

HPC

Mechanical components by mail order

2 / 5
2021

Power transmission parts



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*Maximum discount on price list 2020

NEW : New product 2021

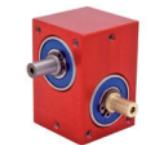
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NEW : New product 2021

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INDEX ICONS

Internal bore



Modifiable



Non-modifiable

Angles



45°



90°



17°45'

Load



Axial load



Radial load



Heavy duty



Max load
1 tonne

Compatibility



Robotic
industry



Food industry

Maintenance



Maintenance
free



No lubrication

Applicable



Industrial



Manual

Method of fabrication



Moulded



Machined

Material



Steel



Stainless steel



Aluminium



Brass



Bronze



Nylon



Copper



Plastic



Delrin



Peek

Cas

Cast iron

Standards



DIN



ISO

Resistant to



Low
temperatures



High
temperatures



Corrosion



Shock

Origin



Japan



Switzerland

Quality



from 1 to 8

Others



Bi-directional



Precision



Duo



Bearings



Light



No fixing



Miniature size



Low cost
range



Modulable



High
speed of
rotation



Easy assembly

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**PANAMECH
MULTI-BEAM®**



p.16

**SINGLE-DISC
COUPLING**



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**OLDHAM®
COUPLING**



p.24

**ROTEX GS®
JAW COUPLING**



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**GERWAH®
JAW COUPLING**



p.28



COUPLING FOR SERVO-MOTOR

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FLEXIBLE BELLOWS COUPLING



p.36

GERWAH® BELLOW COUPLING



p.40

P-FLEX® COUPLING

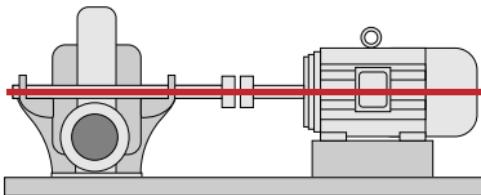


p.48

How do I choose a coupling?

Introduction

A coupling connects a motor shaft to a driven shaft. It must therefore be correctly sized to transmit the rotational movement at the desired torque and speed. As a consequence, it should be selected according to the strengths and weaknesses of each coupling family.

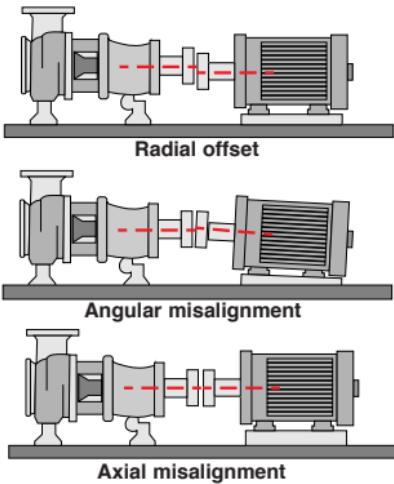


Alignment defaults

- Despite all the care taken in design and assembly, two shafts are never perfectly aligned.

There are therefore 3 types of misalignment: **radial (or parallel) offset**, **axial and angular**. The coupling's ability to absorb these defaults will have a major impact on the life of the system. Poor absorption will lead to vibrations, noise, wear, a rapid failure of the bearings (shaft support bearings) or of the coupling itself.

The choice of coupling type is therefore very important.



Other parameters to be taken into account

- Logically, the coupling must be large enough to accommodate both shafts, in terms of length, diameter and bores.

You should also check that the coupling can withstand the temperature, and whether the application requires shock absorption or, on the contrary, the faithful transmission of movement to enable the overall system to be controlled by electronics (slave system). These are only the major parameters, and the list is not exhaustive.

How do I choose a coupling?

Introduction

Rigid couplings

- They must be used when the shafts are correctly aligned (or perfectly coaxial).
- Their use requires precautions and a rigorous study of the assembled unit, as misalignment of the shafts leads to crushing of the bearings fatigue fractures and premature destruction of the fastening system.
- **Defect amortization: none**
- **High torsional rigidity**



BG/BGC



BS/BC



RGS



MFB

Torsionally non-flexible couplings

- Made up of rigid parts, they can correct one or more particular misalignments but transmit the torque in full without damping transmission irregularities and shocks.
- Ideal for use with encoders, without loss of information. They are widely used in servo systems.
- **Fault damping: radial, axial, angular**
- **Torsionally rigid**



PNA



RTE

Torsionally flexible couplings

- As well as rigid parts, they are made up of fully elastic parts or elastomer blocks that allow torsional flexibility. They are designed to transmit torque smoothly while correcting the various misalignments.
- Ideal for shock or jolting start/stop situations such as pumps
- **Fault damping: radial, axial, angular**
- **Torsionally elastic**



RTK



CT/CTss



G/H/JCS/Hss



GD/HD/JCD/HDss



Universal joints

- They are used to transmit motion between two intersecting shafts. Used for angular misalignments of up to 45°, the movement is transmitted via a cross that rotates freely in relation to the two shafts.
- Disadvantage: this is a non-homokinetic joint. The input speed is not equal at all times to that of the output shaft, even though the number of revolutions covered by the two shafts is the same. This fault can be corrected by using 2 cardan joints in series with identical angles (double or telescopic cardan joint).
- **Fault damping: angular, (double cardan shaft: axial and radial)**
- **High torsional rigidity**

Buying guide

Couplings

For positioning



Reference	BS2	BC2	BS3	BC3	DBC B3PANC
Brand	Panamech Multi-Beam				
Type	2x3 helicoids	2x3 helicoids	2x3 helicoids	2x3 helicoids	1x3 helicoids
Shaft mounting					
Radial misalignment (mm)	0,07 → 0,9	0,07 → 0,9	0,07 → 0,9	0,07 → 0,9	0,127
Axial misalignment (mm)	0,4 → 1	0,4 → 1	0,4 → 1	0,4 → 1	0,4 → 1
Angular misalignment (mm)	3° → 7°	3° → 7°	3° → 7°	3° → 7°	5°
Max. torque (Nm)	0,2 → 40	0,2 → 40	0,22 → 73	0,22 → 73	0,45 → 10
Max. speed (rpm)	5000	5000	5000	5000	5000
Material	aluminium	aluminium	stainless steel	stainless steel	aluminium or stainless steel
Optional keying					
Re-boring possible					
Frequent start-ups					
Advantages	practical	practical	practical	practical	miniature
Quality index	★★★	★★★	★★★	★★★	★★★
Price	€€	€€	€€€	€€€	€€€
Pages	2 p.16	2 p.18	2 p.17	2 p.19	2 p.20



: clamp hub



: set screw hub



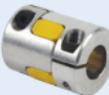
: locking assembly

	MHS	MHW	PFL	BG, BGC
	-	-	P-FLEX	Oldham
	single disc	single disc	double elastomer loop	-
	0	0,15 → 0,3	2,6 → 3,2	0,2 → 0,25
	0,2	0,4 → 0,8	4,5 → 11	0,05 → 0,2
	1°	2°	10° → 15°	0,5°
	2,8 → 38	2 → 20	0,5 → 10	0,06 → 44
	10000 → 19000	10000 → 19000	3000	3000
	aluminium + stainless steel	aluminium + stainless steel	steel + Hytrel	brass or aluminium + acetal
	X	X	X	X
	X	X	X	✓
	✓	✓	✓	✓
	accurate	accurate	economic	practical
	☆☆☆	☆☆☆	☆☆	☆☆☆
	€€€	€€€	€	€€
	② p.22	② p.23	② p.48	② p.24

Buying guide

Couplings

For positioning



Reference	RGS	DKGS BKGS	EKGS	ADSR
Brand	Rotex® GS	Gerwah®	Gerwah®	Gerwah®
Type	flextor pre-stressed mounted	flextor pre-stressed mounted	flextor pre-stressed mounted	flextor pre-stressed mounted
Shaft mounting				
Radial misalignment (mm)	0,06 → 0,15	0,06 → 0,14	0,06 → 0,14	0,06 → 0,16
Axial misalignment (mm)	0,4 → 1,5	0,2 → 2	0,2 → 1,4	0,5 → 2,1
Angular misalignment (mm)	1°	0,5 → 1°	1°	0,9°
Max. torque (Nm)	0,5 → 190	0,5 → 450	0,5 → 35	12,5 → 525
Max. speed (rpm)	5850 → 38000	4000 → 3800	8500 → 47500	3600 → 13000
Material	aluminium + polyurethane	aluminium + polyurethane	aluminium + polyurethane	aluminium + polyurethane
Optional keying	✓	✓	✓	✓
Re-boring possible	✓	✓	✓	✓
Frequent start-ups	✓	✓	✓	✓
Advantages	powerful, precise	powerful, precise	powerful, precise	powerful, precise
Quality index	★★★	★★★	★★★	★★★
Price	€€€	€€€	€€€	€€€
Pages	2 p.26	2 p.30	2 p.28	2 p.34



: clamp hub



: set screw hub



: locking assembly

					
MFB MFB-C	MFBS MFBS-C	EKN DKN	AKD AKN	AK	
-	-	Gerwah®	Gerwah®	Gerwah®	
bellows	bellows	bellows	bellows	bellows	bellows
					
0,1 → 0,2	0,1 → 0,2	0,1 → 0,25	0,1 → 0,2	0,1 → 0,2	
-2,5 → +0,8	-2,5 → +0,8	0,2 → 0,5	0,4 → 1	0,4 → 1	
1,5° → 2°	1,5° → 2°	1,2° → 2°	1° → 1,5°	1° → 1,5°	
0,3 → 4	0,5 → 6	0,5 → 12	22 → 600	36 → 800	
19000 → 52000	19000 → 52000	-	4900 → 12700	4600 → 11000	
aluminium + bronze	stainless steel + stainless steel	aluminium + stainless steel	steel or aluminium + stainless steel	steel + stainless steel	
					
					
					
accurate	accurate	miniature	powerful, precise	powerful, precise	
☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	
€	€€	€€	€€€€	€€€€	
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Torque: 0.2 to 40Nm

- Multidirectional flexibility

- High precision

- High torsional rigidity

- Single piece construction

- Backlash free

- 6 beams (except BS21 which has 3)

- Working temp -40°C to +120°C

- Max. speed: 5,000 rpm

- Material:

- Aluminium 6082

- Pre-bore is not tolerated

Applications

- Encoders, optical systems

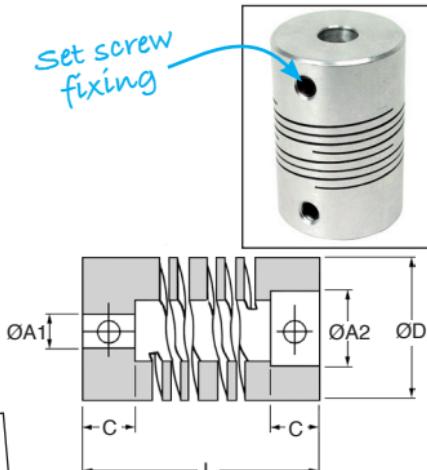
- Automated systems, step motors

- Continuous or intermittent use

Assembly

- Dimension "C"

- must not be exceeded



DISCOUNTS

Qty	1+	5+	10+
Disc.	List	-6%	On request

Part number	ØD	L	C	Set screw	Misalignment		Torsional rigidity (Nm/Rad)	Max. torque (Nm)		
					Radial (mm)	Angular		shock and reversing	non reversing	peak torque
BS21	6,4	12,7	3,2	M2	0,07	3°	1,53	0,20	0,26	0,4
BS22	9,5	19,6	5,3	M2,5	0,12	3°	1,8	0,50	0,66	1,0
BS23	12,7	22,9	6,5	M3	0,17	5°	14	1,00	1,33	2,0
BS24	19,1	26,5	6,5	M4	0,25	7°	46	2,65	3,53	5,3
BS25	25,4	38,1	11,0	M5	0,38	7°	108	5,00	6,66	10,0
BS266	31,8	57,2	16,0	M6	0,50	7°	225	7,50	10,00	15,0
BS27	38,1	66,7	18,0	M6	0,60	7°	315	11,00	14,66	22,0
BS29	50,8	95,3	25,0	M8	0,90	7°	666	20,00	26,66	40,0

Part number	ØA1 x ØA2		ØA1 x ØA2		Standard Bores (H8)	Stock*	Price each 1 to 4		
	Pre-bores	Min.	Max.	Min.	Max.		Std bores and pre-bores	Std bores and pre-bores	Modified bore
BS21	1,5 x 2,0	1 x 2	3 x 3	-	-	✓	26,90 €	31,99 €	
BS22	2,0 x 2,8	2 x 4	4,76 x 4,76	3,18 x 4	-	-	29,66 €	35,29 €	
BS23	2,5 x 4,5	3 x 5	6,35 x 6,35	6 x 6	✓	32,35 €	38,48 €		
BS24	2,5 x 5,8	4,76 x 6,35	10 x 10	5 x 6	6 x 6	10 x 10	✓	40,32 €	38,48 €
BS25	3,5 x 7,5	5 x 8	12,70 x 12,70	6 x 6	-	✓	44,86 €	47,96 €	
BS266	6,0 x 10,0	8 x 9,53	16 x 16	-	-	✓	58,82 €	53,35 €	
BS27	8,0 x 12,0	8 x 12	22 x 22	-	-	✓	75,37 €	89,64 €	
BS29	10,0 x 16,0	10 x 16	28 x 28	-	-	-	On request	On request	

*Depending on availability - Dimensions in mm



Couplings for servo-motors

Torque: 0.22 to 73Nm

- Multidirectional flexibility

- High precision
- High torsional rigidity
- Single piece construction
- Backlash free
- 6 beams (except BS21 which has 3)
- Working temp -40°C to +120°C
- Max. speed: 5,000 rpm
- Material:
Stainless steel 303
- Pre-bore is not tolerated

Applications

- Encoders, optical systems
- Automated systems, step motors
- Continuous or intermittent use

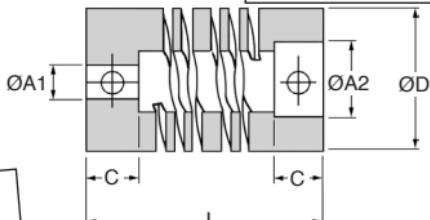
Assembly

- Dimension "C"
must not be exceeded



Set screw fixing

stainless steel



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD	L	C	Set screw	Misalignment		Torsional rigidity (Nm/Rad)	shock and reversing	non reversing	peak torque
					Radial (mm)	Angular				
BS31	6,4	12,7	3,2	M2	0,07	3°	1,53	0,22	0,30	0,45
BS32	9,5	19,6	5,3	M2,5	0,12	3°	5,4	0,75	1,00	1,50
BS33	12,7	25,4	6,5	M3	0,17	5°	25	1,50	2,00	3,00
BS34	19,1	28,0	6,5	M4	0,25	7°	72	4,00	5,33	8,00
BS35	25,4	38,1	11,0	M5	0,38	7°	170	8,00	10,66	16,00
BS36	31,8	57,2	16,0	M6	0,50	7°	364	12,50	16,66	25,00
BS37	38,1	66,7	18,0	M6	0,60	7°	634	18,00	22,50	36,00
BS39	50,8	95,3	25,0	M8	0,90	7°	1305	36,50	48,66	73,00

Part number	ØA1 x ØA2		ØA1 x ØA2		Standard Bores (H8)	Stock*	Price each	
	Pre-bores	Min.	Max.	ØA1 x ØA2	Std bores and pre-bores		Std bores and pre-bores	Modified bore
BS31	1,5 x 2,0	1 x 2	3 x 3	-	-	✓	46,73 €	55,57 €
BS32	2,0 x 2,8	2 x 4	4,76 x 4,76	-	-	✓	39,19 €	46,61 €
BS33	2,5 x 4,5	3 x 5	6,35 x 6,35	6,35 x 6,35	4 x 4	✓	50,98 €	60,63 €
BS34	2,5 x 5,8	4,76 x 6,35	10 x 10	10 x 10	5 x 9,53	✓	55,24 €	55,24 €
BS35	3,5 x 7,5	5 x 8	12,70 x 12,70	8 x 8	-	✓	87,29 €	103,81 €
BS36	6,0 x 10,0	8 x 10	19 x 19	-	-	✓	128,15 €	152,40 €
BS37	8,0 x 12,0	8 x 12	22 x 22	-	-	✓	164,44 €	195,57 €
BS39	10,0 x 16,0	10 x 16	28 x 28	-	-	-	On request	On request

*Depending on availability - Dimensions in mm

- Multidirectional flexibility

- High precision

- High torsional rigidity

- Single piece construction

- Backlash free

- 6 beams (except BS21 which has 3)

- Working temp -40°C to +120°C

- Max. speed: 5,000 rpm

- Material:

- Aluminium 6082

- Pre-bore is not tolerated

Applications

- Encoders, optical systems

- Automated systems, step motors

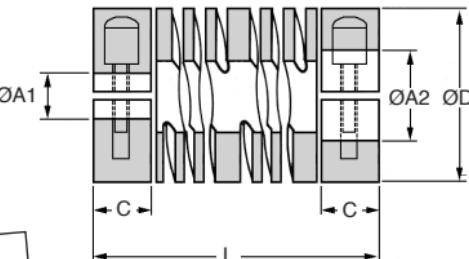
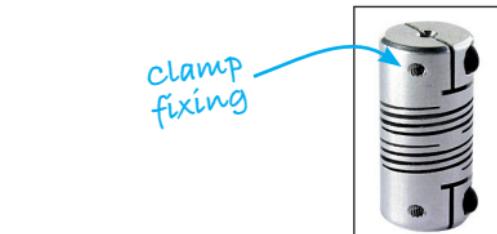
- Continuous or intermittent use

Assembly

- Dimension "C" must not be exceeded



clamp
fixing



DISCOUNTS

Qty	1+	5+	10+
Disc.	List	-6%	On request

Part number	ØD	L	C	Set screw	Misalignment		Torsional rigidity (Nm/Rad)	Max. torque (Nm)		
					Radial (mm)	Angular		shock and reversing	non reversing	peak torque
BC22	9,5	19,6	5,3	M1,6	0,12	3°	1,8	0,5	0,66	1,0
BC23	12,7	22,9	6,5	M2	0,17	5°	14	1,0	1,33	2,0
BC24	19,1	26,5	6,5	M2,5	0,25	7°	46	2,6	3,53	5,3
BC25	25,4	38,1	11,0	M3	0,38	7°	108	5,0	6,66	10,0
BC26	31,8	57,2	16,0	M4	0,50	7°	225	7,5	10,00	15,0
BC27	38,1	66,7	18,0	M5	0,60	7°	315	11,0	14,66	22,0
BC29	50,8	95,3	25,0	M6	0,90	7°	666	20,0	26,66	40,0

Part number	ØA1 x ØA2 Pre-bores	ØA1 x ØA2 Min.	ØA1 x ØA2 Max.	ØA1 x ØA2 Standard Bores (H8)		Stock*	Price each 1 to 4		
				Std. bores and pre-bores	Std. bores and pre-bores		Std. bores and pre-bores	Std. bores and pre-bores	Modified bore
BC22	2,0 x 2,8	2 x 4	4,76 x 4,76	3 x 3		✓	43,44 €	43,44 €	
BC23	2,5 x 4,5	3 x 5	6,35 x 6,35	3,18 x 4 6 x 6		✓	46,46 €	55,26 €	
BC24	2,5 x 5,8	4,76 x 6,35	10 x 10	5 x 6 6 x 10 8 x 8		✓	51,52 €	61,27 €	
BC25	3,5 x 7,5	5 x 8	12,70 x 12,70	6 x 6 8 x 12 10 x 10 10 x 12 12 x 12		✓	57,59 €	68,50 €	
BC26	6,0 x 10,0	8 x 9,53	16 x 16	10 x 14		✓	99,89 €	On request	
BC27	8,0 x 12,0	8 x 12	19 x 19	-		✓	114,53 €	136,22 €	
BC29	10,0 x 16,0	10 x 16	26 x 26	-		-	On request	On request	

*Depending on availability - Dimensions in mm

Couplings for servo-motors

Torque: 0.75 to 73Nm

BC3

Multidirectional flexibility

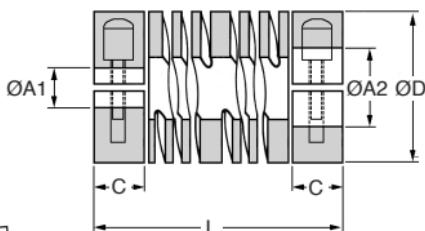
- High precision
- High torsional rigidity
- Single piece construction
- Backlash free
- 6 beams (except BS21 which has 3)
- Working temp -40°C to +120°C
- Max. speed: 5000 rpm
- Material:
Stainless steel 303
- Pre-bore is not tolerated

Applications

- Encoders, optical systems
- Automated systems, step motors
- Continuous or intermittent use

Assembly

- Dimension "C" must not be exceeded



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD	L	C	Set screw	Misalignment		Torsional rigidity (Nm/Rad)	Max. torque (Nm)		
					Radial (mm)	Angular		shock and reversing	non reversing	peak torque
BC32	9,5	19,6	5,3	M1,6	0,12	3°	5,4	0,75	1,00	1,5
BC33	12,7	25,4	6,5	M2	0,17	5°	25	1,50	2,00	3,0
BC34	19,1	28,0	6,5	M2,5	0,25	7°	72	4,00	5,33	8,0
BC35	25,4	38,1	11,0	M3	0,38	7°	170	8,00	10,66	16,0
BC36	31,8	57,2	16,0	M4	0,50	7°	364	12,50	16,66	25,0
BC37	38,1	66,7	18,0	M5	0,60	7°	634	18,00	24,00	36,0
BC39	50,8	95,3	25,0	M6	0,90	7°	1305	36,50	48,66	73,0

Part number	ØA1 x ØA2		ØA1 x ØA2		ØA1 x ØA2 Standard Bores (H8)	Stock*	Price each		
	Pre-bores	Min.	Max.	Std. bores and pre-bores			Std. bores and pre-bores	Modified bore	
BC32	2,0 x 2,8	2 x 4	4,76 x 4,76	-	-	✓	64,43 €	76,63 €	
BC33	2,5 x 4,5	3 x 5	6,35 x 6,35	6 x 6 6,35 x 6,35	6 x 6	✓	65,80 €	78,26 €	
BC34	2,5 x 5,8	4,76 x 6,35	10 x 10	6 x 6	6 x 6	✓	84,72 €	100,75 €	
BC35	3,5 x 7,5	5 x 8	12,70 x 12,70	6 x 6	6 x 6	✓	116,87 €	138,99 €	
BC36	6,0 x 10,0	8 x 10	16 x 16	-	-	✓	154,09 €	183,27 €	
BC37	8,0 x 12,0	8 x 12	19 x 19	-	-	✓	205,52 €	244,43 €	
BC39	10,0 x 16,0	10 x 16	26 x 26	-	-	-	On request	On request	

*Depending on availability - Dimensions in mm

Torque: 0.45 to 6Nm

- Multidirectional flexibility
- High precision
- Space saving
- Good torsional rigidity
- Single piece construction
- Backlash free
- For use in restricted spaces
- 3 beams
- Working temperature: -40°C to +120°C
- Max. speed: 5,000 rpm
- Material:
Aluminium 6082
- Pre-bore is not tolerated

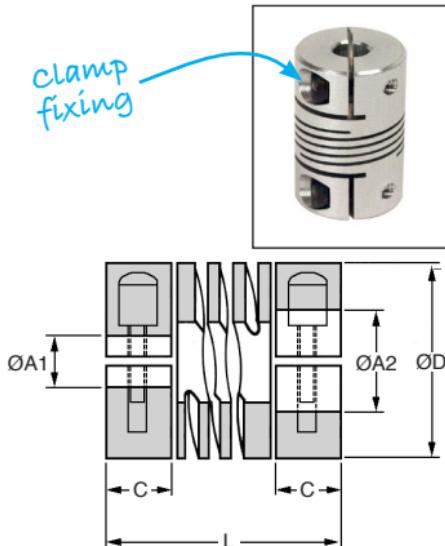
Applications

- Encoders, optical systems
- Automated systems, step motors

Assembly

- Dimension "C" must not be exceeded

clamp
fixing



STANDARD BORES
IN STOCK

DISCOUNTS

Qty	1+	5+	10+
Disc.	List	-6%	On request

Part number	$\text{\textcircled{O}}\text{D}$	L	C	Vis	radial (mm)	angular	Torsional rigidity (Nm/rad)	Max torque (Nm)		
								Shock and reversing	non reversing	Peak torque
DBC3	12,7	19,1	6,0	M2	0,127	5°	28	0,45	0,60	0,9
DBC3.5	15,9	20,3	6,5	M2,5	0,127	5°	38	0,75	1,00	1,5
DBC4	19,1	22,9	6,5	M2,5	0,127	5°	65	1,25	1,66	2,5
DBC5	25,4	31,8	9,0	M3	0,127	5°	121	2,00	2,66	4,0
DBC6	31,8	44,5	12,0	M4	0,127	5°	238	3,00	4,00	8,0

Part number	$\text{\textcircled{O}}\text{A1} \times \text{\textcircled{O}}\text{A2}$		$\text{\textcircled{O}}\text{A1} \times \text{\textcircled{O}}\text{A2}$		$\text{\textcircled{O}}\text{A1} \times \text{\textcircled{O}}\text{A2}$ Standard Bores (H8)	Stock*	Price each 1 to 4	
	Pre-bores	Min.	Max.	Std. bores and pre-bores	Std. bores and pre-bores	Modified bore		
DBC3	2,5 x 3,95	3 x 4	5 x 5	-		48,23 €	69,44 €	
DBC3.5	2,5 x 3,95	3 x 4	6,35 x 6,35	5 x 5		48,23 €	76,34 €	
DBC4	2,5 x 5,8	4 x 4,76	8 x 8	6 x 6		51,33 €	61,05 €	
DBC5	3,8 x 5,95	5 x 6	10 x 10	10 x 10		58,11 €	69,11 €	
DBC6	5,1 x 9,2	6 x 8	14 x 14	-		87,46 €	133,07 €	

*Depending on availability - Dimensions in mm

Couplings for servo-motors

Torque: 0,5 to 10Nm

B3PAN

- Multidirectional flexibility
- High precision
- Space saving
- Good torsional rigidity
- Single piece construction
- Backlash free
- For use in restricted spaces
- 3 beams
- Working temperature: -40°C to +140°C
- Max. speed: 5,000 rpm
- Material:

 - Stainless steel 303

- Pre-bore is not tolerated

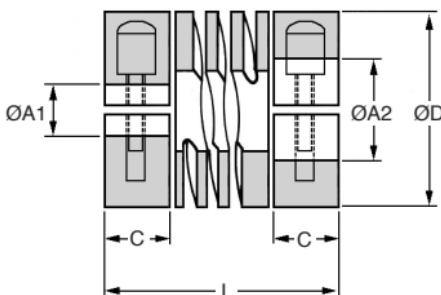


Applications

- Encoders, optical systems
- Automated systems, step motors

Assembly

- Dimension "C" must not be exceeded



STANDARD BORES
IN STOCK

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD	L	C	Set screw	Misalignment	Torsional	Max. torque (Nm)
					radial (mm)	angular	shock and reversing
B3PAN4C	12,7	19,1	6,0	M2	0,127	5°	0,50
B3PAN5C	15,9	20,3	6,5	M2,5	0,127	5°	0,66
B3PAN6C	19,1	22,9	6,5	M2,5	0,127	5°	1,20
B3PAN7C	25,4	31,8	9,0	M3	0,127	5°	1,80
B3PAN8C	31,8	44,5	12,0	M4	0,127	5°	2,7
							6,0
							10,0

Part number	ØA1 x ØA2 Pre-bores	ØA1 x ØA2 Min.	ØA1 x ØA2 Max.	ØA1 x ØA2 Standard Bores (H8)	Stock*	Price each
					Std. bores and pre-bores	Std. bores and pre-bores
B3PAN4C	1,6 x 4,5	3 x 4	5 x 5	4 x 4	✓	69,67 €
B3PAN5C	2,5 x 4,8	3 x 4	6,35 x 6,35	5 x 5	✓	72,22 €
B3PAN6C	2,5 x 4,75	4 x 4,76	8 x 8	6 x 6	✓	76,52 €
B3PAN7C	3,5 x 5,95	5 x 6	10 x 10	8 x 8	✓	98,52 €
B3PAN8C	5,1 x 9,2	6 x 8	14 x 14	10 x 10	✓	117,17 €
						183,28 €

*Depending on availability - Dimensions in mm

Single-disc flexible coupling



MHS

Couplings for servo-motors

Torque: 2.8 to 38Nm

- Very rigid in torsion

- Misalignment absorbed by stainless steel disc

- Backlash free

- Resistant to oil and chemical products

- Maintenance free

- Materials:

Hubs: Aluminium A-U4G

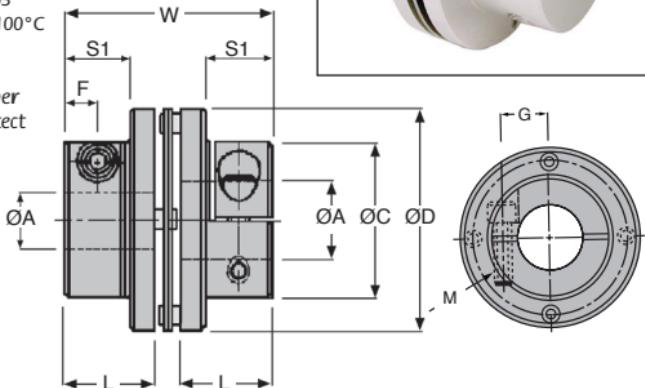
Disc: Stainless steel 301

Pin: Stainless steel 303

- Max. working temp.: +100°C



clamp
fixing



Applications

- Ideal for use with stepper motors that cannot detect start position

- Applications requiring high accuracy

- Automated systems

Info

- We are unable to modify these parts

DISCOUNTS

Qty	1+	5+	10+	15+	20+
Disc.	List	-10%	-15%	-25%	On request

Part number	Max. speed of rotation (rpm)	Weight (g)	Moment of inertia (kg.m²)	Static torsional stiffness (Nm/Rad)	Misalignment			Nominal torque (Nm)	Max. torque (Nm)
					Radial (mm)	Angular (°)	Axial (mm)		
MHS-32C	1900	38	$4,5 \times 10^{-6}$	1300	-	1°	$\pm 0,20$	2,8	5,6
MHS-40C	1500	66	$1,2 \times 10^{-5}$	2800	-	1°	$\pm 0,20$	6,0	12,0
MHS-50C	1200	120	$3,7 \times 10^{-5}$	3700	-	1°	$\pm 0,20$	12,0	24,0
MHS-63C	1000	190	$8,4 \times 10^{-5}$	5000	-	1°	$\pm 0,20$	19,0	38,0

Part number	Standard bore ØA	Max. bore ØA	Dimensions							Stock*	Price each 1 to 4
			ØD	F	L	W	ØC	S1	M		
MHS-32C	6	10	32	4	13,70	32	22	9	M3	8,00	✓✓ 165,16 €
MHS-40C	8	14	40	6	16,50	38	28	12	M4	10,50	✓ 179,33 €
MHS-50C	12	20	50	7	19,40	44	39	15	M5	14,75	✓ 216,84 €
MHS-63C	15	25	63	8	22,30	50	45	18	M6	17,00	- 302,91 €

*Depending on availability - Dimensions in mm



Double-disc flexible coupling

Couplings for servo-motors

MHW

Torque: 2 to 20Nm

- Very rigid in torsion
- Misalignment absorbed by stainless steel disc
- Backlash free
- Resistant to oil and chemical products
- Maintenance free
- Materials:
 - Hubs: Aluminium A-U4G
 - Disc: Stainless steel 301
 - Pin: Stainless steel 303
 - Central disc: A-U5 Pb Bi
- Max. working temp.: +100°C

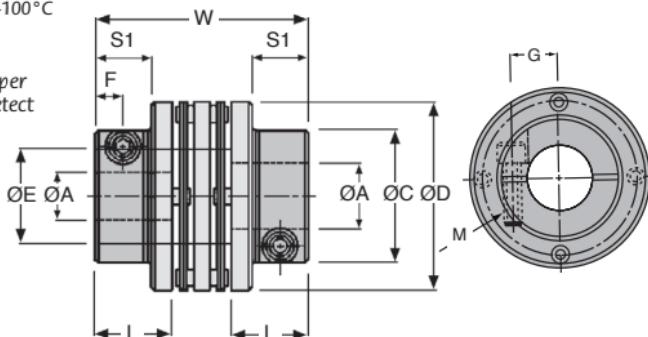


Applications

- Ideal for use with stepper motors that cannot detect start position
- Applications requiring high accuracy
- Automated systems

Info

- We are unable to modify these parts



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Max. speed of rotation (rpm)	Weight (g)	Moment of inertia (kg.m ²)	Static torsional stiffness (Nm/Rad)	Misalignment			Nominal torque (Nm)	Max. torque (Nm)
					Radial (mm)	Angular (°)	Axial (mm)		
MHW-32C	19000	48	6,2 x 10 ⁻⁶	1000	0,15	2°	±0,40	2	4
MHW-40C	15000	81	1,6 x 10 ⁻⁵	1500	0,20	2°	±0,50	4	8
MHW-50C	12000	150	4,6 x 10 ⁻⁵	2000	0,20	2°	±0,60	7,5	15
MHW-63C	10000	230	1,1 x 10 ⁻⁴	2500	0,30	2°	±0,80	10	20

Part number	Standard bore	Max. bore	ØA	ØA	ØE	F	L	W	ØC	S1	M	G	Stock*	Price each
	ØA	ØD												
MHW-32C	6	10	32	15	4	13,70	40	22	9	M3	8,00	-	196,47 €	
MHW-40C	8	14	40	25	6	16,50	46	28	12	M4	10,50	✓	220,35 €	
MHW-50C	12	20	50	25	7	19,40	52	39	15	M5	14,75	✓	264,97 €	
MHW-63C	15	25	63	32	8	22,30	58	45	18	M6	17,00	✓	375,40 €	

*Depending on availability - Dimensions in mm

Couplings for servo-motors

Torque: 0.06 to 44Nm

- 3 part assembly

- Max. speed: 3000 rpm
 - Working temp: -20°C to +60°C

- Materials:

BG6-BG13 Hubs: brass
 CZ121
 BG19-57 Hubs: Alocrom
 coated aluminium 6082
 Disk: black acetal

Info

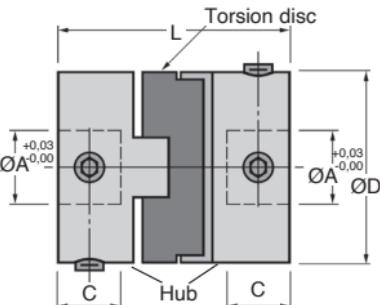
- Delivered not assembled

Service factor	
Usage	Factor
Momentary	1
1hr/day	2
3h/day	4
6h/day	6
12h/day	8

Torque to be transmitted X Service Factor must be less than Peak Torque



	Misalignment at 3000 rpm			Torque Peak (Nm)	Static break (Nm)	Moment of inertia (kg.m² x 10³)	Torsional stiffness (Nm/Rad)
	Radial (± mm)	Axial (± mm)	Angular (±)				
BG6	0,10	0,05	0,5°	0,06	0,7	6	10
BG9	0,10	0,05	0,5°	0,21	2,0	18	30
BG13	0,10	0,05	0,5°	0,5	4,0	26	65
BG19	0,20	0,10	0,5°	1,7	10,8	67	115
BG25	0,20	0,10	0,5°	4,0	13,0	252	205
BG33	0,20	0,15	0,5°	9,0	53,0	1 074	615
BG41	0,25	0,15	0,5°	17,0	57,0	3 327	1 200
BG50	0,25	0,20	0,5°	30,0	95,0	7 550	1 375
BG57	0,25	0,20	0,5°	44,0	150,0	12 410	2 610



DISCOUNTS

Qty	1+	5+	10+
Disc.	List	-6%	On request

Part number	Standard bores (mm)	Optional bores (mm)			C	Screw	Weight (g)	Stock*	Price each 1 to 4 Standard bores
		ØD	L	C					
BG6	2	3, 3.18	6,40	12,70	3,80	M3	2,5	✓	20,80 €
BG9	3, 4, 5	-	9,50	12,70	3,80	M3	4	✓	18,21 €
BG13	3	4, 5, 6, 6,35	12,70	15,90	4,30	M3	11	✓	on request
BG19	4, 6, 8	5, 6,35	19,10	22,00	6,30	M3	12	✓	23,09 €
BG25	6, 8, 10	6,35, 9,52, 12	25,40	28,40	8,60	M4	31	✓	30,53 €
BG33	8, 12	9,52, 10, 14, 15, 16	33,30	42,00	13,00	M4	86	✓	45,86 €
BG41	9,52, 10	12, 14, 15, 16, 18, 19, 20	41,30	50,80	16,70	M5	148	✓	54,43 €
BG50	10, 20	12, 14, 15, 16, 18, 19, 24, 25	50,00	59,60	20,60	M8	208	✓	on request
BG57	12, 20	14, 15, 16, 18, 19, 24, 25, 30	57,10	78,00	28,40	M8	361	✓	on request

*Depending on availability - Dimensions in mm



Couplings for servo-motors

Torque: 1.7 to 44Nm



- 3 part assembly

- Max. speed: 3000 rpm
- Working temperature: -20°C to +60°C
- Materials:
 - Hub: Alcrom coated aluminium 6082
 - Disk: black acetal

Advantages

- Misalignment does not affect load
- No lubrication
- Low inertia
- Non magnetic

Info

- Delivered not assembled

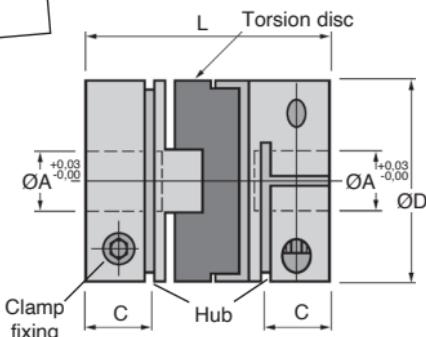
Service factor	
Usage	Factor
Momentary	1
1h/day	2
3h/day	4
6h/day	6
12h/day	8

Torque to be transmitted X Service Factor must be less than Peak Torque

STANDARD BORE
IN STOCK



clamp fixing



DISCOUNTS

Qty	1+	5+	10+	25+	50+
Disc.	List	-6%	-12%	-18%	On request

	Misalignment at 3000 rpm			Torque Peak (Nm)	Static break (Nm)	Moment of inertia (kg.m ²)	Torsional stiffness (Nm/ Rad)
	Radial (± mm)	Axial (± mm)	Angular (±)				
BGC19	0,20	0,10	0,5°	1,7	8	67	115
BGC25	0,20	0,10	0,5°	4,0	13	252	205
BGC33	0,20	0,15	0,5°	9,0	53	1 074	615
BGC41	0,25	0,15	0,5°	17,0	57	3 327	1 200
BGC50	0,25	0,20	0,5°	30,0	95	7 550	1 375
BGC57	0,25	0,20	0,5°	44,0	150	12 410	2 610

Part number	Standard bores (mm)	Optional bores (mm)	Weight				Stock*	Price each 1 to 4 Standard bores
			ØD	L	C	Screw		
BGC19	4	5, 6, 6,35, 8	19,10	22,00	6,30	M2,5	12	✓ 23,28 €
BGC25	6, 8, 10	6,35, 9,52, 12	25,40	28,40	8,60	M3	31	✓ 33,39 €
BGC33	8, 9,52, 10, 14	12, 12,7 15, 16	33,30	42,00	13,00	M4	86	✓ 49,03 €
BGC41	9,52, 12, 14	10, 15, 16, 18, 19, 20	41,30	50,80	16,70	M4	148	✓ 54,44 €
BGC50	10, 20	12, 14, 15, 16, 18, 19, 24, 25	50,00	59,60	20,60	M5	208	✓ 134,01 €
BGC57	12, 20	14, 15, 16, 18 19, 24, 25, 30	57,10	78,00	28,40	M6	361	✓ 153,62 €

*Depending on availability - Dimensions in mm

RGS Couplings for servo-motors



Torque: 0.5 to 190Nm

- No-wear elastic couplings

- No maintenance
- Low inertia and reduced size
- Easy blind assembly using standard screws
- Dampens vibration
- Electrically insulated

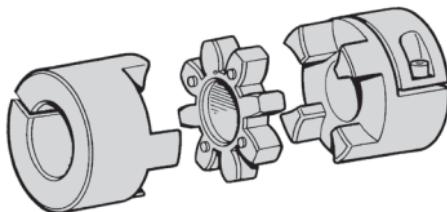
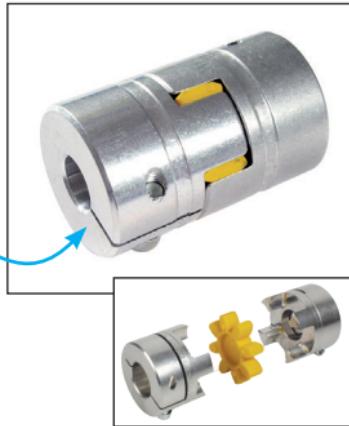
Definition

- TKN Nominal torque (Nm)
- TKMAX Max. torque (Nm)

Info

- Delivered not assembled

clamp
fixing



✓ STANDARD BORE
IN STOCK

DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Transmissible torque (Nm) by friction for split hub

Part number	03	04	05	06	07	08	010	012	014	015	016	019	020	024	028	030	032
RGS-AL-5	-	-															
RGS-AL-7	0,65	0,70	0,74	0,79													
RGS-AL-9	1,48	-	1,43	-	1,79	1,94											
RGS-AL-14	3,32	3,43	-	3,67	3,91	4,14	4,38										
RGS-AL-19					18,90	-	20,80	21,3	21,7	-	23,6						
RGS-AL-24										27,5	28	29,0	31				
RGS-AL-28											62,0	66	69	71	73		

Part number	Max. speed (rpm)	Torsional stiffness		Radial stiffness (N/mm)	Torque (Nm)			Misalignment		
		static (Nm/rad)	dynamic (Nm/rad)		T_{KSP}	T_{KN}	T_{KMAX}	axial (mm)	radial (mm)	angular (mm)
RGS-AL-5	38 000	5,16	16	154	0,08	0,50	1,00	+0,4/-0,2	0,06	1°
RGS-AL-7	27 000	14,30	43	219	0,20	1,20	2,40	+0,6/-0,3	0,10	1°
RGS-AL-9	19 000	31,50	95	262	0,45	3,00	6,00	+0,8/-0,4	0,13	1°
RGS-AL-14	127 000	114,60	344	336	1,00	7,50	15,00	+1/0,5	0,15	1°
RGS-AL-19	9 550	1090,00	1720	1120	2,50	12,00	24,00	+1,2/-0,5	0,10	1°
RGS-AL-24	6 950	2280,00	4010	1480	-	35,00	70,00	+1,4/-0,5	0,14	1°
RGS-AL-28	5 850	4080,00	6754	1780	-	95,00	190,00	+1,5/-0,7	0,15	1°

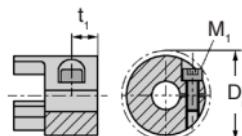
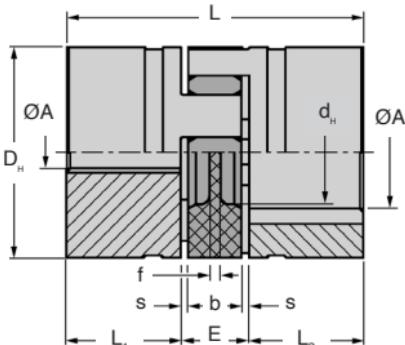
Dimensions in mm

Characteristics

- Long-life
- Fixed by clamping jaw (except RGS-AL-5)
- Single-slit split hub (except RGS-AL-24 and RGS-AL-28 double slit)
- Preconstrained raised coupling
- Working temperature: -40°C to +90°C (occasional -50°C to +120°C)
- Materials:
Hub: aluminium
Ring: polyurethane elastic (92 Shore A)

Uses

- Measuring and control instruments
- Servo-control, ball-screw systems
- Machine tools



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	Clamping screw			$\emptyset D_k$	Tightening torque T^* (Nm)
	M_1	t_1			
RGS-AL-5	M1,2	2,5		11,4	-
RGS-AL-7	M2,0	3,5		16,5	0,37
RGS-AL-9	M2,5	5,0		23,4	0,76
RGS-AL-14	M3,0	5,0		32,2	1,34
RGS-AL-19	M6,0	12,0		45,7	10,50
RGS-AL-24	M6,0	10,5		56,4	10,50
RGS-AL-28	M8,0	11,5		72,6	25,00

Part number	Standard bore		D_h	d_h	L	$L_1;L_2$	E	b	s	f	Price each
	ØA (H7)	1 to 4									
RGS-AL-5	Plain		10	-	15	5	5	4	0,5	4,0	47,54 €
RGS-AL-7	4, 5, 6, 7		14	-	22	7	8	6	1,0	6,0	80,37 €
RGS-AL-9	4, 6, 8, 10		20	7,2	30	10	10	8	1,0	1,5	80,93 €
RGS-AL-14	5, 6, 8, 10, 12, 14		30	10,5	35	11	13	10	1,5	2,0	90,46 €
RGS-AL-19	10, 14, 15, 16, 20		40	18,0	66	25	16	12	2,0	3,0	210,74 €
RGS-AL-24	16, 19, 20, 24, 25		55	27,0	78	30	18	14	2,0	3,0	252,45 €
RGS-AL-28	20, 24, 25, 28, 30, 32		65	30,0	90	35	20	15	2,5	4,0	329,77 €

Dimensions in mm

EKGS

Servo insert coupling Torque range: 0.5 to 35 Nm

- Elastic backlash free coupling
- Reliable torque transmission
- Maintenance free
- Low inertia/size
- Easy to assemble, even in confined spaces
- Reduces vibration
- Materials:
 - Body: Aluminium
 - Spider: Polyurethane 92 Shore A (Yellow)

Applications

- Metrology, control systems, driving, machine tools, driving lead screws



Fixed by
set screws

Torque (Nm) transmissible for hub secured using set screws

Bore size	03	04	05	06	07	08	09	010	011	012	013	014	015	016	017	018	020	022	024	028
EKGS-5	0,5	0,5	0,5																	
EKGS-7	1,2	1,2	1,2	1,2	1,2	1,2														
EKGS-9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
EKGS-14	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	
EKGS-19		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
EKGS-24			20	22	24	26	29	31	34	35	35	35	35	35	35	35	35	35	35	

Part number	Transmissible nominal torque (Nm)	Tightened torque (Nm)	Max speed (rpm)	Moment of inertia (10^{-6} kg.m 2)	axial (Nm)	Misalignment radial (Nm)	Misalignment angular
EKGS-5	0,5	1,3	47500	0,034	-0,2/+0,4	0,06	1°
EKGS-7	1,2	1,3	34000	0,196	-0,3/+0,6	0,10	1°
EKGS-9	3	3	24000	1,08	-0,4/+0,8	0,13	1°
EKGS-14	7,5	6	16000	5,7	-0,5/+1,0	0,15	1°
EKGS-19	10	6	12000	36	-0,5/+1,2	0,10	1°
EKGS-24	35	6	8500	162	-0,5/+1,4	0,14	1°

Dimensions in mm

Characteristics

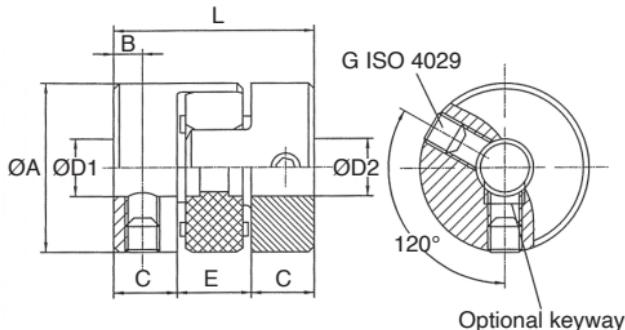
- Hardwearing
- Fixed using set screws
- Couplings are mounted pre-tensioned
- Shaft tolerance should be g6 or h7
- Contact surfaces should be free of grease

Bore

- Choose ØD1 and ØD2 from the ranges shown

Option

- Keyway according to DIN6885-1

**DISCOUNTS**

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	L	ØA	E	ØD1 / ØD2	ØD1 / ØD2	Weight (g)	Price each
				No keyway	with keyway		No with keyway keyway
EKGS-5	15	10	5	2-5	-	5	2,5 1xM3 5 33,84 € -
EKGS-7	22	14	8	3-8	6-8	7	2,5 1xM3 9 35,06 € 35,06 €
EKGS-9	30	20	10	3-12	6-10	10	5 2xM4 17 36,43 € 36,43 €
EKGS-14	35	30	13	4-16	6-16	11	5 2xM6 41 45,81 € 45,81 €
EKGS-19	66	40	16	6-24	6-24	25	10 2xM6 138 57,95 € 57,95 €
EKGS-24	78	55	18	8-35	8-35	30	10 2xM6 282 72,72 € 72,72 €

Dimensions in mm

DKGS

Servo insert coupling Torque range: 0.5 to 3 Nm

- Elastic backlash free coupling
- Reliable torque transmission
- Maintenance free
- Low inertia/size
- Easy to assemble, even in confined spaces
- Reduces vibration
- Materials:
 - Hub: Aluminium
 - Spider: Polyurethane 92 Shore A (Yellow)

Applications

- Metrology, control systems, driving, machine tools, driving lead screws

Small size



Secured by a
clamping hub

Torque (Nm) transmissible by friction for a split hub

Bore size	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11
DKGS-5	0,5	0,5	0,5	-	-	-	-	-	-	-
DKGS-7	-	0,8	1,1	1,2	1,2	1,2	-	-	-	-
DKGS-9	-	1,5	2	2,5	2,9	3	3	3	3	3

Part number	Nominal torque (Nm)	Tightened torque (Nm)	Max. speed (rpm)	Moment of inertia (10^{-6} kg.m 2)	axial (Nm)	Misalignment radial (Nm)	angular
DKGS-5	0,5	0,25	38000	0,034	-0,2/+0,4	0,06	1°
DKGS-7	1,2	0,35	27000	0,196	-0,3/+0,6	0,10	1°
DKGS-9	3	0,75	19000	1,08	-0,4/+0,8	0,13	1°

Dimensions in mm

Characteristics

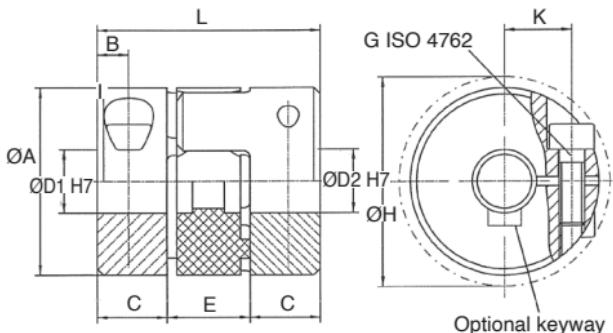
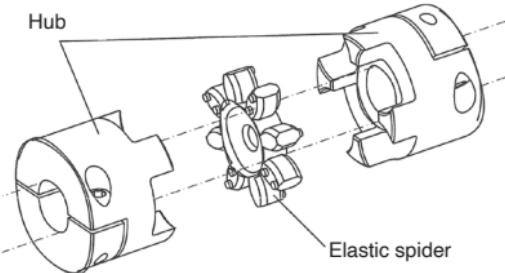
- Hardwearing
- Secured by a clamping hub
- Couplings are mounted pre-tensioned
- Shaft tolerance should be g6 or h7
- Contact surfaces should be grease free

Bore

- Choose ØD1 and ØD2 from the ranges shown

Option

- Keyway according to DIN6885-1



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	L	ØA	K	ØH	E	ØD1 / ØD2	ØD1 / ØD2	No keyway	with keyway	C	B	G	Weight (g)	Price each	No keyway	with keyway
DKGS-5	15	10	3,2	11,5	5	2-4	-	5	2,5	M1,6	5	36,61	€	-		
DKGS-7	22	14	5	16,5	8	3-7	6-7	7	3,5	M2	9	38,00	€	38,00	€	
DKGS-9	30	20	7,3	23,5	10	3-11	6-11	10	5	M2,5	15	39,22	€	39,22	€	

Dimensions in mm



BKGS

Coupling for driven systems
Torque range: 1.2 to 450 Nm

- Elastic backlash free coupling
- Reliable torque transmission
- Maintenance free
- Low inertia/size
- Easy to assemble, even in confined spaces
- Reduces vibration
- Materials:
 - Hub: Aluminium
 - Ring: Polyurethane 98 Shore A (Red) except sizes 7 and 9 which are Shore 92 A (Yellow)



Applications

- Metrology, control systems, driving, machine tools, driving lead screws

Secured using
a clamping hub

Torque (Nm) transmissible by friction for a split hub

Bore size	03	04	05	06	08	010	012	014	015	018	020	025	026	028	030	035	040	045	050	055	056
BKGS-7	0,7	0,9	1,1	1,2																	
BKGS-9		1,7	2,1	2,4	3,0	3,0															
BKGS-14			9	10,6	12,5	12,5	12,5	12,5	12,5												
BKGS-19				17	17	17	17	17	17	17	17										
BKGS-24					43,9	51,8	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
BKGS-28						92	98	115	120	153	159	160	160	160	160	160	160	160	160	160	160
BKGS-38							191	226	248	302	312	325	325	325	325	325	325	325	325	325	325
BKGS-42								250	305	316	337	358	409	450	450	450	450	450	450	450	450

Part number	Transmissible torque (Nm)	Max. speed (l/min)	Moment of inertia (10^{-6} kg.m 2)	axial (mm)	radial (mm)	angular (mm)	Tightening torque (Nm)	Weight (kg)
BKGS-7	1,2	27000	0,0001	-0,3/+0,6	0,10	1°	0,35	0,006
BKGS-9	3	19000	0,0002	-0,4/+0,8	0,13	1°	0,75	0,019
BKGS-14	12,5	13000	0,006	-0,5/+1,0	0,09	0,9°	5	0,049
BKGS-19	17	10000	0,029	-0,5/+1,2	0,06	0,9°	10	0,12
BKGS-24	60	7000	0,121	-0,5/+1,4	0,10	0,9°	18	0,28
BKGS-28	160	6000	0,236	-0,7/+1,5	0,11	0,9°	43	0,355
BKGS-38	325	5000	0,797	-0,7/+1,8	0,12	0,9°	84	0,85
BKGS-42	450	4000	1,779	-1,0/+2,0	0,14	0,9°	84	1,5

Dimensions in mm

Characteristics

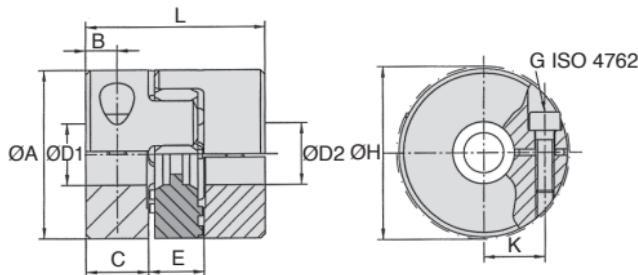
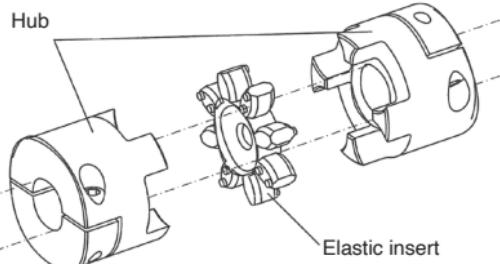
- Hardwearing
- Secured by a clamping hub
- Coupling mounted under pre-tension
- Shafts must have g_6 or h_7 tolerance
- Degrease surfaces before assembly

Bore

- Choose $\varnothing D_1$ and $\varnothing D_2$ from within the range shown

Option

- Keyway according to DIN6885-1



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	L	$\varnothing A$	K	$\varnothing H$	E	$\varnothing D_1/\varnothing D_2$		Price each		
						With keyway	Without keyway	C	B	G
BKGS-7	20	14	5	16,5	8	6-7	3-7	6	3	M2 29,20 € 42,52 €
BKGS-9	26	19,5	7,5	23	10	6-11	4-11	8	4	M2,5 32,12 € 46,68 €
BKGS-14	32	29,5	10,5	33	13	6-15	5-15	9,5	5	M4 54,02 € 78,78 €
BKGS-19	50	39,5	15	43	16	8-22	8-22	17	6	M5 65,70 € 95,80 €
BKGS-24	58	54,5	20	56	18	10-31	10-31	20	10	M6 74,48 € 108,47 €
BKGS-28	62	64,5	23,5	67	19	14-35	14-35	21,5	11	M8 102,23 € 148,73 €
BKGS-38	85	79,5	30	88	23	15-46	15-46	31	13	M10 173,78 € 252,86 €
BKGS-42	102	94,5	35	95	26	20-56	20-56	38	14	M10 268,71 € 390,64 €

Dimensions in mm



ADSR

Servo insert coupling Torque range: 12.5 to 525 Nm

- Elastic backlash free coupling
- Reliable torque transmission
- Maintenance free
- Low inertia/size
- Easy to assemble, even in confined spaces
- Reduces vibration
- Materials:
 - Hub- Aluminium
 - Ring- Polyurethane 98 Shore A (Red)

Applications

- Metrology, control systems, driving, machine tools, driving lead screws



Secured by a
clamping hub

Torque (Nm) transmissible by friction for a split hub

Part number	Ø5	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø30	Ø35	Ø40	Ø45	Ø50	Ø55
ADSR-14	4,8	6,0	7,7	9,4	11	12,5	12,5								
ADSR-19		16	17	17	17	17	17	17							
ADSR-24			37	43	50	56	60	60	60						
ADSR-28				61	72	83	94	114	138	160	160				
ADSR-38					87	100	113	138	168	197	225	251	277		
ADSR-42						174	197	242	296	348	398	450	450		
ADSR-48							276	343	424	502	525	525	525	525	525

Part number	transmissible torque (Nm)	Tightened torque (Nm)	Max speed (t/min)	Moment of inertia 10 ⁻³ kg.m ²	axial (mm)	Misalignment radial (mm)	angular
ADSR-14	12,5	2	13000	0,006	-0,5/+1,0	0,09	0,9°
ADSR-19	17	11	10000	0,036	-0,5/+1,2	0,06	0,9°
ADSR-24	60	15	7000	0,15	-0,5/+1,4	0,10	0,9°
ADSR-28	160	32	6000	0,33	-0,7/+1,5	0,11	0,9°
ADSR-38	325	38	5000	0,96	-0,7/+1,8	0,12	0,9°
ADSR-42	450	84	4000	4,92	-1,0/+2,0	0,14	0,9°
ADSR-48	525	145	3600	8,26	-1,0/+2,1	0,16	0,9°

Dimensions in mm

Characteristics

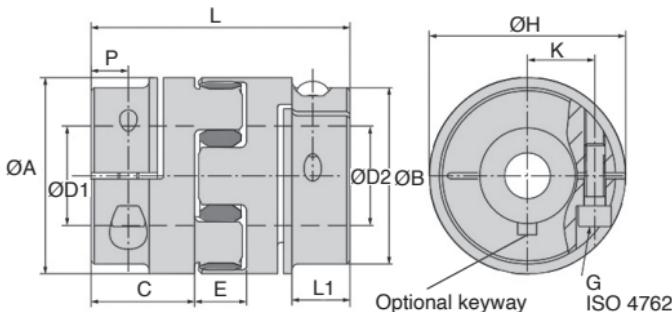
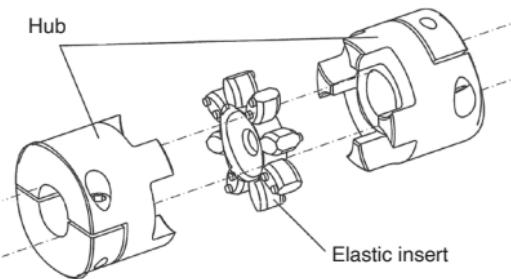
- Hardwearing
- Secured by a clamping hub
- Coupling mounted under pre-tension
- Shafts must have g6 or h7 tolerance
- Degrease surfaces before assembly

Bore

- Choose $\varnothing D1$ and $\varnothing D2$ from within the range shown

Option

- Keyway according to DIN6885-1

**DISCOUNTS**

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	L	L1	$\varnothing B$	K	$\varnothing A$	$\varnothing H$	E	$\varnothing D1 / \varnothing D2$	C	P	G	Price each	Weight (kg)	No. with keyway
ADSR-14	35	-	-	11	30	32,2	13	5-16	11	5	M3	0,042	58,83 €	58,83 €
ADSR-19	66	-	-	14,5	40	46	16	6-20	25	12	M6	0,158	83,65 €	83,65 €
ADSR-24	78	-	-	20	55	57	18	10-32	30	10,5	M6	0,304	97,87 €	97,87 €
ADSR-28	90	-	-	24,5	65	71	20	10-38	35	11,5	M8	0,505	126,68 €	126,68 €
ADSR-38	114	-	-	30	80	83	24	12-48	45	15,5	M8	0,934	195,75 €	195,75 €
ADSR-42	126	28	85	32,5	95	91	26	14-54	50	18	M10	3,8	669,37 €	669,37 €
ADSR-48	140	32	95	37	105	106	28	15-60	56	21	M12	4,9	782,71 €	782,71 €

Dimensions in mm

Flexible bellows coupling

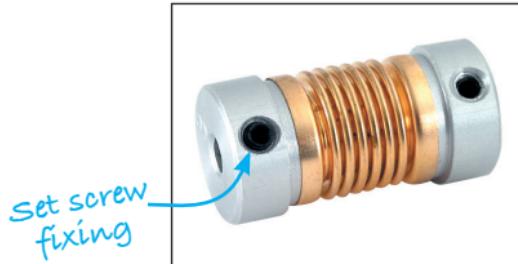


MFB

Couplings for servo-motors

Torque: 0.3 to 2Nm

- High precision
- High torsional stiffness
- Large misalignment
- Identical operation in both clockwise and anti-clockwise directions
- Materials:
 - Hub: Aluminium A-U5 Pb Bi
 - Bellows: Phosphorated bronze
- Max. working temperature: +100°C
- Bellows and hub bonded together

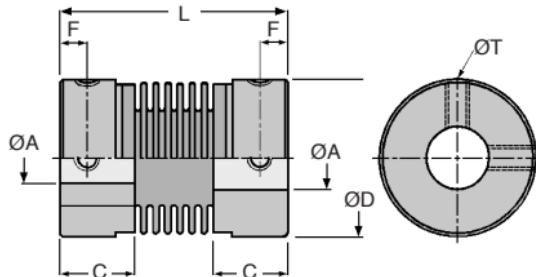


Uses

- Encoders, automated and robotic systems
- Stepper motors that cannot detect start position

Info

- We are unable to modify these parts



STANDARD BORES
IN STOCK

Part number	Misalignment			Torque		
	Radial (mm)	Axial (mm)	Angular	Nominal (Nm)	Max. (Nm)	
MFB-12	0,10	+0,40	-1,20	1,5°	0,3	0,6
MFB-16	0,10	+0,40	-1,20	1,5°	0,5	1,0
MFB-20	0,15	+0,60	-1,80	2,0°	0,8	1,6
MFB-25	0,15	+0,60	-1,80	2,0°	1,3	2,6
MFB-32	0,20	+0,80	-2,50	2,0°	2,0	4,0

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Max.						Moment of inertia (kg.m²)	Torsional stiffness (Nm/Rad)	Weight (g)	Max. rotational speed (rpm)	Price each Standard Bores
	Standard bore ØA	bore ØA	ØD	L	C	ØT					
MFB-12	3 x 3	6,35	12	23,5	7,5	M2,5	2,5	9,0 x 10⁻⁸	82	4,1	52000 56,66 €
MFB-16	4 x 4	8	16	26,5	9,0	M3	3,0	3,5 x 10⁻⁷	110	9,0	39000 58,66 €
MFB-20	5 x 5	10	20	33,0	10,0	M3	3,5	9,9 x 10⁻⁷	180	16,0	31000 58,11 €
MFB-25	6 x 6	12	25	36,5	12,0	M4	4,5	3,1 x 10⁻⁶	240	32,0	25000 74,73 €
MFB-32	6 x 6	16	32	42,0	13,5	M4	5,5	9,2 x 10⁻⁶	330	57,0	19000 85,95 €

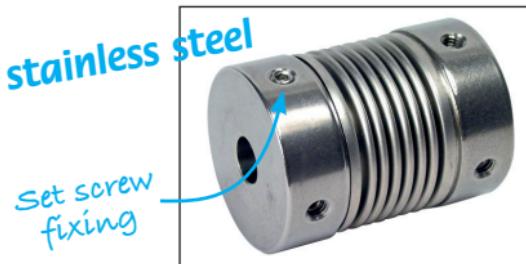
Dimensions in mm

Couplings for servo-motors

MFBS

Torque: 0.5 to 3Nm

- High precision
- High torsional stiffness
- Large misalignment
- Identical operation in both clockwise and anti-clockwise directions
- Materials:
 - Hub: stainless steel 303
 - Bellows: stainless steel 316L
- Max. working temperature: +150°C
- Bellows and hub bonded together

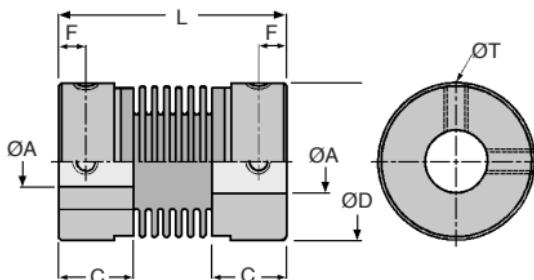


Uses

- Encoders, automated and robotic systems
- Stepper motors that cannot detect start position

Options

- We are unable to modify these parts



STANDARD BORES
IN STOCK

Part number	Misalignment			Nominal Torque (Nm)	Max. Torque (Nm)
	Radial (mm)	Axial (mm)	Angular		
MFBS-12	0,10	+0,40 -1,20	1,5°	0,5	1
MFBS-16	0,10	+0,40 -1,20	1,5°	1,0	2
MFBS-20	0,15	+0,60 -1,80	2,0°	1,5	3
MFBS-25	0,15	+0,60 -1,80	2,0°	2,0	4
MFBS-32	0,20	+0,80 -2,50	2,0°	3,0	6

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Standard bore	Max.						Moment of inertia (kg.m²)	Torsional stiffness (Nm/Rad)	Weight (g)	rotational speed (rpm)	Price each Standard Bores
		ØA	ØA	ØD	L	C	ØT					
MFBS-12	3 x 3	6,35	12	23,5	7,5	M2,5	2,5	$2,1 \times 10^{-7}$	100	9,1	52000	97,89 €
MFBS-16	4 x 4	8	16	26,5	9,0	M3	3,0	$8,0 \times 10^{-7}$	150	20,0	39000	121,82 €
MFBS-20	5 x 5	10	20	32,0	10,0	M3	3,5	$2,3 \times 10^{-6}$	220	37,0	31000	131,92 €
MFBS-25	6 x 6	12	25	36,5	12,0	M4	4,5	$7,0 \times 10^{-6}$	330	73,0	25000	137,43 €
MFBS-32	6 x 6	16	32	42,0	13,5	M4	5,5	$2,1 \times 10^{-5}$	490	130,0	19000	179,64 €

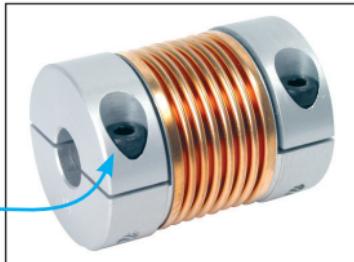
Dimensions in mm

MFBc

Couplings for servo-motors

Torque: 0.3 to 2Nm

- High precision
- High torsional stiffness
- Large misalignment
- Identical operation in both clockwise and anti-clockwise directions
- Materials:
 - Hub: Aluminium A-U5 Pb Bi
 - Bellows: Phosphorated bronze
- Max. working temperature: +100°C
- Bellows and hub bonded together

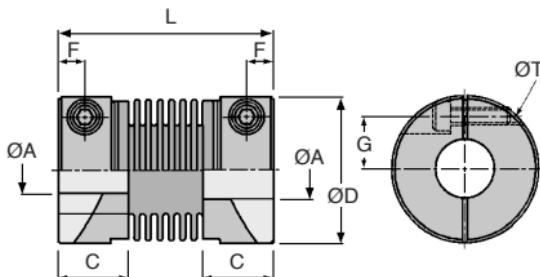


Uses

- Encoders, automated and robotic systems
- Stepper motors that cannot detect start position

Info

- We are unable to modify these parts



Part number	Misalignment			Torque	
	Radial (mm)	Axial (mm)	Angular (°)	Nominal (Nm)	Max. (Nm)
MFB-12C	0,10	+0,40	-1,20	1,5°	0,3 0,6
MFB-16C	0,10	+0,40	-1,20	1,5°	0,5 1,0
MFB-20C	0,15	+0,60	-1,80	2,0°	0,8 1,6
MFB-25C	0,15	+0,60	-1,80	2,0°	1,3 2,6
MFB-32C	0,20	+0,80	-2,50	2,0°	2,0 4,0

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -6%	On request	

Part number	Standard bore ØA	Max.							Moment of inertia (kg.m²)	Torsional Stiffness (Nm/Rad)	Max. rotational speed (rpm)	Stock* Standard bores	Price each Standard Bores
		Standard bore ØA	ØA	ØD	L	ØT	F	G					
MFB-12C	4 x 4	5,00	12	23,5	7,5	M2	2,25	4,0	9,7 x 10⁻⁸	82	52 000	✓	74,63 €
MFB-16C	5 x 5	6,35	16	26,5	9,0	M2,5	3,00	5,0	3,7 x 10⁻⁷	110	39 000	✓	74,70 €
MFB-20C	6 x 6	8,00	20	33,0	10,0	M2,5	3,50	6,5	1,0 x 10⁻⁷	180	31 000	✓	74,83 €
MFB-25C	8 x 8	10,0	25	36,5	12,0	M3	4,50	9,0	3,1 x 10⁻⁶	240	25 000	✓	104,95 €
MFB-32C	8 x 8	14,0	32	42,0	13,5	M4	5,00	11,0	9,6 x 10⁻⁶	330	19 000	✓	100,73 €

*Depending on availability - Dimensions in mm

Couplings for servo-motors

MFBSc

Torque: 0.5 to 3Nm

- **High precision**

- High torsional stiffness
- Large misalignment
- Identical operation in both clockwise and anti-clockwise directions

- **Materials:**

Hub: stainless steel 303
Bellows: stainless steel 316L

- Max. working temperature: +150°C
- Bellows and hub bonded together

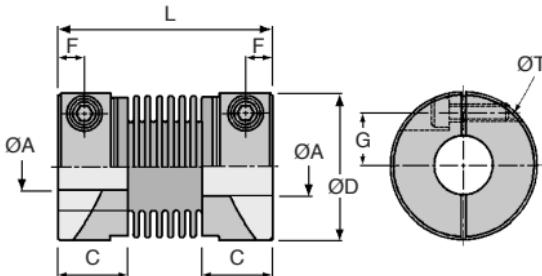


Uses

- Encoders, automated and robotic systems
- Stepper motors that cannot detect start position

Info

- We are unable to modify these parts



Part number	Misalignment			Torque	
	Radial (mm)	Axial (mm)	Angular (°)	Nominal (Nm)	Max. (Nm)
MFBS-12C	0,10	+0,40	-1,20	1,5°	0,5
MFBS-16C	0,10	+0,40	-1,20	1,5°	1,0
MFBS-20C	0,15	+0,60	-1,80	2,0°	1,5
MFBS-25C	0,15	+0,60	-1,80	2,0°	2,0
MFBS-32C	0,20	+0,80	-2,50	2,0°	3,0
					6

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Standard bore ØA	Max.						Moment of inertia (kg.m²)	Torsional stiffness (Nm/Rad)	rotational speed (rpm)	Stock*	Price each Standard Bores
		ØA	ØD	L	C	ØT	F					
MFBS-12C	4 x 4	5,00	12	23,5	7,5	M2	2,25	4,0	$2,1 \times 10^7$	100	52 000	✓ 183,03 €
MFBS-16C	5 x 5	6,35	16	26,5	9,0	M2,5	3,00	5,0	$8,1 \times 10^7$	150	39 000	✓ 183,71 €
MFBS-20C	6 x 6	8,00	20	32,0	10,0	M2,5	3,50	6,5	$2,3 \times 10^6$	220	31 000	✓ 220,16 €
MFBS-25C	8 x 8	10,0	25	36,5	12,0	M3	4,50	9,0	$6,9 \times 10^6$	330	25 000	✓ 234,86 €
MFBS-32C	8 x 8	14,0	32	42,0	13,5	M4	5,00	11,0	$2,1 \times 10^5$	490	19 000	✓ 267,20 €

*Depending on availability - Dimensions in mm

Miniature bellows coupling

Size XS



EKN GERWAH®

Couplings for servo-motors

Torque: 0.5 to 12Nm

- Backlash and maintenance free

- Materials:

Hub: anodised aluminium

Bellows: stainless steel

- Angular misalignment from 1.2° to 2° depending on the length

- High torsional rigidity

- Low moment of inertia

- Shaft/bore link without backlash

- Recommended assembly tolerances H7/g6

- Max speed: 15,000 rpm

- Working temperature -30°C to +100°C

- Please specify bore size on order
(between min and max Ø)



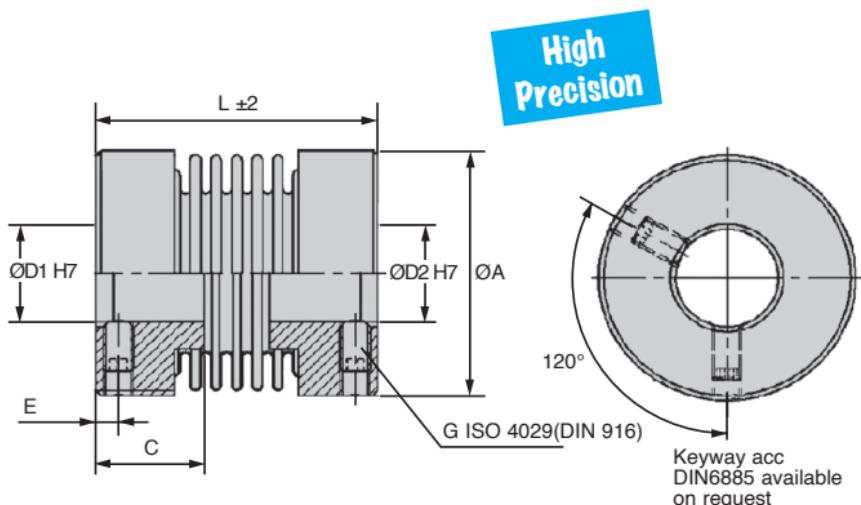
Options

- Keyway acc DIN6885 available on request
(tolerance JS9)

- Stainless steel version on request

Part number	Misalignment radial (ΔK_r) (mm)	Misalignment axial (ΔK_a) (mm)	Torsional stiffness C_T dyn (10 ⁶ Nm/rad)	Moment of inertia J (g cm ²)	Tightening torque (Screw) (Nm)	Weight (g)
EKN4-20	0,10	0,20	0,25	2,0	0,5	5
EKN4-23	0,15	0,30	0,19	2,0	0,5	6
EKN4-26	0,20	0,40	0,50	2,0	0,5	7
EKN9-21	0,10	0,20	0,50	2,0	0,5	6
EKN9-25	0,15	0,30	0,38	2,3	0,5	7
EKN9-28	0,20	0,40	0,30	2,6	0,5	8
EKN15-25	0,10	0,25	0,75	7,5	1,5	12
EKN15-30	0,15	0,40	0,70	8,0	1,5	14
EKN20-26	0,10	0,30	1,50	14,0	1,5	16
EKN20-32	0,20	0,40	1,30	16,0	1,5	18
EKN20-36	0,25	0,50	1,00	17,0	1,5	20
EKN45-39	0,10	0,30	6,50	68,0	3,0	48
EKN45-48	0,20	0,50	4,00	73,0	3,0	52
EKN100-44	0,15	0,40	8,10	200,0	3,0	48
EKN100-54	0,25	0,50	6,70	220,0	3,0	58

Dimensions in mm



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD1/ØD2 (H7)	ØA	C	L	G (DIN 916)	E (mm)	Nominal torque (Nm)	Price each	
								No keyway	With keyway
EKN4-20	3-9	16	6	20	M3	2,0	0,5	48,06 €	75,87 €
EKN4-23	3-9	16	6	23	M3	2,0	0,5	48,06 €	75,87 €
EKN4-26	3-9	16	6	26	M3	2,0	0,5	48,06 €	75,87 €
EKN9-21	3-9	16	6	21	M3	2,0	1,1	48,06 €	75,87 €
EKN9-25	3-9	16	6	25	M3	2,0	1,1	48,06 €	75,87 €
EKN9-28	3-9	16	6	28	M3	2,0	1,1	48,06 €	75,87 €
EKN15-25	3-12	20	10	25	2 x M4	3,0	1,75	48,06 €	75,87 €
EKN15-30	3-12	20	10	30	2 x M4	3,0	1,75	48,06 €	75,87 €
EKN20-26	3-16	25	11	26	2 x M3	2,0	2,4	48,06 €	75,87 €
EKN20-32	3-16	25	11	32	2 x M3	2,0	2,4	48,06 €	75,87 €
EKN20-36	3-16	25	11	36	2 x M3	2,0	2,4	48,06 €	75,87 €
EKN45-39	6-22	33	16	39	2 x M6	4,0	5,5	68,56 €	94,06 €
EKN45-48	6-22	33	16	48	2 x M6	4,0	5,5	68,56 €	94,06 €
EKN100-44	6-28	40	20	44	2 x M6	4,0	12	97,02 €	120,26 €
EKN100-54	6-28	40	20	54	2 x M6	4,0	12	97,02 €	120,26 €

Dimensions in mm

Miniature bellows coupling

DKN **GERWAH**

Couplings for servo-motors

Torque: 0.4 to 10Nm

Size XS ✕ ★★★ ⚙

- Backlash and maintenance free

- Materials:

Hub: anodised aluminium

Bellows: stainless steel

- Angular misalignment from 1.2° to 2° depending on the length

- High torsional rigidity

- Low moment of inertia

- Shaft/bore link without backlash

- Max speed: 15,000 rpm

- Recommended assembly tolerances H7/g6

- Working temperature -30°C to +100°C

- Please specify bore size on order (between min and max Ø)

Options

- Keyway acc DIN6885 available on request

Info.

- The DK series is no longer available and has been replaced by the DKN range

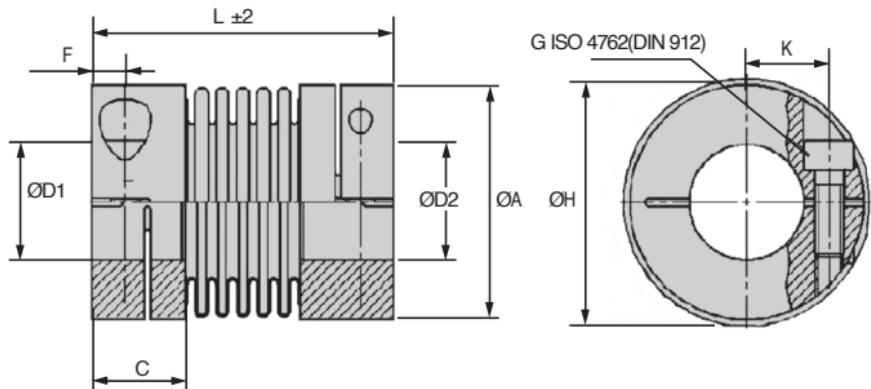


clamp hub

Part number	Nominal torque (Nm)	Misalignment radial (ΔK) (mm)	Misalignment axial (ΔK) (mm)	Angulaire (°)	Torsional stiffness C-(Nm/rad)	Moment of inertia J (g cm²)	Tightening torque (Nm)	Weight (g)
DKN4/21	0,5	0,10	0,20	1,2	0,25	2,6	0,3	5
DKN4/24	0,5	0,15	0,30	2,0	0,19	2,6	0,3	6
DKN4/28	0,5	0,20	0,40	2,0	0,15	2,6	0,3	7
DKN9/23	0,5	0,10	0,20	1,2	0,50	2,6	0,3	6
DKN9/26	0,5	0,15	0,30	2,0	0,38	2,9	0,3	7
DKN9/30	0,5	0,20	0,40	2,0	0,30	3,2	0,3	8
DKN15/26	1,75	0,10	0,25	1,2	0,75	11,0	0,8	12
DKN15/30	1,75	0,15	0,40	2,0	0,70	12,0	0,8	14
DKN20/32	2,4	0,10	0,30	1,2	1,50	25,0	1,5	20
DKN20/38	2,4	0,20	0,40	2,0	1,30	27,0	1,5	22
DKN20/42	2,4	0,25	0,50	2,0	1,00	28,0	1,5	24
DKN45/41	5,5	0,10	0,30	1,2	6,50	98,0	3,0	58
DKN45/50	5,5	0,20	0,50	2,0	4,00	103,0	3,0	62
DKN100/47	12,0	0,15	0,40	1,2	8,10	231,0	3,0	60
DKN100/57	12,0	0,25	0,50	2,0	6,70	250,0	3,0	70

Dimensions in mm

**High
Precision**



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -6%	On request	

Part number	D/D, (H7)	ØA	C	L	F	øH undercut	G (DIN 912)	K	Price each	
									No keyway	With keyway
DKN4/21	3-8	16	7	21	2	18	M2	5	63,80 €	64,37 €
DKN4/24	3-8	16	7	24	2	18	M2	5	63,80 €	64,37 €
DKN4/28	3-8	16	7	28	2	18	M2	5	63,80 €	64,37 €
DKN9/23	3-8	16	7	23	2	18	M2	5	63,80 €	64,37 €
DKN9/26	3-8	16	7	26	2	18	M2	5	64,37 €	64,37 €
DKN9/30	3-8	16	7	30	2	18	M2	5	64,37 €	64,37 €
DKN15/26	3-10	20	9	26	3	21	M2,5	7	64,37 €	64,37 €
DKN15/30	3-10	20	9	30	3	21	M2,5	7	64,37 €	64,37 €
DKN20/32	3-14	25	11	32	4	27	M3	9	68,56 €	68,56 €
DKN20/38	3-14	25	11	38	4	27	M3	9	68,56 €	68,56 €
DKN20/42	3-14	25	11	42	4	27	M3	9	68,56 €	68,56 €
DKN45/41	5-17	33	13	41	5	34	M4	12	101,33 €	101,33 €
DKN45/50	5-17	33	13	50	5	34	M4	12	101,33 €	101,33 €
DKN100/47	5-24	40	14	47	5	42	M4	16	126,85 €	126,85 €
DKN100/57	5-24	40	14	57	5	42	M4	16	126,85 €	126,85 €

Dimensions in mm

Bellows coupling



AKD **GERWAH**

Coupling for servo-motors

Torque: 22 to 600Nm

- Backlash and maintenance free
- Materials:
 - Hub: aluminium
 - bellows: stainless steel
- High torsional stiffness
- Low moment of inertia
- Shaft/bore link without backlash
- Recommended assembly tolerances H7/g6
- Working temperature: -30°C to +100°C
- Please specify bore size on order (between min and max Ø)

Options

- Keyway acc DIN6885 available on request
(tolerance JS9)

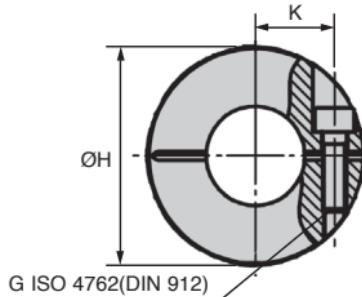
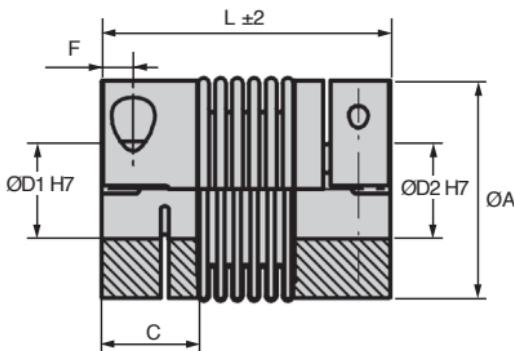


Part number	radial (mm)	Misalignment axial (mm)	angular	Max. speed (rpm)	Weight (approx) (ca.kg)
AKD18	0,2	0,5	1,5°	12700	0,14
AKD30	0,2	0,5	1,5°	10200	0,26
AKD60	0,2	0,5	1,5°	8600	0,43
AKD80	0,2	0,5	1,5°	6800	0,79
AKD150	0,2	0,5	1,5°	6800	0,79
AKD200	0,2	0,5	1,5°	6300	1,12
AKD300	0,2	0,5	1,5°	5900	1,50
AKD500	0,2	1,0	1,5°	4900	2,04

Part number	Nominal torque (Nm)	Torsional stiffness (10 ³ Nm/rad)	Radial stiffness (N/mm)	Axial stiffness (N/mm)	Moment of inertia (10 ⁻³ kg.m ²)	Tightening torque (Nm)
AKD18	22	6	85	40	0,06	6
AKD30	36	25	220	30	0,10	12
AKD60	75	50	330	55	0,30	30
AKD80	95	75	400	55	0,90	60
AKD150	180	100	600	85	0,90	85
AKD200	240	120	450	85	1,50	100
AKD300	360	280	1500	150	3,20	120
AKD500	600	310	1000	85	4,90	190

Dimensions in mm

High
Precision



G ISO 4762(DIN 912)

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Bore ØD1/D2 (H7)	Price each							
		C	L	ØA	F	G	K	H	
AKD18	8-26	20	71	45	6	M5	18	47	216,57 €
AKD30	10-30	25	73	55	8	M6	20	56	269,51 €
AKD60	12-35	29	89	64	10	M8	24	67	304,23 €
AKD80	14-42	34	103	80	12	M10	28	84	345,00 €
AKD150	14-42	34	103	80	12	M10	28	84	412,52 €
AKD200	22-46	38	113	90	13	M12	31	93	498,24 €
AKD300	24-60	38	115	110	13	M12	39	110	545,10 €
AKD500	35-64	41	122	119	15	M14	43	122	698,36 €

Dimensions in mm

Bellows coupling

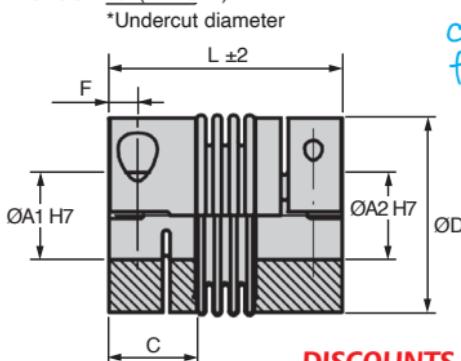
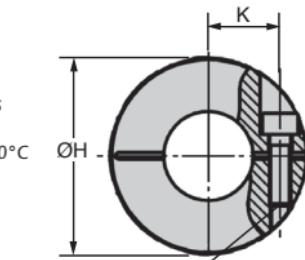


AKN **GERWAH®**

Coupling for servo-motors

Torque: 22 to 180Nm

- Backlash and maintenance free
- High torsional stiffness
- Low moment of inertia
- Shaft/bore link without backlash
- Recommended assembly tolerances H7/g6
- Working temperature -30°C to +100°C
- Materials:
 - Hub: aluminium
 - Bellows: stainless steel
- Please specify bore size on order (between min and max Ø)



High
Precision

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -8%	On request	

Part number	Max. speed (rpm)	radial (mm)	Misalignment axial (mm)	angular	Nominal torque (Nm)	Torsional stiffness (10 ⁶ Nm/Rad)	Moment of inertia (10 ⁻⁶ kg.m ²)	Tightening torque (Nm)	Weight (kg)
AKN18-63	12 700	0,2	0,5	1,5°	22	8	0,05	6	0,13
AKN30-65	10 200	0,1	0,4	1,0°	36	35	0,11	12	0,25
AKN60-78	8 600	0,1	0,4	1,0°	75	75	0,29	30	0,41
AKN80-91	6 800	0,2	0,4	1,0°	95	130	0,87	60	0,74
AKN150-91	6 800	0,2	0,4	1,0°	180	150	0,87	85	0,74

Part number	ØA mini.	ØA maxi.	L	ØD	C	F	G	K	ØH	Pric each	1 to 2 No keyway	With keyway
AKN18-63	8	26	63	45	20	6	M5	18	48	234,28	€ 271,27	€
AKN30-65	10	30	65	55	25	8	M6	20	55	291,10	€ 328,10	€
AKN60-78	12	35	78	64	29	10	M8	24	67	328,96	€ 365,96	€
AKN80-91	14	42	90	80	33	12	M10	28	84	373,95	€ 410,94	€
AKN150-91	14	42	90	80	33	12	M10	28	84	446,89	€ 484,35	€

Dimensions in mm



Couplings for servo-motors

GERWAH® AK

Torque: 36 to 800Nm

- Backlash and maintenance free
- High torsional stiffness
- Low moment of inertia
- Shaft/bore link without backlash
- Recommended assembly tolerances H7/g6
- Working temperature -30°C to +100°C
- Materials:
 - Hub: steel
 - Bellows: stainless steel
- Please specify bore size on order (between min and max Ø)

Torque calculation

- Use the formula

$$T_{kn} > K \times T_{as} \times J_{mach} / (J_{mach} + J_{mach}) \text{ in Nm}$$

With following safety coefficient:

K = 1.5 for regular motion

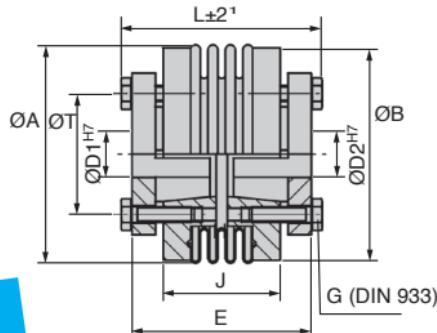
K = 2 for irregular motion

K = 2.5 - 4 for jerky motion

JX = moment of inertia (machine + motor)

T_{as} Required torque

clamp fixing

High
Precision

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	Nominal torque (Nm)	torsional stiffness radial (10 ⁶ Nm/Rad)	Stiffness axial (N/mm)	Moment of inertia (10 ⁻³ kg.m ²)	Tightening torque (Nm)	Weight (kg)	Misalignement radial (mm)	misalignement axial (mm)	angular (°)	Max. speed (rpm)
AK30-60	36	25	220	30	0,15	3,0	0,28	0,2	0,5	1,5 11 000
AK60-73	72	50	330	55	0,24	8,5	0,48	0,2	0,5	1,5 9 100
AK80-91	96	75	400	55	0,65	10,0	0,85	0,2	0,5	1,5 7 000
AK150-92	180	100	600	85	0,65	14,0	0,85	0,2	0,5	1,5 7 000
AK200-93	240	120	450	85	0,87	14,0	1,00	0,2	0,5	1,5 6 700
AK300-104	360	280	1500	150	2,33	18,0	1,92	0,2	0,5	1,5 5 200
AK500-113	800	310	1000	85	5,73	26,0	2,45	0,2	1,0	1,5 4 600

Part number	ØA (mm)	ØB (mm)	L	D _{H7} /D _{H7} min.	D _{H7} /D _{H7} max.	E	J	ØT	G	Price each
AK30-60	56	55	60	9	20	53	38	31	6 x M4	265,53 €
AK60-73	66	64	73	12	25	65	46	37	6 x M6	288,08 €
AK80-91	82	80	91	15	35	83	61	51	6 x M6	316,54 €
AK150-92	82	80	91	15	35	84	61	51	6 x M6	369,66 €
AK200-93	90	90	93	15	42	85	63	56	6 x M6	432,82 €
AK300-104	110	110	104	15	50	93	67	75	6 x M8	500,34 €
AK500-113	122	119	113	24	55	105	72	80	6 x M8	651,33 €

Dimensions in mm

- Tolerates extreme misalignment

- Compact

- Corrosion-resistant

- High resistance to acids, solvents, alkaline solutions, fats, oils and ozone

- High torsional rigidity

- High resistance to tearing

- Retains its flexibility even at low temperatures

Set screw fixing



Characteristics

- High angular, radial, and axial flexibility

- Dampens vibrations

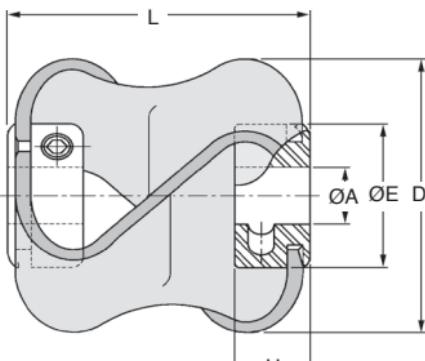
- Absorbs shocks

- Max. working temp.: -40°C to +100°C

- Max. speed: 3000 rpm

- Materials:

Ring: Hytrel® resistant elastomer
Hub: galvanised steel



Part number	Misalignment		
	axial (mm)	angulaire (°)	radial (mm)
PFL28	4,5	10°	2,6
PFL48	7,5	15°	3,2
PFL58	8,5	15°	3,2
PFL61	11,0	15°	3,2

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	ØA Bores (mm)					Max. torque (Nm)	Weight (g)	Price each	
	Standard	Max.	D	L (+/- mm)	H				
PFL28-6	6 x 6	9,53	27	27	7,9	0,5	M3	25	✓ 39,74 €
PFL28-8	8 x 8	9,53	27	27	7,9	0,5	M3	25	✓ 39,74 €
PFL48-10	10 x 10	12,70	48	48	12,7	25	M4	92	✓ 46,40 €
PFL48-12	12 x 12	12,70	48	48	12,7	25	M4	92	✓ 46,40 €
PFL58-12	12 x 12	16,00	54	55	16,0	28	M5	124	✓ 52,63 €
PFL58-14	14 x 14	16,00	54	55	16,0	28	M5	124	✓ 52,63 €
PFL61-14	14 x 14	16,00	56	56	16,0	28	M6	136	✓ 60,19 €
PFL61-16	16 x 16	16,00	56	56	16,0	28	M6	136	✓ 60,19 €

*Depending on availability - Dimensions in mm

COUPLINGS (TRANSMISSION)

P. 50-73

BOWEX® COUPLING



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**JAW COUPLING
ECONOMY RANGE**



p.58

**MASTERFLEX®
FLEXIBLE SHAFT**



p.62

**PERIFLEX® ELASTIC
COUPLING**



p.68

Buying guide

Coupling

for transmission



Reference	RTN	GFX	RTK	GET-AL
Brand	BoWex® Junior	-	BoWex®	-
Type	curved tooth gear	curved tooth gear	curved tooth gear	Flektor
Radial misalignment (mm)	0,1 → 0,4	0,7 → 1,3	0,3 → 0,4	0,2 → 0,28
Axial misalignment (mm)	1	1	1	1,2 → 1,8
Angular misalignment (mm)	1° → 2°	2°	2°	0,9 → 1,2
Max. torque (Nm)	5 → 24	23 → 840	5 → 160	20 → 380
Max. speed (rpm)	-	4000 → 14000	6700 → 14000	7100 → 14000
Materials	nylon	steel + nylon	steel + nylon	aluminium + Polyurethane
Keying	✓	✗	✓	✗
Re-boring	✗	✗	✓	✗
Frequent starts	✓	✓	✓	✓
Uncoupling without disassembly	✓	✓	✓	✓
Advantages	economical	economical	practical	economical
Quality	☆☆	☆☆	☆☆☆	☆☆
Price	€	€	€€	€
Pages	② p.52	② p.54	② p.56	② p.58

					
RTE	PNA	FDS FDSQ	AF	SC2	
Rotex®	Periflex®	Masterflex			
flector	type	flexible shaft	rigid	rigid	
0,17 → 0,50	5	-	0	0	
-0,5 → +3,4	6	-	0	0	
0,9° → 1,2°	2°	-	0	0	
2 → 4800	50 → 2400	0,15 → 75	-	25 → 2250	
2800 → 19000	3000 → 5000	200 → 12000	-	-	
steel, aluminium or cast iron + polyurethane	steel + rubber	steel	steel	steel, stainless steel	
✓	✓	✗	✓	✗	
✓	✗	✗	✓	✗	
✓	✓	✗	✓	✓	
✓	✗	✗	✗	✓	
practical, powerful	practical, powerful	bypasses obstacles	standard	standard	
☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	
€€€	€€€	€€€€	€€	€€	
② p.60	② p.68	② p.62	② p.72	② p.73	

BoWex® curved tooth gear coupling

RTN

Torque: 5 to 24Nm

- Anti-corrosion materials

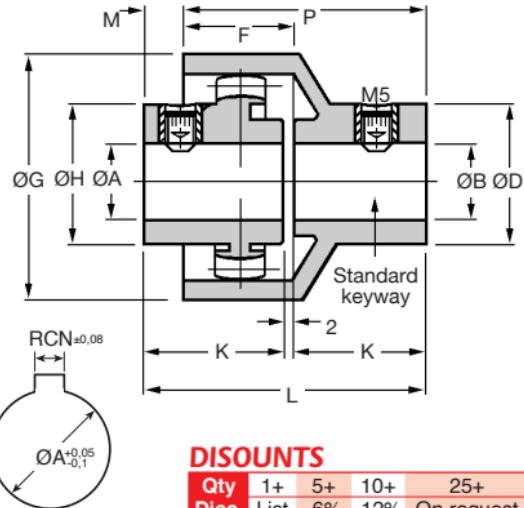
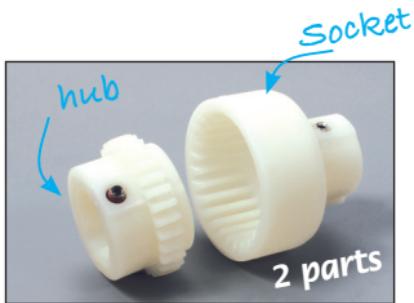
- Very low wear
- BoWex® Junior
- Maintenance free
- 2 part construction
- Curved teeth
- Material:
Nylon
- Working temp.: -25°C to +100°C
- Bore and keyway acc DIN6885/1-J59,
fixing screw supplied
- Max. speed: 6.000 rpm
- Low weight and low inertia
- Axial assembly

Elements
of same
size can be
combined

Info.

- ØD is a non-operational surface and is not truly circular
- Supplied un-assembled

**MANY DIFFERENT BORES
IN STOCK**



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	K	L	P	F	M	ØH ØD	ØA ØB	Bores Hub Socket	Misalignment	Torque (Nm) Tkn	Price each max.	1 to 4
									Axial	Radial		
RTN-J-14	23	48	40	18,5	8	22	22	6,8,9	8	5	10	21,41 €
						25	25	10,11	10,11			
						26	26	12,14	12,14			
RTN-J-19	25	52	42	19	10	27	29	12,14	14,15	8	16	32,47 €
						30	29	16	14,15			
						32	35	19	19			
RTN-J-24	26	54	45	21,5	9	32	26	10,11,12	14,16	12	24	39,16 €
						32	32	14,15,16	14,16			
						36	36	18,19,20	19,20			
						38	40	24	24			

Dimensions in mm



BoWex® curved tooth gear coupling

Torque: 5 to 24Nm



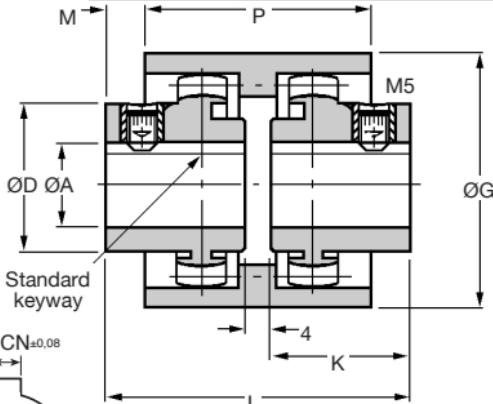
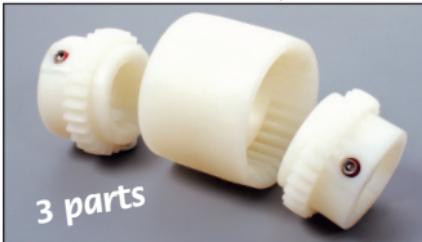
- Anti-corrosion material

- Very low wear
- BoWex® Junior
- Maintenance free
- 3 part construction
- Curved teeth
- Material:
Nylon
- Working temp.: -25°C to +100°C
- Bore and keyway acc DIN6885/1-JS9,
fixing screw supplied
- Tolerances:
Bore $+0.05 / -0.1$
Keyway ± 0.08
- Axial assembly

Info.

- ØD is a non-operational surface and is not truly circular
- Supplied un-assembled

MANY DIFFERENT BORES
IN STOCK



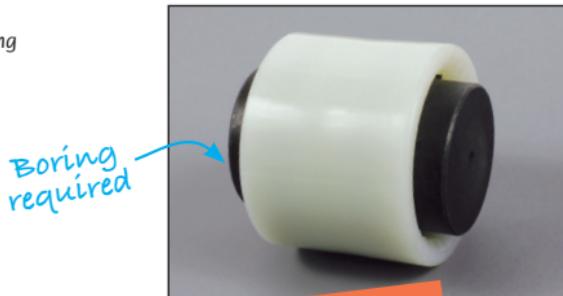
DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	K	L	P	M	ØD	ØA	ØG	Misalignment			Torque (Nm)		Price each 1 to 4
								Axial (mm)	Radial (mm)	Angular ±1°	Tkn	Tkn max.	
RTN-JM-14	23	50	37	6,50	22	6,7,8,9		40	±1°	±0,3	5	10	29,50 €
					25	10,11							
					26	12,14							
RTN-JM-19	25	54	37	8,50	27	12,14		47	±1°	±0,3	8	16	46,03 €
					30	16							
					32	19							
RTN-JM-24	26	56	41	7,50	26	10,11,12		53	±1°	±0,4	12	24	55,42 €
					32	14,15,16							
					36	18,19,20							
					38	24							

Dimensions in mm

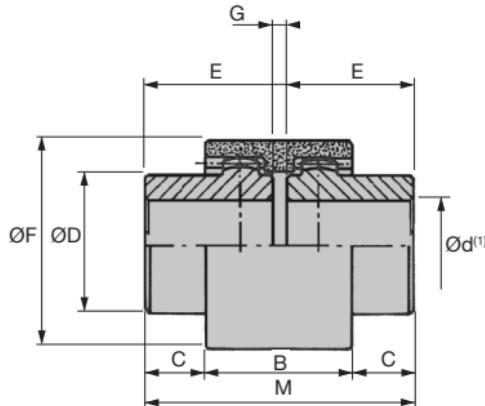
- Rigid in torsion
- Especially suitable for transmitting torque
- Maintenance free
- Low wearing
- 3 part construction
- Absorbs vibration
- Curved teeth
- Electrically insulating
- Materials:
 - Hub: Steel
 - Sleeve: Polyamide
- Working temp range: -20 to 80 °C



Economy range

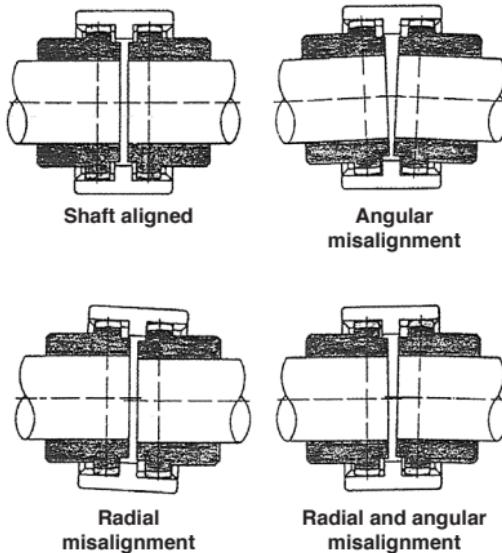
Bores

- ⁽¹⁾Depending on the size, these are supplied either solid or with a pre-bore.
- They should be finished by the user.
- Supplied non-assembled



Part number	Nominal torque	Max torque	Max speed (rpm)	Weight (kg)	Moment of inertia kg.cm²	Misalignment		
						angular	radial (mm)	axial (mm)
GFX-14-NN	11,5	23	14000	0,166	0,27	±2°	0,7	±1
GFX-19-NN	18,5	36,5	12000	0,276	0,64	±2°	0,8	±1
GFX-24-NN	23	46	10000	0,312	0,92	±2°	0,8	±1
GFX-28-NN	51,5	103,5	8000	0,779	3,45	±2°	1	±1
GFX-32-NN	69	138	7100	0,918	5,03	±2°	1	±1
GFX-38-NN	88	176	6300	1,278	9,59	±2°	0,9	±1
GFX-42-NN	110	220	6000	1,473	13,06	±2°	0,9	±1
GFX-48-NN	154	308	5600	1,777	18,15	±2°	0,9	±1
GFX-55-NN	285	570	4800	3,380	49,44	±2°	1,2	±1
GFX-65-NN	420	840	4000	4,988	106,34	±2°	1,3	±1

Dimensions in mm



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	Bores possible Ød (h7)										Stock*	Price each 1 to 4
	Mini.	Maxi.	B	C	ØD	E	ØF	G	M			
GFX-14-NN	6	14	38	6,5	25	23,5	41	4	51	✓	22,75 €	
GFX-19-NN	8	19	38	8,5	32	25,5	48	4	55	✓	27,29 €	
GFX-24-NN	10	24	42	7,5	36	26,5	52	4	57	✓	30,50 €	
GFX-28-NN	10	28	48	19	45	41	68	4	86	✓	40,25 €	
GFX-32-NN	12	32	48	18	50	40	75	4	84	✓	48,07 €	
GFX-38-NN	14	38	50	17	58	40	85	4	84	✓	49,40 €	
GFX-42-NN	20	42	50	19	63	42	95	4	88	✓	72,43 €	
GFX-48-NN	20	48	50	27	68	50	100	4	104	✓	86,87 €	
GFX-55-NN	25	55	65	29,5	82	60	120	4	124	-	138,85 €	
GFX-65-NN	25	65	72	36	95	70	140	4	144	-	199,19 €	

*Depending on availability - Dimensions in mm



Torque: 5 to 160Nm

- Rigid in torsion
- Suitable for handling high torques
- Maintenance free
- Low wear
- 3 part construction
- Rounded teeth
- Materials:
 - Sleeve: nylon
 - Hub: sintered steel
- Working temp.: -25°C to +100°C
- Bore(tolerance H7) and keyway acc DIN6885/1-JS9
- Axial plug-in assembly



set screw and
keyway fixing*

Options

- Modification to bore sizes (additional cost)
- Conical bores
- Imperial sized bores for hydraulic pumps

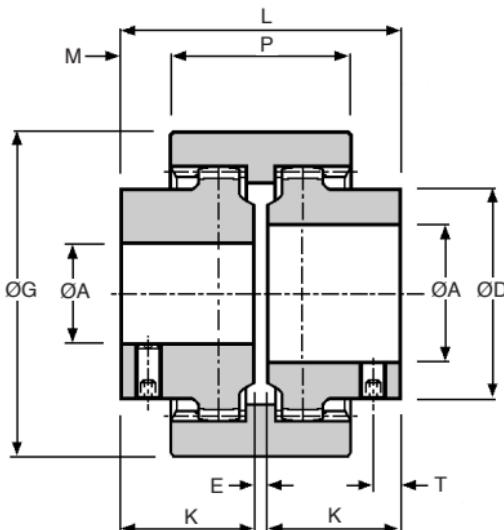
Info

- *Except for non bored couplings
- Supplied un-assembled



Part number	K	E	L	P	M	ØD	ØG	Screw	Standard		Optional ØA	max. ØA
									T	ØA		
RTK-M-14	23	4	50	37	6,5	25	40	M5	6	12	8, 9, 10, 11, 13, 14, 15	15
RTK-M-19	25	4	54	37	8,5	32	47	M5	6	12	10, 11, 14, 15, 16, 17, 18, 19, 20	20
RTK-M-24	26	4	56	41	7,5	36	53	M5	6	12	10, 11, 14, 15, 16, 17, 18, 19, 20, 22, 24	24
RTK-M-28	40	4	84	46	19,0	44	65	M8	10	-	14, 15, 16, 17, 18, 19, 20, 22, 24, 25, 28	28
RTK-M-32	40	4	84	48	18,0	50	75	M8	10	-	18, 19, 20, 22, 24, 25, 28, 30, 32	32
RTK-M-38	40	4	84	48	18,0	58	83	M8	10	-	18, 19, 20, 22, 24, 25, 28, 30, 32, 35, 38	38

Dimensions in mm



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	Max. speed (rpm)	Torque Tk (Nm)			Misalignment			Stock*	Price each 1 to 4	
		Alternate (Nm)	Nominal (Nm)	Max. (Nm)	Axial (mm)	Radial (mm)	Angular		Plain	Plain
RTK-M-14	14000	5	10	30	±1	±0,30	±1,0°	✓	41,68 €	On request
RTK-M-19	11800	8	16	48	±1	±0,30	±1,0°	✓	52,33 €	
RTK-M-24	10600	10	20	60	±1	±0,35	±0,9°	✓	62,61 €	
RTK-M-28	8500	23	45	135	±1	±0,35	±0,9°	✓	94,42 €	
RTK-M-32	7500	30	60	180	±1	±0,35	±0,9°	✓	115,97 €	
RTK-M-38	6700	40	80	240	±1	±0,40	±0,9°	✓	141,56 €	On request

*Depending on availability - Dimensions in mm

Jaw coupling, economy range



GET-AL Torque range from 2.6 to 380 Nm

- Rigid in torsion
- Especially suitable for transmitting torque
- Maintenance free
- Low wearing
- 3 part construction
- Absorbs vibration
- Constant velocity
- Electrically insulating
- Materials:
 - Hub: Aluminium
 - Spider: Polyamide 94 Shore A
- Working temp range: -30 to 140 °C

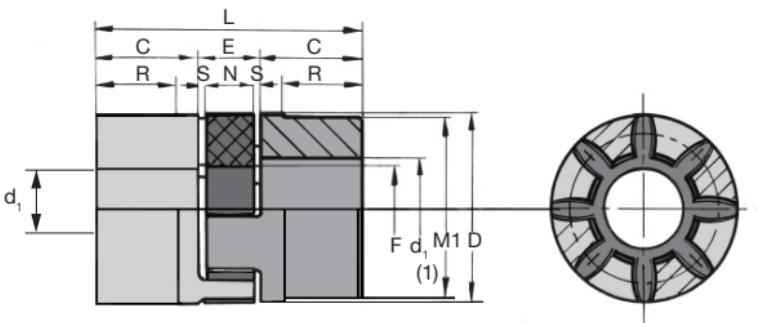
Bores

- To be finished by the user
- Supplied un-assembled



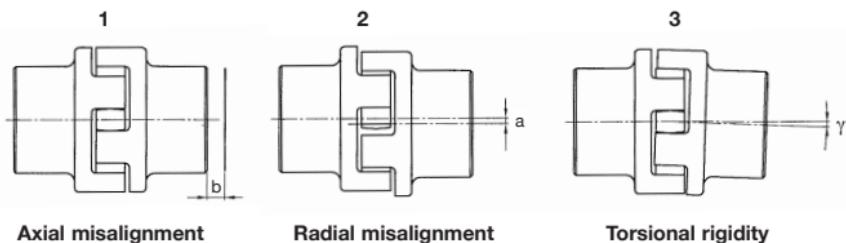
Economical range

Re-boring
required



Part number	Pre-bore	Max bore	d1	C	ØD	E	ØF	ØM1	N	R	S	L	Weight (kg)	Spider	Hub
GET-AL-24B	10	24	25	40	16	18	40	40	12	19	2	66	0,005	0,08	
GET-AL-32B	14	32	30	55	18	27	55	14	24	2	78	0,014	0,18		
GET-AL-38B	16	38	35	65	20	30	65	15	27,5	2,5	90	0,025	0,30		
GET-AL-45B	20	45	45	80	24	38	78	18	36,5	3	114	0,042	0,55		

Dimensions in mm



Axial misalignment

Radial misalignment

Torsional rigidity

Part number	Torsional rigidity (kNm/rad)			
	1,0 Tk n	0,75 Tk n	0,5 Tk n	0,25 Tk n
GET-AL-24B	0,68	0,57	0,44	0,28
GET-AL-32B	2,19	1,82	1,40	0,90
GET-AL-38B	5,20	4,31	3,32	2,12
GET-AL-45B	10,00	8,30	6,39	4,08

DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List -6%	-12%	On request	

Part number	Moment of inertia kg.cm ²	Max torque t/min	Torque (Nm)			axial b	radial a	angular γ	Price each 1 to 4 Stock*
	Tk n	Nominal Tk n	Max Tk max	Alternating Tk w					
GET-AL-24B	0,4	14000	10	20	2,6	1,2	0,2	1,2	✓ 20,73 €
GET-AL-32B	1,0	10600	35	70	9	1,4	0,2	0,9	✓ 27,73 €
GET-AL-38B	3,0	8500	95	190	25	1,5	0,25	0,9	✓ 40,04 €
GET-AL-45B	8,0	7100	190	380	49	1,8	0,28	1,0	✓ 62,69 €

*Depending on availability - Dimensions in mm

- Maintenance free
- 3 part construction
- Max torsion angle 5°
- Materials:
 - Hub: Aluminium, steel or cast iron
 - Spider: Polyurethane (92 Shore A)
- Working temp. -40°C to +100°C
- Bore (tolerance H7) and keyway acc DIN6885/1-J59
- Axial plug-in assembly
- Pre-bores are not toleranced

Options

- Modification to bore sizes at additional cost (H7 tolerance and keyway acc DIN6885/1-J53)

Info.

- *Except for non-bored or pre-bored couplings
- Supplied un-assembled

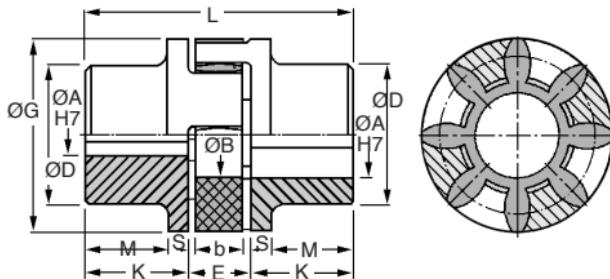


set screw and
keyway fixing*



Part number	Material	Misalignment at (rpm)			Max. speed (rpm)	Torque Tk (Nm)	Angle of torsion		
		axial (mm)	radial (mm)	angulare (°)			alternate Tk	nominal Tk	max. Tk
RTE-A-14	Aluminium	-0,5/1,0	0,17	1,2°	19 000	2,0	7,5	12,5	6,4° 10°
RTE-A-19	Aluminium	-0,5/1,2	0,20	1,2°	14 000	2,6	10	17	3,2° 5°
RTE-SL-19	Steel	-0,5/1,2	0,20	1,2°	14 000	2,6	10	20	3,2° 5°
RTE-A-24	Aluminium	-0,5/1,4	0,22	0,9°	10 600	9,0	35	60	3,2° 5°
RTE-SL-24	Steel	-0,5/1,4	0,22	0,9°	10 600	9,0	35	70	3,2° 5°
RTE-A-28	Aluminium	-0,7/1,5	0,25	0,9°	8 500	25,0	95	160	3,2° 5°
RTE-SL-28	Steel	-0,7/1,5	0,25	0,9°	8 500	25,0	95	190	3,2° 5°
RTE-GG-38	Cast iron	-0,7/1,8	0,28	1,0°	7 100	49,0	190	380	3,2° 5°
RTE-GG-42	Cast iron	-1,0/2,0	0,32	1,0°	6 000	69,0	265	530	3,2° 5°
RTE-GG-48	Cast iron	-1,0/2,1	0,36	1,1°	5 600	81,0	310	620	3,2° 5°
RTE-GG-55	Cast iron	-1,0/2,2	0,38	1,1°	4 750	105,0	410	820	3,2° 5°
RTE-GG-65	Cast iron	-1,0/2,6	0,42	1,2°	4 250	163,0	625	1 250	3,2° 5°
RTE-GG-75	Cast iron	-1,5/3,0	0,48	1,2°	3 550	254,0	975	1 950	3,2° 5°
RTE-GG-90	Cast iron	-1,5/3,4	0,50	1,2°	2 800	624,0	2400	4 800	3,2° 5°

Dimensions in mm



Elements of same size
can be combined

DISCOUNTS

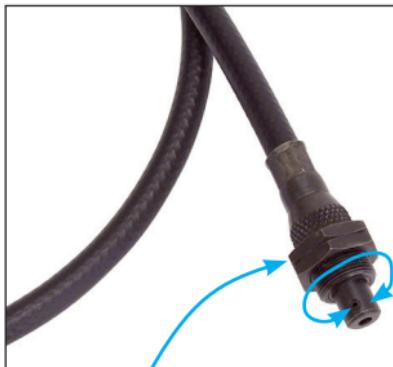
Qty	1+	5+	10+	25+
Disc.	List -6%	-12%	On request	

ØA Pre- bore	ØA standard	ØA in option	Price each 1 to 4											
			ØD	ØG	K	E	S	b	L	M	ØB	Plain or Standard bore pre-bored	and keyway	
Full	14	6 8 9 10 11 12 15 16	30	30	11	13	1,5	10	35	0	10	39,99 €	56,20 €	
Full	14,19	8 10 11 12 15 16	32	41	25	16	2,0	12	66	20	18	32,26 €	48,65 €	
18	-	20 24 25	41	41	25	16	2,0	12	66	20	18	On request	68,65 €	
Full	25	10 11 12 14 15 16 18 19 20 24	40	40	25	16	2,0	12	66	-	18	45,50 €	85,69 €	
Full	15,19	14 15 16 18 19 20 24	40	56	30	18	2,0	14	78	24	27	42,52 €	87,22 €	
20	-	25 28	56	56	30	18	2,0	14	78	24	27	On request	87,22 €	
Full	-	14 15 16 18 19 20 22 24 25 28 30 32	55	55	30	18	2,0	14	78	-	27	64,69 €	On request	
Full	20,25	14 16 18 19 22 24 28	48	67	35	20	2,5	15	90	28	30	58,41 €	113,92 €	
23	-	30 35 38	67	67	35	20	2,5	15	90	28	30	On request	113,92 €	
Full	30	14 15 16 18 19 20 22 24 25 28 32 35 38 40	65	65	35	20	2,5	15	90	-	30	83,45 €	142,51 €	
Full	-	16 18 19 20 22 24 25 28 30 32 35 38	66	80	45	24	3,0	18	114	37	38	154,86 €	On request	
36	-	40 42 45 48	78	80	45	24	3,0	18	114	37	38	-	-	
Full	-	30 32 35 38 40 42 45 48	75	95	50	26	3,0	20	126	40	46	235,18 €	On request	
Full	-	25 30 32 35 38 40 42 45 48 50 55 60	85	105	56	28	3,5	21	140	45	51	276,66 €	On request	
18	-	30 32 35 38 40 42 45 48 50 55 60	98	120	65	30	4,0	22	160	52	60	On request	On request	
20	-	40 45 48 50 55 60 65 70	115	135	75	35	4,5	26	185	47	68	On request	On request	
28	-	40 45 48 50 55 60 65 70 75 80 85 90	135	160	85	40	5,0	30	210	53	80	On request	On request	
38	-	50 55 60 65 70 75 80 85 90	160	200	100	45	5,5	34	245	62	100	On request	On request	

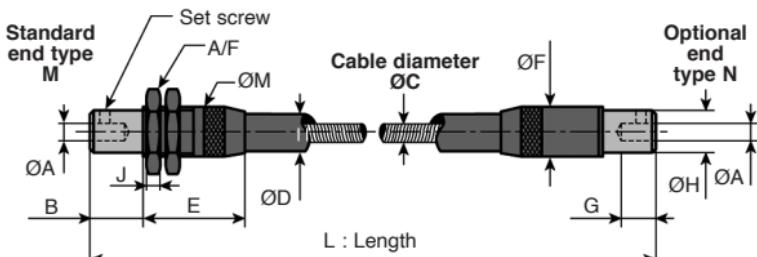
Dimensions in mm



- Suitable for most applications due to the use of self lubricating bronze bearings in the end connectors
- Allows the driving and driven elements to be mounted apart
- Obstacles can be avoided, multiple bends possible
- Position of the driven element is no longer determined by the position of the driving equipment
- Output efficiency >95%
- Dampens vibration
- Woven wire flexible shaft
- Materials:
 - Wires: blackened XC25 steel
 - Sheath: PVC



*standard end
(with 2 locknuts)*



Dark grey areas are fixed parts.
Light grey areas are revolving parts.

Part number	ØC core	ØM	ØA	B	ØD	E	A/F	ØF	G	ØH	J	Screw
FDSQ4-L	3,80	M15x1,0	4	10	10,5	43	22	15,0	8	12,5	4	M3
FDSQ5-L	4,75	M18x1,0	5	16	14,0	50	24	18,0	12	15,5	4	M3
FDSQ6-L	6,35	M21x1,0	6	17	17,0	59	27	21,0	14	18,5	4	M4
FDSQ8-L	8,00	M22x1,5	8	23	17,5	63	30	22,0	17	18,5	4	M4
FDSQ9-L	9,52	M26,5x1,5	10	25	22,5	69	35	26,5	20	23,0	4	M5
FDSQ13-L	12,70	M29,5x1,5	15	31	25,0	84	36	29,5	24	26,0	4	M6

Dimensions in mm

Info.

- Replace the "L" in the part number by the length required and add the desired end (R: standard; S: optional)

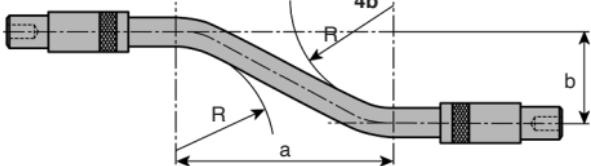
E.g. FDSQ4A-500RR

- Steel core lubricated with oil
- For continuous use, the shaft should be lubricated every 3 months
- Flexible shaft can be removed by unscrewing the knurled part. Check the sealing before re-use
- Delivered pre-bored

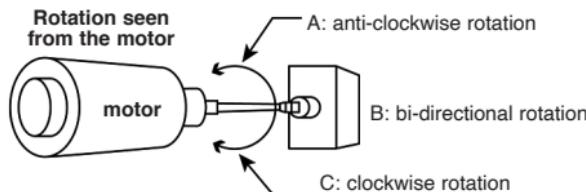
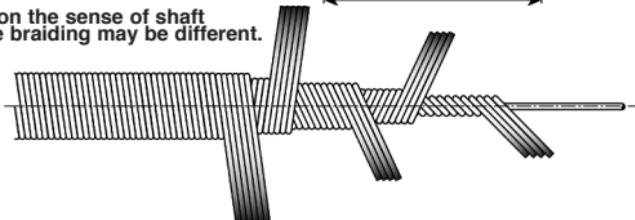
NOTE: For assembly, the end must be drilled and pinned to the connected shaft. The set screw is only there for positioning. It does not allow torque to be transmitted.

BEND RADIUS

$$\text{Radius} = \frac{a^2 + b^2}{4b} (\text{mm})$$



Depending on the sense of shaft rotation, the braiding may be different.



"L" in part number refers to length, see info.

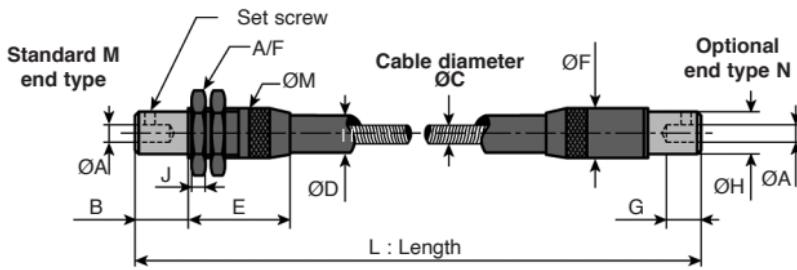
Part number bidirectional	Price for 500 mm	Price for 1000 mm	Price for 1500 mm	Price for 2000 mm	Price for 2500 mm	Price for 3000 mm
FDSQ4B-L	On request					
FDSQ5B-L		On request				
FDSQ6B-L			On request			
FDSQ8B-L				On request		
FDSQ9B-L					On request	
FDSQ13B-L						On request

Dimensions in mm

- Ball bearings in the end connectors allow for a higher speed of rotation and more intensive use.
- Allows the driving and driven elements to be mounted apart
- Obstacles can be avoided, multiple bends possible
- Position of the driven element is no longer determined by the position of the driving equipment
- Output efficiency >95%
- Dampens vibration
- Woven wire flexible shaft
- Materials:
 - Wires: blackened XC25 steel
 - Sheath: PVC



*standard end
(with 2 locknuts)*



Dark grey areas are fixed parts.
Light grey areas are revolving parts.

Part number	ØC core	ØM	ØA	B	ØD	E	A/F	ØF	G	ØH	J	Screw
FDS4-L	3,80	M18 x 1,0	4	11,0	10,5	48,0	24	18	8	10,75	4	M3
FDS5-L	4,75	M21 x 1,0	5	14,5	14,0	59,0	27	21	12	14,00	4	M3
FDS6-L	6,35	M27 x 1,0	6	19,5	17,0	66,5	35	27	14	18,00	4	M4
FDS8-L	8,00	M30 x 1,5	8	24,0	17,5	68,5	36	30	17	20,50	4	M4
FDS9-L	9,52	M34 x 1,5	10	25,0	22,5	78,5	41	34	20	24,50	4	M5
FDS13-L	12,70	M38 x 1,5	15	26,5	25,0	85,5	46	38	24	28,00	4	M6
FDS16-L	16,00	M44 x 1,5	16	30,0	32,0	108,5	55	44	25	31,00	4	M6
FDS19-L	19,05	M50 x 1,5	20	31,0	31,0	114,0	60	50	25	36,50	4	M6

Dimensions in mm

Info.

- Replace the "L" in the part number by the length required and add the desired end (M: standard; N: optional)

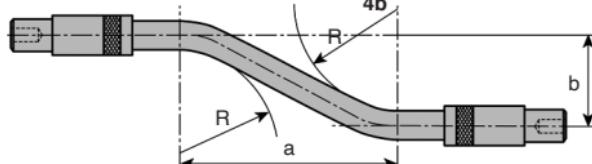
E.g. **FDS4-500MM**

- Steel core lubricated with oil
- For continuous use, the shaft should be lubricated every 3 months
- Flexible shaft can be removed by unscrewing the knurled part. Check the sealing before re-use
- Delivered pre-bored

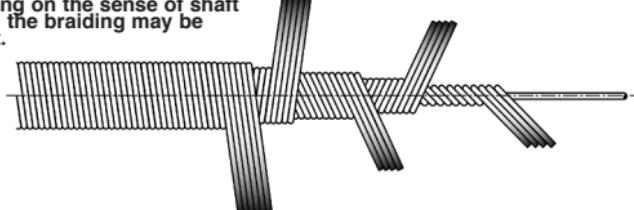
NOTE: For assembly, the end must be drilled and pinned to the connected shaft. The set screw is only there for positioning. It does not allow torque to be transmitted.

BEND RADIUS

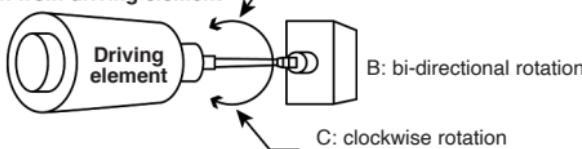
$$\text{Radius} = \frac{a^2 + b^2}{4b} \text{ (mm)}$$



Depending on the sense of shaft rotation, the braiding may be different.



Direction of rotation as seen from driving element



"L" in part number refers to length, see info.

Part number bidirectional	Price for 500 mm	Price for 1000 mm	Price for 1500 mm	Price for 2000 mm	Price for 2500 mm	Price for 3000 mm
FDS4B-L	On request					
FDS5B-L						
FDS6B-L						
FDS8B-L						
FDS9B-L						
FDS13B-L						
FDS16B-L						
FDS19B-L						

Dimensions in mm

Masterflex® flexible shaft

FDS
FDSQ

Technical information

	Min. use radius (mm) RU	Max. speed		Torsion deflection depending on twist (0,1 Nm at 1 m)	
		FDS (trpm)	FDSQ	Same (Nm)	Opp. (Nm)
FDS(Q)4	B	75	3 000	200	28° 56,00°
FDS(Q)5	B	100	3 000	200	7,50° 17,00°
FDS(Q)6	B	125	3 000	200	1,50° 3,25°
FDS(Q)8	B	200	2 000	200	0,50° 0,80°
FDS(Q)9	B	200	2 000	200	0,30° 0,63°
FDS(Q)13	B	250	2 000	200	0,11° 0,20°
FDS16	B	300	1 500	-	0,06° 0,13°
FDS19	B	400	1 500	-	0,01° 0,01°

Dimensions in mm

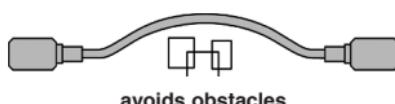
Torsion deflection depending on twist 0,1Nm for 1 meter shaft.

Bend radius (mm)	Max. torque (Nm) depending on bend radius (mm)																
	75	100	125	150	175	200	250	300	350	400	500	600	650	750	800	1000	1500
FDS(Q)4	B	0,65	1,20	1,50	1,70	1,80	1,85	1,95	2,00	2,03	2,05	2,10					
FDS(Q)5	B		1,30	1,70	2,05	2,17	2,25	2,34	2,40	2,45	2,50	2,60					
FDS(Q)6	B			4,00	5,00	6,00	7,00	8,00	9,00	9,40	9,80	10,50					
FDS(Q)8	B						10,00	12,50	14,40	15,80	16,50	17,60	18,50				
FDS(Q)9	B						13,00	17,00	20,00	23,00	24,40	26,00	27,20	28,00			
FDS(Q)13	B							23,00	32,00	41,00	45,00	49,00	51,00	51,50	53,00	53,50	56,00
FDS16	B							20,00	28,00	31,50	36,50	40,00	41,20	43,80	45,00	50,00	
FDS19	B								40,00	50,00	60,00	62,50	65,00	66,20	70,00	75,00	

Direction of rotation : B bi-directional or manual

Advantages

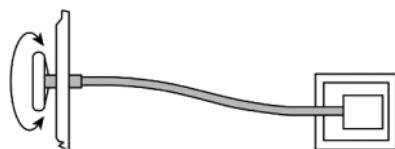
FDS
FDSQ



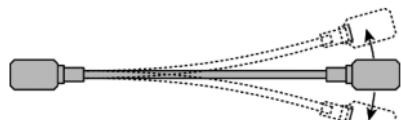
avoids obstacles



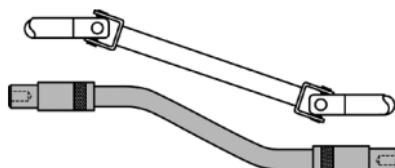
reduces vibrations



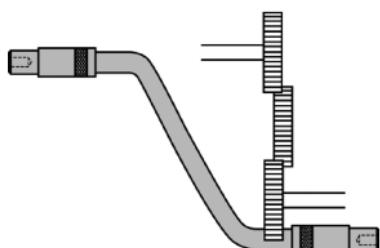
restricted access or control
at a distance



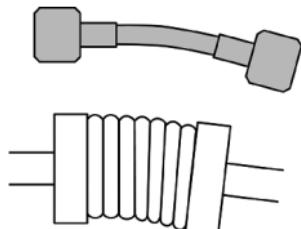
for moving parts



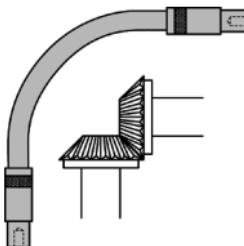
parallel misalignment



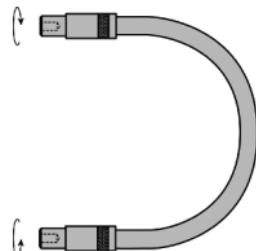
Very large parallel misalignment



angular misalignment



Redirects at 90°



change of direction

Applications

- Motor driven pumps or compressors
- Electrical generators, textile machines
- Iron and steel plants, cement factories.

Determining torque

$$T_{mn} = \frac{N_{kw} \times 9550}{n_{rpm}} \text{ (Nm)}$$

Service factor K :

Service	Electric motor steam turbine	Combustion engine hydraulic turbine
Uniform S1	1.0	1.5
Light S2	1.5	2.0
medium S3	2.0	2.5
Heavy S4	2.5	3.0
Very heavy S5	3.0	3.2



Temperature factor St:

St	-20°C	0°C	+20°C	+40°C	+60°C	+70°C	+80°C
	1,0	1,0	1,0	1,0	1,2	1,4	1,6

$T_{mn} \times K \times St < T_{cn}$ coupling

$n_{inst.} \leq n_{max}$ coupling

shaft diameter $\leq d_{max}$ coupling

Safety precautions

The tyre is cut radially to allow mounting/dismounting. Depending on the speed and torque transmitted, an axial force will be generated which must be absorbed by the bearings in the coupled machines. The tyre may expand by up to 5% during use which must be taken into account when choosing a protective housing.

Part number	Nominal torque TCN (Nm)	Max. torque TCmaxi. (Nm)	Max. speed (rpm)	Moment of inertia (kg.m²)	Axial (Nm)	Misalignment Radial (Nm)	Angular
PNA2-203R	50	150	5 000	0,001	1,0	0,75	2°
PNA6-206R	100	300	5 000	0,003	1,5	1,00	2°
PNA16-210R	200	600	4 000	0,013	2,0	1,30	2°
PNA40-214R	400	1 200	4 000	0,035	2,5	1,60	2°
PNA63-218R	800	2 400	3 000	0,105	3,0	2,10	2°

Dimensions in mm

Torque: 50 to 2400Nm

PNA

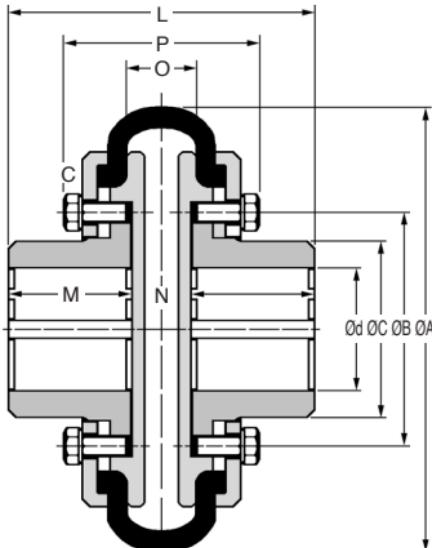
- Easy installation, machines to be coupled will not require to be moved
- Backlash free
- Can transmit shocks up to 3 times the value of nominal torque
- Quickly damps vibrations
- Maintenance free

Characteristics

- Large axial misalignment up to 6mm radial up to 5mm angular up to 2°
- Keyway in accordance with NF E22-175/P9 (JS9)
- Working temp.: -20°C to +80°C
- Materials:
 - Hub: Steel
 - Locking assembly: Steel
 - Tyre R: Natural rubber (NR) with fabric reinforcements

Options

- Alternative tyre materials (inserts mounted in X pattern)



DISCOUNTS

Qty	1+	2+
Disc.	List	On request

Part number solid coupling	Ød Standard bores (H7)							
	ØA	ØB	ØC	L	M	Ød max.	Ød pre-bore	
PNA2-203R	104	54	40	70	30	28	plain	10, 15, 19, 20, 25, 28
PNA6-206R	136	68	55	110	45	38	plain	10, 15, 20, 25, 30, 35, 38
PNA16-210R	178	88	70	130	50	48	15	20, 25, 30, 35, 38, 48
PNA40-214R ⁽¹⁾	210	116	92	160	65	65	15	20, 25, 30, 35, 40, 45, 50, 55, 60, 65
PNA63-218R ⁽¹⁾	263	140	107	190	75	75	25	30, 35, 40, 45, 50, 55, 60, 65, 70, 75

Part number solid coupling	Number of screws			Locking torque (Nm)	Weight (kg)	Price each	
	N	O	P			Stock* prebored	full or bored prebored keyway
PNA2-203R	8	16	66	12	M6 4 ⁽²⁾	1,15	✓ 270,25 € 457,68 €
PNA6-206R	8	18	74	16	M6 6 ⁽²⁾	2,50	✓ 360,33 € 566,65 €
PNA16-210R	19	35	100	16	M8 15 ⁽²⁾	5,40	✓ 454,78 € 662,55 €
PNA40-214R ⁽¹⁾	20	38	99	24	M8 20	9,50	- 662,55 € 883,40 €
PNA63-218R ⁽¹⁾	24	44	121	16	M12 25	17,50	- 903,74 € 1.176,90 €

*Depending on availability - Dimensions in mm

- Tyre for PERIFLEX® coupling

- Replace the tyre without moving the machine
- Natural rubber tyre R (NR) reinforced with fabric aligned radially (R)
- Tyre quality X (1) reinforced with fabric arranged transversally (X)

Assembly

- The elastic coupling is delivered pre-assembled. To mount the coupling, remove the tyre and place the hubs and locking assemblies on their respective shafts. Bring the two assemblies together respecting the distance "O" and aligning the two hubs with a straight edge or template.

- Place the tyre between the two hubs ensuring there is minimum radial backlash (2-15mm depending on the size of the coupling). Then bring the two locking assemblies together, tightening pairs of diametrically opposite screws to the prescribed torque. As the rubber may decompress with time, tighten the screws after a few hours of use.



SAVE MONEY !
Only change the tyre

DISCOUNTS

Qty	1+	2+
Disc.	List	On request

Part number spare tyre	for PERIFLEX® coupling part number	Type of tyre	Stock*	Price each
203R	PNA2-203	R	-	85,72 €
206R	PNA6-206	R	✓	103,16 €
210R	PNA16-210	R	✓	152,56 €
214R	PNA40-214	R	✓	238,29 €
218R	PNA63-218	R	✓	248,46 €
414X	PNA40-214	X	-	313,84 €
418X	PNA63-218	X	-	366,15 €

*Depending on availability - Dimensions in mm

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Rigid coupling with keyway

Stock

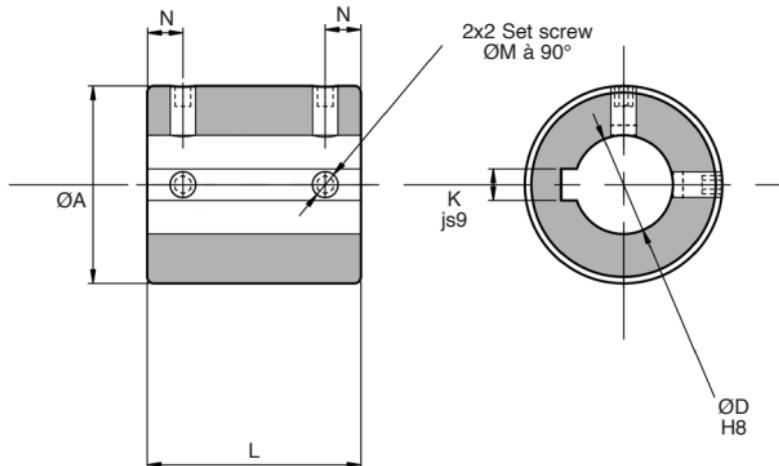
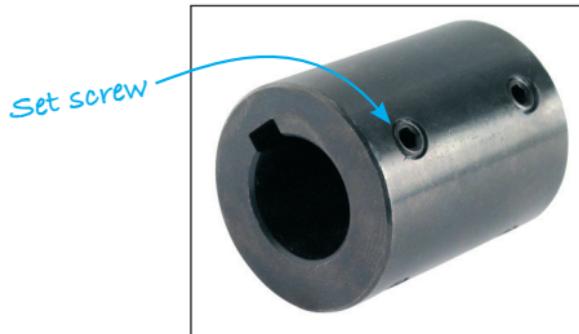
AF

Set screw fixing

- With keyway

- Material:

Steel



DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List -15%	-20%	On request	

Part number	ØD	Keyway K	ØA	L	Screw ØM	N	Stock*	Price each 1 to 5
AF10	10	3	20	30	M4	6	✓	86,14 €
AF12	12	4	28	36	M5	7	✓	86,14 €
AF15	15	5	28	36	M5	8	✓	86,14 €
AF20	20	6	32	40	M6	10	✓	108,83 €
AF25	25	8	40	54	M8	12	✓	126,61 €
AF30	30	8	50	54	M8	12	✓	139,26 €

*Depending on availability - Dimensions in mm

Easy to disassemble

SC2

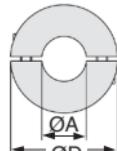
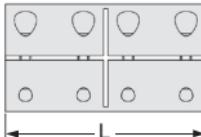
- Rigid coupling for applications without alignment errors

- Dependable torque transfer
 - No backlash
 - Easy to dismantle
 - 8 locking screws supplied
 - No risk of shaft damage
 - Materials:
- Steel
Stainless steel

Info.

- Replaces the SC range

stainless steel
or steel

**DISCOUNTS Stainless steel**

Qty	1+	6+	10+	
Disc.	List	-15%	On request	

DISCOUNTS steel

Qty	1+	6+	20+	40+	
Disc.	List	-15%	-20%	On request	

Part number	ØA	ØD	L	Fixing screws	Max torque (Nm)	Stock*	Price each 1 to 9
Steel							
SC2-6	6	18	30	M3x8	30	✓	42,23 €
SC2-8	8	24	35	M3x10	50	✓	49,28 €
SC2-10	10	29	45	M4x12	100	✓	55,51 €
SC2-12	12	29	45	M4x12	100	✓	55,51 €
SC2-14	14	34	50	M5x16	190	✓	62,44 €
SC2-15	15	34	50	M5x16	190	✓	60,18 €
SC2-16	16	35	50	M5x16	190	✓	58,27 €
SC2-20	20	42	65	M6x16	350	✓	68,33 €
SC2-25	25	45	75	M6x16	390	✓	72,27 €
SC2-30	30	53	83	M6x18	475	✓	100,26 €
SC2-35	35	67	95	M8x25	1100	-	118,12 €
SC2-40	40	77	108	M8x25	1325	✓	160,37 €
SC2-50	50	85	124	M10x25	2250	-	207,08 €
Stainless steel							
SC2-6/SS	6	18	30	M3x8	25	✓	67,00 €
SC2-8/SS	8	24	35	M3x10	40	✓	68,33 €
SC2-10/SS	10	29	45	M4x12	90	✓	82,79 €
SC2-12/SS	12	29	45	M4x12	90	✓	96,88 €
SC2-14/SS	14	34	50	M5x16	160	-	110,95 €
SC2-15/SS	15	34	50	M5x16	160	✓	110,95 €
SC2-16/SS	16	35	50	M5x16	160	-	113,57 €
SC2-20/SS	20	42	65	M6x16	300	✓	150,81 €
SC2-25/SS	25	45	75	M6x16	325	✓	160,37 €
SC2-30/SS	30	53	83	M6x18	400	-	239,39 €
SC2-35/SS	35	67	95	M8x25	925	-	328,01 €
SC2-40/SS	40	77	108	M8x25	1100	-	459,69 €
SC2-50/SS	50	85	124	M10x25	1875	-	560,26 €

*Subject to availability - Dimensions in mm

SINGLE UNIVERSAL JOINT ECO SERIES

NEW

Economy range



p.78

SINGLE OR DOUBLE UNIVERSAL JOINT



p.80

SINGLE OR DOUBLE UNIVERSAL JOINT STAINLESS STEEL



stainless steel

p.84

SINGLE NEEDLE UNIVERSAL JOINT



stainless steel

p.86

UNIVERSAL JOINT

P. 76-93

TELESCOPIC UNIVERSAL JOINT



p.88

TELESCOPIC UNIVERSAL JOINT STAINLESS STEEL



stainless steel

p.90



UNIVERSAL JOINT COVER



p.92

Buyers guide

Universal joint coupling

Simple



Part number	G-AL	G-A	H-A	JCS	Hss
Bushes	-	Hardened	With needles	-	With needles
Standard	DIN808	DIN808-7551	DIN808-7551	-	DIN808-7551
Angular misalignment	45°	45°	45°	45°	45°
Max. torque (Nm)	4,5 → 114,4	7,5 → 720	9 → 402	2,3 → 216	21,12 → 288
Max. speed (RPM)	800	800	4000	800	3600
Material	steel	steel	steel	stainless steel	stainless steel
Re-machining possible	✓	✓	✓	✓	✓
Keying possible	✓	✓	✓	✓	✓
Uses	light	normal	intensive	light	intensive
Frequent starts	✗	✓	✓	✗	✓
Advantages	economic	standard	high speed	stainless steel standard series	stainless steel standard series
Quality	☆	☆☆	☆☆☆	☆☆	☆☆☆
Price	€	€€	€€€	€€	€€€
Pages	② p.78	② p.80	② p.82	② p.84	② p.86

	Double					Telescopic	
							
	GD-AL	GD-A	HD-A	JCD	HDss	CT	CTss
	-	Hardened	With needles	-	With needles	Hardened	-
DIN808	DIN808-7551	-	-	-	DIN808-7551	-	-
2x45°	2x45°	2x45°	2x45°	2x45°	2x45°	2x45°	2x45°
5,7 → 130	7 → 648	8,1 → 361,8	5,2 → 194,4	21,12 → 288	7 → 648	5,2 → 324	
800	800	4000	800	3600	800	800	
steel	steel	steel	stainless steel	stainless steel	steel	stainless steel	
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
light	normal	intensive	normal	intensive	normal	normal	normal
✗	✓	✓	✗	✓	✓	✓	✓
economic	standard	high speed	stainless steel standard series	stainless steel standard series	long lengths	stainless steel long lengths	
☆	☆☆	☆☆☆	☆☆	☆☆☆	☆☆	☆☆	
€	€€€	€€€€	€€€	€€€	€€€	€€€	€€€€
② p.79	② p.81	② p.83	② p.85	② p.87	② p.88	② p.89	② p.90

GAL

Light load

- Standard series without bush according to DIN808

- Max. misalignment angle 45°

- Materials:

 - PR80 steel (non-weldable)

 - Maximum speed 800 rpm



NEW!

Applications

- For low rotation speeds
- For low load applications
(e.g. valve, valve control, blinds, etc.)...

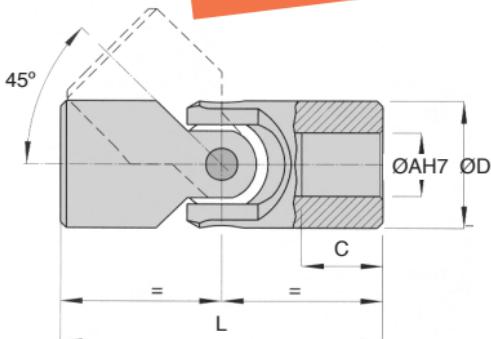
Option

- Changes to hole, keyway

Accessories

- Don't forget the cover trim M
(tome ② p.92)

Modifiable bore



Economy series

Angle Factor

Effect of the working angle

The torques indicated correspond to an angle of 10°. They should therefore be weighted with the factors opposite as a function of the working angle.

e.g.: 100Nm to transmit to 20°

Calculation: $100/0,75=133,33$

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	Price	-6%	-12%	On request

Part number	ØD	ØA	C	L	Torques (Nm)								Price each
					at 100	at 200	at 300	at 400	at 500	at 700	at 800		
G00-AL-5/5	10	5	13	40	7,1	6,5	5,4	4,9	4,5	-	-		28,14 €
G01-AL-6/6	13	6	13	40	8,5	8,5	6,8	6,2	5,7	-	-		26,27 €
G02-AL-8/8	16	8	10	40	16,9	11,7	10,4	9,1	7,8	6,7	6,1		26,27 €
G03-AL-10/10	20	10	10	45	32,5	22,1	19,5	15,6	14,3	13,0	9,1		26,27 €
G04-AL-12/12	25	12	11	50	58,5	32,5	27,3	20,8	18,2	14,3	11,7		28,82 €
G05-AL-14/14	29	14	13	56	91,0	58,5	52,0	42,9	39,0	33,8	28,6		29,63 €
G1-AL-16/16	32	16	15	65	114,4	110,5	93,6	71,5	65,0	55,9	44,2		31,46 €

*Dimensions in mm

Light load

GDAL

- Standard series without bush according to DIN808

- Max. misalignment angle 45°

- Materials :

- PR80 steel (non-weldable)

- Maximum speed 800 rpm

Applications

- For low rotation speeds
- For low load applications
(e.g: valve, valve control, blinds, etc.)...

Option

- Changes to hole, keyway

Accessories

- Don't forget the cover trim M (tome 2 p.92)

Modifiable bore



Angle Factor

5°	1,25
10°	1,00
20°	0,75
30°	0,45
40°	0,30

Effect of the working angle

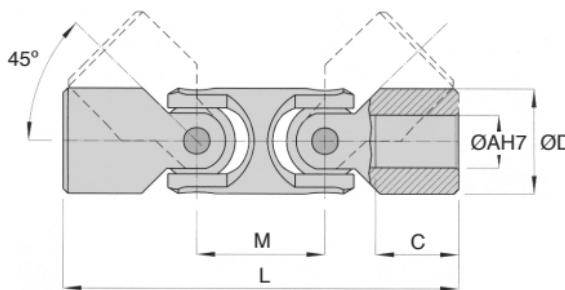
The torques indicated correspond to an angle of 10°. They should therefore be weighted with the factors opposite as a function of the working angle.

e.g.: 100Nm to transmit to 20°

Calculation: $100/0,75=133,33$



Economy series



DISCOUNTS

Qty	1+	2+	4+
Disc.	Price	-6%	On request

Part number	ØD	ØA	C	L	M	Torques (Nm)						Price each	
						at 100	at 200	at 300	at 400	at 500	at 700		
GD01-AL-6/6	13	6	13	63	23	8,5	8,5	6,8	6,2	5,7	-	-	51,46 €
GD02-AL-8/8	16	8	10	67	27	16,9	11,7	10,4	9,1	7,8	6,7	6,1	51,46 €
GD03-AL-10/10	20	10	10	74	29	32,5	22,1	19,5	15,6	14,3	13,0	9,1	52,38 €
GD04-AL-12/12	22	12	11	74	29	58,5	32,5	27,3	20,8	18,2	14,3	11,7	52,38 €
GD05-AL-14/14	25	14	13	85	33	91,0	58,5	52,0	42,9	39,0	33,8	28,6	59,06 €
GD1-AL-16/16	29	16	19	100	35	114,4	110,5	93,6	71,5	65,0	55,9	44,2	62,00 €
GD2-AL-18/18	32	18	20	112	39	208,0	156,0	130,0	88,4	75,4	70,2	-	76,28 €

*Dimensions in mm

G Industrial range

- Standard series in accordance with DIN 808-7551

- Smooth hardened bushes

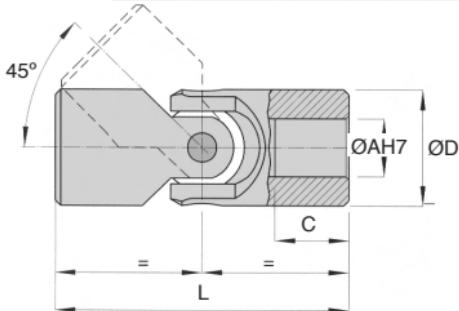
- Suitable for speeds up to 800 rpm

- Max. misalignment angle 45°

- Materials:

Body: C45 steel

Pin: Hardened steel 18NCD4



Accessories

- Don't forget the cover trim M
(tome ② p.92)

Modifiable bore



Angle	Factor
5°	1,25
10°	1,00
20°	0,75
30°	0,45
40°	0,30

Effect of operating angle

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied.

E.g. For 100Nm to be transmitted at 20°, the corrected value of torque becomes $100/0.75 = 133 \text{ Nm}$ and a joint should be chosen that can transmit 133Nm at the required speed.

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -6%	-12%	On request	

Part number	OD	OA	C	L	Torque (Nm)								Stock*	Price each
					at 100 rpm	at 200 rpm	at 300 rpm	at 400 rpm	at 500 rpm	at 700 rpm	at 800 rpm			
G01-A-6/6	16	6	9	34	-	-	-	-	-	-	-	-	✓	29,21 €
G02-A-8/8	16	8	11	40	-	-	-	-	-	-	-	-	✓	29,21 €
G03-A-10/10	20	10	10	45	32,5	22,1	18,8	16,9	15,6	14,3	9,7	✓	30,37 €	
G04-A-12/12	25	12	11	50	55,9	32,5	26,6	22,1	20,1	16,9	15,6	✓	33,15 €	
G05-A-14/14	29	14	13	56	89,1	55,9	51,3	46,8	43,5	37,1	34,4	✓	35,22 €	
G1-A-16/16	32	16	15	65	112,4	109,2	93,6	74,7	66,9	53,3	46,8	✓	36,40 €	
G2-A-18/18	37	18	17	72	202,8	156,0	124,8	93,6	78,0	62,4	-	✓	42,27 €	
G3-A-20/20	40	20	19	82	312,0	218,4	156,0	124,8	109,2	78,0	-	✓	49,97 €	
G4-A-22/22	47	22	22	95	390,0	249,6	187,2	156,0	124,8	93,6	-	✓	59,96 €	
G5-A-25/25	50	25	26	108	499,2	312,0	218,4	187,2	156,0	124,8	-	✓	70,69 €	
G6-A-30/30	58	30	30	122	561,6	343,2	249,6	202,8	171,6	-	-	✓	90,50 €	
G61-A-32/32	63	32	30	130	561,6	343,2	249,6	202,8	171,6	-	-	-	On request	
G7-A-35/35	70	35	35	140	592,8	390,0	296,4	226,2	187,2	-	-	-	On request	
G8-A-40/40	80	40	42	160	655,2	436,8	343,2	280,8	-	-	-	-	On request	
G9-A-50/50	95	50	54	190	936,0	624,0	436,8	343,2	-	-	-	-	On request	

*Depending on availability - Dimensions in mm

Industrial range

GD

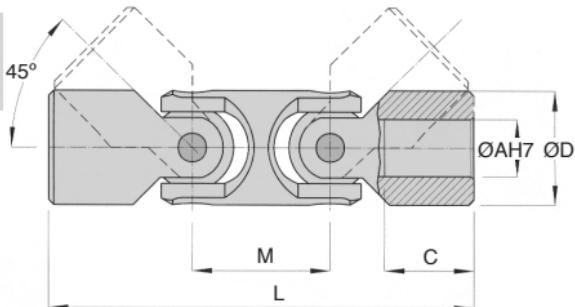
- Standard series in accordance with DIN 808-7551
- Smooth hardened bushes
- Suitable for speeds up to 800 rpm
- Max. misalignment angle 45°
- Materials:
 - Body: C45 steel
 - Pin: Hardened steel 18NCD4



Accessories

- Don't forget the cover trim M (tome ② p.92)

Modifiable bore



Effect of operating angle

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied.

E.g. For 100Nm to be transmitted at 20°, the corrected value of torque becomes $100/0.75 = 133$ Nm and a joint should be chosen that can transmit 133Nm at the required speed.

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD	ØA	C	M	L	Torque (Nm)							Stock*	Price each
						at 100 rpm	at 200 rpm	at 300 rpm	at 400 rpm	at 500 rpm	at 700 rpm	at 800 rpm		
GD01-A-6/6	16	6	9	27	61	-	-	-	-	-	-	-	✓	58,56 €
GD02-A-8/8	16	8	11	27	67	-	-	-	-	-	-	-	✓	58,56 €
GD03-A-10/10	20	10	10	30	75	-	-	-	-	-	-	-	✓	61,47 €
GD04-A-12/12	22	12	11	29	74	32,5	22,1	18,8	16,9	15,6	14,3	9,7	✓	61,47 €
GD05-A-14/14	25	14	13	33	85	55,9	32,5	26,6	22,1	20,1	16,9	15,6	✓	68,86 €
GD1-A-16/16	29	16	19	35	100	89,1	55,9	51,3	46,8	43,5	37,1	34,4	✓	73,53 €
GD2-A-18/18	32	18	20	39	112	112,4	109,2	93,6	74,7	66,9	53,3	46,8	✓	88,65 €
GD3-A-20/20	40	20	19	46	128	312,0	218,4	156,0	124,8	109,2	78,0	-	✓	97,89 €
GD4-A-22/22	40	22	25	48	145	312,0	218,4	156,0	124,8	109,2	78,0	-	-	131,30 €
GD5-A-25/25	50	25	24	59	163	499,2	312,0	218,4	187,2	156,0	124,8	-	✓	160,48 €
GD6-A-30/30	58	30	28	66	182	561,6	343,2	249,6	202,8	171,6	-	-	-	190,66 €
GD61-A-32/32	63	32	30	84	198	561,6	343,2	249,6	202,8	171,6	-	-	-	On request
GD7-A-35/35	70	35	32	78	212	592,2	390,0	296,4	226,2	187,2	-	-	-	On request
GD8-A-40/40	80	40	38	95	245	655,2	436,8	343,2	280,8	-	-	-	-	On request
GD9-A-50/50	95	50	50	120	290	936,0	624,0	436,8	343,2	-	-	-	-	On request

*Depending on availability - Dimensions in mm

Single needle roller universal joint



H Industrial range

- Standard series
- Needle bearings
- Suitable for speeds up to 4000 rpm
- Max. misalignment angle 45°
- Materials:
 - Body: C45 steel
 - Pin: Hardened steel 18NCD4



Uses

- High speed applications

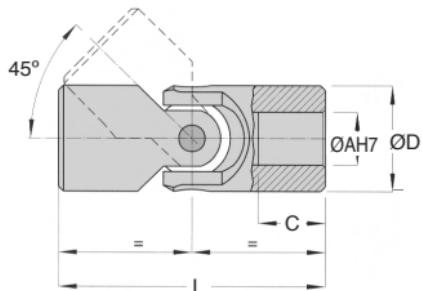
Accessories

- Don't forget the cover trim M
(tome 2 p.92)

Modifiable bore



High speed applications



Effect of operating angle

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied. E.g. For 100Nm to be transmitted at 20°, the corrected value of torque becomes $100/0.75 = 133$ Nm and a joint should be chosen that can transmit 133Nm at the required speed.

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Part number	ØD	ØA	C	L	Torque (Nm)						Stock*	Price each	
					at 250 rpm	at 500 rpm	at 1000 rpm	at 2000 rpm	at 3000 rpm	at 4000 rpm			
H02-A-8/8	16	8	15	52	-	-	-	-	6,9	-	-	✓	55,53 €
H03-A-10/10	20	10	18	62	26,4	20,4	16,8	13,2	12,0	10,8	✓	49,97 €	
H05-A-14/14	25	14	20	74	40,8	34,8	28,8	26,4	24,0	21,6	✓	49,97 €	
H1-A-16/16	32	16	24	86	78,0	66,0	54,0	48,0	44,4	38,4	✓	55,53 €	
H2-A-18/18	37	18	17	72	90,0	73,2	60,0	54,0	48,0	43,2	✓	58,43 €	
H3-A-20/20	40	20	30	108	168,0	144,0	120,0	96,0	84,0	78,0	✓	66,65 €	
H4-A-22/22	47	22	22	95	194,4	158,4	129,6	105,6	92,4	85,2	-	77,55 €	
H5-A-25/25	50	25	38	132	240,0	204,0	156,0	132,0	108,0	102,0	✓	86,09 €	
H6-A-30/30	63	30	45	166	360,0	324,0	276,0	228,0	192,0	168,0	-	110,86 €	
H61-A-32/32	63	32	45	166	360,0	324,0	276,0	228,0	192,0	168,0	-	102,34 €	
H7-A-35/35	70	35	35	140	391,2	332,4	284,4	237,6	201,6	-	-	185,22 €	
H8-A-40/40	80	40	50	180	438,0	363,6	306,0	246,0	223,2	-	-	255,02 €	
H9-A-50/50	95	50	54	190	482,4	402,0	330,0	270,0	237,6	-	-	357,36 €	

*Depending on availability - Dimensions in mm

- Standard series
- Needle bearings

- Suitable for speeds up to 4000 rpm

- Max. misalignment angle 45°

- Materials:

Body: C45 steel

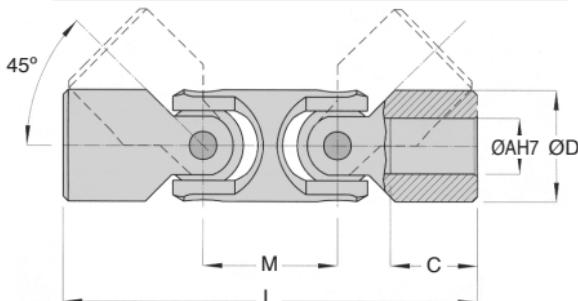
Pin: Hardened steel 18NCD4


Uses

- High speed applications

Accessories

- Don't forget the cover trim M
(tome ② p.92)

Modifiable bore

Effect of operating angle

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied.

E.g. For 100Nm to be transmitted at 20°, the corrected value of torque becomes $100/0.75 = 133 \text{ Nm}$ and a joint should be chosen that can transmit 133Nm at the required speed.

High speed applications
DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

	ØD	ØA	C	M	L	at 250 rpm	at 500 rpm	Torque (Nm) at 1000 rpm at 2000 rpm	at 3000 rpm	at 4000 rpm	Price each
											Stock*
HD03-A-10/10	20	10	18	26	88	26,4	20,4	16,8	13,2	12,0	10,8 ✓ 150,05 €
HD05-A-14/14	25	14	19	33	104	40,8	34,8	28,8	26,4	24,0	21,6 ✓ 117,68 €
HD1-A-16/16	32	16	24	39	125	78,0	66,0	54,0	48,0	44,4	38,4 ✓ 117,68 €
HD3-A-20/20	40	20	30	48	156	168,0	144,0	120,0	96,0	84,0	78,0 ✓ 158,83 €
HD5-A-25/25	50	25	37	59	188	240,0	204,0	156,0	132,0	108,0	102,0 ✓ 189,11 €
HD6-A-30/30	63	30	41	80	238	360,0	324,0	276,0	228,0	192,0	168,0 ✓ 213,62 €
HD61-A-32/32	63	32	41	80	238	360,0	324,0	276,0	228,0	192,0	168,0 ✓ 197,19 €
HD7-A-35/35	70	35	30	78	212	391,2	332,4	284,4	237,6	201,6	- 392,42 €
HD8-A-40/40	80	40	48	120	290	438,0	363,6	306,0	246,0	223,2	- 632,98 €
HD9-A-50/50	95	50	50	120	290	482,4	402,0	330,0	270,0	237,6	- 738,44 €

Dimensions in mm

- Stainless steel range

- Smooth and bushes
- Suitable for speeds up to 800 rpm
- Max. angle of misalignment 45°
- Material:
Stainless steel X5CrNi1810

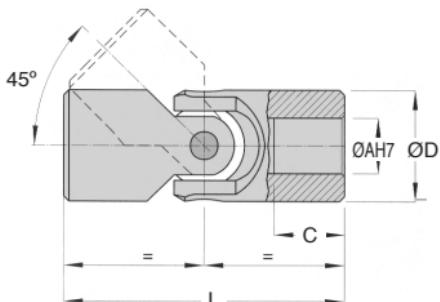
Uses

- Food and pharmaceutical industries

Accessories

- Don't forget the cover trim M
(tome ② p.92)

Modifiable bore



Effect of operating angle

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied.

E.g. For 10Nm to be transmitted at 20°, the corrected value of torque becomes $10/0.75 = 13.3 \text{ Nm}$ and a joint should be chosen that can transmit 13.3Nm at the required speed.

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List	-6%	-12%	On request

Part number	ØD	ØA	C	L	Torque (Nm)								Stock*	Price each
					at 100 rpm	at 200 rpm	at 300 rpm	at 400 rpm	at 500 rpm	at 700 rpm	at 800 rpm			
JCS00/SS	10	5	15	44	5,4	4,9	4,2	3,7	3,4	-	-	✓	46,52 €	
JCS01/SS	13	6	18	50	6,6	6,6	5,2	4,8	4,3	-	-	✓	42,62 €	
JCS02/SS	16	8	19	58	12,9	9,0	7,9	6,9	6,0	5,1	4,6	✓	42,62 €	
JCS03/SS	22	10	25	76	18,4	12,4	10,5	9,6	8,7	7,8	5,2	✓	42,62 €	
JCS04/SS	25	12	29	86	31,5	18,9	15,0	12,0	10,9	9,4	8,7	✓	48,45 €	
JCS05/SS	29	14	30	90	49,5	31,9	28,9	26,4	24,4	19,9	18,9	✓	50,40 €	
JCS06/SS	32	16	30	95	67,5	63,0	52,9	42,0	37,9	30,0	25,9	✓	52,32 €	
JCS07/SS	37	18	35	108	114,0	90,0	69,9	52,9	43,9	34,9	-	-	✓	62,03 €
JCS08/SS	40	20	32	108	175,5	126,0	87,9	69,9	61,9	43,9	-	✓	67,86 €	
JCS09/SS	47	22	38	127	219,0	144,0	105,0	87,9	69,9	52,9	-	-	85,35 €	
JCS10/SS	50	25	44	140	288,0	180,0	126,0	108,0	90,0	72,0	-	✓	100,93 €	
JCS11/SS	58	30	58	178	324,0	198,0	144,0	117,0	99,0	-	-	✓	131,99 €	

*Depending on availability - Dimensions in mm

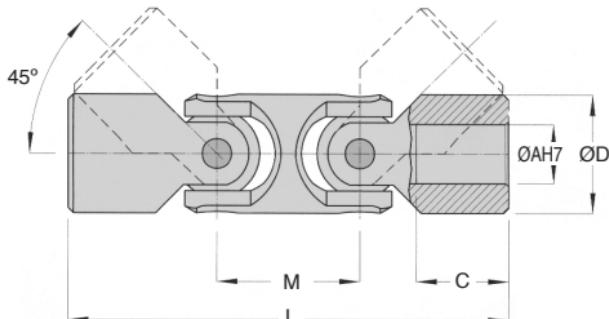
- Stainless steel range
- Smooth and bushes
- Suitable for speeds up to 800 rpm
- Max. angle of misalignment 90°
- Material:
Stainless steel X5CrNi1810

Uses

- Food and pharmaceutical industries

Accessories

- Don't forget the cover trim M
(tome ② p.92)

Modifiable bore**Effect of operating angle**

The torques below are given for a 10° angle. For other angles, the appropriate factor from this table should be applied.

E.g. For 10Nm to be transmitted at 20°, the corrected value of torque becomes $10/0.75 = 13.3$ Nm and a joint should be chosen that can transmit 13.3Nm at the required speed.

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-6%	On request

Angle	Factor
5°	1,25
10°	1,00
20°	0,75
30°	0,45
40°	0,30

Part number	ØD	ØA	C	M	L	Torque (Nm)							Stock*	Price each
						at 100 rpm	at 200 rpm	at 300 rpm	at 400 rpm	at 500 rpm	at 700 rpm	at 800 rpm		
JCD04/SS	22	12	25	29	105	18,4	12,4	10,5	9,6	8,7	7,8	5,2	✓	68,65 €
JCD05/SS	25	14	29	33	119	31,5	18,9	15,0	12,0	10,9	9,4	8,7	✓	71,32 €
JCD06/SS	29	16	30	35	125	49,5	31,9	28,9	26,4	24,4	19,9	18,9	✓	74,22 €
JCD07/SS	32	18	30	39	134	67,5	63,0	52,9	42,0	37,9	30,0	25,9	-	87,92 €
JCD08/SS	40	20	32	46	154	175,5	126,0	87,9	69,9	61,9	43,9	-	✓	96,13 €
JCD09/SS	40	22	38	46	173	175,5	126,0	87,9	69,9	61,9	43,9	-	-	120,82 €
JCD10/SS	50	25	44	59	199	288,0	180,0	126,0	108,0	90,0	72,0	-	-	142,92 €
JCD11/SS	58	30	58	66	244	324,0	198,0	144,0	117,0	99,0	-	-	-	187,43 €

*Depending on availability - Dimensions in mm

Single needle universal joint stainless steel



★★★

Hss**Heavy duty DIN808-7551**

- Standard series stainless steel version

- Needle bearings

- Max. misalignment angle 45°

- Material:

- Stainless steel X5CrNi1810,

- Stainless steel bearing X20Cr13

- Maximum speed 3600 rpm

**Applications**

- For high rotational speeds
- For applications requiring low backlash
- Pharmaceutical and food industries

Option

- Changes to hole, keyway

Accessories

- Don't forget the cover trim M (tome ② p.92)

Modifiable bore**Angle Factor**

Angle	Factor
5°	1,25
10°	1,00
20°	0,75
30°	0,45
40°	0,30

Effect of the working angle

The torques shown are for an angle of 10°.

They should therefore be weighted with the factors opposite as a function of the working angle.

e.g.: 100Nm to be transmitted at 20°

calculation: $100/0,75=133,33$

DISCOUNTS

Qty	1+	2+	4+
Disc.	Price	-15%	On request

Torques (Nm)

Part number	ØD	ØA	C	L	at 250		at 500		at 1000		at 2000		at 3000		at 4000		Price each	
					rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm	rpm		
H03-A-10/10/SS	20	10	18	62	21,12	16,32	13,44	10,56	9,60	8,64	7,72	6,80	5,92	5,00	4,12	3,20	100,70 €	
H05-A-14/14/SS	25	14	20	74	32,64	27,84	23,04	21,12	19,20	17,28	15,36	13,44	11,52	9,60	7,72	6,80	100,70 €	
H1-A-16/16/SS	32	16	24	86	62,40	52,80	43,20	38,40	35,52	30,72	27,84	23,04	19,20	15,36	11,52	9,60	8,64	111,47 €
H3-A-20/20/SS	40	20	30	108	134,40	115,20	96,00	76,80	67,20	62,40	57,60	48,80	40,00	31,20	22,40	16,80	13,44	134,53 €
H5-A-25/25/SS	50	25	38	132	192,00	163,20	124,80	105,60	86,40	81,60	71,20	57,60	48,80	39,20	30,40	21,60	17,28	172,63 €
H6-A-30/30/SS	63	30	45	166	288,00	259,20	220,80	182,40	153,60	134,40	124,80	105,60	86,40	71,20	57,60	48,80	40,00	222,96 €

Dimensions in mm

- Série standard version inox
- Needle bearings
- Max misalignment angle 45°
- Material:
 - Stainless steel X5CrNi1810,
 - Stainless steel bearing X20Cr13
- Maximum speed 3600 rpm

Applications

- For high rotational speeds
- For applications requiring low backlash
- Pharmaceutical and food industries

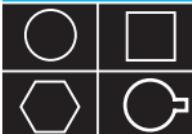
Options

- Changes to hole, keyway

Accessories

- Don't forget the cover trim M (tome ② p.92)

Modifiable bore



Angle Factor

5°	1,25
10°	1,00
20°	0,75
30°	0,45
40°	0,30

Effect of the working angle

The torques shown are for an angle of 10°.

They should therefore be weighted with the factors opposite as a function of the working angle.

e.g.: 100Nm to be transmitted at 20°
calculation: $100/0,75=133,33$

DISCOUNTS

Qty	1+	2+	4+
Disc.	Price -15%		On request

Torques (Nm)

at 250 at 500 at 1000 at 2000 at 3000 at 4000

Part number	ØD	ØA	C	M	L	rpm	rpm	rpm	rpm	rpm	Price each
HD03-A-10/10/SS	20	10	18	26	88	21,12	16,32	13,44	10,56	9,60	8,64
HD05-A-14/14/SS	25	14	19	33	104	32,64	27,84	23,04	21,12	19,20	17,28
HD1-A-16/16/SS	32	16	24	39	125	62,40	52,80	43,20	38,40	35,52	30,72
HD3-A-20/20/SS	40	20	30	48	156	134,40	115,20	96,00	76,80	67,20	62,40
HD5-A-25/25/SS	50	25	37	59	188	192,00	163,20	124,80	105,60	86,40	81,60
HD6-A-30/30/SS	63	30	41	80	238	288,00	259,20	220,80	182,40	153,60	134,40

Dimensions in mm

- Standard series

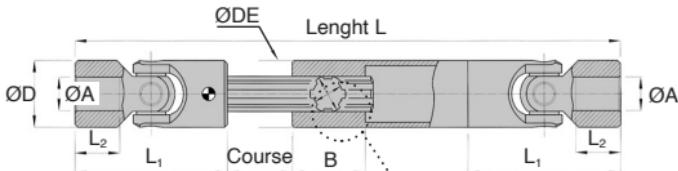
- Smooth hardened bushes
- Suitable for speeds up to 800 rpm
- Max. angle of misalignment 45°
- Materials:

Body: C45 steel
Pin: Hardened steel 18NCD4

- For transmissible torques, refer to G range
(tome ② p.80)

Accessories

- Don't forget the cover trim M
(tome ② p.92)



Modifiable bore



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -6%		On request

Part number	L min/max	ØA (H7)	ØD	L1	L2	B	Stroke	E	F	ØDE	Stock*	Price each
CT10-130/150	130/150	10	22	45	10	40	20	11	14	22	✓	169,17 €
CT10-140/170	140/170	10	22	45	10	40	30	11	14	22	✓	169,17 €
CT10-160/200	160/200	10	22	45	10	40	40	11	14	22	✓	169,17 €
CT10-170/230	170/230	10	22	45	10	40	60	11	14	22	✓	169,17 €
CT10-180/240	180/240	10	22	45	10	40	60	11	14	22	-	169,17 €
CT10-230/330	230/330	10	22	45	10	40	100	11	14	22	✓	169,17 €
CT12-140/170	140/170	12	25	50	11	45	30	13	16	26	✓	178,74 €
CT12-160/200	160/200	12	25	50	11	45	40	13	16	26	-	178,74 €
CT12-180/225	180/225	12	25	50	11	45	45	13	16	26	-	178,74 €
CT12-200/270	200/270	12	25	50	11	45	70	13	16	26	✓	178,74 €
CT12-220/300	220/300	12	25	50	11	45	80	13	16	26	-	178,74 €
CT12-250/355	250/355	12	25	50	11	45	105	13	16	26	-	178,74 €
CT12-280/420	280/420	12	25	50	11	45	140	13	16	26	✓	178,74 €
CT12-300/450	300/450	12	25	50	11	45	150	13	16	26	✓	178,74 €
CT14-160/190	160/190	14	29	56	13	45	30	13	16	29	-	184,46 €
CT14-170/200	170/200	14	29	56	13	45	30	13	16	29	✓	184,46 €
CT14-180/220	180/220	14	29	56	13	45	40	13	16	29	-	184,46 €
CT14-210/280	210/280	14	29	56	13	45	70	13	16	29	-	184,46 €
CT14-220/300	220/300	14	29	56	13	45	80	13	16	29	-	184,46 €
CT14-250/350	250/350	14	29	56	13	45	100	13	16	29	✓	184,46 €
CT14-280/420	280/420	14	29	56	13	45	140	13	16	29	-	184,46 €
CT14-300/450	300/450	14	29	56	13	45	150	13	16	29	-	184,46 €
CT14-350/550	350/550	14	29	56	13	45	200	13	16	29	-	189,74 €
CT14-400/650	400/650	14	29	56	13	45	250	13	16	29	✓	189,74 €

*Depending on availability - Dimensions in mm

Part number	L min/max	ØA (H7)	ØD	L1	L2	B	Stroke	E	F	ØDE	Stock*	Price each
CT16-180/210	180/210	16	32	65	15	45	30	16	20	32	-	190,04 €
CT16-190/220	190/220	16	32	65	15	45	30	16	20	32	-	190,04 €
CT16-210/250	210/250	16	32	65	15	45	40	16	20	32	-	190,04 €
CT16-240/320	240/320	16	32	65	15	45	80	16	20	32	✓	190,04 €
CT16-250/350	250/350	16	32	65	15	45	100	16	20	32	✓	190,04 €
CT16-275/390	275/390	16	32	65	15	45	115	16	20	32	-	190,04 €
CT16-300/430	300/430	16	32	65	15	45	130	16	20	32	-	190,04 €
CT16-380/590	380/590	16	32	65	15	45	210	16	20	32	-	195,34 €
CT16-400/630	400/630	16	32	65	15	45	230	16	20	32	✓	200,64 €
CT18-195/225	195/225	18	37	72	17	45	30	16	20	37	-	213,51 €
CT18-230/280	230/280	18	37	72	17	45	50	16	20	37	-	213,51 €
CT18-250/320	250/320	18	37	72	17	45	70	16	20	37	-	213,51 €
CT18-270/370	270/370	18	37	72	17	45	100	16	20	37	-	213,51 €
CT18-290/400	290/400	18	37	72	17	45	110	16	20	37	-	213,51 €
CT18-300/415	300/415	18	37	72	17	45	115	16	20	37	-	213,51 €
CT18-400/620	400/620	18	37	72	17	45	220	16	20	37	-	224,10 €
CT18-500/820	500/820	18	37	72	17	45	320	16	20	37	-	234,69 €
CT20-220/250	220/250	20	40	82	19	45	30	18	22	40	✓	218,16 €
CT20-250/300	250/300	20	40	82	19	45	50	18	22	40	✓	218,16 €
CT20-270/340	270/340	20	40	82	19	45	70	18	22	40	-	218,16 €
CT20-290/380	290/380	20	40	82	19	45	90	18	22	40	✓	218,16 €
CT20-320/440	320/440	20	40	82	19	45	120	18	22	40	-	218,16 €
CT20-380/560	380/560	20	40	82	19	45	180	18	22	40	✓	223,48 €
CT20-420/640	420/640	20	40	82	19	45	220	18	22	40	-	228,78 €
CT20-500/800	500/800	20	40	82	19	45	300	18	22	40	✓	234,08 €
CT22-250/280	250/280	22	47	95	22	48	30	21	25	47	-	276,93 €
CT22-270/320	270/320	22	47	95	22	48	50	21	25	47	-	276,93 €
CT22-290/350	290/350	22	47	95	22	48	60	21	25	47	-	276,93 €
CT22-330/430	330/430	22	47	95	22	48	100	21	25	47	-	276,93 €
CT22-350/470	350/470	22	47	95	22	48	120	21	25	47	-	276,93 €
CT22-470/710	470/710	22	47	95	22	48	240	21	25	47	-	292,80 €
CT25-270/320	270/320	25	50	108	26	48	50	23	28	47	-	312,85 €
CT25-295/350	295/350	25	50	108	26	48	55	23	28	47	-	312,85 €
CT25-310/375	310/375	25	50	108	26	48	65	23	28	47	-	312,85 €
CT25-350/450	350/450	25	50	108	26	48	100	23	28	47	-	312,85 €
CT25-380/500	380/500	25	50	108	26	48	120	23	28	47	-	312,85 €
CT25-420/590	420/590	25	50	108	26	48	170	23	28	47	-	312,85 €
CT25-460/660	460/660	25	50	108	26	48	200	23	28	47	-	312,85 €
CT25-500/745	500/745	25	50	108	26	48	245	23	28	47	✓	312,85 €
CT30-320/390	320/390	30	58	122	30	50	70	26	32	60	-	On request
CT30-350/420	350/420	30	58	122	30	50	70	26	32	60	-	On request
CT30-370/455	370/455	30	58	122	30	50	85	26	32	60	-	On request
CT30-400/510	400/510	30	58	122	30	50	110	26	32	60	-	On request
CT30-450/620	450/620	30	58	122	30	50	170	26	32	60	-	On request
CT30-500/720	500/720	30	58	122	30	50	220	26	32	60	-	On request
CT30-540/795	540/795	30	58	122	30	50	255	26	32	60	-	On request

*Depending on availability - Dimensions in mm

Telescopic universal joint stainless steel



CTss

Light load

- Standard series stainless steel version

- Plain bearings

- Max. misalignment angle 45°

- Material:

Stainless steel 304

- Maximum speed 800 rpm

- Transmissible torque,
see universal joint

JCD (tome ② p.85)

Applications

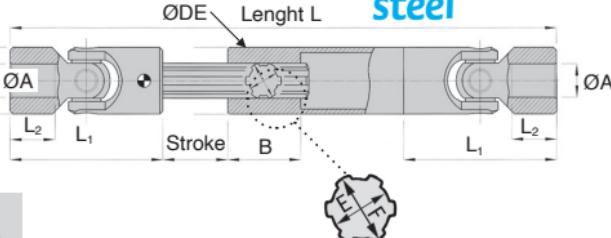
- Pharmaceutical and food industries

Accessories

- Don't forget the cover trim **M**
(tome ② p.92)



**Stainless
steel**



Modifiable bore



DISCOUNTS

Qty	1+	2+	4+
Disc.	Price -15%	On request	

Part number	L min/ max	ØA	ØD	L1	L2	B	Stroke	E	F	ØDt	Price each
CT10-210/230/SS	210/230	10	22	76	25	30	20	11	14	21,2	345,80 €
CT10-220/250/SS	220/250	10	22	76	25	30	30	11	14	21,2	345,80 €
CT10-240/290/SS	240/290	10	22	76	25	30	50	11	14	21,2	345,80 €
CT10-260/300/SS	260/300	10	22	76	25	30	40	11	14	21,2	345,80 €
CT10-280/370/SS	280/370	10	22	76	25	30	90	11	14	21,2	345,80 €
CT12-220/230/SS	220/230	12	25	86	29	35	10	13	16	26,5	359,64 €
CT12-230/250/SS	230/250	12	25	86	29	35	20	13	16	26,5	359,63 €
CT12-250/290/SS	250/290	12	25	86	29	35	40	13	16	26,5	359,64 €
CT12-290/370/SS	290/370	12	25	86	29	35	80	13	16	26,5	359,63 €
CT12-330/450/SS	330/450	12	25	86	29	35	120	13	16	26,5	359,64 €
CT14-240/260/SS	240/260	14	29	90	30	35	20	13	16	26,5	374,13 €
CT14-260/300/SS	260/300	14	29	90	30	35	40	13	16	26,5	374,13 €
CT14-280/340/SS	280/340	14	29	90	30	35	60	13	16	26,5	374,13 €
CT14-320/420/SS	320/420	14	29	90	30	35	100	13	16	26,5	374,13 €
CT14-380/500/SS	380/500	14	29	90	30	35	120	13	16	26,5	374,13 €
CT14-440/600/SS	440/600	14	29	90	30	35	160	13	16	26,5	374,13 €

Dimensions in mm

DISCOUNTS

Qty	1+	2+	4+
Disc.	Price	-15%	On request

Part number	L min/ max	ØA	ØD	L1	L2	B	Stroke	E	F	ØDt	Price each
CT16-250/270/SS	250/270	16	32	95	30	40	20	16	20	32,5	381,24 €
CT16-260/290/SS	260/290	16	32	95	30	40	30	16	20	32,5	381,23 €
CT16-290/350/SS	290/350	16	32	95	30	40	60	16	20	32,5	381,23 €
CT16-330/430/SS	330/430	16	32	95	30	40	100	16	20	32,5	381,23 €
CT16-400/570/SS	400/570	16	32	95	30	40	170	16	20	32,5	381,23 €
CT16-500/720/SS	500/720	16	32	95	30	40	220	16	20	32,5	381,23 €
CT18-270/280/SS	270/280	18	37	108	35	40	10	16	20	32,5	431,55 €
CT18-280/300/SS	280/300	18	37	108	35	40	20	16	20	32,5	431,55 €
CT18-300/340/SS	300/340	18	37	108	35	40	40	16	20	32,5	431,55 €
CT18-330/400/SS	330/400	18	37	108	35	40	70	16	20	32,5	431,55 €
CT18-380/500/SS	380/500	18	37	108	35	40	120	16	20	32,5	431,55 €
CT18-450/620/SS	450/620	18	37	108	35	40	170	16	20	32,5	431,55 €
CT20-280/290/SS	280/290	20	40	108	32	48	10	18	22	41,5	438,79 €
CT20-290/310/SS	290/310	20	40	108	32	48	20	18	22	41,5	438,79 €
CT20-310/350/SS	310/350	20	40	108	32	48	40	18	22	41,5	438,79 €
CT20-350/430/SS	350/430	20	40	108	32	48	80	18	22	41,5	438,81 €
CT20-400/530/SS	400/530	20	40	108	32	48	130	18	22	41,5	438,79 €
CT20-500/730/SS	500/730	20	40	108	32	48	230	18	22	41,5	438,79 €
CT20-550/830/SS	550/830	20	40	108	32	48	280	18	22	41,5	438,79 €
CT22-320/330/SS	320/330	22	47	127	38	48	10	21	25	47,5	553,29 €
CT22-330/350/SS	330/350	22	47	127	38	48	20	21	25	47,5	553,29 €
CT22-350/390/SS	350/390	22	47	127	38	48	40	21	25	47,5	553,29 €
CT22-390/470/SS	390/470	22	47	127	38	48	80	21	25	47,5	553,29 €
CT22-460/600/SS	460/600	22	47	127	38	48	140	21	25	47,5	553,29 €
CT22-560/800/SS	560/800	22	47	127	38	48	240	21	25	47,5	553,29 €
CT25-340/350/SS	340/350	25	50	140	44	48	10	23	28	47,5	553,29 €
CT25-350/370/SS	350/370	25	50	140	44	48	20	23	28	47,5	553,29 €
CT25-370/400/SS	370/400	25	50	140	44	48	30	23	28	47,5	553,29 €
CT25-400/460/SS	400/460	25	50	140	44	48	60	23	28	47,5	553,29 €
CT25-450/550/SS	450/550	25	50	140	44	48	100	23	28	47,5	553,29 €
CT25-500/650/SS	500/650	25	50	140	44	48	150	23	28	47,5	553,29 €
CT25-600/850/SS	600/850	25	50	140	44	48	250	23	28	47,5	553,29 €
CT30-420/430/SS	420/430	30	58	178	58	48	10	26	32	60	856,28 €
CT30-430/450/SS	430/450	30	58	178	58	48	20	26	32	60	856,28 €
CT30-450/490/SS	450/490	30	58	178	58	48	40	26	32	60	856,28 €
CT30-490/570/SS	490/570	30	58	178	58	48	80	26	32	60	856,28 €
CT30-550/690/SS	550/690	30	58	178	58	48	140	26	32	60	856,28 €
CT30-650/890/SS	650/890	30	58	178	58	48	240	26	32	60	856,28 €

Dimensions in mm

Universal joint cover

Stock

M

Industrial range

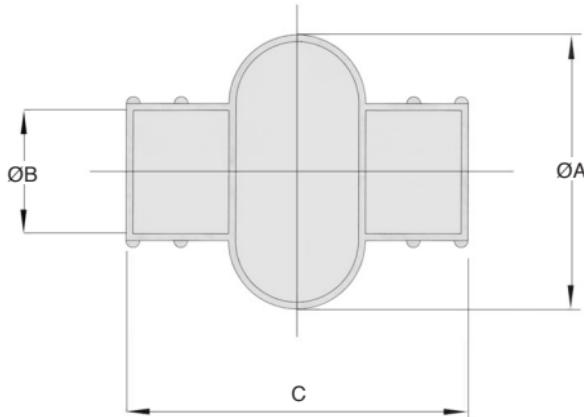
- Bellows for single joints
- For double joints, use two covers

Advantages

- The use of a cover can extend the operating life of a universal joint 5 times

Accessories

- See universal joint coupling Buyers guide
(tome ③ p.76)



DISCOUNTS

Qty	1+	2+	4+	10+
Disc. List	-6%	-12%	On request	

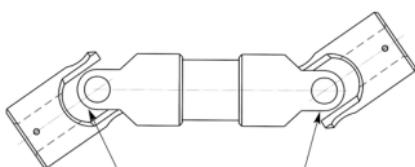
Part number	Joint bore-size (approx)	ØA	ØB	C	For universal joint n°	Stock*	Price each
M03-A-10	10	39	20,5	47	G03 GD03 H03 HD03 CT10	✓	9,84 €
M04-A-12	12	47	24,5	52	G04 GD04 H04 HD04 CT12	✓	9,84 €
M05-A-14	14	51	27,5	58	G05 GD05 H05 HD05 CT14	✓	9,84 €
M1-A-16	16	56	30,5	67	G1 GD1 H1 HD1 CT16	✓	10,77 €
M2-A-18	18	66	35,5	74	G2 GD2 H2 HD2 CT18	✓	10,77 €
M3-A-20	20	75	40,0	84	G3 GD3 H3 HD3 CT20	✓	15,40 €
M4-A-22	22	83	45,0	97	G4 GD4 H4 HD4 CT22	✓	15,40 €
M5-A-25	25	93	50,0	110	G5 GD5 H5 HD5 CT25	✓	16,71 €
M6-A-30	30	105	56,0	124	G6 GD6 H6 HD6 CT30	✓	16,71 €

*Depending on availability - Dimensions in mm

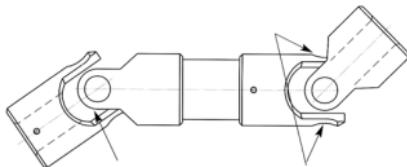
Use and maintenance of universal joints

Use and maintenance of universal joints

The yokes should be positioned as shown in the diagram in order to obtain an uniform movement.



Correct assembly
Yokes well-positioned

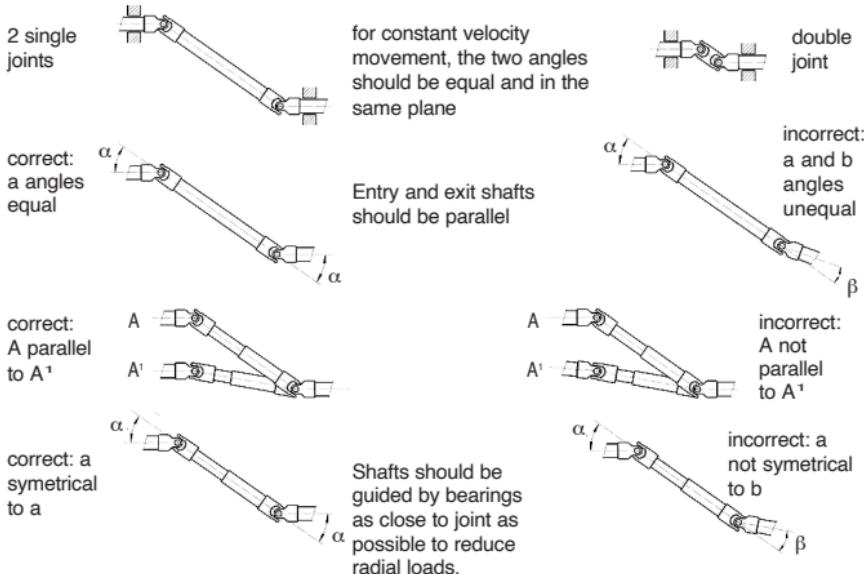


Incorrect assembly
Yokes badly-positioned

Maintenance of universal joints is limited to regular lubrication at least once a day.
In a dusty environment, the use of a grease-filled joint cover is recommended.

Several rules should be followed for a universal joint to work correctly:

- It is rare for a single joint to be used alone. They are normally only used in manually operated systems.
- Assembly of two single joints (a double joint) allows speed irregularities of a single joint to be corrected by another joint exhibiting the same irregularities in the opposite direction. This combination forms what is known as a constant velocity joint.



TORQUE LIMITERS

P. 95-103

FRICTION TORQUE
LIMITERS



p.96

FRICTION TORQUE
LIMITERS



p.97

MINIATURE FRICTION
TORQUE LIMITER



p.98

FRICTION TORQUE
LIMITER



p.102

Buying guide

Torque limiters



Part number	VT	VTA	SAS	LC	DSF
Name	Vari-Tork®	Vari-Tork® /Oldham	miniature	friction	chain
Type	friction	friction	friction	friction	friction
Adjustable	✓	✓	✓	✓	✓
Couplings	✗	✓	✓	✗	✓
In-hub assembly	✓	✗	✗	✓	✗
Bore size (mm)	Ø6 → Ø8	Ø6 → Ø10	Ø6 → Ø15,88	Plein	Ø7 → Ø68
Torque range (Nm)	0,53 → 1,32	0,53 → 1,32	0,01 → 8,64	30 → 240	4 → 2600
Torque precision	medium	medium	medium	medium	medium
Quality	☆☆	☆☆	☆☆	☆☆	☆☆
Price	€€	€€	€€€	€€	€€€€
Pages	2 p.96	2 p.97	2 p.98	2 p.100	2 p.102

VT27 VT40

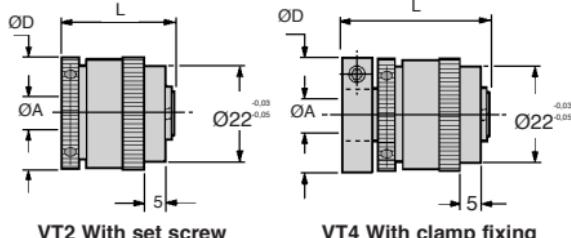
Torque up to 1.32Nm

- Basic clutch to be insert into a hub
- Protects equipment in case of excess torque
- Max. backlash 2°
- Max. sliding velocity: 1000 rpm
- Max surface temperature 80°C
- Power dissipation at 20°C :
 - 2 discs : 7 watts
 - 6 discs : 8.6 watts
- Materials:
 - Hubs + discs: treated steel
 - Casing + adjuster ring: aluminium

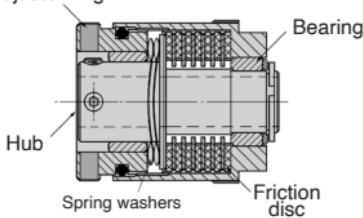


Advantages

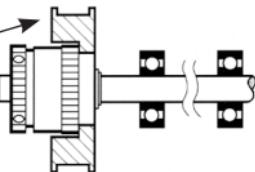
- Clutches interrupt rotation when load being transmitted exceeds preset limit.



Adjuster ring



Pulley (Or gear, etc...) bonded to register.
Press fits not permissible.



DISCOUNTS

Qty	1+	5+	10+	15+	20+	25+
Disc.	List	-15%	-20%	-25%	-30%	On request

Part number	ØA Std.	N° of friction discs	+0.03 -0.00	Heat dissipation at 20°C	Max. frictional torque	Moment of inertia (kg.m² x 10³)	Price each	Stock*
								1 to 4
With set screw								
VT2712-6	6	2	25,8	26,4	M3	7,0	0,53	242 ✓ 77,25 €
VT2712-8	8	2	25,8	26,4	M3	7,0	0,53	242 ✓ 77,25 €
VT2796-6	6	6	25,8	34,4	M3	8,6	1,32	312 ✓ 91,57 €
VT2796-8	8	6	25,8	34,4	M3	8,6	1,32	312 ✓ 91,57 €
With locking jaw								
VT4012-6	6	2	25,8	34,4	M3	7,0	0,53	317 ✓ 87,12 €
VT4012-8	8	2	25,8	34,4	M3	7,0	0,53	317 - 87,12 €
VT4096-6	6	6	25,8	40,7	M3	8,6	1,32	381 ✓ 100,16 €
VT4096-8	8	6	25,8	40,7	M3	8,6	1,32	381 ✓ 100,16 €

*Depending on availability - Dimensions in mm

Stock



Vari-Tork® friction torque limiters

Torque up to 1.32Nm

VTA2
VTA6

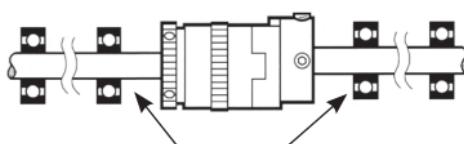
- Adjustable clutch coupling

- Max backlash 2°
- Max sliding velocity: 1000 rpm
- Max surface temperature 80°C
- Equipped with an Oldham coupling
- Materials:
Hub: Aluminium 6082
Disc: Black acetal

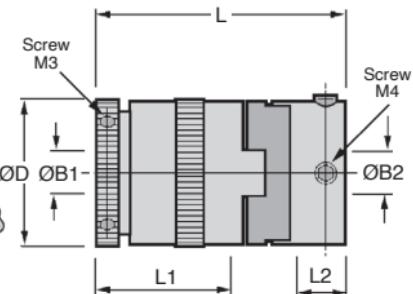
Uses

- 2 spring washers are fitted to these torque limiters
- These clutches are fitted with two washers. In some applications better torque control can be achieved by removing one.

Equipped with
coupling



Motor, gearbox, or other externally supports shafts



DISCOUNTS

Qty	1+	5+	10+	15+	20+	25+
Disc.	List	-15%	-20%	-25%	-30%	On request

Part number	ØB1 +0,03 -0,00	ØB2 +0,03 -0,00	L	ØD	Max. shaft length L1	Max. shaft length L2	Heat dissipation at 20°C (Watts)	Max. frictional torque (Nm)	Stock*	Price each 1 to 4
2 discs										
VTA2-0606	6	6	46,50	25,8	25	8,60	7,0	0,53	✓	108,22 €
VTA2-0608	6	8	46,50	25,8	25	8,60	7,0	0,53	✓	108,22 €
VTA2-0610	6	10	46,50	25,8	25	8,60	7,0	0,53	-	108,22 €
VTA2-0806	8	6	46,50	25,8	25	8,60	7,0	0,53	-	108,22 €
VTA2-0808	8	8	46,50	25,8	25	8,60	7,0	0,53	✓	108,22 €
VTA2-0810	8	10	46,50	25,8	25	8,60	7,0	0,53	✓	108,22 €
6 discs										
VTA6-0606	6	6	53,40	25,8	31	8,60	8,6	1,32	-	122,62 €
VTA6-0608	6	8	53,40	25,8	31	8,60	8,6	1,32	-	122,62 €
VTA6-0610	6	10	53,40	25,8	31	8,60	8,6	1,32	-	122,62 €
VTA6-0806	8	6	53,40	25,8	31	8,60	8,6	1,32	-	122,62 €
VTA6-0808	8	8	53,40	25,8	31	8,60	8,6	1,32	✓	122,62 €
VTA6-0810	8	10	53,40	25,8	31	8,60	8,6	1,32	✓	122,62 €

*Depending on availability - Dimensions in mm

Miniature friction torque limiter stock ★★

SAS

Torque up to 8.64Nm

- Adjustable torque limiter

- Rotation will stop if a preset torque is exceeded and will restart when the torque is reduced, thus protecting equipment and personnel
- Protects in case of overload
- Backlash 6°
- Brass friction discs

Principle

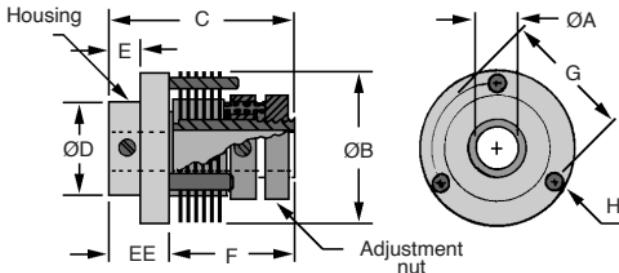
- Springs maintain contact between the clutch plates and friction rings, this contact is broken in case of excessive torque



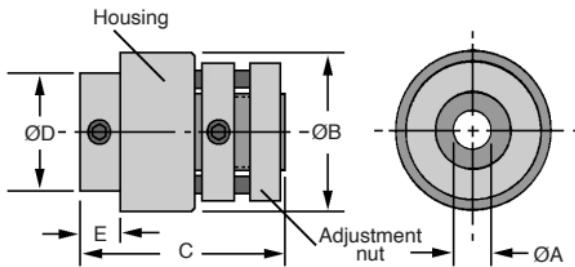
Miniature

Part number	Tolerances (0/+0,005)									
	B	Ø A Std.	Ø A max.	C	Ø D	E	EE	F	G	H
SAS16-6	25,40	6	9,53	33,27	19,30	6,35	-	-	-	-
SAS20-6	31,75	6	9,53	38,10	19,30	6,35	12,70	25,40	26,98	2,39
SAS24-10	38,10	10	12,70	63,50	25,65	9,40	19,05	44,45	33,33	3,18
SAS32-12	50,80	12	15,88	72,90	35,05	12,70	25,40	47,75	42,47	4,78
SAS44-14	69,85	14	15,88	72,90	41,40	12,70	25,40	47,75	60,33	4,78

Dimensions in mm



Open plate - SAS20-44



Enclosed plate - SAS16

DISCOUNTS

Qty	1+	5+	10+	25+	50+
Disc.	List	-6%	-12%	-18%	On request

Part number	Capacity at 50 rpm (Nm)	Capacity at 50 rpm (Watts)	Friction surfaces	Stock*	Price each 1 to 4
SAS16-6	0,010 - 1,28	5,8	8	✓	174,12 €
SAS20-6	0,010 - 1,35	6,0	8	-	476,98 €
SAS24-10	0,055 - 3,22	14,5	12	✓	515,10 €
SAS32-12	0,090 - 5,64	29,0	12	-	663,03 €
SAS44-14	0,110 - 8,64	43,0	12	-	958,97 €

*Depending on availability - Dimensions in mm

Friction torque limiter

**LC**

Max torque 30Nm to 240Nm

- Adjustable clutch

- Place the wheel (gear, pulley, chain sprocket) between the two friction disks and tighten/loosen the thread to achieve the torque setting required.

- Supplied pre-bored

Material:

Steel

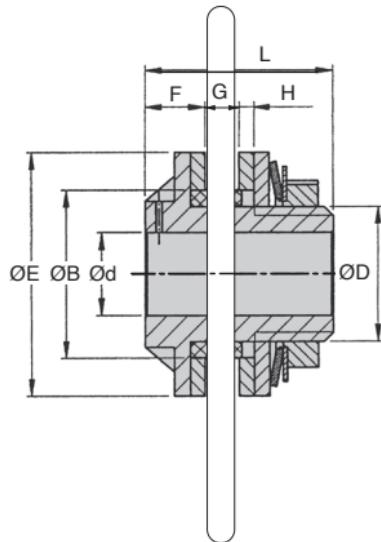
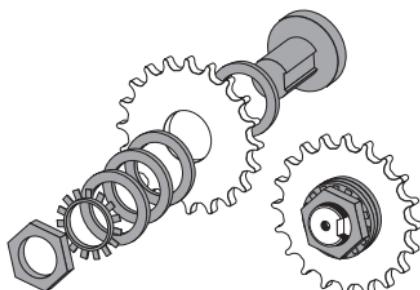
Friction disks do not contain asbestos

**LC 40-50****Option**

- Bore and keyway to your specifications
(Min order quantity: 30)

Info.

- Friction disks should never come into contact with oil as this could cause damage or affect the performance
- **Sprocket not supplied**

**DISCOUNTS**

Qty	1+	2+	5+
Disc.	List	-5%	On request

Part number	ØE	ØB	h8	Ød	F	G max	H	ØD	Ø torque max (Nm)	N° springs	Pitch	N° of teeth	Stock	Price each
LC40-1-7	40	26		7	10	6	3	22	30,0	15	1	3/8"	18-21	- 26,33 €
LC40-2-7	40	26		7	10	6	3	22	30,0	28	2	1/2"	15	- 29,31 €
LC50-1-7	45	35		7	11	6	3	32	35,5	30	1	3/8"	19-23	✓ 32,58 €
LC50-2-7	45	35		7	11	6	3	32	35,5	55	2	1/2"	18	✓ 32,58 €

*Depending on availability - Dimensions in mm



Friction torque limiter

Max torque 190Nm to 1.800Nm

LC

- Adjustable clutch

- Place the wheel (gear, pulley, chain sprocket) between the two friction disks and tighten/loosen the thread to achieve the torque setting required.

- Supplied pre-bored

- Material:

Steel

- Friction disks do not contain asbestos



LC 65-85-95-120-140-170

Option

- Bore and keyway to your specifications
(Mini order quantity: 30)

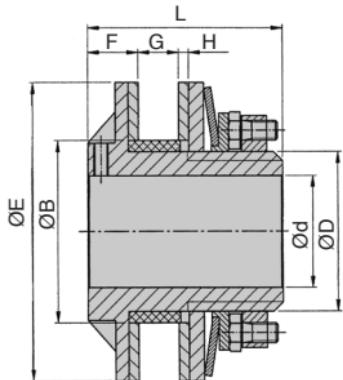
Info.

- Friction disks should never come into contact with oil as this could cause damage or affect the performance

- **Sprocket not supplied**



LC 65-85-95-120-140-170



DISCOUNTS

Qty	1+	2+	5+	
Disc.	List	-5%		On request

Part number	OE	OBh8	Od	F	G max	H	OD	L	Ø torque max (Nm)	Nb springs	Recommended sprocket Pitch	N° of teeth	Stock*	Price each
LC65-1-10	65	45	10	16	9	4	36	50,5	70	1	3/8"	27	✓	43,00 €
LC65-2-10	65	45	10	16	9	4	36	50,5	120	2	1/2"	21	✓	47,17 €
LC85-1-15	85	52	15	17,0	11,0	4,0	45	55,5	130	1	3/8"	38	-	53,77 €
LC85-2-15	85	52	15	17,0	11,0	4,0	45	55,5	240	2	1/2"	25	✓	59,26 €
LC95-1-15	95	60	15	18,0	11,0	4,0	52	67,0	190	1	5/8"	21	-	82,59 €
LC95-2-15	95	60	15	18,0	11,0	4,0	52	67,0	340	2	3/4	19	-	88,49 €
LC120-1-20	120	73	20	20,0	16,0	4,0	64	78,0	350	1	1/2"	38	-	91,98 €
LC120-2-20	120	73	20	20,0	16,0	4,0	64	78,0	650	2	5/8"	32	-	105,00 €
LC140-1-20	140	90	20	23,0	17,0	4,0	85	86,5	650	1	3/4	25	✓	153,63 €
LC140-2-20	140	90	20	23,0	17,0	4,0	85	86,5	1200	2	1"	21	-	174,03 €
LC170-1-28	170	100	28	27,5	18,5	4,5	90	95,0	1000	1	3/4	35	-	177,92 €
LC170-2-28	170	100	28	27,5	18,5	4,5	90	95,0	1800	2	1"	25	-	206,98 €
*Depending on availability - Dimensions in mm														

Friction torque limiter

Ste  ★★

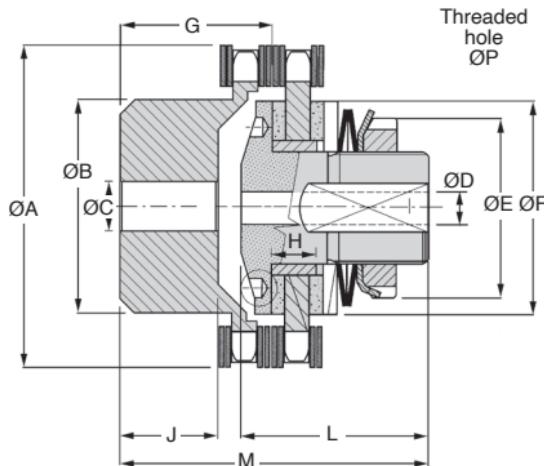
DSF

Torque up to 2,600Nm

- Adjustable torque limiter
- Chain coupled limiter
- Limiter with slip friction disc
- Can be supplied pre-bored or solid
- Max. speed: 100 rpm
- Materials:
Steel EN10083-2

Options

- Bore-size and keyway

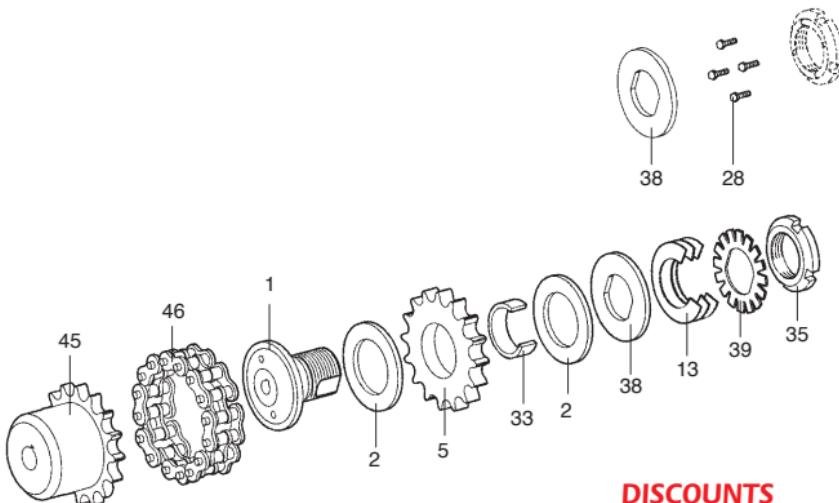


Part number	ØA	ØB	ØE	ØF	G	H	J	L	M	ØP	Q
DSF025-4-20	41	23	22	25	13	5,5	9,0	26	36,0	M3	3
DSF038-5-35	58	37	32	38	28	8,0	20,0	33	56,0	M3	3
DSF050-12-60	75	50	44	50	28	8,0	19,0	35	59,0	M4	4
DSF170-26-100	101	70	63	70	40	10,0	29,0	55	87,0	M4	4
DSF290-70-300	126	90	82	90	60	15,0	48,0	60	112,5	M6	6
DSF311-240-580	157	110	105	115	70	17,0	57,5	70	131,0	M6	6
DSF414-400-1200	198	130	139	140	70	21,0	59,5	80	152,0	M6	6
DSF517-450-2600	223	130	160	170	100	25,0	90,5	95	192,0	M8	8

Dimensions in mm

Parts

- 1 - Flange clamp hub
- 2 - Friction disc
- 5 - Toothed crown
- 13 - Axial spring
- 28 - Adjustment screw
- 33 - Sliding ring
- 35 - Notched locknut
- 38 - Mobile flange
- 39 - Toothed washer
- 45 - Pre-bored chain pinion
- 46 - Double chain

**DISCOUNTS**

Qty	1+	50+
Disc.	List	On request

Part number	ØC (mm)		ØD (mm)		Torque (Nm)	Stock*	Price each
	Prebore Ø	Max. Ø	Prebore Ø	Max. Ø			
DSF025-4-20	7	12	-	8	4-20	✓	134,82 €
DSF038-5-35	10	20	5	12	5-35	✓	162,24 €
DSF050-12-60	12	24	8	20	12-60	✓	234,62 €
DSF170-26-100	16	30	10	25	26-150	✓	240,44 €
DSF290-70-300	20	42	14	38	70-300	-	339,40 €
DSF311-240-580	20	50	18	45	240-580	-	587,36 €
DSF414-400-1200	28	60	24	55	400-1200	-	1.030,93 €
DSF517-450-2600	30	68	28	65	450-2600	-	1.159,62 €

*Depending on availability - Dimensions in mm

SPLINED BUSH



inox

p.109



LOCKING RINGS IN STEEL OR STAINLESS STEEL



p.111

CLAMPING RING



p.112

ASSEMBLY ELEMENTS

P. 106-130

STEEL CLAMPING RING



p.114

**SPLIT SHAFT COLLAR
WITH CLAMP LEVER**



p.116

LOCKING ASSEMBLY



p.119

Steel splined shaft

Ste Stock

ACA

Parallel-faced

- Suitable for transmitting high torque

- Materials:

Steel C40/XC42

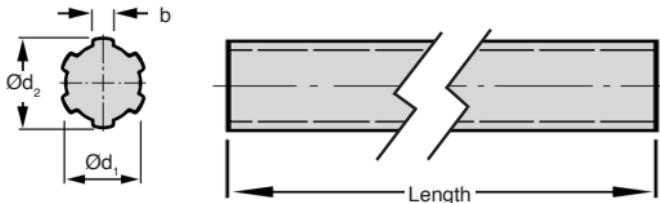
- Extruded product

Accessories

- Splined bush: cylindrical or flanged

Options

- Alternative lengths up to 3000mm



DISCOUNTS and AVAILABLE LENGTHS

Qty disc L. Price	1+	10+	20+	30+	40+
	List	-15%	-20%	-30%	On request
	1000 mm	2000 mm	3000 mm		
Uni.	x 2,23		x 3,35		

Part number	Number of splines	Standard length (mm)				Weight (kg)	Stock*	Price each 1 to 9
		Ød ₁	Ød ₂	b				
ACA6-14-1000	6	11 ^{+0/-0,08}	14 ^{-0,07/-0,02}	3,0 ^{+0/-0,08}	1000	0,949	✓	26,27 €
ACA6-16-1000	6	13 ^{+0/-0,08}	16 ^{-0,07/-0,02}	3,5 ^{+0/-0,08}	1000	1,287	✓	25,16 €
ACA6-20-1000	6	16 ^{+0/-0,08}	20 ^{-0,07/-0,25}	4,0 ^{+0/-0,08}	1000	1,911	✓	33,74 €
ACA6-22-1000	6	18 ^{+0/-0,08}	22 ^{+0/-0,10}	5,0 ^{+0/-0,08}	1000	2,453	✓	38,24 €
ACA6-25-1000	6	21 ^{+0/-0,08}	25 ^{-0,07/-0,27}	5,0 ^{+0/-0,08}	1000	3,139	✓	43,73 €
ACA6-28-1000	6	23 ^{+0/-0,08}	28 ^{-0,07/-0,25}	6,0 ^{+0/-0,08}	1000	3,964	✓	58,78 €
ACA6-32-1000	6	26 ^{+0/-0,08}	32 ^{-0,07/-0,27}	6,0 ^{+0/-0,08}	1000	5,008	✓	71,99 €
ACA6-34-1000	6	28 ^{+0/-0,08}	34 ^{-0,07/-0,27}	7,0 ^{+0/-0,08}	1000	5,816	✓	84,95 €
ACA8-38-1000	8	32 ^{+0/-0,08}	38 ^{-0,07/-0,27}	6,0 ^{+0/-0,08}	1000	7,433	✓	105,34 €
ACA8-42-1000	8	36 ^{+0/-0,08}	42 ^{-0,07/-0,27}	7,0 ^{+0/-0,08}	1000	9,302	✓	136,71 €
ACA8-48-1000	8	42 ^{+0/-0,08}	48 ^{-0,07/-0,27}	8,0 ^{+0/-0,08}	1000	12,371	✓	173,43 €
ACA8-54-1000	8	46 ^{+0/-0,08}	54 ^{-0,07/-0,27}	9,0 ^{+0/-0,08}	1000	15,300	✓	252,34 €

*Depending on availability - Dimensions in mm

Parallel-faced

BCA

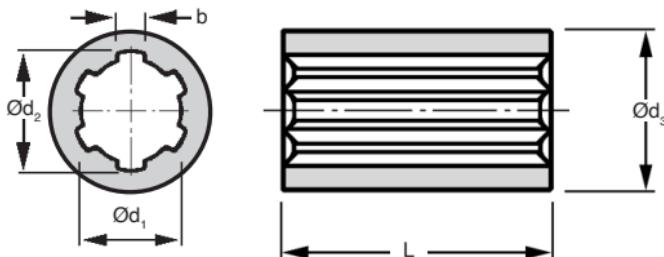
- Suitable for transmitting high torque

- Material:

- Steel C45

Accessories

- Steel or stainless steel **splined shaft**

**DISCOUNTS**

Qty	1+	10+	20+	30+	40+
Disc.	List	-15%	-20%	-30%	On request

Part number	Number of splines	Ød₁	Ød₂	b	L total length	splined length	Ød₃	Stock*	Price each 1 to 9
BCA6-14	6	11,00	14,00	3,00	40	30	25	✓	10,98 €
BCA6-16	6	13,00	16,00	3,50	40	40	28	✓	10,33 €
BCA6-20	6	16,00	20,00	4,00	50	50	30	✓	10,33 €
BCA6-22	6	18,00	22,00	5,00	50	50	32	✓	10,33 €
BCA6-25/40	6	21,00	25,00	5,00	40	40	38	✓	12,16 €
BCA6-25	6	21,00	25,00	5,00	60	60	38	✓	12,16 €
BCA6-28	6	23,00	28,00	6,00	60	60	38	✓	12,63 €
BCA6-32	6	26,00	32,00	6,00	60	60	42	✓	12,63 €
BCA6-34	6	28,00	34,00	7,00	60	60	45	✓	14,17 €
BCA6-38	8	32,00	38,00	6,00	60	60	55	✓	20,70 €
BCA8-42	8	36,00	42,00	7,00	70	70	60	✓	24,22 €
BCA8-48	8	42,00	48,00	8,00	70	70	65	✓	30,09 €
BCA8-54	8	46,00	54,00	9,00	80	80	70	✓	40,13 €

*Depending on availability - Dimensions in mm

Stainless steel 304 splined shaft Sta

ACASS

Parallel-faced

- Suitable for transmitting high torque values

- Material:

Stainless steel 304 (1.4301)

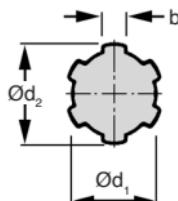
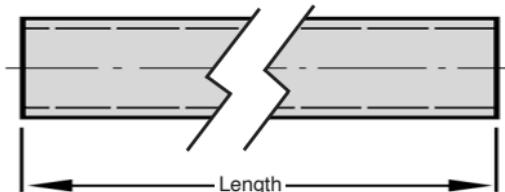


Accessoires

- Stainless steel splined bush BCAss

Option

- Alternative lengths up to 3000mm



For hostile environments

NEW!
Replace the part
number BUC30

DISCOUNTS

Qty	1+	2+	20+
Disc.	List -10%		On request

Part number	Number of splines	$\varnothing d_1$ $+0_{-0.08}$	$\varnothing d_2$ $+0_{-0.07}^{-0.27}$	b $+0_{-0.08}$	Standard length (mm)	Weight (kg/m)	Price each for 1000mm
ACA6-14-1000/SS	6	11,00	14,00	3,00	1000	0,949	57,56 €
ACA6-16-1000/SS	6	13,00	16,00	3,50	1000	1,287	67,43 €
ACA6-20-1000/SS	6	16,00	20,00	4,00	1000	1,911	119,37 €
ACA6-25-1000/SS	6	21,00	25,00	5,00	1000	3,139	195,47 €
ACA6-32-1000/SS	6	26,00	32,00	6,00	1000	5,008	299,45 €
ACA8-38-1000/SS	8	32,00	38,00	6,00	1000	7,433	429,45 €

Dimensions in mm

Parallel-faced

BCASS

- Suitable for transmitting high torque values

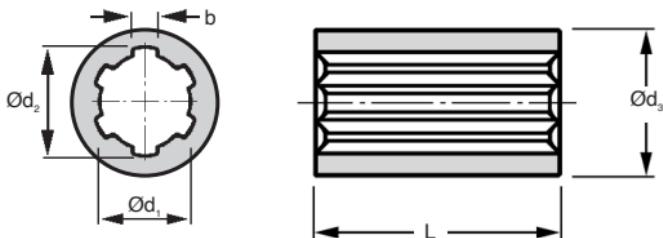
- Materials:
Stainless steel 304

Accessories

- Stainless steel splined shaft ACAss



For hostile environments



NEW!
Replace the part
number BUC00

DISCOUNTS

Qty	1+	2+	20+
Disc.	List	-10%	On request

Part number	Number of splines	Ød _{H7}	Ød _s	b ^{D9}	L	Ød _{h11}	Weight (kg)	Price each
BCA6-14/SS	6	11,00	14,00	3,00	25	18,75	0,028	27,87 €
BCA6-16/SS	6	13,00	16,00	3,50	30	21,75	0,047	32,74 €
BCA6-20/SS	6	16,00	20,00	4,00	30	28,50	0,090	36,40 €
BCA6-25/SS	6	21,00	25,00	5,00	40	36,00	0,190	51,48 €
BCA6-32/SS	6	26,00	32,00	6,00	40	42,50	0,242	66,26 €
BCA8-38/SS	8	32,00	38,00	6,00	40	49,70	0,304	77,37 €

Dimensions in mm



**MINIMUM
ORDER
20€***



**VOLUME
DISCOUNT**

**1,2,3
PRODUCTS
SOLD
INDIVIDUALLY**



**CAD FILES
STEP, IGES...**



**MADE TO
MEASURE
AVAILABLE**



**CAD FILES
STEP, IGES...**

**1,2,3
PRODUCTS
SOLD
INDIVIDUALLY**



**VOLUME
DISCOUNT**



**MADE TO
MEASURE
AVAILABLE**



**FREE
CATALOGUES**

**FREE
DELIVERY
FOR ORDERS
100€* OR MORE**



**CAD FILES
STEP, IGES...**

**1,2,3
PRODUCTS
SOLD
INDIVIDUALLY**



**FAST
QUOTES
& ORDERS**



**VOLUME
DISCOUNT**

- Cylindrical locking ring conforming to DIN705
- Secured using a set screw (DIN914)
- Materials:
 - Steel, natural finish
 - 303 stainless steel, natural finish

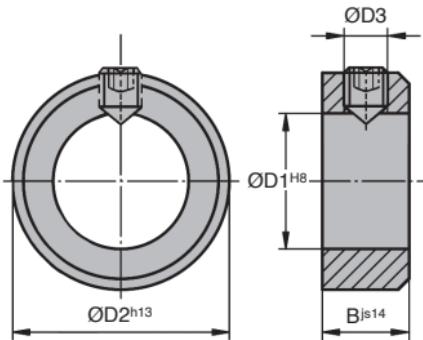
Advantages

- Allows a stop or an axial block to be quickly added to a shaft

Info

- Alternative bores available

Lowest price available!

**DISCOUNTS**

Qty	1+	5+	10+	25+	50+
Disc	List	-6%	-12%	-18%	On request

Part number	Steel	S/steel	ØD1	B	ØD2	ØD3	Weight (kg)	Stock*	Price each 1 to 4	
									Steel	S/steel
BAG0-006	BAG0-006/SS		6	8	12	M4x5	0,005	✓	✓	0,82 € 1,99 €
BAG0-008	BAG0-008/SS		8	8	16	M4x6	0,009	✓	✓	0,90 € 2,42 €
BAG0-010	BAG0-010/SS		10	10	20	M5x8	0,018	✓	✓	1,21 € 2,95 €
BAG0-012	BAG0-012/SS		12	12	22	M6x8	0,025	✓	✓	1,34 € 3,89 €
BAG0-015	BAG0-015/SS		15	12	25	M6x8	0,03	✓	✓	1,51 € 4,43 €
BAG0-016	BAG0-016/SS		16	12	28	M6x8	0,039	✓	✓	1,60 € 6,23 €
BAG0-020	BAG0-020/SS		20	14	32	M6x8	0,054	✓	✓	2,02 € 8,11 €
BAG0-025	BAG0-025/SS		25	16	40	M8x10	0,096	✓	✓	3,10 € 13,43 €
BAG0-030	BAG0-030/SS		30	16	45	M8x10	0,111	✓	-	4,06 € 15,78 €
BAG0-035	BAG0-035/SS		35	16	56	M8x12	0,189	-	-	5,51 € 25,17 €
BAG0-040	BAG0-040/SS		40	18	63	M10x16	0,263	-	-	8,06 € 33,28 €
BAG0-050	BAG0-050/SS		50	18	80	M10x16	0,433	-	-	12,06 € 48,75 €

*Depending on availability - Dimensions in mm

Plastic clamping ring

Stock Pla €
Eco

BAP

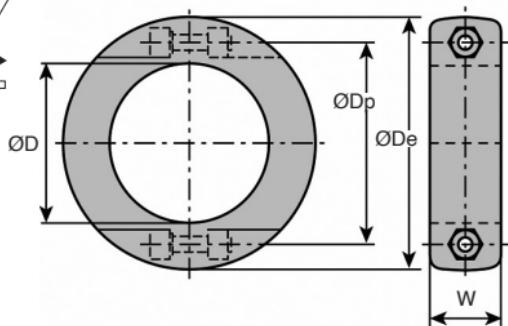
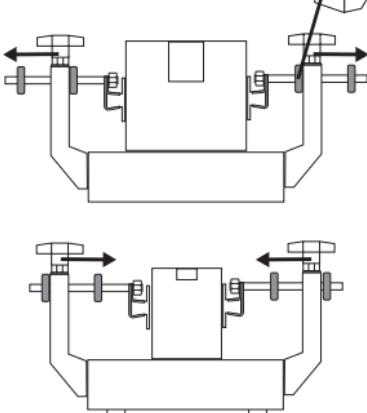
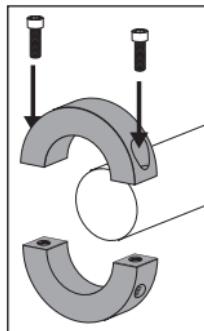
Ø10 to Ø20

- 2 part clamping ring

- Materials:

Body: reinforced polyamide

Screws: stainless steel 304



DISCOUNTS

Qty	1+	40+	100+	200+	300+
Disc.	List	-5%	-10%	-15%	On request

Part number	ØD	ØDe	ØDp	W	Weight (kg)	Stock*	Price each 1 to 39
BAP-10	10	30	20	12	0,01	✓	3,15 €
BAP-12	12	30	20	12	0,01	✓	3,15 €
BAP-14	14	30	20	12	0,01	✓	3,15 €
BAP-15	15	39	27	14	0,02	✓	3,15 €
BAP-16	16	39	27	14	0,02	✓	3,15 €
BAP-18	18	39	27	14	0,02	✓	3,15 €
BAP-20	20	40	29	14	0,02	✓	3,15 €

*Depending on availability - Dimensions in mm

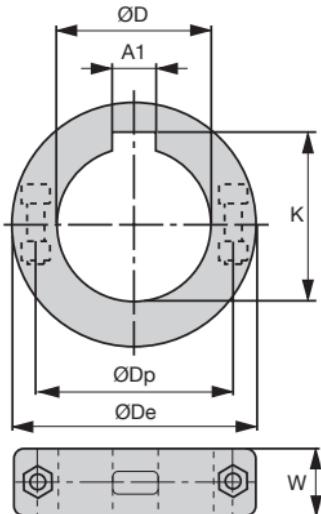
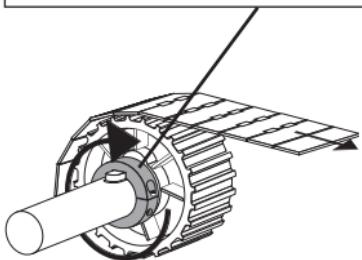
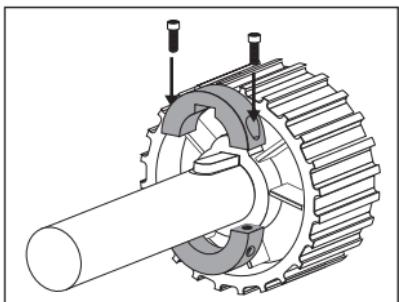
Ø25 to Ø40

BAP

- 2 part clamping**- Smooth or grooved bore****- Materials:**

Body: reinforced polyamide

Screws: stainless steel 304

**DISCOUNTS**

Qty	1+	40+	100+	200+	300+
Disc.	List	-5%	-10%	-15%	On request

Part number	smooth	grooved	ØD	A1	ØDe	ØDp	W	K	Weight (kg)	Stock*	Price each. 1 à 39	
											smooth	grooved
BAP-25	BAP-25K		25	8	45	35	14	28,3	0,02	✓	2,93 €	4,91 €
BAP-30	BAP-30K		30	8	55	45	16	33,3	0,03	✓	3,48 €	5,39 €
BAP-35	BAP-35K		35	10	60	47	16	38,3	0,03	✓	3,76 €	5,67 €
BAP-40	BAP-40K		40	12	64	51	18	43,3	0,04	✓	3,76 €	5,67 €

*Depending on availability - Dimensions in mm

Steel clamping ring

Ste  Eco Stock

BAG1
BAG2

Single or two part assembly

- Solid fixing onto any type of shaft

- Do not separate the two pieces

- Materials:

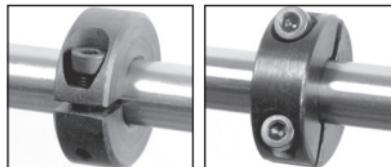
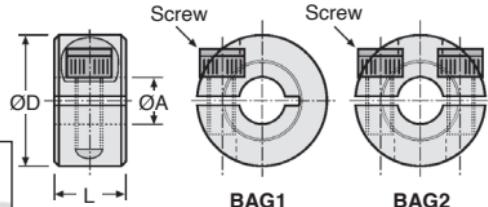
Clamp: blackened steel

(natural, blackened or chromed steel
depending on manufacturer)

Screw: steel alloy

- 2-part clamps offer a 20% stronger fixing

- Dimensions ØD and L are given as an indication only
and are subject to change.



Typical application

DISCOUNTS

Qty	1+	5+	10+	25+	50+
Disc	List	-6%	-12%	-18%	On request

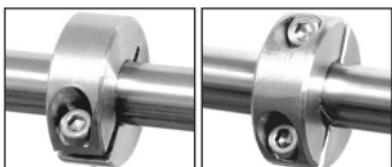
Part number	1 part	2 parts	ØA	ØD	L	Screw	Stock*	Stock*	Price each 1 to 4	
							1 part	2 parts	1 part	2 parts
BAG1-004	BAG2-004	4	16	9	M3 x 8	-	-	-	8,59 €	13,92 €
BAG1-005	BAG2-005	5	16	9	M3 x 8	✓	✓	-	2,87 €	5,07 €
BAG1-006	BAG2-006	6	16	9	M3 x 8	✓	-	-	2,95 €	13,92 €
BAG1-008	BAG2-008	8	18	9	M3 x 8	✓	✓	-	3,01 €	5,33 €
BAG1-010	BAG2-010	10	24	9	M3 x 10	✓	✓	-	3,23 €	5,90 €
BAG1-012	BAG2-012	12	28	11	M4 x 12	✓	✓	-	3,53 €	6,00 €
BAG1-015	BAG2-015	15	34	13	M5 x 16	✓	✓	-	4,25 €	6,90 €
BAG1-016	BAG2-016	16	34	13	M5 x 16	✓	✓	-	4,09 €	6,90 €
BAG1-018	BAG2-018	18	36	13	M5 x 16	-	-	-	11,89 €	17,21 €
BAG1-020	BAG2-020	20	40	15	M6 x 16	✓	✓	-	5,26 €	7,87 €
BAG1-025	BAG2-025	25	45	15	M6 x 16	✓	✓	-	5,50 €	8,60 €
BAG1-030	BAG2-030	30	54	15	M6 x 18	✓	✓	-	7,69 €	10,04 €
BAG1-035	BAG2-035	35	57	15	M6 x 18	✓	✓	-	8,44 €	10,99 €
BAG1-040	BAG2-040	40	60	15	M6 x 18	✓	✓	-	9,73 €	11,68 €
BAG1-050	BAG2-050	50	78	19	M8 x 25	-	✓	-	15,27 €	21,02 €
BAG1-055	BAG2-055	55	90	16	M8 x 20	-	-	-	16,79 €	19,91 €
BAG1-060	BAG2-060	60	100	16	M8 x 20	-	✓	-	19,86 €	22,85 €
BAG1-070	BAG2-070	70	110	20	M10 x 25	-	-	-	22,67 €	26,21 €
BAG1-075	BAG2-075	75	125	20	M10 x 25	-	-	-	28,49 €	32,14 €
BAG1-080	BAG2-080	80	125	20	M10 x 25	-	-	-	27,98 €	31,50 €

*Depending on availability - Dimensions in mm

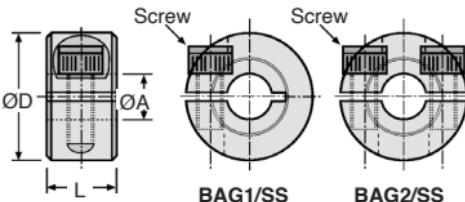
Single or two part assembly

**BAG1ss
BAG2ss**

- Solid fixing onto any type of shaft
- Do not separate the two pieces
- Materials:
 - Clamp + screw: stainless steel
 - Screw: steel alloy
- 2-part clamps offer a 20% stronger fixing
- Dimensions ØD and L are given as an indication only and are subject to change



Typical application



DISCOUNTS

Qty	1+	5+	10+	25+	50+
Disc	List	-6%	-12%	-18%	On request

Part number	1 part	2 parts	ØA	ØD	L	Screw	Stock*	Stock*	Price each 1 to 4	
							1 part	2 parts	1 part	2 parts
BAG1-004/SS	BAG2-004/SS	4	16	9	M3 x 8	✓	✓	✓	10,79 €	10,79 €
BAG1-005/SS	BAG2-005/SS	5	16	9	M3 x 8	✓	✓	✓	5,50 €	9,90 €
BAG1-006/SS	BAG2-006/SS	6	16	9	M3 x 8	✓	✓	✓	5,82 €	10,79 €
BAG1-008/SS	BAG2-008/SS	8	18	9	M3 x 8	✓	✓	✓	6,16 €	8,71 €
BAG1-010/SS	BAG2-010/SS	10	24	9	M3 x 10	✓	✓	✓	7,51 €	11,34 €
BAG1-012/SS	BAG2-012/SS	12	28	11	M4 x 12	✓	✓	✓	9,08 €	13,01 €
BAG1-015/SS	BAG2-015/SS	15	34	13	M5 x 16	✓	✓	✓	10,16 €	16,02 €
BAG1-016/SS	BAG2-016/SS	16	34	13	M5 x 16	✓	✓	✓	14,89 €	18,57 €
BAG1-018/SS	BAG2-018/SS	18	36	13	M5 x 16	✓	✓	✓	14,89 €	18,57 €
BAG1-020/SS	BAG2-020/SS	20	40	15	M6 x 16	✓	✓	✓	12,61 €	16,84 €
BAG1-025/SS	BAG2-025/SS	25	45	15	M6 x 16	✓	✓	✓	13,60 €	18,10 €
BAG1-030/SS	BAG2-030/SS	30	54	15	M6 x 18	✓	✓	✓	22,13 €	30,27 €
BAG1-040/SS	BAG2-040/SS	40	60	15	M6 x 18	✓	✓	✓	41,85 €	37,31 €
BAG1-050/SS	BAG2-050/SS	50	78	19	M8 x 25	✓	✓	✓	60,38 €	58,56 €
BAG1-055/SS	BAG2-055/SS	55	90	16	M8 x 20	-	-	-	78,03 €	82,65 €
BAG1-060/SS	BAG2-060/SS	60	100	16	M8 x 20	-	✓	✓	89,93 €	94,65 €
BAG1-070/SS	BAG2-070/SS	70	110	20	M10 x 25	-	-	-	100,17 €	105,51 €
BAG1-075/SS	BAG2-075/SS	75	125	20	M10 x 25	-	-	-	128,47 €	133,99 €
BAG1-080/SS	BAG2-080/SS	80	125	20	M10 x 25	-	-	-	122,27 €	127,72 €

*Depending on availability - Dimensions in mm

Split shaft collar with clamp lever

Stock

BAG-MI

Steel

- Ensures a uniform distribution of the clamping force
- Clamps securely to any type of shaft
- Material:
Burnished steel (S250Pb)

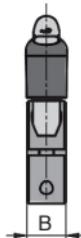
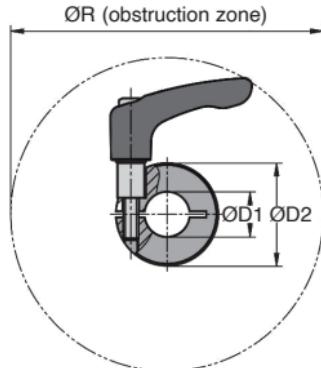
Repeated operations

Advantages

- Fits perfectly on to the shaft with a high clamping force but without risk of damage

Info.

- Recommended shaft tolerance: h11



DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List -15%	-20%	On request	

Part number	ØD1	ØD2	B	ØR	Stock*	Price each 1 to 5
BAG1-010-MI	10	24	9	44,1	-	14,84 €
BAG1-012-MI	12	28	11	90,4	-	15,17 €
BAG1-015-MI	15	34	13	105,0	-	16,38 €
BAG1-016-MI	16	34	13	105,0	-	16,73 €
BAG1-018-MI	18	36	13	105,7	-	17,47 €
BAG1-020-MI	20	40	15	103,8	✓	18,26 €
BAG1-022-MI	22	42	15	104,2	-	18,26 €
BAG1-025-MI	25	45	15	104,8	✓	19,35 €
BAG1-028-MI	28	48	15	106,8	-	19,35 €
BAG1-030-MI	30	54	15	112,6	✓	22,21 €
BAG1-040-MI	40	60	15	113,2	-	25,18 €
BAG1-050-MI	50	78	19	150,2	-	46,80 €

*Depending on availability - Dimensions in mm



Split shaft collar with clamp lever

Stainless steel

BAG-MI/SS

- Ensures a uniform distribution of the clamping force
- Clamps securely to any type of shaft
- Material:
Polished stainless steel (303)

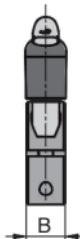
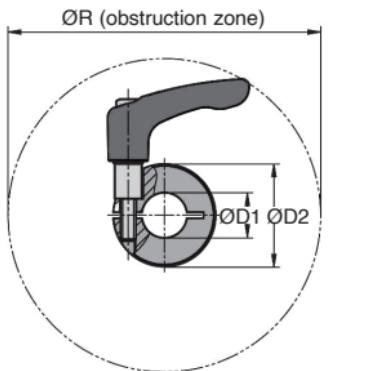
Repeated operations

Advantages

- Fits perfectly on to the shaft with a high clamping force but without risk of damage

Info.

- Recommended shaft tolerance: h11



DISCOUNTS

Qty	1+	6+	40+
Disc.	List -15%		On request

Part number	ØD1	ØD2	B	ØR	Stock*	Price each
BAG1-010-MI/SS	10	24	9	44,1	✓	21,61 €
BAG1-012-MI/SS	12	28	11	90,4	-	21,93 €
BAG1-015-MI/SS	15	34	13	105,0	✓	25,63 €
BAG1-016-MI/SS	16	34	13	105,0	-	25,92 €
BAG1-018-MI/SS	18	36	13	105,7	-	28,62 €
BAG1-020-MI/SS	20	40	15	103,8	✓	33,16 €
BAG1-022-MI/SS	22	42	15	104,2	-	34,05 €
BAG1-025-MI/SS	25	45	15	104,8	✓	34,95 €
BAG1-028-MI/SS	28	48	15	106,8	-	36,74 €
BAG1-030-MI/SS	30	54	15	112,6	✓	38,54 €
BAG1-040-MI/SS	40	60	15	113,2	✓	53,49 €
BAG1-050-MI/SS	50	78	19	150,2	-	106,10 €

*Depending on availability - Dimensions in mm

Buying guide

Locking rings



Part number	RT25	RTT	RT70	RTL450
Self centering	✓	✗	✓	✓
For shaft (mm)	Ø6 → Ø55	Ø20 → Ø100	Ø19 → Ø70	Ø25 → Ø100
Transmissible torque (Nm)	12 → 2580	270 → 9600	350 → 6840	840 → 36 300
Advantages	ideal for small diameters	high transmissible torque	high transmissible torque	high transmissible torque
Quality	★★★	★★★	★★★	★★★
Price	€€	€	€€	€€
Pages	2 p.120	2 p.119	2 p.121	2 p.122



Part number	SUP	SUPcc	SUPss	SUPccss
Self centering	✓	✓	✓	✓
For shaft (mm)	Ø5 → Ø40	Ø5 → Ø35	Ø6 → Ø30	Ø6 → Ø30
Transmissible torque (Nm)	10,1 → 1241	10,1 → 836	8,5 → 423,5	8,5 → 423,5
Advantages	quick to assemble + ideal for small diameters	self centering quick to assemble	stainless steel self centering quick to assemble	stainless steel self centering quick to assemble
Quality	★★★	★★★	★★★	★★★
Price	€€€	€€	€€	€€
Pages	2 p.124	2 p.125	2 p.126	2 p.127

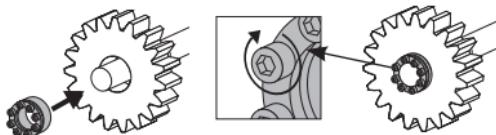
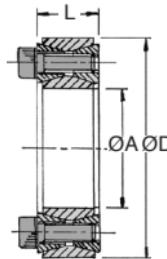
- Inserts between the shaft and the bore
- High transmissible torque
- Contact pressure spread evenly
- Easy to assemble and dismantle
- Reduced width
- Backlash free
- No constraints due to keyway
- Increases the resistant part of the section of the shaft
- Suitable for alternating rotational movements
- Up to 4 units can be used together
- Materials:
Body: steel
Screws: steel DIN 912 12.9

Options

- Other diameters available (up to 220mm bore)
- Stainless steel version

Info

- **Pn: hub surface pressure
- **Pw: shaft surface pressure

**DISCOUNTS**

Qty	1+	6+	20+	40+	60+	100+
Disc.	List	-10%	-15%	-20%	-25%	On request

Part number	ØA	ØD	L	H	Screw	Tightening torque Nm	Transmissible torque Nm	**Pw N/mm²	**Pn N/mm²	Stock* 1 to 5	Price each €
					M	T (Nm)	(Nm)	(N/mm²)	(N/mm²)		
RTT-20-47	20	47	20	28	8xM6x18	14	270	210	90	✓	14,17 €
RTT-22-47	22	47	20	28	8xM6x18	14	300	195	90	✓	14,17 €
RTT-24-50	24	50	20	28	9xM6x18	14	360	195	95	✓	14,54 €
RTT-25-50	25	50	20	28	9xM6x18	14	380	190	85	✓	14,54 €
RTT-28-55	28	55	20	28	10xM6x18	14	500	187	96	-	16,22 €
RTT-30-55	30	55	20	28	10xM6x18	14	530	176	96	✓	16,22 €
RTT-32-60	32	60	20	28	12xM6x18	14	630	192	105	✓	17,81 €
RTT-35-60	35	60	20	28	12xM6x18	14	700	180	105	✓	17,81 €
RTT-38-65	38	65	20	28	14xM6x18	14	860	183	107	-	19,62 €
RTT-40-65	40	65	20	28	14xM6x18	14	910	180	110	✓	19,62 €
RTT-42-75	42	75	24	34	12xM8x22	35	1500	226	125	-	24,54 €
RTT-45-75	45	75	24	34	12xM8x22	35	1610	210	125	-	24,54 €
RTT-48-80	48	80	24	34	12xM8x22	35	1700	196	115	-	26,01 €
RTT-50-80	50	80	24	34	12xM8x22	35	1770	190	115	✓	26,01 €
RTT-55-85	55	85	24	34	14xM8x22	35	2270	200	130	-	28,56 €
RTT-60-90	60	90	24	34	14xM8x22	35	2470	180	120	✓	30,20 €
RTT-65-95	65	95	24	34	16xM8x22	35	3040	190	130	✓	32,88 €
RTT-70-110	70	110	28	40	14xM10x25	70	4600	210	130	-	43,52 €
RTT-75-115	75	115	28	40	14xM10x25	70	4900	195	125	-	47,36 €
RTT-80-120	80	120	28	40	14xM10x25	70	5200	180	120	-	49,80 €
RTT-85-125	85	125	28	40	16xM10x25	70	6300	195	130	-	52,99 €
RTT-90-130	90	130	28	40	16xM10x25	70	6600	180	125	-	53,18 €
RTT-95-135	95	135	28	40	18xM10x25	70	7900	195	135	-	58,51 €
RTT-100-145	100	145	33	47	14xM12x30	125	9600	195	135	-	69,81 €

*Depending on availability - Dimensions in mm

Self-centering flanged locking assembly Steck

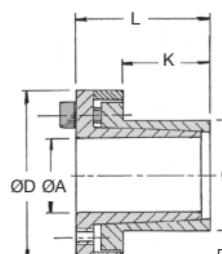
RT25

Medium/high torque



- Inserts between the shaft and the bore

- High transmissible torque
- Contact pressure spread evenly
- Easy to assemble and dismantle
- Reduced width
- Backlash free
- **No constraints due to keyway**
- Increases the resistant part of the section of the shaft
- Suitable for alternating rotational movements



Options

- Other diameters available (up to 100mm bore)

Info

- * PN: hub surface pressure
- * Pw: shaft surface pressure

DISCOUNTS

Qty.	1+	6+	10+	20+	40+	60+
Disc.	List -20%	-30%	-40%	-50%	On request	

Part number	ØA	ØG	ØD	L	Screw M	Tightening torque TA(Nm)	Transmissible torque T (Nm)	*Pw (N/mm²)	*PN (N/mm²)	Stock*	Price each 1 to 5	
RT25-6-14	6	14	25	22,5	3xM3x10	10,0	2,2	12	190	✓	23,13 €	
RT25-8-15	8	15	27	25,5	3xM4x12	12,0	5,0	29	205	✓	20,33 €	
RT25-9-16	9	16	28	27,5	3xM4x12	14,0	5,0	31	150	85	✓	20,53 €
RT25-10-16	10	16	28	27,5	3xM4x12	14,0	5,0	35	140	85	✓	20,53 €
RT25-11-18	11	18	32	27,5	4xM4x12	14,0	5,0	52	170	105	✓	20,77 €
RT25-12-18	12	18	32	27,5	4xM4x12	14,0	5,0	58	150	100	✓	20,77 €
RT25-14-23	14	23	39	27,5	4xM4x12	14,0	5,0	69	140	80	✓	18,72 €
RT25-16-24	16	24	45	36,5	4xM6x12	16,0	17,0	180	148	98	✓	21,84 €
RT25-18-26	18	26	47	39,5	4xM6x18	19,0	17,0	200	180	125	✓	21,98 €
RT25-19-27	19	27	49	39,5	4xM6x18	19,0	17,0	210	170	120	✓	21,98 €
RT25-20-28	20	28	50	39,5	4xM6x18	19,0	17,0	220	160	115	✓	22,78 €
RT25-22-32	22	32	54	46,5	4xM6x18	26,0	17,0	250	115	80	✓	24,85 €
RT25-24-34	24	34	56	46,5	6xM6x18	26,0	17,0	395	146	102	-	24,89 €
RT25-25-34	25	34	56	46,5	6xM6x18	26,0	17,0	410	140	102	✓	25,44 €
RT25-28-39	28	39	61	46,5	6xM6x18	25,5	17,0	465	135	98	✓	28,21 €
RT25-30-41	30	41	62	46,5	6xM6x18	25,5	17,0	510	127	90	✓	28,87 €
RT25-32-43	32	43	65	46,5	8xM6x18	25,5	17,0	705	146	108	✓	31,43 €
RT25-35-47	35	47	69	52,5	8xM6x18	31,5	17,0	790	105	80	-	32,04 €
RT25-38-50	38	50	72	52,5	8xM6x18	31,5	17,0	860	100	76	✓	36,62 €
RT25-40-53	40	53	75	52,5	8xM6x18	31,5	17,0	900	96	72	✓	38,27 €
RT25-42-55	42	55	78	52,5	8xM6x18	31,5	17,0	940	90	70	-	42,49 €
RT25-45-59	45	59	86	71,0	8xM8x22	45,0	41,0	1840	110	85	-	57,82 €
RT25-48-62	48	62	87	71,0	8xM8x22	45,0	41,0	2000	105	80	-	62,20 €
RT25-50-65	50	65	92	71,0	8xM8x22	45,0	41,0	2100	100	75	✓	67,33 €
RT25-55-71	55	71	98	81,0	9xM8x22	55,0	41,0	2580	85	65	-	81,04 €

*Depending on availability - Dimensions in mm

- Inserts between the shaft and the bore

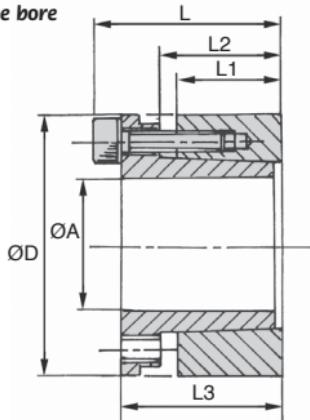
- High transmissible torque
- Contact pressure spread evenly
- Easy to assemble and dismantle
- Backlash free
- No constraints due to keyway
- Increases the resistant part of the section of the shaft**
- Suitable for alternating rotational movements
- Materials:
 - Body: steel
 - Screws: steel DIN 912 12.9

Options

- Other diameters available (up to 180mm bore)

Info.

- * PN: hub surface pressure
- * PW: shaft surface pressure

**DISCOUNTS**

Qty	1+	6+	20+	40+	60+	100+
Disc.	List -10%	-15%	-20%	-25%	On request	

Part number	ØA	ØD	L1	L2	L3	L	Transmissible torque (Nm)	Pw (N/mm²)	Pn (N/mm²)	No.	Screws Type	Tightening torque (Nm)	Stock*	Price each 1 to 5
RT70-19-47	19	47	26	31	39	45	350	228	98	4	M6x25	17	✓	12,48 €
RT70-20-47	20	47	26	31	39	45	390	231	100	4	M6x25	17	✓	12,48 €
RT70-22-47	22	47	26	31	39	45	440	220	95	4	M6x25	17	✓	12,48 €
RT70-24-50	24	50	26	31	39	45	519	215	102	6	M6x25	17	-	13,02 €
RT70-25-50	25	50	26	31	39	45	590	230	105	6	M6x25	17	✓	13,02 €
RT70-28-55	28	55	26	31	39	45	700	220	110	6	M6x25	17	✓	14,79 €
RT70-30-55	30	55	26	31	39	45	760	200	120	6	M6x25	17	✓	14,79 €
RT70-32-60	32	60	26	31	39	45	930	230	114	8	M6x25	17	✓	16,04 €
RT70-35-60	35	60	26	31	39	45	1030	200	119	8	M6x25	17	✓	16,04 €
RT70-38-65	38	65	26	31	39	45	1240	210	124	8	M6x25	17	✓	18,23 €
RT70-40-65	40	65	26	31	39	45	1350	200	125	8	M6x25	17	✓	18,23 €
RT70-42-75	42	75	30	36	47	55	2170	236	140	6	M8x30	41	-	24,40 €
RT70-45-75	45	75	30	36	47	55	2350	236	140	6	M8x30	41	✓	24,40 €
RT70-48-80	48	80	30	36	47	55	2510	218	135	6	M8x30	41	✓	27,28 €
RT70-50-80	50	80	30	36	47	55	2580	218	135	6	M8x30	41	✓	27,28 €
RT70-55-85	55	85	30	36	47	55	3200	223	145	8	M8x30	41	✓	31,13 €
RT70-60-90	60	90	30	36	47	55	3380	198	157	8	M8x30	41	✓	33,41 €
RT70-65-95	65	95	30	36	47	55	4160	213	140	8	M8x30	41	-	35,95 €
RT70-70-110	70	110	40	46	57	67	6840	225	143	8	M10x35	83	✓	54,86 €

*Depending of availability - Dimensions in mm

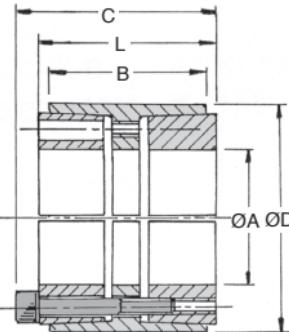
Self-centering locking assembly Ste

RTL450

High torque

- Inserts between the shaft and the bore

- High transmissible torque
- Contact pressure spread evenly
- Easy to assembly and dismantle
- Reduced width
- Backlash free
- No constraints due to keyway
- Increases the resistant part of the section of the shaft
- Suitable for alternating rotational movements
- Up to 3 units can be used together
- Material:
Steel

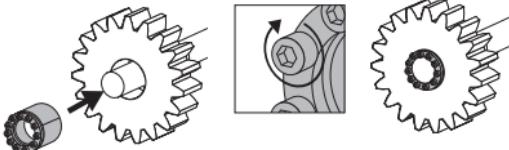


Options

- Other diameters available (up to 300mm bore)

Info.

- *PN: hub surface pressure
- *PW: shaft surface pressure



DISCOUNTS

Qty	1+	6+	20+	40+	60+	100+
Disc	Prix -10%	-15%	-20%	-25%	on request	

Part number	ØA	ØD	B	L	C	Screw M	Tightening torque TA (Nm)	Transmissible torque T (Nm)	*Pw (N/mm²)	*PN (N/mm²)	Price each 1 to 5
RTL450-25-55	25	55	32	40	46	6xM6x35	17	295	295	134	✓ 25,05 €
RTL450-30-55	30	55	32	40	46	6xM6x35	17	246	246	134	✓ 25,75 €
RTL450-35-60	35	60	44	54	60	7xM6x45	17	174	174	101	✓ 31,33 €
RTL450-38-75	38	75	44	54	62	7xM8x50	41	296	296	150	- 39,09 €
RTL450-40-75	40	75	44	54	62	7xM8x50	41	281	281	150	✓ 39,09 €
RTL450-42-75	42	75	44	54	62	7xM8x50	41	268	268	150	- 42,28 €
RTL450-45-75	45	75	44	54	62	7xM8x50	41	250	250	150	- 42,28 €
RTL450-48-80	48	80	44	54	62	8xM8x50	41	207	207	124	✓ 48,74 €
RTL450-50-80	50	80	56	64	72	8xM8x50	41	200	200	98	✓ 48,74 €
RTL450-55-85	55	85	56	64	72	9xM8x50	41	205	205	104	✓ 55,21 €
RTL450-60-90	60	90	56	64	72	10xM8x50	41	202	202	106	✓ 59,38 €
RTL450-65-95	65	95	56	64	72	10xM8x50	41	187	187	100	✓ 65,17 €
RTL450-70-110	70	110	70	78	88	10xM10x60	83	223	223	114	✓ 88,91 €
RTL450-75-115	75	115	70	78	88	10xM10x60	83	223	223	114	✓ 96,33 €
RTL450-80-120	80	120	70	78	88	11xM10x60	83	215	215	115	✓ 102,56 €
RTL450-85-125	85	125	70	78	88	12xM10x60	83	215	215	115	- 109,95 €
RTL450-90-130	90	130	70	78	88	12xM10x60	83	208	208	115	- 113,33 €
RTL450-95-135	95	135	70	78	88	12xM10x60	83	208	208	115	- 128,16 €
RTL450-100-145	100	145	90	100	112	11xM12x80	145	200	200	107	- 172,14 €

* Depending on availability - Dimensions in mm

Clamping assemblies

Technical information

Principle of operation

These parts operate on the basis of an interference fit between two conical rings screwed together. The outer ring expands and exerts a pressure on the part being held whilst the inner ring exerts a pressure on a shaft.

Assembly

Carefully clean all the component parts and then apply a light coating of oil to the contact surfaces. Place one part in the hub and insert the shaft, then tighten the screws in a uniform fashion until the prescribed torque is reached. The Torque (T) and Axial Force (F_{ax}) figures in the tables have been calculated for an oiled assembly.

Note:

Do not use Molybdenum Bisulphate based oils or greases as these can significantly reduce the frictional torque.

Dismantling

Unscrew the screws, inserting them in the extraction holes and increasing the pressure in a gradual and uniform manner until the cones are released. When re-using the pieces, ensure that the screws and threaded holes are oiled.

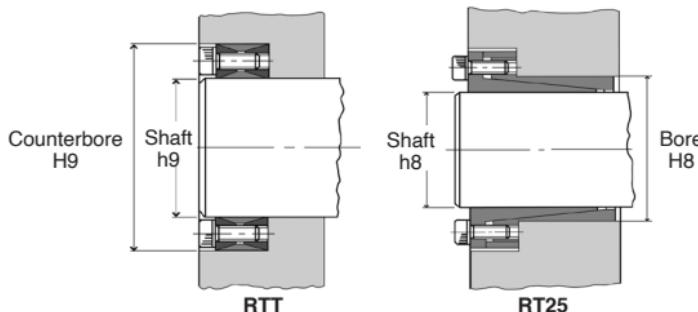
Tolerance

A good machine-finish is sufficient.

Roughness

Maximum admissible roughness: R_t max 16µm

Recommended assembly tolerances



Self-centering clamping hub steel SUP

Without locknut

- Hexagonal clamping hub
- Effective for all types of shaft-pinion assemblies such as sprocket wheels, gear wheels, pulleys, cams etc..
- Materials:
 - External part: galvanised steel
 - Internal part: nickel-plated steel
 - Nut: nickel-plated steel

Benefits

- Self-centering
- Reduced installation time

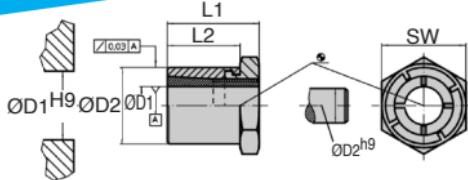
Info

- T_A : Tightening torque of the nut
- M : Transferable torque
- F_A : Transmissible axial load
- P_w : Surface pressure of the shaft
- P_n : Hub surface pressure

Accessory

- Assembly tool SUP/TOOL (tome ② p.130)

Reduced
installation time



DISCOUNTS

Qty	1+	6+	10+
Disc.	-5%		On request

Part number	OD1	OD2	L1	L2	SW	T _A max.	M max.	F _A max.	P _w max.	P _n max.	Weight (g)	Price each 1 to 5 Stock*
SUP-005	5	14	19	15	14	9,9	10,1	4,0	264	96	20	✓ 29,66 €
SUP-006	6	14	19	15	14	9,9	12,1	4,0	220	96	19	✓ 29,66 €
SUP-008	8	16	22	17	16	16,9	23,4	5,8	179	91	26	✓ 30,86 €
SUP-009	9	20	24	19	22	34,9	43,7	9,7	245	115	47	- 32,04 €
SUP-010	10	20	24	19	22	34,9	48,6	9,7	221	115	46	✓ 32,82 €
SUP-011	11	22	24	19	22	43,8	59,9	10,9	225	117	51	- 34,81 €
SUP-012	12	22	24	19	22	43,8	65,3	10,9	206	117	49	✓ 35,60 €
SUP-014	14	26	28	22	27	65,0	93,0	13,3	178	99	83	✓ 38,75 €
SUP-015	15	26	28	22	27	65,0	99,0	13,3	166	99	75	✓ 38,75 €
SUP-016	16	26	28	22	27	65,0	106,0	13,3	156	99	73	✓ 38,75 €
SUP-018	18	35	36	27	36	161,0	223,0	24,8	224	125	201	- 42,31 €
SUP-019	19	35	36	27	36	161,0	235,0	24,8	212	125	189	- 41,25 €
SUP-020	20	35	36	27	36	161,0	248,0	24,8	201	125	186	✓ 42,31 €
SUP-022	22	42	41	30	46	250,0	349,0	31,8	197	110	346	✓ 46,57 €
SUP-024	24	42	41	30	46	250,0	381,0	31,8	180	110	326	- 46,57 €
SUP-025	25	42	41	30	46	250,0	397,0	31,8	173	110	315	✓ 46,57 €
SUP-028	28	47	44	33	50	355,0	565,0	40,4	174	110	403	- 53,51 €
SUP-030	30	47	44	33	50	355,0	605,0	40,4	162	110	378	✓ 54,77 €
SUP-032	32	55	51	38	55	490,0	764,0	47,8	166	102	632	- 65,16 €
SUP-035	35	55	51	38	55	490,0	836,0	47,8	151	102	571	✓ 65,16 €
SUP-038	38	62	58	43	65	720,0	1179,0	62,1	159	111	897	- 84,94 €
SUP-040	40	62	58	43	65	720,0	1241,0	62,1	151	111	842	- 84,94 €

*Depending on availability - Dimensions in mm

- Hexagonal clamping hub

- Effective for all types of shaft-pinion assemblies such as sprocket wheels, gear wheels, pulleys, cams etc..

- Materials:

External part: galvanised steel
Internal part: nickel-plated steel
Nut: nickel-plated steel

Benefits

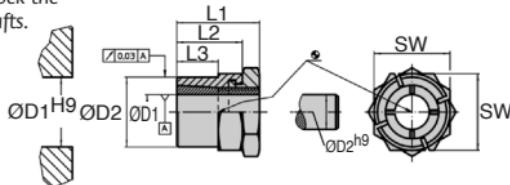
- Self-centering
- Reduced installation time
- The hexagonal locknut makes it easier to lock the shaft-pinion assembly if freely rotating shafts.

Info

- TA : Tightening torque of the nut
- M : Transferable torque
- FA : Transmissible axial load
- Pw : Surface pressure of the shaft
- PN : Hub surface pressure

Easier locking

NEW!



DISCOUNTS

Qty	1+	6+	10+
Disc.	Price	-5%	On request

Accessory

- Assembly tool SUP/TOOL (tome ② p.130)

Part number	OD1	OD2	L1	L2	L3	SW	TA max.	M max.	F _A max.	P _w max.	P _N max.	Weight	Price each 1 to 5
SUP-005/CC	5	12	19	15	9	14	9,9	10,1	4,0	264	119	18	35,11 €
SUP-006/CC	6	12	19	15	9	14	9,9	12,1	4,0	220	119	17	33,83 €
SUP-008/CC	8	14	22	17	11	16	16,9	23,4	5,8	179	121	23	35,60 €
SUP-009/CC	9	18	24	19	12	22	34,9	43,7	9,7	245	127	47	36,88 €
SUP-010/CC	10	18	24	19	12	22	34,9	48,6	9,7	221	127	46	37,87 €
SUP-011/CC	11	20	24	19	12	22	43,8	59,9	10,9	225	128	47	40,24 €
SUP-012/CC	12	20	24	19	12	22	43,8	65,3	10,9	206	128	45	41,25 €
SUP-014/CC	14	24	28	22	15	27	65,0	93,0	13,3	178	107	78	45,49 €
SUP-015/CC	15	24	28	22	15	27	65,0	99,0	13,3	166	107	75	45,49 €
SUP-016/CC	16	24	28	22	15	27	65,0	106,0	13,3	156	107	70	45,49 €
SUP-018/CC	18	30	36	27	17	36	161,0	223,0	24,8	224	145	179	50,83 €
SUP-019/CC	19	30	36	27	17	36	161,0	235,0	24,8	212	145	169	49,44 €
SUP-020/CC	20	30	36	27	17	36	161,0	248,0	24,8	201	145	213	50,83 €
SUP-022/CC	22	38	41	30	20	46	250,0	349,0	31,8	197	122	341	57,36 €
SUP-024/CC	24	38	41	30	20	46	250,0	381,0	31,8	180	122	320	57,36 €
SUP-025/CC	25	38	41	30	20	46	250,0	397,0	31,8	173	122	310	57,36 €
SUP-028/CC	28	42	44	33	23	50	355,0	565,0	40,4	174	123	370	63,60 €
SUP-030/CC	30	42	44	33	23	50	355,0	605,0	40,4	162	123	348	65,16 €
SUP-032/CC	32	50	51	38	28	55	490,0	764,0	47,8	166	112	555	77,24 €
SUP-035/CC	35	50	51	38	28	55	490,0	836,0	47,8	151	112	501	77,24 €

Dimensions in mm

SUPss

Without locknut

- Hexagonal clamping hub
- Effective for all types of shaft-pinion assemblies such as sprocket wheels, gear wheels, pulleys, cams etc..
- Materials
 - External part: galvanised stainless steel
 - Internal part: nickel-plated stainless steel
 - Nut: stainless steel, hardened and nickel-plated

Benefits

- Self-centering
- Reduced installation time

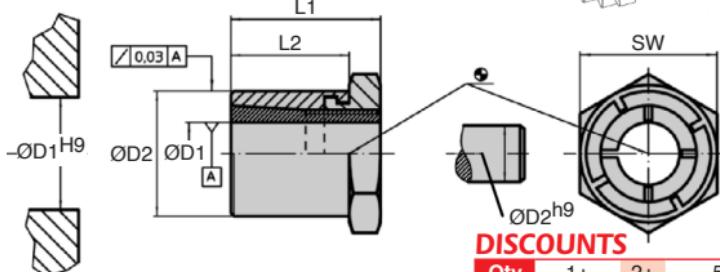
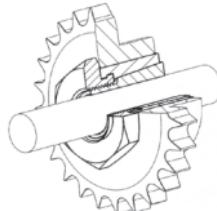
Info

- T_A : Tightening torque of the nut
- M : Transferable torque
- F_A : Transmissible axial load
- P_w : Surface pressure of the shaft
- P_N : Hub surface pressure

Accessory

- Assembly tool SUP/TOOL (tome ② p.130)

Reduced
installation time



DISCOUNTS

Qty	1+	2+	5+
Disc.	Price	-5%	On request

Part number	ØD1	ØD2	L1	L2	SW	T _A max. (Nm)	M max. (Nm)	F _A max. (kN)	P _w max. (N/mm ²)	P _N max. (N/mm ²)	Weight (g)	Price each
SUP-006/SS	6	14	19	15	14	7	8,5	2,8	154	67	19	77,42 €
SUP-008/SS	8	16	22	17	16	12	16,4	4,1	125	64	26	77,42 €
SUP-010/SS	10	20	24	19	22	24	34,0	6,8	155	81	46	88,22 €
SUP-012/SS	12	22	24	19	22	31	45,7	7,6	144	82	49	88,12 €
SUP-016/SS	16	26	28	22	27	46	74,2	9,3	109	69	73	97,40 €
SUP-020/SS	20	35	36	27	36	113	173,6	17,4	141	88	186	114,60 €
SUP-025/SS	25	42	41	30	46	175	277,9	22,3	121	77	315	138,13 €
SUP-030/SS	30	47	44	33	50	249	423,5	28,3	113	77	378	138,03 €

Dimensions in mm

With lock nut

SUPccss

- Hexagonal clamping hub

- Effective for all types of shaft-pinion assemblies such as sprocket wheels, gear wheels, pulleys, cams etc..

- Materials:

- External part: galvanised stainless steel
- Internal part: nickel-plated stainless steel
- Nut: stainless steel, hardened and nickel-plated

NEW!



stainless steel

Benefits

- Self-centering
- Reduced installation time
- The hexagonal locknut makes it easier to lock the shaft-pinion assembly if freely rotating shafts.

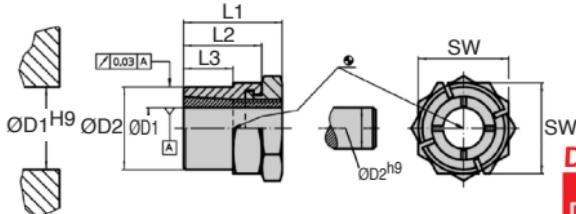
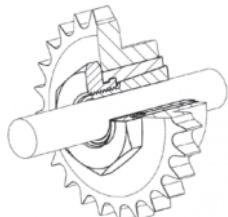
Info

- TA : Tightening torque of the nut
- M : Transferable torque
- FA : Transmissible axial load
- PW : Surface pressure of the shaft
- PN : Hub surface pressure

Easier locking

Accessory

- Assembly tool SUP/TOOL (tome ② p.130)

**DISCOUNTS**

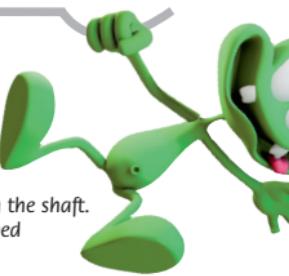
Qty	1+	2+	5+
Disc.	-5%		On request

Part number	ØD1	ØD2	L1	L2	L3	SW	TA max.	M max.	FA max.	PW max. (N/mm ²)	PW max. (N/mm ²)	Weight (g)	Price each
SUP-006/CC/SS	6	12	19	15	9	14	7	8,5	2,8	154	119	17	84,35 €
SUP-008/CC/SS	8	14	22	17	11	16	12	16,4	4,1	125	121	23	87,21 €
SUP-010/CC/SS	10	18	24	19	12	22	24	34,0	6,8	155	127	46	94,44 €
SUP-012/CC/SS	12	20	24	19	12	22	31	45,7	7,6	144	128	45	95,03 €
SUP-016/CC/SS	16	24	28	22	15	27	46	74,2	9,3	109	107	70	105,62 €
SUP-020/CC/SS	20	30	36	27	17	36	113	173,6	17,4	141	145	213	122,52 €
SUP-025/CC/SS	25	38	41	30	20	46	175	277,9	22,3	121	122	310	153,07 €
SUP-030/CC/SS	30	42	44	33	23	50	249	423,5	28,3	113	123	348	164,35 €

Dimensions in mm

Hexagonal clamping hub

Technical files



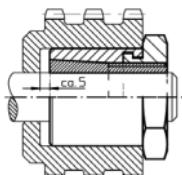
- Example of shaft-pinion hub installation

Pre-centring

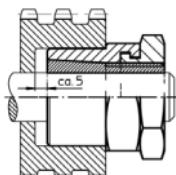
For longer pinions, the diagram below shows an additional support solution on the shaft.

- With this support, forces beyond the effective length of the hub can be absorbed

- Concentricity accuracy is improved.



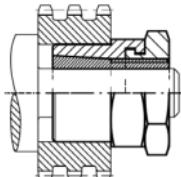
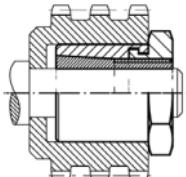
External hex nut



External hex nut
and hexagonal locknut

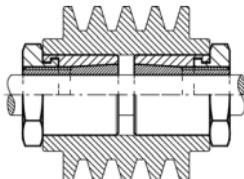
No axial shift

If the pinion rests on a flange during assembly, this prevents axial movement. In this case, only 60% of the forces shown in the tables can be transmitted.



Two shaft-pinion hubs in one pinion

In this arrangement, the first nut locked transmits 100% of the forces shown in the tables. Tightening the 2nd nut prevents any axial displacement of the hub. Therefore, this hub can only transmit 60% of the indicated forces.



Hexagonal clamping hub

Technical files



Shaft-pinion hubs with and without hexagonal locknuts allow the rational assembly of all types of shaft-pinion installation of machine elements such as sprockets, gear wheels, pulleys, cams, levers, etc..

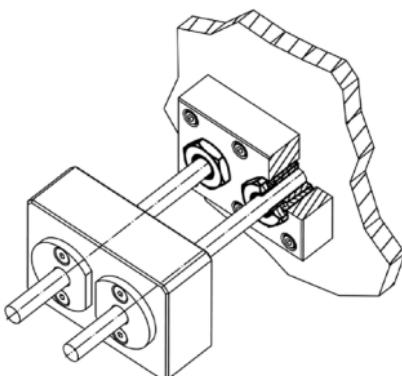
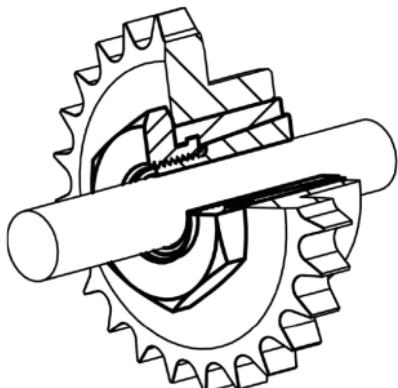
Installation

- ① The contact surfaces on the shaft and pinion must be free from oil and dust.
- ② Screw the nut on the left until the inner part protrudes approx. 3-5mm beyond the outer part.
- ③ Install the shaft-pinion hub with a mallet into the hole.
- ④ Slightly tighten the nut in the desired position. Compensate for the axial displacement caused with a soft face mallet and screw the nut on tightly.

Removal

- Loosen the shaft-pinion hub by turning the hex nut to the left, until the innerpart protrudes from the outer part by approx. 3-5mm.
- When installed in a blind hole, the shaft-pinion hub can be removed with an extraction tool.

Example of assembly



Clamping hub
(tome 2 p.125)



Clamping hub
(tome 2 p.124)



Clamping hub
(tome 2 p.127)



Clamping hub
(tome 2 p.126)

stainless
steel

Installation tools

New

SUPtool

For hexagonal clamping hub

- Open-ended wrench for installation
steel and stainless steel clamping hubs SU

Accessories

- SUP clamping hub (tome ② p.124)

NEW!



DISCOUNTS

Qty	1+	2+	5+
Disc.	Prix	-5%	On request

Part number	SW	Weight (g)	Unit Price
SUP-14/TOOL	14	45	7,09 €
SUP-16/TOOL	16	51	9,62 €
SUP-22/TOOL	22	195	16,53 €
SUP-27/TOOL	27	195	27,09 €
SUP-36/TOOL	36	428	43,52 €
SUP-46/TOOL	46	612	95,03 €
SUP-50/TOOL	50	870	101,66 €
SUP-55/TOOL	55	1125	113,31 €
SUP-65/TOOL	65	1295	114,70 €

Dimensions in mm

GEARBOXES

P. 132-231

RIGHT ANGLED
GEARBOX



p.178

SINGLE AND DUAL
OUTPUT GEARBOXES



p.240

WORM AND WHEEL
GEARBOX



p.290

WORM AND WHEEL
GEARBOX

stainless
steel



p.322

Buying guide

Gearboxes



Part number	CHMR	CHM	CHML	RFV	RFK
Type	Worm and wheel	Worm and wheel	Integrated torque limiter	Worm and wheel	Hypoid
Reduction ratio	7,5:1 → 100:1	7,5:1 → 100:1	7,5:1 → 100:1	7,5 → 100	7,5:1 → 60:1
Transmissible torque (Nm)	→ 980	→ 980	→ 980	→ 141	→ 500
Input shaft	●	○	○	○	○
Output shaft	○	○	○	○	○
Axle orientation	⊥	⊥	⊥	⊥	⊥
Self locking output	✓*	✓*	✓*	✓*	✗
Multiplier	✗	✗	✗	✗	✗
Quality	★★★	★★★	★★★	★★★★★	★★★★★
Price	€€	€€	€€	€€€	€€€€
Page	② p.290	② p.291	② p.308	② p.322	② p.330



Part number	B332	RAM	RVM	CHTRP / CHTRB	HLA / HLC
Type	Bevel gear	bevel gear	Worm and wheel	bevel gear	Spiral bevel gear
Reduction ratio	1:1	1:1 → 2:1	1:1 → 30:1	1:1 → 3:1	1:1 → 120:1
Transmissible torque (Nm)	→ 0,68	→ 6	→ 17	→ 87,3	→ 128
Input shaft	●	○	○	●	●○
Output shaft	●	○	○	●	●○
Axle orientation	L	⊥	⊥	L or ⊥	⊥L
Self locking output	✗	✗	✓*	✗	✗
Multiplier	✗	✗	✗	✓	✗
Quality	☆	☆	☆	☆☆	☆☆☆
Price	€	€	€	€€	€€€
Page	② p.233	② p.234	② p.236	② p.240	② p.250

● : shaft ○ : hollow shaft *Under conditions

P	PF	PP	E	BLH / BLHT	BLHB / BLHI / BLHO	BLHM
Worm and wheel	Worm and wheel	Worm and wheel	Crossed helical gear	spiral bevel gear	spiral bevel gear	spiral bevel gear
5:1 → 120:1 → 164	5:1 → 120:1 → 164	25:1 → 900:1 → 34	1:1 → 40:1 → 62	1:1 → 2:1 → 128	1:1 → 2:1 → 70 ○ or ● ○ or ●	1:1 → 2:1 → 128
● ○	○ ○	● ●	○ ○	● ●	○ or ● ○ or ●	● ●
⊥	⊥	=	⊥	L	L	⊥
✓*	✓*	✓*	X	X	X	X
X	X	X	X	X	X	X
★★★	★★★	★★★	★★★	★★★	★★★	★★★
€€€	€€€	€€€	€€€	€€€	€€€	€€€€
② p.138	② p.139	② p.162	② p.166	② p.178	② p.180	② p.181

BL	FF	EHD	J / XJ	NT	NH
bevel gear	Offset spur	planetary	Offset spur	Offset spur	Offset spur
1:1 → 4:1 → 6	2:1 → 7:1 → 425	36:1 → 380	1:1 → 625:1 → 2,80	1:1 → 120:1 → 85	1:1 → 120:1 → 85
● ○	● ●	○ ●	●○ ●●	● ●	○ ●
—	—	—	—	—	—
X	X	X	X	X	X
X	X	X	X	X	X
☆☆	★★★	☆☆	☆☆	☆☆	☆☆
€€	€€€	€€€	€€	€€	€€
② p.176	② p.202	② p.224	② p.211	② p.217	② p.217

Buying guide

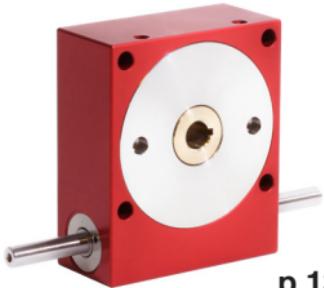
Transmissible torque (Nm) changes depending on speed

Gearbox	Part number	0-1	> 1-5	> 5-20	> 20-100	> 100-300	> 300-600	> 600-900	> 900-1200
Worm and wheel 2 290 → 303	CHM-CHMR30			→ 28					
	CHM-CHMR40				→ 57				
	CHM-CHMR50					→ 107			
	CHM-CHMR63						→ 198		
	CHM-CHMR75							→ 298	
	CHM-CHMR90								→ 540
	CHM-CHMR110								→ 980
Worm and wheel 2 138 → 157	P-PF15		→ 3,75						
	P-PF20			→ 5					
	P-PF30			→ 8	8				
	P-PF40				→ 18				
	P-PF45					→ 40			
	P-PF55						→ 57		
	P-PF60							→ 118	
	P-PF70								→ 164
	PP35		→ 4,1						
	PP50			→ 12,8					
	PP60				→ 34				
Right angle transmission 2 166 → 172	E15		→ 1,32						
	E20			→ 3,84					
	E30				→ 9				
	E40					→ 20			
	E50						→ 41		
	E60							→ 62	
Bevel gearing 2 176 → 199	BLHB20		→ 1,77						
	BLHB30			→ 4,4					
	BLHB40				→ 10,3				
	BLHB50					→ 30			
	BLHB60						→ 70		
	BLHM20		→ 1,77						
	BLHM30			→ 4,4					
	BLHM40				→ 10,3				
	BLHM50					→ 30			
	BLHM60						→ 70		
	BLHM70							→ 128	
	BLH20		→ 1,77						
	BLH30			→ 4,4					
	BLH40				→ 10,3				
	BLH50					→ 30			
	BLH60						→ 70		
	BLH70							→ 128	
	BLHT20		→ 1,77						
	BLHT30			→ 4,4					
	BLHT40				→ 10,3				
	BLHT50					→ 30			
	BLHT60						→ 70		
	BLHT70							→ 128	
	BL8		→ 2						
	BL15			→ 6					

Transmissible torque (Nm) changes depending on speed

Gearbox	Part number	0-1	> 1-5	> 5-20	> 20-100	> 100-300	> 300-600	> 600-900	> 900-1200
Right angle transmission ② 240 → 244	CHTRB8		→ 4,7						
	CHTRB15			→ 16,5					
	CHTRB20				→ 53,1				
	CHTRB25					→ 87,3			
Right angle transmission ② 245 → 249	CHTRP8		→ 9,1						
	CHTRP15			→ 34,5					
	CHTRP20				→ 87,3				
	CHTRP25					→ 87,3			
Hollow shafts ② 246 → 248	CHTRP14			→ 28,8					
	CHTRP19					→ 75,7			
Offset spur gears ② 202 → 207	FF10	→ 3,70							
	FF15		→ 10						
	FF20			→ 23					
	FF30				→ 83				
	FF40					→ 210			
	FF50						→ 425		
Epicyclic ② 224 → 229	EHD04		→ 7						
	EHD06			→ 19					
	EHD08				→ 50				
	EHD08				→ 50				
	EHD12					→ 140			
	EHD16						→ 380		
In line ② 211 → 223	J-XJ51	→ 0,49							
	J-XJ52	→ 0,9							
	J-XJ53	→ 1,15							
	J-XJ64	→ 2,25							
	J-XJ65	→ 2,95							
	J-XJ66	→ 2,8							
	NT-NTH61		→ 14						
	NT-NTH62			→ 18					
	NT-NTH63				→ 20				
	NT-NTH91				→ 35				
	NT-NTH92				→ 40				
	NT-NTH121					→ 68			
	NT-NTH122						→ 85		
Manual ② 234 → 237	RAM		→ 6						
	RVM			→ 17					
Spiro bevel ② 250 → 255	HLA-HLC19			→ 43					
	HLA-HLC24				→ 78				
	HLA-HLC28					→ 142			
Worm and wheel ② 322 → 324	RFV40			→ 47					
	RFV50				→ 80				
	RFV63					→ 152			
Hypoïd ② 330 → 337	RFK28					→ 130			
	RFK38						→ 200		
	RFK48							→ 350	
	RFK58								→ 500

WORM AND WHEEL GEARBOX



p.138

WORM AND WHEEL GEARBOX



p.139

WORM AND WHEEL GEARBOX



p.142

OUTPUT SHAFT FOR P AND PF GEARBOXES



p.158

DOUBLE REDUCTION WORM GEARBOXES



p.162

RIGHT ANGLE HELICAL GEARBOX



p.166

GEARBOXES

P. 138-231

RIGHT ANGLED GEARBOX



p.178

SPUR GEAR COAXIAL GEARBOX



p.211

EPICYCLIC GEARBOX



p.217

EPICYCLIC GEARBOX



p.224

Worm and wheel gearbox Stock Size XS

P15

Torque up to 3,75Nm

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max. input speed: 3000 rpm

- Materials:

Casing: anodised aluminium

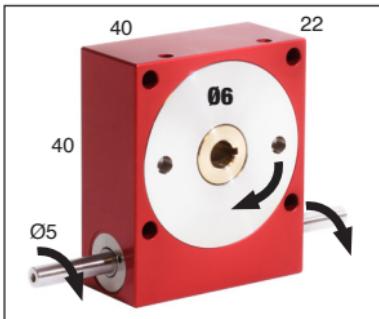
Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 0,15 kg

High reduction ratios



Options

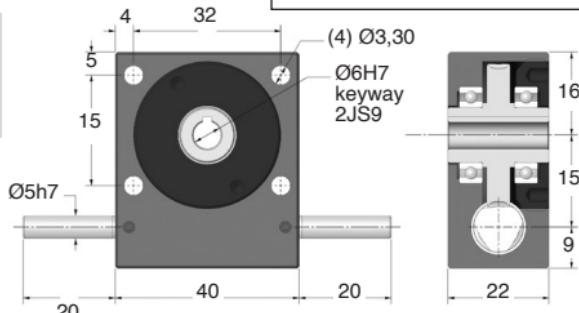
- Can be modified to your specifications

Accessories

- Output shafts

P20-X et P20-DX

(tome 2 p.158)



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	6,66:1	8:1	10:1	13,33:1	20:1	40:1	80:1	
INPUT SPEED (rpm)	3000	1,05	1,13	1,20	1,28	1,43	1,58	0,94
	2000	1,28	1,28	1,35	1,35	1,58	1,80	1,07
	1000	1,58	1,73	1,73	1,88	2,03	2,18	1,28
	500	2,03	2,03	2,10	2,18	2,40	2,63	1,46
	200	2,55	2,63	2,63	2,78	2,93	3,08	1,70
	100	2,93	2,93	3,08	3,15	3,23	3,38	1,91
	50	3,30	3,38	3,38	3,45	3,53	3,60	2,04
	10	3,60	3,60	3,68	3,68	3,75	3,75	2,04

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 t/min	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each
P15-6	6,66:1	86%	1,79x10 ⁻⁷	NO	✓	282,43 €
P15-8	8:1	85%	1,73x10 ⁻⁷	NO	✓	282,43 €
P15-10	10:1	84%	1,68x10 ⁻⁷	NO	✓	282,43 €
P15-13	13,33:1	78%	1,65x10 ⁻⁷	NO	-	282,43 €
P15-20	20:1	71%	1,62x10 ⁻⁷	NO	-	282,43 €
P15-40	40:1	60%	1,61x10 ⁻⁷	NO	✓	282,43 €
P15-80	80:1	32%	1,60x10 ⁻⁷	NO	-	282,43 €
P15-A	Reduced output backlash $\leq 0^{\circ}8'$				On request	
P15-AR	Reduced output backlash $\leq 0^{\circ}4'$				On request	

* Depending on availability - Dimensions in mm



★★★

Worm and wheel gearbox

Torque up to 5Nm

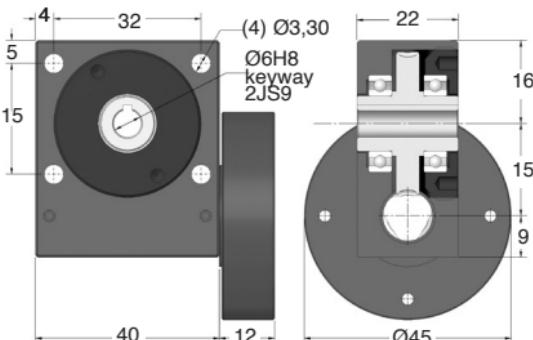
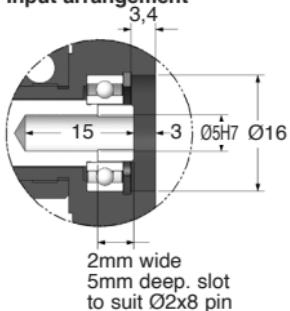
PF15

- Ratios from 6:1 to 80:1
- Output backlash $\leq 0^{\circ}30'$
- Max input speed: 3000 rpm
- Materials:
 - Casing: Anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Cap: stainless steel
- The angle of the input flange is not positioned
- Verify it is suitable for use with your motor
- Weight: 0,21 kg

High reduction ratios



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	6,66:1	8:1	10:1	13,33:1	20:1	40:1	80:1
INPUT SPEED (rpm)	3000	1,05	1,13	1,20	1,28	1,43	1,58
	2000	1,28	1,28	1,35	1,35	1,58	1,80
	1000	1,58	1,73	1,73	1,88	2,03	2,18
	500	2,03	2,03	2,10	2,18	2,40	2,63
	200	2,55	2,63	2,63	2,78	2,93	3,08
	100	2,93	2,93	3,08	3,15	3,23	3,38
	50	3,30	3,38	3,38	3,45	3,53	3,60
	10	3,60	3,60	3,68	3,75	3,75	2,04

DISCOUNTS

Qty	1+	2+	4+	6+
Disc. List	-10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 t/min	Reflected inertia at input (kg.m ²)	Self-locking output	Price each
PF15-6	6,66:1	86%	1,79x10 ⁻⁷	NO	363,04 €
PF15-8	8:1	85%	1,73x10 ⁻⁷	NO	363,04 €
PF15-10	10:1	84%	1,68x10 ⁻⁷	NO	363,04 €
PF15-13	13,33:1	78%	1,65x10 ⁻⁷	NO	363,04 €
PF15-20	20:1	71%	1,62x10 ⁻⁷	NO	363,04 €
PF15-40	40:1	60%	1,61x10 ⁻⁷	NO	363,04 €
PF15-80	80:1	32%	1,60x10 ⁻⁷	NO	363,04 €
PF15-A	Reduced output backlash $\leq 0^{\circ}8'$				On request
PF15-AR	Reduced output backlash $\leq 0^{\circ}4'$				On request

Dimensions in mm

Worm and wheel gearbox

Size
XS

Stock

Stock

Stock

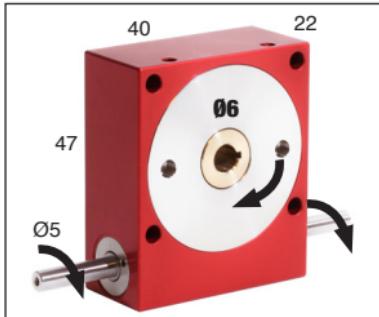
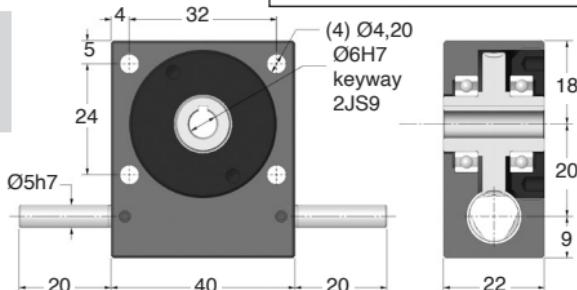
P20**Torque up to 5Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 0,18 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	1,40	1,50	1,60	1,70	1,90	2,10	1,25
2000	1,70	1,70	1,80	1,80	2,10	2,40	1,42
1000	2,10	2,30	2,30	2,50	2,70	2,90	1,70
INPUT SPEED (rpm)	500	2,70	2,70	2,80	3,20	3,50	1,94
200	3,40	3,50	3,50	3,70	3,90	4,10	2,27
100	3,90	3,90	4,10	4,20	4,30	4,50	2,55
50	4,40	4,50	4,50	4,60	4,70	4,80	2,72
10	4,80	4,80	4,90	4,90	5,00	5,00	2,72

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P20-10	10:1	86%	$2,03 \times 10^{-7}$	NO	✓	315,73 €
P20-12	12:1	85%	$1,93 \times 10^{-7}$	NO	-	315,73 €
P20-15	15:1	84%	$1,85 \times 10^{-7}$	NO	✓	315,73 €
P20-20	20:1	78%	$1,78 \times 10^{-7}$	NO	✓	315,73 €
P20-30	30:1	71%	$1,74 \times 10^{-7}$	NO	✓	315,73 €
P20-60	60:1	60%	$1,71 \times 10^{-7}$	YES	✓	315,73 €
P20-120	120:1	32%	$1,50 \times 10^{-7}$	YES	✓	315,73 €
P20-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				- On request
P20-A		Reduced output backlash $\leq 0^{\circ}8'$				- On request
P20-AR		Reduced output backlash $\leq 0^{\circ}4'$				- On request

**Depending on availability - Dimensions in mm*



★★★

Worm and wheel gearbox

Torque up to 5Nm**PF20**

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max input speed: 3000 rpm

- Materials:

 - Casing: Anodised aluminium

 - Input: non-hardened steel

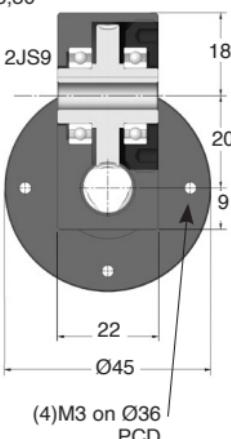
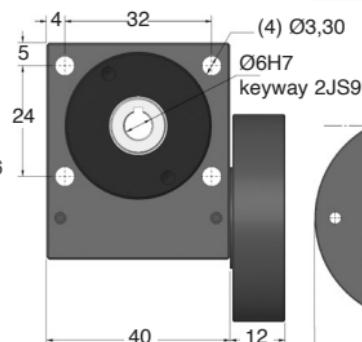
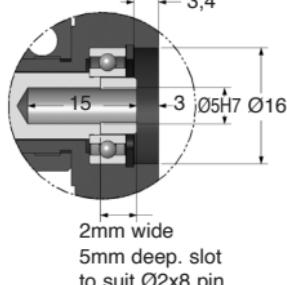
 - Output: Bronze

 - Cap: stainless steel

- The angle of the input flange is not positioned

- Verify it is suitable for use with your motor

- Weight: 0,23 kg

High reduction ratios**Input arrangement****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
INPUT SPEED (rpm)	500	2,70	2,70	2,80	2,90	3,20	3,50
200	2,10	2,30	2,30	2,50	2,70	2,90	1,70
100	3,90	3,90	4,10	4,20	4,30	4,50	2,55
50	4,40	4,50	4,50	4,60	4,70	4,80	2,72
10	4,80	4,80	4,90	4,90	5,00	5,00	2,72

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%-15%	On request		

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Price each
PF20-10	10:1	86%	$2,53 \times 10^{-7}$	NO	402,57 €
PF20-12	12:1	85%	$2,43 \times 10^{-7}$	NO	402,57 €
PF20-15	15:1	84%	$2,35 \times 10^{-7}$	NO	402,57 €
PF20-20	20:1	78%	$2,28 \times 10^{-7}$	NO	402,57 €
PF20-30	30:1	71%	$2,24 \times 10^{-7}$	NO	402,57 €
PF20-60	60:1	60%	$2,21 \times 10^{-7}$	YES	402,57 €
PF20-120	120:1	32%	$2,00 \times 10^{-7}$	YES	402,57 €
PF20-SP	5:1 - 120:1	Ratios from 5:1 to 120:1 or left handed			
PF20-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF20-AR		Reduced output backlash $\leq 0^{\circ}4'$			

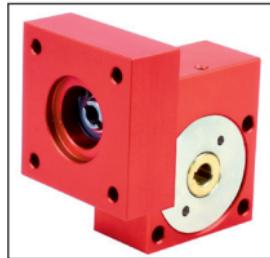
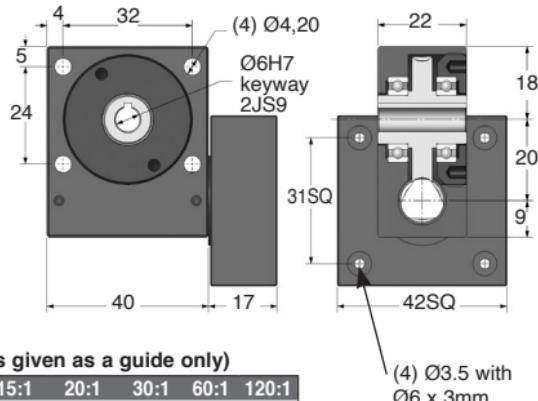
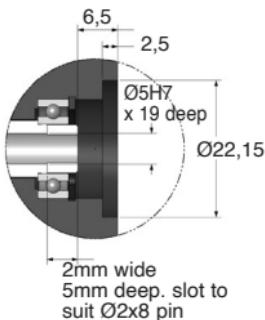
Dimensions in mm

Worm and wheel gearbox

**PF20NM****Torque up to 5Nm**

- Ratios from 5:1 to 120:1
- Output backlash $\leq 0^{\circ}30'$
- Max. input speed: 3000 rpm
- Materials:
 - Casing: anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Stainless steel cap
- Weight: 0,23 kg

**NEMA 17
square flange**

**Input arrangement****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
INPUT SPEED (rpm)	3000	1,40	1,50	1,60	1,70	1,90	2,10	1,25
2000	1,70	1,70	1,80	1,80	2,10	2,40	1,42	
1000	2,10	2,30	2,30	2,50	2,70	2,90	1,70	
500	2,70	2,70	2,80	2,90	3,20	3,50	1,94	
200	3,40	3,50	3,50	3,70	3,90	4,10	2,27	
100	3,90	3,90	4,10	4,20	4,30	4,50	2,55	
50	4,40	4,50	4,50	4,60	4,70	4,80	2,72	
10	4,80	4,80	4,90	4,90	5,00	5,00	2,72	

DISCOUNTS

Qty	1+	3+	6+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Reflected Inertia at Input (kg.m ²)	Efficiency at 1000 rpm	Self-locking output	Price each 1 to 2
PF20-10NM	10:1	2,53 x 10 ⁻⁷	86%	NO	306,03 €
PF20-12NM	12:1	2,43 x 10 ⁻⁷	85%	NO	306,03 €
PF20-15NM	15:1	2,35 x 10 ⁻⁷	84%	NO	306,03 €
PF20-20NM	20:1	2,28 x 10 ⁻⁷	78%	NO	306,03 €
PF20-30NM	30:1	2,24 x 10 ⁻⁷	71%	NO	306,03 €
PF20-60NM	60:1	2,21 x 10 ⁻⁷	60%	YES	306,03 €
PF20-120NM	120:1	2,00 x 10 ⁻⁷	32%	YES	306,03 €
PF20-SPNM	5:1 - 120:1	Special ratios from 5:1 to 120:1 or left handed			On request
PF20-ANM		Reduced output backlash $\leq 0^{\circ}8'$			On request

Dimensions in mm

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- Polymer slide
- Roller slide
- Ball slide



Worm and wheel gearbox

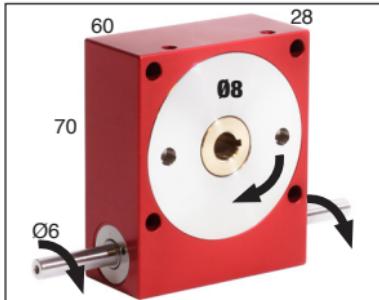
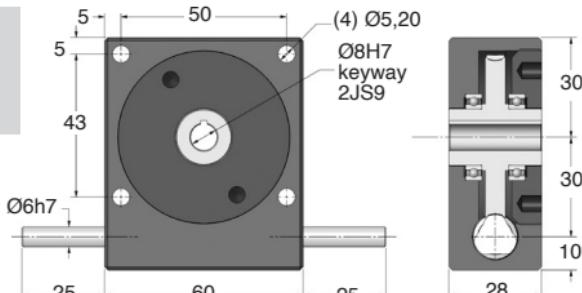
Stock
1 2 3**P30****Torque up to 8.8Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 0,48 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
INPUT SPEED (rpm)	3000	2,50	2,50	2,60	2,70	3,00	3,50	3,40
2000	2,80	2,90	3,00	3,20	3,60	4,10	3,70	
1000	3,50	3,70	4,00	4,20	4,50	5,00	4,60	
500	4,60	4,70	4,90	5,10	5,30	5,80	5,40	
200	5,40	5,60	5,70	5,90	6,20	6,60	6,40	
100	6,00	6,00	6,50	6,50	7,00	7,50	6,70	
50	7,50	7,80	8,00	8,30	8,30	8,60	6,70	
10	8,00	8,00	8,30	8,50	8,50	8,80	6,70	

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P30-10	10:1	90%	$8,43 \times 10^{-7}$	NO	✓	390,51 €
P30-12	12:1	88%	$7,55 \times 10^{-7}$	NO	-	390,51 €
P30-15	15:1	86%	$6,92 \times 10^{-7}$	NO	-	390,51 €
P30-20	20:1	84%	$6,43 \times 10^{-7}$	NO	-	390,51 €
P30-30	30:1	78%	$6,08 \times 10^{-7}$	NO	✓	390,51 €
P30-60	60:1	70%	$5,87 \times 10^{-7}$	YES	✓	390,51 €
P30-120	120:1	40%	$5,72 \times 10^{-7}$	YES	✓	390,51 €
P30-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				
P30-A	Reduced output backlash $\leq 0^{\circ}8'$					- On request
P30-AR	Reduced output backlash $\leq 0^{\circ}4'$					- On request

**Depending on availability - Dimensions in mm*



Worm and wheel gearbox

Torque up to 8.8Nm

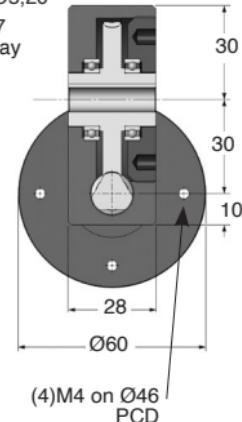
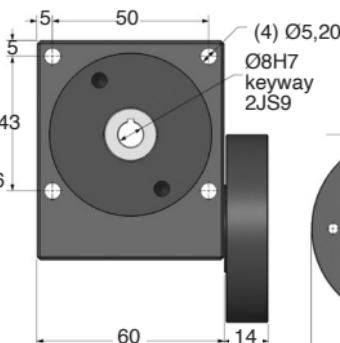
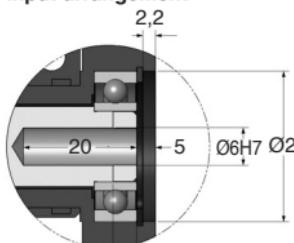
PF30

- Ratios from 5:1 to 120:1
- Output backlash $\leq 0^{\circ}30'$
- Max input speed: 3000 rpm
- Materials:
 - Casing: Anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Cap: stainless steel
- The angle of the input flange is not positioned
- Verify it is suitable for use with your motor
- Weight: 0,59 kg

High reduction ratios



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
INPUT SPEED (rpm)	3000	2,50	2,50	2,60	2,70	3,00	3,50
2000	2,80	2,90	3,00	3,20	3,60	4,10	3,70
1000	3,50	3,70	4,00	4,20	4,50	5,00	4,60
500	4,60	4,70	4,90	5,10	5,30	5,80	5,40
200	5,40	5,60	5,70	5,90	6,20	6,60	6,40
100	6,00	6,00	6,50	6,50	7,00	7,50	6,70
50	7,50	7,80	8,00	8,30	8,30	8,60	6,70
10	8,00	8,00	8,30	8,50	8,50	8,80	6,70

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m ²)	Self-locking output	Price each
PF30-10	10:1	90%	$1,00 \times 10^{-6}$	NO	484,22 €
PF30-12	12:1	88%	$9,25 \times 10^{-7}$	NO	484,22 €
PF30-15	15:1	86%	$8,62 \times 10^{-7}$	NO	484,22 €
PF30-20	20:1	84%	$8,13 \times 10^{-7}$	NO	484,22 €
PF30-30	30:1	78%	$7,88 \times 10^{-7}$	NO	484,22 €
PF30-60	60:1	70%	$7,67 \times 10^{-7}$	YES	484,22 €
PF30-120	120:1	40%	$7,42 \times 10^{-7}$	YES	484,22 €
PF30-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF30-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF30-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Worm and wheel gearbox

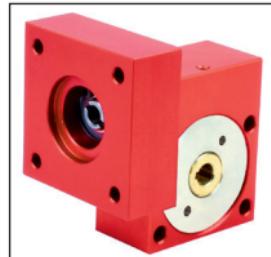


PF30NM

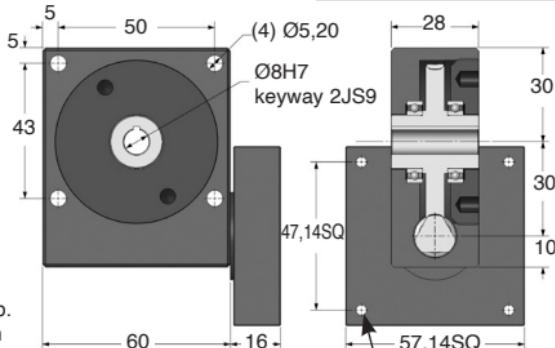
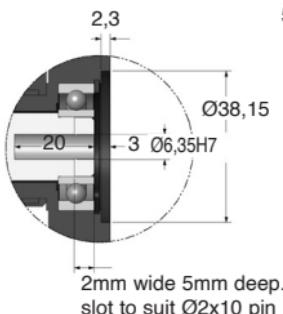
Torque up to 8.8Nm

- Ratios from 5:1 to 120:1
- Output backlash $\leq 0^{\circ}30'$
- Max. input speed: 3000 rpm
- Materials:
 - Casing: anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Stainless steel cap
- Weight: 0,59 kg

NEMA 23
square flange



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
INPUT SPEED (rpm)	3000	2,50	2,50	2,60	2,70	3,00	3,50	3,40
2000	2,80	2,90	3,00	3,20	3,60	4,10	3,70	
1000	3,50	3,70	4,00	4,20	4,50	5,00	4,60	
500	4,60	4,70	4,90	5,10	5,30	5,80	5,40	
200	5,40	5,60	5,70	5,90	6,20	6,60	6,40	
100	6,00	6,00	6,50	6,50	7,00	7,50	6,70	
50	7,50	7,80	8,00	8,30	8,30	8,60	6,70	
10	8,00	8,00	8,30	8,50	8,50	8,80	6,70	

DISCOUNTS

Qty	1+	3+	6+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Reflected Inertia at Input (kg.m^2)	Efficiency at 1000 rpm	Self-locking output	Price each 1 to 2
PF30-10NM	10:1	$1,00 \times 10^{-6}$	90%	NO	368,09 €
PF30-12NM	12:1	$9,25 \times 10^{-7}$	88%	NO	368,09 €
PF30-15NM	15:1	$8,62 \times 10^{-7}$	86%	NO	368,09 €
PF30-20NM	20:1	$8,13 \times 10^{-7}$	84%	NO	368,09 €
PF30-30NM	30:1	$7,88 \times 10^{-7}$	78%	NO	368,09 €
PF30-60NM	60:1	$7,67 \times 10^{-7}$	70%	YES	368,09 €
PF30-120NM	120:1	$7,42 \times 10^{-7}$	40%	YES	368,09 €
PF30-SPNM	5:1 - 120:1	Special ratios from 5:1 to 120:1 or left handed			On request
PF30-ANM		Reduced output backlash $\leq 0^{\circ}8'$			On request

Dimensions in mm



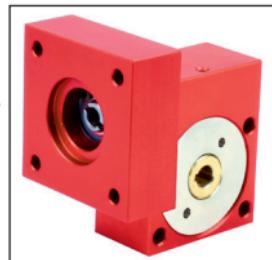
Worm and wheel gearbox

Torque up to 18Nm

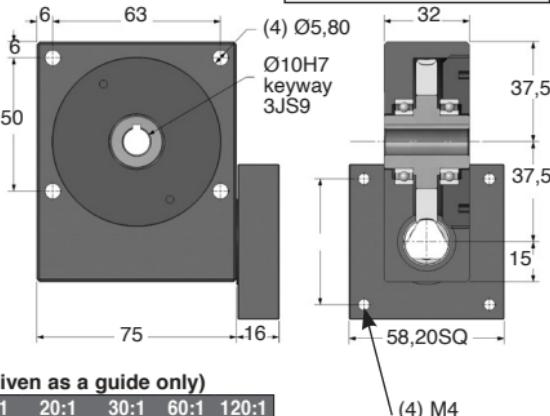
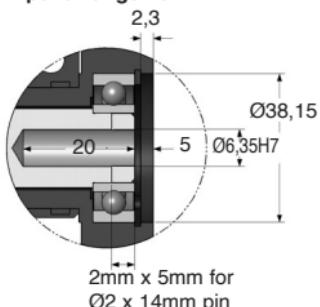
PF40NM

- Ratios from 5:1 to 120:1
- Output backlash $\leq 0^{\circ}30'$
- Max. input speed: 3000 rpm
- Materials:
 - Casing: anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Stainless steel cap
- Weight: 1,15 kg

NEMA 23 square flange



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
INPUT SPEED (rpm)	3000	5,00	5,20	5,40	5,60	6,40	7,20	6,50
500	5,50	5,80	6,20	6,60	7,30	8,00	7,20	
1000	7,10	7,50	8,00	8,20	9,00	10,00	8,70	
200	8,90	9,10	9,60	10,00	10,50	11,40	10,20	
100	11,60	11,90	12,30	12,50	13,50	14,20	11,70	
50	15,10	15,50	16,20	16,40	17,30	17,60	12,30	
10	17,60	17,60	17,60	17,70	17,80	18,00	12,30	

DISCOUNTS

Qty	1+	3+	6+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Reflected Inertia at Input (kg.m^2)	Efficiency at 1000 rpm	Self-locking output	Price each 1 to 2
PF40-10NM	10:1	$3,78 \times 10^{-6}$	89%	NO	499,77 €
PF40-12NM	12:1	$3,62 \times 10^{-6}$	87%	NO	499,77 €
PF40-15NM	15:1	$3,49 \times 10^{-6}$	85%	NO	499,77 €
PF40-20NM	20:1	$3,39 \times 10^{-6}$	83%	NO	499,77 €
PF40-30NM	30:1	$3,32 \times 10^{-6}$	76%	NO	499,77 €
PF40-60NM	60:1	$3,27 \times 10^{-6}$	65%	YES	499,77 €
PF40-120NM	120:1	$3,26 \times 10^{-6}$	41%	YES	499,77 €
PF40-SPNM	5:1 - 120:1	Special ratios from 5:1 to 120:1 or left handed		On request	
PF40-ANM		Reduced output backlash $\leq 0^{\circ}8'$		On request	

Dimensions in mm

Worm and wheel gearbox

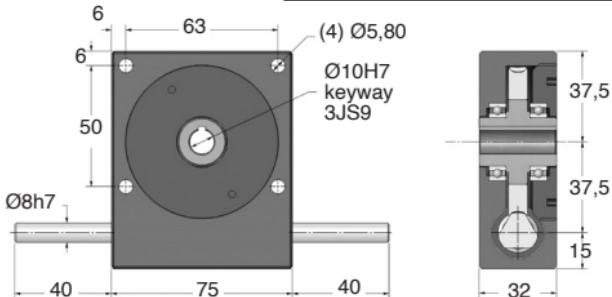
Stock
1 2 3**P40****Torque up to 18Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3,000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened

Output: Bronze

Cap: stainless steel

- Weight: 0,92 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
INPUT SPEED (rpm)	3000	5,00	5,20	5,40	5,60	6,40	7,20	6,50
2000	5,50	5,80	6,20	6,60	7,30	8,00	7,20	
1000	7,10	7,50	8,00	8,20	9,00	10,00	8,70	
500	8,90	9,10	9,60	10,00	10,50	11,40	10,20	
200	11,60	11,90	12,30	12,50	13,50	14,20	11,70	
100	13,40	13,60	14,10	14,60	15,30	16,00	12,30	
50	15,10	15,50	16,20	16,40	17,30	17,60	12,30	
10	17,60	17,60	17,60	17,70	17,80	18,00	12,30	

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P40-10	10:1	89%	$2,94 \times 10^{-6}$	NO	✓	529,31 €
P40-12	12:1	87%	$2,69 \times 10^{-6}$	NO	-	529,31 €
P40-15	15:1	85%	$2,49 \times 10^{-6}$	NO	-	529,31 €
P40-20	20:1	83%	$2,33 \times 10^{-6}$	NO	✓	529,31 €
P40-30	30:1	76%	$2,22 \times 10^{-6}$	NO	-	529,31 €
P40-60	60:1	65%	$2,15 \times 10^{-6}$	YES	✓	529,31 €
P40-120	120:1	41%	$2,10 \times 10^{-6}$	YES	✓	529,31 €
P40-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				
P40-A		Reduced output backlash $\leq 0^{\circ}8'$				
P40-AR		Reduced output backlash $\leq 0^{\circ}4'$				

**Depending on availability - Dimensions in mm*



Worm and wheel gearbox

Torque up to 18Nm

PF40

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max input speed: 3,000 rpm

- Materials:

Casing: Anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- The angle of the input flange is not positioned

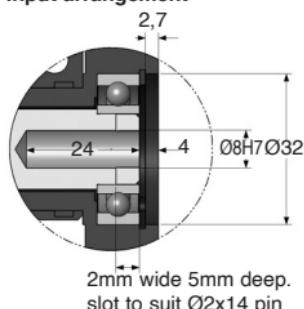
- Verify it is suitable for use with your motor

- Weight: 1,15 kg

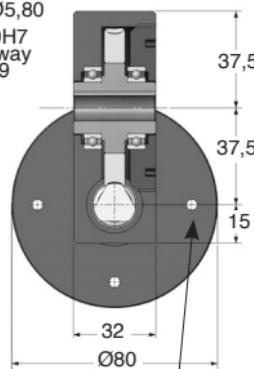
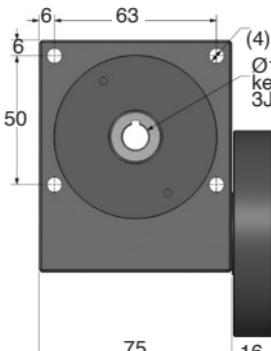
High reduction ratios



Input arrangement



2mm wide 5mm deep.
slot to suit Ø2x14 pin



(4) M5 on Ø60
PCD

OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
3000	5,00	5,20	5,40	5,60	6,40	7,20	6,50	
2000	5,50	5,80	6,20	6,60	7,30	8,00	7,20	
1000	7,10	7,50	8,00	8,20	9,00	10,00	8,70	
INPUT SPEED (rpm)	500	8,90	9,10	9,60	10,00	10,50	11,40	10,20
200	11,60	11,90	12,30	12,50	13,50	14,20	11,70	
100	13,40	13,60	14,10	14,60	15,30	16,00	12,30	
50	15,10	15,50	16,20	16,40	17,30	17,60	12,30	
10	17,60	17,60	17,60	17,70	17,80	18,00	12,30	

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%-15%	On request		

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m ²)	Anti-back drive	Price each
PF40-10	10:1	89%	$3,78 \times 10^{-6}$	NO	657,45 €
PF40-12	12:1	87%	$3,62 \times 10^{-6}$	NO	657,45 €
PF40-15	15:1	85%	$3,49 \times 10^{-6}$	NO	657,45 €
PF40-20	20:1	83%	$3,39 \times 10^{-6}$	NO	657,45 €
PF40-30	30:1	76%	$3,32 \times 10^{-6}$	NO	657,45 €
PF40-60	60:1	65%	$3,27 \times 10^{-6}$	YES	657,45 €
PF40-120	120:1	41%	$3,26 \times 10^{-6}$	YES	657,45 €
PF40-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF40-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF40-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Worm and wheel gearbox

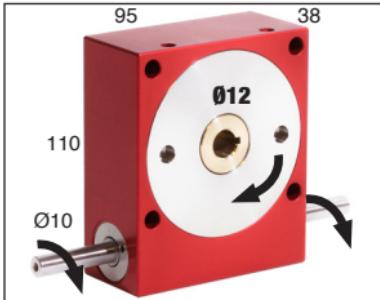
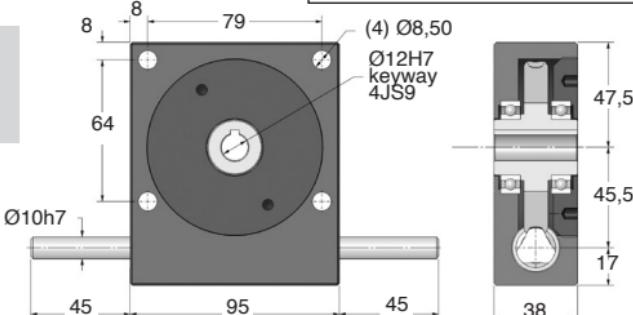
Stock
1 2 3**P45****Torque up to 40Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 1,70 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	10,30	10,80	11,30	12,20	13,20	14,70	10,80
2000	11,70	12,20	12,70	13,20	14,70	17,10	12,70
1000	14,70	15,20	16,20	17,10	18,10	20,60	14,30
INPUT SPEED (rpm)	500	19,10	19,60	20,60	21,60	22,50	24,50
200	24,40	25,50	26,40	27,00	28,90	30,00	20,60
100	28,30	28,90	29,40	30,30	31,80	33,80	22,80
50	32,30	32,80	33,80	34,30	34,50	35,20	23,00
10	39,90	39,90	39,90	40,00	40,00	40,00	23,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P45-10	10:1	90%	$6,15 \times 10^{-6}$	NO	✓	637,92 €
P45-12	12:1	89%	$5,32 \times 10^{-6}$	NO	-	637,92 €
P45-15	15:1	86%	$4,64 \times 10^{-6}$	NO	-	580,41 €
P45-20	20:1	85%	$4,11 \times 10^{-6}$	NO	✓	637,92 €
P45-30	30:1	78%	$3,73 \times 10^{-6}$	NO	✓	637,92 €
P45-60	60:1	67%	$3,51 \times 10^{-6}$	YES	✓	637,92 €
P45-120	120:1	47%	$2,88 \times 10^{-6}$	YES	✓	637,92 €
P45-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				
P45-A		Reduced output backlash $\leq 0^{\circ}8'$				
P45-AR		Reduced output backlash $\leq 0^{\circ}4'$				

**Depending on availability - Dimensions in mm*



Worm and wheel gearbox

Torque up to 40Nm

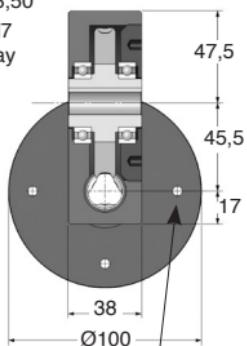
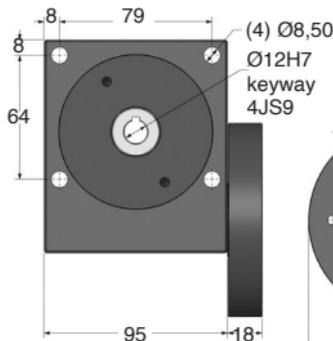
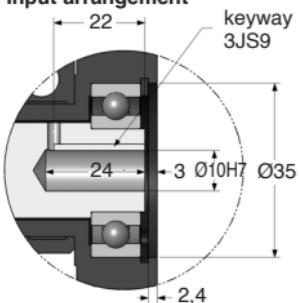
PF45

- Ratios from 5:1 to 120:1
- Output backlash $\leq 0^{\circ}30'$
- Max input speed: 3000 rpm
- Materials:
 - Casing: Anodised aluminium
 - Input: non-hardened steel
 - Output: Bronze
 - Cap: stainless steel
- The angle of the input flange is not positioned
- Verify it is suitable for use with your motor
- Weight: 1,15 kg

High reduction ratios



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	10,30	10,80	11,30	12,20	13,20	14,70	10,80
2000	11,70	12,20	12,70	13,20	14,70	17,10	12,70
1000	14,70	15,20	16,20	17,10	18,10	20,60	14,30
INPUT SPEED (rpm)	500	19,10	19,60	20,60	21,60	22,50	24,50
	200	24,40	25,50	26,40	27,00	28,90	30,00
	100	28,30	28,90	29,40	30,30	31,80	33,80
	50	32,30	32,80	33,80	34,30	34,50	35,20
	10	39,90	39,90	39,90	40,00	40,00	23,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Price each
PF45-10	10:1	90%	$7,34 \times 10^{-6}$	NO	792,30 €
PF45-12	12:1	89%	$6,84 \times 10^{-6}$	NO	792,30 €
PF45-15	15:1	86%	$6,43 \times 10^{-6}$	NO	792,30 €
PF45-20	20:1	85%	$6,09 \times 10^{-6}$	NO	792,30 €
PF45-30	30:1	78%	$5,86 \times 10^{-6}$	NO	792,30 €
PF45-60	60:1	67%	$5,70 \times 10^{-6}$	YES	792,30 €
PF45-120	120:1	47%	$5,66 \times 10^{-6}$	YES	792,30 €
PF45-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF45-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF45-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Worm and wheel gearbox

Stock

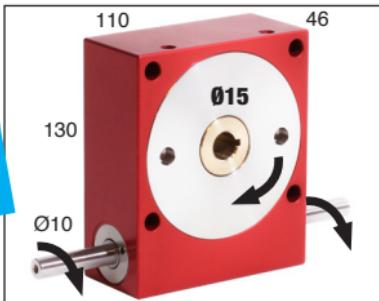
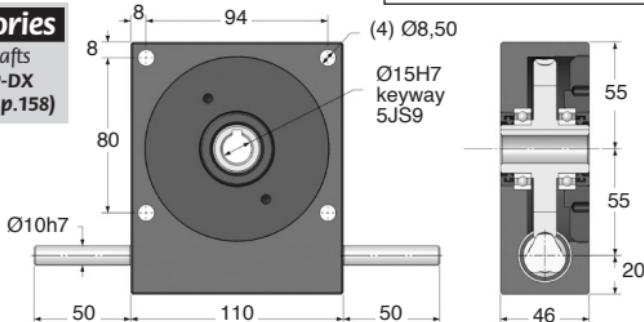
**P55****Torque up to 57Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 2,40 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts****P-X and P-DX****(tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1	
3000	13,40	14,00	14,80	16,20	17,60	20,40	18,00	
2000	16,20	16,90	18,30	19,10	20,40	23,90	20,00	
1000	21,10	22,50	23,20	24,60	25,30	28,80	25,00	
INPUT SPEED (rpm)	500	27,40	28,10	28,80	30,20	31,60	35,10	30,00
	200	34,40	35,10	36,50	37,90	39,30	42,10	36,00
	100	40,00	41,40	42,10	42,80	44,90	46,30	38,00
	50	45,60	46,30	47,70	48,40	49,80	50,50	38,00
	10	56,80	56,80	56,80	57,00	57,00	57,00	38,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P55-10	10:1	89%	$1,35 \times 10^{-5}$	NO	✓	755,98 €
P55-12	12:1	88%	$1,13 \times 10^{-5}$	NO	✓	755,98 €
P55-15	15:1	86%	$9,81 \times 10^{-6}$	NO	✓	755,98 €
P55-20	20:1	84%	$8,63 \times 10^{-6}$	NO	✓	755,98 €
P55-30	30:1	78%	$7,79 \times 10^{-6}$	NO	✓	755,98 €
P55-60	60:1	69%	$7,23 \times 10^{-6}$	YES	✓	756,02 €
P55-120	120:1	47%	$7,04 \times 10^{-6}$	YES	-	755,98 €
P55-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				
P55-A		Reduced output backlash $\leq 0^{\circ}8'$				
P55-AR		Reduced output backlash $\leq 0^{\circ}4'$				

**Depending on availability - Dimensions in mm*



Worm and wheel gearbox

Torque up to 57Nm

PF55

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max input speed: 3000 rpm

- Materials:

Casing: Anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- The angle of the input flange is not aligned

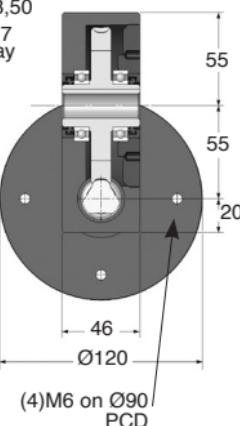
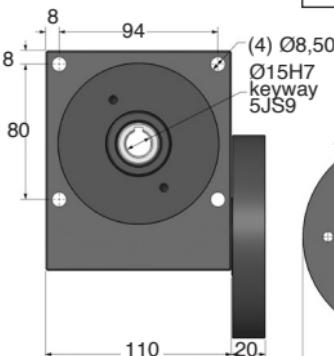
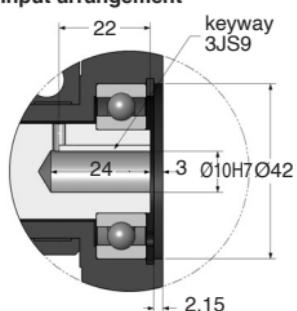
- Verify it is suitable for use with your motor

- Weight: 3,04 kg

High reduction ratios



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
INPUT SPEED (rpm)	3000	13,40	14,00	14,80	16,20	17,60	20,40
2000	16,20	16,90	18,30	19,10	20,40	23,90	20,00
1000	21,10	22,50	23,20	24,60	25,30	28,80	25,00
500	27,40	28,10	28,80	30,20	31,60	35,10	30,00
200	34,40	35,10	36,50	37,90	39,30	42,10	36,00
100	40,00	41,40	42,10	42,80	44,90	46,30	38,00
50	45,60	46,30	47,70	48,40	49,80	50,50	38,00
10	56,80	56,80	56,80	57,00	57,00	57,00	38,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m ²)	Self-locking output	Price each
PF55-10	10:1	89%	$1,96 \times 10^{-5}$	NO	939,03 €
PF55-12	12:1	88%	$1,84 \times 10^{-5}$	NO	939,03 €
PF55-15	15:1	86%	$1,74 \times 10^{-5}$	NO	939,03 €
PF55-20	20:1	84%	$1,67 \times 10^{-5}$	NO	939,03 €
PF55-30	30:1	78%	$1,62 \times 10^{-5}$	NO	939,03 €
PF55-60	60:1	69%	$1,58 \times 10^{-5}$	YES	939,03 €
PF55-120	120:1	47%	$1,57 \times 10^{-5}$	YES	939,03 €
PF55-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF55-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF55-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Worm and wheel gearbox

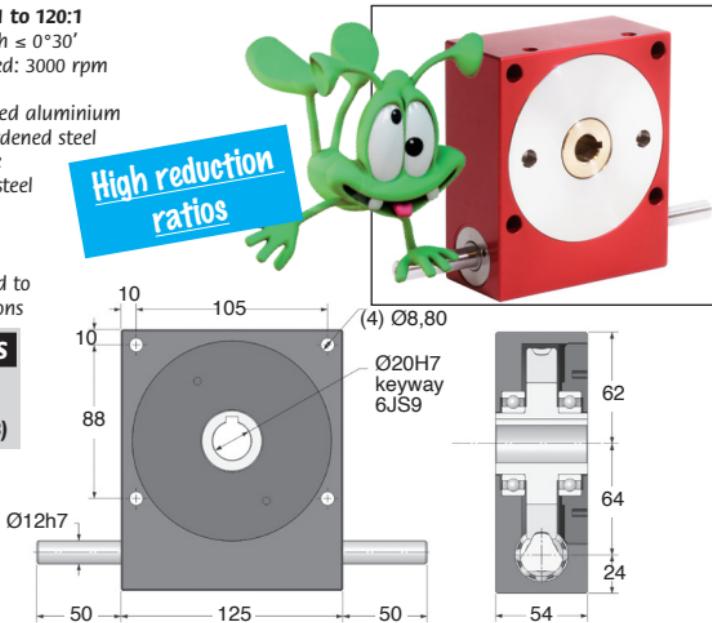
Stock
1 2 3**P60****Torque up to 118Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 4,10 kg**Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
INPUT SPEED (rpm)	3000	30	31	33	35	38	44
2000	33	36	39	41	44	50	32
1000	45	47	50	54	58	64	39
500	58	60	62	65	69	73	47
200	77	78	80	84	88	94	55
100	88	89	91	94	97	105	61
50	100	102	104	105	107	110	66
10	113	114	115	116	116	118	66

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P60-10	10:1	90%	$2,93 \times 10^{-5}$	NO	✓	955,66 €
P60-12	12:1	89%	$2,46 \times 10^{-5}$	NO	-	955,73 €
P60-15	15:1	85%	$2,08 \times 10^{-5}$	NO	-	955,66 €
P60-20	20:1	85%	$1,78 \times 10^{-5}$	NO	✓	955,66 €
P60-30	30:1	78%	$1,57 \times 10^{-5}$	NO	✓	955,66 €
P60-60	60:1	68%	$1,44 \times 10^{-5}$	YES	✓	955,66 €
P60-120	120:1	45%	$9,54 \times 10^{-6}$	YES	✓	955,66 €
P60-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				
P60-A		Reduced output backlash $\leq 0^{\circ}8'$				
P60-AR		Reduced output backlash $\leq 0^{\circ}4'$				

*Depending on availability - Dimensions in mm



Worm and wheel gearbox

Torque up to 118Nm

PF60

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max input speed: 3000 rpm

- Materials:

Casing: Anodised aluminium

Input: non-hardened steel

Output: Bronze

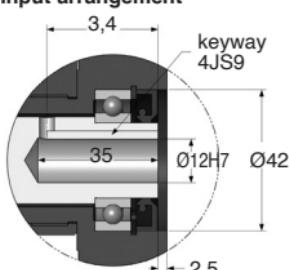
Cap: stainless steel

- The angle of the input flange is not positioned

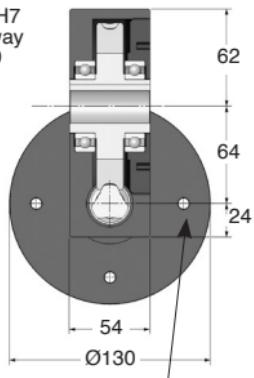
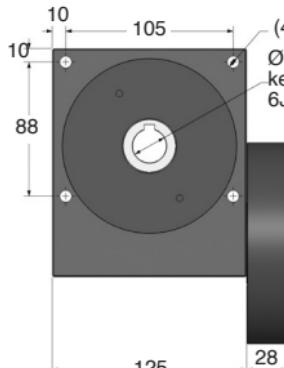
- Verify it is suitable for use with your motor

- Weight: 5,10 kg

Input arrangement



High reduction ratios



(4)M8 on Ø110 PCD

OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
INPUT SPEED (rpm)	3000	30	31	33	35	38	44
2000	33	36	39	41	44	50	52
1000	45	47	50	54	58	64	39
500	58	60	62	65	69	73	47
200	77	78	80	84	88	94	55
100	88	89	91	94	97	105	61
50	100	102	104	105	107	110	66
10	113	114	115	116	116	118	66

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m ²)	Self-locking output	Price each
PF60-10	10:1	90%	$3,80 \times 10^{-5}$	NO	1 059,36 €
PF60-12	12:1	89%	$3,68 \times 10^{-5}$	NO	1 059,36 €
PF60-15	15:1	85%	$3,14 \times 10^{-5}$	NO	1 059,36 €
PF60-20	20:1	85%	$3,10 \times 10^{-5}$	NO	1 059,36 €
PF60-30	30:1	78%	$2,88 \times 10^{-5}$	NO	1 059,36 €
PF60-60	60:1	68%	$2,82 \times 10^{-5}$	YES	1 059,36 €
PF60-120	120:1	45%	$2,79 \times 10^{-5}$	YES	1 059,36 €
PF60-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF60-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF60-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Worm and wheel gearbox

Stock

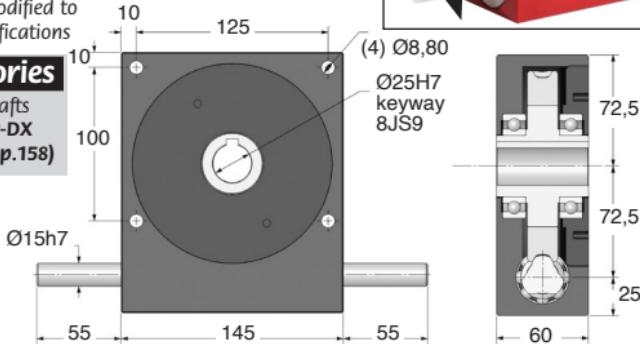
**P70****Torque up to 164Nm****- Ratios from 5:1 to 120:1****- Output backlash $\leq 0^{\circ}30'$** **- Max. input speed: 3000 rpm****- Materials:**

Casing: anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- Weight: 6,40 kg**High reduction ratios****Options****- Can be modified to your specifications****Accessories****- Output shafts P-X and P-DX (tome ② p.158)****OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	38	40	42	45	50	56	38
2000	47	49	53	55	61	69	46
1000	61	65	67	71	73	83	55
INPUT SPEED (rpm)	500	77	81	83	87	91	100
200	99	101	105	107	113	121	77
100	115	119	121	123	129	133	86
50	129	133	137	139	144	146	90
10	160	160	160	164	164	164	90

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%	On request	

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
P70-10	10:1	90%	$6,04 \times 10^{-5}$	NO	✓	1 061,22 €
P70-12	12:1	89%	$5,03 \times 10^{-5}$	NO	-	1 061,22 €
P70-15	15:1	86%	$4,21 \times 10^{-5}$	NO	✓	1 061,29 €
P70-20	20:1	85%	$3,57 \times 10^{-5}$	NO	✓	1 061,29 €
P70-30	30:1	78%	$3,11 \times 10^{-5}$	NO	✓	1 061,22 €
P70-60	60:1	67%	$2,84 \times 10^{-5}$	YES	✓	1 061,22 €
P70-120	120:1	50%	$2,48 \times 10^{-5}$	YES	-	1 061,22 €
P70-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed				- On request
P70-A		Reduced output backlash $\leq 0^{\circ}8'$				- On request
P70-AR		Reduced output backlash $\leq 0^{\circ}4'$				- On request

*Depending on availability - Dimensions in mm



Worm and wheel gearbox

Torque up to 164Nm

PF70

- Ratios from 5:1 to 120:1

- Output backlash $\leq 0^{\circ}30'$

- Max input speed: 3000 rpm

- Materials:

Casing: Anodised aluminium

Input: non-hardened steel

Output: Bronze

Cap: stainless steel

- The angle of the input flange is not positioned

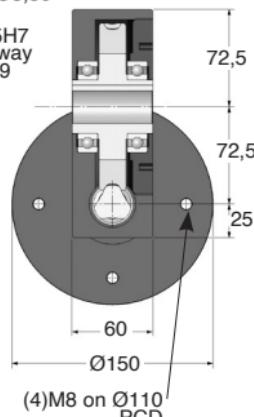
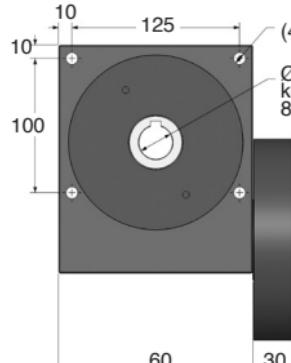
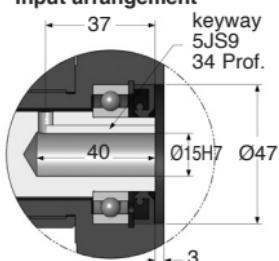
- Verify it is suitable for use with your motor

- Weight: 7,90 kg

High reduction ratios



Input arrangement



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	38	40	42	45	50	56	38
2000	47	49	53	55	61	69	46
1000	61	65	67	71	73	83	55
INPUT SPEED (rpm)	500	77	81	83	87	91	100
200	99	101	105	107	113	121	77
100	115	119	121	123	129	133	86
50	129	133	137	139	144	146	90
10	160	160	160	164	164	164	90

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratios	Efficiency at 1000 rpm	Reflected inertia at input (kg.m^2)	Self-locking output	Price each
PF70-10	10:1	90%	$4,81 \times 10^{-5}$	NO	1 194,64 €
PF70-12	12:1	89%	$4,19 \times 10^{-5}$	NO	1 194,64 €
PF70-15	15:1	86%	$3,70 \times 10^{-5}$	NO	1 194,64 €
PF70-20	20:1	85%	$3,28 \times 10^{-5}$	NO	1 194,64 €
PF70-30	30:1	78%	$3,00 \times 10^{-5}$	NO	1 194,64 €
PF70-60	60:1	67%	$2,89 \times 10^{-5}$	YES	1 194,64 €
PF70-120	120:1	50%	$2,76 \times 10^{-5}$	YES	1 194,64 €
PF70-SP	5:1-120:1	Ratios from 5:1 to 120:1 or left handed			
PF70-A		Reduced output backlash $\leq 0^{\circ}8'$			
PF70-AR		Reduced output backlash $\leq 0^{\circ}4'$			

Dimensions in mm

Output shaft stainless steel

Stock

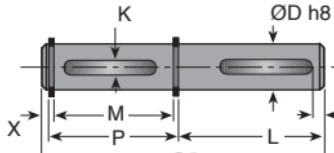
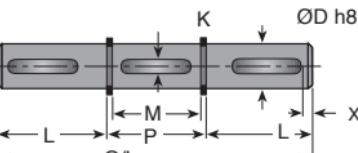
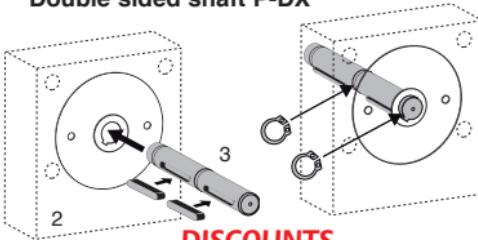
Px PDX

For P and PF gearboxes

- Optional accessory for adding outputs shafts to P and PF gearboxes

Composition

- Single sided shaft kit P-x: Stainless steel 303 shaft, 2 steel keys and 2 steel circlips
- Double sided shaft kit P-DX: Stainless steel 303 shaft, 3 steel keys and 2 steel circlips

**Single sided shaft P-X****Double sided shaft P-DX****Single sided****Double sided****Typical applications****DISCOUNTS**

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%	On request	

Part number	For gearbox	ØD	O/L	M	P	X	L	K	Stock*	Price each
Single sided										
P20-X	P20-PF20	6	50,80	22	23,60	3,00	25	K2 x 22	✓	39,49 €
P30-X	P30-PF30	8	63,90	28	29,80	3,00	32	K2 x 22	✓	46,41 €
P40-X	P40-PF40	10	76,60	32	34,20	3,50	40	K3 x 20	✓	52,16 €
P45-X	P45-PF45	12	88,10	38	40,20	4,00	45	K4 x 25	-	56,03 €
P55-X	P55-PF55	15	101,10	46	48,20	4,00	50	K5 x 30	-	62,06 €
P60-X	P60-PF60	20	119,80	54	56,60	4,50	60	K6 x 32	-	72,95 €
P70-X	P70-PF70	25	135,80	60	62,60	4,50	70	K8 x 40	-	83,83 €
Double sided										
P20-DX	P20-PF20	6	73,60	22	23,60	1,50	25	K2 x 22	-	52,00 €
P30-DX	P30-PF30	8	93,80	28	29,80	5,45	32	K2 x 22	-	56,52 €
P40-DX	P40-PF40	10	114,20	32	34,20	9,90	40	K3 x 20	-	64,73 €
P45-DX	P45-PF45	12	130,20	38	40,20	4,00	45	K4 x 25	-	70,73 €
P55-DX	P55-PF55	15	148,20	46	48,20	9,90	50	K5 x 30	-	77,07 €
P60-DX	P60-PF60	20	176,60	54	56,60	4,50	60	K6 x 32	-	89,62 €
P70-DX	P70-PF70	25	202,50	60	62,60	4,50	70	K8 x 40	-	102,16 €

*Depending on availability - Dimensions in mm

Standard gearboxes



We can easily adapt our standard gearboxes to meet your specific requirements.

On request and with no minimum order, we can manufacture :

- different shaft lengths and diameters
- other bore diameters (metric or imperial)
- flat plates, keyways, circlip grooves...
- addition of channelled or threaded rings
- custom-made parts from a drawing, specification or sample.

To find out more, contact our technical team.

Custom made gearboxes built to order

- Please send your request for a custom made gearbox to our technical department on +33 (0) 437 490 055

Worm and wheel gearboxes

P, P-A
P-AR

Technical information

- Ratios: From 5:1 to 120:1

- Materials :

Housing - anodised aluminium
Worm - Steel
Wheel - Aluminium bronze
Stainless steel cap

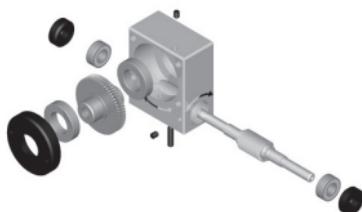
- Max input speed: 3,000 rpm

- Backlash(output): $\leq 0^{\circ}30'$ (P), $\leq 0^{\circ}08'$ (P-A),

$\leq 0^{\circ}04'$ (P-AR)

- Lubrication: greased for life
(Shell Gadus S5 V42P 2.5 grease)

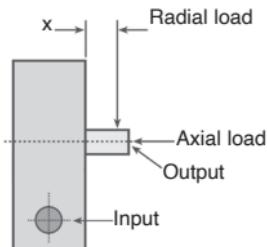
- Guarantee: 13 months



Standard P
P-A and P-AR range

ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Input radial load (N)	Output Radial load (N)	Axial load (N)
P15	10	10	80	30
P20	10	20	120	50
P30	12	30	200	120
P40	15	50	300	200
P45	20	60	450	300
P55	20	140	600	400
P60	25	160	700	500
P70	30	200	800	600



Data given based on input speed of 1,000 rpm.

Values given as an indication only.

Worm and wheel gearboxes with input flange

Technical information

PF, PF-A
PF-AR

- Ratios: From 5:1 to 120:1

- Materials :

Housing - anodised aluminium

Worm - Steel

Wheel - Aluminium bronze

Stainless steel cap

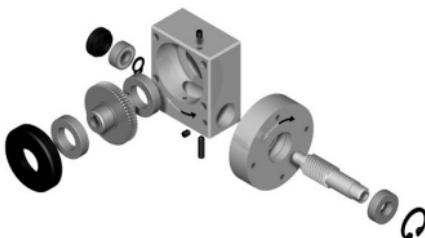
- Max input speed: 3,000 rpm

- Backlash(output): $\leq 0^{\circ}30'$ (PF),

$\leq 0^{\circ}08'$ (PF-A), $\leq 0^{\circ}04'$ (PF-AR)

- Lubrication: greased for life
(Shell Gadus S5 V42P 2.5)

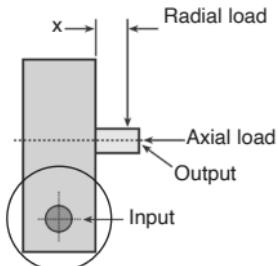
- Guarantee: 13 months



Standard PF
PF-A and PF-AR range

ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Input Radial load (N)	Output Radial load (N)	Axial load (N)
PF15	10	10	80	30
PF20	10	20	120	50
PF30	12	30	200	120
PF40	15	50	300	200
PF45	20	60	450	300
PF55	20	140	600	400
PF60	25	160	700	500
PF70	30	200	800	600



Data given based on input speed of 1,000 rpm.
Values given as an indication only.

Double reduction worm gearboxes



PP35

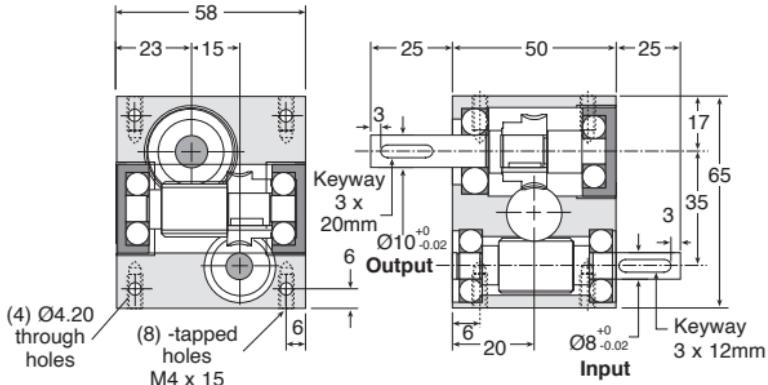
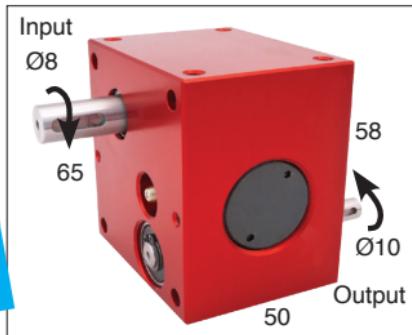
Torque up to 4.10Nm

- Ratios from 25:1 to 900:1
- 2-stage reduction
- Output backlash $\leq 55'$ ($0,92^\circ$)
- Max. input speed: 3000 rpm
- Materials:
 - Casing: anodised aluminium
 - input: non-hardened steel
 - output: bronze
- Weight: 0.70 kg

Options

- Can be modified to your specifications

Very high reduction ratios



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	100:1	200:1	400:1
INPUT SPEED (rpm)	3000	2,20	2,30
500	2,00	2,50	2,70
1000	1,00	2,80	3,00
200	0,50	3,10	3,50
100	0,25	3,80	4,00
50	0,13	3,90	4,00
	4,00	4,10	4,10

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -10%	-15%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Self-locking output	Price each
PP35-100	100:1	3000	30,00	52%	NO	539,35 €
PP35-200	200:1	3000	15,00	45%	NO	539,35 €
PP35-400	400:1	3000	7,50	34%	YES	539,35 €
PP35-SP	25:1 - 900:1	Special ratios from 25:1 to 900:1			On request	

Dimensions in mm



Double reduction worm gearboxes

Torque up to 12.8Nm

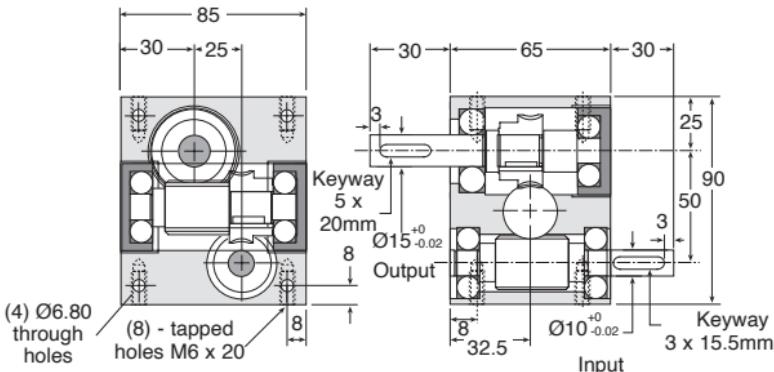
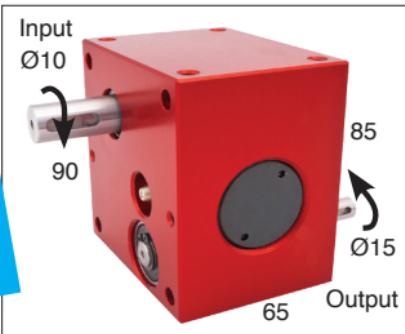
PP50

- Ratios from 25:1 to 900:1
- 2-stage reduction
- Output backlash $\leq 55'$ ($0,92^\circ$)
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input: non-hardened steel
 - output: bronze
- Weight: 1.80 kg

Options

- Can be modified to your specifications

Very high
reduction
ratios



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	100:1	200:1	400:1
INPUT SPEED (rpm)	3000	6,50	7,10
500	7,20	7,80	8,90
1000	8,20	9,00	9,80
200	9,50	10,20	11,50
100	11,00	11,60	12,20
50	12,00	12,30	12,60
	12,70	12,80	12,80

DISCOUNTS

Qty	1+	2+	4+
Disc. List	-5%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Self-locking output	Price each
PP50-100	100:1	3000	30,00	54%	NO	509,82 €
PP50-200	200:1	3000	15,00	48%	NO	509,82 €
PP50-400	400:1	3000	7,50	36%	YES	509,82 €
PP50-SP	25:1 - 900:1	Special ratios from 25:1 to 900:1				On request

Dimensions in mm

Double reduction worm gearboxes

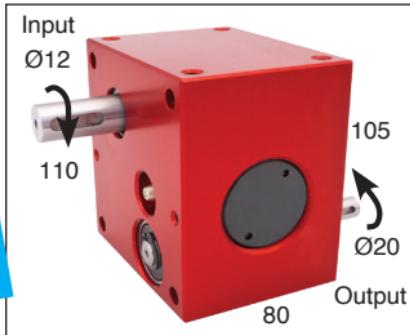


PP60

Torque up to 34Nm

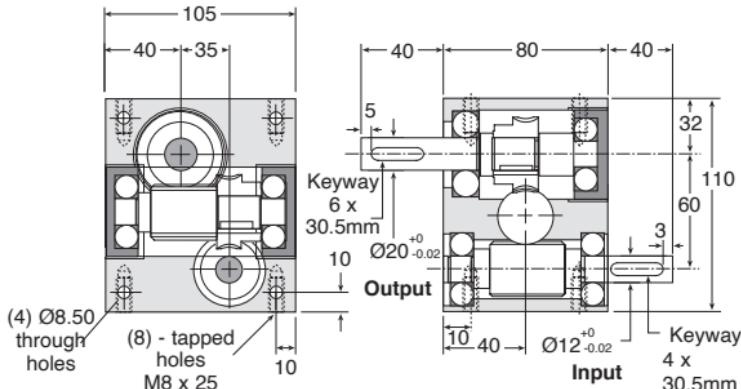
- Ratios from 25:1 to 900:1
- 2-stage reduction
- Output backlash $\leq 55'$ ($0,92^\circ$)
- Max. input speed: 3000 rpm
- Materials:
 - Casing: anodised aluminium
 - input: non-hardened steel
 - output: bronze
- Weight: 3.30 kg

Very high
reduction
ratios



Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	100:1	200:1	400:1
3000	17,80	19,40	22,50
2000	20,00	21,60	24,80
1000	22,50	25,00	26,80
INPUT SPEED 500	26,10	28,00	31,60
200 (rpm)	30,50	32,00	34,00
100	33,00	34,00	34,00
50	34,00	34,00	34,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Self-locking output	Price each
PP60-100	100:1	3000	30,00	55%	NO	644,21 €
PP60-200	200:1	3000	15,00	50%	NO	644,21 €
PP60-400	400:1	3000	7,50	37%	YES	644,21 €
PP60-SP	25:1 - 900:1	Special ratios from 25:1 to 900:1			On request	

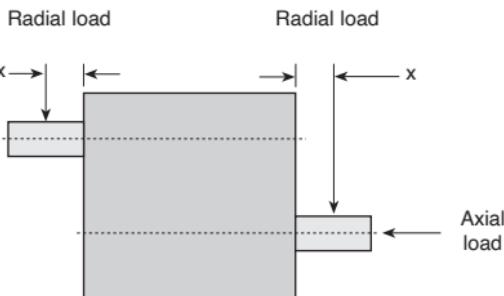
Dimensions in mm

Double reduction gearboxes

Technical information

PP

- Speed ratio: from 25:1 to 900:1
- Materials :
 - casing anodised aluminium
 - worm steel
 - wheel aluminium bronze
- Max. speed: 3000 rpm on input depending on model
- Backlash: $\leq 55'$ ($0,92^\circ$) on output
- Lubrication: greased for life (Shell Gadus S5 V42P 2,5 grease)
- Guarantee: 13 months

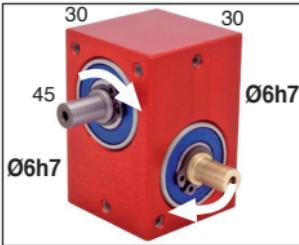


ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Input Radial load (N)	Output Radial load (N)	Axial load (N)
PP35	12	60	120	100
PP50	20	100	300	200
PP60	25	150	450	300

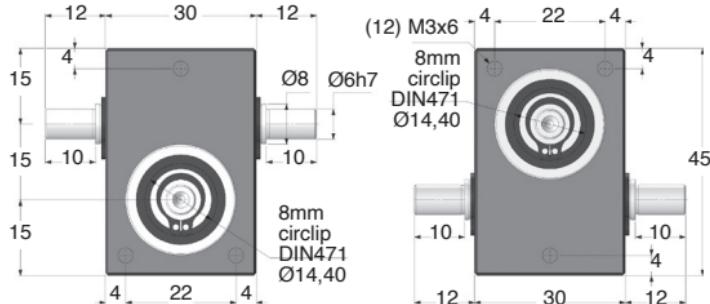
Data given based on input speed of 1,000 rpm.
Values given as an indication only.

- **Ratios from 1 :1 to 40:1**
 - Single piece construction
 - Output backlash : $\leq 45'$ ($0,75^\circ$)
 - Max input speed : up to 4000rpm
 - Materials :
 - Casing: anodised aluminium
 - Gears/worms : high carbon steel
 - Ratios 1: to 5:1, Input and output: high carbon steel
 - Ratios $\geq 8:1$, Input:high carbon steel, Output : bronze
 - Weight: 0.255 kg



Option

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	0,40	0,40	0,40	0,40	0,40	-	-	-	-
2000	0,46	0,46	0,46	0,46	0,46	0,69	0,79	0,90	1,00
1000	0,66	0,66	0,66	0,66	0,86	0,86	0,97	1,08	1,19
INPUT SPEED (RPM)	500	0,92	0,92	0,92	0,92	1,27	1,37	1,47	1,56
100	1,19	1,19	1,19	1,19	1,19	1,72	1,78	1,87	1,95
50	1,25	1,25	1,25	1,25	1,25	1,95	2,07	2,18	2,24
10	1,32	1,32	1,32	1,32	1,32	2,39	2,44	2,51	2,53

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Type	Input	Efficiency	Max input	Reflected inertia	Self-locking	Price each
				at 1000 rpm	speed (rpm)	at input (kg.m ²)		
E15-1	1:1	Helical	A	88%	4000	3,762 x 10 ⁻⁶	NO	368,92 €
E15-2	2:1	Helical	A	86%	4000	2,349 x 10 ⁻⁶	NO	368,92 €
E15-3	3:1	Helical	A	85%	4000	2,011 x 10 ⁻⁶	NO	368,92 €
E15-4	4:1	Helical	A	84%	4000	1,986 x 10 ⁻⁶	NO	368,92 €
E15-5	5:1	Helical	A	80%	4000	1,544 x 10 ⁻⁶	NO	368,92 €
E15-8	8:1	Worm+wheel	A	80%	2000	1,622 x 10 ⁻⁶	NO	368,92 €
E15-10	10:1	Worm+wheel	A	73%	2000	1,609 x 10 ⁻⁶	NO	368,92 €
E15-20	20:1	Worm+wheel	A	67%	2000	1,593 x 10 ⁻⁶	YES	368,92 €
E15-40	40:1	Worm+wheel	A	60%	2000	1,589 x 10 ⁻⁶	YES	368,92 €
E15-SP	1:1 - 40:1	Ratio from 1:1 to 40:1					On request	
E15-SPA	1:1 - 40:1	Reduced output backlash ≤ 30°					On request	
E15-SPLH	1:1 - 40:1	Left handed					On request	

Dimensions in mm

Taille
XS

Right angle helical gearbox

Torque up to 3.84Nm**E20****- Ratios from 1:1 to 40:1****- Single piece construction****- Output backlash $\leq 45'$ ($0,75^\circ$)****- Max. input speed up to 4000 rpm****- Materials:**

Casing: anodised aluminium

gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel**- Ratios $\geq 8:1$,**

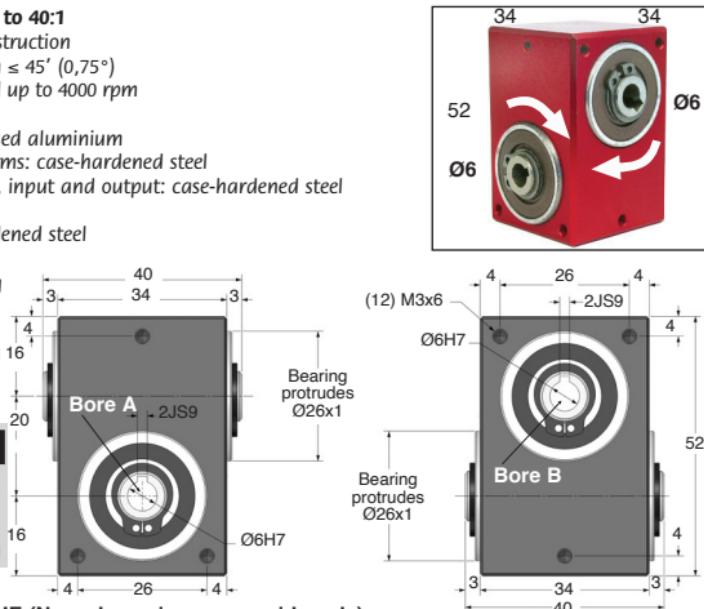
input: case-hardened steel

output: bronze

- Weight: 0.255 kg**Options****- Can be modified to your specifications****Accessories****- Input or output shafts**

E-X and E-DX

(tome ② p.173)

**OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
INPUT SPEED (RPM)	3000	0,60	0,60	0,60	0,60	-	-	-	-
	2000	0,70	0,70	0,70	0,70	1,05	1,20	1,36	1,52
	1000	1,00	1,00	1,00	1,00	1,31	1,47	1,63	1,80
	500	1,40	1,40	1,40	1,40	1,93	2,08	2,22	2,37
	100	1,80	1,80	1,80	1,80	2,60	2,70	2,83	2,95
	50	1,90	1,90	1,90	1,90	2,95	3,13	3,31	3,40
	10	2,00	2,00	2,00	2,00	3,62	3,70	3,80	3,84

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each
E20-1	1:1	Helical	A	88%	4000	$3,762 \times 10^{-6}$	NO	✓	408,87 €
E20-2	2:1	Helical	A	86%	4000	$2,349 \times 10^{-6}$	NO	✓	408,87 €
E20-3	3:1	Helical	A	85%	4000	$2,011 \times 10^{-6}$	NO	-	408,87 €
E20-4	4:1	Helical	A	84%	4000	$1,986 \times 10^{-6}$	NO	-	408,87 €
E20-5	5:1	Helical	A	80%	4000	$1,544 \times 10^{-6}$	NO	-	408,87 €
E20-8	8:1	Worm+wheel	A	80%	2000	$1,622 \times 10^{-6}$	NO	✓	408,87 €
E20-10	10:1	Worm+wheel	A	73%	2000	$1,609 \times 10^{-6}$	NO	-	408,87 €
E20-20	20:1	Worm+wheel	A	67%	2000	$1,593 \times 10^{-6}$	YES	✓	408,87 €
E20-40	40:1	Worm+wheel	A	60%	2000	$1,589 \times 10^{-6}$	YES	✓	408,87 €
E20-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						-	On request
E20-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						On request	
E20-SPLH	1:1 - 40:1	Left handed						On request	

*Depending on availability - Dimensions in mm

Right angle helical gearbox

Size
XS



E30

Torque up to 9Nm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. input speed up to 3000 rpm

- Materials:

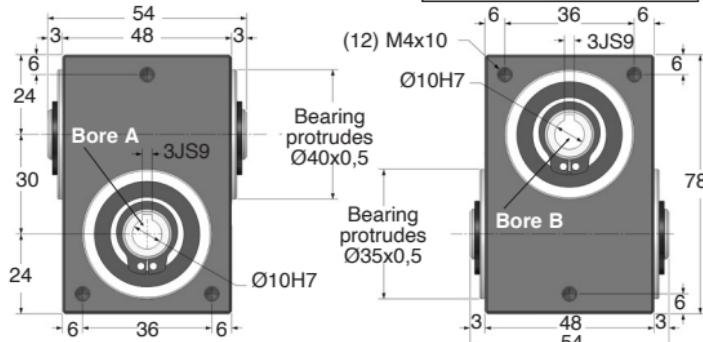
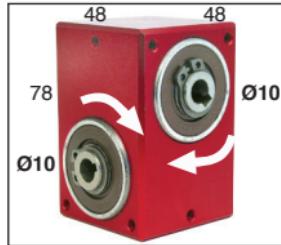
- Casing: anodised aluminium
- gears and worms: case-hardened steel
- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios $\geq 8:1$,
input: case-hardened steel
output: bronze
- Weight: 0.72 kg

Options

- Can be modified to your specifications

Accessories

- Input or output shafts
- E-X and E-DX (tome 2 p.173)



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	1,5	1,5	1,5	1,5	1,5	-	-	-	-
2000	2,0	2,0	2,0	2,0	2,0	-	-	-	-
1000	2,5	2,5	2,5	2,5	2,5	3,6	4,2	4,7	5,0
INPUT SPEED (RPM)	500	3,0	3,0	3,0	3,0	4,9	5,3	5,6	6,0
100	4,0	4,0	4,0	4,0	4,0	6,5	7,0	7,1	7,3
50	4,5	4,5	4,5	4,5	4,5	7,9	8,4	8,5	8,6
10	5,0	5,0	5,0	5,0	5,0	8,5	8,7	8,9	9,0

DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each
E30-1	1:1	Helical	B	90%	3000	$2,867 \times 10^{-6}$	NO	✓	469,34 €
E30-2	2:1	Helical	A	88%	3000	$1,362 \times 10^{-6}$	NO	✓	469,34 €
E30-3	3:1	Helical	A	87%	3000	$1,071 \times 10^{-6}$	NO	✓	469,34 €
E30-4	4:1	Helical	A	86%	3000	$1,032 \times 10^{-6}$	NO	✓	469,34 €
E30-5	5:1	Helical	A	80%	3000	$9,372 \times 10^{-6}$	NO	✓	469,34 €
E30-8	8:1	Worm+wheel	A	80%	1000	$1,115 \times 10^{-6}$	NO	✓	469,34 €
E30-10	10:1	Worm+wheel	A	73%	1000	$1,106 \times 10^{-6}$	NO	✓	469,34 €
E30-20	20:1	Worm+wheel	A	67%	1000	$1,094 \times 10^{-6}$	YES	✓	469,34 €
E30-40	40:1	Worm+wheel	A	60%	1000	$1,091 \times 10^{-6}$	YES	✓	469,34 €
E30-SP	1:1 - 40:1	Ratio from 1:1 to 40:1							On request
E30-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$							On request
E30-SPLH	1:1 - 40:1	Left handed							On request

*Depending on availability - Dimensions in mm



Right angle helical gearbox

Torque up to 20Nm

E40

- Ratios from 1:1 to 40:1

- Single piece construction

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. input speed up to 3000 rpm

- Materials:

Casing: anodised aluminium

gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel

- Ratios $\geq 8:1$, input: case-hardened steel

output: bronze

- Weight: 1.67 kg

Options

- Can be modified to your specifications

Accessories

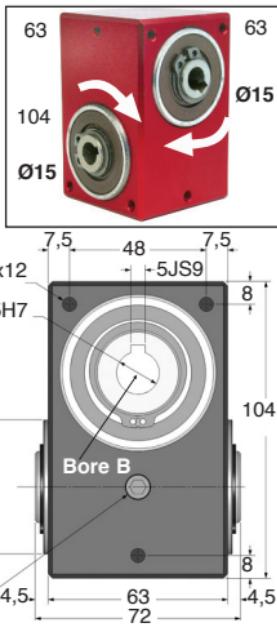
- Input or output shafts

E-X and E-DX

(tome 2 p.173)

OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
INPUT SPEED (RPM)	3000	2,3	2,3	2,3	2,3	-	-	-	-
2000	2,8	2,8	2,8	2,8	2,8	-	-	-	-
1000	3,8	3,8	3,8	3,8	3,8	7,3	8,0	8,8	9,7
500	5,0	5,0	5,0	5,0	5,0	10,7	11,3	12,2	13,1
100	8,0	8,0	8,0	8,0	8,0	14,2	15,0	15,8	16,7
50	9,0	9,0	9,0	9,0	9,0	17,1	17,3	17,7	18,2
10	10,0	10,0	10,0	10,0	10,0	19,5	19,6	19,8	20,0



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%	On request	

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each	
E40-1	1:1	Helical	B	92%	3000	1,471 x 10 ⁻⁴	NO	✓	599,40 €	
E40-2	2:1	Helical	A	90%	3000	6,738 x 10 ⁻⁵	NO	✓	599,40 €	
E40-3	3:1	Helical	A	89%	3000	5,193 x 10 ⁻⁵	NO	✓	599,40 €	
E40-4	4:1	Helical	A	88%	3000	5,038 x 10 ⁻⁵	NO	✓	599,40 €	
E40-5	5:1	Helical	A	80%	3000	5,095 x 10 ⁻⁵	NO	✓	599,40 €	
E40-8	8:1	Worm+wheel	A	80%	1000	5,213 x 10 ⁻⁵	NO	-	599,31 €	
E40-10	10:1	Worm+wheel	A	73%	1000	5,198 x 10 ⁻⁵	NO	✓	599,31 €	
E40-20	20:1	Worm+wheel	A	67%	1000	5,110 x 10 ⁻⁵	YES	✓	599,40 €	
E40-40	40:1	Worm+wheel	A	60%	1000	5,090 x 10 ⁻⁵	YES	-	599,31 €	
E40-SP	1:1 - 40:1	Ratio from 1:1 to 40:1								On request
E40-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$								On request
E40-SPLH	1:1 - 40:1	Left handed								On request

*Depending on availability - Dimensions in mm

Right angle helical gearbox

Stock
1 2 3



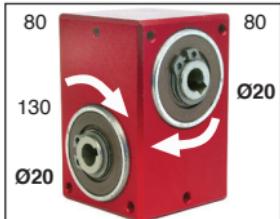
E50

Torque up to 41Nm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. input speed up to 3000 rpm

- Materials:

- Casing: anodised aluminium
- Gears and worms: case-hardened steel
- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios $\geq 8:1$, input: case-hardened steel, output: bronze
- Weight: 3.18 kg

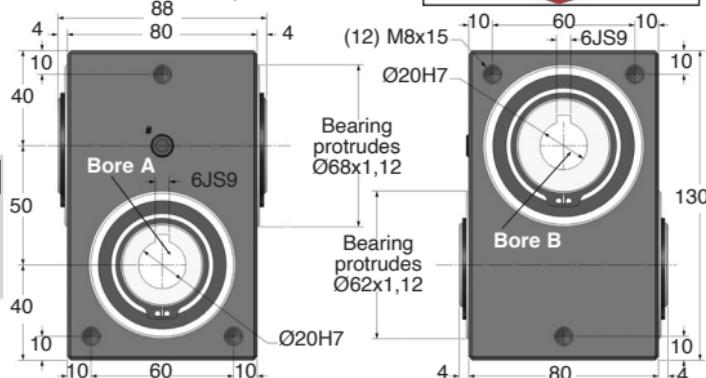


Options

- Can be modified to your specifications

Accessories

- Input or output shafts
- E-X and E-DX (tome ② p.173)



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
INPUT SPEED (RPM)	3000	3,0	3,0	3,0	3,0	-	-	-	-
INPUT SPEED (RPM)	2000	4,0	4,0	4,0	4,0	-	-	-	-
INPUT SPEED (RPM)	1000	6,0	6,0	6,0	6,0	11,3	13,0	15,0	17,0
INPUT SPEED (RPM)	500	8,0	8,0	8,0	8,0	18,0	20,0	21,0	23,0
INPUT SPEED (RPM)	100	12,0	12,0	12,0	12,0	25,0	26,0	28,0	30,0
INPUT SPEED (RPM)	50	14,0	14,0	14,0	14,0	31,0	31,0	32,0	33,0
INPUT SPEED (RPM)	10	16,0	16,0	16,0	16,0	40,0	40,0	41,0	41,0

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each
E50-1	1:1	Helical	B	93%	3000	$4,585 \times 10^{-4}$	NO	✓	762,32 €
E50-2	2:1	Helical	A	91%	3000	$2,240 \times 10^{-4}$	NO	✓	762,32 €
E50-3	3:1	Helical	A	90%	3000	$1,759 \times 10^{-4}$	NO	✓	762,32 €
E50-4	4:1	Helical	A	89%	3000	$1,924 \times 10^{-4}$	NO	✓	762,32 €
E50-5	5:1	Helical	A	80%	3000	$1,920 \times 10^{-4}$	NO	✓	762,34 €
E50-8	8:1	Worm+wheel	A	80%	1000	$1,489 \times 10^{-4}$	NO	✓	762,32 €
E50-10	10:1	Worm+wheel	A	73%	1000	$1,496 \times 10^{-4}$	NO	-	762,32 €
E50-20	20:1	Worm+wheel	A	67%	1000	$1,463 \times 10^{-4}$	YES	✓	762,32 €
E50-40	40:1	Worm+wheel	A	60%	1000	$1,455 \times 10^{-4}$	YES	✓	762,32 €
E50-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						On request	
E50-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						On request	
E50-SPLH	1:1 - 40:1	Left handed						On request	

*Depending on availability - Dimensions in mm



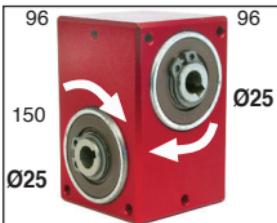
Stock

Right angle helical gearbox

Torque up to 62Nm

E60

- **Ratios from 1:1 to 40:1**
 - Single piece construction
 - Output backlash $\leq 45'$ ($0,75^\circ$)
 - Max. input speed up to 3000 rpm
 - Materials:
 - casing: anodised aluminium
 - gears and worms: case-hardened steel
 - Ratios 1:1 to 5:1, input and output: case-hardened steel
 - Ratios $\geq 8:1$, input: case-hardened steel, output: bronze
 - Weight: 5.50 kg

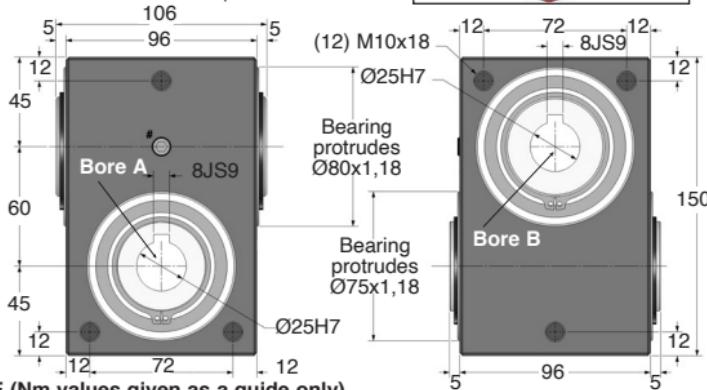


Options

- Can be modified to your specifications

Accessories

- Input and output shafts
E-X and E-DX
(tome 2 p.173)



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	4,5	4,5	4,5	4,5	4,5	-	-	-	-
2000	5,5	5,5	5,5	5,5	5,5	-	-	-	-
1000	8,0	8,0	8,0	8,0	8,0	17,8	21,3	22,0	24,0
INPUT	500	10,0	10,0	10,0	10,0	27,0	29,0	31,0	34,0
SPEED	100	16,0	16,0	16,0	16,0	37,0	40,2	42,0	44,0
(RPM)	50	20,0	20,0	20,0	20,0	48,0	49,0	50,0	51,0
	10	24,0	24,0	24,0	24,0	60,0	60,0	61,0	62,0

DISCOUNTS

DISCOUNTS

Qty	1+	2+	4+
Disc	List	-5%	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m^2)	Self-locking output	Stock*	Price each
E60-1	1:1	Helical	B	94%	3000	$1,319 \times 10^{-3}$	NO	✓	919,01 €
E60-2	2:1	Helical	A	92%	3000	$6,507 \times 10^{-4}$	NO	✓	919,01 €
E60-3	3:1	Helical	A	91%	3000	$5,111 \times 10^{-4}$	NO	✓	919,01 €
E60-4	4:1	Helical	A	90%	3000	$5,543 \times 10^{-4}$	NO	✓	919,01 €
E60-5	5:1	Helical	A	80%	3000	$5,489 \times 10^{-4}$	NO	-	919,01 €
E60-8	8:1	Worm+wheel	A	80%	1000	$4,951 \times 10^{-4}$	NO	✓	919,01 €
E60-10	10:1	Worm+wheel	A	73%	1000	$4,911 \times 10^{-4}$	NO	✓	919,01 €
E60-20	20:1	Worm+wheel	A	67%	1000	$4,859 \times 10^{-4}$	YES	✓	919,01 €
E60-40	40:1	Worm+wheel	A	60%	1000	$4,846 \times 10^{-4}$	YES	✓	919,01 €
E60-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						On request	
E60-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						On request	
E60-SPLH	1:1 - 40:1	Left handed						On request	

**Depending on availability - Dimensions in mm*

Right angle helical gearbox

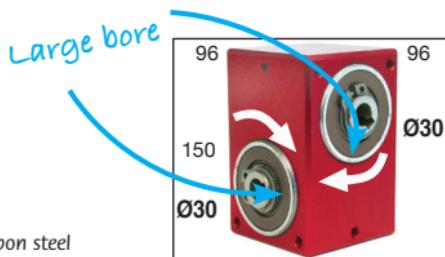
Stock
1 2 3



E60B

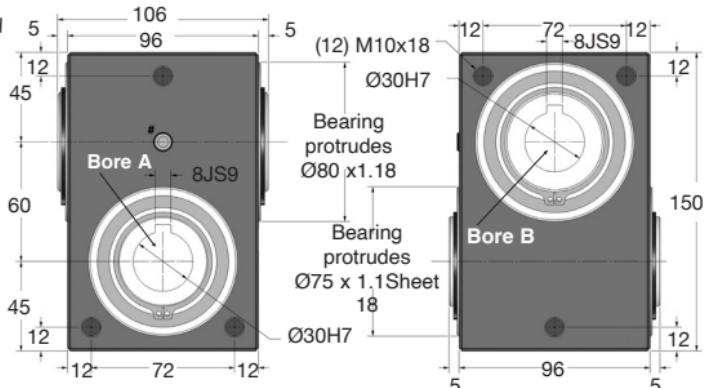
Torque up to 24Nm

- Ratios from 1 :1 to 4:1
- Large bore
- Single block construction
- Output backlash : $\leq 45'$ ($0,75^\circ$)
- Max input speed : up to 3000rpm
- Materials :
 - Casing: anodised aluminium
 - Gears: high carbon steel
 - Ratios 1: to 4:1, Input and output: high carbon steel
- Weight: 5.5 kg



Option

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1
3000	4,5	4,5	4,5
2000	5,5	5,5	5,5
1000	8,0	8,0	8,0
INPUT	10,0	10,0	10,0
SPEED (RPM)	200	16,0	16,0
100	20,0	20,0	20,0
50	24,0	24,0	24,0

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%	On request	

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m ²)	Self-locking output	Stock*	Price each
E60B-1	1:1	Helical	B	94%	3000	$1,237 \times 10^{-3}$	NO	-	698,58 €
E60B-2	2:1	Helical	A	92%	3000	$6,023 \times 10^{-4}$	NO	-	698,58 €
E60B-3	3:1	Helical	A	91%	3000	$4,651 \times 10^{-4}$	NO	-	698,58 €
E60B-4	4:1	Helical	A	90%	3000	$5,026 \times 10^{-4}$	NO	-	698,58 €
E60B-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						-	On request
E60B-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						-	On request
E60B-SPLH	1:1 - 40:1	Left handed						-	On request

*Depending on availability - Dimensions in mm

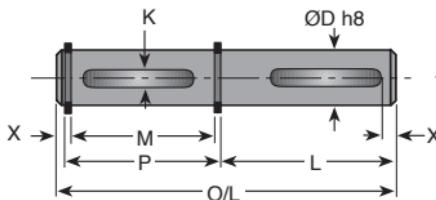
For E gearboxes

Ex
EDX

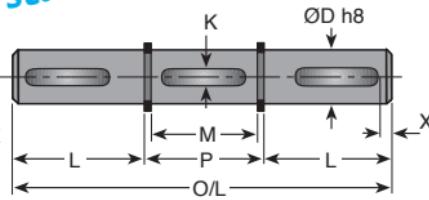
- Optional accessory for adding outputs shafts to E series gearboxes

Composition

- Single sided shaft kit E-X: shaft in stainless steel 303, 2 steel keys and 2 steel circlips
- Double shaft kit E-DX: stainless steel 303 shaft, 3 steel keys and 2 steel circlips



Single sided shaft E-X



Double sided shaft E-DX



Single sided



Double sided

Assembly examples

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	For gearbox	ØD	O/L	M	P	X	L	K	Price each 1 to 5
-------------	-------------	----	-----	---	---	---	---	---	-------------------

Single sided

E20-X	E20	6	68,80	40	41,60	3,00	25	K2 x 22	34,21 €
E30-X	E30	10	98,60	54	56,20	3,50	40	K3 x 20	40,48 €
E40-X	E40	15	127,10	72	74,20	4,00	50	K5 x 30	49,24 €
E50-X	E50	20	153,80	88	90,60	4,50	60	K6 x 32	57,24 €
E60-X	E60	25	182,30	106	108,60	5,00	70	K8 x 40	59,29 €

Double sided

E20-DX	E20	6	91,60	40	41,60	3,00	25	K2 x 22	44,14 €
E30-DX	E30	10	136,20	54	56,20	3,50	40	K3 x 20	50,81 €
E40-DX	E40	15	174,20	72	74,20	4,00	50	K5 x 30	59,11 €
E50-DX	E50	20	210,60	88	90,60	4,50	60	K6 x 32	68,69 €
E60-DX	E60	25	248,60	106	108,60	5,00	70	K8 x 40	80,09 €

Dimensions in mm

Find our full range of SYNCHRONOUS PULLEYS

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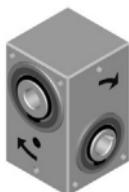
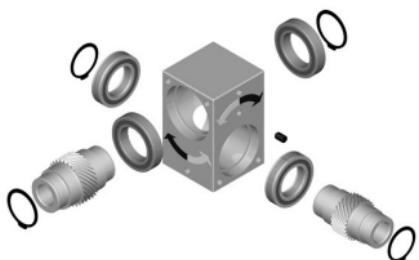
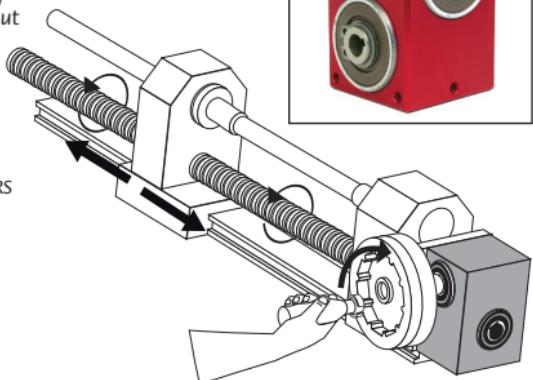
Economy range

- Alternative belt widths
- T and AT pitches
- Sold pre-bored



- Speed ratio: from 1:1 to 40:1

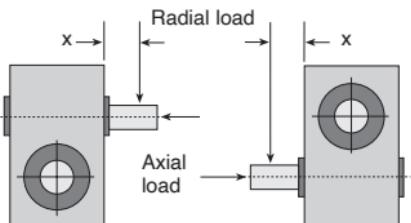
- Materials :
casing anodised aluminium
gears in case hardened
(ratio >8 : output aluminium bronze)
- Max. speed: 3000 to 4000 rpm at input
depending on model
- Backlash(output): $\leq 45'$ ($0,75^\circ$)
 $(\leq 0^\circ 30' \text{ optional})$
- Lubrication: greased for life
(Shell Gadus S2 V220AD 2)
- Guarantee: 13 months
- Steel bearing with single ball race 2RS



ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Radial load (N)	Axial load (N)
E15	6	150	100
E20	6	150	100
E30	10	200	150
E40	12	400	300
E50	20	600	400
E60	25	800	500
E60B	25	800	500

Data given based on input speed of 1,000 rpm.
Values given as an indication only.



Right angled gearbox, dual output shafts



BL8

Torque up to 2Nm

- Ratios from 1:1 to 4:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. input speed: 2,000 rpm

- Materials:

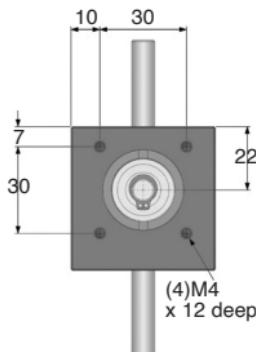
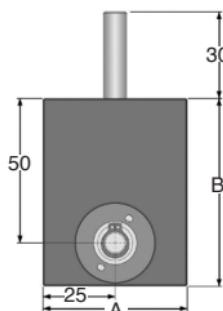
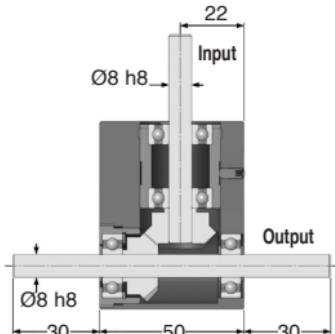
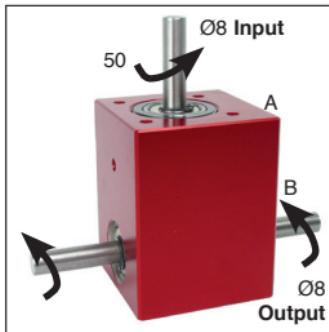
Casing: anodised aluminium

input and output: non-hardened steel

- Weight: 0.56 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1	4:1
INPUT	2000	0,40	0,20	0,50
SPEED (rpm)	1000	0,50	0,30	0,50
	500	0,50	0,30	0,60
	200	0,60	0,40	0,70
	100	0,70	0,40	0,80
	50	0,80	0,40	0,90
	10	1,00	0,60	1,20

DISCOUNTS

Qty	1+	3+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	A	B	Module	Stock*	Price each
BL8-1	1:1	88%	2000	2000	50	65	0,8	-	267,98 €
BL8-2	2:1	88%	2000	1000	50	65	0,8	-	267,98 €
BL8-3	3:1	88%	2000	666	50	75	0,8	✓	267,98 €
BL8-4	4:1	88%	2000	500	60	80	0,8	-	267,98 €
BL8-XH	1:1 - 4:1	With hardened gears = output torque x 2						-	On request

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

Torque up to 6Nm

BL15

- Ratios from 1:1 to 4:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. input speed: 2,000 rpm

- Materials:

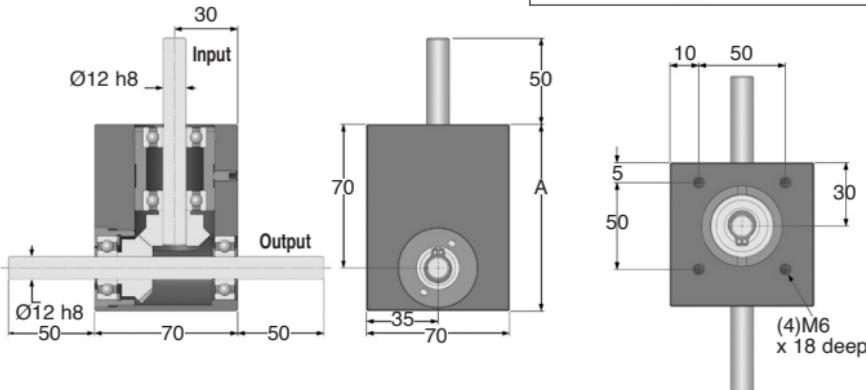
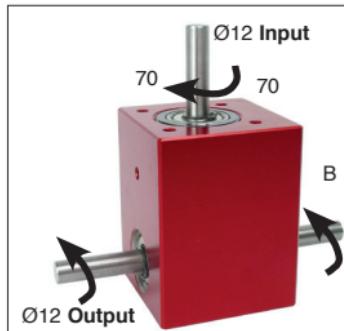
Casing: anodised aluminium

input and output : non-hardened steel

- Weight: 1.70 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1	4:1
INPUT SPEED (rpm)	2000	2,00 1,10	2,30	2,20
1000	2,30	1,20	2,60	2,50
500	2,70	1,40	3,00	2,80
200	3,20	1,70	3,60	3,40
100	3,50	2,00	4,00	3,70
50	3,90	2,20	4,50	4,20
10	5,00	2,90	6,00	5,50

DISCOUNTS

Qty	1+	3+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	B	Module	Price each
BL15-1	1:1	88%	2000	2000	90	1,5	369,96 €
BL15-2	2:1	88%	2000	1000	105	1,5	369,96 €
BL15-3	3:1	88%	2000	666	110	1,5	369,96 €
BL15-4	4:1	88%	2000	500	120	1,0	446,32 €
BL15-XH	1:1 - 4:1	With hardened gears = output torque x 2					on request

Dimensions in mm

Right angled gearbox

Stock Size **XS**
1 2 3
★★★

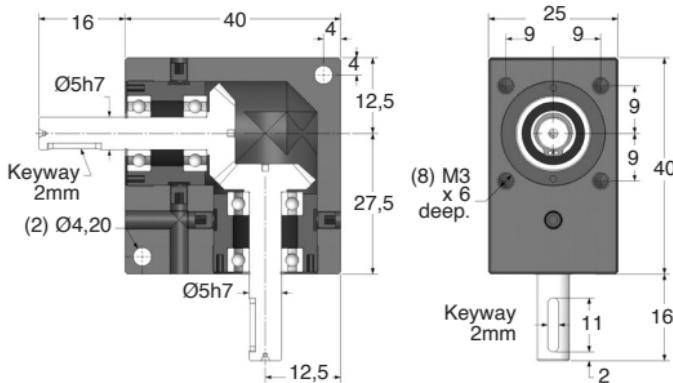
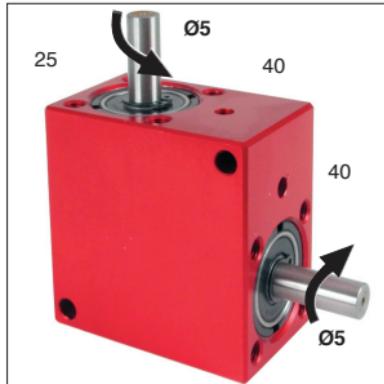
BLH20**Torque up to 1.77Nm**

- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input and output: hardened stainless steel
- Keyway conforms to DIN 6885
- Greased for life: Shell Gadus S2 V220AD 2
- Weight: 0.11 kg

Options

- Can be modified to your specifications

**OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000	0,66
	2000	0,72
	1000	0,88
	500	1,00
	100	1,35
	50	1,48
	10	1,77

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLH20-1	1:1	88%	3000	3000	$4,34 \times 10^{-7}$	✓	332,96 €
BLH20-2	2:1	88%	3000	1500	$8,41 \times 10^{-8}$	✓	332,96 €

*Depending on availability - Dimensions in mm

Size
XS

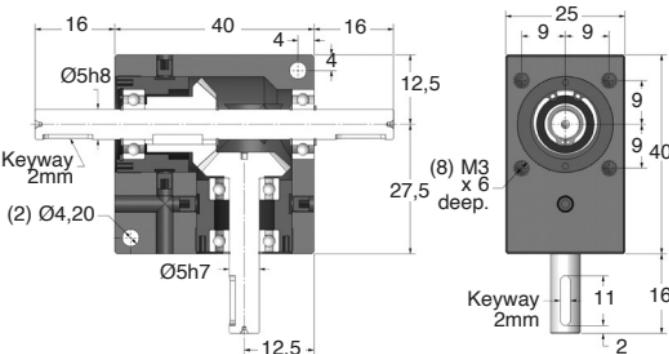
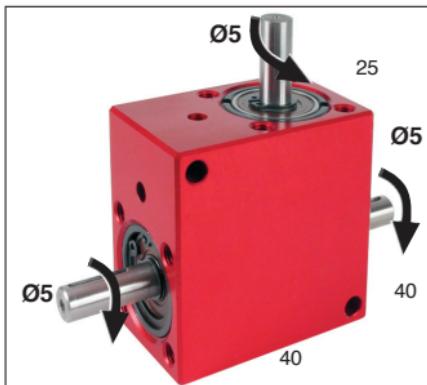
Right angled gearbox, dual output shafts

Torque up to 1.77Nm**BLHT20**

- Through-shaft offers both output directions
- Ratios from 1:1 to 2:1
- Output backlash $\leq 45'$ (0.75°)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input: hardened stainless steel
 - output: unhardened stainless steel
- Keyway conforms to DIN 6885
- Greased for life: Shell Gadus S2 V220AD 2
- Weight: 0.12 kg

Options

- Can be modified to your specifications

**OUTPUT TORQUE (Nm values given as a guide only)**

Ratios	1:1	2:1
INPUT	3000	0,66
SPEED (rpm)	2000	0,72
	1000	0,88
	500	1,00
	100	1,35
	50	1,48
	10	1,77
		0,53
		0,58
		0,70
		0,80
		1,08
		1,18
		1,41

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHT20-1	1:1	88%	3000	3000	$4,34 \times 10^{-7}$	✓	366,28 €
BLHT20-2	2:1	88%	3000	1500	$8,41 \times 10^{-8}$	-	366,28 €

*Depending on availability - Dimensions in mm

Right angled gearbox, bored shafts

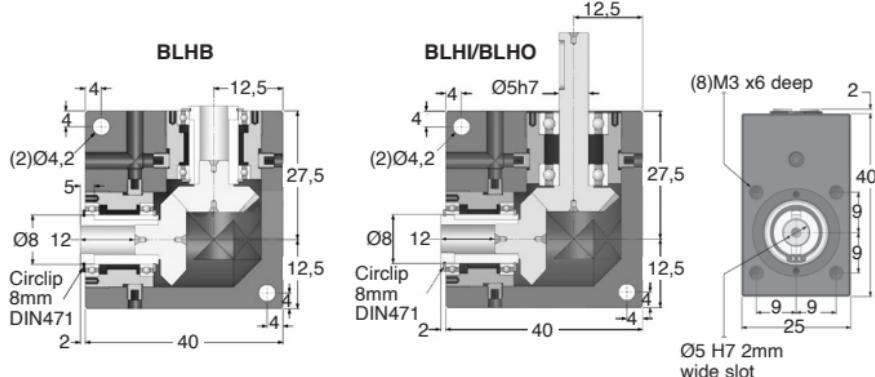
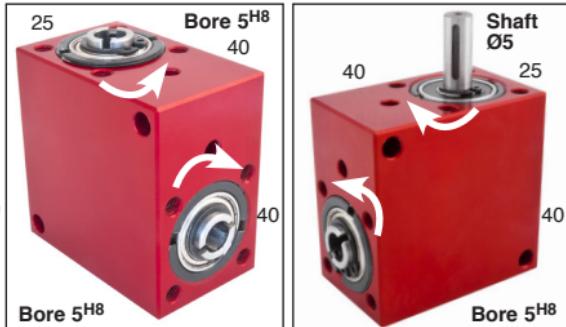
Size
XS



**BLHB20
BLHI20
BLHO20**

Torque up to 1.77Nm

- **Input and output rotate in opposite directions**
 - Ratio from 1:1 to 2:1
 - Output backlash $\leq 45'$ ($0,75^\circ$)
 - Max. speed: 3,000 rpm
 - Greased for life
 - Materials:
 - casing: anodised aluminium
 - gears: hardened stainless steel
 - Allowable loads, please refer to the technical pages



OUTPUT TORQUE (Nm VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
3000	0,66	0,53
2000	0,72	0,58
INPUT	1000	0,88
SPEED (rpm)	500	1,00
100	1,35	1,08
50	1,48	1,18
10	1,77	1,41

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratios			Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Stock*	Price each
		Input shaft	Output shaft					
BLHB20-1	1:1	Bore	Bore	88%	3000	3000	✓	407,59 €
BLHB20-2	2:1	Bore	Bore	88%	3000	1500	✓	407,59 €
BLHI20-1	1:1	Bore	Shaft	88%	3000	3000	✓	372,28 €
BLHI20-2	2:1	Bore	Shaft	88%	3000	1500	✓	372,28 €
BLHO20-2	2:1	Shaft	Bore	88%	3000	1500	✓	372,28 €

**Depending on availability - Dimensions in mm*

Right angled gearbox, dual output shafts

**Size
XS**



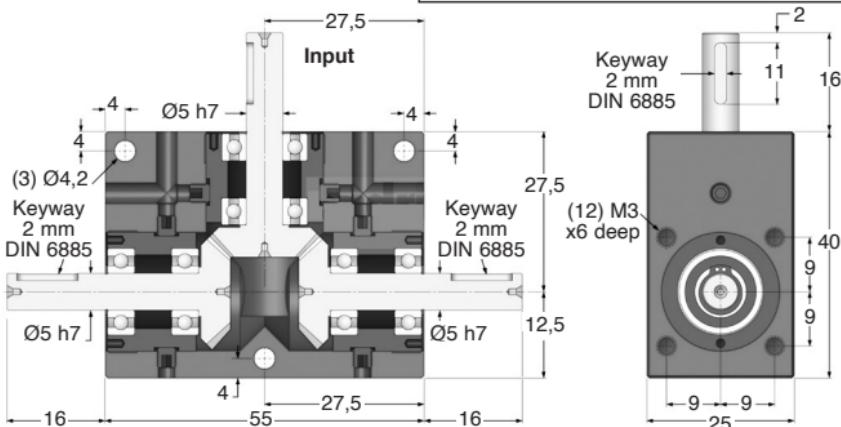
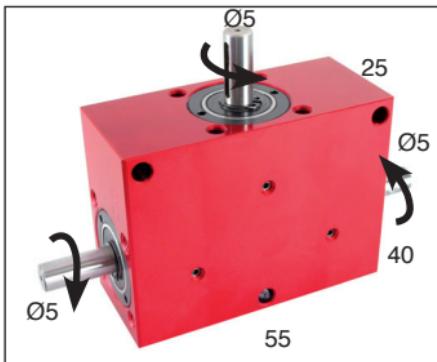
Torque up to 1.77Nm

BLHM20

- Input and two outputs have a reversed direction of rotation
 - Ratios of 1:1 to 2:1
 - Output backlash $\leq 45'$ ($0,75^\circ$)
 - Max. speed: 3,000 rpm
 - Materials: casing: anodised aluminium
input and output: hardened stainless steel
 - Weight: 0.16 kg

Options

- Can be modified to your specifications



Output torque Nm (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	0,66
	2000	0,72
SPEED (rpm)	1000	0,88
	500	1,00
	100	1,35
	50	1,48
	10	1,77
		1,41

Innovative!
Outputs rotate in
opposite directions

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency	Max. input	Max. output	Reflected	Stock*	Price each
		at 1000 rpm	speed (rpm)	speed (rpm)	inertia at input (kg.m ²)		
BLHM20-1	1:1	88%	3000	3000	$4,34 \times 10^{-7}$	✓	499,52 €
BLHM20-2	2:1	88%	3000	1500	$8,41 \times 10^{-8}$	✓	499,52 €

**Depending on availability - Dimensions in mm*

Right angled gearbox

BLH30

Stock
1 2 3



Torque up to 4.4Nm

- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ (0,75°)

- Max. speed: 3,000 rpm

- Materials:

casing: anodised aluminium

input and output: hardened stainless steel

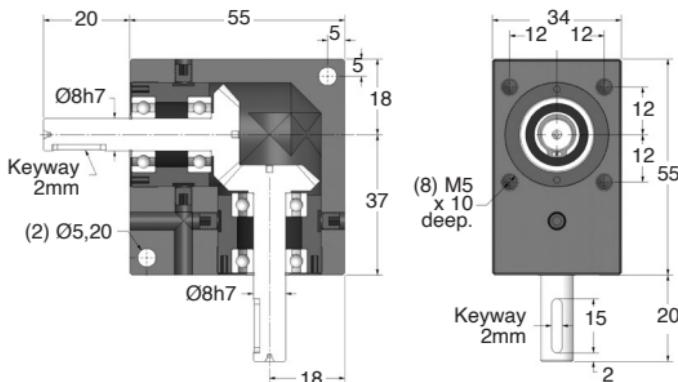
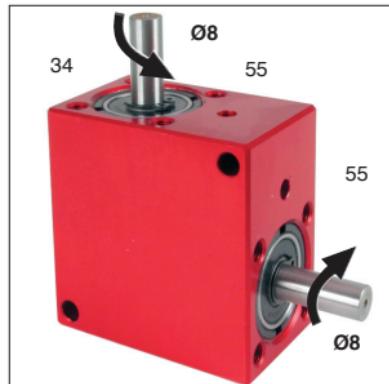
- Keyway conforms to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 0.28 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
3000	1,65	1,32
2000	1,81	1,45
1000	2,20	1,76
500	2,51	2,00
100	3,38	2,70
50	3,70	3,00
10	4,40	3,54

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLH30-1	1:1	88%	3000	3000	$2,19 \times 10^{-6}$	✓	430,51 €
BLH30-2	2:1	88%	3000	1500	$5,00 \times 10^{-7}$	✓	430,51 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

Torque up to 4.4Nm

BLHT30

- Through shaft offers both output directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ (0.75°)

- Max. speed: 3,000 rpm

- Materials:

 - casing: anodised aluminium

 - input: hardened stainless steel

 - output: non-hardened stainless steel

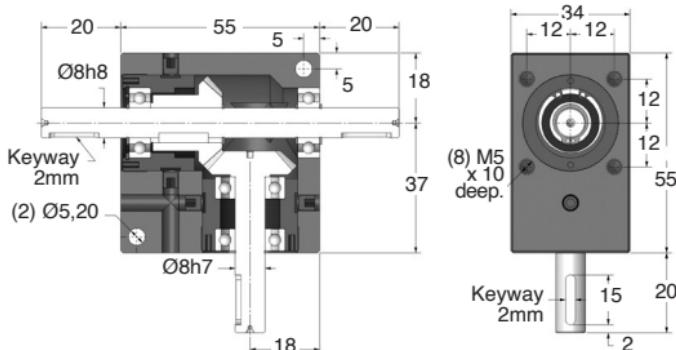
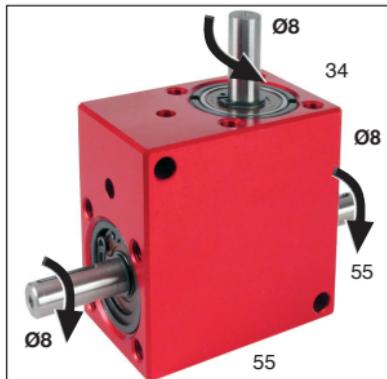
- Keyway conforms to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 0.3 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT SPEED (rpm)		
3000	1,65	1,32
2000	1,81	1,45
1000	2,20	1,76
500	2,51	2,00
100	3,38	2,70
50	3,70	3,00
10	4,40	3,54

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHT30-1	1:1	88%	3000	3000	$2,19 \times 10^{-6}$	✓	473,56 €
BLHT30-2	2:1	88%	3000	1500	$5,00 \times 10^{-7}$	✓	473,56 €

*Depending on availability - Dimensions in mm

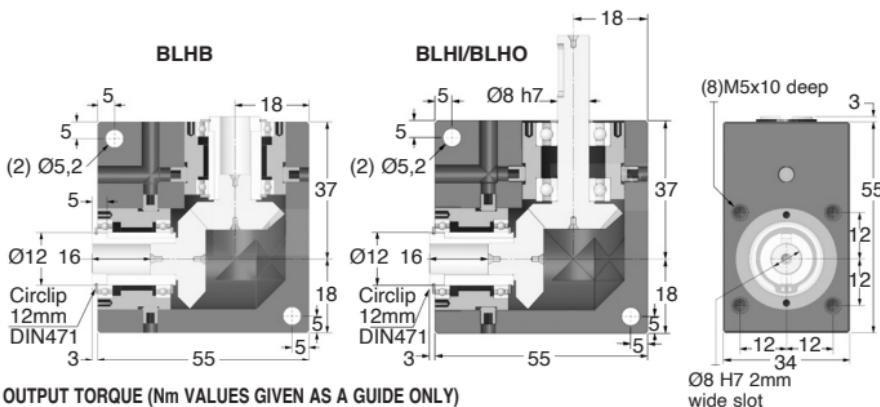
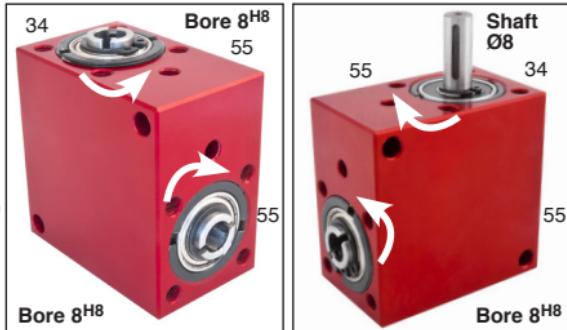
Right angled gearbox, bored shafts



**BLHB30
BLHI30
BLHO30**

Torque up to 4.4Nm

- Input and output rotate in opposite directions
- Ratio from 1:1 to 2:1
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Greased for life
- Materials:
 - casing: anodised aluminium
 - gears: hardened stainless steel
- Allowable loads, please refer to the technical pages



OUTPUT TORQUE (Nm VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
3000	1,65	1,32
2000	1,81	1,45
INPUT SPEED (rpm)	1000	2,20
500	2,51	2,00
100	3,38	2,70
50	3,70	3,00
10	4,40	3,54

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratios	Input shaft	Output shaft	Efficiency at 1000 (rpm)	Max. input speed (rpm)	input speed (rpm)	Stock*	Price each
BLHB30-1	1:1	Bore	Bore	88%	3000	3000	✓	527,09 €
BLHB30-2	2:1	Bore	Bore	88%	3000	1500	✓	527,09 €
BLHI30-1	1:1	Bore	Shaft	88%	3000	3000	✓	481,44 €
BLHI30-2	2:1	Bore	Shaft	88%	3000	1500	✓	481,44 €
BLHO30-2	2:1	Shaft	Bore	88%	3000	1500	✓	481,44 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

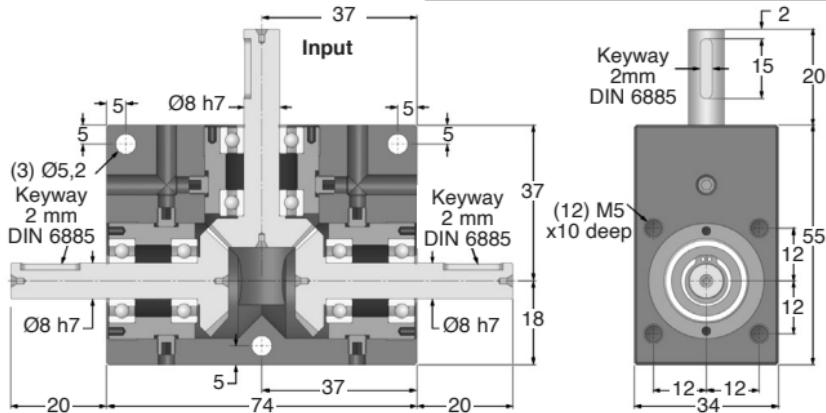
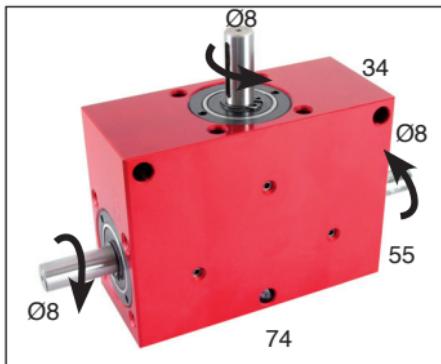
Torque up to 4.4Nm

BLHM30

- Input and two outputs have a reversed direction of rotation
- Ratios of 1:1 to 2:1
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Materials: casing: anodised aluminium
input and output: hardened stainless steel
- Weight: 0.35 kg

Options

- Can be modified to your specifications



Output torque Nm (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	1,65
	2000	1,81
SPEED	1000	2,20
(rpm)	500	2,51
	100	3,38
	50	3,70
	10	4,40
		3,54

Innovative!
Outputs rotate in
opposite directions

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHM30-1	1:1	88%	3000	3000	$2,19 \times 10^{-6}$	✓	645,82 €
BLHM30-2	2:1	88%	3000	1500	$5,00 \times 10^{-7}$	✓	645,82 €

*Depending on availability - Dimensions in mm

Right angled gearbox

BLH40

Stock
1 2 3



Torque up to 10.3Nm

- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. speed: 3,000 rpm

- Materials:

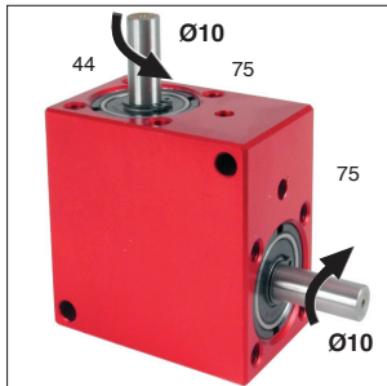
casing: anodised aluminium

input and output: hardened stainless steel

- Keyway conforms to DIN 6885

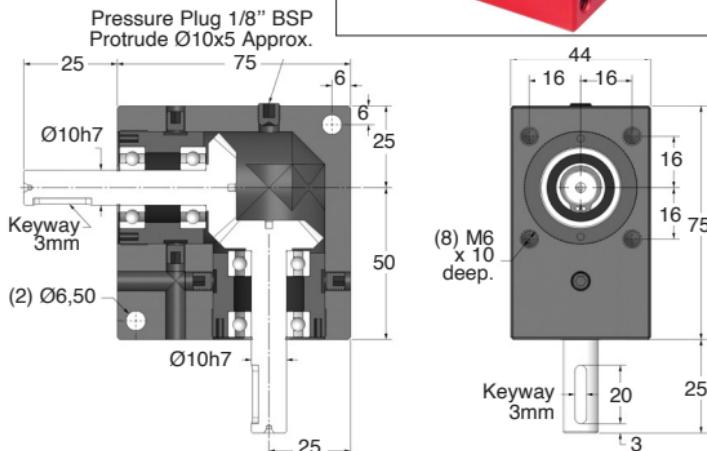
- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 0.90 kg



Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT SPEED (rpm)		
3000	4,00	3,00
2000	4,40	3,40
1000	5,10	4,00
500	5,80	4,60
100	7,60	6,00
50	8,50	6,30
10	10,30	8,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLH40-1	1:1	88%	3000	3000	$6,42 \times 10^{-6}$	✓	549,26 €
BLH40-2	2:1	88%	3000	1500	$1,40 \times 10^{-6}$	✓	549,26 €

*Depending on availability - Dimensions in mm

Torque up to 10.3Nm

BLHT40

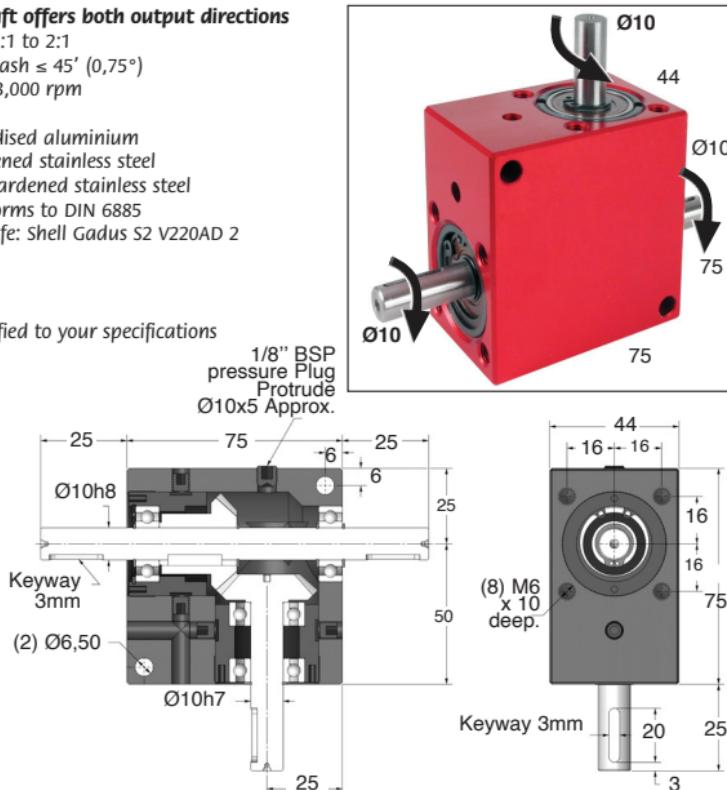
- Through shaft offers both output directions

- Ratios from 1:1 to 2:1
- Output backlash $\leq 45'$ (0.75°)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input: hardened stainless steel
 - output: unhardened stainless steel
- Keyway conforms to DIN 6885
- Greased for life: Shell Gadus S2 V220AD 2
- Weight: 1 kg

Options

- Can be modified to your specifications

1/8" BSP
pressure Plug
Protrude
 $\varnothing 10 \times 5$ Approx.



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT SPEED (rpm)		
3000	4,00	3,00
2000	4,40	3,40
1000	5,10	4,00
500	5,80	4,60
100	7,60	6,00
50	8,50	6,30
10	10,30	8,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHT40-1	1:1	88%	3000	3000	$6,42 \times 10^{-6}$	✓	604,21 €
BLHT40-2	2:1	88%	3000	1500	$1,40 \times 10^{-6}$	✓	604,21 €

*Depending on availability - Dimensions in mm

Right angled gearbox, bored shafts



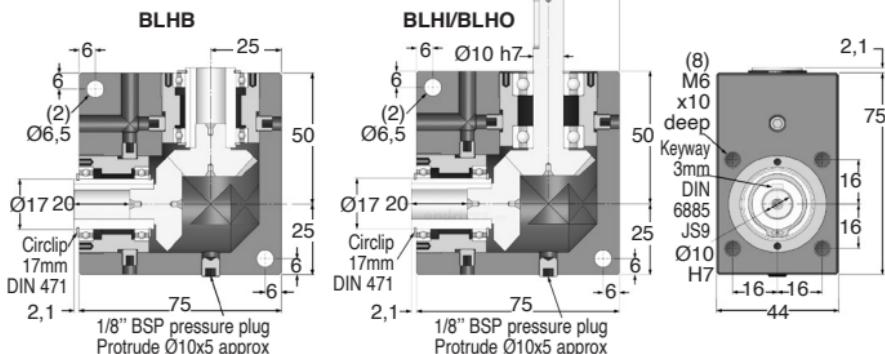
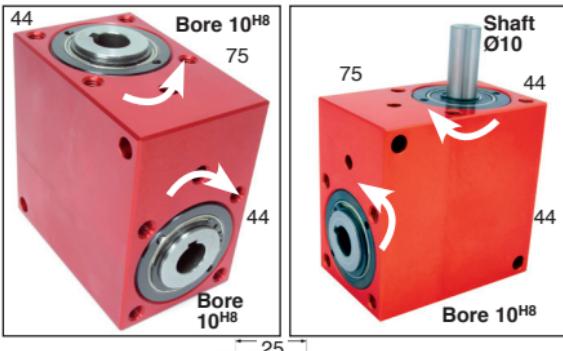
**BLHB40
BLHI40
BLHO40**

- Input and output rotate in opposite directions
- Ratio from 1:1 to 2:1
- Right angled gearbox with bored shafts
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Greased for life
- Materials:
 - casing: anodised aluminium
 - gears: hardened stainless steel

Info.

- Pressure plug 1/8" BSP
- For allowable loads, please refer to the technical pages

Torque up to 10.3Nm



OUTPUT TORQUE (Nm VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000	4,00
1000	2,00	3,40
500	1,00	4,00
100	0,50	4,60
50	0,25	6,30
10	0,13	8,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratios	Input shaft	Output shaft	Efficiency at 1000 (rpm)	Max. input speed (rpm)	input speed (rpm)	Stock*	Price each
BLHB40-1	1:1	Bore	Bore	88%	3000	3000	✓	709,07 €
BLHB40-2	2:1	Bore	Bore	88%	3000	1500	✓	709,07 €
BLHI40-1	1:1	Bore	Shaft	88%	3000	3000	✓	647,62 €
BLHI40-2	2:1	Bore	Shaft	88%	3000	1500	✓	647,62 €
BLHO40-2	2:1	Shaft	Bore	88%	3000	1500	✓	647,62 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

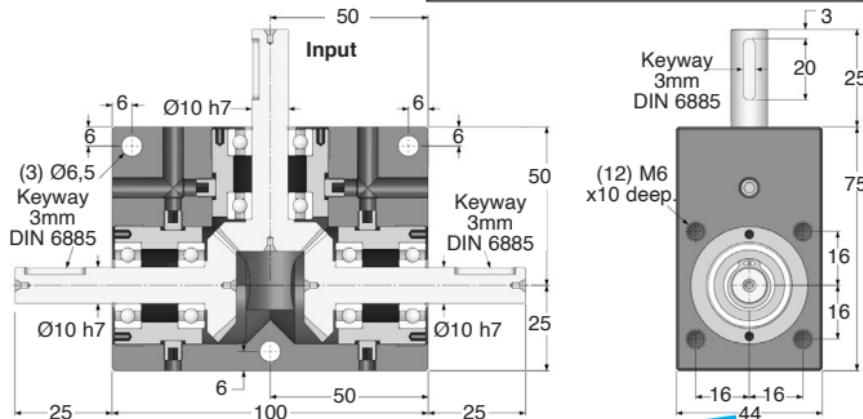
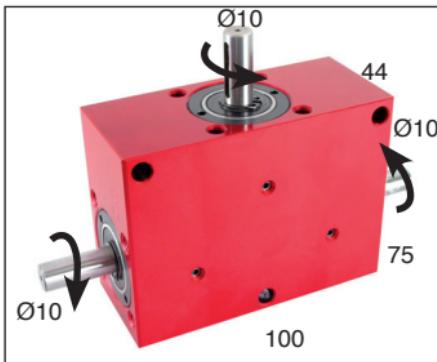
Torque up to 10.3Nm

BLHM40

- Input and two outputs have a reversed sense of rotation
- Ratios of 1:1 to 2:1
- Output backlash $\leq 45'$ (0.75°)
- Max. speed: 3,000 rpm
- Materials: casing: anodised aluminium input and output: hardened stainless steel
- Weight: 1.1 kg

Options

- Can be modified to your specifications



Output torque Nm (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	4,00
	2000	4,40
SPEED (rpm)	1000	5,10
	500	5,80
	100	7,60
	50	8,50
	10	10,30
		8,00

Innovative!
Outputs rotate in different directions

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHM40-1	1:1	88%	3000	3000	$6,43 \times 10^{-6}$	✓	823,98 €
BLHM40-2	2:1	88%	3000	1500	$1,40 \times 10^{-6}$	✓	823,98 €

*Depending on availability - Dimensions in mm

Right angled gearbox

BLH50

Torque up to 30Nm

Stock
1 2 3



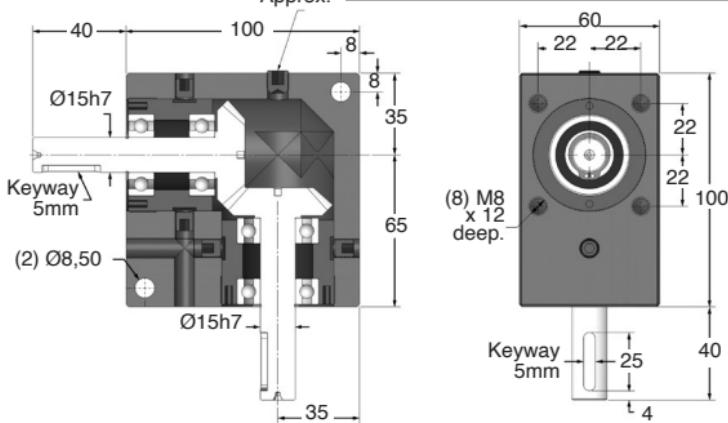
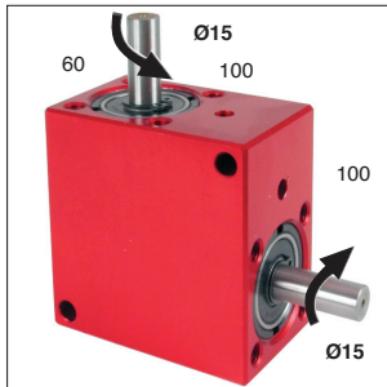
- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input and output: hardened steel
- Keyway conforms to DIN 6885
- Greased for life: Shell Gadus S2 V220AD 2
- Weight: 2.20 kg

Options

- Can be modified to your specifications

Pressure Plug
1/8" BSP
Protrude Ø10x5
Approx.



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	
INPUT SPEED (rpm)	3000 2000 1000 500 100 50 10	11,50 13,20 15,90 17,50 23,00 25,00 30,00	7,70 8,70 10,20 11,60 15,00 17,00 20,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLH50-1	1:1	88%	3000	3000	$4,76 \times 10^{-5}$	✓	826,37 €
BLH50-2	2:1	88%	3000	1500	$1,25 \times 10^{-5}$	✓	826,37 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

Torque up to 30Nm

BLHT50

- Trough-shaft offer both output directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. speed: 3,000 rpm

- Materials:

casing: anodised aluminium

input: hardened steel

output: unhardened steel

- Keyway conforms to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 2.31 kg

Options

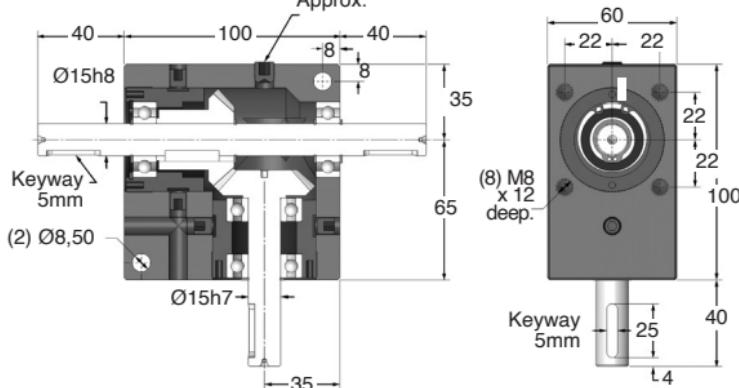
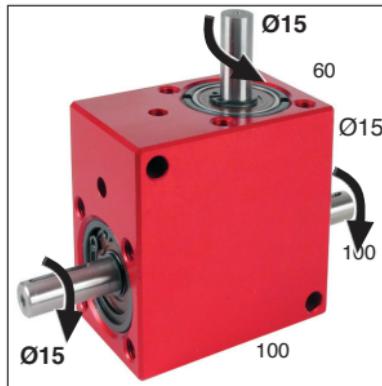
- Can be modified to your specifications

Pressure Plug

1/8" BSP

Protrude Ø10x5

Approx.



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT SPEED (rpm)		
3000	11,50	7,70
2000	13,20	8,70
1000	15,90	10,20
500	17,50	11,60
100	23,00	15,00
50	25,00	17,00
10	30,00	20,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHT50-1	1:1	88%	3000	3000	$4,76 \times 10^{-5}$	✓	907,23 €
BLHT50-2	2:1	88%	3000	1500	$1,25 \times 10^{-5}$	✓	907,23 €

*Depending on availability - Dimensions in mm

Right angled gearbox, bored shafts



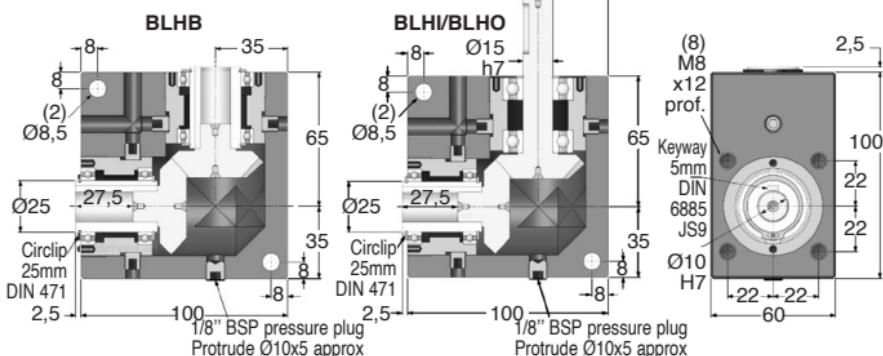
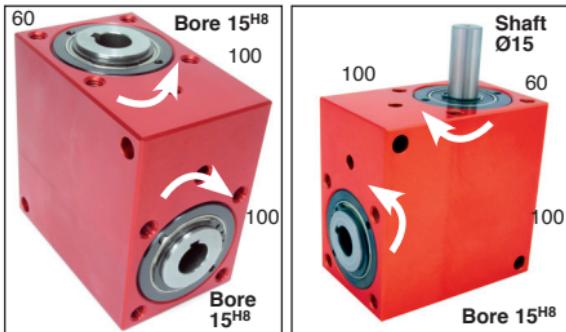
**BLHB50
BLHI50
BLHO50**

Torque up to 30Nm

- Input and output rotate in opposite directions
- Ratio from 1:1 to 2:1
- Right angled gearbox with bored shafts
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Greased for life
- Materials:
 - casing: anodised aluminium
 - gears: case hardened steel

Info.

- Pressure plug 1/8" BSP
- For allowable loads, please refer to the technical pages



OUTPUT TORQUE (Nm) VALUES GIVEN AS A GUIDE ONLY

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000	11,50
2000	13,20	8,70
1000	15,90	10,20
500	17,50	11,60
100	23,00	15,00
50	25,00	17,00
10	30,00	20,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Ratios	Input shaft	Output shaft	Efficiency at 1000 (rpm)	Max. input speed (rpm)	Max. input speed (rpm)	Stock*	Price each
BLHB50-1	1:1	Bore	Bore	88%	3000	3000	✓	1 066,84 €
BLHB50-2	2:1	Bore	Bore	88%	3000	1500	✓	1 066,84 €
BLHI50-1	1:1	Bore	Shaft	88%	3000	3000	✓	974,45 €
BLHI50-2	2:1	Bore	Shaft	88%	3000	1500	✓	974,45 €
BLHO50-2	2:1	Shaft	Bore	88%	3000	1500	✓	974,45 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

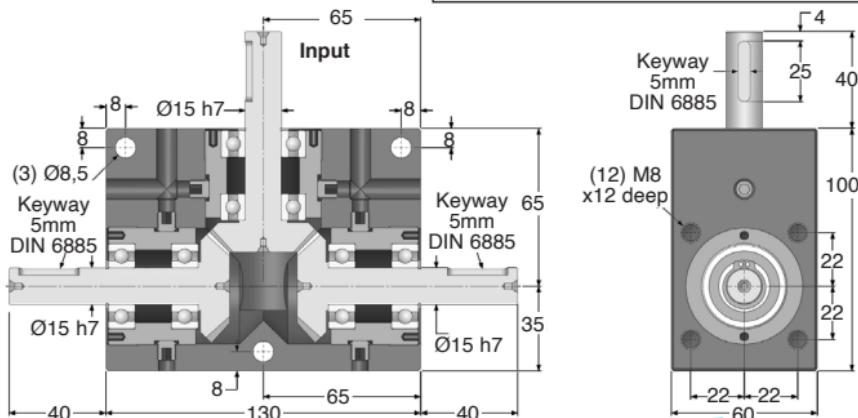
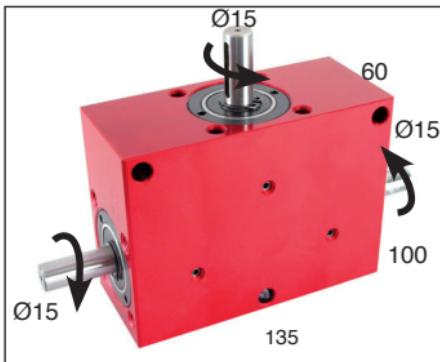
Torque up to 30Nm

BLHM50

- Through-shaft offers both output directions
- Ratios of 1:1 to 2:1
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Materials: casing: anodised aluminium
input: hardened steel,
output: hardened steel
- Weight: 2.3 kg

Options

- Can be modified to your specifications



Output torque Nm (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	11,50
	2000	13,20
SPEED (rpm)	1000	15,90
	500	17,50
	100	23,00
	50	25,00
	10	30,00

Innovative!
Outputs rotate in
different directions

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHM50-1	1:1	88%	3000	3000	$4,76 \times 10^{-5}$	✓	1 239,69 €
BLHM50-2	2:1	88%	3000	1500	$1,25 \times 10^{-5}$	✓	1 239,69 €

*Depending on availability - Dimensions in mm

Right angled gearbox

BLH60

Torque up to 70Nm



- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. speed: 3,000 rpm

- Materials:

casing: anodised aluminium
input and output: hardened steel

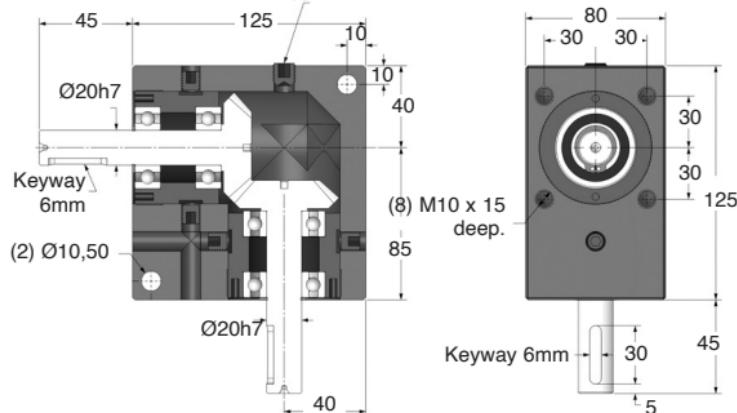
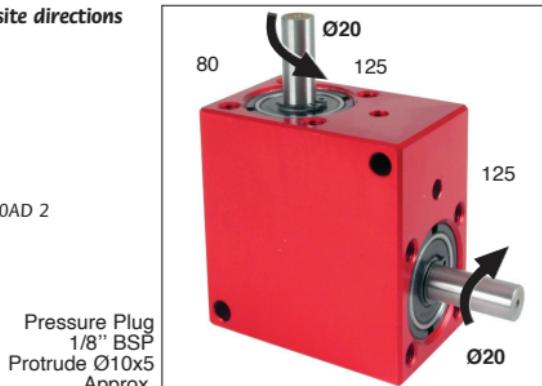
- Keyway conforming to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 4.5 kg

Options

- Can be modified
to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000	26,00
	2000	30,00
	1000	35,00
	500	35,00
	100	53,00
	50	57,00
	10	70,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Price each
BLH60-1	1:1	88%	3000	3000	$1,99 \times 10^{-4}$	940,72 €
BLH60-2	2:1	88%	3000	1500	$3,87 \times 10^{-5}$	940,72 €

Dimensions in mm



Right angled gearbox, dual output shafts

Torque up to 70Nm

BLHT60

- Through shaft offers both output directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ (0.75°)

- Max. speed: 3,000 rpm

- Materials:

 - casing: anodised aluminium

 - input: hardened steel

 - output: unhardened steel

- Keyway conforms to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

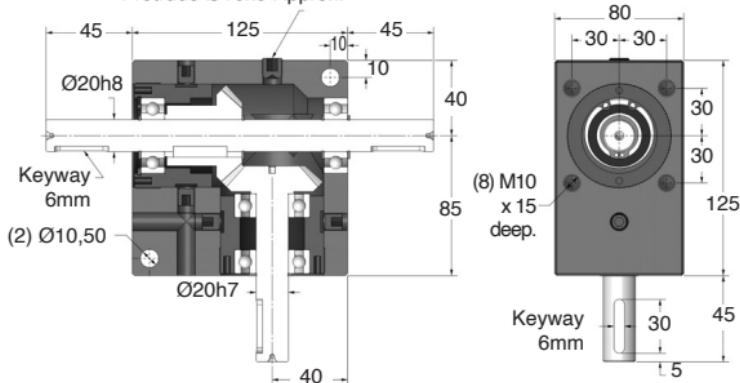
- Weight: 4.75 kg

Options

- Can be modified to your specifications

Pressure Plug
1/8" BSP

Protrude Ø10x5 Approx.



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	26,00
SPEED	2000	30,00
(rpm)	1000	35,00
	500	35,00
	100	53,00
	50	57,00
	10	70,00
		19,00
		22,00
		25,00
		38,00
		43,00
		52,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Price each
BLHT60-1	1:1	88%	3000	3000	1.99×10^{-4}	1 034,78 €
BLHT60-2	2:1	88%	3000	1500	3.87×10^{-5}	1 034,78 €

Dimensions in mm

Right angled gearbox, bored shafts



**BLHB60
BLHI60
BLHO60**

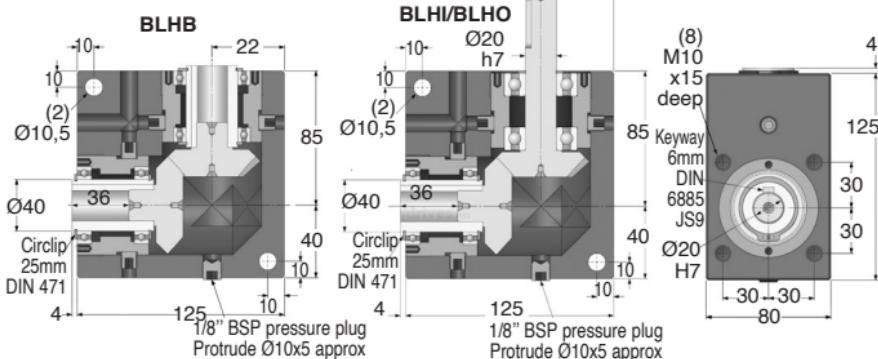
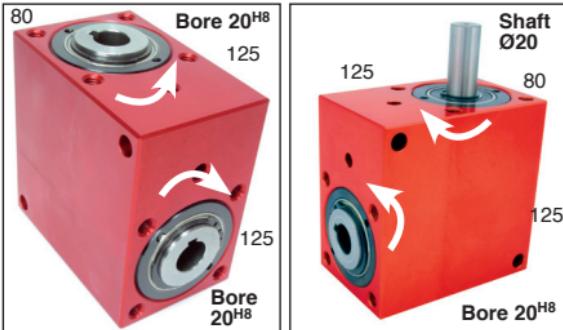
Torque up to 70Nm

- Input and output rotate in opposite directions

- Ratio from 1:1 to 2:1
- Right angled gearbox with bored shafts
- Output backlash $\leq 45'$ ($0,75^\circ$)
- Max. speed: 3,000 rpm
- Greased for life
- Materials:
 - casing: anodised aluminium
 - gears: case hardened steel

Info.

- Pressure plug 1/8" BSP
- For allowable loads, please refer to the technical pages



OUTPUT TORQUE (Nm) VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	
INPUT SPEED (rpm)	3000 2000 1000 500 100 50 10	26,00 30,00 35,00 40,00 53,00 57,00 70,00	19,00 22,00 25,00 29,00 38,00 43,00 52,00

Part number	Ratios	Input shaft	Output shaft	Efficiency at 1000 (rpm)	Max. input speed (rpm)	input speed (rpm)	Stock*	Price each
BLHB60-1	1:1	Bore	Bore	88%	3000	3000	✓	1 214,36 €
BLHB60-2	2:1	Bore	Bore	88%	3000	1500	✓	1 214,36 €
BLHI60-1	1:1	Bore	Shaft	88%	3000	3000	✓	1 109,24 €
BLHI60-2	2:1	Bore	Shaft	88%	3000	1500	✓	1 109,24 €
BLHO60-2	2:1	Shaft	Bore	88%	3000	1500	✓	1 109,24 €

*Depending on availability - Dimensions in mm



Right angled gearbox, dual output shafts

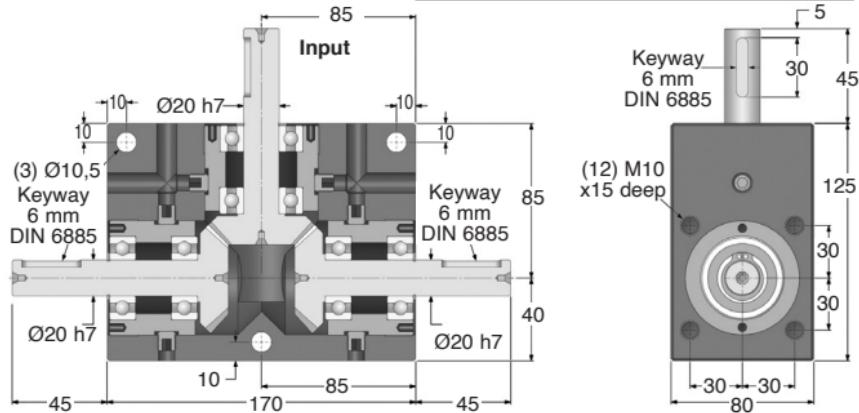
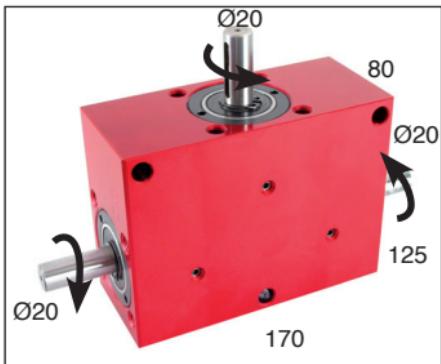
Torque up to 70Nm

BLHM60

- Input and two outputs have a reversed sense of direction
- Ratios of 1:1 to 2:1
- Output backlash $\leq 45'$ (0.75°)
- Max. speed: 4,000 rpm
- Materials: casing: anodised aluminium
input: hardened steel,
output: hardened steel
- Weight: 5.20 kg

Options

- Can be modified to your specifications



Output torque Nm (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	26,00
	2000	30,00
SPEED (rpm)	1000	35,00
	500	40,00
	100	53,00
	50	57,00
	10	70,00

Innovative!
Outputs rotate in different directions

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Stock*	Price each
BLHM60-1	1:1	88%	3000	3000	$1,99 \times 10^{-4}$	-	1 411,21 €
BLHM60-2	2:1	88%	3000	1500	$3,87 \times 10^{-5}$	-	1 411,21 €

Dimensions in mm

Right angled gearbox

**BLH70**

Torque up to 128Nm

- Input and output rotate in opposite directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. speed: 3,000 rpm

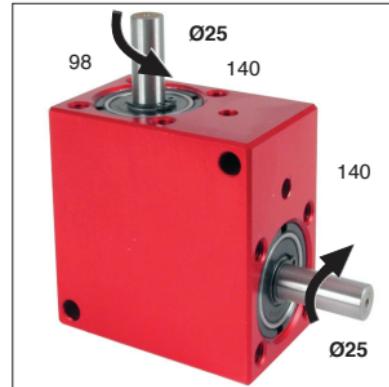
- Materials:

- casing: anodised aluminium
input and output: hardened steel

- Keyway conforms to DIN 6885

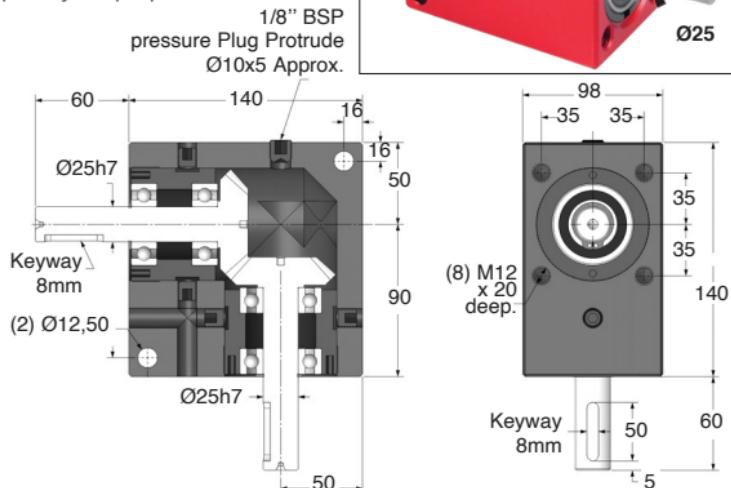
- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 7.05 kg



Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
3000	43	26
2000	47	30
INPUT SPEED (rpm)	1000	51
500	64	38
100	85	51
50	94	60
10	128	77

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Price each
BLH70-1	1:1	88%	3000	3000	$4,15 \times 10^{-4}$	1 888,16 €
BLH70-2	2:1	88%	3000	1500	$1,12 \times 10^{-4}$	1 888,16 €

Dimensions in mm



Right angled gearbox, dual output shafts

Torque up to 128Nm

BLHT70

- Trough-shaft offers both output directions

- Ratios from 1:1 to 2:1

- Output backlash $\leq 45'$ ($0,75^\circ$)

- Max. speed: 3,000 rpm

- Materials:

casing: anodised aluminium

input: hardened steel

output: unhardened steel:

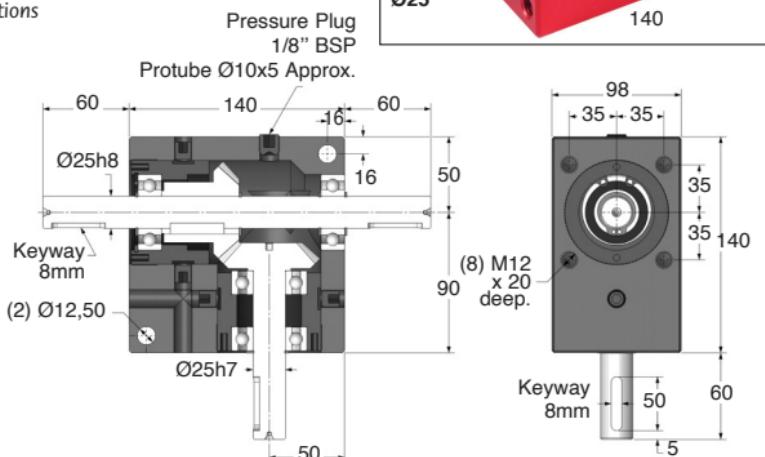
- Keyway conforms to DIN 6885

- Greased for life: Shell Gadus S2 V220AD 2

- Weight: 7.20 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1
INPUT	3000	43
SPEED	2000	47
(rpm)	1000	51
	500	64
	100	85
	50	94
	10	128

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Efficiency at 1000 rpm	Max. input speed (rpm)	Max. output speed (rpm)	Reflected inertia at input (kg.m ²)	Price each
BLHT70-1	1:1	88%	3000	3000	$4,15 \times 10^{-4}$	2 062,22 €
BLHT70-2	2:1	88%	3000	1500	$1,12 \times 10^{-4}$	2 062,22 €

Dimensions in mm

Right angle gearbox, single or dual output

BLH, BLHT,
BL, BLHB

Technical information

- Speed ratio: from 1:1 to 4:1

- Materials :

housing anodised aluminium
case hardened steel gears or
hardened stainless steel

- Max. speed: 2,000 to 3,000 rpm on
input depending on model

- Backlash: $\leq 45'$ ($0,75^\circ$) on output

- Lubrification: greased for life
(Shell Gadus S2 V220AD 2 grease)

- Guarantee: 13 months

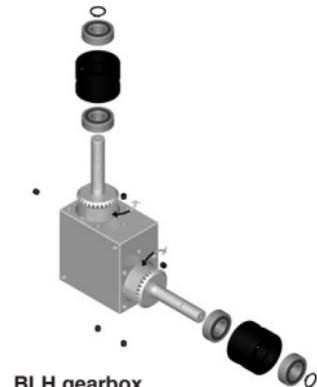
- Tolerances : ground shafts h7,
 R_a 0.8



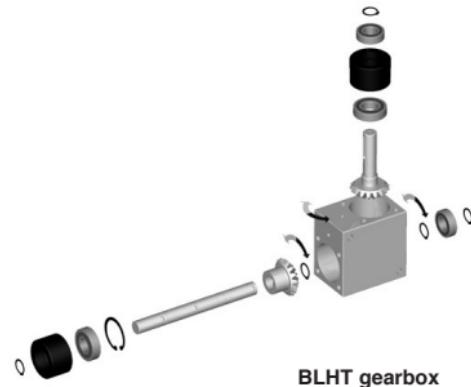
BLH range



BLHT range



BLH gearbox



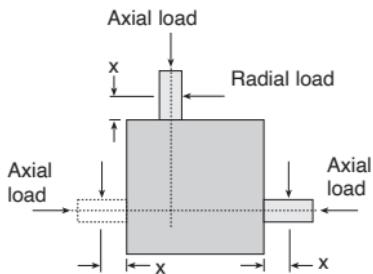
BLHT gearbox

ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Radial load (N)	Axial load (N)
BLH20	BLHT20	6	10
BLH30	BLHT30	10	30
BLH40	BLHT40	12	60
BLH50	BLHT50	20	200
BLH60	BLHT60	25	300
BLH70	BLHT70	30	500

Data given based on input speed of 1,000 rpm.

Values given as an indication only.



Double output bevel gearbox

Technical information

BLHM

- Speed ratio: from 1:1 to 2:1

- Materials :

housing anodised aluminium
case hardened steel gears

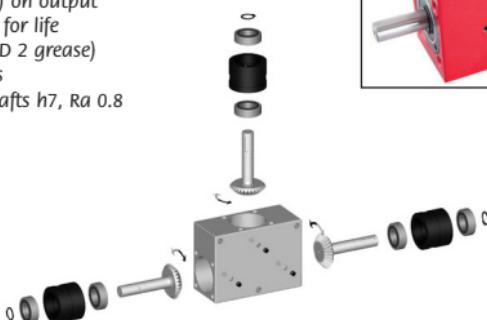
- Max. speed: 2,000 to 4,000 rpm on
input depending on model

- Backlash: $\leq 45'$ ($0,75^\circ$) on output

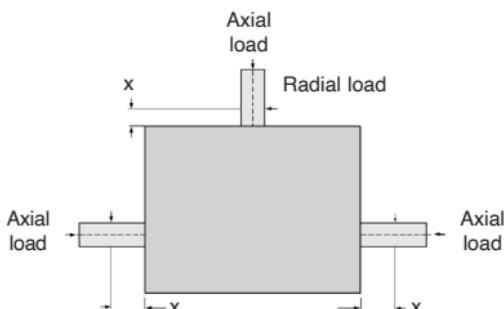
- Lubrication: greased for life
(Shell Gadus S2 V220AD 2 grease)

- Guarantee: 13 months

- Tolerances: ground shafts h7, Ra 0.8



BLHM series



ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Radial load (N)	Axial load (N)
BLHM20	6	10	5
BLHM30	10	30	20
BLHM40	12	60	50
BLHM50	20	200	100
BLHM60	25	300	150
BLHM70	30	500	200

Data given based on input speed of 1,000 rpm.
Values given as an indication only.

Offset spur gearbox

FF10

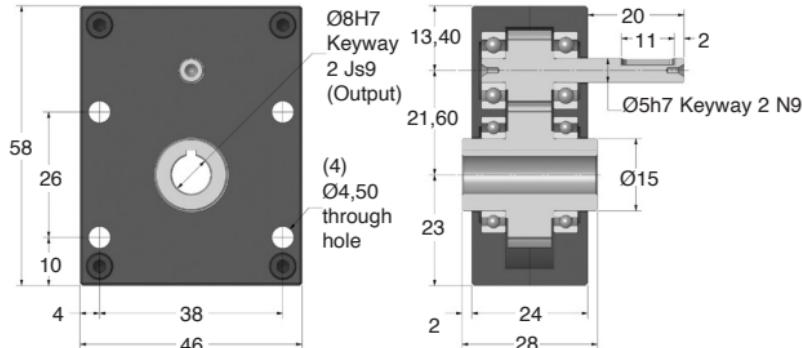
Stock Size XS 1 2 3 ★★★

Torque up to 3.7Nm

- High efficiency
- Ratios from 2:1 to 7:1
- Output backlash $\approx 1^\circ$
- Max. speed: 2,000 rpm
- Materials:
 - casing: anodised aluminium
 - input and output: non-hardened steel
- Weight: 0.226 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT	2000	1,34	1,29	1,15	1,10	0,94
(rpm)	1000	1,55	1,49	1,33	1,27	1,08
SPEED	500	1,85	1,78	1,58	1,51	1,30
(rpm)	200	2,08	2,00	1,78	1,71	1,46
	100	2,44	2,35	2,09	2,00	1,71
	50	2,74	2,63	2,36	2,25	1,92
	10	3,70	3,57	3,16	3,03	2,60

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Stock*	Price each
FF10-2	2:1	2000	1000	93%	✓	334,97 €
FF10-3	3:1	2000	666	93%	-	334,97 €
FF10-4	4:1	2000	500	93%	-	334,97 €
FF10-5	5:1	2000	400	93%	✓	334,97 €
FF10-6	6:1	2000	333	93%	-	334,97 €
FF10-7	7:1	2000	285	93%	-	334,97 €
FF10-XH	2:1 - 7:1	(With hardened gears = torque x 2)			-	592,13 €

*Depending on availability - Dimensions in mm

Torque up to 10Nm

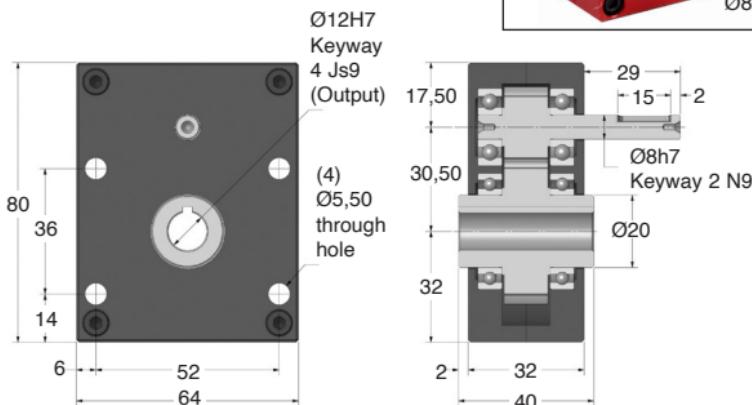
FF15

- High efficiency

- Ratios from 2:1 to 7:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 2,000 rpm
- Materials:
 - casing: anodised aluminium
 - input and output: non-hardened steel
- Weight: 0.55 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT SPEED (rpm)	2000	3,70	3,50	3,20	2,90	2,60
1000	4,30	4,00	3,70	3,40	3,10	2,60
500	5,00	4,80	4,40	4,00	3,60	3,00
200	5,70	5,50	5,00	4,40	3,90	3,20
100	6,70	6,50	5,90	5,10	4,50	3,70
50	7,50	7,20	6,50	5,70	5,00	4,00
10	10,00	9,80	9,00	8,00	7,30	6,10

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Stock*	Price each
FF15-2	2:1	2000	1000	93%	✓	409,61 €
FF15-3	3:1	2000	666	93%	✓	409,61 €
FF15-4	4:1	2000	500	93%	-	409,61 €
FF15-5	5:1	2000	400	93%	✓	409,61 €
FF15-6	6:1	2000	333	93%	✓	409,61 €
FF15-7	7:1	2000	285	93%	✓	409,61 €
FF15-XH	2:1 - 7:1	(With hardened gears = torque x 2)			-	737,04 €

*Depending on availability - Dimensions in mm

Offset spur gearbox

FF20

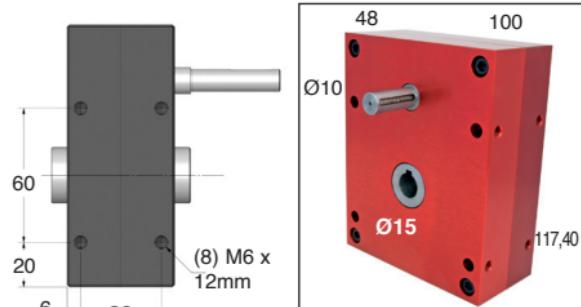
Stock
1 2 3



Torque up to 23Nm

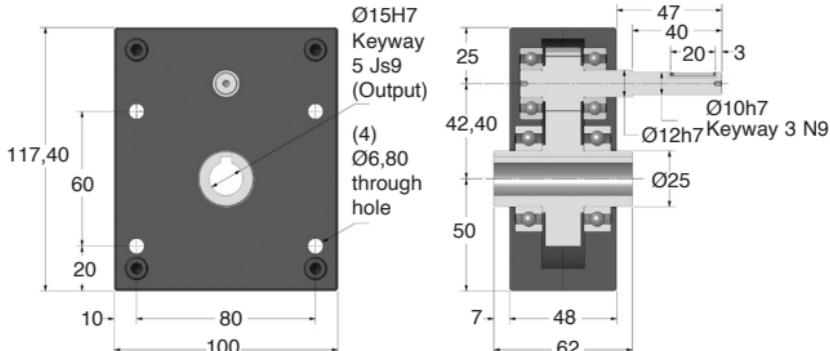
- High efficiency

- Ratios from 2:1 to 7:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 2,000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 1.90 kg



Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT SPEED (rpm)	2000	9,20	7,70	8,00	6,90	6,60
500	10,80	10,20	9,50	8,20	7,80	6,90
200	12,50	11,80	11,00	9,60	9,00	8,20
100	15,00	14,20	13,10	11,50	10,80	9,80
50	16,70	15,70	14,60	12,80	12,00	10,90
10	19,20	18,10	16,80	14,50	13,80	12,50
	23,00	21,60	20,00	17,50	16,50	15,00

DISCOUNTS

Qty	1+	2+	4+
Disc.	-15%	On request	

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Stock*	Price each
FF20-2	2:1	2000	1000	93%	✓	623,05 €
FF20-3	3:1	2000	666	93%	-	623,05 €
FF20-4	4:1	2000	500	93%	✓	623,05 €
FF20-5	5:1	2000	400	93%	-	623,05 €
FF20-6	6:1	2000	333	93%	-	623,05 €
FF20-7	7:1	2000	285	93%	✓	623,05 €
FF20-XH	2:1 - 7:1	(With hardened gears = torque x 2)			-	1 040,86 €

*Depending on availability - Dimensions in mm



Offset spur gearbox

Torque up to 83Nm

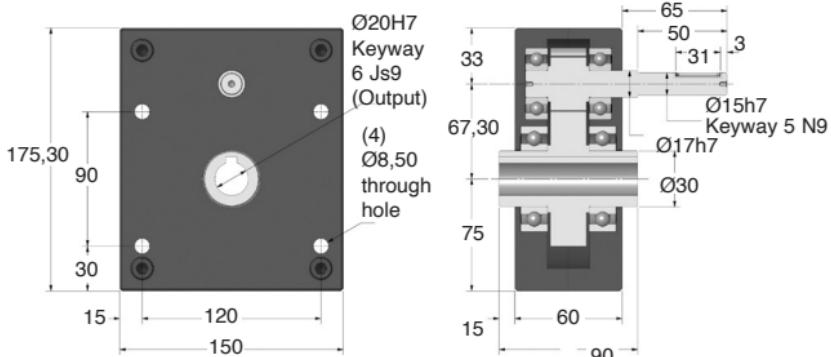
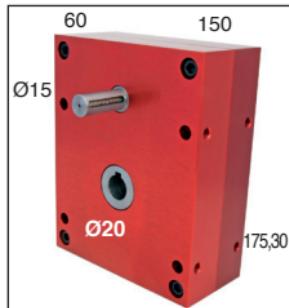
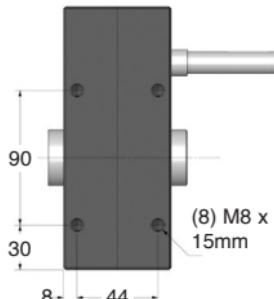
FF30

- High efficiency

- Ratios from 2:1 to 7:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 2,000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 5.50 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT SPEED (rpm)	2000	33,20	29,10	25,20	24,30	23,90
1000	39,10	34,40	29,80	28,70	27,30	25,10
500	45,20	39,70	34,40	33,10	31,60	28,80
200	54,30	47,60	41,30	39,70	38,20	34,00
100	60,40	52,90	45,90	44,20	43,40	39,10
50	69,00	60,08	43,00	50,80	49,30	45,20
10	83,00	72,70	63,00	60,70	59,20	54,40

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Stock*	Price each
FF30-2	2:1	2000	1000	93%	-	832,96 €
FF30-3	3:1	2000	666	93%	-	832,96 €
FF30-4	4:1	2000	500	93%	✓	832,96 €
FF30-5	5:1	2000	400	93%	-	832,96 €
FF30-6	6:1	2000	333	93%	-	832,96 €
FF30-7	7:1	2000	285	93%	✓	832,96 €
FF30-XH	2:1 - 7:1	(With hardened gears = torque x 2)			-	1 297,89 €

*Depending on availability - Dimensions in mm

Offset spur gearbox

FF40



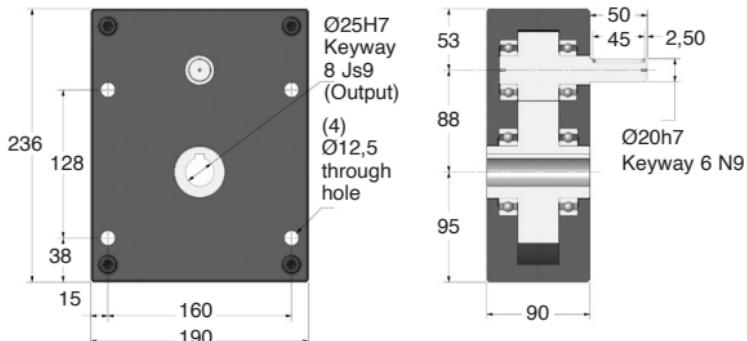
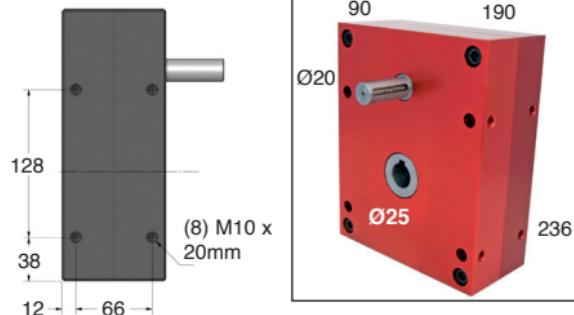
Torque up to 210Nm

- High efficiency

- Ratios from 2:1 to 7:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 2000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel

Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT SPEED (rpm)	2000	83	83	76	70	61
1000	90	90	82	76	66	64
500	103	102	95	87	76	73
200	120	120	110	102	89	86
100	138	135	126	116	101	98
50	156	155	146	136	117	113
10	210	210	196	180	158	152

DISCOUNTS

Qty	1+	2+	4+
Disc.	-15%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 t/min	Price each
FF40-2	2:1	2000	1000	93%	1 464,89 €
FF40-3	3:1	2000	666	93%	1 464,89 €
FF40-4	4:1	2000	500	93%	1 464,89 €
FF40-5	5:1	2000	400	93%	1 464,89 €
FF40-6	6:1	2000	333	93%	1 464,89 €
FF40-7	7:1	2000	285	93%	1 464,89 €
FF40-XH	2:1 - 7:1	(With hardened gears = torque x 2)			1 915,68 €

Dimensions in mm



Offset spur gearbox

Torque up to 425Nm

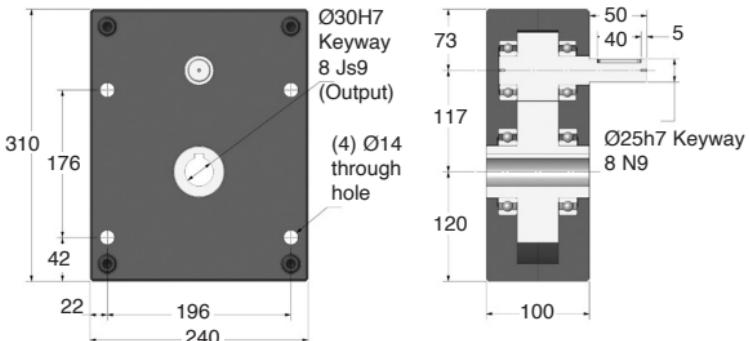
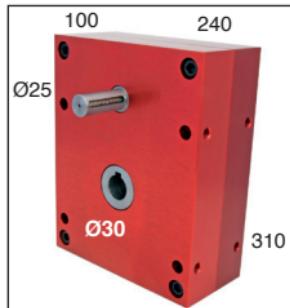
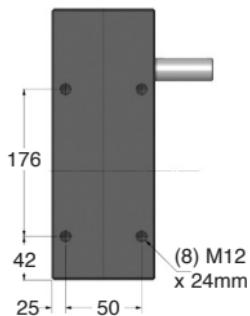
FF50

- High efficiency

- Ratios from 2:1 to 7:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 2000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 26.59 kg

Options

- Can be modified to your specifications



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	7:1
INPUT SPEED (rpm)	2000	166	156	147	138	120
500	180	168	160	149	130	120
200	207	194	183	172	150	139
100	276	260	245	220	200	185
50	318	300	282	264	230	212
10	425	400	380	356	310	286

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Price each
FF50-2	2:1	2000	1000	93%	2 244,81 €
FF50-3	3:1	2000	666	93%	2 244,81 €
FF50-4	4:1	2000	500	93%	2 244,81 €
FF50-5	5:1	2000	400	93%	2 244,81 €
FF50-6	6:1	2000	333	93%	2 244,81 €
FF50-7	7:1	2000	285	93%	2 244,81 €
FF50-XH	2:1 - 7:1	(With hardened gears = torque x 2)			2 695,59 €

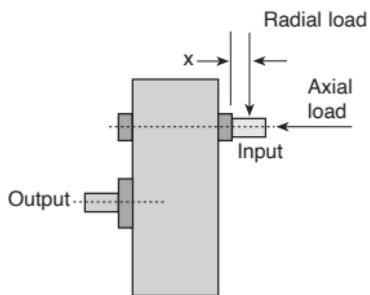
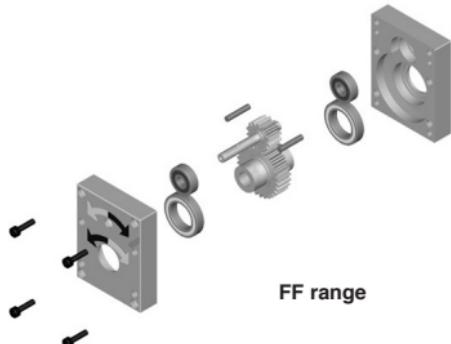
Dimensions in mm

Offset spur gearboxes

FF

Technical information

- Speed ratio: from 2:1 to 7:1
- Materials :
 - housing anodised aluminium
 - steel
- Gears in steel
- Max. speed: 2,000 rpm on input
- Backlash: $\leq 30'$ (0.5°) on output
- Lubrification: greased for life
(Shell Gadus S5V42P 2.5 grease)
- Guarantee: 13 months
- Tolerances : ground shafts h7, Ra 0.8



ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Input Radial load (N)	Output Radial load (N)	Axial load (N)
FF10	8	20	100	100
FF15	10	60	200	200
FF20	15	160	400	300
FF30	20	200	600	400
FF40	30	300	800	500
FF50	40	400	1000	600

Data given based on input speed of 1000 rpm.
Values given as an indication only.

Request a quote for

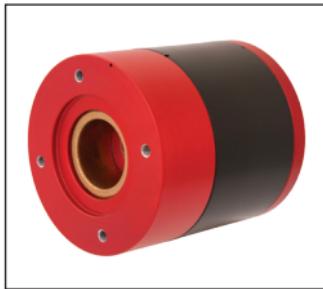
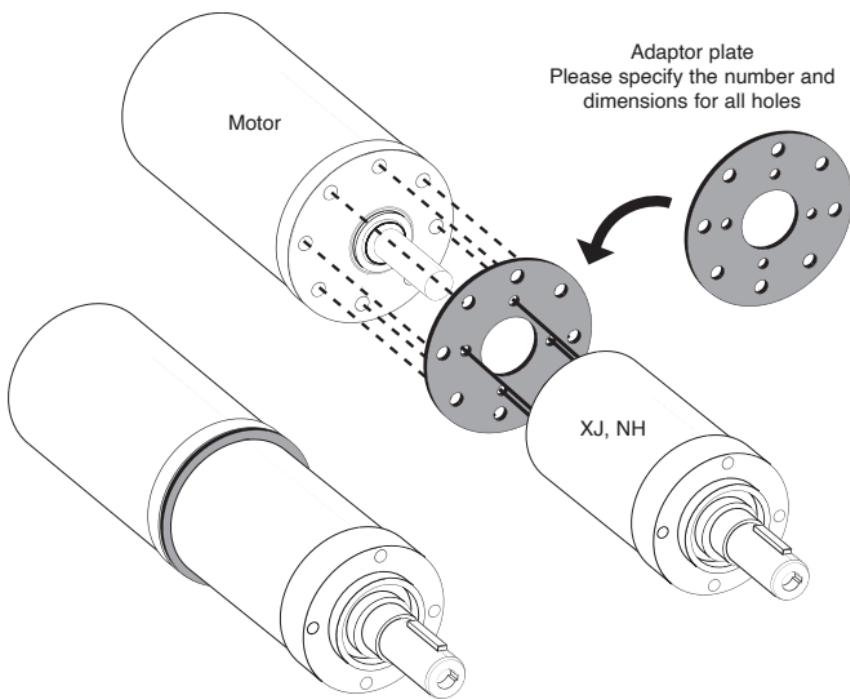
**MADE TO MEASURE
CHAIN SPROCKETS**

- Steel, stainless steel or delrin
- Pitch from 4 to 19.05mm
- Choice of bores



Spur gear coaxial gearbox

Technical information



Input face of the XJ reducers



Output face of the XJ reducers



XJ + NH Reducers:

Please supply us with the dimensions of the face plate of your motor



Spur gear coaxial gearbox

Torque up to 0.49Nm

J51
XJ51

- Ratios from 1:1 to 20:1

(Other ratios available on request)

- Output backlash: 3-6° depending on ratio

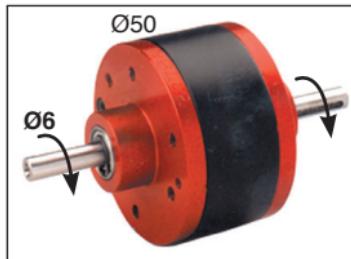
- Max. input speed: 4,000 rpm

- Materials:

casing: anodised aluminium and black Delrin
input & output: non-hardened steel

- Weight: 0.14 kg

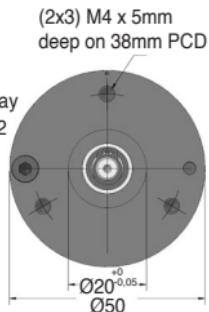
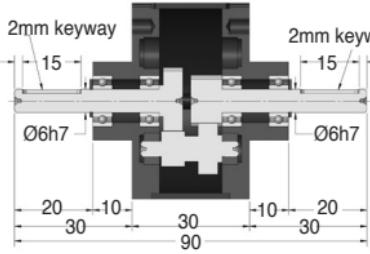
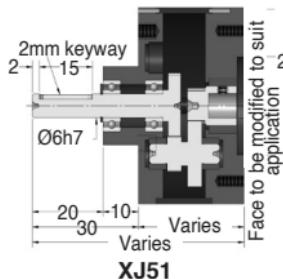
- Keyway conforms to DIN 6885



XJ Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	10:1	15:1	20:1	
INPUT SPEED (rpm)	4000	0,16	0,15	0,14	0,13	0,15	0,17	0,18
	2000	0,19	0,18	0,17	0,15	0,18	0,20	0,21
	1000	0,22	0,22	0,20	0,18	0,21	0,22	0,23
	500	0,27	0,25	0,23	0,21	0,24	0,25	0,27
	200	0,32	0,30	0,27	0,25	0,28	0,30	0,32
	100	0,36	0,33	0,30	0,28	0,32	0,34	0,36
	50	0,40	0,38	0,35	0,32	0,36	0,37	0,42
	20	0,48	0,45	0,41	0,38	0,43	0,44	0,49

Large choice
of reduction
ratios !
Up to 625:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc. List	-15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	Price each XJ	On request
J51-2	XJ51-2	2:1	4000	2000	92%	Same	297,04 €	
J51-3	XJ51-3	3:1	4000	1333	92%	Same	297,04 €	
J51-4	XJ51-4	4:1	4000	1000	92%	Same	297,04 €	
J51-5	XJ51-5	5:1	4000	800	92%	Same	297,04 €	
J51-10	XJ51-10	10:1	4000	400	92%	Same	297,06 €	
J51-15	XJ51-15	15:1	4000	266	92%	Same	297,06 €	
J51-20	XJ51-20	20:1	4000	200	92%	Same	297,06 €	
J51-SP	XJ51-SP	1:1 - 20:1			Special ratios from 1:1 to 20:1		417,51 €	

Dimensions in mm

Spur gear coaxial gearbox



J52
XJ52

Torque up to 0.9Nm

- Ratios from 1:1 to 130:1

(Other ratios available on request)

- Output backlash: 3-6° depending on ratio

- Max. input speed: 4,000 rpm

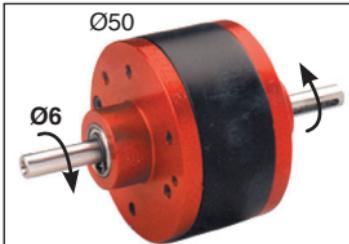
- Materials:

casing: anodised aluminium
and black Delrin

input & output: non-hardened steel

- Weight: 0.16 kg

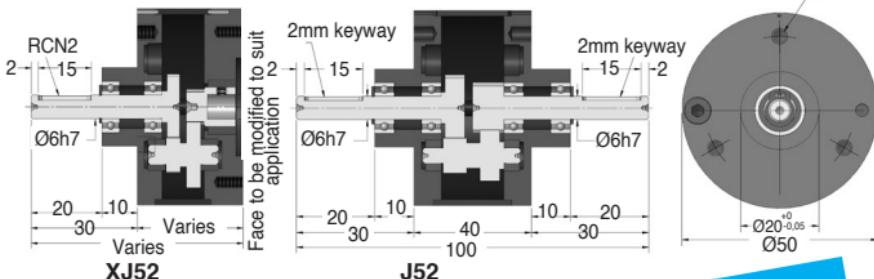
- Keyway conforms to DIN 6885



XJ Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	30:1	40:1	50:1	60:1	75:1	100:1	125:1	
INPUT SPEED (rpm)	4000	0,27	0,28	0,29	0,30	0,31	0,33	0,34
	2000	0,30	0,32	0,33	0,34	0,35	0,38	0,40
	1000	0,34	0,36	0,38	0,40	0,41	0,42	0,43
	500	0,40	0,41	0,42	0,43	0,46	0,49	0,49
	200	0,46	0,48	0,49	0,52	0,54	0,57	0,59
	100	0,52	0,55	0,57	0,59	0,61	0,65	0,69
	50	0,57	0,62	0,65	0,69	0,73	0,74	0,75
	20	0,69	0,73	0,75	0,75	0,75	0,90	0,90

Large choice
of reduction
ratios!
Up to 625:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	Price each XJ
J52-30 XJ52-30	30:1	4000	133	88%	Opposite	410,25 €	
J52-40 XJ52-40	40:1	4000	100	88%	Opposite	410,25 €	
J52-50 XJ52-50	50:1	4000	80	88%	Opposite	410,25 €	
J52-60 XJ52-60	60:1	4000	66	88%	Opposite	410,25 €	
J52-75 XJ52-75	75:1	4000	53	88%	Opposite	410,25 €	
J52-100 XJ52-100	100:1	4000	40	88%	Opposite	410,25 €	
J52-125 XJ52-125	125:1	4000	32	88%	Opposite	410,25 €	
J52-SP XJ52-SP	1:1 - 130:1					483,46 €	

Dimensions in mm

On request



Spur gear coaxial gearbox

Torque up to 1.15Nm

J53
XJ53

- Ratios from 1:1 to 625:1

(Other ratios available on request)

- Output backlash: N/A

- Max. input speed: 4,000 rpm

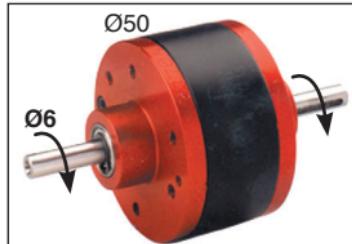
- Materials:

casing: anodised aluminium
and black Delrin

input & output: non-hardened steel

- Weight: 0.17 kg

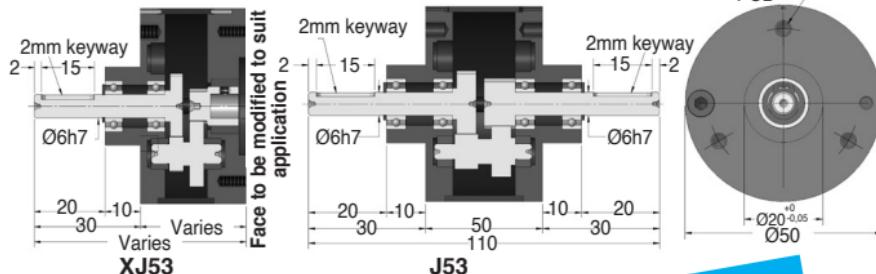
- Keyway conforms to DIN 6885



XJ Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	140:1	160:1	200:1	300:1	400:1	500:1	625:1
INPUT SPEED (rpm)	4000	4000	4000	4000	4000	4000	4000
500	0.43	0.45	0.46	0.51	0.53	0.55	0.58
2000	0.50	0.52	0.53	0.58	0.59	0.61	0.63
1000	0.56	0.57	0.58	0.63	0.65	0.67	0.69
200	0.63	0.67	0.69	0.69	0.79	0.84	0.96
100	0.76	0.79	0.79	0.79	0.91	0.99	1.15
50	0.86	0.91	0.91	0.91	1.15	1.15	1.15
20	1.15	1.15	1.15	1.15	1.15	1.15	1.15

Large choice
of reduction
ratios !
Up to 625:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	XJ	On request
J53-140 XJ53-140	140:1	4000	29	85%	Same	548,44 €		
J53-160 XJ53-160	160:1	4000	25	85%	Same	548,44 €		
J53-200 XJ53-200	200:1	4000	20	85%	Same	548,44 €		
J53-300 XJ53-300	300:1	4000	13	85%	Same	548,44 €		
J53-400 XJ53-400	400:1	4000	10	85%	Same	548,44 €		
J53-500 XJ53-500	500:1	4000	8	85%	Same	548,44 €		
J53-625 XJ53-625	625:1	4000	6,40	85%	Same	548,44 €		
J53-SP XJ53-SP	1:1 - 625:1	Special ratios from 1:1 to 625:1				626,91 €		

Dimensions in mm

Spur gear coaxial gearbox

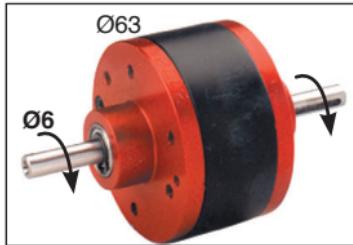


J64
XJ64

Torque up to 2.25Nm

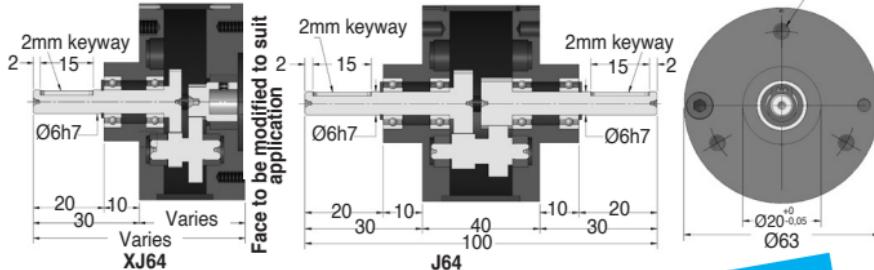
- Ratios from 1:1 to 16:1
(Other ratios available on request)

- Output backlash: N/A
- Max. input speed: 4,000 rpm
- Materials:
 - casing: anodised aluminium and black Delrin
 - input & output: non-hardened steel
- Weight: 0.3 kg
- Keyway conforms to DIN 6885



XJ Gearbox

- Please send us the dimensions of the front face of your motor
- The overall length depends on the adaptor plate



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	6:1	10:1	12:1	16:1	
INPUT SPEED (rpm)	4000	0,66	0,64	0,57	0,75	0,70	0,79	0,80
	2000	0,84	0,81	0,72	0,88	0,81	0,90	0,92
	1000	0,99	0,96	0,85	1,00	0,90	1,04	1,07
	500	1,13	1,10	0,98	1,14	1,01	1,17	1,21
	200	1,32	1,28	1,14	1,35	1,20	1,39	1,43
	100	1,50	1,45	1,30	1,53	1,33	1,58	1,65
	50	1,68	1,63	1,46	1,68	1,53	1,81	1,90
	20	2,00	1,95	1,74	2,00	1,80	2,10	2,25

Large choice
of reduction
ratios!
Up to 625:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc. List	-15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	Price each XJ
J64-2	XJ64-2	2:1	4000	2000	92%	Same	388,97 €
J64-3	XJ64-3	3:1	4000	1333	92%	Same	388,97 €
J64-4	XJ64-4	4:1	4000	1000	92%	Same	388,97 €
J64-6	XJ64-6	6:1	4000	666	92%	Same	388,98 €
J64-10	XJ64-10	10:1	4000	400	92%	Same	388,97 €
J64-12	XJ64-12	12:1	4000	333	92%	Same	388,97 €
J64-16	XJ64-16	16:1	4000	250	92%	Same	388,97 €
J64-SP	XJ64-SP	1:1 - 16:1	Special ratios from 1:1 to 16:1			475,88 €	On request

Dimensions in mm



Spur gear coaxial gearbox

Torque up to 2.95Nm

J65
XJ65

- Ratios from 1:1 to 64:1

(Other ratios available on request)

- Output backlash: N/A

- Max. input speed: 4,000 rpm

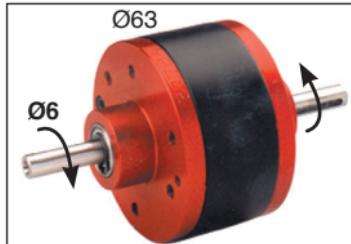
- Materials:

casing: anodised aluminium
and black Delrin

input & output: non-hardened steel

- Weight: 0.32 kg

- Keyway conforms to DIN 6885

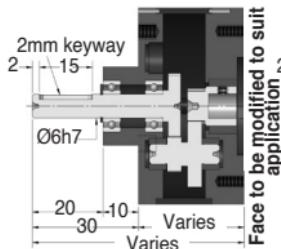


XJ Gearbox

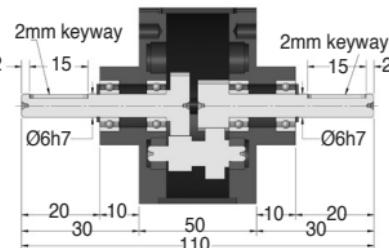
- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate

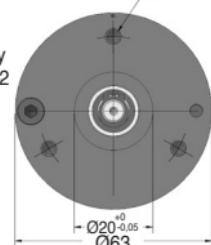
(2x3) M4 x 5mm
deep on 38mm PCD



XJ65



J65



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	15:1	20:1	24:1	32:1	40:1	48:1	64:1	
INPUT SPEED (rpm)	4000	0,80	0,81	0,91	0,92	0,89	0,91	0,92
500	2000	0,91	0,93	1,04	1,05	1,03	1,04	1,06
1000	1000	1,05	1,10	1,16	1,20	1,16	1,19	1,23
200	500	1,20	1,27	1,35	1,41	1,37	1,40	1,45
100	200	1,40	1,63	1,58	1,63	1,56	1,61	1,63
50	100	1,48	1,71	1,80	1,85	1,73	1,82	1,87
20	50	1,86	2,02	1,95	2,00	1,94	1,95	1,96
	20	2,20	2,30	2,36	2,45	2,36	2,40	2,95

Large choice
of reduction
ratios !
Up to 625:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	Price each XJ	On request
J65-15 XJ65-15	15:1	4000	266	88%	Opposite	462,28 €		
J65-20 XJ65-20	20:1	4000	200	88%	Opposite	462,28 €		
J65-24 XJ65-24	24:1	4000	166	88%	Opposite	462,28 €		
J65-32 XJ65-32	32:1	4000	125	88%	Opposite	462,28 €		
J65-40 XJ65-40	40:1	4000	100	88%	Opposite	462,28 €		
J65-48 XJ65-48	48:1	4000	83	88%	Opposite	462,28 €		
J65-64 XJ65-64	64:1	4000	62	88%	Opposite	462,28 €		
J65-SP XJ65-SP	1:1 - 64:1	Special ratios from 1:1 to 64:1				543,86 €		

Dimensions in mm

Spur gear coaxial gearbox

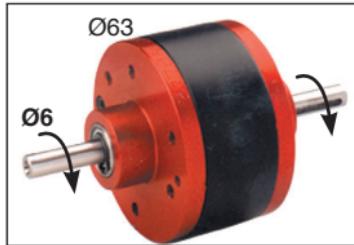


J66
XJ66

Torque up to 2.8Nm

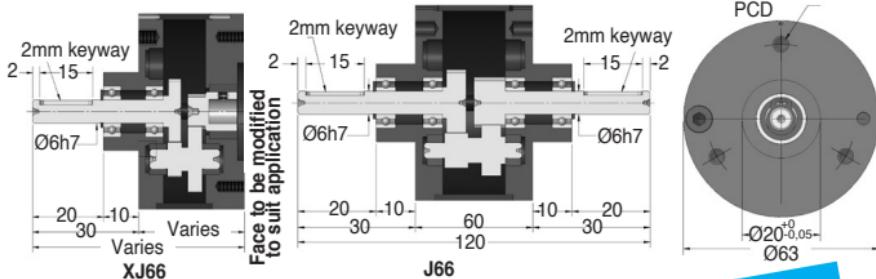
- Ratios from 1:1 to 256:1
- (Other ratios available on request)

- Output backlash: N/A
- Max. input speed: 4,000 rpm
- Materials:
 - casing: anodised aluminium and black Delrin
 - input & output: non-hardened steel
- Weight: 0.34 kg
- Keyway conforms to DIN 6885



XJ Gearbox

- Please send us the dimensions of the front face of your motor
- The overall length depends on the adaptor plate



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	50:1	80:1	96:1	128:1	160:1	192:1	256:1	
INPUT SPEED (rpm)	4000	0,90	1,01	1,05	1,09	1,13	1,25	1,40
	2000	1,04	1,13	1,18	1,24	1,30	1,40	1,55
	1000	1,18	1,30	1,33	1,39	1,44	1,60	1,85
	500	1,40	1,44	1,50	1,58	1,64	1,78	2,00
	200	1,60	1,73	1,80	1,87	1,96	2,18	2,42
	100	1,82	1,96	2,10	2,17	2,28	2,47	2,80
	50	2,02	2,28	2,45	2,61	2,80	2,80	2,80
	20	2,50	2,80	2,80	2,80	2,80	2,80	2,80

Large choice
of reduction
ratios !
Up to 256:1

DISCOUNTS

Qty	1+	2+	4+	6+
Disc. List	-15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each J	Price each XJ
J66-50 XJ66-50	50:1	4000	80	85%	Same	548,02 €	
J66-80 XJ66-80	80:1	4000	50	85%	Same	548,02 €	
J66-96 XJ66-96	96:1	4000	41	85%	Same	548,02 €	
J66-128 XJ66-128	128:1	4000	31	85%	Same	548,02 €	
J66-160 XJ66-160	160:1	4000	25	85%	Same	548,02 €	
J66-192 XJ66-192	192:1	4000	21	85%	Same	548,02 €	
J66-256 XJ66-256	256:1	4000	15	85%	Same	548,02 €	
J66-SP XJ66-SP	1:1 - 256:1	Special ratios from 1:1 to 256:1				630,96 €	On request

Dimensions in mm



Spur gear coaxial gearbox

Torque up to 14Nm

NT61
NH61

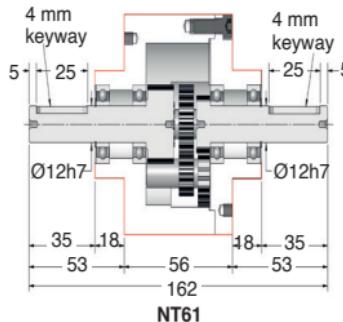
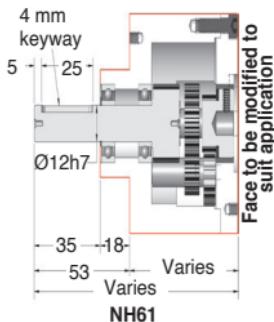
- Ratios from 1:1 to 9:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 0.6 / 1.2kg
- keyway conforms to DIN 6885



NH Gearbox

- Please send us the dimensions of the front face of your motor
- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm: values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	8:1	9:1
INPUT SPEED (rpm)	3000	5,0	5,0	5,0	5,0	5,0	5,0
	2000	5,5	5,5	5,5	6,0	6,0	6,0
	1000	6,5	6,5	6,5	7,0	7,0	7,0
	500	7,5	7,5	7,5	8,0	8,0	8,0
	200	9,0	9,0	9,0	9,0	9,0	9,0
	100	10,0	10,0	10,0	10,0	10,0	10,0
	50	12,0	12,0	12,0	12,0	12,0	12,0
	20	14,0	14,0	14,0	14,0	14,0	14,0

Large choice of reduction ratios !
Up to 120:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
					NT	NH
NT61-2	NH61-2	2:1	3000	1500	92%	Same 637,06 €
NT61-3	NH61-3	3:1	3000	1000	92%	Same 637,06 €
NT61-4	NH61-4	4:1	3000	750	92%	Same 637,06 €
NT61-5	NH61-5	5:1	3000	600	92%	Opposite 637,06 €
NT61-6	NH61-6	6:1	3000	500	92%	Opposite 637,06 €
NT61-8	NH61-8	8:1	3000	375	92%	Opposite 637,06 €
NT61-9	NH61-9	9:1	3000	333	92%	Opposite 637,06 €
NT61-SP	NH61-SP	1:1 - 9:1	Special ratios from 1:1 to 9:1			746,45 €

Dimensions in mm

Spur gear coaxial gearbox



**NT62
NH62**

Torque up to 18Nm

- Ratios from 1:1 to 27:1 (other ratios available on request)

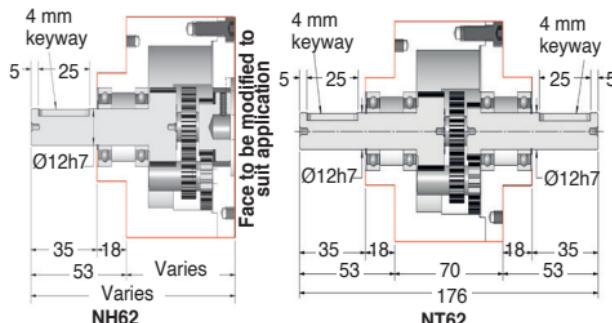
- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 0.61 kg
- keyway conforms to DIN 6885



NH Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	10:1	12:1	15:1	18:1	20:1	24:1	27:1
3000	6,0	8,0	8,0	8,0	8,0	8,0	8,0
2000	7,0	8,5	8,5	8,5	8,5	8,5	8,5
1000	8,5	9,0	9,0	9,0	9,0	9,0	9,0
INPUT SPEED (rpm)	500	10,0	10,0	10,0	10,0	10,0	10,0
	200	11,0	12,0	12,0	12,0	12,0	12,0
	100	12,0	14,0	14,0	14,0	14,0	14,0
	50	14,0	16,0	16,0	16,0	16,0	16,0
	20	16,0	18,0	18,0	18,0	18,0	18,0

Large choice of reduction ratios !
Up to 120:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each NT	Price each NH	On request
NT62-10	NH62-10	10:1	3000	300	85%	Same	769,20 €	
NT62-12	NH62-12	12:1	3000	250	85%	Same	769,20 €	
NT62-15	NH62-15	15:1	3000	200	85%	Same	769,20 €	
NT62-18	NH62-18	18:1	3000	166	85%	Same	769,20 €	
NT62-20	NH62-20	20:1	3000	150	85%	Same	769,20 €	
NT62-24	NH62-24	24:1	3000	125	85%	Same	769,20 €	
NT62-27	NH62-27	27:1	3000	111	85%	Same	769,20 €	
NT62-SP	NH62-SP	1:1 - 27:1			Special ratios from 1:1 to 27:1	877,07 €		

Dimensions in mm



Spur gear coaxial gearbox

Torque up to 20Nm

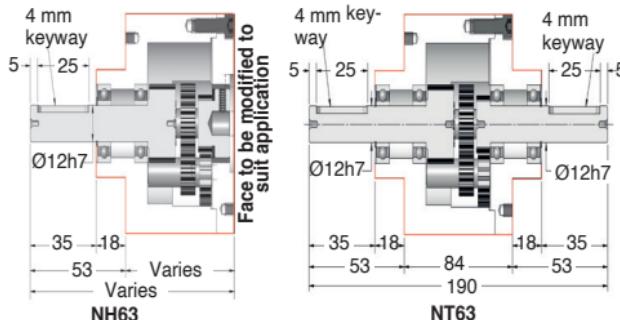
NT63
NH63

- Ratios from 1:1 to 120:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 0.64 kg
- keyway conforms to DIN 6885

NH Gearbox

- Please send us the dimensions of the front face of your motor
- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	30:1	36:1	40:1	48:1	54:1	81:1	120:1
INPUT SPEED (rpm)	3000	8,0	9,0	9,0	9,0	10,0	10,0
	2000	8,5	9,0	9,0	9,0	10,0	10,0
	1000	9,0	10,0	10,0	10,0	10,0	10,0
	500	10,0	11,0	11,0	11,0	11,0	11,0
	200	12,0	12,0	12,0	12,0	12,0	12,0
	100	14,0	14,0	14,0	14,0	14,0	14,0
	50	16,0	17,0	17,0	17,0	17,0	17,0
	20	19,0	20,0	20,0	20,0	20,0	20,0

Large choice of reduction ratios !
Up to 120:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each NT	Price each NH
NT63-30	NH63-30	30:1	3000	100	80%	849,04 €	849,04 €
NT63-36	NH63-36	36:1	3000	83	80%	849,04 €	849,04 €
NT63-40	NH63-40	40:1	3000	75	80%	849,04 €	849,04 €
NT63-48	NH63-48	48:1	3000	62	80%	849,04 €	849,04 €
NT63-54	NH63-54	54:1	3000	55	80%	849,04 €	849,04 €
NT63-81	NH63-81	81:1	3000	37	80%	849,04 €	849,04 €
NT63-120	NH63-120	120:1	3000	25	80%	849,04 €	849,04 €
NT63-SP	NH63-SP	1:1 - 120:1	Special ratios from 1:1 to 120:1			947,21 €	

Dimensions in mm

Spur gear coaxial gearbox



**NT91
NH91**

Torque up to 35Nm

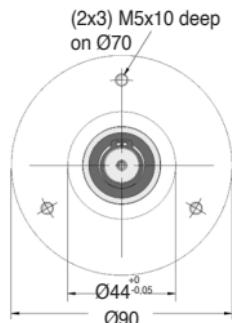
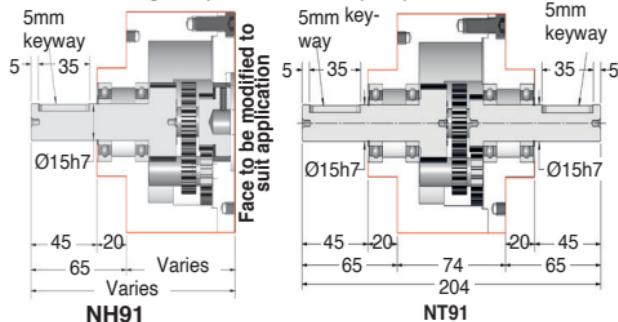
- Ratios from 1:1 to 9:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 1.6 kg
- keyway conforms to DIN 6885

NH Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	8:1	9:1
INPUT SPEED (rpm)	3000	10	11	12	12	14	14
2000	12	13	14	15	16	16	17
1000	15	16	17	18	19	19	20
500	18	18	19	21	22	22	23
200	21	22	22	24	25	25	26
100	24	25	26	26	27	28	29
50	27	27	28	30	31	32	32
20	30	30	30	33	33	35	35

Large choice of reduction ratios !
Up to 36:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each NT	Price each NH	On request
NT91-2	NH91-2	2:1	3000	1500	90%	Same	736,51 €	
NT91-3	NH91-3	3:1	3000	1000	90%	Same	736,51 €	
NT91-4	NH91-4	4:1	3000	750	90%	Same	736,51 €	
NT91-5	NH91-5	5:1	3000	600	90%	Opposite	736,51 €	
NT91-6	NH91-6	6:1	3000	500	90%	Opposite	736,51 €	
NT91-8	NH91-8	8:1	3000	375	90%	Opposite	736,51 €	
NT91-9	NH91-9	9:1	3000	333	90%	Opposite	736,51 €	
NT91-SP	NH91-SP	1:1 - 9:1	Special ratios from 1:1 to 9:1				848,67 €	

Dimensions in mm



Spur gear coaxial gearbox

Torque up to 40Nm

NT92
NH92

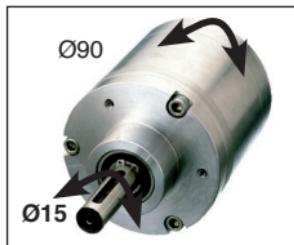
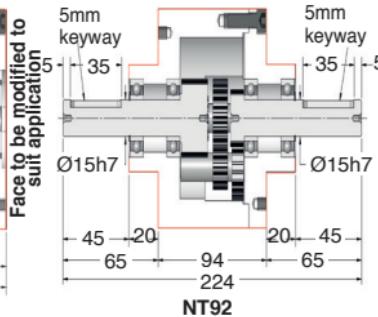
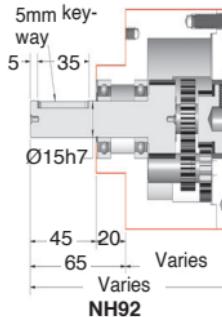
- Ratios from 1:1 to 36:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 2 kg
- keyway conforms to DIN 6885

NH Gearbox

- Please send us the dimensions of the front face of your motor

- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	10:1	12:1	15:1	18:1	20:1	27:1	36:1
INPUT SPEED (rpm)	3000	15	15	17	17	18	18
500	2000	18	18	20	20	21	21
1000	200	21	21	23	23	24	24
500	400	24	24	26	26	27	27
200	100	27	27	29	29	30	30
(rpm)	30	30	31	31	32	33	33
50	32	33	34	34	35	36	36
20	35	36	38	38	40	40	40

Large choice of reduction ratios !
Up to 36:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
					NT	NH
NT92-10	NH92-10	10:1	3000	300	84%	787,90 €
NT92-12	NH92-12	12:1	3000	250	84%	787,90 €
NT92-15	NH92-15	15:1	3000	200	84%	787,90 €
NT92-18	NH92-18	18:1	3000	166	84%	787,90 €
NT92-20	NH92-20	20:1	3000	150	84%	787,90 €
NT92-27	NH92-27	27:1	3000	125	84%	787,90 €
NT92-36	NH92-36	36:1	3000	83	84%	787,79 €
NT92-SP	NH92-SP	1:1 - 36:1				896,20 €

Dimensions in mm

Spur gear coaxial gearbox



NT121
NH121

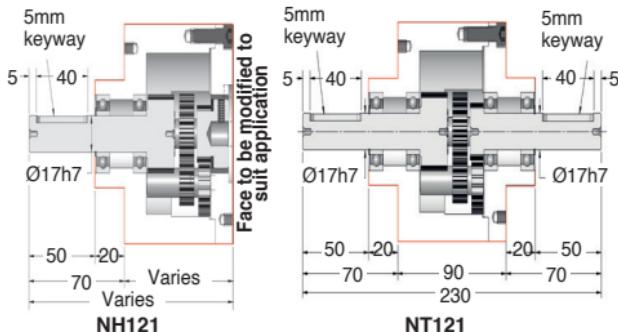
Torque up to 68Nm

- Ratios from 1:1 to 9:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 2.3 kg
- keyway conforms to DIN 6885

Options

- Can be adapted to suit your motor
- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	2:1	3:1	4:1	5:1	6:1	8:1	9:1	
INPUT SPEED (rpm)	3000	20,0	20,0	21,1	22,2	23,5	29,7	26,0
	2000	23,0	23,6	24,7	26,0	27,4	28,6	30,0
	1000	27,1	27,5	28,6	29,7	31,0	32,5	34,0
INPUT SPEED (rpm)	500	31,5	32,0	33,3	34,8	36,4	38,0	40,0
	200	35,0	35,5	37,2	38,0	40,8	42,8	45,0
	100	40,0	41,0	41,8	42,7	43,6	47,0	51,0
	50	47,2	48,0	50,2	52,5	55,0	58,0	61,1
	20	53,0	55,0	57,0	60,0	62,0	65,0	68,0

Large choice of reduction ratios !
Up to 27:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
					NT	NH
NT121-2	NH121-2	2:1	3000	1500	92%	916,71 €
NT121-3	NH121-3	3:1	3000	1000	92%	916,71 €
NT121-4	NH121-4	4:1	3000	750	92%	916,71 €
NT121-5	NH121-5	5:1	3000	600	92%	916,71 €
NT121-6	NH121-6	6:1	3000	500	92%	916,71 €
NT121-8	NH121-8	8:1	3000	375	92%	916,71 €
NT121-9	NH121-9	9:1	3000	333	92%	916,71 €
NT121-SP	NH121-SP	1:1 - 9:1	Special ratios from 1:1 to 9:1			1 020,75 €

Dimensions in mm

On request



Spur gear coaxial gearbox

Torque up to 85Nm

NT122
NH122

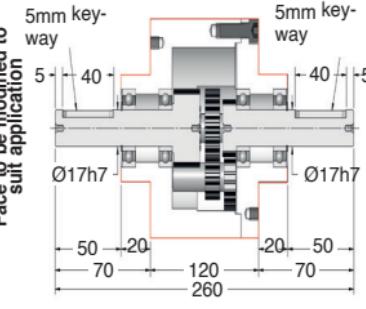
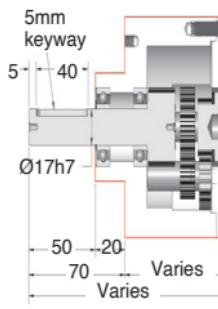
- Ratios from 1:1 to 27:1 (other ratios available on request)

- Output backlash: N/A
- Max. input speed: 3000 rpm
- Materials:
 - casing: anodised aluminium
 - input & output: non-hardened steel
- Weight: 2.6 kg
- keyway conforms to DIN 6885



Options

- Can be adapted to suit your motor
- The overall length depends on the adaptor plate



Output face

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	10:1	12:1	15:1	18:1	24:1	8:1
INPUT SPEED (rpm)	3000	32	32	32	32	32
2000	36	36	36	36	36	36
1000	42	42	42	42	42	42
500	49	49	49	49	49	49
200	54	54	54	54	54	54
100	61	61	61	61	61	61
50	73	73	73	73	73	73
20	85	85	85	85	85	85

Large choice of reduction ratios !
Up to 27:1

DISCOUNTS

Qty.	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratios	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each NT	Price each NH	On request
NT122-10	NH122-10	10:1	3000	300	88%	Opposite	1 097,17 €	
NT122-12	NH122-12	12:1	3000	250	88%	Opposite	1 097,17 €	
NT122-15	NH122-15	15:1	3000	200	88%	Opposite	1 097,17 €	
NT122-18	NH122-18	18:1	3000	166	88%	Opposite	1 097,17 €	
NT122-24	NH122-24	24:1	3000	125	88%	Opposite	1 097,17 €	
NT122-27	NH122-27	27:1	3000	111	88%	Opposite	1 097,17 €	
NT122-SP	NH122-SP	1:1 - 27:1	Special ratios from 1:1 to 27:1				1 164,96 €	

Dimensions in mm

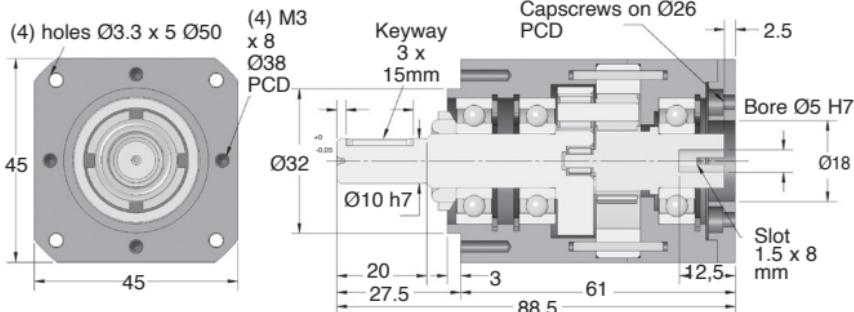
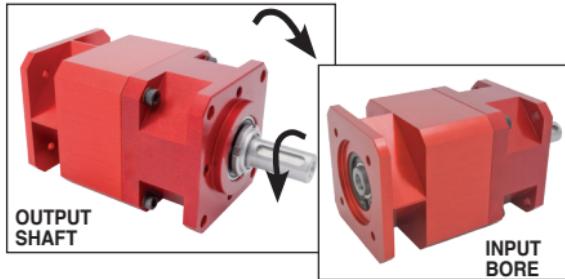
EHD04

Torque up to 7Nm

- Ratios from 3:1 to 6:1
- Input is a slot pin drive
- Output backlash $\leq 15'$ ($0,25^\circ$)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - input and output: non-hardened steel
- Weight: 0.44kg

Options

- Can be modified to your specifications
- e.g. modified to suit your motor



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	3:1	4:1	5:1	6:1
INPUT SPEED (rpm)	3000	76	70	61
1000	90	82	76	66
500	102	95	87	76
200	120	110	102	89
100	135	126	116	101
50	155	146	136	117
	210	196	180	158

Large transmissible torque

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD04-3	3:1	3000	1000	92%	Same	591,11 €
EHD04-4	4:1	3000	750	92%	Same	591,11 €
EHD04-5	5:1	3000	600	92%	Same	591,11 €
EHD04-6	6:1	3000	500	92%	Same	591,11 €

Dimensions in mm



Internal epicyclic servo reducers

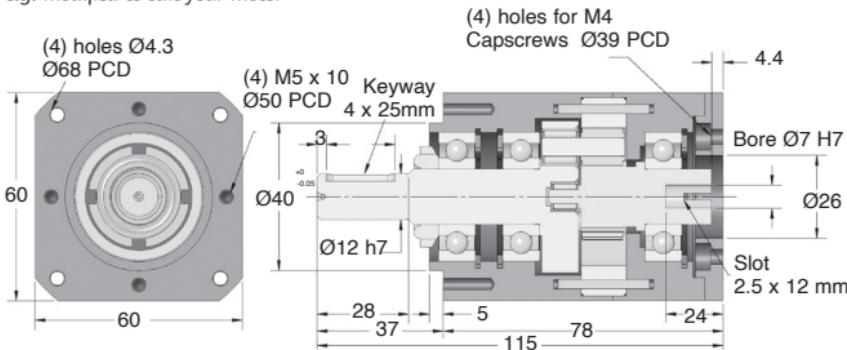
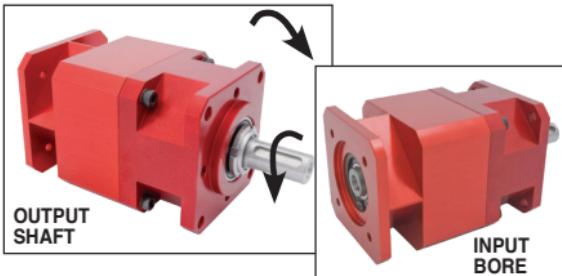
Torque up to 19Nm

EHD06

- Ratios from 3:1 to 6:1
- Input is a slot pin drive
- Output backlash $\leq 15'$ (0.25°)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - gears: hardened steel
- Weight: 0.96kg

Options

- Can be modified to your specifications
- e.g. modified to suit your motor



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	3:1	4:1	5:1	6:1
INPUT SPEED (rpm)	3000	10	10	8
2000	12	12	12	10
1000	15	15	15	12
500	16	16	16	13
200	18	18	18	14
100	19	19	19	15
50	19	19	19	15

Large transmissible torque

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List	-15%	-20%	On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD06-3	3:1	3000	1000	92%	Same	658,62 €
EHD06-4	4:1	3000	750	92%	Same	658,62 €
EHD06-5	5:1	3000	600	92%	Same	658,62 €
EHD06-6	6:1	3000	500	92%	Same	658,62 €

Dimensions in mm

Internal epicyclic servo reducers



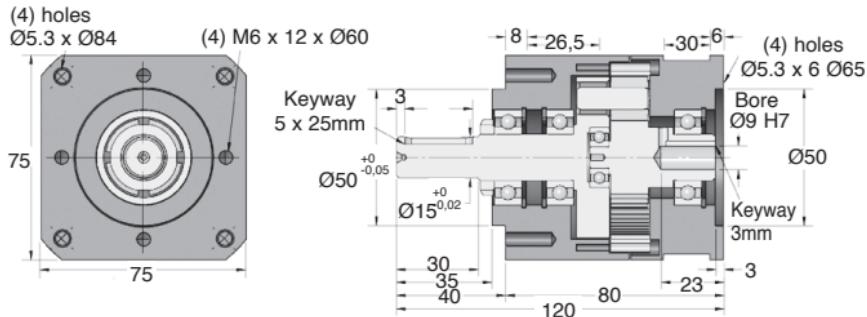
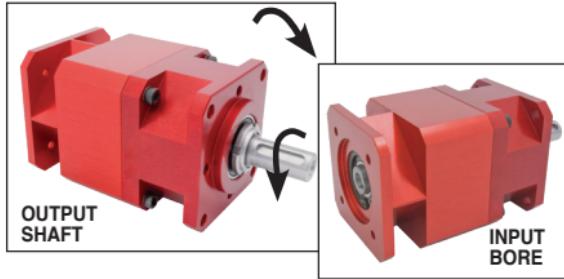
EHD08

Torque up to 50Nm

- Ratios from 3:1 to 6:1
- Output backlash $\leq 15'$ ($0,25^\circ$)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - gears: hardened steel
- Weight: 1.4kg

Options

- Can be modified to your specifications
- e.g. modified to suit your motor



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	3:1	4:1	5:1	6:1
INPUT SPEED (rpm)	3000	25	25	20
2000	30	30	30	23
1000	35	35	35	28
500	42	42	42	35
200	45	45	45	40
100	48	48	48	42
50	50	50	50	45

Large transmissible torque

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD08-3	3:1	3000	1000	92%	Same	814,30 €
EHD08-4	4:1	3000	750	92%	Same	814,30 €
EHD08-5	5:1	3000	600	92%	Same	814,30 €
EHD08-6	6:1	3000	500	92%	Same	814,30 €

Dimensions in mm



Internal epicyclic servo reducers

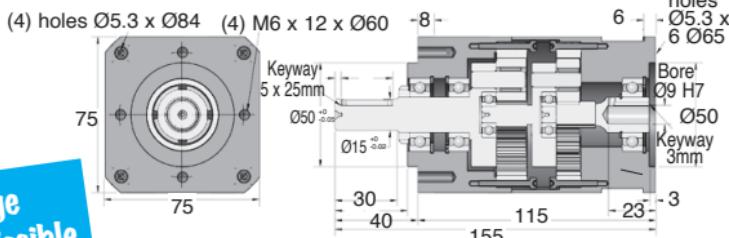
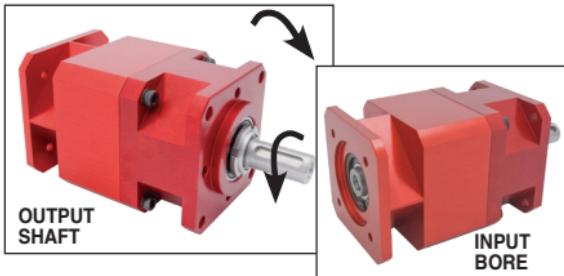
Torque up to 50Nm

EHD08

- Ratios from 9:1 to 36:1
- Output backlash $\leq 30'$ (0.5°)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - gears: hardened steel
- Weight: 2.1 kg

Options

- Can be modified to your specifications
- e.g. modified to suit your motor



**Large
transmissible
torque**

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%		On request

OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	9:1	12:1	15:1	16:1	18:1	20:1	24:1	25:1	30:1	36:1
INPUT SPEED (rpm)	3000	35	35	35	38	42	42	42	42	36
1000	43	43	43	45	45	46	46	46	46	41
500	45	45	45	45	48	48	48	48	48	42
(rpm)	100	50	50	50	50	50	50	50	50	45
	50	50	50	50	50	50	50	50	50	45

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD08-9	9:1	3000	333	86%	Same	1 222,39 €
EHD08-12	12:1	3000	250	86%	Same	1 222,39 €
EHD08-15	15:1	3000	200	86%	Same	1 222,39 €
EHD08-16	16:1	3000	187	86%	Same	1 222,39 €
EHD08-18	18:1	3000	166	86%	Same	1 222,39 €
EHD08-20	20:1	3000	150	86%	Same	1 222,39 €
EHD08-24	24:1	3000	125	86%	Same	1 222,39 €
EHD08-25	25:1	3000	120	86%	Same	1 222,39 €
EHD08-30	30:1	3000	100	86%	Same	1 222,39 €
EHD08-36	36:1	3000	83	86%	Same	1 222,39 €

Dimensions in mm

Internal epicyclic servo reducers



EHD12

Torque up to 140Nm

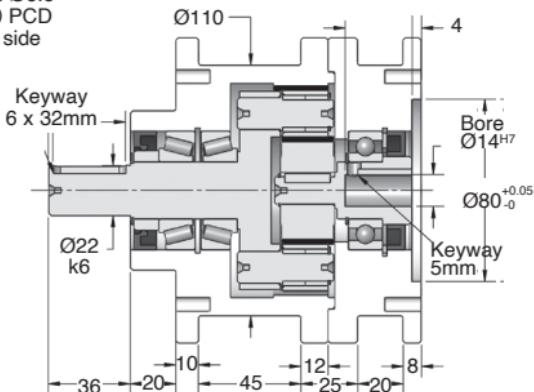
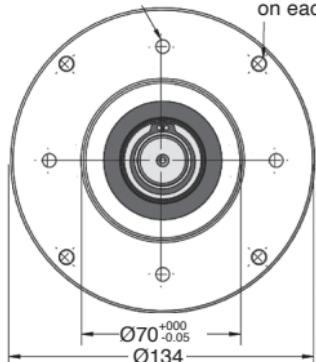
- Ratios from 3:1 to 6:1
- Output backlash $\leq 45'$ ($0,25^\circ$)
- Max. speed: 3,000 rpm
- Materials:
 - casing: anodised aluminium
 - gears: hardened steel
- Weight: 9,25 kg

Options

- Can be modified to your specs
- e.g. modified to suit your motor

(4) holes M6 x 15
on Ø100 PCD on
each side

(4) holes Ø6.6
on Ø120 PCD
on each side



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	3:1	4:1	5:1	6:1
INPUT SPEED (rpm)	3000	75	75	60
2000	90	90	90	75
1000	110	110	110	90
500	120	120	120	100
200	130	130	130	110
100	140	140	140	120
50	140	140	140	120

Large transmissible torque

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%	On request	

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD12-3	3:1	3000	1000	92%	Same	1 461,25 €
EHD12-4	4:1	3000	750	92%	Same	1 461,25 €
EHD12-5	5:1	3000	600	92%	Same	1 461,25 €
EHD12-6	6:1	3000	500	92%	Same	1 461,25 €

Dimensions in mm



Internal epicyclic servo reducers

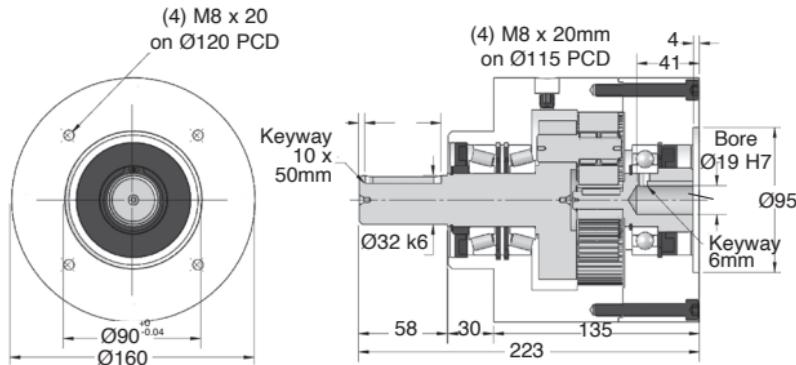
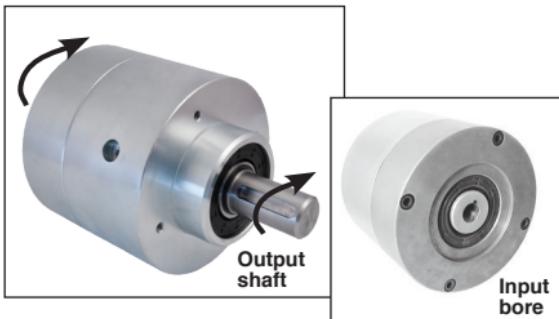
Torque up to 380Nm

EHD16

- Ratios from 3:1 to 6:1
- Output backlash $\leq 15'$ (0.25°)
- Max. speed: 2,000 rpm
- Materials:
 - casing: anodised aluminium
 - gears: hardened steel
- Weight: 18.86 kg

Options

- Can be modified to your specs
- e.g. modified to suit your motor



OUTPUT TORQUE (In Nm, values given as a guide only)

Ratios	3:1	4:1	5:1	6:1
INPUT	250	250	250	210
SPEED (rpm)	1000	300	300	250
200	350	350	350	300
100	380	380	380	320
50	380	380	380	320

Large transmissible torque

DISCOUNTS

Qty	1+	2+	4+	6+
Disc.	List -15%	-20%		On request

Part number	Ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 1000 rpm	Direction of input/output rotation	Price each
EHD16-3	3:1	2000	666,66	92%	Same	1 965,91 €
EHD16-4	4:1	2000	500,00	92%	Same	1 965,91 €
EHD16-5	5:1	2000	400,00	92%	Same	1 965,91 €
EHD16-6	6:1	2000	333,33	92%	Same	1 965,91 €

Dimensions in mm

Spur gear coaxial gearbox

J,XJ,NT,NH,
JHD,XJHD

Technical information

- Speed ratio: from 1:1 to 625:1

- Materials :

Housing - anodised aluminium and black Delrin

Gears - stainless steel, steel

Case hardened steel depending on model

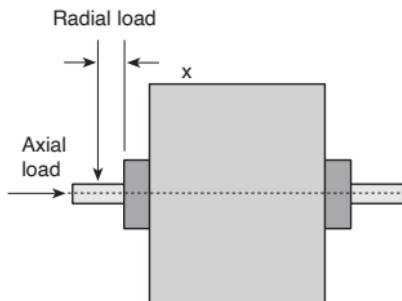
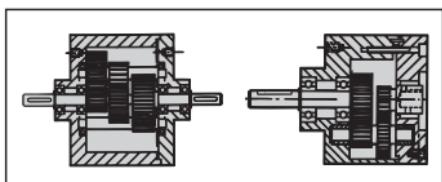
- Max. speed: 3,000 to 4,000 rpm on input
depending on model

- Lubrification: greased for life

- Guarantee: 13 months



J, XJ range



ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Output Radial load (N)	Axial load (N)
J & XJ51-52-53	6	10	10
J & XJ64-65-66	6	20	20
NT & NH61-62-63	10	120	100
NT & NH91-92	15	200	150
NH & NH121-122	20	250	200

Data given based on input speed of 1,000 rpm.

Values given as an indication only.

- **Speed ratio: from 3:1 to 36:1**

- **Materials :**

housing anodised aluminium
gears in case hardened steel

- Max. speed: 2,000 to 4,000 rpm on
input depending on model

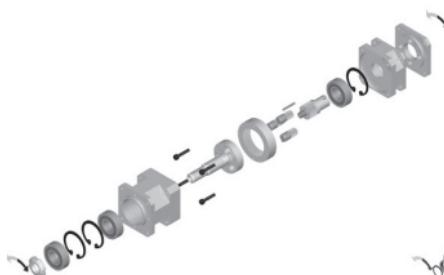
- Backlash: $\leq 15'$ ($0,25^\circ$) on output

- Lubrification: greased for life
(Shell Gadus S5V42P 2,5 grease)

- Guarantee: 13 months

- **Tolerances :**

• Ground shafts h7, Ra 0.8



EHD 04, 06, 08, 12 range

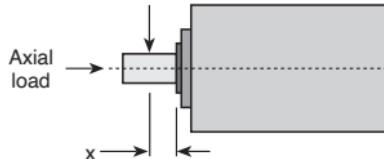


EHD16 range

ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Output	
		Radial load (N)	Axial load (N)
EHD04	10	200	150
EHD06	10	250	150
EHD08	12	300	200
EHD12	20	600	600
EHD16	30	1000	1000

Axial load



Data given based on input speed of 1,000 rpm.
Values given as an indication only.

OTHERS GEARBOXES

P. 233-257

MINIATURE RIGHT ANGLED GEARBOX



p.233

MANUAL WORM/WHEEL GEARBOX



p.236

SINGLE AND DUAL OUTPUT GEARBOXES



p.240

RIGHT ANGLE GEARBOX WITH 1 OR 2 OUTPUTS

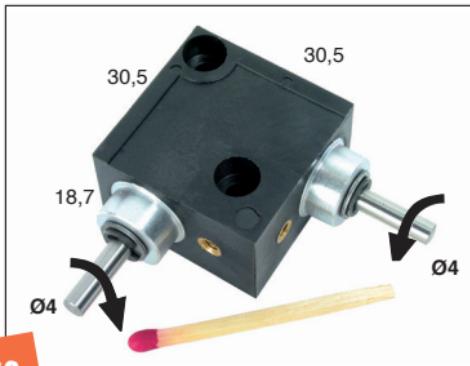


p.250

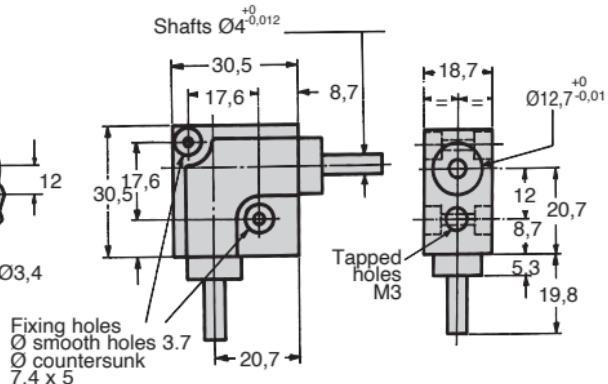
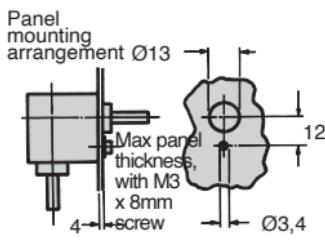
Torque up to 0.68Nm

B332

- Ratio 1:1
- Lightweight construction
- Output backlash 1°
- Max. input speed: 3,000 rpm
- Materials:
 - housing: plastic
 - gears: Type 1 = steel
 - Type 2 = plastic
- Weight: 37 to 41g



Economy range



OUTPUT TORQUE (Nm)

Ratios	1:1	1:1
Max. Input speed	Type 1 Steel 0,68	Type 2 Plastic 0,11

DISCOUNTS

Qty	1+	5+	10+	25+	50+
Disc.	List	-6%	-12%	-18%	On request

Part number	Type	Ratio	Gear	Max. input speed (rpm)	Stock*	Price each 1 to 4
B332.31.2	1	1:1	Steel	1000	✓	67,87 €
B332.31.3	2	1:1	Plastic	Manual	✓	39,43 €

*Depending on availability - Dimensions in mm

Manual bevel gearbox



RAM30

Manual torque up to 4 Nm

- Manually operated bevel gearbox

- Ratios from 1:1

- Materials:

Housing: Glass fibre reinforced PA6
Bevel gears: Case hardened steel

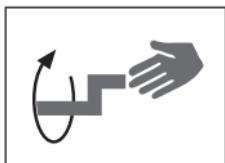
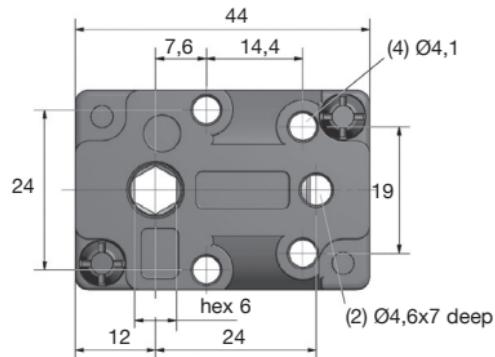
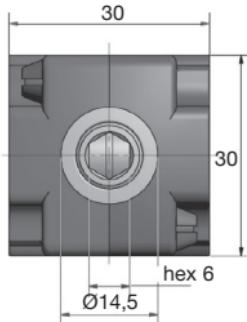
Info

- Not suitable for motorised applications

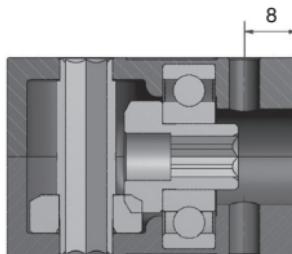
Accessories

- MBEX handle (tome ② p.239)

- AHEX hexagonal shaft (tome ② p.238)



For manual operation
only



DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	Ratio	Input	Output	Max torque (Nm)	Price each 1 to 9
RAM30-1	1:1	hex 6mm	hex 6mm	4	50,79 €

Dimensions in mm



Manual bevel gearbox

Manual torque up to 6 Nm

RAM35

- Manually operated bevel gearbox

- Ratios from 1:1 to 2:1

- Materials:

Housing: Glass fibre reinforced PA6
Bevel gears: Case hardened steel

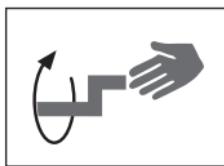
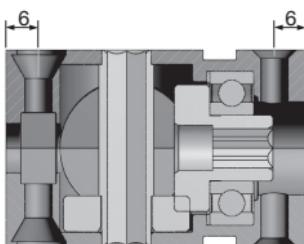
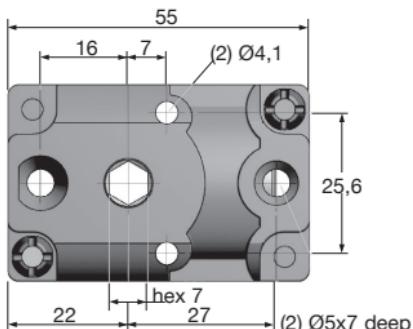
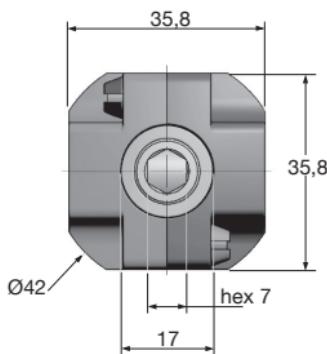
Info

- Not suitable for motorised applications

Accessories

- MBEX handle (tome ② p.239)

- AHEX hexagonal shaft (tome ② p.238)



For manual operation
only

DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	Ratio	Input	Output	Max torque (Nm)	Stock*	Price each 1 to 9
RAM35-1	1:1	hex 7mm	hex 7mm	6	✓	56,67 €
RAM35-2	2:1	hex 7mm	hex 7mm	6	✓	52,46 €

*Depending on availability - Dimensions in mm

Manual worm/wheel gearbox



RVM14

Manual torque up to 5 Nm

- Manually operated bevel gearbox

- Ratios from 1:1 to 23:1

- Materials:

Housing: Die cast zinc

Worm/wheel: Case hardened steel

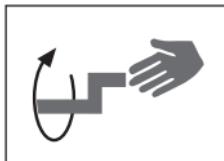
Info

- Not suitable for motorised applications

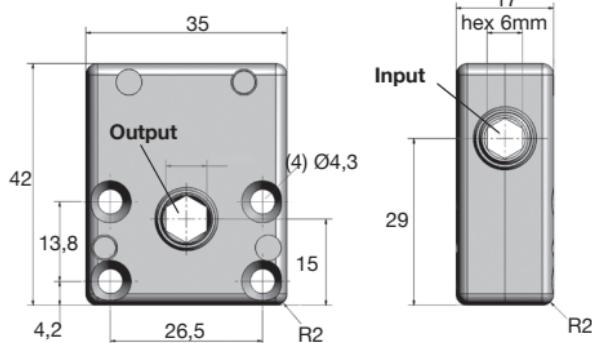
Accessories

- MBEX handle (tome ② p.239)

- AHEX hexagonal shaft (tome ② p.238)



For manual operation
only



DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	Ratio	Input/ Output	Max torque (Nm)	Self locking	Stock*	Price each 1 to 9
RVM14-1	1:1	hex 6mm	2,0	No	✓	98,99 €
RVM14-2	2:1	hex 6mm	2,0	No	✓	98,99 €
RVM14-2.8	2,8:1	hex 6mm	2,5	No	-	98,99 €
RVM14-4.33	4,33:1	hex 6mm	2,0	Yes	✓	98,99 €
RVM14-10	10:1	hex 6mm	4,0	Yes	✓	98,99 €
RVM14-14	14:1	hex 6mm	5,0	Yes	✓	98,99 €
RVM14-15	15:1	hex 6mm	4,0	Yes	✓	98,99 €
RVM14-23	23:1	hex 6mm	3,0	Yes	-	98,99 €

*Depending on availability - Dimensions in mm



Manually operated gearbox

Manual torque up to 17 Nm

RVM25

- Compact manually operated gearbox

- Ratios from 1:1 to 30:1

- Material:

- Housing: Die cast zinc

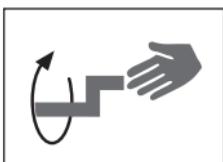
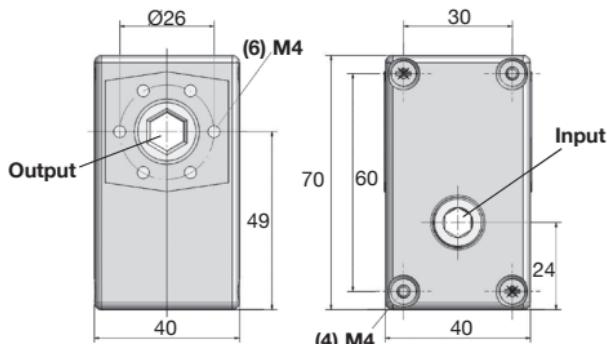
Info

- Not suitable for motorised applications

Accessories

- MBEX handle (tome ② p.239)

- AHEX hexagonal shaft (tome ② p.238)



For manual operation
only

DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	Ratio	Input	Output	Max torque (Nm)	Self locking	Stock*	Price each 1 to 9
RVM25-1	1:1	hex 6mm	hex 9mm	2,0	No	✓	134,05 €
RVM25-2	2:1	hex 6mm	hex 9mm	3,0	No	✓	135,48 €
RVM25-3.25	3,25:1	hex 6mm	hex 9mm	4,0	Yes	✓	138,11 €
RVM25-4.33	4,33:1	hex 6mm	hex 9mm	5,0	Yes	✓	138,11 €
RVM25-7	7:1	hex 6mm	hex 9mm	7,0	Yes	✓	139,79 €
RVM25-8.5	8,5:1	hex 6mm	hex 9mm	9,0	Yes	✓	139,79 €
RVM25-17	17:1	hex 6mm	hex 9mm	12,0	Yes	✓	140,74 €
RVM25-20	20:1	hex 6mm	hex 9mm	15,0	Yes	✓	140,74 €
RVM25-30	30:1	hex 6mm	hex 9mm	17,0	Yes	✓	143,13 €

*Depending on availability - Dimensions in mm

Hexagonal shaft DIN176

Stock

AHEX For manually operated bevel gearbox

- Hexagonal shaft for use with the RAM and RVM bevel gearbox ranges

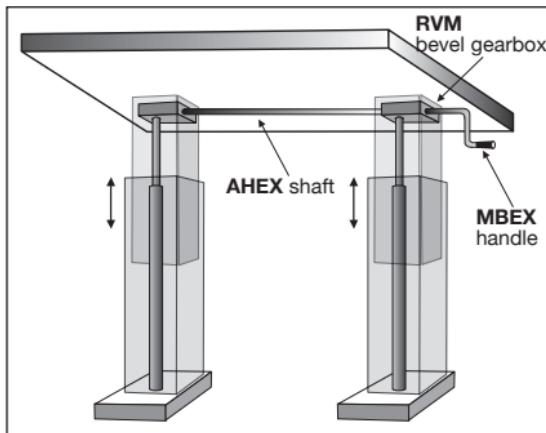
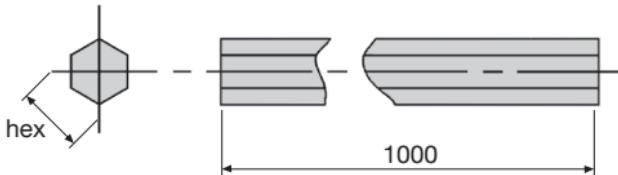
- Cut to required length

- Material:
Steel

Accessories

- RAM operated gearbox (tome ② p.234)

- RVM operated gearbox (tome ② p.236)



Typical application

DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	Profil	Length (mm)	Stock*	Price each 1 to 9
AHEX6-1000	hex 6mm	1000	✓	27,08 €
AHEX7-1000	hex 7mm	1000	✓	32,26 €
AHEX9-1000	hex 9mm	1000	✓	32,26 €

*Depending on availability - Dimensions in mm

Hexagonal ended handle

For use with manually operated bevel gearbox

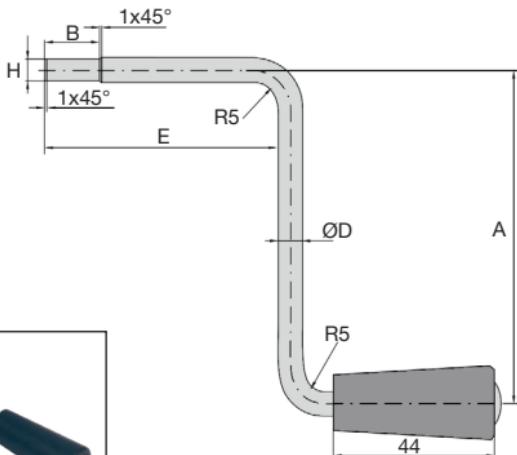
MBEX

- Handle for operating RAM and RVM manual bevel gearboxes

- Material
 - Shaft: stainless steel
 - Rotating handle: plastic

Accessories

- RAM operated gearbox (tome ② p.234)
- RVM operated gearbox (tome ② p.236)



Used with a RVM14 gearbox

DISCOUNTS

Qty	1+	10+	25+	50+
Disc.	List	-5%	-15%	On request

Part number	A	H	ØD	E	B	Stock*	Price each
MBEX6-90	90	hex 6mm	7	60	20	✓	56,65 €
MBEX7-90	90	hex 7mm	8	62	15	✓	45,32 €

*Depending on availability - Dimensions in mm

Single and dual output gearboxes

Size XS



CHTRB8

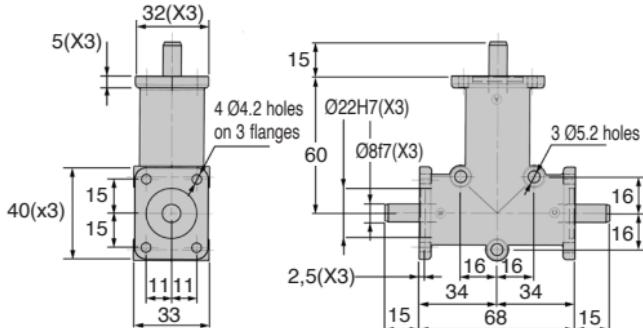
Torque up to 4.7Nm

- Gearbox with one or two outputs

- Ratios from 1:1 to 2:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material :
 - Housing: Cast aluminium
 - Gears: Steel 16CrNi4
- Operating temperature -20° to +80°C

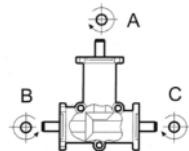
Info.

- Max. axial load : 210N
- Max. radial load at 7,5mm : 110N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
INPUT	3000	1,7
SPEED (rpm)	2000	1,8
	1400	2,0
	800	2,3
	400	2,8
	200	3,3
	100	3,9
	50	4,7



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)		Max. output speed (rpm)		Weight (kg)	Stock*	Price each
					3000	3000	3000	3000			
CHTRB8-1-1	1	1:1	A	B	3000	3000	3000	3000	0,3	✓	155,45 €
CHTRB8-2-1	2	1:1	A	C	3000	3000	3000	3000	0,3	✓	155,45 €
CHTRB8-3-2	3	2:1	A	B	3000	1500	3000	1500	0,3	✓	155,45 €
CHTRB8-4-2	4	2:1	A	C	3000	1500	3000	1500	0,3	-	155,45 €
CHTRB8-5-1	5	1:1	A	B-C	3000	3000	3000	3000	0,3	✓	163,36 €
CHTRB8-6-2	6	2:1	A	B-C	3000	1500	3000	1500	0,3	-	163,36 €

Depending of availability - Dimensions in mm



Single and dual output gearboxes

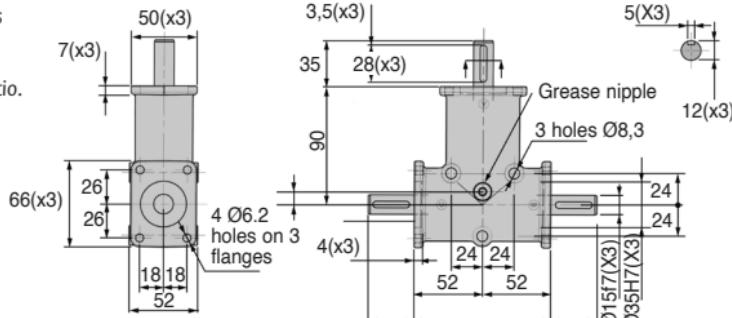
Torque up to 16.5Nm

CHTRB15

- Gearbox with one or two outputs
- Ratios from 1:1 to 2:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material :
 - Housing: Cast aluminium
 - Gears: Steel 16CrN4
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 410N
- Max. radial load at 17,5mm : 200N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
3000	5,9	5,2
2000	6,6	5,8
1400	7,2	6,3
INPUT SPEED (rpm)	800	7,3
400	9,8	8,7
200	11,7	10,3
100	13,9	12,3
50	16,5	14,6

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Stock*	Price each
CHTRB15-1-1	1	1:1	A	B	3000	3000	1,1	✓	202,35 €
CHTRB15-2-1	2	1:1	A	C	3000	3000	1,1	✓	202,35 €
CHTRB15-3-2	3	2:1	A	B	3000	1500	1,1	✓	202,35 €
CHTRB15-4-2	4	2:1	A	C	3000	1500	1,1	✓	202,35 €
CHTRB15-5-1	5	1:1	A	B-C	3000	3000	1,2	✓	211,02 €
CHTRB15-6-2	6	2:1	A	B-C	3000	1500	1,2	✓	211,02 €

Depending of availability - Dimensions in mm

Single and dual output gearboxes



CHTRB20

Torque up to 53.1Nm

- Gearbox with one or two outputs

- Ratios from 1:1 to 2:1
 - Maximum speed 3,000 rpm
 - Lubrication: Synthetic oil

- Material:

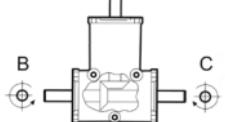
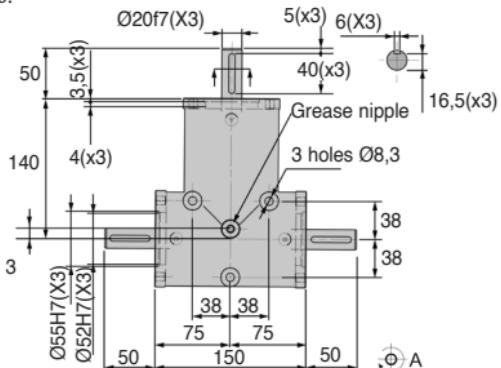
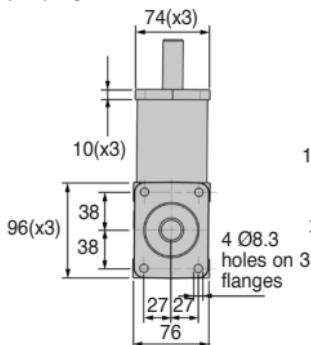
Housing: Cast aluminium

Gears: Steel 16CrN4

- Operating temperature -20° to +80°C

Info.

- Max. axial load : 760N
 - Max. radial load at 25mm : 430N
 - If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
3000	19,1	15,3
2000	21,1	16,9
1400	23,1	18,5
INPUT	800	26,5
SPEED	400	31,6
(rpm)	200	37,5
	100	44,6
	50	53,1
		42,5

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Type	Ratio	Input	Output	Max. input	Max. output	Weight (kg)	Stock*	Price each
					speed (rpm)	speed (rpm)			
CHTRB20-1-1	1	1:1	A	B	3000	3000	3,4	✓	287,53 €
CHTRB20-2-1	2	1:1	A	C	3000	3000	3,4	-	287,53 €
CHTRB20-3-2	3	2:1	A	B	3000	1500	3,4	-	287,53 €
CHTRB20-4-2	4	2:1	A	C	3000	1500	3,4	✓	287,53 €
CHTRB20-5-1	5	1:1	A	B-C	3000	3000	3,5	✓	292,13 €
CHTRB20-6-2	6	2:1	A	B-C	3000	1500	3,5	✓	292,13 €

Depending of availability - Dimensions in mm



Single and dual output gearboxes

Torque up to 87.3Nm

CHTRB25

- Gearbox with one or two outputs

- Ratios from 1:1 to 2:1

- Maximum speed 3,000 rpm

- Lubrication: Synthetic oil

- Material:

Housing: Cast aluminium

Gears: Steel 16CrN4

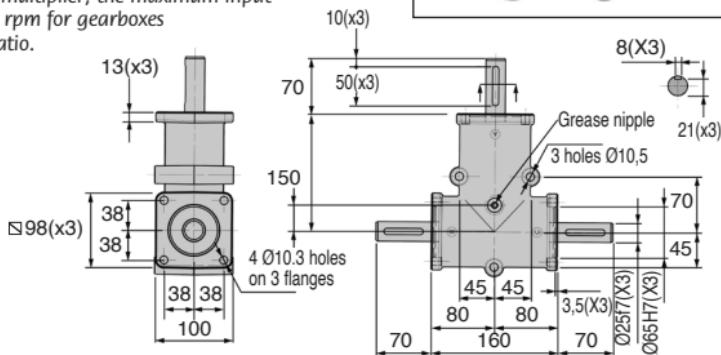
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 880N

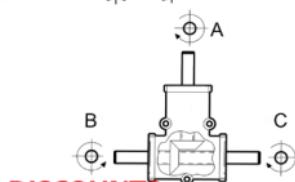
- Max. radial load at 35mm : 490N

- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000 2000 1400 800 400 200 100 50	31,4 34,7 38,0 43,7 51,9 61,8 73,4 87,3
3000 2000 1400 800 400 200 100 50	29,6 32,7 35,8 41,1 48,9 58,2 69,2 82,3	



DISCOUNTS

Qty	1+	2+	4+
Disc. List	-15%	On request	

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Price each
CHTRB25-1-1	1	1:1	A	B	3000	3000	5,5	356,67 €
CHTRB25-2-1	2	1:1	A	C	3000	3000	5,5	356,67 €
CHTRB25-3-2	3	2:1	A	B	3000	1500	5,5	356,67 €
CHTRB25-4-2	4	2:1	A	C	3000	1500	5,5	356,67 €
CHTRB25-5-1	5	1:1	A	B-C	3000	3000	5,8	369,52 €
CHTRB25-6-2	6	2:1	A	B-C	3000	1500	5,8	369,52 €

Dimensions in mm

Single and dual output gearboxes

Size XS

CHTRP8

Torque up to 9.1Nm

- Gearbox with one or two outputs

- Ratios from 1:1 to 2:1

- Maximum speed 3,000 rpm

- Lubrication: Synthetic oil

- Material:

- Housing: Cast aluminium

- Gears: Steel 16CrNi4

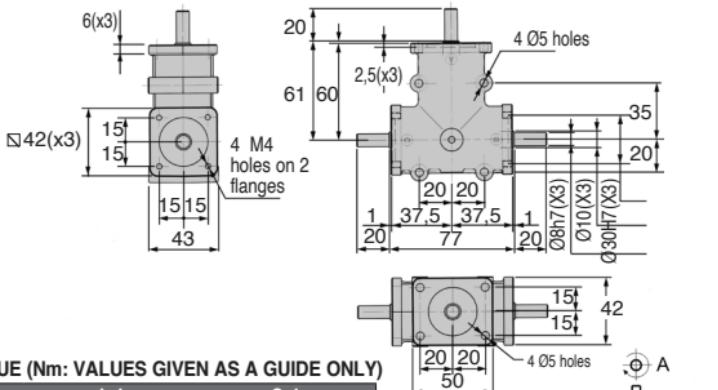
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 280N

- Max. radial load at 10mm : 150N

- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1
INPUT SPEED (rpm)	3000 2000 1400 800 400 200 100 50	3,3 3,6 4,0 4,5 5,4 6,4 7,6 9,1
3000 2000 1400 800 400 200 100 50	3,2 3,5 3,9 4,4 5,3 6,3 7,5 8,9	

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List -15%	-20%	On request	

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Stock*	Price each 1 to 5
CHTRP8-1-1	1	1:1	A	B	3000	3000	0,6	✓	213,79 €
CHTRP8-2-1	2	1:1	A	C	3000	3000	0,6	✓	213,79 €
CHTRP8-3-2	3	2:1	A	B	3000	1500	0,6	✓	241,47 €
CHTRP8-4-2	4	2:1	A	C	3000	1500	0,6	-	241,49 €
CHTRP8-5-1	5	1:1	A	B-C	3000	3000	0,6	✓	226,61 €
CHTRP8-6-2	6	2:1	A	B-C	3000	1500	0,6	-	256,35 €

Depending of availability - Dimensions in mm



Single and dual output gearboxes

Torque up to 34.5Nm

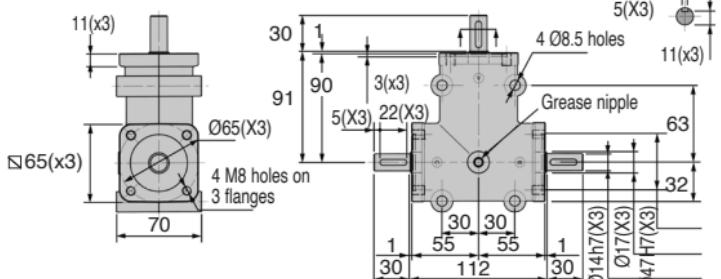
CHTRP14

- Gearbox with one or two outputs

- Ratios from 1:1 to 3:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material:
 - Housing: Cast aluminium
 - Gears: Steel 16CrNi4
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 530N
- Max. radial load at 15mm : 300N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with 3:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

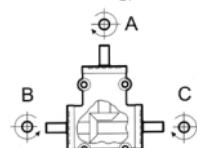
Ratios	1:1	2:1	3:1	
INPUT SPEED (rpm)	3000 2000 1400 800 400 200 100 50	12,4 13,7 15,0 17,2 20,5 24,4 29,0 34,5	12,2 13,5 14,7 16,9 20,1 23,9 28,5 33,8	9,9 10,9 12,0 13,7 16,3 19,4 23,1 27,5

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Stock*	Price each 1 to 5
CHTRP14-1-1	1	1:1	A	B	3000	3000	2	✓	259.02 €
CHTRP14-2-1	2	1:1	A	C	3000	3000	2	✓	259.02 €
CHTRP14-3-2	3	2:1	A	B	3000	1500	2	✓	277.83 €
CHTRP14-4-2	4	2:1	A	C	3000	1500	2	✓	277.83 €
CHTRP14-5-3	5	3:1	A	B	3000	1000	2	✓	284.23 €
CHTRP14-6-3	6	3:1	A	C	3000	1000	2	✓	284.23 €
CHTRP14-7-1	7	1:1	A	B-C	3000	3000	2	✓	284.23 €
CHTRP14-8-2	8	2:1	A	B-C	3000	1500	2	✓	297.53 €
CHTRP14-9-3	9	3:1	A	B-C	3000	1000	2	✓	319.71 €

Depending of availability - Dimensions in mm



Single and dual output gearboxes



CHTRP14

Torque up to 28.8Nm

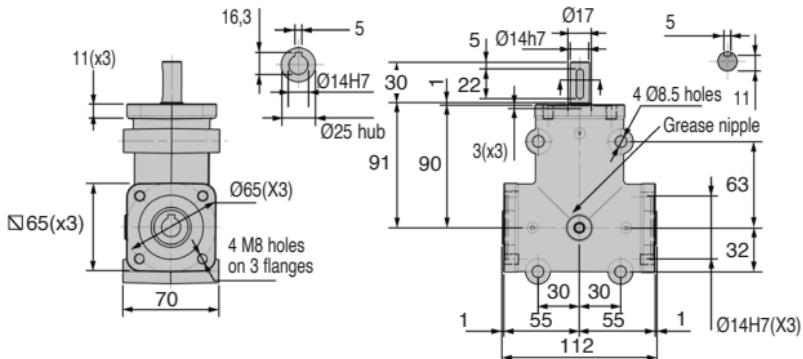
- Gearbox with one or two outputs

- Ratios from 1:1 to 3:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material:
 - Housing: Cast aluminium
 - Gears: Steel 16CrNi4
- Operating temperature -20° to +80°C

Ø14 hollow output shaft

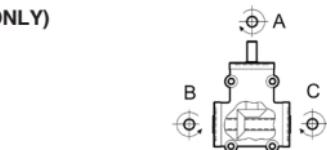
Info.

- Max. axial load : 530N
- Max. radial load at 15mm : 300N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio and 500 rpm for a 3:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1
INPUT SPEED (rpm)	3000	10,3	10,1
2000	11,4	11,2	10,9
1400	12,5	12,2	12,0
800	14,4	14,1	13,7
400	17,1	16,7	16,3
200	20,3	19,9	19,4
100	24,2	23,7	23,1
50	28,8	28,1	27,5



DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Price each 1 to 5 Stock*
CHTRP14-10-1	10	1:1	A	B-C	3000	3000	2	325,84 € ✓
CHTRP14-11-2	11	2:1	A	B-C	3000	1500	2	351,98 € ✓
CHTRP14-12-3	12	3:1	A	B-C	3000	1000	2	379,13 € ✓

Depending of availability - Dimensions in mm



Single and dual output gearboxes

Torque up to 87.3Nm

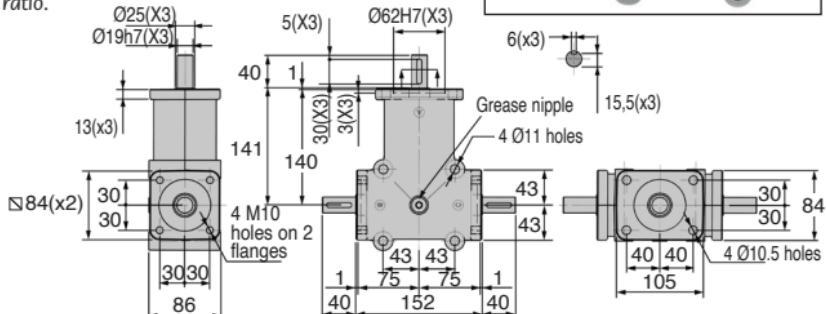
CHTRP19

- Gearbox with one or two outputs

- Ratios from 1:1 to 3:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material:
 - Housing: Cast aluminium
 - Gears: Steel 16CrNi4
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 650N
- Max. radial load at 20mm : 450N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio and 500 rpm for a 3:1 ratio.

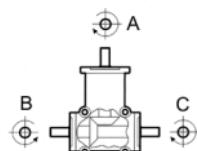


OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1
INPUT SPEED (rpm)			
3000	31,4	29,6	22,8
2000	34,7	32,7	25,2
1400	38,0	35,8	27,6
800	43,7	41,1	31,7
400	51,9	48,9	37,7
200	61,8	58,2	44,9
100	73,4	69,2	53,3
50	87,3	82,3	63,4

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request



Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Stock*	Price each 1 to 5
CHTRP19-1-1	1	1:1	A	B	3000	3000	4,5	✓	379,01 €
CHTRP19-2-1	2	1:1	A	C	3000	3000	4,5	-	379,01 €
CHTRP19-3-2	3	2:1	A	B	3000	1500	4,5	-	396,87 €
CHTRP19-4-2	4	2:1	A	C	3000	1500	4,5	-	396,85 €
CHTRP19-5-3	5	3:1	A	B	3000	1000	4,5	✓	414,85 €
CHTRP19-6-3	6	3:1	A	C	3000	1000	4,5	-	414,89 €
CHTRP19-7-1	7	1:1	A	B-C	3000	3000	4,5	✓	378,89 €
CHTRP19-8-2	8	2:1	A	B-C	3000	1500	4,5	-	402,52 €
CHTRP19-9-3	9	3:1	A	B-C	3000	1000	4,5	✓	431,67 €

Depending of availability - Dimensions in mm

Single and dual output gearboxes



CHTRP19

Torque up to 75.7Nm

- Gearbox with one or two outputs

- Ratios from 1:1 to 3:1

- Maximum speed 3,000 rpm

- Lubrication: Synthetic oil

- Material:

- Housing: Cast aluminium

- Gears: Steel 16CrNi

- Operating temperature -20° to +80°C

Ø19 hollow
output
shafts

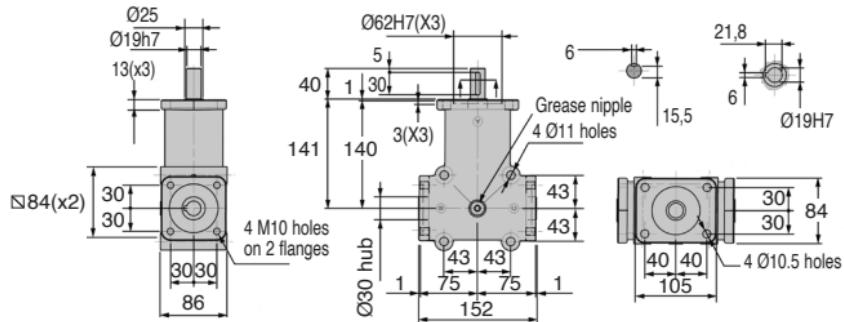


Info.

- Max. axial load : 650N

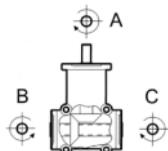
- Max. radial load at 20mm : 450N

- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio and 500 rpm for a 3:1 ratio.



OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1
INPUT SPEED (rpm)	3000	27,2	26,6
2000	30,1	28,3	25,2
1400	32,9	31,0	27,6
800	37,9	35,6	31,7
400	45,0	42,4	37,7
200	53,5	50,4	44,9
100	63,7	59,9	53,3
50	75,7	71,3	63,4



DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	Type	Ratio	Input	Output	Max. input speed (rpm)	Max. output speed (rpm)	Weight (kg)	Price each 1 to 5 Stock*
CHTRP19-10-1	10	1:1	A	B-C	3000	3000	4,5	489,85 € ✓
CHTRP19-11-2	11	2:1	A	B-C	3000	1500	4,5	- 578,90 €
CHTRP19-12-3	12	3:1	A	B-C	3000	1000	4,5	- 667,13 €

Depending of availability - Dimensions in mm



Single and dual output gearboxes

Torque up to 87.3Nm

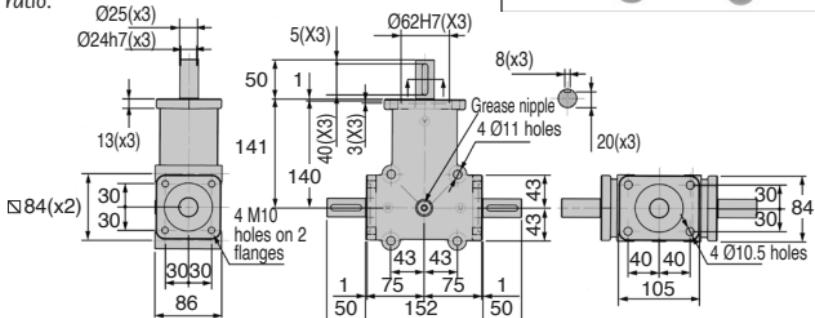
CHTRP24

- Gearbox with one or two outputs

- Ratios from 1:1 to 3:1
- Maximum speed 3,000 rpm
- Lubrication: Synthetic oil
- Material:
 - Housing: Cast aluminium
 - Gears: Steel 16CrNi4
- Operating temperature -20° to +80°C

Info.

- Max. axial load : 800N
- Max. radial load at 25mm : 600N
- If used as a multiplier, the maximum input speed is 750 rpm for gearboxes with a 2:1 ratio and 500 rpm for a 3:1 ratio.

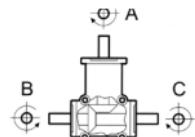


OUTPUT TORQUE (Nm: VALUES GIVEN AS A GUIDE ONLY)

Ratios	1:1	2:1	3:1	
INPUT SPEED (rpm)	3000 2000 1400 800 400 200 100 50	31,4 34,7 38,0 43,7 51,9 61,8 73,4 87,3	29,6 32,7 35,8 41,1 48,9 58,2 69,2 82,3	22,8 25,2 27,6 31,7 37,7 44,9 53,3 63,4

DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request



Part number	Type	Ratio	Max. input speed		Max. output speed		Weight (kg)	Stock*	Price each
			Input	Output	(rpm)	(rpm)			
CHTRP24-1-1	1	1:1	A	B	3000	3000	4,5	-	388,64 €
CHTRP24-2-1	2	1:1	A	C	3000	3000	4,5	-	667,13 €
CHTRP24-3-2	3	2:1	A	B	3000	1500	4,5	-	437,31 €
CHTRP24-4-2	4	2:1	A	C	3000	1500	4,5	-	437,31 €
CHTRP24-5-3	5	3:1	A	B	3000	1000	4,5	✓	470,68 €
CHTRP24-6-3	6	3:1	A	C	3000	1000	4,5	✓	470,70 €
CHTRP24-7-1	7	1:1	A	B-C	3000	3000	4,5	✓	427,83 €
CHTRP24-8-2	8	2:1	A	B-C	3000	1500	4,5	✓	463,50 €
CHTRP24-9-3	9	3:1	A	B-C	3000	1000	4,5	-	510,41 €

Depending of availability - Dimensions in mm

Right angle gearbox with 1 or 2 outputs

HLA19

Torque up to 43 Nm

- Right angle bevel gearbox

- Max speed 1,400 rpm

- Output backlash: 12' to 20'

- Materials:

Components: steel

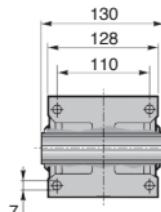
Housing: cast iron

- Thermal power: 4.5 kW (Heat dissipation capability)

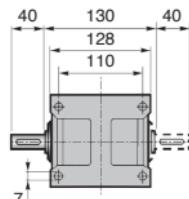
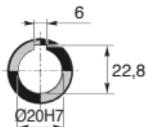


Part number

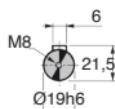
- When ordering, specify the rotation direction and mounting position by replacing E and B3 in the Part number (see presentation page (tome ② p.256)).



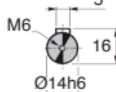
Hollow output shaft C



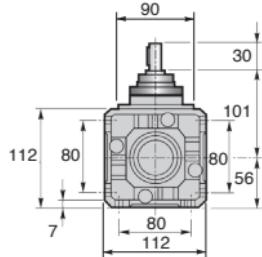
Single output shaft S or dual shafts B



Ratio 1:1



Ratio 2:1
Ratio 3:1



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Ø input shaft (h6)	Output shaft	Max output speed (rpm)	Mechanical output torque (Nm)	Weight (kg)	Price each
HLA19-1-C-E-B3	1:1	19	hollow	1400	35	8,5	378,49 €
HLA19-2-C-E-B3	2:1	14	hollow	700	40	8,5	378,49 €
HLA19-3-C-E-B3	3:1	14	hollow	467	43	8,5	378,49 €
HLA19-1-S-E-B3	1:1	19	single	1400	35	8,5	377,27 €
HLA19-2-S-E-B3	2:1	14	single	700	40	8,5	377,27 €
HLA19-3-S-E-B3	3:1	14	single	467	43	8,5	377,27 €
HLA19-1-B-E-B3	1:1	19	dual	1400	35	8,5	389,60 €
HLA19-2-B-E-B3	2:1	14	dual	700	40	8,5	389,60 €
HLA19-3-B-E-B3	3:1	14	dual	467	43	8,5	389,60 €

*For maximum torque and a service factor applied, see presentation page - Dimensions en mm

Right angle gearbox with 1 or 2 outputs

Torque up to 43 Nm

HLC19

- Right angle bevel gearbox

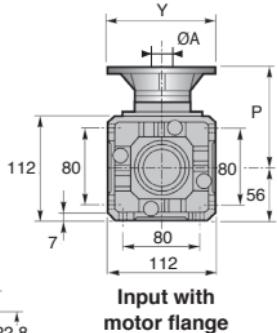
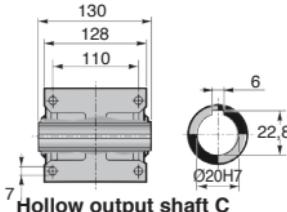
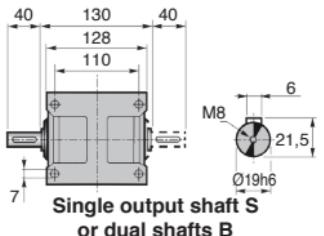
- For 1,8 kW motor
- Max speed 1,400 rpm
- Output backlash: 12' to 20'
- Materials:
 - Components: steel
 - Housing: cast iron
- Thermal power: 4.5 kW (Heat dissipation capability)

Part number

- When ordering, specify the rotation direction and mounting position by replacing **E** and **B3** in the Part number (see presentation page (**tome ② p.256**)).

Input flange

- The following flanges are available: 63B5, 71B5, 80B5, 90B5 and 80B14 and the reference should be added to the Part number



Input flange

IEC	63B5	71B5	80B5	90B5	80B14
Y	140	160	200	200	120
P	104	111	131	131	131
ØA	11	14	19	24	19

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Output shaft	Max output speed (rpm)	Mechanical output torque* (Nm)	Weight (kg)	Price each
HLC19-1-C-63B5-E-B3	1:1	hollow	1400	35	11,5	451,24 €
HLC19-2-C-63B5-E-B3	2:1	hollow	700	40	11,5	451,24 €
HLC19-3-C-63B5-E-B3	3:1	hollow	467	43	11,5	451,24 €
HLC19-1-S-63B5-E-B3	1:1	single	1400	35	11,5	450,01 €
HLC19-2-S-63B5-E-B3	2:1	single	700	40	11,5	450,01 €
HLC19-3-S-63B5-E-B3	3:1	single	467	43	11,5	450,01 €
HLC19-1-B-63B5-E-B3	1:1	dual	1400	35	11,5	462,34 €
HLC19-2-B-63B5-E-B3	2:1	dual	700	40	11,5	462,34 €
HLC19-3-B-63B5-E-B3	3:1	dual	467	43	11,5	462,34 €

*For maximum torque and a service factor applied, see presentation page - Dimensions in mm

Right angle gearbox with 1 or 2 outputs

HLA24

Torque up to 78 Nm

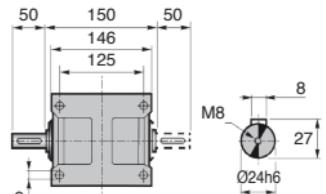
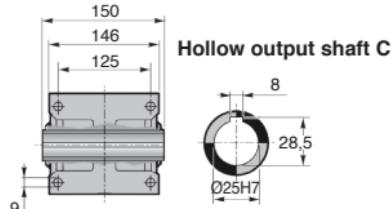
- Right angle bevel gearbox

- Max speed 1,400 rpm
- Output backlash: 12' to 20'
- Materials:
 - Components: steel
 - Housing: cast iron
- Thermal power: 6.7 kW (Heat dissipation capability)

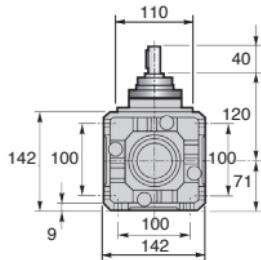
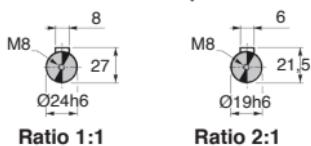


Part number

- When ordering, specify the rotation direction and mounting position by replacing E and B3 in the Part number (see presentation page (tome 2 p.256)).



Single output shaft S or dual shafts B



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Øinput shaft (h6)	Input shaft	Max output speed (rpm)	Mechanical output torque* (Nm)	Weight (kg)	Price each
HLA24-1-C-E-B3	1:1	24	hollow	1400	73	14	527,68 €
HLA24-2-C-E-B3	2:1	19	hollow	700	72	14	527,68 €
HLA24-3-C-E-B3	3:1	19	hollow	467	78	14	527,68 €
HLA24-1-S-E-B3	1:1	24	single	1400	73	14	494,39 €
HLA24-2-S-E-B3	2:1	19	single	700	72	14	494,39 €
HLA24-3-S-E-B3	3:1	19	single	467	78	14	494,39 €
HLA24-1-B-E-B3	1:1	24	dual	1400	73	14	525,22 €
HLA24-2-B-E-B3	2:1	19	dual	700	72	14	525,22 €
HLA24-3-B-E-B3	3:1	19	dual	467	78	14	525,22 €

*For maximum torque and a service factor applied, see presentation page - Dimensions en mm

Right angle gearbox with 1 or 2 outputs

Torque up to 78 Nm

HLC24

- Right angle bevel gearbox

- For 4 kW motor
- Max speed 1,400 rpm
- Output backlash: 12' to 20'
- Materials:
 - Components: steel
 - Housing: cast iron
- Thermal power: 6.7 kW (Heat dissipation capability)

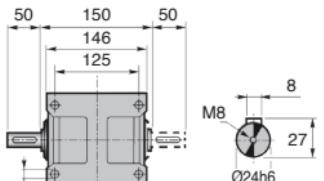
Part number

- When ordering, specify the rotation direction and mounting position by replacing **E** and **B3** in the Part number (tome ② p.256).

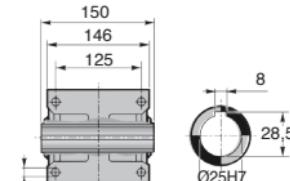


Input flange

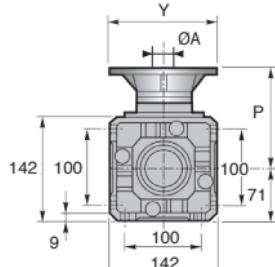
- The following flanges are available: 63B5, 71B5, 80B5, 90B5 and 80B14 and the reference should be added to the Part number



Single output shaft S
or dual shafts B



Hollow output shaft C



Input with
motor flange

Input flange

IEC	71B5	80B5	90B5	100/112B5
Y	160	200	200	250
P	128	148	148	158
ØA	14	19	24	28

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Output shaft	Max output speed (rpm)	Mechanical output torque* (Nm)	Weight (kg)	Price each
HLC24-1-C-71B5-E-B3	1:1	hollow	1400	73	19	623,85 €
HLC24-2-C-71B5-E-B3	2:1	hollow	700	72	19	623,85 €
HLC24-3-C-71B5-E-B3	3:1	hollow	467	78	19	623,85 €
HLC24-1-S-71B5-E-B3	1:1	single	1400	73	19	590,56 €
HLC24-2-S-71B5-E-B3	2:1	single	700	72	19	590,56 €
HLC24-3-S-71B5-E-B3	3:1	single	467	78	19	590,56 €
HLC24-1-B-71B5-E-B3	1:1	dual	1400	73	19	639,88 €
HLC24-2-B-71B5-E-B3	2:1	dual	700	72	19	639,88 €
HLC24-3-B-71B5-E-B3	3:1	dual	467	78	19	639,88 €

*For maximum torque and a service factor applied, see presentation page - Dimensions in mm

Right angle gearbox with 1 or 2 outputs

HLA28

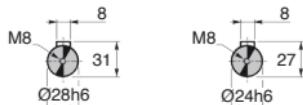
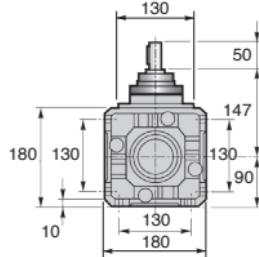
Torque up to 182 Nm

- Right angle bevel gearbox

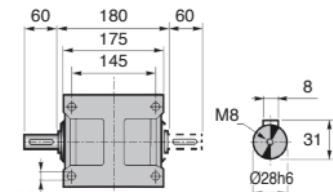
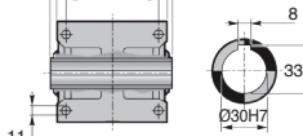
- Max speed 1,400 rpm
- Output backlash: 12' to 20'
- Materials:
 - Components: steel
 - Housing: cast iron
- Thermal power: 10.3 kW (Heat dissipation capability)

Part number

- When ordering, specify the rotation direction and mounting position by replacing E and B3 in the Part number (see presentation page (**tome 2 p.256**)).

**With input shaft****Ratio 1:1****Ratio 2:1
Ratio 3:1****DISCOUNTS**

Qty	1+	2+	4+
Disc.	List	-5%	On request

Hollow output shaft C**Single output shaft S or dual shafts B**

Part number	Ratio	ØInput shaft (h6)	output shaft	Max output speed (rpm)	Mechanical output torque* (Nm)	Weight (kg)	Price each
HLA28-1-C-E-B3	1:1	28	hollow	1400	146	23	784,13 €
HLA28-2-C-E-B3	2:1	24	hollow	700	145	23	784,13 €
HLA28-3-C-E-B3	3:1	24	hollow	467	182	23	784,13 €
HLA28-1-S-E-B3	1:1	28	single	1400	146	23	702,76 €
HLA28-2-S-E-B3	2:1	24	single	700	145	23	702,76 €
HLA28-3-S-E-B3	3:1	24	single	467	182	23	702,76 €
HLA28-1-B-E-B3	1:1	28	dual	1400	146	23	745,91 €
HLA28-2-B-E-B3	2:1	24	dual	700	145	23	745,91 €
HLA28-3-B-E-B3	3:1	24	dual	467	182	23	745,91 €

*For maximum torque and a service factor applied, see presentation page - Dimensions en mm

Right angle gearbox with 1 or 2 outputs

Torque up to 182 Nm

HLC28

- Right angle bevel gearbox

- For 9,2 kW motor
- Max speed 1,400 rpm
- Output backlash: 12' to 20'
- Materials:
 - Components: steel
 - Housing: cast iron
- Thermal power: 10.3 kW (Heat dissipation capability)

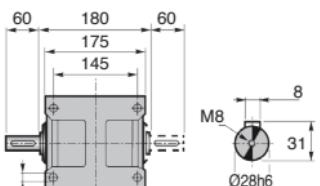
Part number

- When ordering, specify the rotation direction and mounting position by replacing **E** and **B3** in the Part number (see presentation page (**tome 2** p.256)).

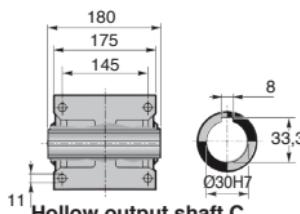


Input flange

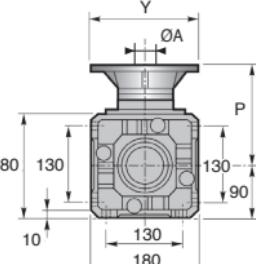
- The following flanges are available: 63B5, 71B5, 80B5, 90B5 and 80B14 and the reference should be added to the Part number



Single output shaft S
or dual shafts B



Hollow output shaft C



Input with
motor flange

Input flange

IEC	80B5	90B5	100/112B5	132B5
Y	200	200	250	300
P	171	171	181	203
ØA	19	24	28	38

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Output shaft	Max output speed (rpm)	Mechanical output torque* (Nm)	Weight (kg)	Price each
HLC28-1-C-80B5-E-B3	1:1	hollow	1400	146	33	906,18 €
HLC28-2-C-80B5-E-B3	2:1	hollow	700	145	33	906,18 €
HLC28-3-C-80B5-E-B3	3:1	hollow	467	182	33	906,18 €
HLC28-1-S-80B5-E-B3	1:1	single	1400	146	33	824,81 €
HLC28-2-S-80B5-E-B3	2:1	single	700	145	33	824,81 €
HLC28-3-S-80B5-E-B3	3:1	single	467	182	33	824,81 €
HLC28-1-B-80B5-E-B3	1:1	dual	1400	146	33	1 429,74 €
HLC28-2-B-80B5-E-B3	2:1	dual	700	145	33	1 429,74 €
HLC28-3-B-80B5-E-B3	3:1	dual	467	182	33	1 429,74 €

*For maximum torque and a service factor applied, see presentation page - Dimensions in mm

Right angled gearbox

HLA

HLC

With spiral bevel gears

- Gearbox available with 3 different final ratios and 3 types of output shaft, hollow, single or dual. It is also possible to have an additional optional output shaft on the opposite side to the input.

- Three input types are available; a projecting shaft (**HLA**), a coupling for a motor (bell and joint are options) or a coupling for a compact motor with an IEC flange (**HLC**).
- The cast iron body (EN GJL 200 UNI EN 1561) has internal and external ribs to ensure rigidity and is machined on all surfaces for easy positioning. A single lubrication chamber guarantees improved heat dissipation and better lubrication of all internal components.
- The internal mechanism of these gearboxes consists of a train of steel (16CrNi4 or 18NiCrMo5) GLEASON spiral bevel gears with precision lapped profiles.
- The use of high quality bearings on all axes ensures a long life even under conditions of very high radial and axial stresses.
- The body of the gearbox, flanges, bells and covers have a RAL5010 blue painted finish.



HLA With input shaft



HLC With motor flange

The different types of input, rotation direction (see table below) and mounting positions (see table opposite) offer a wide variety of possible configurations and make up the final Part number.

The following modifications should be made to the basic reference:

Basic Part number - Input type-Direction of rotation-Mounting position

Example: HLC19-1-C-71B5-F-VA

$i = 1 \quad i > 1$



$i = 1 \quad i > 1$



Direction of rotation

Right angled gearbox

With spiral bevel gears

HLA
HLC

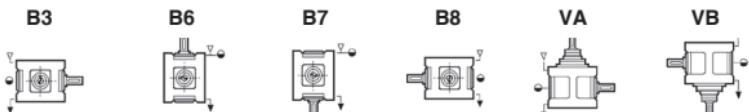
Lubrication

Right angle gearboxes require oil lubrication and are fitted with filling points, drain plugs and level gauges. The mounting position should always be specified in the Part number when ordering.

The HLA19 gearbox is lubricated for life.

Mounting position and oil volume (litres)

The quantities of oil shown in the following table are given as a guide only and apply for the mounting position shown. They have been calculated for correct operation in normal ambient temperature and an input speed of 1,400 rpm.



L	B3	B6	B7	B8	VA	VB
19	0,2	0,2	0,2	0,2	0,2	0,2
24	0,4	0,8	0,8	0,4	0,6	0,5
28	0,9	0,8	0,8	0,8	0,9	0,8

The thermal power

The table opposite gives the thermal power ratings (P_{T0} (kW) for all gearbox sizes.

FS: service factor with motor

T2: Torque with service factor

T2M: Torque with service factor of 1

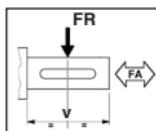
Values highlighted in grey should be modified using the appropriate service factor and thermal power.

n1 (rpm)	Thermal power (kW)		
	L19	L24	L28
1400	4,5	6,7	10,3

L	n1 = 1400		LC		LA		
	ir	n2	T2	P1	FS'	T2M	P
	ratio	rpm	Nm	kW		Nm	kW
19	1	1400	12	1,8	3	35	5,5
	2	700	24	1,8	1,7	40	3
	3	467	36	1,8	1,2	43	2,2
24	1	1400	26	4	2,7	73	11
	2	700	53	4	1,4	72	5,5
	3	467	78	4	1	78	4
28	1	1400	61	9,2	2,4	146	22
	2	700	122	9,2	1,2	145	11
	3	467	182	9,2	1	182	9,2

Axial and radial loads (N)

The radial loads shown in the table are given for loads applied to the mid-point of the shaft and are given for gears operating with a service factor of 1.



i _n	L					
	19	24	28	Fr ₁	Fa ₁	Fr ₁
1-2-3	400	80	630	125	1000	200
Input shaft (at 1400 rpm)						
1	800	160	1250	250	2000	400
2-3	1000	160	1600	320	2500	500

For the case of dual projecting shafts, the load applied to each shaft is limited to 2/3 of the value given subject to the condition that the loads are identical, are applied in the same direction and have the same direction of rotation.

MOTOR-GEARBOX
12V ET 24V DC



p.264

POWER SUPPLY
24V DC



p.272

SPEED CONTROLLER 5A



p.276

POTENTIOMETER



p.277

ASYNCHRONOUS AC MOTOR



p.280

ASYNCHRONOUS AC MOTOR



p.285

ASYNCHRONOUS AC MOTOR

P. 260-347

WORM AND WHEEL
GEARBOX



p.308

MECHANICAL MOTOR
DRIVE



p.312

ASYNCHRONOUS
MOTOR

stainless
steel



p.318

WORM AND WHEEL
GEARBOX

stainless
steel



p.322

Buyers guide

Motorgearboxes

Direct current



Part number	MAX22	MAX26	BUH77
Gearbox type	spur	spur	spur
Voltage	12V DC or 24V DC	12V DC or 24V DC	12V DC or 24V DC
Nominal current (A)	0,05 → 0,30	0,05 → 0,63	0,275 → 1,4
Max.torque (Nm)	0,07 → 0,20	0,08 → 0,6	0,1 → 2
Max. speed (rpm)	27 → 435	8 → 459	14 → 900
Quality	☆☆☆	☆☆☆	☆☆☆
Price	€€	€€	€€
Pages	2 p.264	2 p.265	2 p.266

AC



Part number	DER / RFV / RFK	LINK64
Motor	asynchrone	synchrone
Gearbox type	worm and wheel stainless steel	spur
Voltage	230/400V AC	230V AC mono
Nominal current (A)	0,58 → 3,3	0,051
Max.torque (Nm)	11 → 141	1,2 → 6
Max. speed (rpm)	14 → 186	0,5 → 31
Quality	☆☆☆	☆☆☆
Price	€€€	€€
Pages	2 p.318	2 p.278



DOG316

DOG111

DOG319

DOG258

worm and wheel

worm and wheel

worm and wheel

worm and wheel

12V DC or
24V DC12V DC or
24V DC12V DC or
24V DC12V DC or
24V DC

2 → 4

2 → 5

3 → 10

5 → 12

1,5 → 2

1,5 → 6

6 → 10

12 → 15

27,5 → 65

10 → 240

10 → 80

25 → 40

☆☆

☆☆

☆☆

☆☆

€

€€

€€

€€€

② p.267

② p.268

② p.269

② p.270



CHM30-MOT

CHM40-MOT

CHM50-MOT

CHM63-MOT

asynchrone

asynchrone

asynchrone

asynchrone

worm and wheel

worm and wheel

worm and wheel

worm and wheel

400V AC tri

400V AC tri

400V AC tri

400V AC tri

-

-

-

-

9 → 22

22 → 52

33 → 87

67 → 165

17 → 186

14 → 186

14 → 186

14 → 186

☆☆

☆☆

☆☆

☆☆

€€

€€

€€

€€

② p.285

② p.286

② p.287

② p.288

24V motorisation kit



KITDOG

Worm and wheel

-The kit comprises:

- 1 motorised gearbox DOG319
- 1 servoamplifier FIRSTDC-1Q
- 1 potentiometer MDPOT-10T/10K
- 1 power supply ALIDR120-24

(please refer to product pages for full technical details)

- Reduced size
- Low noise
- Solid design
- Powerfull

Application

- Industrial drives

Advantages

- Complete set
- Easy to set up



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Motor used	Max speed (rpm)	Max torque (Nm)	Stock*	Price each 1 to 5
KIT-DOG-30	DOG319-24-30	30	9	✓	582,77 €
KIT-DOG-45	DOG319-24-45	45	9	✓	582,77 €
KIT-DOG-85	DOG319-24-85	85	4	-	582,77 €

*Depending on availability - Dimensions in mm

2 Planetary gears

KITBUH

- The kit comprises :
 - 1 motorised gearbox BUH77
 - 1 servoamplifier NANODC-1Q-30/3
 - 1 cable NANO DC-RS232
 - 1 power supply 24V 2.1A
- (please refer to product pages for full technical details)
- Reduced diameter
- Works in Start/Stop mode or in reverse direction

Application

- Industrial drives

Advantages

- Complete set of components
- Easy to install



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Motor used	Max speed (rpm)	Max torque (Nm)	Price each 1 to 5
KIT-BUH-900	BUH77-24-004	900	0,10	327,72 €
KIT-BUH-260	BUH77-24-012	260	0,30	327,72 €
KIT-BUH-140	BUH77-24-022	140	0,55	327,72 €
KIT-BUH-075	BUH77-24-040	75	1,00	327,72 €
KIT-BUH-023	BUH77-24-135	23	1,80	327,72 €
KIT-BUH-014	BUH77-24-250	14	2,00	327,72 €

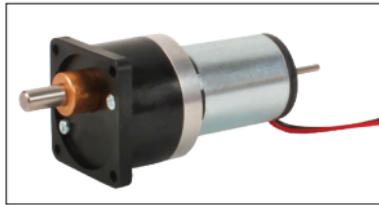
Dimensions in mm

Motor-gearbox, 12 and 24 V DC Size XS

MAX22

Torque from 0.07 to 0.2 Nm

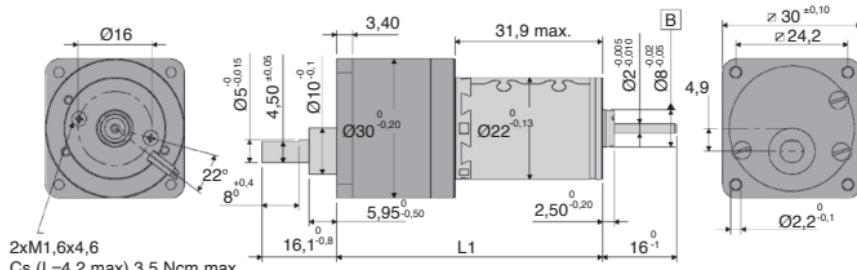
- Type of gearbox: spur gear
- Bearings: self lubricating bushes
- Avg angular backlash: 2° to 3 °
- Max axial load: 15N
- Max radial load at 5 mm from fixing surface: 35 N
- Working temperature: -5 to 65 °C
- Weight: 104g min



Accessories

- ESCON-4Q-50/5 (servo-amplifier, tome ② p.276)
- NANODC-1Q-30/3 (speed controller, tome ② p.274)
- Power supplies: ALIDR30-12 and ALIDR30-24 (tome ② p.271)

Replaces the MAX30



$\oplus \text{ Ø}0,2 \text{ B}$

Wire length: 150 mm ±5

Stripped and tinned ends: 4 mm ±1

DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Ratio	N° of stages	Efficiency	L1 (mm)	No-load speed (rpm)	Speed under load (rpm)	Nominal torque (Nm)	Nominal current (A)	Price each 1 to 5
12 V version									
MAX22-12-015	15:1	3	73%	54,9	356	176	0,07	0,30	158,62 €
MAX22-12-100	100:1	4	66%	57,4	53	47	0,10	0,08	183,34 €
MAX22-12-200	200:1	5	59%	62,4	27	23	0,20	0,09	189,52 €
24 V version									
MAX22-24-015	15:1	3	73%	54,9	435	252	0,07	0,18	158,62 €
MAX22-24-100	100:1	4	66%	57,4	65	58	0,10	0,05	161,83 €
MAX22-24-200	200:1	5	59%	62,4	33	29	0,20	0,05	189,52 €

Dimensions in mm

Motor-gearboxes 12 and 24 V DC

Torque from 0.075 to 0.6 Nm

MAX26

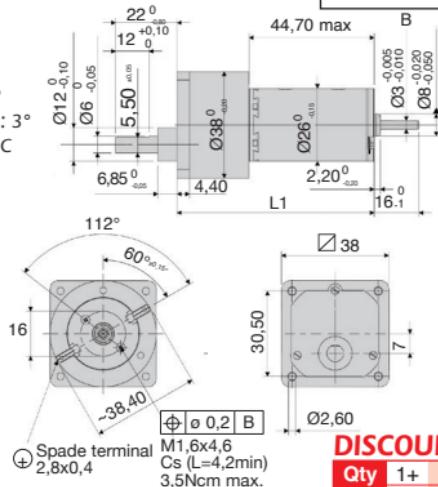
- **Gearbox type : spur gear**

- Precious metal brushes
- Bearing: self lubricating
- Max axial load: 30N
- Min axial backlash: 0.03mm
- Max axial backlash: 0.2mm
- Max radial load: 50N at 5mm from flange
- Press fit force: 500N
- Angular backlash (no load): 2°
- Angular backlash (under load): 3°
- Working temp: from -5° to 65°C
- Input stage: Tufnol
- Output stage: Steel
- Weight: 181g



Accessories

- NANODC-1Q-30/3
(tome ② p.274)
- ESCON-4Q-50/5
(tome ② p.276)
- Power supply ALIDR30-12 and ALIDR30-24
(tome ② p.271)



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Reduction	Nº of stages	Max efficiency	L1 (mm)	No-load speed under load (rpm)	Speed (rpm)	nominal torque (Nm)	nominal current (A)	Price each 1 to 5
12V Version									
MAX26-12-006	6	2	0,81	62,4	740	457	0,08	0,63	193,80 €
MAX26-12-010	10	2	0,81	62,4	444	311	0,10	0,50	193,80 €
MAX26-12-018	18	3	0,73	67,9	247	155	0,20	0,61	201,96 €
MAX26-12-030	30	3	0,73	67,9	148	115	0,20	0,37	201,96 €
MAX26-12-060	60	4	0,66	70,4	74	47	0,60	0,61	211,14 €
MAX26-12-100	100	4	0,66	70,4	44	35	0,60	0,37	211,14 €
MAX26-12-200	200	5	0,59	72,3	22	19	0,60	0,22	216,24 €
MAX26-12-500	500	6	0,53	75,3	9	8	0,60	0,11	222,36 €
24V Version									
MAX26-24-006	6	2	0,81	62,4	752	459	0,08	0,25	193,80 €
MAX26-24-010	10	2	0,81	62,4	451	310	0,10	0,25	193,80 €
MAX26-24-018	18	3	0,73	67,3	251	154	0,20	0,31	201,96 €
MAX26-24-030	30	3	0,73	67,3	150	116	0,20	0,19	201,96 €
MAX26-24-060	60	4	0,66	70,4	75	46	0,60	0,31	211,14 €
MAX26-24-100	100	4	0,66	70,4	45	35	0,60	0,19	211,14 €
MAX26-24-200	200	5	0,59	72,3	22	20	0,60	0,11	216,24 €
MAX26-24-500	500	6	0,53	75,9	9	8	0,60	0,053	222,36 €

Dimensions in mm

Motor-gearbox 12 and 24 V DC

BUH77

Torque from 0.1 to 2 Nm

- Gearbox type : spur gear
- Bearing :bronze
- Max axial load : 10N
- Max radial load : 30N at 5mm from flange
- Angular backlash : 0.05 to 0.6mm
- Working temp : from -10° to 70°C
- Weight : 250g

Application

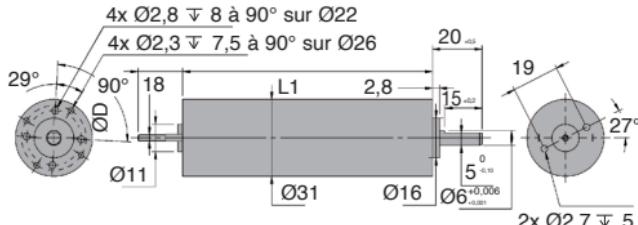
- Drives, ideal for Start/Stop applications or reverse applications

Advantages

- Compact size
- High torque

Accessories

- Servoamplifier:
NANODC-1A-30/3
(**tome ② p.274**)
- Power supply
ALIDR30-12,
ALIDR30-24
(**tome ② p.271**)



DISCOUNTS

Qty	1+	6+	10+
Disc	Price -7% on request		

Part number	Reduction	N° of stages	ØD	L1 (mm)	No-load speed (rpm)	Speed under load (rpm)	Nominal torque (Nm)	Nominal current (A)	Nominal Price each 1 to 5
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12V DC Version

BUH77-12-004	3,4	1	3	100,5	1215	900	0,10	1,4	174,80 €
BUH77-12-012	11,6	2	3	106,6	355	260	0,30	1,4	174,80 €
BUH77-12-022	21,4	2	3	106,6	190	140	0,55	1,4	174,80 €
BUH77-12-040	39,7	2	3	106,6	105	75	1,00	1,4	183,33 €
BUH77-12-135	135	3	2,5	88,5	33	23	1,80	0,85	183,33 €
BUH77-12-250	250	3	2,5	88,5	18	14	2,00	0,85	183,33 €

24V DC Version

BUH77-24-004	3,4	1	3	100,5	1215	900	0,10	0,7	174,80 €
BUH77-24-012	11,6	2	3	106,6	355	260	0,30	0,7	174,80 €
BUH77-24-022	21,4	2	3	106,6	190	140	0,55	0,7	185,46 €
BUH77-24-040	39,7	2	3	106,6	105	75	1,00	0,7	185,46 €
BUH77-24-135	135	3	2,5	88,5	33	23	1,80	0,425	185,46 €
BUH77-24-250	250	3	2,5	88,5	18	14	2,00	0,275	185,46 €

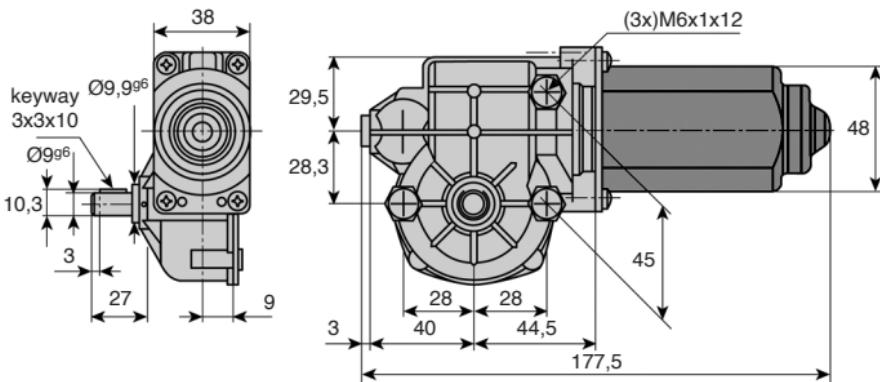
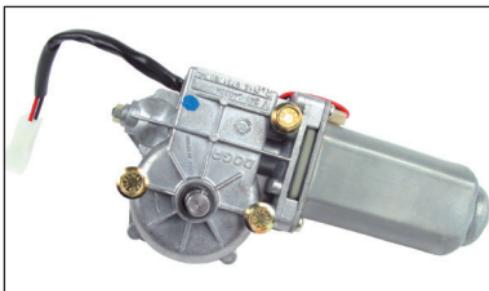
Dimensions in mm



- Gearbox type: worm
- Bearings: self-lubricating bushes
- Working temp.: -40°C to +80°C
- Weight: 1kg
- Ingress protection: IP40
- Angular backlash: N/A
- Max axial load: N/A
- Radial load: N/A

Accessories

- Servo Amplifiers FIRSTDc-1Q-60/10 and NANODC- 1Q-30/3
(tome 2 p.274-275)
- Power Supplies ALIDR30-12, ALIDR60-24, ALIDR-120-24
(tome 2 p.271-272)



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

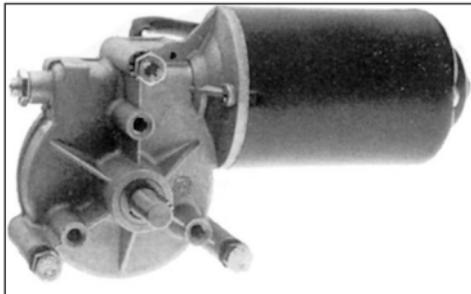
Part number	Ratio	Efficiency	Speed under load (rpm)	Nominal torque (Nm)	Nominal current (A)	Compatible with card Nano	First	Price each 1 to 5
12V DC Version								
DOG316-12-46	62:1	0,5	38	2,0	3,4	No	Yes	116,08 €
DOG316-12-30	62:1	0,5	32	1,5	3,0	No	Yes	116,08 €
24V DC Version								
DOG316-24-75	62:1	0,5	65	1,5	3,0	No	Yes	116,08 €
DOG316-24-46	62:1	0,5	38	2,0	1,7	Yes	Yes	116,08 €

Dimensions in mm

DOG111

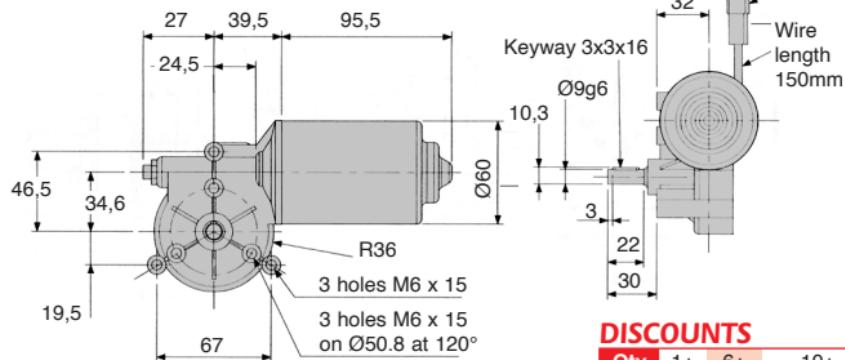
Torque from 1.5Nm to 6Nm

- Gearbox type: worm and wheel
- Bearing: self-lubricating bushes
- Angular backlash: N/A
- Max. axial load: N/A
- Max. radial load: N/A
- Working temp. from -40°C to +80°C
- Min. weight: 1.25kg
- Motor does not exhibit anti back drive behaviour for efficiencies greater than 50%



Accessories

- Servo Amplifier FIRSTD C-1Q-60/10
- Speed controller NANODC-1Q-30/3
(tome 2 p.274-275)
- Power Supplies ALIDR60-24, ALIDR120-24
(tome 2 p.271-272)



DISCOUNTS

Qty	1+	6+	10+
Disc.	List -7%		On request

Part number	Ratio	Efficiency (%)	Unloaded speed (rpm)	Speed under load (rpm)	Nominal torque (Nm)	Nominal current (A)	Compatible card	Price each 1 to 5
12 V DC Version								
DOG111-12-135	12,2:1	60	135	105	1,5	4,0	No Yes	251,58 €
DOG111-12-50	62,0:1	45	50	40	5,0	5,0	No Yes	135,44 €
DOG111-12-34	62,0:1	45	34	25	6,0	4,0	No Yes	135,44 €
DOG111-12-17	62,0:1	45	17	10	6,0	2,0	Yes Yes	138,23 €
24 V DC Version								
DOG111-24-270	12,2:1	60	270	240	1,5	4,0	No Yes	251,58 €
DOG111-24-78	62,0:1	45	78	70	3,0	3,0	Yes Yes	149,26 €
DOG111-24-50	62,0:1	45	50	40	5,0	2,5	Yes Yes	143,73 €
DOG111-24-34	62,0:1	45	34	25	6,0	2,0	Yes Yes	138,23 €

Dimensions in mm



Motor-gearbox 12V and 24V DC

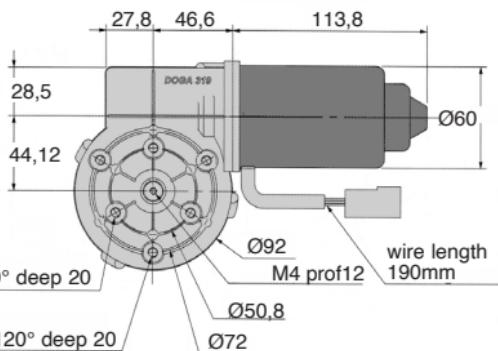
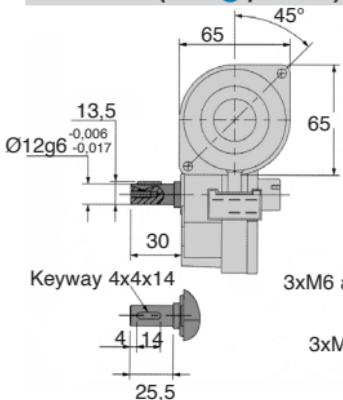
Torque from 4Nm to 9Nm

DOG319

- Gearbox type: worm
- Bearings: self-lubricating bushes
- Angular backlash: N/A
- Max. axial load: N/A
- Max. radial load: N/A
- Working temperature: -40°C to +80°C
- Weight 1.7kg
- Materials:
 - Screws: steel
 - Wheel: POM

Accessories

- Servo Amplifier FIRSTDC-1Q-60/10
- Speed controller NANODC-1Q-30/3 (tome ② p.274-275)
- Power Supplies ALIDR120-24, ALIDR240-24 (tome ② p.272-273)



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

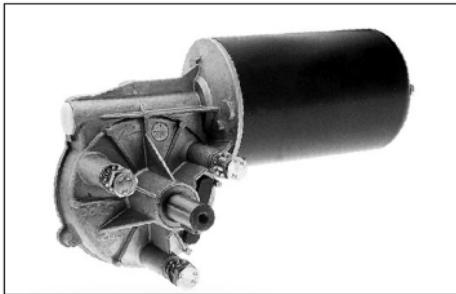
Part number	Ratio	Unloaded	Speed	Nominal	Nominal	Compatible	Price each
		speed (rpm)	under load (rpm)	torque (Nm)	current (A)	card Nano	
12 V DC Version							
DOG319-12-15	81:1	18	15	9	3	No	Yes 214,91 €
DOG319-12-30	81:1	35	30	9	7	No	Yes 215,52 €
DOG319-12-45	81:1	50	45	8	6	No	Yes 214,91 €
DOG319-12-85	39:1	95	85	4	7	No	Yes 263,16 €
24 V DC Version							
DOG319-24-30	81:1	30	30	9	3	No	Yes 227,63 €
DOG319-24-45	81:1	45	45	9	3	No	Yes 203,94 €
DOG319-24-85	39:1	95	85	4	3,5	No	Yes 271,93 €

Dimensions in mm

DOG258

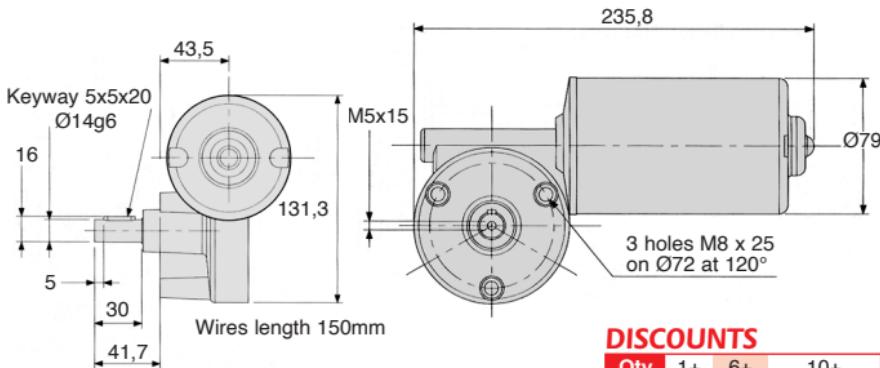
Torque from 12Nm to 15Nm

- Gearbox type: worm
- Bearings: self-lubricating bushes
- Angular backlash: N/A
- Max. axial load: N/A
- Max. radial load: N/A
- Working temp.: -40°C to +80°C
- Weight: 3kg
- Ingress protection: IP53
- Self locking
- Material:
 - steel worm
 - wheel POM



Accessories

- Speed controller not available
- Servo amplifier FIRSTDC-1Q-60/10
- Power Supplies ALIDR120-14, ALIDRP240-24
(tome ② p.275 et 272-273)
- Important: an encoder cannot be mounted behind the motor.



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Ratio	No load speed (rpm)	Vitesse under load (rpm)	Nominal torque (Nm)	Nominal current (A)	Price each 1 to 5
12 V DC Version						
DOG258-12-50	52:1	50	40	12	12	403,65 €
DOG258-12-30	52:1	30	25	15	10	403,65 €

24 V DC Version
Dimensions in mm



12 and 24V DC power supplies

Max current 1.5A or 2A

ALIDR
30

Advantages

- Universal mains input
- DIN rail mounting, DINTS35/7.5 or 15
- Protected against short circuits, overloads and over-voltage.
- Insulation class II
- LED supply indication
- Air-cooled
- 100% Burn-in

Characteristics

- Output voltage can be varied by +/- 10%
- Max ripple on output +/- 1%

Protections

- Max overload on output limited to 105/160%
- Output is short circuit protected
- Max overvoltage on output 115 to 135% of nominal output voltage

Environment

- EMC: Conforms to EN55022 class B, EN61000-3-2,3, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61204-3
- Max working temperature -20° to +50°C at 100% rated load (+60°C at 80% rated load)

Connection

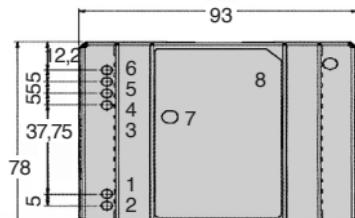
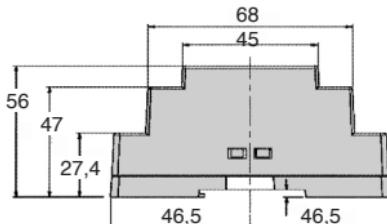
- Supply: 2 screw clamp terminals (0.2 to 2.5mm²)
- Output: 4 screw clamp terminals (0.2 to 2.5mm²)

Dimensions/Material

- Enclosure: painted plastic
- Dimensions 93 x 78 x 56 (L x W x H)

Terminal n° Connection Terminal n° Connection

1	AC/N	5,6	V-
2	AC/L	7	LED
3,4	V+	8	+VADJ



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Supply voltage (V AC)	Output voltage (V DC)	Output current (A)	Weight (kg)	Price each 1 to 5
ALIDR30-12	85-264 / 120-370	12	2	0,27	46,80 €
ALIDR30-24	85-264 / 120-370	24	1,5	0,27	56,65 €

Dimensions in mm

24V DC power supply



ALIDR 120

Max current 5A

Advantages

- Mains input voltage switch-selectable
- UL508 listed
- Din rail mounting, DINTS35/7.5 or 15
- Protected against short circuits, overloads and over-voltage.
- Insulation class II
- LED supply indication
- Air-cooled
- 100% Burn-in

Characteristics

- Output voltage can be varied from 24 to 48V DC
- Max ripple on output +/- 1%

Protections

- Max overload on output limited to 105/160%
- Output is short circuit protected
- Max overvoltage on output 120 to 140% of nominal voltage

Environment

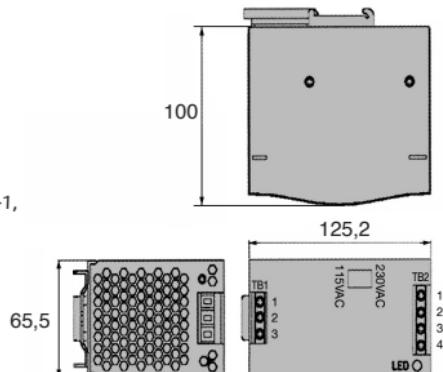
- Environmental
- EMC: Conforms to EN55022 class B, EN61000-3-2,3, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61204-3
- Personnel safety: Conforms to UL508, UL60950-1, TUV60950-1
- Max working temperature -20° to +60°C (natural convection)

Connections

- Supply: 3 screw clamp terminals DIN
- Output: 4 screw clamp terminals DIN

Dimensions/Material

- Enclosure: painted plastic
- Dimensions 65.5 x 125.2 x 100 (L x W x H)



Terminal assignment (TB1)

Contact n°	Connection
1	FG
2	AC/N
3	AC/L

Terminal assignment (TB2)

Contact n°	Connection
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

DISCOUNTS

Qty	1+	6+	10+
Disc. List	-7%	On request	

Part number	Supply voltage (V AC)	Output voltage (V DC)	Output current (A)	Weight (kg)	Price each 1 to 5
ALIDR120-24	88-132 / 176-264 commutable	24	5	0,79	140,43 €

Dimensions in mm



24V DC power supply

Max current 10A

**ALIDRP
240**

Advantages

- Universal mains input
PF>0.98@115Vac, PF>0.95@230Vac
- Protected against short circuits, overloads and over-voltage
- Switching frequency : 100KHz
- UL508 listed
- Din rail mounting, DINTS35/7.5 or 15.
- LED supply indication
- Air-cooled
- 100% Burn-in

Characteristics

- Output voltage can be varied from 24 to 48V DC
- Max ripple on output +/- 1%

Protections

- Max overload on output limited to 105 to 150%
- Output is short circuit protected
- Max overvoltage on output 30 to 36 V DC

Environment

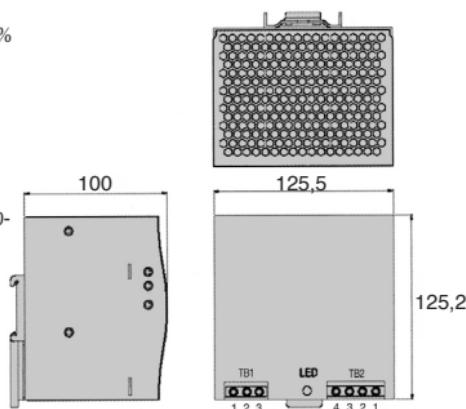
- EMC: Conforms to EN55022 class B, EN61000-3-2,3, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61204-3
- Personnel safety: Conforms to UL508, UL60950-1, TUV60950-1
- Max working temperature -10° to +50°C @100% load, +70°C @60% load (natural convection)

Connection

- Supply: 3 screw clamp terminals DIN
- Output: 4 screw clamp terminals DIN

Dimensions/Material

- Enclosure: painted plastic
- Dimensions 125.5 x 125.2 x 100 (L x W x H)



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Supply voltage (V AC)	Output voltage (V DC)	Output current (A)	Weight (kg)	Price each 1 to 5
ALIDRP240-24	85-264 / 120-370	24	10	1,2	206,95 €

Dimensions in mm

3A Servo amplifier

Size
XS  week

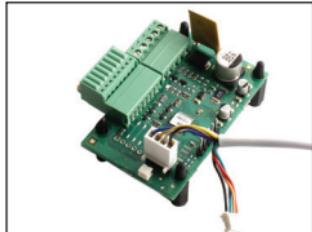
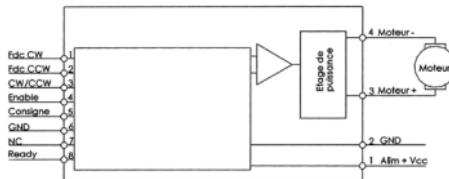
NANO

For motor control systems

- Digital motor servo amplifier for driving DC motors (>90W)
- Accepts limit switch inputs
- Small size
- Easily configured using a PC, RS232 cable required (not supplied)

Accessories

- MDPOT-10T/10K Control potentiometer (tome ② p.277)
- NANO DC -RS232 configuration cable



Technical specifications

30V/3A

- Max Power	90W	- Under voltage	Yes
- Power Supply	10 to 30 Vdc	- Over-current	Adjustable
- Max permanent output current	3A	- Motor short circuit	Yes
- Operating mode	PWM, 1 quadrant	- Short circuit on inputs	Yes
Inputs			
- Speed control	External voltage 0/10V	- Working temperature	0 to 40°C
- Enable	Voltage free contact (earthed)	- Storage temperature	-40 to +85°C
- Direction	Voltage free contact (earthed)	- Relative humidity	20 to 80 %non-condensing
- Limit switches	2 Voltage free contacts (earthed)	Connections	
Outputs		- Connectors	Spring loaded terminals, pitch 2.54mm.
- Ready	Open collector, 30Vdc 20mA	Wire size : 0.14 to 1.5mm ²	
Controls		- Connectors (motor + supply)	Screw clamp terminals, pitch 3.81mm .
- Max speed	Analogue voltage	Wire size : 0.14 to 1.5mm ²	
- Max current	Analogue voltage		
Mechanical characteristics			
Protection		- Dimensions	50x100x32mm
- Reverse polarity	Resettable fuse	- Weight	105g
- Over voltage	Yes	- Mounting:	Uses M4 screws

DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Mounting	Screw spacing	Weight (g)	Price each 1 to 5
NANODC-1Q-30/3	M4 screw	34x54	0,11	125,25 €
NANODC-RS232		Cable NANO DC - RS232		94,29 €

Dimensions in mm



10A Servo amplifier

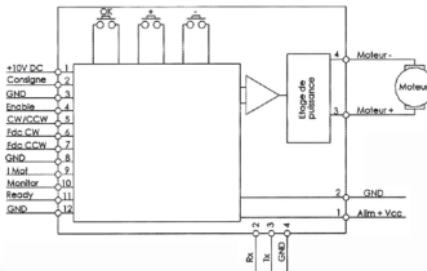
1 quadrant

FIRSTDC-1Q

- Digital servo amplifier operating in "R x I" mode
- Allows direction of rotation to be reversed
- Analogue output signal
- Inputs for end of travel limit switches
- End of stroke control

Accessories

- MDPOT-10/10K Control potentiometer (tome 2 p.277)
- Power supplies



Technical specifications		60V/10A	
- Max Power	600W	Over voltage	Yes
- Power Supply	12 to 60 VDc	- Under voltage	Yes
- Max permanent output current	10A	- Over-current	Adjustable
- Operating mode	PWM (20kHz), 1 quadrant	- Motor short circuit	Yes
- Control mode	R x I	- Short circuit on inputs	Yes
Inputs		- Short circuit on aux voltage	Yes
- Speed control	10kW potentiometer, External voltage 0/10V	Environment	
- Enable	Voltage free contact (earthed)	- Working temperature	0 to 40°C
- Direction	Voltage free contact (earthed)	- Storage temperature	-40 to +85°C
Outputs		- Relative humidity	20 to 80 %non-condensing
- Motor Current	2 V/A	Connections	20 to 80 %non-condensing
- Control signal	2 V/A	- Connectors	Screw clamp terminals, pitch 3.0 mm.
- Ready	Open collector, 30Vdc 20mA	Wire size : 0.14 to 1.5mm ²	
- Aux voltage	10V, 20mA max	- Connectors (motor + supply)	Screw clamp terminals, pitch 5.08mm.
Controls		Wire size : 0.14 to 1.5mm ²	
- Compensation R I	By Pushbutton		
- Min speed	By Pushbutton	Mechanical characteristics	
- Max speed	By Pushbutton	- Eurocard 3U	
- Max current	By Pushbutton	Yes	
Protection			
- Reverse polarity	16A fuse		

DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Mounting	Format	Weight (g)	Price each 1 to 5
FIRSTDC-1Q-60/10	M4 screw	100 x 100 x 32	220	299,06 €

Dimensions in mm

Speed controller 5A



ESCON-4Q 4 quadrant servo-controller

- Digital speed controller for DC or brushless motors up to 250W

- Configured using a USB cable and graphical interface

Accessories

- ESCON Studio software
(Free download from our site)



ESCON-USB



ESCON-CABLE



ESCON-4Q-50/5

DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Technical Specifications

50V/5A

- Max power	250W	- Fault	Yes
- Supply voltage	10 to 50 Vdc	- Auxiliary Voltage	+5 Vdc 10 mA max
- Max output current	15A	- Hall sensor supply	+5 Vdc 10 mA max
- Nominal Output current	5A	- Encoder supply	+5 vdc 70mA
- Max motor speed	150 000 rpm	- Aux input supply	-10/+10 Vdc
- Programmable	No	Parameters	
- Control mode	Current, Speed	- Offset	Yes
Inputs:		- Max speed	Yes
- Limit switches	No	- Max output current	5 A
- Analogue	2,12 bit, +/-10V	- Speed ramp	Yes
- Speed limit	Pot. ext/int, PWM 53.6KHZ	- Current point	15 A
- Enable/Disable	Yes	- Gain	Yes
- Electronic brake	Yes	Protection	
- Stop	No	- Reverse polarity	No
- Direction	Yes	- Surge protection	Yes
- Encoder	A,A/B, B/-1MHz	- Under voltage	Yes
- Tachometer	Yes	- Overvoltage	Yes
- Regulation	Rxl	- Over Current limit	Limited by regulator
- Serial link	No	- Motor short circuit	Yes
- CAN bus	No	- Input short circuit	Yes
Outputs :		- Supply short circuit	Yes
- USB signal	Mini USB	- Thermal	Yes
- Speed	Yes	- Working temp	-30°/+45°C
- Current	Yes	- Storage	-40°/+85°C
- Ready	Yes	- Relative humidity	20/80 % non condensing

Part number	Mounting	Format	Weight (g)	Price each 1 to 5
ESCON-4Q-50/5	Screw M4	115X75,5x24	204	379,04 €
ESCON-USB		USB cable for PC link		22,66 €
ESCON-CABLE		Kit of 4 cables for DC motor		49,44 €

Dimensions in mm



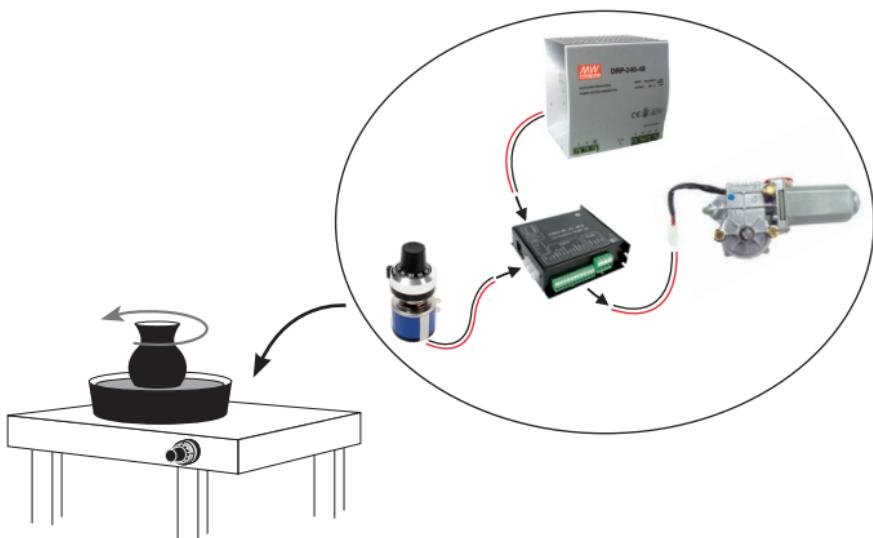
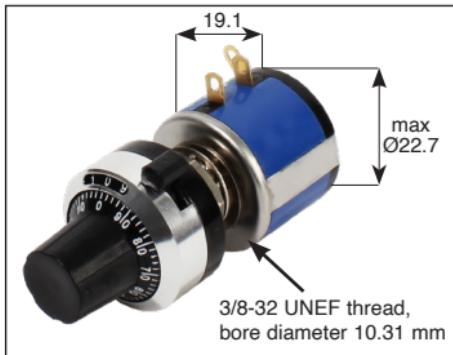
Potentiometer

MDPOT

- Precision potentiometer
- 10 turn, wirewound
- Fitted with indicator for precise control

Application

- For controlling the speed of a DC motor



Adjusting the speed

DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Resistance (kΩ)	Tolerance (%)	Linearity (%)	Max power (W)	Total angular travel (°)	Insulation resistance (Mohm)	Insulation voltage (V)	Price each 1 to 5
MDPOT-10T/10K	10,0	±5	±0,5	2	3600	1000	1000	44,18 €

Dimensions in mm

Synchronous AC motor-gearbox



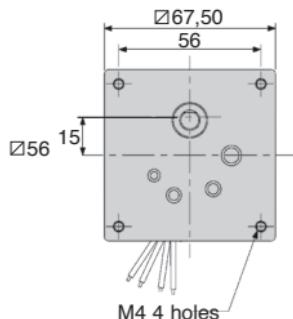
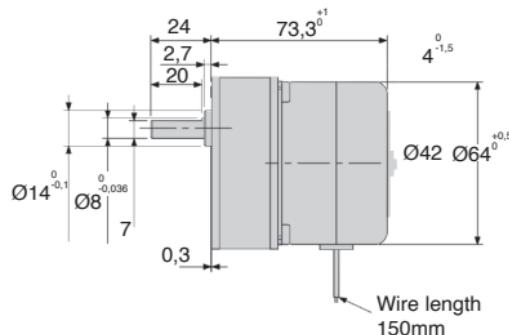
LINK64

Torque from 1.3Nm to 6Nm

- 230 V AC Single phase
- Rotor: permanent magnet
- Magnet: ferrite
- Type of gearbox: spur gear
- Bearings: self-lubricating bushes
- Max. axial load: 30N
- Axial backlash: 0.3mm
- Max. radial load: 60N at 10mm from the surface
- Press fit force: 3°
- Working temp. from 0°C to +40°C
- Weight: 830g

Assembly

- Capacitor supplied
- Refer to Diagram N° 2 on technical information



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	Reduction ratio	Number of stages	Efficiency (%)	No load speed (rpm)	Loaded under speed (rpm)	Nominal torque (Nm)	Nominal current (mA)	Price each 1 to 5
LINK6443A/0012	12:1	2	85	31,0	31,0	1,3	180	201,80 €
LINK6443A/0037	37,5:1	3	78	10,0	10,0	3,8	180	204,58 €
LINK6443A/0050	50:1	3	78	8,0	8,0	5,1	180	204,58 €
LINK6443A/0093	93,75:1	4	72	4,0	4,0	6,0	180	223,93 €
LINK6443A/0187	187:1	4	72	2,0	2,0	6,0	180	223,93 €
LINK6443A/0375	375:1	5	66	1,0	1,0	6,0	180	246,04 €
LINK6443A/0750	750:1	5	66	0,5	0,5	6,0	180	246,04 €

Dimensions in mm

Worm and wheel motorgearbox

Create your set

Create your set



or



+



Worm and wheel gear
reducer **CHM**
(tome ② p.291-303)

Worm and wheel gear reducer
with torque limiter **CHML** (tome
② p.308-311)

CHT asynchronous
AC motor
(tome ② p.280-284)

=



CHM asynchronous AC
motorgearbox
(tome ② p.285-288)

Accessories

+



Reaction arm **CHMBR**
(tome ② p.304)

CHMx et CHMdx
output shaft
(tome ② p.305)

* See buying guide (tome ② p.260)

Asynchronous AC motor 0.09kW



CHT56

Torque up to 0.64Nm

- 3 phase AC asynchronous motor
- 4 pole motor
- Supply frequency 50 Hz
- B14 mounting flange
- Insulation class F
- Protection IP55
- Bearings: ball bearings
- Can rotate in both directions
- Rotor: Squirrel cage

Option

- Motor with B5 mounting flange

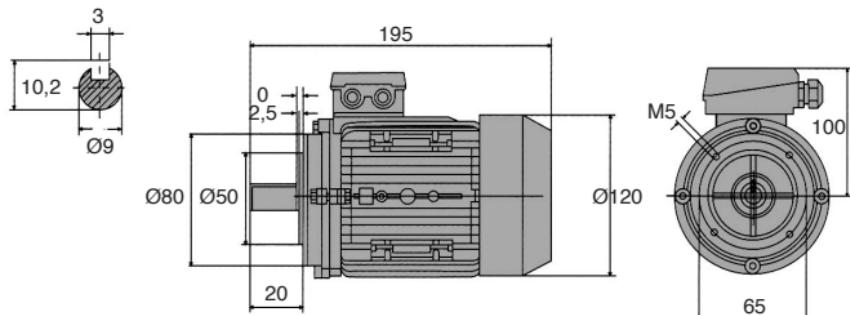


Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (tome ② p.289)

Accessories

- Gearbox CHM (tome ② p.291)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-10%	On request

Part number	Power (kW)	Power supply (V)	Current at 400V (A)	Torque (Nm)	Efficiency	Power factor cos	Weight (kg)	Stock*	Price each
CHT56B4-B14	0,09	230/400	0,43	0,64	50%	0,61	3,2	-	100,33 €

*Depending on availability - Dimensions in mm



Asynchronous AC motor 0.12 to 0.22kW

Torque up to 1.77Nm

CHT63

- 3 phase AC asynchronous motor

- 4 pole motor
- Supply frequency 50 Hz
- B14 mounting flange
- Insulation class F
- Ingress protection: IP55
- Bearings: ball bearings
- Can rotate in both directions
- Rotor: Squirrel cage

Option

- Motor with B5 mounting flange

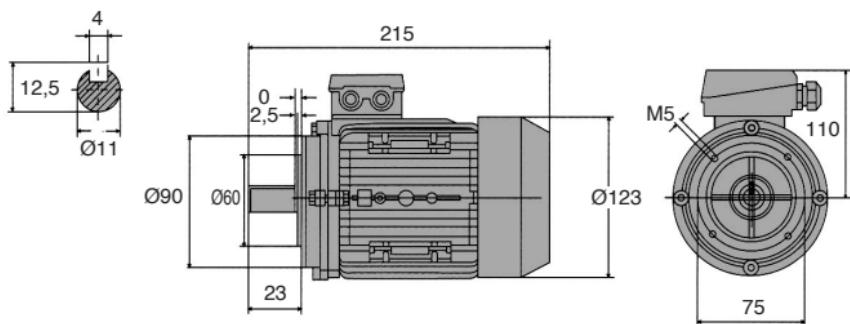


Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (**tome 2** p.289)

Accessories

- Gearbox CHM (**tome 2** p.293)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-10%	On request

Part number	Power (kW)	Power supply (V)	Current at 400V (A)	Torque (Nm)	Efficiency	Power factor cos	Weight (kg)	Stock*	Price each
CHT63A4-B14	0,12	230/400	0,47	0,86	57%	0,64	3,9	-	103,87 €
CHT63B4-B14	0,18	230/400	0,70	1,27	57%	0,65	4,5	✓	108,90 €
CHT63C4-B14	0,22	230/400	0,92	1,77	59%	0,67	4,8	-	114,38 €

*Depending on availability - Dimensions in mm



- 3 phase AC asynchronous motor
- 4 pole motor
- Supply frequency 50 Hz
- B14 mounting flange
- Insulation class F
- Ingress protection: IP55
- Bearings: ball bearings
- Can rotate in both directions
- Rotor: Squirrel cage

Option

- Motor with B5 mounting flange

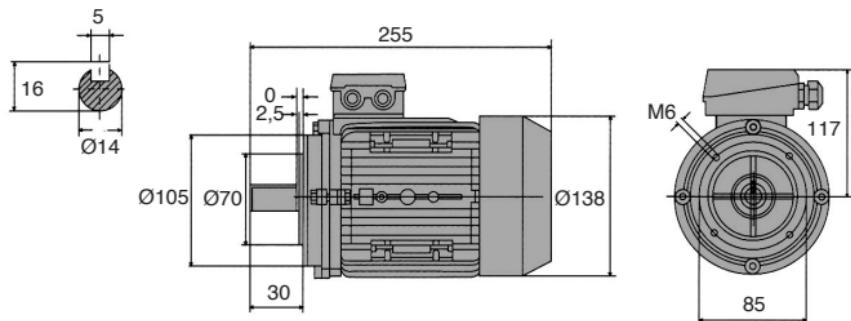


Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (tome 2 p.289)

Accessories

- Gearbox CHM (tome 2 p.295-297)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -10%		On request

Part number	Power (kW)	Power supply (V)	Current at 400V (A)	Torque (Nm)	Efficiency	Power factor cos	Weight (kg)	Stock*	Price each
CHT71A4-B14	0,25	230/400	0,84	1,77	60%	0,72	5,6	-	117,75 €
CHT71B4-B14	0,37	230/400	1,12	2,58	65%	0,74	6,2	✓	131,18 €
CHT71C4-B14	0,55	230/400	1,61	3,81	66%	0,75	7,0	-	148,74 €

*Depending on availability - Dimensions in mm



Asynchronous AC Motor 0.55 to 1.1kW

Torque up to 7.6Nm

CHT80

- 3 phase AC asynchronous motor

- 4 pole motor
- Supply frequency 50 Hz
- B14 mounting flange
- Insulation class F
- Ingress protection: IP55
- Bearings: ball bearings
- Can rotate in both directions
- Rotor: Squirrel cage

Option

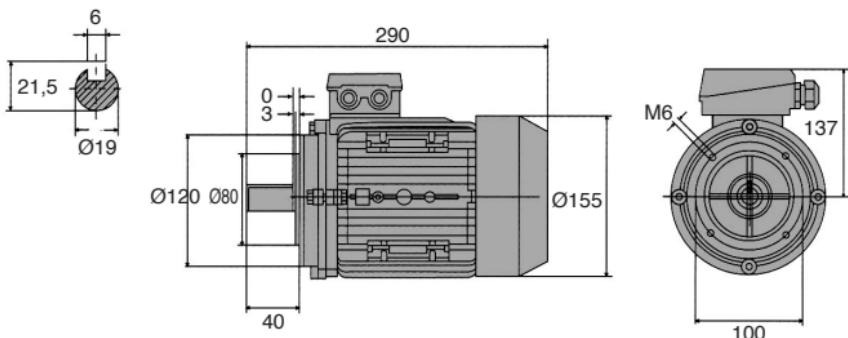
- Motor with B5 mounting flange

Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (**tome 2** p.289)

Accessories

- Gearbox CHM (**tome 2** p.297, 299, 301)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-10%	On request

Part number	Power (kW)	Power supply (V)	Current at 400V (A)	Torque (Nm)	Efficiency	Power factor cos	Weight (kg)	Stock*	Price each
CHT80A4-B14	0,55	230/400	1,59	3,81	67%	0,75	8,9	-	155,84 €
CHT80B4-B14	0,75	230/400	1,94	5,20	72%	0,78	10,0	✓	230,85 €
CHT80C4-B14	1,10	230/400	2,64	7,58	78%	0,77	11,0	-	266,57 €

*Depending on availability - Dimensions in mm

Asynchronous AC Motor 1.1 to 1.85kW

CHT90

Torque up to 9.24Nm



- 3 phase AC asynchronous motor
- 4 pole motor
- Supply frequency 50 Hz
- B14 mounting flange
- Insulation class F
- Ingress protection: IP55
- Bearings: ball bearings
- Can rotate in both directions
- Rotor: Squirrel cage

Option

- Motor with B5 mounting flange

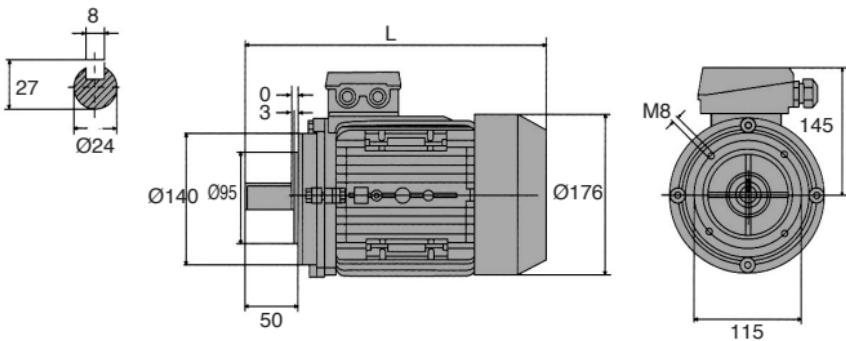


Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (tome ② p.289)

Accessories

- Gearbox CHM (tome ② p.299-301)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -10%		On request

Part number	L (mm)	Power (kW)	Power supply (V)	Current at 400V (A)	Torque (Nm)	Efficiency	Power factor cos	Weight (kg)	Price each
CHT90S4-B14	310	1,10	230/400	2,64	5,19	76,2%	0,79	12,1	276,19 €
CHT90L4-B14	335	1,50	230/400	3,46	7,51	78,5%	0,80	14,3	320,17 €
CHT90LL4-B14	335	1,85	230/400	4,30	9,24	79%	0,78	16,0	268,21 €

Dimensions in mm



Torque up to 22Nm

CHM30
-MOT

- Three phase electric motor gearbox assembly
- Comprises 1 CHM30 gearbox and 1 CHT motor (see motor section)
- 4 pole motor
- B14 mounting flange
- Motor speed 1,400 rpm
- Material:
Gearbox housing: aluminium

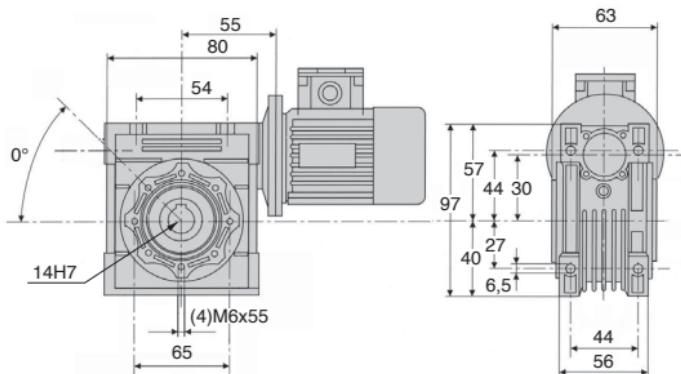
Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (tome 2 p.289)



Accessories

- Output shaft
CHM30-X,
CHM30-DX
(tome 2 p.305)
- Reaction arm
CHM30-BR
(tome 2 p.304)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-15%	On request

Part number	Reduction ratio	Motor	Motor power (kW)	Speed under load (rpm)	Nominal Torque (Nm)	Service factor	Stock*	Price each
CHM30-7-63C4	7,5:1	63C4	0,22	186,7	9	2,1	✓	234,66 €
CHM30-10-63C4	10:1	63C4	0,22	140,0	11	1,6	✓	234,66 €
CHM30-15-63C4	15:1	63C4	0,22	93,3	16	1,0	✓	234,14 €
CHM30-20-63C4	20:1	63C4	0,22	70,0	20	0,9	✓	234,14 €
CHM30-25-63B4	25:1	63B4	0,18	56,0	20	1,0	✓	229,16 €
CHM30-30-63B4	30:1	63B4	0,18	46,7	22	0,9	✓	229,16 €
CHM30-40-63B4	40:1	63B4	0,18	35,0	21	0,8	✓	229,16 €
CHM30-50-63B4	50:1	63B4	0,18	28,0	19	0,8	✓	229,16 €
CHM30-60-56B4	60:1	56B4	0,09	23,3	18	0,9	✓	220,59 €
CHM30-60-56B4	80:1	56B4	0,09	17,5	13	0,9	✓	220,59 €

*Depending on availability - Dimensions in mm

Asynchronous AC motor-gearboxes 0.18 to 0.55kW



CHM40 -MOT

Torque up to 52Nm

- Three phase electric motor gearbox assembly
- Comprises 1 CHM40 gearbox and 1 CHT motor (see motor section)
- 4 pole motor
- B14 mounting flange
- Motor speed 1,400 rpm
- Material:
Gearbox housing: aluminium

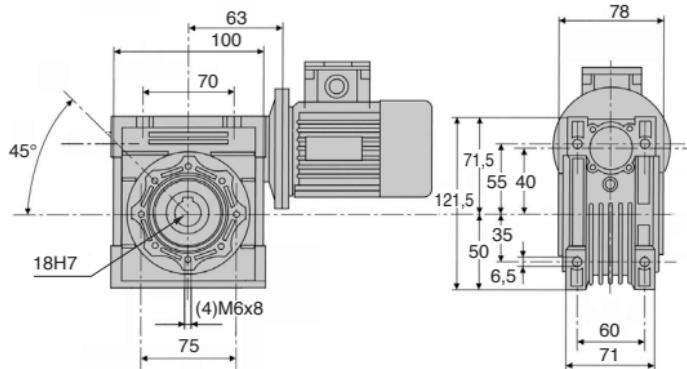
Wiring

- See wiring diagrams N°3 and N°5 on technical (tome 2 p.289)



Accessories

- Output shaft
**CHM40-X,
CHM40-DX
(tome 2 p.305)**
- Reaction arm
**CHM40-BR
(tome 2 p.304)**



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%		On request

Part number	Reduction ratio	Motor	Motor power (kW)	Speed under load (rpm)	Nominal Torque (Nm)	Service factor	Stock*	Price each
CHM40-7-71C4	7,5:1	71C4	0,55	186,7	22	1,6	✓	293,90 €
CHM40-10-71C4	10:1	71C4	0,55	140,0	30	1,4	✓	293,90 €
CHM40-15-71C4	15:1	71C4	0,55	93,3	44	0,9	✓	293,90 €
CHM40-20-71C4	20:1	71C4	0,55	70,0	38	1,0	-	293,90 €
CHM40-25-71B4	25:1	71B4	0,37	56,0	45	0,9	✓	276,30 €
CHM40-30-71B4	30:1	71B4	0,37	46,7	52	0,8	✓	276,30 €
CHM40-40-71A4	40:1	71A4	0,25	35,0	43	0,9	✓	262,90 €
CHM40-50-63C4	50:1	63C4	0,22	28,0	44	0,9	✓	259,50 €
CHM40-60-63B4	60:1	63B4	0,18	23,3	42	0,8	-	254,04 €
CHM40-80-63B4	80:1	63B4	0,18	17,5	36	0,8	✓	254,04 €
CHM40-100-63B4	100:1	63B4	0,18	14,0	35	0,8	✓	254,04 €

*Depending on availability - Dimensions in mm



Torque up to 87Nm

**CHM50
-MOT**

- Three phase electric motor gearbox assembly
- Comprises 1 CHM50 gearbox and 1 CHT motor (see motor section)
- 4 pole motor
- B14 mounting flange
- Motor speed: 1,400 rpm
- Material:
Gearbox housing: aluminium

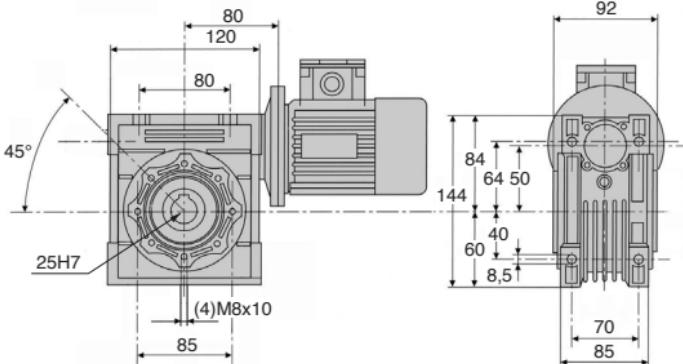
Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (**tome 2 p.289**)



Accessories

- Output shaft
**CHM50-X,
CHM50-DX**
(**tome 2 p.305**)
- Reaction arm
CHM50-BR
(**tome 2 p.304**)



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

* without CHM50-100-63B4 mounting flange B5

Part number	Reduction ratio	Motor	Motor power (kW)	Speed under load (rpm)	Nominal Torque (Nm)	Service factor	Price each
CHM50-7-80B4	7,5:1	80B4	0,75	186,7	33,3	2,0	358,63 €
CHM50-10-80B4	10:1	80B4	0,75	140,0	43,9	1,6	358,63 €
CHM50-15-80B4	15:1	80B4	0,75	93,3	62,6	1,2	358,63 €
CHM50-20-80B4	20:1	80B4	0,75	70,0	80,0	0,9	358,63 €
CHM50-25-80A4	25:1	80A4	0,55	56,0	70,0	1,0	342,95 €
CHM50-30-80A4	30:1	80A4	0,55	46,7	80,0	1,0	342,95 €
CHM50-40-71B4	40:1	71B4	0,37	35,0	67,0	1,1	318,27 €
CHM50-50-71B4	50:1	71B4	0,37	28,0	78,0	0,9	318,27 €
CHM50-60-71B4	60:1	71B4	0,37	23,3	87,0	0,8	318,27 €
CHM50-80-71A4	80:1	71A4	0,25	17,5	70,0	0,9	304,85 €
CHM50-100-63B4*	100:1	63B4	0,18	14,0	59,0	0,9	296,00 €

Dimensions in mm

CHM63-MOT

Torque up to 165Nm

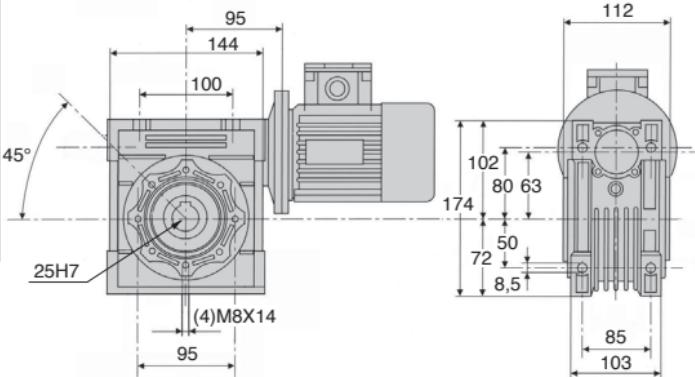
- Three phase electric motor gearbox assembly
- Comprises 1 CHM63 gearbox and 1 CHT motor (see motor section)
- 4 pole motor
- B14 mounting flange
- Motor speed 1,400 rpm
- Material:
Gearbox housing: aluminium

Wiring

- See wiring diagrams N°3 and N°5 on technical information pages (tome ② p.289)

Accessories

- Servo amplifier
TEL-ATV11/370
- Output shaft
**CHM63-X,
CHM63-DX
(tome ② p.305)**
- Reaction arm
**CHM63-BR
(tome ② p.304) p.289)**



DISCOUNTS

Qty	1+	2+	4+
Disc.	List -15%	On request	

Part number	Reduction ratio	Motor	Motor power (kW)	Speed under load (rpm)	Nominal Torque (Nm)	Service factor	Price each
CHM63-7-90L4	7,5:1	90L4	1,50	186,7	67,4	1,8	495,96 €
CHM63-10-90L4	10:1	90L4	1,50	140,0	88,6	1,4	495,96 €
CHM63-15-90L4	15:1	90L4	1,50	93,3	126,0	1,1	495,96 €
CHM63-20-90L4	20:1	90L4	1,50	70,0	164,0	0,8	495,96 €
CHM63-25-90S4	25:1	90S4	1,10	56,0	145,0	0,9	468,70 €
CHM63-30-90S4	30:1	90S4	1,10	46,7	165,0	1,0	468,70 €
CHM63-40-80B4	40:1	80B4	0,75	35,0	143,0	1,0	436,57 €
CHM63-50-80A4	50:1	80A4	0,55	28,0	122,0	1,1	420,91 €
CHM63-60-80A4	60:1	80A4	0,55	23,3	138,0	0,9	420,91 €
CHM63-80-71B4	80:1	71B4	0,37	17,5	114,0	1,1	396,24 €
CHM63-100-71B4	100:1	71B4	0,37	14,0	127,0	0,9	396,24 €

Dimensions in mm

Comparison of the two technologies (AC)

Synchronous and Asynchronous

The range of AC motors uses permanent magnet **synchronous** and **asynchronous** single-phase or three-phase technologies.

AC motors are often used in fixed-speed, fixed-torque drives powered directly from the network tension. They offer the long life required for most applications.

Synchronous motors

Synchronous motors enable rotate at a fixed and precise speed, independent of load and voltage variations.

General characteristics

- The rotor consists of a magnet or electromagnet.
- The motor rotates at the same speed as the magnetic field. The rotor is said to rotate at synchronous speed.

Benefits

- Better efficiency than asynchronous motors.
- Fixed speed, whatever the load.

Disadvantage

- Stalls when maximum torque is exceeded

Service life

- It depends on the application and is limited by the life of the motor bearings

Asynchronous motors

Asynchronous motors are characterised by a rotation speed that depends on the load applied to the shaft. The speed is linked to the frequency of the singlephase or three-phase supply network (230/400V-50Hz).

General characteristics

- The rotor is made up of rings that form a squirrel cage.
- The shaft speed and the magnetic field are out of phase. The rotor rotates more slowly and never reaches synchronous speed.

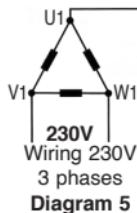
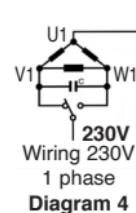
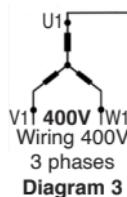
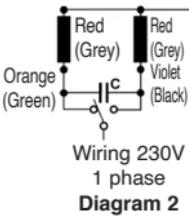
Benefits

- Highly resistant.
- Easy to maintain.
- Cheaper and smaller than synchronous motors.
- These are the motors most commonly used in industry.

Disadvantage

- Lower efficiency than synchronous motors.

Wiring diagram



Worm and wheel gearbox



CHMR30

Torque up to 28 Nm

- Ratios from 7.5:1 to 80:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Max. output speed: see CHMR30

- Materials:

Casing: aluminium

Screws: hardened steel

Wheel: bronze (cast iron hub)

- Lubrication: synthetic oil ISO VG320

- Weight: 1.2 kg

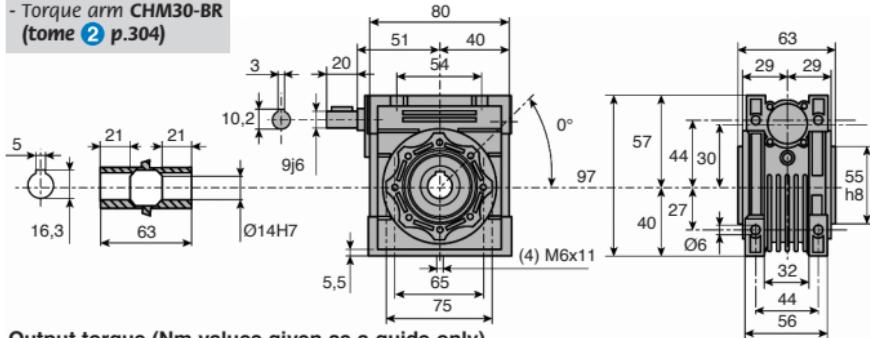


Accessories

- Output shaft CHM30-X
or CHM30-DX

(tome ② p.305)

- Torque arm CHM30-BR
(tome ② p.304)



Output torque (Nm values given as a guide only)

Ratios	7,5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	
INPUT	2800	12	12	12	11	15	14	13	12	11	10
SPEED	1400	17	17	17	17	20	19	17	16	15	12
(rpm)	900	19	19	19	19	22	20	19	17	16	14
	500	23	23	23	22	28	25	22	20	18	16

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each 1 to 2
CHMR30-7	7,5:1	2800	373,33	NC	no	✓	132,58 €
CHMR30-10	10:1	2800	280,00	NC	no	✓	132,58 €
CHMR30-15	15:1	2800	186,66	NC	no	✓	132,58 €
CHMR30-20	20:1	2800	140,00	NC	no	-	132,58 €
CHMR30-25	25:1	2800	112,00	NC	no	✓	132,58 €
CHMR30-30	30:1	2800	93,33	NC	not defined	-	132,58 €
CHMR30-40	40:1	2800	70,00	NC	not defined	✓	132,58 €
CHMR30-50	50:1	2800	56,00	NC	not defined	✓	132,58 €
CHMR30-60	60:1	2800	46,66	NC	yes	✓	132,58 €
CHMR30-80	80:1	2800	35,00	NC	yes	✓	132,58 €

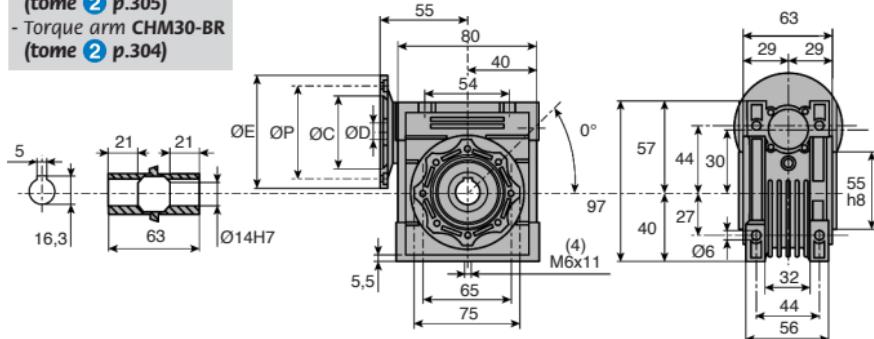
*Depending on availability - Dimensions in mm



- **Ratios from 7,5:1 to 80:1**
 - With mounting flange B14 for IEC56
 - Output backlash: N/A
 - Max. input speed: 2,800 rpm
 - Material:
 - Casing: aluminium
 - Worm: hardened steel
 - Wheel: bronze (cast iron hub)
 - Lubrication: synthetic oil ISO VG320
 - Weight: 1,2 kg

Accessories

- Output shaft **CHM30-X**
or **CHM30-DX**
(tome ② p.305)
 - Torque arm **CHM30-BR**
(tome ② p.304)



Output torque (Nm values given as a guide only)

Ratios	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	1:50:1	60:1	80:1
2800	12	12	12	11	15	14	13	12	11	10
INPUT	1400	17	17	17	17	20	19	17	16	15
SPEED	900	19	19	19	19	22	20	19	17	16
(rpm)	500	23	23	23	22	28	25	22	20	18

DISCOUNTS

Qty	1+	3+	6+
Disc.	List	-20%	On request

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each
									1 to 2
CHM30-7	7,5:1	56B14	9	50	65	80	no	-	132,58 €
CHM30-10	10:1	56B14	9	50	65	80	no	✓	132,58 €
CHM30-15	15:1	56B14	9	50	65	80	no	✓	132,58 €
CHM30-20	20:1	56B14	9	50	65	80	no	✓	132,58 €
CHM30-25	25:1	56B14	9	50	65	80	no	✓	132,58 €
CHM30-30	30:1	56B14	9	50	65	80	not defined	-	132,58 €
CHM30-40	40:1	56B14	9	50	65	80	not defined	-	132,58 €
CHM30-50	50:1	56B14	9	50	65	80	not defined	✓	132,58 €
CHM30-60	60:1	56B14	9	50	65	80	yes	✓	132,58 €
CHM30-80	80:1	56B14	9	50	65	80	yes	✓	132,58 €

**Depending on availability - Dimensions in mm*

Worm and wheel gearbox



CHMR40

Torque up to 57 Nm

- Ratios from 7.5:1 to 100:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Materials:

Casing: aluminium

Screws: treated steel 20CR

Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 2.3 kg



Accessories

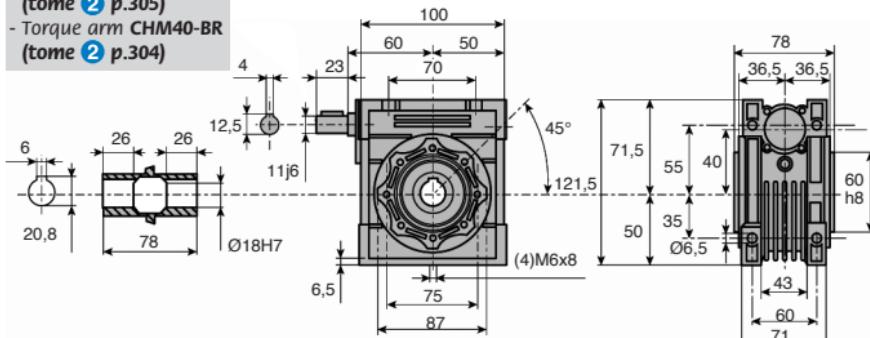
- Output shaft CHM40-X

or CHM40-DX

(tome 2 p.305)

- Torque arm CHM40-BR

(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratios	7,5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1
INPUT	2800	27	26	30	28	27	33	30	30	27	24
SPEED	1400	39	39	39	38	39	44	40	38	35	32
(rpm)	900	43	43	44	43	43	48	44	41	38	35
	500	52	52	54	53	51	57	52	48	45	40

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each 1 to 2
CHMR40-7	7,5:1	800	373,33	NC	no	✓	160,04 €
CHMR40-10	10:1	2800	280,00	NC	no	✓	160,04 €
CHMR40-15	15:1	2800	186,66	NC	no	✓	160,04 €
CHMR40-20	20:1	2800	140,00	NC	no	✓	160,04 €
CHMR40-25	25:1	2800	112,00	NC	no	✓	160,04 €
CHMR40-30	30:1	2800	93,33	NC	no	✓	160,04 €
CHMR40-40	40:1	2800	70,00	NC	no	✓	160,04 €
CHMR40-50	50:1	2800	56,00	NC	not defined	-	160,04 €
CHMR40-60	60:1	2800	46,66	NC	not defined	✓	160,04 €
CHMR40-80	80:1	2800	35,00	NC	yes	✓	160,04 €
CHMR40-100	100:1	2800	28,00	NC	yes	✓	160,04 €

*Depending on availability - Dimensions in mm



Torque up to 57 Nm

CHM40

- Ratios from 7.5:1 to 100:1

- With B14 (IEC56) flange
- Output backlash: N/A
- Max. input speed: 2,800 rpm
- Max. output speed: see CHMR40

- Materials:

Casing: aluminium

Screws: treated steel 20CR

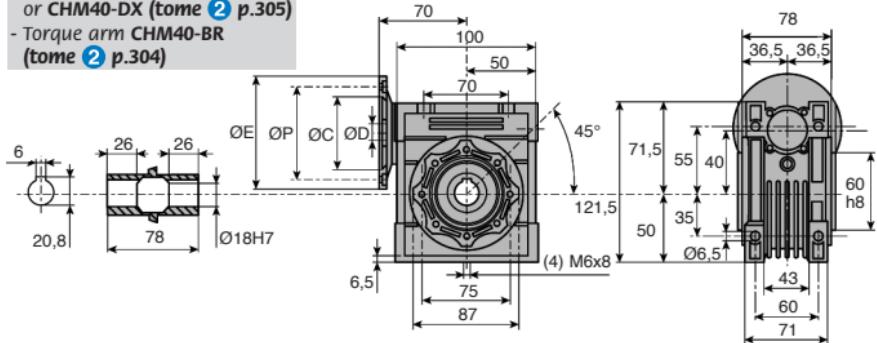
Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 2.3 kg

**Accessories**

- Output shaft CHM40-X or CHM40-DX (tome ② p.305)
- Torque arm CHM40-BR (tome ② p.304)



Ratios	7,5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	27	26	30	28	27	33	30	30	27	24	22
SPEED (rpm)	1400	39	39	39	38	39	44	40	38	35	32	28
(rpm)	900	43	43	44	43	43	48	44	41	38	35	31
	500	52	52	54	53	51	57	52	48	45	40	35

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each 1 to 2
CHM40-7	7,5:1	63B14	11	60	75	90	no	✓	160,04 €
CHM40-10	10:1	63B14	11	60	75	90	no	✓	160,04 €
CHM40-15	15:1	63B14	11	60	75	90	no	-	160,04 €
CHM40-20	20:1	63B14	11	60	75	90	no	✓	160,04 €
CHM40-25	25:1	63B14	11	60	75	90	no	-	160,04 €
CHM40-30	30:1	63B14	11	60	75	90	no	✓	160,04 €
CHM40-40	40:1	63B14	11	60	75	90	no	✓	160,04 €
CHM40-50	50:1	63B14	11	60	75	90	not defined	✓	160,04 €
CHM40-60	60:1	63B14	11	60	75	90	not defined	✓	160,04 €
CHM40-80	80:1	63B14	11	60	75	90	yes	✓	160,04 €
CHM40-100	100:1	63B14	11	60	75	90	yes	✓	160,04 €

*Depending on availability - Dimensions in mm

Worm and wheel gearbox



CHMR50

Torque up to 107 Nm

- Ratios from 7.5:1 to 100:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Materials:

Casing: aluminium

Screws: treated steel 20CR

Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 3.5 kg



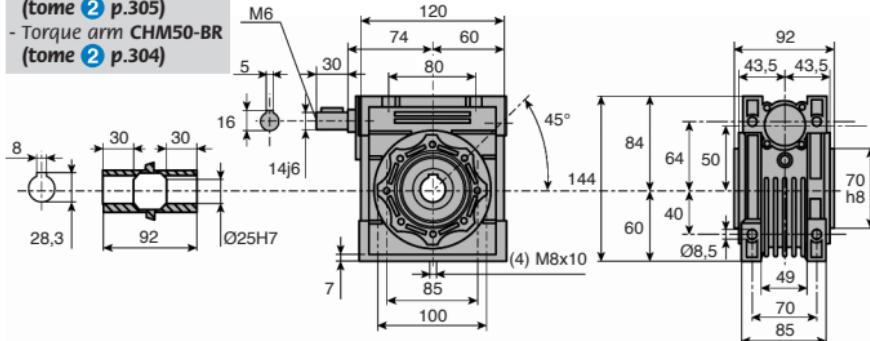
Accessories

- Output shaft CHM50-X or CHM50-DX

(tome 2 p.305)

- Torque arm CHM50-BR

(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratios	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT SPEED (rpm)	2800	51	53	56	52	51	63	58	52	49	44	39
INPUT SPEED (rpm)	1400	70	71	73	72	69	83	75	72	67	64	54
SPEED (rpm)	900	83	83	83	76	74	89	81	76	71	67	55
(rpm)	500	102	102	102	92	90	107	97	90	82	74	64

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each 1 to 2
CHMR50-7	7.5:1	2800	373,33	NC	no	✓	206,34 €
CHMR50-10	10:1	2800	280,00	NC	no	✓	206,34 €
CHMR50-15	15:1	2800	186,66	NC	no	✓	206,34 €
CHMR50-20	20:1	2800	140,00	NC	no	✓	206,34 €
CHMR50-25	25:1	2800	112,00	NC	no	-	206,34 €
CHMR50-30	30:1	2800	93,33	NC	no	✓	206,34 €
CHMR50-40	40:1	2800	70,00	NC	no	✓	206,34 €
CHMR50-50	50:1	2800	56,00	NC	not defined	✓	206,34 €
CHMR50-60	60:1	2800	46,66	NC	not defined	✓	206,34 €
CHMR50-80	80:1	2800	35,00	NC	yes	✓	206,34 €
CHMR50-100	100:1	2800	28,00	NC	yes	✓	206,34 €

*Depending on availability - Dimensions in mm



Torque up to 107 Nm

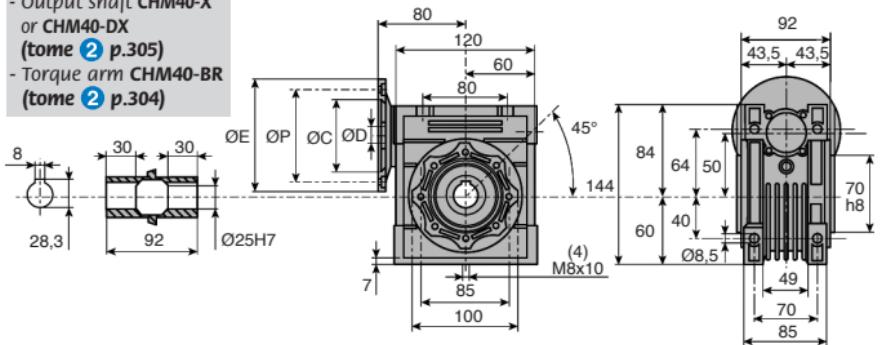
CHM50

- **Ratios from 7.5:1 to 100:1**
 - With B14 (IEC71) flange
 - Output backlash: N/A
 - Max. input speed: 2,800 rpm
 - Max. output speed: see CHMR50
 - Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast iron)
 - Lubrication: synthetic oil ISO VG32
 - Weight: 3.5 kg



Accessories

- Output shaft CHM40-X or CHM40-DX
(tome ② p.305)
 - Torque arm CHM40-BR
(tome ② p.304)



Output torque (Nm values given as a guide only)

DISCOUNTS

DISCOUNTS

Qty	1+	3+	6+
Disc.	List	-20%	On request

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each
									1 to 2
CHM50-7	7,5:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-10	10:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-15	15:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-20	20:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-25	25:1	71B14	14	70	85	105	no	-	206,34 €
CHM50-30	30:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-40	40:1	71B14	14	70	85	105	no	✓	206,34 €
CHM50-50	50:1	71B14	14	70	85	105	not defined	✓	206,34 €
CHM50-60	60:1	71B14	14	70	85	105	not defined	-	206,34 €
CHM50-80	80:1	71B14	14	70	85	105	yes	✓	206,34 €
CHM50-100	100:1	71B14	14	70	85	105	yes	✓	206,34 €

**Depending on availability - Dimensions in mm*

Worm and wheel gearbox



CHMR63

Torque up to 196 Nm

- Ratios from 7.5:1 to 100:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Materials:

Casing: aluminium

Screws: treated steel 20CR

Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 6.2 kg



Accessories

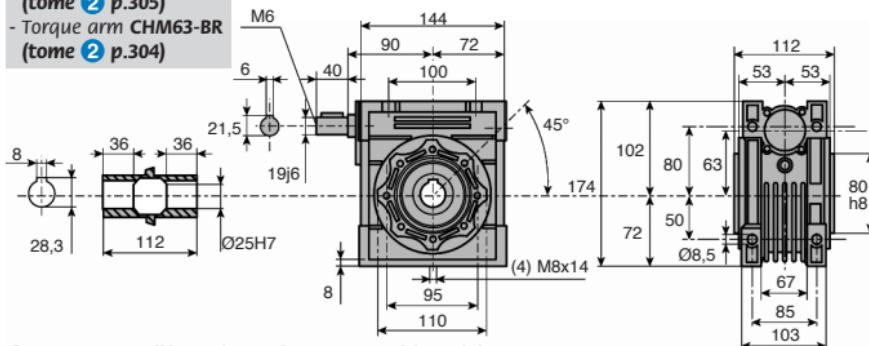
- Output shaft CHM63-X

or CHM63-DX

(tome 2 p.305)

- Torque arm CHM63-BR

(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratios	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT SPEED (rpm)	2800	92	96	102	99	91	119	107	99	94	84	73
INPUT SPEED (rpm)	1400	127	129	139	134	129	159	144	134	129	121	117
INPUT SPEED (rpm)	900	150	152	154	147	136	174	159	144	137	127	123
INPUT SPEED (rpm)	500	183	184	186	177	163	198	184	172	159	136	127

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Max. input speed (rpm)	Max. output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each 1 to 2
CHMR63-7	7.5:1	2800	373,33	NC	no	✓	292,34 €
CHMR63-10	10:1	2800	280,00	NC	no	✓	292,34 €
CHMR63-15	15:1	2800	186,66	NC	no	✓	292,34 €
CHMR63-20	20:1	2800	140,00	NC	no	✓	292,34 €
CHMR63-25	25:1	2800	112,00	NC	no	✓	292,34 €
CHMR63-30	30:1	2800	93,33	NC	no	✓	292,34 €
CHMR63-40	40:1	2800	70,00	NC	no	✓	292,34 €
CHMR63-50	50:1	2800	56,00	NC	not defined	-	292,34 €
CHMR63-60	60:1	2800	46,66	NC	not defined	✓	292,34 €
CHMR63-80	80:1	2800	35,00	NC	yes	✓	292,34 €
CHMR63-100	100:1	2800	28,00	NC	yes	✓	292,34 €

*Depending on availability - Dimensions in mm



Torque up to 196 Nm

CHM63

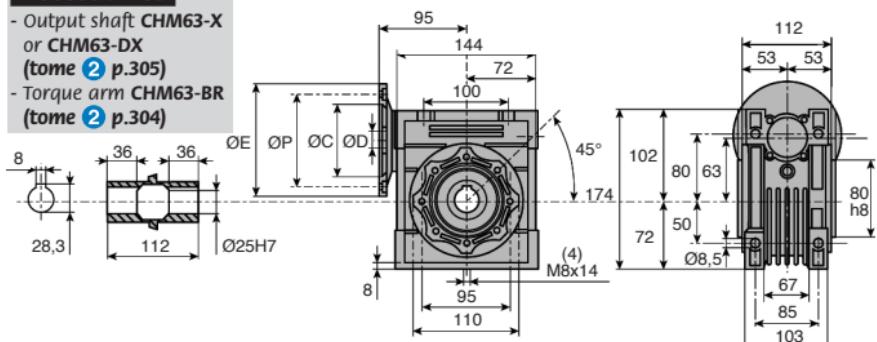
- Ratios from 7.5:1 to 100:1

- With B14 flange acc IEC80 for ratios 7.5:1 to 30:1
- With B14 mounting flange acc IEC71 for ratios 7.5:1 to 30:1
- Output backlash: N/A
- Max. input speed: 2,800 rpm
- Max. output speed: see CHMR63
- Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast iron hub G500)
- Lubrication: synthetic oil ISO VG320
- Weight: 3.5 kg



Accessories

- Output shaft **CHM63-X** or **CHM63-DX** (tome 2 p.305)
- Torque arm **CHM63-BR** (tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratios	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	92	96	102	99	91	119	107	99	94	84	73
SPEED (rpm)	1400	127	129	139	134	129	159	144	134	129	121	117
	900	150	152	154	147	136	174	159	144	137	127	123
	500	183	184	186	177	163	198	184	172	159	136	127

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each 1 to 2
CHM63-7	7.5:1	80B14	19	80	100	120	no	-	292,34 €
CHM63-10	10:1	80B14	19	80	100	120	no	-	292,34 €
CHM63-15	15:1	80B14	19	80	100	120	no	-	292,34 €
CHM63-20	20:1	80B14	19	80	100	120	no	-	292,34 €
CHM63-25	25:1	80B14	19	80	100	120	no	-	292,34 €
CHM63-30	30:1	80B14	19	80	100	120	no	✓	292,34 €
CHM63-40	40:1	71B14	14	70	85	105	no	✓	292,34 €
CHM63-50	50:1	71B14	14	70	85	105	not defined	✓	292,34 €
CHM63-60	60:1	71B14	14	70	85	105	not defined	✓	292,34 €
CHM63-80	80:1	71B14	14	70	85	105	oui	✓	292,34 €
CHM63-100	100:1	71B14	14	70	85	105	oui	✓	292,34 €

*Depending on availability - Dimensions in mm

Worm and wheel gearbox



CHMR75

Torque up to 298 Nm

- Ratios from 7.5:1 to 100:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Materials:

Casing: aluminium

Screws: treated steel 20CR

Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 8.5 kg



Accessories

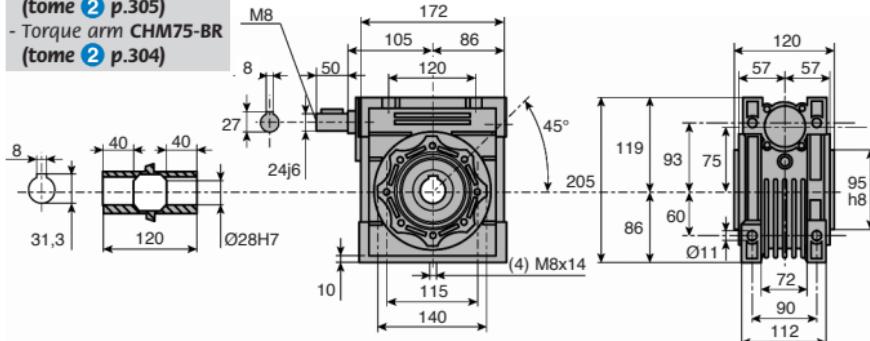
- Output shaft CHM75-X

or CHM75-DX

(tome 2 p.305)

- Torque arm CHM75-BR

(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratio	7,5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	129	144	148	158	148	119	168	146	144	129	118
SPEED	1400	184	194	198	209	198	159	228	209	198	188	178
(rpm)	500	258	268	278	284	254	198	298	248	238	214	208

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -20%		On request

Part number	Reduction ratio	Max. input speed (rpm)	Max output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each
CHMR75-7	7,5:1	2800	373,33	NC	no	✓	390,49 €
CHMR75-10	10:1	2800	280,00	NC	no	✓	390,49 €
CHMR75-15	15:1	2800	186,66	NC	no	-	390,49 €
CHMR75-20	20:1	2800	140,00	NC	no	✓	390,49 €
CHMR75-25	25:1	2800	112,00	NC	no	-	390,49 €
CHMR75-30	30:1	2800	93,33	NC	no	✓	390,49 €
CHMR75-40	40:1	2800	70,00	NC	no	✓	390,49 €
CHMR75-50	50:1	2800	56,00	NC	not defined	-	390,49 €
CHMR75-60	60:1	2800	46,66	NC	not defined	✓	390,49 €
CHMR75-80	80:1	2800	35,00	NC	not defined	✓	390,49 €
CHMR75-100	100:1	2800	28,00	NC	yes	✓	390,49 €

*Depending on availability - Dimensions in mm



Torque up to 298 Nm

CHM75

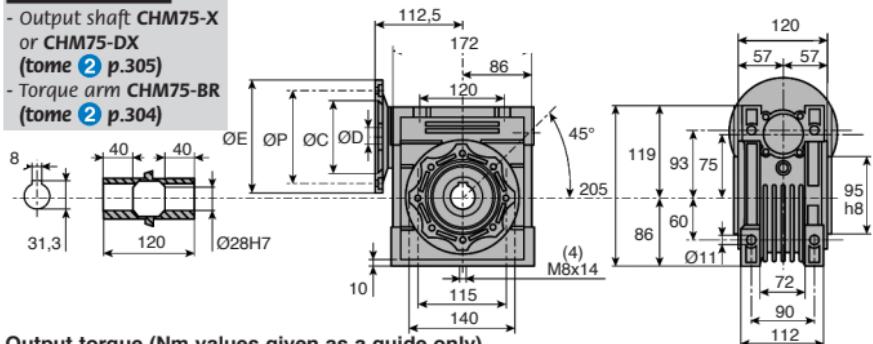
- Ratios from 7.5:1 to 100:1

- With B14 flange acc IEC80 for ratios 7.5:1 to 15:1
- With B14 mounting flange acc IEC71 for ratios 20:1 to 30:1
- Output backlash: N/A
- Max. input speed: 2,800 rpm
- Max. output speed: see CHMR75
- Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast iron hub G500)
- Lubrication: synthetic oil ISO VG320
- Weight: 8.5 kg



Accessories

- Output shaft CHM75-X or CHM75-DX (tome 2 p.305)
- Torque arm CHM75-BR (tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratio	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	129	144	148	158	148	119	168	146	144	129	118
SPEED (rpm)	1400	184	194	198	209	198	159	228	209	198	188	178
(rpm)	900	214	228	234	234	214	174	258	218	209	198	186

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-20%	On request

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each
CHM75-7	7.5:1	90B14	24	95	115	140	no	-	390,49 €
CHM75-10	10:1	90B14	24	95	115	140	no	-	390,49 €
CHM75-15	15:1	90B14	24	95	115	140	no	-	390,49 €
CHM75-20	20:1	80B14	19	80	100	120	no	-	390,49 €
CHM75-25	25:1	80B14	19	80	100	120	no	✓	390,49 €
CHM75-30	30:1	80B14	19	80	100	120	no	-	390,49 €
CHM75-40	40:1	80B14	19	80	100	120	no	-	390,49 €
CHM75-50	50:1	80B14	19	80	100	120	not defined	✓	390,49 €
CHM75-60	60:1	80B14	19	80	100	120	not defined	-	390,49 €
CHM75-80	80:1	80B14	19	80	100	120	not defined	✓	390,49 €
CHM75-100	100:1	80B14	19	80	100	120	yes	✓	390,49 €

*Depending on availability - Dimensions in mm

Worm and wheel gearbox



CHMR90

Torque up to 540 Nm

- Ratios from 7.5:1 to 100:1

- Output backlash: N/A

- Max. input speed: 2,800 rpm

- Materials:

Casing: aluminium

Screws: treated steel 20CR

Wheel: bronze CuSn12 (cast iron hub G500)

- Lubrication: synthetic oil ISO VG320

- Weight: 12 kg



Accessories

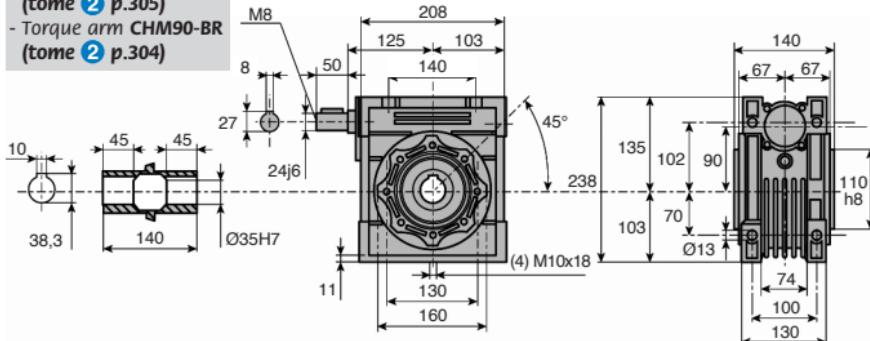
- Output shaft CHM90-X

or CHM90-DX

(tome 2 p.305)

- Torque arm CHM90-BR

(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratio	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	208	234	258	258	248	308	274	264	244	224	198
SPEED	1400	288	308	358	354	338	408	358	338	318	284	268
(rpm)	500	408	434	438	468	438	540	478	448	398	364	328

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -20%		On request

Part number	Reduction ratio	Max. input speed (rpm)	Max output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Stock*	Price each
CHMR90-7	7.5:1	2800	373,33	NC	No	-	509,62 €
CHMR90-10	10:1	2800	280,00	NC	No	✓	509,62 €
CHMR90-15	15:1	2800	186,66	NC	No	-	509,62 €
CHMR90-20	20:1	2800	140,00	NC	No	✓	509,62 €
CHMR90-25	25:1	2800	112,00	NC	No	-	509,62 €
CHMR90-30	30:1	2800	93,33	NC	No	✓	509,62 €
CHMR90-40	40:1	2800	70,00	NC	No	✓	509,62 €
CHMR90-50	50:1	2800	56,00	NC	No	✓	509,62 €
CHMR90-60	60:1	2800	46,66	NC	not defined	✓	509,62 €
CHMR90-80	80:1	2800	35,00	NC	not defined	✓	509,62 €
CHMR90-100	100:1	2800	28,00	NC	Yes	✓	509,62 €

*Depending on availability - Dimensions in mm



Torque up to 540 Nm

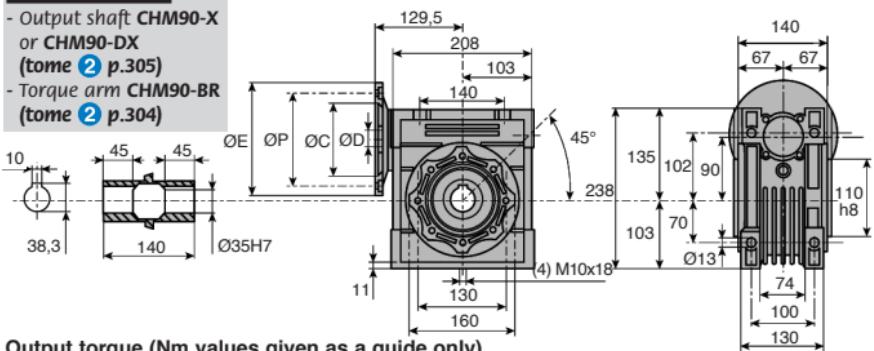
CHM90

- **Ratios from 7.5:1 to 100:1**
 - With B14 flange acc IEC90 for ratios 7.5:1 to 60:1
 - With B14 mounting flange acc IEC71 for ratios 80:1 to 100:1
 - Output backlash: N/A
 - Max. input speed: 2,800 rpm
 - Max. output speed: see CHMR90
 - Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast iron hub G500)
 - Lubrication: synthetic oil ISO VG320
 - Weight: 3.5 kg



Accessories

- Output shaft **CHM90-X**
or **CHM90-DX**
(tome ② p.305)
 - Torque arm **CHM90-BR**
(tome ② p.304)



Output torque (Nm values given as a guide only)

Ratio	7:5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1
INPUT	2800	208	234	258	258	248	308	274	264	244	224
SPEED	1400	288	308	358	354	338	408	358	338	318	284
(rpm)	900	338	368	418	388	368	458	408	388	346	314

DISCOUNTS

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-20%	On request

Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Stock*	Price each
CHM90-7	7,5:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-10	10:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-15	15:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-20	20:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-25	25:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-30	30:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-40	40:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-50	50:1	90B5	24	130	165	200	No	-	509,62 €
CHM90-60	60:1	90B5	24	130	165	200	not defined	-	509,62 €
CHM90-80	80:1	80B5	19	130	165	200	not defined	-	509,62 €
CHM90-100	100:1	80B5	19	130	165	200	Yes	-	509,62 €

**Depending on availability - Dimensions in mm*

Worm and wheel gearbox



€
Ecco



CHMR110

Torque up to 980 Nm

- **Ratios from 7.5:1 to 100:1**
 - Output backlash: N/A
 - Max. input speed: 2,800 rpm
 - Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast)
 - Lubrication: synthetic oil ISO
 - Weight: 35 kg

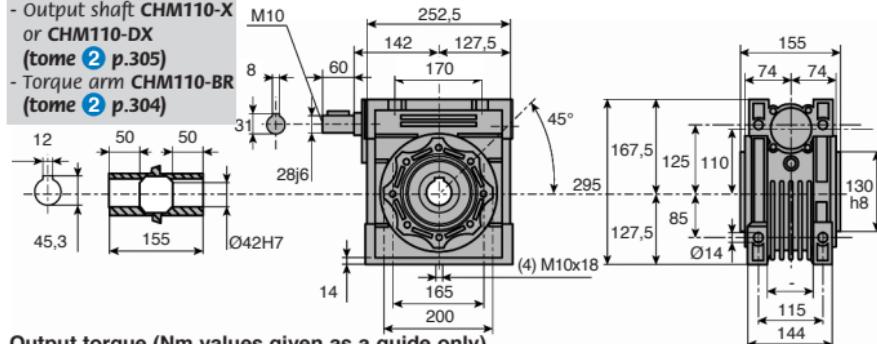


Info.

- See **technical pages**

Accessories

- Output shaft **CHM110-X**
or **CHM110-DX**
(tome 2 p.305)
 - Torque arm **CHM110-BR**
(tome 2 p.304)



Output torque (Nm values given as a guide only)

Ratio	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	380	430	480	475	490	540	520	490	465	380	350
SPEED (rpm)	1400	540	580	650	635	660	715	690	650	610	505	480
(rpm)	900	640	705	740	720	740	830	780	740	675	550	500

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-20%	On request

Part number	Reduction ratio	Max. input speed (rpm)	Max output speed (rpm)	Efficiency at 900 rpm (%)	Self locking output	Price each
CHMR110-7	7,5:1	2800	373,33	NC	no	785,30 €
CHMR110-10	10:1	2800	280,00	NC	no	785,30 €
CHMR110-15	15:1	2800	186,66	NC	no	785,30 €
CHMR110-20	20:1	2800	140,00	NC	no	785,30 €
CHMR110-25	25:1	2800	112,00	NC	no	785,30 €
CHMR110-30	30:1	2800	93,33	NC	no	785,30 €
CHMR110-40	40:1	2800	70,00	NC	no	785,30 €
CHMR110-50	50:1	2800	56,00	NC	no	785,30 €
CHMR110-60	60:1	2800	46,66	NC	no	785,30 €
CHMR110-80	80:1	2800	35,00	NC	not defined	785,30 €
CHMR110-100	100:1	2800	28,00	NC	not defined	785,30 €

Dimensions in mm



Torque up to 980 Nm

CHM110

- **Ratios from 7.5:1 to 100:1**
 - With B14 flange acc IEC100/112 for ratios 7.5:1 to 60:1
 - With B14 mounting flange acc IEC90 for ratios 80:1 to 100:1
 - Output backlash: N/A
 - Max. input speed: 2,800 rpm
 - Max. output speed: see CHMR110
 - Materials:
 - Casing: aluminium
 - Screws: treated steel 20CR
 - Wheel: bronze CuSn12 (cast iron hub G500)
 - Lubrication: synthetic oil ISO VG320
 - Weight: 35 kg

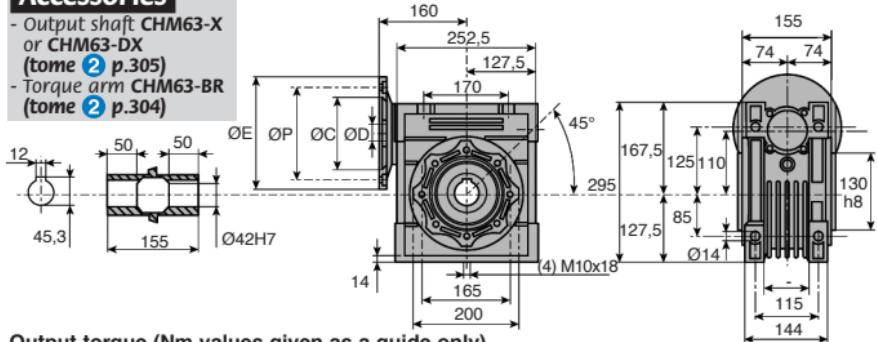


Info.

- See **technical pages**

Accessories

- Output shaft CHM63-X or CHM63-DX
(tome ② p.305)
 - Torque arm CHM63-BR
(tome ② p.304)



Output torque (Nm values given as a guide only)

Ratio	7:5:1	10:1	15:1	20:1	25:1	30:1	40:1	50:1	60:1	80:1	100:1	
INPUT	2800	380	430	480	475	490	540	520	490	465	380	350
SPEED	1400	540	580	650	635	660	715	690	650	610	505	480
(rpm)	900	640	705	740	720	740	830	780	740	675	550	500

DISCOUNTS

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-20%	On request

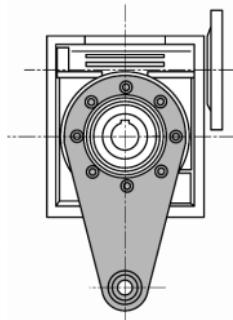
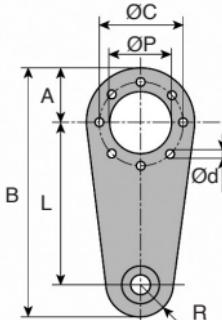
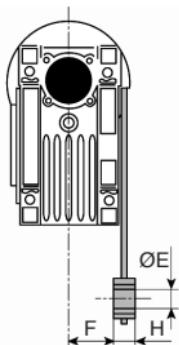
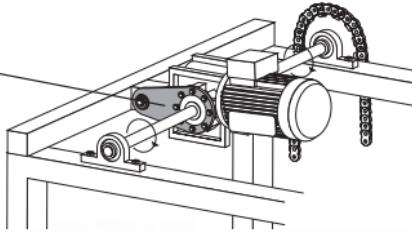
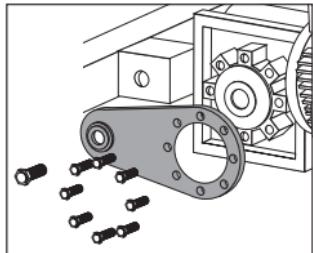
Part number	Reduction ratio	Input flange	ØD	ØC	ØP	ØE	Self locking output	Price each
CHM110-7	7,5:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-10	10:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-15	15:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-20	20:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-25	25:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-30	30:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-40	40:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-50	50:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-60	60:1	100/112B5	28	180	215	250	no	785,30 €
CHM110-80	80:1	90B5	24	130	165	200	not defined	785,30 €
CHM110-100	100:1	90B5	24	130	165	200	not defined	785,30 €

Dimensions in mm

CHMBR

Reaction arm

- Mounts directly on the output side of CHM and CHMR gearboxes
- The mounting point of the reaction arm is equipped with a vibration proof bearing
- Material:
Galvanised steel



DISCOUNTS A

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

DISCOUNTS B

Qty	1+	2+	6+	15+
Disc.	List	-5%	-15%	On request

Part number	L	R	F	H	ØE	A	B	ØC	ØD	ØP	Weight (kg)	Stock*	Price each
CHM30-BR	85	15	24,0	14	8	38	138	65	7	55	0,18	✓ A	9,00 €
CHM40-BR	100	18	31,5	14	10	44	162	75	7	60	0,24	✓ A	9,56 €
CHM50-BR	100	18	38,5	14	10	50	168	85	9	70	0,27	✓ A	10,45 €
CHM63-BR	150	18	49,0	14	10	55	223	95	9	80	0,57	✓ A	13,35 €
CHM75-BR	200	30	47,5	25	20	70	300	115	9	95	1,10	✓ B	20,03 €
CHM90-BR	200	30	57,5	25	20	80	310	130	11	110	1,26	✓ B	28,49 €
CHM110-BR	250	35	62,0	30	25	100	385	165	11	130	1,92	- B	37,90 €

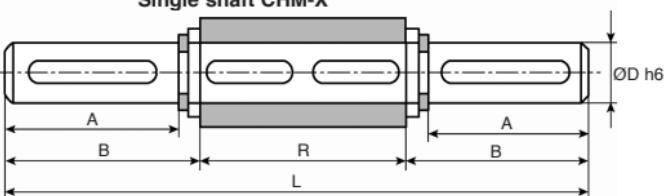
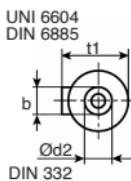
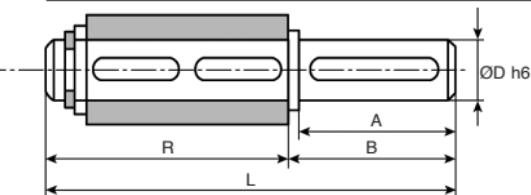
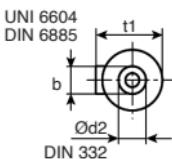
*Depending on availability - Dimensions in mm

Single and double output shaft

CHMx
CHMdx

- Mounts into the bores of the CHM and CHMR gearboxes

- Shaft steel C40



DISCOUNTS A

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

DISCOUNTS B

Qty	1+	2+	6+	15+
Disc.	List	-5%	-15%	On request

Part number	ØD h6	A	B	b	t1	R	L	Ød2	Weight (kg)	Stock*	Price each
Single shaft											
CHM30-X	14	30	32,5	5	16,0	69,5	102	M6x16	0,14	✓	Ⓐ 13,23 €
CHM40-X	18	40	43,0	6	20,5	85,0	128	M6x16	0,27	✓	Ⓐ 15,60 €
CHM50-X	25	50	53,5	8	28,0	99,5	153	M10x22	0,60	✓	Ⓐ 17,94 €
CHM63-X	25	50	53,5	8	28,0	119,5	173	M10x22	0,67	✓	Ⓐ 19,97 €
CHM75-X	28	60	63,5	8	31,0	128,5	192	M10x22	0,94	✓	Ⓑ 22,30 €
CHM90-X	35	80	84,5	10	38,0	149,5	234	M12x28	1,79	✓	Ⓑ 33,19 €
CHM110-X	42	80	84,5	12	45,0	164,5	249	M16x35	2,70	-	Ⓑ 37,55 €
Double shaft											
CHM30-DX	14	30	32,5	5	16,0	63,0	128	M6x16	0,16	✓	Ⓐ 17,94 €
CHM40-DX	18	40	43,0	6	20,5	78,0	164	M6x16	0,34	✓	Ⓐ 19,97 €
CHM50-DX	25	50	53,5	8	28,0	92,0	199	M10x22	0,75	✓	Ⓐ 22,30 €
CHM63-DX	25	50	53,5	8	28,0	112,0	219	M10x22	0,84	-	Ⓐ 24,31 €
CHM75-DX	28	60	63,5	8	31,0	120,0	247	M10x22	1,20	✓	Ⓑ 26,47 €
CHM90-DX	35	80	84,5	10	38,0	140,0	309	M12x28	2,50	✓	Ⓑ 39,07 €
CHM110-DX	42	80	84,5	12	45,0	155,0	324	M16x35	3,44	-	Ⓑ 46,47 €

*Depending on availability - Dimensions in mm

CHM and CHMR gearboxes

Technical information

CHM CHMR

Maximum output load

When used with a double output shaft, the total of the combined loads should not exceed the values given in the table below

Loads are given for a speed of 10 rpm are the maximum loads that the gear reducers can accept.

a : Gear constant

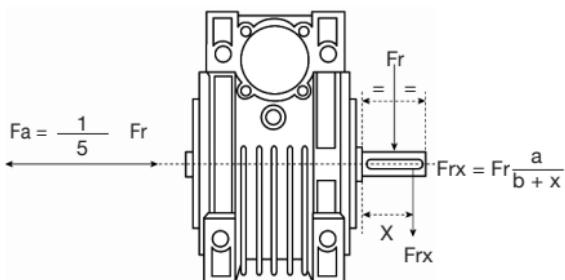
b : Gear constant

x : Load distance
from shaft shoulder (mm)

Fr_x: Radial load
in position X (N)

Fr : Radial load (N)

Fa : Axial load (N)



Maximum output load (NB Speeds given are a guide only)

Sizes	CHM30	CHM40	CHM50	CHM63	CHM75	CHM90	CHM110
OUTPUT SPEED (rpm)	400	530	1020	1400	1830	2160	2390
	250	620	1200	1650	2150	2520	2800
	150	740	1420	1960	2540	2990	3310
	100	850	1620	2250	2910	3430	3800
	60	1000	1920	2660	3450	4060	4500
	40	1150	2200	3050	3950	4650	5150
	25	1350	2570	3570	4620	5440	6020
	10	1830	3490	4840	6270	7380	8180
							12000

Values of gear constants

Sizes	CHM30	CHM40	CHM50	CHM63	CHM75	CHM90	CHM110
a	65	84	101	120	131	162	176
b	50	64	76	95	101	122	136

Maximum radial input loads

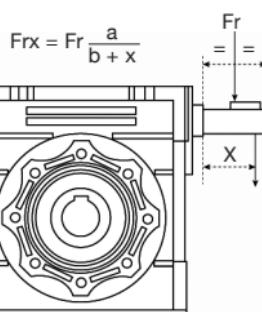
Values of gear constants

Sizes	CHM30	CHM40	CHM50	CHM63	CHM75	CHM90	CHM110
a	86	106	129	159	192	227	266
b	76	94	114	139	167	202	236
Fr maxi.	210	350	490	700	980	1270	1700



For the CHM110 and CHMR110

- It is the user's responsibility to fill the housing with oil before use (approx 3l).
- The oil should be changed after 300 hours of use.





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* Certain conditions apply - Deliveries to mainland France only

Worm and wheel gearbox

CHML

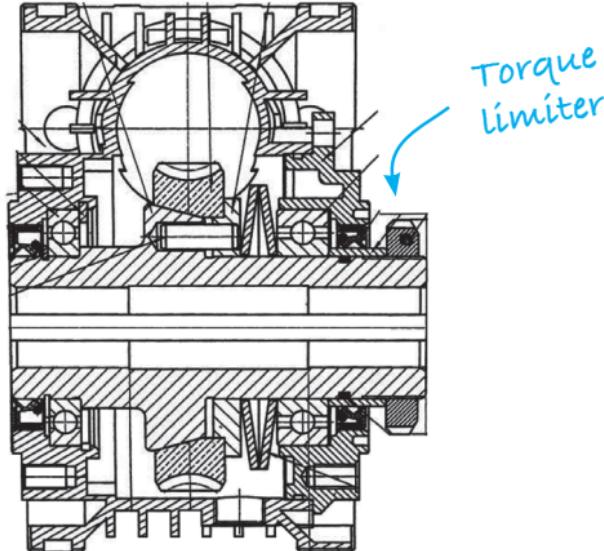
Integrated torque limiter

- The CHML range of worm and wheel gearboxes are available in 3 sizes; **CHML40, CHML50 and CHML63**
- The torque limiter provides protection against overload
- The torque limiter is in an oil bath and is maintenance free
- The gearbox **dimensions are identical to those of the CHM range** with the exception of the external ring nut.
- Please note however that the dimensions of the mounting flange may be different to those of the CHM range



Adjustment

- Set the torque limit by tightening or loosening the external ring nut



Worm and wheel gearbox

Integrated torque limiter (up to 57 Nm) CHML40

- Protected against overload
- Ratios from 20:1 to 100:1
- Torque limit can be set anywhere up to the maximum value
- Materials:
 - Housing: aluminium
 - Worm: treated steel
 - Wheel: bronze (cast iron hub)
- Lubrication: synthetic oil ISO VG320

Accessory

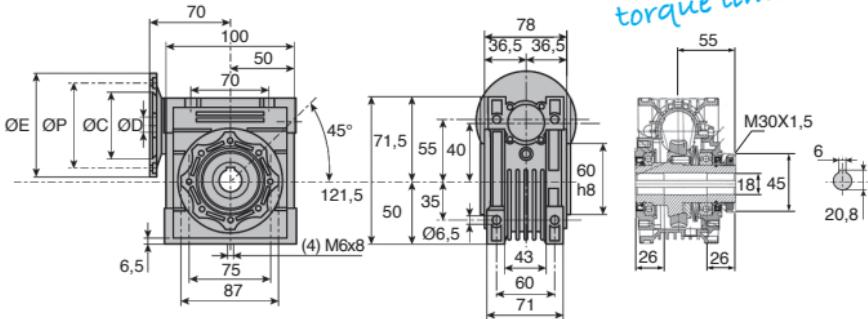
- See CHM40

Info

- Dimensions are the same as the CHM range except for the mounting flanges which may be different



with integrated
torque limiter



OUTPUT TORQUE (IN NM, VALUES GIVEN AS A GUIDE ONLY)

Ratio	20:1	25:1	30:1	40:1	50:1	60:1	100:1
Input speed (rpm)	2800	27	33	30	30	27	22
1400	38	39	44	40	38	35	28
900	43	43	48	44	41	38	31
500	53	51	57	52	48	40	35

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Mounting						Self locking output	Price each 1 to 2
		flange	ØD	ØC	ØP	ØE			
CHML40-20-71B14	20:1	71B14	14	70	85	105	No	224,19 €	
CHML40-25-63B14	25:1	63B14	11	60	75	90	No	224,19 €	
CHML40-25-63B5	25:1	63B5	11	95	115	140	No	224,19 €	
CHML40-30-63B14	30:1	63B14	11	60	75	90	No	224,19 €	
CHML40-30-63B5	30:1	63B5	11	95	115	140	No	224,19 €	
CHML40-40-63B14	40:1	63B14	11	60	75	90	No	224,19 €	
CHML40-40-63B5	40:1	63B5	11	95	115	140	No	224,19 €	
CHML40-50-63B14	50:1	63B14	11	60	75	90	Not defined	224,19 €	
CHML40-60-63B14	60:1	63B14	11	60	75	90	Not defined	224,19 €	
CHML40-100-63B14	100:1	63B14	11	60	75	90	Yes	224,19 €	

Dimensions in mm

Worm and wheel gearbox

CHML50 Integrated torque limiter (up to 107 Nm)

- Protected against overload
- Ratios from 20:1 to 100:1
- Torque limit can be set anywhere up to the maximum value
- Materials:
 - Housing: aluminium
 - Worm: treated steel
 - Wheel: bronze (cast iron hub)
- Lubrication: synthetic oil ISO VG320

Accessory

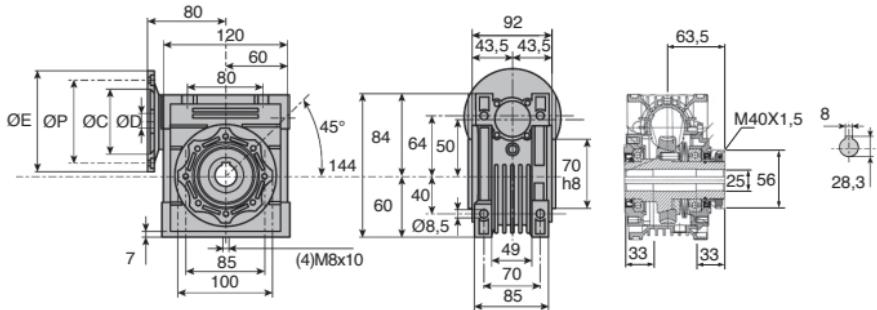
- See CHM50

Info

- Dimensions are the same as the CHM range except for the mounting flanges which may be different



with integrated torque limiter



OUTPUT TORQUE (IN NM, VALUES GIVEN AS A GUIDE ONLY)

Ratio	20:1	25:1	30:1	40:1	50:1	60:1	100:1	
Input speed (rpm)	2800	52	51	63	58	52	49	39
1400	72	69	83	75	72	67	54	
900	76	74	89	81	76	71	55	
500	92	90	107	97	90	82	64	

DISCOUNTS

Qty	1+	3+	6+
Disc.	-20%	On request	

Part number	Reduction ratio	Mounting flange	Self locking output				Price each
			ØD	ØC	ØP	ØE	
CHML50-20-71B5	20:1	71B5	14	110	130	160	No 340,14 €
CHML50-25-71B5	25:1	71B5	14	110	130	160	No 340,14 €
CHML50-30-71B5	30:1	71B5	14	110	130	160	No 340,14 €
CHML50-40-71B5	40:1	71B5	14	110	130	160	No 340,14 €
CHML50-50-71B5	50:1	71B5	14	110	130	160	Not defined 340,14 €
CHML50-60-71B5	60:1	71B5	14	110	130	160	Not defined 340,14 €
CHML50-100-71B5	100:1	71B5	14	110	130	160	Yes 340,14 €

Dimensions in mm

Worm and wheel gearbox

Integrated torque limiter (up to 138 Nm) CHML63

- Protected against overload
- Ratios from 20:1 to 100:1
- Torque limit can be set anywhere up to the maximum value
- Materials:
 - Housing: aluminium
 - Worm: treated steel
 - Wheel: bronze (cast iron hub)
- Lubrication: synthetic oil ISO VG320

Accessory

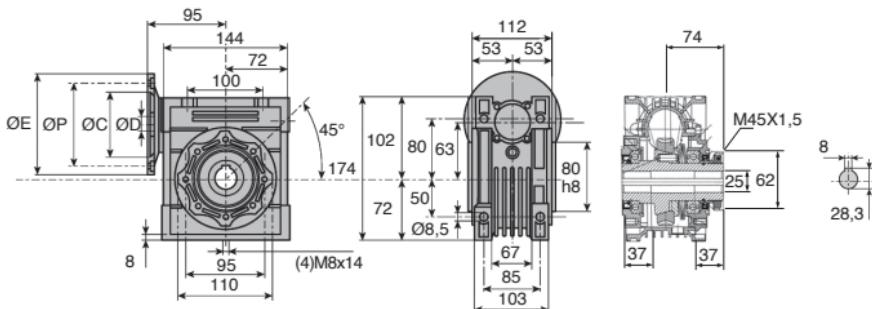
- See CHM63

Info

- Dimensions are the same as the CHM range except for the mounting flanges which may be different.



with integrated
torque limiter



OUTPUT TORQUE (IN NM, VALUES GIVEN AS A GUIDE ONLY)

Ratio	20:1	25:1	30:1	40:1	50:1	60:1	100:1	
Input speed (rpm)	2800	99	91	119	107	99	94	73
1400	134	129	159	144	134	129	117	
900	147	136	174	159	144	137	123	
500	177	163	198	184	172	159	127	

DISCOUNTS

Qty	1+	3+	6+
Disc.	List -20%	On request	

Part number	Reduction ratio	Mounting						Self locking output	Price each 1 to 2
		flange	ØD	ØC	ØP	ØE			
CHML63-20-90B5	20:1	90B5	24	130	165	200	No	454,63 €	
CHML63-25-90B5	25:1	90B5	24	130	165	200	No	454,63 €	
CHML63-30-90B5	30:1	90B5	24	130	165	200	No	454,63 €	
CHML63-40-80B5	40:1	80B5	19	130	165	200	No	454,63 €	
CHML63-50-80B5	50:1	80B5	19	130	165	200	Not defined	454,63 €	
CHML63-60-80B5	60:1	80B5	19	130	165	200	Not defined	454,63 €	
CHML63-100-71B5	100:1	71B5	14	110	130	160	Yes	454,63 €	

Dimensions in mm

Mechanical speed variator

CHV

With 4 pole motor

- Reduction ratio 1:5

- With 4 pole motor, 1,400 RPM 230/400V

- B5 mounting flange

- Materials:

Aluminium for sizes 02, 05 and 10

Cast iron for size 20

- Paint : grey RAL 9022

Advantages

- Simple speed adjustment by a mechanical handle

- Good efficiency

Use

- The drives are supplied with lubrication

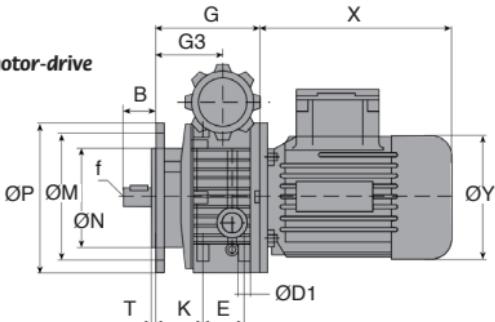
for horizontal use

- Attention: supplied with motor only

- Do not adjust the handle when the motor-drive

is not connected to the final device:

risk of irreversible damage.



Part number	Motor power kW	Output speed (rpm)	Torque (Nm)	B	ØD1	E	G	G3
CHV02-0.18	0,18	170-880	3-1,5	23	M6	50	112,5	64,5
CHV02-0.22	0,22	170-880	3,8-1,9	23	M6	50	112,5	64,5
CHV05-0.37	0,37	200-1000	6-3	30	M8	40	110,0	74,0
CHV10-0.75	0,75	200-1000	12-6	40	M8	58	139,0	85,5
CHV20-1.10	1,1	200-1000	18-9	50	-	-	188,0	115,0
CHV20-1.50	1,5	200-1000	24-12	50	-	-	188,0	115,0

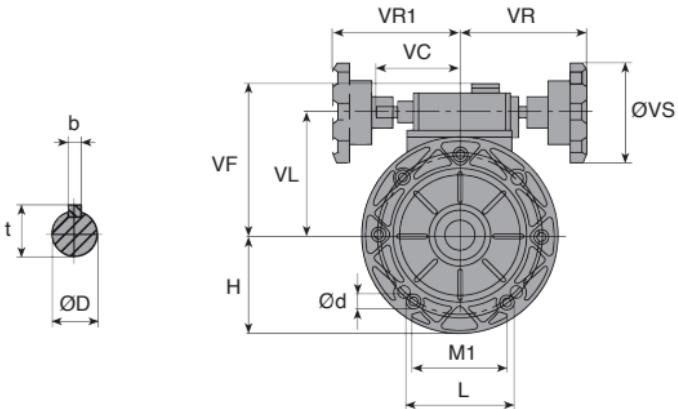
Part number	X	ØY	ØM	ØN	ØP	T	K	f
CHV02-0.18	192	130	115	95	140	3,5	46,0	M5
CHV02-0.22	192	130	115	95	140	3,5	46,0	M5
CHV05-0.37	225	145	130	110	160	3,5	52,5	M6
CHV10-0.75	250	165	165	130	200	3,5	60,0	M6
CHV20-1.10	205	185	165	130	200	3,5	-	M8
CHV20-1.50	205	185	165	130	200	3,5	-	M8

Dimensions in mm

Mechanical speed variator

With 4 pole motor

CHV



DISCOUNTS

Qty	1+	6+	10+
Disc.	List	-7%	On request

Part number	VC	VF	VL	VR	VR1	ØVS	Oil (kg)
CHV02-0.18	71	111	78	110	110	85	0,13
CHV02-0.22	71	111	78	110	110	85	0,13
CHV05-0.37	71	123	90	110	110	85	0,15
CHV10-0.75	79	140	107	120	120	110	0,33
CHV20-1.10	-	144	122	150	-	110	0,80
CHV20-1.50	-	144	122	150	-	110	0,80

Part number	M1	L	H	Ød	ØD (j6)	t	b	Weight (kg)	Price each 1 to 5
CHV02-0.18	60	72	70	9	11	12,5	4	3,4	403,74 €
CHV02-0.22	60	72	70	9	11	12,5	4	3,4	412,06 €
CHV05-0.37	76	90	80	9	14	16,0	5	4,7	492,89 €
CHV10-0.75	84	98	100	11	19	21,5	6	7,8	656,10 €
CHV20-1.10	-	241	126	11	24	27,0	8	31,0	973,61 €
CHV20-1.50	-	241	126	11	24	27,0	8	31,0	1 017,94 €

Dimensions in mm

Symbols and general formulas

P = Power (kW)
i = Reduction ratio
T = Torque (Nm)
n = Speed (rpm)
Fr = Radial load (N)

P₁ = Input power (kW)
P₂ = Output power (kW)
η = Efficiency
P₁ * η = P₂

F_a = Axial load (N)
f.s. = Service factor
D = Diameter (mm)
1 kW = 1,36 HP
9,81 N = 1 kg

T₂ = Output torque (Nm)
T_{2n} = Maximum output torque (Nm)

Rotation speeds

n₁ = Input speed (rpm)
n₂ = Output speed (rpm)

Reduction ratio

$$i = \frac{n_1}{n_2}$$

Torque

$$T_2 = \frac{9550 \cdot P_1 \cdot i}{n_2} \text{ [Nm]} \quad T_{2n} \geq T_2 \cdot f_s \text{ [Nm]}$$

Radial load

The radial load is proportional to the torque required and inversely proportional to the transmitting diameter:

$$F_R = \frac{2000 \cdot T \cdot T.e.f.}{D} \text{ [N]}$$

F_R = Radial load

T = Torque (Nm)

T.e.f. = Transmission factor

T.e.f. = 1,15 for gear

= 1,4 for chain sprockets

= 1,75 for V pulleys

= 2,5 for flat pulleys

D = Transmitting diameter

Lubrification

- All motor-drives and drives are delivered pre-lubricated.
- Recommended oil for maintenance: A.T.F.DEXRON

Operation and maintenance

- The screws under the crank are preset, they should not be touched.
- **Do not adjust the handle when the motor-drive is not attached as there is a risk of irreversible damage.**
- The drives are delivered lubricated, check the level before use.
- Check the level periodically after use.
- The temperature after use can reach 50°C to 55°C more than ambient temperature.

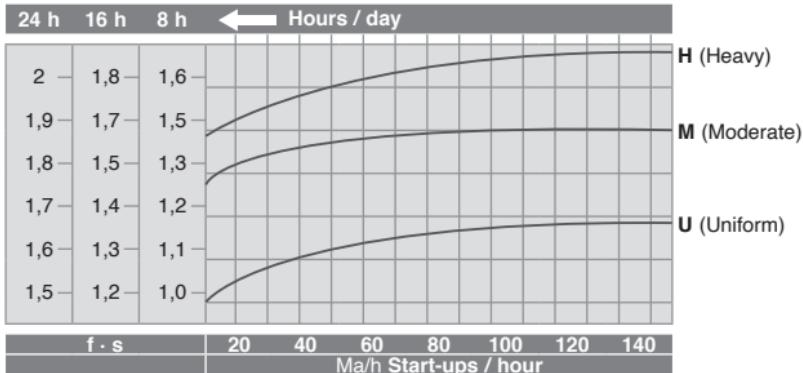
Type of load

- **U** = Conveyor for light loads, centrifugal pumps, lifts, bottling machines
- **M** = Heavy load conveyor, packaging machines, woodworking machines, gear pumps
- **H** = Mixers, Machines, vibrators...

Service factor

The service factor depends mainly on 3 parameters:

- Type of load
- Operating time (h/day)
- How often the motor is started



Stainless steel Worm and wheel motor gearbox

Create your set



For food industry



Supporting feet **RFV-FP**
(tome 2 p.326)



Motor 0,18kW to 1,5kW
(tome 2 p.318)



Gear reducer **RFV40, RFV50, RFV63**,
Reduction ratio of 7,5/1 to 100/1,
3 flanges to choose depending
on the motor selected



RFV-CAP protective cover
(tome 2 p.327)
open or closed to prevent
material retention in the output
bore



Reaction arm **RFV-BR**
(tome 2 p.325) to better
support the load

* See data sheet (tome 2 p.328)

Stainless steel hypoid motorgearbox

Create your set*
Boost your performance!

Create your set



RFK Hypoid gear reducer
(tome ② p.330)



For food industry

**Asynchronous AC motor
DER** (tome ② p.318)



Accessoirise



**Reaction arm
RFKBR**
(tome ② p.325)



**Foot for gearbox
RFKFPSS**
(tome ② p.326)



RFK-CAP protective cover
(tome ② p.327)

ADVANTAGES

- + Silencer**
- + Economic**
(find out why*)
- + Better performance**
- + Reduction ratio up to 300/1**

* Possibility of selecting a smaller motor than for a worm and wheel motorgearbox, less expensive, less energy consuming

* See data sheet (tome ② p.341)

Asynchronous stainless steel motor, 0.18kW Sta

DER63

Torque up to 3,49Nm

- 3 phase asynchronous motor ideal for use in the food industry

- B14 flange

- 4 pole motor

- Speed under no load: 1,500 rpm

- Supply voltage 230/400 VAC

- All surfaces smooth and polished to avoid dirt retention

- Enclosed housing, no ventilation

- Sealed terminal box

- Ingress protection IP66

- Insulation class ISO F

- Material:

Stainless steel



Option

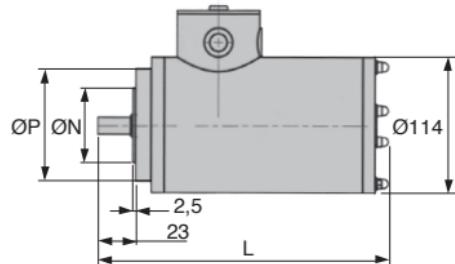
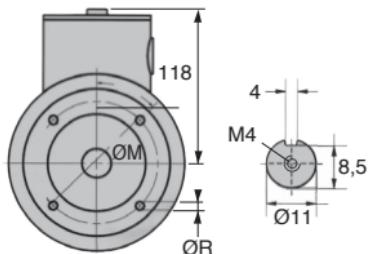
- Motor with B5 or B3 flanges

Accessories

- RFV, RFK Stainless steel gearbox to create a motorised gearbox

(tome ② p.322), (tome ② p.330)

Designed for the food industry



Flange dimensions

	Flange	ØR	ØP	ØM	ØN
DER63-A4-B14/SS	B14	M5	90	75	60
DER63-A4-B5/SS	B5	10	140	115	95

DISCOUNTS

Qty	1+	2+	4+
Disc.	List -5%		On request

Part number	L (mm)	Power (kW)		Current (A)		Effi- ciency	Power factor	Nominal Tn (Nm)	Ts (Nm)	Tmax (Nm)	Is (A)	Weight (kg)	Price each
		B14	B5										
DER63-A4-B14/SS	237	0,18	0,55	69,9%	0,68	1,21	2,54	2,66	2,42	8,7	601,02 €		
DER63-A4-B5/SS	237	0,18	0,55	66,9%	0,68	1,21	2,54	2,66	2,42	8,7	678,00 €		

Dimensions in mm

Sta Asynchronous stainless steel motor, 0.25 - 0.37kW

Torque up to 6,37Nm

DER71

- 3 phase asynchronous motor ideal for use in the food industry
- B14 flange
- 4 pole motor
- Speed under no load: 1,500 rpm
- Supply voltage 230/400 VAC
- All surfaces smooth and polished to avoid dirt retention
- Enclosed housing, no ventilation
- Sealed terminal box
- Ingress protection IP66
- Insulation class ISO F
- Material:
 - Stainless steel 304



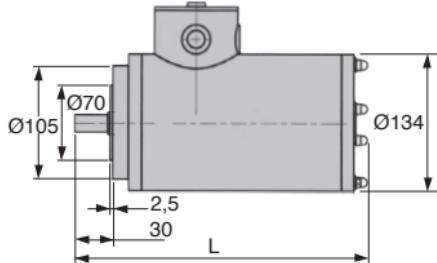
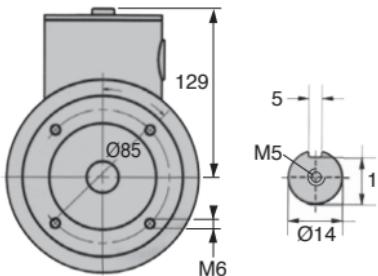
Option

- Motor with B5 flange

Accessories

- RFV, RFK Stainless steel gearbox to create a motorised gearbox
(tome 2 p.322), (tome 2 p.330)

Designed for the food industry



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	L (mm)	Torque									
		Power (kW)	Current (A)	Effi- ciency	Power factor	Tn (Nm)	Ts (Nm)	Tmax (Nm)	Is (A)	Weight (kg)	Price each
DER71-A4-B14/SS	243	0,25	0,67	79%	0,69	1,65	3,47	3,63	3,48	11,5	662,09 €
DER71-B4-B14/SS	253	0,37	0,95	81,5%	0,70	2,49	5,23	5,48	4,54	13	701,71 €

Dimensions in mm

Asynchronous stainless steel motor, 0.55 - 0.75kW Sta

DER80

Torque up to 17,46Nm

- 3 phase asynchronous motor ideal for use in the food industry

- B14 flange
- 4 pole motor
- Speed under no load: 1,500 rpm
- Supply voltage 230/400 VAC
- All surfaces smooth and polished to avoid dirt retention
- Enclosed housing, no ventilation
- Sealed terminal box
- Ingress protection IP66
- Insulation class ISO F
- Material:
Stainless steel

Option

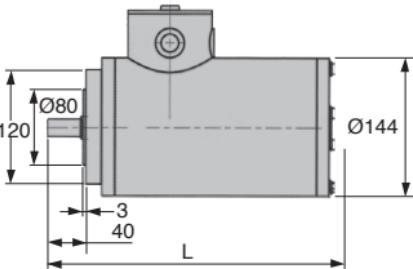
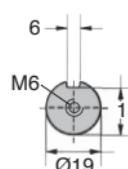
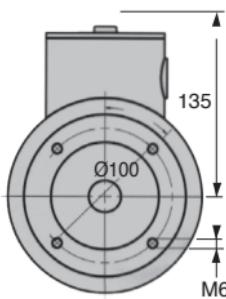
- Motor with B5 flange

Accessories

- RFV, RFK Stainless steel gearbox to create a motorised gearbox
(tome ② p.322), (tome ② p.330)



Designed for the food industry



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	L (kW)	Torque			Tn (Nm)	Ts (Nm)	Tmax (Nm)	Is (A)	Weight (kg)	Price each
		Power (kW)	Current (A)	Effi- ciency						
DER80-A4-B14/SS	308	0,55	1,29	81,8%	0,75	3,65	87,6	8,9	6,71	17,6
DER80-B4-B14/SS	348	0,75	1,76	84,4%	0,74	4,91	11,29	11,29	10,56	21,0

Dimensions in mm

Sta Asynchronous stainless steel motor 1.1 to 1.5kW

Torque up to 33Nm

DER90

- 3 phase asynchronous motor ideal for use in the food industry
- B14 flange
- 4 pole motor
- Speed under no load: 1,500 rpm
- Supply voltage 230/400 VAC
- All surfaces smooth and polished to avoid dirt retention
- Enclosed housing, no ventilation
- Sealed terminal box
- Ingress protection IP66
- Insulation class ISO F
- Material:
Stainless steel



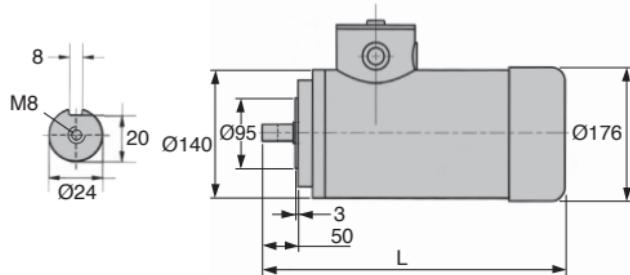
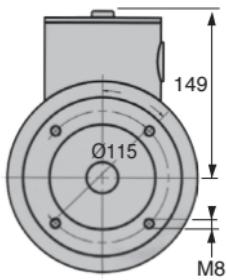
Option

- Motor with B5 flange

Accessories

- RFV, RFK Stainless steel gearbox to create a motorised gearbox
(tome ② p.322), (tome ② p.330)

Designed for the food industry



DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	L (kW)	Torque									
		Power (kW)	Current (A)	Effi- ciency	Power factor	Nominal Tn (Nm)	Starting Ts (Nm)	Max Tmax (Nm)	Is (A)	Weight (kg)	Price each
DER90-S4-B14/SS	351	1,1	2,31	82,7%	0,83	7,2	16,56	16,56	13,86	24	1 185,54 €
DER90-L4-B14/SS	367	1,5	3,14	86,3%	0,79	9,81	22,56	22,56	18,84	28	1 255,62 €

Dimensions in mm

Stainless steel worm and wheel gearbox

RFV40

Torque up to 40Nm

- Gearbox especially suitable for use in the food industry
- Ratios from 7.5:1 to 100:1
- B14 flange
- All surfaces smooth and polished to avoid dirt retention
- Lubricated using food quality grease
- Working temperature: -20° to +40 °C
- Material:
316 stainless steel housing

Info

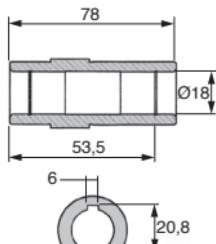
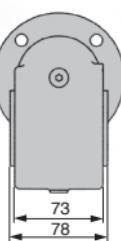
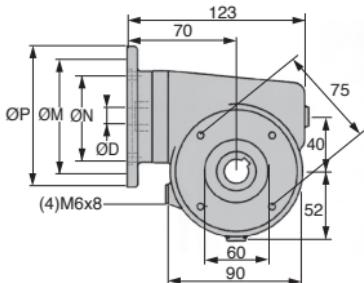
- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc

Accessories

- Use with a DER 4 pole motor to create a motorised gearbox (tome ② p.318)
- RFV_{BR} torque arm, RFV_{FP} mounting feet and RFV_{CAP} protective covers (tome ② p.325 to p.327)



Suitable for
the food industry



FLANGE DIMENSIONS

	ØD	ØP	ØM	ØN
63B14 flange	11	90	75	60
71B14 flange	14	105	85	70

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number		Max. Torque at 1400rpm (Nm)	Reduction ratio	Self locking output	Price each
63B14 flange	71B14 flange				
-	RFV40-7,5-71B14/SS	37	7,5	No	624,58 €
-	RFV40-10-71B14/SS	40	10	No	624,58 €
-	RFV40-15-71B14/SS	40	15	No	624,58 €
RFV40-20-63B14/SS	RFV40-20-71B14/SS	39	20	Not defined	624,58 €
RFV40-25-63B14/SS	RFV40-25-71B14/SS	36	25	Not defined	624,58 €
RFV40-30-63B14/SS	RFV40-30-71B14/SS	40	30	Yes	624,58 €
RFV40-40-63B14/SS	RFV40-40-71B14/SS	40	40	Yes	624,58 €
RFV40-50-63B14/SS	-	39	50	Yes	624,58 €
RFV40-60-63B14/SS	-	36	60	Yes	624,58 €
RFV40-80-63B14/SS	-	30	80	Yes	624,58 €

Dimensions in mm

Stainless steel worm and wheel gearbox

Torque up to 75Nm

RFV50

- Réducteur idéal pour l'agroalimentaire

- Ratios from 7,5:1 à 100:1

- B14 flange

- All surfaces smooth and polished to avoid dirt retention

- Lubricated using food quality grease

- Working temperature: -20°C à +40°C

- Material:

316 stainless steel housing

stainless
steel

Info.

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc

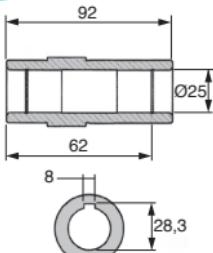
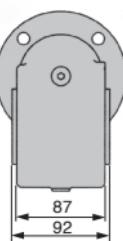
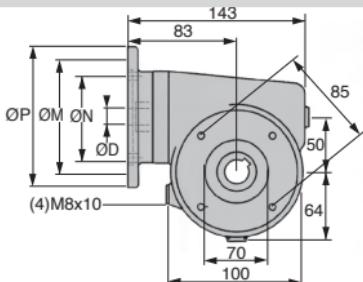
Accessories

- Use with a DER 4 pole motor to create a motorised gearbox (**tome 2 p.318**)

- RFV_{BR} torque arm, RFV_F mounting feet and RFV_{CAP} protective covers (**tome 2 p.325 to p.327**)



Suitable for
the food industry



FLANGE DIMENSIONS

	ØD	ØP	ØM	ØN
63B14 flange	11	90	75	60
71B14 flange	14	105	85	70
80B14 flange	19	120	100	80

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Max. Torque at 1400 rpm (Nm)	Reduction ratio	Self locking output	Price each
63B14 flange	71B14 flange	80B14 flange		
-	-	RFV50-7,5-80B14/SS	67	7,5 No 667,43 €
-	RFV50-10-71B14/SS	RFV50-10-80B14/SS	75	10 No 667,43 €
-	RFV50-15-71B14/SS	RFV50-15-80B14/SS	75	15 No 667,43 €
-	RFV50-20-71B14/SS	RFV50-20-80B14/SS	74	20 Not defined 667,43 €
-	RFV50-25-71B14/SS	RFV50-25-80B14/SS	64	25 Not defined 667,43 €
-	RFV50-30-71B14/SS	RFV50-30-80B14/SS	75	30 Yes 667,43 €
RFV50-40-63B14/SS	RFV50-40-71B14/SS	-	75	40 Yes 667,43 €
RFV50-50-63B14/SS	RFV50-50-71B14/SS	-	69	50 Yes 667,43 €
RFV50-60-63B14/SS	RFV50-60-71B14/SS	-	67	60 Yes 667,43 €
RFV50-80-63B14/SS	-	-	60	80 Yes 667,43 €
RFV50-100-63B14/SS	-	-	57	100 Yes 667,43 €

Dimensions in mm

Stainless steel worm and wheel gearbox

RFV63

Torque up to 140Nm

- Gearbox especially suitable for use in the food industry
- Ratios from 7.5:1 to 100:1
- B14 flange
- All surfaces smooth and polished to avoid dirt retention
- Lubricated using food quality grease
- Working temperature: -20° to +40 °C
- Material:
316 stainless steel housing

Info

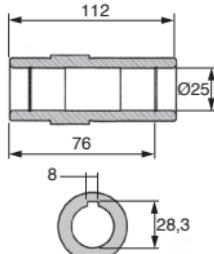
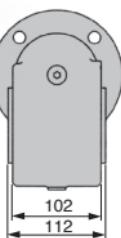
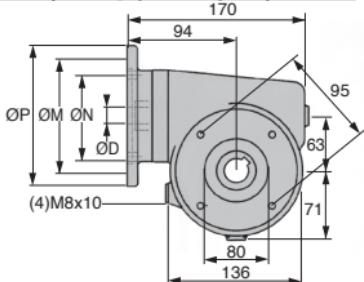
- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc

Accessories

- Use with a DER 4 pole motor to create a motorised gearbox (tome ② p.318)
- RFV_{BR} torque arm, RFV_{FP} mounting feet and RFV_{CAP} protective covers (tome ② p.325 to p.327)



Suitable for
the food industry



FLANGE DIMENSIONS

	ØD	ØP	ØM	ØN
71B14 flange	14	105	85	70
80B14 flange	19	120	100	80
90B14 flange	24	140	115	95

DISCOUNTS

Qty	1+	2+	4+
Disc.	-5%		On request

Part number	Maxi. Torque at 1400 rpm(Nm)	Reduction ratio	Self locking output	Price each
71B14 flange	80B14 flange	90B14 flange		
-	-	RFV63-7,5-90B14/SS	120	7,5 No 874,23 €
-	-	RFV63-10-80B14/SS	112	10 No 874,23 €
-	RFV63-15-80B14/SS	RFV63-15-80B14/SS	120	15 No 874,23 €
-	RFV63-20-80B14/SS	RFV63-20-90B14/SS	112	20 Not defined 874,23 €
-	RFV63-25-80B14/SS	-	126	25 Not defined 874,23 €
-	RFV63-30-80B14/SS	-	139	30 Yes 874,23 €
RFV63-40-71B14/SS	RFV63-40-80B14/SS	-	131	40 Yes 874,23 €
RFV63-50-71B14/SS	RFV63-50-80B14/SS	-	122	50 Yes 874,23 €
RFV63-60-71B14/SS	-	-	114	60 Yes 874,23 €
RFV63-80-71B14/SS	-	-	104	80 Yes 874,23 €
RFV63-100-71B14/SS	-	-	96	100 Yes 874,23 €

Dimensions in mm

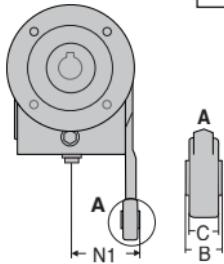
Torque arm

RFV_{BR}
RFK_{BR}

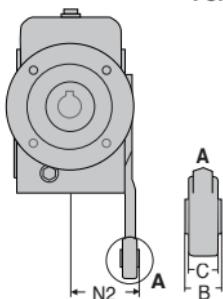
- **Torque arm for RFV and RFK gearboxes**
- Mounts on gearbox output
- Material:
316 stainless steel

Accessories

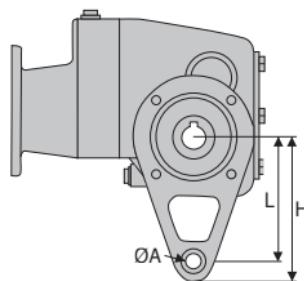
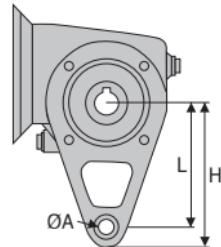
- RFV, RFK gearbox
(tome ② p.322 et 330)



For RFV gearbox



For RFK gearbox



DISCOUNTS

Qty	1+	2+	4+
Disc.	Net	-5%	On request

Part number	L	H	N1	N2	B	C	ØA	For gearbox	Price each
RFV40-BR/SS	100	116	47,3	-	15	12	10,5	RFV40	43,03 €
RFV50-BR/SS	100	116	55,3	55,30	15	12	10,5	RFV50-RFK28	45,13 €
RFV63-BR/SS	150	166	55,3	64,80	15	12	10,5	RFV63-RFK38	47,23 €
RFK48-BR/SS	200	225	-	74,30	26	23	20,5	RFK48	113,83 €
RFK58-BR/SS	200	225	-	85,55	26	23	20,5	RFK58	128,39 €

All dimensions in mm

Stainless steel worm and wheel gearboxes

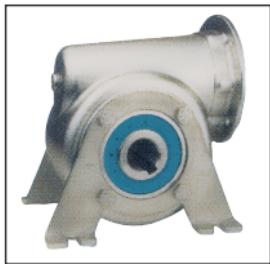
RFVFP

Mounting bracket

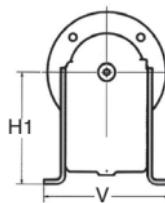
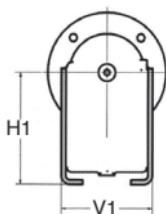
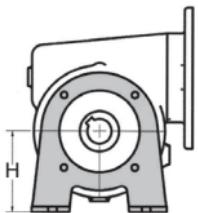
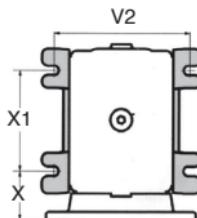
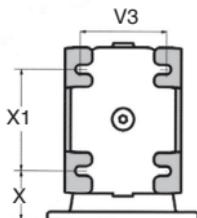
- Supports RFV gearbox
- Inward or outward facing
- Sold in pairs
- Material:
316 stainless steel

Accessories

- RFV worm and wheel gearbox
(tome ② p.322)



Suitable for
the food industry



Brackets facing
inwards

Brackets facing
outwards

DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	H	H1	V	V1	X	X1	V2	V3	Price each
RFV40-FP/SS	50	90	111	83	35	70	95	60	81,39 €
RFV50-FP/SS	60	110	131	97	40	80	114	70	88,89 €
RFV63-FP/SS	72	135	156	116	45	100	137	85	108,18 €

Dimensions in mm

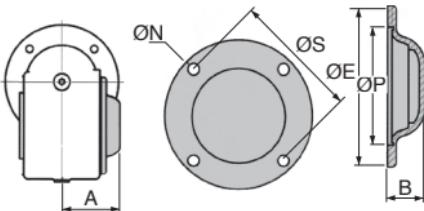
Protective cover

RFV^{CAP}
RFK^{CAP}

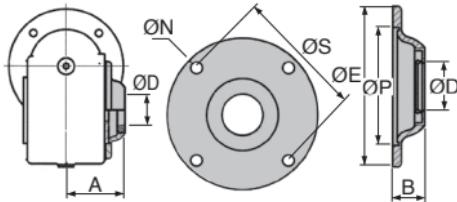
- Protective cover to prevent dirt etc from lodging in the output shaft of RFV stainless steel worm and wheel gearboxes and RFK stainless steel hypoid gearboxes
- For full protection, use one cover on each side of the gearbox
- Matériel:
316 stainless steel

Accessories

- RFV, RFK gearbox
(tome ② p.322 et 330)



Closed cover RFV-CAP-F/SS and RFK-CAP-F/SS



Open cover RFV-CAP-AT/SS and RFK-CAP-AT/SS



DISCOUNTS

Qty	1+	2+	4+
Disc.	Net	-5%	On request

Part number	ØE	ØP	ØD	B	A	ØS	ØN	For gearbox	Price each
Closed cover									
RFV40-CAP-F/SS	90	60	-	20,0	56,5	75	6,5	RFV40	32,39 €
RFV50-CAP-F/SS	100	70	-	20,5	64,0	85	8,5	RFV50-RFK28	39,96 €
RFV63-CAP-F/SS	110	80	-	26,0	79,0	95	8,5	RFV63-RFK38	47,53 €
RFK48-CAP-F/SS	140	95	-	28,0	85,0	115	8,5	RFK48	65,26 €
RFK58-CAP-F/SS	160	110	-	28,0	95,0	130	10,5	RFK58	80,18 €
Open cover for transversal shaft									
RFV40-CAP-AT/SS	90	60	18	17,0	53,5	75	6,5	RFV40	35,64 €
RFV50-CAP-AT/SS	100	70	25	17,0	61,0	85	8,5	RFV50	42,12 €
RFK28-CAP-AT/SS	100	70	20	17,0	61,0	85	8,5	RFK28	40,08 €
RFV63-CAP-AT/SS	110	80	25	22,0	75,0	95	8,5	RFV63-RFK38	49,69 €
RFK48-CAP-AT/SS	140	95	30	28,0	85,0	115	8,5	RFK48	67,13 €
RFK58-CAP-AT/SS	160	110	35	28,0	95,0	130	10,5	RFK58	82,04 €

All dimensions in mm

Stainless steel worm and wheel gearbox

RFV Motor and gearbox selection table

Power P1n (kW)	Output speed (rpm)	Output torque M _{2n} (Nm)	Reduction ratio	F _{r2} (N)	Service factor F _s	Gearbox	Motor
0,18	70	19	20/1	1824	2,1	RFV40	DER63- A4-B14/SS
	56	23	25/1	1964	1,7		
	46,7	25	30/1	2087	1,8		
	35	32	40/1	2298	1,3		
	28	37	50/1	2475	1,0		
	35	33	40/1	3153	2,3	RFV50	DER63- A4-B14/SS
	28	39	50/1	3397	1,9		
	23,3	43	60/1	3610	1,6		
	17,5	52	80/1	3973	1,2		
	186,7	11	7,5/1	1315	3,6		
0,25	140	14	10/1	1447	2,8	RFV40	DER71- A4-B14/SS
	93,3	20	15/1	1657	2,0		
	70	26	20/1	1824	1,5		
	56	32	25/1	1964	1,3		
	46,7	35	30/1	2087	1,2		
	70	27	20/1	2503	2,7	RFV50	DER71- A4-B14/SS
	56	32	25/1	2696	2,2		
	46,7	36	30/1	2865	2,3		
	35	46	40/1	3153	1,7		
	28	54	50/1	3397	1,4		
0,37	23,3	60	60/1	3610	1,1	RFV63	DER71- A4-B14/SS
	28	55	50/1	4440	2,4		
	23,3	63	60/1	4719	2,0		
	17,5	76	80/1	5193	1,6		
	14	87	100/1	5595	1,4		
	186,7	16	7,5/1	1315	2,5	RFV40	DER71- B4-B14/SS
	140	21	10/1	1447	1,9		
	93,3	30	15/1	1657	1,3		
	70	39	20/1	1824	1,0		
	140	21	10/1	1987	3,4		
0,55	93,3	31	15/1	2274	2,4	RFV50	DER71- B4-B14/SS
	70	39	20/1	2503	1,9		
	56	47	25/1	2696	1,5		
	46,7	54	30/1	2865	1,6		
	35	68	40/1	3153	1,1		
	35	70	40/1	4122	2,1	RFV63	DER71- B4-B14/SS
	28	82	50/1	4440	1,6		
	23,3	94	60/1	4719	1,4		
	17,5	113	80/1	5193	1,1		
	186,7	24	7,5/1	1805	2,9		
0,55	140	32	10/1	1987	2,3	RFV50	DER80- A4-B14/SS
	93,3	46	15/1	2274	1,6		
	70	59	20/1	2503	1,2		
	56	70	25/1	2696	1,0		
	46,7	80	30/1	2865	1,1	RFV63	DER80- A4-B14/SS
	70	60	20/1	3272	2,2		
	56	72	25/1	3524	1,8		
	46,7	82	30/1	3745	1,9		
	35	104	40/1	4122	1,4		
	28	122	50/1	4440	1,1		

Power P1n (kW)	Output speed (rpm)	Output torque M _{2n} (Nm)	Reduction Ratio	F _{r2} (N)	Service factor F _s	Gearbox	Motor
0,75	186,7	33	7,5/1	1805	2,1	RFV50	DER80-B4-B14/SS
	140	43	10/1	1987	1,7		
	93,3	62	15/1	2274	1,2		
	93,3	63	15/1	2973	2,2		
	70	82	20/1	3272	1,6		
	56	98	25/1	3524	1,3		
	46,7	112	30/1	3745	1,4		
1,1	35	141	40/1	4122	1,0	RFV63	DER80-B4-B14/SS
	186,7	50	7,5/1	2359	2,6		
	140	65	10/1	2597	2,0		
	93,3	92	15/1	2973	1,5		
	70	120	20/1	3272	1,1		
	186,7	68	7,5/1	2359	1,9		
	140	88	10/1	2597	1,5		
1,5	93,3	126	15/1	2973	1,1	RFV63	DER90-L4-B14/SS

RFV

Radial load

Use the following formula to calculate the radial load:

Where:

F_r radial load (N)

M Shaft torque (Nm)

d₀ Diameter of the transmission element (mm)

F_z Transmission factor (see table)

$$F_r = \frac{M \cdot 2000 \cdot f_z}{d_0} [N]$$

Use the following formula to calculate the maximum permissible radial load on the shaft:

Where:

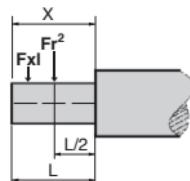
F_{r2} Allowable radial load (x=L/2), see table

(N) a, b are constant, see table

x distance at which load is applied (mm)

$$FxL \leq \frac{F_{r2} \cdot a}{(b + x)} [N]$$

Transmission element	Factor F _z	Factor M _{2n} (Nm)
Gear	1,00	>=17 teeth
	1,15	<17 teeth
Chain sprocket	1,00	>=20 teeth
	1,25	<20 teeth
	1,40	<13 teeth
Belt pulley	1,75	Depends on tension
Synchronous pulley	2,50	Depends on tension
	RFV40	RFV50
a	84	101
b	64	76
F _{r2} max (N)	3490	4840
		RFV63
		6270



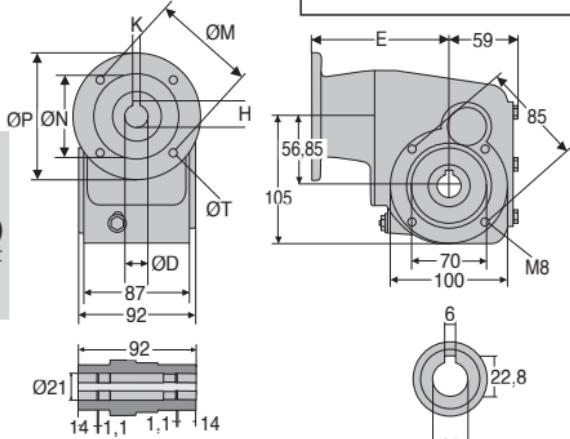
- Ideal gearbox for the food industry
- Ratios from 7.5:1 to 60:1
- 2-stage reduction
- B14 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 92% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)



Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 71B14	14	5	16,3	105	85	70	112,5	7
Flange 80B14	19	6	21,8	120	100	80	132,5	7
Flange 90B14	24	8	27,3	140	115	95	132,5	9



Output shaft

DISCOUNTS

Qty	1+	2+	4+
Disc Net	-5%		On request

Part number			Nominal reduction ratio	Actual reduction ratio	Price each
Flange 71B14	Flange 80B14	Flange 90B14			
RFK28B-7.5-71B14/SS	RFK28B-7.5-80B14/SS	RFK28B-7.5-90B14/SS	7,5	7,73	832,09 €
RFK28B-10-71B14/SS	RFK28B-10-80B14/SS	RFK28B-10-90B14/SS	10	10,47	832,09 €
RFK28B-12-71B14/SS	RFK28B-12-80B14/SS	RFK28B-12-90B14/SS	12,5	12,47	832,09 €
RFK28B-15-71B14/SS	RFK28B-15-80B14/SS		15	14,92	832,09 €
RFK28B-20-71B14/SS	RFK28B-20-80B14/SS		20	20,21	832,09 €
RFK28B-25-71B14/SS	RFK28B-25-80B14/SS		25	24,07	832,09 €
RFK28B-30-71B14/SS	RFK28B-30-80B14/SS		30	29,33	832,09 €
RFK28B-40-71B14/SS			40	40,09	832,09 €
RFK28B-50-71B14/SS			50	48,86	832,09 €
RFK28B-60-71B14/SS			60	58,36	832,09 €

All dimensions in mm

Torque up to 130Nm

RFK28C

- Ideal gearbox for use in the food industry

- Ratios from 50:1 to 300:1
- 3-stage reduction
- B14 or B5 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 90% efficient
- Rendement 90%
- Material:

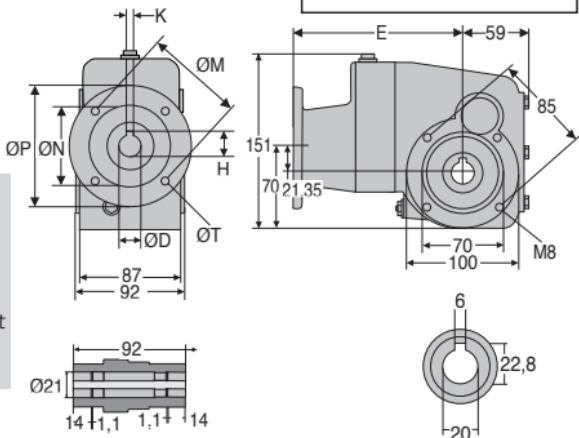
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome 2 p.318)
- Torque arms, mounting bracket and protective cover (tome 2 p.338, p.339, p.340)



Output shaft

Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 63B5	11	4	12,8	140	115	95	139,5	9
Flange 71B14	14	5	16,3	105	85	70	146,5	7

DISCOUNTS

Qty	1+	2+	4+
Disc	Net	-5%	On request

Part number	Nominal reduction ratio	Actual reduction ratio	Price each
Flange 63B5	Flange 71B14		
RFK28C-50-63B5/SS	RFK28C-50-71B14/SS	50	52,36
RFK28C-60-63B5/SS	RFK28C-60-71B14/SS	60	62,36
RFK28C-75-63B5/SS	RFK28C-75-71B14/SS	75	74,62
RFK28C-100-63B5/SS	RFK28C-100-71B14/SS	100	101,04
RFK28C-125-63B5/SS	RFK28C-125-71B14/SS	125	120,34
RFK28C-150-63B5/SS		150	146,67
RFK28C-200-63B5/SS		200	200,44
RFK28C-250-63B5/SS		250	244,29
RFK28C-300-63B5/SS		300	291,79

All dimensions in mm

- Ideal gearbox for use in the food industry

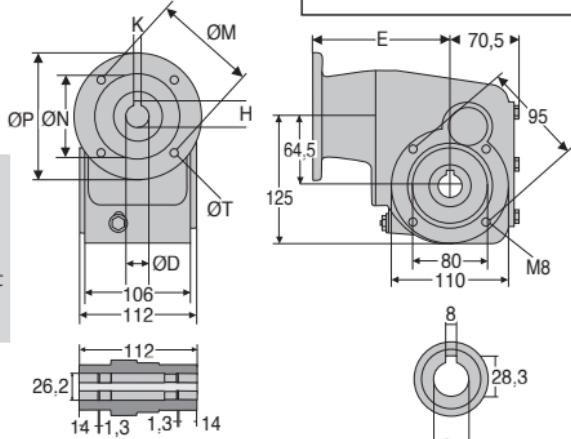
- Ratios from 7.5:1 to 60:1
- 2-stage reduction
- B14 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 90% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)



Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 71B14	14	5	16,3	105	85	70	112,5	7
Flange 80B14	19	6	21,8	120	100	80	132,5	7
Flange 90B14	24	8	27,3	140	115	95	132,5	9

Output shaft

DISCOUNTS

Qty	1+	2+	4+
Disc. Net	-5%		On request

Part number			Nominal reduction ratio	Actual reduction ratio	Price each
Flange 71B14	Flange 80B14	Flange 90B14			
RFK38B-7,5-80B14/SS	RFK38B-7,5-90B14/SS		7,5	7,6	1 051,60 €
RFK38B-10-80B14/SS	RFK38B-10-90B14/SS		10	10,5	1 051,60 €
RFK38B-12-80B14/SS	RFK38B-12-90B14/SS		12,5	12,67	1 051,60 €
RFK38B-15-71B14/SS	RFK38B-15-80B14/SS	RFK38B-15-90B14/SS	15	14,67	1 051,60 €
RFK38B-20-71B14/SS	RFK38B-20-80B14/SS	RFK38B-20-90B14/SS	20	20,25	1 051,60 €
RFK38B-25-71B14/SS	RFK38B-25-80B14/SS	RFK38B-25-90B14/SS	25	24,44	1 051,60 €
RFK38B-30-71B14/SS	RFK38B-30-80B14/SS	RFK38B-30-90B14/SS	30	30,31	1 051,60 €
RFK38B-40-71B14/SS	RFK38B-40-80B14/SS		40	39,29	1 051,60 €
RFK38B-50-71B14/SS	RFK38B-50-80B14/SS		50	48,71	1 051,60 €
RFK38B-60-71B14/SS	RFK38B-60-80B14/SS		60	60,5	1 051,60 €

All dimensions in mm

Torque up to 130Nm

RFK38C

- Ideal gearbox for use in the food industry

- Ratios from 50:1 to 300:1
- 3-stage reduction
- B14 or B5 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 90% efficient
- Material:

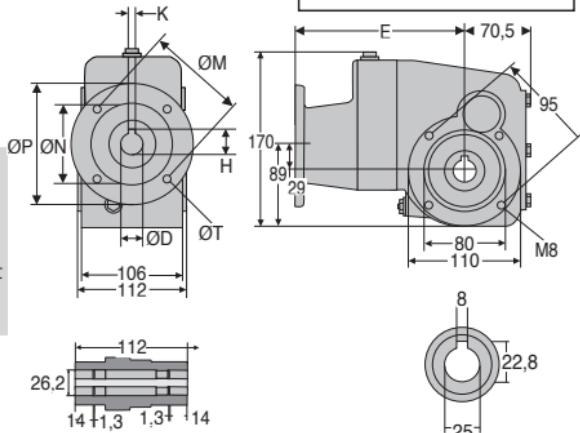
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)

**Flange dimensions**

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 63B5	11	4	12,8	140	115	95	151	9
Flange 71B14	14	5	16,3	105	85	70	158	7
Flange 80B14	19	6	21,8	120	100	80	178	7

Output shaft**DISCOUNTS**

Qty	1+	2+	4+
Disc.	Net	-5%	On request

Part number

Flange 63B5	Flange 71B14	Flange 80B14	Nominal reduction ratio	Actual reduction ratio	Price each
RFK38C-50-63B5/SS	RFK38C-50-71B14/SS	RFK38C-50-80B14/SS	50	52,48	1 260,90 €
RFK38C-60-63B5/SS	RFK38C-60-71B14/SS	RFK38C-60-80B14/SS	60	63,33	1 260,90 €
RFK38C-75-63B5/SS	RFK38C-75-71B14/SS		75	73,33	1 260,90 €
RFK38C-100-63B5/SS	RFK38C-100-71B14/SS		100	101,27	1 260,90 €
RFK38C-125-63B5/SS	RFK38C-125-71B14/SS		125	122,22	1 260,90 €
RFK38C-150-63B5/SS	RFK38C-150-71B14/SS		150	151,56	1 260,90 €
RFK38C-200-63B5/SS			200	196,43	1 260,90 €
RFK38C-250-63B5/SS			250	243,57	1 260,90 €
RFK38C-300-63B5/SS			300	302,5	1 260,90 €

All dimensions in mm

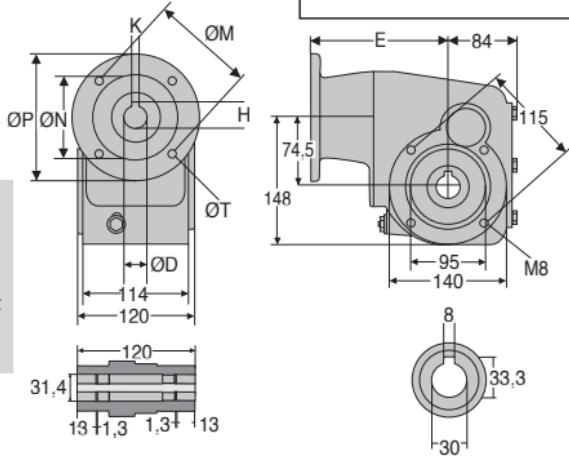
- Ideal gearbox for use in the food industry
- Ratios from 7.5:1 to 60:1
- 2-stage reduction
- B14 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 92% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)



Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 71B14	14	5	16,3	105	85	70	145,5	6,5
Flange 80B14	19	6	21,8	120	100	80	165,5	6,5
Flange 90B14	24	8	27,3	140	115	95	165,5	9

DISCOUNTS

Qty	1+	2+	4+
Disc. Net	-5%		On request

Part number			Nominal reduction ratio	Actual reduction ratio	Price each
Flange 71B14	Flange 80B14	Flange 90B14	RFK48B-7,5-90B14/SS	7,5	7,48 1 352,79 €
			RFK48B-10-90B14/SS	10	9,84 1 352,79 €
			RFK48B-12-90B14/SS	12,5	12,49 1 352,79 €
RFK48B-15-80B14/SS	RFK48B-15-90B14/SS			15	15,09 1 352,79 €
RFK48B-20-80B14/SS	RFK48B-20-90B14/SS			20	19,84 1 352,79 €
RFK48B-25-80B14/SS	RFK48B-25-90B14/SS			25	25,19 1 352,79 €
RFK48B-30-80B14/SS	RFK48B-30-90B14/SS			30	30,24 1 352,79 €
RFK48B-40-71B14/SS	RFK48B-40-80B14/SS	RFK48B-40-90B14/SS		40	40,13 1 352,79 €
RFK48B-50-71B14/SS	RFK48B-50-80B14/SS	RFK48B-50-90B14/SS		50	48,18 1 352,79 €
RFK48B-60-71B14/SS	RFK48B-60-80B14/SS	RFK48B-60-90B14/SS		60	59,44 1 352,79 €

All dimensions in mm

Torque up to 350Nm

RFK48C

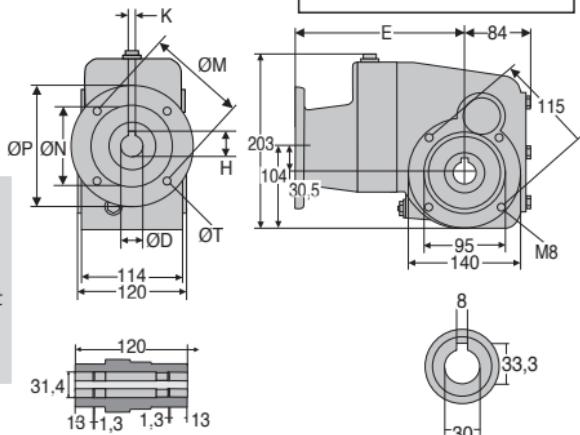
- Ideal gearbox for use in the food industry
- Ratios from 50:1 to 300:1
- 3-stage reduction
- B14 or B5 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 90% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a **DER** 4-pole motor to create a motor-gearbox (**tome 2 p.318**)
- Torque arms, mounting bracket and protective cover
(**tome 2 p.338, p.339, p.340**)
- bracket and protective cover

**Flange dimensions**

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 63B5	11	4	12,8	140	115	95	178,8	9
Flange 71B14	14	5	16,3	105	85	70	185,8	6,5
Flange 80B14	19	6	21,8	120	100	80	205,8	6,5

Output shaft**DISCOUNTS**

Qty	1+	2+	4+
Rem.	Net	-5%	On request

Part number			Nominal reduction ratio	Actual reduction ratio	Price each
Flange 63B5	Flange 71B14	Flange 80B14	RFK48C-50-71B14/SS	RFK48C-50-80B14/SS	50 49,18 1 618,24 €
			RFK48C-60-71B14/SS	RFK48C-60-80B14/SS	60 62,43 1 618,24 €
RFK48C-75-63B5/SS	RFK48C-75-71B14/SS	RFK48C-75-80B14/SS		75 75,45	1 618,24 €
RFK48C-100-63B5/SS	RFK48C-100-71B14/SS	RFK48C-100-80B14/SS		100 99,22	1 618,24 €
RFK48C-125-63B5/SS	RFK48C-125-71B14/SS	RFK48C-125-80B14/SS		125 125,95	1 618,24 €
RFK48C-150-63B5/SS	RFK48C-150-71B14/SS	RFK48C-150-80B14/SS		150 151,2	1 618,24 €
RFK48C-200-63B5/SS	RFK48C-200-71B14/SS			200 200,66	1 618,24 €
RFK48C-250-63B5/SS	RFK48C-250-71B14/SS			250 240,89	1 618,24 €
RFK48C-300-63B5/SS	RFK48C-300-71B14/SS			300 297,21	1 618,24 €

All dimensions in mm

Stainless steel Hypoid gearbox

Sta

RFK58B

Torque up to 500Nm

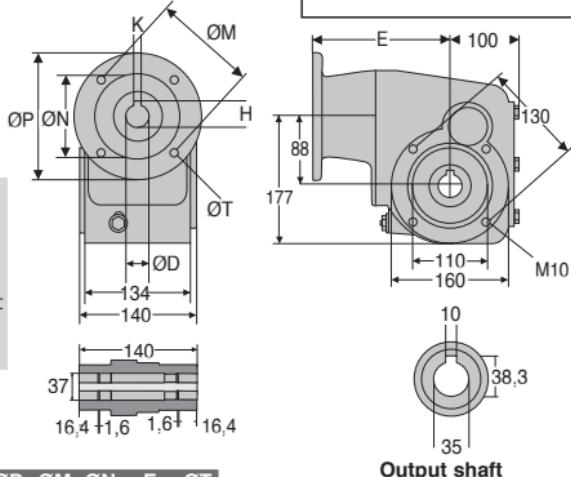
- Ideal gearbox for use in the food industry
- Ratios from 7.5:1 to 60:1
- 2-stage reduction
- B14 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 92% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)



Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 71B14	14	5	16,3	105	85	70	162	6,5
Flange 80B14	19	6	21,8	120	100	80	182	6,5
Flange 90B14	24	8	27,3	140	115	95	182	9

DISCOUNTS

Qty	1+	2+	4+
Disc. Net	-5%		On request

Part number			Nominal reduction ratio	Actual reduction ratio	Price each
Flange 71B14	Flange 80B14	Flange 90B14	RFK58B-7,5-90B14/SS	7,5	7,48 1 688,01 €
			RFK58B-10-90B14/SS	10	9,84 1 688,01 €
			RFK58B-12-90B14/SS	12,5	12,49 1 688,01 €
RFK58B-15-80B14/SS	RFK58B-15-90B14/SS		15	15,09 1 688,01 €	
RFK58B-20-80B14/SS	RFK58B-20-90B14/SS		20	19,84 1 688,01 €	
RFK58B-25-80B14/SS	RFK58B-25-90B14/SS		25	25,19 1 688,01 €	
RFK58B-30-80B14/SS	RFK58B-30-90B14/SS		30	30,24 1 688,01 €	
RFK58B-40-80B14/SS	RFK58B-40-90B14/SS		40	40,13 1 688,01 €	
RFK58B-50-71B14/SS	RFK58B-50-80B14/SS	RFK58B-50-90B14/SS	50	48,18 1 688,01 €	
RFK58B-60-71B14/SS	RFK58B-60-80B14/SS	RFK58B-60-90B14/SS	60	59,04 1 688,01 €	

All dimensions in mm

Torque up to 500Nm

RFK58C

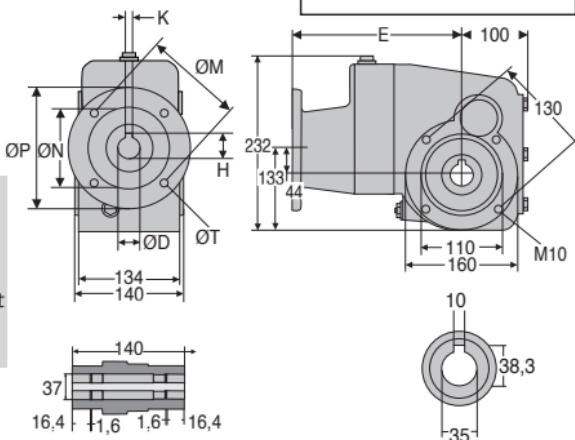
- Ideal gearbox for use in the food industry
- Ratios from 50:1 to 300:1
- 3-stage reduction
- B14 or B5 flange
- Rounded and polished surfaces to avoid material retention
- Lubricated using food quality grease
- 90% efficient
- Material:
316 stainless steel housing

Info

- All information is engraved directly on to gearbox rather than being on a tag plate to avoid accumulating dirt etc.

Accessories

- Can be used with a DER 4-pole motor to create a motor-gearbox (tome ② p.318)
- Torque arms, mounting bracket and protective cover (tome ② p.338, p.339, p.340)



Output shaft

Flange dimensions

	ØD	K	H	ØP	ØM	ØN	E	ØT
Flange 63B5	11	4	12,8	140	115	95	195,3	9
Flange 71B14	14	5	16,3	105	85	70	202,3	6,5
Flange 80B14	19	6	21,8	120	100	80	222,3	6,5

DISCOUNTS

Qty	1+	2+	4+
Disc.	Net	-5%	On request

Part number

Flange 63B5	Flange 71B14	Flange 80B14	Nominal reduction ratio	Actual reduction ratio	Price each
RFK58C-50-71B14/SS	RFK58C-50-80B14/SS	50	49,18	1 960,27 €	
RFK58C-60-71B14/SS	RFK58C-60-80B14/SS	60	62,43	1 960,27 €	
RFK58C-75-63B5/SS	RFK58C-75-71B14/SS	75	75,45	1 960,27 €	
RFK58C-100-63B5/SS	RFK58C-100-71B14/SS	100	99,22	1 960,27 €	
RFK58C-125-63B5/SS	RFK58C-125-71B14/SS	125	125,95	1 960,27 €	
RFK58C-150-63B5/SS	RFK58C-150-71B14/SS	150	151,2	1 960,27 €	
RFK58C-200-63B5/SS	RFK58C-200-71B14/SS	200	200,66	1 960,27 €	
RFK58C-250-63B5/SS	RFK58C-250-71B14/SS	250	240,89	1 960,27 €	
RFK58C-300-63B5/SS	RFK58C-300-71B14/SS	300	295,18	1 960,27 €	

All dimensions in mm

Stainless steel worm and wheel gearbox Sta

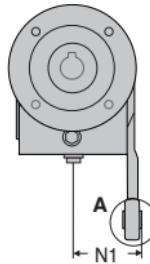
RFVBR
RFKBR

Torque arm

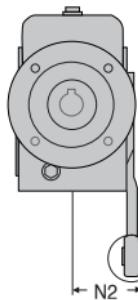
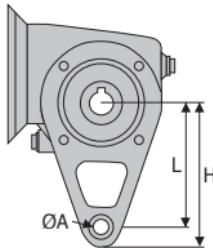
- Torque arm for RFV and RFK gearboxes
- Mounts on gearbox output
- Material:
316 stainless steel

Accessories

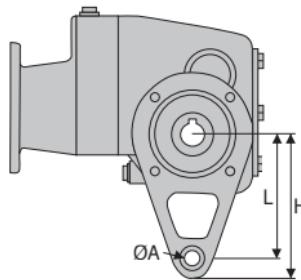
- RFV, RFK gearbox
(tome ② p.322 et 330)



For RFV gearbox



For RFK gearbox



DISCOUNTS

Qty	1+	2+	4+
Disc.	Net -5%		On request

Part number	L	H	N1	N2	B	C	ØA	For gearbox	Price each
RFV40-BR/SS	100	116	47,3	-	15	12	10,5	RFV40	43,03 €
RFV50-BR/SS	100	116	55,3	55,30	15	12	10,5	RFV50-RFK28	45,13 €
RFV63-BR/SS	150	166	55,3	64,80	15	12	10,5	RFV63-RFK38	47,23 €
RFK48-BR/SS	200	225	-	74,30	26	23	20,5	RFK48	113,83 €
RFK58-BR/SS	200	225	-	85,55	26	23	20,5	RFK58	128,39 €

All dimensions in mm

Mounting bracket brackets

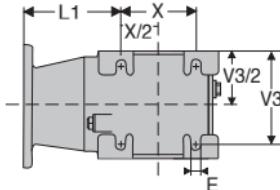
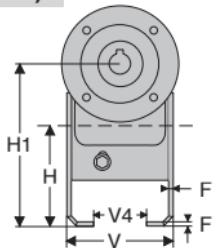
RFKFPSS

- Support for RFK gearboxes

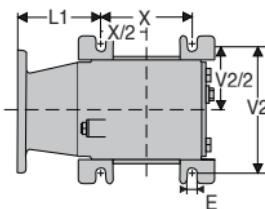
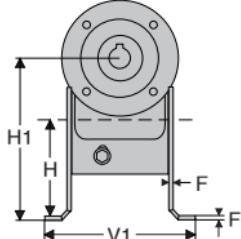
- Inward or outward facing
- Sold in pairs
- Material:
316 stainless steel

**Accessories**

- RFK gearbox
(tome ② p.330)



Brackets facing inwards



Brackets facing outwards

DISCOUNTS

Qty	1+	2+	4+
Rem.	Net	-5%	On request

Part number	H	H1	V	V1	V2	V3	V4	X	E	F
RFK28-FP/SS	80	136,85	93	129	110	70	51	80	8,5	3
RFK38-FP/SS	90	154,50	114	157	135	85	63	100	8,5	4
RFK48-FP/SS	95	169,50	124	170	148	90	68	120	11,5	5
RFK58-FP/SS	110	198,00	144	204	178	100	74	140	13,0	5

Part number	L1 for flange				Price each
	63B5	71B14	80B14	90B14	
RFK28-FP/SS	65,5	72,5	92,5	92,5	81,95 €
RFK38-FP/SS	67,0	74,0	94,0	94,0	104,72 €
RFK48-FP/SS	78,5	85,5	105,5	105,5	129,30 €
RFK58-FP/SS	85,0	92,0	112,0	112,0	161,17 €

All dimensions in mm

Stainless steel gearbox

Sta

RFV CAP RFK CAP

Protective cover

- Protective cover to prevent dirt etc from lodging in the output shaft of RFV stainless steel worm and wheel gearboxes and RFK stainless steel hypoid gearboxes

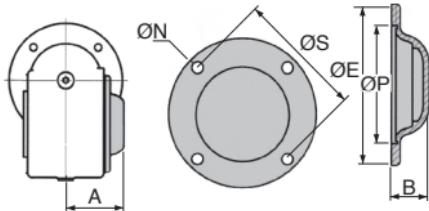
- For full protection, use one cover on each side of the gearbox

- Materiel:

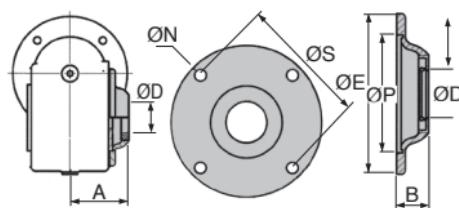
316 stainless steel

Accessories

- RFV, RFK gearbox
(tome ② p.322 et 330)



Closed cover RFV-CAP-F/SS and RFK-CAP-F/SS



Open cover RFV-CAP-AT/SS and RFK-CAP-AT/SS



stainless
steel

DISCOUNTS

Qty	1+	2+	4+
Disc.	Net	-5%	On request

Part number	ØE	ØP	ØD	B	A	ØS	ØN	For gearbox	Price each
Closed cover									
RFV40-CAP-F/SS	90	60	-	20,0	56,5	75	6,5	RFV40	32,39 €
RFV50-CAP-F/SS	100	70	-	20,5	64,0	85	8,5	RFV50-RFK28	39,96 €
RFV63-CAP-F/SS	110	80	-	26,0	79,0	95	8,5	RFV63-RFK38	47,53 €
RFK48-CAP-F/SS	140	95	-	28,0	85,0	115	8,5	RFK48	
RFK58-CAP-F/SS	160	110	-	28,0	95,0	130	10,5	RFK58	
Open cover for transversal shaft									
RFV40-CAP-AT/SS	90	60	18	17,0	53,5	75	6,5	RFV40	35,64 €
RFV50-CAP-AT/SS	100	70	25	17,0	61,0	85	8,5	RFV50	42,12 €
RFK28-CAP-AT/SS	100	70	20	17,0	61,0	85	8,5	RFK28	
RFV63-CAP-AT/SS	110	80	25	22,0	75,0	95	8,5	RFV63-RFK38	49,69 €
RFK48-CAP-AT/SS	140	95	30	28,0	85,0	115	8,5	RFK48	
RFK58-CAP-AT/SS	160	110	35	28,0	95,0	130	10,5	RFK58	

All dimensions in mm

Motor and gearbox selection table

RFK

Power P1n (kW)	Output speed (rpm)	Output torque (Nm)	Nominal	Actual	Factor of service Fs	Gearbox	Motor	
			reduction ratio	reduction ratio				
0,18	22,0	69	60	62,36	3030	1,9	RFK28C- 63B5/SS	DER63-A4- B5/SS
	27,0	58	60	52,36	2860	1,7		
	9,2	167	150	151,56	4650	1,2		
	11,5	135	125	122,22	4330	1,3		
	13,8	112	100	101,27	4070	1,3	RFK38C- 63B5/SS	DER63-A4- B5/SS
	19,1	81	75	73,33	3650	1,4		
	22,0	70	60	63,33	3480	2,6		
	27,0	58	50	52,48	3270	2,6		
	4,7	328	300	297,21	6500	1,1		
	5,8	266	250	240,89	6500	1,3		
	7,0	222	200	200,66	6500	1,4	RFK48C- 63B5/SS	DER63-A4- B5/SS
	9,3	167	150	151,20	6500	2,1		
	11,1	139	125	125,95	5980	2,2		
	14,1	110	100	99,22	5520	2,2		
	18,6	83	75	75,45	5040	2,4		
	4,7	326	300	295,18	8300	1,5		
	5,8	266	250	240,89	8300	1,9		
0,25	7,0	222	200	200,66	8300	2,2	RFK58C- 63B5/SS	DER63-A4- B5/SS
	9,3	167	150	151,20	8050	3,0		
	11,1	139	125	125,95	7580	3,4		
	14,1	110	100	99,22	7000	3,5		
	18,6	83	75	75,45	6390	3,6		
	22,0	96	60	62,36	3030	1,4	RFK28C- 71B14/SS	DER71-A4- B14/SS
	27,0	80	50	52,36	2860	1,2		
	24,0	92	60	58,36	2960	1,4		
	29,0	77	50	48,86	2790	1,7		
	35,0	63	40	40,09	2610	2,1	RFK28B- 71B14/SS	DER71-A4- B14/SS
	48,0	46	30	29,33	2350	2,8		
	58,0	38	25	24,07	2200	3,4		
	69,0	32	20	20,21	2080	3,2		
	94,0	23	15	14,92	1880	3,4		
	22,0	97	60	63,33	3480	1,9	RFK38C- 71B14/SS	DER71-A4- B14/SS
	27,0	81	50	52,48	3270	1,9		
	23,0	95	60	60,50	3430	2,1		
	29,0	76	50	48,71	3190	2,6	RFK38B- 71B14/SS	DER71-A4- B14/SS
	36,0	62	40	39,29	2970	2,9		
	46,0	48	30	30,31	2720	4,2		
	9,3	232	150	151,20	6500	1,5		
	11,1	193	125	125,95	5980	1,6	RFK48C- 71B14/SS	DER71-A4- B14/SS
	14,1	152	100	99,22	5520	1,6		
	18,6	116	75	75,45	5040	1,7		
	22,0	96	60	62,43	4730	3,1		
	28,0	75	50	49,18	4370	3,2		
	24,0	93	60	59,44	4660	3,8	RFK48B- 71B14/SS	DER71-A4- B14/SS
	29,0	76	50	48,18	4340	4,6		
	4,7	453	300	295,18	8300	1,1		
	5,8	370	250	240,89	8300	1,4		
	7,0	308	200	200,66	8300	1,6	RFK58C- 71B14/SS	DER71- A4-B14/SS
	9,3	232	150	151,20	8050	2,2		
	11,1	193	125	125,95	7580	2,5		
	14,1	152	100	99,22	7000	2,5		

All dimensions in mm

RFK

Power P1n (kW)	Output speed (rpm)	Output torque (Nm)	Nominal reduction ratio	Actual reduction ratio	r ₂ (N)	Factor of service Fs	Gearbox	Motor
0,25	18,6	116	75	75,45	6390	2,6	RFK58C- 71B14/SS	DER71- A4-B14/SS
	22,0	96	60	62,43	6000	5,0		
	28,0	75	50	49,18	5540	5,0		
	29,0	113	50	48,86	2790	1,1		
	35,0	93	40	40,09	2610	1,4		
	48,0	68	30	29,33	2350	1,9		
	58,0	56	25	24,07	2200	2,3		DER71- B4-B14/SS
	69,0	47	20	20,21	2080	2,1		
	94,0	35	15	14,92	1880	2,3		
	112,0	29	12,5	12,47	1770	4,5		
0,37	134,0	24	10	10,47	1670	4,1	RFK38C- 71B14/SS	DER71- B4-B14/SS
	181,0	17,9	7,5	7,73	1510	4,5		
	22,0	144	60	63,33	3480	1,3		
	27,0	119	50	52,48	3270	1,3		
	23,0	140	60	60,50	3430	1,4		
	29,0	113	50	48,71	3190	1,8		
	36,0	91	40	39,29	2970	2,0		
	46,0	70	30	30,31	2720	2,8		DER71- B4-B14/SS
	57,0	57	25	24,44	2530	3,2		
	69,0	47	20	20,25	2380	3,2		
0,55	95,0	34	15	14,67	2130	3,2	RFK48C- 71B14/ SS	DER71- B4-B14/SS
	9,3	343	150	151,20	6500	1,0		
	11,1	286	125	125,95	5980	1,0		
	14,1	225	100	99,22	5520	1,1		
	18,6	171	75	75,45	5040	1,2		
	22,0	142	60	62,43	4730	2,1		
	28,0	112	50	49,18	4370	2,1		
	24,0	138	60	59,44	4660	2,5		DER71- B4-B14/SS
	29,0	112	50	48,18	4340	3,1		
	35,0	93	40	40,13	4080	3,2		
0,55	7,0	456	200	200,66	8300	1,1		
	9,3	343	150	151,20	8050	1,5	RFK58C- 71B14/SS	DER71- B4-B14/SS
	11,1	286	125	125,95	7580	1,7		
	14,1	225	100	99,22	7000	1,7		
	18,6	171	75	75,45	6390	1,8		
	22,0	142	60	62,43	6000	3,4		
	28,0	112	50	49,18	5540	3,4		
	24,0	137	60	59,04	5890	3,6		DER71- B4-B14/SS
	29,0	112	50	48,18	5500	4,5		
	48,0	101	30	29,33	2350	1,3		
0,55	58,0	83	25	24,07	2200	1,6		
	69,0	70	20	20,21	2080	1,4	RFK28B- 80B14/SS	DER80- A4-B14/SS
	94,0	51	15	14,92	1880	1,6		
	112,0	43	12,5	12,47	1770	3,0		
	134,0	36	10	10,47	1670	2,8		
	181,0	27	7,5	7,73	1510	3,0		
	29,0	168	50	48,71	3190	1,2		
	36,0	136	40	39,29	2970	1,3		DER80- A4-B14/SS
	46,0	105	30	30,31	2720	1,9		
	57,0	84	25	24,44	2530	2,1		
	69,0	70	20	20,25	2380	2,1		

All dimensions in mm

Motor and gearbox selection table

RFK

Power P1n (kW)	Output speed (rpm)	Output torque (Nm)	Nominal reduction ratio	Actual reduction ratio	r2 (N)	Factor of service Fs	Gearbox	Motor
0,55	95,0	51	15	14,67	2130	2,2	RFK38B- 80B14/SS	DER80- A4-B14/SS
	110,0	44	12,5	12,67	2030	4,1		
	133,0	36	10	10,5	1910	4,1	RFK48C- 80B14/SS	DER80- A4-B14/SS
	184,0	26	7,5	7,6	1710	4,2		
	22,0	211	60	62,43	4730	1,4	RFK48B- 80B14/SS	DER80- A4-B14/SS
	28,0	166	50	49,18	4370	1,4		
	24,0	205	60	59,44	4660	1,7	RFK48B- 80B14/SS	DER80- A4-B14/SS
	29,0	166	50	48,18	4340	2,1		
	35,0	139	40	40,13	4080	2,2	RFK58C- 80B14/SS	DER80- A4-B14/SS
	46,0	104	30	30,24	3720	3,4		
	56,0	87	25	25,19	3500	3,5	RFK58B- 80B14/SS	DER80- A4-B14/SS
	71,0	68	20	19,84	3230	3,5		
	93,0	52	15	15,09	2950	3,8	RFK58C- 80B14/SS	DER80- A4-B14/SS
	11,1	425	125	125,95	7580	1,1		
	14,1	335	100	99,22	7000	1,1	RFK58B- 80B14/SS	DER80- A4-B14/SS
	18,6	255	75	75,45	6390	1,2		
	22,0	211	60	62,43	6000	2,3	RFK28B- 80B14/SS	DER80- B4-B14/SS
	28,0	166	50	49,18	5540	2,3		
	24,0	204	60	59,04	5890	2,5	RFK58B- 80B14/SS	DER80- A4-B14/SS
	29,0	166	50	48,18	5500	3,0		
	35,0	139	40	40,13	5170	3,5	RFK28B- 80B14/SS	DER80- B4-B14/SS
	46,0	104	30	30,24	4710	4,8		
0,75	58,0	113	25	24,07	2200	1,1	RFK38B- 80B14/SS	DER80- B4-B14/SS
	69,0	95	20	20,21	2080	1,1		
	94,0	70	15	14,92	1880	1,1	RFK48B- 80B14/SS	DER80- B4-B14/SS
	112,0	59	12,5	12,47	1770	2,2		
	134,0	49	10	10,47	1670	2,0	RFK38B- 80B14/SS	DER80- B4-B14/SS
	181,0	36	7,5	7,73	1510	2,2		
	46,0	143	30	30,31	2720	1,4	RFK48C- 80B14/SS	DER80- B4-B14/SS
	57,0	115	25	24,44	2530	1,6		
	69,0	95	20	20,25	2380	1,6	RFK48B- 80B14/SS	DER80- B4-B14/SS
	95,0	69	15	14,67	2130	1,6		
	110,0	60	12,5	12,67	2030	3,0	RFK48B- 80B14/SS	DER80- B4-B14/SS
	133,0	49	10	10,50	1910	3,0		
	184,0	36	7,5	7,60	1710	3,1	RFK48C- 80B14/SS	DER80- B4-B14/SS
	22,0	287	60	62,43	4730	1,0		
	28,0	226	50	49,18	4370	1,1	RFK48B- 80B14/SS	DER80- B4-B14/SS
	24,0	280	60	59,44	4660	1,3		
	29,0	227	50	48,18	4340	1,5	RFK48C- 80B14/SS	DER80- B4-B14/SS
	35,0	189	40	40,13	4080	1,6		
	46,0	142	30	30,24	3720	2,5	RFK48B- 80B14/SS	DER80- B4-B14/SS
	56,0	119	25	25,19	3500	2,5		
	71,0	93	20	19,84	3230	2,6	RFK48B- 80B14/SS	DER80- B4-B14/SS
	93,0	71	15	15,09	2950	2,8		
	22,0	287	60	62,43	6000	1,7	RFK48C- 80B14/SS	DER80- B4-B14/SS
	28,0	226	50	49,18	5540	1,7		
	24,0	278	60	59,04	5890	1,8	RFK48B- 80B14/SS	DER80- B4-B14/SS
	29,0	227	50	48,18	5500	2,2		
	35,0	189	40	40,13	5170	2,5	RFK48C- 80B14/SS	DER80- B4-B14/SS
	46,0	142	30	30,24	4710	3,5		
	56,0	119	25	25,19	4430	4,0	RFK48B- 80B14/SS	DER80- B4-B14/SS

All dimensions in mm

RFK

Power P1n (kW)	Output speed (rpm)	Output torque (Nm)	Nominal ratio	Actual reduction ratio	r2 (N)	Factor of service Fs	Gearbox	Motor
0,75	71,0	93	20	19,84	4090	4,1	RFK48C- 80B14/SS	DER80- B4-B14/SS
	93,0	71	15	15,09	3730	4,2		
	112,0	86	12,5	12,47	1770	1,5	RFK28B- 90B14/SS	DER90- S4-B14/SS
	134,0	72	10	10,47	1670	1,4		
	181,0	53	7,5	7,73	1510	1,5		
	57,0	169	25	24,44	2530	1,1	RFK38B- 90B14/SS	DER90- S4-B14/SS
	69,0	140	20	20,25	2380	1,1		
	95,0	101	15	14,67	2130	1,1		
	110,0	87	12,5	12,67	2030	2,1		
	133,0	72	10	10,50	1910	2,1		
	184,0	52	7,5	7,60	1710	2,1		
	29,0	333	50	48,18	4340	1,1		
	35,0	277	40	40,13	4080	1,1		
	46,0	209	30	30,24	3720	1,7		
	56,0	174	25	25,19	3500	1,7	RFK48B- 90B14/SS	DER90- S4-B14/SS
1,1	71,0	137	20	19,84	3230	1,8		
	93,0	104	15	15,09	2950	1,9		
	112,0	86	12,5	12,49	2770	3,5		
	142,0	68	10	9,84	2550	3,5		
	187,0	52	7,5	7,48	2330	3,9		
	24,0	408	60	59,04	5890	1,2		
	29,0	333	50	48,18	5500	1,5		
	35,0	277	40	40,13	5170	1,7		
	46,0	209	30	30,24	4710	2,4	RFK58B- 90B14/SS	DER90- S4-B14/SS
	56,0	174	25	25,19	4430	2,8		
	71,0	137	20	19,84	4090	2,8		
	93,0	104	15	15,09	3730	2,9		
	120,0	80	7,5	7,48	3420	3,7		
	112,0	117	12,5	12,47	1770	1,1	RFK28B- 90B14/SS	DER90- L4-B14/SS
	134,0	99	10	10,47	1670	1,0		
	181,0	73	7,5	7,73	1510	1,1		
	110,0	119	12,5	12,67	2030	1,5	RFK38B- 90B14/SS	DER90- L4-B14/SS
	133,0	99	10	10,5	1910	1,5		
	184,0	72	7,50	7,60	1710	1,5		
	46,0	285	30	30,24	3720	1,2		
	56,0	237	25	25,19	3500	1,3		
	71,0	187	20	19,84	3230	1,3	RFK48B- 90B14/SS	DER90- L4-B14/SS
	93,0	142	15	15,09	2950	1,4		
1,5	112,0	118	12,5	12,49	2770	2,6		
	142,0	93	10	9,84	2550	2,6		
	187,0	70	7,5	7,48	2330	2,8		
	29,0	454	50	48,18	5500	1,1		
	35,0	378	40	40,13	5170	1,3		
	46,0	285	30	30,24	4710	1,8		
	56,0	237	25	25,19	4430	2,0	RFK58B- 90B14/SS	DER90- L4-B14/SS
	71,0	187	20	19,84	4090	2,0		
	93,0	142	15	15,09	3730	2,1		
	112,0	118	12,5	12,49	3510	4,1		
	142,0	93	10	9,84	3240	4,1		
	187,0	70	7,5	7,48	2950	4,3		

All dimensions in mm

Technical information

Torque

- Torque figures have been calculated on the basis of a 12,000 hour working life and being used 12 hours per day. For 24/24 use, multiply the original figure by 0.75.

Working temperature

- Normal working temperature range is 0°C to +70°C.
Alternative greases for use between -55°C and +155°C are available, as are bearings with sealed joints (2RS) for use up to +120°C, steel bearings without joints for use up to +150°C or stainless steel bearings for use up to +288°C when used with special high temperature grease.
- Standard grease allows use of up to +80°C in most applications. However if the speed or torque rises, the gear reducer temperature will also rise, which could cause damage.

Modifications

- We can modify gearboxes, adding keyways or circlip grooves or modifying the shaft...
Please contact us with your requirements.

Usage

- The use of flexible coupling is recommended to connect the gearbox to the rest of the system.
- **Gearboxes are designed to reduce speed, not multiply it. Because of this, we cannot guarantee the correct operation of a gearbox when used backwards.**
- The user must always test a gearbox in his own application to ensure that it is suitable and produces the desired results.

Oiling

- Gearboxes are greased for life and do not require maintenance. If re-greasing, do not over-fill as this could cause gears to get stuck and over-heat the gearbox.

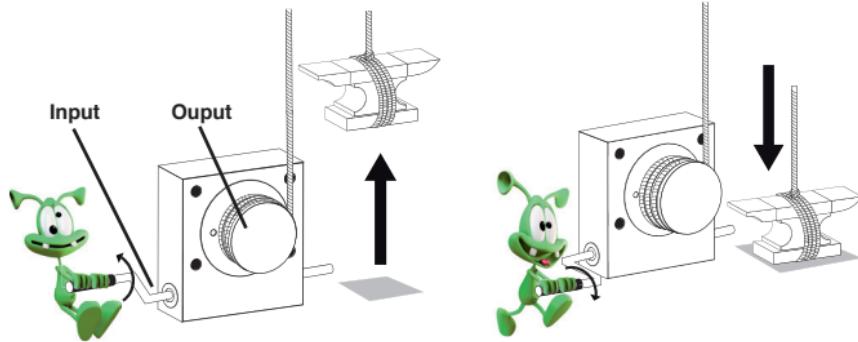


What is self-locking?

Technical information

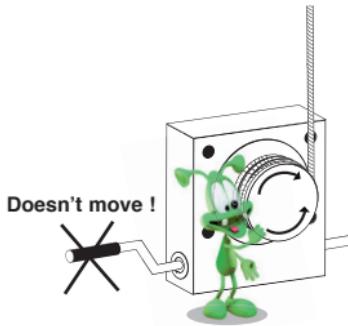
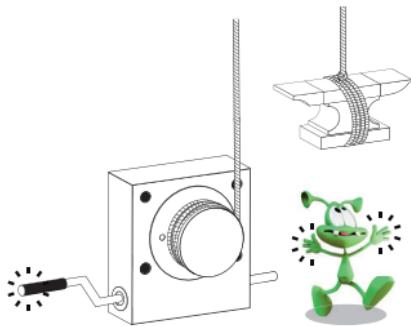
The inputs of all of our gear reducers can turn in both directions whether they are reversible or not reversible. But what is self-locking?

The input of a self locking gearbox can turn in both directions. In this example a self locking gearbox can be used to raise or lower a load by turning a handle.



...However, if the handle is released, the load will not move...

...If you try to turn the output of an anti-back drive gear reducer, the input shaft will not move.

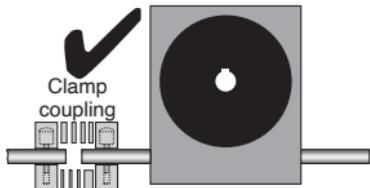
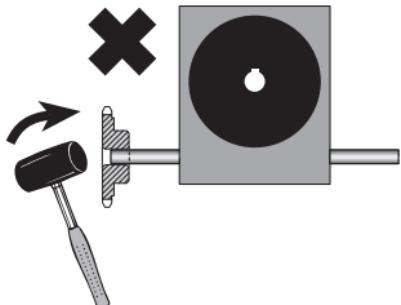


The Self locking drive property is sometimes referred to as **anti back drive**

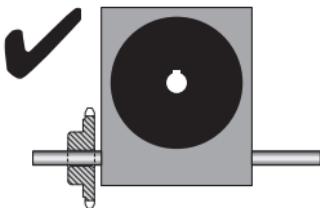
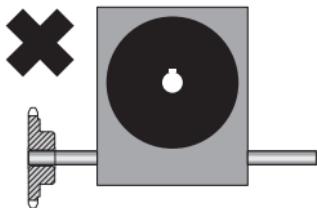
i Very occasionally, the reverse efficiency of a self locking gearbox is insufficient to guarantee anti back drive and a light brake will be required on the input shaft to ensure safety.

All types of gear gearboxes

Assembly advice

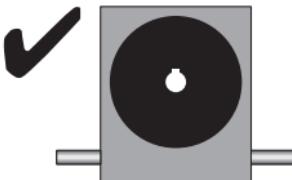
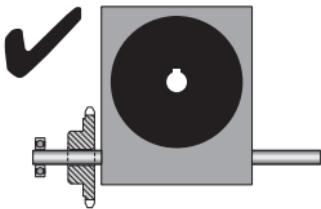


Clamp coupling avoids damage to shaft and absorbs misalignments.



Gears mounted at the outer extremity of the input shaft can cause bending and eventual failure of the shaft.

Mounting a gear as near to the housing as possible allows the torque produced by the overhung load to be reduced, and protects the shaft from premature wear.



The addition of a bearing at the end of the shaft acts as a counter-weights to the overhung load, avoiding damage to the shaft.

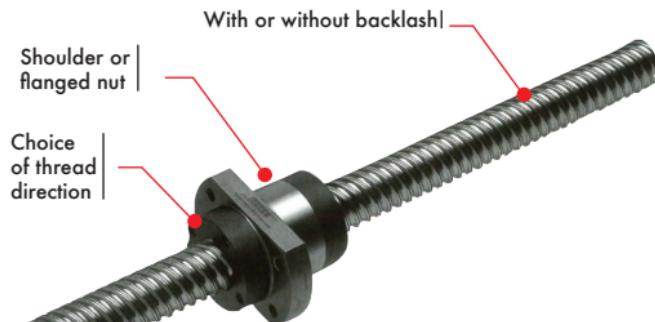
Please contact us about any modifications you may require to be made to a shaft. In that way they can be done before assembly, thus avoiding any possible damage to the gear reducer due to later re-machining.



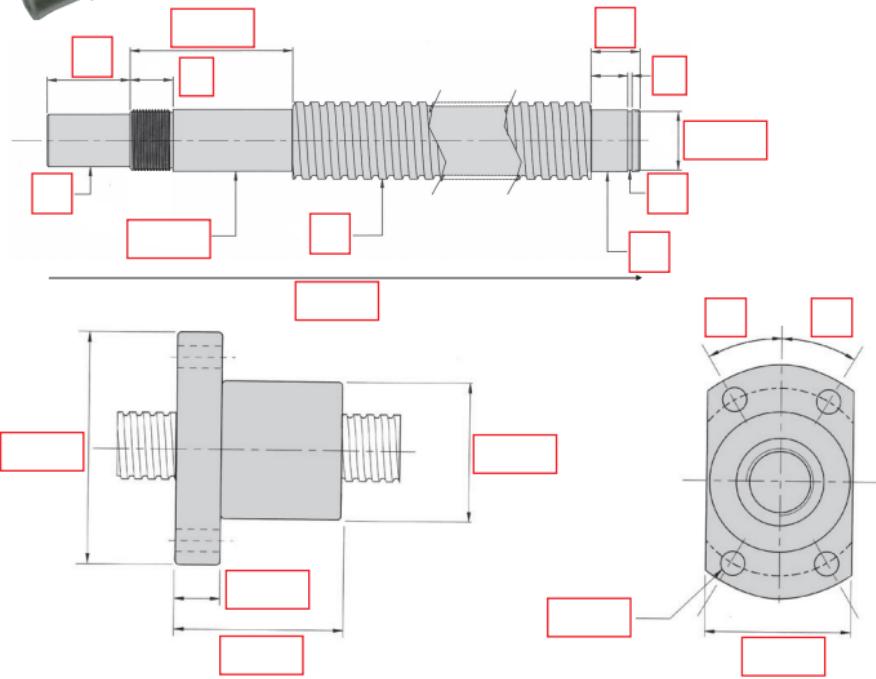
Note: Gear reducers can be mounted in any position.
Any modifications made by the customer will void the guarantee.

MADE TO MEASURE

BALLSCREWS



Choice
of thread
direction

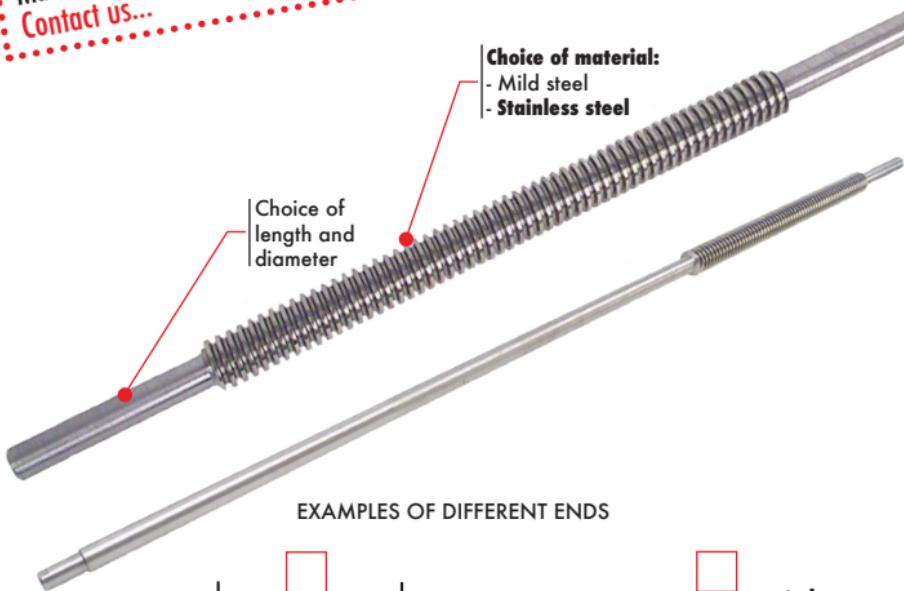


MADE TO MEASURE

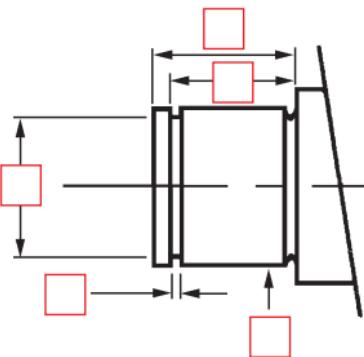
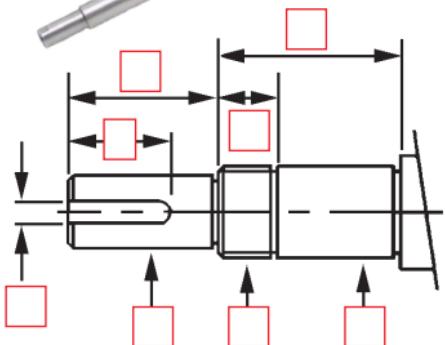
1 start? 2 starts? BI-DIRECTIONAL?
Made to measure versions available!
Contact us...

Min
quantity

Choice of material:
- Mild steel
- Stainless steel



EXAMPLES OF DIFFERENT ENDS



MADE TO MEASURE

INLINE GEAR REDUCERS

Send us details of your requirements, specifications and special requirements...

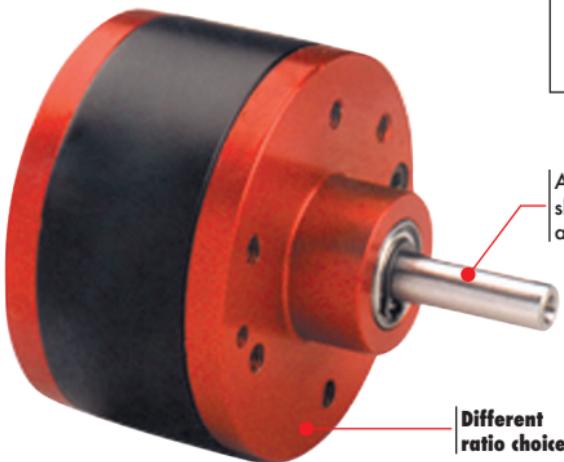
Email address: cia2@hpceurope.com

Tel: +33(0)4 37 496 496

Fax: +33(0)4 37 490 055



Adapted for use
with a motor



HPC offers a wide choice of different
made to measure gear reducers

- epicyclical
- bevel
- worm wheel
- inline spur gear
- double reduction
- offset

DID YOU KNOW?

GREASE FILLING

HPC gear reducers are greased for life and are maintenance free.

Contact our technical support team for more information

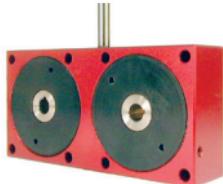
*Ask us for the ratio you require

MADE TO MEASURE

WORM WHEEL GEAR REDUCERS

From
1+>

EXAMPLES OF REDUCERS BUILT TO ORDER



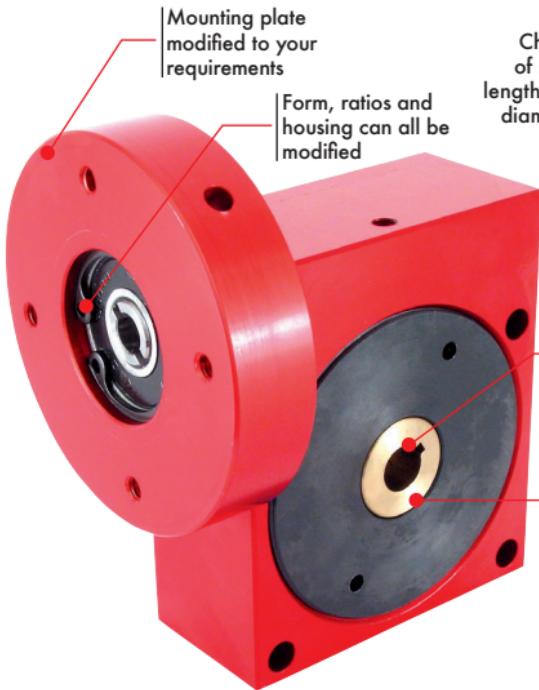
- A single input (worm)
- Dual outputs (2 wheels)
- Housing manufactured to order



- Modified input shaft
- Addition of aluminium hand wheel



- Rotating output table
- Input shaft on one side only



Choice
of shaft
length and
diameter



MODIFIED

HANDWHEELS PLEASE FILL IN THE DETAILS

Please complete this form and return it to us!

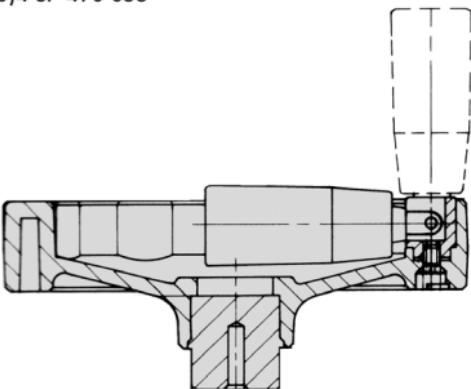
Email address: cial2@hpceurope.com

Tel: +33(0)4 37 496 496

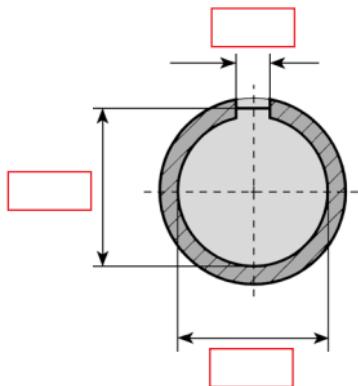
Fax: +33(0)4 37 490 055

Wheel diameter

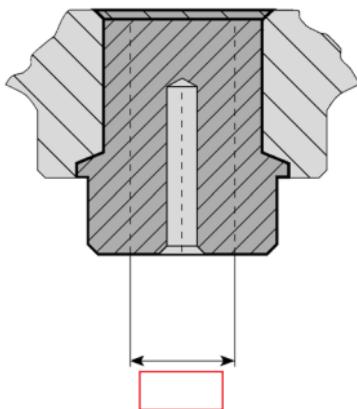
$\varnothing 50$		$\varnothing 200$	
$\varnothing 65$		$\varnothing 250$	
$\varnothing 80$		$\varnothing 300$	
$\varnothing 100$		$\varnothing 400$	
$\varnothing 125$		$\varnothing 500$	
$\varnothing 150$			



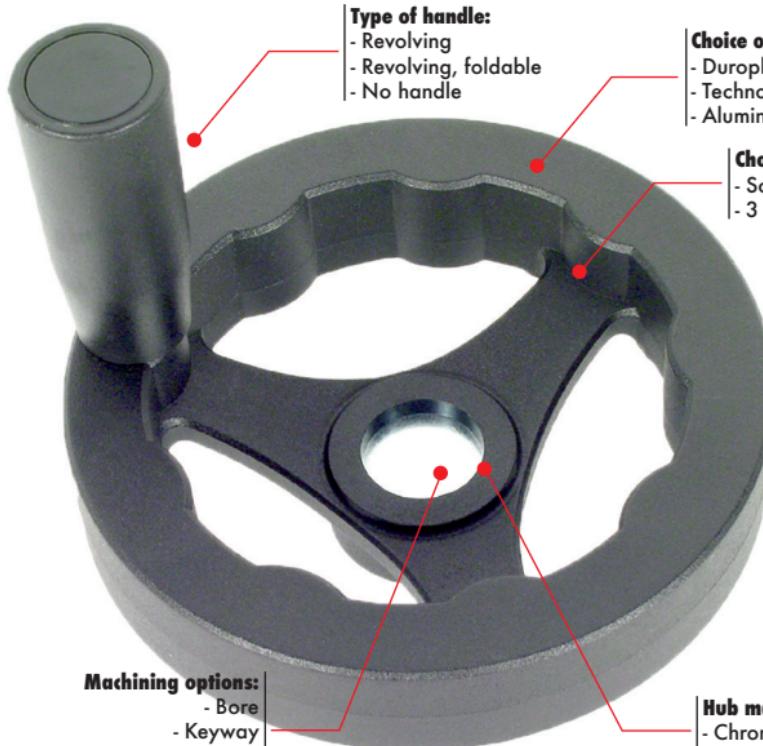
Keyway



Bore modifications



MODIFIED HANDWHEELS

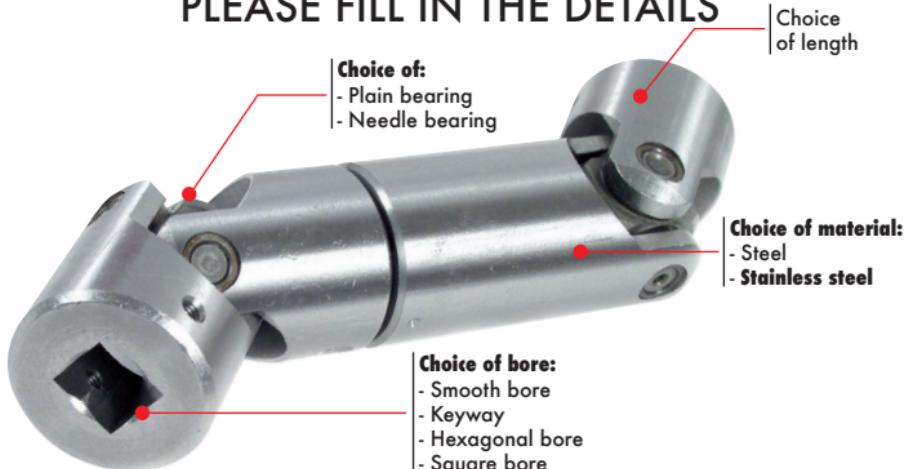


EXAMPLES OF HAND
WHEELS ALREADY
SUPPLIED



MODIFIED

TELESCOPIC UNIVERSAL JOINTS PLEASE FILL IN THE DETAILS



Based on
universal-joint:
HPC
Part Number

Bore A

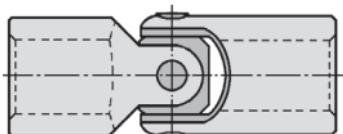
Smooth	Keyway	Hexagonal	Square
$\varnothing d$	$\varnothing d$ b t	SW	S
<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>

Smooth	Keyway	Hexagonal	Square
$\varnothing d$	$\varnothing d$ b t	SW	S
<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>

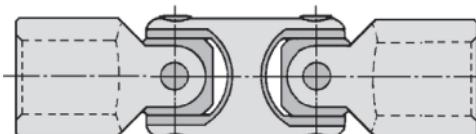
Bore B

MODIFIED

SINGLE OR DOUBLE UNIVERSAL JOINTS
PLEASE FILL IN THE DETAILS



SINGLE



DOUBLE



Based on
universal-joint:
 HPC
Part Number

Bore A

$\varnothing d$ <input type="text"/>	$\varnothing d$ <input type="text"/> b <input type="text"/> t <input type="text"/>	SW <input type="text"/>	S <input type="text"/>

$\varnothing d$ <input type="text"/>	$\varnothing d$ <input type="text"/> b <input type="text"/> t <input type="text"/>	SW <input type="text"/>	S <input type="text"/>

Bore B

General Terms of Sale

For professionals

1- APPLICATION AND OPPOSABILITY OF THE GENERAL TERMS OF SALE

Placing an order with ENGRÈNAGES HPC ("HPC") implies the full and unreserved acceptance by the professional buyer (the "Customer") of these General Terms of Sale (the "GTC"), to the exclusion of all other documents issued by HPC which are provided for information only and solely for reference, in spite of any stipulation to the contrary indicated on the Customer's purchase orders, on its general terms and conditions of purchase or on any other document produced by the Customer.

Any condition imposed by the Customer shall therefore be ineffective against HPC unless it is expressly accepted by HPC, regardless of when it was informed of the condition.

These GTS may only be completed by the specifications for customised parts, it being stated that if there is any conflict between these GTS and the technical specifications of the parts to be produced, the CGV shall take precedence.

If HPC does not require performance at a given time of any of the clauses hereof, it cannot be deemed to have waived its right to require performance later on.

2 - ORDERS

Orders must be placed in writing by the Customer with HPC. Any order placed by telephone must therefore be confirmed by the Customer in writing within 24 hours of the phone call. If it is not confirmed, it will not be taken into account. The order only becomes final and the sales agreement is only formed once it has been accepted by HPC either by sending confirmation of order or by delivery of the products ordered to the Customer.

If HPC makes any changes to the Customer's order, which are indicated in the order confirmation letter sent to the Customer, the Customer is deemed to have accepted the changes unless it submits a written response within 24 hours.

- No orders will be accepted for less than 20 € exclusive of tax, including for over-the-counter orders.
- No orders will be accepted for less than 150 € for EU countries, or for over 600 € for non-EU countries.

3- MODIFICATION OR CANCELLATION OF ORDERS

Modification or cancellation of orders requested by the Customer can only be taken into account if they have been expressly accepted by HPC within 24 hours of the request.

The Customer will be liable for any processing costs. They will be indicated in the acceptance letter. The costs applicable may represent up to 50% of the total cost of the order row concerned or of the total cost of the order. If they are not accepted by HPC, the products initially ordered will be shipped as initially planned and must be paid for.

4- PRICE

All of the prices in our catalogue are indicated exclusive of tax, and VAT at the current rate, delivery and packaging charges and any insurance that the Customer wishes to take out, must be added. The packaging is selected by HPC, unless specifically requested by the Customer.

Except as otherwise stated, the products are sold at the price in force on the order date. The prices of the products stated in the catalogue are those in force on the catalogue publication date indicated on the cover. They may be amended by HPC at any time.

5- DELIVERY - TERMS - LEAD TIMES

A- LEAD TIMES

Parts in stock on the order acceptance date may be made available or shipped within a maximum of 72 hours from the time of acceptance. For parts in the catalogue that are not in stock on the order acceptance date or for special parts, the manufacturing lead time is indicated for information only when the order is accepted.

Except in cases of force majeure, if the delivery date indicated by HPC is exceeded by more than thirty (30) working days, the Customer may request the early cancellation of the order by registered letter with acknowledgement of receipt within thirty (30) working days of expiry of the deadline.

For the purposes of these GTS, the following are deemed to be force majeure events: wars, riots, fires, strikes, natural disasters, impossibility of obtaining supplies, this list not being restrictive.

Cancellation shall enter into effect on the date of receipt by HPC of the aforementioned letter provided that the delivery has not been carried out prior to the date of receipt of the letter.

B- DELIVERY

Except as otherwise expressly stipulated, delivery is carried out by direct delivery of the products to the Customer on the premises of HPC in Dardilly, 69570 (France) or to the carrier chosen by HPC, or failing that one chosen by the Customer.

The products are sold from Dardilly, 69570 France (premises of HPC), and are transported at the risk of the consignee, notwithstanding HPC's retention of title clause as stipulated below.

Except as otherwise expressly provided, goods are transported FCA (at the Customer's expense by the carrier chosen by HPC) or failing that one by the Customer.

It is up to the Customer to express any customary observations and reservations to the carrier in the event of loss or damage during transport, by registered letter with acknowledgement of receipt or by extrajudicial document within three days of receipt of the products (Article L.133-3 of the French Commercial Code).

HPC reserves the right to carry out part deliveries.

C- ACCEPTANCE

The Customer must check at the time of delivery, in the presence of the carrier, that the parcels do not show any sign of having been damaged, broken or opened, and that the number of parcels matches the number indicated on the shipping document. The customer must express any reservations on the shipping document.

Without prejudice to the measures to be taken with regard to the carrier, claims regarding apparent defects or non-compliance of the product delivered with the product ordered or with the consignment note must be made in writing within thirty days of the arrival of the products, or the claim is barred.

It is up to the Customer to ask HPC for a return voucher number and to provide any proof of the reality of the defects or anomalies identified. It must enable HPC to assess these defects and remedy them. It will not intervene itself, or require a third party to intervene for this purpose.

HPC's only obligation under the warranty will be to replace free-of-charge the item that it has recognised as defective. All warranty claims for products must first be submitted to HPC's quality or engineering department, whose consent is required for any replacement. Any postal charges are payable by the Customer if the warranty does not apply.

6- PAYMENT - TERMS AND CONDITIONS

Our invoices are sent with the articles ordered and are payable:

- on receipt,

- at the end of the month, 30 days after the invoice date, subject to the line of credit granted. This means of payment is subject to approval by HPC, which reserves the right to withdraw it at any time, without the Customer being able to object,

- in Euros,

- Credit card (Master card or visa) or bank transfer, the choice of method of payment cannot change the payment due date

No discount will be granted for early payment.

7- LATE OR NON-PAYMENT

In the event of late payment, the penalty is due without it being necessary to send a reminder, on the day following the payment date indicated on the invoice.

Unless there is a provision to the contrary, which cannot however set the rate at less than three times the legal interest rate, the interest rate for the late payment penalty is equal to that applied by the European Central Bank in its most recent refinancing operation, increased by 10%.

Lump-sum compensation for recovery costs is automatically due from the first day of late payment regardless of the deadline applicable to the transaction. This lump-sum compensation of 40 € must be paid in the event of late payment of any amount due, in addition to the late payment penalty.

If the recovery costs actually incurred are higher than this fixed amount, in particular if a collection agency is employed to send reminders and notice to pay, the Customer may be asked to pay additional compensation on production of documentary evidence.

HPC reserves the right to suspend the customer's orders in progress, with or without notice, until it has paid the amounts due, and to take back the equipment delivered.

The Customer must pay each invoice at the due date even if a claim is made.

8- WARRANTY

HPC guarantees the Customer against defects or hidden defects in the products sold, under the conditions specified in Article 1641 of the French Civil Code.

In the event of customised production, since HPC does not provide any services as an engineering department, it undertakes to produce the products in compliance with the specifications provided by the Customer, but does not guarantee that they will function, which it is up to the Customer alone to assess. The Customer alone is responsible for the information transmitted to HPC.

For standard products, HPC guarantees that they will meet the specifications indicated in the catalogue, subject to technical changes made by suppliers. Liability and/or warranty claims against HPC must be made within thirty days of receipt of the goods by the Customer. They cannot result in compensation that exceeds the price of the order concerned. Damage caused by a part marketed by HPC cannot on any account result in compensation.

If a customised product infringes the rights of a third party, the Customer undertakes to repay any resulting costs that may be incurred by HPC (proceedings, compensation, damages, costs of lawyers and other consultants etc.) and actively help to defend HPC at its own expense.

The warranty does not apply if the products sold are modified or interfered with without the prior written agreement of HPC or if the products are used in an abnormal manner or in abnormal conditions in view of their characteristics and the normal practice and standards applicable (in particular in the event of use or installation in aircraft and/or spacecraft for which the products are totally unsuitable).

9- RETURNS - TERMS AND CONDITIONS

All product returns must be the subject of a formal agreement between HPC and the Customer by fax, email or letter.

The carrier is chosen by HPC. Any product returned without such agreement shall be kept at the Customer's disposal and will not result in the issue of credit notes or repayment.

In any case, no returns will be accepted if they are sent more than thirty days after receipt of the product. The Customer is always liable for the costs and risks of return. All returns must be sent to our head office.

All returns accepted by HPC shall result in the issue of a credit note to the Customer valid for a period of six months from the issue date, after checking the quality and quantity of products returned.

In the event of an apparent defect or non-compliance of the products delivered, duly certified by HPC, the Customer may receive a replacement free of charge, or repayment of the products, at HPC's discretion, to the exclusion of any compensation or damages.

10- RETENTION OF TITLE

Transfer of ownership of all standard or customised parts is subject to payment of the price in full, including principal and incidental charges, it being stated that payment is deemed to have taken place on the date of actual receipt of the amounts by HPC.

The preceding provisions do not prevent the transfer of risks to the Customer (in particular the risk of loss, deterioration and damage caused by the parts shipped) at the time of shipping or delivery of the goods by HPC.

If the Customer returns equipment acquired from HPC in order to have a part produced that must be incorporated in it, or that will be added to it, the Customer remains the owner of the equipment, bears the costs of shipping and return, and the risks linked to transport and any adaptation or alteration of the equipment by HPC, and to any damage it may cause.

11- APPLICABLE LAW - COURT OF COMPETENT JURISDICTION

Sales concluded with HPC are governed by French law.

Any disputes that may arise between the parties concerning the interpretation and/or performance and/or termination of the contract shall be referred to the commercial courts with jurisdiction over the head office of HPC, even in the event of third party proceedings or multiple defendants.

Non-contractual photographs.

Product information subject to technical changes.

General Terms of Sale for private individuals are available on our website hpceurope.com

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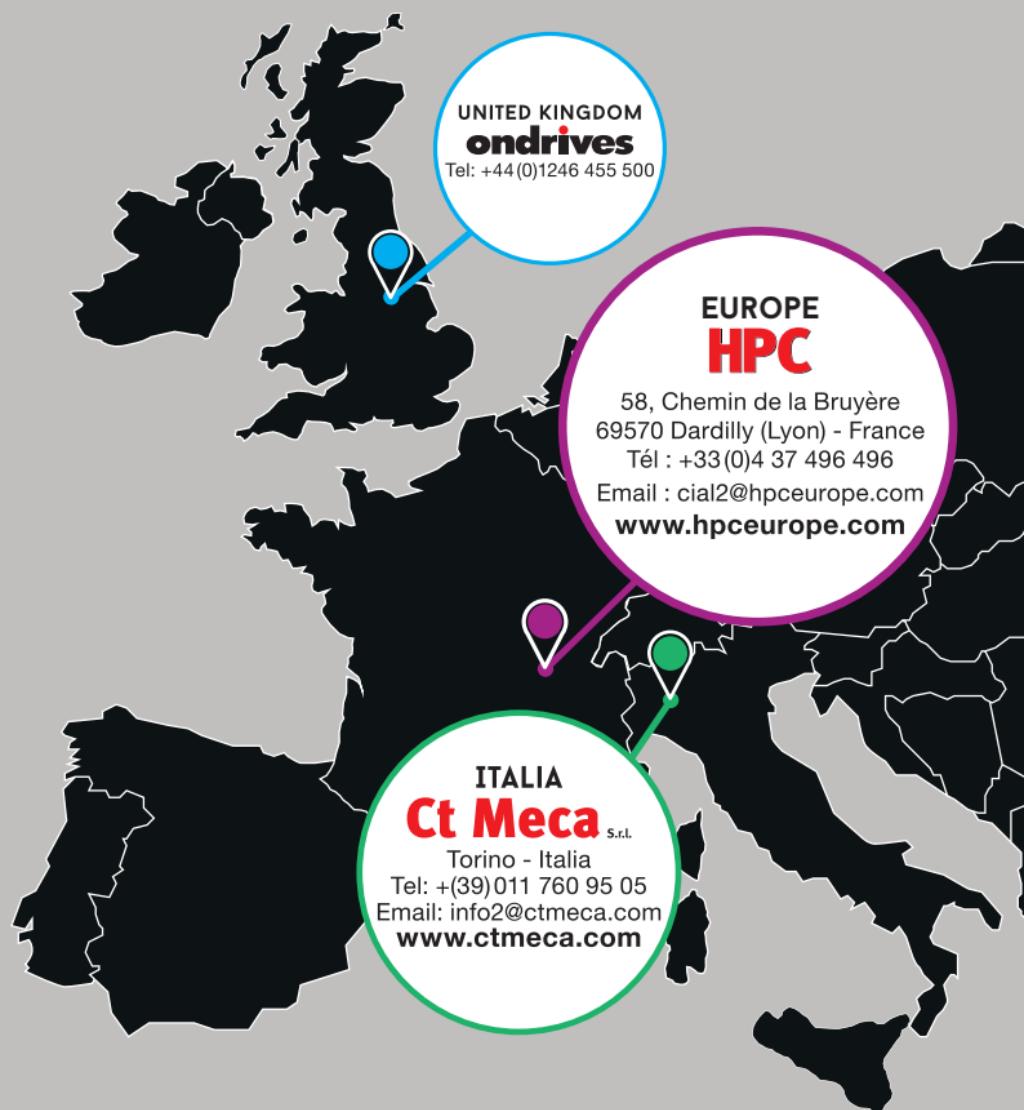
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