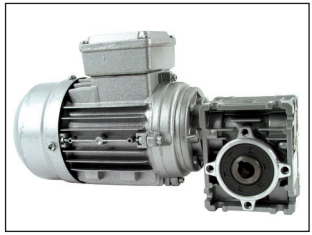
## Torque up to 22Nm

# 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*

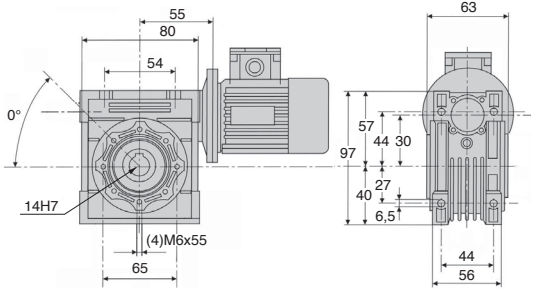


## Wiring

- *Wiring diagrams N°3 and N°5 on technical information pages* ***(tome 2 p.314)***

## Accessories

- *Output shaft*
  **CHM30-X,**
  **CHM30-DX**
  ***(tome 2 p.313)***
- *Reaction arm*
  **CHM30-BR**
  ***(tome 2 p.312)***




## DISCOUNTS

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

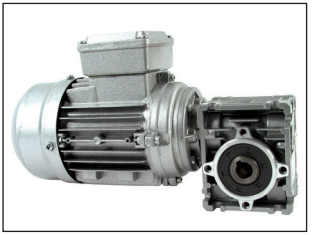
| Part number | Ratio | Motor | Motor power (kW) | Speed under load (rpm) | Nominal Torque (Nm) | Service factor | Stock* | Price each |
|---|---|---|---|---|---|---|---|---|
| CHM30-7-63C4 | 7,5:1 | 63C4 | 0,22 | 186,7 | 9 | 2,1 | ✔ | 255,00 € |
| CHM30-10-63C4 | 10:1 | 63C4 | 0,22 | 140,0 | 11 | 1,6 | ✔ | 255,00 € |
| CHM30-15-63C4 | 15:1 | 63C4 | 0,22 | 93,3 | 16 | 1,0 | ✔ | 254,45 € |
| CHM30-20-63C4 | 20:1 | 63C4 | 0,22 | 70,0 | 20 | 0,9 | ✔ | 254,45 € |
| CHM30-25-63B4 | 25:1 | 63B4 | 0,18 | 56,0 | 20 | 1,0 | ✔ | 249,04 € |
| CHM30-30-63B4 | 30:1 | 63B4 | 0,18 | 46,7 | 22 | 0,9 | ✔ | 249,04 € |
| CHM30-40-63B4 | 40:1 | 63B4 | 0,18 | 35,0 | 21 | 0,8 | ✔ | 249,04 € |
| CHM30-50-63B4 | 50:1 | 63B4 | 0,18 | 28,0 | 19 | 0,8 | ✔ | 249,04 € |
| CHM30-60-56B4 | 60:1 | 56B4 | 0,09 | 23,3 | 18 | 0,9 | ✔ | 239,72 € |
| CHM30-80-56B4 | 80:1 | 56B4 | 0,09 | 17,5 | 13 | 0,9 | ✔ | 239,72 € |

**Depending on availability - Dimensions in mm*

# 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*

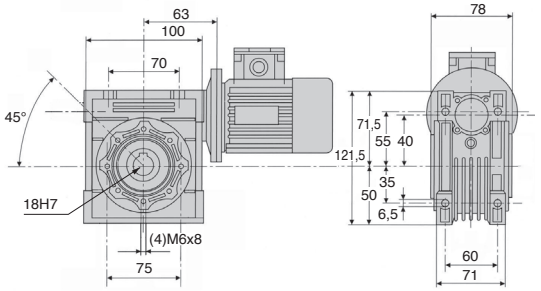


### Wiring

- *Wiring diagrams N°3 and N°5 on technical* ***(tome 2 p.314)***

### Accessories

- *Output shaft* ***CHM40-X, CHM40-DX (tome 2 p.313)***
- *Reaction arm* ***CHM40-BR (tome 2 p.312)***




### DISCOUNTS

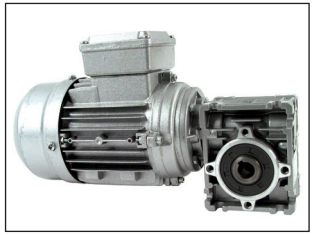
| Qty | 1+ | 2+ | 4+ |
|---|---|---|---|
| Disc. | List | -15% | On request |

| Part number | 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 | ✔ | 319,39 € |
| CHM40-10-71C4 | 10:1 | 71C4 | 0,55 | 140,0 | 30 | 1,4 | ✔ | 319,39 € |
| CHM40-15-71C4 | 15:1 | 71C4 | 0,55 | 93,3 | 44 | 0,9 | ✔ | 319,39 € |
| CHM40-20-71C4 | 20:1 | 71C4 | 0,55 | 70,0 | 38 | 1,0 | - | 319,39 € |
| CHM40-25-71B4 | 25:1 | 71B4 | 0,37 | 56,0 | 45 | 0,9 | ✔ | 300,26 € |
| CHM40-30-71B4 | 30:1 | 71B4 | 0,37 | 46,7 | 52 | 0,8 | ✔ | 300,26 € |
| CHM40-40-71A4 | 40:1 | 71A4 | 0,25 | 35,0 | 43 | 0,9 | ✔ | 285,70 € |
| CHM40-50-63C4 | 50:1 | 63C4 | 0,22 | 28,0 | 44 | 0,9 | ✔ | 282,01 € |
| CHM40-60-63B4 | 60:1 | 63B4 | 0,18 | 23,3 | 42 | 0,8 | - | 276,07 € |
| CHM40-80-63B4 | 80:1 | 63B4 | 0,18 | 17,5 | 36 | 0,8 | ✔ | 276,07 € |
| CHM40-100-63B4 | 100:1 | 63B4 | 0,18 | 14,0 | 35 | 0,8 | ✔ | 276,07 € |

**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*

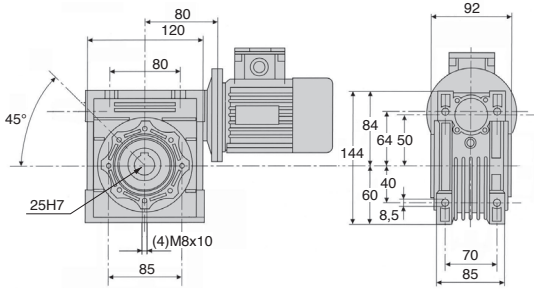


### Wiring

- *Wiring diagrams N°3 and N°5 on technical information pages* ***(tome 2 p.314)***

### Accessories

- *Output shaft*
  **CHM50-X,**
  **CHM50-DX**
  ***(tome 2 p.313)***
- *Reaction arm*
  **CHM50-BR**
  ***(tome 2 p.312)***




**DISCOUNTS**

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

* without CHM50-100-63B4 mounting flange B5

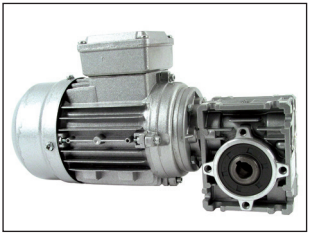
| Part number | Ratio | Motor | Motor power (kW) | Speed under load (rpm) | Nominal Torque (Nm) | Service factor | Price each |
|---|---|---|---|---|---|---|---|
| CHM50-7-80B4 | 7,5:1 | 80B4 | 0,75 | 186,7 | 33,3 | 2,0 | 389,74 € |
| CHM50-10-80B4 | 10:1 | 80B4 | 0,75 | 140,0 | 43,9 | 1,6 | 389,74 € |
| CHM50-15-80B4 | 15:1 | 80B4 | 0,75 | 93,3 | 62,6 | 1,2 | 389,74 € |
| CHM50-20-80B4 | 20:1 | 80B4 | 0,75 | 70,0 | 80,0 | 0,9 | 389,74 € |
| CHM50-25-80A4 | 25:1 | 80A4 | 0,55 | 56,0 | 70,0 | 1,0 | 372,70 € |
| CHM50-30-80A4 | 30:1 | 80A4 | 0,55 | 46,7 | 80,0 | 1,0 | 372,70 € |
| CHM50-40-71B4 | 40:1 | 71B4 | 0,37 | 35,0 | 67,0 | 1,1 | 345,86 € |
| CHM50-50-71B4 | 50:1 | 71B4 | 0,37 | 28,0 | 78,0 | 0,9 | 345,86 € |
| CHM50-60-71B4 | 60:1 | 71B4 | 0,37 | 23,3 | 87,0 | 0,8 | 345,86 € |
| CHM50-80-71A4 | 80:1 | 71A4 | 0,25 | 17,5 | 70,0 | 0,9 | 331,28 € |
| CHM50-100-63B4* | 100:1 | 63B4 | 0,18 | 14,0 | 59,0 | 0,9 | 321,66 € |

*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*

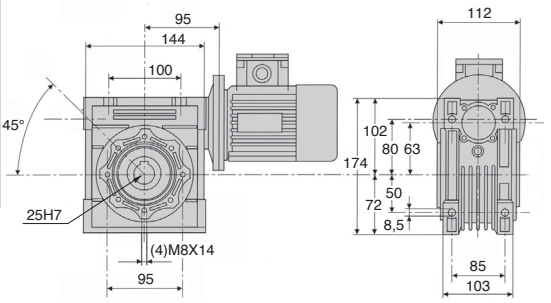


## Wiring

- *Wiring diagrams N°3 and N°5 on technical information pages* ***(tome 2 p.314)***

## Accessories

- *Servo amplifier* ***TEL-ATV11/370***
- *Output shaft* ***CHM63-X, CHM63-DX (tome 2 p.313)***
- *Reaction arm* ***CHM63-BR (tome 2 p.312- p.314)***




## DISCOUNTS

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

| Part number | 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 | 538,97 € |
| CHM63-10-90L4 | 10:1 | 90L4 | 1,50 | 140,0 | 88,6 | 1,4 | 538,97 € |
| CHM63-15-90L4 | 15:1 | 90L4 | 1,50 | 93,3 | 126,0 | 1,1 | 538,97 € |
| CHM63-20-90L4 | 20:1 | 90L4 | 1,50 | 70,0 | 164,0 | 0,8 | 538,97 € |
| CHM63-25-90S4 | 25:1 | 90S4 | 1,10 | 56,0 | 145,0 | 0,9 | 509,35 € |
| CHM63-30-90S4 | 30:1 | 90S4 | 1,10 | 46,7 | 165,0 | 1,0 | 509,35 € |
| CHM63-40-80B4 | 40:1 | 80B4 | 0,75 | 35,0 | 143,0 | 1,0 | 474,43 € |
| CHM63-50-80A4 | 50:1 | 80A4 | 0,55 | 28,0 | 122,0 | 1,1 | 457,42 € |
| CHM63-60-80A4 | 60:1 | 80A4 | 0,55 | 23,3 | 138,0 | 0,9 | 457,42 € |
| CHM63-80-71B4 | 80:1 | 71B4 | 0,37 | 17,5 | 114,0 | 1,1 | 430,60 € |
| CHM63-100-71B4 | 100:1 | 71B4 | 0,37 | 14,0 | 127,0 | 0,9 | 430,60 € |

*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

### 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.

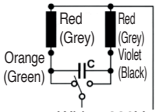
#### Disadvantage

- Lower efficiency than synchronous motors.

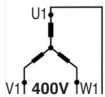
#### Service life

- It depends on the application and is limited by the life of the motor bearings

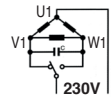
### Wiring diagram



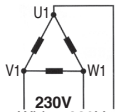

Wiring 230V
1 phase
**Diagram 2**




Wiring 400V
3 phases
**Diagram 3**




Wiring 230V
1 phase
**Diagram 4**



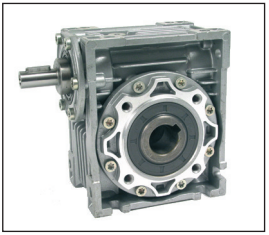

Wiring 230V
3 phases
**Diagram 5**

# Worm and wheel gearbox

## CHMR30

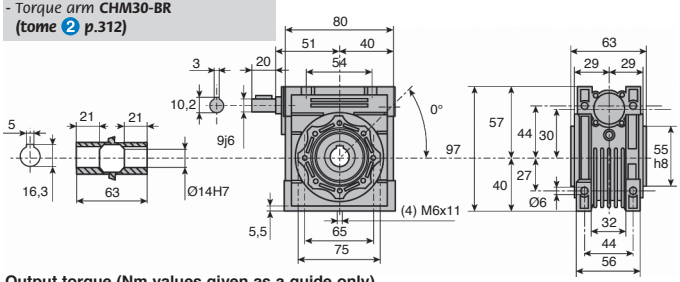
**Torque up to 28 Nm**

- ***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.313)***
- *Torque arm* ***CHM30-BR*** ***(tome 2 p.312)***




**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 SPEED (rpm) | 2800 | 12 | 12 | 12 | 11 | 15 | 14 | 13 | 12 | 11 | 10 |
| | 1400 | 17 | 17 | 17 | 17 | 20 | 19 | 17 | 16 | 15 | 12 |
| | 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 |

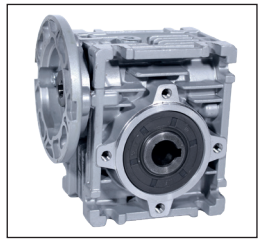
| Part number | Ratio | Max. input speed (rpm) | Max. output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|
| CHMR30-7 | 7,5:1 | 2800 | 373,33 | NC | no | ✔ | 143,28 € |
| CHMR30-10 | 10:1 | 2800 | 280,00 | NC | no | ✔ | 143,28 € |
| CHMR30-15 | 15:1 | 2800 | 186,66 | NC | no | ✔ | 143,28 € |
| CHMR30-20 | 20:1 | 2800 | 140,00 | NC | no | - | 143,28 € |
| CHMR30-25 | 25:1 | 2800 | 112,00 | NC | no | ✔ | 143,28 € |
| CHMR30-30 | 30:1 | 2800 | 93,33 | NC | not defined | - | 143,28 € |
| CHMR30-40 | 40:1 | 2800 | 70,00 | NC | not defined | ✔ | 143,28 € |
| CHMR30-50 | 50:1 | 2800 | 56,00 | NC | not defined | ✔ | 143,28 € |
| CHMR30-60 | 60:1 | 2800 | 46,66 | NC | yes | ✔ | 143,28 € |
| CHMR30-80 | 80:1 | 2800 | 35,00 | NC | yes | ✔ | 143,28 € |

**Depending on availability - Dimensions in mm*

## Torque up to 28 Nm

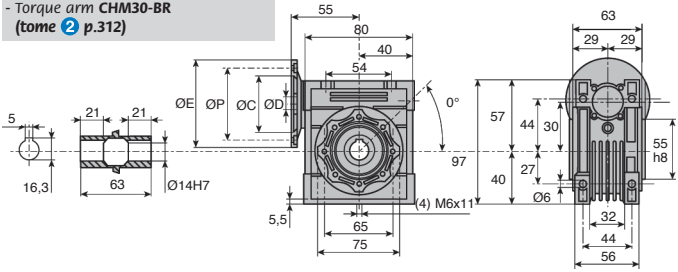
# CHM30

- ***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.313)***
- *Torque arm* ***CHM30-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 12 | 12 | 12 | 11 | 15 | 14 | 13 | 12 | 11 | 10 |
| INPUT | 1400 | 17 | 17 | 17 | 17 | 20 | 19 | 17 | 16 | 15 | 12 |
| SPEED | 900 | 19 | 19 | 19 | 19 | 22 | 20 | 19 | 17 | 16 | 14 |
| (rpm) | 500 | 23 | 23 | 23 | 22 | 28 | 25 | 22 | 20 | 18 | 16 |

## DISCOUNTS

| Qty | 1+ | 3+ | 6+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|---|---|
| CHM30-7 | 7,5:1 | 56B14 | 9 | 50 | 65 | 80 | no | - | 143,28 € |
| CHM30-10 | 10:1 | 56B14 | 9 | 50 | 65 | 80 | no | ✔ | 143,28 € |
| CHM30-15 | 15:1 | 56B14 | 9 | 50 | 65 | 80 | no | ✔ | 143,28 € |
| CHM30-20 | 20:1 | 56B14 | 9 | 50 | 65 | 80 | no | ✔ | 143,28 € |
| CHM30-25 | 25:1 | 56B14 | 9 | 50 | 65 | 80 | no | ✔ | 143,28 € |
| CHM30-30 | 30:1 | 56B14 | 9 | 50 | 65 | 80 | not defined | - | 143,28 € |
| CHM30-40 | 40:1 | 56B14 | 9 | 50 | 65 | 80 | not defined | - | 143,28 € |
| CHM30-50 | 50:1 | 56B14 | 9 | 50 | 65 | 80 | not defined | ✔ | 143,28 € |
| CHM30-60 | 60:1 | 56B14 | 9 | 50 | 65 | 80 | yes | ✔ | 143,28 € |
| CHM30-80 | 80:1 | 56B14 | 9 | 50 | 65 | 80 | yes | ✔ | 143,28 € |

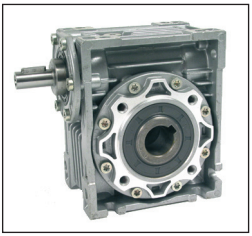
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## CHMR40

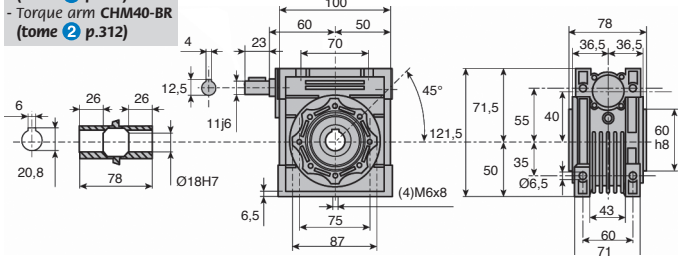
**Torque up to 57 Nm**

- ***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.313)***
- *Torque arm **CHM40-BR** **(tome 2 p.312)***




**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 | 27 | 26 | 30 | 28 | 27 | 33 | 30 | 30 | 27 | 24 | 22 |
| | 1400 | 39 | 39 | 39 | 38 | 39 | 44 | 40 | 38 | 35 | 32 | 28 |
| | 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 |

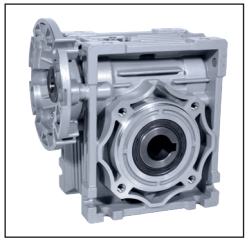
| Part number | Ratio | Max. input speed (rpm) | Max. output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|
| CHMR40-7 | 7,5:1 | 800 | 373,33 | NC | no | ✔ | 172,96 € |
| CHMR40-10 | 10:1 | 2800 | 280,00 | NC | no | ✔ | 172,96 € |
| CHMR40-15 | 15:1 | 2800 | 186,66 | NC | no | - | 172,96 € |
| CHMR40-20 | 20:1 | 2800 | 140,00 | NC | no | ✔ | 172,96 € |
| CHMR40-25 | 25:1 | 2800 | 112,00 | NC | no | - | 172,96 € |
| CHMR40-30 | 30:1 | 2800 | 93,33 | NC | no | ✔ | 172,96 € |
| CHMR40-40 | 40:1 | 2800 | 70,00 | NC | no | ✔ | 172,96 € |
| CHMR40-50 | 50:1 | 2800 | 56,00 | NC | not defined | - | 172,96 € |
| CHMR40-60 | 60:1 | 2800 | 46,66 | NC | not defined | ✔ | 172,96 € |
| CHMR40-80 | 80:1 | 2800 | 35,00 | NC | yes | ✔ | 172,96 € |
| CHMR40-100 | 100:1 | 2800 | 28,00 | NC | yes | ✔ | 172,96 € |

**Depending on availability - Dimensions in mm*

## Torque up to 57 Nm

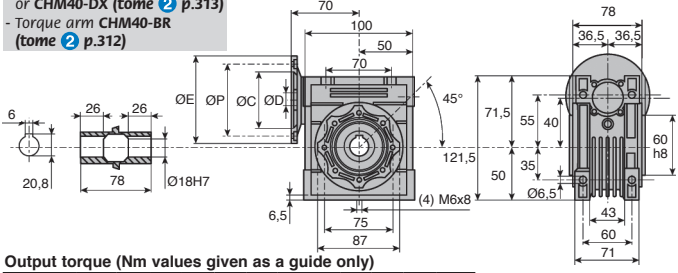
# CHM40

- ***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.313)***
- *Torque arm* ***CHM40-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 27 | 26 | 30 | 28 | 27 | 33 | 30 | 30 | 27 | 24 | 22 |
| INPUT | 1400 | 39 | 39 | 39 | 38 | 39 | 44 | 40 | 38 | 35 | 32 | 28 |
| SPEED | 900 | 43 | 43 | 44 | 43 | 43 | 48 | 44 | 41 | 38 | 35 | 31 |
| (rpm) | 500 | 52 | 52 | 54 | 53 | 51 | 57 | 52 | 48 | 45 | 40 | 35 |

**DISCOUNTS**

| Qty | 1+ | 3+ | 6+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|---|---|
| CHM40-7 | 7,5:1 | 63B14 | 11 | 60 | 75 | 90 | no | ✔ | 172,96 € |
| CHM40-10 | 10:1 | 63B14 | 11 | 60 | 75 | 90 | no | ✔ | 172,96 € |
| CHM40-15 | 15:1 | 63B14 | 11 | 60 | 75 | 90 | no | - | 172,96 € |
| CHM40-20 | 20:1 | 63B14 | 11 | 60 | 75 | 90 | no | ✔ | 172,96 € |
| CHM40-25 | 25:1 | 63B14 | 11 | 60 | 75 | 90 | no | - | 172,96 € |
| CHM40-30 | 30:1 | 63B14 | 11 | 60 | 75 | 90 | no | ✔ | 172,96 € |
| CHM40-40 | 40:1 | 63B14 | 11 | 60 | 75 | 90 | no | ✔ | 172,96 € |
| CHM40-50 | 50:1 | 63B14 | 11 | 60 | 75 | 90 | not defined | ✔ | 172,96 € |
| CHM40-60 | 60:1 | 63B14 | 11 | 60 | 75 | 90 | not defined | ✔ | 172,96 € |
| CHM40-80 | 80:1 | 63B14 | 11 | 60 | 75 | 90 | yes | ✔ | 172,96 € |
| CHM40-100 | 100:1 | 63B14 | 11 | 60 | 75 | 90 | yes | ✔ | 172,96 € |

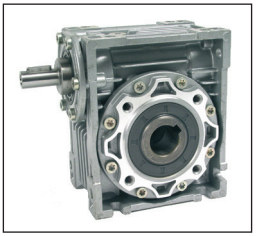
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## CHMR50

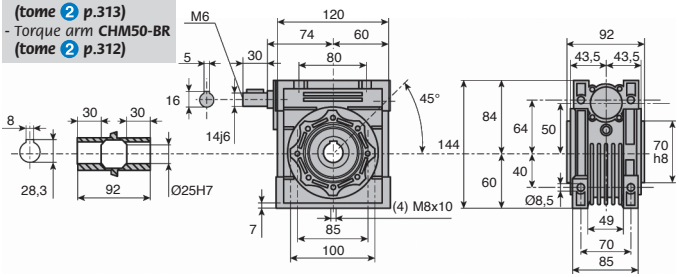
**Torque up to 107 Nm**

- ***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.313)***
- *Torque arm* ***CHM50-BR*** ***(tome 2 p.312)***




**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 |
| | 1400 | 70 | 71 | 73 | 72 | 69 | 83 | 75 | 72 | 67 | 64 | 54 |
| | 900 | 83 | 83 | 83 | 76 | 74 | 89 | 81 | 76 | 71 | 67 | 55 |
| | 500 | 102 | 102 | 102 | 92 | 90 | 107 | 97 | 90 | 82 | 74 | 64 |

**DISCOUNTS**

| Qty | 1+ | 3+ | 6+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Max. input speed (rpm) | Max. output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|
| CHMR50-7 | 7,5:1 | 2800 | 373,33 | NC | no | ✔ | 223,01 € |
| CHMR50-10 | 10:1 | 2800 | 280,00 | NC | no | ✔ | 223,01 € |
| CHMR50-15 | 15:1 | 2800 | 186,66 | NC | no | ✔ | 223,01 € |
| CHMR50-20 | 20:1 | 2800 | 140,00 | NC | no | ✔ | 223,01 € |
| CHMR50-25 | 25:1 | 2800 | 112,00 | NC | no | - | 223,01 € |
| CHMR50-30 | 30:1 | 2800 | 93,33 | NC | no | ✔ | 223,01 € |
| CHMR50-40 | 40:1 | 2800 | 70,00 | NC | no | ✔ | 223,01 € |
| CHMR50-50 | 50:1 | 2800 | 56,00 | NC | not defined | ✔ | 223,01 € |
| CHMR50-60 | 60:1 | 2800 | 46,66 | NC | not defined | ✔ | 223,01 € |
| CHMR50-80 | 80:1 | 2800 | 35,00 | NC | yes | ✔ | 223,01 € |
| CHMR50-100 | 100:1 | 2800 | 28,00 | NC | yes | ✔ | 223,01 € |

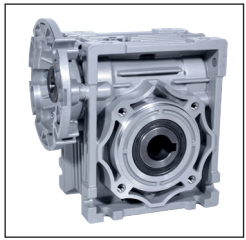
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## Torque up to 107 Nm

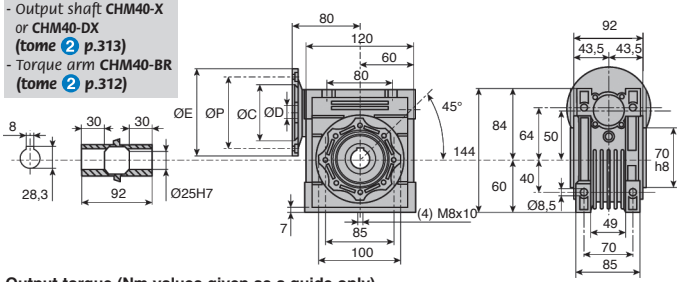
## CHM50

- ***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 hub G500)*
- *Lubrication: synthetic oil ISO VG320*
- *Weight: 3.5 kg*



### Accessories

- *Output shaft* ***CHM40-X*** *or* ***CHM40-DX*** ***(tome 2 p.313)***
- *Torque arm* ***CHM40-BR*** ***(tome 2 p.312)***




**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 |
| | 1400 | 70 | 71 | 73 | 72 | 69 | 83 | 75 | 72 | 67 | 64 | 54 |
| | 900 | 83 | 83 | 83 | 76 | 74 | 89 | 81 | 76 | 71 | 67 | 55 |
| | 500 | 102 | 102 | 102 | 92 | 90 | 107 | 97 | 90 | 82 | 74 | 64 |

**DISCOUNTS**

| Qty | 1+ | 3+ | 6+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|---|---|
| CHM50-7 | 7,5:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-10 | 10:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-15 | 15:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-20 | 20:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-25 | 25:1 | 71B14 | 14 | 70 | 85 | 105 | no | - | 223,01 € |
| CHM50-30 | 30:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-40 | 40:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 223,01 € |
| CHM50-50 | 50:1 | 71B14 | 14 | 70 | 85 | 105 | not defined | ✔ | 223,01 € |
| CHM50-60 | 60:1 | 71B14 | 14 | 70 | 85 | 105 | not defined | - | 223,01 € |
| CHM50-80 | 80:1 | 71B14 | 14 | 70 | 85 | 105 | yes | ✔ | 223,01 € |
| CHM50-100 | 100:1 | 71B14 | 14 | 70 | 85 | 105 | yes | ✔ | 223,01 € |

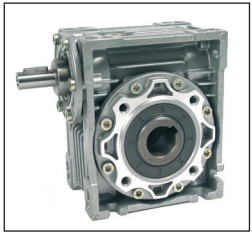
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## CHMR63

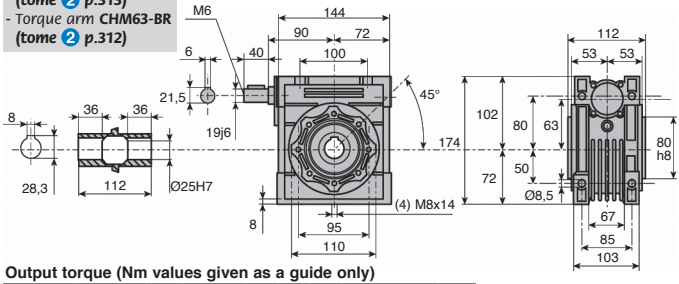
**Torque up to 196 Nm**

- ***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.313)***
- *Torque arm* ***CHM63-BR*** ***(tome 2 p.312)***




**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 |
| | 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**

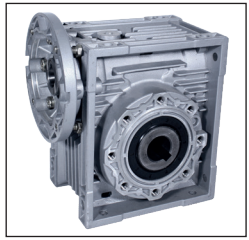
| Qty | 1+ | 3+ | 6+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Max. input speed (rpm) | Max. output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|
| CHMR63-7 | 7,5:1 | 2800 | 373,33 | NC | no | ✔ | 315,95 € |
| CHMR63-10 | 10:1 | 2800 | 280,00 | NC | no | ✔ | 315,95 € |
| CHMR63-15 | 15:1 | 2800 | 186,66 | NC | no | - | 315,95 € |
| CHMR63-20 | 20:1 | 2800 | 140,00 | NC | no | ✔ | 315,95 € |
| CHMR63-25 | 25:1 | 2800 | 112,00 | NC | no | ✔ | 315,95 € |
| CHMR63-30 | 30:1 | 2800 | 93,33 | NC | no | ✔ | 315,95 € |
| CHMR63-40 | 40:1 | 2800 | 70,00 | NC | no | ✔ | 315,95 € |
| CHMR63-50 | 50:1 | 2800 | 56,00 | NC | not defined | - | 315,95 € |
| CHMR63-60 | 60:1 | 2800 | 46,66 | NC | not defined | ✔ | 315,95 € |
| CHMR63-80 | 80:1 | 2800 | 35,00 | NC | yes | ✔ | 315,95 € |
| CHMR63-100 | 100:1 | 2800 | 28,00 | NC | yes | ✔ | 315,95 € |

**Depending on availability - Dimensions in mm*

## Torque up to 196 Nm

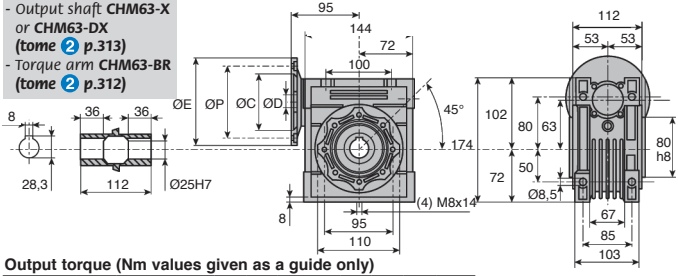
# CHM63



- ***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.313)***
- *Torque arm* ***CHM63-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 92 | 96 | 102 | 99 | 91 | 119 | 107 | 99 | 94 | 84 | 73 |
| INPUT | 1400 | 127 | 129 | 139 | 134 | 129 | 159 | 144 | 134 | 129 | 121 | 117 |
| SPEED | 900 | 150 | 152 | 154 | 147 | 136 | 174 | 159 | 144 | 137 | 127 | 123 |
| (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 | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each 1 to 2 |
|---|---|---|---|---|---|---|---|---|---|
| CHM63-7 | 7,5:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 315,95 € |
| CHM63-10 | 10:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 315,95 € |
| CHM63-15 | 15:1 | 80B14 | 19 | 80 | 100 | 120 | no | ✔ | 315,95 € |
| CHM63-20 | 20:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 315,95 € |
| CHM63-25 | 25:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 315,95 € |
| CHM63-30 | 30:1 | 80B14 | 19 | 80 | 100 | 120 | no | ✔ | 315,95 € |
| CHM63-40 | 40:1 | 71B14 | 14 | 70 | 85 | 105 | no | ✔ | 315,95 € |
| CHM63-50 | 50:1 | 71B14 | 14 | 70 | 85 | 105 | not defined | ✔ | 315,95 € |
| CHM63-60 | 60:1 | 71B14 | 14 | 70 | 85 | 105 | not defined | ✔ | 315,95 € |
| CHM63-80 | 80:1 | 71B14 | 14 | 70 | 85 | 105 | oui | ✔ | 315,95 € |
| CHM63-100 | 100:1 | 71B14 | 14 | 70 | 85 | 105 | oui | ✔ | 315,95 € |

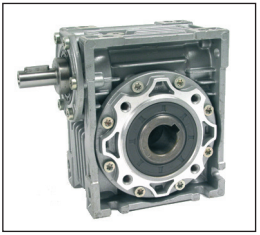
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## CHMR75

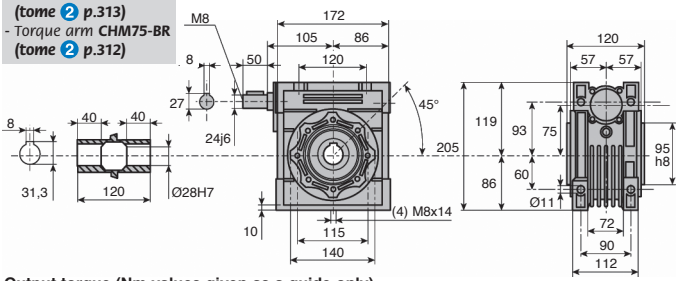
**Torque up to 298 Nm**

- ***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.313)***
- *Torque arm* ***CHM75-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 129 | 144 | 148 | 158 | 148 | 119 | 168 | 146 | 144 | 129 | 118 |
| INPUT | 1400 | 184 | 194 | 198 | 209 | 198 | 159 | 228 | 209 | 198 | 188 | 178 |
| SPEED | 900 | 214 | 228 | 234 | 234 | 214 | 174 | 258 | 218 | 209 | 198 | 186 |
| (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 | Ratio | Max. input speed (rpm) | Max output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each |
|---|---|---|---|---|---|---|---|
| CHMR75-7 | 7,5:1 | 2800 | 373,33 | NC | no | ✔ | 422,02 € |
| CHMR75-10 | 10:1 | 2800 | 280,00 | NC | no | ✔ | 422,02 € |
| CHMR75-15 | 15:1 | 2800 | 186,66 | NC | no | - | 422,02 € |
| CHMR75-20 | 20:1 | 2800 | 140,00 | NC | no | ✔ | 422,02 € |
| CHMR75-25 | 25:1 | 2800 | 112,00 | NC | no | - | 422,02 € |
| CHMR75-30 | 30:1 | 2800 | 93,33 | NC | no | ✔ | 422,02 € |
| CHMR75-40 | 40:1 | 2800 | 70,00 | NC | no | ✔ | 422,02 € |
| CHMR75-50 | 50:1 | 2800 | 56,00 | NC | not defined | - | 422,02 € |
| CHMR75-60 | 60:1 | 2800 | 46,66 | NC | not defined | ✔ | 422,02 € |
| CHMR75-80 | 80:1 | 2800 | 35,00 | NC | not defined | ✔ | 422,02 € |
| CHMR75-100 | 100:1 | 2800 | 28,00 | NC | yes | ✔ | 422,02 € |

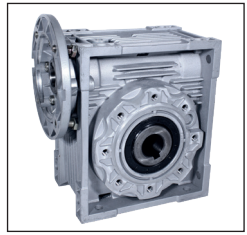
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## Torque up to 298 Nm

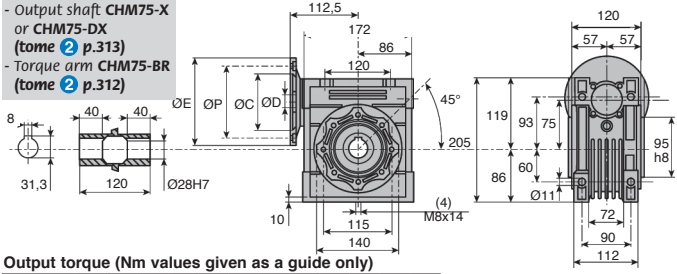
## CHM75

- ***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.313)***
- *Torque arm* ***CHM75-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 129 | 144 | 148 | 158 | 148 | 119 | 168 | 146 | 144 | 129 | 118 |
| INPUT | 1400 | 184 | 194 | 198 | 209 | 198 | 159 | 228 | 209 | 198 | 188 | 178 |
| SPEED | 900 | 214 | 228 | 234 | 234 | 214 | 174 | 258 | 218 | 209 | 198 | 186 |
| (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 | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each |
|---|---|---|---|---|---|---|---|---|---|
| CHM75-7 | 7,5:1 | 90B14 | 24 | 95 | 115 | 140 | no | - | 422,02 € |
| CHM75-10 | 10:1 | 90B14 | 24 | 95 | 115 | 140 | no | - | 422,02 € |
| CHM75-15 | 15:1 | 90B14 | 24 | 95 | 115 | 140 | no | - | 422,02 € |
| CHM75-20 | 20:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 422,02 € |
| CHM75-25 | 25:1 | 80B14 | 19 | 80 | 100 | 120 | no | ✔ | 422,02 € |
| CHM75-30 | 30:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 422,02 € |
| CHM75-40 | 40:1 | 80B14 | 19 | 80 | 100 | 120 | no | - | 422,02 € |
| CHM75-50 | 50:1 | 80B14 | 19 | 80 | 100 | 120 | not defined | ✔ | 422,02 € |
| CHM75-60 | 60:1 | 80B14 | 19 | 80 | 100 | 120 | not defined | - | 422,02 € |
| CHM75-80 | 80:1 | 80B14 | 19 | 80 | 100 | 120 | not defined | - | 422,02 € |
| CHM75-100 | 100:1 | 80B14 | 19 | 80 | 100 | 120 | yes | ✔ | 422,02 € |

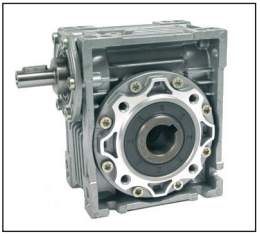
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## CHMR90

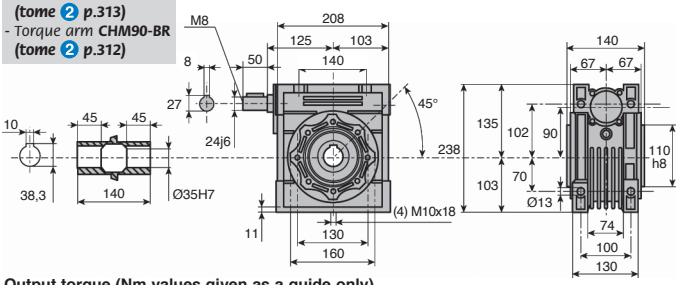
**Torque up to 540 Nm**

- ***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.313)***
- *Torque arm* ***CHM90-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 208 | 234 | 258 | 258 | 248 | 308 | 274 | 264 | 244 | 224 | 198 |
| INPUT | 1400 | 288 | 308 | 358 | 354 | 338 | 408 | 358 | 338 | 318 | 284 | 268 |
| SPEED | 900 | 338 | 368 | 418 | 388 | 368 | 458 | 408 | 388 | 346 | 314 | 278 |
| (rpm) | 500 | 408 | 434 | 438 | 468 | 438 | 540 | 478 | 448 | 398 | 364 | 328 |

**DISCOUNTS**

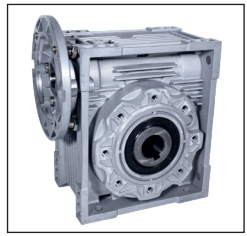
| Qty | 1+ | 2+ | 4+ |
|---|---|---|---|
| Disc. | List | -20% | On request |

| Part number | Ratio | Max. input speed (rpm) | Max output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Stock* | Price each |
|---|---|---|---|---|---|---|---|
| CHMR90-7 | 7,5:1 | 2800 | 373,33 | NC | No | - | 550,77 € |
| CHMR90-10 | 10:1 | 2800 | 280,00 | NC | No | ✔ | 550,77 € |
| CHMR90-15 | 15:1 | 2800 | 186,66 | NC | No | - | 550,77 € |
| CHMR90-20 | 20:1 | 2800 | 140,00 | NC | No | - | 550,77 € |
| CHMR90-25 | 25:1 | 2800 | 112,00 | NC | No | - | 550,77 € |
| CHMR90-30 | 30:1 | 2800 | 93,33 | NC | No | ✔ | 550,77 € |
| CHMR90-40 | 40:1 | 2800 | 70,00 | NC | No | ✔ | 550,77 € |
| CHMR90-50 | 50:1 | 2800 | 56,00 | NC | No | ✔ | 550,77 € |
| CHMR90-60 | 60:1 | 2800 | 46,66 | NC | not defined | ✔ | 550,77 € |
| CHMR90-80 | 80:1 | 2800 | 35,00 | NC | not defined | ✔ | 550,77 € |
| CHMR90-100 | 100:1 | 2800 | 28,00 | NC | Yes | ✔ | 550,77 € |

**Depending on availability - Dimensions in mm*

## Torque up to 540 Nm

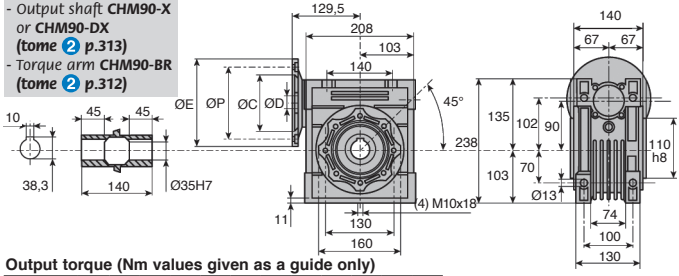
# CHM90



- ***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.313)***
- *Torque arm* ***CHM90-BR*** ***(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 208 | 234 | 258 | 258 | 248 | 308 | 274 | 264 | 244 | 224 | 198 |
| INPUT | 1400 | 288 | 308 | 358 | 354 | 338 | 408 | 358 | 338 | 318 | 284 | 268 |
| SPEED | 900 | 338 | 368 | 418 | 388 | 368 | 458 | 408 | 388 | 346 | 314 | 278 |
| (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 | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Stock* | Price each |
|---|---|---|---|---|---|---|---|---|---|
| CHM90-7 | 7,5:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-10 | 10:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-15 | 15:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-20 | 20:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-25 | 25:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-30 | 30:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-40 | 40:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-50 | 50:1 | 90B5 | 24 | 130 | 165 | 200 | No | - | 550,77 € |
| CHM90-60 | 60:1 | 90B5 | 24 | 130 | 165 | 200 | not defined | - | 550,77 € |
| CHM90-80 | 80:1 | 80B5 | 19 | 130 | 165 | 200 | not defined | - | 550,77 € |
| CHM90-100 | 100:1 | 80B5 | 19 | 130 | 165 | 200 | Yes | ✔ | 550,77 € |

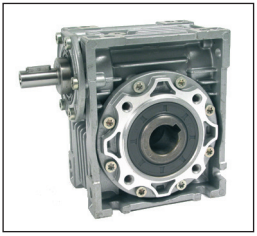
**Depending on availability - Dimensions in mm*

# Worm and wheel gearbox

## 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: cast iron*
  *Screws: treated steel 20CR*
  *Wheel: bronze CuSn12 (cast iron hub G500)*
- *Lubrication: synthetic oil ISO VG320*
- *Weight: 35 kg*

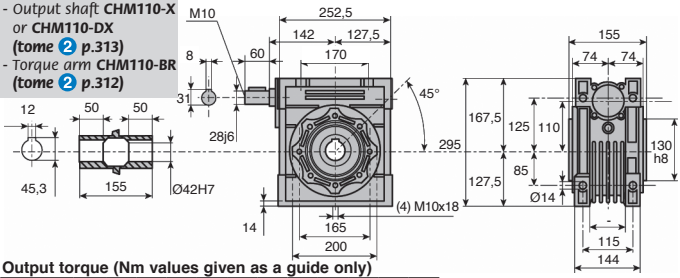


### Info.

- *See **technical pages***

### Accessories

- *Output shaft **CHM110-X** or **CHM110-DX** **(tome 2 p.313)***
- *Torque arm **CHM110-BR** **(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 380 | 430 | 480 | 475 | 490 | 540 | 520 | 490 | 465 | 380 | 350 |
| INPUT | 1400 | 540 | 580 | 650 | 635 | 660 | 715 | 690 | 650 | 610 | 505 | 480 |
| SPEED | 900 | 640 | 705 | 740 | 720 | 740 | 830 | 780 | 740 | 675 | 550 | 500 |
| (rpm) | 500 | 780 | 840 | 890 | 850 | 890 | 980 | 920 | 870 | 770 | 645 | 570 |

**DISCOUNTS**

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

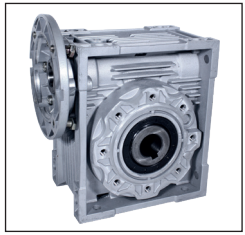
| Part number | Ratio | Max. input speed (rpm) | Max output speed (rpm) | Efficiency at 900 rpm (%) | Static self-locking output | Price each |
|---|---|---|---|---|---|---|
| CHMR110-7 | 7,5:1 | 2800 | 373,33 | NC | no | 848,71 € |
| CHMR110-10 | 10:1 | 2800 | 280,00 | NC | no | 848,71 € |
| CHMR110-15 | 15:1 | 2800 | 186,66 | NC | no | 848,71 € |
| CHMR110-20 | 20:1 | 2800 | 140,00 | NC | no | 848,71 € |
| CHMR110-25 | 25:1 | 2800 | 112,00 | NC | no | 848,71 € |
| CHMR110-30 | 30:1 | 2800 | 93,33 | NC | no | 848,71 € |
| CHMR110-40 | 40:1 | 2800 | 70,00 | NC | no | 848,71 € |
| CHMR110-50 | 50:1 | 2800 | 56,00 | NC | no | 848,71 € |
| CHMR110-60 | 60:1 | 2800 | 46,66 | NC | no | 848,71 € |
| CHMR110-80 | 80:1 | 2800 | 35,00 | NC | not defined | 848,71 € |
| CHMR110-100 | 100:1 | 2800 | 28,00 | NC | not defined | 848,71 € |

*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: cast iron*
  *Screws: treated steel 20CR*
  *Wheel: bronze CuSn12 (cast iron hub G500)*
- *Lubrication: synthetic oil ISO VG320*
- *Weight: 35 kg*

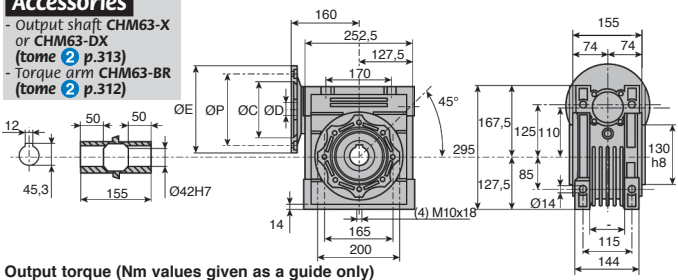


## Info.

- *See **technical pages***

## Accessories

- *Output shaft **CHM63-X** or **CHM63-DX** **(tome 2 p.313)***
- *Torque arm **CHM63-BR** **(tome 2 p.312)***




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2800 | 380 | 430 | 480 | 475 | 490 | 540 | 520 | 490 | 465 | 380 | 350 |
| INPUT | 1400 | 540 | 580 | 650 | 635 | 660 | 715 | 690 | 650 | 610 | 505 | 480 |
| SPEED | 900 | 640 | 705 | 740 | 720 | 740 | 830 | 780 | 740 | 675 | 550 | 500 |
| (rpm) | 500 | 780 | 840 | 890 | 850 | 890 | 980 | 920 | 870 | 770 | 645 | 570 |

## DISCOUNTS

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

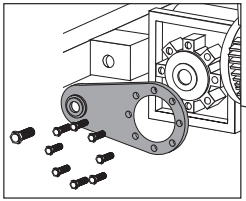
| Part number | Ratio | Input flange | ØD | ØC | ØP | ØE | Static self-locking output | Price each |
|---|---|---|---|---|---|---|---|---|
| CHM110-7 | 7,5:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-10 | 10:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-15 | 15:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-20 | 20:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-25 | 25:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-30 | 30:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-40 | 40:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-50 | 50:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-60 | 60:1 | 100/112B5 | 28 | 180 | 215 | 250 | no | 848,71 € |
| CHM110-80 | 80:1 | 90B5 | 24 | 130 | 165 | 200 | not defined | 848,71 € |
| CHM110-100 | 100:1 | 90B5 | 24 | 130 | 165 | 200 | not defined | 848,71 € |

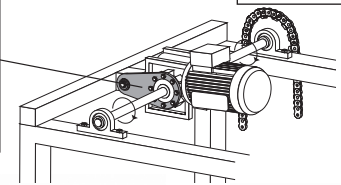
*Dimensions in mm*

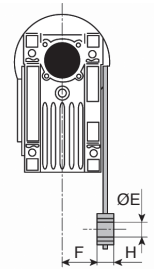
## CHMBR Reaction arm

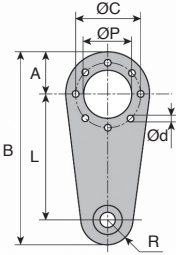
- ***Mounts directly on the output side of CHM and CHMR gearboxes***
- *The mounting point of the reaction arm is equipped with a vibration proof bearing*
- *Material:*
  *Galvanised steel*

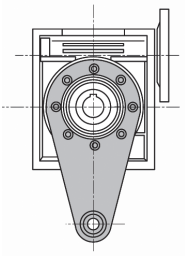








### DISCOUNTS Ⓐ

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

### DISCOUNTS Ⓑ

| Qty | 1+ | 2+ | 6+ | 15+ |
|---|---|---|---|---|
| Disc. | List | -5% | -15% | On request |

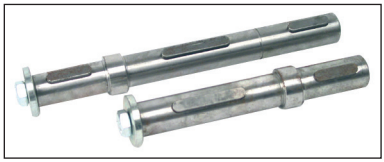
| Part number | L | R | F | H | ØE | A | B | ØC | ØD | ØP | Weight (kg) | Stock* | Price each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHM30-BR | 85 | 15 | 24,0 | 14 | 8 | 38 | 138 | 65 | 7 | 55 | 0,18 | ✔ | Ⓐ 11,32 € |
| CHM40-BR | 100 | 18 | 31,5 | 14 | 10 | 44 | 162 | 75 | 7 | 60 | 0,24 | ✔ | Ⓐ 13,29 € |
| CHM50-BR | 100 | 18 | 38,5 | 14 | 10 | 50 | 168 | 85 | 9 | 70 | 0,27 | ✔ | Ⓐ 15,06 € |
| CHM63-BR | 150 | 18 | 49,0 | 14 | 10 | 55 | 223 | 95 | 9 | 80 | 0,57 | ✔ | Ⓐ 20,73 € |
| CHM75-BR | 200 | 30 | 47,5 | 25 | 20 | 70 | 300 | 115 | 9 | 95 | 1,10 | ✔ | Ⓑ 33,85 € |
| CHM90-BR | 200 | 30 | 57,5 | 25 | 20 | 80 | 310 | 130 | 11 | 110 | 1,26 | ✔ | Ⓑ 49,09 € |
| CHM110-BR | 250 | 35 | 62,0 | 30 | 25 | 100 | 385 | 165 | 11 | 130 | 1,92 | - | Ⓑ 65,92 € |

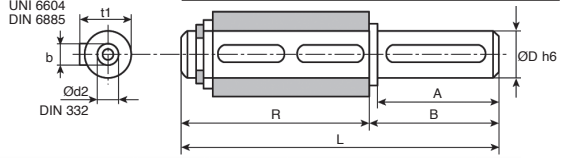
**Depending on availability - Dimensions in mm*

## Single and double output shaft

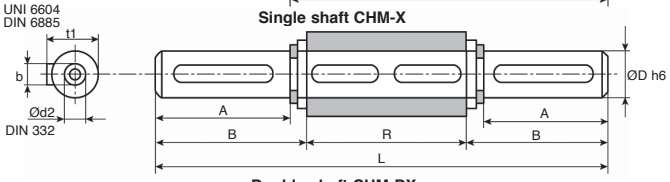
## CHMX
## CHMDX

- **Mounts into the bores of the CHM and CHMR gear gearboxes**
- Shaft steel C40






**Single shaft CHM-X**




**Double shaft CHM-DX**

### 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 |

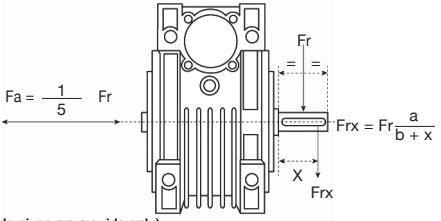
| Part number | ØD h6 | A | B | b | t1 | R | L | Ød2 | Weight (kg) | Stock* | Price each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single shaft** | | | | | | | | | | | |
| CHM30-X | 14 | 30 | 32,5 | 5 | 16,0 | 69,5 | 102 | M6x16 | 0,14 | ✔ | A 16,67 € |
| CHM40-X | 18 | 40 | 43,0 | 6 | 20,5 | 85,0 | 128 | M6x16 | 0,27 | ✔ | A 19,63 € |
| CHM50-X | 25 | 50 | 53,5 | 8 | 28,0 | 99,5 | 153 | M10x22 | 0,60 | ✔ | A 22,61 € |
| CHM63-X | 25 | 50 | 53,5 | 8 | 28,0 | 119,5 | 173 | M10x22 | 0,67 | ✔ | A 25,16 € |
| CHM75-X | 28 | 60 | 63,5 | 8 | 31,0 | 128,5 | 192 | M10x22 | 0,94 | ✔ | B 29,41 € |
| CHM90-X | 35 | 80 | 84,5 | 10 | 38,0 | 149,5 | 234 | M12x28 | 1,79 | ✔ | B 41,83 € |
| CHM110-X | 42 | 80 | 84,5 | 12 | 45,0 | 164,5 | 249 | M16x35 | 2,70 | - | B 47,34 € |
| **Double shaft** | | | | | | | | | | | |
| CHM30-DX | 14 | 30 | 32,5 | 5 | 16,0 | 63,0 | 128 | M6x16 | 0,16 | ✔ | A 22,61 € |
| CHM40-DX | 18 | 40 | 43,0 | 6 | 20,5 | 78,0 | 164 | M6x16 | 0,34 | ✔ | A 25,16 € |
| CHM50-DX | 25 | 50 | 53,5 | 8 | 28,0 | 92,0 | 199 | M10x22 | 0,75 | ✔ | A 28,08 € |
| CHM63-DX | 25 | 50 | 53,5 | 8 | 28,0 | 112,0 | 219 | M10x22 | 0,84 | ✔ | A 35,03 € |
| CHM75-DX | 28 | 60 | 63,5 | 8 | 31,0 | 120,0 | 247 | M10x22 | 1,20 | - | B 36,55 € |
| CHM90-DX | 35 | 80 | 84,5 | 10 | 38,0 | 140,0 | 309 | M12x28 | 2,50 | - | B 51,63 € |
| CHM110-DX | 42 | 80 | 84,5 | 12 | 45,0 | 155,0 | 324 | M16x35 | 3,44 | - | B 69,77 € |

**Depending on availability - Dimensions in mm*

## 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)
**Frx** : 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 |
|---|---|---|---|---|---|---|---|---|
| | 400 | 530 | 1020 | 1400 | 1830 | 2160 | 2390 | 3530 |
| | 250 | 620 | 1200 | 1650 | 2150 | 2520 | 2800 | 4130 |
| | 150 | 740 | 1420 | 1960 | 2540 | 2990 | 3310 | 4890 |
| OUTPUT | 100 | 850 | 1620 | 2250 | 2910 | 3430 | 3800 | 5600 |
| SPEED | 60 | 1000 | 1920 | 2660 | 3450 | 4060 | 4500 | 6640 |
| (rpm) | 40 | 1150 | 2200 | 3050 | 3950 | 4650 | 5150 | 7600 |
| | 25 | 1350 | 2570 | 3570 | 4620 | 5440 | 6020 | 8890 |
| | 10 | 1830 | 3490 | 4840 | 6270 | 7380 | 8180 | 12000 |

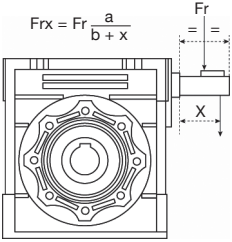
**Values of gear constants**

| 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.*