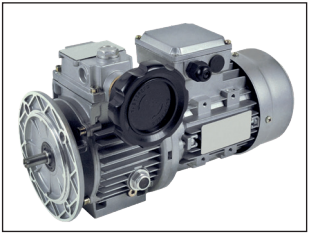
Mechanical speed variator

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

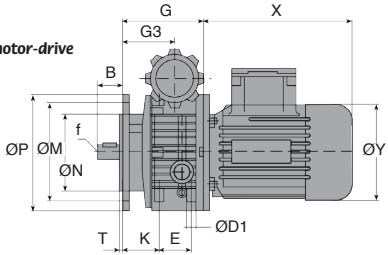


Advantages

- Simple speed adjustment by a mechanical handle
- Good efficiency

Use

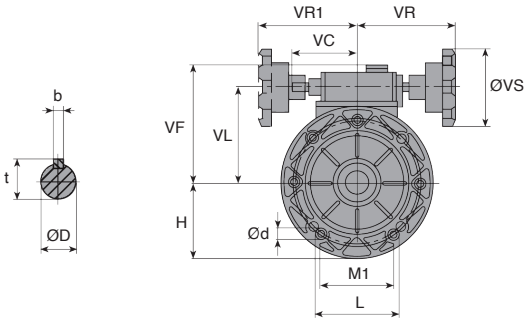
- The drives are supplied with lubrication for horizontal use
- Attention: supplied with motor only
- **Do not adjust the handle when the motor-drive is not connected to the final device: risk of irreversible damage.**



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



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	423,88 €
CHV02-0.22	60	72	70	9	11	12,5	4	3,4	432,60 €
CHV05-0.37	76	90	80	9	14	16,0	5	4,7	517,45 €
CHV10-0.75	84	98	100	11	19	21,5	6	7,8	688,81 €
CHV20-1.10	-	241	126	11	24	27,0	8	31,0	1 022,15 €
CHV20-1.50	-	241	126	11	24	27,0	8	31,0	1 068,69 €

Dimensions in mm

Symbols and general formulas

P = Power (kW)
i = Reduction ratio
T = Torque (Nm)
n = Speed (rpm)
Fr = Radial load (N)

Fa = Axial load (N)
f.s. = Service factor
D = Diameter (mm)
1 kW = 1,36 HP
9,81N = 1 kg

P_1 = Input power (kW)
P_2 = Output power (kW)
η = Efficiency
P_1 *η = P2

T_2 = Output torque (Nm)
T_{2n} = Maximum output torque (Nm)

Rotation speeds

n_1 = Input speed (rpm)
n_2 = Output speed (rpm)

Reduction ratio

$$i = \frac{n_1}{n_2}$$

Torque

$$T_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \text{ [Nm]} \qquad T_{2n} \geq T_2 \cdot f_s \text{ [Nm]}$$

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, boottling 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