

## Section 2 TEC FCNDK Worm Gearbox



FCNDK



FCNK



FCNDK/FCNDK



FCNK/FCNDK



FCNDK/FXA

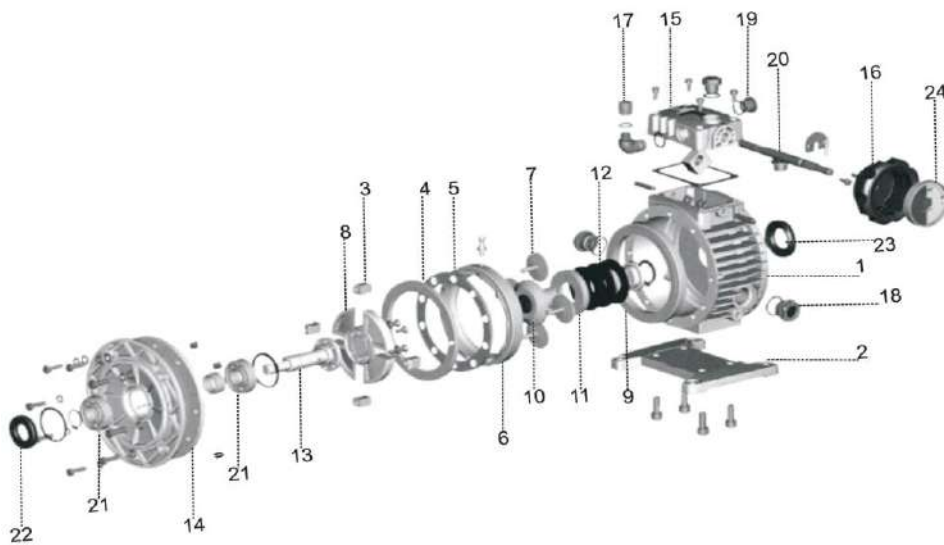


FCNDK/MB..

## Section 3 MBN Series cone-disc mechanical Speed Variator

### Summary

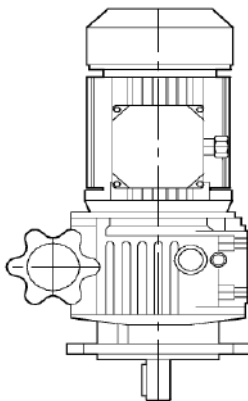
MBN Series Variators can be combined with other geared products in the TEC range to achieve slower speed reductions. Basic variator gives a stepless input speed variation ratio of 1:1.1-7. Housings are made from pressure die cast aluminium for sizes MBN2-MBN7 and cast iron for MB15-MB40.



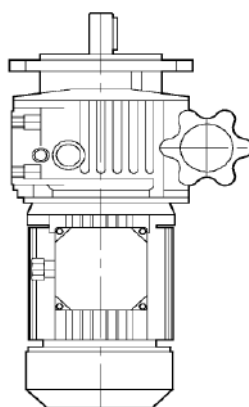
No.	Description
1	Housing
2	Foot plate
3	Slide-block bearing
4	Adjustable annulus ring
5	Ball ring
6	Fixed annulus ring
7	Planet disk
8	Planet carrier
9	Oil seal RCA
10	Fixed sun race
11	Adjustable sun race
12	Belleville spring
13	Output shaft
14	Output flange
15	Speed control cover
16	Speed control handle
17	Breather
18	Oil sight glass
19	Plug
20	Speed control lead screw
21	Bearing
22	Output oil seal
23	Input oil seal

#### Mounting positions

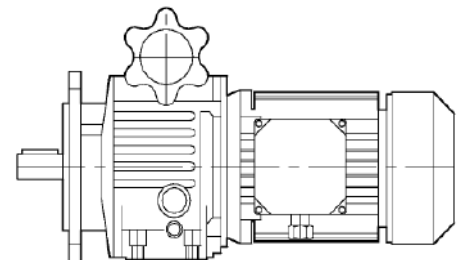
V5



V6



B5

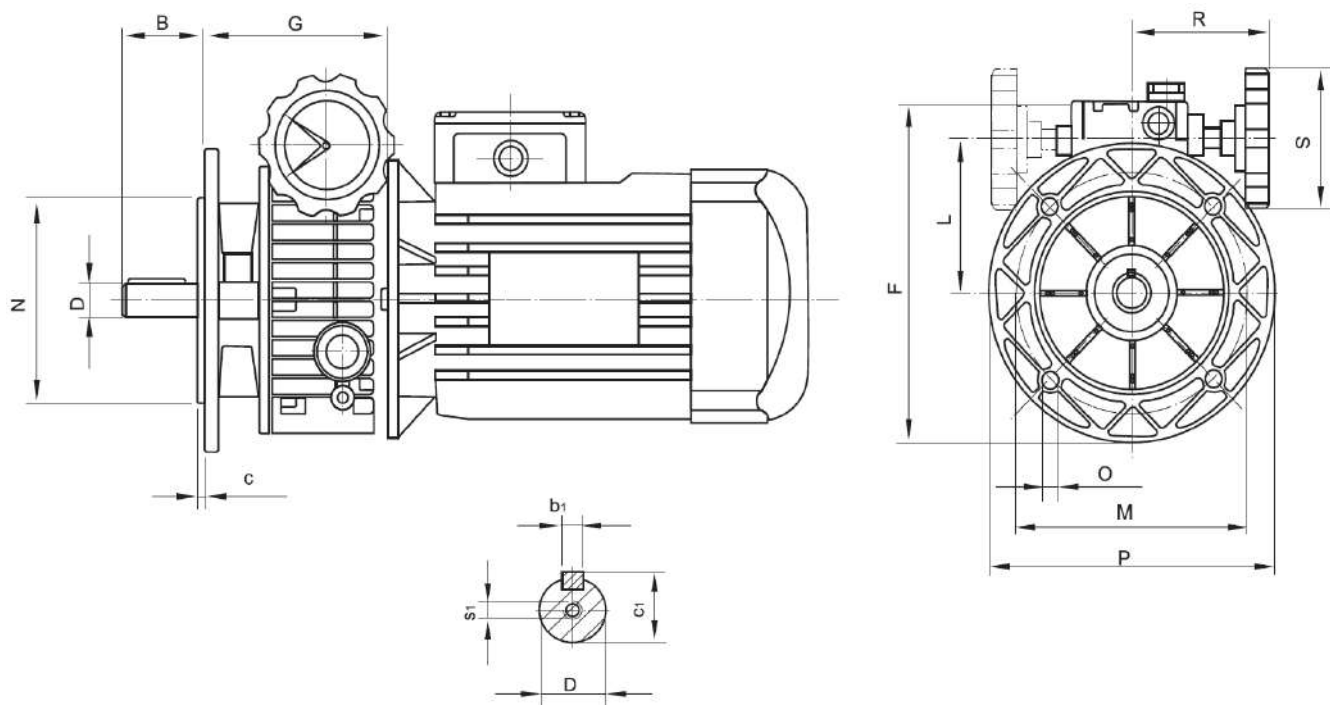


Unless specified all sizes are supplied lubricated with Automatic transmission fluid (A.T.F) for B5 mounting.  
**For mounting positions V5 & V6 a special 90° extension breather is required.**

Size	Oil fill quantity in litres		
	B5	V1	V6
MBN02	0.2	0.3	0.25
MBN04	0.3	0.5	0.45
MBN07	0.45	0.9	0.75
MB15	1.2	1.8	1.5
MB22	2.0	2.8	2.3
MB40	2.0	2.8	2.3

## Section 3 MBN Series cone-disc mechanical Speed Variator

### Installation dimensions



Variator ref	B	c	D	F	G	L	M	N	O	P	R	S	b1	c1	s1
<b>MBN02</b>	23	3.5	11	181	113	77	115	95	9	140	110	85	4	13	M6
<b>MBN04</b>	30	3.5	14	203	110	89	130	110	9	160	110	85	5	16	M6
<b>MBN07</b>	40	3.5	19	240	139	107	165	130	11	200	115	110	6	22	M6
<b>MB15</b>	50	4.0	24	286	173	121	165	130	15	200	135	110	8	27	M8
<b>MB22</b>	60	4.0	28	344	208	150	215	180	15	250	166	110	8	31	M8
<b>MB40</b>	60	4.0	28	344	208	150	215	180	15	250	166	110	8	31	M8

#### Performance (n1 with 4 pole 1400 rpm motor, sf = 1)

Variator ref	MBN02	MBN04	MBN07	MB15	MB22	MB40			
<b>Kw</b>	0.18	0.37	0.55	0.75	1.1	1.5	2.2	3	4
<b>n2 (rpm)</b>	880-175	1000-200							
<b>M2 (Nm)</b>	1.5-4	3.0-6	4.4-12	6.0-12	9.0-24	12.0-24	18-48	24-48	32-64

#### Recommended lubricants

AGIP	BP	CASTROL	ESSO	IP	MOBIL	SHELL
A.T.F. Dexron	Autran Dx	TQ Dexron II	A.T.F. Dexron	Dexron Fluid	A.T.F. 200 Red	Donax TG

**Warning: Do not adjust the output speed when the variator is at standstill.**

#### Weight (kg)

MBN02	MBN04	MBN07	MB15	MB22	MB40
2.3	3.3	6.1	21	51	51