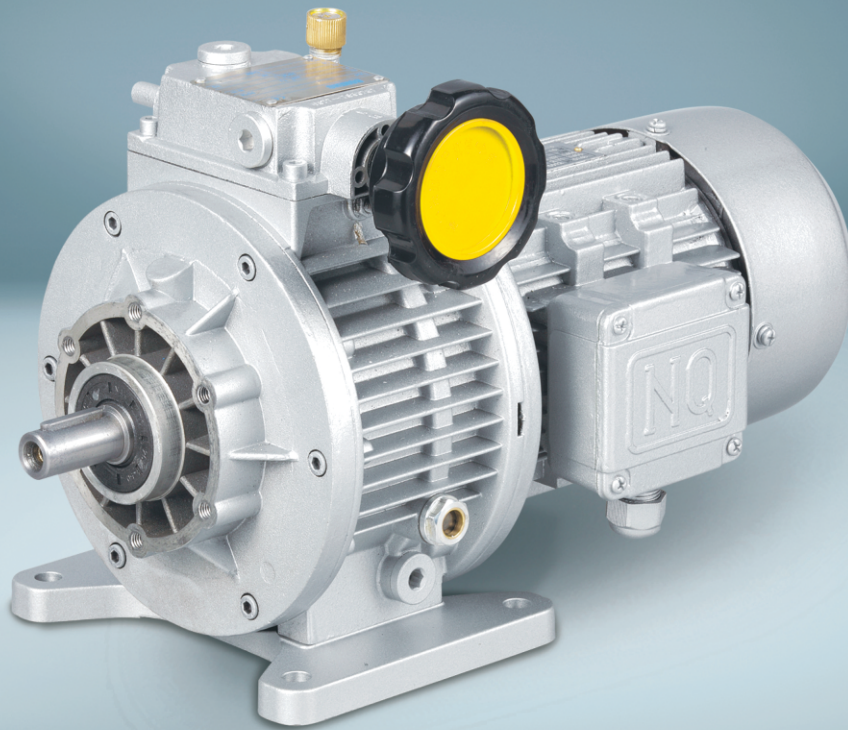
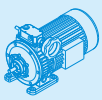


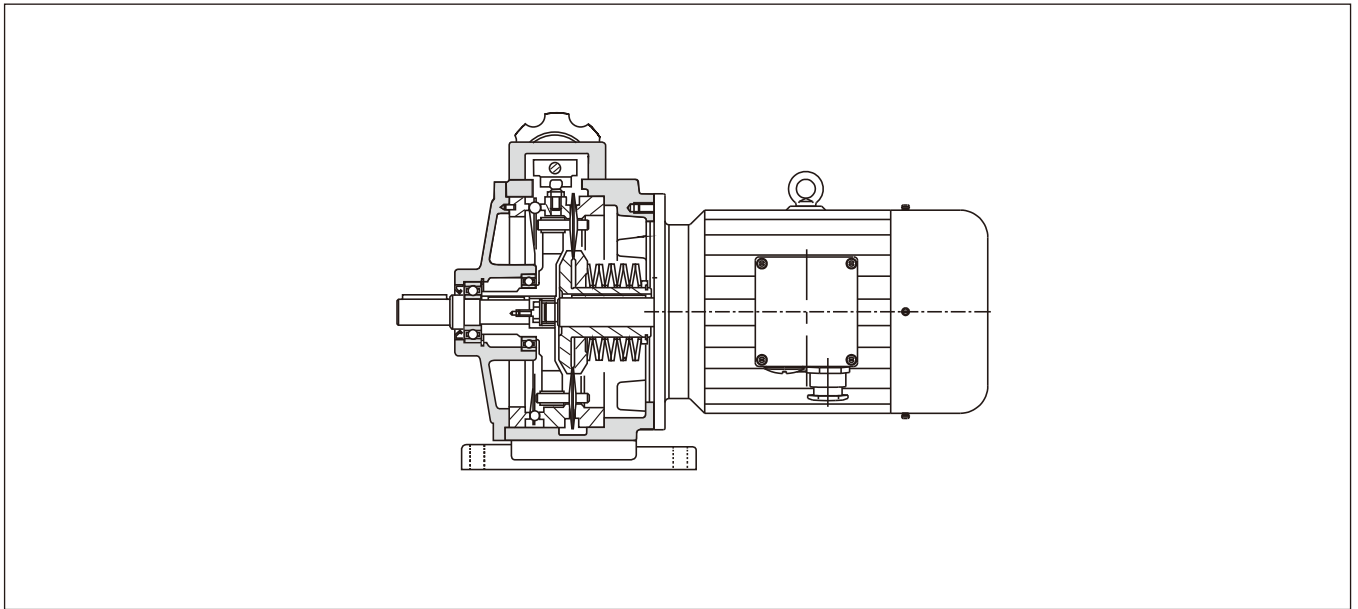
MB Series Planetary Mechanical Variable Speed Driver



www.motiontech.com.au



1 Sectional Drawings:



2 Type Designation

MB L 15 - Y-1.5 + S21+L11 -B5-90

MB

MB Series

Mounting Mode

W=Foot-mounted

L=Flange-mounted

Z=Short Flange-mounted

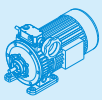
Size

Motor Type

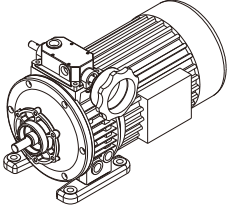
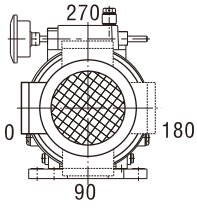
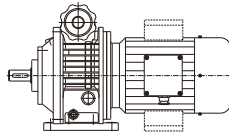
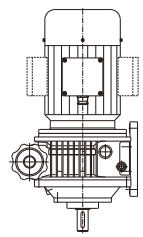
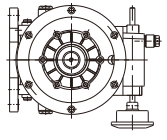
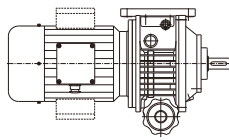
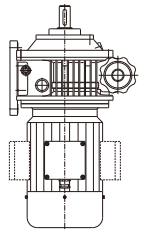
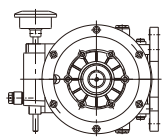
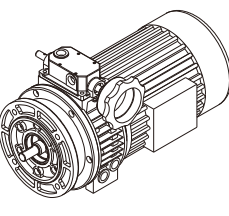
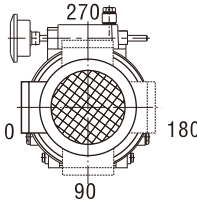
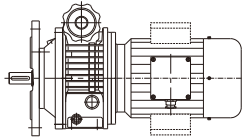
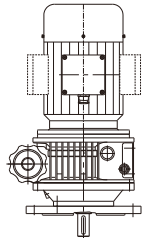
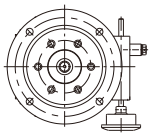
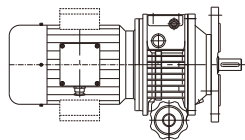
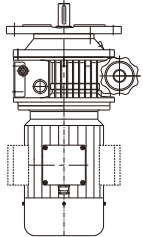
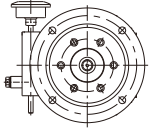
Accessories and Special Requests

Mounting Positions

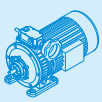
Positions of Motor Terminal Box



3 Mounting Positions:

 MBW..		 B3	 V5	 B6A
		 B8B	 V6	 B6B
 MBL..MBZ..		 B5	 V1	 B7A
		 B5B	 V3	 B7B

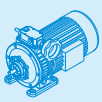
MB



4 Type Selection and Examples:

Steps	Description	Symbols	Parameters Calculation and Guidelines			
1	Driven Machine Factor	f ₁	Load Characteristic	Operating hours per day (h)		
				≤2	2~10	10~24
			Uniform	1.00(1.00)	1.00(1.25)	1.25(1.50)
			Moderate	1.00(1.25)	1.25(1.50)	1.50(1.75)
			Heavy	1.25(1.50)	1.50(1.75)	1.75(2.00)
Note: Apply values in the brackets when starts per hour are 10 times or more.						
2	Input Speed	n ₁	750r/min ≤ n ₁ ≤ 1450r/min Consult us if higher speed required.			
3	Calculation of the speed range of the variator according to that of the driven machine.	n ₂	See the table of transmission capacity on P6/MB			
4	Determination of the size of the variator according to the torque required by the driven machine with reference to the table of the transmission capacity	T ₂	Constant torque required by the driven machine $T_{2Natmax} \geq T_2 \cdot f_1$			
			Variable torque required by the driven machine $T_{2Natmax} \geq T_{2min} \cdot f_1$ $T_{2Natmin} \geq T_{2max} \cdot f_1$ Determine the size with reference to the table of transmission capacity T _{2Natmax} - Rated output torque at max speed T _{2Natmin} - Rated output torque at min speed			
5	Check the radial and axial forces on the output shaft.	F _{r1} /F _{r2} F _{a1} /F _{a2}	See the table of Fr on P 6/MB.			
6	Determination of Lubrication System		Generally Splash Lubrication			
7	Determination of Cooling System		Generally Air Cooling			
8	Determination of every item included in the Type Designation		For details about Type Designation, see P 2/MB.			
9	Normal ambient conditions		Ambient temperature -10 to 40°C, ample space, good ventilation, altitude not exceeding 1000m and common plant dust.			
10	Special ambient conditions		For higher or lower temperature, dusty sites, chemical reaction(acids, alkaline, etc), or open field (sunlight, ice, rain, etc), please consult us!			

MB



Type selection example

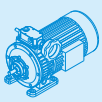
Known Criteria:

1. The speed required by the driven machine: 1000-2000r/min,
constant torque required: 6N.m
2. Common motor: 4-pole, speed $n_1=1450\text{r/min}$
3. Load characteristics: moderate, operating 8 hours/d
4. Mounting mode: flange-mounted, mounting position B5, terminal
box position 270

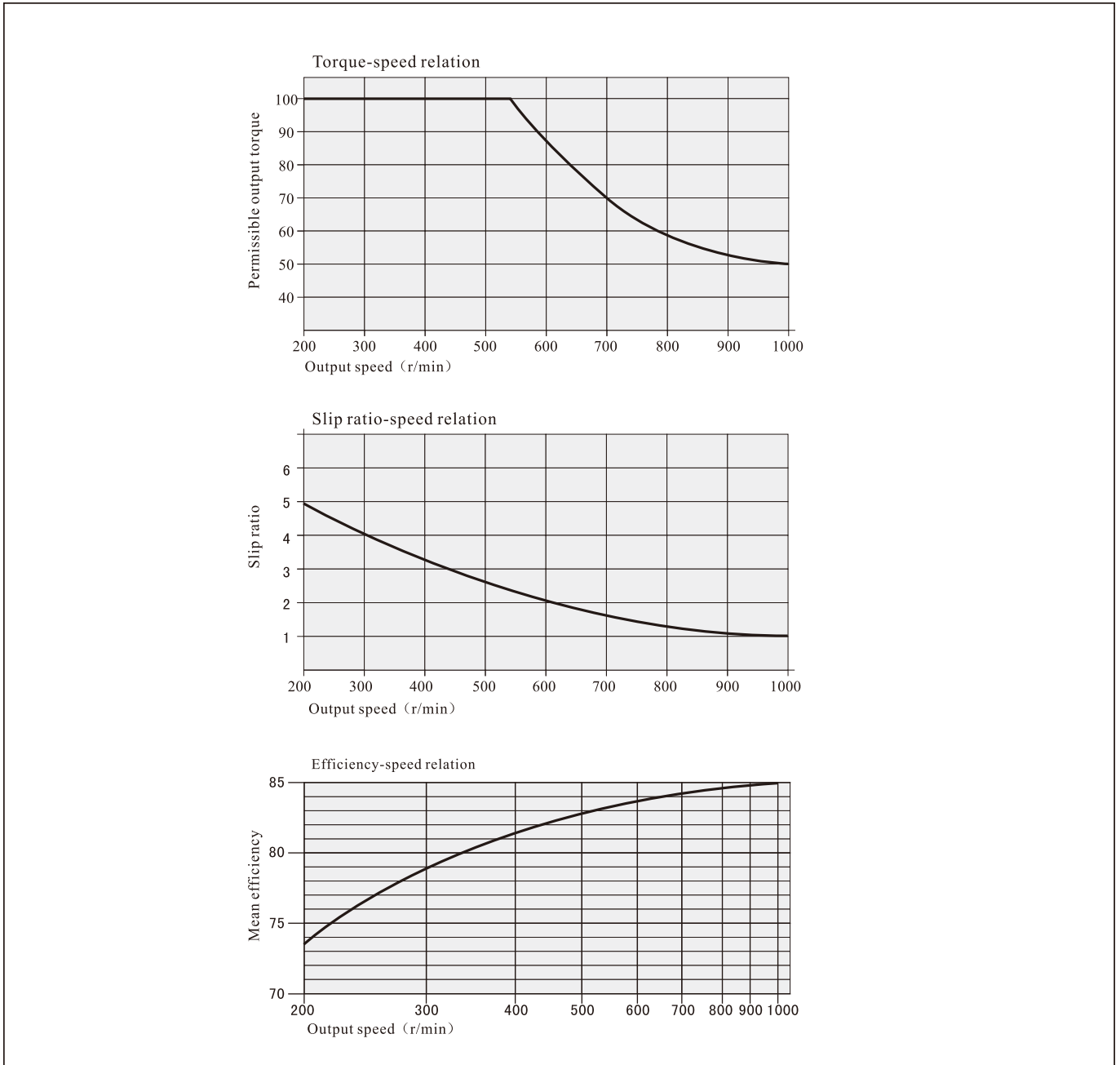
Selection Steps:

1. By referring to the table of Load Characteristic, we get the
driven machine factor $f_1=1.25$
2. Calculation of the torque:
 $T_{2natmax1} \geq T_2 \cdot f_1 = 6 \times 1.25 = 7.5\text{N} \cdot \text{m}$
In the table of transmission capacity, MB15 with 1.1kW motor is
appropriate.
3. The Type selected:

MBL15-Y-1.1-B5-270



5 Performance Curves:



MB

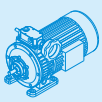
6 Transmission Capacity:

Size		04		07		15		40			75		220			
Rated power (kW)		0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	
Input speed	Variable speed	T _{2Natmax} —T _{2Natmin} (N • m)														
1450(r/min)	1000-200(r/min)	3-6	5-10	6-12	9-18	12-24	18-36	24-48	32-64	45-90	60-120	88-176	118-235	145-290	176-352	

7 Radial Force on Output Shaft(Fr2)(N):

Size	04	07	15	40	75	220
Fr(N)	588	980	1270	1860	2160	4410

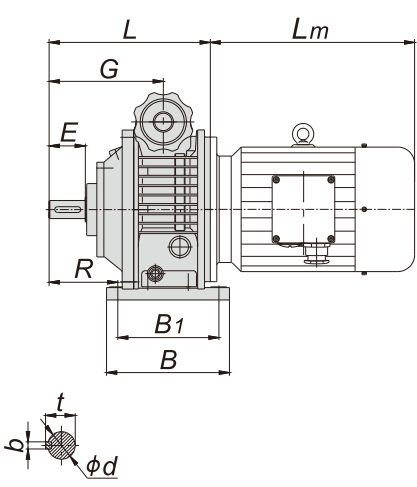
Note: For combination with other Series, see their respective Fr2 tables.



8 Outline Dimensions:

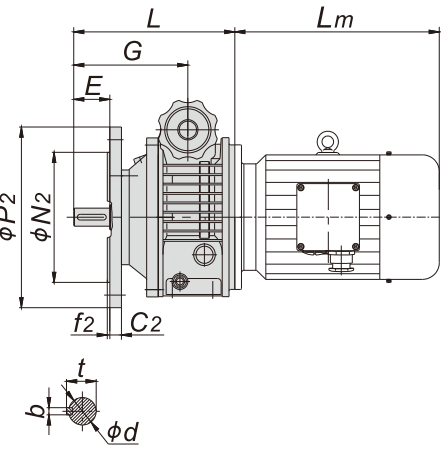
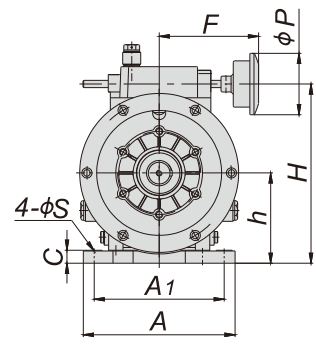
	04	07	15	40	75	220
A	160	190	210	300	365	480
A1	120	160	180	245	315	375
b	5	6	8	8	10	16
B	135	150	170	270	290	415
B1	105	125	140	230	250	355
C	15	15	18	20	35	45
C2	12	12	16	16	20	28
d	14k6	20k6	25k6	30k6	35k6	55m6
E	30	40	50	60	70	110
f2	3.5	3.5	4	4	5	5
f3	3.5	/	3.5	4	4	/
F	118	126	126	166	194	265
G	112	125	157	195	201	374
h	90	106	125	150	200	250
H	188	217	248	300	392	514
L	145	177	223	268	319	456
M2	165	165	215	265	300	400
M3	130	/	165	215	265	/
N2	130h7	130h7	180h7	230h7	250h7	350h7
N3	110h7	/	130h7	180h7	230h7	/
P	85	85	85	100	150	230
P2	200	200	250	300	350	450
P3	160	/	200	250	300	/
R	60	73	95	85	103	160
S	9	11	11	13.5	17.5	22
S2	11	11	13.5	13.5	17.5	17.5
S3	9	/	11	13.5	13.5	/
t	16	22.5	28	33	38	59
Weight(kg)	13	17	33	60	105	230

MB



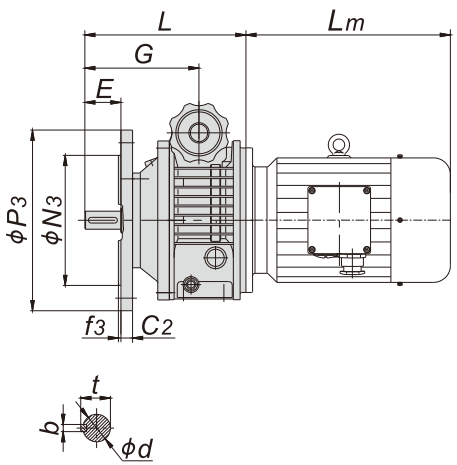
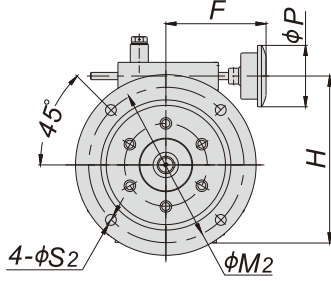
MBW04~MBW220

Foot-mounted



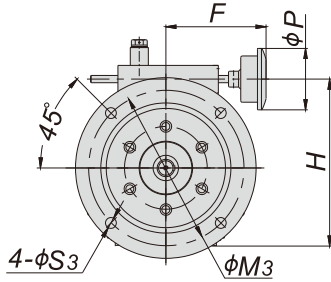
MBL04~MBL220

Flange-mounted

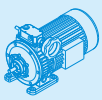


MBZ04~MBZ220

Short flange-mounted



Note: * The weight of motor and lubricant is not included.



9 Accessories :

9.1 Handwheel (Code L11):

Code L11

Handwheel at Position 1 is standard.
If handwheel at Position 2 required,
add ordering code L11.

Manual Speed Adjustment

9.2 Oil

Note: When ambient temperature is between $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$, UB-3 lubricant should be used for MB series, Lubrication oil is filled at factory .

9.3 For details about motor accessories, see page 5/Y for motor section.

10 Combi-type (On request):

<p>CR.../MB...</p>	<p>F.../MB...</p>
<p>K.../MB...</p>	<p>R.../MB...</p>
<p>RV.../MB...</p>	<p>S.../MB...</p>

MB