

Direct current drives MVE - MVS

General information



MVE

Drive designed for constant torque applications ; it comprises :

- an electronic drive with thyristors from the VE/B range
- an enclosed direct current (dc) motor type MFA or MF.

A very simple drive system regarding operation and use.

MVS

Drive designed for constant torque applications ; it comprises :

- an electronic drive with thyristors from the DMV 201 range.
- an open direct current (dc) motor from the MVS range.

A very simple drive system regarding operation and use.

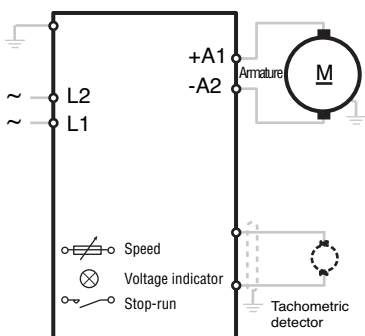
Construction

Direct current (dc) drive specifications

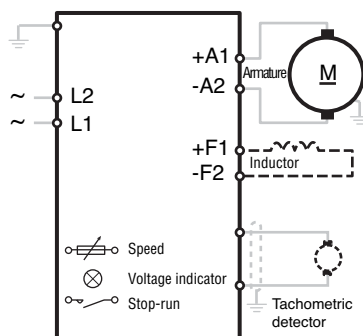
Drive characteristics	VE/B
Presentation	• IP 20 enclosure
Supply	• Single phase, 50-60 Hz, 220-240 V \pm 10 %
Speed range	• 1 to 15 standard • 1 to 30 with tachometer generator (option)
Ramps	• Acceleration e and deceleration incorporated , adjustable from 0 to 10 s
Tachometer-generator feedback	• Yes
Current limitation	• Adjustable from 0.5 to 1.5 I_N
Adjustments	• min. speed • max. speed
Control circuit	• By integrated potentiometer
Protection	• By incorporated fuse

Operational charts

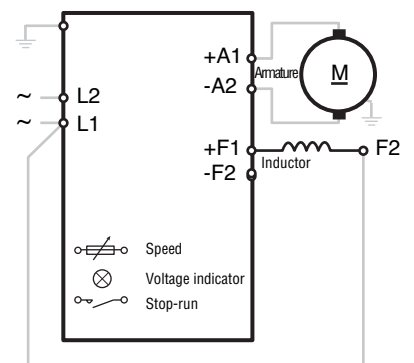
- VE / MFA



- VE / MS (190V excitation voltage)



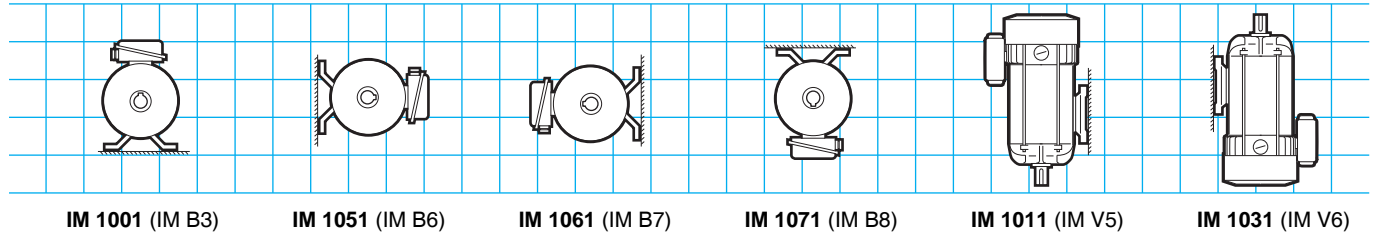
- VE / MS (100V excitation voltage)



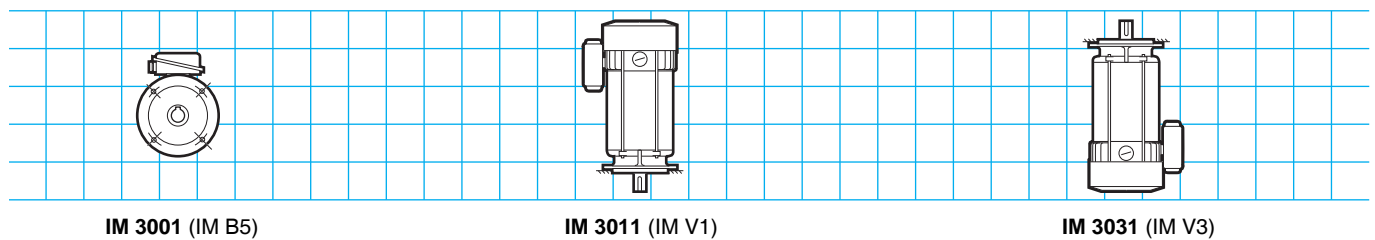
Direct current drives MVE - MVS

Mounting positions

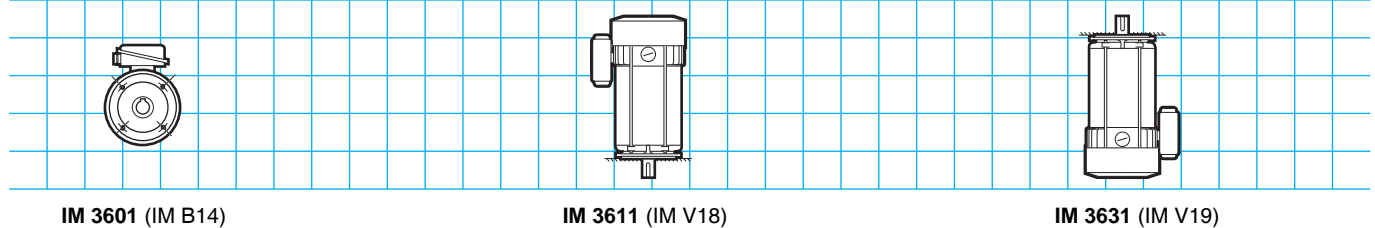
Foot mounted motors



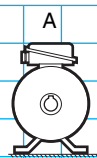
Flange motors with plain holes (except for MS56)



Flange motors with tapped holes (MVE 56 and 63, MVS 10-3000 to 50-3000 solely)

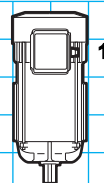


Terminal box position

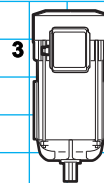


Standard

Cable gland positions

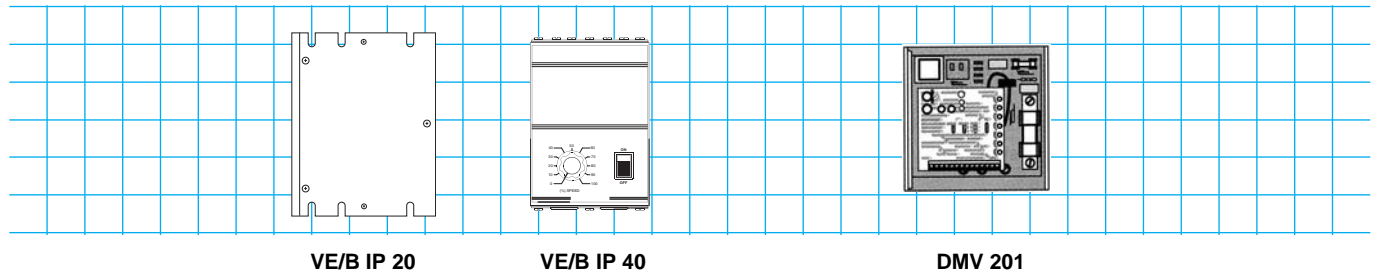


1 : standard
MFA 56, 63, 71 - MS1



Only possibility
MFA 80 - MF 100, 112

Drives VE/B - DMV 201



Direct current drives MVE

Adaptation possibilities

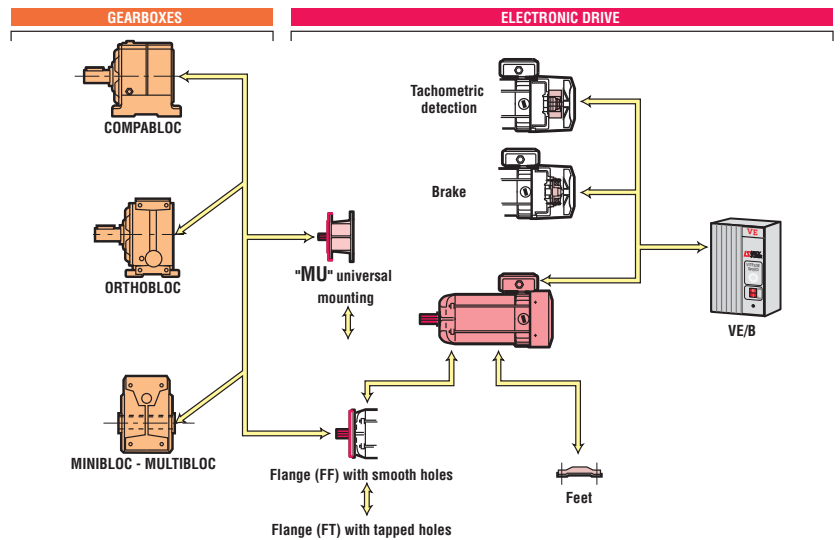
For more details concerning each element, please refer to the corresponding section.

The MVE drives can be associated with :

- **gearboxes with universal or integrated mounting :**
 - with parallel or coaxial axis: Cb 1000, Cb 2000 ;
 - with helical bevel Ot 2000 ;
 - with worm & wheel Minibloc, Mb 2000.

Options :

- **flange with plain holes**
- **flange with tapped holes:**
 - MFA 56 and 63 only
- **speed detection with hollow shaft :**
 - tachometer generator, 20 V / 1 000 min⁻¹ ;
 - tachometer alternator, 30 V / 1 000 min⁻¹.
- **safety brakes:**
 - FMC type for MFA 56 and 63 : 2,5 N.m ;
 - 458 type for MFA 80 : 8 N.m ;
 - MF 100-112 : 16 N.m.
- **brake and tachometer detector**



Designation / Coding

MVE	25	63	M	IM 1001
Drive type	Size	Motor shaft height	Length index	Construction form

Example of coding :

0.25 kW drive, horizontal foot mounting


Designation MVE 25 63 M 1001 (B3) **Code** MVA 22209

All the products of this catalogue have a code.
The coding table is incorporated in the price list with the list of designations.
Each electromechanic product is classified by its power and its speed

Direct current drives MVS

Adaptation possibilities

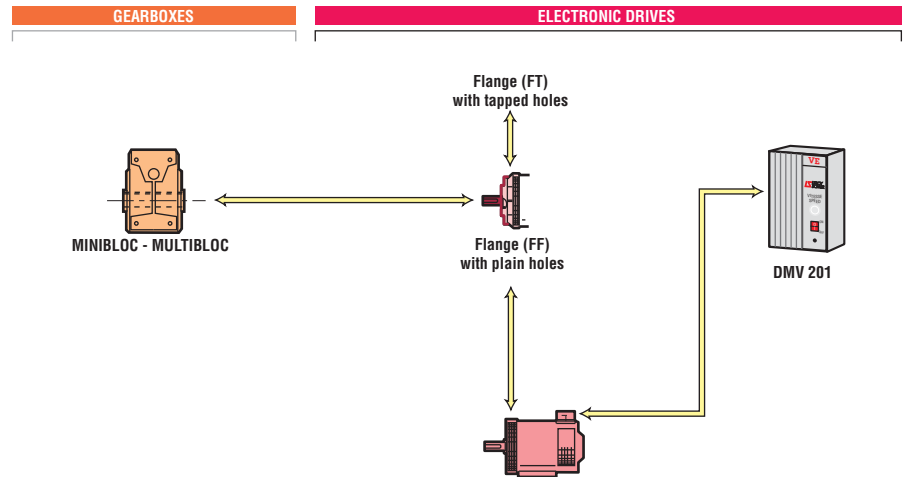
For more details concerning each element, please refer to the corresponding section.

 *The MVS drives can be used in conjunction with:*

- **gearboxes :**
- with worm & wheel Minibloc, Mb 2000.

 *Options :*

- **plain hole flange**
- **tapped hole flange**
- **safety brake :**
- FMC type for MS 56 and MS 63.



Designation / Coding

MVS	50	2000	IM 1001
Drive type	Size	Maximum speed	Construction form

 *Example of coding :*

0.37 kW drive, open motor
horizontal foot mounting

Designation	Code
MVS 50 - 3000 IM 1001 (B3)	MVA 21201

All the products of this catalogue have a code.
The coding table is incorporated in the price list including the list of designations.
Each electromechanic product is classified by its power and its speed.

Direct current drives MVE

Selection

Supply by thyristor (form factor 1.6)
Enclosed motor
Service S1 - Ambient temperature $\leq 40\text{ }^{\circ}\text{C}$, altitude $\leq 1\ 000\ \text{m}$

Single phase supply	Power kW	Rated torque N.m	Speed range min^{-1}	Armature voltage V	Rated current A	Drive designation type	Composition		Motor fixing		Quantity
							motor	drive	Code		
									with feet	with flange	
50 - 60 Hz	0.075	0.24	200-3000	180	0.6	MVE 7-56 S	MFA 56 S	VE/B 7	MVA21201	MVA21202	5
	0.12	0.4	200-3000	180	0.9	MVE 12-56 L	MFA 56 L	VE/B 12	MVA21203	MVA21204	5
	0.18	0.6	200-3000	180	1.4	MVE 18-63 S	MFA 63 S	VE/B 18	MVA21205	MVA21206	5
	0.25	0.8	200-3000	180	1.7	MVE 25-63 M	MFA 63 M	VE/B 25	MVA22209	MVA22210	5
	0.37	1.2	200-3000	180	2.4	MVE 37-63 L	MFA 63 L	VE/B 37	MVA23207	MVA23208	5

Brake characteristics

MVE size	M_f N.m	P_f W	U_f V	I_f mA	Brake type
7-56 S, 12-56 L	1.5	13.5	190	71	FMC
18-63 S, 25-63 M, 37-63 L	2.5	13.5	190	71	FMC

Example:

Information :

- 0.3 kW useful power at $2000\ \text{min}^{-1}$;
- single phase supply 230 V,
horizontal foot mounting.

Operational mode :

Look in the selection chart for a rated power higher or equal to the power demanded :
in this case one can find 0.37 kW, for a speed range from 200 to $3\ 000\ \text{min}^{-1}$.

Selected drive :

MVE 37-63 L IM 1001

M_f : Braking torque
 P_f : Brake power
 U_f : Brake coil voltage
 I_f : Brake coil current

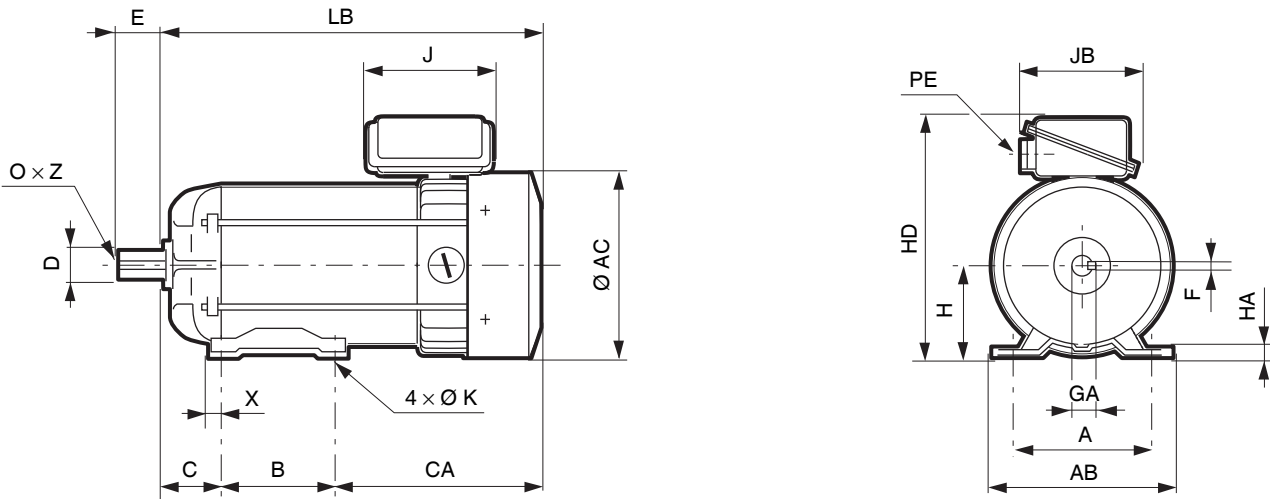
Direct current drives MVE

Dimensions

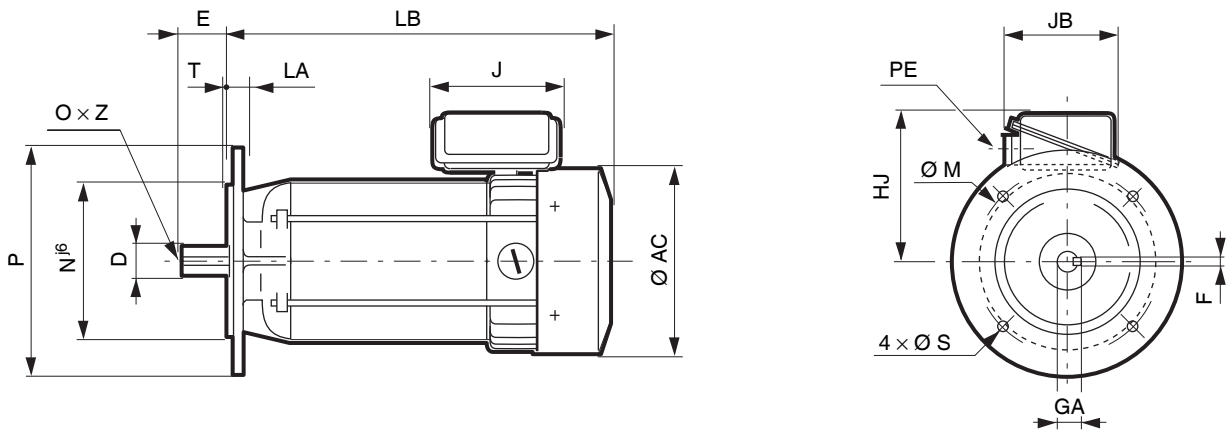
Dimensions for enclosed direct current (dc) motors MFA - MF

Dimensions in millimetres

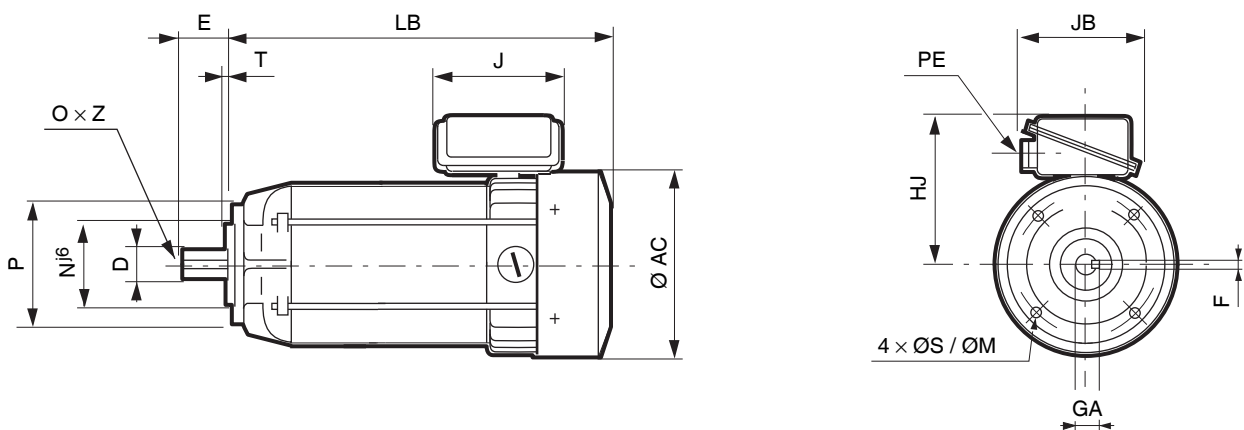
- foot mounted



- (FF) flange with plain holes



- (FT) flange with tapped holes



Direct current drives MVE

Dimensions

Dimensions for enclosed direct current (dc) motors MFA - MF

Dimensions in millimetres

- foot mounted

- plain hole flange mounted (FF) or tapped hole flange mounted (FT)

Type	Motor															Weight
	A	AB	AC	B	C	CA	H	HA	HD	J	JB	K	LB ¹	X	PE ²	kg
MFA 56 S	90	108	108	71	36	49	56	2	127	49	49	5.8	156	9	9	2.9
MFA 56 L	90	108	108	71	36	89	56	2	127	49	49	5,8	196	9	9	3.5
MFA 63 S	100	120	134	80	40	77	63	2	161	78	75	7	197	10	11	7.5
MFA 63 M	100	120	134	80	40	102	63	2	161	78	75	7	222	10	11	9.2
MFA 63 L	100	120	134	80	40	132	63	2	161	78	75	7	252	10	11	11

1. As plain hole flange version (B5) LB = + 4 mm for MFA 56 and + 11 mm for MFA 63.

2. Cable gland (PE) to the right for MFA 56 to 63 motor types.

Type	Plain hole flange							Tapped hole flange					Shaft extension				
	HJ	M	N	P	LA	S	T	M	N	P	S	T	D	E	0×Z	GA	F
MFA 56 S-L	71	100	80	120	8	7	3	65	50	80	M5	2.5	11 j6	23	M4×10	12.5	4
MFA 63 S-M-L	98	115	95	140	10	9	3	75	60	120	M5	2.5	11 j6	23	M4×10	12.5	4

Direct current drives MVE

Dimensions

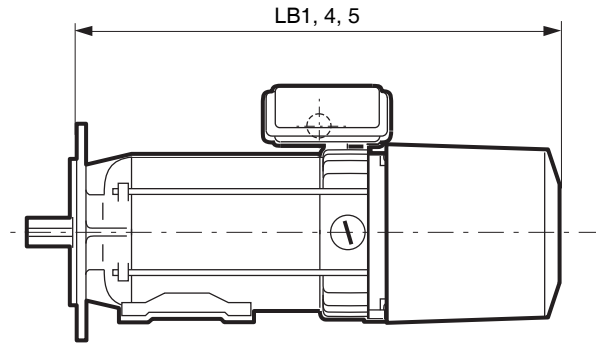
Dimensions of options for enclosed direct current (dc) motors MFA - MF

Dimensions in millimetres

- foot, flange or foot and flange mounted

Type	Motors			
	* (=)	* (-)	▼	▼ *
	LB1	LB1	LB4 ¹	LB5
MFA 56 S	207	190	200	-
MFA 56 L	247	230	240	-
MFA 63 S	245	228	238	-
MFA 63 M	270	253	263	-
MFA 63 L	300	283	293	-

1. Brake loosening lever, total length LB4 + 10 mm.



Use symbols

- * : speed detection with hollow shaft
- ▼ : safety brakes
- = : rectified current
- ~ : alternating current

Dimensions of the electronic drives VE/B

VE/B - Size 7 to 37

Refer to section
VE/B

Direct current drives MVS

Selection



Supply by thyristor (form factor 1.6)

Open motor

Service S1 - Ambient temperature $\leq 40\text{ }^{\circ}\text{C}$, altitude $\leq 1\ 000\text{ m}$

Single phase supply 50 - 60 Hz	Power kW	Rated torque N.m	Speed range min^{-1}	Drive designation type	Composition		Motor fixing		Quantity
					motor	drive	Code		
							with feet	with flange	
220 - 240 V $\pm 10\%$	0.35	1.8	200-2000	MVS 50	MVS 50	DMV 201 - 6A	MVA23203	MVA23204	1
	0.75	3.6	200-2000	MVS 100	MVS 100	DMV 201 - 6A	MVA27201	MVA27202	1
	2.2	10	200-2000	MVS 300	MVS 300	DMV 201 - 24	MVA22309	MVA22310	1

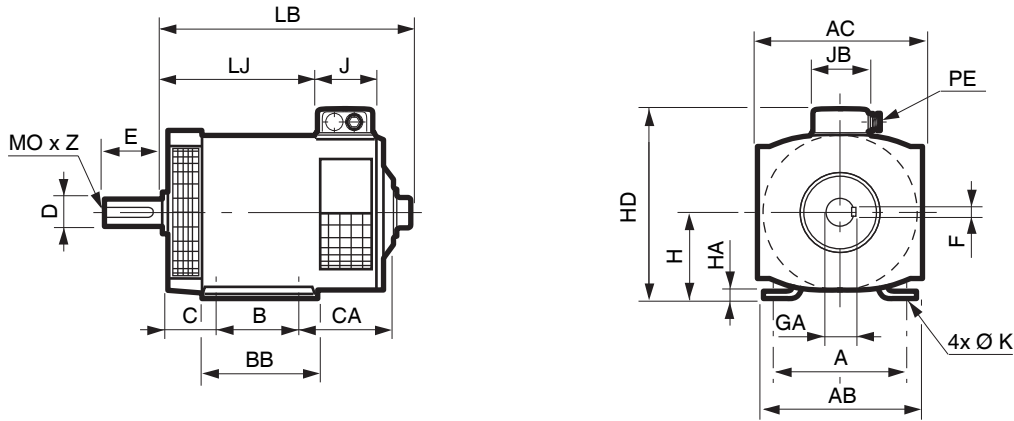
Direct current drives MVS

Dimensions

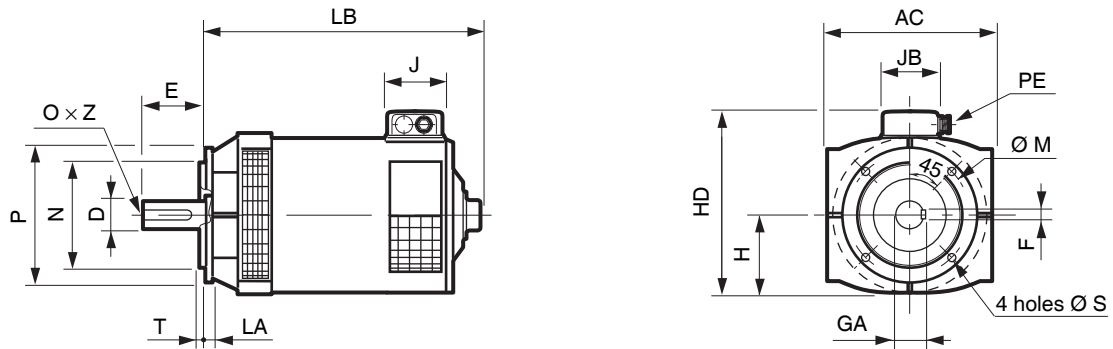
Dimensions for direct current (dc) motors MS and MVS

Dimensions in millimetres

- foot mounted



- plain hole flange (FF) or tapped hole flange (FT) mounted



Type	Drive														Weight kg	
	A	AB	AC	B	C	H	HA	HD	J	JB	K	LB	LJ	PE	feet	flange
MVS 50	125	150	160	100	50	80	2	204	80	80	9	316	167	16	20	21
MVS 100	160	185	200	140	63	100	3	248	80	80	10	364	227	16	37	38
MVS 300	190	220	225	140	70	112	3	272	80	80	12	414	278	16	54	57

Type	Plain hole flange							Tapped hole flange					Shaft extension					
	LB	M	Nj6	P	LA	S	T	M	Nj6	P	S	T	D 6j	E	F	GA	O	Z
MVS 50	353	115	95	140	10	9	3	-	-	-	-	-	14	30	5	16	M5	12
MVS 100	402	130	110	160	10	9	3.5	-	-	-	-	-	19	40	6	21.5	M6	12
MVS 300	456	165	130	200	12	11	3.5	-	-	-	-	-	24	50	8	27	M8	15

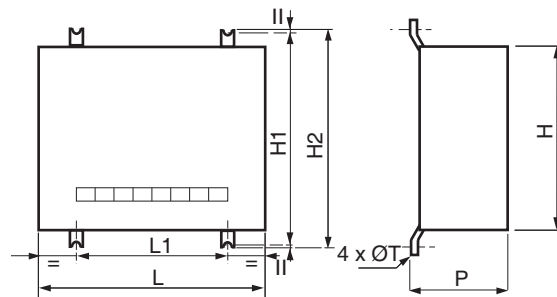
Direct current drives MVS

Dimensions

Electronic drives dimensions DMV 201

Dimensions in millimetres

- DMV 201 - 6A et 24A



Drive type	Drive							Weight kg
	H	H1	H2	L	L1	P	T	
DMV 201 - 6A	150	200	220	220	170	134	6	2.5
DVM 201- 24A	200	250	270	220	170	134	6	3.1

