

# Matador DC-Servomotors

Matador DC- servomotors have compact small dimensions, good dynamic performance and smooth running at low speed. The high commutating power allows to meet acceleration requirements without limiting the current at upper torque and speed values. The demagnetizing current is higher than the current limit of the drives. This assures safe operation for any duty cycle. The D.C. tachogenerator is integrated directly on the rear end shaft. All details are carefully designed and manufactured to obtain a very long lifecycle and to ensure a correct speed information and very low ripple content.

Motor bearings are oversized and maintenance free, the output shaft bearing is sideways locked to avoid end float.

The motor overload protection is guaranteed by the  $I^2t$  circuit of the drive.

## Options

The standard motor has a DC tachogenerator. The motor can be delivered with the following options:

- Fail safe brake
- Encoder  
( second shaft is provided to allow encoder mounting by the customer. Upon request Control Techniques can furnish the encoder direct on the motor.)
- Oil shaft o-ring
- special flanges

## Features

- Low cost versus quality
- Two or four poles
- Very reliable
- IP54 protection degree
- Long life brushes
- B14-Flange according to IEC 34-7-1972

## Technical Specifications

Matador motor type	Rated stall torque [Nm]	Rated stall curr. [A]	Max. peak curr. [A]	Rotor resist. 25°C [Ohm]	Rotor induct. [mH]	Thermal time const. [Minutes]	Volt. const. [V/Krpm]	Torque const. at 25°C [Nm/A]	Rotor inertia 10 <sup>-3</sup> kgm <sup>2</sup>	Weight [kg]	No. of poles
DCM 2B 30/03	0,32	4,6	23	0,82	1,34	15	7,3	0,07	0,0324	1,6	2
DCM 2C 30/03	0,47	4,6	23	1,16	1,65	25	10,7	0,11	0,0607	2,15	2

DCM 3A 35/06	0,6	4,6	23	0,8	2,5	20	13	0,13	0,3	4	2
DCM 3B 35/06	0,93	7	35	0,37	1,11	25	13,8	0,13	0,6	4,3	2
DCM 3C 30/06	1,3	8	40	0,39	1,3	30	16,5	0,16	0,7	4,7	2
DCM 3D 30/06	1,6	10	50	0,3	1,1	40	16,5	0,16	0,8	5,8	2
DCM 3D 40/12	1,6	6,2	31	0,8	3	40	27	0,26	0,8	5,8	2
DCM 3F 30/06	2	12,5	62,5	0,19	0,69	50	16,5	0,16	1	8	2
DCM 3F 30/14	2,1	6,65	33,25	0,82	3,04	50	32,8	0,31	1	8	2

DCM 6B 35/14	2,65	7,8	39	1	5,9	40	35,5	0,34	1,8	8,5	2
DCM 6C 20/14	3,5	6	30	1,7	7,1	40	60	0,58	1,8	8,5	4
DCM 6C 30/14	3,5	9	45	0,92	3,4	40	40	0,39	1,8	8,5	4
DCM 6D 30/14	5,5	14	70	0,4	1,65	50	40	0,39	2,8	12,8	4
DCM 6F 20/14	8	13,8	69	0,45	1,9	60	60	0,57	5,1	17,2	4
DCM 6F 30/14	7,5	21	105	0,26	0,85	60	37,5	0,36	5,1	17,2	4

DCM 9B 30/20	11	20	90	0,31	2,3	80	57	0,55	10	22	4
DCM 9B 20/20	11	13,4	60	0,61	4,35	80	85	0,82	10	22	4
DCM 9C 30/20	15	27,5	124	0,23	1,39	90	57	0,55	14	30	4
DCM 9C 15/20	15	14,2	64	0,88	5	90	110	1,06	14	30	4

= Preferred type

\* Ambient temperature 40°C.

\* Thermal time constant; time for a loaded motor to reach 63,2% of its final temperature.

\* Insulation class F (100°C temperature rise).

\* Deratings available upon request.

## Brake specification

Type: Fail safe (for parking or emergency stop)

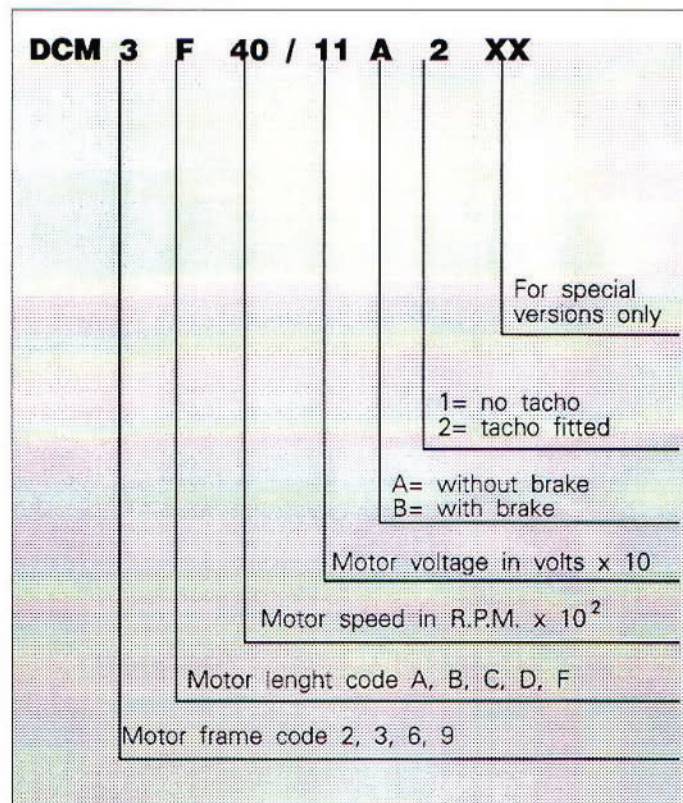
Supply voltage 24 Vdc

	holding torque [Nm]	motor lenght increase [mm]
DCM 2	0,5	44
DCM 3	3	44
DCM 6	12	44
DCM 9	16	42

## Tachogenerator specifications

	UNIT	DCM
voltage constant	V/RPM	0,01
peak to peak ripple	%	1,6
rms ripple	%	0,7
linearity error	%	0,1
voltage tollerance	%	±5,0
voltage variation	% PER °C	-0,02
nr. of comm. segments		25
nr. of poles		4

## Type Definition

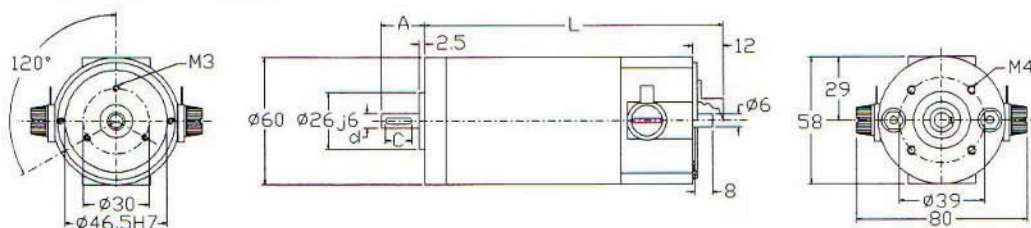




## Dimensions DCM 2

TYPE	2B	2C
A	20	25
L	136,5	184
D(j6)	7	9
F	--	3*3*15

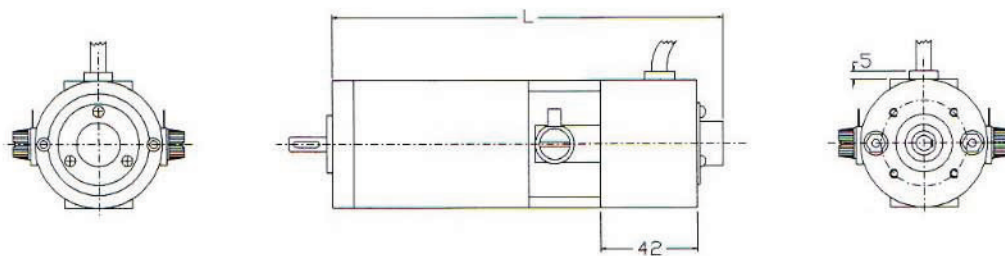
SERVOMOTOR ONLY



TYPE	2B	2C
L	178,5	226

SERVOMOTOR+TACHO

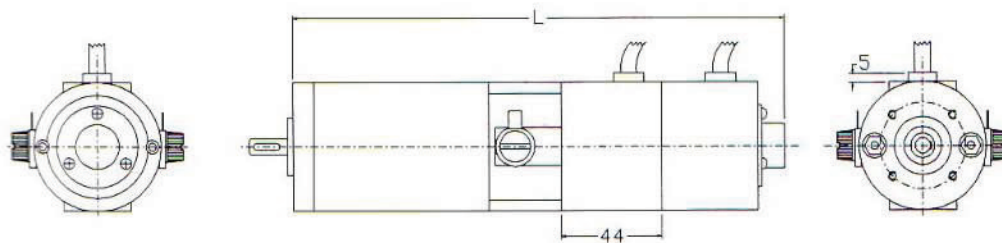
CABLE LENGHT = 1m



TYPE	2B	2C
L	222,5	270

SERVOMOTOR+TACHO+BRAKE

CABLE LENGHT = 1m



Maestro

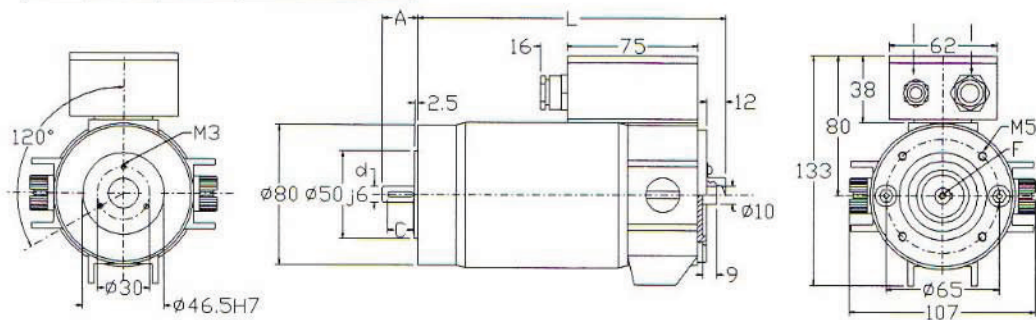
## Dimensions

### DCM 3

TYPE	3A	3B	3C	3D	3F
A	20	23		30	
L	177	212	228,5	267	322
D(j6)	9	11		14	
F	--	M4		M5	
C	3*3*15	4*4*18		5*5*25	

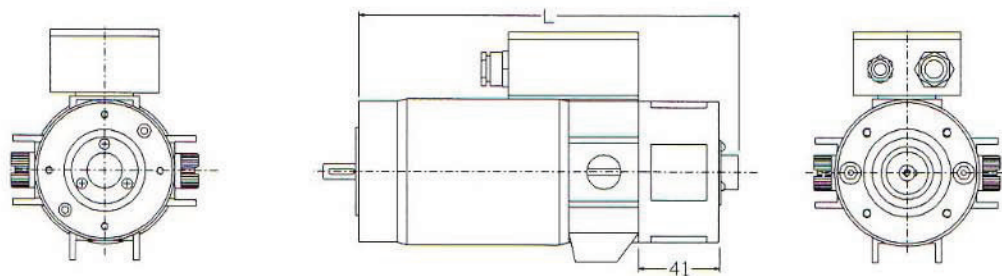
SERVOMOTOR ONLY

CABLE GLANDS 7PG - 11PG



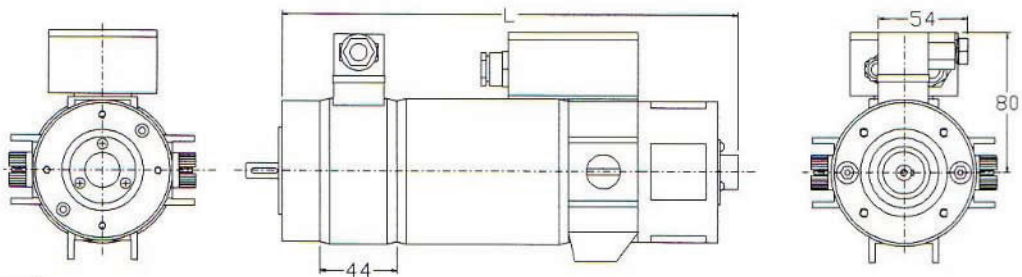
TYPE	3A	3B	3C	3D	3F
L	218	253	267,5	308	363

SERVOMOTOR+TACHO



TYPE	3A	3B	3C	3D	3F
L	262	297	313,5	352	407

SERVOMOTOR+TACHO+BRAKE

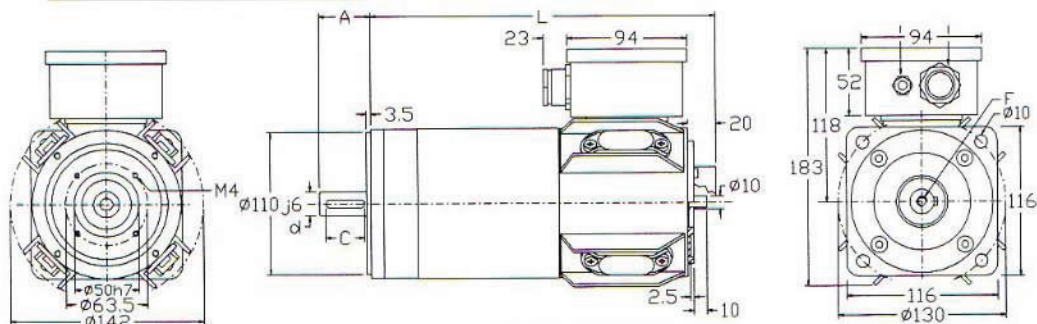


# Dimensions DCM 6

TYPE	6B	6C	6D	6F
A	30		40	
L	266		338	410
D(j6)	14		19	
F	M5		M6	
C	5*5*25		40	

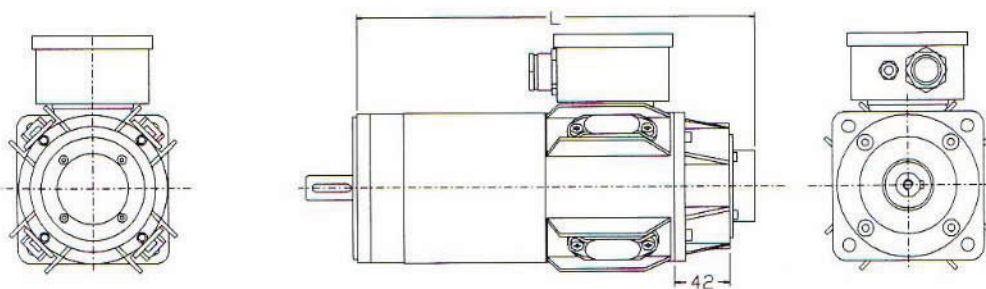
SERVOMOTOR ONLY

CABLE GLANDS 7PG - 21PG



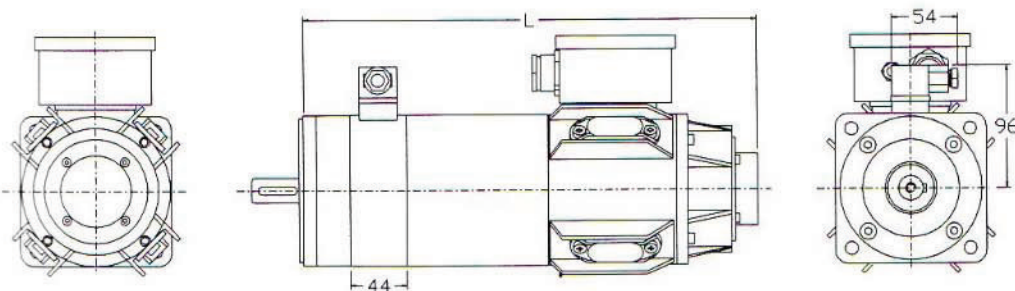
TYPE	6B	6C	6D	6F
L	308		380	452

SERVOMOTOR+TACHO



TYPE	6B	6C	6D	6F
L	352		424	496

SERVOMOTOR+TACHO+BRAKE



Maestro



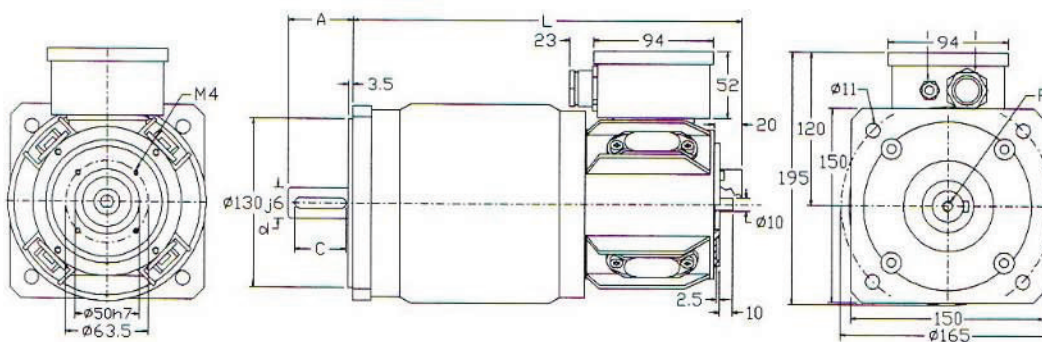
# Dimensions

## DCM 9

TYPE	A	L	d(j6)	E	C
B	50	350	24	M8	8*7*40
C		472			

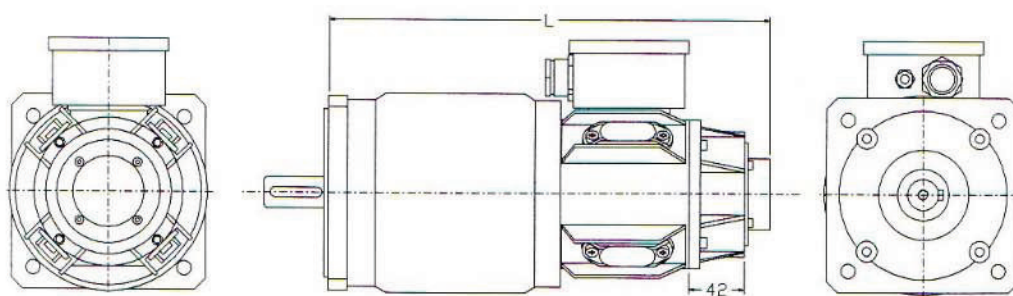
SERVOMOTOR ONLY

CABLE GLANDS 7PG - 21PG



TYPE	B	C
L	392	514

SERVOMOTOR+TACHO



TYPE	B	C
L	392	514

SERVOMOTOR+TACHO+BRAKE

