

Réf. 810 - 033 / a - 10.90

MBT **Low voltage D.C. motors** **with permanent magnets** **Maintenance catalogue**

MBT

Low voltage D.C. motors with permanent magnets

ATTENTION

- Before starting check the supply to the motor
- Be sure that voltage is the same as that indicated on the name plate of the motor ;
- Check that the cross-section of leads is sufficient (too small a size can cause a voltage drop at the terminals of the motor).

STARTING

Before starting check :

- the characteristics on the name plate with what is requested ;
- the free rotation of the shaft by hand. It should have no resistance or mechanical friction ;
- Balancing of pulley should be done with the balancing of the motor ;
- for IEC standard, balancing is done with a whole key ;
- for NEMA standard, balancing is done with half a key ;
- Alignment of the motor shaft with the driven machine according to the degree of play allowed at the coupling ;
- the tension of the belt (too high a tension can overload the bearing).

ATTENTION

For continuous duty at full load, the housing of the motor can reach a high temperature :
AVOID ANY CONTACT WITH YOUR BODY.

CONNECTION

On these motors different types of connection are offered :

- MBT 86 = connection with terminal box
 - flying leads.
- MBT 114 = connection with flying leads only
 - of wires to terminals located under the cover.

In any case check the tightening of screws on the terminals (an insufficient tightening can cause a temperature rise).

RUNNING MAINTENANCE

- Check periodically the wear of the brushes.
First inspection : after 100 hours operation
Second inspection : after 300 hours operation
Third inspection : according to the application.
- the length of the brushes should never be less than :
MBT 86 = 6 mm
MBT 114 = 8 mm
- At each inspection or replacement of brushes, blow compressed air through the brushgear to remove any dust.
- Brushes must be replaced by new ones of the same quality.
- For reassembly, take care to replace the rear exactly in its original position.

COMMUTATOR

- When replacing the brushes, you are advised to dismantle the motor to inspect the commutator. If the commutator is out of round, or scratched or shows a significant wear, you should machine the commutator.
- This should only be done by qualified personnel.

MECHANICAL PARTS

- The bearings are lubricated for the life of the motor.
Note : The grease is suitable for 5 years. After this period you are advised to change the bearing.
- Replace also any mechanical parts which have been damaged according to the drawing.
- Each order for parts should specify the motor type and serial number.

DISMANTLING - REASSEMBLING

- The MBT motors can be dismantled without damaged to the magnets.

ATTENTION

Put a mark on the housing to avoid breaking of magnets, do this gently, to locate the angular position of the rear endshield equipped fitted the brush holder the housing. This mark fixes the neutral plane for correct reassembling.

- Remove the brushes from the brush holders.
- Unscrew the tierods in order to remove the endshields.
Note : at each reassembling you are advised to change the bearings.
Generally the drive-end bearing is fixed with a circlip.

ELECTRICAL FAILURE

SYMPTOM	CAUSE	CURE
Rated speed too low or too high more than usual tolerances	Partial demagnetisation of magnets usually after over-current	Replacement of stator which must be remagnetised
Unusually high current at rated torque		
Commutator : trace of arc ignition, damage of material, scratches, out of round	Fault of supply : <ul style="list-style-type: none">• Not operated under-correct condition.• Vibrations.	<ul style="list-style-type: none">• Check supply• Check use• Machine the commutator
Different speeds in opposite direction	When reassembling bad repositionning of rear endshield	Required repositionning of rear endshield

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Low voltage D.C. motors with permanent magnets

TYPE MBT 86


NAME PLATE

SPARE PARTS LIST

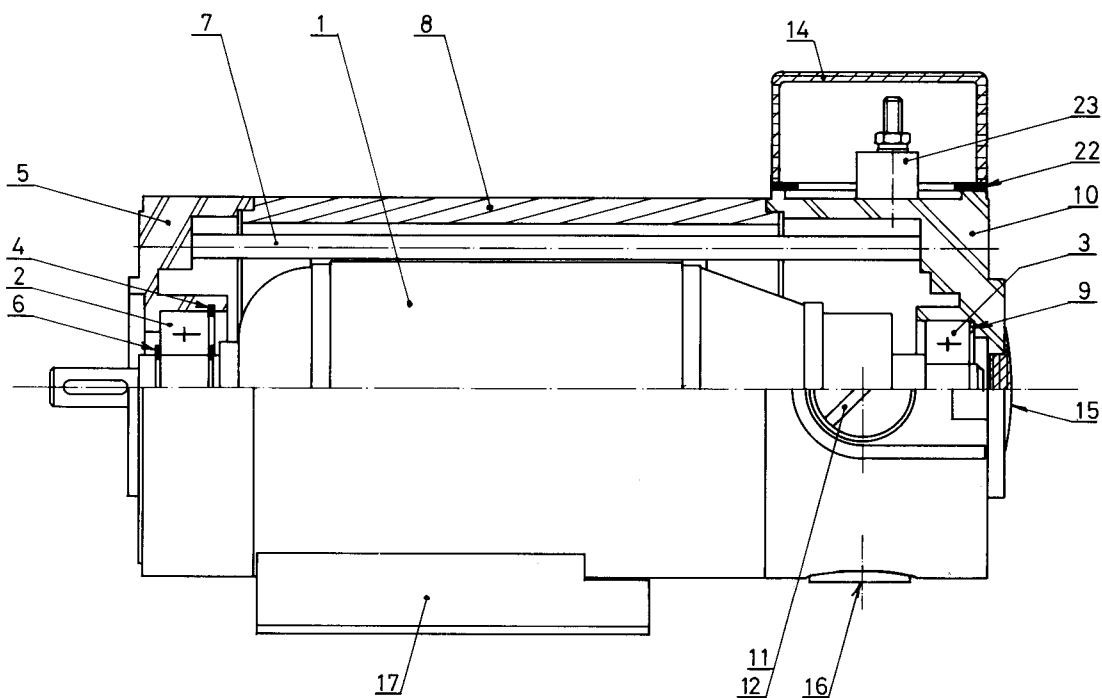
Please specify with order :
Type of motor
Serial number

RECOMMENDED SPARE PARTS

- Set of brushes

	MOTEUR COURANT CONTINU
N° _____	ANNEE : _____
TYPE : _____	
EXCITATION : _____	
INDUIT : _____ V _____ A	
FACTEUR DE FORME : _____	
SERVICE : _____	
PUISSANCE : _____ kW CLASSE : _____	
VITESSE : _____ min ⁻¹	
PROTECTION : _____	
fab. par MOTEURS LEROY-SOMER	
CEI 34-1 (1987)	MADE IN FRANCE

PARTS LIST



Item.	No.	DESIGNATION	Item.	No.	DESIGNATION
1	1	Armature	16	1	Inspection cover
2	1	Drive-end bearing	17	1	Feet
3	1	Nondrive-end bearing	18		
4	1	Internal circlip	19		
5	1	Drive-end endshield	20		
6	2	External circlip	21		
7	2	Tie-rods	22	1	Gasket between frame & terminal box
8	1	Fied magnet	23	1	Terminal block
9	1	Spring washer	24	1	Cable gland
10	1	Complete brush-gear endshield	25		
11	2	Brushes	26		
12	2	Brush retaining cap	27		
13			28		
14	1	Terminal box cover	29	2	Screws
15	1	Cover for endshield			

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TYPE MBT 114


NAME PLATE

SPARE PARTS LIST

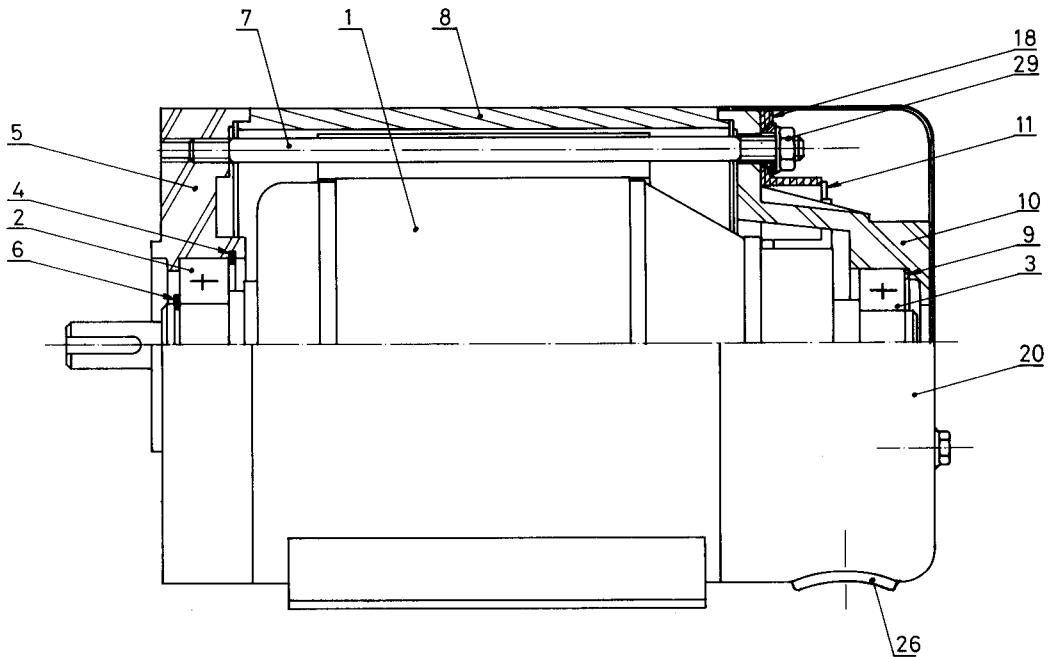
Please specify with order :
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Serial number

RECOMMENDED SPARE PARTS

- Set of brushes

		MOTEUR COURANT CONTINU
N° _____	ANNEE : _____	
TYPE : _____		
EXCITATION : _____		
INDUIT : _____ V _____ A		
FACTEUR DE FORME : _____		
SERVICE : _____		
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PARTS LIST



Item.	No.	DESIGNATION	Item.	No.	DESIGNATION
1	1	Armature	16		
2	1	Drive-end bearing	17		
3	1	Nondrive-end bearing	18	1	Brush holders
4	1	Internal circlip	19		
5	1	Drive-end endshield	20	1	End cover
6	1	External circlip	21		
7	2	Tie-rods	22		
8	1	Field magnet	23		
9	1	Spring washer	24		
10	1	Complete brush gear endshield	25		
11	2	Brushes	26	1	Cable entry hole
12			27		
13			28		
14			29	2	Screws
15					