

MANUFACTURING

THE PRODUCTION LINE OF HANSA-TMP

HT 16 / M / 732 / 1110 / E

Fixed Displacement Axial Piston Motor for Open and Closed Loop System

TMF 500



CONTENTS

General Information..... 4

Technical Specifications.....5

Installation Drawings 6

Shaft Details..... 7

Optional..... 8

Order Code.....9

GENERAL INFORMATION

The fixed-displacement axial piston motors TMF 500 with swash plate system may operate in either closed or open circuit.

Proper selection of materials and the use of steel cylinder blocks with inserted bushings guarantee the high performance of the TMF 500 motors, in terms of max. speed and working pressure.

The main features of TMF 500 motors include:

- Exceptionally high power/weight ratio.
- Excellent volumetric and mechanical efficiency.
- Long life.
- Compact design.
- Purge valve fitted as optional. (All dimensions remain unchanged).

The very small dimensions allow to fit the motor in restricted space or positions which are difficult with traditional mechanical transmission.

Installation instructions

- During the assembly check that the motor is in line and concentric with the drive shaft sleeve to prevent overloading of the shaft bearings.
- Clean carefully all tanks and pipes internally before assembly.
- The pipe internal diameter must be suitable for the max. oil speed through the pipes.
- Fit the motor lower than oil level in tank.
- Heat exchanger must be provided in the machine design, to keep temperature level within the limit of 80°C.

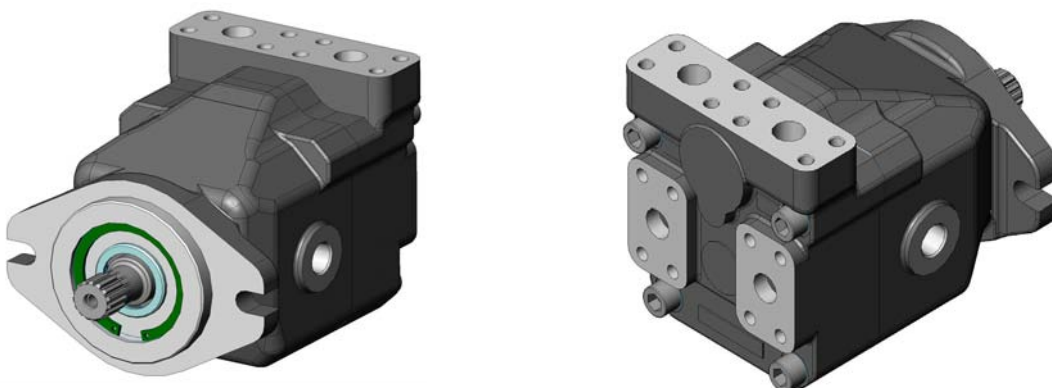
First starting

- Before starting fill all the system components with new and filtered oil.
- Verify that the charge pressure is correct.
- Restore the tank oil level.

Maintenance

To guarantee long life, the motor must work with oil cleaned according ISO 4406 class 18/16/13 ISO 4406 (NAS 9) or better.

- First oil change must be made after approximately 500 hours of operations, and then every 2000 hours.
- The filter cartridge must be replaced the first time after 50 hours and then every 500 hours; such time should be reduced when the filter clogging indicator shows that the cartridge is clogged or when the system works in a heavily polluted environment.



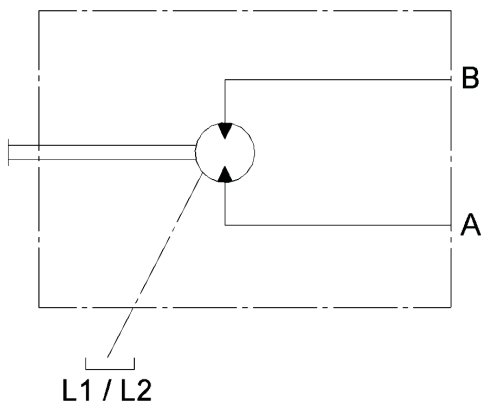
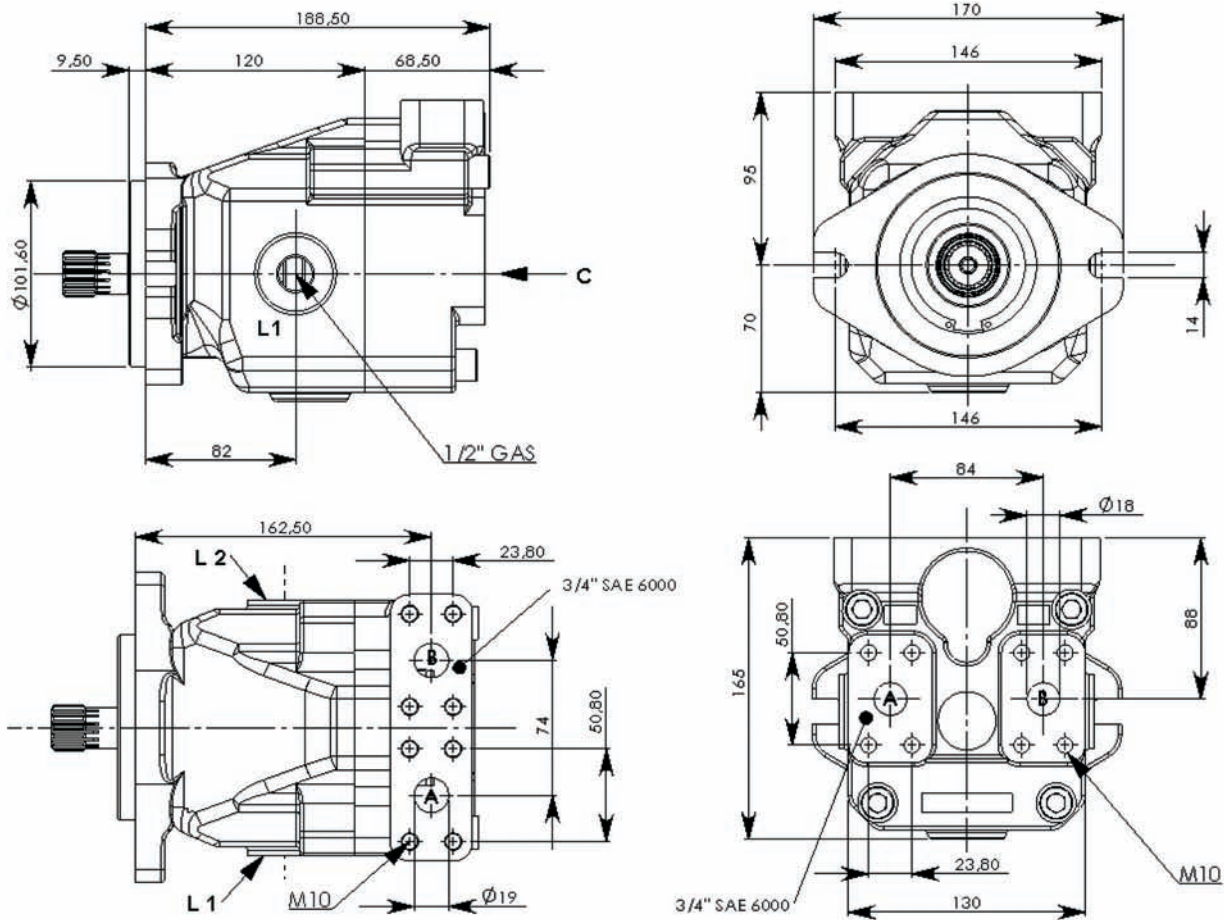
TECHNICAL SPECIFICATION

Motor Model		TMF 34	TMF 46	TMF 50	TMF 64
Displacement	cm ³ /n	34	46	50	64
Theoric specific torque	Nm/bar	0,54	0,73	0,79	1,02
Flow rating (1)	lt/min.	122	165	180	230
Power rating (1)	kW	50,8	68,5	75	95,8
Continuous pressure	bar			250	
Peak pressure	bar			400	
Max. case pressure	bar			1,5	
Minimum speed	n/min.			700	
Max. speed without load	n/min.			3800	
Max. speed with load	n/min.			3600	
Polar moment of inertia	Nm.s ²	60x10 ⁻⁴	60x10 ⁻⁴	59x10 ⁻⁴	59x10 ⁻⁴
Max oil temperature	°C			80	
Oil viscosity	mm ² /sec			15 - 35	
Fluid contamination				18/16/13 ISO 4406 (NAS 9)	
Mass	kg			13	

(1) 3600 n/min. 250 bar

INSTALLATION DRAWING

SAE B



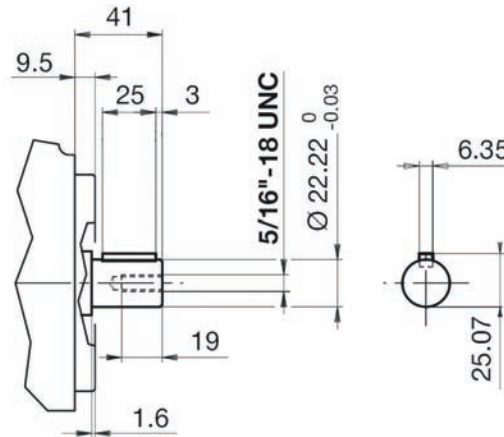
Rotation direction	Port
Right (clockwise)	A
Left (counterclockwise)	B

INSTALLATION DRAWING (continued)

Shaft

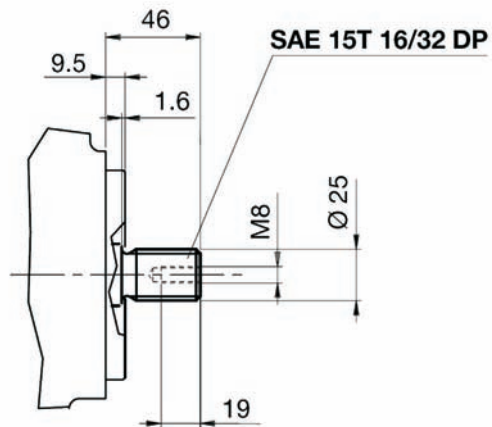
Shaft type 1 - (Parallel $\varnothing 22,22$)

Maximum torque = 210 N.m



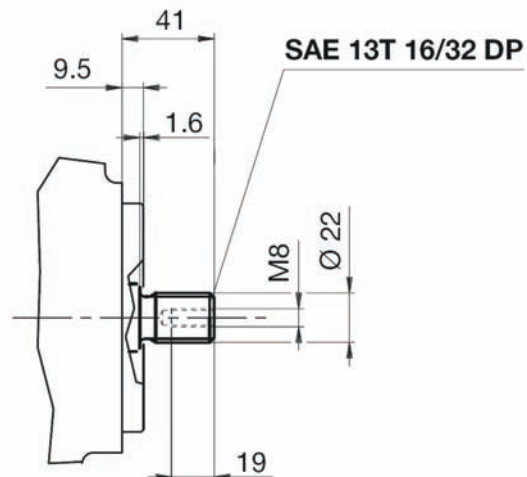
Shaft type 3 - (Splined 15 teeth 16/32 DP)

Maximum torque = 460 N.m



Shaft type 5 - (Splined 13 teeth 16/32 DP)

Maximum torque = 310 N.m

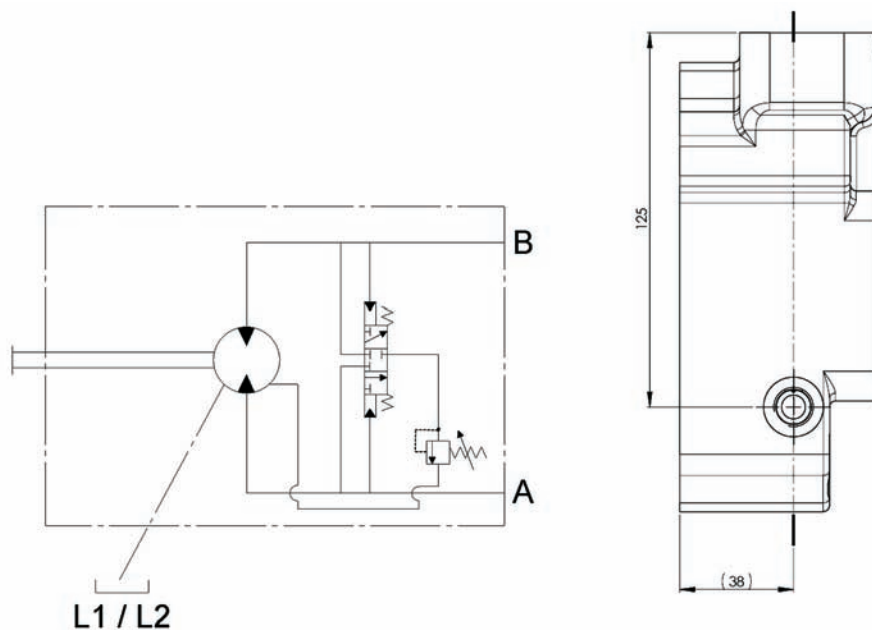


OPTIONAL

Purge valve

Subtracting hot oil from the closed circuit, the purge valve allows the flow of cool oil from the charge system.

Oil flow for cooling = 5-7 lt/min. (1500 n/min).



ORDER CODE

TMF 500	34	1	B	1	T	P	-
1	2	3	4	5	6	7	8

	Pag.
1 - Motor series	5
TMF 500 = Fixed displacement axial piston motor TMF 500 series	
2 - Motor displacement	5
34 = 34 cm ³ /n	
46 = 46 cm ³ /n	
50 = 50 cm ³ /n	
64 = 64 cm ³ /n	
3 - Ports	6
1 = Rear A and B connections	
2 = Side A and B connections	
4 - Rotation direction	
B = Bidirectional (standard)	
5 - Shaft	7
1 = Parallel Ø 30	
3 = Splined male 15 teeth 16/32 DP	
5 = Splined male 13 teeth 16/32 DP	
7 = Splined male 21 teeth 16/32 DP	
6 - Port versions	5
T = Ports A - B threaded 3/4" Gas	
G = SAE flange 3/4" 6000 psi with metric screw holes	
U = SAE flange 3/4" 6000 psi with UNF screw holes	
7 - Optional (omit if not requested)	
P = Rear drain	5
V = Purge valve	
8 - Special versions (omit if not requested)	

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As HANSA-TMP has a very extensive range of products and some products have a variety of applications, the information supplied may often only apply to specific situations.

If the catalogue does not supply all the information required, please contact HANSA-TMP.

In order to provide a comprehensive reply to queries we may require specific data regarding the proposed application.

Whilst every reasonable endeavour has been made to ensure accuracy, this publication cannot be considered to represent part of any contract, whether expressed or implied.

HANSA-TMP reserves the right to amend specifications at their discretion.



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