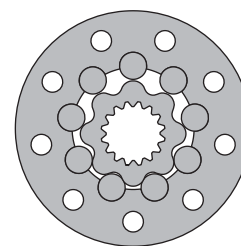
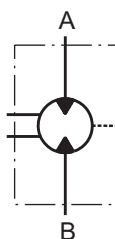


HYDRAULIC MOTORS TMF



APPLICATION

- » Marine equipment
- » Forestry equipment
- » Metal working machines
- » Agricultural machines
- » Road building machines
- » Mining machinery
- » Special vehicles etc.



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OPTIONS

- » Model - Disc valve, roll-gerotor
- » Wheel mounting flange
- » Side ports
- » Shaft - thread hole flange
- » SAE and BSPP ports
- » Other special features

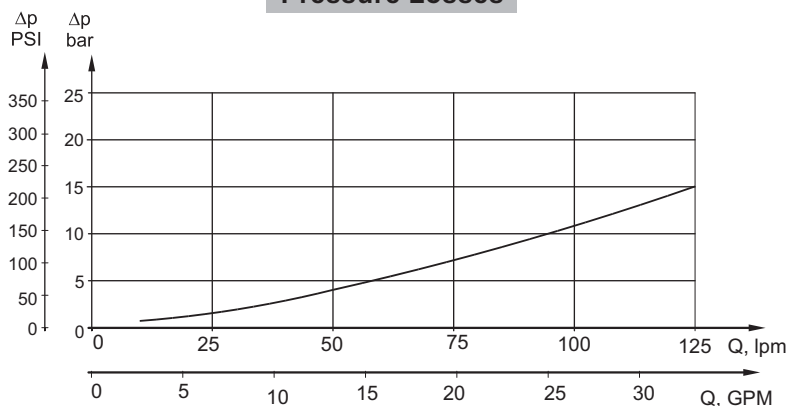
GENERAL

Max. Displacement, in ³ /rev [cm ³ /rev]	44.2 [724,3]
Max. Speed, [RPM]	750
Max. Torque, lb-in [daNm]	cont.: 16200 [183] int.: 20270 [229]
Max. Output, HP [kW]	94 [70]
Max. Pressure Drop, PSI [bar]	cont.: 3600 [250] int.: 5080 [350]
Max. Oil Flow, GPM [lpm]	40 [150]
Min. Speed, [RPM]	5
Permissible Shaft Loads lbs [daN]	P _a =2250 [1000]
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, °F [°C]	-40÷284 [-40÷140]
Optimal Viscosity range, SUS [mm²/s]	98÷347 [20÷75]
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

Oil flow in drain line

Pressure drop PSI [bar]	Viscosity SUS [mm ² /s]	Oil flow in drain line GPM [lpm]
2030 [140]	98 [20]	.660 [2,5]
	164 [35]	.396 [1,5]
3045 [210]	98 [20]	1.321 [5]
	164 [35]	.793 [3]

Pressure Losses



SPECIFICATION DATA

Type	TMF 200	TMF 250	TMF 315	TMF 400	TMF 470	TMF 500	TMF 630	TMF 725
Displacement, in³/rev [cm³/rev]	12.29 [201,4]	15.36 [251,8]	19.9 [326,3]	25.06 [410,9]	28.97 [475]	31.95 [523,6]	38.52 [631,2]	44.2 [724]
Max. Speed, [RPM]	Cont.	625	500	380	305	260	240	190
	Int.*	750	600	460	365	315	285	230
Max. Torque lb-in [daNm]	Cont.	6375 [72]	7965[90]	10265[116]	13010[147]	15135[171]	15225[172]	16200[183]
	Int.*	9030[102]	11330[128]	14425[163]	18232[206]	16030[215]	19030[215]	20270[229]
	Peak**	10180[115]	12745[144]	16460[186]	20800[235]	21240[240]	21240[240]	24250[274]
Max. Output HP [kW]	Cont.	55 [41]	55 [41]	55 [41]	55 [41]	55 [41]	50[37,5]	37,5 [28]
	Int.*	87 [65]	94[70]	94[70]	94[70]	74[55]	68 [51]	56 [42]
Max. Pressure Drop PSI [bar]	Cont.	3600[250]	3600[250]	3600[250]	3600[250]	3600[250]	3340[230]	2900[200]
	Int.*	5080[350]	5080[350]	5080[350]	5080[350]	4570[315]	4060[280]	3625[250]
	Peak**	5800[400]	5800[400]	5800[400]	5800[400]	5080[350]	4640[320]	4350[300]
Max. Oil Flow GPM [lpm]	Cont.	33[125]	33[125]	33[125]	33[125]	33[125]	33[125]	33[125]
	Int.*	40[150]	40[150]	40[150]	40[150]	40[150]	40[150]	40[150]
Max. Inlet Pressure PSI [bar]	Cont.	3920[270]	3920[270]	3920[270]	3920[270]	3920[270]	3920[270]	3920[270]
	Int.*	5370[370]	5370[370]	5370[370]	5370[370]	5370[370]	5370[370]	5370[370]
	Peak**	6100[420]	6100[420]	6100[420]	6100[420]	6100[420]	6100[420]	6100[420]
Max. Return Pressure without Drain Line or Max. Pressure in Drain Line, PSI [bar]	Cont. 0-100 RPM	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]
	Cont. 100-300 RPM	580 [40]	580 [40]	580 [40]	580 [40]	580 [40]	580 [40]	580 [40]
	Cont. >300 RPM	290 [20]	290 [20]	290 [20]	290 [20]	290 [20]	-	-
	Int.* 0-max. RPM	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]	1100 [75]
Max. Return Pressure with Drain Line PSI [bar]	Cont.	2000[140]	2000[140]	2000[140]	2000[140]	2000[140]	2000[140]	2000[140]
	Int.*	2500[175]	2500[175]	2500[175]	2500[175]	2500[175]	2500[175]	2500[175]
	Peak**	3000[210]	3000[210]	3000[210]	3000[210]	3000[210]	3000[210]	3000[210]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]	90 [6]	90 [6]	90 [6]	90 [6]	90 [6]	90 [6]	90 [6]	90 [6]
Min. Starting Torque lb-in [daNm]	5310[60]	6640[75]	8585[97]	10800[122]	12570[142]	12655[143]	12830[145]	13100[148]
Min. Speed***, [RPM]	5	5	5	5	5	5	5	5
Weight, lb [kg]	59.3 [26,9]	60.2 [27,3]	62 [28,1]	64 [29]	65.5 [29,7]	66.6 [30,2]	65.5 [29,7]	68.4 [31]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

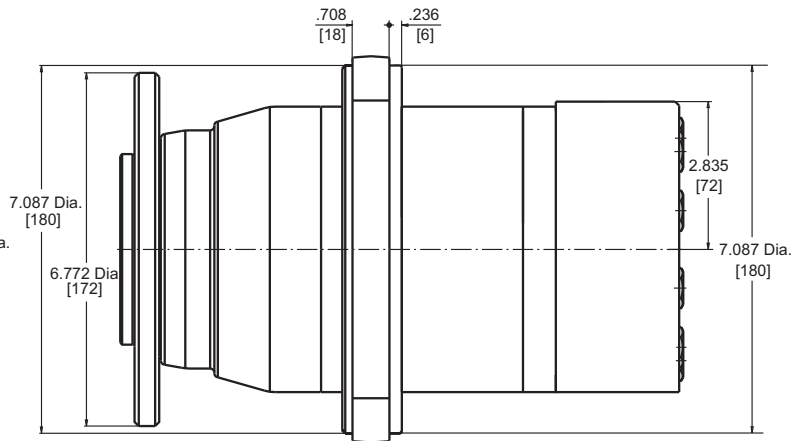
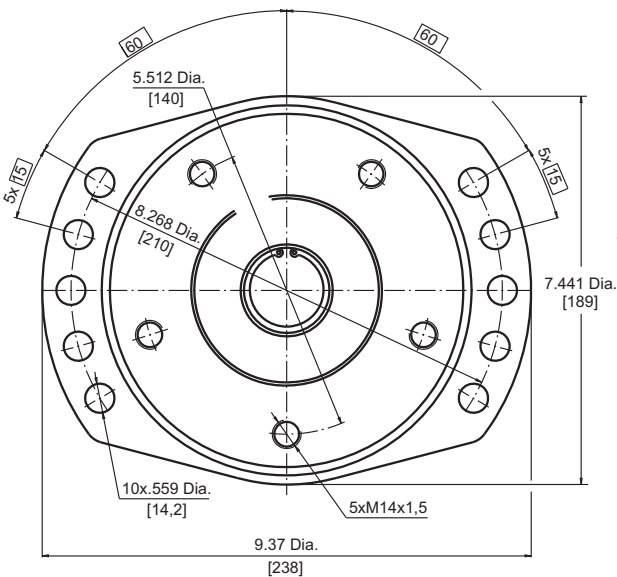
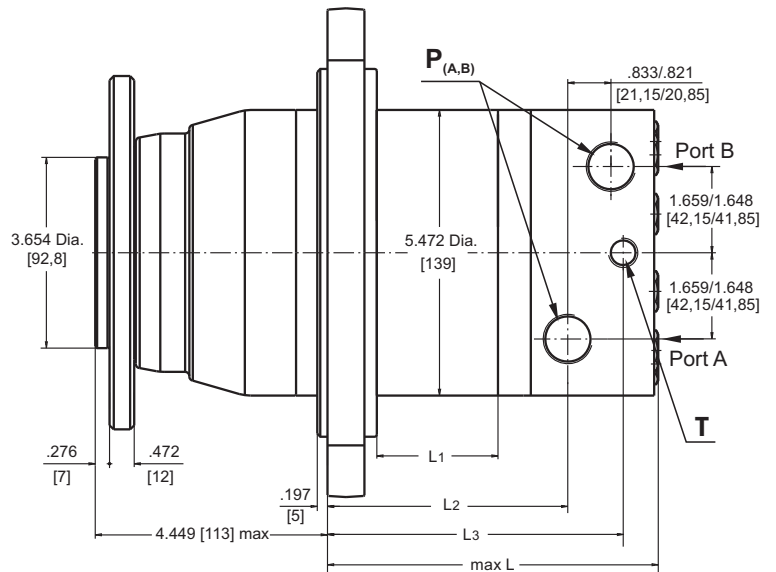
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

- Intermittent speed and intermittent pressure drop must not occur simultaneously.
- Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- Recommended minimum oil viscosity 70 SUS [13 mm²/s] at 122°F [50°C].
- Recommended maximum system operating temperature is 180°F [82°C].
- To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

DIMENSIONS AND MOUNTING DATA - TMF

P_(A,B): 2xG3/4 - .669 in [17 mm] depth
T : G1/4 - .472 in [12 mm] depth



Warning: Drain line should always be used.



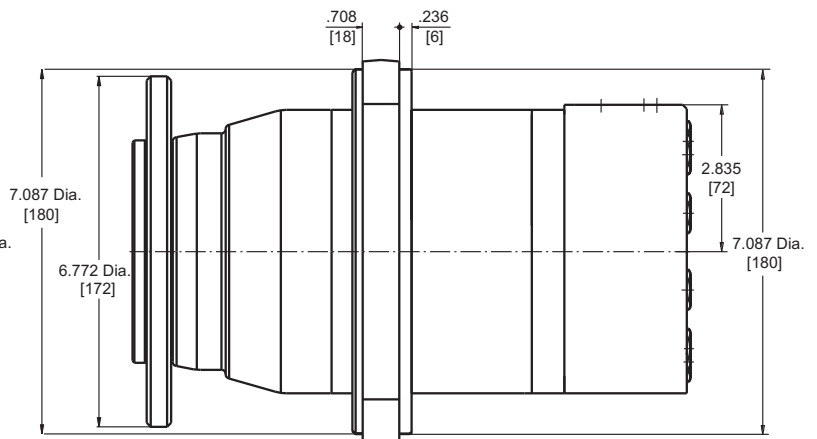
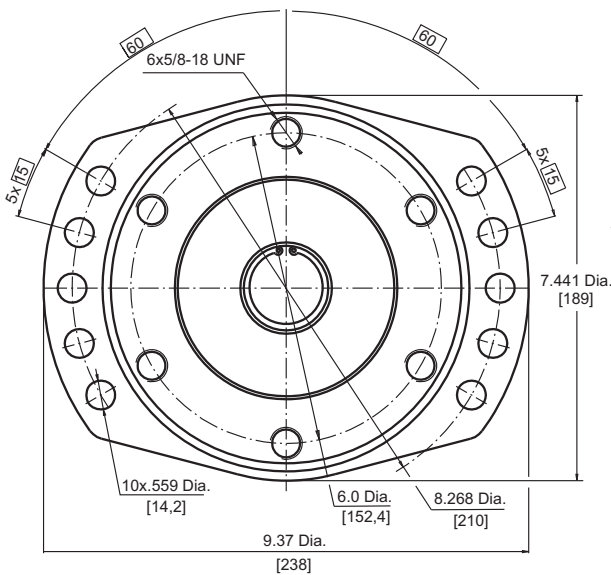
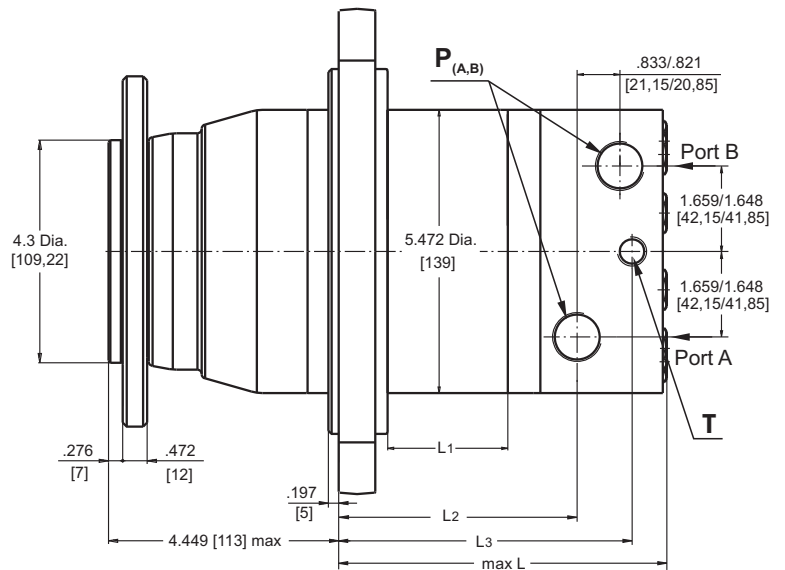
Standard Rotation
 Viewed from Shaft End
 Port **A** Pressurized - **CW**
 Port **B** Pressurized - **CCW**

Reverse Rotation
 Viewed from Shaft End
 Port **A** Pressurized - **CCW**
 Port **B** Pressurized - **CW**

Type	L _{max} , in [mm]	L ₁ , in [mm]	L ₂ , in [mm]	L ₃ , in [mm]
TMF 200	4.96 [126]	25 [.98]	3.268 [83]	4.34 [110,3]
TMF 250	5.21 [132,3]	1.23 [31,3]	3.516 [89,3]	4.59 [116,6]
TMF 315	5.57 [141,5]	1.59 [40,5]	3.878 [98,5]	4.95 [125,8]
TMF 400	5.98 [152]	2.01 [51]	4.291 [109]	5.37 [136,3]
TMF 470	6.30 [160]	2.32 [59]	4.606 [117]	5.68 [144,3]
TMF 500	6.54 [166]	2.56 [65]	4.843 [123]	5.92 [150,3]
TMF 630	6.38 [162]	2.40 [61]	4.69 [119]	5.76 [146,3]
TMF 725	6.73 [171]	2.76 [70]	5.04 [128]	6.11 [155,3]

DIMENSIONS AND MOUNTING DATA - TMFA

P_(A,B): 2x1 1/16-12 UN, O-ring port
 .669 in [17 mm] depth
T : 9/16-18 UNF, O-ring port
 .472 in [12 mm] depth



Warning: Drain line should always be used.



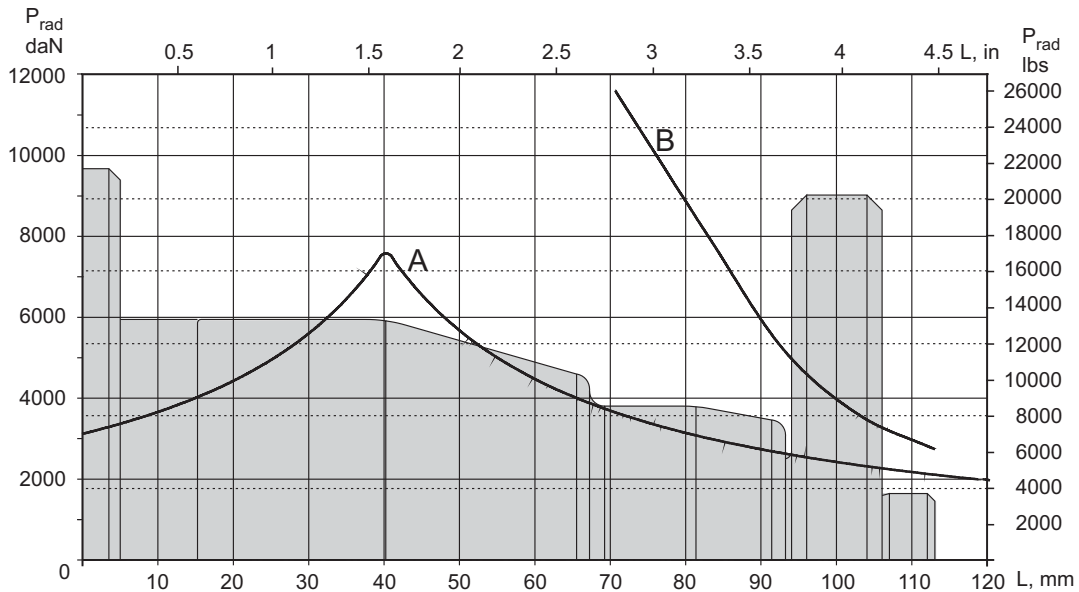
Standard Rotation
 Viewed from Shaft End
 Port **A** Pressurized - **CW**
 Port **B** Pressurized - **CCW**

Reverse Rotation
 Viewed from Shaft End
 Port **A** Pressurized - **CCW**
 Port **B** Pressurized - **CW**

Type	L _{max} , in [mm]	L ₁ , in [mm]	L ₂ , in [mm]	L ₃ , in [mm]
TMFA 200	4.96 [126]	25 [.98]	3.268 [83]	4.34 [110,3]
TMFA 250	5.21 [132,3]	1.23 [31,3]	3.516 [89,3]	4.59 [116,6]
TMFA 315	5.57 [141,5]	1.59 [40,5]	3.878 [98,5]	4.95 [125,8]
TMFA 400	5.98 [152]	2.01 [51]	4.291 [109]	5.37 [136,3]
TMFA 470	6.30 [160]	2.32 [59]	4.606 [117]	5.68 [144,3]
TMFA 500	6.54 [166]	2.56 [65]	4.843 [123]	5.92 [150,3]
TMFA 630	6.38 [162]	2.40 [61]	4.69 [119]	5.76 [146,3]
TMFA 725	6.73 [171]	2.76 [70]	5.04 [128]	6.11 [155,3]

PERMISSIBLE SHAFT LOADS

The load diagram is valid for an average bearings life of 2000 hours at 100 RPM



- A** - Permissible radial shaft load.
- B** - Max. radial shaft load. Any shaft load exceeding the values shown by the curve will involve a risk of breakage.

ORDER CODE

	1	2	3	4
TMF				

Pos.1 - Mounting Flange

omit - Thread hole flange, 5xM12x1,5 on \varnothing 140

A - Thread hole flange, 6x5/8-18 UNF on \varnothing 152,4

Pos.2 - Displacement code

- 200** - 12.29 in³/rev [201,4 cm³/rev]
- 250** - 15.36 in³/rev [251,8 cm³/rev]
- 315** - 19.90 in³/rev [326,3 cm³/rev]
- 400** - 25.06 in³/rev [410,9 cm³/rev]
- 470** - 28.97 in³/rev [475,0 cm³/rev]
- 500** - 31.95 in³/rev [523,6 cm³/rev]
- 630** - 38.52 in³/rev [631,2 cm³/rev]
- 725** - 44.20 in³/rev [724,3 cm³/rev]

Pos.3 - Special Features [\[see page 48\]](#)

Pos.4 - Design Series

omit - Factory specified

The hydraulic motors are manganophosphatized as standard.