



# MPT

## Self-Priming Solids-Handling Pump

### ► Maintenance Checklist

## **⚠ DANGER**

Read User Instructions **before** installing, operating or maintaining this pump.  
Copies available from Flowserve pump representatives.

### Recommended Lubricants:

**Mineral Oil:** Quality mineral oil with rust and oxidation inhibitors.  
ExxonMobil DTE – Light/Medium – Castrol Hyspin AWS 32/46

**Synthetic Oil:** Royal Purple only, all others consult factory.  
Some synthetic lubricants require Viton® O-rings.

**Grease:** N/A

### Relubrication Intervals<sup>1</sup>

Lubricant	External Housing Temperature <sup>2</sup>	
	0°C to 37°C (32°F to 99°F)	38°C to 75°C (100°F to 167°F)
Mineral Oil	4000 hr	2000 hr
Synthetic Oil	18 mo	18 mo

1. Assuming good maintenance and operation practices and no contamination.
2. Bearing temperature up to 17°C (30°F) higher than housing temperature.

### Oil Viscosity Grades

Max. Temp	ISO VG	Min. Visc. Index
0°C to 37°C (32°F to 99°F)	32	95
38°C to 75°C (100°F to 167°F)	46	95

### Maximum Recommended External Housing Temperature

Lubrication	Temperature
Oil bath	77°C (170°F)

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**For sales and product information, go to [www.flowserve.com](http://www.flowserve.com).**

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**MPT pumps are manufactured in: Chesapeake, VA (USA), and Newark, (U.K.).**

**USA and Canada**  
Flowserve Corporation  
5215 North O'Connor Blvd.  
Suite 2300  
Irving, Texas 75039-5421 USA  
Telephone: +1 937 890 5839

**Europe, Middle East, Africa**  
Flowserve Corporation  
Parallelweg 13  
4878 AH Etten-Leur  
The Netherlands  
Telephone: +31 76 502 8100

**Latin America**  
Flowserve Corporation  
Martín Rodríguez 4460  
B1644CGN-Victoria-San Fernando  
Buenos Aires, Argentina  
Telephone: +54 11 4006 8700  
Telefax: +54 11 4714 1610

**Asia Pacific**  
Flowserve Pte. Ltd.  
10 Tuas Loop  
Singapore 637345  
Telephone: +65 6771 0600  
Telefax: +65 6862 2329

	MPT 20	MPT 30	MPT 40	MPT 60	MPT 80
<b>Operating Parameters</b>					
Maximum Sphere, mm (in)	38.1 (1.5)	63.5 (2.5)	76.2 (3)	76.2 (3)	76.2 (3)
Minimum Flows, m <sup>3</sup> /h (gpm)	10 (44)	27 (119)	40 (176)	63 (277)	100 (440)
Max. Working Pressure, bar (psi)	7 (95)				
Pumped Fluid Temperature <sup>3</sup>	0°C to 75°C (32°F to 167°F)				
Hydrostatic Test Pressure, bar (psi)	10 (145)				
Suction Lift, m (ft)	6 (20)				
Maximum Power Rating, kW (hp)	74 (100)				
<b>Casing</b>					
150# NPT	Standard				
150# FF Flange Spool	Optional				
Flange Finish, RMS	125				
Minimum Thickness, mm (in)	8.1 (0.32)	10.9 (0.43)	11.2 (0.44)	12.7 (0.5)	12.7 (0.5)
<b>Bearings</b>					
Inboard	6206	6308	6308	6308	6311
Outboard	6306	5309 AH	5309 AH	5309 AH	3311 A
<b>Seal Chamber Dimensions, mm (in)</b>					
Length/Depth	68.1 (2.68)	66.3 (2.61)	81.3 (3.2)	81.3 (3.2)	83.6 (3.29)
Inside Bore Diameter	44.5 (1.75)	54.0 (2.125)	54.0 (2.125)	54.0 (2.125)	66.7 (2.625)
<b>Pump Shaft Dimensions, mm (in)</b>					
Diameter at Seal Chamber	28.6 (1.125)		38.1 (1.5)		47.6 (1.875)
Diameter at Coupling Hub	28.6 (1.125)		38.1 (1.5)		44.5 (1.75)
I.B to O.B (Centerline)	102.6 (4.04)		159.8 (6.29)		212.6 (8.37)
Impeller to I.B. Bearing (Centerline)	140.5 (5.53)	152.9 (6.02)	175.8 (6.92)		202.7 (7.98)
Coupling Hub Length	87.4 (3.44)	85.6 (3.37)	122.7 (4.83)	121.9 (4.8)	160.3 (6.31)
At Impeller Threads	19.1 (0.75)		30.2 (1.188)		35.6 (1.4)
L <sup>3</sup> /D <sup>4</sup>	106	43	65	66	41

3. Heater option is required for service below 0°C (32°F).

## Materials of Construction

Casing		Cast Iron - Class 30
Impeller	Standard	Cast Iron - Class 30
	Optional	CD4MCuN
Wear Plate	Standard	Cast Iron - Class 30
	Optional	CD4MCuN
Seal Plate	Standard	Cast Iron - Class 30
	Optional	CD4MCuN
Shaft		431

## Impeller

Balanced to ISO 1940-1, grade G6.3.

## Direction of Rotation

Clockwise for all pumps when viewed from the coupling end.

## Air Release Valve (ARV)

Required when discharge check valve is installed in the system.