



# Truck Hydraulics

Series F1  
Fixed Displacement Motors

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



ENGINEERING YOUR SUCCESS.

**Conversion factors**

1 kg.....	2.20 lb
1 N.....	0.225 lbf
1 Nm.....	0.738 lbf ft
1 bar.....	14.5 psi
1 l.....	0.264 US gallon
1 cm <sup>3</sup> .....	0.061 cu in
1 mm.....	0.039 in
$\frac{9}{5} \text{ }^\circ\text{C} + 32$ .....	$1^\circ\text{F}$
1 kW.....	1.34 hp

# F1 Motor



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## F1 Motor ISO

### Features:

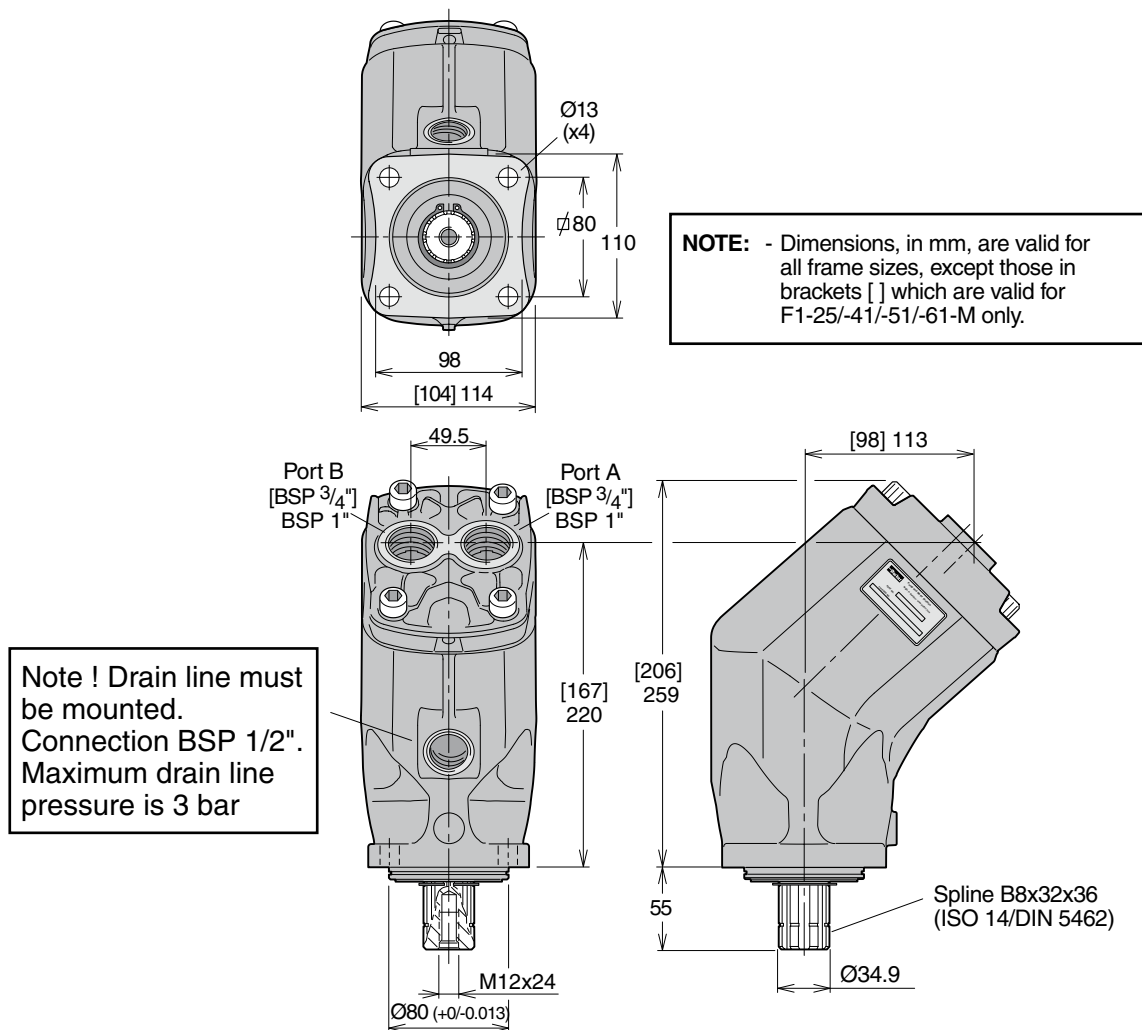
- Laminated piston rings - low leakage
- Positive synchronisation with timing gear
- Operating pressure up to 250 bar
- Tolerates low temperatures and high temperature shocks
- Shaft end and mounting flange meet the ISO standard for all sizes
- Tolerates high acceleration



## Specifications

Motor frame size F1-	25-M	41-M	51-M	61-M	81-M	101-M	121-M	
<b>Displacement</b> [cm <sup>3</sup> /rev]	25.6	40.9	51.1	59.5	81.6	102.9	118.5	
<b>Max operating pressure</b> [bar]								
- continuous	250						250	
- intermittent	350						350	
<b>Max shaft speed</b> [rpm]								
- continuous	2 300	2 000	1 800	1 700	1 500	1 400	1300	
- intermittent	3 000	2 700	2 400	2 200	2 000	1 800	1700	
<b>Torque</b> (theor.) [Nm]								
- at 200 bar	81	130	162	189	259	327	376	
- at 350 bar	142	227	284	331	453	572	658	
<b>Max output power</b> [kW]								
- continuous	20	27	31	34	41	48	51	
- intermittent	26	37	41	44	54	62	67	
<b>Weight</b> [kg]	8.5	8.5	8.5	8.5	12.5	12.5	12.5	

**Installation  
dimensions**



**Ordering code**

Example: **F1 - 81 - M**  
F1 Motor frame size         
**25, 41, 51, 61, 81, 101 or 121**

**Port size**

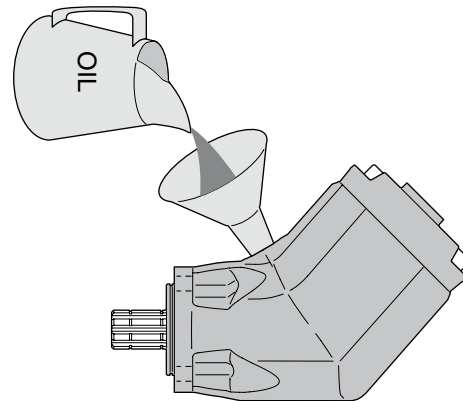
F1 motor frame size	Port size
F1-25/41/51/61	3/4"
-81/101/121	1"

**Standard versions**

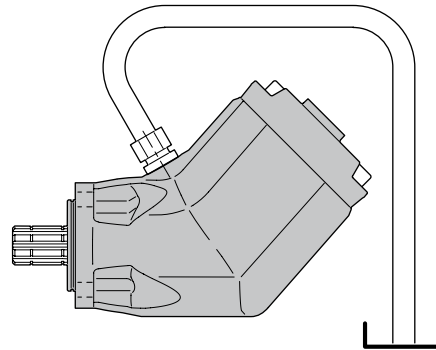
Designation	Ordering no.
F1-25-M	378 1724
-41-M	378 1740
-51-M	378 1750
-61-M	378 1760
-81-M	378 1780
-101-M	378 1800
-121-M	378 4120

# Installation and start up

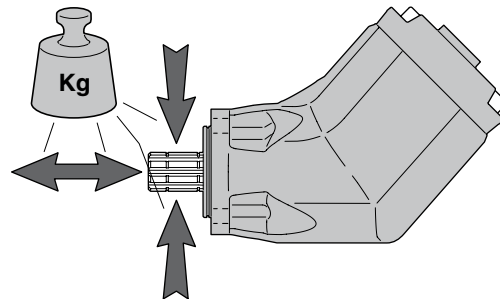
- 1) Always fill the motor (and the hydraulic system) with recommended oil before start-up.



- 2) The motor drain port must be connected directly to tank. NOTE: When the motor is delivered, the port is protected with a plastic plug.



- 3) If an axial and/or radial force will be acting on the shaft – contact Parker Hannifin for information.



- 4) If a separate gear is installed on the motor shaft (with outer snapping or screw and washer):
- A, the inner snapping, must be installed!
  - B, screw and washer (alternative to outer snapping).
  - C, outer snapping.

