

F1 Pump

F1-SAE



4

Contents	Page	Chapter
Pump and Line selection	12	2
Specifications	30	
Pump cross section	30	
Installation dimensions, F1-25, -41, -51 and -61 (SAE).....	31	
Ordering code (SAE)	31	
Port size.....	31	
Suction fittings	52	10
Installation and start up	70	13

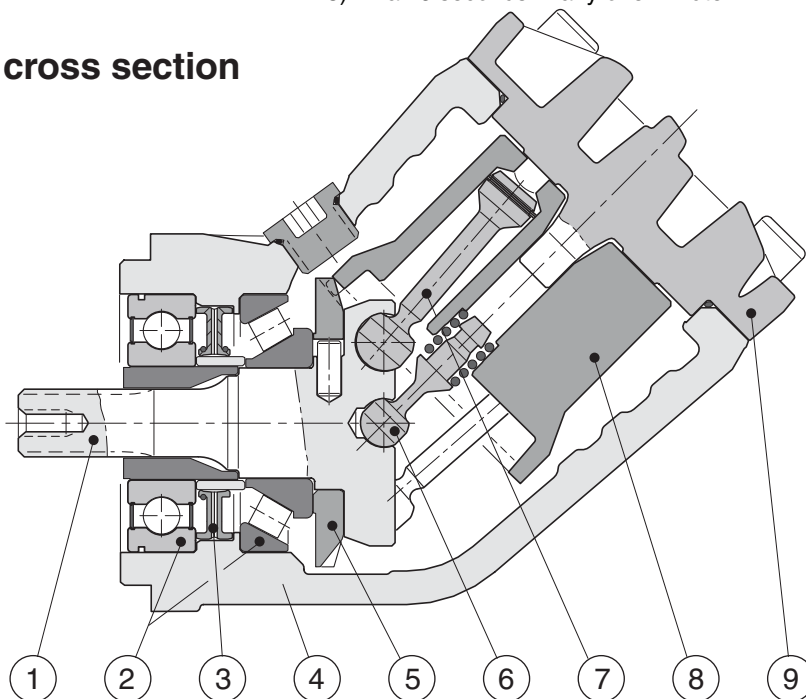
Specifications

F1 frame size	25	41	51	61
Displacement [cm ³ /rev] [cu in/rev]	25.6 1.56	40.9 2.50	51.1 3.12	59.5 3.63
Max flow ¹⁾				
at 350 bar [l/min]	67	98	112	131
at 5000 psi [gpm]	17.7	25.9	29.6	34.6
at 400 bar [l/min]	56	86	97	113
at 5000 psi [gpm]	14.8	22.7	25.6	29.8
Max operating pressure				
continuous [bar]/[psi]	————— 350/5000 —————			
intermittent [bar]/[psi]	————— 400/5800 —————			
Shaft speed [rpm]				
- short circuited pump (low press.)	2700	2700	2700	2700
- max speed at 350 bar ²⁾ /5000 psi ²⁾	2600	2400	2200	2200
at 400 bar ²⁾ /5800 psi ²⁾	2200	2100	1900	1900
Torque ¹⁾				
at 350 bar [Nm]	142	227	284	331
at 5000 psi [lbf ft]	105	168	210	244
at 400 bar [Nm]	163	260	324	378
at 5800 psi [lbf ft]	120	192	239	279
Input power				
- continuous [kW]	31	46	52	61
[hp]	42	62	70	82
- intermittent [kW] ³⁾	39	57	66	76
[hp] ³⁾	52	76	88	102
Weight [kg]	8.5	8.5	8.5	8.5
[lbs]	18.7	18.7	18.7	18.7

- 1) Theoretical values
- 2) Valid at an inlet pressure of 1.0 bar/15 psi (abs.) when operating on mineral oil at a viscosity of 30 mm²/s (cSt)/150 SUS.
- 3) Max 6 seconds in any one minute.

NOTE: For noise level information, contact Parker Hannifin.

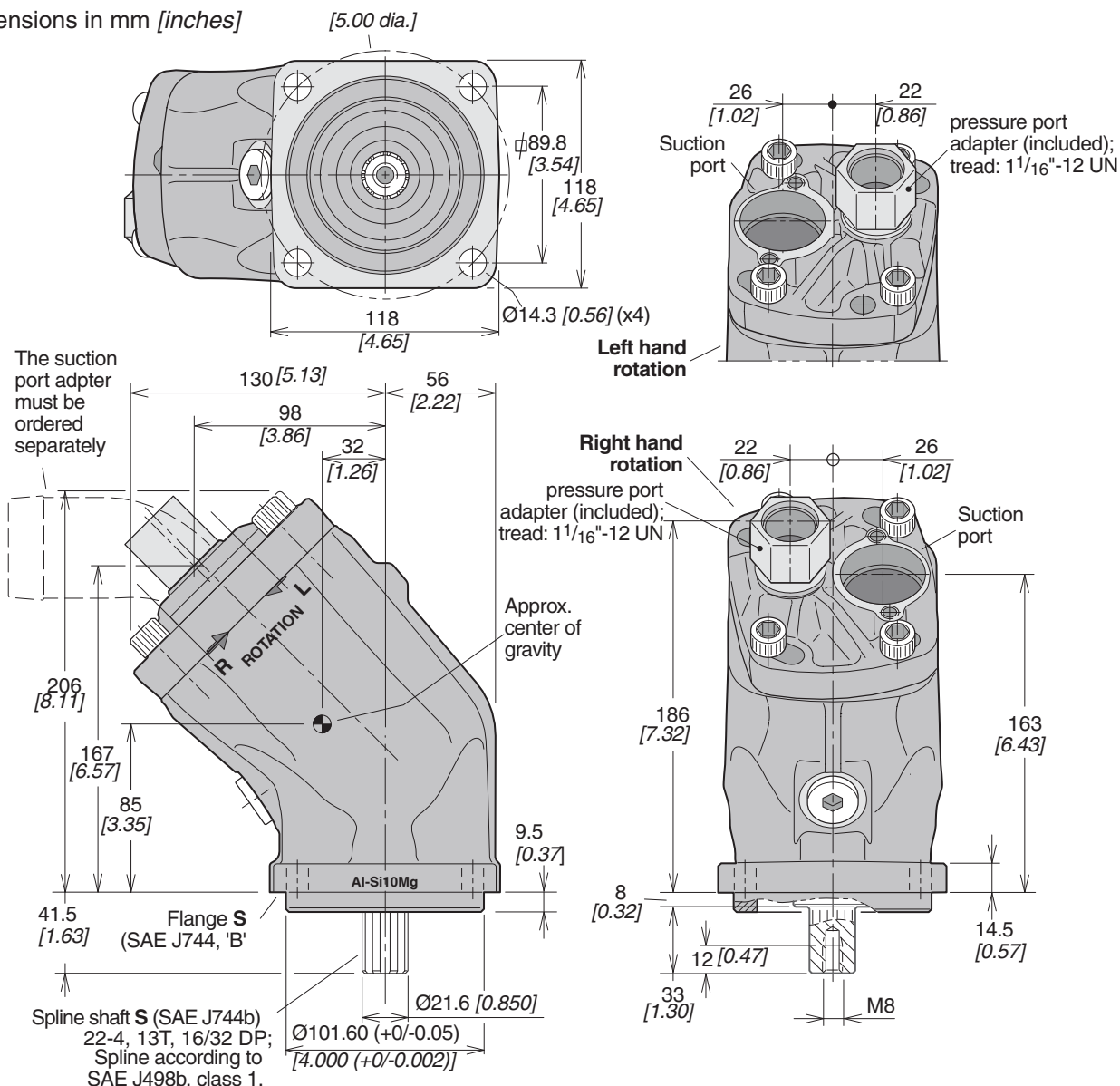
Pump cross section



1. Input shaft
2. Bearings
3. Shaft seal
4. Housing
5. Timing gear
6. Barrel support
7. Piston with piston ring
8. Cylinder barrel
9. End cap

Installation dimensions, F1-25, -41, -51 and -61 (SAE)

Dimensions in mm [inches]



Ordering code (SAE)

Example:

F1-61-RU-SV-S

F1 frame size
25, 41, 51 or 61

Shaft rotation
R Right hand
L Left hand

Port size

F1 frame size Pressure port¹⁾

-25	1 1/16" -12 UN
-41	1 1/16" -12 UN
-51	1 1/16" -12 UN
-61	1 1/16" -12 UN

1) BSP-to-**SAE** adapter (included).

Shaft end
S SAE spline "B" spline
 Shaft seal
V FPM
 Mounting flange
S SAE "B"
 Main port
U SAE O-ring, UN threads

Standard SAE versions

Designation	Ordering no.
F1-25-R	378 1424
-L	378 1425
F1-41-R	378 1440
-L	378 1441
F1-51-R	378 1450
-L	378 1451
F1-61-R	378 1460
-L	378 1461

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 10.