

F1 Pump

F1-SAE



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F1 Pump SAE

Series F1 is a further development of our well known 'truck pump', the F1. The F1 offers many additional values for operators of cargo cranes, hook loaders, skip loaders, forest cranes, concrete mixers and similar truck applications.

Series F1 is a very efficient and straight forward pump design with unsurpassed reliability.

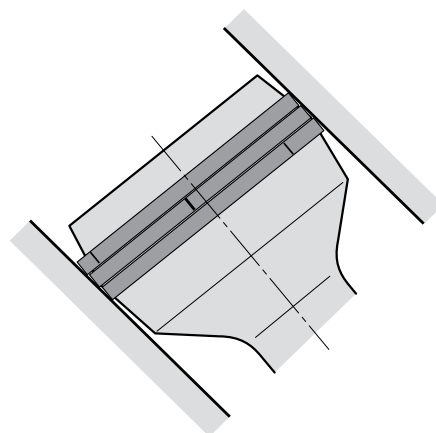
Its small envelope size gives a simple and inexpensive installation.

Features:

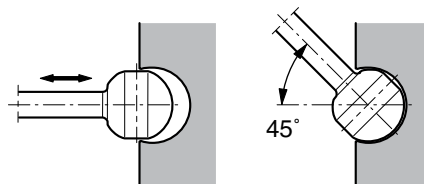
- Laminated piston rings - low leakage
- Positive synchronisation with timing gear
- Operating pressure up to 350 bar (5076 psi)
- Installation above the reservoir level possible
- Tolerates low temperatures and high temperature shocks
- Shaft end and mounting flange meet the standard SAE-B
- 4 sizes -25 / -41 / -51 / -61 cm³/rev
1.56 / 2.50 / 3.12 / 3.63 cu in/rev

... thanks to:

- 45° bent-axis angle
- Optimal inlet port geometry in the end cap
- Single housing design
- Spherical pistons - high speeds
- Laminated piston rings - low leakage
- Positive synchronisation with timing gear
- Installation above the reservoir level possible
- Tolerates low temperatures and high temperature shocks
- Shaft end and mounting flange meet the SAE standard for all sizes



F1 piston with laminated piston ring.



F1 piston-to-shaft locking.

Specifications

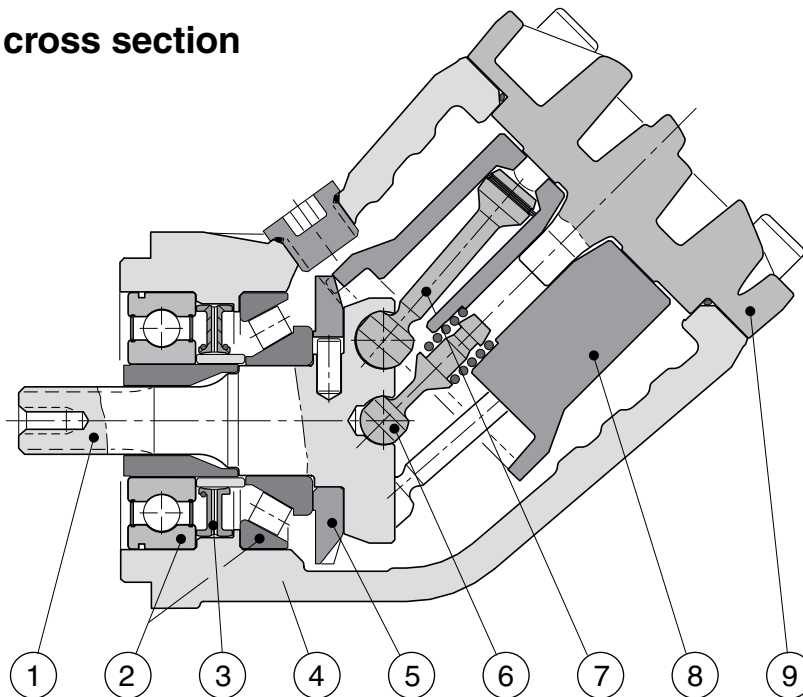
Size F1-	25	41	51	61
Displacement [cm ³ /rev]	25.6	40.9	51.1	59.5
[cu in/rev]	1.56	2.50	3.12	3.63
Max flow ¹⁾ [l/min]	67	98	112	131
[gpm]	17.7	25.9	29.6	34.6
Max operating pressure [bar]	350	350	350	350
[psi]	5000	5000	5000	5000
Mass moment of inertia J [kgm ²]	0,00274	0,00266	0,00261	0,00257
Shaft speed [rpm]				
- short circuited pump (low press.)	2700	2700	2700	2700
- max speed at 350 bar ²⁾ /5000 psi ²⁾	2600	2400	2200	2200
Torque ¹⁾				
at 350 bar [Nm]	142	227	284	331
at 5000 psi [lbf ft]	105	168	210	244
Input power				
[kW]	39	57	66	76
[hp]	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.

NOTE: For noise level information, contact Parker Hannifin.

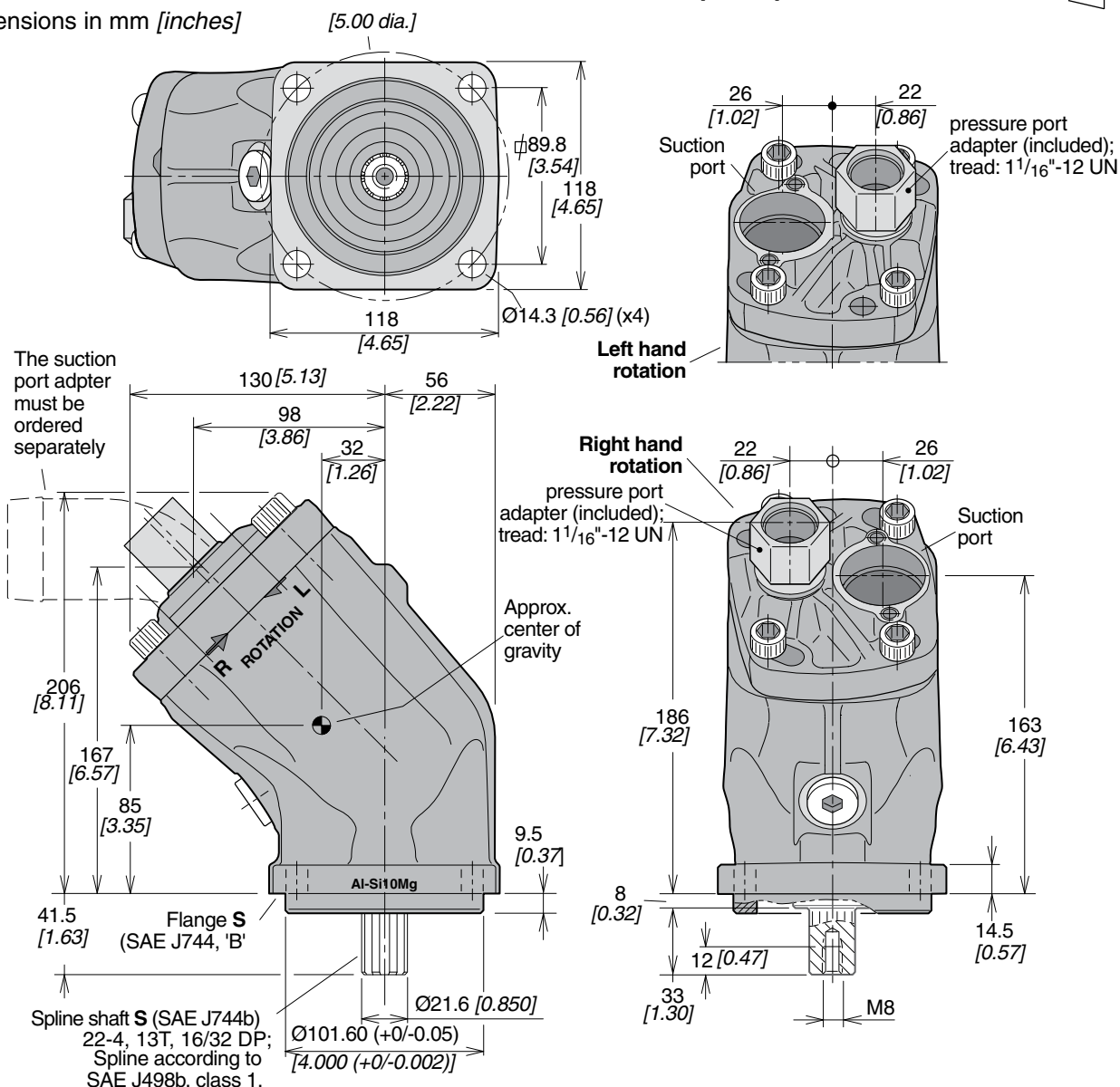
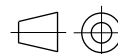
Pump cross section



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 size

25, 41, 51 or 61

Shaft rotation

R Right hand

L Left hand

Port size

F1 size	Pressure port ¹⁾
-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)

S SAE spline "B" spline

V FPM

Shaft seal

S SAE "B"

Mounting flange

U SAE O-ring, UN threads

Main port

Standard SAE versions

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

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See page 18