

F1 Pump

F1-ISO



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F1-25 to -101, ISO Specifications

Frame size F1-	25	41	51	61	81	101
Displacement [cm ³ /rev]	25.6	40.9	51.1	59.5	81.6	102.9
Max flow ¹⁾ [l/min]						
at 350 bar	67	98	112	131	163 ³⁾	185 ³⁾
at 400 bar	56	86	97	113	143	160
Max operating pressure [bar]						
continuous	350	350	350	350	350	350
intermittent	400	400	400	400	400	400
Shaft speed [rpm]						
- short circuited pump (low press.)	2700	2700	2700	2700	2300	2300
- max speed at 350 bar ²⁾	2600	2400	2200	2200	2000 ³⁾	1800 ³⁾
at 400 bar ²⁾	2200	2100	1900	1900	1750	1550 ³⁾
Torque ¹⁾ [Nm]						
at 350 bar	142	227	284	331	453	572
at 400 bar	163	260	324	378	518	653
Input power [kW]						
- continuous	31	46	52	61	76	86
- intermittent ⁴⁾	39	57	66	76	95	108
Weight [kg]	8.5	8.5	8.5	8.5	12.5	12.5

1) Theoretical values

2) Valid at an inlet pressure of 1.0 bar (abs.) when operating on mineral oil at a viscosity of 30 mm²/s (cSt).

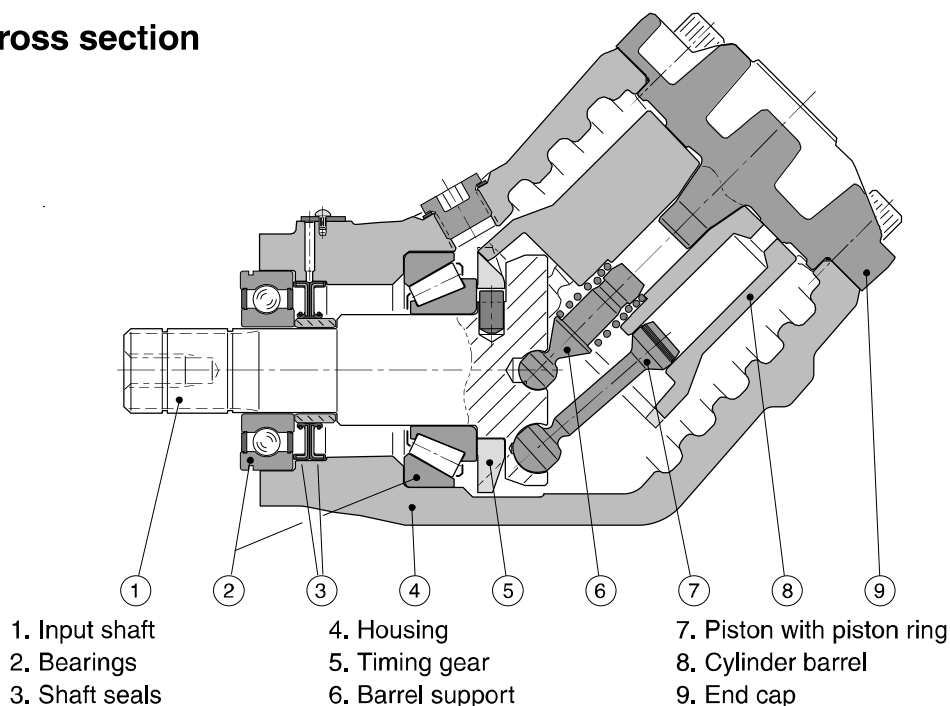
3) Valid with 2 1/2" inlet (suction) line.

With 2" suction line: F1-81 – max 1400 rpm (Q≈120 l/min);
F1-101 – max 1000 rpm (Q≈120 l/min).

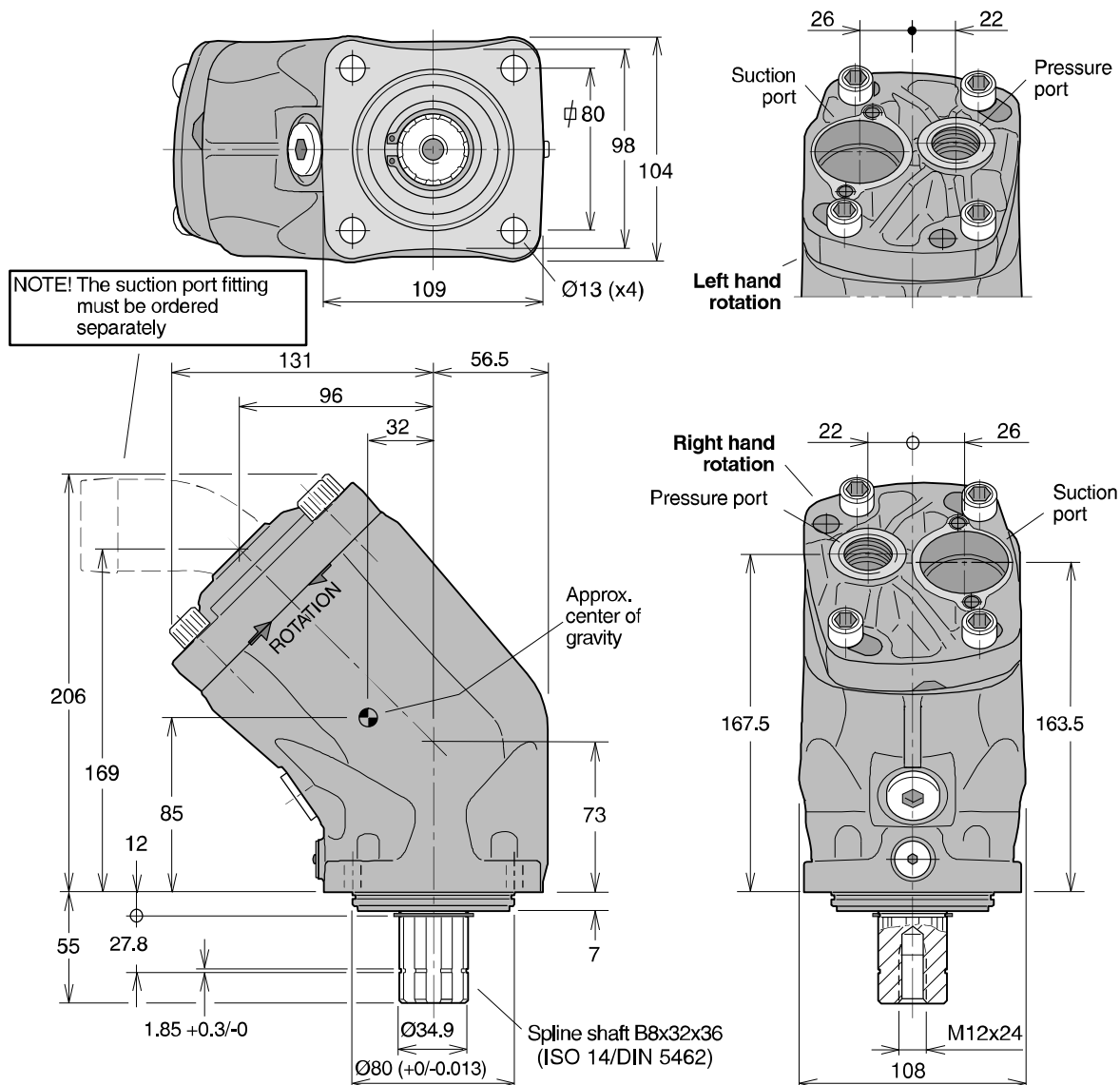
4) Max 6 seconds in any one minute.

NOTE: For noise level information, contact Parker Hannifin

Pump cross section



F1-25, -41, -51 and -61



Ordering code

Example:

F1 frame size

25, 41, 51, 61, 81 or 101

Shaft rotation

R Right hand

L Left hand

F1- 81 - R

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 11.

Standard versions

Designation	Ordering no.
F1-25-R	378 1024
F1-25-L	378 1025
F1-41-R	378 1040
F1-41-L	378 1041
F1-51-R	378 1050
F1-51-L	378 1051
F1-61-R	378 1060
F1-61-L	378 1061

4



Standard versions

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 11.

F1-12 ISO with BSP port threads

Specifications

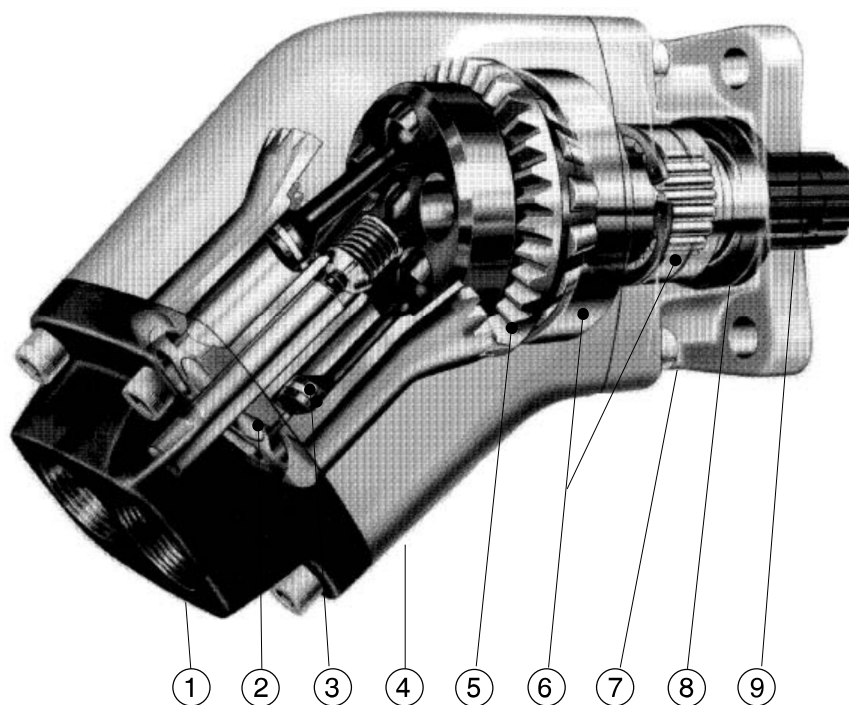
Frame size F1-	12
Displacement [cm ³ /rev]	12
Max flow ¹⁾ [l/min]	28
Max operating pressure [bar]	350
Shaft speed [rpm]	
- short circuited pump (low press.)	3100
- max selfpriming speed	2300
Torque ¹⁾ [Nm]	67
Input power [kW]	
- continuous	16.1
- intermittent ²⁾	21.7
Weight [kg]	6.7

1) Theoretical values

2) Max 6 seconds in any one minute.

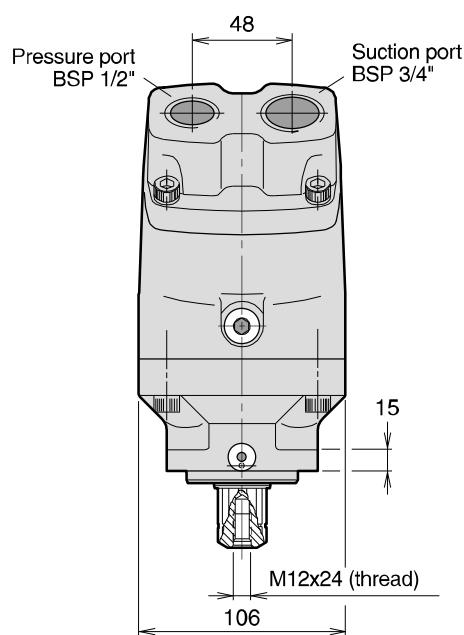
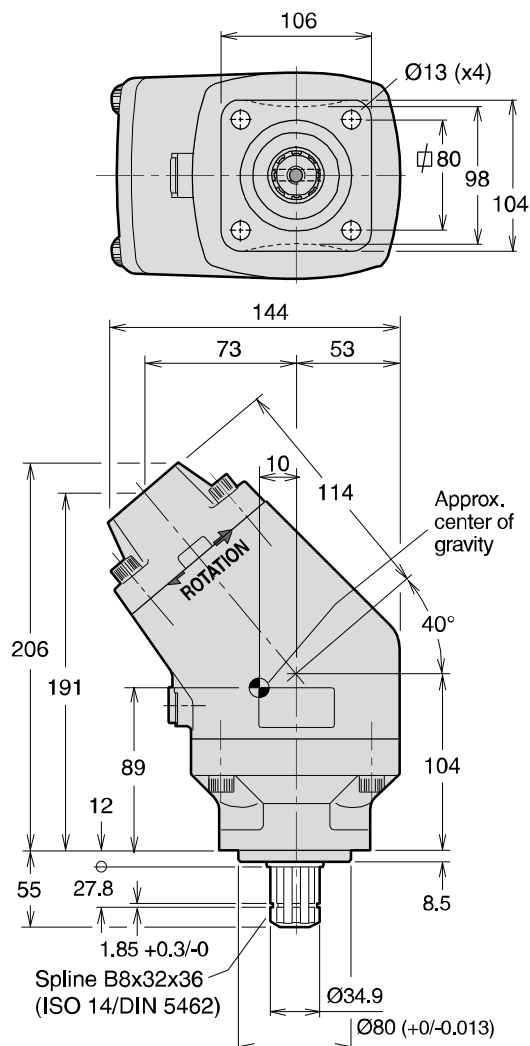
NOTE: For noise level information, contact Parker Hannifin

Pump cross section



- | | | |
|---------------------------|-------------------|-------------------------------|
| 1 End cap | 4 Barrel housing | 7 Bearing housing with flange |
| 2 Cylinder barrel | 5 Timing gear | 8 Shaft seals |
| 3 Piston with piston ring | 6 Roller bearings | 9 Input shaft |

F1-12 with BSP port threads



4

Ordering code

Example: **F1- 12 - R**

F1 frame size **12**

Shaft rotation

R Right hand

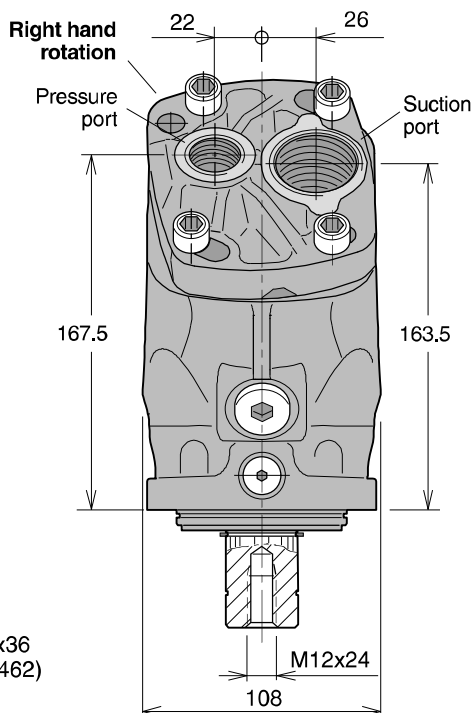
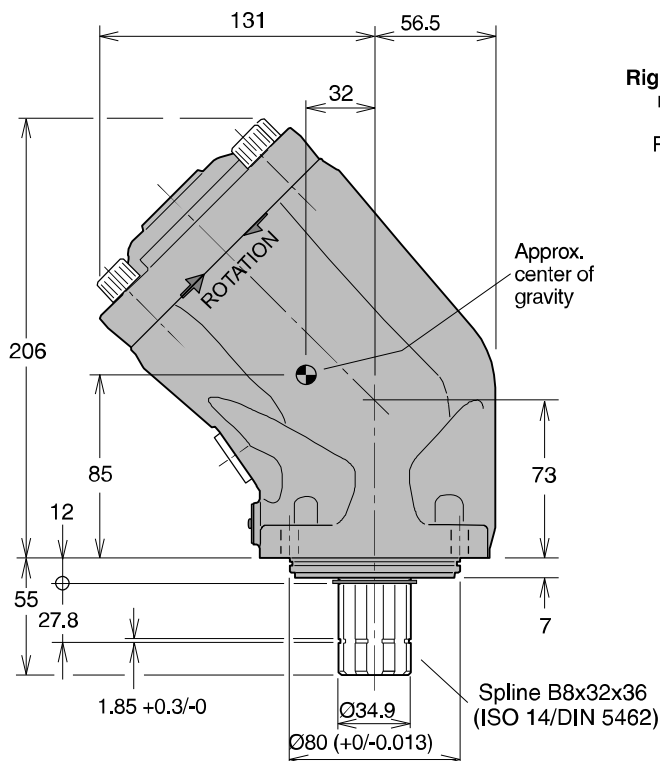
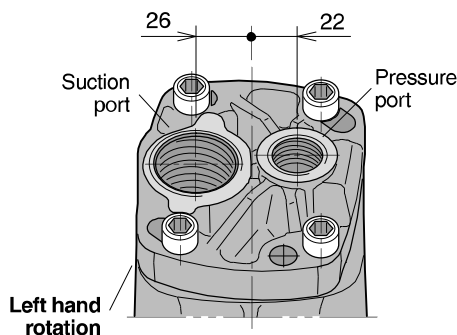
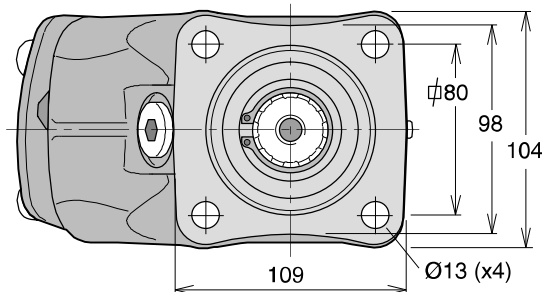
L Left hand

Standard versions

Designation	Ordering no.
F1-12-R	378 2212
F1-12-L	378 2211

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 11.

F1-25, -41, -51 and -61 with BSP port treads



Port size (all ports are BSP)

F1 frame size	Pressure port ¹⁾	Suction port
-25	3/4" "	1"
-41	3/4" "	1"
-51	3/4" "	1"
-61	3/4" "	1"

Ordering code

Example: **F1- 61 - RB**

F1 frame size
25, 41, 51, 61, 81 or 101

Shaft rotation/port threads

RB Right hand/BSP

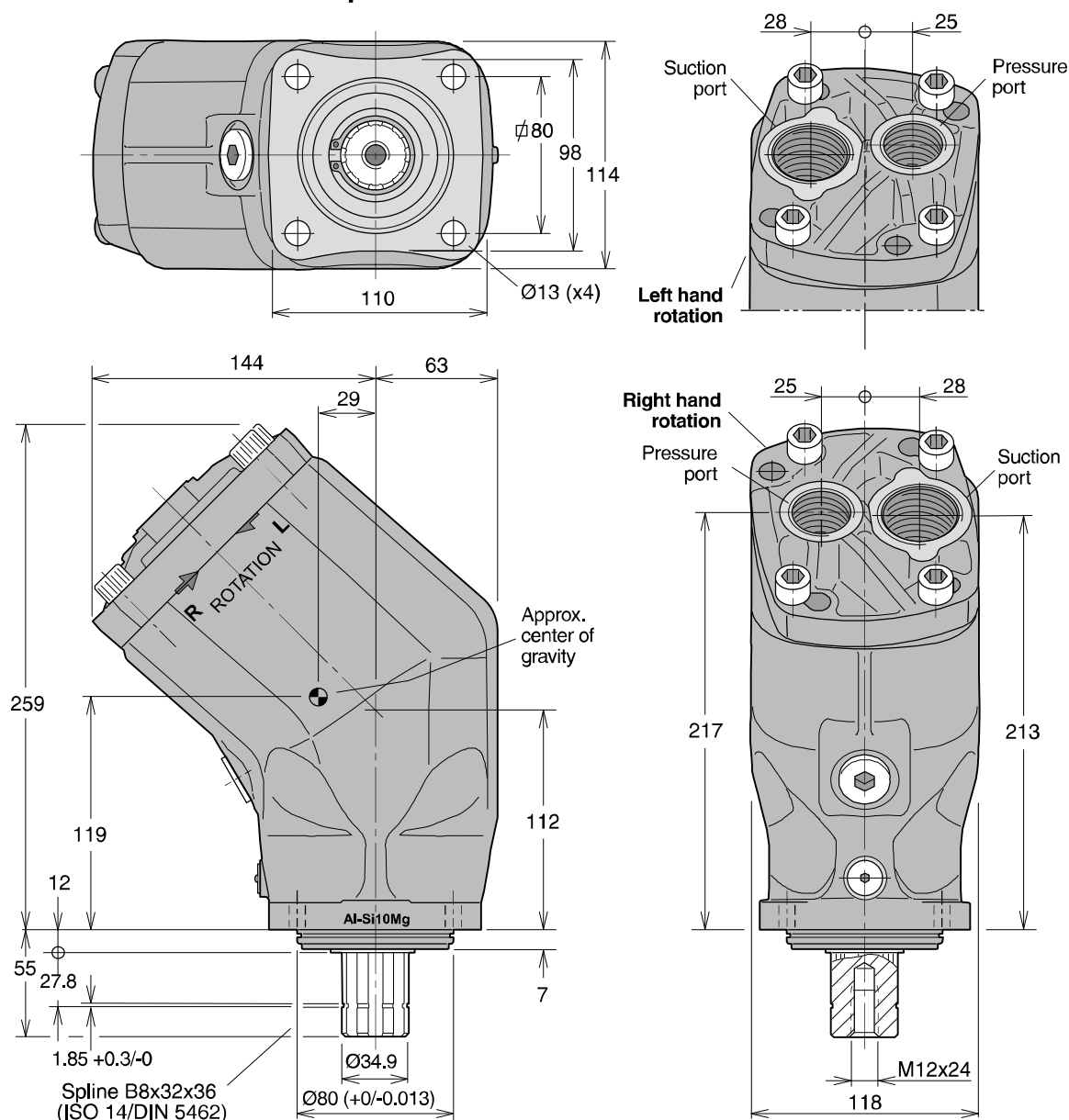
LB Left hand/BSP

Standard versions

Designation	Ordering no.
F1-25-RB	378 4024
F1-25-LB	378 4025
F1-41-RB	378 4040
F1-41-LB	378 4041
F1-51-RB	378 4050
F1-51-LB	378 4051
F1-61-RB	378 4060
F1-61-LB	378 4061

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 11.

F1-81 and -101 with BSP port treads



Port size (all ports are BSP)

F1 frame size	Pressure port ¹⁾	Suction port
-81	1"	1 1/4"
-101	1"	1 1/4"

Ordering code

Example: **F1- 81 - RB**

F1 frame size **25, 41, 51, 61, 81 or 101**

Shaft rotation/port threads **RB** Right hand/BSP
LB Left hand/BSP

Standard versions

Designation	Ordering no.
F1-81-RB	378 4080
F1-81-LB	378 4081
F1-101-RB	378 4100
F1-101-LB	378 4101

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See chapter 11.

F1 Pump

F1-SAE



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Specifications

Frame 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⁾				
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 [bar]				
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

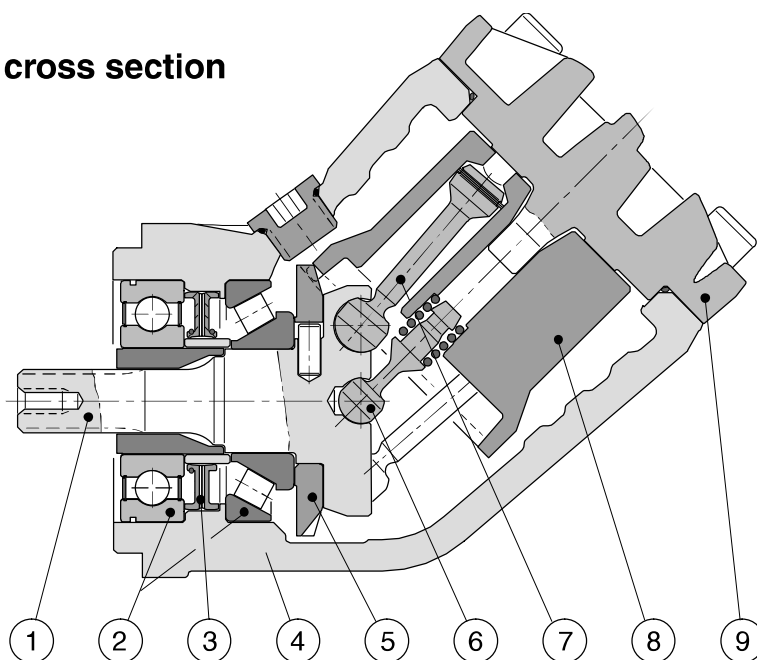
1) Theoretical values

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

Dimensions in mm [*inches*]