

F3 Pump



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F3-81 and -101, ISO Specifications

Frame size F3-	81	101
Displacement [cm ³ /rev]	81.6	102.9
Max flow ¹⁾ [l/min]	180	216
Max operating pressure [bar]	400	400
Shaft speed [rpm]		
- short circuited pump (low press.)	2300	2300
- max selfpriming speed ²⁾	2200	2100
Torque ¹⁾ [Nm]	518	653
Max input power ³⁾ [kW]	105	126
Weight [kg]	16.7	16.7

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) Max 6 seconds in any one minute.

NOTE: For noise level information, contact Parker Hannifin.

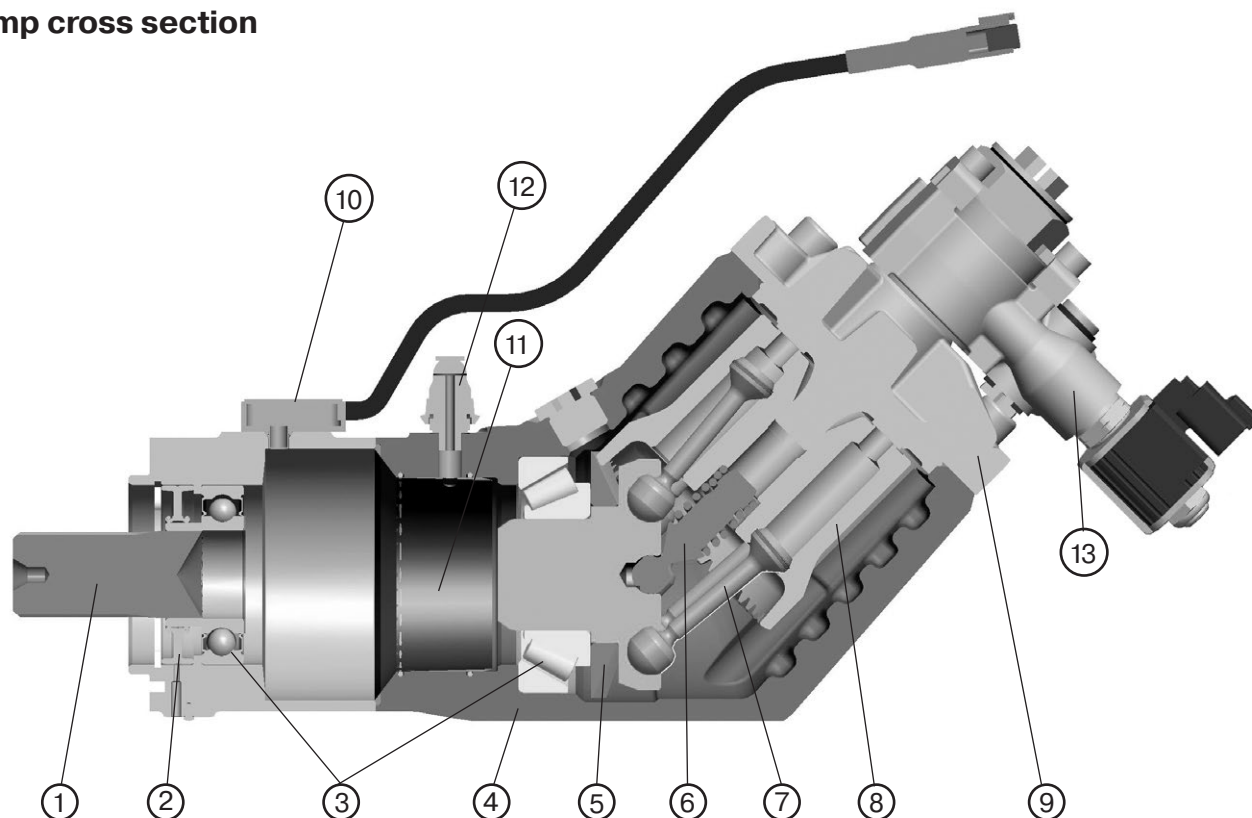
BPV-F3 Bypass valve 12 or 24 VDC Without manual override

Bypass valve, type	BPV-F3
Max pressure, continuous	350 bar
intermittent	400 bar
Solenoid voltage	12 or 24 VDC,
Power requirement	14 W
Operating mode	Activated solenoid: Check valve closed

Accessories / Spare Parts see page 64

- As the BPV valve is symmetrical, it can be 'turned 180°' to prevent interference with chassis components; it can be utilised for either left hand or right hand pumps.
- The valve function must only be activated or released (by means of the 24 VDC solenoid) at no-load (below 20 bar) system pressure.

Pump cross section



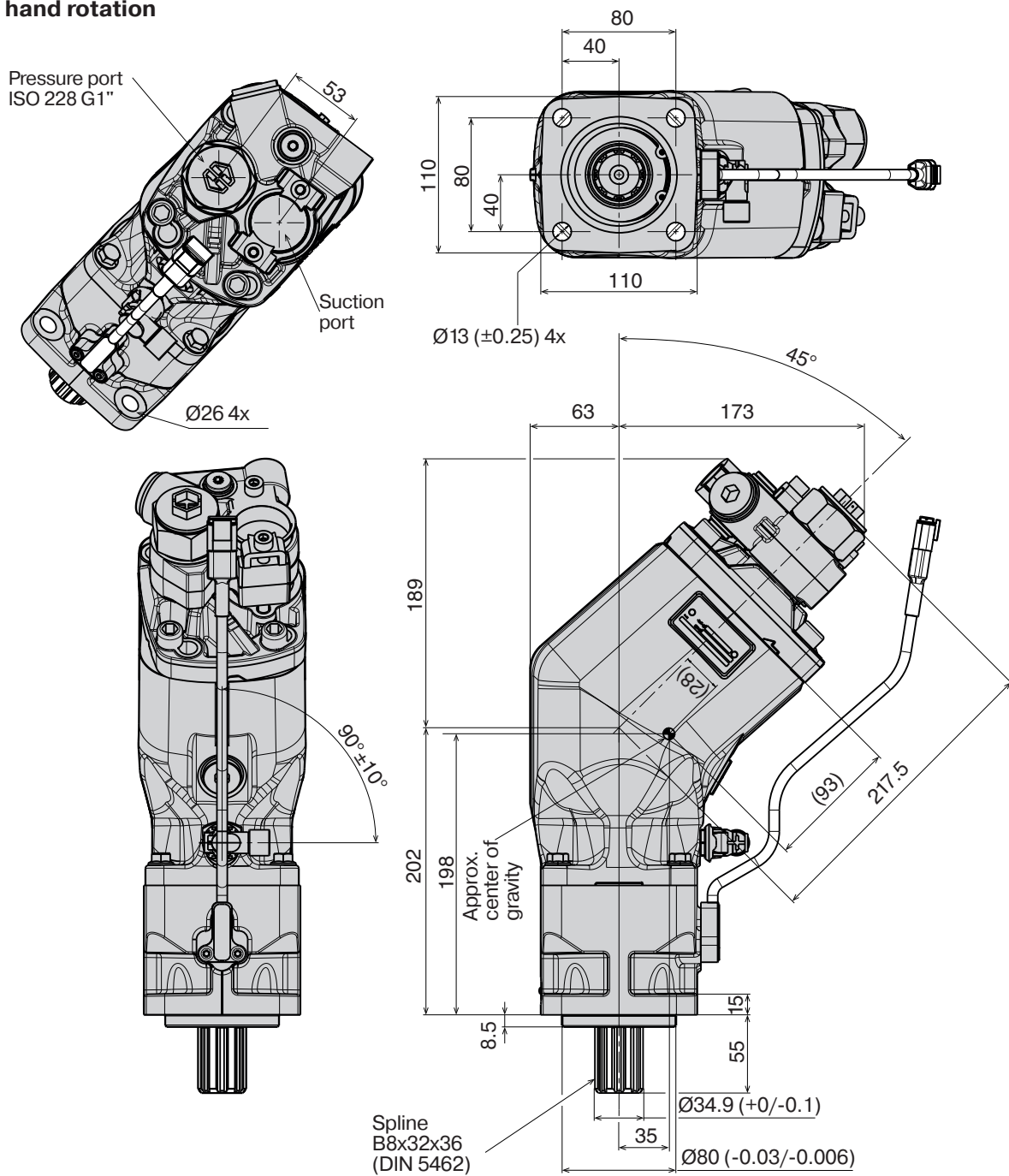
- 1. Input shaft
- 2. Shaft seals
- 3. Bearings
- 4. Housing

- 5. Timing gear
- 6. Barrel support
- 7. Piston with piston ring
- 8. Cylinder barrel

- 9. End cap
- 10. Position sensor
- 11. Air cylinder
- 12. Air fitting

- 13. Bypass Valve

F3-81 and -101
Right hand rotation



Port size

F3 frame size	Pressure port ¹⁾
-81	1"
-121	1"

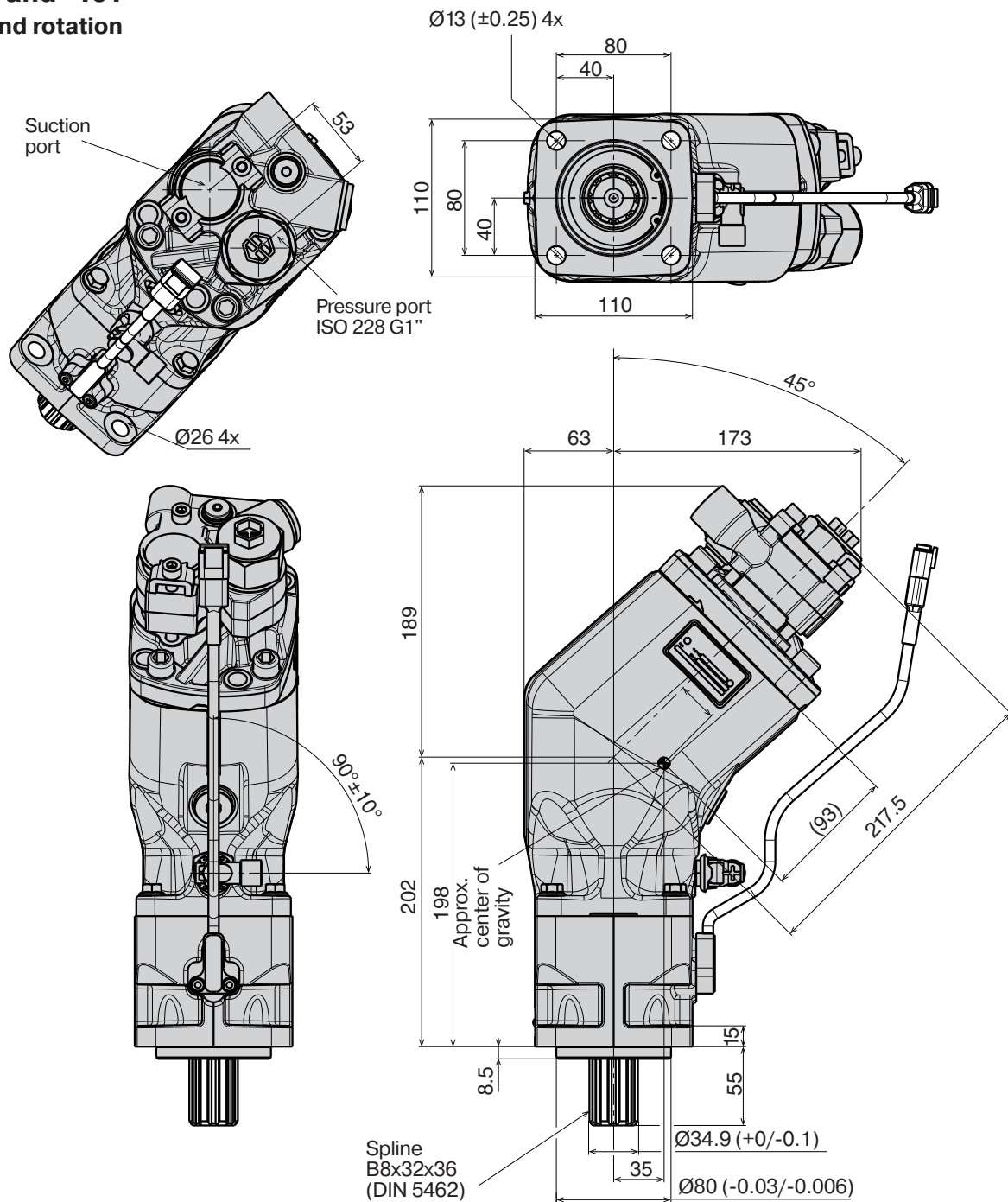
¹⁾ BSP thread (fitting not included).

Standard versions

Designation	Ordering no. 24 VDC	Ordering no. 12 VDC
F3-81-R-	372 0091	3720382
F3-101-R-	372 0093	3720384

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See page 57ff.

F3-81 and -101
Left hand rotation



Port size

F3 frame size	Pressure port ¹⁾
-81	1"
-121	1"

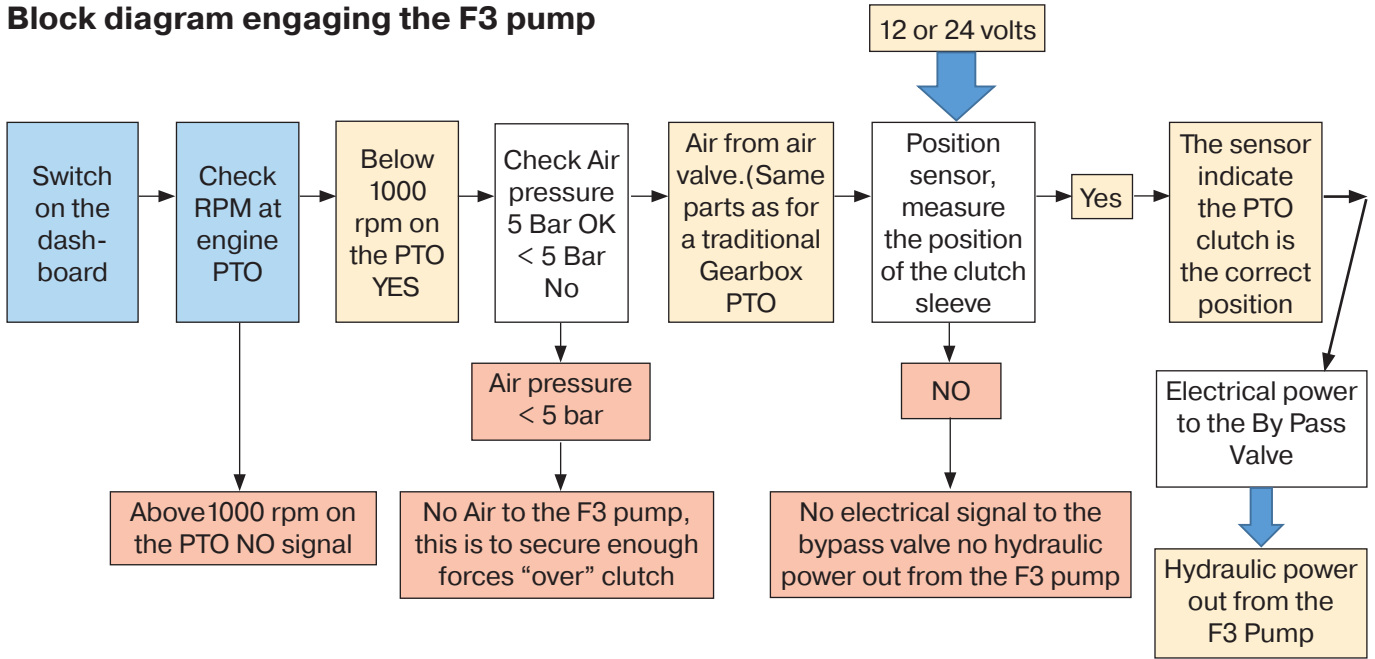
¹⁾ BSP thread (fitting not included).

Standard versions

Designation	Ordering no. 24 VDC	Ordering no. 12 VDC
F3-81-L-	372 0092	3720383
F3-101-L-	372 0094	3720385

NOTE: The pump **does not** include a suction fitting; it must be ordered separately. See page 57ff.

Block diagram engaging the F3 pump



Product Demand

- Max engine speed before the F3 can be engaged (max shaft speed during engagement is 1000 rpm)
- Air pressure > 5 bar before the clutch can start to engage the pump

Interface

