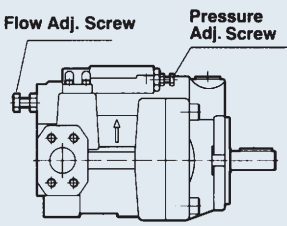
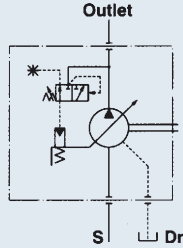
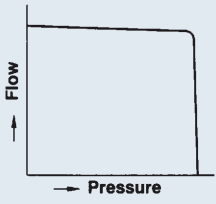
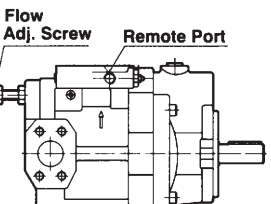
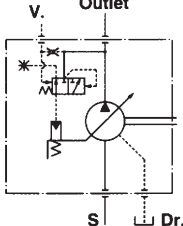
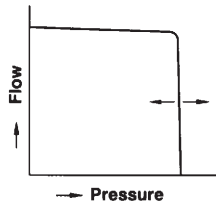
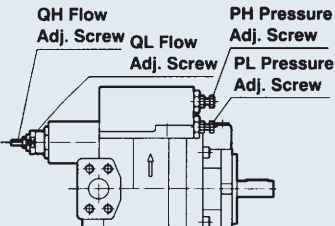
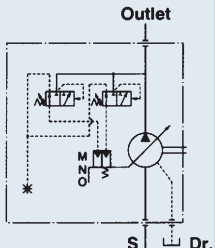
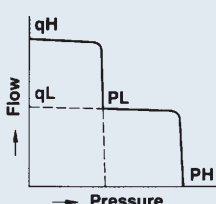
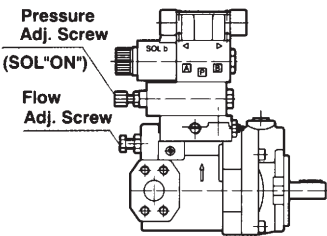
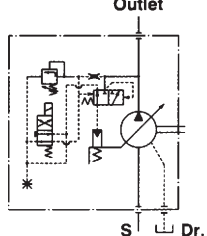
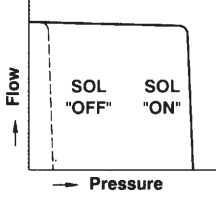
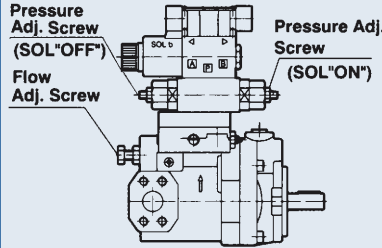
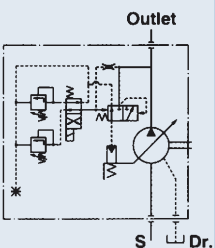
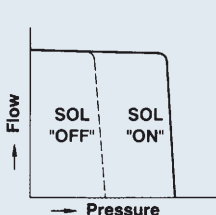
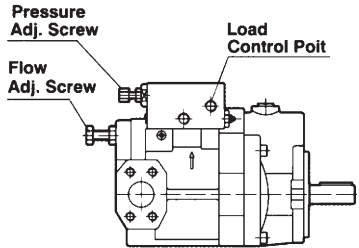
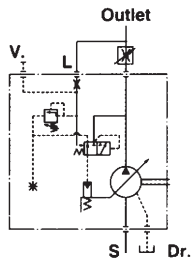
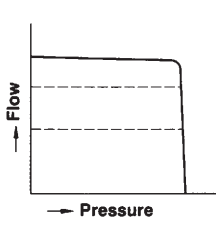


PVS, PZS SERIES VARIABLE VOLUME PISTON PUMP

Control Types

Type	External View	JIS Symbols	Characteristics	Description
N				Pressure Compensating Type (Manual) - When the pressure reaches the value set with the compensator, the flow is reduced automatically and the set pressure is maintained. - The pressure and flow are controlled manually.
P				Remote Pressure Control Type - The pressure can be controlled according to the pilot pressure. - The flow can be controlled manually.
NQ				Two Pressure-Two Flow Control Type By means of the sequence valve, two stage flow rate can be obtained and each flow rate has the different pressure eventually enabling energy savings.
RS (RA)				Solenoid Cut-Off Control Type - An unloading solenoid valve is used to minimize the lost energy when the pump output is not required. - Heat generated is very small.
WS (WA)				Two Pressure Cut-Off Control Type By means of "ON" "OFF" control of solenoid valves, two different pressure compensating types can be obtained.
HL				Load Sensing Control - The "HL" compensator is used for load sensing circuits and is a true load sensor. This is the "P" compensator with a pin in the compensator spool. The pin prevents pilot flow from entering the circuit which will eliminate creeping of the load. - The "HL" compensator will let the pump deliver a constant flow rate to the circuit by providing an adjustable ΔP across the customers orifice or valve. The pump will operate at 17.2~27.5 bar (250-400 psi) above "Load pressure".

245 (MAX)

Flow Adj. Screw

Drain
PT3/8"

Key 4.76 $\begin{smallmatrix} +0.01 \\ -0.01 \end{smallmatrix}$

4-M10X16

245 (MAX)

77

49

23

6

25.4

5

55

47.6

22.2

13

153

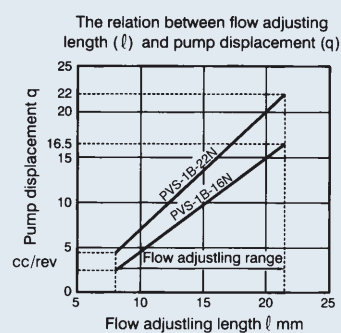
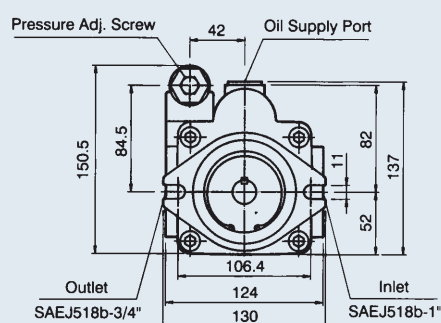
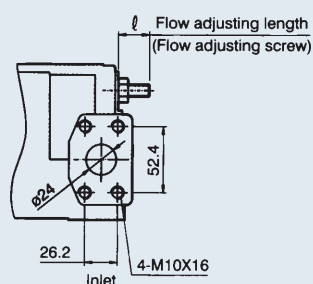
19.05 $\begin{smallmatrix} 0.021 \\ 0.021 \end{smallmatrix}$

21.2 $\begin{smallmatrix} 0.25 \\ 0.25 \end{smallmatrix}$

ø82.55 $\begin{smallmatrix} +0.05 \\ -0.05 \end{smallmatrix}$

62.4

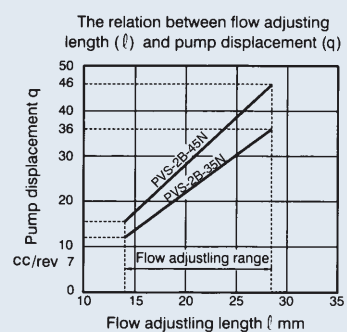
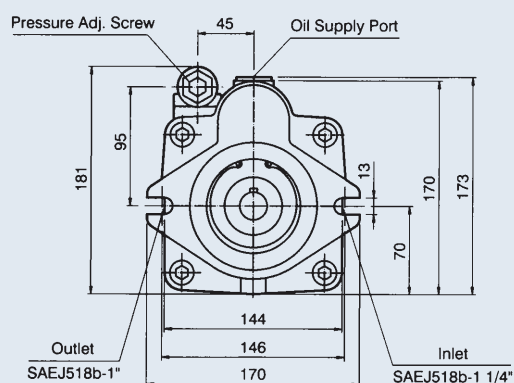
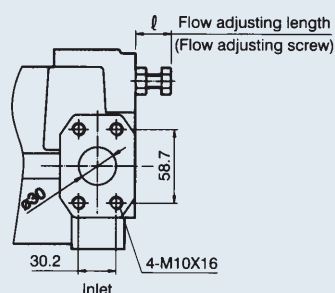
181



Technical drawing of the front view of a 310 (MAX) solenoid valve. The drawing shows a cylindrical body with a solenoid coil on the left and a valve assembly on the right. Key features include a flow adjustment screw, a drain port, and a key for the shaft. Dimensions are provided in millimeters.

Dimensions and features shown in the drawing:

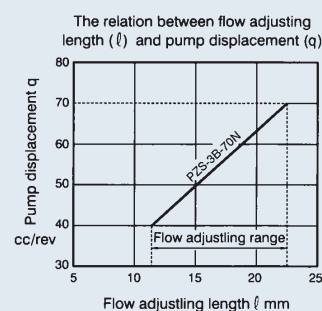
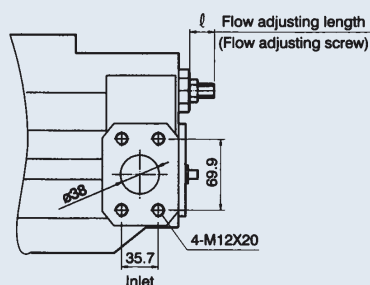
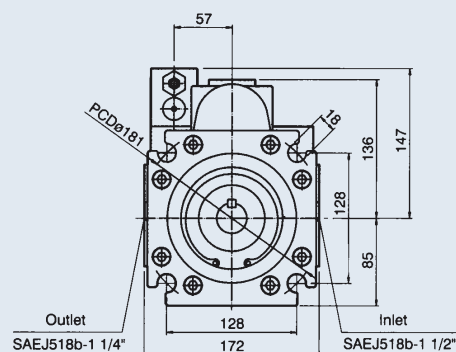
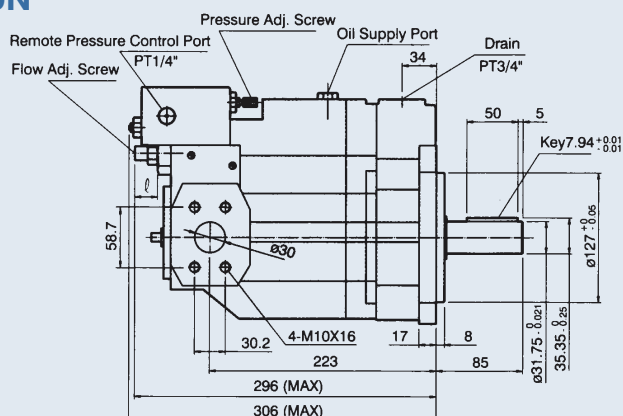
- Overall length: 310 (MAX)
- Distance from coil to drain: 93
- Distance from drain to valve body: 60
- Distance from valve body to shaft: 6
- Distance from shaft to key: 38
- Distance from key to end of shaft: 4
- Distance from coil to flow adj. screw: ℓ
- Drain port: PT1/2"
- Key: 6.35 ± 0.08
- Shaft diameter: $\phi 10.6 \pm 0.06$
- Shaft length: 25 ± 0.25
- Distance from coil to valve body: 52.4
- Distance from valve body to shaft: 26.2
- Distance from shaft to end of valve body: 15
- Distance from coil to end of valve body: 190
- Distance from coil to end of shaft: 222
- Flow adj. screw: 4-M10X16
- Valve body diameter: $\phi 30$



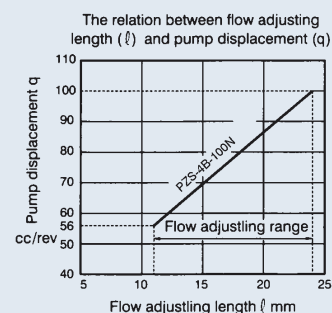
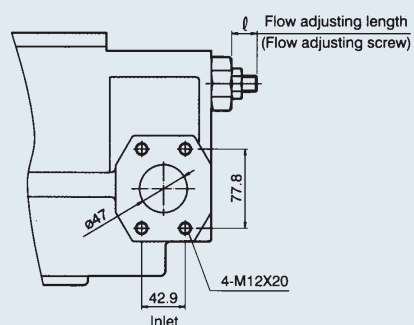
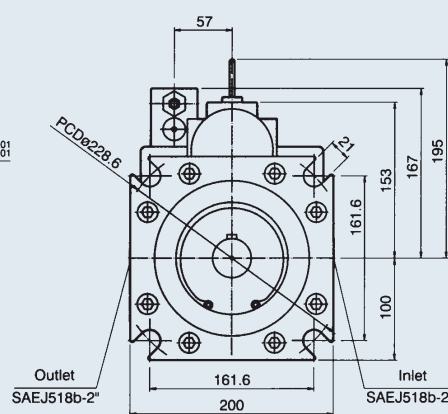
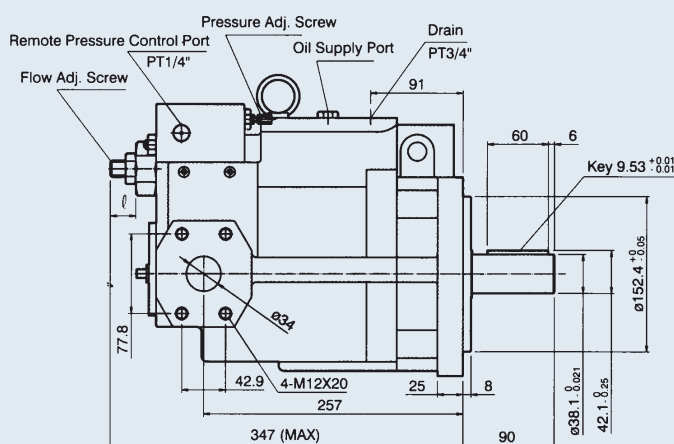
PVS, PZS SERIES VARIABLE VOLUME PISTON PUMP

Dimensions

PZS-3B-70N

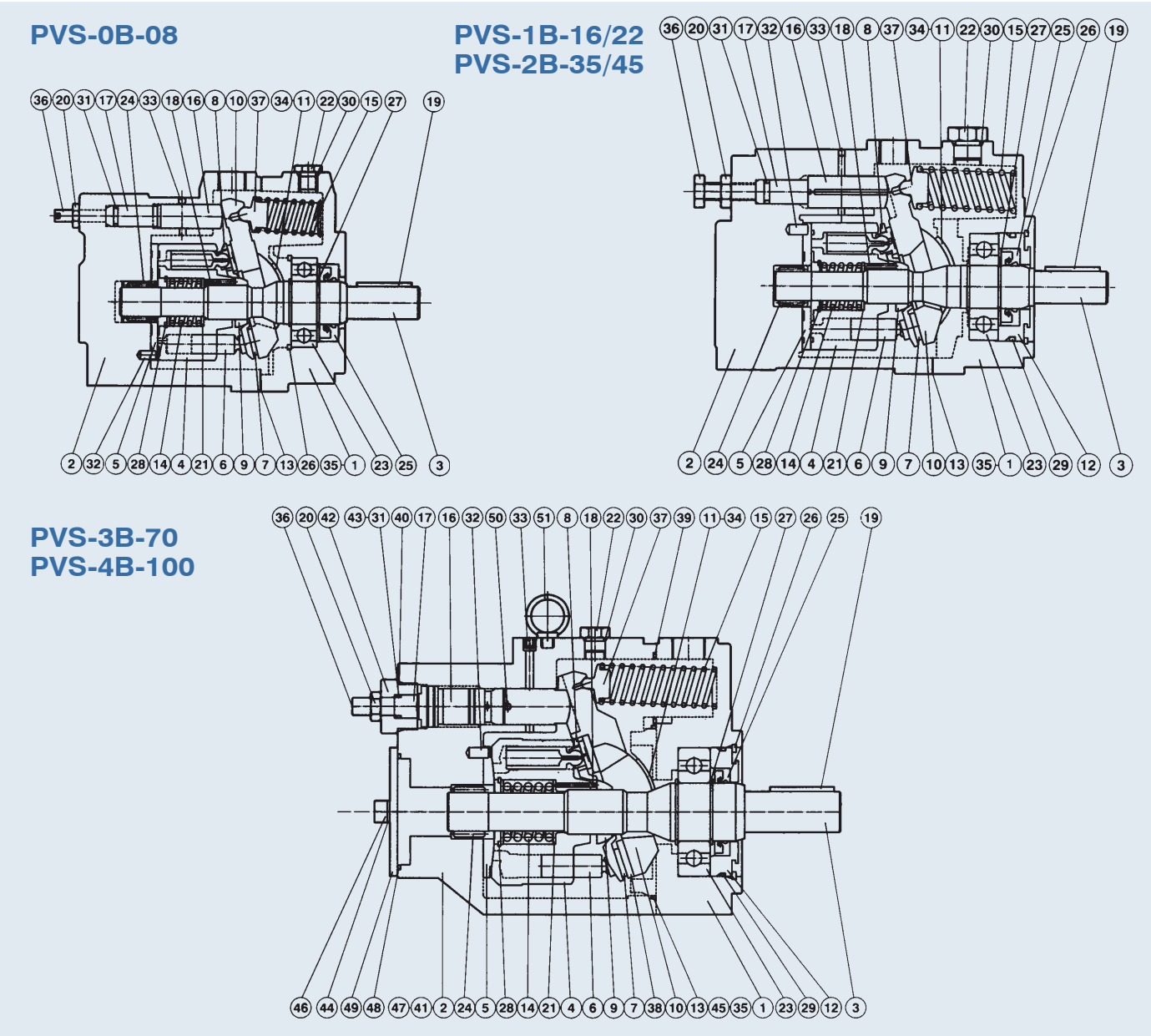


PZS-4B-100N



PVS, PZS SERIES VARIABLE VOLUME PISTON PUMP

Cross section drawing



Parts list

N0.	Part Name	N0.	Part Name	N0.	Part Name	N0.	Part Name	N0.	Part Name
1	Bady	9	Barrel holder	17	Guide	25	Oil seal	33	Expander plug
2	Case	10	Swash plate	18	Needle	26	Snap ring	34	Machine screw
3	Shaft	11	Thrust bush	19	Key	27	Snap ring	35	Machine screw
4	Cylinder barrel	12	Seal holder	20	Nut	28	Snap ring	36	Flow adj. screw
5	Valve plate	13	Gasket	21	Retainer	29	O-ring	37	Spring Holder
6	Piston	14	Spring	22	Plug	30	O-ring		
7	Shoe	15	Spring	23	Ball bearing	31	O-ring		
8	Shoe holder	16	Control Piston	24	Needle bearing	32	Pin		



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