

PVS, PZS, SERIES VARIABLE VOLUME, PRESSURE COMPENSATED PISTON PUMPS

Features

- 143 to 4000 PSI PRESSURE RANGES
- QUIET and EFFICIENT OPERATION
- 3.8 to 85.6 GPM at 1800 RPM
- FAST RESPONSE, APPROXIMATELY 60ms on stroke, 90ms off stroke
- OPTIONAL COMPENSATORS



PVS SERIES



PZS SERIES

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PVS SERIES, 3.8 to 21.4 GPM @ 1800 RPM/3000 PSI MAX.	P-46
PZS SERIES, 33.3 to 85.6 GPM @ 1800 RPM/4000 PSI MAX.	P-57

PZS Series

Variable Volume Piston Pump

Features

1) High pressure and high efficiency.

These pumps are available in high pressure ranges (up to 28 MPa) with a high operational efficiency.

2) Low noise and low pulsation.

These pumps have been developed for low noise and low pulsation operation using the semi-cylindrical swash plate and an increased number of pistons (from 9 to 11 units).

3) High reliability and long service life.

Optimum pressure balance provided by the spherical valve plate and the use of copper alloy bushings on the piston sliding surface of the cylinder barrel ensure stable operation for a wider operational range.

4) Applicable for multiple-pump layout.

In addition to a single pump layout, PZS Series pumps are applicable for double-pump layout for combination with an IP pump (constant discharge pump) for wider range of applications. Additionally, an adapter kit is available to make a double pump with other pumps (ex. PVS-1B, VDC-1B).

Specifications

Model	Volume [adjustable range] cc/rev	Rated Pressure kgf/cm ² (psi)	Maximum Operating Pressure kgf/cm ² (psi)	Pressure Compensating Range kgf/cm ² (psi)	Drive Speed rpm		Weight kgf (lbs.)
					Min.	Max.	
PZS-3B-70※1-E4481A 3-E4481A 4-E10	(cm^3/rev) 70 (4.27) [45~70] (2.75~4.27)	210 (3000)	280 (4000)	20~70 (286~1000) 20~210 (286~3000) 20~280 (286~4000)	500	1800	37 (81.7)
PZS-4B-100※1-E4481A 3-E4481A 4-E10	100 (6.10) [50~100] (3.05~6.10)	210 (3000)	280 (4000)	20~70 (286~1000) 20~210 (286~3000) 20~280 (286~4000)	500	1800	58 (128.0)
PZS-5B-130※1-E10 3 4	130 (7.93) [50~130] (3.05~7.93)	210 (3000)	250 (3571)	20~70 (286~1000) 20~210 (286~3000) 20~250 (286~3571)	500	1800	86 (189.8)
PZS-6B-180※1-E10 3 4	180 (10.98) [110~180] (6.71~10.98)	210 (3000)	250 (3571)	20~70 (286~1000) 20~210 (286~3000) 20~250 (286~3571)	500	1800	123 (271.5)

Note: 1. Rated pressure = Maximum continuous pressure.

Maximum pressure = Maximum pressure with 1/10 of cycle time or 6 sec.

2. Volume adjustment range is available for N, RS and WS type
Please see P-61 for NQ type.

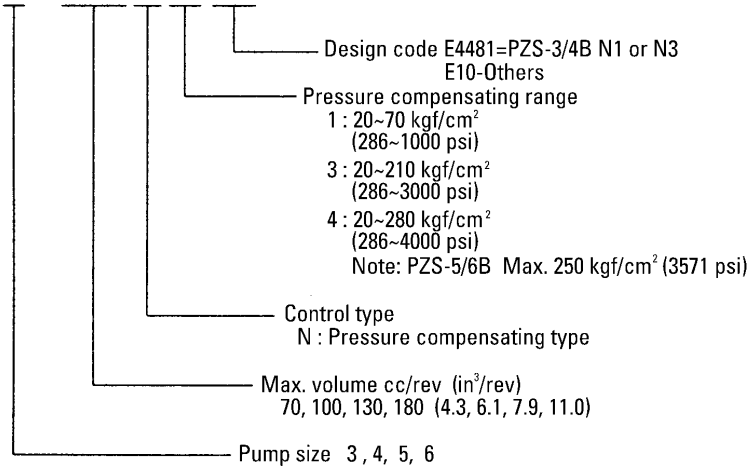
PZS Series

Model Code

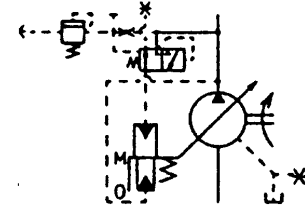
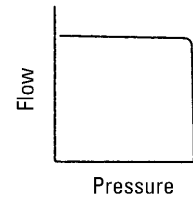
Standard type

Pressure compensating type (N)

PZS-4B-100 N ※-E10



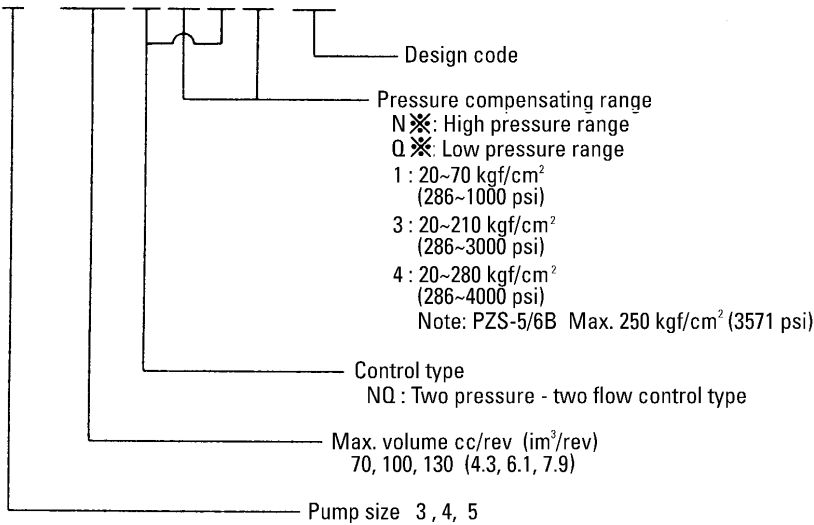
Pressure - Flow curve



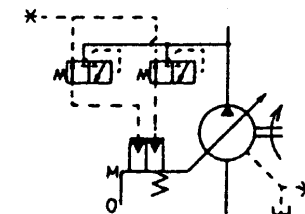
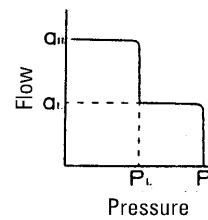
Optional type

Two pressure - two flow control type (NQ)

PZS-4B-100 N ※ Q ※-E10



Pressure - Flow curve

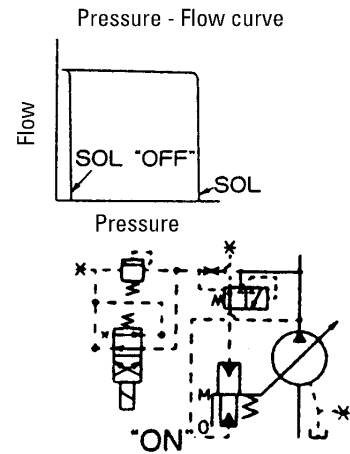
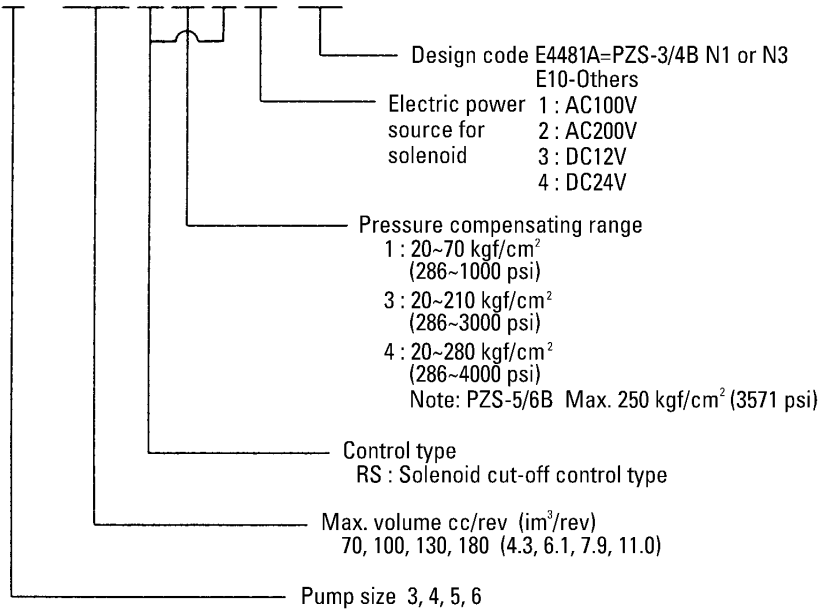


Pumps

PZS Series

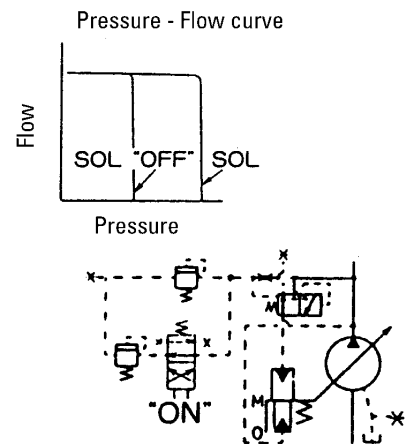
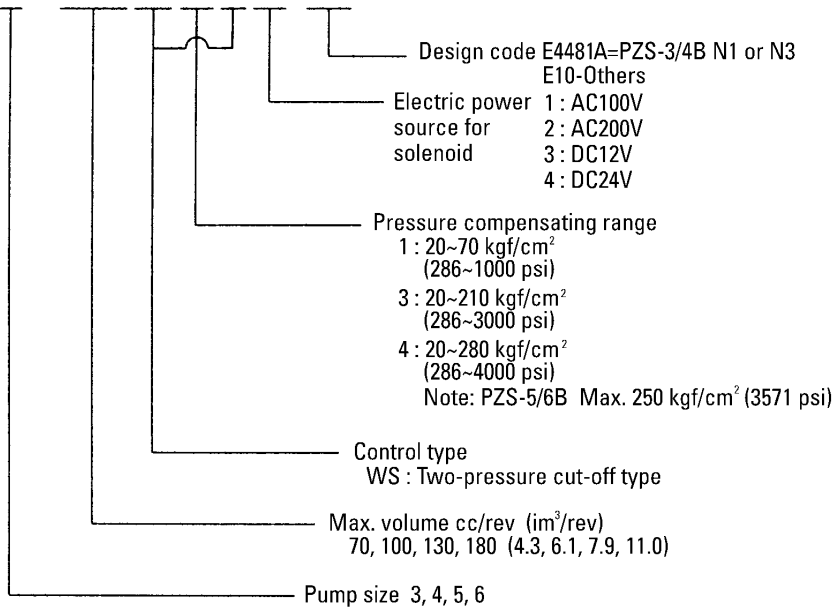
Solenoid cut-off control type

PZS-4B-100 R ※ S ※ -E10



Two pressure cut-off type

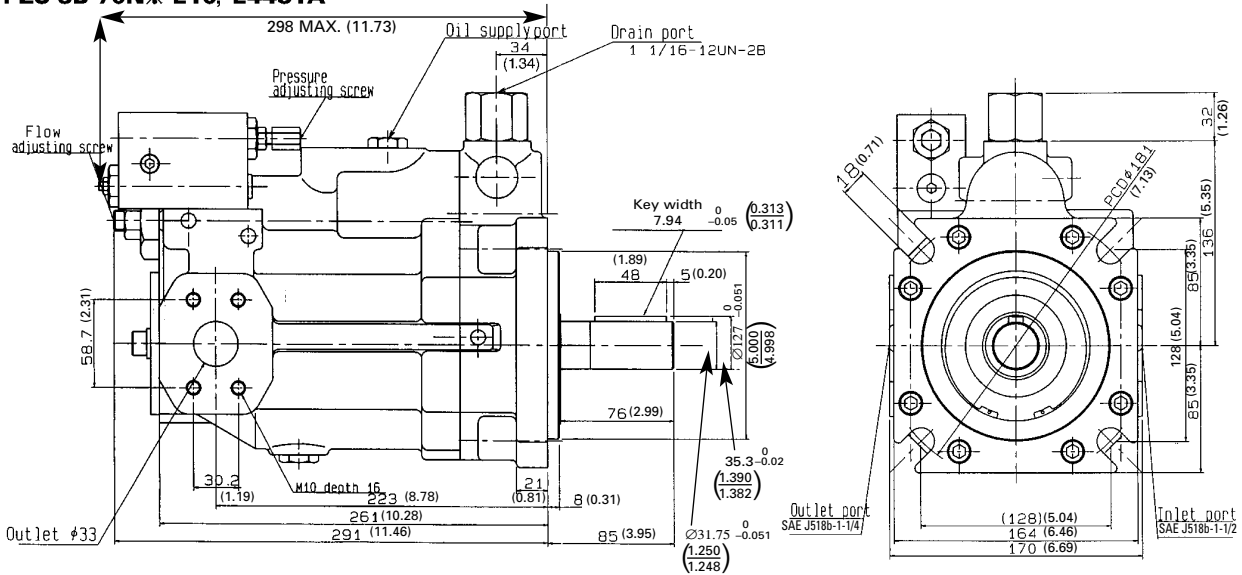
PZS-4B-100 W ※ S ※ -E10



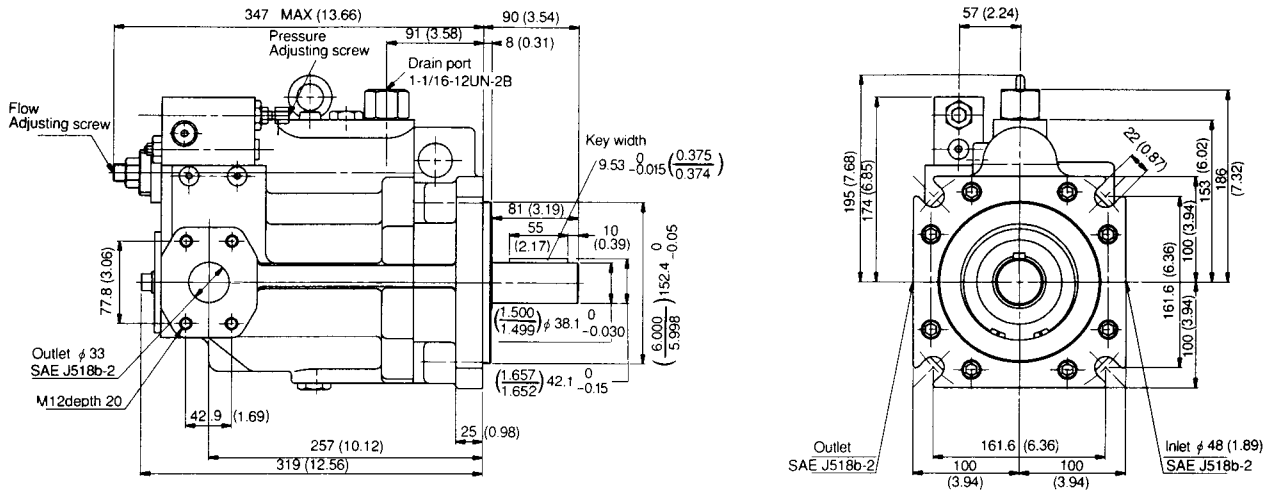
PZS Series

Installation Dimensions mm (inch)

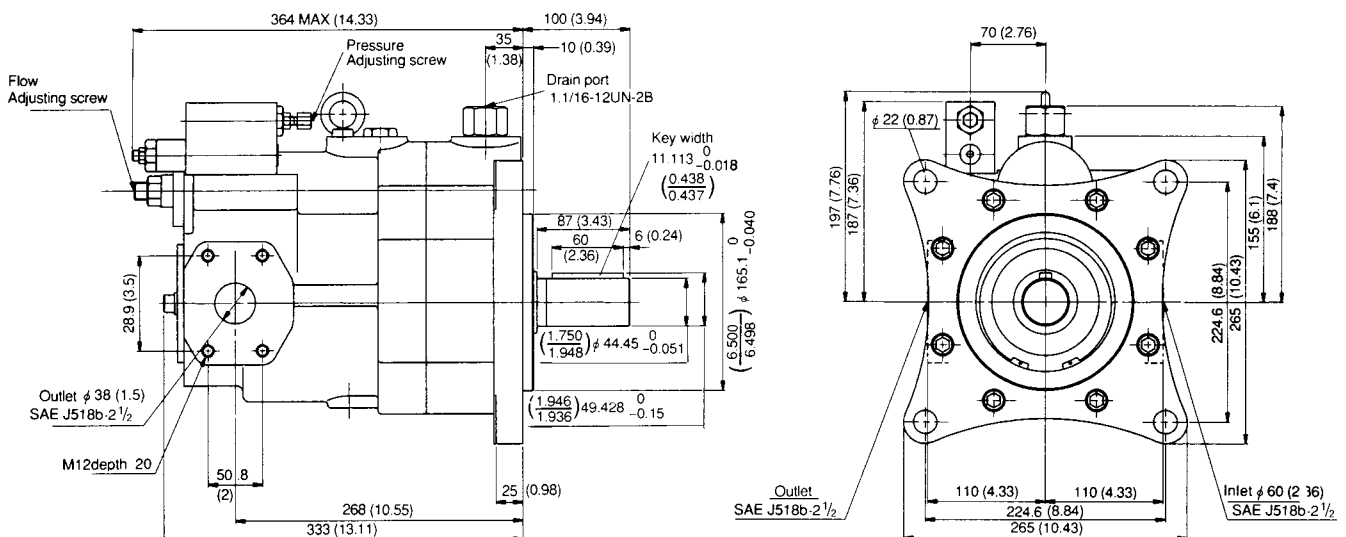
PZS-3B-70N*-E10, E4481A



PZS-4B-100N*-E10, E4481A

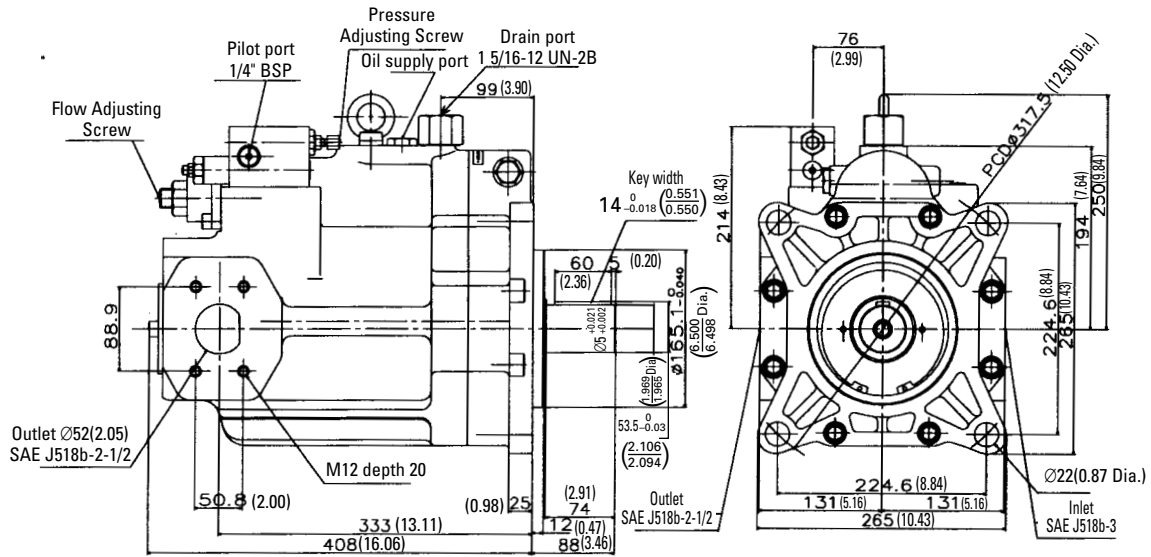


PZS-5B-130N*-E10

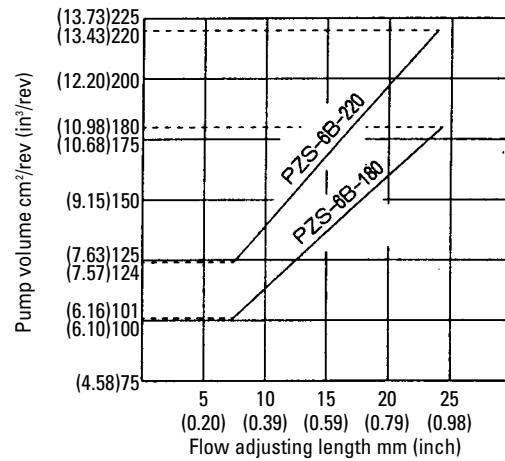
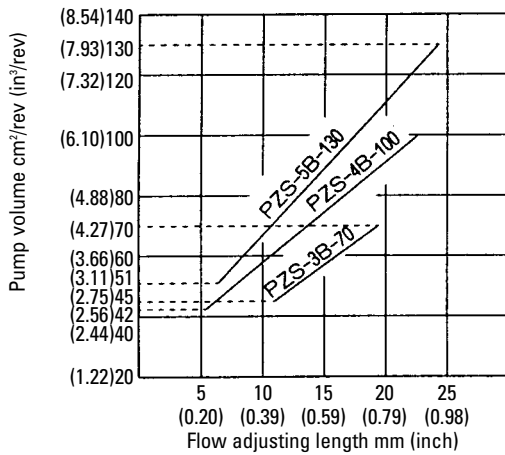


PZS Series

PZS-6B-180N*E10



Flow adjusting length and pump volume

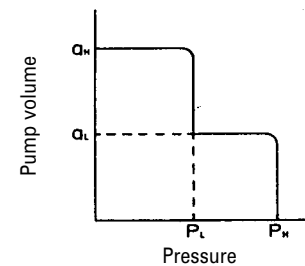


Pump volume adjustable range of NQ (Two pressure-Two flow control type) type

Pump model	Volume adjustable range cm^3/rev (in^3/rev)		φL setting at shipment cm^3/rev (in^3/rev)
	QH note	QL	
PZS-3B-70N*Q*E10	5(0.31) to 70(4.27)	5(0.31) to 40(2.44)	14(0.85)
PZS-4B-100N*Q*E10	16(0.98) to 100(6.10)	5(0.31) to 60(3.66)	20(1.22)
PZS-5B-130N*Q*E10	17(1.04) to 130(7.93)	8(0.49) to 70(4.27)	26(1.59)

Note 1. φH adjustable range can change by φL setting.

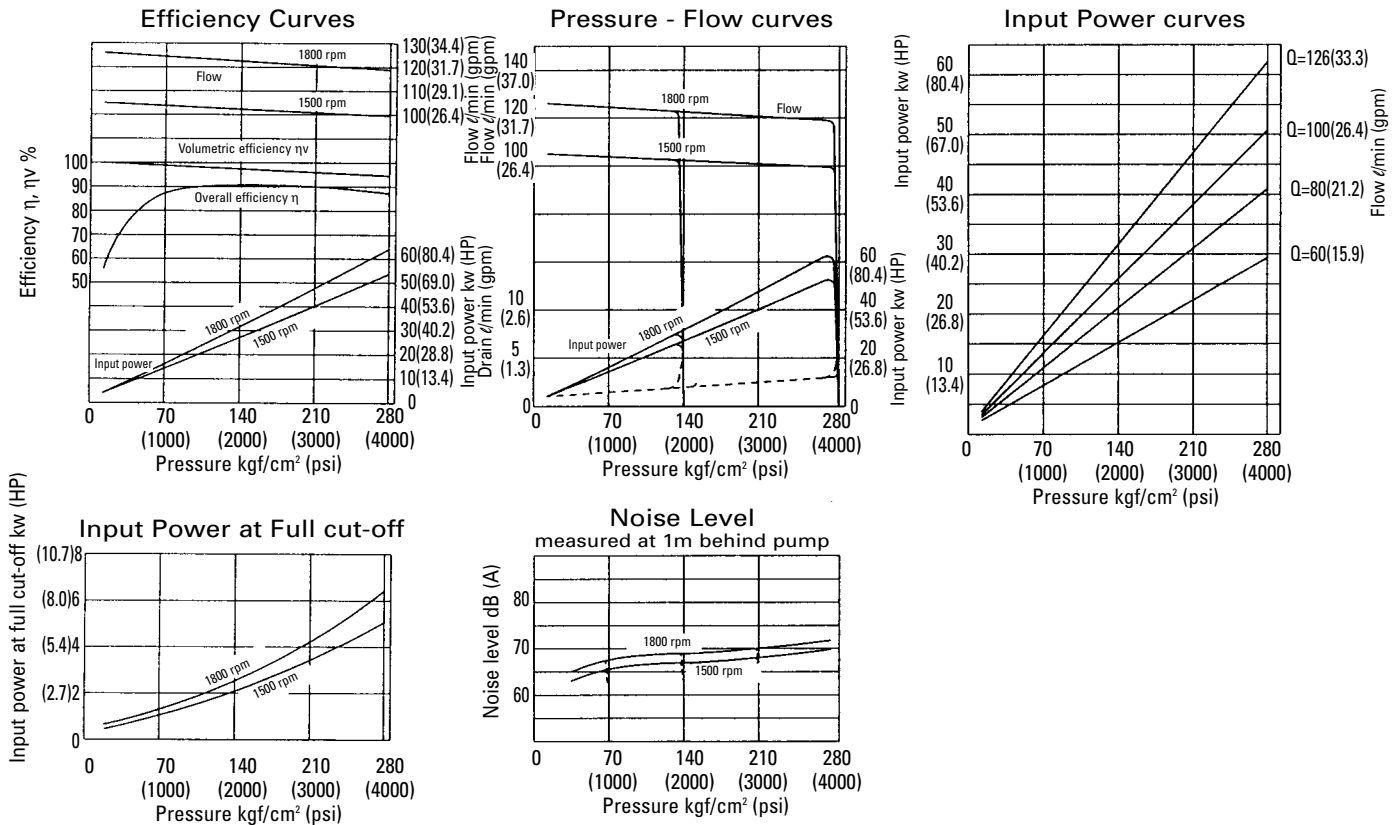
Note 2. Please pay attention to pump efficiency at low flow range. The efficiency at low flow range is worse than high flow range.



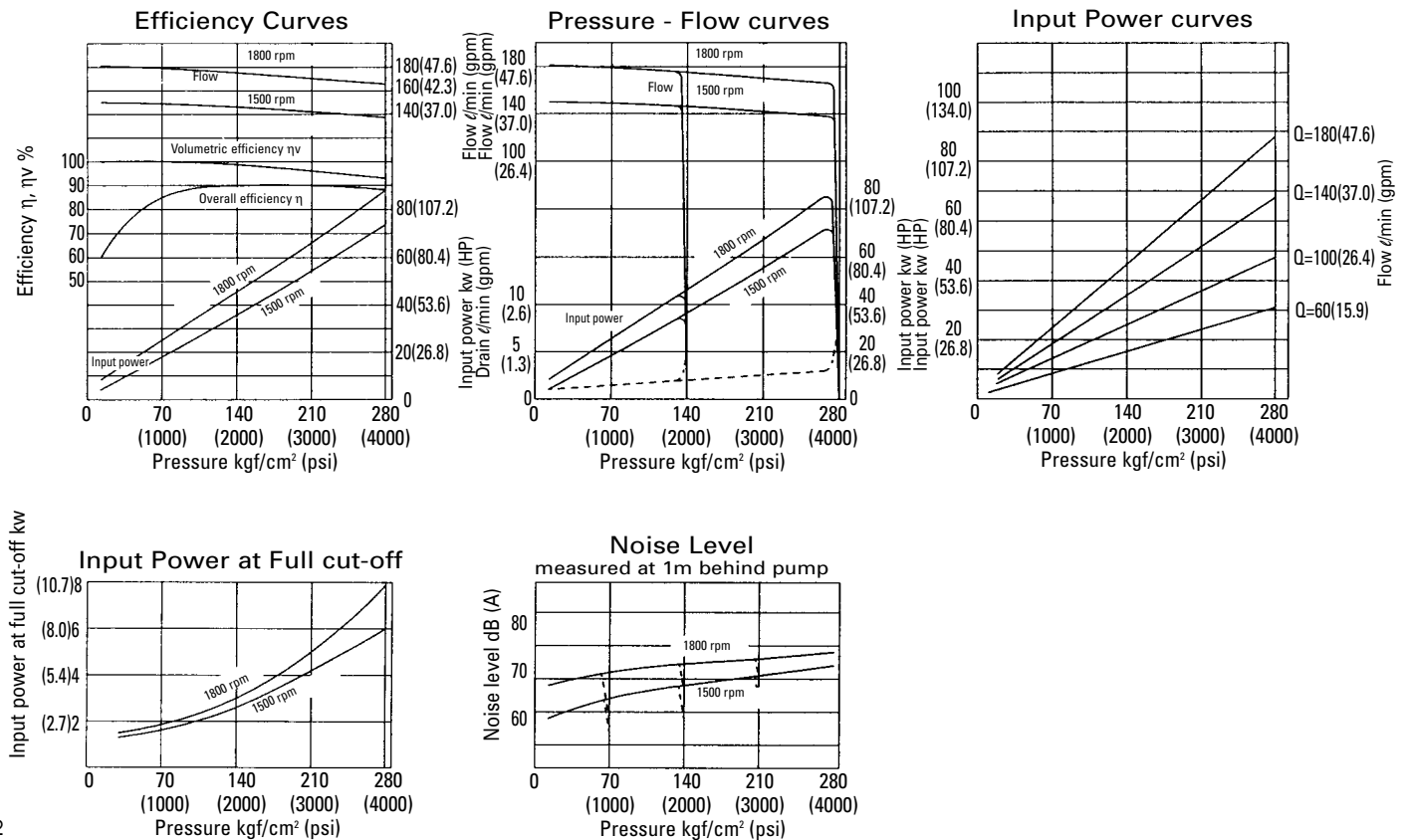
PZS Series

Performance Curves Oil Viscosity = 46 cSt

PZS-3B-70N* E4481A
E10



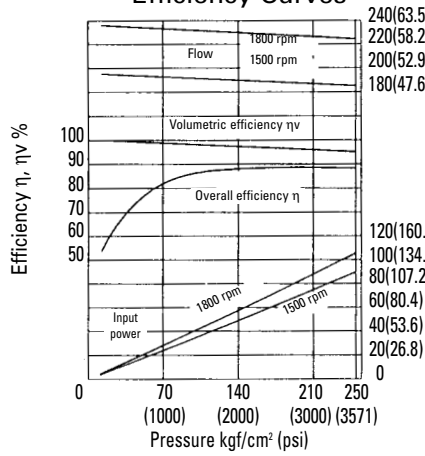
PZS-4B-100N* E4481A
E10



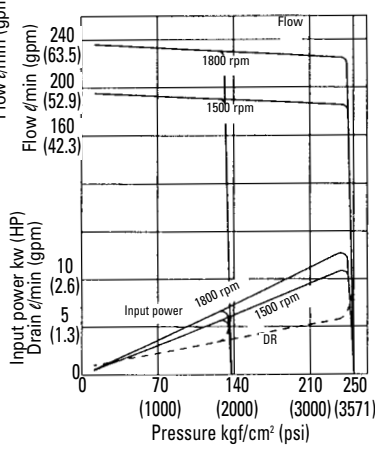
PZS Series

PZS-5B-130N*-E10

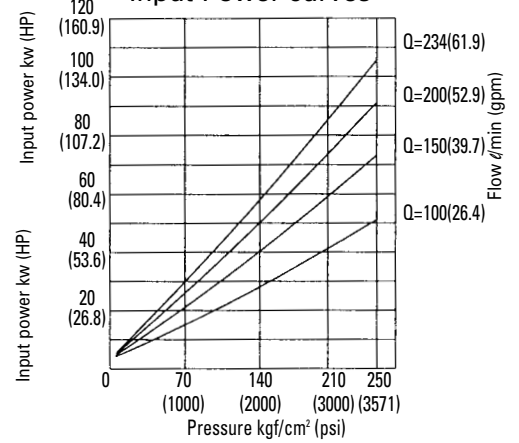
Efficiency Curves



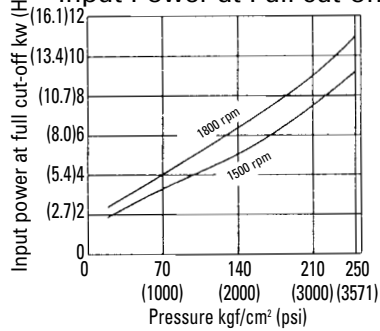
Pressure - Flow curves



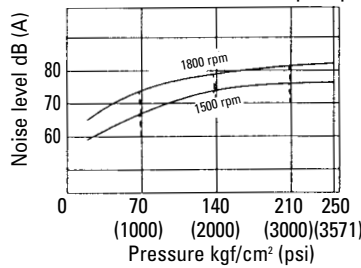
Input Power curves



Input Power at Full cut-off

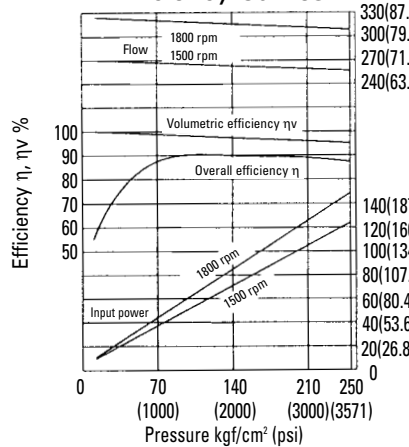


Noise Level measured at 1m behind pump

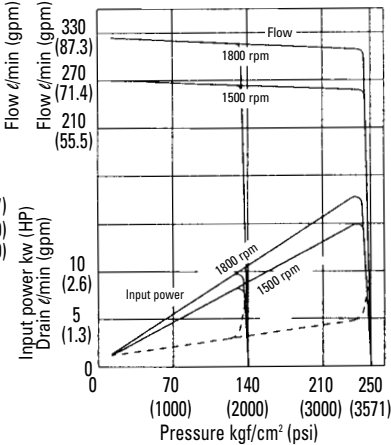


PZS-6B-180N*-E10

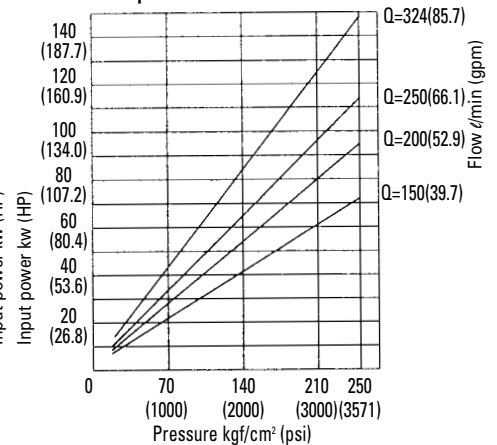
Efficiency Curves



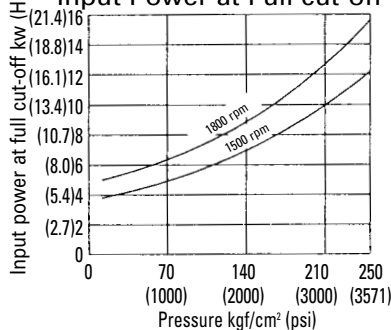
Pressure - Flow curves



Input Power curves



Input Power at Full cut-off



Noise Level measured at 1m behind pump

