

Oilgear

PVWJ Open Loop Pumps



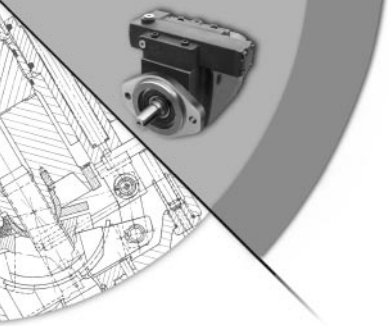


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PERFORMANCE ASSURANCE – STANDARD WITH EVERY OILGEAR PUMP



Oilgear
PERFORMANCE
ASSURANCE

Every Oilgear product is shipped to you with our Performance Assurance — a corporate commitment to stay with your installation until our equipment performs as specified.

Hydraulic equipment and systems have been Oilgear's primary business since 1921. For decades, we have developed hydraulic techniques to meet the unique needs and unusual fluid power problems of machinery builders and users worldwide, matching fluid power systems to a tremendous range of applications and industries. Our exclusive Performance Assurance program is built upon that strong foundation.

As a customer, you also benefit from access to Oilgear's impressive technical support network. You'll find factory trained and field-experienced application engineers on staff at every Oilgear facility. They are backed by headquarters staff who can access the records and knowledge learned from decades of solving the most difficult hydraulic challenges.

When your design or purchase is complete, our service is just beginning. If you ever need us, our Oilgear engineers will be there, ready to help you with the education, field service, parts and repairs to assure that your installation runs smoothly — and keeps right on running.

Oilgear Performance Assurance

PVWJ Open Loop Pumps

Oilgear Features and Benefits

Six different control types

- Field interchangeability without disconnecting from drive or system piping

Cylinder mounted polymerous journal bearing

- Allows operation with special fluids
- Provides infinite bearing life
- Permits compact design

Hardened cylinder surface running on hardened valve plate ("hard-on-hard")

- Provides greater resistance to contamination
- Provides longer life
- Allows operation with special fluids

SAE keyed or SAE splined shaft

- Heavy duty belt drive shafts

Quiet valve plate design

- Minimizes noise at typical electric motor speeds
- Rear or side port connections available

Sealed front shaft bearing

- Allows operation with special fluids
- Permits side loading

Thru-shaft availability

- Allows for multiple pump installation from a single drive shaft
- Allows pumps to drive auxiliary devices

Patented pressure lubricated swashblock design

- Provides high performance for high-pressure high-cylinder operation

Steel shoes with specially treated faces for increased fluid retention, running on hardened swashblock surface

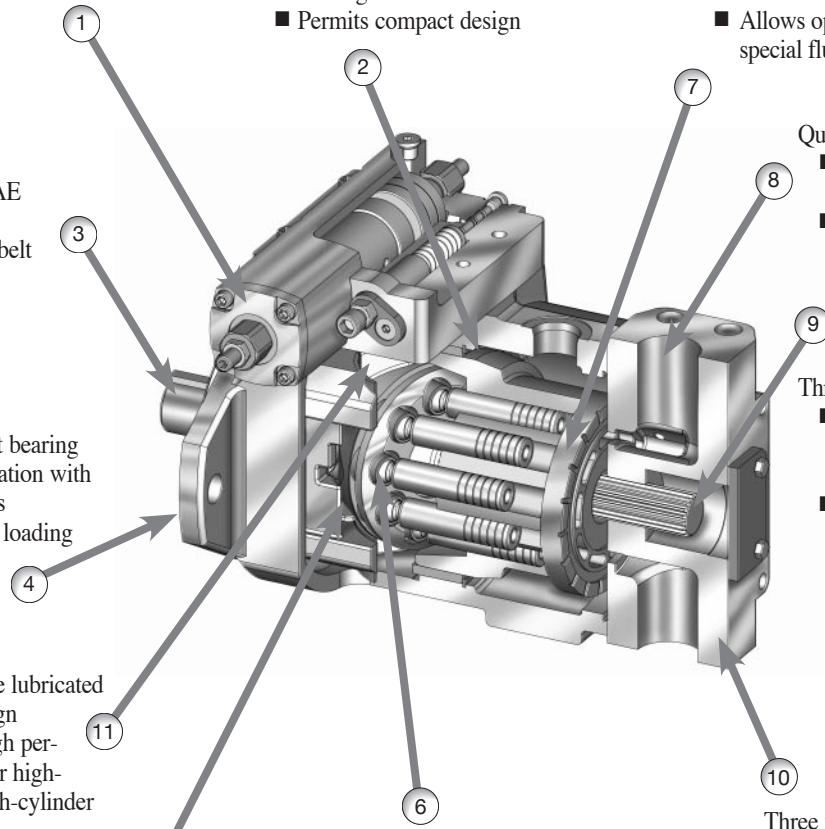
- Provides a higher degree of contamination resistance
- Allows higher pressure operation with long life
- Allows operation with water base, low viscosity or other special fluids
- Provides longer life

Three frame sizes

- Ten capacity ranges allowing greater flexibility to selectively match pressure and capacity
- Low flow/high pressure to low pressure/high flow from the same frame sizes

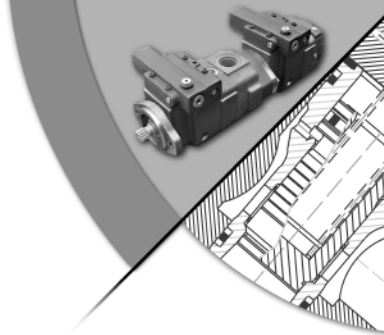
Special polymerous saddle bearings

- Allows running on low viscosity or other special fluids
- Permits consistent control reaction
- Eliminates troublesome yoke bearings
- Provides long life



SPECIFICATIONS

SINGLE PUMP



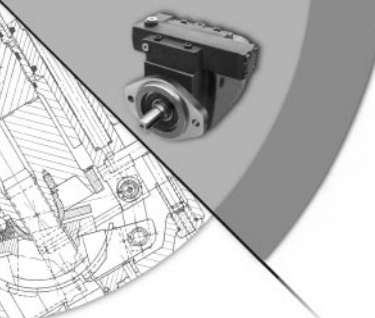
Based on 150 – 300 ssu viscosity fluid

FRAME SIZE	UNIT SIZE	THEORETICAL MAXIMUM DISPLACEMENT		RATED CONTINUOUS PRESSURE		MAXIMUM PRESSURE		FLOW RATE at 1800 rpm, rated continuous pres. & 14.7 psia (1.0 bar) inlet condition		MINIMUM INLET PRESSURE* psia (bar)			MAXIMUM SPEED*	POWER INPUT at rated cont. pres. & 1800 rpm	
		in ³ /rev	ml/rev	psi	bar	psi	bar	gpm	l/min	1200rpm	1500rpm	1800rpm	rpm	hp	kw
A	011	0.66	10,8	5000	344,8	5800	400,0	4.2	15,9	5.4 (.37)	5.7 (.39)	6.1 (.42)	3000	16.3	12,2
	014	0.86	14,1	4000	275,9	4500	310,3	5.9	22,4	5.5 (.38)	5.9 (.41)	6.4 (.44)	3000	17.7	13,2
	022	1.35	22,1	3000	206,9	3500	241,4	9.5	36,0	5.5 (.38)	6.0 (.41)	7.0 (.48)	3000	20.2	15,1
B	025	1.55	25,4	5000	344,8	5800	400,0	10.9	41,3	7.0 (.48)	7.3 (.50)	8.2 (.57)	3000	36.5	27,2
	034	2.06	33,8	3500	241,4	4000	275,9	14.7	55,7	7.0 (.48)	7.6 (.52)	8.4 (.58)	3000	35.5	26,5
	046	2.83	46,4	2500	172,4	3000	206,9	20.6	78,1	7.2 (.50)	7.9 (.54)	9.0 (.62)	2400	35.0	26,1
C	064	3.88	63,6	5000	344,8	5800	400,0	27.4	103,8	7.6 (.59)	8.5 (.59)	9.5 (.66)	2400	95.1	70,9
	076	4.67	76,5	3500	241,4	4000	275,9	33.7	127,7	8.0 (.55)	8.6 (.59)	9.6 (.66)	2400	80.4	60,0
	098	6.00	98,3	2500	172,4	3000	206,9	43.3	164,1	7.6 (.52)	8.6 (.59)	9.8 (.68)	2400	74.1	55,3
	130	7.94	130,2	1500	103,4	2000	137,9	58.2	220,3	8.0 (.55)	9.3 (.64)	14.5 (1,00)	1800	64.0	48,8

* For higher speeds, see Suction Curves on pages 19-21.
Higher speeds available – consult factory.

Note: Minimum speed 600 rpm.

These units are designed to run with fluids in the 65 to 2000 SSU range.



PUMP COMBINATIONS

Two or more Oilgear axial piston variable delivery pumps can be integrally coupled together and driven from a single shaft.

Pump deliveries can be combined for large volume circuits or deliveries can be used individually. See page 5 for individual pump ratings.

The front pump can be used at full rated output while the rear pumps are governed by the thru-shaft torque listed in the table below.

THRU-SHAFT SIZING/COMPATIBILITY

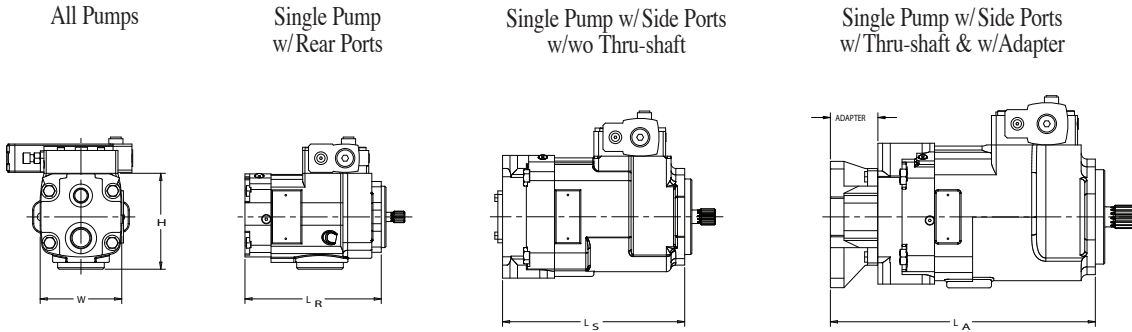
PISTON PUMP FRAME SIZE	PUMP SIZE	INPUT TORQUE								ALLOWABLE THRU- SHAFT TORQUE	
		RATED PRESSURE		INPUT TORQUE (T _R) @ RATED PRESSURE		PEAK PRESSURE		INPUT TORQUE @ PEAK PRESSURE			
		psi	bar	in-lb	Nm	psi	bar	in-lb	Nm	in-lb	Nm
A	011	5000	344,8	570.7	64,3	5800	400,0	662.0	74,6	1290	145,1
	014	4000	275,9	612.7	70,0	4500	310,3	689.3	77,6		
	022	3000	206,9	717.8	80,8	3500	241,4	837.4	94,3		
B	025	5000	344,8	1306.0	147,1	5800	400,0	1515.0	170,6	2250	253,1
	034	3500	241,4	1278.0	143,9	4000	275,9	1460.6	165,5		
	046	2500	172,4	1243.0	140,0	3000	206,9	1450.2	163,3		
C	064	5000	344,8	3263.3	367,5	5800	400,0	3785.3	426,3	6400	720,0
	076	3500	241,4	2871.1	323,3	4000	275,9	3281.3	369,5		
	098	2500	172,4	2661.0	299,7	3000	206,9	3104.5	349,6		
	130	1500	103,4	2100.8	236,6	2000	137,9	2801.1	315,4		

ACTUAL INPUT TORQUE CALCULATION

$$T_A = T_R \times \frac{\text{ACTUAL OPERATING PRESSURE}}{\text{RATED PRESSURE}} \times \frac{\% \text{ FULL DELIVERY}}{100\%}$$

NOTE: Total input torque to the front unit with the high strength shaft may not exceed the values given in the table. The torque may be divided between the units in any fashion as long as the total does not exceed the table value. If a triple pump is used, with the second and third units equipped with standard shafts, see Notes (1) and (2) for second and third unit limitations on transmitted torque.

SINGLE PUMP



DIMENSIONS and WEIGHTS W/O CONTROLS

FRAME SIZE	PVWJ PUMP SIZE	HEIGHT		WIDTH		LENGTH						WEIGHT	
		H		W		L _R		L _S		L _A		SINGLE PUMP W/REAR PORTS	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lb	kg
A	011, 014, 022	4.50	114,3	4.32	109,7	7.20	182,9	9.62	244,3	10.94	277,9	32	14,5
B	025, 034, 046	6.11	155,2	5.80	147,3	8.50	215,9	9.63	244,6	12.36	313,9	68	30,9
C	064, 076, 098, 130	7.18	182,4	6.76	171,7	10.44	265,2	11.50	292,1	14.00	355,6	103	46,8

See appropriate data sheet for further details.
All dimensions are approximate. For detailed dimensions, contact your Oilgear representative.

Length Example: SINGLE PUMP

* With rear ports
PVWJ - 034 - A1UV - RSAY - P - 1NNNN
Size 034 (L_R) length = 8.50 inches (215,9 mm)

* With side ports, with or without thru-shaft
PVWJ - 034 - A1UV - RDFY - P - 1NNNN
Size 034 (L_S) length = 9.63 inches (244,6 mm)

* With side ports, with thru-shaft adapter
PVWJ - 034 - A1UV - RDFY - P - 1NNNN
Size 034 (L_A) length = 12.36 inches (313,9 mm)

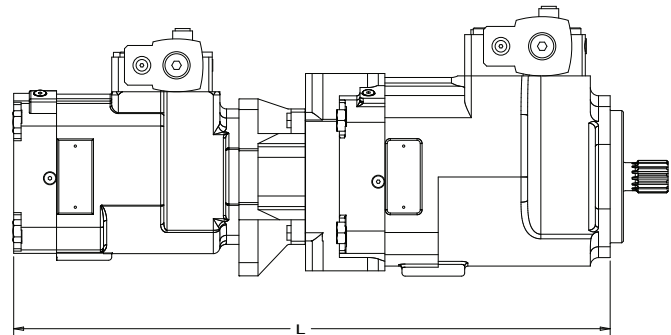
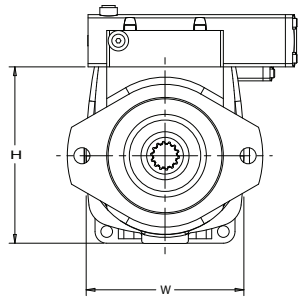
STANDARD AUXILIARY GEAR PUMPS

DIMENSIONS and WEIGHTS

GEAR PUMP SIZE	LENGTH L _G		WEIGHT	
	inch	mm	lb	kg
05	3.74	95,0	8.1	3,7
07	3.91	99,4	8.4	3,8
10	4.20	106,8	9.0	4,1
14	4.61	117,2	9.6	4,4
20	6.56	161,6	20.1	9,1

Spline Key Driven (Add to L_A)

DUAL PUMP



DIMENSIONS and WEIGHTS W/O CONTROLS

FRAME SIZE	PVWJ DUAL PUMP SIZES	H HEIGHT		W WIDTH		L LENGTH		WEIGHT	
		inch	mm	inch	mm	inch	mm	lb	kg
A/A	011, 014 or 022 & 011, 014 or 022	4.50	114,3	4.32	109,7	18.12	460,2	72	33
B/A	025, 034 or 046 & 011, 014 or 022	6.11	155,2	5.80	147,3	19.56	496,8	108	49
B/B	025, 034 or 046 & 025, 034 or 046	6.11	155,2	5.80	147,3	20.86	529,8	144	66
C/A	064, 076, 098 or 130 & 011, 014 or 022	7.18	182,4	6.76	171,7	21.20	538,5	143	65
C/B	064, 076, 098 or 130 & 025, 034 or 046	7.18	182,4	6.76	171,7	22.50	571,5	179	82
C/C	064, 076, 098 or 130 & 064, 076, 098 or 130	7.18	182,4	6.76	171,7	24.44	620,8	214	97

Length dimensions are for a rear ported dual pump. For further dimensions of these or other multiple combinations including other types of auxiliary pumps, contact your Oilgear representative.

Length Example:

DUAL PUMP

Two Variable Delivery Pumps

PVWJ-098-A1UV-LDFS-P-1NNSN-AN/PVWJ-046-LSAS-P-1NNSN

Size 098 pump (L_A) length = 14 inches (355,6 mm) plus

Size 046 pump (L_R) length = 8.5 inches (215,9 mm) = 22.50 inches (571,5 mm)

One Variable Delivery Pump and A Gear Pump

PVWJ-098-A1UV-LDFS-P-1NNSN-AN/10

Size 098 piston pump (L_A) length = 14 inches (355,6 mm) plus

Size 10 gear pump (L_G) length = 4.2 inches (106,8 mm) = 18.2 inches (462,4 mm)

TRIPLE PUMP

Three Variable Delivery Pumps

PVWJ-098-A1UV-LDFS-P-1NNSN-BN/PVWJ-046-A1UV-LDFS-P-1NNSN-AN/

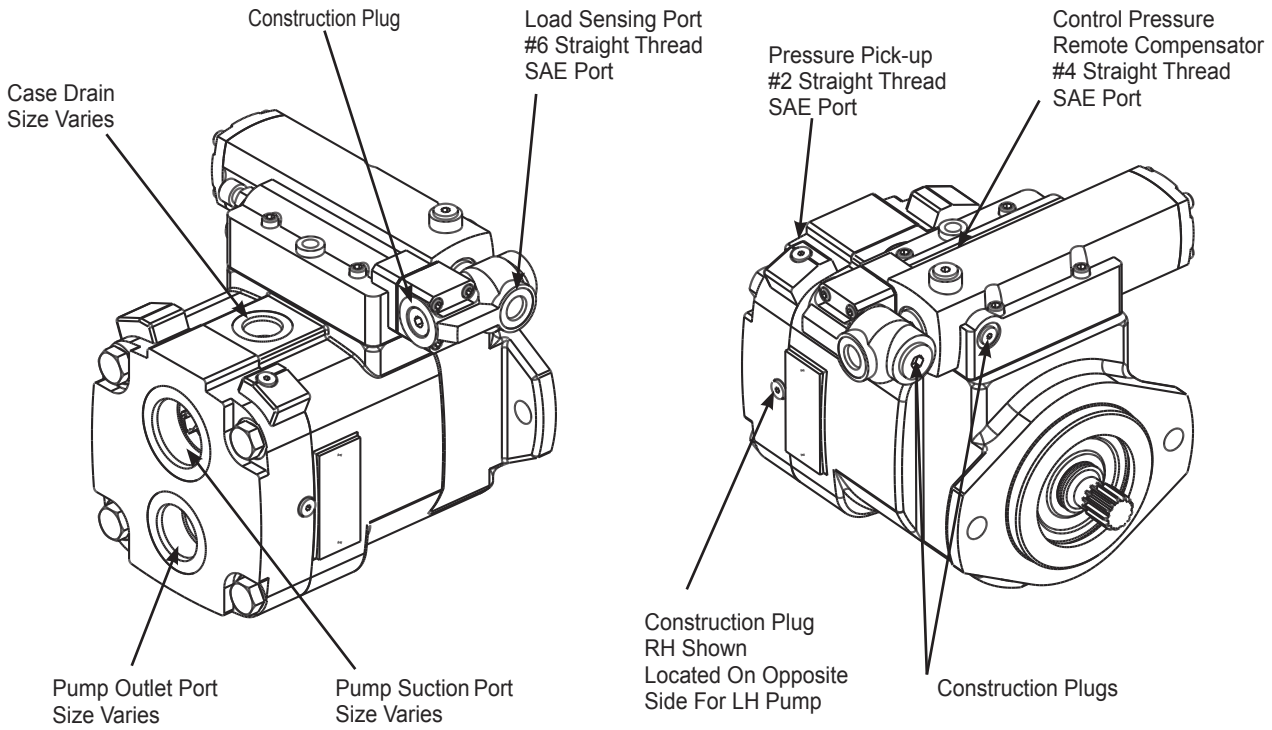
PVWJ-022-A1UV-LDAS-P-1NNSN-CP

Size 098 pump (L_A) length = 14 inches (355,6 mm) plus

Size 046 pump (L_A) length = 12.36 inches (313,9 mm) plus

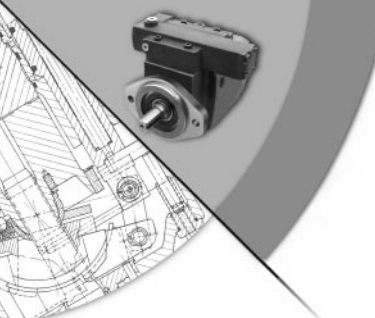
Size 022 pump (L_S) length = 9.62 inches (244,3 mm) = 35.98 inches (913,9 mm)

PRESSURE PICK-UP POINTS FOR INSTRUMENTATION



NOTE: Right hand pump shown. Suction and Outlet Locations are reversed for Left Hand units.

Oilgear Pressure Pick-ups

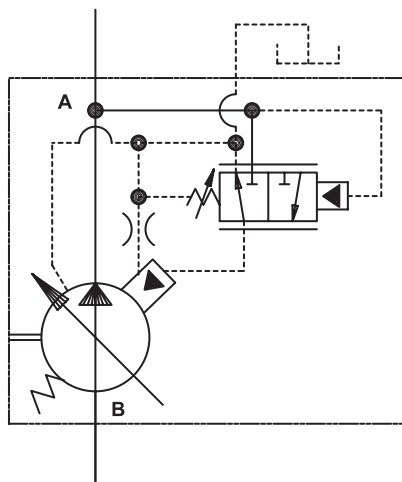


Pump Controls

PRESSURE*

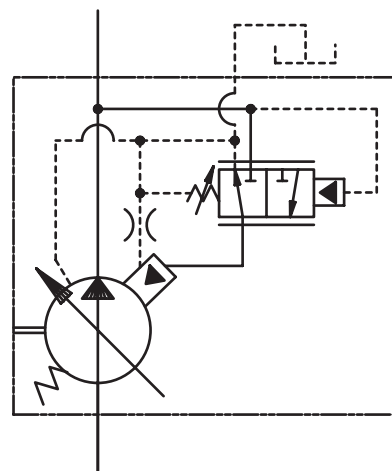
■ Pressure Compensator “P-1NN”

Ensures maximum pump flow until unit reaches preset control pressure setting then regulates output flow to match the requirements of the system while maintaining preset output pressure. Can be adjusted from 750 psi working pressure up to the maximum pressure rating of the applicable pump. A remote control module “VSR” can be used to adjust the “P-1NN” control.



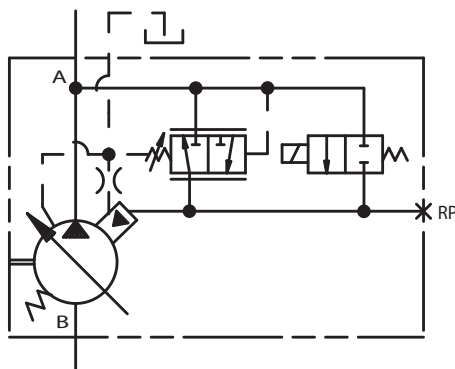
■ Low Pressure Compensator “P-LNN”

Works the same as the “P-1NN” control except it provides a lower minimum pressure. Can be adjusted from 250 psi working pressure up to a maximum of 1500 psi. A remote control module “VSR” can be used to adjust the “P-LNN” control.



■ Soft Start Pressure Compensator “P-KNN”

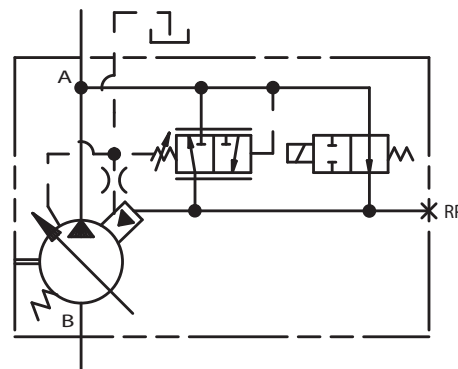
Pump starts “softly” by going quickly at low pressure to a reduced flow setting, thereby reducing start up torque requirements. The “P-KNN” control uses a normally closed cartridge that will unload the pump at the minimum pressure setting with the solenoid energized. A remote control module “VSR” can be used to adjust the “P-KNN” control.



(N.C.)

■ Soft Start Pressure Compensator “P-CNN”

Pump starts “softly” by going quickly at low pressure to a reduced flow setting, thereby reducing start up torque requirement. The “P-CNN” control uses a normally open cartridge that will unload the pump at the minimum pressure setting with no power to the solenoid. A remote control module “VSR” can be used to adjust the “P-CNN” control.



(N.O.)

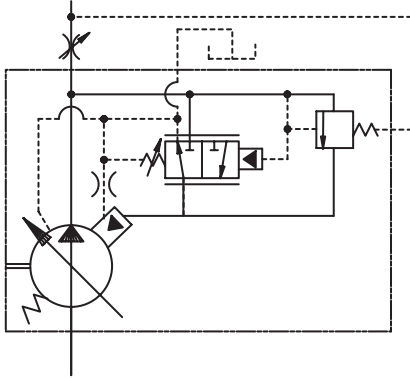
* Be sure system and pumps are protected against overloads with a high-pressure relief valve.

VOLUME PRESSURE SENSING*

Fixed Load Sense w/Pressure Compensator

“P-1NN/F”

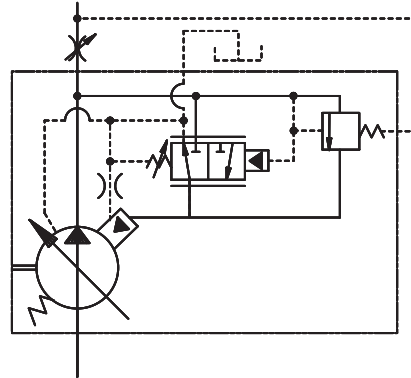
A constant flow output is maintained for a given flow control valve setting regardless of changes in drive speed and/or working pressure. The pressure compensator control over rides the load sense control when system pressure reaches the preset control pressure. Control pressure can be adjusted from 750 psi up to the maximum pressure rating of the applicable pump. Load sense differential is set at 170 PSID. See page 12 for remote control options.



Fixed Load Sense w/Low Pressure Compensator

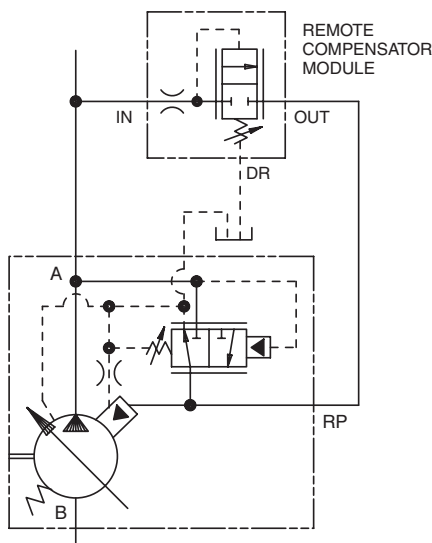
“P-LNN/F”

Works the same as the P-1NN/F control except it provides a lower minimum pressure. Can be adjusted from 250 psi working pressure up to a maximum of 1500 psi. Load sense differential is set at 170 PSID. See page 12 for remote control options.



Remote Operator For “P-1NN,” “P-LNN,” “P-CNN,” & “P-KNN”

Remote operation of “P-1NN,” “P-LNN,” “P-CNN” and “P-KNN” controls can be accomplished by installing an Oilgear VSR Module at the location shown in the control circuit. Use module L51542 for units rated continuously for 4000 psi (275.8 bar) or less. Use L51542-1 for units rated above 4000 psi (275.8 bar).



Adjustable Load Sense “P-1NN/J” & “P-1NN/K” w/Pressure Compensator

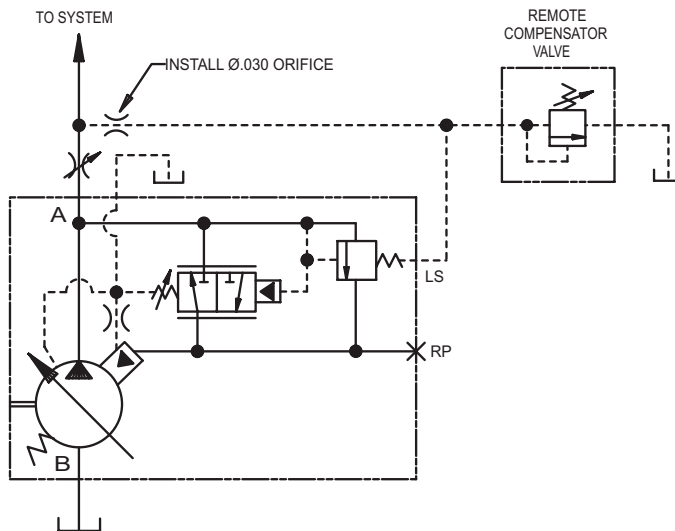
Same as the “P-1NN/F” and “P-LNN/F” controls except the load sense differential is externally adjustable. The adjustment range for the “P-1NN/J” control is 100 to 220 PSID. The adjustment range for the “P-1NN/K” control is 225 to 350 PSID.

*Be sure system and pumps are protected against overloads with a high-pressure relief valve.

LINE MOUNTED REMOTE PRESSURE CONTROL FOR SINGLE & MULTIPLE PUMPS

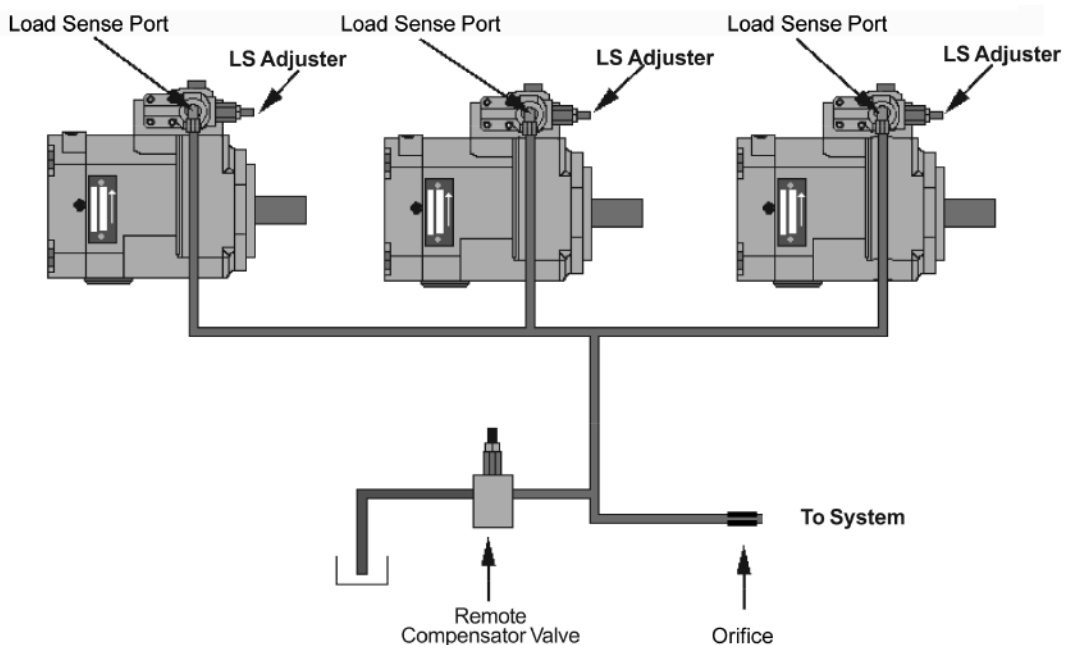
Remote operation of pumps with load sense controls can be accomplished by installing a Remote Compensator Valve at the location shown in the control circuits.

SINGLE PUMP



Refer to Data Sheet 47491

MULTIPLE PUMPS



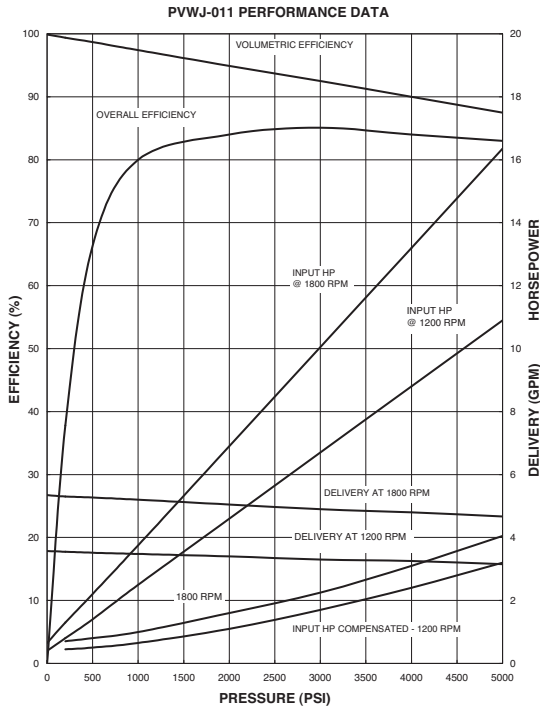
Refer to Data Sheet 47974A

PERFORMANCE CURVES

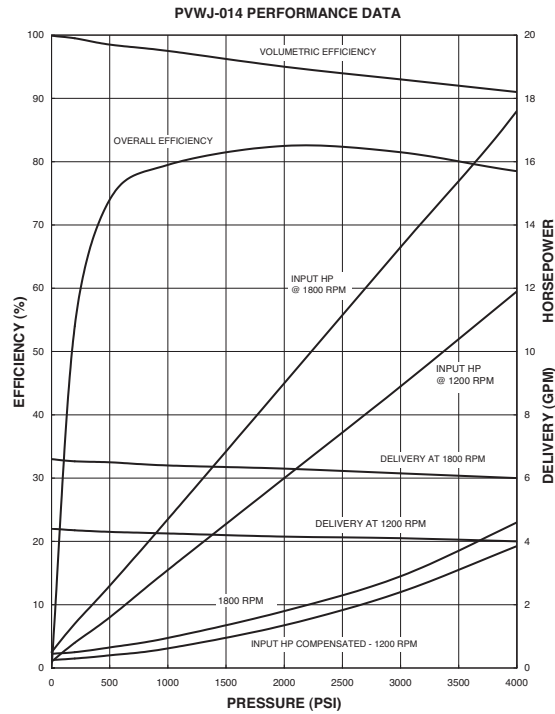
The following single pump curves are based on an oil temperature of 125° F (160 SSU) and 14.7 psia (1 bar_{abs}).

Frame Size A

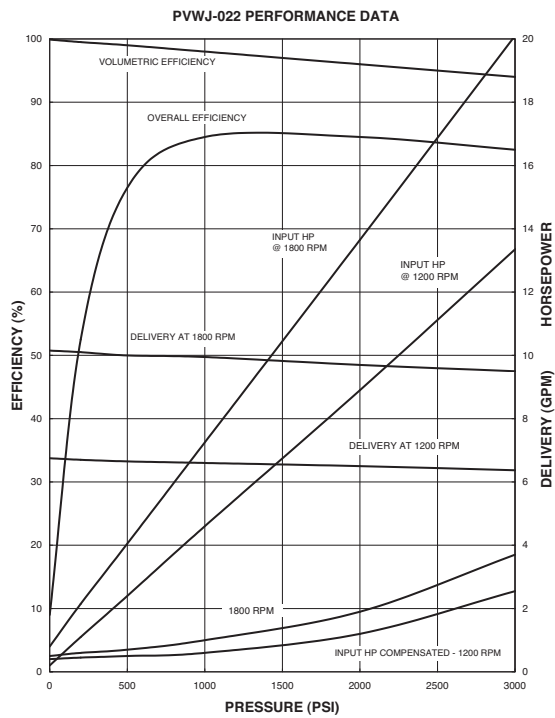
PVWJ-011



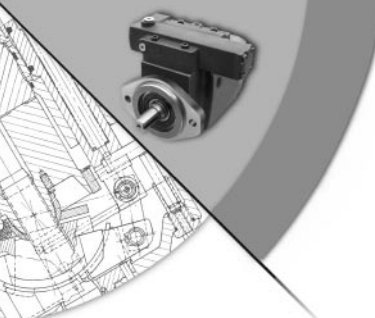
PVWJ-014



PVWJ-022



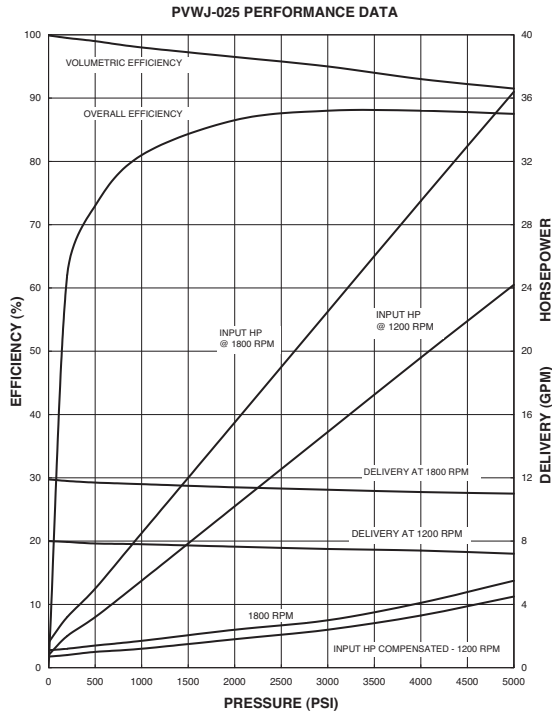
Oilgear Performance Curves



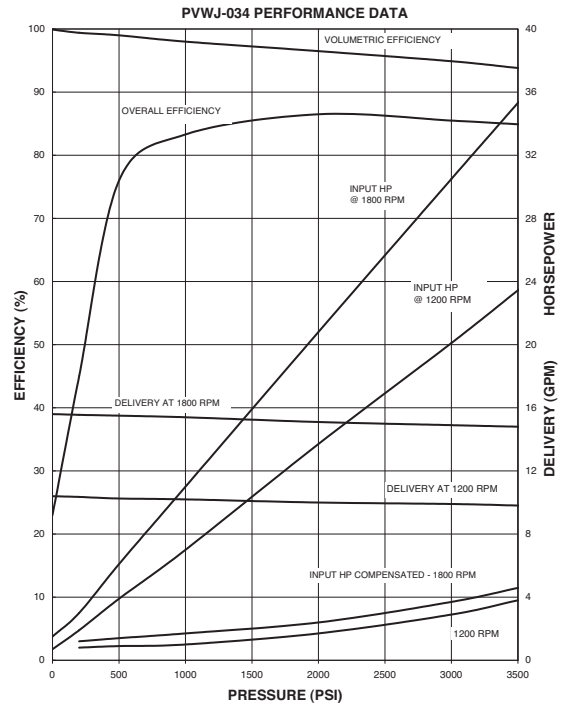
The following single pump curves are based on an oil temperature of 125° F (160 SSU) and 14.7 psia (1 bar_{abs}).

Frame Size B

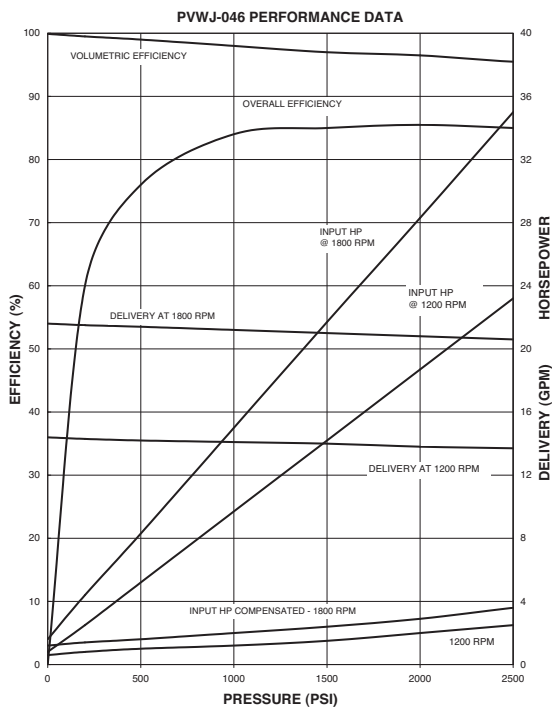
PWWJ-025

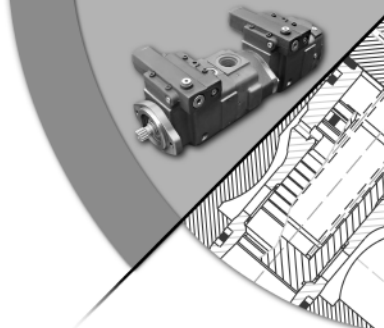


PWWJ-034



PWWJ-046

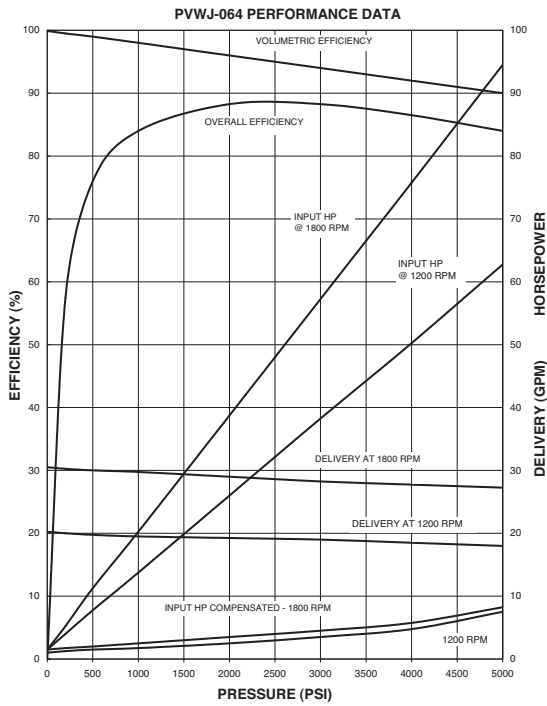




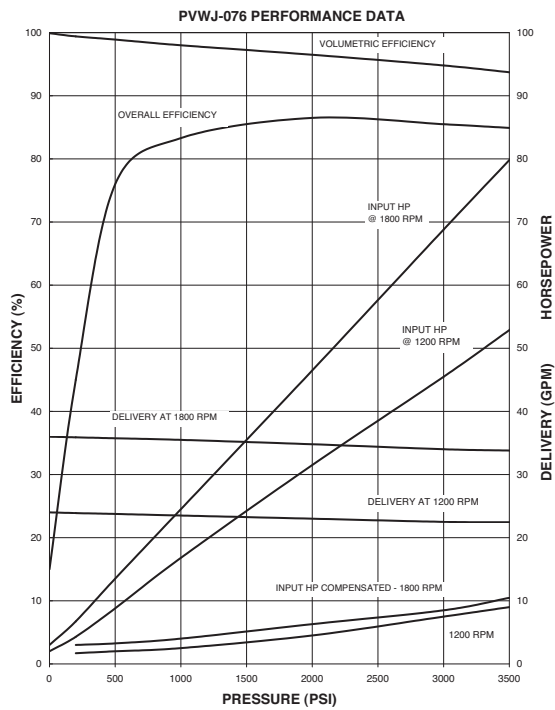
The following single pump curves are based on an oil temperature of 125° F (160 SSU) and 14.7 psia (1 bar_{abs}).

Frame Size C

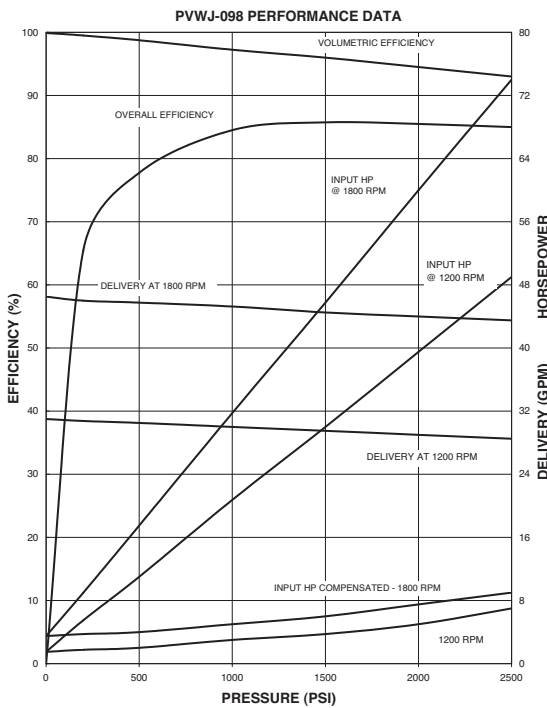
PVWJ-064



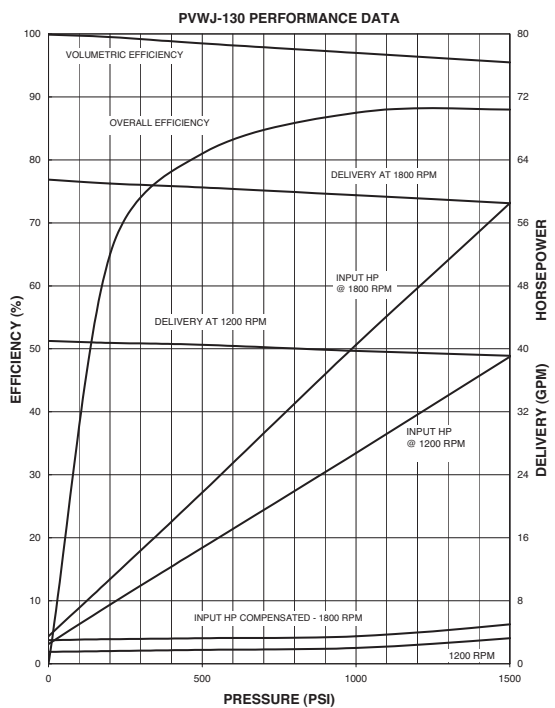
PVWJ-076



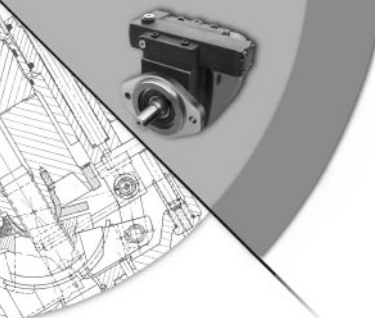
PVWJ-098



PVWJ-130



Oilgear Performance Curves

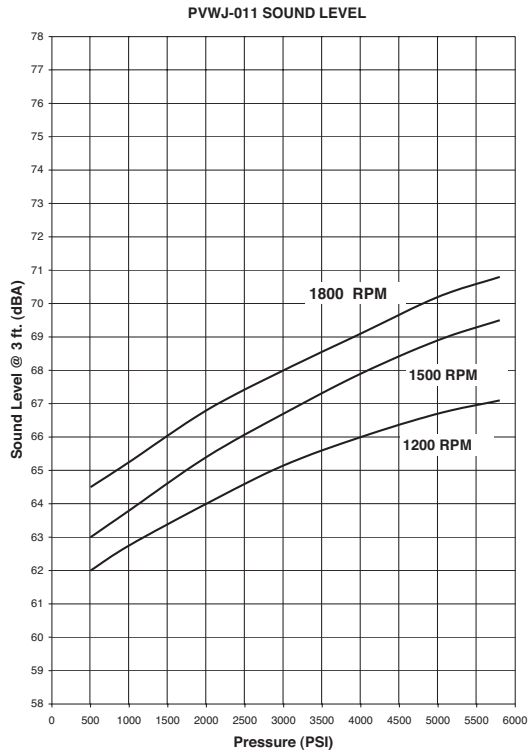


SOUND CURVES

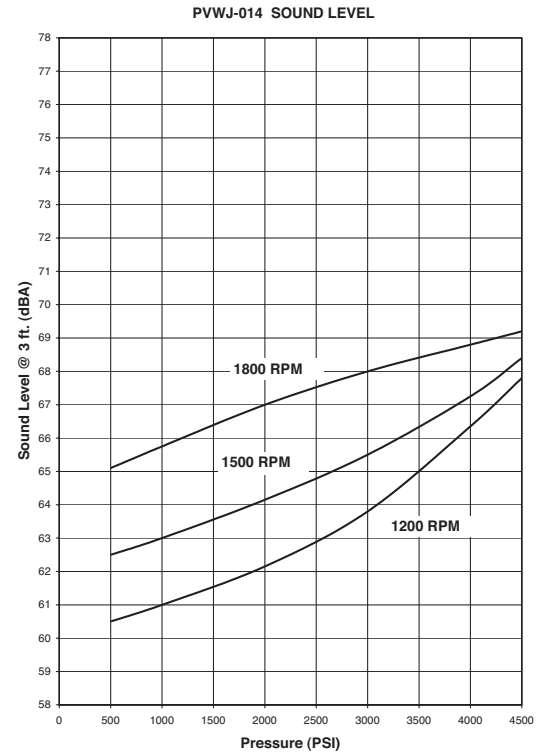
All of the following sound curves are based on the pump delivering full volume from port "A." Single microphone noise taken in semi-reverberant room at three feet from pump surface. Tolerance on curves is +3 dBA.

Frame Size A

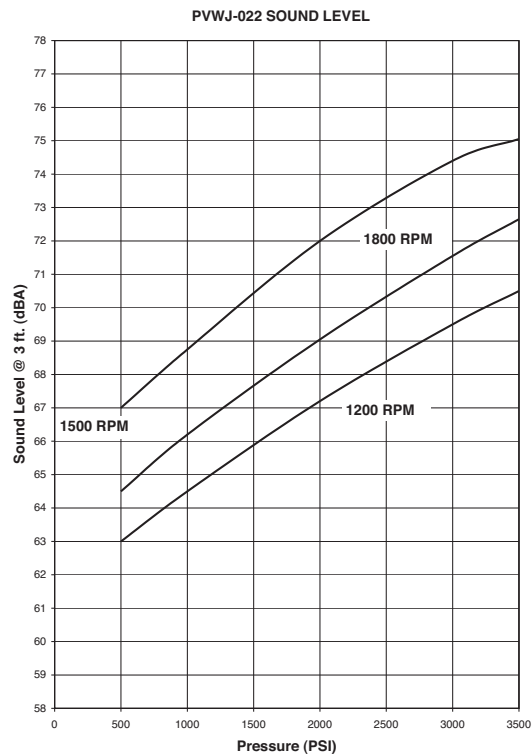
■ PVWJ-011-FULL STROKE

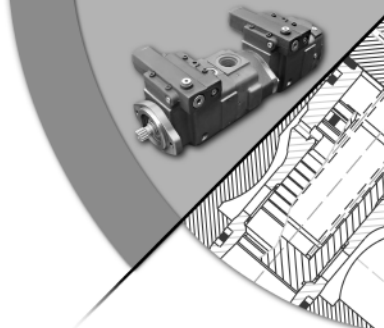


■ PVWJ-014-FULL STROKE



■ PVWJ-022-FULL STROKE

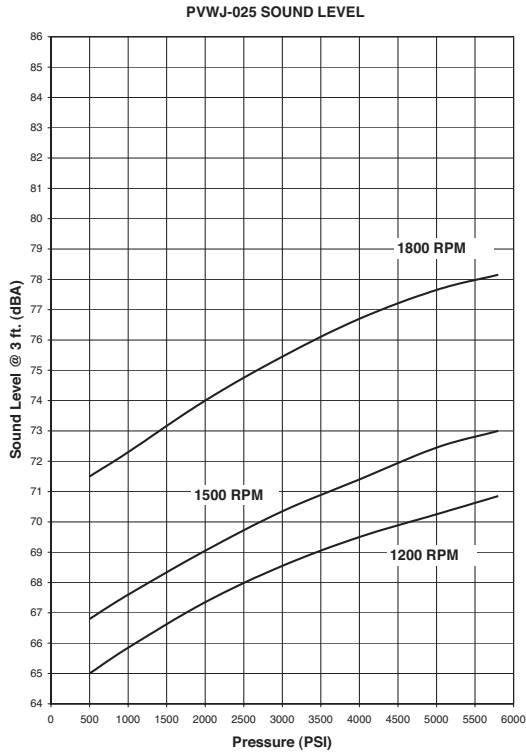




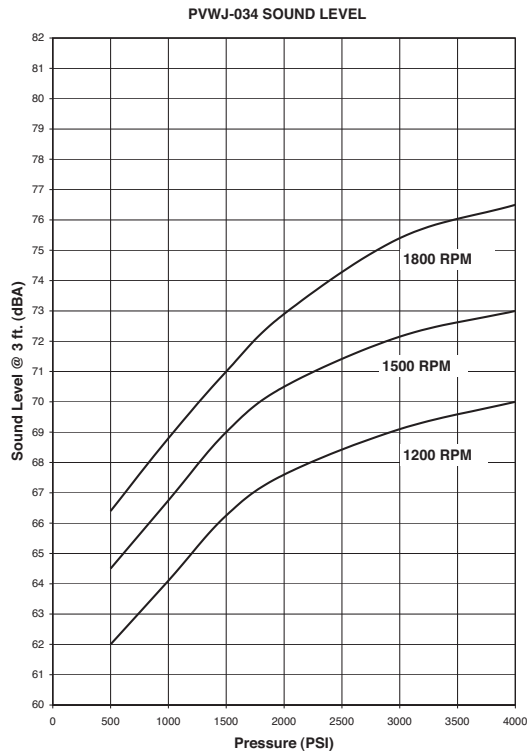
All of the following sound curves are based on the pump delivering full volume from port "A." Single microphone noise taken in semi-reverberant room at three feet from pump surface. Tolerance on curves is +3 dBA.

Frame Size B

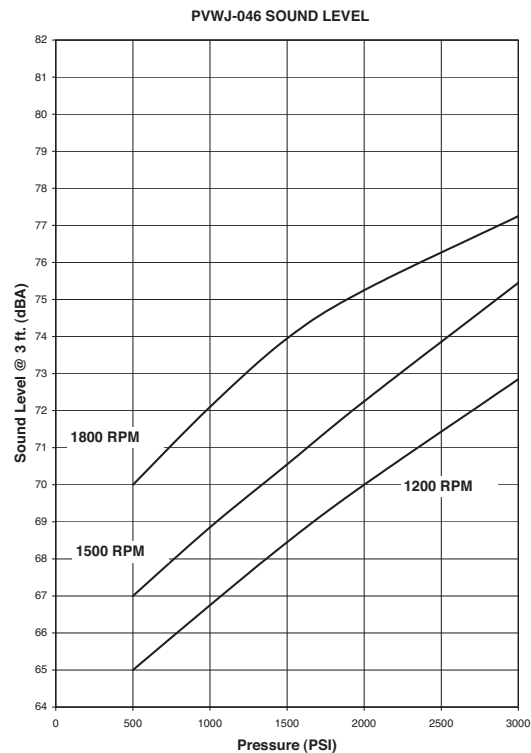
PWWJ-025-FULL STROKE



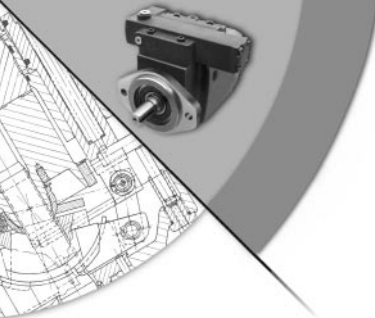
PWWJ-034-FULL STROKE



PWWJ-046-FULL STROKE



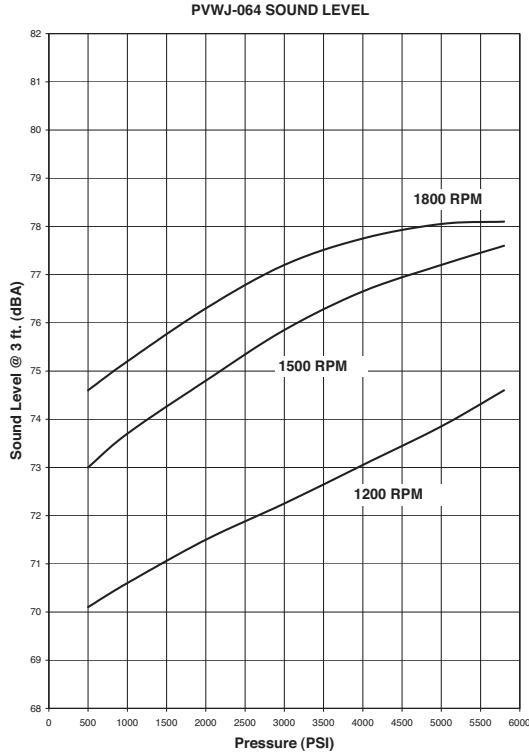
Oilgear Sound Curves



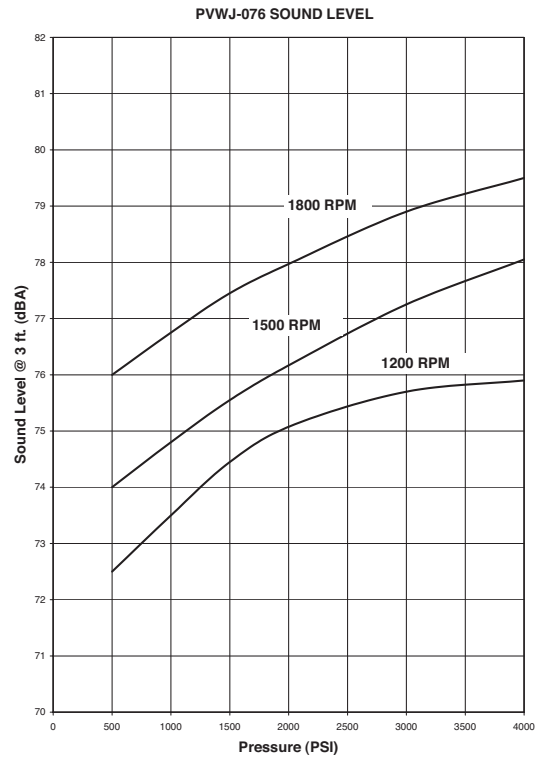
All of the following sound curves are based on the pump delivering full volume from port "A." Single microphone noise taken in semi-reverberant room at three feet from pump surface. Tolerance on curves is +3 dBA.

Frame Size C

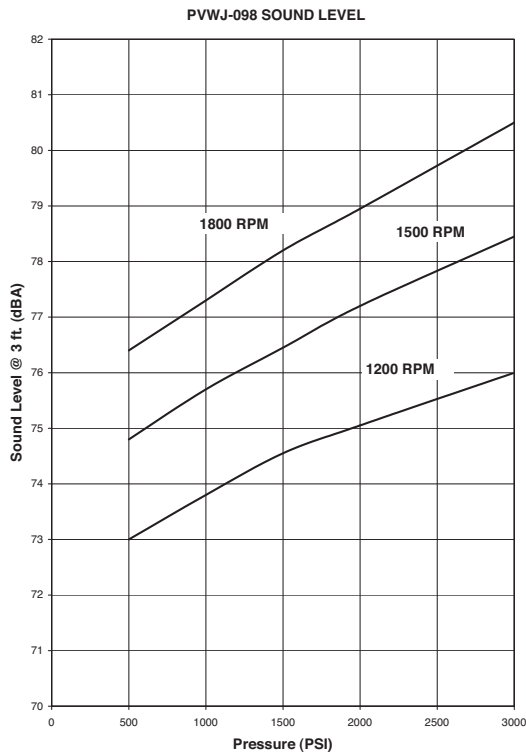
■ PVWJ-064-FULL STROKE



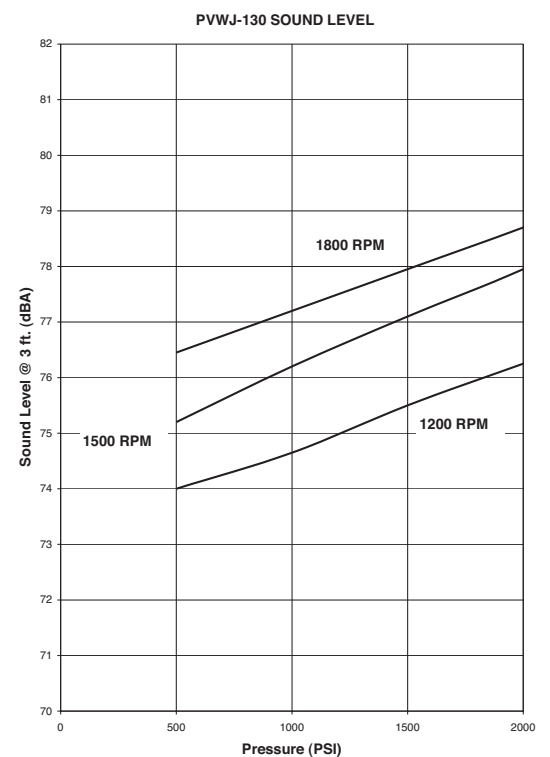
■ PVWJ-076-FULL STROKE



■ PVWJ-098-FULL STROKE



■ PVWJ-130-FULL STROKE

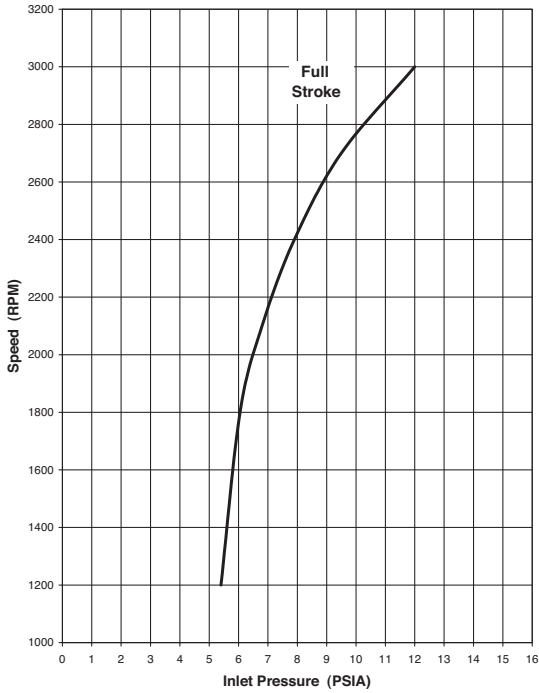


INLET SUCTION CURVES

Frame Size A

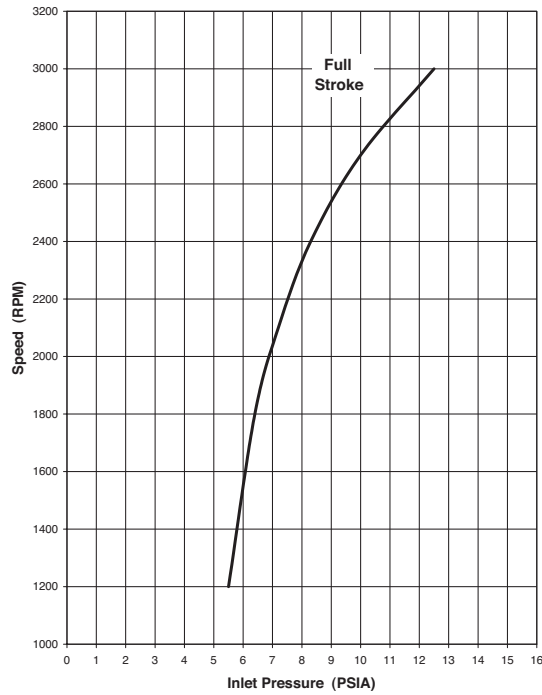
■ PVWJ-011

PVWJ-011 SUCTION CAPABILITY



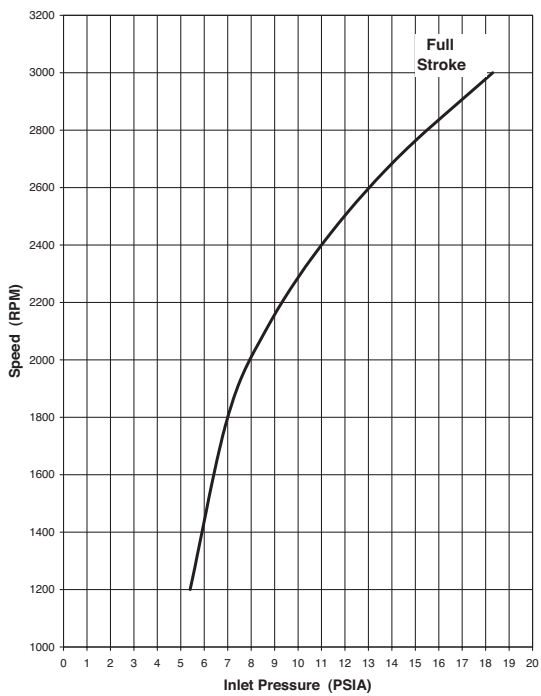
■ PVWJ-014

PVWJ-014 SUCTION CAPABILITY



■ PVWJ-022

PVWJ-022 SUCTION CAPABILITY



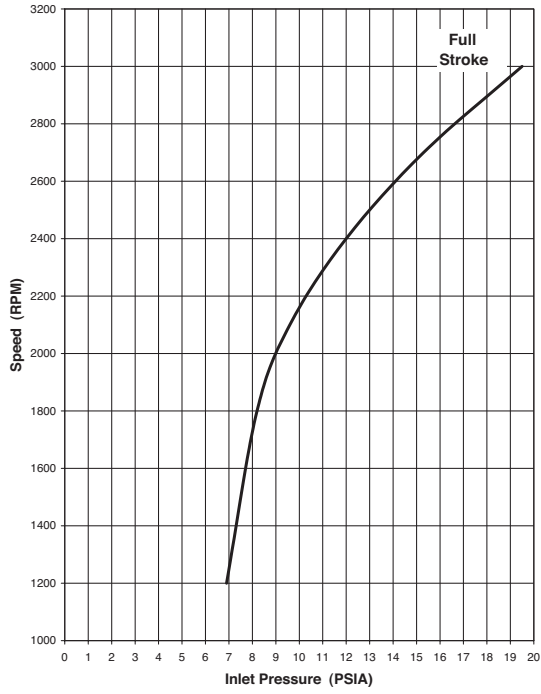
Oilgear Inlet Suction Curves

Oilgear Inlet Suction Curves

Frame Size B

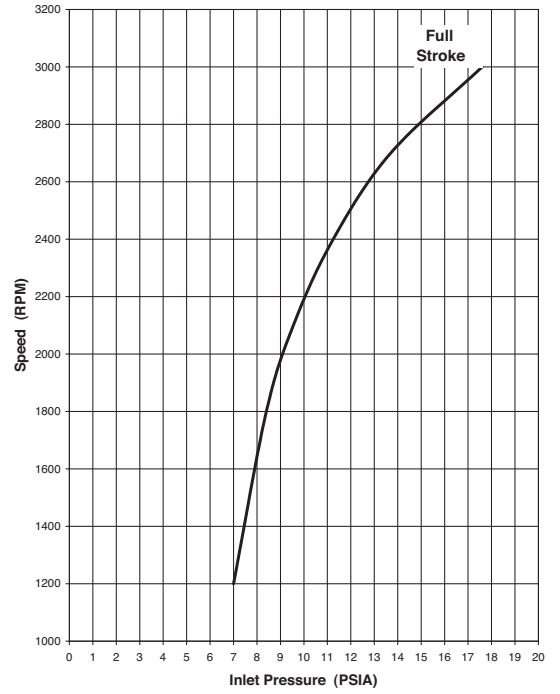
■ PWJ-025

PWJ-025 SUCTION CAPABILITY



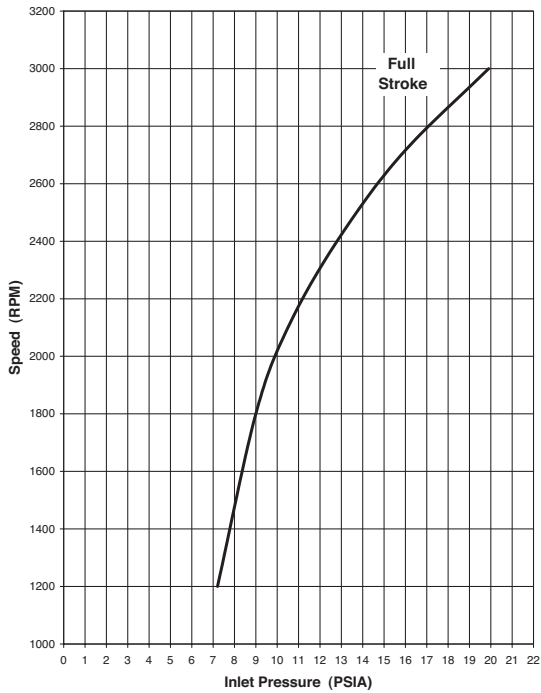
■ PWJ-034

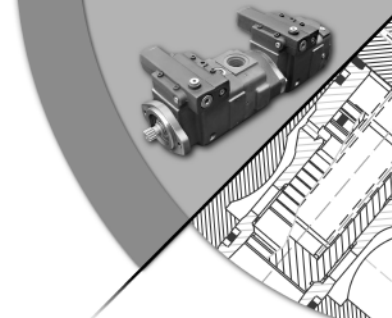
PWJ-034 SUCTION CAPABILITY



■ PWJ-046

PWJ-046 SUCTION CAPABILITY

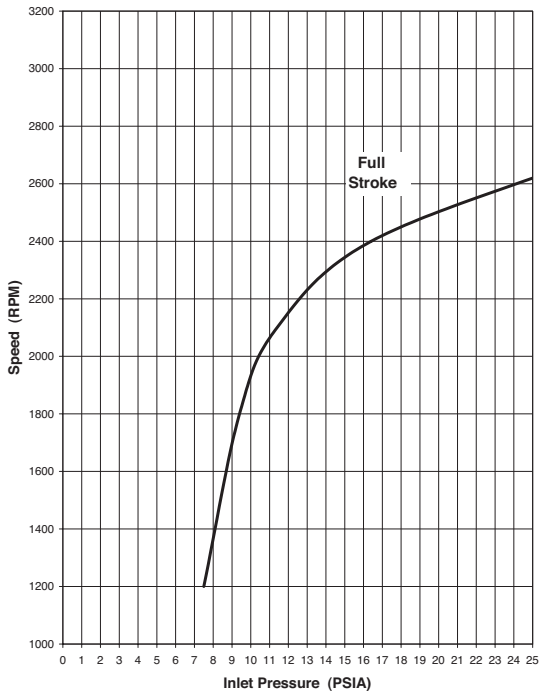




Frame Size C

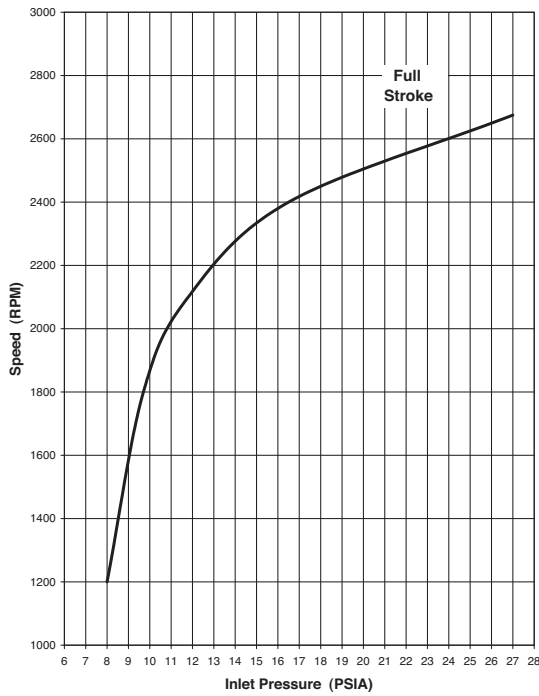
■ PVWJ-064

PVWJ-064 SUCTION CAPABILITY



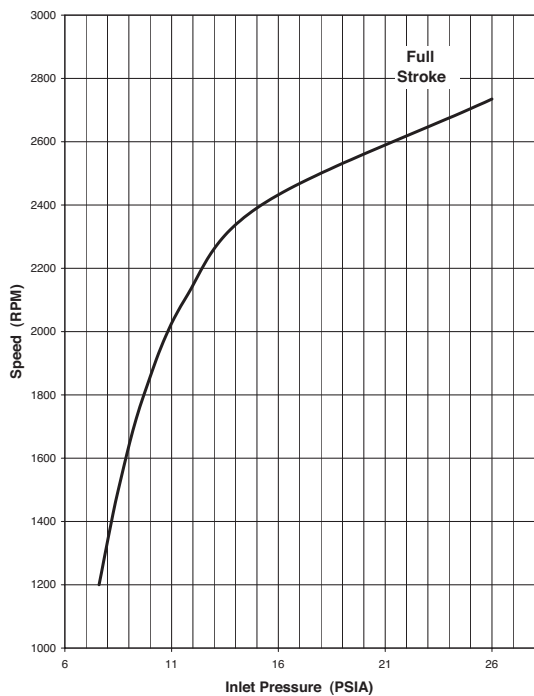
■ PVWJ-076

PVWJ-076 SUCTION CAPABILITY



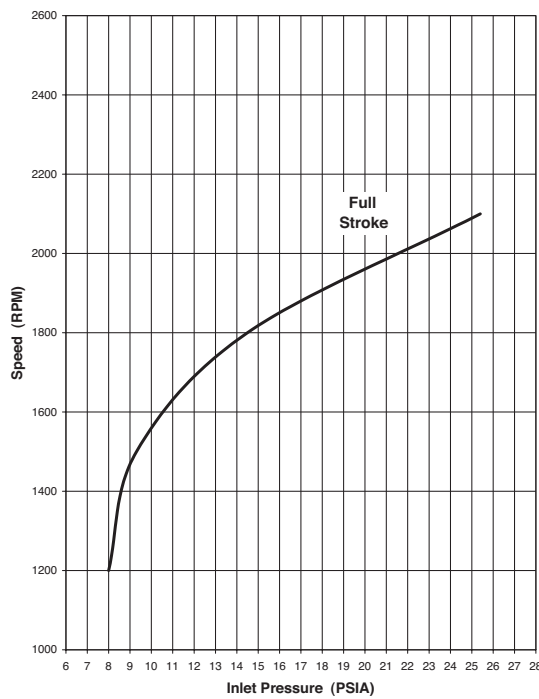
■ PVWJ-098

PVWJ-098 SUCTION CAPABILITY

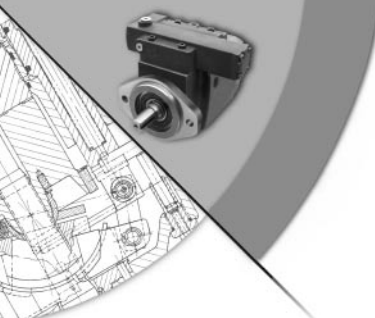


■ PVWJ-130

PVWJ-130 SUCTION CAPABILITY



Oilgear Inlet Suction Curves



HOW TO ORDER

BLOCK NUMBER EXPLANATION	1	2	3	-	4	-	5	6	7	-	8	9	10	11	-	12	-	13a	13b	13c	13d	14	-	15	/	16	-	17
PVWJ Model Code EXAMPLE	P	V	WJ	-	098	-	A1	U	V	-	L	D	F	Y	-	P	-	1	N	N	/F	SN	-	AN	/	10	-	XXX

- 1 = UNIT
P = Pump
- 2 = TYPE
V = Variable
- 3 = DESIGN TYPE
WJ = Pump Series
- 4 = UNIT SIZE

011 = 10.8 cc/rev (0.66 cipr) 014 = 14.1 cc/rev (0.86 cipr) 022 = 22.1 cc/rev (1.35 cipr)	A Frame
025 = 25.4 cc/rev (1.55 cipr) 034 = 33.8 cc/rev (2.06 cipr) 046 = 46.4 cc/rev (2.83 cipr)	B Frame
064 = 63.6 cc/rev (3.88 cipr) 076 = 76.5 cc/rev (4.67 cipr) 098 = 98.3 cc/rev (6.00 cipr) 130 = 130.2 cc/rev (7.94 cipr)	C Frame

- 5 = DESIGN SERIES
A1 = Current for all displacements
- 6 = DESIGN SERIES MODIFIER
U = SAE Connections & Mounting
- 7 = SHAFT & O-RING SEALS
V = Viton
P = EPR
- 8 = ROTATION
L = Left Hand (CCW)
R = Right Hand (CW)

- 9 = VALVE PLATE TYPE*
S = Rear Ported
G = Side Ported
D = Thru-Shaft w/Side-Ports
T = Top/Bottom Ported
- 10 = CONNECTION TYPE
A = SAE Straight Port*
F = SAE Flange
R = SAE Flange w/ Relief Valve

* All combinations of Valve Plate and Connection types not available. See Valve Plate Table below.

- 11 = SHAFT TYPE
See Shaft Table below.
- 12 = CONTROL TYPE
P = Pressure Compensating
- 13a = PRESSURE COMPENSATOR OPTIONS
1 = Single PC Setting (standard)
L = Low PC Setting
C = Single PC w/Soft Start, NO
K = Single PC w/Soft Start, NC

- 13b = SOLENOID VOLTAGE
N for Single & Low PC Setting
0 = 115/60 - 110/50 VAC
2 = 12 VDC

- 13c = CONNECTOR
N for Single & Low PC Setting
N = No Connector
R = .500 NPT w/o Lite
W = .500 NPT w/Lite
S = PG-11 w/o Lite
L = PG-11 w/Lite

- 13d = CONTROL MODIFIER
/F = Fixed Load Sense 170 PSI
/J = Adjustable Load Sense 100-220 PSI
/K = Adjustable Load Sense 225-350 PSI
Blank = None
- 14 = STROKE LIMITER OPTION
NN = None
SN = Adjustable Max. Volume Stop
SA = Adjustable Min. Volume Stop
SB = Adjustable Min. & Max. Volume Stops

- 15 = AUXILIARY ADAPTORS
(required for all thru-shaft units, leave blank for all rear & side ported units.
CP = Cover Plate
AN = SAE A Adaptor & Coupling
BN = SAE B Adaptor & Coupling
CN = SAE C Adaptor & Coupling
NN = No Adaptor or Coupling

- 16 = GEAR PUMPS
Blank = None
05 = 0.488 cipr
07 = 0.672 cipr
10 = 0.976 cipr
14 = 1.403 cipr
20 = 2.015 cipr

- 17 = SPECIAL PUMP MODIFIER
XXX = Special Pump Modifier (Factory Assigned)
Blank = Standard Unit

Valve Plate Table (X = Available)

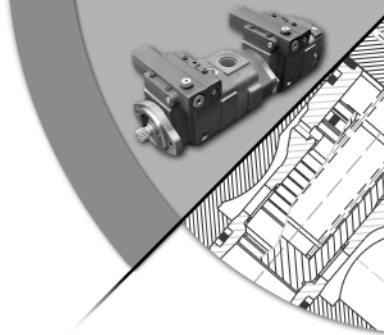
	SA	GA	DA	SF	DF	DR	TA
-011	X	X	X				X
-014	X	X	X				X
-022	X	X	X				X
-025	X				X	X	
-034	X				X	X	
-046	X				X	X	
-064				X	X	X	
-076	X*				X	X	
-098	X*				X	X	
-130	X*				X	X	

* = SAE Flange on inlet, SAE Straight Thread Port on Outlet

Shaft Table

Shaft Code	PVWJ-011/ -014/-022	PVWJ-025/ -034/-046	PVWJ-064-076/ -098/-130
Y	.75" Keyed	.875" Keyed	1.25" Keyed
B	.875" Keyed	1.00" Keyed	—
S	SAE A Spline	SAE B Spline	SAE C Spline
C	SAE B Spline	SAE B-B Spline	—
D**	SAE A Spline	SAE B Spline	SAE C Spline

**D shafts are "industrial" versions of S shafts



Oilgear Notes

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For more information about your application or the products in this brochure, please contact your nearest Oilgear facility.



AUSTRALIA

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BRAZIL

Oilgeardo Brazil Hydraulica Ltd.

CANADA

The Oilgear Company

FRANCE

Oilgear Towler S.A.

GERMANY

Oilgear Towler GmbH

INDIA

Oilgear Towler Polyhydron Pvt. Ltd.
Towler Automation Pvt. Ltd.

ITALY

Oilgear Towler S.r.l.

JAPAN

The Oilgear Japan Company

KOREA

Oilgear Towler Korea Co. Ltd.

MEXICO

Oilgear Mexicana S.A. de C.V.

SPAIN

Oilgear Towler S.A.

TAIWAN

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