Technical Bulletin
PVWW PUMPS
Application Guidelines

ENGINEERING

				A-Frame		B-Frame		C-Frame		
Displacement			**cm³**	**14**	**22**	**34**	**46**	**76**	**98**	**130**
Outlet	**Pressure**	Rated Continuous Pressure	psi bar	3000 205	2000 135	3000 205	3000 135	3000 205	2000 135	1200 85
		Peak Pressure see definition in "Notes" section	psi bar	3500 240	2500 175	3500 240	2500 175	3500 240	2500 175	1500 105
		Minimum Pressure	psi bar	100 7		100 7		100 7		
		Minimum Pressure with Pressure Controls. P-L control can achieve lower minimum pressure	psi bar	200 13,8		400 27,6		600 41,4		
	Flow	Nominal Outlet Flow @ 1800 rpm, full stroke, rated pressure	gpm lpm	5.5 20,6	9.1 34,4	12.7 48,1	20.3 76,9	32,6 123,6	42.8 162,2	56,6 214,2
Input Shaft	**Speed**	Maximum Speed @ Full Stroke May require supercharged inlet.	rpm	1800		1800		1800		
		Min Speed	rpm	600		600		600		
	Torque	Approximate torque to turn Drive Shaft	ft-lbs N-m	1.7 to 2.1 2,3 to 2,8		2.9 to 3.3 4,0 to 4,5		7.9 to 8.3 10,8 to 11,3		
		Moment of Inertia for Rotating Group	lbs/in^2 kg/cm^2	5 14,6		21 61,5		53 155,1		
Fluid Temperature①		Maximum Operating - At Inlet	°F °C	190 90		190 90		190 90		
		Minimum Operating - At Inlet	°F °C	14 -14		14 -14		14 -14		
		Minimum Starting - At Inlet	°F °C	-40 -40		-40 -40		-40 -40		
		Maximum Operating - Case with standard seals	°F °C	230 110		230 110		230 110		
Case	**Pressure**	Max Continuous Case Pressure	psi bar	15 1,0		15 1,0		15 1,0		
		Maximum Case Pressure with Standard Shaft Seal	psi bar	25 1,7		25 1,7		25 1,7		
		Maximum Case Pressure with High Pressure Shaft Seal	psi bar	100 7,0		100 7,0		100 7,0		
	Fill	Approximate amount of fluid necessary to fill case	ounces cc	10 300		24 700		30 900		
Inlet Pressure				Refer to the graphs in the "Inlet Data" section of Oilgear Bulletin 47013 to determine pump inlet pressure requirements						

① Minimum and Maximum viscocities MUST be observed.

Customer Connections	Case Drain Port		#8 SAE Straight Thread	#12 SAE Straight Thread	#12 SAE Straight Thread
	Minimum Case Drain Line Size Inside Diameter	inch mm	0.5 12	.625 16	.75 19
	Remote Pressure Compensator Port	inch mm	#4 SAE Straight Thread	#4 SAE Straight Thread	#4 SAE Straight Thread
	Load Sensing Port	inch mm	#6 SAE Straight Thread	#6 SAE Straight Thread	#6 SAE Straight Thread
Fluid Viscosity	Min Allowable Fluid Viscosity	SSU cSt	31 1	31 1	31 1
	Max Allowable Fluid Viscosity	SSU cSt	2000 450	2000 450	2000 450
Control Information	Min Pilot Pressure to Destroke Pump	psi bar	200 13,8	400 27,6	600 41,4
	Minimum % Stroke Attainable with Standard Stroke Limiter		25%	25%	25%
	On-Stroke Response Time ②		100 mS	100 mS	200 mS
	Off-Stroke Response Time ②		80 mS	80 mS	200 mS

② Fastest possible time, stroking times may be slower depending on conditions. Consult Oilgear Technical Sales.

Installation Data Sheets

	14/22	34/46	64	98/130
Rear Ported	47480	47483	47486	47488
Side Ported	47481	47484	47487	47489
Side Ported Thu-Shaft	47482	47485		

Additional Notes

Inlet

1. Pumps mounted above the reservoir must be arranged to insure pump will prime when started.

2. When supercharging, maximum allowable inlet pressure is 100 psi. Volume required to fully supercharge units must be sufficient to maintain a minimum required inlet pressure.

3. For low viscosity and HF water based fluids consult the Oilgear Technical Sales Department.

4. Oilgear does not recommend suction line filtration. Suction line filtration can starve the pump if the pressure drop across the filter becomes excessive. Return line filtration is the preferred method .

Output

Be sure system and pumps are protected against overloads with high pressure relief valves.

Peak pressure is the maximum pressure the unit can be operated at for 1% or less of every minute.

Case

1. Drain

(a) Fill case with fluid before starting

(b) Arrange case drain line to keep case full of fluid

(c) Use a minimum of bends returning case drain line to reservoir below minimum fluid level.

2. Orientation

Pump orientation is not restricted. But, case drain must be arranged to keep case full of fluid at all times. *See Oilgear Service Bulletin 947019 for horizontally mounted units. For vertically mounted units, see Bulletin 90014 "Service Instructions, Installation of Vertically Mounted Axial Piston Units".*

Fluid

Contamination level of ISO code 21/19/16 is maximum and 0.1% of water is maximum level for the pump.

Multiple Unit Mounting

Additional mounting support should be considered for multiple pump units, especially in mobile or high vibration applications.