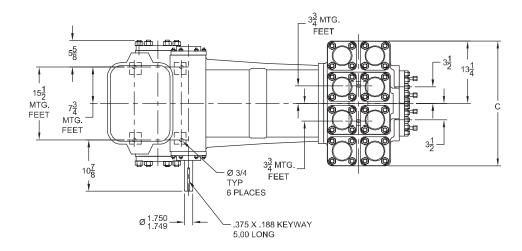
# **1847-A Duplex Double-Acting Piston Pump**



# DISCHARGE CONNECTION OF ROTATION OF ROTATION 178 93 178 94 SUCTION CONNECTION CONNECTION

# **Specifications**

### Pump Size:

maximum piston size x stroke length, in.(mm):  $4-1/2 \times 6 (114.3 \times 152.4)$ 

Rated BHP (kW) at 100 RPM (Crankshaft speed): 33 (25)

Rated piston load, pounds (kg): 4850 (2200) Maximum discharge pressure, psi (kPa): 990 (6826)

Pinion gear ratio: 5.100:1 Pinion shaft extension:

Diameter, in.(mm): 1.750 (44.45)

Length, in.(mm): 6.500 (165.1)

Keyway width x depth, in.(mm): 3/8 x 3/16 (9.52 x 4.76)

Maximum recommended sheave diameter,

in.(mm): 38 (965)

For larger sheave diameters:

Contact Factory

Oil Capacity, gallons (L): 5.0 (18.9)

 $\textbf{Weight,} \ \mathsf{pump} \ \mathsf{only} \ \mathsf{on}$ 

wood shipping skids, pounds (kg): 1960 (889)

### Standard Materials for Fluid End Bodies:

Cast Steel

Cast Ductile Iron

Pump Model		Dimensions (Inches)								
	Discharge Connection Sizes	Suction Connection Sizes	By-Pass Connection Sizes	Α	В	С	D	Е	F	G
1847-A	2 (50.8)-ANSI 600 FF	4 (101.6)-ANSI 150 FF	None	7 1/4	8 5/8	26 1/2	42 5/8	65 15/16	11 7/8	8 5/8



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# **1847-A Duplex Double-Acting Piston Pump**

## **Performance Data**

PUMP	English Units						20 RPM		40 RPM		60 RPM		80 RPM		100 RPM	
	Piston	Piston	BPD	GPM	Max.											
	Dia.	Area	per	per	Press.											
	In.	Sq. In.	RPM	RPM	PSI	BPD	GPM									
1847-A	2.500	4.9087	15.7680	0.4599	990	316	9.2	631	18.4	947	27.6	1262	36.8	1577	46.0	
	3.000	7.0686	23.4480	0.6839	686	469	13.7	938	27.4	1407	41.0	1876	54.7	2345	68.4	
	3.500	9.6211	32.3520	0.9436	504	648	18.9	1295	37.7	1942	56.6	2589	75.5	3236	94.4	
	4.000	12.5664	42.9120	1.2516	386	859	25.0	1717	50.1	2575	75.1	3433	100.1	4292	125.2	
	4.500	15.9043	54.8640	1.6002	305	1098	32.0	2195	64.0	3292	96.0	4390	128.0	5487	160.0	
	Brake Horsepower Required						7 13		13 20		27		33			

PUMP	Metric Units						20 RPM		40 RPM		60 RPM		80 RPM		100 RPM	
	Plunger	Plunger	M³/Hr	L/Sec.	Max.											
	Dia.	Area	per	per	Press.											
	mm	cm <sup>2</sup>	RPM	RPM	kPa	M³/Hr	L/Sec.									
1847-A	64	31.669	0.1044	0.0290	6826	2.1	0.6	4.2	1.2	6.3	1.7	8.4	2.3	10.4	2.9	
	76	45.604	0.1553	0.0431	4731	3.1	0.9	6.2	1.7	9.3	2.6	12.4	3.5	15.5	4.3	
	89	62.072	0.2143	0.0595	3476	4.3	1.2	8.6	2.4	12.9	3.6	17.1	4.8	21.4	6.0	
	102	81.073	0.2842	0.0790	2661	5.7	1.6	11.4	3.2	17.1	4.7	22.7	6.3	28.4	7.9	
	114	102.608	0.3634	0.1010	2103	7.3	2.0	14.5	4.0	21.8	6.1	29.1	8.1	36.3	10.1	
	Kilowatts Required						5		10		15		20		25	

For operation below 70 RPM, an auxiliary lubrication system is required.

RPM shown is Crankshaft speed. For Pinion Shaft speed, multiply RPM by Gear Ratio. Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 85% Mechanical Efficiency.

The information and data on this sheet is accurate to the best of our knowledge and belief, but are intended for general information only. Applications suggested for the materials are described only to help readers make their own evaluations and decisions, and are neither guarantees nor to be construed as express or implied warranties of suitability for these or other applications. National Oilwell makes no warranty either express or implied beyond that stipulated in National Oilwell Standard Terms and Conditions of Sale.



