ROTATING RIGHT

NATIONAL OILWELL JWS-340 TECHNICAL DATA SHEET

NATIONAL OILWELL

Triplex Intermittent Duty **JWS-340**

"J" series intermittent duty pump

Rated input horsepower



NATIONAL-OILWELL Intermittent Duty Pumps are appropriate for high-pressure, high horsepower, operations. This includes applications such as reverse circulation, well killing, acidizing, cementing, sand fracturing, and horizontal directional drilling.

Field Connections in.

Pump Model	Discharge Connection Size	Suction Connection Size
JWS-340	2-1/16" API-10,000# RTJ	6" Std Pipe

Dimensions

Pump Type	Length	Width	Height
JWS-340	68-1/16"	55-1/2"	22-7/8"

Pump Specifications

Pump Size (Max. Plunger Diameter x Stroke) in. (mm).....4 x 5 (102x127)
Rated BHP At 450 RPM (Kw) 340 (253.5)
Maximum Working Pressure: PSI (kPa) 10,000 (68,947.6)
Stroke Length, in. (mm) 5 (127)
Maximum Speed, rpm.....450
Maximum Plunger size, in. (mm) 4 (101.6)
Maximum Piston size, in. (mm) 4-1/2 (114.3)

Crankshaft Extension: in. (mm)
Diameter.....4-7/8 (123.8)
Length 11-3/4 (298.0)
Keyway (Width x Depth).....1-1/4 x 5/8 (32 x 16)

Pinion Shaft Extension, if gear unit supplied (mm)
Belt Or Chain Drive: Diameter 3-1/2 (88.9)
Length.....5-3/4 (146)
Keyway (Width x Depth) .....7/8 x 7/16 (22.2 x 11.1)
Direct Drive: Diameter 3-1/2 (88.9)
Length.....5-3/4 (146)
Keyway (Width x Depth) .....7/8 x 7/16 (22.2 x 11.1)

Oil Capacity: Gallons (L)
Crankcase 8 (30)
Gear Unit (Varies with Ratio).....3-1/2 to 6-1/2 (13.2 to 24.6)
Weight: Pump Only On Wood Shipping Skids - Lbs. (Kg).....5,200 (2,359)
Gear Unit - Lbs. (Kg) 1,100 (499)

Standard Equipment

Forged Steel Fluid End
Forged Steel Valve Covers
Pistons & Liners
Or Plungers & Packing
Stainless Steel Extension Rods
Slush-Type Valves
Double Extended Crankshaft
Oil Level Dipstick
Crankcase Breather

Accessories

Bolt On Style Gear Reducers
- 2.27:1 Ratio
- 2.89:1 Ratio
- 3.25:1 Ratio
- 4.38:1 Ratio
- 4.84:1 Ratio

Plunger Lubricator
Suction Stabilizer
Discharge Dampener
Liner Flush System
Relief Valves
Valve Service Kit
Complete Unitization Services

Quick Maintenance Features

- Horizontal Design
- Large Power End Covers
- Easy Bearing Access
- Separate Crosshead/Plunger Construction
- Open Frame Construction
- Removable Stuffing Boxes

JWS-340 Performance Data (Volumes Indicated are Displacement of Incompressible Fluid)

English Units

Plunger/ Piston* Dia. In.	Area Inches Squared	Gallon Per RPM	25 RPM		50 RPM		100 RPM		200 RPM		225 RPM		250 RPM		300 RPM		350 RPM		400 RPM		450 RPM	
			PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM
JWS-340																						
2 3/4	5.9396	0.3857	10,000	9.64	10,000	19.28	10,000	38.57	6,800	77.14	6,040	86.78	5,440	96.42	4,530	115.71	3,890	134.99	3,400	154.28	3,020	173.56
3 1/2	9.6212	0.6248	6,220	15.62	6,220	31.24	6,220	62.48	4,200	124.95	3,730	140.57	3,360	156.19	2,800	187.43	2,400	218.66	2,100	249.90	1,870	281.14
4	12.5664	0.8160	4,760	20.40	4,760	40.80	4,760	81.60	3,210	163.20	2,860	183.60	2,570	204.00	2,140	244.80	1,840	285.60	1,610	326.40	1,430	367.20
4 1/2	15.9044	1.03275	3,760	25.82	3,760	51.64	3,760	103.28	2,540	206.55	2,260	232.37	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Brake Horsepower Required			63		126		252		340		340		340		340		340		340		340	

* 4-1/2" Available with Piston Only.

Metric Units

Plunger/ Piston* Dia. mm.	Area Centi-meters Squared	Liter Per RPM	25 RPM		50 RPM		100 RPM		200 RPM		225 RPM		250 RPM		300 RPM		350 RPM		400 RPM		450 RPM	
			kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.	kPa	L/Min.
JWS-340																						
70	57.29	1.460	68,950	36.50	68,950	72.99	68,950	145.98	46,886	291.97	41,646	328.46	37,509	364.96	31,234	437.95	26,822	510.94	23,443	583.93	20,823	656.92
89	92.80	2.365	42,887	59.12	42,887	118.23	42,887	236.47	28,959	472.94	25,718	532.05	23,167	591.17	19,306	709.40	116,548	827.64	14,480	945.87	12,894	1,064.11
102	121.20	3.089	32,820	77.21	32,820	154.43	32,820	308.86	22,133	617.71	19,720	694.93	17,720	772.14	14,755	926.57	12,687	1,081.00	11,101	1,235.42	9,860	1,389.85
114	153.40	3.909	25,925	97.72	25,925	195.45	25,925	390.90	17,513	781.79	15,583	879.52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Kilowatts Required			47		94		188		254		254		254		254		254		254		254	

* 114 mm Available with Piston Only.
** Horsepower and Kilowatts required are based on 90% mechanical efficiency and 100% volumetric efficiency.

Intermittent Duty Ratings: These ratings are for intermittent service. Pressures as shown may be utilized for a period not to exceed 30 minutes followed by an equal period at no load, but not to exceed 4 hours in a 24 hour period.

Pressure Limitations, Caution: When pump is eqipped with pistons and liners, pressures in excess of 5,000 psi (34,475 kPa) should not be exceeded except for emergencies or intermittent duty of short duration.

Speed Limitations: Speed in excess of 225 RPM is not recommended on JWS-340 pumps for maximum liner and piston life.

Charge Pump: A suction system charge pump is recommended for best operation. The charge pump should be capable of delivering 1-1/2 times the maximum discharge flow rate of the reciprocating pump.

ROTATING RIGHT

Head Office:
6120 Davies Road
Edmonton, AB
T6E 4M9

Phone: (780) 485-2010 • Toll Free: (866) 707-7867
Fax: (780) 485-1938
• Calgary • Drayton Valley • Lethbridge
www.rotatingright.com