

ROTATING RIGHT

## MODEL 250T-5 SINGLE ACTING TRIPLEX PUMP



### 250T-5

A 250 horsepower 5" stroke horizontal triplex single acting plunger pump. Available in nickel-aluminum-bronze fluid end material at pump speeds up to 400 RPM and multiple accessory gear reduction unit ratios.

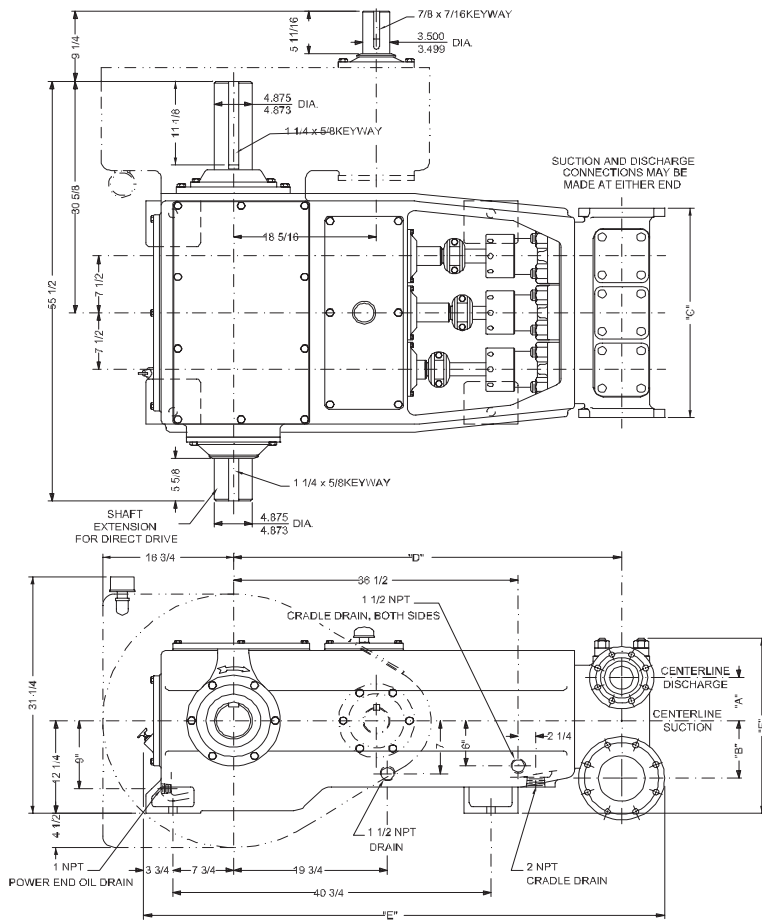
#### **Power End Features:**

- Cast iron power frame
- Heavy-duty, tapered roller crankshaft bearings
- Precision type, aluminum alloy crankpin bearings
- Ductile Iron connecting rods
- Alloy steel crosshead pins
- Alloy steel crankshaft with ground journals and polished throws
- Bronze bearing crosshead pin bushings
- Cast iron crossheads with upper/lower oil grooves
- Replaceable Stainless Steel intermediate rods
- Flooded sump, splash distribution lubrication
- Rated rod load is 14855 lbs.

#### **Fluid End Features:**

- 17-4 Stainless Steel or Nickel Aluminum Bronze Steel stuffing boxes (Includes nuts)
- General Service, Molded Lip or Aramid Fiber plunger packing
- Plungers-Solid Ceramic or Tungsten Carbide coated
- Spherical suction and discharge valves
- Valve Seat & Valve Body: Nitronic 50
- Spring: Inconel
- Cage: 316L Stainless Steel
- Severe duty valves with inserts available

# 250T-5 Triplex Plunger Pump



## Specifications

### Pump Size

maximum plunger size x stroke length, in.(mm):  
4 1/2 x 5 (114 x 127)

**Rated bhp at 400 rpm (kw):** 250 (187)

**Rated plunger load, pounds(Kg):** 14855(6738)

**Maximum discharge pressure: psi(kPa)**

"L" model: 1544 (10646)

"M" model: 3026 (20,865)

"H" model: 5000 (3,474)

**Crankshaft extension: in.(mm)**

Diameter: 4.875 (123.8)

Length long side: 11 1/8 (282.6)

Length short side: 5 5/8 (142.9)

Keyway (width x depth):

1 1/4 x 5/8 (32 x 16)

Maximum recommended sheave

in.(mm): 58 (1473)

Minimum recommended sheave

in.(mm): 36 (914)

For larger sizes: **Contact Factory**

**Pinion shaft extension,**

if gear reducer is supplied, in.(mm)

For belt or chain drive:

**Contact Factory**

For direct drive: Diameter: 3.5 (98.9)

Length: 5 11/16 (114.5)

Keyway (width x depth):

7/8 x 7/16 (22.2 x 11.1)

**Accessory gear reduction unit:**

2.27:1, 2.89:1, 3.25:1, 3.36:1, 3.69:1,

4.38:1, 4.84:1, 5.63:1

**Oil Capacity, gallons (L)**

Crankcase: 6 1/2 (24.6)

Gear Reducer-varies with ratio:

3.5 to 6.5 (13.2 to 24.6)

**Weight, pump only on**

wood shipping skids, pounds (Kg):

4486 (2035)

Gear reducer, approximate pounds, (Kg):

1100 (499)

Pump Model	Flange Connections		Dimensions in inches (mm)					
	Discharge Connection Sizes	Suction Connection Sizes	A	B	C	D	E	F
250T-5L	3 (76.2) API-2000 RJ	6 (152.4) ANSI-150 FF	5 11/16	7 5/8	27 3/4	49 3/4	65 3/4	23
250T-5M	2 (50.8) API-5000 RJ	4 (101.6) ANSI-150 FF	4 3/4	6 1/2	26 1/2	49 3/8	64 7/8	25 5/16
250T-5H	2 (50.8) ANSI-2500 RJ	3 (76.2) API-2000 RJ	4 3/4	6 1/2	26 1/2	49 3/8	64 1/4	25 5/16

# 250T-5 Triplex Plunger Pump

## Performance Data

PUMP	English Units					100 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
250T-5L	4.500	15.9043	35.4084	1.0327	934	3541	103.3	7082	206.5	8853	258.2	10623	309.8	12393	361.4		
	4.250	14.1862	31.5835	0.9212	1047	3159	92.1	6317	184.2	7896	230.3	9476	276.4	11055	322.4	12634	368.5
	4.000	12.5664	27.9770	0.8160	1182	2798	81.6	5596	163.2	6995	204.0	8394	244.8	9792	285.6	11191	326.4
	3.750	11.0447	24.5892	0.7172	1345	2459	71.7	4918	143.4	6148	179.3	7377	215.2	8607	251.0	9836	286.9
	3.500	9.6211	21.4199	0.6247	1544	2142	62.5	4284	124.9	5355	156.2	6426	187.4	7497	218.7	8568	249.9
250T-5M	3.250	8.2958	18.4692	0.5387	1791	1847	53.9	3694	107.7	4618	134.7	5541	161.6	6465	188.5	7388	215.5
	3.000	7.0686	15.7371	0.4590	2102	1574	45.9	3148	91.8	3935	114.7	4722	137.7	5508	160.6	6295	183.6
	2.750	5.9396	13.2235	0.3857	2501	1323	38.6	2645	77.1	3306	96.4	3968	115.7	4629	135.0	5290	154.3
	2.500	4.9087	10.9285	0.3187	3026	1093	31.9	2186	63.7	2733	79.7	3279	95.6	3825	111.6	4372	127.5
250T-5H	2.250	3.9761	8.8521	0.2582	3736	886	25.8	1771	51.6	2214	64.5	2656	77.5	3099	90.4	3541	103.3
	2.125	3.5466	7.8959	0.2303	4189	790	23.0	1580	46.1	1974	57.6	2369	69.1	2764	80.6	3159	92.1
	2.000	3.1416	6.9943	0.2040	4728	700	20.4	1399	40.8	1749	51.0	2099	61.2	2448	71.4	2798	81.6
	1.875	2.7612	6.1473	0.1793	5000	615	17.9	1230	35.9	1537	44.8	1845	53.8	2152	62.8	2459	71.7
	Brake Horsepower Required					63		126		157		188		219		250	

PUMP	Metric Units					100 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
	Plunger Dia. mm	Plunger Area cm <sup>2</sup>	M <sup>3</sup> /Hr per RPM	L/Sec. per RPM	Max. Press. kPa	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.
250T-5L	114	102.608	0.2345	0.0652	6440	23.5	6.5	46.9	13.0	58.6	16.3	70.4	19.5	82.1	22.8		
	108	91.524	0.2092	0.0581	7220	20.9	5.8	41.8	11.6	52.3	14.5	62.8	17.4	73.2	20.3	83.7	23.2
	102	81.073	0.1853	0.0515	8151	18.5	5.1	37.1	10.3	46.3	12.9	55.6	15.4	64.9	18.0	74.1	20.6
	95	71.256	0.1629	0.0452	9273	16.3	4.5	32.6	9.0	40.7	11.3	48.9	13.6	57.0	15.8	65.1	18.1
	89	62.072	0.1419	0.0394	10646	14.2	3.9	28.4	7.9	35.5	9.9	42.6	11.8	49.7	13.8	56.8	15.8
250T-5M	83	53.521	0.1223	0.0340	12346	12.2	3.4	24.5	6.8	30.6	8.5	36.7	10.2	42.8	11.9	48.9	13.6
	76	45.604	0.1042	0.0290	14490	10.4	2.9	20.8	5.8	26.1	7.2	31.3	8.7	36.5	10.1	41.7	11.6
	70	38.320	0.0876	0.0243	17244	8.8	2.4	17.5	4.9	21.9	6.1	26.3	7.3	30.7	8.5	35.0	9.7
	64	31.669	0.0724	0.0201	20865	7.2	2.0	14.5	4.0	18.1	5.0	21.7	6.0	25.3	7.0	29.0	8.0
250T-5H	57	25.652	0.0586	0.0163	25760	5.9	1.6	11.7	3.3	14.7	4.1	17.6	4.9	20.5	5.7	23.5	6.5
	54	22.881	0.0523	0.0145	28879	5.2	1.5	10.5	2.9	13.1	3.6	15.7	4.4	18.3	5.1	20.9	5.8
	51	20.268	0.0463	0.0129	32602	4.6	1.3	9.3	2.6	11.6	3.2	13.9	3.9	16.2	4.5	18.5	5.1
	48	17.814	0.0407	0.0113	34474	4.1	1.1	8.1	2.3	10.2	2.8	12.2	3.4	14.3	4.0	16.3	4.5
	Kilowatts Required					47		94		117		140		163		187	

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 100 RPM, an auxiliary lubrication system is required. Not all plunger sizes are shown. Contact National-Oilwell for additional information. Spherical Valves must be installed when the pump is fitted with 4.0" (102mm) plungers. Contact Factory for flow rates not listed above.

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.

## Accessories

Rotating Right offers a full line of accessories to ensure long trouble free and safe operation of your multiplex pumps.

### Accessories Include:

- Pulsation Dampeners - Suction & Discharge
- Vibration Shock Switches
- Liquid Level Gauges & Switches
- Pressure Safety Valves
- Plunger Lubricators
- Fire Safety Valves
- High Discharge Pressure Switch
- Condensate Drain
- N.A.C.E. Valving
- Lubricator Level Controller
- API Valves
- Drive Options



## Expendables



With our worldwide buying power Rotating Right is well equipped to provide a wide range of replacement parts & expendables for virtually all multiplex plunger pumps regardless of make or model.

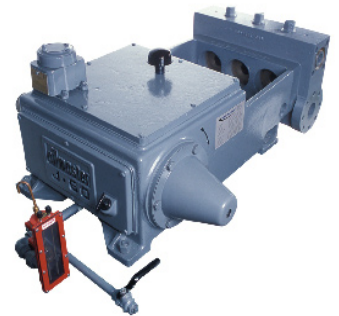


Our expendables inventory includes plungers, packing, brass, valves, bearings, crankshafts, connecting rods and seals.



## Repair & Overhauls

Rotating Right service technicians follow strict quality control procedures for every pump repair and overhaul. The use of consistent and reliable re-manufacturing techniques ensure your equipment is returned to you in "Like New" condition.



**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 • Lloydminster  
[www.rotatingright.com](http://www.rotatingright.com)