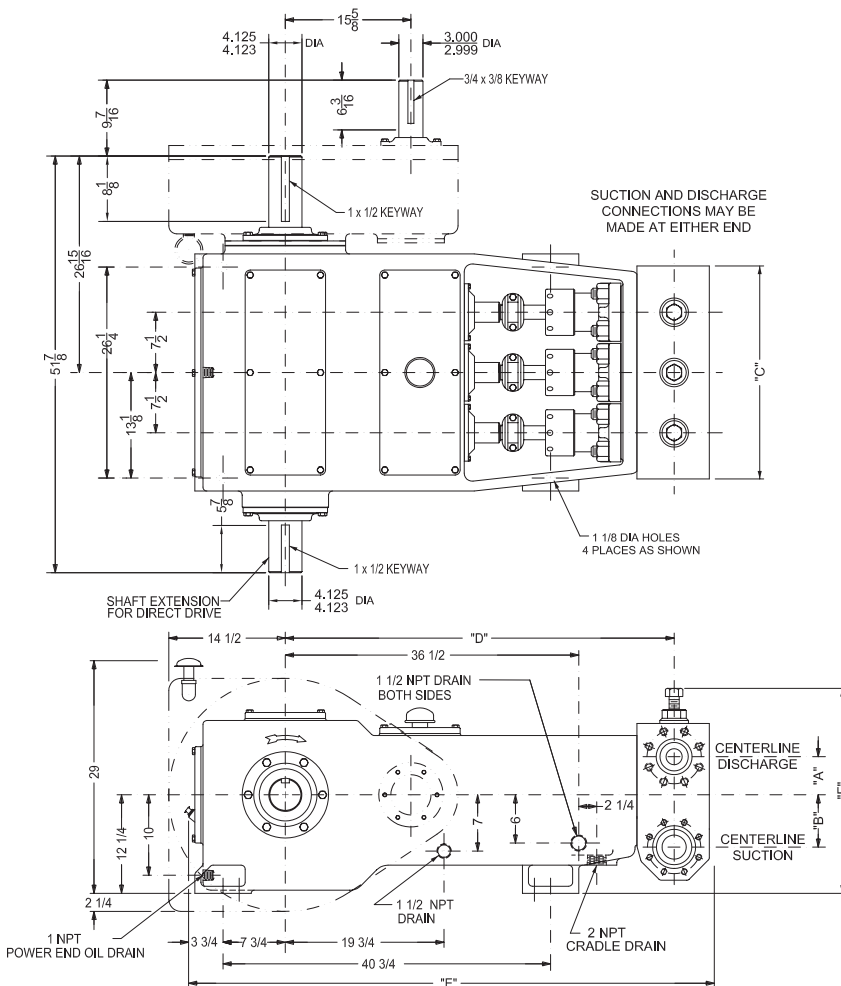


# 165T-5 Triplex Plunger Pump



## Pump size in.(mm)

(maximum plunger size x stroke length:  
4 x 5 (102 x 127)

## Rated bhp at 500 rpm (kw)

165 (123)

## Rated plunger load pounds (Kg)

9800 (4445.2)

## Max discharge pressure psi(kPa)

"L" model: 1650 (11,376)

"M" model: 3120 (21,512)

"H" model: 5000 (34,474)

## Crankshaft extension in.(mm)

Diameter: 4.125 (104.8)

Length long side: 8 1/8 (206.4)

Length short side: 5 7/8 (149.2)

Keyway (width x depth): 1 x 1/2 (25.4 x 12.7)

Maximum recommended sheave in. (mm): 50 (1270)

Minimum recommended sheave in. (mm): 36 (914)

For larger sizes: **Contact Factory**

## Pinion shaft extension in.(mm)

If gear reducer is supplied:

For belt or chain drive: **Contact Factory**

For direct drive: diameter: 3.0 (76.2)

Length: 6 3/16 (157.2)

Keyway (width x depth): 3/4 x 3/8 (19.05 x 9.53)

## Accessory gear reduction unit ratios

2.8:1, 3.22:1, 3.46:1, 4.00:1,

4.38:1, 4.78:1, 4.96:1, 5.74:1

## Oil capacity gallons (L)

Crankcase: 8 (30)

Gear Reducer-varies with ratio: 2.25 to 3.5 (8.52 to 13.25)

## Weight pounds (Kg)

pump only on wood shipping skids: 4000 (1814)

Gear reducer, approximate: 800 (363)

Pump Model	Flange Connections		Dimensions (Inches)					
	Discharge Connection Sizes	Suction Connection Sizes	A	B	C	D	E	F
165-5L	3 (76.2) API-2000 RJ	6 (152.4) ANSI-150 FF	5 11/16	7 5/8	27 3/4	48 3/4	65 3/4	23
165-5M	2 (50.8) API-5000 RJ	4 (101.6) ANSI-150 FF	4 3/4	6 1/2	26 1/2	48 3/8	64 7/8	25 5/16
165-5H	2 (50.8) ANSI-2500 RJ	3 (76.2) API-2000 RJ	4 3/4	6 1/2	26 1/2	48 3/8	64 1/4	25 5/16

# 165T-5

## 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
165T-5L	4.000	12.566	27.977	0.816	780	2798	81.6	5596	163.2	6995	204.0	8394	244.8	9792	285.6	11191*	326*
	3.750	11.045	24.589	0.717	887	2459	71.7	4918	143.4	6148	179.3	7377	215.2	8607	251.0	9836	286.9
	3.500	9.621	21.420	0.625	1019	2142	62.5	4284	124.9	5355	156.2	6426	187.4	7497	218.7	8568	249.9
	3.250	8.296	18.469	0.539	1181	1847	53.9	3694	107.7	4618	134.7	5541	161.6	6465	188.5	7388	215.5
	3.000	7.069	15.737	0.459	1386	1574	45.9	3148	91.8	3935	114.7	4722	137.7	5508	160.6	6295	183.6
	2.750	5.940	13.224	0.386	1650	1323	38.6	2645	77.1	3306	96.4	3968	115.7	4629	135.0	5290	154.3
165T-5M	2.750	5.940	13.224	0.386	1650	1323	38.6	2645	77.1	3306	96.4	3968	115.7	4629	135.0	5290	154.3
	2.500	4.909	10.929	0.319	1996	1093	31.9	2186	63.7	2733	79.7	3279	95.6	3825	111.6	4372	127.5
	2.250	3.976	8.852	0.258	2465	886	25.8	1771	51.6	2214	64.5	2656	77.5	3099	90.4	3541	103.3
	2.000	3.142	6.994	0.204	3120	700	20.4	1399	40.8	1749	51.0	2099	61.2	2448	71.4	2798	81.6
165T-5H	2.000	3.142	6.994	0.204	3120	700	20.4	1399	40.8	1749	51.0	2099	61.2	2448	71.4	2798	81.6
	1.750	2.405	5.355	0.156	4074	536	15.6	1071	31.2	1339	39.0	1607	46.9	1875	54.7	2142	62.5
	1.500	1.767	3.934	0.115	5000	394	11.5	787	22.9	984	28.7	1181	34.4	1377	40.2	1574	45.9
Brake Horsepower Required						42		83		104		124		144		165	

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.
165T-5L	102	81.073	0.185	0.052	5377	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	0.163	0.045	6118	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	0.142	0.039	7023	14.2	3.9	28.4	7.9	35.5	9.9	42.6	11.8	49.7	13.8	56.8	15.8
	83	53.521	0.122	0.034	8145	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	0.104	0.029	9559	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	0.088	0.024	11376	8.8	2.4	17.5	4.9	21.9	6.1	26.3	7.3	30.7	8.5	35.0	9.7
165T-5M	70	38.320	0.088	0.024	11376	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	0.072	0.020	13765	7.2	2.0	14.5	4.0	18.1	5.0	21.7	6.0	25.3	7.0	29.0	8.0
	57	25.652	0.059	0.016	16994	5.9	1.6	11.7	3.3	14.7	4.1	17.6	4.9	20.5	5.7	23.5	6.5
165T-5H	51	20.268	0.046	0.013	21512	4.6	1.3	9.3	2.6	11.6	3.2	13.9	3.9	16.2	4.5	18.5	5.1
	44	15.518	0.036	0.010	28092	3.5	1.0	7.1	2.0	8.9	2.5	10.6	3.0	12.4	3.4	14.2	3.9
	38	11.401	0.026	0.007	34474	2.6	0.7	5.2	1.4	6.5	1.8	7.8	2.2	9.1	2.5	10.4	2.9
Kilowatts Required						31		62		78		92		108		123	

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 200 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.

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