



NATIONAL OILWELL 300Q-5 TECHNICAL DATA SHEET



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Formerly J-275 Quintuplex Plunger Pump 300Q-5

Rated input horsepower
"Q" Quintuplex
Stroke length (in.)
Fluid end pressure ranges
"L" Low, "M" Medium, "H" High



This 5" stroke pump is designed for a variety of fluid transfer applications operating at low, medium or high pressures.

Field Connections in. (mm)

Pump Model	Discharge Connection Size	Suction Connection Size
300Q-5L	4 (101.6) API-2000# RTJ	8 (203.2) API# 150 F.F.
300Q-5M	3 (76.2) NSD-5000 RTJ	6 (152.4) NSD-600 RTJ
300Q-5H	2 (50.8) ANSI-2500# RTJ	6 (152.4) ANSI-600 RTJ

Dimensions

Pump Type	Length	Width	Height
300Q-5L	67-1/8"	70-1/2"	23-3/16"
300Q-5M	64-1/4"	70-1/2"	23-3/16"
300Q-5H	64-1/4"	70-1/2"	23-3/16"

Pump Specifications

Pump Size (Max. Plunger Diameter x Stroke) in. (mm).....4 x 5 (102x127)
Rated BHP At 400 RPM (Kw)300 (224)
Rated Plunger Load (Kg)10,700 (4,853.5)

Maximum Working Pressure: PSI (kPa)

"L" Model Discharge Pressure1,650 (11,375)
"M" Model Discharge Pressure.....3,000 (20,682)
"H" Model Discharge Pressure5,000 (34,473)

Crankshaft Extension: in. (mm)

Diameter4-7/8 (123.8)
Length (long side).....12 (305)
Length (short side)6-1/2 (165)
Keyway (Width x Depth).....1-1/4 x 5/8 (32 x 16)

Pinion Shaft Extension, if gear unit supplied (mm)

For Belt Or Chain Drive: Diameter3-1/2 (88.9)
Length5-11/16 (145)
Keyway (Width x Depth)7/8 x 7/16 (22.2 x 11.1)

Oil Capacity: Gallons (L)

Crankcase12 (45.5)
Gear Unit (Varies with Ratio)3.5 to 6.5 (13.2:24.6)

Weight: Pump Only On Wood Shipping Skids - Lbs. (Kg)7,000 (3175)
Gear Unit - Lbs. (Kg)1,100 (499)

Standard Equipment

Aluminum Bronze Fluid End
Aluminum Bronze Valve Covers
Aluminum Bronze or Stainless Steel Stuffing Boxes
Bronze Stuffing Box Internals
Ceramic or Tungsten Carbide Plungers
General Service or Kevlar Plunger Packing
Stainless Steel Intermediate Rods
Fluid King Spherical Valves
Double Extended Crankshaft
Oil Level Dipstick
Crankcase Breather

Optional Equipment

Alternate Fluid End Materials
Alternate Fluid End Valve Styles
Custom Designs For Specialized Applications

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 5.63:1 Ratio

Packing Lubricator
Pulsation Dampeners
Relief Valves
Valve Service Kit
Complete Unitization Services

Quick Maintenance Features:

- Horizontal Design
- Large Power End Covers
- Easy Access To Bearings
- Separate Crosshead/Plunger Construction
- Open Frame Construction
- Removable Stuffing Boxes
- Interchangeable Valves

Continuous Duty Performance Data (Volumes Indicated Are Displacement of Incompressible Fluid)

English Units

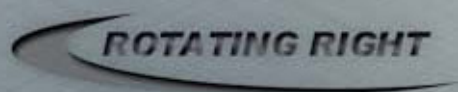
Plunger Size					100 RPM*		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
Plunger Dia. In.	Plunger Area Sq. In.	BPD Per RPM	GPM Per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
300Q-5L																		
2 3/4	5.9396	22.0485	0.6428	1650	2205	64.28	3307	96.42	4410	128.56	5512	160.70	6615	192.84	7717	224.98	8819	257.13
3	7.0686	26.2395	0.7650	1510	2624	76.50	3936	114.75	5248	153.00	6560	191.25	7872	229.50	9184	267.75	10496	306.00
3 1/4	8.2958	30.7950	0.8978	1290	3079	89.78	4619	134.67	6159	179.56	7699	224.45	9238	269.34	10778	314.23	12318	359.13
3 1/2	9.6212	35.7149	1.0413	1110	3571	104.13	5357	156.19	7143	208.25	8929	260.31	10714	312.38	12500	364.44	14286	416.50
3 3/4	11.0447	40.9992	1.1953	970	4100	119.53	6150	179.30	8200	239.06	10250	298.83	12300	358.59	14350	418.36	16400	478.13
4	12.5664	46.6480	1.3600	850	4665	136.00	6997	204.00	9330	272.00	11662	340.00	13994	408.00	16327	476.00	n/a	n/a
300Q-5M																		
2	3.1416	11.6620	0.3400	3400	1166	34.00	1749	51.00	2332	68.00	2916	85.00	3499	102.00	4082	119.00	4665	136.00
2 1/4	3.9761	14.7597	0.4303	2690	1476	43.03	2214	64.55	2952	86.06	3690	107.58	4428	129.09	5166	150.61	5904	172.13
2 1/2	4.9088	18.2219	0.5313	2185	1822	53.13	2733	79.69	3644	106.25	4555	132.81	5467	159.38	6378	185.94	7289	212.50
2 3/4	5.9396	22.0485	0.6428	1800	2205	64.28	3307	96.42	4410	128.56	5512	160.70	6615	192.84	7717	224.98	8819	257.13
300Q-5H																		
1 1/2	1.7672	6.5599	0.1913	5000	656	19.13	984	28.69	1312	38.25	1640	47.81	1968	57.38	2296	66.94	2624	76.50
1 3/4	2.4053	8.9287	0.2603	4450	893	26.03	1339	39.05	1786	52.06	2232	65.08	2679	78.09	3125	91.11	3571	104.13
2	3.1416	11.6620	0.3400	3400	1166	34.00	1749	51.00	2332	68.00	2916	85.00	3499	102.00	4082	119.00	4665	136.00
Brake Horsepower Required:					75		112		150		188		225		263		300	

Metric Units

Plunger Dia. mm		Plunger Area Sq. cm.	M ³ /D Per RPM	L/Min Per RPM	Max. Press. kPa	100 RPM*		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
						M ³ /D	L/Min.	M ³ /D	L/Min.	M ³ /D	L/Min.	M ³ /D	L/Min.	M ³ /D	L/Min.	M ³ /D	L/Min.	M ³ /D	GPM
300Q-5L																			
70	38.3200	3.5055	2.4330	11375	351	243.30	526	364.96	701	486.61	876	608.26	1052	729.91	1227	851.57	1402	973.22	
76	45.6040	4.1718	2.8955	10410	417	289.55	626	434.33	834	579.11	1043	723.88	1252	868.66	1460	1013.43	1669	1158.21	
83	53.5213	4.8961	3.3982	8893	490	339.82	734	509.73	979	679.64	1224	849.56	1469	1019.47	1714	1189.38	1958	1359.29	
89	62.0721	5.6783	3.9411	7652	568	394.11	852	591.17	1136	788.23	1420	985.28	1703	1182.34	1987	1379.40	2271	1576.45	
95	71.2562	6.5185	4.5243	6687	652	452.43	978	678.64	1304	904.85	1630	1131.06	1956	1357.28	2281	1583.49	2607	1809.70	
102	81.0737	7.4166	5.1476	5860	742	514.76	1112	772.14	1483	1029.52	1854	1286.90	2225	1544.28	2596	1801.66	n/a	n/a	
300Q-5M																			
51	20.2684	1.8541	1.2869	20682	185	128.69	278	193.04	371	257.38	464	321.73	556	386.07	649	450.42	742	514.76	
57	25.6522	2.3466	1.6287	18545	235	162.87	352	244.31	469	325.75	587	407.18	704	488.62	821	570.06	939	651.49	
64	31.6694	2.8971	2.0108	15063	290	201.08	435	301.62	579	402.16	724	502.70	869	603.23	1014	703.77	1159	804.31	
70	38.3200	3.5055	2.4330	12409	351	243.30	526	364.96	701	486.61	876	608.26	1052	729.91	1227	851.57	1402	973.22	
300Q-5H																			
38	11.4010	1.0430	0.7239	34470	104	72.39	156	108.58	209	144.78	261	180.97	313	217.16	365	253.36	417	289.55	
44	15.5180	1.4196	0.9853	30678	142	98.53	213	147.79	284	197.06	355	246.32	426	295.58	497	344.85	568	394.11	
51	20.2684	1.8541	1.2869	23440	185	128.69	278	193.04	371	257.38	464	321.73	556	386.07	649	450.42	742	514.76	
Kilowatts Required:					56		84		112		140		168		196		224		

* For operations below 100 RPM an auxiliary lubrication system is required.

Volume is based on 100% volumetric efficiency. Brake horsepower is based on 90% mechanical efficiency.



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