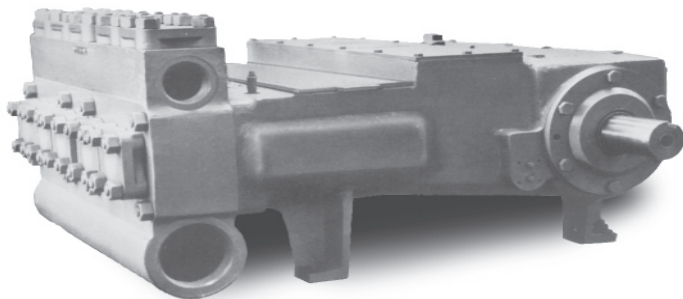
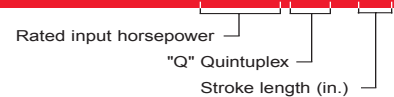


ROTATING RIGHT

# NATIONAL OILWELL 84Q-3 TECHNICAL DATA SHEET



Formerly C-523  
**Quintuplex Plunger Pump 84Q-3**



This 3" stroke pump is designed for a variety of fluid transfer applications.

**Field Connections** in. (mm)

Pump Model	Discharge Connection Size	Suction Connection Size
84Q-3	4 (101.61) NPT Threaded	6 (152.4) NPT Threaded

**Dimensions**

Pump Type	Length	Width	Height
84Q-3	40-3/4"	43-3/4"	20"

### Pump Specifications

Pump Size (Max. Plunger Diameter x Stroke) in. (mm) .....2-1/2 x 3 (64 x 76)  
 Rated BHP At 500 RPM (Kw) .....84 (63)  
 Rated Plunger Load (Kg) .....4,000 (1,814.4)

**Maximum Working Pressure:** PSI (kPa) .....2,260 (15,582)

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

Diameter .....2.995 (76)  
 Length .....4-7/8 (124)  
 Keyway (Width x Depth) .....3/4 x 3/8 (19 x 10)

**Pinion Shaft Extension,** if gear unit supplied (mm)

Belt Or Chain Drive: Diameter .....1.870 (47)  
 Length .....4-7/8 (124)  
 Keyway (Width x Depth) .....1/2 x 1/4 (13 x 16)  
 Direct Drive: Diameter .....1.870 (47)  
 Length .....4-7/8 (124)  
 Keyway (Width x Depth) .....1/2 x 1/4 (13 x 16)

**Oil Capacity:** Gallons (L)

Crankcase .....3-1/2 (13)  
 Gear Unit (Vertically Mounted) .....1 (4)  
 (Horizontally Mounted) .....1-1/2 (6)

**Weight:** Pump Only On Wood Shipping Skids - Lbs. (Kg) .....1,655 (751)  
 Gear Unit - Lbs. (Kg) .....175 (79)

### 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
  - 3.54:1 Ratio
  - 3.95:1 Ratio
  - 4.45:1 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 Dia. In.	Plunger Area Sq. In.	BPD Per RPM	GPM Per RPM	Max. Press. PSI	100 RPM		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM		450 RPM		500 RPM	
					BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
<b>84Q-3</b>																						
1 1/4	1.2272	2.7333	0.0797	2260	273	7.97	410	11.95	547	15.94	683	19.92	820	23.91	957	27.89	1093	31.87	1230	35.86	1367	39.84
1 1/2	1.7672	3.9359	0.1148	2260	394	11.48	590	17.21	787	22.95	984	28.69	1181	34.43	1378	40.16	1574	45.90	1771	51.64	1968	57.37
1 3/4	2.4053	5.3572	0.1562	1660	536	15.62	804	23.43	1071	31.24	1339	39.05	1607	46.86	1875	54.67	2143	62.47	2411	70.28	2679	78.09
2	3.1416	6.9972	0.2040	1275	700	20.40	1050	30.60	1399	40.80	1749	51.00	2099	61.20	2449	71.40	2799	81.60	3149	91.80	3499	102.00
2 1/4	3.9761	8.8558	0.2582	1005	886	25.82	1328	38.73	1771	51.64	2214	64.55	2657	77.46	3100	90.37	3542	103.28	3985	116.18	4428	129.69
2 1/2	4.9088	10.9331	0.3188	815	1093	31.88	1640	47.81	2187	63.75	2733	79.69	3280	95.63	3827	111.56	4373	127.50	4920	143.44	5467	159.37
Brake Horsepower Required					17		25		34		42		51		59		67		76		84	

**Metric Units**

Plunger Dia. mm	Plunger Area Sq. cm.	M <sup>3</sup> /D Per RPM	L/Min. Per RPM	Max. Press. kPa	100 RPM		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM		450 RPM		500 RPM	
					M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	GPM	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.	M <sup>3</sup> /D	L/Min.
<b>84Q-3</b>																						
32	7.9174	0.4346	0.3016	15582	43	30.16	65	45.24	87	60.32	109	75.40	130	90.49	152	105.57	174	120.65	195	135.60	217	150.60
38	11.4010	0.6258	0.4343	15582	63	43.43	94	65.15	125	86.87	156	108.58	188	130.30	219	152.02	250	173.73	281	195.60	313	217.20
44	15.518	0.8504	0.5912	11445	85	59.12	128	88.68	170	118.24	213	147.80	255	177.36	298	206.9	340	236.48	383	266.04	425	295.60
51	20.2684	1.1125	0.7721	8790	111	77.21	167	115.82	222	154.43	278	193.04	334	231.64	389	270.25	445	308.86	500	347.40	556	386.40
57	25.6522	1.4080	0.9772	6929	141	97.72	211	146.59	282	195.45	352	244.31	422	293.17	493	342.03	563	390.90	633	439.80	704	488.40
64	31.6694	1.7383	1.2065	5619	174	120.65	261	180.97	348	241.29	435	301.62	521	361.94	608	422.26	695	482.59	782	543.00	869	603.00
Kilowatts Required					13		19		25		31		38		44		50		56		63	

\* For operations below 50 RPM, an auxiliary lubrication system is required.  
Volume is based on 100 % volumetric efficiency. Brake horsepower is based on 90% mechanical efficiency



**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](http://www.rotatingright.com)