

**INJECTION PUMP**
**UNIT: PUM022**
**PERFORMANCE**

Maximum Operating Pressure @ 100% of Rated Capacity	1955 psi
Maximum Flow Rate @ 100% of Rated Capacity	1620 m <sup>3</sup> /day
Maximum Operating Pressure @ 80% of Rated Capacity (Recommended)	1564 psi
Maximum Flow Rate @ 80% of Rated Capacity (Recommended)	1296 m <sup>3</sup> /day

**SOUND RATING**

Distance	@50%	@100%
In Building	96.1 dB(A)	105.3 dB(A)
1.2 m (4 ft)	76.1 dB(A)	81.5 dB(A)
7.5 m (25 ft)	66.3 dB(A)	72.3 dB(A)
15.2 m (50 ft)	61.2 dB(A)	69.8 dB(A)

\*\* Sound ratings will be field verified\*\*

**INJECTION DRIVE**

Model	CAT 3406B
Horsepower	460 HP
Maximum RPM	1900 RPM
Fuel Type	Diesel

**PUMP**

Make	National 7-P-50
Model	Triplex
Plungers	3
Installed Plunger Diameter	5.5" (152.4 mm)
Maximum Input	500 HP (373 kW)
Maximum RPM	125 RPM
Stroke Length	7.75" (196.9 mm)


**DISCHARGE PIPING**

Maximum Allowable Working Pressure	5,150 psi (35.5 MPa)
Size	4" (114.3 mm)
Connection	CL2500 RTJ

**SUCTION PIPING**

Maximum Allowable Working Pressure	248 psi (1,710 kPa)
Size	8" (219.1 mm)
Connection	CL150 RF

**FUEL CONSUMPTION**

50% Load	47.8 L/hr
75% Load	66.3 L/hr
100% Load	86.6 L/hr

\*\* Approximate: Will vary based on site conditions\*\*

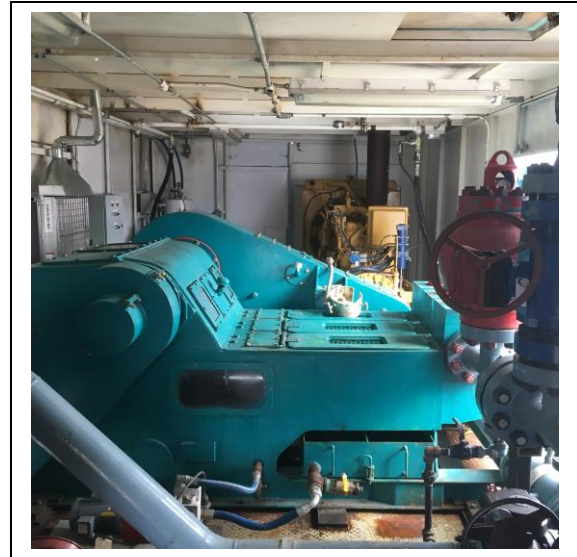
**EMISSIONS**

NOx	7.76 g/hp-hr
CO	1.51 g/hp-hr

\*\* Approximate: Will vary based on site conditions\*\*

**SHIPPING DIMENSIONS**

Width	12' 4" (3.76 m)
Length	35' (10.67 m)
Height	11' (3.35 m)
Weight Estimate	67,800 lbs (30,750 kg)



**BOOSTER PUMP**

Make	Forum
Model	999881BDC
Impeller Size	11" (279.4 mm)

**FEATURES**

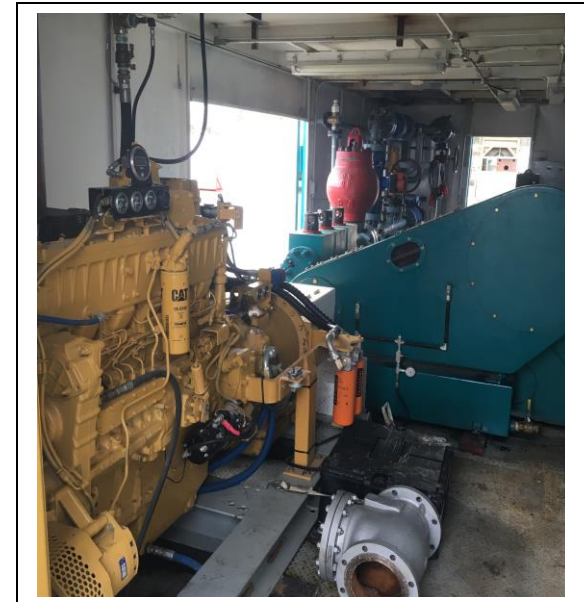
Building Equipped With Heater and Lights
Strainer On Inlet Piping
Pulsation Dampener
Booster Pump
24 V Battery System
Air Compressor
2 – 100lb Propane Bottles
Generator
Oteco Pressure Relief Valve

**SHUTDOWNS**

Positive Air Shutoff
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**CERTIFICATION**

Electrical Class	General Area Classification
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# 7-P-50 Mud Pump

The 7-P-50 Mud Pump is National Oilwell Varco's smallest, rated at 500 input horsepower (373 kw) at 165 strokes-per-minute with a 7¼-inch (196.9 mm) stroke.

This mud pump is ideal for shallow drilling and workover. Seven liner sizes provide a variety of pressures and volumes.



**7-P-50 Mud Pump**

## Dimensions and Specifications

Height, floor to center of front inlet suction, inches (mm)	105 $\frac{1}{8}$ (270)	Maximum fluid cylinder line bore*, inches (mm)	6 $\frac{1}{4}$ (158.8)
Height, floor to center of discharge, inches (mm)	33 $\frac{1}{2}$ (851)	Stroke, inches (mm)	7 $\frac{3}{4}$ (196.9)
Overall length over skids, inches (mm)	142 $\frac{1}{4}$ (3613)	Hydrostatic test pressure of standard fluid cylinders, psi (kg/cm <sup>2</sup> )	10,000 (703)
Width over frame, inches (mm)	54 $\frac{1}{2}$ (1384)	Ratio of gears	2.742
Width over pinion shaft, inches (mm)	81 $\frac{7}{8}$ (2069)	Suction connection, ASA-150 lb. R.J. Flange (inches)	8
Height, floor to top of gear case, inches (mm)	54 $\frac{1}{2}$ (1384)	Discharge connection, cross w/API-5000 lb. R.J. Flange (inches)	4
Height over fluid cylinders, inches (mm)	48 $\frac{3}{8}$ (1241)	Valve pot, API number	MOD. 5.5
Max. input, horsepower (kW)	500 (373)	Weight-complete, less sheave, lbs. (kg)	16,750 (7600)
Rated pump speed, spm	165		

## Performance

Liner size, inches (mm)	6 $\frac{1}{4}$ (158.8)	6 (152.4)	5 $\frac{1}{2}$ (139.7)	5 (127.0)	4 $\frac{1}{2}$ (114.3)	4 (101.6)	3 $\frac{1}{2}$ (88.9)		
Max. Discharge Pressure, psi (kg/cm <sup>2</sup> )	1515 (106.5)	1645 (115.7)	1955 (137.4)	2365 (166.3)	2920 (205.3)	3695 (259.8)	4830 (339.6)		
Pump Speed	Max. Input	Hydraulic*							
spm	HP	HP	GPM* (LPM*)	GPM (LPM)	GPM (LPM)	GPM (LPM)	GPM (LPM)	GPM (LPM)	
165†	500†	450	510 (1929)	470 (1777)	395 (1493)	326 (1234)	264 (1000)	209 (790)	160 (605)
145	439	395	448 (1695)	413 (1562)	347 (1312)	287 (1085)	232 (879)	183 (694)	140 (531)
120	363	327	371 (1403)	341 (1293)	287 (1086)	237 (898)	192 (727)	152 (574)	116 (440)
100	303	273	309 (1169)	285 (1077)	239 (905)	198 (748)	160 (606)	126 (479)	97 (367)
80	242	218	247 (935)	228 (862)	191 (724)	158 (598)	128 (485)	101 (383)	77 (293)
	Vol./stroke, gal. (liters)		3.088 (11.688)	2.846 (10.772)	2.391 (9.051)	1.976 (7.480)	1.601 (6.059)	1.265 (4.787)	968 (3.665)

\* Based on 90% mechanical efficiency and 100% volumetric efficiency

† Rated speed and input horsepower

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**NOV NATIONAL OILWELL VARCO**

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PPO10000811 Rev. 02