

ROTATING RIGHT

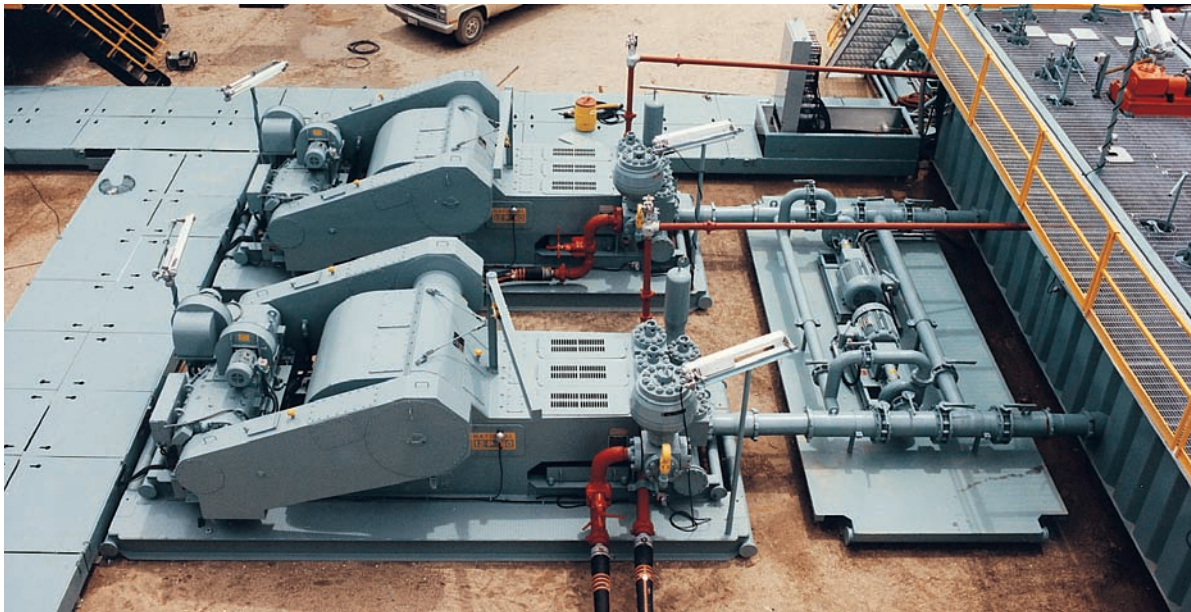
MODEL 12-P-160 TRIPLEX MUD PUMP



12-P-160 Triplex Mud Pump

National Oilwell Varco's 12-P-160 Mud Pump is rated at 1600 input horsepower (1193 kw) at 120 strokes per minute, with a 12-inch (304.8 mm) stroke.

Multiple liner sizes allow pressures and volumes to handle circulation requirements in deep drilling applications.





PERFORMANCE DATA

Liner size, inches (mm)			7 ¼"	7"	6 ¾"	6 ½"	6 ¼"	6"	5 ¾"	5 ½"	5"	4 ½"
			(184.2)	(177.8)	(171.5)	(165.1)	(158.8)	(152.4)	(146.1)	(139.7)	(127)	(114.3)
Max. Discharge Pressure, psi (kg/cm ²) with high pressure Fluid End†			3200 (225)	3430 (241.1)	3690 (259.4)	3980 (279.8)	4305 (302.7)	4670 (328.3)	5085 (357.5)	5555 (390.5)	6720 (472.4)	7500 (527.2)
Pump Speed spm	Input HP, HP (kW)	Hyd.** HP, HP (kW)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)	GPM** (LPM**)
120*	1600* (1193*)	1440 (1074)	***	***	669 (2533)	621 (2349)	574 (2172)	529 (2002)	486 (1840)	444 (1682)	367 (1389)	297 (1124)
100	1333 (994)	1200 (895)	643 (2435)	600 (2270)	558 (2111)	517 (1958)	478 (1810)	441 (1668)	405 (1533)	370 (1401)	306 (1158)	248 (938)
80	1067 (796)	960 (716)	515 (1948)	480 (1816)	446 (1689)	414 (1566)	383 (1448)	353 (1334)	324 (1226)	296 (1121)	245 (927)	198 (750)
60	800 (597)	720 (537)	388 (1461)	360 (1362)	335 (1267)	310 (1175)	287 (1086)	264 (1001)	243 (920)	222 (841)	184 (697)	149 (564)
40	533 (397)	480 (358)	257 (974)	240 (908)	223 (844)	207 (783)	191 (724)	176 (667)	162 (613.1)	148 (561)	122 (462)	99 (375)
Volume/Stroke, gal. (Liters)			6.433 (24.35)	5.997 (22.70)	5.576 (21.11)	5.171 (19.58)	4.781 (18.10)	4.406 (16.68)	4.046 (15.32)	3.702 (14.02)	3.060 (11.58)	2.478 (9.38)

*Rated maximum input horsepower and speed

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

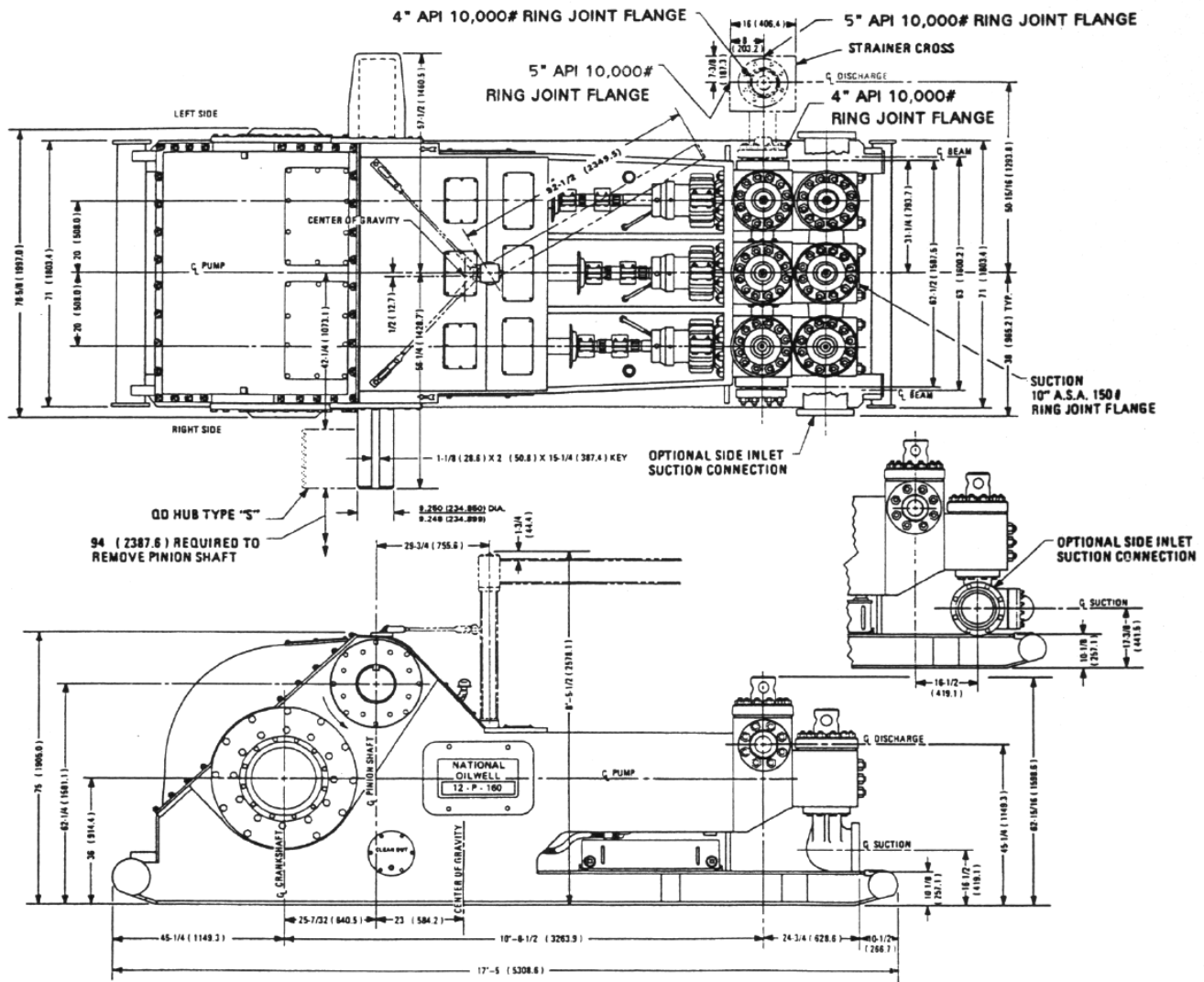
***Operation over 675 gpm could result in reduced valve life

†5,000 PSI Fluid End configuration available



Dimensions	
Height, floor to center of front inlet suction, inches (mm)	16 ½ (419)
Height, floor to center of discharge, inches (mm)	45 ¼ (1149)
Overall length over skids, inches (mm)	209 (5309)
Width over frame, inches (mm)	78 ⅝ (1997)
Width over pinion shaft, inches (mm)	113 ¾ (2889)
Height, floor to top of gear case, inches (mm)	75 (1905)
Height over fluid cylinders, inches (mm)	62 ⅛ (1599)
Weight-complete, less sheave, lbs. (kg)	54,700 (24,810)
Fluid Connections	
Suction connection	10" ASA-150 lb. R.J. flange
Discharge connection, cross	6" API-5000 lb. R.J. flange
Capacity Data	
Maximum liner bore, inches (mm)	7 ¼ (184.2)
Stroke, inches (mm)	12 (304.9)
Maximum input horsepower (kW)	1600 (1193)
Rated pump speed, spm	120
Pinion speed, rpm	413
Hydrostatic test pressure of fluid cylinders, psi (kg/cm ²)	11,250 (791)
Mechanical Data	
Fluid cylinder	Steel, 2 piece interchangeable modular design
Valves, API number	MOD. 7
Valve seats	Bottom shouldering, modified for high pressure
Piston rod-piston connection	Piloted and shouldered, National CB-4
Piston rod-intermediate rod connection	Piloted and shouldered, metal-to-metal lock
Type of gears	Relieved herringbone
Gear ratio	3.439:1
Gear and pinion	Through hardened alloy
Type of crosshead pin	Tapered
Number and type of pinion shaft bearing	2 self aligning roller
Number and type of main bearing	2 double row tapered roller
Number and type of crosshead bearing	3 double row needle
Number and type of crankshaft-connecting rod bearing	3 cylindrical roller
Double extension on pinion shaft, inches (mm)	9 ¼ Dia. x 18 ½ Long (234.95 x 469.9)
Sprocket with QD Hub Type S-Dual Electric Motor Drive (Drive sprocket 1200 RPM max.)	Two- 75T 1½" pitch quint.
Ind. or rig drive-drive sprocket 1000 rpm max.	75T 1½" pitch octuple
Ind. or rig drive-drive sprocket 1100 rpm max.	75T 1½" pitch tenwide
Sheave, QD Hub Type S	53" OD 24-8V Section belts

General Dimensions



NOTE: Center of Gravity is for complete pump less sprocket

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

