

CG-33 Hydraulic Drivehead



NOV Monoflo provides a complete line of artificial lift technologies and oilfield equipment through over 30 service center locations across Canada and more than 150 locations around the globe. The artificial lift product offering includes a complete hydraulics package specifically designed for use with progressing cavity pumping systems.

NOV Monoflo's CG-33 hydraulic drivehead is a beltless top drive using gears to transfer torque to the polished rod. The precision ground gears reduce noise levels by up to five times. In comparison to conventional belt drives, making the CG-33 drivehead an ideal solution for use in populated areas. Each CG-33 drive utilizes a radial piston motor designed to reduce internal friction and run efficiently. These driveheads are fitted with a hydraulically activated stuffing box that can withstand any progressing cavity pumping application.

Features & Benefits

- Enclosed gear housing eliminates need for belts, thus reducing field maintenance
- Case hardened and precision ground gears drastically reduce noise levels
- Gear drive utilizes a radial piston motor connected to the input gear
- Motor is available in various displacements
- Motor is easily changed in the field
- Pressurized stuffing box prevents fluid from entering the seal chamber extending the life of the seals
- Built in polished rod vise allows stuffing box seal change without removal of drivehead or flush-by rig

- Gearbox incorporates a field removable main shaft
- Main thrust bearing is housed separately eliminating contaminants on the gears
- Gear drive is compact and easy to handle on vertical and slant wells

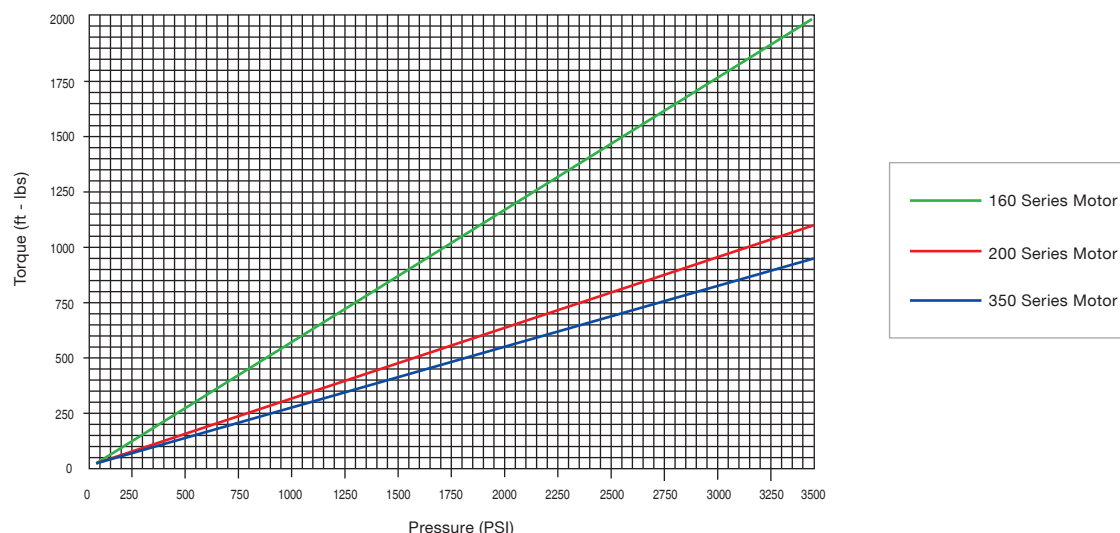
Options and Accessories

- Polished rod guard
- Ejection clamp
- Connect under pressure quick couplers
- Shipping / support stands



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CG-33 Pressure vs Output Torque



Specifications

Drive Ratio (Gears)	2:1
Max. System Pressure (psi)	3500 psi (24,132 kPa)
Max. System Temperature	176°F/80°C
Polish Rod Size (In)	1 ¹ / ₄ " (32 mm)
Wellhead Connection	3 ¹ / ₈ " 3000 psi - R31 Flange
Thrust Bearing ²	Ca90-33,500 lbs/ISO-129,000 lbs
Backspin Control	Check valve on pressure side of the motor
Torque Control	Adjustable pressure compensator on pump
Variable Speed Control	Adjustment knob on the pump
Height (In)	31 (787 mm)
Width (In)	24 (610 mm)
Weight (lbs)	240 (109 kg)
Bearing Box Grease	1 tube (Chevron Ulti-Plex Synthetic Grease)
Gear Box Oil	4 ¹ / ₂ L (1 gal) (Chevron Tegra ISO 460)
Stuffing Box Pressure	50 psi-100 psi (345 kPa-689 kPa) above flow line pressure
Polish Rod Vise Axial Resistance	10,000 lbs (4536 kg) at 220 ft-lbs (298 Nm) Lockout Clamp Torque
Polish Rod Vise Rotational Resistance	1500 ft-lbs (2034 Nm) at 220 ft-lbs (298 Nm) Lockout Clamp Torque

¹ Maximum operating temperature may be limited by hydraulic oil.

² Ca90 load rating is 90 million revolutions at 500 rpm. Reducing load by 50% increases life 10 times. Reducing speed by 50% doubles hours of life.

Drive Comparison

Pump (Rexroth* A10VSO-)	71			100		
Motor (SAI)	Series 160	Series 200	Series 350	Series 160	Series 200	Series 350
Max. Polish Rod Speed ¹ (rpm)	380	325	180	545	460	255
Max. Rod Torque ^{1,2} (ft-lb at 3500 psi)	930	1095	1975	930	1095	1975
Torque (ft-lb/100 psi)	26.6	31.3	56.4	26.6	31.3	56.4

¹ Values are based on 100% efficiencies

² Information for torque ratings at different pressures is available on request.



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