

MODEL 220 DC BRUSHLESS HYDRAULIC PUMP



Due to its extremely small size, light weight and reasonable cost, the Model 220 DC brushless hydraulic pump is ideally suited for small manipulators, tool packages, pan & tilts and a variety of other subsea applications. The Model 220's reliability has been proven over many years service in the worlds harshest offshore environments.

The fixed displacement gear pump of the Model 220 is available with four pump displacements delivering flows of 1.9 liters / minute, 3.4 liters / minute, 4.3 liters / minute and 5.8 liters / minute. The extremely reliable DC brushless motor is available at various voltages ranging from 95vdc to 330vdc. And because the DC brushless motor has variable speed control, the pump speed and flow can be continuously varied to meet the hydraulic demand, thus conserving considerable electrical power when compared to variable displacement pumps which operate at fixed speed.

The Model 220 pump will deliver rated flow at pressures to 21mPa. The investment cast aluminum casing of the pump is protected from the ocean environment with a rugged ceramic epoxy coating. The motor housing is hard anodized aluminum.

For depths to 1,500 meters, the power and control electronics can be housed within the hard anodized aluminum motor casing, greatly simplifying the installation and electrical interface. For full ocean depth rating, the electronics are installed in a remote, one atmosphere housing (either the customers housing or one supplied by Tecnadyne) and the motor housing and electrical cabling are oil filled for pressure tolerance.

The Model 220 is available for operation at voltages from 95vdc to 330vdc (150vdc standard) supplied by a well filtered battery bank, rectified and filtered AC or a DC power supply. Pump speed is controlled with a 0-5v analog speed control signal. Alternately, the motor can be wired so that it operates at full speed only when the main power is applied, which reduces the control and connector complexity in some installations. Also, a full servo RS232 or RS485 input controller is available but this must be installed in a remote, one atmosphere housing. Please refer to the Tecnadyne website for detailed installation and interface instructions.

The standard depth rating of the Model 220 DC brushless hydraulic pump is 1,500 meters - full ocean depth is an available option. Alternate operating voltages and pump flow rates, hydraulic fittings, customer specified subsea connectors and cables, stainless steel or titanium housings and custom mountings are also available.

MODEL 220 SPECIFICATIONS

Hydraulic Flow
@ 3,000psi (21 mPa) &
supply voltages of 100-
330vdc

0.5 gpm (1.9lpm) @ 1.25
kW input (.25cc pump)

0.9 gpm (3.4lpm) @ 2.25
kW input (.45cc pump)

1.14 gpm (4.3lpm) @ 2.9
kW input (.57cc pump)

1.52gpm (5.8lpm) @ 3.8
kW input (.76cc pump)

Weight
6.8lb (3.1kg) in air
5.2lb (2.4kg) in water

Depth Rating
5,000ft (1,500m)
standard
full ocean depth (oil
filled) optional

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Part Number: 220 -

- (90-100vdc) 095
- (115-125vdc) 120
- (145-160vdc) 150
- (170-180vdc) 175
- (190-210vdc) 200
- (250-270vdc) 260
- (300-330vdc) 330

1500 (1500m depth)
OFRE (oil filled remote electronics)

Ln (SeaCon LMG-6FS w/ cable length of n meters)
Mn (SeaCon LMG-6MP w/ cable length of n meters)
X (Customer specified connector)

