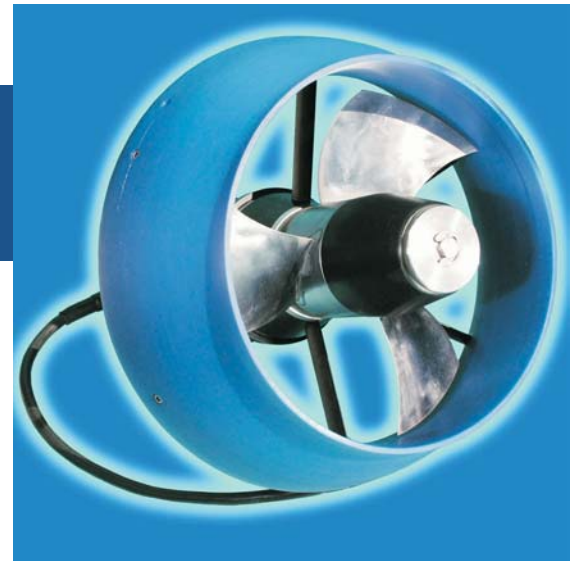


# MODEL 2020 DC BRUSHLESS THRUSTERS



One of the most recent additions to Tecnadyne's range of underwater thrusters, the new Model 2020 uses a custom designed, ultra efficient propeller and Kort nozzle to easily exceed 115kg forward thrust. And with over 65kg reverse thrust, the Model 2020 also exhibits exceptional backing performance. Derived from Tecnadyne's very successful Model 2010 thruster, of which more than 175 units have been delivered to customers worldwide, the Model 2020 is ideally suited for use on work class ROV's, AUV's, manned submersibles and other subsea installations requiring high thrust, light weight and good reliability.

As with all Tecnadyne thrusters, the propeller of the Model 2020 is magnetically coupled. With this design, a magnet array in the hub of the propeller is driven by a matching magnet array attached to the drive motor. By eliminating the rotating drive shaft and shaft seals that always seem to leak over time, the Model 2020 achieves extremely high reliability. Additionally, the magnetic coupling will ratchet if overloaded, preventing damage caused by objects jammed in the propeller. And since the water lubricated propeller bearings are external to the pressure housing, they can be easily replaced in several minutes.

With its high RPM, low inertia DC brushless motor and 6.7/1 ratio planetary gearset, the Model 2020 delivers maximum reliability, efficiency and high power in an extremely compact, lightweight and easy to maintain package. The newly designed, high efficiency stainless steel propeller, available in both right and left hand rotations, yields 25% more thrust and 20% higher efficiency compared to the older Model 2010..

The standard configuration is rated to 750m depth and houses the electronics controller with the motor. For full ocean depth rating, the electronics module is installed in a remote, one atmosphere housing (either the customers housing or one supplied by Tecnadyne) and the thruster is oil filled.

The Model 2020 is available for operation at voltages from 48vdc to 330vdc (260vdc standard) supplied by a well filtered battery bank, rectified and filtered AC or a DC power supply. In addition to the main power, a +/-5v analog speed and direction control signal is required. Alternately, a full servo RS232 or RS485 input controller is available and must be installed in a remote, one atmosphere housing. Please visit the Tecnadyne website for detailed installation and interface instructions.

The standard depth rating of the Model 2020 is 750 meters. Full ocean depth rating with pressure compensated housings and remote electronics is also available. Customer specified subsea connectors and cables, stainless steel or titanium housings, custom mountings and custom propeller and kort nozzle combinations are also available.

## MODEL 2020 SPECIFICATIONS

### **Bollard Output**

255lbf (116kg) forward  
145lbf (66kg) reverse  
w/ either right hand or  
left hand stainless steel  
propeller

### **Input**

260vdc, 20A power  
(5.5 KW at alternate  
voltages)  
+/-5v analog speed  
command

### **Weight**

22.5lb (10.2kg) in air  
15.7lb (7.2kg) in water

### **Depth Rating**

2,500ft (750m) standard  
and full ocean depth (oil  
filled)

(Specifications subject to change  
without notice)

(1,000m & greater depth subject to  
US Govt. export approval)

# MODEL 2020 DC BRUSHLESS THRUSTERS

Part Number: 2020 -

- (44-52vdc) 048
- (65-75) 070
- (140-175vdc) 150
- (165-185vdc) 175
- (250-300vdc) 260

- 0750 (750 meter depth rating)
- OFRE (Oil filled, remote electronics)
- Xn (SeaCon XSL-6-CCP w/ cable of n meters)
- X (Customer specified connector)

