

# MODEL 150 DC BRUSHLESS THRUSTERS



Proven in the world's harshest subsea environments, Tecnadyne's thrusters have been at the forefront of propulsion technology for over 25 years. The all new Model 150 thruster, a 100w unit with over 2kg forward thrust, is ideally suited for small ROV's, AUV's and other subsea applications.

The propeller of the Model 150 is magnetically coupled using a design perfected by Tecnadyne. 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 150 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.

The Model 150's high efficiency DC brushless motor drives the propeller directly, without the planetary gearset of Tecnadynes larger thrusters -- this delivers maximum reliability, high efficiency and high power in an extremely compact, lightweight and easy to maintain package. A high efficiency stainless steel propeller and Kort nozzle combine to give the Model 150 extremely high Bollard thrust, reverse thrust and open water efficiency.

For water depths to 850 meters, the power and control electronics are 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 customer's housing or one supplied by Tecnadyne) and the thruster is oil filled for pressure tolerance.

The Model 150 is available for operation at voltages of 12vdc, 24vdc and 48vdc supplied by a well filtered battery bank, rectified and filtered AC or a DC power supply. The speed and direction control is via a +/-5v analog signal. Alternately, 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 150 is 850 meters -1,500 meters and full ocean depth are available options. Customer specified subsea connectors and cables, stainless steel or titanium housings and custom mountings are also available.

## MODEL 150 SPECIFICATIONS

### **Bollard Output**

3.0lbf (1.4kg) forward  
2.1lbf (0.9kg) reverse

### **Input**

12vdc, 24vdc or 48vdc,  
100 watts

+/-5v analog speed  
command

### **Weight**

1.6lb (0.7kg) in air  
1.2lb (0.5kg) in water

### **Depth Rating**

2,800ft (850m) standard,  
full ocean depth (oil  
filled) optional

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

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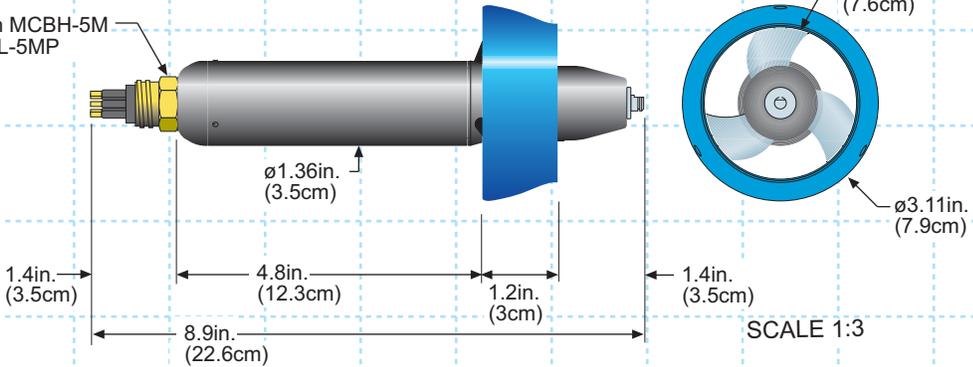
Part Number: 150 -

(12vdc) 012  
 (24vdc) 024  
 (48vdc) 048

0850 (850m depth)  
 OFRE (oil filled remote electronics)

M (SeaCon MCBH-5M)  
 F (SeaCon FAWL-5P-BC-RA)  
 Ln (SeaCon LMG-6FS w/ cable length of n meters)  
 Mn (SeaCon LMG-6MP w/ cable length of n meters)  
 X (Customer specified connector)

SeaCon MCBH-5M  
 or FAWL-5MP



SCALE 1:3

Note: Due to motor tolerances, voltage required to achieve rated Bollard thrust can vary +/-5%

Specifications subject to change without notice

