

400HFS-L Hi-Flow Thruster

Data Sheet



CrustCrawler “High Flow 400HFS-L-L” Series AUV/UROV Thruster Technical Specifications

CrustCrawler’s “High Flow” AUV / UROV 400HFS-L thrusters were designed to be extremely powerful and customizable for any number of our customers unique UROV / ROV requirements. No other thruster on the market has the programmable flexibility to set specific operating parameters for different environmental conditions than the CrustCrawler “High Flow” series. Machined from top of the line materials the Hi-Flow 400HFS-L thrusters are engineered for powerful thrust capability in a small package.

Motor Specifications

- Motor Type – High efficiency brushless
- Weight – 185g. (6.5oz)
- Max Power – 400W (130W Max for the thruster)
- Gear Ratio – 4.28:1
- Shaft Diameter – 5.0mm (.1969”)
- Maximum Case Temperature – 100C (212F)
- Operating Voltage – 12 to 50 volts
- Operates in forward and reverse thrust

Connector Specifications

- Depth Rating – 300 ft.
- 3 wire

Thruster Housing / End Caps

- T- 6 Aluminum

Thruster Seal

- Motor - Flexible, polyurethane encapsulating compound
- Shaft Seal – Fluoropolymer Lip Seal followed by encapsulating grease gallery

Thruster Weight

- Weight in air - 1 pound (.453kg)
- Weight in Water – 9 ounces (255 grams)

Thruster Length

- 6.25” (15.87cm)

Finish

- Black / Red Type II Hard Anodized Finish

Propeller

- Size – 2.36” (60mm) - 4 blade
- Material – Solid Brass
- Propeller Adapter – Machined aluminum / Anodized Type II Black

Kort Nozzle Adaptor

- Material – .090 Aluminum
- Offset - 120 degrees

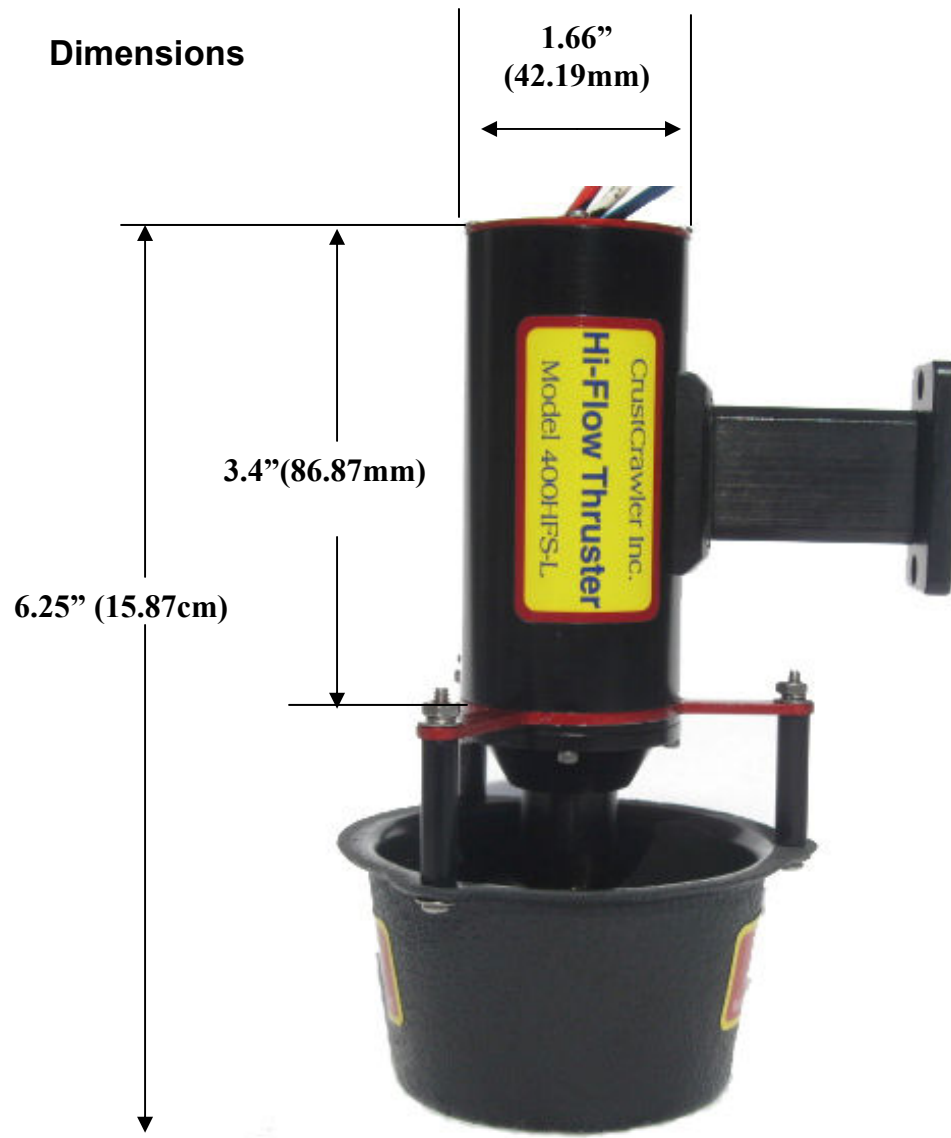
Thrust Rating (130W max)

- 15 pounds + (6.79kg) (approx. 130W max)
- 12 Volts – 8 pounds of thrust max
- 24 Volts – 15 pounds of thrust max
- 50 Volts - 15 pounds of thrust max
- **Note # 1** - At no time shall the thrust rating of 15lbs be exceeded or damage to the thruster may occur.
- **Note# 2** - Never Exceed the 130W (voltage X current) or damage to the motor will occur. **Always monitor your current consumption based on 12, 25 and 50 volt usage to ensure you do not exceed 130W.**

Thrust vs. Current Rating at 24v (130W max)

Thrust (kg)	Thrust (pounds)	Current (Amps)
.453	1	.14
.906	2	.40
1.36	3	.60
1.81	4	.81
2.26	5	1.16
2.72	6	1.46
3.17	7	1.94
3.62	8	2.30
4.08	9	2.70
4.53	10	3.15
4.98	11	3.56
5.44	12	3.89
5.89	13	4.35
6.34	14	4.69
6.79	15	5.26

Note: The current rating for a moving UROV can be as much as 20% – 30% lower than the current rating indicated above depending on UROV size and weight.



- Kort Nozzle Inlet – 2.80" (71mm)
- Kort Nozzle Outlet – 2.44" (62mm)