



1004B SERIES ELECTRIC THRUSTER WITH 3150 MOTOR

A 1/2 scale of the Model 1002, having 1/4 of its flow area.



- Streamlined Brushless DC, oil filled and pressure balanced motors.
- The direct drive electric motors simplifying the design and increasing reliability.
- Proven 3 tier seal system that includes Silicone Carbide Face Shaft Seals.
- 90% Reverse Thrust
- High Efficiency and Much Faster Response Time. Thrusters that will make a difference to your ROV's / Submarines performance
- All USA made materials, manufacturing and assembly.
- Independently Tested Off-The-Shelf Units that have a proven track record.

PRECISION DESIGNED AND BUILT - COMPARE EFFICIENCIES & PROP TIP CLEARANCES.

- Optional Hexscreens of Hydrodynamic Design Protects Divers & the Prop.
- Cancels 80% of the Prop Torque While Reclaiming Thrust by Reducing Jet Whirl. Steadier Vehicle.

Customized Solutions/Systems for R & D Programs or Prototype Vehicles, small or large. These thrusters can be precision matched to each application.



PERFORMANCE DATA & THRUSTER DIMENSIONS

1004B with 3150 Motor Specifications.				
INPUT VOLTAGE	Max Thrust	RPM	Input Power	Shaft Power
150 VDC MAX	53 lbf (24 kgf)	2,800	2 HP (1.5 kW)	1.81 HP (1.35 kW)
Reverse Thrust				
150 VDC MAX	48 lbf (21.8 kgf)	2,800	2 HP (1.5 kW)	1.81 HP (1.35 kW)

1004B Hexscreen Electric Thruster with 3150 Motor Performance Table

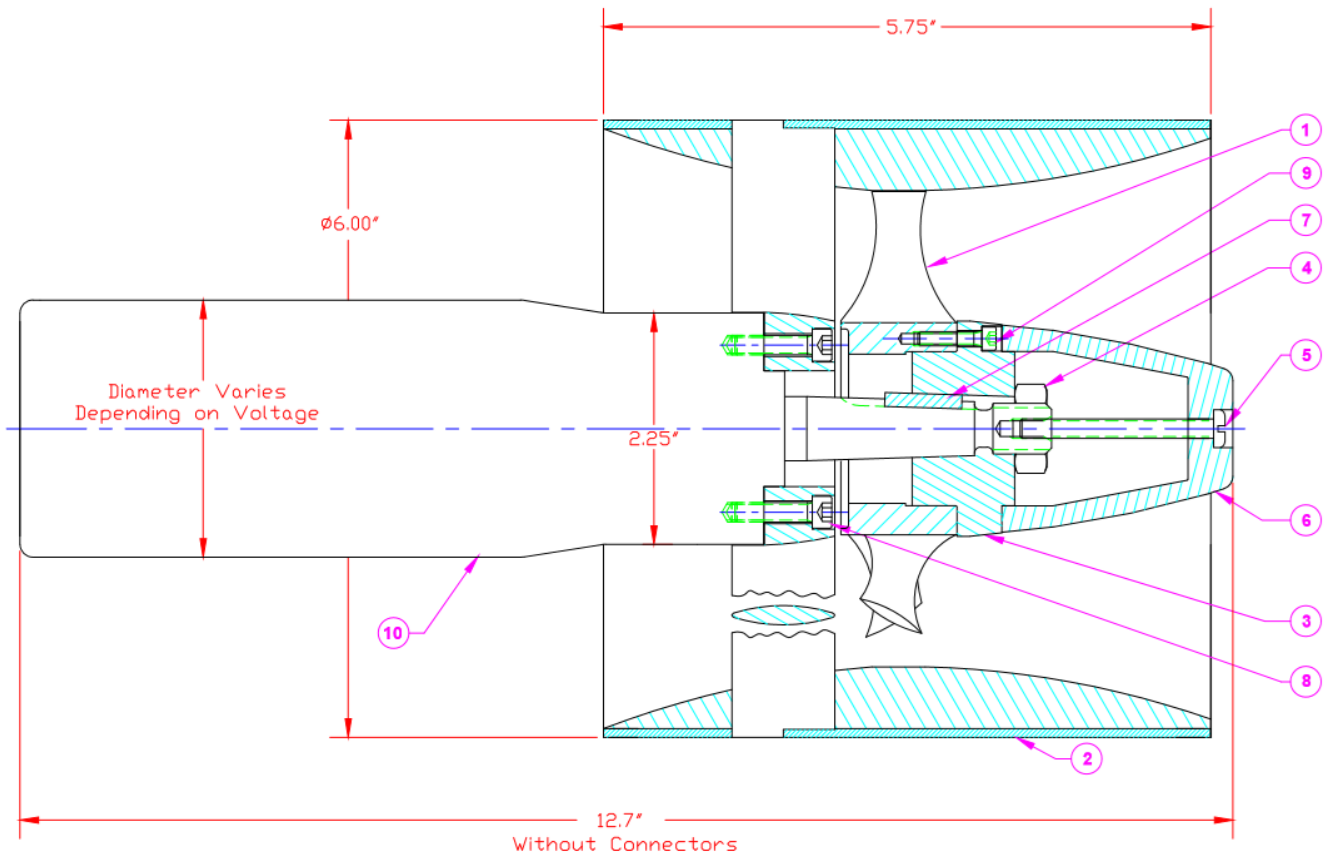
SPEED RPM	VOLTAGE (VDC)	CURRENT (A rms)	TORQUE		FWD THRUST		REV THRUST		POWER SHAFT		POWER IN		Efficiency Pout/Pin
			N-M	in-lbs	lbs	Kgf	lbs	Kgf	(HP)	(watts)	(watts)	(HP)	
100	5.0	0.9	0.3	3.0	0	0	0.0	0.0	0.00	4	5	0.0	79.5%
200	8.6	0.9	0.4	3.2	0	0	0.0	0.0	0.01	8	9	0.0	88.1%
300	12.3	1.0	0.4	3.4	1	0	0.5	0.2	0.02	12	13	0.0	91.2%
400	16.0	1.1	0.4	3.8	1	0	0.9	0.4	0.02	18	19	0.0	92.6%
500	19.7	1.2	0.5	4.2	2	1	1.5	0.7	0.03	25	27	0.0	93.4%
600	23.5	1.4	0.5	4.7	2	1	2.0	0.9	0.05	34	36	0.0	93.7%
800	31.3	1.7	0.7	6.1	4	2	4.0	1.8	0.08	58	61	0.1	94.0%
1000	39.2	2.2	0.9	7.8	7	3	6.0	2.7	0.12	92	99	0.1	93.8%
1200	47.3	2.9	1.1	9.9	10	4	9.0	4.1	0.19	141	151	0.2	93.4%
1400	55.6	3.6	1.4	12.4	13	6	12.0	5.4	0.28	206	221	0.3	93.0%
1600	64.1	4.4	1.7	15.3	17	8	15.0	6.8	0.39	290	314	0.4	92.5%
1800	72.8	5.3	2.1	18.6	22	10	20.0	9.1	0.53	396	431	0.6	92.0%
2000	81.7	6.4	2.5	22.2	27	12	24.0	10.9	0.71	526	576	0.8	91.4%
2200	90.7	7.6	3.0	26.3	32	15	29.0	13.2	0.92	684	754	1.0	90.8%
2400	100.0	8.8	3.5	30.7	39	18	35.0	15.9	1.17	872	967	1.3	90.2%
2600	109.4	10.2	4.0	35.5	46	21	41.0	18.6	1.47	1093	1219	1.6	89.6%
2800	119.1	11.7	4.6	40.7	53	24	48.0	21.8	1.81	1349	1515	2.0	89.0%

Table Information:

- 1) Voltage in the above chart shows the minimum voltage needed to achieve the performance at that given propeller rpm
- 2) The system voltage should typically be 20-40 VDC higher than the minimum voltage referenced above.
- 3) The Current shown represents the continues RMS current to the motor to achieve the torque at the corresponding propeller rpm.
- 4) The Shaft HP developed is a function of the propeller and increases with propeller rpm.
- 5) The maximum performance achieved will depend on the limitations of customers system voltage and driver current capacity.
- 6) The current/rpm might need to be limited depending on customer connector spec and or system current limitations.



1004B Dimensions.



The Electric Thrusters can be ordered with almost any customer preferred connectors if current ratings are taken into consideration.