



1004B SERIES ELECTRIC THRUSTER WITH 3300 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 3300 Motor Specifications.				
INPUT VOLTAGE	Max Thrust	RPM	Input Power	Shaft Power
300 VDC MAX	79 lbf (36 kgf)	3,400	3.6 HP (2.7 kW)	3.16 HP (2.3 kW)
Reverse Thrust				
300 VDC MAX	71 lbf (32 kgf)	3,400	3.6 HP (2.7 kW)	3.16 HP (2.3 kW)

1004B Hexscreen Electric Thruster with 3300 Motor Performance Table

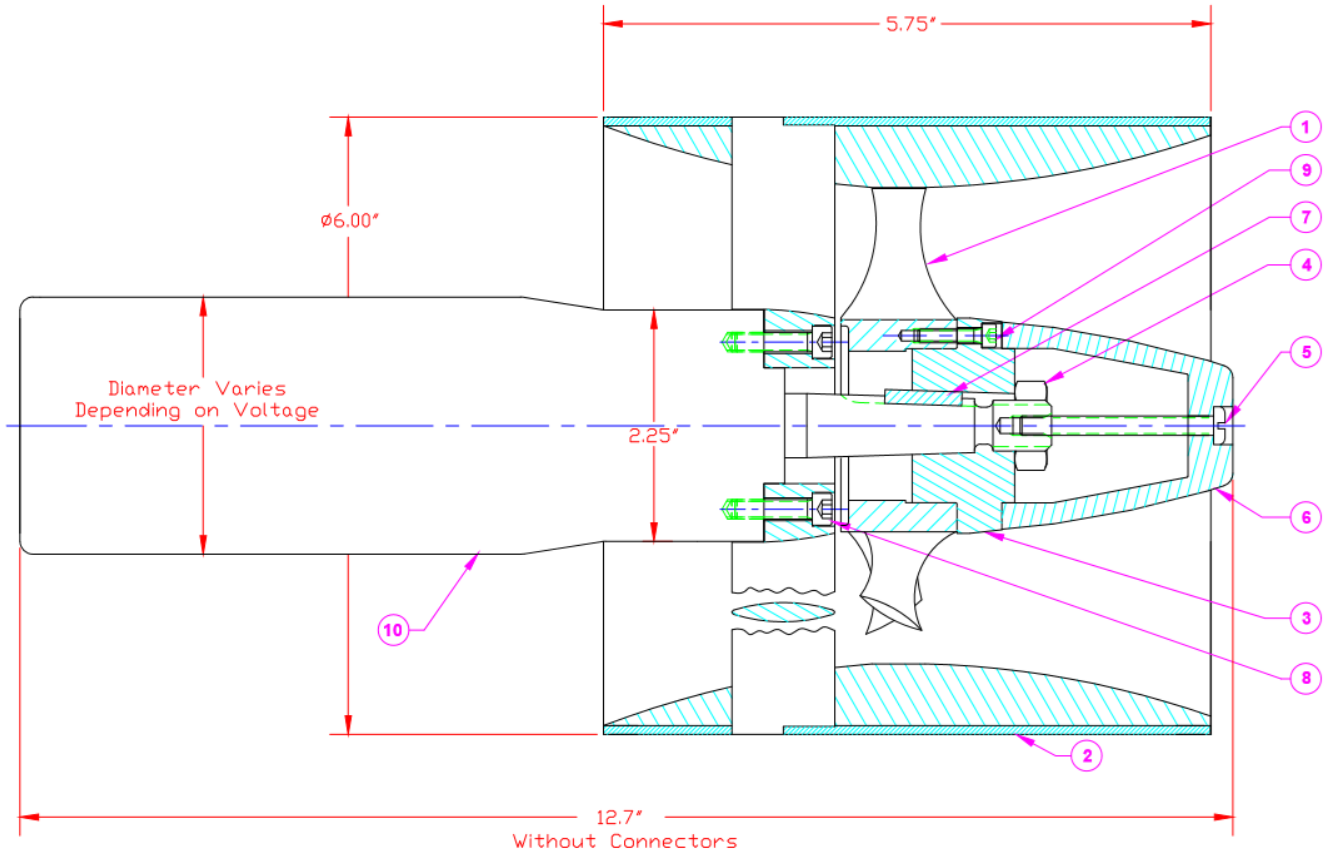
SPEED RPM	VOLTAGE (VDC)	CURRENT (A rms)	TORQUE		THRUST		REV THRUST		POWER SHAFT		POWER IN		Efficiency Pout/Pin
			N-M	in-lbs	lbs	Kgf	lbs	Kgf	(HP)	(watts)	(watts)	(HP)	
100	7.3	0.6	0.3	3.0	0	0	0.0	0.0	0.00	4	4	0.0	81.1%
200	12.6	0.6	0.4	3.2	0	0	0.0	0.0	0.01	8	8	0.0	89.1%
300	18.1	0.7	0.4	3.4	1	0	0.5	0.2	0.02	12	13	0.0	91.9%
400	23.5	0.7	0.4	3.8	1	0	0.9	0.4	0.02	18	19	0.0	93.3%
500	29.1	0.8	0.5	4.2	2	1	1.5	0.7	0.03	25	26	0.0	94.0%
600	34.7	0.9	0.5	4.7	2	1	2.0	0.9	0.05	34	36	0.0	94.3%
800	46.1	1.2	0.7	6.1	4	2	4.0	1.8	0.08	58	61	0.1	94.5%
1000	57.8	1.5	0.9	7.8	7	3	6.0	2.7	0.12	92	98	0.1	94.4%
1200	69.7	1.9	1.1	9.9	10	4	9.0	4.1	0.19	141	150	0.2	94.0%
1400	81.9	2.4	1.4	12.4	13	6	12.0	5.4	0.28	206	220	0.3	93.6%
1600	94.3	3.0	1.7	15.3	17	8	15.0	6.8	0.39	290	311	0.4	93.2%
1800	107.0	3.6	2.1	18.6	22	10	20.0	9.1	0.53	396	427	0.6	92.7%
2000	119.9	4.3	2.5	22.2	27	12	24.0	10.9	0.71	526	571	0.8	92.2%
2200	133.1	5.1	3.0	26.3	32	15	29.0	13.2	0.92	684	747	1.0	91.6%
2400	146.6	5.9	3.5	30.7	39	18	35.0	15.9	1.17	872	958	1.3	91.1%
2600	160.3	6.9	4.0	35.5	46	21	41.0	18.6	1.47	1093	1207	1.6	90.5%
2800	174.3	7.9	4.6	40.7	53	24	48.0	21.8	1.81	1349	1499	2.0	90.0%
3000	188.5	8.9	5.2	46.3	61	28	55.0	24.9	2.20	1644	1838	2.5	89.4%
3200	203.0	10.1	5.9	52.3	70	32	63.0	28.6	2.65	1979	2226	3.0	88.9%
3300	210.3	10.7	6.3	55.4	74	34	67.0	30.4	2.90	2163	2441	3.3	88.6%
3400	217.7	11.3	6.6	58.6	79	36	71.0	32.2	3.16	2358	2669	3.6	88.3%

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.