



INNERSPACE CORPORATION

1138 E. EDNA PLACE, COVINA, CA 91724
TEL: (626) 331-0921 FAX: (626) 966-6391
www.innerspacethrusters.com

INNERSPACE - 10HP - 300VDC - 1002HL ELECTRIC THRUSTER

Thruster Detail

MOTOR TYPE: **3 Phase BDC**
BUS VOLTAGE: **300-400 VDC**
THRUSTER DIA: **14.5 inch**
LENGTH: **23 inch**

Performance

Max Current: **30.0 Amps**
Max THRUST: **460 lbs**
TOTAL DRY WEIGHT: **56 lbs**
TOTAL WET WEIGHT: **41 lbs**

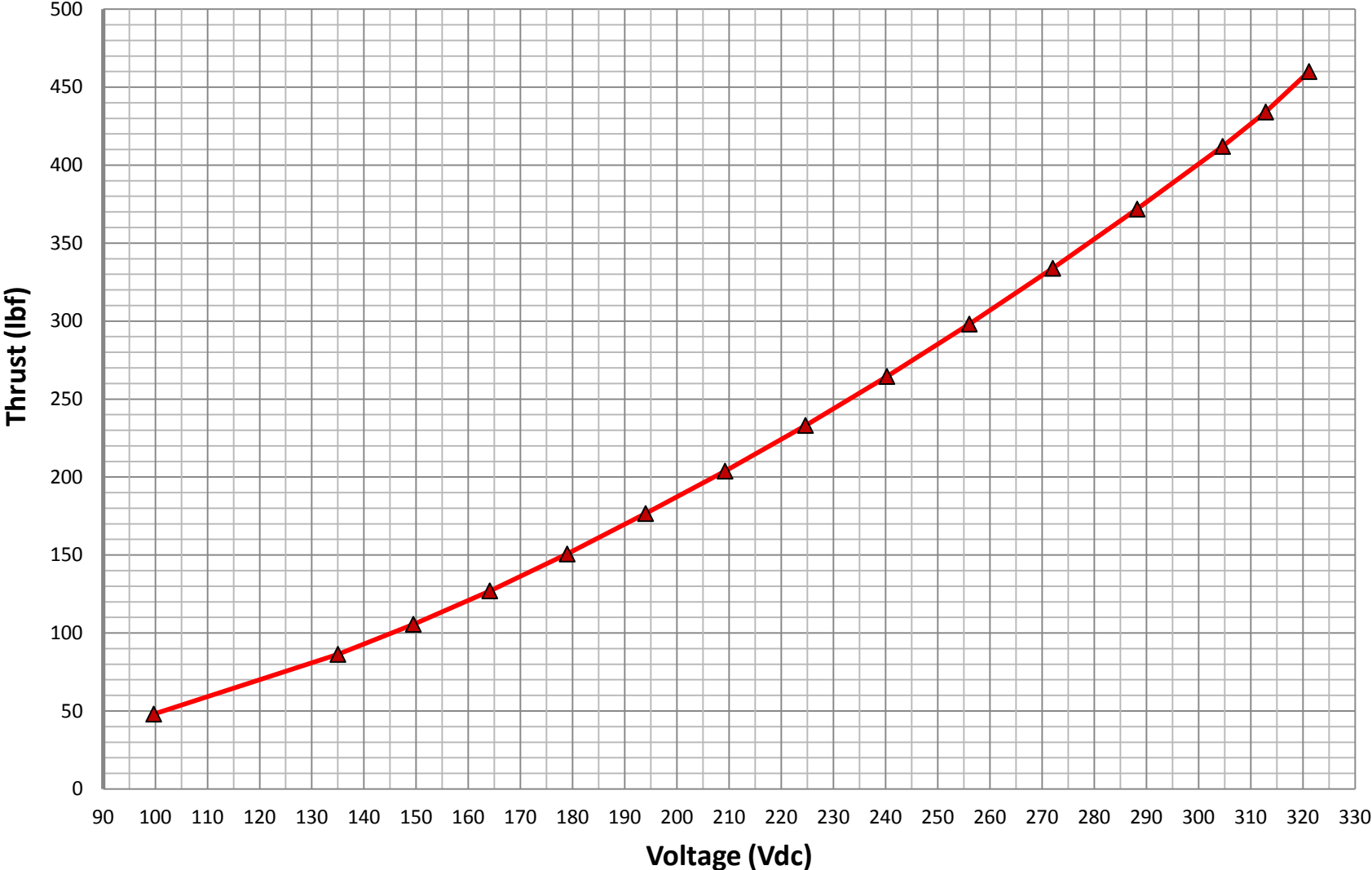
Reference Operating Point

SPEED: **2000 RPM**
POWER IN: **8351 Watts**
MIN VOLTAGE: **288 VDC**
CURRENT: **25.1 Amps**

| Command SPEED (RPM) | Motor Voltage (Peak) | Current (A rms) | Motor SPEED RPM | Torque | | Thrust | | | SHAFT POWER | | POWER IN (watts) | POWER IN (HP) | Efficiency Pout/Pin |
|---------------------|----------------------|-----------------|-----------------|--------|--------|--------|-----|------|-------------|---------|------------------|---------------|---------------------|
| | | | | N-M | in-lbs | lbf | Kgf | N | (HP) | (watts) | | | |
| 750 | 100 | 4.1 | 750 | 5.9 | 52.3 | 48 | 22 | 214 | 0.62 | 465 | 483 | 0.6 | 96.2% |
| 1000 | 135 | 6.7 | 1000 | 9.8 | 86.8 | 86 | 39 | 384 | 1.38 | 1028 | 1078 | 1.4 | 95.3% |
| 1100 | 149 | 8.0 | 1100 | 11.7 | 103.4 | 106 | 48 | 470 | 1.80 | 1346 | 1417 | 1.9 | 95.0% |
| 1200 | 164 | 9.4 | 1200 | 13.7 | 121.5 | 127 | 58 | 565 | 2.31 | 1726 | 1824 | 2.4 | 94.6% |
| 1300 | 179 | 11.0 | 1300 | 16.0 | 141.2 | 151 | 68 | 670 | 2.91 | 2173 | 2306 | 3.1 | 94.2% |
| 1400 | 194 | 12.6 | 1400 | 18.4 | 162.5 | 177 | 80 | 786 | 3.61 | 2693 | 2869 | 3.8 | 93.9% |
| 1500 | 209 | 14.4 | 1500 | 20.9 | 185.3 | 204 | 92 | 907 | 4.41 | 3291 | 3520 | 4.7 | 93.5% |
| 1600 | 225 | 16.3 | 1600 | 23.7 | 209.8 | 233 | 106 | 1037 | 5.33 | 3973 | 4267 | 5.7 | 93.1% |
| 1700 | 240 | 18.3 | 1700 | 26.6 | 235.8 | 265 | 120 | 1177 | 6.36 | 4745 | 5116 | 6.9 | 92.7% |
| 1800 | 256 | 20.4 | 1800 | 29.8 | 263.4 | 298 | 135 | 1326 | 7.52 | 5611 | 6075 | 8.1 | 92.4% |
| 1900 | 272 | 22.7 | 1900 | 33.1 | 292.5 | 334 | 151 | 1485 | 8.82 | 6579 | 7151 | 9.6 | 92.0% |
| 2000 | 288 | 25.1 | 2000 | 36.5 | 323.3 | 372 | 169 | 1654 | 10.26 | 7653 | 8351 | 11.2 | 91.6% |
| 2100 | 305 | 27.6 | 2100 | 40.2 | 355.6 | 412 | 187 | 1833 | 11.85 | 8839 | 9684 | 13.0 | 91.3% |
| 2150 | 313 | 28.9 | 2150 | 42.1 | 372.3 | 434 | 197 | 1931 | 12.70 | 9476 | 10402 | 13.9 | 91.1% |
| 2200 | 321 | 30.2 | 2200 | 44.0 | 389.5 | 460 | 208 | 2042 | 13.60 | 10142 | 11156 | 15.0 | 90.9% |

10 HP 1002 THRUST (lbf) vs VOLTAGE (Vdc)

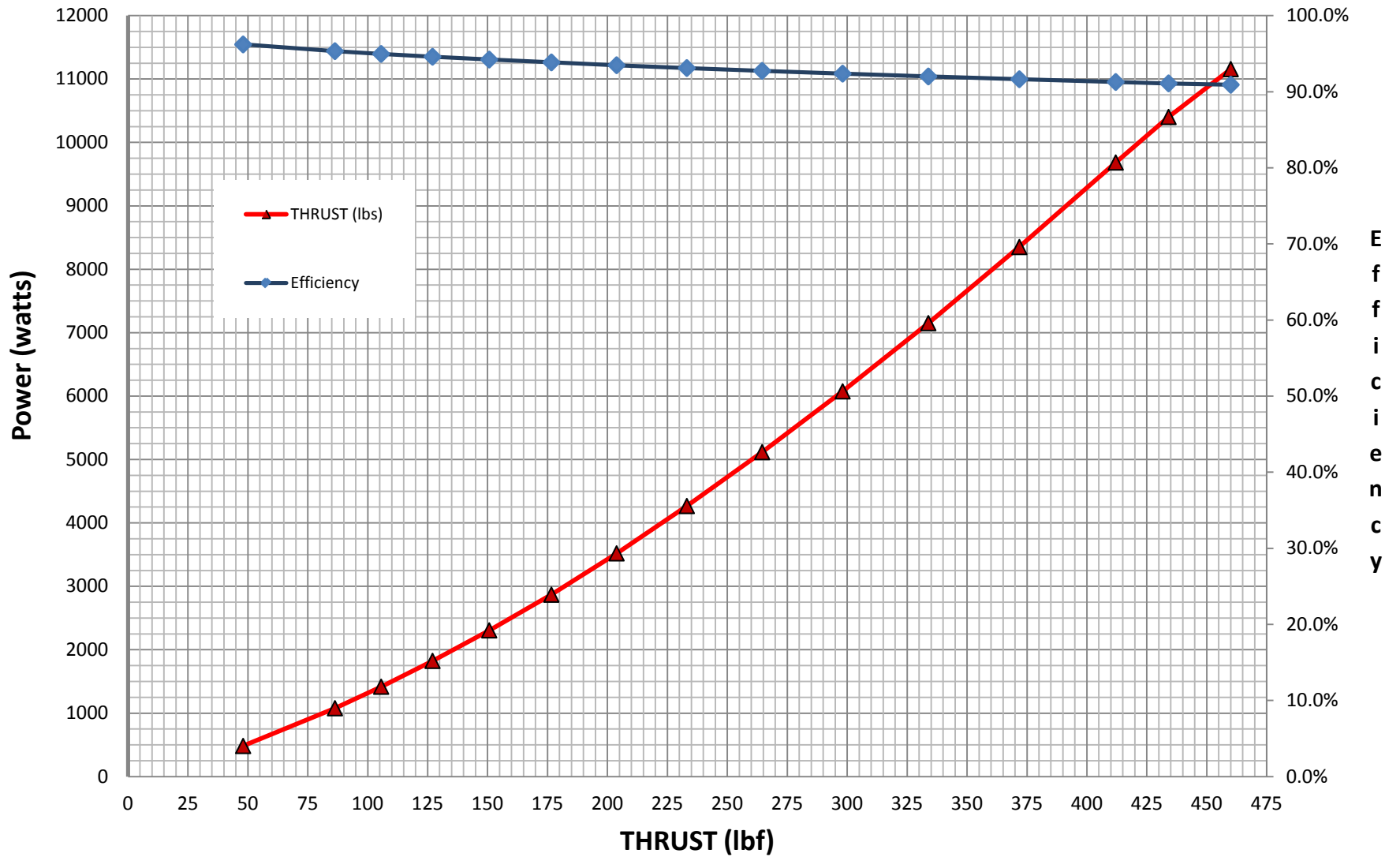
MOTOR: BDC 13300-10 (300 VDC, 10HP)



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10 HP 1002 THRUST (lbf) vs POWER IN (watts)

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