



# INNERSPACE CORPORATION

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

## INNERSPACE BDC 13150HB-05

### INNERSPACE - 5HP - 150VDC - 1002 ELECTRIC THRUSTER

#### Thruster Detail

MOTOR TYPE: **3 Phase BDC**  
BUS VOLTAGE: **150 VDC**  
THRUSTER DIA: **14.5 inch**  
LENGTH: **21.9 inch**

#### Performance

Max Current: **40.0 Amps**  
Max THRUST: **320 lbs**  
TOTAL DRY WEIGHT: **57 lbs**  
TOTAL WET WEIGHT: **38 lbs**

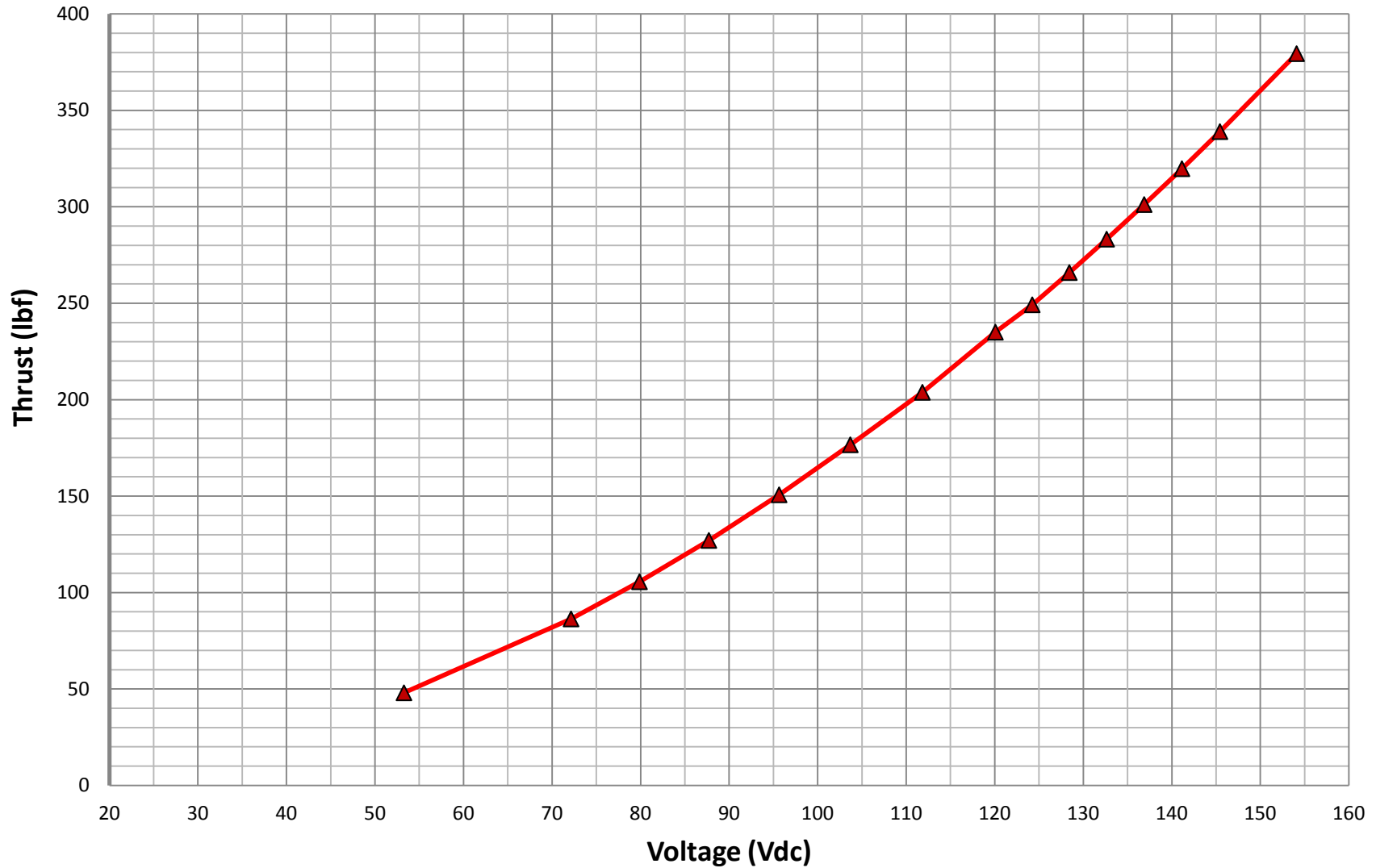
#### Reference Operating Point

SPEED: **1600 RPM**  
POWER IN: **4270 Watts**  
MIN VOLTAGE: **120 VDC**  
CURRENT: **30.5 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                 | 53                   | 7.6             | 750             | 5.9    | 52.3   | 48     | 22  | 214  | 0.62        | 465     | 483              | 0.6           | 96.2%               |
| 1000                | 72                   | 12.6            | 1000            | 9.8    | 86.8   | 86     | 39  | 384  | 1.38        | 1028    | 1078             | 1.4           | 95.3%               |
| 1100                | 80                   | 15.0            | 1100            | 11.7   | 103.4  | 106    | 48  | 470  | 1.80        | 1346    | 1418             | 1.9           | 94.9%               |
| 1200                | 88                   | 17.7            | 1200            | 13.7   | 121.5  | 127    | 58  | 565  | 2.31        | 1726    | 1825             | 2.4           | 94.6%               |
| 1300                | 96                   | 20.5            | 1300            | 16.0   | 141.2  | 151    | 68  | 670  | 2.91        | 2173    | 2307             | 3.1           | 94.2%               |
| 1400                | 104                  | 23.6            | 1400            | 18.4   | 162.5  | 177    | 80  | 786  | 3.61        | 2693    | 2870             | 3.8           | 93.8%               |
| 1500                | 112                  | 26.9            | 1500            | 20.9   | 185.3  | 204    | 92  | 907  | 4.41        | 3291    | 3522             | 4.7           | 93.4%               |
| 1600                | 120                  | 30.5            | 1600            | 23.7   | 209.8  | 235    | 106 | 1037 | 5.33        | 3973    | 4270             | 5.7           | 93.1%               |
| 1650                | 124                  | 32.4            | 1650            | 25.2   | 222.6  | 249    | 113 | 1108 | 5.83        | 4347    | 4681             | 6.3           | 92.9%               |
| 1700                | 128                  | 34.3            | 1700            | 26.6   | 235.8  | 266    | 121 | 1183 | 6.36        | 4745    | 5119             | 6.9           | 92.7%               |
| 1750                | 133                  | 36.3            | 1750            | 28.2   | 249.4  | 283    | 128 | 1260 | 6.92        | 5166    | 5585             | 7.5           | 92.5%               |
| 1800                | 137                  | 38.3            | 1800            | 29.8   | 263.4  | 301    | 137 | 1340 | 7.52        | 5611    | 6078             | 8.1           | 92.3%               |
| 1850                | 141                  | 40.4            | 1850            | 31.4   | 277.8  | 320    | 145 | 1422 | 8.15        | 6082    | 6602             | 8.8           | 92.1%               |
| 1900                | 145                  | 42.5            | 1900            | 33.1   | 292.5  | 339    | 154 | 1508 | 8.82        | 6579    | 7155             | 9.6           | 91.9%               |
| 2000                | 154                  | 47.0            | 2000            | 36.5   | 323.3  | 379    | 172 | 1688 | 10.26       | 7653    | 8357             | 11.2          | 91.6%               |

# 5 HP 1002 THRUST (lbf) vs VOLTAGE (Vdc)

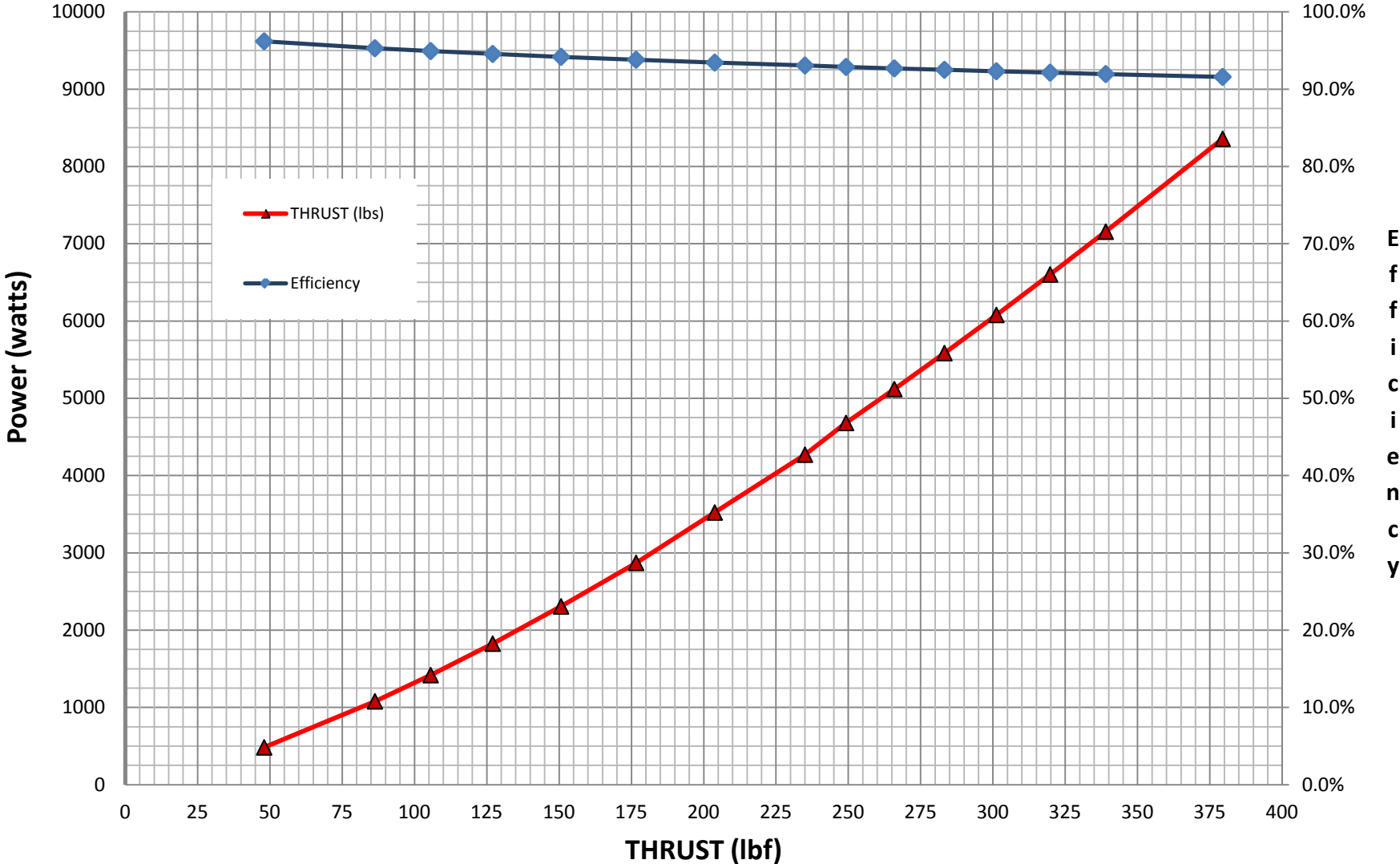
MOTOR: BDC 13150HB-05 (150 VDC, 5HP)



**INNERSPACE CORPORATION**  
1138 E. EDNA PLACE, COVINA, CA 91724  
TEL: (626) 331-0921 FAX: (626) 966-6391  
[www.innerspacethrusters.com](http://www.innerspacethrusters.com)

# 5 HP 1002 THRUST (lbf) vs POWER IN (watts)

MOTOR: BDC 13150HB-05 (150 VDC, 5HP)



**INNERSPACE CORPORATION**  
1138 E. EDNA PLACE, COVINA, CA 91724  
TEL: (626) 331-0921 FAX: (626) 966-6391  
[www.innerspacethrusters.com](http://www.innerspacethrusters.com)