



INNERSPACE CORPORATION

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

INNERSPACE BDC 12150-05

INNERSPACE - 5HP - 150VDC - 1002 ELECTRIC THRUSTER

Thruster Detail

MOTOR TYPE: 3 Phase BDC
BUS VOLTAGE: 150-180 VDC
THRUSTER DIA: 14.5 inch
LENGTH: 19 inch

Performance

Max Current: 30.0 Amps
Max THRUST: 282 lbs
TOTAL DRY WEIGHT: 48 lbs
TOTAL WET WEIGHT: 35 LBS

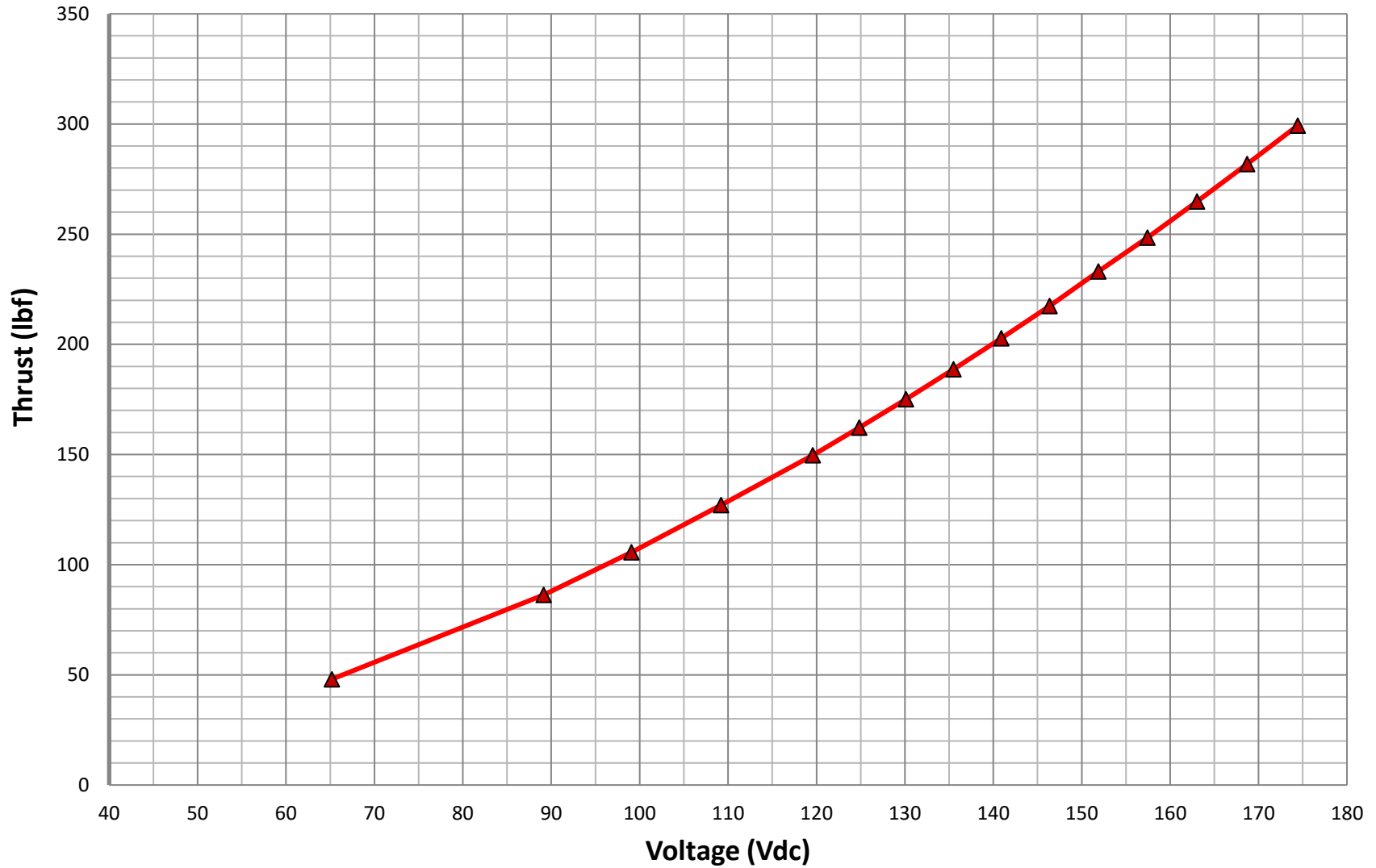
Reference Operating Point

SPEED: 1600 RPM
POWER IN: 4479 Watts
MIN VOLTAGE: 152 VDC
CURRENT: 26.1 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 | 65 | 6.5 | 750 | 5.9 | 52.3 | 48 | 22 | 214 | 0.62 | 465 | 496 | 0.7 | 93.7% |
| 1000 | 89 | 10.8 | 1000 | 9.8 | 86.8 | 86 | 39 | 384 | 1.38 | 1028 | 1114 | 1.5 | 92.2% |
| 1100 | 99 | 12.8 | 1100 | 11.7 | 103.4 | 106 | 48 | 470 | 1.80 | 1346 | 1469 | 2.0 | 91.6% |
| 1200 | 109 | 15.1 | 1200 | 13.7 | 121.5 | 127 | 58 | 565 | 2.31 | 1726 | 1895 | 2.5 | 91.0% |
| 1300 | 120 | 17.5 | 1300 | 16.0 | 141.2 | 150 | 68 | 666 | 2.91 | 2173 | 2402 | 3.2 | 90.5% |
| 1350 | 125 | 18.8 | 1350 | 17.1 | 151.6 | 162 | 74 | 721 | 3.25 | 2423 | 2688 | 3.6 | 90.2% |
| 1400 | 130 | 20.2 | 1400 | 18.4 | 162.5 | 175 | 79 | 779 | 3.61 | 2693 | 2996 | 4.0 | 89.9% |
| 1450 | 135 | 21.6 | 1450 | 19.6 | 173.7 | 189 | 86 | 839 | 4.00 | 2982 | 3328 | 4.5 | 89.6% |
| 1500 | 141 | 23.0 | 1500 | 20.9 | 185.3 | 203 | 92 | 902 | 4.41 | 3291 | 3686 | 4.9 | 89.3% |
| 1550 | 146 | 24.5 | 1550 | 22.3 | 197.4 | 217 | 99 | 967 | 4.85 | 3621 | 4069 | 5.5 | 89.0% |
| 1600 | 152 | 26.1 | 1600 | 23.7 | 209.8 | 233 | 106 | 1037 | 5.33 | 3973 | 4479 | 6.0 | 88.7% |
| 1650 | 157 | 27.6 | 1650 | 25.2 | 222.6 | 248 | 113 | 1105 | 5.83 | 4347 | 4917 | 6.6 | 88.4% |
| 1700 | 163 | 29.3 | 1700 | 26.6 | 235.8 | 265 | 120 | 1178 | 6.36 | 4745 | 5383 | 7.2 | 88.1% |
| 1750 | 169 | 31.0 | 1750 | 28.2 | 249.4 | 282 | 128 | 1253 | 6.92 | 5166 | 5880 | 7.9 | 87.8% |
| 1800 | 174 | 32.7 | 1800 | 29.8 | 263.4 | 299 | 136 | 1331 | 7.52 | 5611 | 6409 | 8.6 | 87.6% |

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

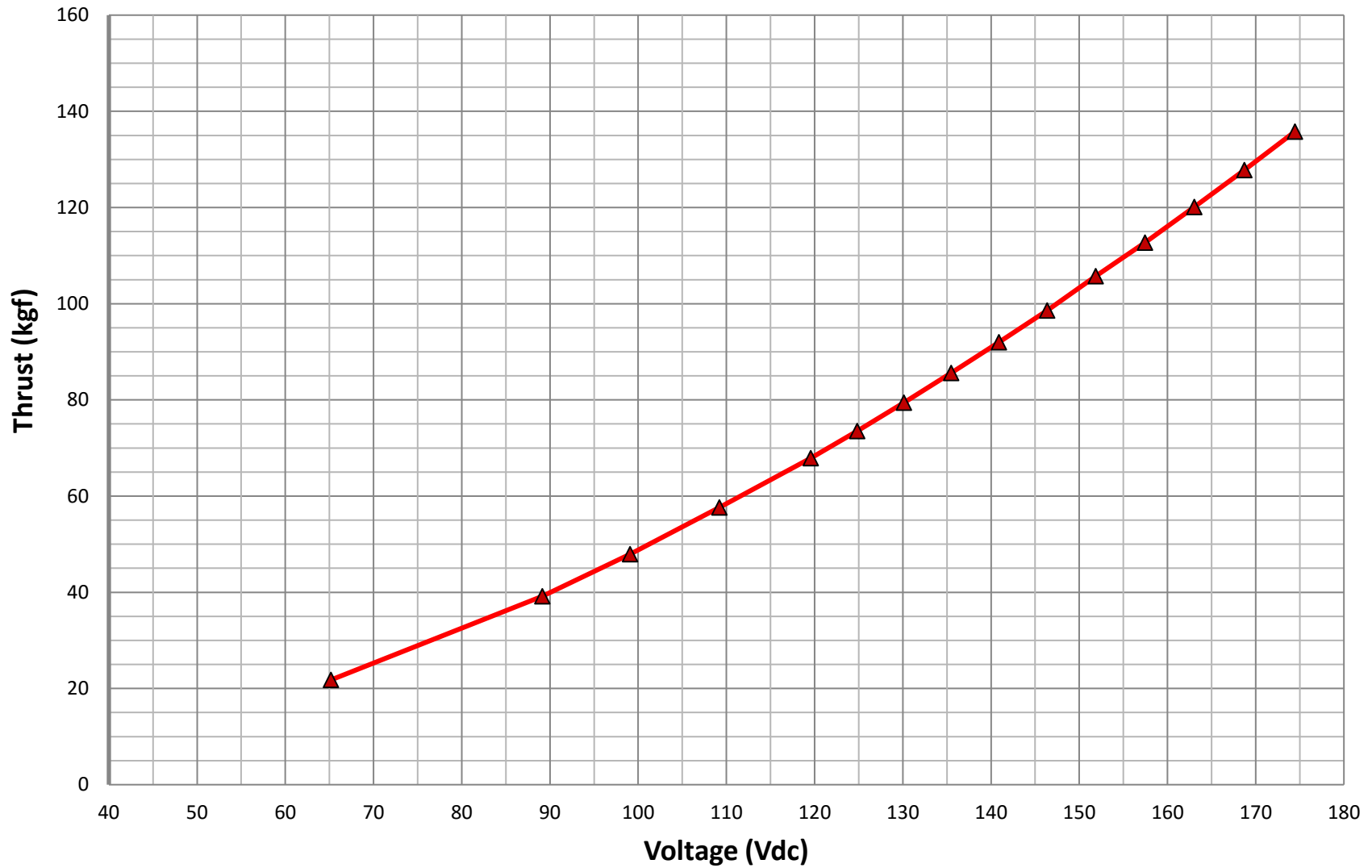
MOTOR: BDC 12150-05 (150 VDC, 5HP)



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5 HP 1002 THRUST (kgf) vs VOLTAGE (Vdc)

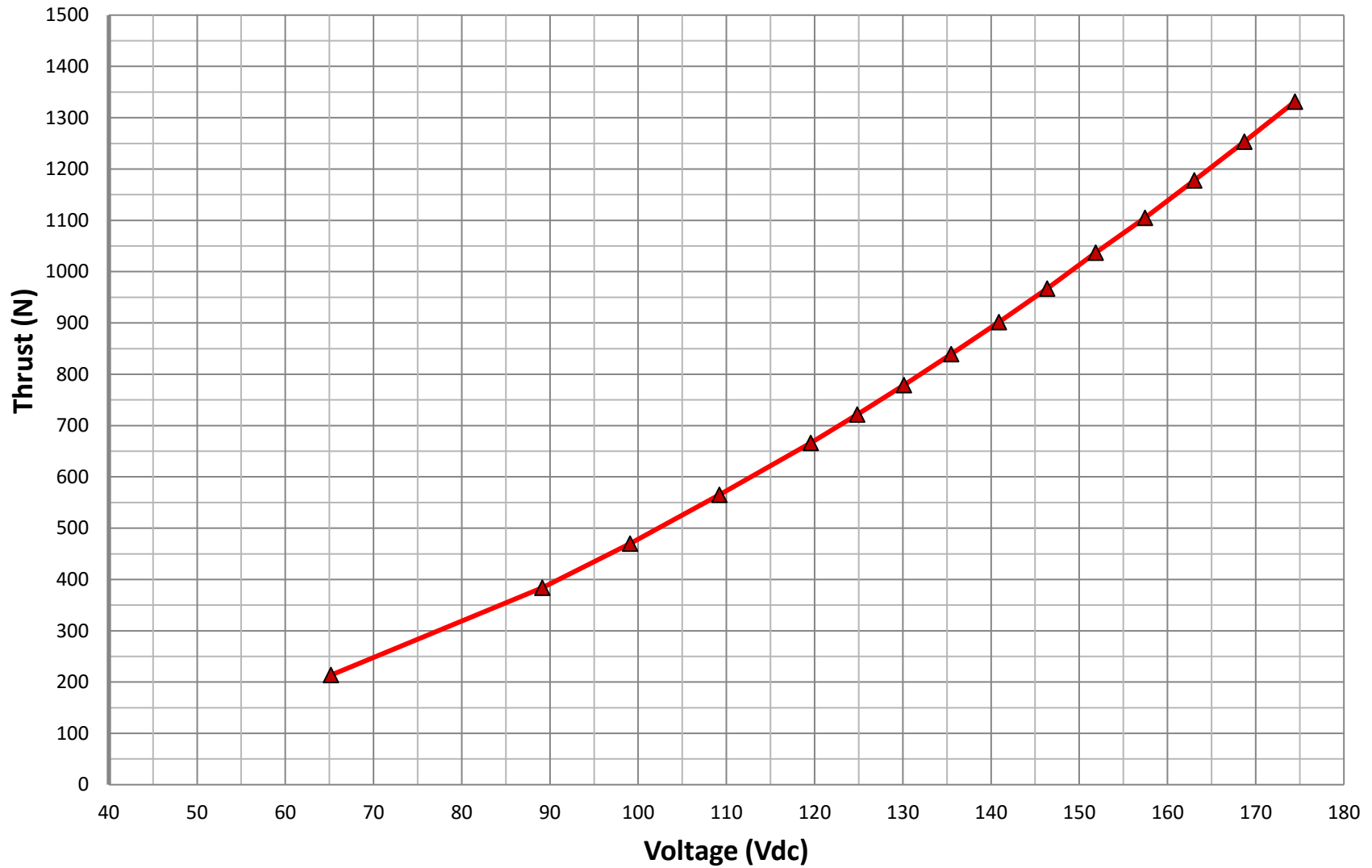
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5 HP 1002 THRUST (N) vs VOLTAGE (Vdc)

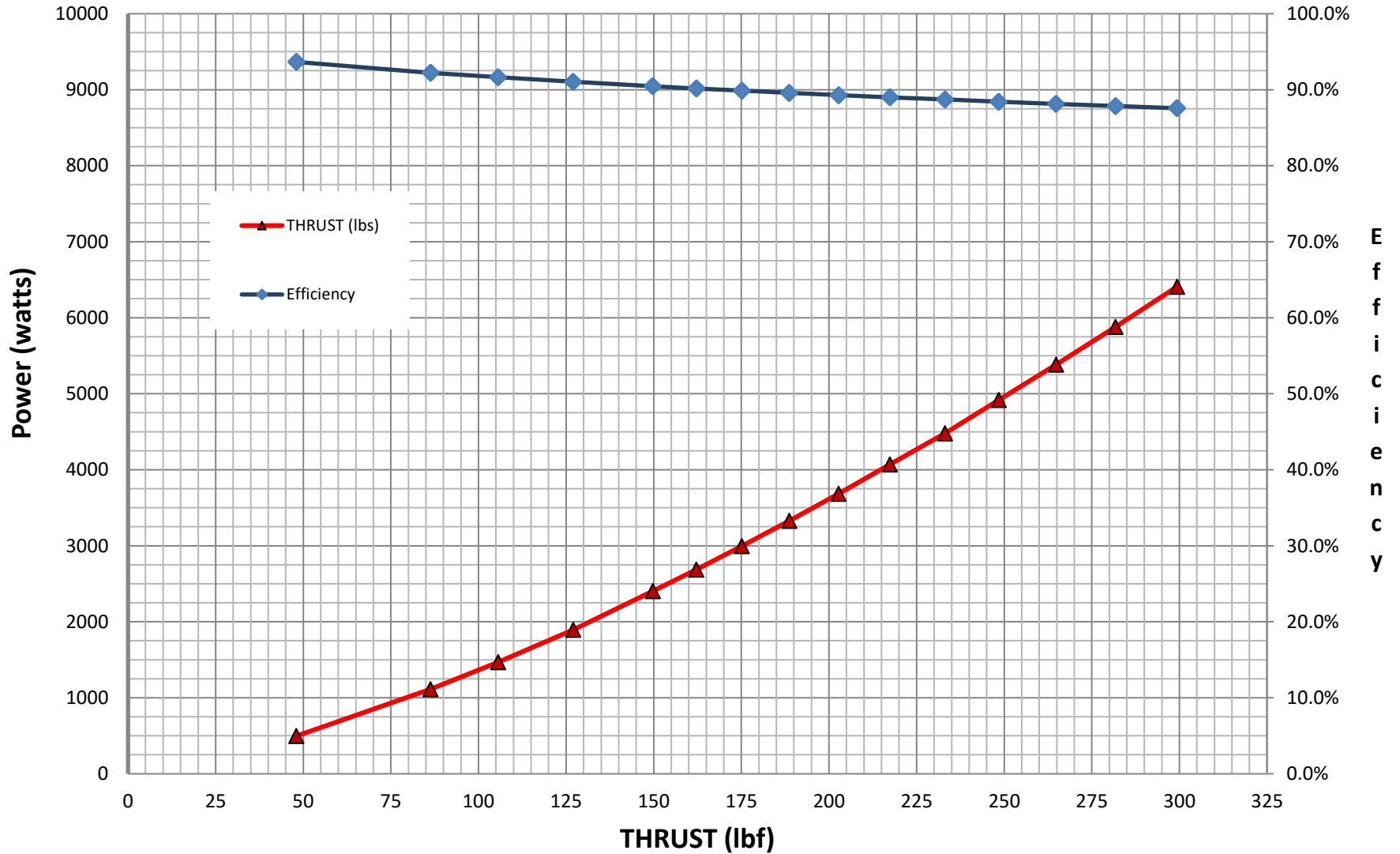
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5 HP 1002 THRUST (lbf) vs POWER IN (watts)

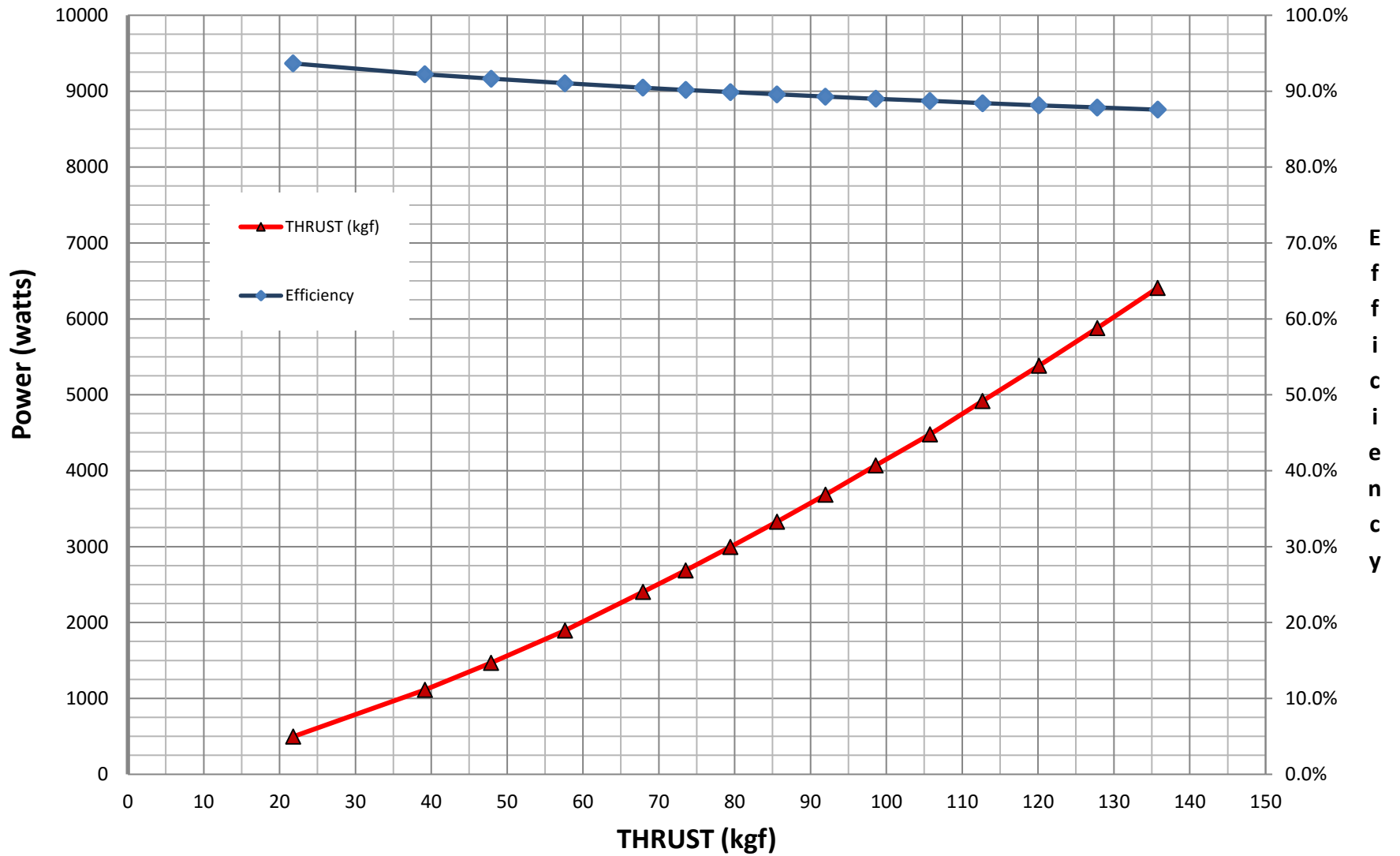
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5 HP 1002 THRUST (kgf) vs POWER IN (watts)

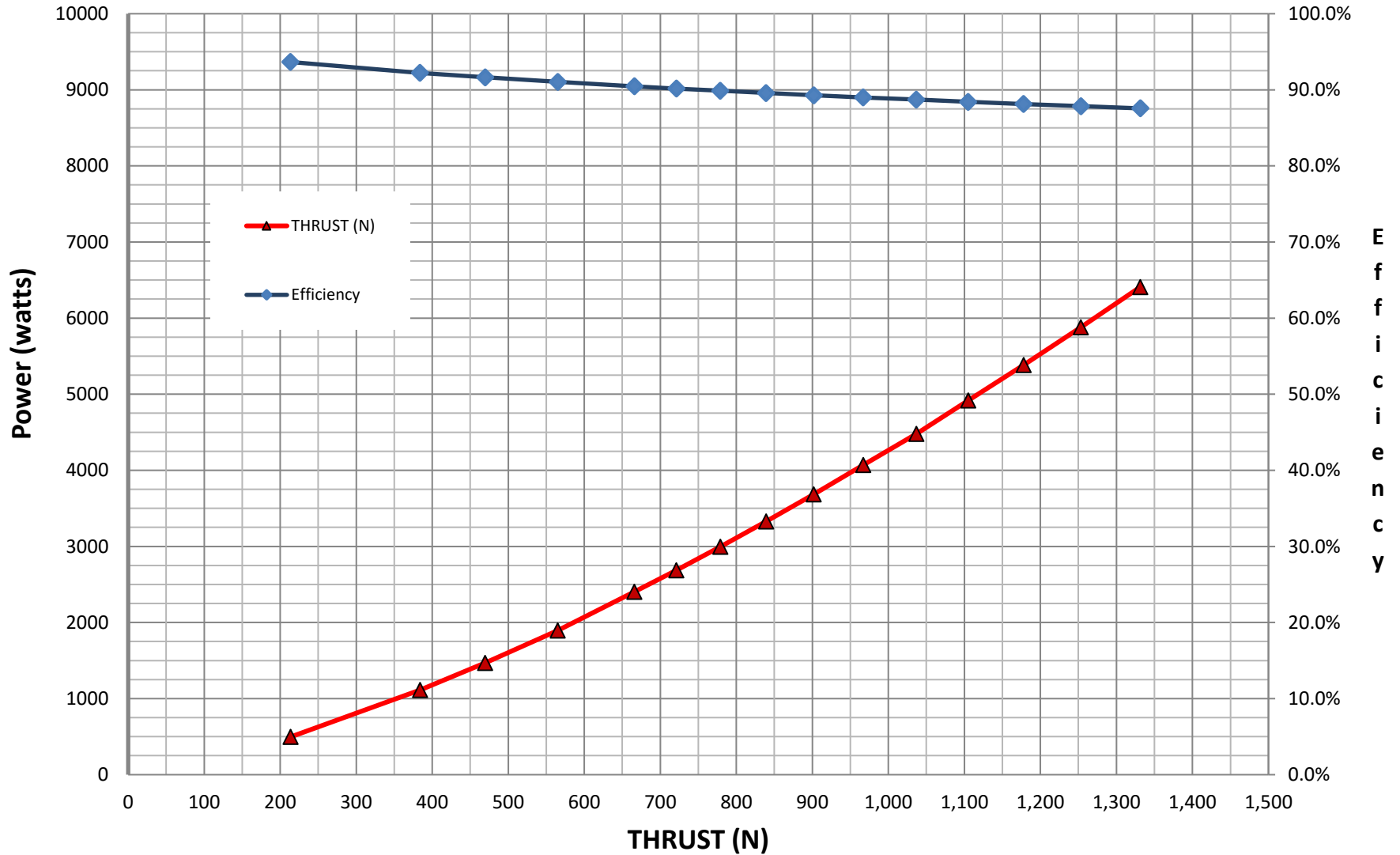
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