



INNERSPACE CORPORATION

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

INNERSPACE BDC 13450-10

INNERSPACE - 10HP - 450VDC - 1002 ELECTRIC THRUSTER

Thruster Detail

MOTOR TYPE: 3 Phase BDC
BUS VOLTAGE: 450-550 VDC
THRUSTER DIA: 14.5 inch
LENGTH: 22 inch

Performance

Max Current: 30.0 Amps
Max THRUST: 550 lbs
TOTAL DRY WEIGHT: 56 lbs
TOTAL WET WEIGHT: 41 lbs

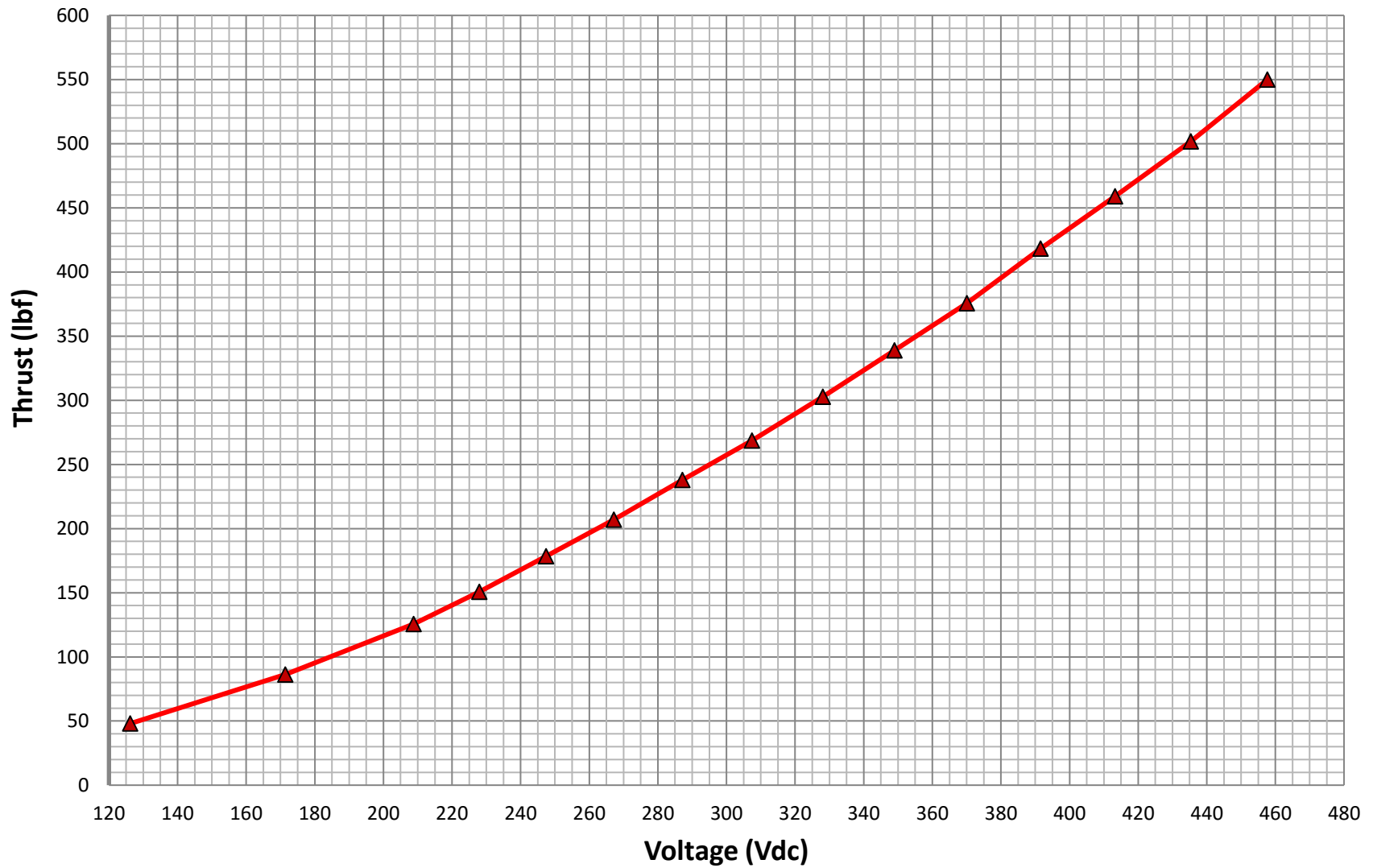
Reference Operating Point

SPEED: 2000 RPM
POWER IN: 8491 Watts
MIN VOLTAGE: 370 VDC
CURRENT: 20.1 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	126	3.3	750	5.9	52.3	48	22	214	0.62	465	487	0.7	95.5%
1000	171	5.4	1000	9.8	86.8	86	39	384	1.38	1028	1088	1.5	94.4%
1200	209	7.5	1200	13.7	121.5	126	57	559	2.31	1726	1844	2.5	93.6%
1300	228	8.8	1300	16.0	141.2	151	68	670	2.91	2173	2333	3.1	93.1%
1400	247	10.1	1400	18.4	162.5	178	81	794	3.61	2693	2904	3.9	92.7%
1500	267	11.5	1500	20.9	185.3	207	94	921	4.41	3291	3566	4.8	92.3%
1600	287	13.0	1600	23.7	209.8	238	108	1058	5.33	3973	4326	5.8	91.8%
1700	307	14.6	1700	26.6	235.8	269	122	1195	6.36	4745	5190	7.0	91.4%
1800	328	16.4	1800	29.8	263.4	303	137	1346	7.52	5611	6168	8.3	91.0%
1900	349	18.2	1900	33.1	292.5	339	154	1508	8.82	6579	7265	9.7	90.6%
2000	370	20.1	2000	36.5	323.3	376	170	1671	10.26	7653	8491	11.4	90.1%
2100	392	22.1	2100	40.2	355.6	418	190	1861	11.85	8839	9853	13.2	89.7%
2200	413	24.2	2200	44.0	389.5	459	208	2042	13.60	10142	11359	15.2	89.3%
2300	435	26.4	2300	48.0	424.9	502	228	2232	15.51	11569	13017	17.4	88.9%
2400	458	28.7	2400	52.2	462.0	550	250	2450	17.59	13124	14836	19.9	88.5%

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

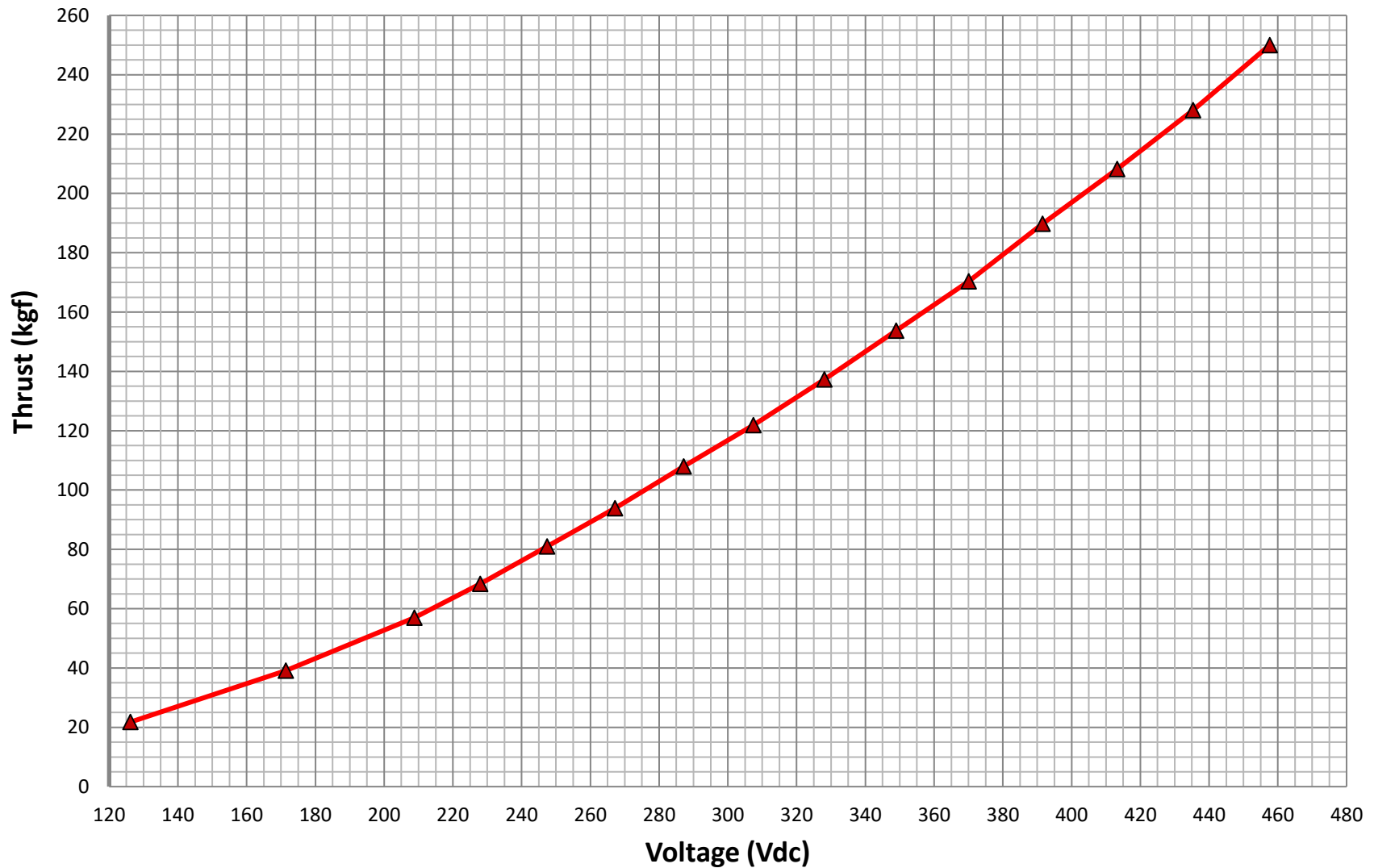
MOTOR: BDC 13450-10 (450 VDC, 10HP)



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

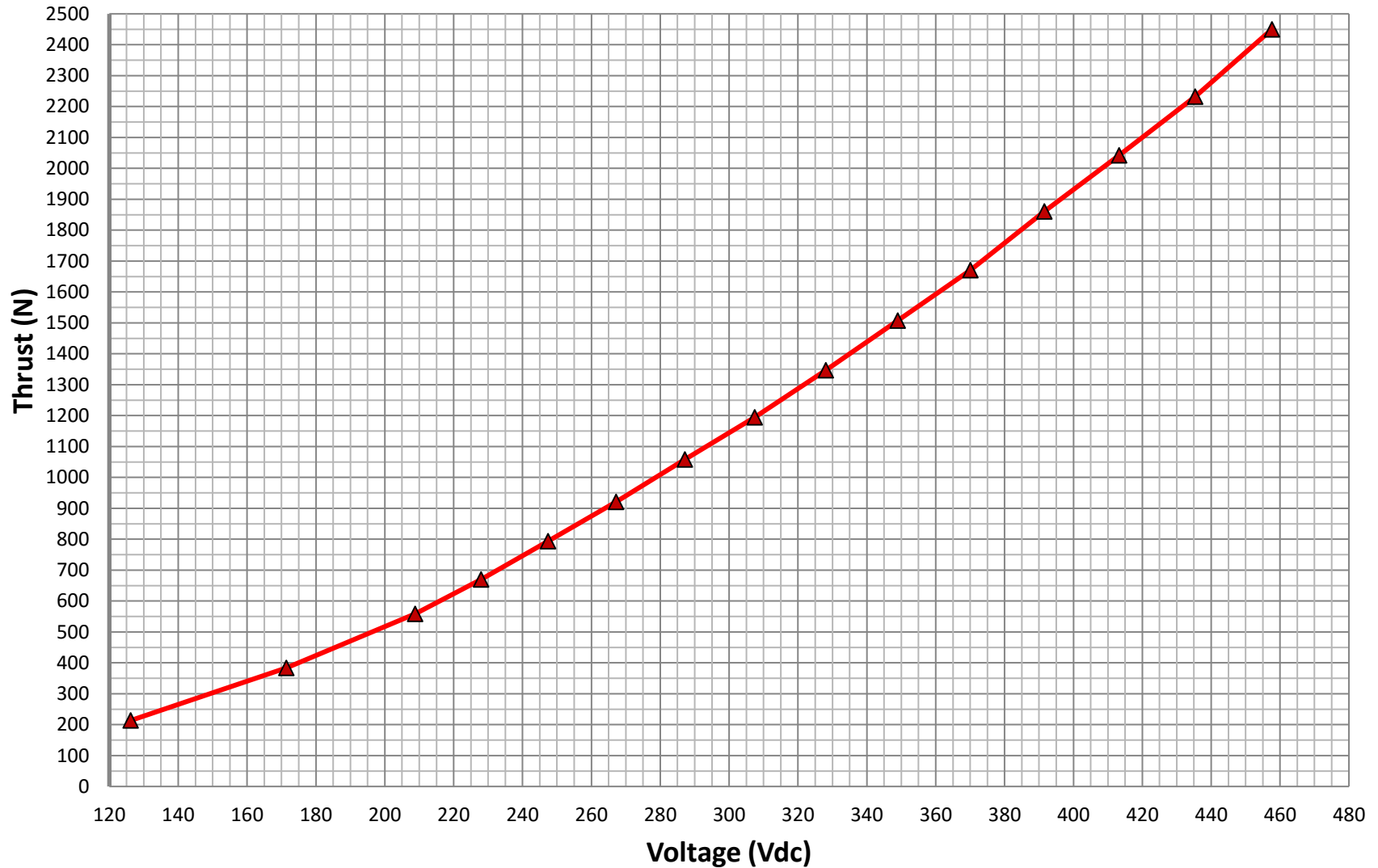
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10 HP 1002 THRUST (N) vs VOLTAGE (Vdc)

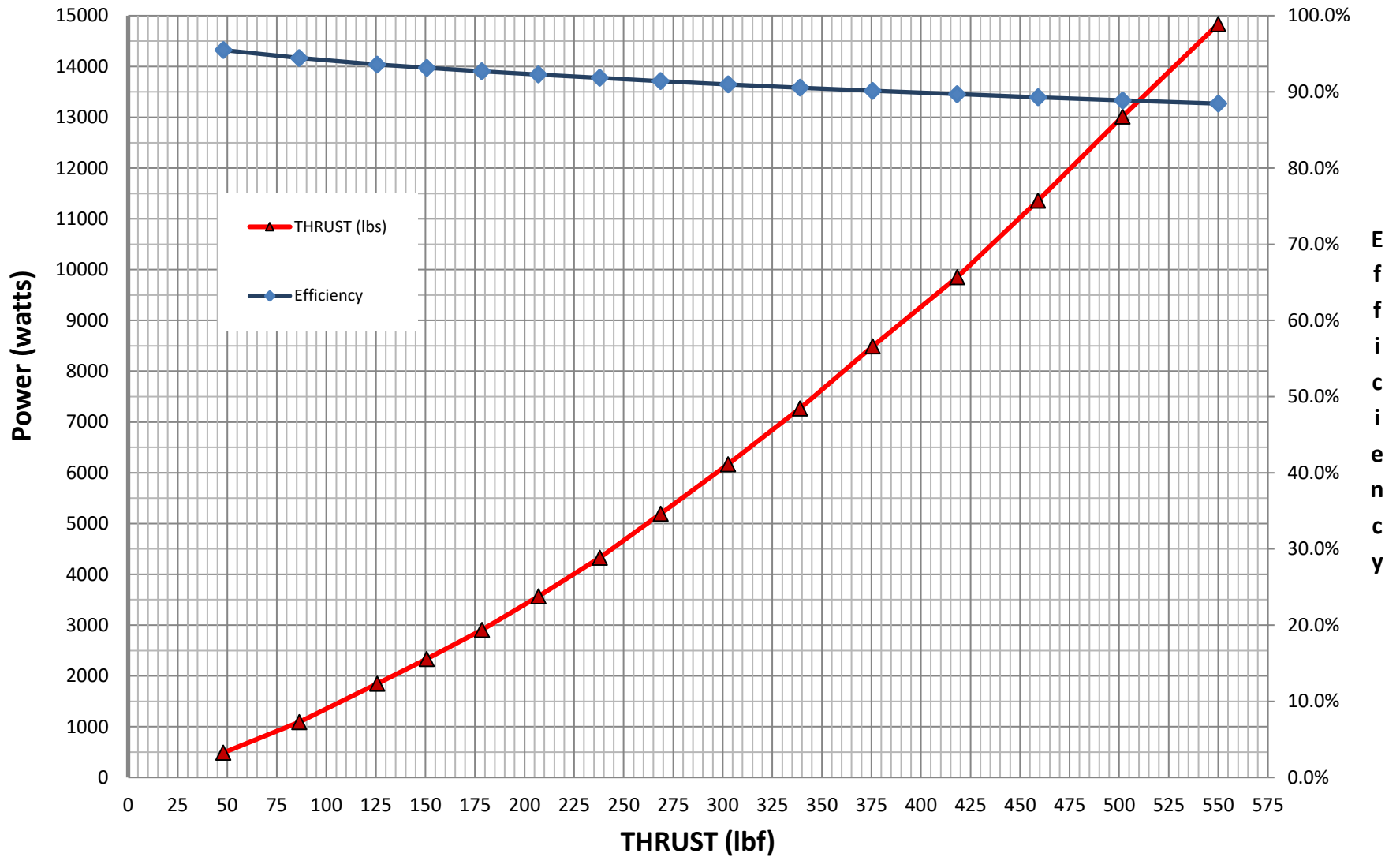
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10 HP 1002 THRUST (lbf) vs POWER IN (watts)

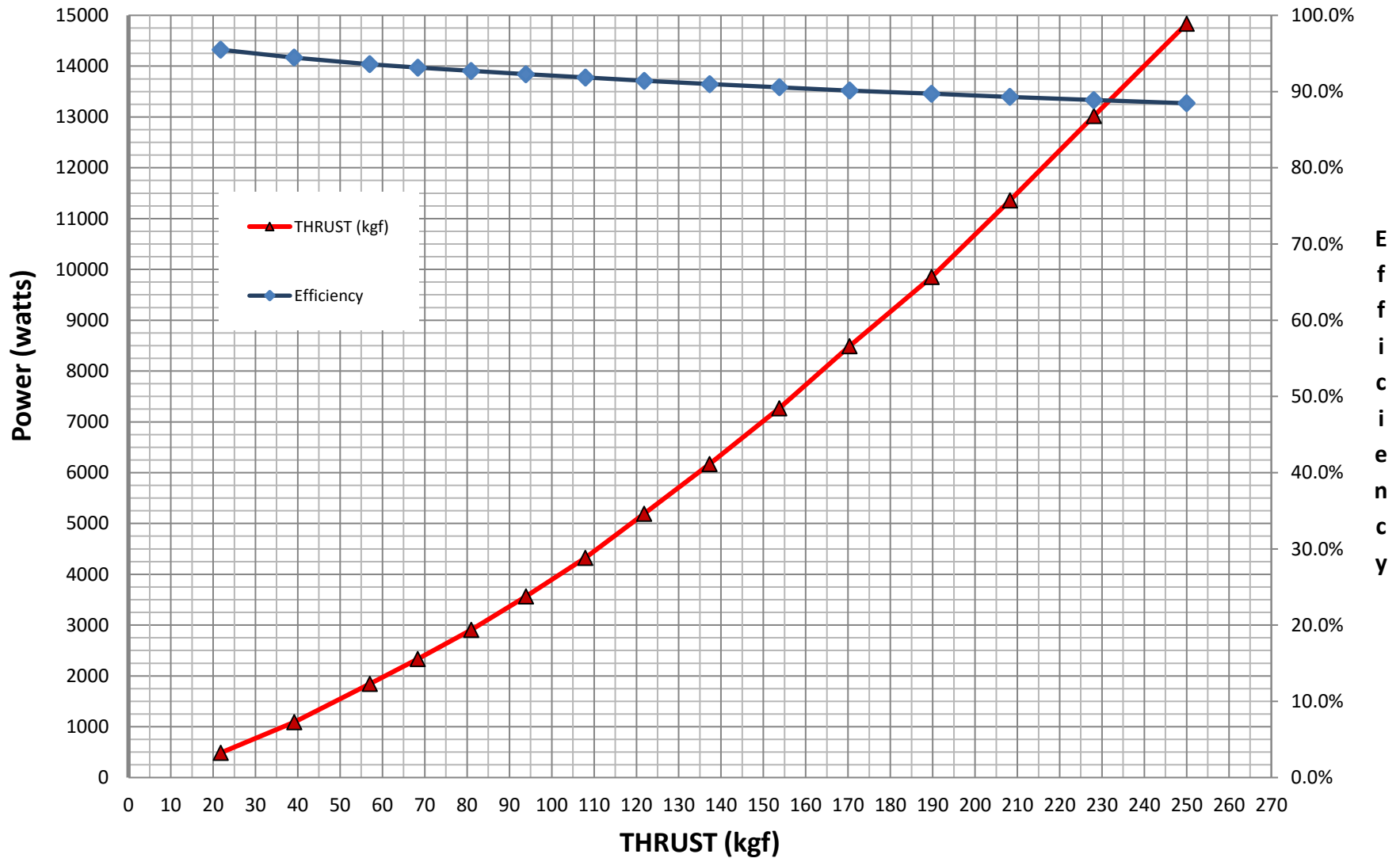
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10 HP 1002 THRUST (kgf) vs POWER IN (watts)

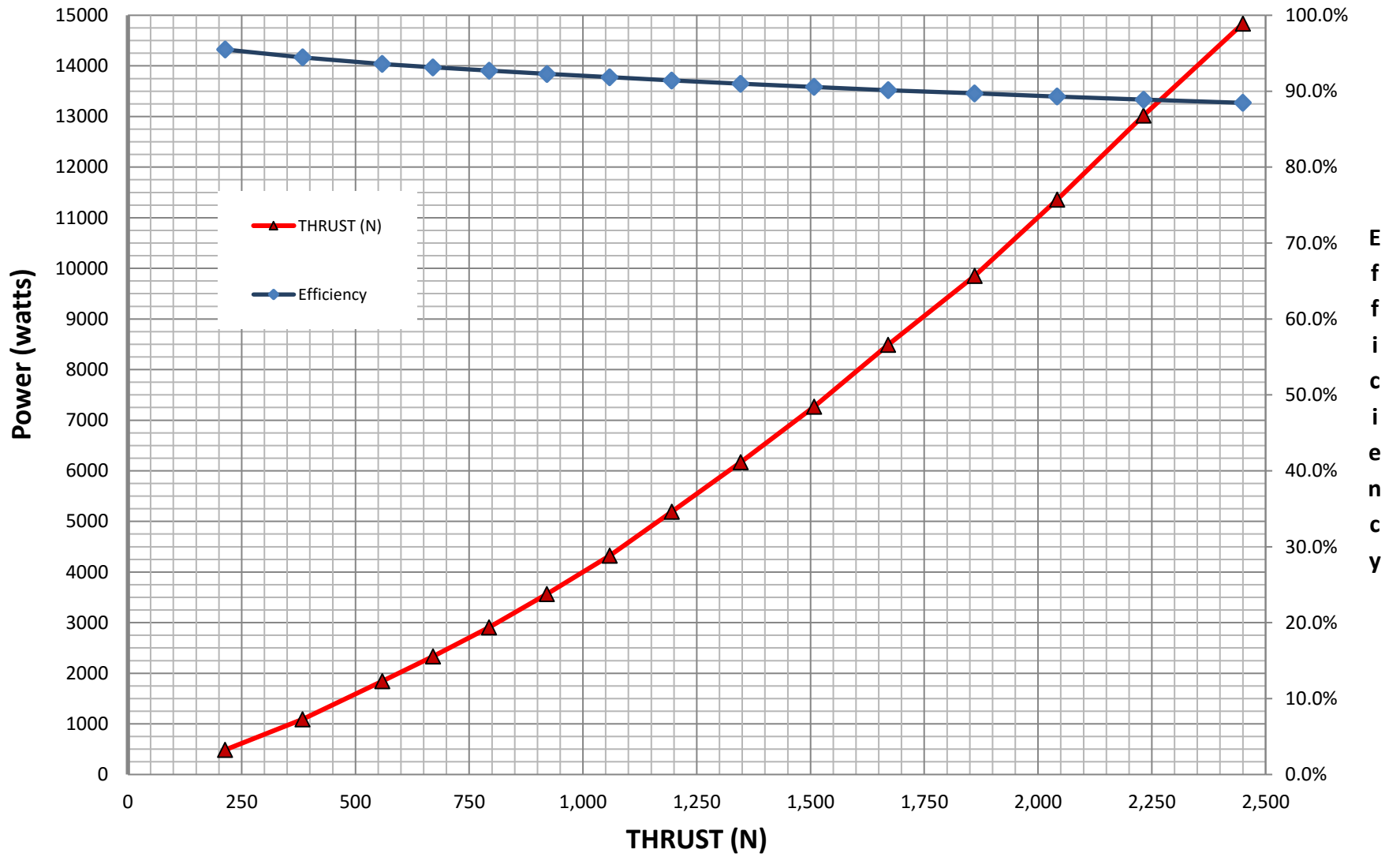
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