Transmagnetics 24v 4" motor (ca. 2004)

Headline 24V/50A controller
CW rotation
Full throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
35	0	0.0%
96	52	54.2%
156	108	69.2%
204	158	77.5%
240	182	75.8%
258	193	74.8%
267	200	74.9%
336	250	74.4%
408	302	74.0%
498	362	72.7%
588	425	72.3%
744	517	69.5%
984	613	62.3%
1020	607	59.5%

Half Throttle

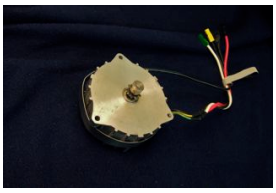
Power (Drain Brain)	Power (PowerTap)	Efficiency
20	0	0.0%
87	55	63.2%
156	107	68.6%
252	165	65.5%
432	213	49.3%

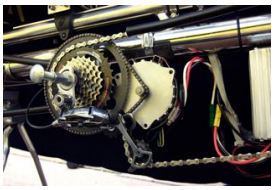
Transmagnetics 24V/30A controller
CW rotation
Full throttle

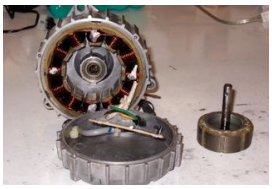
Power (Drain Brain)	Power (PowerTap)	Efficiency
35	0	0.0%
102	59	57.8%
150	108	72.0%
222	170	76.6%
282	218	77.3%
360	275	76.4%
450	333	74.0%
582	417	71.6%
714	467	65.4%

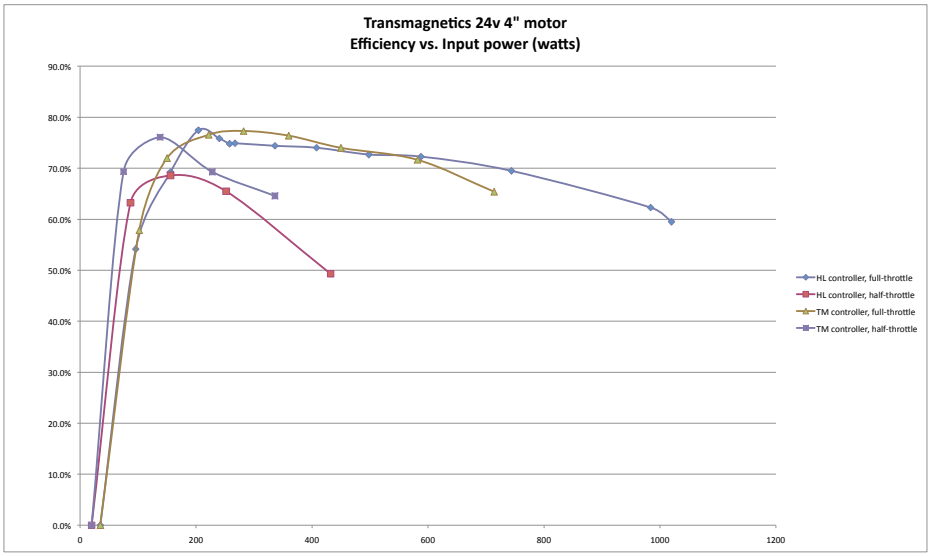
Half Throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
20	0	0.0%
75	52	69.3%
138	105	76.1%
228	158	69.3%
336	217	64.6%

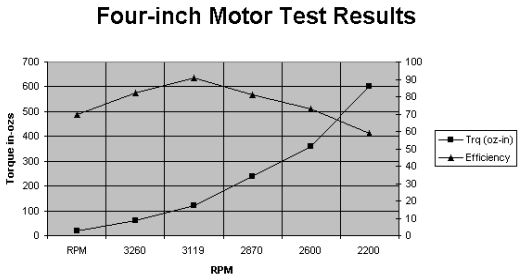








Notes: Efficiency was measured by comparing energy drawn from the battery according to a Cycle Analyst and comparing that to energy sent to the rear wheel of the bicycle as read from a PowerTap hub.
Motor power passes through a chain and sprocket (#25 chain; 9t - 90t) to a mid-drive, which is then passed to the rear wheel using normal bicycle chain (15t - 34t).
Efficiency of the two-stage chain and sprocket drive is probably around 93%-94%, so actual motor/controller efficiency is about 7% greater.



Manufacturer's Data