

Human Power Spectrum

Ski-Alpin

Date 15 Oct 2013 11:17:15

Athlete

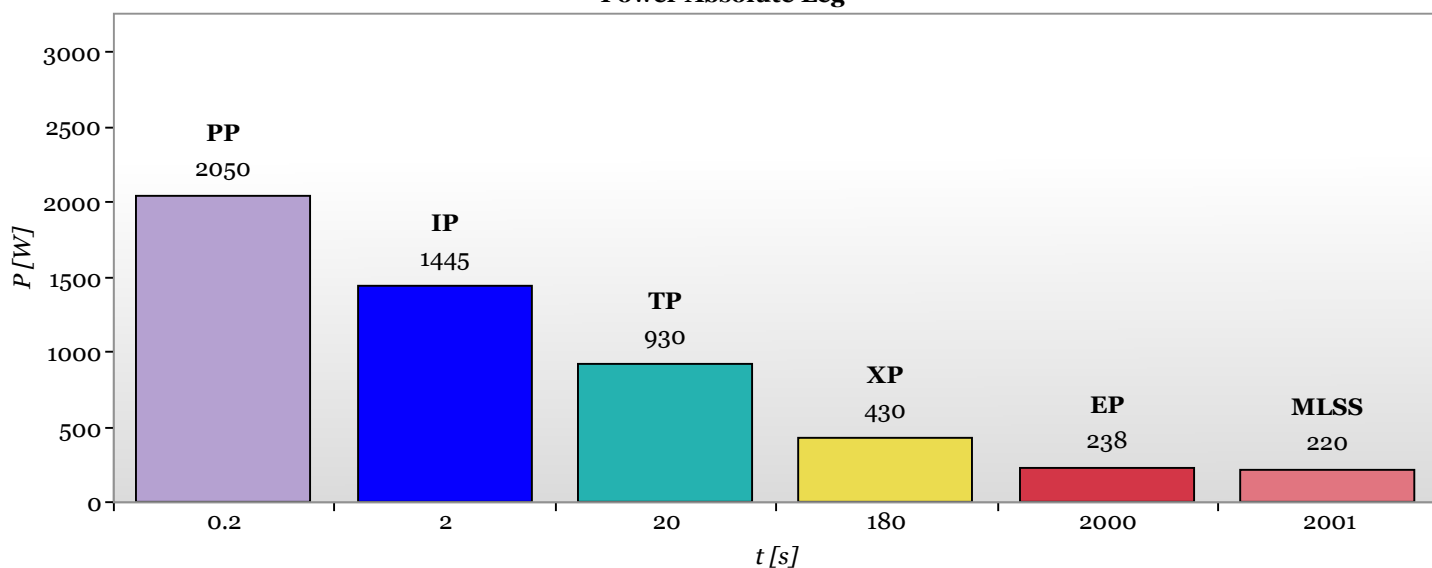
Name	Date of Birth	Height	Sitting Height	Mass
Max Mustermann	24 Sep 1985	183 cm	94 cm	74.0 kg

Indices

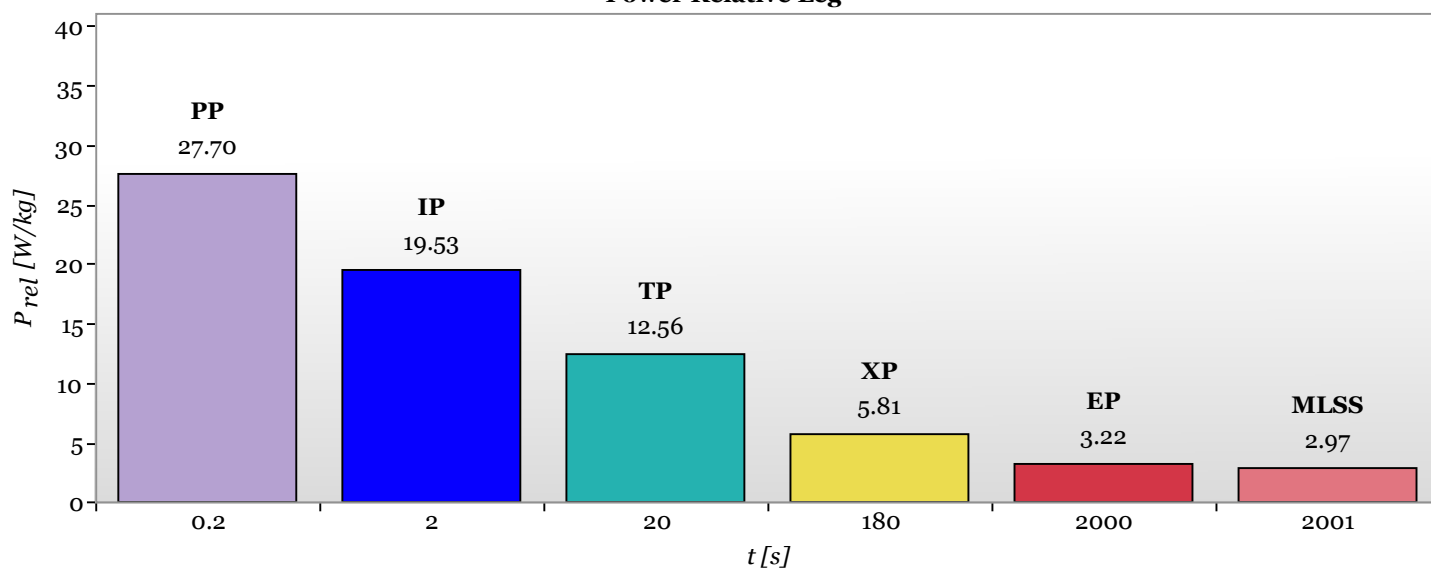
BMI	MI ₂	C
22.1	23.5	0.514

Leg Tests

Power Absolute Leg

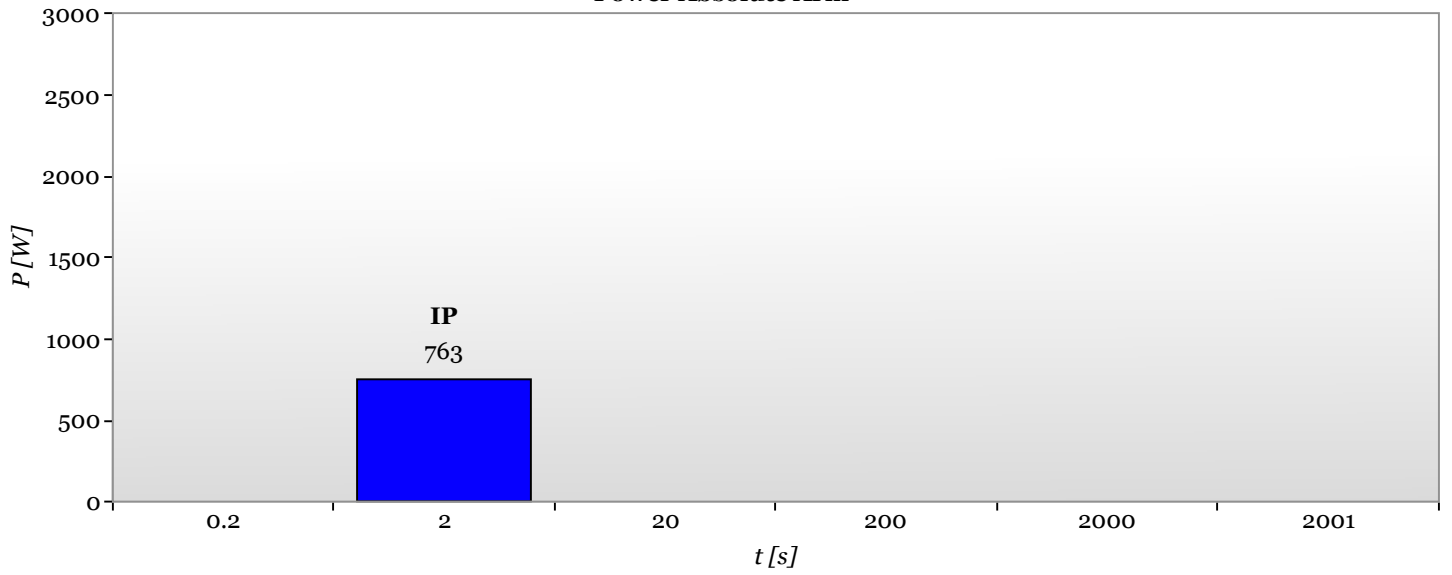


Power Relative Leg

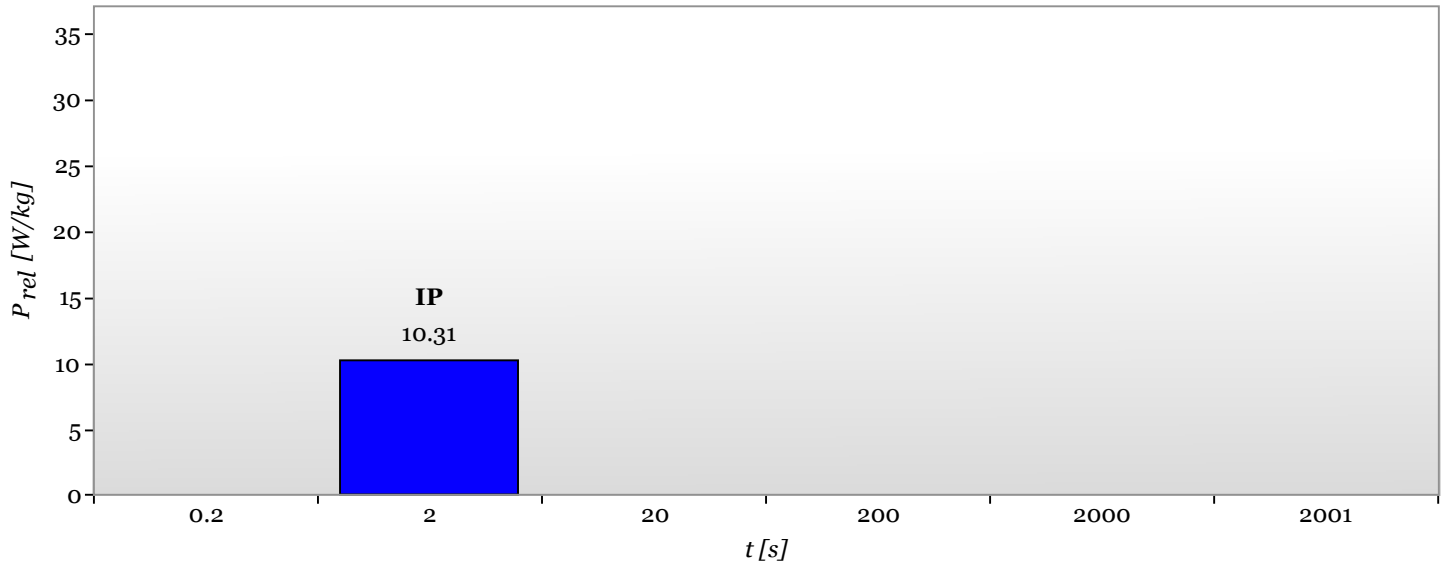


Arm Tests

Power Absolute Arm



Power Relative Arm



Immediate Power Test

Max Mustermann

Date 28 Oct 2013 10:54:09

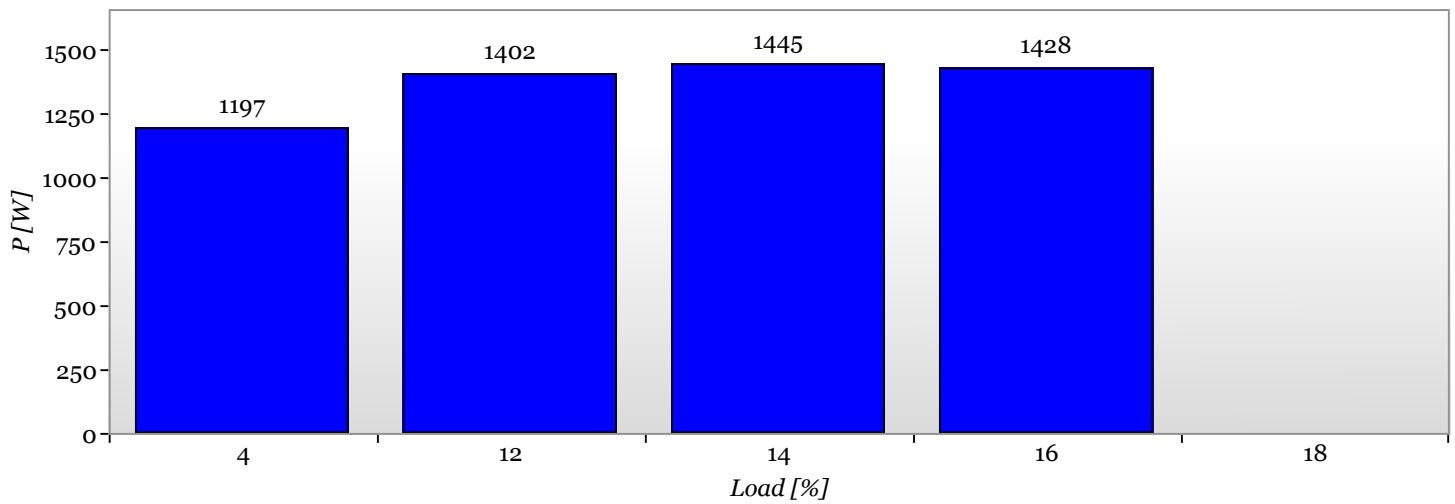
Test Settings

Span	v_0	Pause Time	Start Delay	Step Duration
2 s	1 RPM	7.00 min	0.00 s	10 s

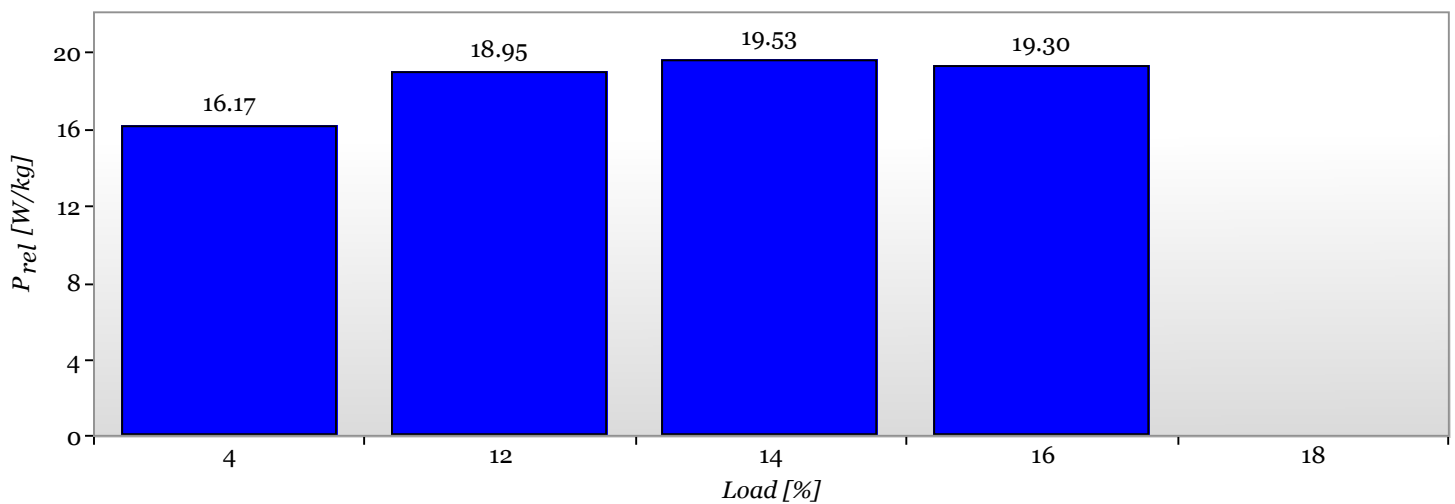
Test Results

Load _{rel} [%]	Load [kg]	RPM _{max}	RPM _p	P [W]	P _{rel} [W/kg]
4	3.0	205	153	1197	16.17
12	8.9	145	121	1402	18.95
14	10.4	133	121	1445	19.53
16	11.8	119	114	1428	19.30
18	13.3	0	0	0	0.00

Power Absolute



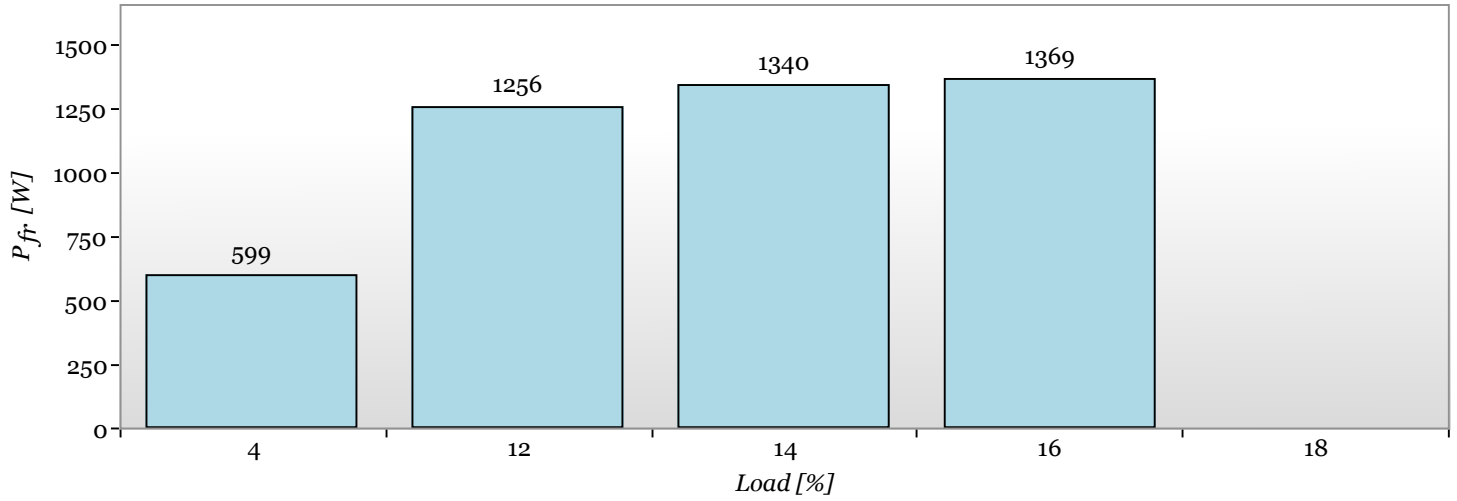
Power Relative



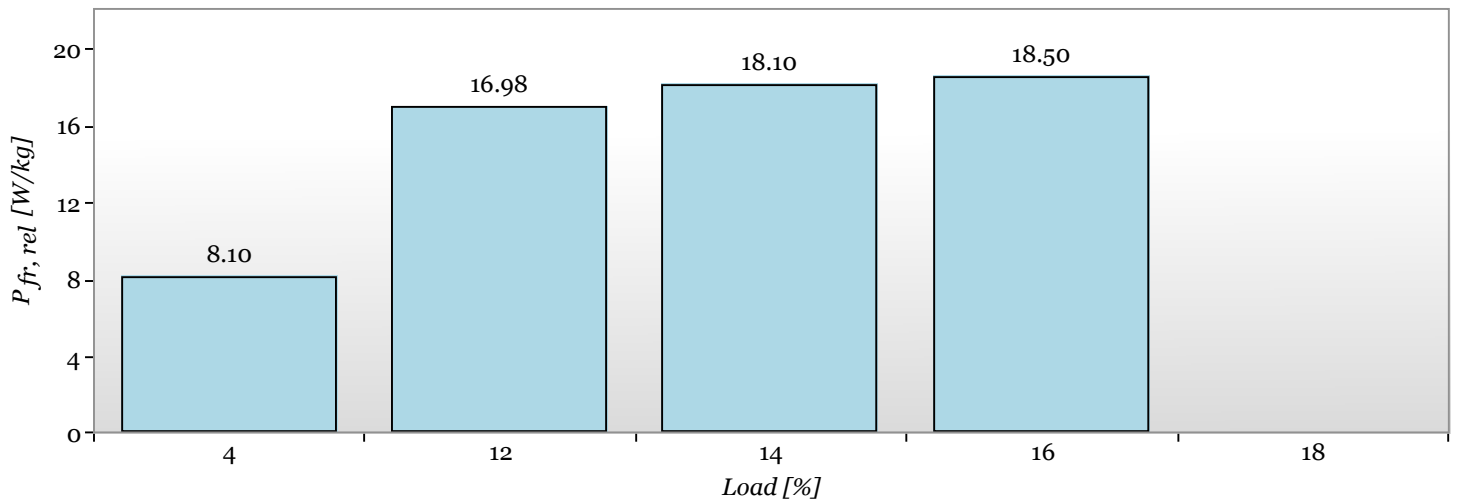
Test Results (Friction Power)

Load _{rel} [%]	Load [kg]	RPM _{max}	RPM _{P_{fr}}	P _{fr} [W]	P _{fr,rel} [W/kg]
4	3.0	205	203	599	8.10
12	8.9	145	143	1256	16.98
14	10.4	133	131	1340	18.10
16	11.8	119	118	1369	18.50
18	13.3	0	0	0	0.00

Friction Power Absolute



Friction Power Relative



Immediate Power (arm) Test

Max Mustermann

Date 28 Oct 2013 11:57:22

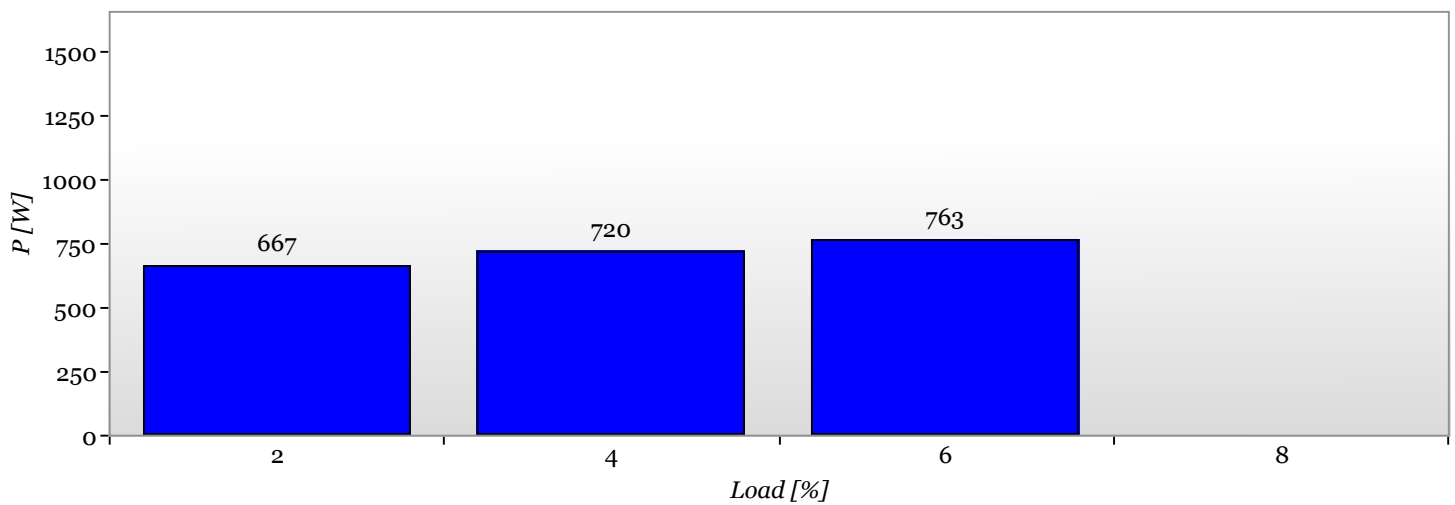
Test Settings

Span	v_0	Pause Time	Start Delay	Step Duration
2 s	1 RPM	7.00 min	0.00 s	10 s

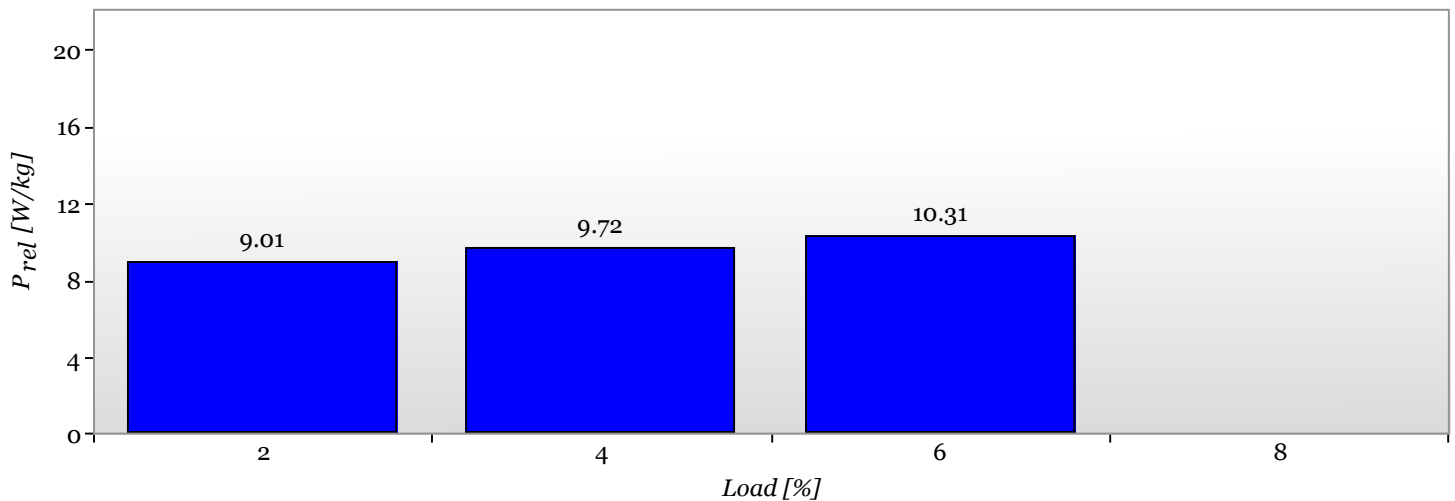
Test Results

Load _{rel} [%]	Load [kg]	RPM _{max}	RPM _p	P [W]	P _{rel} [W/kg]
2	1.5	229	174	667	9.01
4	3.0	190	163	720	9.72
6	4.4	163	148	763	10.31
8	5.9	0	0	0	0.00

Power Absolute



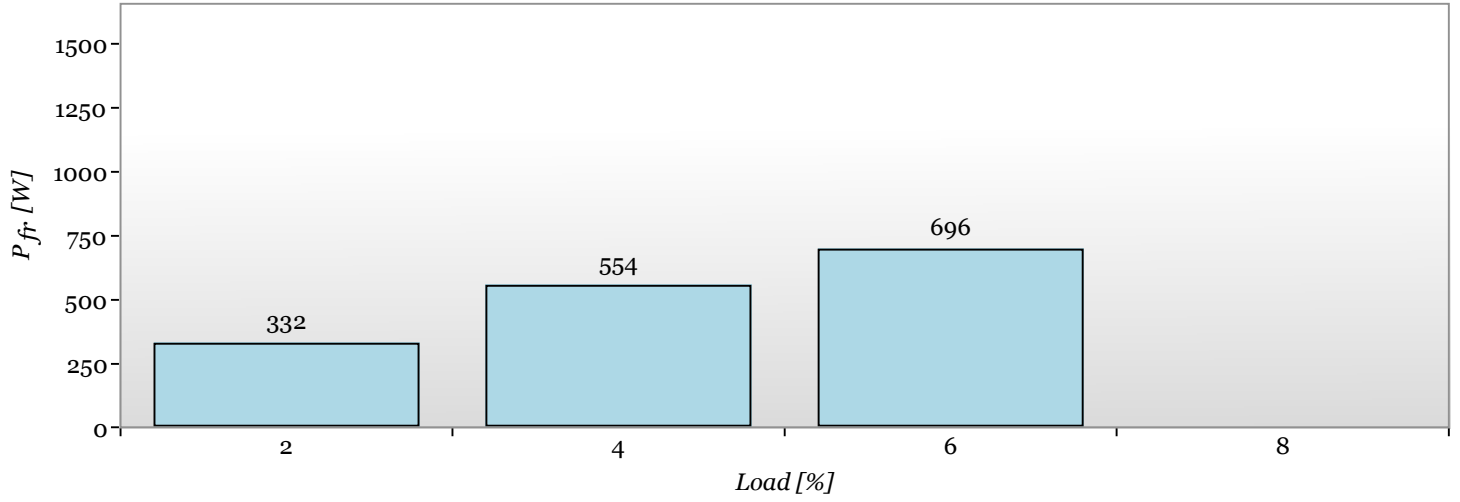
Power Relative



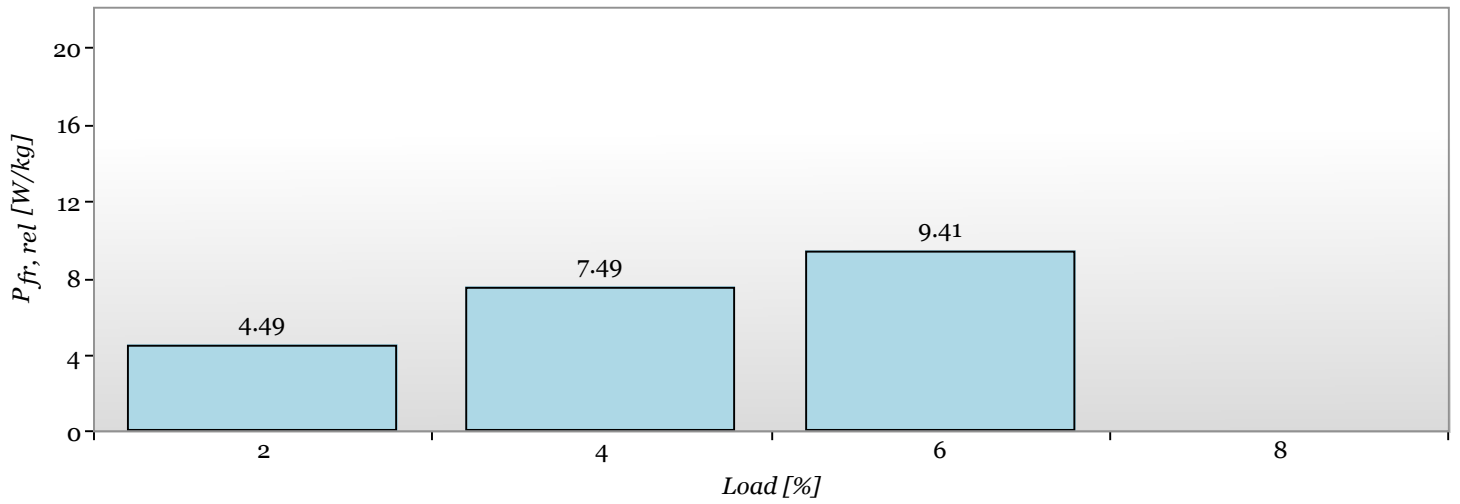
Test Results (Friction Power)

Load _{rel} [%]	Load [kg]	RPM _{max}	RPM _{P_{fr}}	P _{fr} [W]	P _{fr,rel} [W/kg]
2	1.5	229	225	332	4.49
4	3.0	190	188	554	7.49
6	4.4	163	160	696	9.41
8	5.9	0	0	0	0.00

Friction Power Absolute



Friction Power Relative



Transition Power Test

Max Mustermann

Date 29 Oct 2013 10:34:28

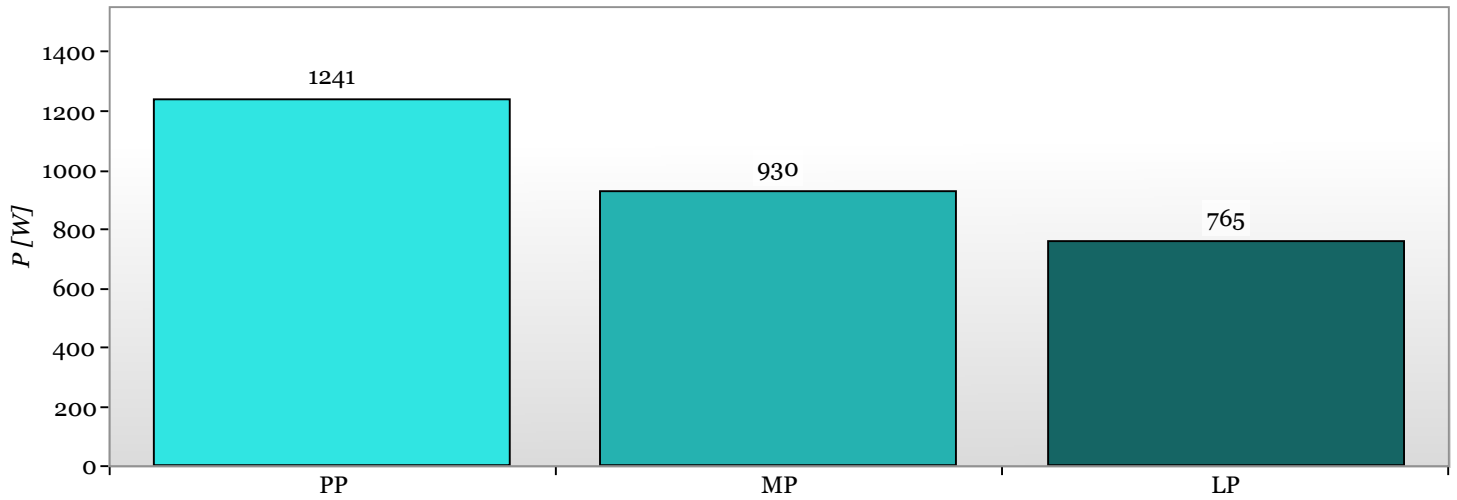
Test Settings

Load	Load _{rel}	Duration	Span	Start Delay
8.1 kg	11.0 %	20.0 s	5 s	0.00 s

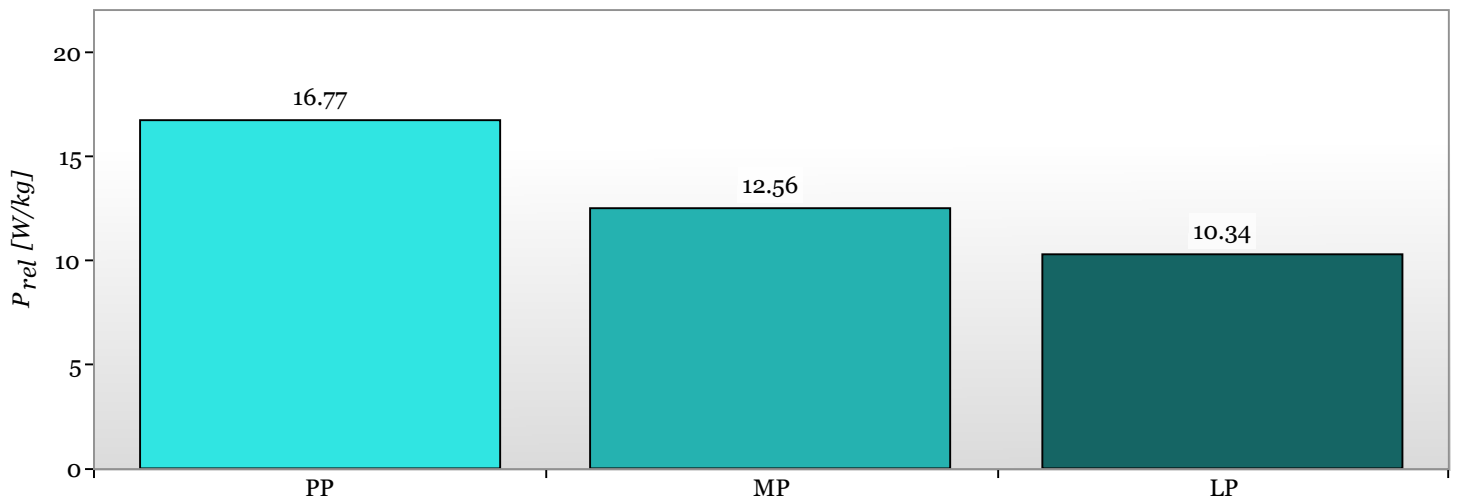
Test Results

$$FI = (PP - LP) / PP = 0.38$$

Power Absolute



Power Relative



Endurance Power Test

Max Mustermann

Date 15 Oct 2013 11:51:29

Test Settings

Power Increment	20.0 W
Estimated Final Power	360 W
Delta Mass	0.255 kg
Prephase Duration	1.0 min
First Step Duration	1.0 min
Step Duration	1.0 min
Postphase Duration	6.0 min

Test Results

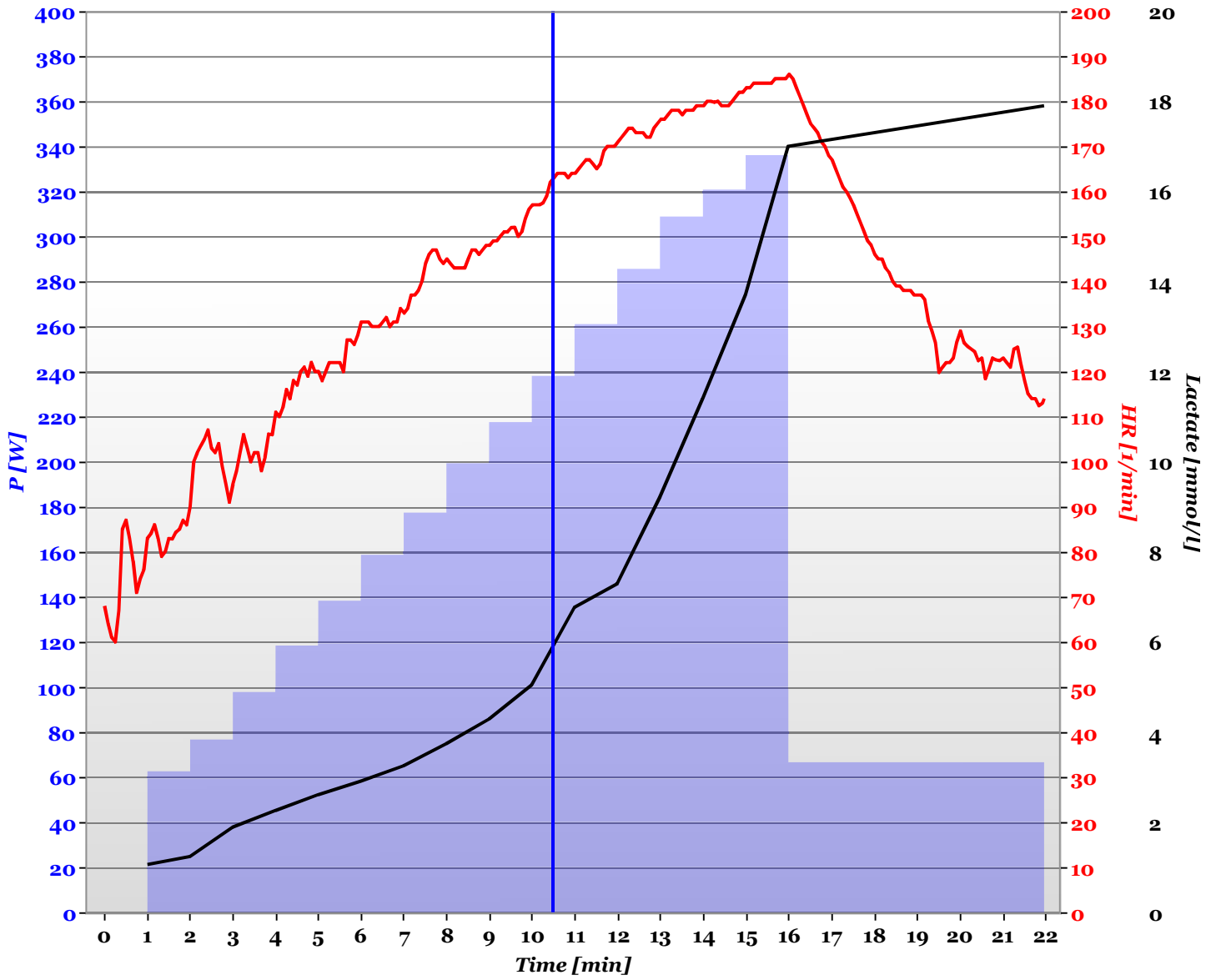
P_{max}	336 W	P_{max,rel}	4.54 W/kg	HR_{max}	185 1/min	Lactate_{max}	17.9 mmol/l
P_{EP}	237 W	P_{EP,rel}	3.22 W/kg	HR_{EP}	161 1/min	Lactate_{EP}	6.8 mmol/l

Step Results

Load [kg]	P [W]	Delta P [W]	RPM [1/min]	HR [1/min]	Lactate [mmol/l]
0.000	0	0.0	0	74	1.06
1.000	63	62.6	64	84	1.24
1.000	77	14.1	78	100	1.89
1.255	98	21.2	79	102	2.26
1.510	118	20.6	80	117	2.61
1.765	138	19.9	80	123	2.91
2.020	159	20.4	80	131	3.25
2.275	177	18.7	79	141	3.74
2.530	199	21.9	80	145	4.29
2.785	218	18.2	80	151	5.05
3.040	238	20.6	80	161	6.77
3.295	261	22.9	81	167	7.29
3.550	286	24.6	82	173	9.22
3.805	309	23.2	83	178	11.4
4.060	321	12.0	81	180	13.7
4.315	336	15.3	79	184	17
1.000	67	-269.5	68	151	17.9

Training Regimes

Description	Cycling HR [1/min]	Running HR [1/min]	P [W]	P _{EP} [%]	Lactate [mmol/l]	Workout [min]	Pause [min]
Regeneration	117 - 125	125 - 133	119 - 143	50 - 60	2.6 - 3.0	20 - 40	
Ultra long training	125 - 136	133 - 144	143 - 167	60 - 70	3.0 - 3.4	180 - 360	
Low pace	136 - 144	144 - 152	167 - 190	70 - 80	3.4 - 4.0	60 - 180	
Medium pace	144 - 150	152 - 158	190 - 214	80 - 90	4.0 - 4.9	60 - 90	
Fast pace	150 - 158	158 - 166	214 - 231	90 - 97	4.9 - 6.2	15 - 60	
Extensive intervals	158 - 163	166 - 171	231 - 245	97 - 103	6.2 - 7.0	3 - 5	0.5 - 1
Intensive intervals	163 - 167	171 - 175	245 - 262	103 - 110	7.0 - 7.3	0.2 - 1.0	3 - 5



MLSS Test

Max Mustermann

Date 3 Mar 2014 01:48:33

Test Settings

Duration	2001.0 s
P_{Low}	160 W
HR_{Low}	130 1/min
P_{MLSS}	220 W
HR_{MLSS}	160 1/min
Lactate	0.0 mmol/l

Training Regimes

Description	Cycling HR [1/min]	Running HR [1/min]	P [W]	P_{MLSS} [%]	Workout [min]	Pause [min]
Regeneration	105 - 116	113 - 124	110 - 132	50 - 60	20 - 40	
Ultra long training	116 - 127	124 - 135	132 - 154	60 - 70	180 - 360	
Low pace	127 - 138	135 - 146	154 - 176	70 - 80	60 - 180	
Medium pace	138 - 149	146 - 157	176 - 198	80 - 90	60 - 90	
Fast pace	149 - 157	157 - 165	198 - 213	90 - 97	15 - 60	
Extensive intervals	157 - 163	165 - 171	213 - 227	97 - 103	3 - 5	0.5 - 1
Intensive intervals	163 - 171	171 - 179	227 - 242	103 - 110	0.2 - 1.0	3 - 5