

**Power Outputs of Team Telekom at a 6 day stage race (Vogt in MSSE. 38:147-151, 2006):**

**Test Results 1 Day Prior to Race:**

**Test Protocol: Initial Load 100 watts, incremental Load 20 watts every 3 minutes**

Ppeak (W): 390 +/- 28

Ppeak/kg (W/kg): 5.5 +/- 0.3

PeakLT (W): 248 +/- 32

PeakLT + 1 (W): 326 +/- 38

HRLT (bpm): 137 +/- 13

HRLT + 1 (bpm): 163 +/- 10

Ppeak = Watts of last completed workload + [(t/180) X 20]; with t = time the last incomplete workload was maintained in seconds and 20 is the power output difference between the last two workloads

LT = start of increase in blood lactate concentration (Wasserman technique)

LT + 1 = 1 mmol above the lactate threshold

**Stage Race Results:**

Mean Power for 5 mass start stages: 220 +/- 22 W

Intensity ranged 28 W above PeakLT and 107 W below PeakLT + 1  
(about 190 W to 310 W)

Average HR: 142 +/- 5

Mean Power for Uphill 13km TT: 392 +/- 60 W (5.5 +/- 0.4 W/kg)

(equals 66 W above the PeakLT + 1)

Average HR: 169 +/- 3 bpm

**Estimated Power Outputs at Alpe d'Huez TT (13.8km, altitude change 1110m):**

Marco Pantani: 388 W (6.9 W/kg)

Lance Armstrong: 445 W (6.3 W/kg)

Jan Ulrich: 440 W (6.0 W/kg)

**Cyclocross race (Hansen in Cycle Coaching 2:23-24, 1999):**

Mean power output 374, 316, and 309 (4.7, 4.1 and 4.9 W/kg)

**Indirect measurement, 3 week stage races (Padilla in MSSE 33:796 – 802, 2001)**

246 +/- 44 W for high mountain stages

234 +/- 43 W for semi-mountainous stages

192 +/- 45 W for flat stages

**Eight amateur cyclists in a 40km TT (Smith IJSM 22:270 - 274, 2001):**

312 +/- 23 W

**11 elite mountain bike racers in 15 competitions (Staplefeldt IJSM 25:294 – 300, 2004):**

Average male power: 246 +/- 12 W (3.5 +/- 0.2 W/kg) for mean time of 128 minutes

Average female power: 193 +/- 1 W (3.1 +/- 0.2 W/kg) for mean time of 108 minutes

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