

EVALUATION REPORT
Ergocycle Force/Velocity Test

Asymmetry detection + downstroke-upstroke separation



Name: Doe	First name: John	Date: 18/02/2008
Age: 25 yrs	Height: 180 cm	Weight (kg): 75
Specialty: kilometer	Best time (200m):	
Mean Velocity: -- km/h	Mean Pedaling Rate: -- rpm	

SEATED POSITION EXERCISE

Anthropometrics Data

4 skin folds method, Durnin and Womersley (1974) - Harpenden Skinfold Caliper

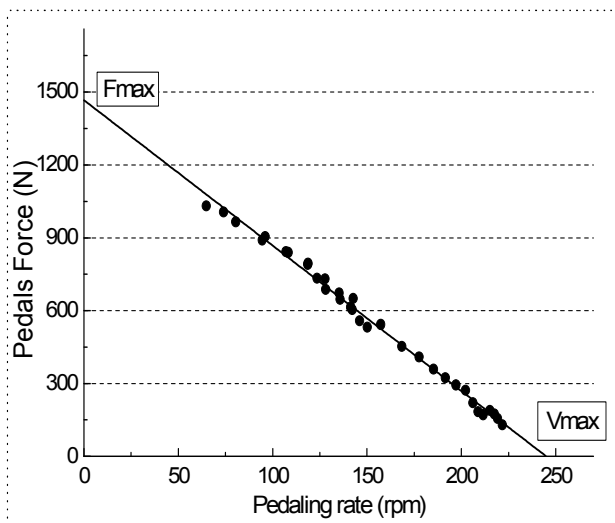
Sum of skin folds (mm) : 30.2	Total leg volume (litre) : 7.9
Percentage of body fat (%) : 19.6	Maximal thigh circumference (cm) : 49

Sum of leg skin folds (mm) : 63.5
Lean leg volume* (litre) : 5.5
*(without knee)

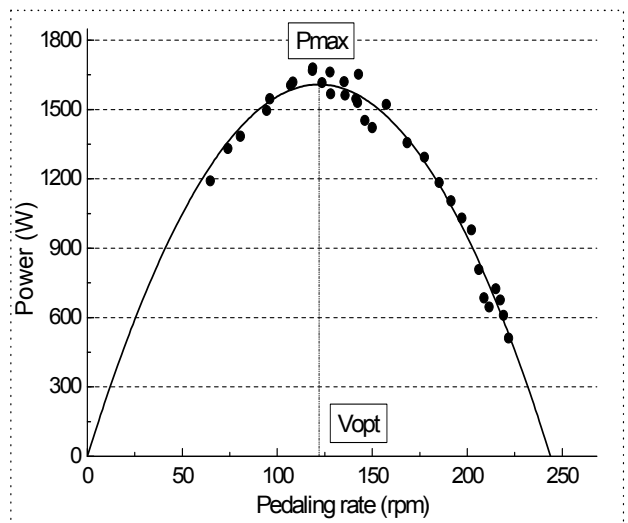
Global Force-Velocity Results

Lode Excalibur ergocycle (strain gauges in cranks). 3 sprints of 5 to 7 s : 2 sprints with high and medium resistance, 1 flying start sprint 70 rpm without resistance

Force-Velocity Relationship



Power-Velocity Relationship



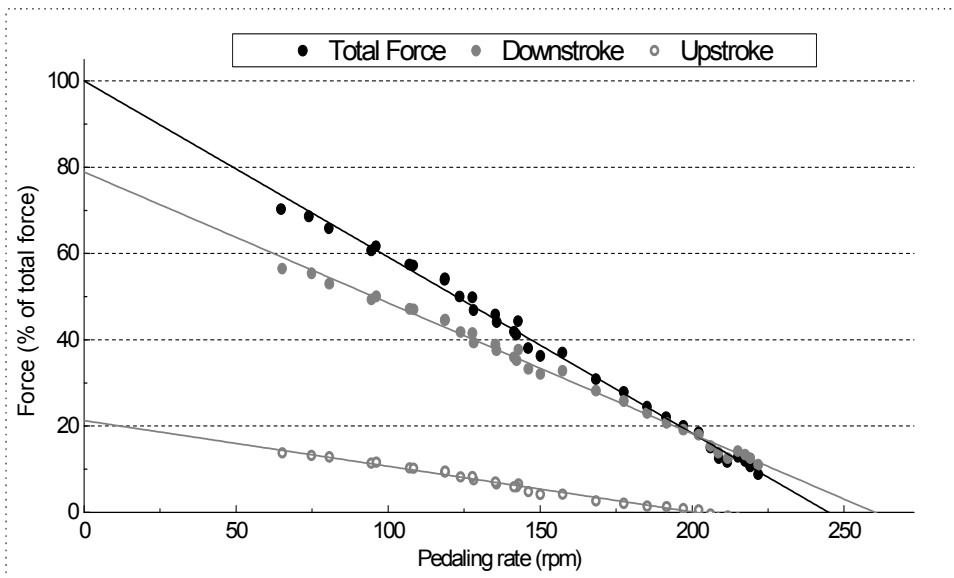
Individual results							
Vmax (rpm)	Fmax (N)	Fmax (N/kg)		Vopt (rpm)	Pmax (W)	Pmax (W/kg)	Pmax Peak (W)
245	1467	19.6		122	1608	21.4	1670
INSEP group mean							
255	1269	16.3		127	1457	18.7	1513

Vmax: Maximal theoretical velocity (rpm)
Fmax: Maximal theoretical force (N)
Pmax W/kg: Relative maximal power (W/kg)

Vopt: Optimal velocity (corresponding to Pmax)
Pmax: Maximal theoretical power (W)
Pmax Peak: Mean of the three highest measured powers (W)

DOWNSTROKE / UPSTROKE Separation

Downstroke and upstroke relative parts in comparison with total force

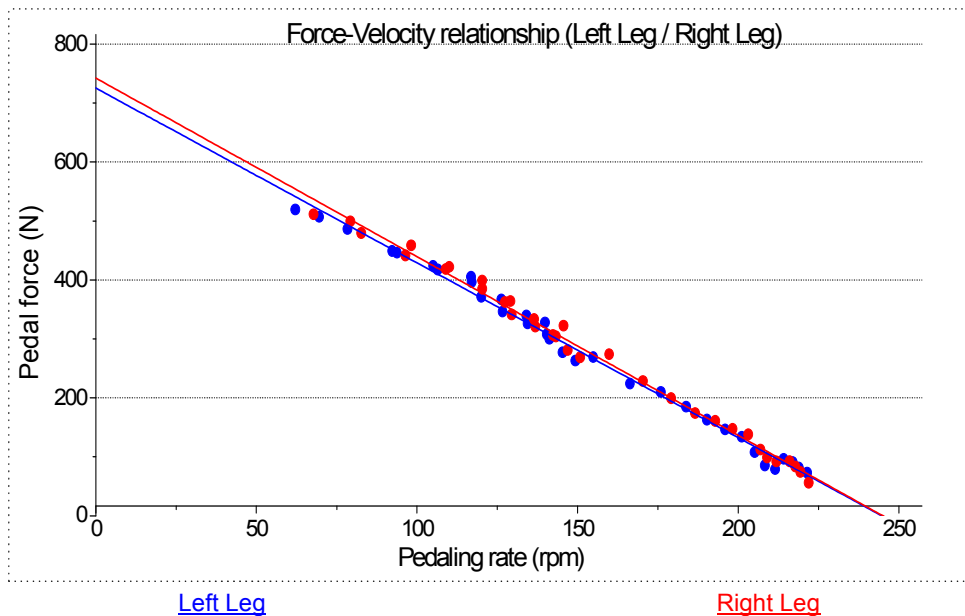


DOWNSTROKE / UPSTROKE RELATIVE PARTS

Individual results			
DOWNSTROKE		UPSTROKE	
Fmax % : 78.9	Vmax (rpm) : 260	Fmax % : 21.1	Vmax (rpm) : 201
INSEP group mean			
Fmax % : 79.6	Vmax (rpm) : 274	Fmax % : 20.4	Vmax (rpm) : 201

LEFT / RIGHT Asymmetry

Left leg - right leg involvement



Left Leg

Right Leg

Individual results (both legs)

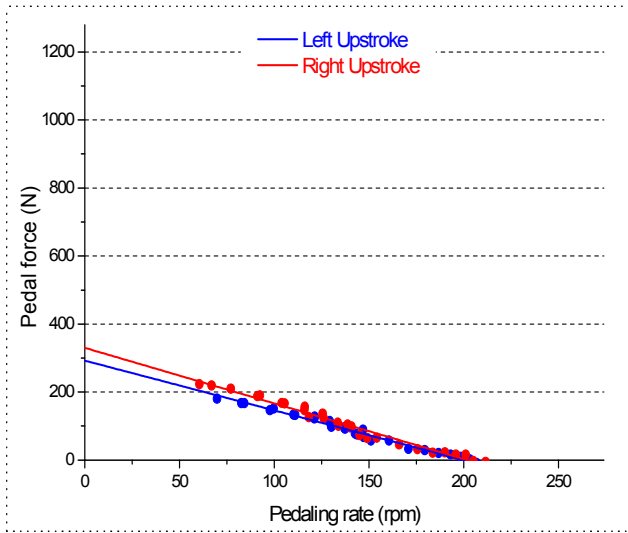
Fmax (N) : 725	Vmax (rpm) : 245	Pmax (W) : 794
Fmax (N) : 742	Vmax (rpm) : 245	Pmax (W) : 815

ASYMMETRY PERCENTAGE

Individual results		
Fmax : RL > 2.3 %	Vmax : LL ~ RL	Pmax : RL > 2.6 %
INSEP group mean		
Fmax : 3	Vmax : 4	Pmax : 2.1

Left and right legs ASYMMETRY for DOWNSTROKE and UPSTROKE phases

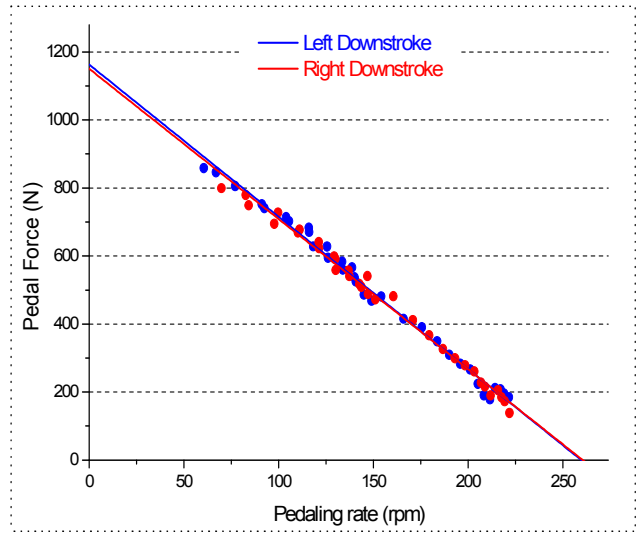
UPSTROKE



Vmax (rpm) :	200
Vmax (rpm) :	202

Fmax (N) :	292
Fmax (N) :	330

DOWNSTROKE



Vmax (rpm) :	260
Vmax (rpm) :	261

Fmax (N) :	1163
Fmax (N) :	1151