


Features

- Extremely wide measuring range
- Excellent measuring accuracy
- L/R vertical force under each foot
- Real-time user feedback
- Built-in amplifier with acquisition system
- Start and stop triggers
- LAN connection
- Control & acquisition software included
- Cost-effective

Applications

- Biomechanics
- Rehabilitation
- Exercise training

Overview		150/50	170/65
Instrumentation model		P001	P002
Treadmill model		stratos	stellar
Dimensions (L x W x H) with safety arch		220 x 95 x 120 cm 220 x 95 x 255 cm	245 x 145 x 150 cm 245 x 145 x 245 cm
Mass (with safety arch)		273kg (308kg)	328kg (363kg)
Running surface (L x W)		150 x 50 cm	170 x 65 cm
Sensor load range	Fx, Fy, Fz	10 kN	
Sensor overload	Fx, Fy, Fz	24 kN	
Interfaces		Built-in amplifier Ethernet interface Analog force output One start and one stop digital trigger Serial port for treadmill control	

Performance		150/50	170/65
Speed		0 ... 22 km/h	0 ... 25 km/h
Elevation	optional	0 ... 10 %	0 ... 10 %
Linearity	Fx, Fy	<0.8 %	<0.8 %
	Fz	<0.2 %	<0.2 %
Hysteresis	Fx, Fy	<0.8 %	<0.8 %
	Fz	<0.2 %	<0.2 %
Cross-talk	Fz → Fx, Fy	<2.0 %	<2.0 %
Drift	Fx, Fy, Fz	<0.05 N/min	<0.05 N/min
Natural frequency (unloaded)	x-axis	≈ 40 Hz	≈ 40 Hz
	y-axis	≈ 65 Hz	≈ 55 Hz
	z-axis	≈ 65 Hz	≈ 55 Hz

Physical	
Operating / storage temperature	10 ... 40°C / -25 ... 40°C
Operating / storage humidity	30 ... 70% (non condensing) / 0 ... 95% (non condensing)
Air pressure	700 ... 1060 hPa (max 3000m altitude)
Ingress protection	IP 00
Audible noise	Noise emission LpA < 70 dB(A) (63db) acc. EN 957-6 Noise emission under load is higher than without load.
Anchorage	26 x HILTI HKD M10x40 or HIT-IC M10x80
Sensors	Strain gauge / Stainless steel tempered

Electrical	
Treadmill supply	200 ... 240 Vac / 16 A
Treadmill drive motor	3.3 kW
Amplifier supply	12V DC @ 800 mA

Amplification			
Amplifier		8 channels: 4x Fz, 2x Fy, 2x Fx	
Analog filter		Bessel 8-pole low pass filter cut-off frequency: 125 Hz	
Range	1 to 6	x4 / x8 / x16 / x32 / x64 / x128	
		Range 1	Range 6
Measuring range	Fx, Fy	-3 ... 3 kN	-0.38 ... 0.38 kN
	Fz	-1.2 ... 11 kN	-0.05 ... 0.33 kN
Resolution	Fx, Fy	200 mN	25 mN
	Fz	400 mN	12 mN
Noise (peak-to-peak)	Fx, Fy	±2 N	±2 N
	Fz	±2 N	±2 N
Sensitivity at analog interface	Fx, Fy	600 N/V	80 N/V
	Fz	1200 N/V	40 N/V

Speed sensor	
Range	0.2 ... 40 km/h
Resolution	<0.3% of speed

Ethernet interface	
Connector	RJ-45
Data rate	10 / 100 Mbit/s
Analog-to-digital converter	Built-in, 8 channels, 16-bit resolution, simultaneous sampling
Sampling rate	100 Hz ... 10 kHz

Analog output		
Connector		9-pin Sub-D
Channels		8 channels: 4x Fz, 2x Fy, 2x Fx
Range	Fx, Fy, Fz	0 ... 10 V
Type	Fx, Fy, Fz	Single-ended ground referenced

Digital input		
Auto-zero	BNC	5V digital TTL/CMOS, isolated
Trigger in	BNC	5V digital TTL/CMOS, isolated
Auxiliary in	BNC	5V digital TTL/CMOS, isolated, can be used as trigger

Digital output		
Sync out	BNC	5V digital TTL/CMOS, isolated

Software	
Data acquisition	gaitway-3D software ©
Functions	data monitoring, acquisition and storage, biomechanical parameters of gait, left/right vertical force under each foot, real-time biofeedback, visualization of acquired data, configuration, reporting, data streaming
Compatibility	Windows 7 / 8 / 10
Export file format	Native binary, tab delimited text