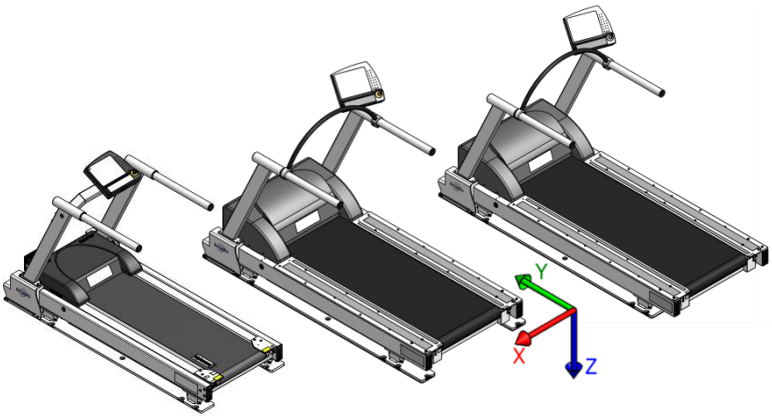

Features

- 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	190/65
Instrumentation model		P001	P002	P021
Treadmill model		stratos	stellar	pulsar
Dimensions (L x W x H) with safety arch		220 x 95 x 120 cm 220 x 95 x 255 cm	245 x 120 x 150 cm 245 x 120 x 245 cm	265 x 120 x 150 cm 265 x 120 x 245 cm
Mass (with safety arch)		273kg (308kg)	328kg (363kg)	366kg (401kg)
Running surface (L x W)		150 x 50 cm	170 x 65 cm	190 x 65 cm
Sensor overload	Fx, Fy, Fz	24 kN		
Interfaces		Ethernet interface Analog force and speed output Start and stop digital trigger Serial port for treadmill control		

Performance		150/50	170/65	190/65
Speed		0 … 18 km/h	0 … 25 km/h	0 … 40 km/h
Elevation	optional	0 … 20 %	0 … 20 %	0 … 20 %
Linearity	Fx, Fy, Fz	<0.2 %	<0.2 %	<0.2 %
Hysteresis	Fx, Fy Fz	<0.8 % <0.2 %	<0.8 % <0.2 %	<0.8 % <0.2 %
Cross-talk	Fz → Fx, Fy	<1.0 %	<1.0 %	<1.0 %
Drift	Fx, Fy, Fz	<0.05 N/min	<0.05 N/min	<0.05 N/min
Natural frequency (unloaded, no elevation)	x-axis y-axis z-axis	≈ 45 Hz ≈ 60 Hz ≈ 60 Hz	≈ 40 Hz ≈ 55 Hz ≈ 55 Hz	≈ 35 Hz ≈ 45 Hz ≈ 45 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

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Electrical		**150/50**	**170/65**	**190/65**
Treadmill supply		200 … 240Vac / 16A	200 … 240Vac / 16A	200 … 240Vac / 16A or 3 x 400Vac / 16A
Treadmill drive motor		2.2kW	3.3 kW	4.3kW
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 adjustable upon request		**Min.**	**Default range**	**Max.**
Measuring range on each sensor	Fx Fy Fz	±0.3 kN ±0.4 kN 0.3 kN	±0.7 kN ±0.8 kN 2.5 kN	±10.9 kN ±12.1 kN 10.2 kN
Resolution	Fx Fy Fz	22 mN 24 mN 11 mN	44 mN 48 mN 91 mN	700 mN 775 mN 363 mN
Noise (peak-to-peak)	Fx Fy Fz	±0.5 N ±0.5 N ±0.5 N	±0.5 N ±0.5 N ±0.5 N	±1.0 N ±1.0 N ±1.0 N
Sensitivity at analog interface	Fx Fy Fz	70 N/V 80 N/V 40 N/V	140 N/V 160 N/V 300 N/V	2300 N/V 2500 N/V 1200 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		15-pin Sub-D (HD)
Channels		9 channels: 4x Fz, 2x Fy, 2x Fx, 1x speed
Range	Fx, Fy, Fz	0 … 10 V
Type	Fx, Fy, Fz	Single-ended ground referenced

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

Software	
Data acquisition	gaitway-3D software ©
Functions	Force & center of pressure monitoring, configuration, data recording, gait biomechanical parameters, left/right force under each foot, real-time biofeedback, visualization of recorded data, reporting
Compatibility	Windows 10 / 11
Export file format	Native binary, tab delimited text for data and parameters
Software options	Digital data streaming (Noraxon MR3, Vicon Nexus, Qualisys QTM, Matlab), External left/right force decomposition, Vicon Nexus plugin, Speed perturbation module