

sports, diagnostics, medical and rehabilitation ergometer series



German Engineering since 1988



torqualizer® cycle ef med 900 with 7" TFT touch display



stainless steel length adjustable cranks [cos30021ef-acr] for an easy and tool-free adaption of the ergometer available at extra charge



horizontal seat adjustment allows a perfect adjustment of the recumbent ergometer to the individual needs for small and tall patients

Benefit from our experience since 1988 in building and servicing standard and customized solutions around the globe.

h/p/cosmos standard

h/p/cosmos has been developing and building treadmills since 1988 in Germany for various fields including fitness, competitive sports, sports medicine, orthopaedic and neurological rehabilitation, sport science, biomechanics, uniformed services, performance diagnostics, cardiopulmonary diagnostics and rehabilitation. This experience, maximum standards in quality and advanced technology are the foundation of our business and reflect in every h/p/cosmos product.

The torqualizer® series with the latest emotion-fitness 900 UserTerminal is the perfect addition to the existing portfolio of treadmills to support therapists and trainers with a matching series of reliable ergometers for professional use. Correspondingly, all components are manufactured in best quality, jointly creating reliable and durable ergometers. The outstanding level of h/p/cosmos products and services as well as attractive prices form the h/p/cosmos standard.

The perfect match for your cardio circle

To allow a seamless look and feel as well as a perfect integration of h/p/cosmos treadmills into a torqualizer® cardio circle, the pluto® ef med treadmill is equipped with the same emotion-fitness 900 UserTerminal as the torqualizer® ergometer series.

Your advantages

All torqualizer® 900 ergometers can be ordered according to the planned application either as sports or medical devices (MDD 93/42/EEC certified with CE labeling) and the treadmill pluto® ef med 900 will be released already with the new certification MDR (EU) 2017/745.

With a keen eye on therapeutic demands, a very low step through allows easy access to the ergometers for patients with limited mobility. The 7" TFT touch display with biofeedback indications is easy to handle, clearly readable and grid independent (except for treadmills or when ordering 24 Volt permanent power supply option).

Customer-specific configuration for individual solutions

Ergometers off the peg can be many, at h/p/cosmos you can also get your individualized torqualizer® ergometer with a large selection of options and accessories.

Various options and preconfigured packages allow you to customize your ergometer for your planned applications.

torqualizer® 900 series programs

With each product of the torqualizer® 900 series, a basic package with three programmes comes pre-installed on your terminal.

The quickstart functionality lets you immediately start with manual adjustments according to your needs.

The time-programme finishes your training after a certain, predefined time.

The pulse programme lets you put in your target pulse/heart rate to be reached within your training session.

Until this pulse is reached, the training difficulty advances.



Programme package additionally includes:

- Programmes: Watt sensitive, Isokinetic*, Therapy, Interval, K-Cal, Hills, Distance
- Tests for torqualizer® cycle ef (med) 900: IPN, PWC, Astrand, Standard Test, Lactate, Conconi 50, Conconi 100
- Systems for torqualizer® cycle ef (med) 900, recumbent ef (med) 900 & cross ef (med) 900: motion balance system, Serious Games (Slalom, Freeway, Balance)





Connect package includes

- RFID, NFC connectivity easy nearfield access for different devices
- Simple connection with compatible mobile devices
- Bluetooth® Low Energy connection
- Barcode identification for easy scan & connect





Performance package includes

- Charging with wireless Qi-inductive technology for many compatible smart devices
- Higher maximum power for extensive training
- Reduced initial load of 7 watts (cycle, recumbent, body) or 15 watts (cross) when using an external power supply



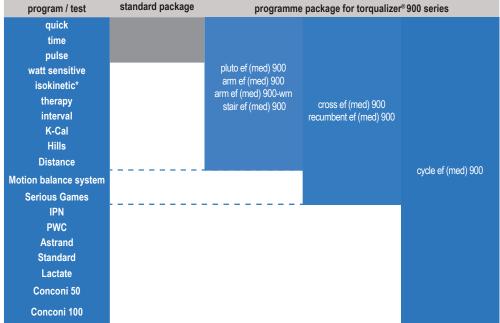
All-in package includes

- Programme package
- Connect package
- Performance package









^{*}not available for torqualizer® stair

Overview of the torqualizer® series:



bike-ergometer	torqualizer® cycle ef med 900	torqualizer® cycle ef 900
order number	cos30021ef-med900	cos30021ef-900
applications	endurance training cycling	
functions	7" TFT - capacitive multicolor touch display, high resolution, biofeedback, low st through / easy access, horizontally and vertically adjustable saddle, hybrid POLAR® pul receiver, optional Bluetooth®, NFC, RFID, optional inductive charging for mobile devices	
power range* standard: 15 (med) / 25 (sport) 500 watts rpm independent (up to 1,000 watts rpm optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm		tts rpm independent (up to 1,000 watts rpm dependent)



recumbent-ergometer	torqualizer® recumbent ef med 900	torqualizer® recumbent ef 900
order number	cos30031ef-med900	cos30031ef-900
applications	endurance training legs / obese trainees / lo	ng training sessions
functions	7" TFT - capacitive multicolor touch display, high resolution, biofeedback, low step through easy access; horizontal seat adjustment, adjustable backrest, hybrid POLAR® pulse receiver, optional Bluetooth®, NFC, RFID, optional inductive charging for mobile devices	
power range*	standard: 15 (med) / 25 (sport) 500 watts rpm independent (up to 1000 watts rpm dependent) optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1000 watts rpm dependent)	



arm-ergometer	torqualizer® arm ef med 900	torqualizer® arm ef 900
order number	cos30030ef-med900	cos30030ef-900
applications endurance training, mobilisation & stabilisation of upper body /		ion of upper body / arms
functions	7" TFT - capacitive multicolor touch display, high resolution, biofeedback, gas pressure supported height adjustment of the drive unit, length-adjustable crank arms, synchronous & asynchronous mode, long seat for optimal positioning, easy dismantling of the seat for wheelchair access, rpm dependent and independent mode, hybrid POLAR® pulse receiver, optional Bluetooth®, NFC, RFID, optional inductive charging for mobile devices	
power range* standard: 15 (med) / 25 (sport) 500 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 950 watts rpm independent (up to 1,000 watts rpm do optional: 15 (med) / 25 (sport) 95 (sport)		



cross-ergometer	torqualizer® cross ef med 900	torqualizer® cross ef 900
order number	cos30032ef-med900	cos30032ef-900
applications full body endurance training, easy on the joints		ints
functions	7" TFT - capacitive multicolor touch display, high resolution, biofeedback forwards and backwards movement, hybrid POLAR® pulse receiver, rpm limit adjustable for extra safety, optional Bluetooth®, NFC, RFID, inductive charging for mobile devices	
power range* standard: 100 500 watts rpm independent (up to 1,000 watts rpm dependent) optional: 100 950 watts rpm independent (up to 1,000 watts rpm dependent)		



stair-ergometer	torqualizer® stair ef med 900	torqualizer® stair ef 900
order number	cos30033ef-med900	cos30033ef-900
applications	endurance training legs / coordination	n / activity of daily life (ADL)
functions	connection system (Bluetooth® Low En pedal suspension, automatic weight de	splay, high resolution, biofeedback, POLAR® auto ergy & 5kHz), pedal independent system, cushioned etection for precise calculation of performance, nal inductive charging for mobile devices



treadmill	pluto® ef med 900	pluto® ef 900
order number	cos31012	cos31011
applications	endurance training walking and running, stress device for performance testing, gait analysis and gait training	endurance training walking and running
functions	7" TFT - capacitive multicolor touch display, high resolution, biofeedback, POLAR® auto connection system (Bluetooth® Low Energy & 5kHz), optional Bluetooth®, NFC, RFID, optional inductive charging for mobile devices	

^{*}Power range of all medical torqualizers*: 15 ... 500 watts rpm independent (cross ef med: 100 ... 500 watts rpm independent); 7 watts minimum resistance if the optional 24 Volt permanent power supply option is used, 15 (med) / 25 (sport) ... 950 watts independent (cross ef med 100 ... 950 Watt rpm independent) with performance package (optional 1000 watt rpm dependent at extra charge)



configuration torqualizer® ef med 900: therapy basic

recommended configuration therapy basic torqualizer® ef med 900

pos.	qty.	order number	product description	
1.	1	cos30021ef-med900	torqualizer® cycle ef med 900 hybrid brake system with 15 500 watts, 15 140 rpm, max. user weight 150kg 7" TFT - capacitive multicolor touch display, high resolution, biofeedback	
2.	1	cos30021ef-pro	Programme package for series 900 - Plus 7 programs, IPN Test, plus 5 additional tests, full range of functions on motion balance system and serious games	
3.	1	cos30021-B-EF-AL-188	lacking torqualizer® for bicycle ef (med) 900, (L: 125 cm / W: 85 cm / H: 170 cm) acked fully assembled on pallet with metal frame and cardboard hood for bicycle-ergometer	
4.	1	cos104392	transport / shipping charge (please specify if truck, sea or air freight; for overseas, sea shipment is recommended)	
5.	1	cos15732-os	installation, commissioning and instruction through authorized and trained personnel	

E & OE. Subject to alterations without prior notice. The illustrations may show accessories and items of optional equipment which are not part of standard specification or the recommended configuration. Subject to our general terms of trade: www.hpcosmos.com



configuration torqualizer® ef med 900: cardiac testing and training

recommended configuration cardiac testing and training torqualizer® ef med 900

pos.	qty.	order number	product description	
1.	1	cos30021ef-med900	torqualizer® cycle ef med 900 hybrid brake system with 15 500 watts, 15 140 rpm, max. user weight 150kg 7" TFT - capacitive multicolor touch display, high resolution, biofeedback	
2.	1	cos30021ef-per	All-in Package (includes Performance package with extended max. workload - 950 watts, Programme Package & Connect Package)	
3.	1	cos30021ef-900-epc	Power supply for power connection - Power supply 24 Volt	
4.	1	cos30021-B-EF-AL-188	Packing torqualizer® for bicycle ef (med) 900, (L: 125 cm / W: 85 cm / H: 170 cm) backed fully assembled on pallet with metal frame and cardboard hood for bicycle-ergometer	
5.	1	cos104392	transport / shipping charge (please specify if truck, sea or air freight; for overseas, sea shipment is recommended)	
6.	1	cos15732-os	installation, commissioning and instruction through authorized and trained personnel	

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configuration torqualizer® recumbent ef med 900: therapy basic

recommended configuration therapy basic torqualizer® recumbent ef med 900

pos.	qty.	order number	product description	
1.	1	cos30031ef-med900	torqualizer® recumbent ef med 900 hybrid brake system with 15 500 watts, 20 120 rpm, max. user weight 150kg 7" TFT - capacitive multicolor touch display, high resolution, biofeedback	
2.	1	cos30021ef-pro	Programme package for medical devices - Plus 7 programmes, IPN Test, plus 5 additional tests, full range of functions on motion balance system and serious games	
3.	1	cos30031-B-EF-AL-189	Packing torqualizer® for recumbent ef (med) 900, (L: 217 cm / W: 79 cm / H: 155 cm) packed fully assembled on pallet with metal frame and cardboard hood for bicycle-ergometer	
4.	1	cos104392	transport / shipping charge (please specify if truck, sea or air freight; for overseas, sea shipment is recommended)	
5.	1	cos15732-os	installation, commissioning and instruction through authorized and trained personnel	

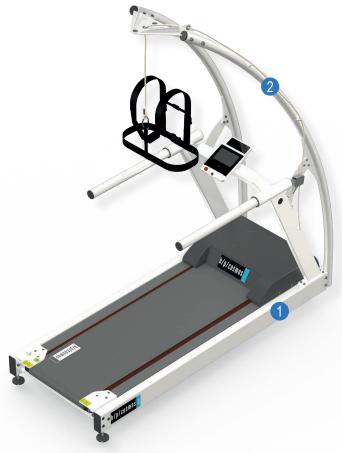
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configuration pluto® ef med: rehabilitation and diagnostics

To allow a seamless look and feel for therapists and patients as well as a perfect integration of h/p/cosmos treadmills into a torqualizer[®] cardio circle, the pluto[®] ef med treadmill is equipped with the same user terminal as the torqualizer[®] series.

The specific terminal must be originally equipped and cannot be retrofitted to existing pluto[®] treadmills.

Many further h/p/cosmos accessories (e.g. different handrails, safety or unweighting systems) can be retrofitted.



recommended configuration rehabilitation and diagnostics pluto® ef med

pos.	qty.	order number	product description	
1.	1	cos31012	pluto® ef med running surface 150 x 50 cm, speed range 0 22 km/h, elevation 0 25 %, max. user weight 250 kg (optional up to 300 kg available) 7"TFT - capacitive multicolor touch display, high resolution	
2.	1	cos10079-01va01	Safety arch 50 with harness & chest belt / stop function, fall protection for all applications (mandatory for high risk applications); running surface 50 cm wide	
3.	1	cos102522va03	Packing treadmill 150/50 (SA), packed part assembled on pallet with cardboard hood, incl. safety arch L: 274 cm / W: 122 cm / H: 94 cm)	
4.	1	cos104392	transport / shipping charge (please specify if truck, sea or air freight; for overseas sea shipment is recommended)	
5.	1	cos15732-os	installation, commissioning and instruction through authorized and trained personnel	

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Our recommended upgrades for pluto[®] ef med:



adjustable handrails [cos102010va05] allow an easy, fast and tool-free adaption of the handrail height and width



standard maximum user weight of 250 kg can optionally be upgraded to 300 kg max. user weight



the optional connect package [cos30021ef-con] allows wireless (RFID, NFC, Bluetooth, Barcode) transmission of training data to compatible PC software

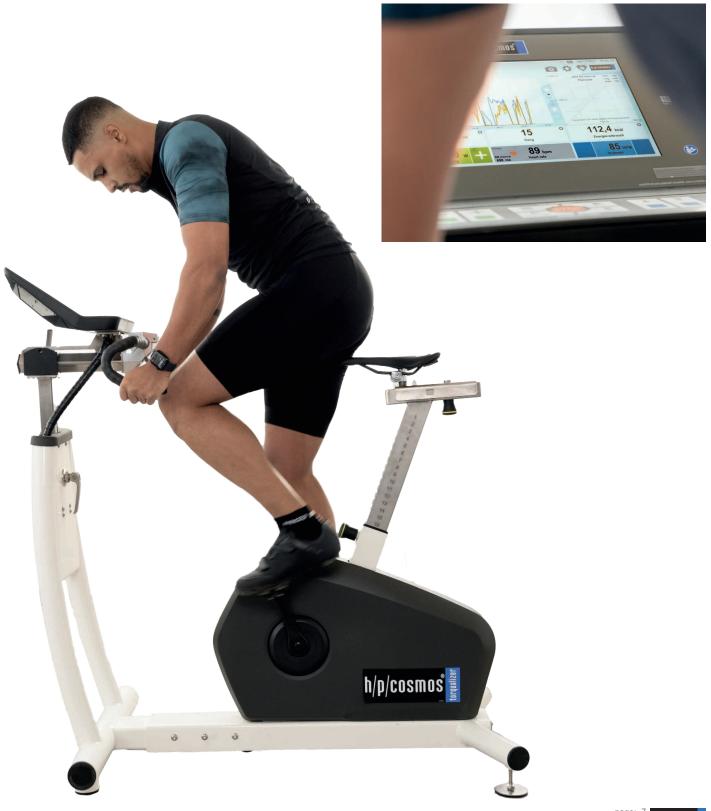
torqualizer® 1200

Ergometer for endurance training and cycling. Stress device for performance testing with up to 950 watts resistance.

The torqualizer® 1200 ergometer is a brand new development by h/p/cosmos based on proven technologies and designs in combination with modern features. A clear focus on ergonomy, market requirements and state of the art technology has driven the development.

With our long history and experience in the development and manufacturing of treadmills, it was time to extend our position as realiable supplier for training and medical testing devices to the field of bike ergometers. The torqualizer® 1200 comes with the well-established MCU6 UserTerminal, granting a similar design, look & feel and related features known from the h/p/cosmos MCU6 treadmill series pluto®, mercury®, quasar® and pulsar®. Among the key features of the torqualizer series are the rigid construction, the fully adjustable frame including adjustable step through and of course the interface known from the current generation of treadmills that includes graphic display of heart rate variability via Poincaré diagram.

The torqualizer® 1200 (med) are currently in the latest stages of development, testing and certification and will be launched to the market approx. in early 2025.



torqualizer® **1200**Ergometer for endurance training and cycling. Stress device for performance testing with up to 950 watts resistance.



Adjustable saddle posts and handlebars for maximum flexibility and individualization for therapeutic and athletic applications



exchangeable handlebars and adjustable handlebar position



Gridless horizontal saddle adjustment with conveniently changeable saddle for sports [cos104528] or therapy





For the rapeutic applications, a specially designed saddle and handlebar [cos 104071va 01] are available for comfortable and upright sitting.



Height and width adjustments of frame, saddle and handlebar provide flexibility for a maximum versatility for small and tall athletes or patients.



deep step through and rigid frame construction



 $\hbox{Q-factor of 0.9 allows (depending on pedals mounted) ergonomic cycling for athletes and patients}\\$

specifications torqualizer® 1200 med (certification pending / Product launch planned for 2025)

specifications torqualizer® 1200 sport (certification pending / Product launch planned for 2025)

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bike-ergometer	torqualizer® 1200 med	torqualizer® 1200 sport
manufacturer:	h/p/cosmos sports & medical gmbh / Germany	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30021va02	cos30021va01
applications:	endurance training cycling, stress device for performance testing	endurance training cycling
functions:	easy to handle, 10.1" LCD touch display, high resolution coloured display with Bio-Feedback; easy step-through, horizontally and vertically adjustable saddle	easy to handle, 10.1" LCD touch display, high resolution coloured display with Bio-Feedback; easy step-through horizontally and vertically adjustable saddle
max. user weight:	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)
voltage supply:	230 V	230 V
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display
power range:	7 950 watts rpm independent	7 950 watts rpm independent
speed range:	20 140 rpm	20 140 rpm
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)
safety:	C € 0123; MDR (EU) 2017/745, DIN EN ISO 20957-1; DIN EN ISO 20957-5; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Certification pending. Product launch planned for 2025	C €: DIN EN ISO 20957-1; DIN EN ISO 20957-5; DIN EN 60601-1-2 Not UL-certified. Certification pending. Product launch planned for 2025
classification:	medical device risk class IIa according to MDR, therapeutic medical device and diagnostic medical device Certification pending. Product launch planned for 2025	sports and fitness device; not for medical, not for therapeutical applications Certification pending. Product launch planned for 2025
usage class:	S, I according to ISO 20957-5	S, I according to ISO 20957-5
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1	A (high accuracy) according to DIN EN ISO 20957-1
digital interface:	optional Bluetooth®, NFC, RFID	optional Bluetooth®, NFC, RFID
programs:	quick start, time, pulse, optional program package available	quick start, time, pulse, optional program package available
colour of frame:	pure white RAL 9010 (powder coated)	pure white RAL 9010 (powder coated)
size of frame:	L x W x H: 150 x 70 x 130 cm (4ft 9.2" x 2ft 2.9" x 4ft 26 ")	L x W x H: 150 x 70 x 130 cm (4ft 9.2" x 2ft 2.9" x 4ft 26 ")
net. weight:	device approx. 110 kg (243 lbs)	device approx. 110 kg (243 lbs)
gross weight:	depending on package mode chosen (land, sea, air)	depending on package mode chosen (land, sea, air)
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specifications torqualizer® ef med 900

specifications torqualizer® ef 900

bike-ergometer	torqualizer® cycle ef med 900	torqualizer® cycle ef 900
manufacturer:	emotion fitness GmbH & Co. KG / Germany	emotion fitness GmbH & Co. KG / Germany
order number:	cos30021ef-med900	cos30021ef-900
applications:	endurance training cycling, stress device for performance testing	endurance training cycling, stress device for performance testing
functions:	7" TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; easy step-through; easy to handle; horizontally and vertically adjustable saddle; Polar® - auto connection system	7" TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; easy step-through; easy to handle; horizontally and vertically adjustable saddle; Polar® - auto connection system
max. user weight:	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display
power range:	15 500 watts rpm independent (up to 1,000 watts rpm dependent) 15 950 watts rpm independent (up to 1,000 watts rpm dependent) at extra charge starting from 7 watts with additional external power supply	25 500 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) at extra charge starting from 7 watts with additional external power supply
speed range:	15 140 rpm	15 140 rpm
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)
safety:	C € 0633; MDD 93/42/EEC, Class IIa, DIN EN ISO 20957-1; DIN EN ISO 20957-5; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA.	C ← DIN EN ISO 20957-1; DIN EN ISO 20957-5; Not UL-certified. Device not for sale in Canada and the USA.
classification:	medical device risk class IIa according to MDD, therapeutic medical device and diagnostic medical device	sports and fitness device; not for medical, not for therapeutical applications
usage class:	S, I according to ISO 20957-1	S, I according to ISO 20957-1
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1	A (high accuracy) according to DIN EN ISO 20957-1
digital interface:	optional Bluetooth®, NFC, RFID	optional Bluetooth®, NFC, RFID
programs:	quick start, time, pulse, optional program package available	quick start, time, pulse, optional program package available
colour of frame:	white aluminum RAL 9006 (powder coated)	white aluminum RAL 9006 (powder coated)
size of frame:	L x W x H: 119 x 65 x 145 cm (3ft 10.85" x 2ft 1.6" x 4ft 9")	L x W x H: 119 x 65 x 145 cm (3ft 10.85" x 2ft 1.6" x 4ft 9")
net. weight:	device approx. 58 kg (128 lbs)	device approx. 58 kg (128 lbs)
gross weight:	depending on package mode chosen (land, sea, air)	depending on package mode chosen (land, sea, air)



specifications torqualizer® arm ef 900

arm-ergometer	torqualizer® arm ef med 900	torqualizer® arm ef 900
manufacturer:	emotion fitness GmbH & Co. KG / Germany emotion fitness GmbH & Co. KG / Germany	
order number:	cos30030ef-med900	cos30030ef-900
applications:	endurance training upper body / arms	endurance training upper body / arms
functions:	easy to handle, 7" TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; easy step-through, easily removable seat; length adjustable crank arm (with synchronous mode), bi-directional drive; Polar® – auto connection system easy to handle, 7" TFT – capacitive touch display Bio-Feedback; easy step-through, easily remov	
max. user weight:	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display
power range:	15 500 watts rpm independent (up to 1,000 watts rpm dependent) 15 550 watts rpm independent (up to 1,000 watts rpm dependent) 25 550 watts rpm independent (up to 1,000 watts rpm dependent) 25 550 watts rpm independent (up to 1,000 watts rpm dependent) at exterting from 7 watts with additional external power supply	
speed range:	15 140 rpm 15 140 rpm	
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)
safety:	C € 0633; MDD 93/42/ECC, Class IIa, DIN EN ISO 20957-1; C €: DIN EN ISO 20957-3; DIN EN ISO 20957-5; DIN EN ISO 20957-5; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA.	
classification:	medical device risk class IIa according to MDD, therapeutic medical device and diagnostic medical device sports and fitness device; not for medical, not for therapeutic applications	
usage class:	S, I according to ISO 20957-1 S, I according to ISO 20957-1	
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1 A (high accuracy) according to DIN EN ISO 20957-1	
digital interface:	optional Bluetooth®, NFC, RFID optional Bluetooth®, NFC, RFID	
programs:	quick start, time, pulse, optional program package available quick start, time, pulse, optional program package available	
colour of frame:	white aluminum RAL 9006 (powder coated)	white aluminum RAL 9006 (powder coated)
size of frame:	L x W x H: 116 x 77 x 155 cm (3ft 9.6" x 2ft 6.3" x 5ft 1") L x W x H: 116 x 77 x 155 cm (3ft 9.6" x 2ft 6.3" x 5ft 1")	
net. weight:	device approx. 98 kg (216.1 lbs) device approx. 98 kg (216.1 lbs)	
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specifications torqualizer® recumbent ef med 900

specifications torqualizer® recumbent ef 900

bike-ergometer	torqualizer® recumbent med 900	torqualizer® recumbent 900
manufacturer:	emotion fitness GmbH & Co. KG / Germany emotion fitness GmbH & Co. KG / Germany	
order number:	cos30031ef-med900 cos30031ef-900	
applications:	endurance training legs, obese patients, long training session	endurance training legs, obese trainees, long training session
functions:		
max. user weight:	150 kg (330 lbs), optional 200 / 250 kg (440 / 551 lbs) available at extra charge	150 kg (330 lbs), optional 200 / 250 kg (440 / 551 lbs) available at extra charge
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display
power range:	15 500 watts rpm independent (up to 1,000 watts rpm dependent) 15 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent) 25 950 watts rpm independent (up to 1,000 watts rpm dependent)	
speed range:	15 140 rpm 15 140 rpm	
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)
safety:	C € 0633; MDD 93/42/EEC, Class IIa, DIN EN ISO 20957-1; DIN EN ISO 20957-5; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA. Not UL-certified, Device not for sale in Canada and the USA.	
classification:	medical device risk class IIa according to MDD, therapeutic medical device and diagnostic medical device sports and fitness device; not for medical, not for therapeutic applications	
usage class:	S, I according to ISO 20957-1 S, I according to ISO 20957-1	
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1 A (high accuracy) according to DIN EN ISO 20957-1	
digital interface:	optional Bluetooth®, NFC, RFID optional Bluetooth®, NFC, RFID	
programs:	quick start, time, pulse, optional therapy package available quick start, time, pulse, optional therapy package available	
colour of frame:	white aluminum RAL 9006 (powder coated) white aluminum RAL 9006 (powder coated)	
size of frame:	L x W x H: 173 x 65 x 133 cm (5ft 8.11" x 2ft 1.59" x 4ft 4.36") L x W x H with boosted 250 kg: 173 x 78 x 133 cm (5ft 8.11" x 2ft 6,7"x 4ft 4.36") L x W x H with boosted 250 kg: 173 x 78 x 133 cm (5ft 8.11" x 2ft 6,7"x 4ft 4.36")	
net. weight:	device approx. 80 kg (176.4 lbs) with boosted 250 kg: approx. 104 kg (230lbs)	device approx. 80 kg (176.4 lbs) with boosted 250 kg: approx. 104 kg (230lbs)



specifications torqualizer® arm ef med 900 wall model

specifications torqualizer® arm ef 900 wall model

arm-ergometer	torqualizer® arm ef med 900 wall model	torqualizer® arm ef 900 wall model	
manufacturer:	emotion fitness GmbH & Co. KG / Germany	emotion fitness GmbH & Co. KG / Germany	
order number:	cos30030ef-med900-wm cos30030ef-900-wm		
applications:	endurance training upper body / arms	endurance training upper body / arms	
functions:	easy to handle, 7" TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; length adjustable crank arm (with synchronous mode), bi-directional drive; Polar® - auto connection system	easy to handle, 7" TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; length adjustable crank arm (with synchronous mode), bi-directional drive; Polar® - auto connection system	
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display	
power range:	15 500 watts rpm independent (up to 1,000 watts rpm dependent) 15 550 watts rpm independent (up to 1,000 watts rpm dependent) 25 550 watts rpm independent (up to 1,000 watts rpm dependent) starting from 7 watts with additional external power supply		
speed range:	15 140 rpm 15 140 rpm		
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)	
safety:	 C € 0633; MDD 93/42/ECC, Class IIa, DIN EN ISO 20957-1; DIN EN ISO 20957-5; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA. 		
classification:	medical device risk class IIa according to MDD, therapeutic medical device and diagnostic medical device sports and fitness device; not for medical, not for therapeutic applications		
usage class:	S, I according to ISO 20957-1 S, I according to ISO 20957-1		
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1 A (high accuracy) according to DIN EN ISO 20957-1 A (high accuracy) according to DIN EN ISO 20957-1		
digital interface:	optional Bluetooth®, NFC, RFID optional Bluetooth®, NFC, RFID		
programs:	quick start, time, pulse, optional program package available quick start, time, pulse, optional program package available		
colour of frame:	white aluminum RAL 9006 (powder coated) white aluminum RAL 9006 (powder coated)		
size of frame:	L x W x H: 63 x 56 x 155 cm (2ft 0.8" x 1ft 10" x 5ft 1")	L x W x H: 63 x 56 x 155 cm (2ft 0.8" x 1ft 10" x 5ft 1")	
net. weight:	device approx. 48 kg (105.9 lbs) device approx. 48 kg (105.9 lbs)		



specifications torqualizer® cross ef med 900

specifications torqualizer® cross ef 900

cross-ergometer	torqualizer® cross med 900	torqualizer® cross 900
manufacturer:	emotion fitness GmbH & Co. KG / Germany emotion fitness GmbH & Co. KG / Germany	
order number:	cos30032ef-med900 cos30032ef-900	
applications:	full body endurance training, easy on the joints	full body endurance training, easy on the joints
easy step-through; easy to handle; horizontally and vertically adjustable saddle; easy step-through; easy to handle;		7"TFT – capacitive touch display, high resolution coloured display with Bio-Feedback; easy step-through; easy to handle; horizontally and vertically adjustable saddle; Polar® - auto connection system
max. user weight:	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)	150 kg / 330 lbs (optional 200 kg / 440 lbs available at extra charge)
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display
power range:	100 500 watts rpm independent (up to1,000 watts rpm dependent) 100 950 watts rpm independent with performance package starting from 7 watts with additional external power supply optional display of brake wattage with 15 watts initial break resistance;	100 500 watts rpm independent (up to 1,000 watts rpm dependent) 100 950 watts rpm independent with performance package starting from 7 watts with additional external power supply optional display of brake wattage with 15 watts initial break resistance;
speed range:	15 140 rpm 15 140 rpm	
brake:	hybrid-brake-system (HBS) hybrid-brake-system (HBS)	
safety:	C € 0633; MDD 93/42/ECC, Class IIa, DIN EN ISO 20957-1; DIN EN ISO 20957-9; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA. Not UL-certified. Device not for sale in Canada and the USA.	
classification:	medical device risk class IIa according to 93/42 EEC, therapeutic medical device and diagnostic medical device sports and fitness device; not for medical, not for therapeutic applications	
usage class:	S, I according to ISO 20957-1	S, I according to ISO 20957-1
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1 A (high accuracy) according to DIN EN ISO 20957-1	
digital interface:	optional Bluetooth®, NFC, RFID optional Bluetooth®, NFC, RFID	
programs:	quick start, time, heart rate, optional therapy package available quick start, watts, heart rate, optional comfort package available	
colour of frame:	white aluminum RAL 9006 (powder coated)	white aluminum RAL 9006 (powder coated)
size of frame:	L x W x H: 200 x 65 x 169 cm (6ft 6.7" x 2ft 1.5" x 5ft 6.5")	L x W x H: 200 x 65 x 169 cm (6ft 6.7" x 2ft 1.5" x 5ft 6.5")
net. weight:	device approx. 101 kg (223 lbs)	device approx. 101 kg (223 lbs)



specifications torqualizer® stair ef med 900

specifications torqualizer® stair ef 900

stair-ergometer	torqualizer® stair ef med 900	torqualizer® stair ef 900	
manufacturer:	emotion fitness GmbH & Co. KG / Germany emotion fitness GmbH & Co. KG / Germany		
order number:	cos30033ef-med900 cos30033ef-900		
applications:	endurance training legs, coordination, activity of daily life (ADL)	endurance training legs, coordination, activity of daily life (ADL)	
functions:	7" TFT – capacitive touch display, high resolution coloured display with biofeedback, Polar® - auto connection system, pedal independent system, cushioned pedal suspension, automatic weight detection for precise calculation of performance	7" TFT – capacitive touch display, high resolution coloured display with biofeedback, Polar® - auto connection system, pedal independent system, cushioned pedal suspension, automatic weight detection for precise calculation of performance	
max. user weight:	150 kg	150 kg	
voltage supply:	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	torqualizer® ergometer is grid independent, except when ordering 24 Volt permament power supply option	
control:	via UserTerminal with keyboard & display	via UserTerminal with keyboard & display	
power range:	Isokinetic mode of operation for 4 27 m / min falling speed	Isokinetic mode of operation for 4 27 m / min falling speed	
brake:	hybrid-brake-system (HBS)	hybrid-brake-system (HBS)	
motor system:	calibrated drive unit	calibrated drive unit	
safety:	€ 0633; MDD 93/42/ECC, Class IIa, DIN EN ISO 20957-1; DIN EN ISO 20957-8; DIN EN 60601-1; DIN EN 60601-1-2; Not UL-certified. Device not for sale in Canada and the USA.	C ← DIN EN ISO 20957-1; DIN EN ISO 20957-8; Not UL-certified. Device not for sale in Canada and the USA.	
classification:	medical device risk class IIa according to MDD, therapeutic medical device and diagnostic medical device	sports and fitness device; not for medical, not for therapeutic applications	
usage class:	S, I according to ISO 20957-1	S, I according to ISO 20957-1	
accuracy class:	A (high accuracy) according to DIN EN ISO 20957-1	A (high accuracy) according to DIN EN ISO 20957-1	
digital interface:	optional Bluetooth®, NFC, RFID	optional Bluetooth®, NFC, RFID	
programs:	quick start, time, pulse, optional program package available	quick start, watts, heart rate, optional program package available	
colour of frame:	white aluminum RAL 9006 (powder coated)	white aluminum RAL 9006 (powder coated)	
size of frame:	L x W x H: 102 x 73 x 160 cm (3ft 4.1" x 2ft 4.7" x 5ft 3")	L x W x H: 102 x 73 x 160 cm (3ft 4.1" x 2ft 4.7" x 5ft 3")	
net. weight:	device approx. 79 kg (175 lbs)	device approx. 79 kg (175 lbs)	

Weight and dimensions may differ depending on accessories.

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treadmill	pluto® ef med
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos31012
applications:	endurance training walking and running stress device for performance testing, gait analysis and gait training
control:	UserTerminal with easy-to-use 7" TFT – capacitive touch display, via integrated interface coscom® v4
running surface:	L x W: 150 x 50 cm (4' 11.1" x 1' 7.6") access height: 23 cm (9.1") - shock load reduction for the joints - running belt with slip resistant surface - max. permissible load: 250 kg (551 lbs) - max. permissible load: 300 kg (660 lbs) at extra charge
speed range:	0.0 22.0 km/h (0.0 6.1 m/s) (0.0 13.7 mph) special speed available at extra charge
acceleration:	1 acceleration / deceleration level
elevation:	0 25 % (0 14.0°) motorized adjustment (-25 % +25 % when using optional reverse belt rotation)
running direction:	reverse belt rotation at extra charge. Without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
motor systems:	2.2 kW (3 HP) 3-phase AC motor, maintenance free and brushless For high-performance applications we recommend models with a 3-phase 3x400 Volt power supply and a running surface min. 190/65 cm
power transmission:	frequency inverter, poly-V-belt, very quiet operation
safety systems:	C € 0123; medical device regulation MDR (EU) 2017/745, machinery regulation (EU) 2023/1230; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; ISO 20957-6; EN 14971; emergency-stop mushroom push button (drives power off), emergency-stop with pull cord and clip, potential equalization bolt; transformer for potential-isolation from the mains Certification pending. Product launch planned for Q3 2024.
degree of protection:	appliance class I ♠ / type B 🐧 / IP 20
classification:	medical device risk class IIb according to MDR, active therapeutic medical device and active diagnostic medical device
usage class:	S, I according to ISO 20957-1
accuracy class:	A (high accuracy) according to ISO 20957-6
earth leakage current:	< 0.2 mA
ambient condition:	+10 +30 °C; (-30 + 50 °C on request) 20 85 % humidity (up to 100% on request) 700 1060 hPa air pressure; 3,000 m (~10,000 ft) max. altitude without pressurization
display (resolutions) parameter:	7" TFT capacitive color touch display speed, time, elevation, distance, heart rate, heart rate variability
resolution:	1 decimal place
units:	metric
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate ("cardio mode")
digital interface:	via optional "connect package"; optional Bluetooth®, NFC, RFID
programs:	Standard: Quick, Time, pulse ("cardio mode") optional program package: watt sensitive, therapy, interval, k-cal, hills, distance
PC software (incl.):	para control® for display & remote control
accessory (incl.):	instruction for use on media stick, service kit, 5m LAN cable, 5m PE-cable
colour of frame:	pure white RAL 9010 (powder coated)
handrails:	steel tube handrails diameter 60 mm on both sides, over min. 1/3 of treadmill length, easily exchangable Other handrail designs optional at extra charge.
voltage supply:	200 240 Volt AC 1~/N/PE 50/60 Hz 16A fuse; dedicated circuit, line and protection
size of frame:	L x W x H: 210 cm x 86cm x 126cm (6ft 11" x 2ft 9.9" x 4ft 1.6")
mass of device:	device approx. 240 kg (530 lbs)
mass of packaging:	75 265 kg (165 585 lbs) depending on requirement

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Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply, other options and accessories. Weight and package specifications can deviate according to options, accessories packing and way of transport. E&OE. Subject to alterations without prior notice. Please consider the natural and physical performance limitations of the single phase 230 volt power supply. The single phase 230 volt power supply is sufficient up to normal fitness or therapy applications. For all special high performance applications (speed running, controlled jump-ons, sidesteps, heavy subjects at higher speed, extreme elevations, etc.), we recommend models with a 3-phase, 3x400 volt power supply ((for example model h/p/cosmos quasar® med 3p, pulsar® 3p, venus® or saturn®).

Warning! Installation, commissioning, instruction, maintenance and repair work only to be conducted by h/p/cosmos trained and authorized personnel. For treadmills with oversized deck (width >65cm), for children, special applications, without sufficient safety space behind the treadmill, for subjects and / or patients with health or other limitations (e.g. visual impairment, etc.), for running at high speed and / or for all individuals, where a fall triggers a dangerous risk of injury or death (e.g. newly operated hip patients, invasive probes, etc.), a fall prevention system is obligatory (e.g. safety arch with chest belt and harness or a weight support system). For more information see the instructions for use. Safety space behind the treadmill: min. L: 2 m (6ft 6.74") x treadmill width. Children are only allowed to be on the treadmill, if under permanent supervision and secured by a fall prevention system.





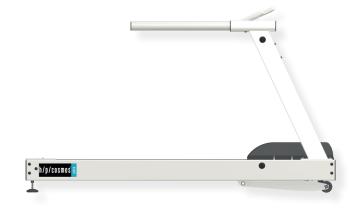
treadmill	pluto® ef sport
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos31011
applications:	endurance training walking and running
control:	UserTerminal with easy-to-use 7" TFT – capacitive touch display, via integrated interface coscom® v4
running surface:	L x W: 150 x 50 cm (4' 11.1" x 1' 7.6") access height: 23 cm (9.1") - shock load reduction for the joints - running belt with slip resistant surface - max. permissible load: 250 kg (551 lbs) - max. permissible load: 300 kg (660 lbs) at extra charge
speed range:	0.0 22.0 km/h (0.0 6.1 m/s) (0.0 13.7 mph) special speed available at extra charge
acceleration:	1 acceleration / deceleration level
elevation:	0 25 % (0 14.0°) motorized adjustment (-25 % +25 % when using optional reverse belt rotation)
running direction:	reverse belt rotation at extra charge. Without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
motor systems:	2.2 kW (3 HP) 3-phase AC motor, maintenance free and brushless For high-performance applications we recommend models with a 3-phase 3x400 Volt power supply and a running surface min. 190/65 cm
power transmission:	frequency inverter, poly-V-belt, very quiet operation
safety systems:	
degree of protection:	appliance class I 🔔 / IP 20
classification:	sports and fitness device; not for medical, not for therapeutic applications
usage class:	S, I according to ISO 20957-1
accuracy class:	A (high accuracy) according to ISO 20957-6
earth leakage current:	< 2.5 mA
ambient condition:	+10 +30 °C (-30 + 50°C on request) 20 95 % humidity, (up to 100% on request) 700 1060 hPa air pressure 3,000 m (~10,000 ft) max. altitude without pressurization
display (resolutions) parameter:	7" TFT capacitive color touch display speed, time, elevation, distance, heart rate, heart rate variability
resolution:	1 decimal place
units:	metric
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate ("cardio mode")
digital interface:	via optional "connect package"; optional Bluetooth®, NFC, RFID
programs:	Standard: Quick, Time, pulse ("cardio mode") optional program package: watt sensitive, therapy, interval, k-cal, hills, distance
PC software (incl.):	para control® for display & remote control
accessory (incl.):	instruction for use on media stick, service kit, 5m lan cable
colour of frame:	pure white RAL 9010 (powder coated)
handrails:	steel tube handrails diameter 60 mm on both sides, over min. 1/3 of treadmill length, easily exchangable Other handrail designs optional at extra charge.
voltage supply:	200 240 Volt AC 1~/N/PE 50/60 Hz 16A fuse; dedicated circuit, line and protection
size of frame:	L x W x H: 210 cm x 86cm x 126cm (6ft 11" x 2ft 9.9" x 4ft 1.6")
mass of device:	approx. 225 kg (495 lbs)
mass of packaging:	75 265 kg (165 585 lbs) depending on requirements

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Weight and dimensions may differ depending on accessories.

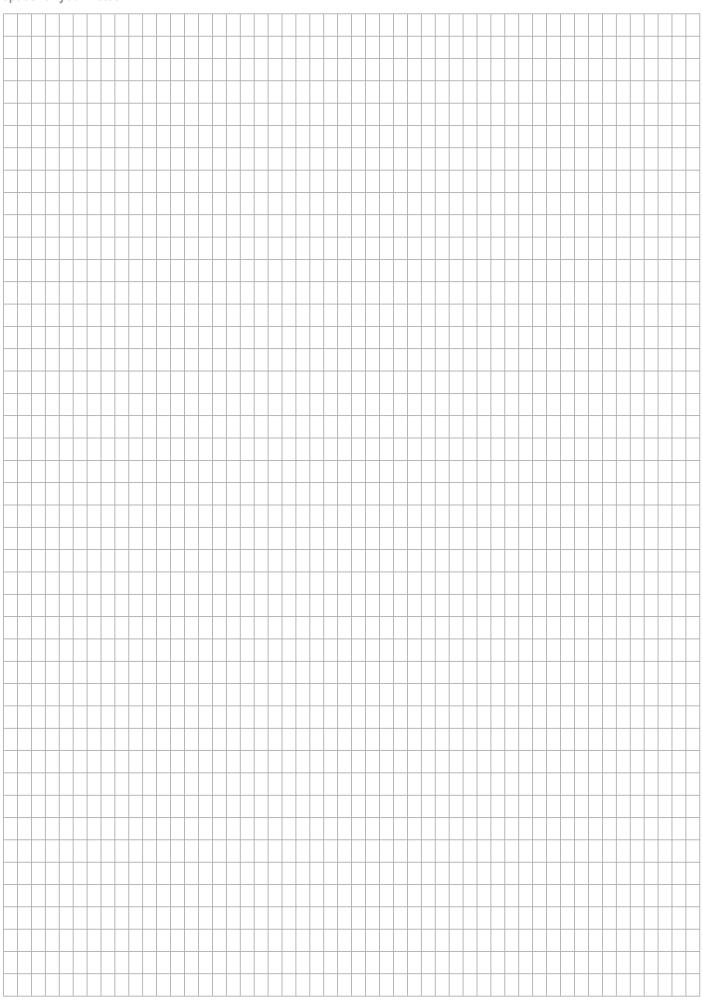
Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply, other options and accessories. Weight and package specifications can deviate according to options, accessories packing and way of transport. E&OE. Subject to alterations without prior notice. Please consider the natural and physical performance limitations of the single phase 230 volt power supply. The single phase 230 volt power supply is sufficient up to normal fitness or therapy applications. For all special high performance applications (speed running, controlled jump-ons, sidesteps, heavy subjects at higher speed, extreme elevations, etc.), we recommend models with a 3-phase, 3x400 volt power supply (for example model h/p/cosmos quasar® med 3p, pulsar® 3p, venus® or saturn®).

Warning! Installation, commissioning, instruction, maintenance and repair work only to be conducted by h/p/cosmos trained and authorized personnel. For treadmills with oversized deck (width >65cm), for children, special applications, without sufficient safety space behind the treadmill, for subjects and / or patients with health or other limitations (e.g. visual impairment, etc.), for running at high speed and / or for all individuals, where a fall triggers a dangerous risk of injury or death (e.g. newly operated hip patients, invasive probes, etc.), a fall prevention system is obligatory (e.g. safety arch with chest belt and harness or a weight support system). For more information see the instructions for use. Safety space behind the treadmill: min. L: 2 m (6ft 6.74") x treadmill width. Children are only allowed to be on the treadmill, if under permanent supervision and secured by a fall prevention system.





space for your notes:



sports / athletics



sports quasar®



cycling & athletics saturn® med 300/100r



performance diagnostics pulsar® med 3p



German Engineering since 1988



inline skating saturn® med 300/125r



functional training pulsar® med 3p + robowalk®



cross country skiing skating / biathlon saturn® med 450/300rs



wheelchair saturn® med 300/125r



speed training / speedlab® quasar® 3p



fitness pluto® / mercury® / quasar® / pulsar®



motion analysis quasar® med



expander training robomove®



bike ergometer torqualizer®



biomechanics gait parameters optogait

rehabilitation



active gait correction robowalk® expander / mercury® med



senior fitness mercury®



orthopaedic rehabilitation mercury® med / arm support / airwalk® ap



cardiac rehabilitation mercury® med



body weight supported treadmill therapy airwalk® ap / mercury® med



angiology mercury® med



gait analysis / biomechanics gaitway® 3d with force and pressure measurement



cardiovascular stress testing / CPET mercury® med



locomotion therapy locomotion® med 150/50



bike ergometer torqualizer® 1200 medical certification pending

special applications



environmental & climate chambers quasar® med 3p with

quasar® med 3p with external UserTerminal



biomechanics gaitway® 3d



military / army quasar® special version



speed training sprint trainer comet®



fire fighter ladder training & fitness discovery®

h/p/cosmos dealer contact:

manufacturer

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