

specifications pluto® med

treadmill	pluto® med
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos31022
applications:	endurance training walking and running, stress device for performance testing, gait analysis and gait training
control:	via UserTerminal MCU6 with keyboard, touch display and Windows® 10 operating system, integrated interface coscom® v4
keyboard:	9 keys for manual control, easily controllable with medical gloves and under sweaty conditions
running surface:	L: 150 cm (4ft 11.1") W: 50 cm (1ft 7.6") access height: 23 cm (9.1") - 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 ... 13.6 mph)
acceleration:	7 acceleration / deceleration levels between 131 s and 3 s from 0 to max. or from max. to 0; equals 0.053 ... 2.315 m/s² levels 1 to 4 enabled, levels 5 to 7 on request adjustable via treadmill or remote control
elevation:	0.0 ... 25.0 % (0.0...14.0°) motorized adjustment (up to -25 % when using reverse belt rotation)
running direction:	reverse belt rotation at extra charge. Max. permissible reverse speed 5 km/h (3.1 mph) if no safety-harness with fall-stop prevention system is used.
motor systems:	2.2 kW (3 PS) 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:	CE 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 (for drive system power-off), emergency-stop (with pull-cord and clip); potential equalization bolt; transformer for potential-isolation from the mains.
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:	25.9 cm / 10.1" (1280x800), color touch display, speed, time, elevation, distance, heart rate, heart rate variability energy consumption, altitude, power, pace, METs, diagram view of heart rate and load parameter, parameter export as .pdf and .csv tables to USB
resolution:	1 decimal place
units:	metric / imperial
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:	1x LAN / RJ45, 1x RS232 for external control 4x USB 3.0, 1x USB 2.0, 1x USB 4.0 for data transmission 1x connection for safety arch fall stop RFID / NFC Reader (optional at extra charge) Bluetooth® (optional at extra charge)
programs:	over 18 programs / profiles (predefined) over 8 exercise profiles (scalable) - many test profiles (UKK Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - min. 100 free definable programs - import / export of profiles from / to USB stick also for further processing

PC software (incl.):	h/p/cosmos para control® for display & remote control:
PC software: (extra charge)	h/p/cosmos para graphics®, para analysis® & para motion®. PC software for control, monitoring, recording & analysis
accessory (incl.):	instruction for use on USB stick, service kit, 5 m LAN cable, 5 m (16 ft 4.85") PE-cable
colour of frame:	pure white RAL 9010 (powder coated)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length, square cross tube between pillars Other lengths and designs at extra charge Front crossbar (Ø 30 mm) at extra charge
voltage supply:	200 ... 240 Volt AC 1~/N/PE 50/60 Hz 16A type C fuse; dedicated circuit, line and protection
size of frame:	L: 210 cm (6ft 11") W: 86 cm (2ft 9.9") H: 120 cm (3ft 11.24")
net. weight:	device approx. 240 kg (530 lbs)
gross weight:	device approx. 315 ... 505 kg (694 ... 1113 lbs)

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 authorised 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.





pluto® It med (no UserTerminal)
with optional safety arch fall prevention



pluto® med
with optional safety arch fall prevention

technical comparison

Discover the h/p/cosmos medical treadmill series pluto® med.

The pluto® med series offers a solid platform for a wide range of medical applications. The modular setup, a large variety of additional options and retrofittable accessoires allow individual solutions. Please review the full technical specifications in the back of this brochure for all details.



Model name	pluto® It med	pluto® med
Article number:	cos31002	cos31022
User Terminal/Control	no displays, no keyboard. Control via integrated interface and coscom v4 protocol	UserTerminal Touch with keyboard and displays, integrated interface and coscom v4 protocol
Device dimensions:	L: 210 x W: 86 x H: 139 cm	
Device weight:	approx. 240 kg	
Running surface:	L: 150 x W: 50 cm	
Max. user weight:	250 kg (optional at extra charge: 300 kg)	
Speed range:	0 ... 22 km/h	
Elevation:	0 ... +25% (optional at extra charge: -25 ... +25%)	
Drive motor system:	2.2 kW (3.0 HP) brushless 3-phase AC motor	
Power supply:	200 ... 240 Volt AC, 16A fuse type C, dedicated line	
Running belt:	PVC-running belt with slip resistant surface	
Wireless heart rate:	no heart rate receiver, HR-functions only via ext. device	Bluetooth® pulse receiver included (BLE)
Classification & safety for medical devices	CE 0123; risk class IIb; 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;	
Classification & safety for sport devices	pluto® It cos31001	pluto® cos31021
	CE; machinery regulation (EU) 2023/1230; EN 60335-1; Directive 2014/30/EU (EMC tested); ISO 20957-1; ISO 20957-6	

article number description

cos101000_touch_pro Upgrade user terminal TOUCH PRO TOUCH BASIC --> TOUCH PRO

upgrades the user terminal TOUCH BASIC to TOUCH PRO

User terminal TOUCH BASIC is mainly for basic applications with some hardware limitations in performance, connectivity and software features. Detailed specs and limitations will be announced with the release of the TOUCH BASIC

User terminal TOUCH PRO is for basic AND professional applications and special features with high performance user terminal touch professional (TOUCH PRO). For the product launch of the pluto and mercury treadmill series generation 7, the high performance TOUCH PRO is temporary included free of charge.

TOUCH PRO can not be retrofitted and needs to be equipped at the initial purchase and production

cos101000_brake_as Motor brake for treadmill 150/50 G7 incl. sensor

Name: Motor brake for treadmill 150/50 G7 ergometer.
Application: The motor brake prevents, that, when set speed = 0 (e.g. treadmill stop or pause), with exception of a few cm, that the running belt can be driven manually (e.g. by the users own weight)
compatible: cos310XX treadmill 150/50 G7
from firmware version V1.6.348

This option includes the speed measurement Option cos14376.

Note:
The engine brake is only functional when the device is fitted with a velocity measurements sensor and is turned on.

Caution:
The motor brake does not work when the power is off or if there is power failure or if the emergency stop /emergency off button is activated. Therefore, the motor brake is not a safety feature /measure!
Attention, after a time interval of 60 seconds the motor brake switches off automatically and is only reactivated after the running belt has been moved again. Depending on the weight of the patient and the inclination used, the running belt may move a little bit.

article number description

cos102010-01va01 **handrail adjustable** pluto(ef) UT center | handrail adjustable 150/50 G7

handrails adjustable in height and width at both sides for the h/p/cosmos treadmill 150/50 G7 (pluto (ef) ab 2024):

The UserTerminal is mounted at the crosstube middle of the vertical front handrail tubes.

The width adjustment is made by turning of two swivel arms with a covering of +/- 80 degrees from the center position. The swivel arms are fixed to the locking bar with serrated discs.

The height adjustment is done in steps of 25 mm by pulling the locking bar up or down in the guiding tube while the locking bolt is pulled.

technical data (+/- 5mm):

height above the running surface (measured to upper edge of handrails):

max. adjustment **top:** **120 cm**

min. adjustment **bottom:** **75 cm**

width between bars:

max. adjustment inside: **38 cm**

max. adjustment outside: **104 cm**

handrail bar **length:** **150 cm**

bar diameter: 4 cm

weight: ~69 kg

color: RAL 9010 pure white

This article is an option as outfit and alternative to the standard equipment.

The price is therefore calculated as exchange standard items.

For spare parts or for later retrofitting applies a different item number and it is a different price.

Attention:

Adjustment of the handrails while in use by the subject is not permitted.

Before height adjustment loosen the top levers by two turns.

For adjusting the height, turn the locking knob to unlock the safety thread.

Then hold the swivel arm with one hand and pull out the locking knob.

Now pull the swivel arm up or down until the desired position is reached.

Finally, release the locking knob und tighten the safety thread by turning the

locking knob clockwise. Now tighten the top lever again.

In case of use for pediatric patients, children are not permitted on the treadmill without permanent supervision and an installed fall arrest system.

article number description

cos10079-01va01 **safety arch** 150/50 G6 | safety arch incl. harness for treadmill for treadmills 150/50 - 190/65

Safety arch with fall-stop prevention, harness and chest-belt system

Function: **In cases of an fall, the subject are caught and the treadmill- ergometer stop automatically.**

Permissible load: max. 300kg

Subject size: up to 200 cm (continuously adjustable)

Min. room height: 246 cm at 0% treadmill elevation
 257 cm at 25% treadmill elevation

Compatibility: device family h/p/cosmos treadmill 150/50 LC

Accessories (incl.): **1x chest belt system size M for safety arch harness**
 1x carabiner

Net weight: approx. 42 kg

Chest belt

The chest belt is connected via harness with the emergency stop at the crossbar of the safety arch. If there is more than 8 kg / 17.6 lbs traction pulling on the harness, the switch will stop the running belt immediately.
The length of the harness is individually adjustable.

article number description

cos14903-04-XXS chestbelt XXS for safety arch system orange, for chest girth approx. 45-65cm

Chest belt harness with quick release buckle as a fall prevention system for a human on a treadmill ergometer.

To be used in combination with an optional h/p/cosmos safety arch or airwalk ap unweighting device.

Max. user weight 150 kg (330 lbs)

Webbing: Polyester 25/28 mm black
Elastic: Polyester, Rubber
Fasteners: Aluminum, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
XXS	45 - 65 cm	orange
XS	55 - 75 cm	black

Including h/p/cosmos logo-label on the front left and back side.
For care instructions and expected lifetime see label cos14903-04lbl.

THINGS TO CHECK BEFORE, DURING AND AFTER EACH USE:

Make sure that the COBRA component has no cracks, deformations, fractures, fissures or signs of corrosion and that all components are firmly attached to each other.

Make sure that the male part and the female part belong to the same component group. Check the riveting and the perfect functioning of the clips.

Make sure that the buckle closes tightly and securely.

Ensure both before and during usage that the buckle is correctly closed.

OPERATING INSTRUCTIONS:

General: Always pay close attention to correct alignment, especially the way the COBRA component are pointing. The upper side must face away from the persons body.

Open: Press both clips simultaneously.

Close: insert the male part into the female part without exercising the clips.

A click-sound should be audible from both clips.

By pulling on it shortly, test whether the buckle is really closed.

CLEANING of COBRA Buckles:

Clean dirty COBRA components in lukewarm water (if necessary using neutral soap). Rinse them well. Dry at room temperature, never in an electric dryer or near electric radiators. Use only approved household disinfection liquids not any containing halogen as needed. The joints of all metal parts must be re-lubricated with a dry lubricant regularly, particularly following cleaning (such dry lubricants perform their lubricating function even when in a dry state so that no dust or dirt can cling to it).

Lifetime:

Replace after 2 years of usage or at the latest 4 years after manufacturing date. Unusual circumstances can reduce the component life of an element to a one-time usage, e.g. contact with chemicals or aggressive cleaning substances/liquids, extreme temperatures, salty or acidic atmosphere, sharp edges, extreme loads.

article number description

cos14903-04-XS chestbelt XS for safety arch system black, for chest girth approx. **55-75cm**

Chest belt harness with quick release buckle as a fall prevention system for a human on a treadmill ergometer.

To be used in combination with an optional h/p/cosmos safety arch or airwalk ap unweighting device.

Max. user weight 150 kg (330 lbs)

Webbing: Polyester 25/28 mm black
Elastic: Polyester, Rubber
Fasteners: Aluminum, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
XXS	45 - 65 cm	orange
XS	55 - 75 cm	black

Including h/p/cosmos logo-label on the front left and back side.
For care instructions and expected lifetime see label cos14903-04lbl.

THINGS TO CHECK BEFORE, DURING AND AFTER EACH USE:

Make sure that the COBRA component has no cracks, deformations, fractures, fissures or signs of corrosion and that all components are firmly attached to each other.

Make sure that the male part and the female part belong to the same component group. Check the riveting and the perfect functioning of the clips.

Make sure that the buckle closes tightly and securely.

Ensure both before and during usage that the buckle is correctly closed.

OPERATING INSTRUCTIONS:

General: Always pay close attention to correct alignment, especially the way the COBRA component are pointing. The upper side must face away from the persons body.

Open: Press both clips simultaneously.

Close: insert the male part into the female part without exercising the clips.

A click-sound should be audible from both clips.

By pulling on it shortly, test whether the buckle is really closed.

CLEANING of COBRA Buckles:

Clean dirty COBRA components in lukewarm water (if necessary using neutral soap). Rinse them well. Dry at room temperature, never in an electric dryer or near electric radiators. Use only approved household disinfection liquids not any containing halogen as needed. The joints of all metal parts must be re-lubricated with a dry lubricant regularly, particularly following cleaning (such dry lubricants perform their lubricating function even when in a dry state so that no dust or dirt can cling to it).

Lifetime:

Replace after 2 years of usage or at the latest 4 years after manufacturing date. Unusual circumstances can reduce the component life of an element to a one-time usage, e.g. contact with chemicals or aggressive cleaning substances/liquids, extreme temperatures, salty or acidic atmosphere, sharp edges, extreme loads.

Chest belt with quick release buckle.

Max. user weight 150 kg (330 lbs)

Webbing: Polyester 25/28 mm black

article number description

Elastic: Polyester, Rubber
Fasteners: Aluminium, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
XXS	45 - 65 cm	orange
XS	55 - 75 cm	black

Including h/p/cosmos logo-label on the front left and back side
For care instructions and expected lifetime see label cos14903-04lbl.

article number description

cos14903-04-S **chestbelt S for safety arch** system red, for chest girth approx. **65-98cm**

Chest belt harness with quick release buckle as a fall prevention system for a human on a treadmill ergometer.

To be used in combination with an optional h/p/cosmos safety arch or airwalk ap unweighting device.

Max. user weight: 300 kg (660 lbs)

Webbing: Polyester / Polypropylene 45/50 mm black
Elastic: Polyester, Rubber
Fasteners: Aluminium, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
S	65 - 98 cm	red
M	85 - 115 cm	blue
L	105 - 135 cm	yellow
XL	125 - 155 cm	green

Including h/p/cosmos logo-label on the front left and back side.
For care instructions and expected lifetime see label cos14903-04lbl.

THINGS TO CHECK BEFORE, DURING AND AFTER EACH USE:

Make sure that the COBRA component has no cracks, deformations, fractures, fissures or signs of corrosion and that all components are firmly attached to each other.

Make sure that the male part and the female part belong to the same component group. Check the riveting and the perfect functioning of the clips.

Make sure that the buckle closes tightly and securely.

Ensure both before and during usage that the buckle is correctly closed.

OPERATING INSTRUCTIONS:

General: Always pay close attention to correct alignment, especially the way the COBRA component are pointing. The upper side must face away from the persons body.

Open: Press both clips simultaneously.

Close: insert the male part into the female part without exercising the clips.

A click-sound should be audible from both clips.

By pulling on it shortly, test whether the buckle is really closed.

CLEANING of COBRA Buckles:

Clean dirty COBRA components in lukewarm water (if necessary using neutral soap). Rinse them well. Dry at room temperature, never in an electric dryer or near electric radiators. Use only approved household disinfection liquids not any containing halogen as needed. The joints of all metal parts must be re-lubricated with a dry lubricant regularly, particularly following cleaning (such dry lubricants perform their lubricating function even when in a dry state so that no dust or dirt can cling to it).

Lifetime:

Replace after 2 years of usage or at the latest 4 years after manufacturing date. Unusual circumstances can reduce the component life of an element to a one-time usage, e.g. contact with chemicals or aggressive cleaning substances/liquids, extreme temperatures, salty or acidic atmosphere, sharp edges, extreme loads.

article number description

cos14903-04-M **chestbelt M for safety arch system** blue, for chest girth approx. **85-115cm**

Chest belt harness with quick release buckle as a fall prevention system for a human on a treadmill ergometer.

To be used in combination with an optional h/p/cosmos safety arch or airwalk ap unweighting device.

Max. user weight: 300 kg (660 lbs)

Webbing: Polyester / Polypropylene 45/50 mm black
 Elastic: Polyester, Rubber
 Fasteners: Aluminium, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
S	65 - 98 cm	red
M	85 - 115 cm	blue
L	105 - 135 cm	yellow
XL	125 - 155 cm	green

Including h/p/cosmos logo-label on the front left and back side.
 For care instructions and expected lifetime see label cos14903-04lbl.

THINGS TO CHECK BEFORE, DURING AND AFTER EACH USE:

Make sure that the COBRA component has no cracks, deformations, fractures, fissures or signs of corrosion and that all components are firmly attached to each other.

Make sure that the male part and the female part belong to the same component group. Check the riveting and the perfect functioning of the clips.

Make sure that the buckle closes tightly and securely.

Ensure both before and during usage that the buckle is correctly closed.

OPERATING INSTRUCTIONS:

General: Always pay close attention to correct alignment, especially the way the COBRA component are pointing. The upper side must face away from the persons body.

Open: Press both clips simultaneously.

Close: insert the male part into the female part without exercising the clips.

A click-sound should be audible from both clips.

By pulling on it shortly, test whether the buckle is really closed.

CLEANING of COBRA Buckles:

Clean dirty COBRA components in lukewarm water (if necessary using neutral soap). Rinse them well. Dry at room temperature, never in an electric dryer or near electric radiators. Use only approved household disinfection liquids not any containing halogen as needed. The joints of all metal parts must be re-lubricated with a dry lubricant regularly, particularly following cleaning (such dry lubricants perform their lubricating function even when in a dry state so that no dust or dirt can cling to it).

Lifetime:

Replace after 2 years of usage or at the latest 4 years after manufacturing date. Unusual circumstances can reduce the component life of an element to a one-time usage, e.g. contact with chemicals or aggressive cleaning substances/liquids, extreme temperatures, salty or acidic atmosphere, sharp edges, extreme loads.

article number description

cos14903-04-L **chestbelt L for safety arch system** yellow, f. chest girth approx. **105-135cm**

Chest belt harness with quick release buckle as a fall prevention system for a human on a treadmill ergometer.

To be used in combination with an optional h/p/cosmos safety arch or airwalk ap unweighting device.

Max. user weight: 300 kg (660 lbs)

Webbing: Polyester / Polypropylene 45/50 mm black
Elastic: Polyester, Rubber
Fasteners: Aluminium, steel, plastic

Sizing chart:

	Chest circumf.:	color code (suspension)
S	65 - 98 cm	red
M	85 - 115 cm	blue
L	105 - 135 cm	yellow
XL	125 - 155 cm	green

Including h/p/cosmos logo-label on the front left and back side.

For care instructions and expected lifetime see label cos14903-04lbl.

THINGS TO CHECK BEFORE, DURING AND AFTER EACH USE:

Make sure that the COBRA component has no cracks, deformations, fractures, fissures or signs of corrosion and that all components are firmly attached to each other.

Make sure that the male part and the female part belong to the same component group. Check the riveting and the perfect functioning of the clips.

Make sure that the buckle closes tightly and securely.

Ensure both before and during usage that the buckle is correctly closed.

OPERATING INSTRUCTIONS:

General: Always pay close attention to correct alignment, especially the way the COBRA component are pointing. The upper side must face away from the persons body.

Open: Press both clips simultaneously.

Close: insert the male part into the female part without exercising the clips.

A click-sound should be audible from both clips.

By pulling on it shortly, test whether the buckle is really closed.

CLEANING of COBRA Buckles:

Clean dirty COBRA components in lukewarm water (if necessary using neutral soap). Rinse them well. Dry at room temperature, never in an electric dryer or near electric radiators. Use only approved household disinfection liquids not any containing halogen as needed. The joints of all metal parts must be re-lubricated with a dry lubricant regularly, particularly following cleaning (such dry lubricants perform their lubricating function even when in a dry state so that no dust or dirt can cling to it).

Lifetime:

Replace after 2 years of usage or at the latest 4 years after manufacturing date. Unusual circumstances can reduce the component life of an element to a one-time usage, e.g. contact with chemicals or aggressive cleaning substances/liquids, extreme temperatures, salty or acidic atmosphere, sharp edges, extreme loads.