

# oversize treadmills

performance training and diagnostics

running, cycling, hand bike, wheelchair, inline skating, ski roller



## performance treadmills made in germany

German Engineering since 1988



- performance analysis of wheelchair athletes on a treadmill?
- ride safely on a bike on a treadmill – even if you fall?
- perfect documentation – but how?

### the correct choice

The choice of the right performance and diagnostics treadmill for cycling, wheelchairs, hand-bikes and ski rollers is a very demanding one. Not only performance diagnostics but also sport-specific training needs to be conducted safely. With a view to the capital costs and the often limited space in a sports laboratory a multifunctional treadmill that can also be used by runners should be selected.

Based on the h/p/cosmos venus® and saturn® model ranges there are several hundred h/p/cosmos treadmill solutions worldwide for running, cycling, wheelchairs, hand-bikes and skiing in use. The customers for such systems are many well-known universities, Olympic training centres, biomechanics and performance diagnostic institutes, training centres, football clubs, clinics as well as sport, rehabilitation and research centres. Based on this experience most of these treadmill solutions are medically approved and are tailored to their customers' specific requirements.

### cycling

Whoever has had the privilege to train on a treadmill designed for cycling will know the vast difference to a normal ergometer and will not want to miss the possibility for training and testing.

Cyclists reach some of the highest speeds of all sports, 80 km/h (~ 50 mph) and more in the top class. A treadmill that is to be used in this environment needs to offer enough space and have extremely fast acceleration – also allowing quick riding out-of saddle. It is crucial that the running belt has a very low rolling resistance for the wheels. The h/p/cosmos saturn® series with a special speed of 80 km/h allows both physiological performance and biomechanical analysis – under optimal and repeatable conditions.



versatile applications

### wheelchairs and hand-bikes

There are many different types and widths of wheelchairs: the classic wheelchair, hand-bike and racing wheelchair or specially built chairs for wheelchair rugby or basketball. Top athletes can achieve very high speeds. A treadmill for this application must offer enough width – at least 100 cm, 125 cm is better. In addition it needs to accommodate various different tire and wheelchair frame designs and must also run fast enough.

The h/p/cosmos saturn® 300/125r with its deck length of 300 cm and 125 cm width fulfills the requirements of nearly all available wheelchairs. The safety arch with chest harness and fall stop together with the wheelchair stabilizer with integrated „range limiter“ ensure the safety and motivation of the athlete as well as ensuring correct tracking. The special speed of 60 km/h (37.28 mph) ensures that even top athletes can test themselves to the limit.



### cross country skiing

For classical style cross-country skiing not only the length and width of the running belt but also the use ski poles is important. Therefore the running belt needs both optimum roll characteristics (low rolling resistance) and must be resistant to piercing by the sharp ski pole tips.

The h/p/cosmos saturn® 300/125rs meets these requirements enabling a standardized and repeatable diagnostics and first-class training possibility.

During push treadmill tests and during ski skating at elevation high power pushes with great force at difficult angles to the belt occur. Outdoor the athletes insert the steel blades into ice/snow. On the treadmill it is important that they can insert the steel blades into the running belt and the belt has non-slip characteristic. Otherwise only little force can be used with the ski poles and upper body muscles are not in full use. Athletes on the treadmill are sweating a lot and the running belt gets wet from sweat. During such condition cheap treadmill belts get very slippery. Cheap treadmills use mainly thin PVC belts or similar and cannot resist metal tips/blades. They use rubber adapters for the poles. If slipping with ski-poles or with roller uphill on the treadmill belt, the training and tests do not show realistic results. For the 10 mm thick running belt with a belt weight of 402 kg h/p/cosmos is using a 30 kW motor on the saturn 450/300rs “ski simulator treadmill”!





## versatile applications

### motivation and safety – for bikes and wheelchairs

A formula 1 pilot can only go to his limits when he knows that his car and the track are as safe as can be. Without a safety cockpit, a special seat belt and helmet, he would hardly get the same performance or be able to push himself to his limits. It is similar for all running athletes, cross country skiers, wheelchair users and cyclists if they feel unsafe and are afraid of falling.

Training or testing at speeds of 40, 60 or even up to 80 km/h (49.71 mph) on a treadmill demand a healthy respect. An increased adrenalin level for the athlete and operating personnel is necessary for testing to the limits but nothing must go wrong.

The h/p/cosmos® safety arch prevents a fall in case of a mistake, loss of coordination due to (nerve) fatigue or stumbling. The fall stop safety system stops the treadmill immediately and automatically by means of a quick-stop device. The strong safety rope prevents the subject from falling down onto the running belt. The wheelchair stabiliser keeps the wheelchair in the correct position and on track. With this sense of safety it's possible to test to the important and sometimes decisive level of exertion necessary for a precise diagnostics.



### compatible and future-safe

Particularly in the field of sports medicine, research and professional sports there is often the need to connect a number of systems to the treadmill such as an EMG, ECG, spirometer, CPET, IMU, MoCap, Video, blood pressure monitor, external printer, h/p/cosmos para graphics® for documentation, h/p/cosmos para analysis® for lactate diagnostics or possibly other software solutions such as h/p/cosmos para motion® for motion analysis or bio feedback.

Therefore most h/p/cosmos® treadmills offer an option of up to 4 PC interfaces. For the best level of compatibility and safety the coscom® v3 and v4 protocol are fully supported.

Under [www.coscom.org](http://www.coscom.org) you will find an impressive list of manufacturers and coscom® compatible devices, the free of charge coscom.dll v4 program library and the protocol description together with tips for implementation and download. A free treadmill simulator is temporarily provided for partners in order to support programmers during the implementation and testing of coscom®.





## options

### with optimal movement to success and possibilities for future

A treadmill is particularly suitable for bio-mechanical analysis. Which wheelchair drive ring gives the best acceleration? At what cadence does the athlete have the lowest energy consumption? How can the movements be optimised? The design of the h/p/cosmos saturn® allows good visual access from all 4 sides. You can remove temporarily the rear 2/3 of the side handrails (optional extra) and the hand rail crossbar at the front for an almost completely unrestricted view during movement analysis. h/p/cosmos® treadmill systems are often in use for many years – for a large number of customers that's already over 20 years. Desires, needs and goals may change and develop over time.

The h/p/cosmos saturn® offers you a wide variety of options and expansion possibilities. For example many systems are multi use for movement analysis or coordination and technique training with unweighting which of course can also be retrofitted. Also for rehabilitation, functional training or speed training h/p/cosmos® offers you the ideal solution. Thanks to the integrated PC interfaces and the open coscom® protocol standard there is a tremendous range of compatible software solutions available.

### High performance for excellent accuracy and dynamics in acceleration and deceleration.

Depending on the size, h/p/cosmos® has powerful, maintenance-free and high-capacity drive motors of 11.0 or even 30.0 kW. This is needed for athletes in sprinting, for making running belts faster, and for applications with very fast acceleration. The saturn® model's 11 kW drive motor and heavy rollers provide *exceptional dynamics, precision and smoothness. The speed is accurate to 0.148% (0.044 km/h). What is 1%? Is 1% important? Is data validity important?* Seconds can make the difference between winning and losing. The Olympic Games and other competitions show this. To train successfully, you need to measure time accurately, have strong drive systems and high-accuracy measuring instruments. This is true for all athletes, whether competitive or recreational. For training methods and tests (e.g. shuttle run, T-test, sprints, diagnostics, etc.), measurements are important for seeing the impact of changing training plans, fitness and performance levels, as well as change in motion and running styles. How does this compare to other equipment? Same size and speed does not mean same performance!



focus on maximum athlete safety and performance



Light barrier for automatic emergency stop



Front range limiter roller for cycling applications [cos102792-01]



Wheelchair stabilizer with range limiter [cos10227-01]



Wheelchair stabilizer height adjustment



Safety arch with outlets according to the preferred athlete position [cos10172-01]



Maximum connectivity via digital interfaces

# configuration venus® 200/75: running

## recommended configuration running venus® 200/75

pos.	qty.	order number	product description
1.	1	cos30005-01va05	<b>h/p/cosmos treadmill venus® 200/75</b> - running surface 200 x 75 cm, speed range 0 ... 40 km/h, elevation -35 ... +35 %, (via reverse belt rotation) Control via external UserTerminal (TouchScreen) MCU5, or via integrated interface coscom® v4, UserTerminal and treadmill are connected via 3 detachable cables
2.	1	cos101277	<b>Science port speed output TTL</b> , for raw and unfiltered data, e.g. sudden deceleration and acceleration of the treadmill belt speed
3.	1	cos101000retva02	<b>Additional MCU6 UserTerminal with TouchScreen for MCU5 remote control</b> with flange and clamp 60mm pipe for mounting on treadmill handrail; including external power supply and connection cable.
4.	1	cos100699_LED	<b>Automatic speed control and position control software</b>
5.	1	cos14190-01	<b>Handrail pluggable long</b> , incl. rear pillar; mandatory for wheelchair stabilizer
6.	1	cos100947-02	<b>Handrail cross-bar</b> for treadmill with running deck width 75 cm (venus / saturn)
7.	1	cos10171-01	<b>Safety arch 75 with harness &amp; chest belt / stop function</b> , fall protection for all applications (mandatory for high risk applications); running surface 75 cm wide
8.	1	cos14430-01	<b>Safety arch 75, 100, 125 upgrade h=220 cm</b> , upgrade for safety arch for users up to 220 cm; for running surface 75, 100, 125 cm wide
9.	1	cos14903-04-S	<b>Chestbelt S</b> for safety arch system - colour code: red, for chest measurement approx. 65-95 cm
10.	1	cos14903-04-M	<b>Chestbelt M</b> for safety arch system - colour code blue for chest measurement approx. 85-115 cm
11.	1	cos14903-04-L	<b>Chestbelt L</b> for safety arch system - colour code: yellow, for chest measurement approx. 105-135 cm
12.	1	cos102065	<b>Optogait Kit 1m single meter</b> , optical measuring system consisting of a transmitting and a receiving measuring bar
13.	2	cos103386	<b>Optofix mounting Optogait / Optojump on the treadmill</b> , holder system with magnets for Optojump / Optogait bar to mount it on h/p/cosmos treadmill
14.	1	cos102066	<b>Optogait Kit 1m additional meter for extension</b> , content: 1xTX, 1x RX bar 1 meter with 2 connection plugs for extension (without bag)
15.	1	cos13476-01	<b>DELL Laptop Computer</b> , technical details and specification on request
16.	3	cos60098010004	<b>Labour costs per hour system specialist &amp; software</b> , service engineer system specialist and software for installation, maintenance and repairs in the factory h/p/cosmos.
17.	1	cos13320-01	<b>Notebook holder (mounted on ext. control desk venus/saturn)</b>
18.	1	cos102397	<b>LED monitor TV 50"</b> (with a small monitor stand for table), for example for SpeedLab®, gaitway® display or for the virtual training module of zebris®
19.	1	cos101624	<b>Monitor stand mobile for LCD TV 32-60"</b> , monitor stand (without monitor!) for additional TV / monitor (max. load: 30 kg), height: 180 cm.
20.	2	cos00097010034	<b>Connection cable RS232 5 m</b> , RS232, 5 m (Sub-D 9-pin male/female)
21.	2	cos12769-01	<b>USB to RS232 converter</b> , converter from USB to serial port RS232 (Sub-D 9-pin male)
22.	2	cos10223-01	<b>Potential equalization cable 5 m (with 2 POAG-plugs)</b> , potential equalization cable for medical devices
23.	1	cos10071-v6	<b>Software h/p/cosmos para control®</b>
24.	3	cos14854-sport	<b>lactate strips</b> (25 strips each box)
25.	1	cos100650-sport	<b>Starter kit sirius® with Lactate Scout lactate test meter</b>
26.	1	cos14091	<b>Packing treadmill 200/75, part assembled</b> , packed part assembled in a wooden box, L: 305 / W: 140 / H: 135 cm
27.	1	cos15740-os	<b>Inst. &amp; Instruction treadmill 200+/75+ OS</b> , Installation Europe onsite at customer's facility, incl. traveling, hotel, labour costs and training
28.	1	cos101094	<b>1-day application workshop</b> , includes costs for specialist / referent, not included flight, logistics, hotel, etc. (need to be charged separately)

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# configuration saturn® 250/100r: running, cycling, ski

## recommended configuration cycling saturn® 250/100r

pos.	qty.	order number	product description
1.	1	cos30008-01va06	<b>h/p/cosmos treadmill saturn® 250/100r</b> - running surface 250 x 100 cm, speed range 0 ... 40 km/h, elevation -27 ... +27 %, (via reverse belt rotation) Control via external UserTerminal (TouchScreen) MCU5, or via integrated interface coscom® v4, UserTerminal and treadmill are connected via 3 detachable cables
2.	1	cos101277	<b>Science port speed output TTL</b> for raw and unfiltered data, e.g. sudden deceleration and acceleration of the treadmill belt speed for sudden deceleration and acceleration of the treadmill belt speed
3.	1	cos101000retva02	<b>Additional MCU6 UserTerminal with TouchScreen for MCU5 remote control</b> with flange and clamp 60mm pipe for mounting on treadmill handrail; including external power supply and connection cable.
4.	1	cos00096110030va02	<b>Special speed 0 ... 80 km/h equals 0 ... 22.22 m/sec (0 ... 49.73 mph)</b>
5.	1	cos100699_LED	<b>Automatic speed control and position control software</b>
6.	1	cos14191-01	<b>Running belt saturn 250/100 rs ski sticks / spikes</b> , Special re-inforced running belt for use with metal tipped ski sticks and/or spiked shoes; also applicable for running/ cycling/wheelchair
7.	1	cos14190-01	<b>Handrail pluggable long</b> , incl. rear pillar; mandatory for wheelchair stabilizer
8.	1	cos10172-01	<b>Safety arch 100 with harness &amp; chest belt / stop function</b> , fall protection for all applications (mandatory for high risk applications); running surface 100 cm wide
9.	1	cos14903-04-S	<b>Chestbelt S</b> for safety arch system - colour code: red, for chest measurement approx. 65-95 cm
10.	1	cos14903-04-M	<b>Chestbelt M</b> for safety arch system - colour code blue for chest measurement approx. 85-115 cm
11.	1	cos14903-04-L	<b>Chestbelt L</b> for safety arch system - colour code: yellow, for chest measurement approx. 105-135 cm
12.	1	cos102792-01va02	<b>Front range limiter for cycling for treadmill W: 100 cm</b> , mechanical mounting (front), range limiter prevents cycling beyond treadmill surface
13.	1	cos102065	<b>Optogait Kit 1m single meter</b> , optical measuring system consisting of a transmitting and a receiving measuring bar
14.	2	cos103386	<b>Optofix mounting Optogait / Optojump on the treadmill</b> , holder system with magnets for Optojump / Optogait bar to mount it on h/p/cosmos treadmill
15.	1	cos102066	<b>Optogait Kit 1m additional meter for extension</b> , content: 1xTX, 1x RX bar 1 meter with 2 connection plugs for extension (without bag)
16.	1	cos13476-01	<b>DELL Laptop Computer</b> , technical details and specification on request
17.	3	cos60098010004	<b>Labour costs per hour system specialist &amp; software</b> , service engineer system specialist and software for installation, maintenance and repairs in the factory h/p/cosmos.
18.	1	cos13320-01	<b>Notebook holder (mounted on ext. control desk venus/saturn)</b>
19.	1	cos102397	<b>LED monitor TV 50" (with a small monitor stand for table)</b> , for example for SpeedLab®, gaitway® display or for the virtual training module of zebris®
20.	1	cos101624	<b>Monitor stand mobile for LCD TV 32-60"</b> , monitor stand (without monitor!) for additional TV / monitor (max. load: 30 kg), height: 180 cm.
21.	2	cos00097010034	<b>Connection cable RS232 5 m</b> , RS232, 5 m (Sub-D 9-pin male/female)
22.	2	cos12769-01	<b>USB to RS232 converter</b> , converter from USB to serial port RS232 (Sub-D 9-pin male)
23.	2	cos10223-01	<b>Potential equalization cable 5 m (with 2 POAG-plugs)</b> , potential equalization cable for medical devices
24.	1	cos10071-v6	<b>Software h/p/cosmos para control®</b>
25.	3	cos14854-sport	<b>lactate strips</b> (25 strips each box)
26.	1	cos100650-sport	<b>Starter kit sirius® with Lactate Scout lactate test meter</b>
27.	1	cos14094	<b>Packing treadmill 250/100, part assembled</b> , packed part assembled in a wooden box, L: 355 / W: 165 / H: 135 cm
28.	1	cos15740-os	<b>Inst. &amp; Instruction treadmill 200+/75+ OS</b> , Installation Europe onsite at customer's facility, incl. traveling, hotel, labour costs and training
29.	1	cos101094	<b>1-day application workshop</b> , includes costs for specialist / referent, not included flight, logistics, hotel, etc. (need to be charged separately)

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# configuration saturn® 300/125rs: running, cycling, wheelchair, ski max

recommended configuration running, cycling, wheelchair, ski max saturn® 300/125rs

pos.	qty.	order number	product description
1.	1	cos30012-01va03	<b>h/p/cosmos treadmill saturn® 300/125r-</b> running surface 300 x 125 cm, speed range 0 ... 40 km/h, elevation -27 ... +27 %, (via reverse belt rotation) Control via external UserTerminal (TouchScreen) MCU5, or via integrated interface coscom® v4, UserTerminal and treadmill are connected via 3 detachable cables
2.	1	cos101277	<b>Science port speed output</b> for raw and unfiltered data, e.g. sudden deceleration and acceleration of the treadmill belt speed for sudden deceleration and acceleration of the treadmill belt speed
3.	1	cos101000retva02	<b>Additional MCU6 UserTerminal with TouchScreen for MCU5 remote control</b> with flange and clamp 60mm pipe for mounting on treadmill handrail; including external power supply and connection cable.
4.	1	cos00096110030va02	<b>Special speed 0 ... 80 km/h</b> equals 0 ... 22.22 m/sec (0 ... 49.73 mph)
5.	1	cos100699_LED	<b>Automatic speed control and position control software</b>
6.	1	cos14192-01	<b>Handrail pluggable long</b> , incl. rear pillar; mandatory for wheelchair stabilizer
7.	1	cos100949-02	<b>Handrail cross-bar</b> for treadmill with running deck width 75 cm (venus / saturn)
8.	1	cos10173-01	<b>Safety arch 125 with harness &amp; chest belt / stop function</b> , fall protection for all applications (mandatory for high risk applications); running surface 75 cm wide
9.	1	cos14903-04-S	<b>Chestbelt S</b> for safety arch system - colour code: red, for chest measurement approx. 65-95 cm
10.	1	cos14903-04-M	<b>Chestbelt M</b> for safety arch system - colour code blue for chest measurement approx. 85-115 cm
11.	1	cos14903-04-L	<b>Chestbelt L</b> for safety arch system - colour code: yellow, for chest measurement approx. 105-135 cm
12.	1	cos10227-01va08	<b>Wheelchairstabilizer / fixation for treadmill 300x125,</b>
13.	1	cos101060-01_125	<b>Wheelchairramp for treadmill venus/saturn® xx/125</b> , wheelchair ramp (L: 244.5 cm x W: inner: 113.2 cm / outer: 123.8 cm) for oversize treadmills with belt W: 125 cm
14.	1	cos102792-01va03	<b>Front range limiter for cycling for treadmill W: 125 cm</b> , mechanical mounting (front), range limiter prevents cycling beyond treadmill surface
15.	1	cos102065	<b>Optogait Kit 1m single meter</b> , optical measuring system consisting of a transmitting and a receiving measuring bar
16.	2	cos103386	<b>Optofix mounting Optogait / Optojump on the treadmill</b> , holder system with magnets for Optojump / Optogait bar to mount it on h/p/cosmos treadmill
17.	1	cos102066	<b>Optogait Kit 1m additional meter for extension</b> , content: 1xTX, 1xRX bar 1 meter with 2 connection plugs for extension (without bag)
18.	1	cos13476-01	<b>DELL Laptop Computer</b> , technical details and specification on request
19.	3	cos60098010004	<b>Labour costs per hour system specialist &amp; software</b> , service engineer system specialist and software for installation, maintenance and repairs in the factory h/p/cosmos.
20.	1	cos13320-01	<b>Notebook holder (mounted on ext. control desk venus/saturn)</b>
21.	1	cos102397	<b>LED monitor TV 50"</b> (with a small monitor stand for table), for example for SpeedLab®, gaitway® display or for the virtual training module of zebris®
22.	1	cos101627	<b>Wall mount for LCD monitor TV 32-65"</b> , wall mount (without monitor!) for additional TV / monitor 32-65"
23.	2	cos00097010034	<b>Connection cable RS232 5 m</b> , RS232, 5 m (Sub-D 9-pin male/female)
24.	2	cos12769-01	<b>USB to RS232 converter</b> , converter from USB to serial port RS232 (Sub-D 9-pin male)
25.	2	cos10223-01	<b>Potential equalization cable 5 m (with 2 POAG-plugs)</b> , potential equalization cable for medical devices
26.	1	cos10071-v6	<b>Software h/p/cosmos para control®</b>
27.	3	cos14854-sport	<b>lactate strips</b> (25 strips each box)
28.	1	cos100650-sport	<b>Starter kit sirius® with Lactate Scout lactate test meter</b>
29.	1	cos12575	<b>Packing treadmill 300/125, part assembled</b> , packed part assembled in a wooden box, L 405 / W 190 / H 135 cm
30.	1	cos15740-os	<b>Inst. &amp; Instruction treadmill 200+/75+ OS</b> , Installation Europe onsite at customer's facility, incl. traveling, hotel, labour costs and training
31.	1	cos101094	<b>1-day application workshop</b> , includes costs for specialist / referent, not included flight, logistics, hotel, etc. (need to be charged separately)

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# configuration saturn® 450/300rs: performance diagnostics cross country ski skating

recommended configuration performance diagnostics running, cycling, inline skating, cross country ski skating saturn® 450/300rs

pos.	qty.	order number	product description
1.	1	cos30013-02va01	<b>h/p/cosmos treadmill saturn® 450/300rs sport</b> - running surface 450 x 300 cm, speed range 0 ... 40 km/h, elevation - 4 ... + 25 %, Control via external UserTerminal (TouchScreen) MCU6, or via integrated interface coscom® v4, UserTerminal and treadmill are connected via 3 detachable cables
2.	1	cos101277va03	<b>Science port speed output TTL</b> for raw and unfiltered data, e.g. sudden deceleration and acceleration of the treadmill belt speed for sudden deceleration and acceleration of the treadmill belt speed
3.	1	cos100600	<b>Electric access ramp</b> , allows almost even access from the floor onto the belt of the running deck (running surface).
4.	1	cos00097010033	Stage floor / walkway (up to 80 m <sup>2</sup> ) around the treadmill, required if treadmill will be placed in a pit, (can alternatively be built and provided on-site by customer's construction company based on h/p/cosmos drawings)
5.	1	cos100699_LED	<b>Automatic speed control and position control software</b>
6.	1	cos23200-01	Handrails 2/3 detachable long / short / rolled - for perfect sagittal view during video analysis
7.	1	cos14071	Safety arch with harness, fall stop, chest belt + autom. running belt stop. CE mark for 200 kg (440 lbs)
8.	2	cos14903-04-S	<b>Chestbelt S</b> for safety arch system - colour code: red, for chest measurement approx. 65-95 cm
9.	2	cos14903-04-M	<b>Chestbelt M</b> for safety arch system - colour code blue for chest measurement approx. 85-115 cm
10.	2	cos14903-04-L	<b>Chestbelt L</b> for safety arch system - colour code: yellow, for chest measurement approx. 105-135 cm
11.	1	cos10670-01ret	<b>Spare rope for safety arch</b>
12.	1	cos102065	<b>Optogait Kit 1m single meter</b> , optical measuring system consisting of a transmitting and a receiving measuring bar
13.	4	cos103386	<b>Optofix mounting Optogait / Optojump on the treadmill</b> , holder system with magnets for Optojump / Optogait bar to mount it on h/p/cosmos treadmill
14.	3	cos102066	<b>Optogait Kit 1m additional meter for extension</b> , content: 1xTX, 1x RX bar 1 meter with 2 connection plugs for extension (without bag)
15.	1	cos100668v6	<b>Software h/p/cosmos para analysis®</b> „professional“ evaluation software for performance diagnostics and training control
16.	1	cos13476-01	<b>DELL Laptop Computer</b> , technical details and specification on request
17.	1	cos13320-01	<b>Notebook holder (mounted on ext. control desk venus/saturn)</b>
18.	1	cos14970-03	<b>h/p/cosmos satellite PC med</b> , DELL PC, 2x 24" LED Monitor, COL Laser printer, potential isolation transformer, h/p/cosmos PC-rack with 4 casters
19.	6	cos60098010004	<b>Labour costs per hour system specialist &amp; software</b> , service engineer system specialist and software for installation, maintenance and repairs in the factory h/p/cosmos.
20.	1	cos00097010035	<b>Connection cable RS232 5 m</b> , RS232, 5 m (Sub-D 9-pin male/female)
21.	2	cos12769-01	<b>USB to RS232 converter</b> , converter from USB to serial port RS232 (Sub-D 9-pin male)
22.	2	cos10223-01	<b>Potential equalization cable 5 m (with 2 POAG-plugs)</b> , potential equalization cable for medical devices
23.	1	cos10071-v6	<b>Software h/p/cosmos para control®</b>
24.	3	cos14854-sport	<b>Lactate strips</b> (25 strips each box)
25.	1	cos11657	<b>Startset consumables „lactate“</b> - incl. latex gloves, kidney dish, disinfectant spray, disposable lancets, MEDI-box, etc.
26.	1	cos100650-sport	<b>Starter kit sirius® with Lactate Scout lactate test meter</b>
27.	1	cos15310	<b>Packing treadmill 450/300rs, part assembled</b> , packed part assembled in a wooden box, L: 663 x W 448 x H 173.6 cm plus additional boxes
28.	1	cos60098010021	<b>transport / shipping charge</b> (please specify if truck, sea or air freight; for overseas sea shipment is recommended)
29.	1	cos15740-os	<b>Inst. &amp; Instruction treadmill 200+/75+ OS</b> , Installation Overseas onsite at customer's facility, incl. traveling, hotel, labour costs and training
30.	1	cos101094	<b>1-day application workshop</b> , includes costs for specialist / referent, not included flight, logistics, hotel, etc. (need to be charged seperately)

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# saturn 450/300rs „the beast”

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## “the beast”

The saturn treadmill, with a running deck width of 3 metres and a length of 4.5 metres, is the largest treadmill of its kind. It is used in high-class professional sports locations such as winter sports centres, Olympic training centres and other high-class training centres. With a weight of approximately 12 tons, the treadmill is normally not brought into a building, but the building is constructed around the treadmill.

Due to its enormous size, the treadmill is affectionately called “The Beast” by its designers.

## Benefits of an oversized treadmill

- specially designed for sports with a wide range of movement, such as skiing or cross-country skiing
- the best possible way to recreate the vast landscape of a cross-country ski run
- speeds of up to 50 km/h are possible at extra charge
- a moveable safety arch covers all areas of the treadmill and automatically positions itself horizontally with a winch and vertically with operator adjustment.

This can also be automated by using an optogait system with our speedcontrol software

## Where to use an oversized treadmill

- sports & fitness, medical, rehab and scientific use
- cross country skating and roller skating
- usable with ski rollers, poles, spike shoes, cycles
- safety system dependent - multiple athletes can be in training at the same time



Professional cross-country skier on „the beast”



Running application with automatic speed control



Cycling application



Cycling application



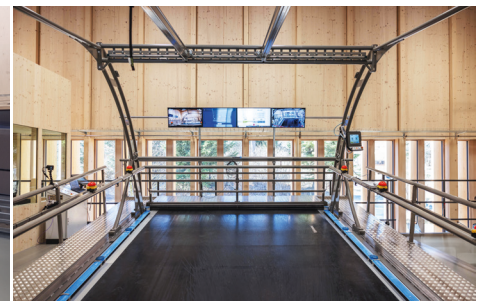
Roller skating application



Roller skating application



Cross country skiing application



The oversized treadmill saturn 450x300rs comes with a range of features and an extended safety system that can be tailored to suit specific requirements.  
© BASPO / Ueli Känzig

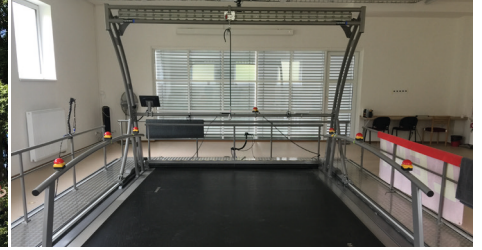
# saturn 450/300rs „the beast” impressions of various installations



Typical delivery of a "beast" packed in wooden box with heavy-duty transport



Treadmill is unpacked and brought in by crane.



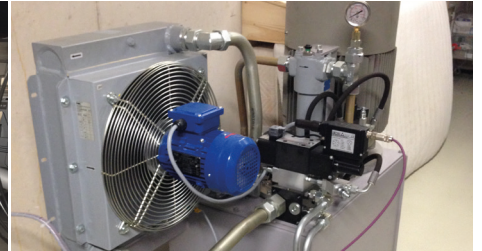
Properly fitted saturn® 450/300rs



Hydraulic motor and oil tank for elevation adjustment



Hydraulic cylinder construction for dynamic and programmable elevation adjustment in different speeds



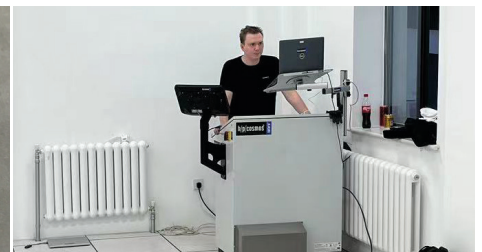
Hydraulic motor for elevation adjustment



30kw drive motor for the 402kg heavy running belt below "the beast" - in comparison Mr. Franz Harrer



Surface of the treadmill belt gives way when using it with a ski pole



UserTerminal setup by a h/p/cosmos technician



Properly fitted saturn® 450/300rs including stage floor and electric access ramp with wooden cover



Cycling application



Cycling application



Roller skating application



Roller skating application



Cross country skiing application



Special heavy-duty crane needed for installation



Crane with packed treadmill in Magglingen/Switzerland



Treadmill is unpacked and brought in by crane.



Treadmill is unpacked and brought in by crane.



Brought in to its final position



Fully setup saturn® 450/300rs with special custom made safety arch [cos14071fix]



Additional MCU6 UserTerminal at saturn® 450/300rs



Fully setup saturn® 450/300rs



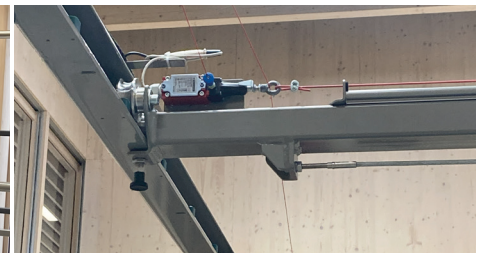
Front bar adjustment option



Optogait integration with saturn® 450/300rs



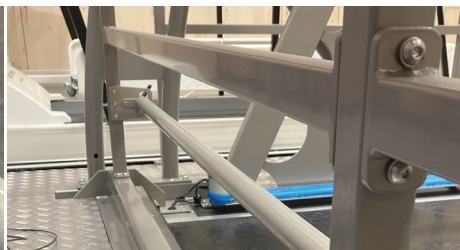
UserTerminal at saturn® 450/300rs



Safety arch emergency stop trigger



Adjustable front range limiter



Adjustable front range limiter



Safety harness system for free movement on the entire-treadmill belt length

h/p/cosmos® treadmills	order number	running surface l/w	speed	elevation	power supply *	UserTerminal display	CE
pluto® lt med	cos31002	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1- / 16 Amp.	no	CE 0123
pluto® med	cos31022	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1- / 16 Amp.	10,1" touch & keyboard	CE 0123
pluto® ef med (emotion fitness touch-display)	cos31012	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1- / 16 Amp.	7" touch	CE 0123
stratos® med	cos31032	150 / 50 cm	0 ... 22 km/h	0 %	200 ... 240 Volt AC 1- / 16 Amp.	10,1" touch & keyboard	CE 0123
mercury® med	cos31042	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1- / 16 Amp.	10,1" touch & keyboard	CE 0123
stellar® med, with UserTerminal 10,1" TouchPro	cos30003-01va06	170 / 65 cm	0 ... 25 km/h	0 %	230 Volt AC 1- / 15 Amp.	10,1" touch & keyboard	CE 0123
quasar® med, with UserTerminal 10,1" TouchPro	cos30003-01va02	170 / 65 cm	0 ... 25 km/h	0 ... 28 %	230 Volt AC 1- / 15 Amp.	10,1" touch & keyboard	CE 0123
stellar® med 190/65, with UserTerminal 10,1" TouchPro	cos30004-01va06	190 / 65 cm	0 ... 25 km/h	0 %	230 Volt AC 1- / 15 Amp.	10,1" touch & keyboard	CE 0123
pulsar® med, with UserTerminal 10,1" TouchPro	cos30004-01va02	190 / 65 cm	0 ... 25 km/h	-25 ... +25 %	230 Volt AC 1- / 15 Amp.	10,1" touch & keyboard	CE 0123

Treadmills for climate chambers available on request (for all sizes as an option at extra charge for climatic conditions from -35°C ... +55°C and 20% ... 95% humidity) with external UserTerminal.

h/p/cosmos® neurological rehabilitation treadmills	order number	with adjustable handrails, therapists seats on both sides and foot rest				UserTerminal display	CE
locomotion® 150/50 DE med	cos30001-01va02	150 / 50 cm	0 ... 10 km/h	-25 ... +25 %	230 Volt AC 1- / 15 Amp.	15,6" touch	CE 0123
locomotion® 190/65-3p DE med	cos30024va04	190 / 65 cm	0 ... 25 km/h	-25 ... +25 %	400 Volt AC 3- / 15 Amp.	15,6" touch	CE 0123

h/p/cosmos® high-performance treadmills	order number	running surface l/w	speed	elevation	power supply *	UserTerminal display	CE
quasar® med 3p, with MCU5 (6 displays)	cos30003va26	170 / 65 cm	0 ... 40 km/h	0 ... 28 %	400 Volt AC 3- / 15 Amp.	yes	CE 0123
pulsar® lt 3p med, with MCU5	cos30004va02	190 / 65 cm	0 ... 40 km/h	-25 ... +25 %	400 Volt AC 3- / 15 Amp.	no	CE 0123
pulsar® med 3p, with MCU5 (6 displays)	cos30004va04	190 / 65 cm	0 ... 40 km/h	-25 ... +25 %	400 Volt AC 3- / 15 Amp.	yes	CE 0123

h/p/cosmos® oversize treadmills	order number	running surface l/w	speed	elevation	power supply *	UserTerminal display	CE
venus® 200/75	cos30005-01va05	200 / 75 cm	0 ... 40 km/h	-35 ... +35 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
venus® 200/75 r	cos30005-01va06	200 / 75 cm	0 ... 40 km/h	-35 ... +35 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
venus® 200/100	cos30006-01va05	200 / 100 cm	0 ... 40 km/h	-35 ... +35 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
venus® 200/100 r	cos30006-01va06	200 / 100 cm	0 ... 40 km/h	-35 ... +35 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 250/75	cos30007-01va05	250 / 75 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 250/75 r	cos30007-01va06	250 / 75 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 250/100	cos30008-01va05	250 / 100 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 250/100 r	cos30008-01va06	250 / 100 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 250/125 rs	cos30009-01va03	250 / 125 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 300/75	cos30010-01va05	300 / 75 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 300/75 r	cos30010-01va06	300 / 75 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 300/100	cos30011-01va05	300 / 100 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 300/100 r	cos30011-01va06	300 / 100 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123
saturn® 300/125 rs	cos30012-01va03	300 / 125 cm	0 ... 40 km/h	-27 ... +27 %	400 Volt AC 3- / 32 Amp.	15" touch	CE 0123

Further oversize treadmills and specialised running machines with custom dimensions and specifications available on request.

Treadmills for climate chambers available on request (for all sizes as an option at extra charge for climatic conditions from -35°C ... +55°C and 20% ... 95% humidity) with external UserTerminal.

h/p/cosmos® biomechanics treadmills	with pressure measurement plates & gait analysis software (medical PC & printer not included)					UserTerminal display	CE
stratos® med	cos31032	150 / 50 cm	0 ... 22 km/h	optional	200 ... 240 Volt AC 1- / 16 Amp.	10,1" touch & keyboard	CE 0123
+ gaitway 3d med biomechanic-upgrade + 3 component (Fx,y,z) force measurement, requires additional subframe: [cos102999_subframe] / [cos102999_subframe_elev], with or without elevation	cos102999_150-50_MCU6va02						
stellar® med, with UserTerminal 10,1" TouchPro	cos30003-01va06	170 / 65 cm	0 ... 25 km/h	optional	230 Volt AC 1- / 15 Amp.	10,1" touch & keyboard	CE 0123
+ gaitway 3d med biomechanic-upgrade + 3 component (Fx,y,z) force measurement, requires additional subframe: [cos102999_subframe] / [cos102999_subframe_elev], with or without elevation	cos102999_170-65_MCU6va02						

Further biomechanic upgrades for example with pressure distribution sensor plates, see gaitway, noraxon, zebris.

h/p/cosmos® torqualizer® med ergometer series	order number	brake system	power range** optionally 750 W	rpm 1/min speed range	power supply *	max. user weight	CE
torqualizer® med 1200 with UserTerminal 10,1" TouchPro	cos30021va02	hybrid	6 ... 1200 watts **	20 ... >140 rpm **	100 ... 240 volts AC / 6 Amp.	150 kg	CE 0123
torqualizer® cycle ef med 900	cos30021ef-med900	hybrid	15 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE 0633
torqualizer® arm ef med 900 stand model incl. crank lever adjustable in length	cos30030ef-med900	hybrid	15 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE 0633
torqualizer® arm ef med 900 wall model incl. crank lever adjustable in length	cos30030ef-med900-wm	hybrid	15 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE 0633
torqualizer® recumbent ef med 900	cos30031ef-med900	hybrid	15 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE 0633
torqualizer® cross ef med 900	cos30032ef-med900	hybrid	(15) 100 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE 0633
torqualizer® stair ef med 900	cos30033ef-med900	hybrid	sinking rate	4 ... 27 m/min	grid independent (cordless)	150 kg	CE 0633

\* We recommend a dedicated line 3 phase power connection (400 Volt AC3~/N/PE 50/60 Hz 16 to 32A fuse) and 3-phase device for high speed, fast acceleration, special applications and for heavier subjects due to higher performance. For all single phase powered treadmills the natural performance limitations of single phase voltage supply apply due to the law of physics. For professional performance diagnostics, athletic training and high performance applications we strongly recommend running machines with 3-phase voltage power supply from model size min. pulsar 3p, venus or saturn. \*\* measured and calibrated up to 900 watts. Depending on gearings and revolutions per minute. Tolerances may occur on loads above 900 watts.



h/p/cosmos® treadmills	order number	running surface l/w	speed	elevation	power supply *	UserTerminal display	CE
pluto® lt sport	cos31001	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1~ / 16 Amp.	no	CE
pluto® sport	cos31021	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1~ / 16 Amp.	10,1" touch & keyboard	CE
pluto® ef sport (emotion fitness touch-display)	cos31011	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1~ / 16 Amp.	7" touch	CE
stratos® sport	cos31031	150 / 50 cm	0 ... 22 km/h	0 %	200 ... 240 Volt AC 1~ / 16 Amp.	10,1" touch & keyboard	CE
mercury® sport	cos31041	150 / 50 cm	0 ... 22 km/h	0 ... 25 %	200 ... 240 Volt AC 1~ / 16 Amp.	10,1" touch & keyboard	CE
stellar®, with UserTerminal 10,1" TouchPro	cos30003-01va05	170 / 65 cm	0 ... 25 km/h	0 %	230 Volt AC 1~ / 15 Amp.	10,1" touch & keyboard	CE
quasar®, with UserTerminal 10,1" TouchPro	cos30003-01va01	170 / 65 cm	0 ... 25 km/h	0 ... 28 %	230 Volt AC 1~ / 15 Amp.	10,1" touch & keyboard	CE
stellar® sport 190/65, with UserTerminal 10,1" TouchPro	cos30004-01va05	190 / 65 cm	0 ... 25 km/h	0 %	230 Volt AC 1~ / 15 Amp.	10,1" touch & keyboard	CE
pulsar® sport, with UserTerminal 10,1" TouchPro	cos30004-01va01	190 / 65 cm	0 ... 25 km/h	-25 ... +25 %	230 Volt AC 1~ / 15 Amp.	10,1" touch & keyboard	CE
saturn® 450/300 rs sport, with UserTerminal 10,1" TouchPro	cos30013-02va01	450 / 300 cm	0 ... 40 km/h	-4 ... +25 %	400 Volt AC 3~ / 64 Amp.	10,1" touch & keyboard	CE

h/p/cosmos® biomechanics treadmills	with pressure measurement plates & gait analysis software (medical PC & printer not included)					UserTerminal display	CE
stratos® sport	cos31031	150 / 50 cm	0 ... 22 km/h	optional	200 ... 240 Volt AC 1~ / 16 Amp.	10,1" touch & keyboard	CE
+ gaitway 3d sport biomechanic-upgrade + 3 component (F,x,y,z) force measurement, requires additional subframe: [cos102999_subframe] / [cos102999_subframe_elev], with or without elevation	cos102999_150-50_MCU6va01						
stellar®, with UserTerminal 10,1" TouchPro	cos30003-01va05	170 / 65 cm	0 ... 25 km/h	optional	230 Volt AC 1~ / 15 Amp.	10,1" touch & keyboard	CE
+ gaitway 3d sport biomechanic-upgrade + 3 component (F,x,y,z) force measurement, requires additional subframe: [cos102999_subframe] / [cos102999_subframe_elev], with or without elevation	cos102999_170-65_MCU6va01						
pulsar® sport 3p, with MCUS (6 displays)	cos30004va07	190 / 65 cm	0 ... 40 km/h	optional	400 Volt AC 3~ / 15 Amp.	yes	CE
+ gaitway 3d biomechanics upgrade 3 component (F,x,y,z) force measurement requires additional subframe: [cos102999_subframe] / [cos102999_subframe_elev], with or without elevation	cos102999_190-65						

Further biomechanic upgrades for example with pressure distribution sensor plates, see gaitway, noraxon, zebris.

h/p/cosmos® ladder ergometer	order number	height of climb: 235cm, rung width: 49.5cm / interval: 24.4cm	power supply *	UserTerminal display	CE
discovery®	cos30014va02	*endless* ladder ergometer for climbing	230 Volt AC 1~ / 15 Amp.	yes	CE

h/p/cosmos® sprint trainer / rope traction device	order number	traction force- and traction resistance-training	power supply *	UserTerminal display	CE
comet®	cos30015va01	sprint trainer concentric/eccentric. 180 meter rope, 1-phase	230 Volt AC 1~ / 15 Amp.	yes	CE
comet® 3p	cos30015va02	sprint trainer concentric/eccentric. 180 meter rope, 3-phase	400 Volt AC 3~ / 15 Amp.	yes	CE

h/p/cosmos® torqualizer® ergometer series	order number	brake system	power** optionally 750 W	rpm 1/min speed range	power supply *	max. user weight	CE
torqualizer® 1200 with UserTerminal 10,1" TouchPro	cos30021va01	hybrid	6 ... 1200 watts **	20 ... >140 rpm **	100 ... 240 volts AC / 6 Amp.	150 kg	CE
torqualizer® cycle ef 900	cos30021ef-900	hybrid	25 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE
torqualizer® arm ef 900 stand model incl. crank lever adjustable in length	cos30030ef-900	hybrid	25 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE
torqualizer® arm ef 900 wall model incl. crank lever adjustable in length	cos30030ef-900-wm	hybrid	25 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE
torqualizer® recumbent ef 900	cos30031ef-900	hybrid	25 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE
torqualizer® cross ef 900	cos30032ef-900	hybrid	(15) 100 ... 500 watts	15 ... 140 rpm	grid independent (cordless)	150 kg	CE
torqualizer® stair ef 900	cos30033ef-900	hybrid	sinking rate	4 ... 27 m/min	grid independent (cordless)	150 kg	CE

All options for torqualizers, see torqualizer.

\* We recommend a dedicated line 3 phase power connection (400 Volt AC3~/N/PE 50/60 Hz 16 to 32A fuse) and 3-phase device for high speed, fast acceleration, special applications and for heavier subjects due to higher performance. For all single phase powered treadmills the natural performance limitations of single phase voltage supply apply due to the law of physics. For professional performance diagnostics, athletic training and high performance applications we strongly recommend running machines with 3-phase voltage power supply from model size min. pulsar 3p, venus or saturn. \*\* measured and calibrated up to 900 watts. Depending on gearings and revolutions per minute. Tolerances may occur on loads above 900 watts.

## specifications venus® 200/75

treadmill	venus® 200/75
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30005-01va05
applications:	endurance training walking and running, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU5 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 200 cm (6ft 6.7") W: 75 cm (2ft 5.5") access height: 48 cm (1ft 6.9") - shock load reduction for the joints - running belt with slip resistant surface - reinforced running belt with profiled surface, 5 mm thick - max. permissible load: 300 kg (660 lbs)
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph) 0 ... 60.0 km/h (0 ... 16.7 m/s) (0 ... 37.3 mph) 0 ... 80.0 km/h (0 ... 22.2 m/s) (0 ... 49.7 mph)
acceleration:	7 acceleration / deceleration levels 0.064 ... 2.78 m/s <sup>2</sup> (for max speed 40 km/h)
elevation:	-35 % ... +35 % (-19° ... +19°) motorized adjustment
running direction:	incl. reverse belt rotation (allows negative elevation); without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
drive systems:	11 kW (15 HP) 3-phase AC motor, maintenance free and brushless 20 years warranty on main drive motor
power transmission:	frequency inverter, toothed belt, very quiet operation
safety systems:	CE 0123, medical device directive MDD 93/42/EEC, legacy device machinery directive 2006/42/EC; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; EN 957-6; EN 14971; emergency-stop mushroom push button (drives power off) light barriers at belt re-entry zones and for belt alignment, 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 MDD, 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 EN 957-6
earth leakage current:	< 0.25 mA
ambient conditions:	10 °C ... +40 °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: (at least via RS232 and para control sw)	TouchScreen with operation mode speed (0.1 km/h or m/s or m/min or mph), time (00:00) in hours, minutes & seconds, elevation (0.1 % or degrees), distance (1 m ... 999.9 km or miles), METS (1 MET), program step / number, energy (1 kJ / kcal), fitness index (1), power (1 Watt), heart rate (1 bpm / beat per minute)
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	2 x RS232 com1 and com2 (9,600 bps) 2 x USB 2.0, 1 x Ethernet RJ45 (100 Mbit / s) incl. interface protocol coscom® v4 optional at extra charge: USB-RS232-converter; com3 with 115,200 bps;
programs:	17 programs / profiles (predefined) - 6 exercise profiles (scalable) - 11 test profiles (UKK 2 km Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - 20 free definable programs with 40 steps each
PC software (incl.):	para control® for display & remote control
colour of frame:	pure white RAL 9010 (powder coated)

accessories (incl.):	instruction for use on USB stick, drinking bottle holder, service box, special oil, POLAR® heart rate chest belt (5kHz + Bluetooth®)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length with crossbar in front, other handrail designs optional at extra charge
power supply:	400 Volt AC 3~/N/PE 50/60 Hz 32A fuse; dedicated circuit, line and protection;
dimensions:	L: 240 cm (7ft 6.6") W: 115 cm (3ft 5.3") H: 138 cm (4ft 10.7") external control unit: L: 48 cm (1ft 6.9") W: 80 cm (2ft 7.4") H: 106 cm (3ft 5.7")
net. weight:	device approx. 850 kg (1875 lbs)
mass of packaging:	150 ... 350 kg (330 ... 770 lbs) depending on requirements

Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

**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.



## specifications saturn® 250/100r

treadmill	saturn® 250/100r
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30008-01va06
applications:	endurance training walking, running and cycling, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU5 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 250 cm (8ft 2.4") W: 100 cm (3ft 3.4") access height: 48 cm (1ft 6.9") - shock load reduction for the joints - running belt with slip resistant surface - reinforced running belt with profiled surface, mm thick - special running surface, suitable for cycling, wheelchair applications, roller ski and skating oil tank and pump for lubrication support - max. permissible load: 300 kg (660 lbs)
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph) 0 ... 60.0 km/h (0 ... 16.7 m/s) (0 ... 37.3 mph) 0 ... 80.0 km/h (0 ... 22.2 m/s) (0 ... 49.7 mph)
acceleration:	7 acceleration / deceleration levels 0.064 ... 2.78 m/s <sup>2</sup> (for max speed 40 km/h)
elevation:	-27 % ... +27 % (-15° ... +15°) motorized adjustment
running direction:	incl. reverse belt rotation (allows negative elevation); without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
drive systems:	11 kW (15 HP) 3-phase AC motor, maintenance free and brushless 20 years warranty on main drive motor
power transmission:	frequency inverter, toothed belt, very quiet operation
safety systems:	CE 0123, medical device directive MDD 93/42/EEC, legacy device machinery directive 2006/42/EC; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; EN 957-6; EN 14971; emergency-stop mushroom push button (drives power off) light barriers at belt re-entry zones and for belt aligning, 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 MDD, 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 EN 957-6
earth leakage current:	< 0.25 mA
ambient conditions:	10 °C ... +40 °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: (at least via RS232 and para control sw)	TouchScreen with operation mode speed (0.1 km/h or m/s or m/min or mph), time (00:00) in hours, minutes & seconds, elevation (0.1 % or degrees), distance (1 m ... 999.9 km or miles), METS (1 MET), program step / number, energy (1 kJ / kcal), fitness index (1), power (1 Watt), heart rate (1 bpm / beat per minute)
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	2 x RS232 com1 and com2 (9,600 bps) 2 x USB 2.0, 1 x Ethernet RJ45 (100 Mbit /s) incl. interface protocol coscom® v4 optional at extra charge: USB-RS232-converter; com3 with 115,200 bps;
programs:	17 programs / profiles (predefined) - 6 exercise profiles (scalable) - 11 test profiles (UKK 2 km Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - 20 free definable programs with 40 steps each

PC software (incl.):	para control® for display & remote control
colour of frame:	pure white RAL 9010 (powder coated)
accessories (incl.):	instruction for use on USB stick, drinking bottle holder, service box, special oil, POLAR® heart rate chest belt (5kHz + Bluetooth®)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length with crossbar in front, other handrail designs optional at extra charge
power supply:	400 Volt AC 3~N/PE 50/60 Hz 32A fuse; dedicated circuit, line and protection;
dimensions:	L: 290 cm (9ft 6.2") W: 140 cm (4ft 7.1") H: 138 cm (4ft 10.7") external control unit: L: 48 cm (1ft 6.9") W: 80 cm (2ft 7.4") H: 106 cm (3ft 5.7")
net. weight:	device approx. 1000 kg (2205 lbs)
mass of packaging:	150 ... 350 kg (330 ... 770 lbs) depending on requirements

Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

**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.



## specifications saturn® 300/100

treadmill	saturn® 300/100
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30011-01va05
applications:	endurance training walking and running, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU5 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 300 cm (9ft 10.1") W: 100 cm (3ft 3.4") access height: 48 cm (1ft 6.9") - shock load reduction for the joints - running belt with slip resistant surface - reinforced running belt with profiled surface, 5 mm thick - max. permissible load: 300 kg (660 lbs)
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph) 0 ... 60.0 km/h (0 ... 16.7 m/s) (0 ... 37.3 mph) 0 ... 80.0 km/h (0 ... 22.2 m/s) (0 ... 49.7 mph)
acceleration:	7 acceleration / deceleration levels 0.064 ... 2.78 m/s <sup>2</sup> (for max speed 40 km/h) programmable via para control PC software
elevation:	-27 % ... +27 % (-15° ... +15°) motorized adjustment
running direction:	incl. reverse belt rotation (allows negative elevation); without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
drive systems:	11 kW (15 HP) 3-phase AC motor, maintenance free and brushless 20 years warranty on main drive motor
power transmission:	frequency inverter, toothed belt, very quiet operation
safety systems:	CE 0123, medical device directive MDD 93/42/EEC, legacy device machinery directive 2006/42/EC; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; EN 957-6; EN 14971; emergency-stop mushroom push button (drives power off) light barriers at belt re-entry zones and for belt alignment, 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 MDD, 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 EN 957-6
earth leakage current:	< 0.25 mA
ambient conditions:	10 °C ... +40 °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: (at least via RS232 and para control sw)	TouchScreen with operation mode speed (0.1 km/h or m/s or m/min or mph), time (00:00) in hours, minutes & seconds, elevation (0.1 % or degrees), distance (1 m ... 999.9 km or miles), METS (1 MET), program step / number, energy (1 kJ / kcal), fitness index (1), power (1 Watt), heart rate (1 bpm / beat per minute)
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	2 x RS232 com1 and com2 (9,600 bps) 2 x USB 2.0, 1 x Ethernet RJ45 (100 Mbit /s) incl. interface protocol coscom® v4 optional at extra charge: USB-RS232-converter; com3 with 115,200 bps;
programs:	17 programs / profiles (predefined) - 6 exercise profiles (scalable) - 11 test profiles (UKK 2 km Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - 20 free definable programs with 40 steps each
PC software (incl.):	para control® for display & remote control

colour of frame:	pure white RAL 9010 (powder coated)
accessories (incl.):	instruction for use on USB stick, drinking bottle holder, service box, special oil, POLAR® heart rate chest belt (5kHz + Bluetooth®)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length with crossbar in front, other handrail designs optional at extra charge
power supply:	400 Volt AC 3~/N/PE 50/60 Hz 32A fuse; dedicated circuit, line and protection;
dimensions:	L: 340 cm (11ft 1.8") W: 140 cm (4ft 7.1") H: 138 cm (4ft 10.7") external control unit: L: 48 cm (1ft 6.9") W: 80 cm (2ft 7.4") H: 106 cm (3ft 5.7")
net. weight:	device approx. 1150 kg (2535 lbs)
mass of packaging:	150 ... 350 kg (330 ... 770 lbs) depending on requirements Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

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## specifications saturn® 300/100r

treadmill	<b>saturn® 300/100r</b>
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30011-01va06
applications:	endurance training walking and running, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU5 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 300 cm (9ft 10.1") W: 100 cm (3ft 3.4") access height: 48 cm (1ft 6.9") - shock load reduction for the joints - running belt with slip resistant surface - reinforced running belt with profiled surface, 5 mm thick - special running surface, suitable for cycling, - wheelchair applications, roller ski and skating oil tank and pump for lubrication support - max. permissible load: 300 kg (660 lbs)
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph) 0 ... 60.0 km/h (0 ... 16.7 m/s) (0 ... 37.3 mph) 0 ... 80.0 km/h (0 ... 22.2 m/s) (0 ... 49.7 mph)
acceleration:	7 acceleration / deceleration levels 0.064 ... 2.78 m/s <sup>2</sup> (for max speed 40 km/h) programmable via para control PC software
elevation:	-27 % ... +27 % (-15° ... +15°) motorized adjustment
running direction:	incl. reverse belt rotation (allows negative elevation); without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
drive systems:	11 kW (15 HP) 3-phase AC motor, maintenance free and brushless 20 years warranty on main drive motor
power transmission:	frequency inverter, toothed belt, very quiet operation
safety systems:	CE 0123, medical device directive MDD 93/42/EEC, legacy device machinery directive 2006/42/EC; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; EN 957-6; EN 14971; emergency-stop mushroom push button (drives power off) light barriers at belt re-entry zones and for belt alignment, 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 MDD, 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 EN 957-6
earth leakage current:	< 0.25 mA
ambient conditions:	10 °C ... +40 °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: (at least via RS232 and para control sw)	TouchScreen with operation mode speed (0.1 km/h or m/s or m/min or mph), time (00:00) in hours, minutes & seconds, elevation (0.1 % or degrees), distance (1 m ... 999.9 km or miles), METS (1 MET), program step / number, energy (1 kJ / kcal), fitness index (1), power (1 Watt), heart rate (1 bpm / beat per minute)
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	2 x RS232 com1 and com2 (9,600 bps) 2 x USB 2.0, 1 x Ethernet RJ45 (100 Mbit /s) incl. interface protocol coscom® v4 optional at extra charge: USB-RS232-converter; com3 with 115,200 bps;

programs:	17 programs / profiles (predefined) - 6 exercise profiles (scalable) - 11 test profiles (UKK 2 km Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - 20 free definable programs with 40 steps each
PC software (incl.):	para control® for display & remote control
colour of frame:	pure white RAL 9010 (powder coated)
accessories (incl.):	instruction for use on USB stick, drinking bottle holder, service box, special oil, POLAR® heart rate chest belt (5kHz + Bluetooth®)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length with crossbar in front, other handrail designs optional at extra charge
power supply:	400 Volt AC 3~/N/PE 50/60 Hz 32A fuse; dedicated circuit, line and protection;
dimensions:	L: 340 cm (11ft 1.8") W: 140 cm (4ft 7.1") H: 138 cm (4ft 10.7") external control unit: L: 48 cm (1ft 6.9") W: 80 cm (2ft 7.4") H: 106 cm (3ft 5.7")
net. weight:	device approx. 1150 kg (2535 lbs)
mass of packaging:	150 ... 350 kg (330 ... 770 lbs) depending on requirements Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

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## specifications saturn® 300/125rs

treadmill	saturn® 300/125rs
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30012-01va03
applications:	endurance training walking and running, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU5 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 300 cm (9ft 10.1") W: 125 cm (4ft 1.2") access height: 48 cm (1ft 6.9") - shock load reduction for the joints - running belt with slip resistant surface - reinforced running belt with profiled surface, 5 mm thick - special running surface, suitable for cycling, wheelchair applications, roller ski and skating oil tank and pump for lubrication support - max. permissible load: 300 kg (660 lbs)
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph) 0 ... 60.0 km/h (0 ... 16.7 m/s) (0 ... 37.3 mph) 0 ... 80.0 km/h (0 ... 22.2 m/s) (0 ... 49.7 mph)
acceleration:	7 acceleration / deceleration levels 0.064 ... 2.78 m/s <sup>2</sup> (for max speed 40 km/h)
elevation:	-27 % ... +27 % (-15° ... +15°) motorized adjustment
running direction:	incl. reverse belt rotation (allows negative elevation); without fall prevention the max. speed for reverse belt rotation is limited to 5 km/h (3.1 mph)
drive systems:	11 kW (15 HP) 3-phase AC motor, maintenance free and brushless 20 years warranty on main drive motor
power transmission:	frequency inverter, toothed belt, very quiet operation
safety systems:	CE 0123, medical device directive MDD 93/42/EEC, legacy device machinery directive 2006/42/EC; IEC 60601-1; EN 60601-1-2 (EMC tested); ISO 20957-1; EN 957-6; EN 14971; emergency-stop mushroom push button (drives power off) light barriers at belt re-entry zones and for belt alignment, 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 MDD, 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 EN 957-6
earth leakage current:	< 0.25 mA
ambient conditions:	10 °C ... +40 °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: (at least via RS232 and para control sw)	TouchScreen with operation mode speed (0.1 km/h or m/s or m/min or mph), time (00:00) in hours, minutes & seconds, elevation (0.1 % or degrees), distance (1 m ... 999.9 km or miles), METS (1 MET), program step / number, energy (1 kJ / kcal), fitness index (1), power (1 Watt), heart rate (1 bpm / beat per minute)
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®), automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	2 x RS232 com1 and com2 (9,600 bps) 2 x USB 2.0, 1 x Ethernet RJ45 (100 Mbit /s) incl. interface protocol coscom® v4 optional at extra charge: USB-RS232-converter; com3 with 115,200 bps;
programs:	17 programs / profiles (predefined) - 6 exercise profiles (scalable) - 11 test profiles (UKK 2 km Walktest, Conconi, Graded test, Gardner, Naughton, Ellestad, Cooper, Balke, etc.) - 20 free definable programs with 40 steps each

PC software (incl.):	para control® for display & remote control
colour of frame:	pure white RAL 9010 (powder coated)
accessories (incl.):	instruction for use on USB stick, drinking bottle holder, service box, special oil, POLAR® heart rate chest belt (5kHz + Bluetooth®)
handrails:	steel tube handrails Ø 60 mm on both sides, over min. 1/3 of treadmill length with crossbar in front, other handrail designs optional at extra charge
power supply:	400 Volt AC 3~/N/PE 50/60 Hz 32A fuse; dedicated circuit, line and protection;
dimensions:	L: 340 cm (11ft 1.8") W: 165 cm (5ft 5.0") H: 138 cm (4ft 10.7") external control unit: L: 48 cm (1ft 6.9") W: 80 cm (2ft 7.4") H: 106 cm (3ft 5.7")
net. weight:	device approx. 1250 kg (2755 lbs)
mass of packaging:	150 ... 350 kg (330 ... 770 lbs) depending on requirements Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

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## specifications saturn® 450/300rs

treadmill	<b>saturn® 450/300rs sport</b>
manufacturer:	h/p/cosmos sports & medical gmbh / Germany
order number:	cos30013-02va01
applications:	endurance training walking, running, cycling, inline skating, cross country ski, stress device for performance testing, gait analysis and gait training
control:	via external UserTerminal (TouchScreen) MCU6 or via integrated interface coscom® v4; UserTerminal and treadmill are connected via 3 detachable cables
running surface:	L: 450 cm (14ft 7") W: 300 cm (9ft 8") access height without installation pit approx. 130 cm (4.26 ft) - reinforced running belt with low roll resistance - automatic belt centering and belt tensioning control - improved anti slip characteristics - thick running belt ca. 10 mm - temperature resistant: permissible constant temperature range -30...+80°C - water and saltwater resistant, particularly against human perspiration - 3 year warranty on the running belt by use with ski sticks with a minimum ski tip diameter of 5.0 mm - max. permissible load: 300 kg (660 lbs)
lubrication on deck:	Automatic lubrication system between running deck and running belt (running deck) via special silicone oil
speed range:	0.0 ... 40.0 km/h (0.0 ... 11.1 m/s) (0.0 ... 24.9 mph) special speed available at extra charge: 0 ... 30.0 km/h (0 ... 8.3 m/s) (0 ... 18.6 mph) 0 ... 50.0 km/h (0 ... 13.9 m/s) (0 ... 31.1 mph)
speed control:	automatic speed control depending on the position of the subject on the running deck; option at extra charge.
acceleration:	7 acceleration / deceleration levels between 131 s and 3 s from 0 to max. or from max. to 0; equals 0.084... 3.70 m/s <sup>2</sup> (for 40.0 km/h)
elevation:	-4 % ... 25 % (-2.3° ... +14°) hydraulic adjustment, with smooth start; adjustable elevation speed from 0 ... 1°/sec
running direction:	switch for reversing running belt direction at extra charge
drive systems:	30 kW (40.8 PS) 3-phase AC motor, elevation drive motor for hydraulic: 18.5 kW (25 HP). maintenance free and brushless; 20 years warranty on main drive motor.
power transmission:	frequency inverter, timing-belt drive (very dynamic operation)
safety systems:	<b>CE</b> Machinery Directive 2006/42/EG; IEC 60335-1, EMC directive ISO 20957-1; EN 957-6; emergency-off safety stop switch (mushroom push button for drive system quick stop and power-off); sensitive protection (light barriers with stop function) at belt re-entry zones; sensitive protection (light barriers with control light) for belt alignment; potential equalization bolt; transformer for potential-isolation from the mains; integrated motor brake when power is on; safety arch with 1x cos14903-M chest belt system size M, fall stop and automatic stop of running belt
degree of protection:	appliance class I (⊕) / IP 00
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 EN 957-6
earth leakage current:	< 3.5 mA
ambient conditions:	10 °C ... +40 °C (-30 ... +50 °C on request); 30 ... 70 % humidity (up to 100 % on request) 700 ... 1060 hPa air pressure 3,000 m (~10,000 ft) max. altitude without pressurization
display (resolutions):	25.9 cm / 10.1" (1280x800), colour touch display
parameter:	speed, time, elevation, distance, METS, energy consumption, altitude, power, pace, heart rate, heart rate variability (digital and scatter diagram)
resolution:	1 decimal place / optional 2 decimal places
units:	metric / imperial
heart rate monitoring:	heart rate receiver included (5kHz + Bluetooth®) - POLAR H10 automatic control of speed and elevation according to programmed target heart rate („cardio mode“)
interfaces:	coscom® v4 interface through RS232, LAN / RJ45, USB, HDMI, optionally Bluetooth®, NFC / RFID, WiFi, FTMS connection for quick stop

programs:	The new MCU6 software features optional Stoop Test, dual tasking, cognitive skills, country flags, capitals, "word salad" and mathematic tasks in various levels and has included test profiles / protocols such as Bruce, modified Bruce, Graded Test, Naughton, Cooper, Balke, Super Balke, Ellestad A, Ellestad B, Gardner, UKK 2 km WalkTest, Conconi, Ramp, Fitkids, Chester Treadmill Walk, VO2 / 10k, VO2 / 11k, VO2 / 12k, VO2 / 14k, various Interval Tests incl. progressive interval, various Pyramid Tests, Hochföln mountain protocol, etc
PC software (incl.):	para control® for display & remote control
colour of frame:	grey aluminum RAL 9007 (powder coated)
accessories (incl.):	instruction for use on USB Stick, 2x drinking bottle holder with 10 h/p/cosmos 0.5 l bottles, service box, special oil, 3x 5 m (16.4ft) PE Potential-Equalization cable POLAR H10 heart rate chest belt
handrails:	steel tube handrails Ø 60 mm on both sides, over the whole treadmill surface with front-handrail crossbar. The handrail is detachable from the first third of the tread, other handrail designs at extra charge
gantry at the front:	approx. 75 cm (2ft 5.5") along the width of the running deck; for applications lactate analysis, ergospirometry, motion analysis, support for subjects through trainer, etc.
gantry at the side:	right and left approx. 50 cm (1ft 7.7") along the width of the running deck.
access ramp:	L: 228 cm (7.48 ft) x B: 282 cm (9.25 ft) H: 130cm (4.26 ft) automatic ramp for ground-level access to the running surface on request at an extra charge. The exact specification depends on the treadmill equipment and the building.
stage floor:	safety cover for the machine and level entrance to the treadmill at 130 cm (4.26 ft) at extra charge.
voltage supply:	1 x 400 Volt AC 3~/N/PE 50/60 Hz 63 A 1 x 400 Volt AC 3~/N/PE 50/60 Hz 50 A 2 x 230 Volt AC 1~/N/PE 50/60 Hz 16 A Each with a separate dedicated circuit, line and separate protection; LAN DSL internet connection for remote access / maintenance
power cabinet:	W: 120 cm (3ft 11.2") D: 50 cm (1ft 7.7") H: 120 cm (3ft 11") for accommodation of electric components for inverter drive and elevation control and high power components
size of treadmill frame:	L: 645 cm (21ft 1.9") W: 500 cm (16ft 4.9") H: 490 cm (16ft 1") depending on options and accessories, type of installation and additional options (e.g. gentries) the measurements may deviate.
size control unit:	approx.: L: 112 cm (3.67 ft), W: 52 cm (1.70 ft) H: 120 cm (3.93 ft)
net. weight:	approx. 10,000 kg (22,046 lbs)
gross weight:	approx. 12,000 ... 15,000 kg (26,455...33,069 lbs)

Weight and dimensions may differ depending on accessories.

Optionally available at extra charge are special frame colours, other handrail designs, special voltage supply and 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.

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wheelchair options	<b>wheelchair stabilizer &amp; ramps</b>	<b>order number</b>	
	Wheelchair stabilizer / fixation for treadmill 200x75	cos10227-01va01	wheelchair stabilizer for treadmill venus 200x75; long handrails cos14190-01 mandatory
	Wheelchair stabilizer / fixation for treadmill 200x100	cos10227-01va02	wheelchair stabilizer for treadmill venus 200x100; long handrails cos14190-01 mandatory
	Wheelchair stabilizer / fixation for treadmill 250x100	cos10227-01va04	wheelchair stabilizer for treadmill saturn 250x100; long handrails cos14191-01 mandatory
	Wheelchair stabilizer / fixation for treadmill 250x125	cos10227-01va05	wheelchair stabilizer for treadmill saturn 250x125; long handrails cos14191-01 mandatory
	Wheelchair stabilizer / fixation for treadmill 300x100	cos10227-01va07	wheelchair stabilizer for treadmill venus 300x100; long handrails cos14192-01 mandatory
	Wheelchair stabilizer / fixation for treadmill 300x125	cos10227-01va08	wheelchair stabilizer for treadmill venus 300x125; long handrails cos14192-01 mandatory
	Front range limiter for cycling for treadmill W: 75 cm	cos102792-01va01	mechanical mounting (front), range limiter prevents cycling beyond treadmill surface
	Front range limiter for cycling for treadmill W: 100 cm	cos102792-01va02	mechanical mounting (front), range limiter prevents cycling beyond treadmill surface
	Front range limiter for cycling for treadmill W: 125 cm	cos102792-01va03	mechanical mounting (front), range limiter prevents cycling beyond treadmill surface
	Wheelchair ramp for treadmill venus/saturn® xx/75	cos101060-01_75	wheelchair ramp (L: 244.5 cm x W: inner: 67.6 cm / outer: 123.8 cm) for oversize treadmills with belt W: 75 cm
	Wheelchair ramp for treadmill venus/saturn® xx/100	cos101060-01_100	wheelchair ramp (L: 244.5 cm x W: inner: 92.6 cm / outer: 123.8 cm) for oversize treadmills with belt W: 100 cm
Wheelchair ramp for treadmill venus/saturn® xx/125	cos101060-01_125	wheelchair ramp (L: 244.5 cm x W: inner: 113.2 cm / outer: 123.8 cm) for oversize treadmills with belt W: 125 cm	
optical gait analysis / bio	<b>Microgate - LED optical gait analysis / bio feedback</b>	<b>order number</b>	<b>All options see microgate.</b>
	Optogait Kit 1m single meter	cos102065	OptoGait is an optical measuring system consisting of a transmitting and a receiving measuring bar. Content: 1xTX, 1xRX bar with interface, 2 webcams, 2 tripods, USB cable, power supply, software, bag for 1 meter. PC or laptop required.
	Optofix mounting Optogait / Optojump on the treadmill	cos103386	Holder system with magnets for Optojump / Optogait bar to mount it on h/p/cosmos treadmill (not for extra wide footboards). This set consists of 4 fastening profiles. For one bar 2 fastening profiles. Optogait / Optojump bar is NOT included in this item!
	Optogait Kit 1m additional meter for extension	cos102066	Content: 1xTX, 1x RX bar 1 meter with 2 connection plugs for extension (without bag)
	OptoGait 50 cm bar for extension	cos102066_50cm	Content: 1xTX, 1x RX bar 50 cm with 2 connection plugs for extension (without bag)
IT, computer & visualisation	<b>IT, computer &amp; visualisation</b>	<b>order number</b>	
	h/p/cosmos satellite PC med	cos14970-03	DELL PC, 2x 24" LED Monitor, COL Laser printer, potential isolation transformer, h/p/cosmos PC-rack with 4 casters
	h/p/cosmos satellite PC med LC	cos14970-03_LC	PC minitower without on-site support, 2 pcs. 24" LED monitor, potential isolation transformer, h/p/cosmos PC-rack with 4 casters
	h/p/cosmos satellite Notebook	cos15686-01	DELL notebook, potential isolation transformer, h/p/cosmos PC-rack with 4 casters
	DELL Laptop Computer	cos13476-01	technical details and specification on request
	Labour costs per hour system specialist & software	cos60098010004	service engineer system specialist and software for installation, maintenance and repairs in the factory h/p/cosmos.
	Notebookholder (mounted on ext. control desk venus/saturn)	cos13320-01	for models with running surface 200+75+ cm, manufactured after January 2011
	h/p/cosmos PC-rack of steel, without PC, without devices	cos15033-03	ergonomically designed PC-rack in pure white (RAL-colour 9010) of powder coated steel in h/p/cosmos-design
	LED monitor TV 50" (with a small monitor stand for table)	cos102397	for example for SpeedLab®, gateway® display or for the virtual training module of zebris®
	Monitor stand mobile for LCD TV 32-60"	cos101624	monitor stand (without monitor) for additional TV / monitor (max. load: 30 kg), height: 180 cm.
	Wall mount for LCD monitor TV 32-65"	cos101627	wall mount (without monitor) for additional TV / monitor 32-65"
	Connection cable RS232 5 m	cos00097010034	RS232, 5 m (Sub-D 9-pin male/female), USB-Adapter optionally available (cos12769-01)
	Connection cable RS232 10 m	cos00097010035	RS232, 10 m (Sub-D 9-pin male/female), USB-Adapter optionally available (cos12769-01)
	Potential equalization cable 5 m (with 2 POAG-plugs)	cos10223-01	potential equalization cable for medical devices
USB to RS232 converter	cos12769-01	converter from USB to serial port RS232 (Sub-D 9-pin male)	
diagnostics	<b>lactate measurement &amp; software</b>	<b>order number</b>	<b>All options see options, accessories.</b>
	Software h/p/cosmos para control®	cos10071-v4.2.0-bt	software for controlling running machines; can be used for optional bluetooth heart rate sensor.
	Lactate Scout Sport Starter Set	cos14825-sport	Mobile lactate meter Lactate Scout sport, manufacturer: EKf-diagnostic GmbH, e-paper display, 10 sec. measuring time, easy to use.
	Test strip box 25 Lactate Scout Sport	cos14854-sport	Can be used for lactate meter h/p/cosmos sirius, Lactate Scout+, Lactate Scout 4 and Lactate Scout Sport.
	Lactate test solution 8,9 - 11,1 mmol/l	cos15527-01-10mmol	Test solution can be used to check the function of h/p/cosmos sirius, Lactate Scout+, Lactate Scout 4 and Lactate Scout Sport.
	Lactate test solution 4.5 - 5.6 mmol/l	cos15527-01-5mmol	Test solution can be used to check the function of h/p/cosmos sirius, Lactate Scout+, Lactate Scout 4 and Lactate Scout Sport.
Starter set sirius® Lactate Scout Sport	cos100650-sport	starter set consisting of cos14825-sport, cos14854-sport, cos100773, 6x cos100774	
others	<b>lactate measurement, supplies &amp; software</b>		<b>All options see options, accessories.</b>
	<b>motion &amp; gait analysis</b>		<b>All options see gateway, noraxon, zebris.</b>
	<b>options</b>		<b>All options see options, accessories.</b>

In case of retrofitting of options and accessories, prices will be higher than indicated in the price list. Please specify device, model and serial number for a detailed quotation. Not all options and accessories are available for all models.

Your project notes:

A large grid of graph paper for taking project notes. The grid consists of 30 columns and 40 rows of small squares, providing a structured space for writing and drawing.



sports / athletics



sports  
quasar®



cycling & athletics  
saturn® 300/100r



performance diagnostics  
pulsar® med

**h/p/cosmos®**

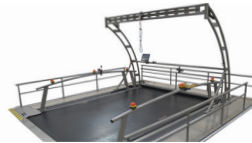
German Engineering since 1988



inline skating  
saturn® 300/125r



functional training  
pulsar® med + robowalk®



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



wheelchair  
saturn® 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 with external UserTerminal



biomechanics  
gaitway® 3d



military / army  
quasar® special version



speed training  
sprint trainer comet®



fire fighter ladder  
training & fitness  
discovery®

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