identify, analyse and document movement problems
gait and motion analysis

- unrestricted view with the right handrail design
- complete analysis with 2 cameras through reverse belt rotation
- optimised process through camera stands with integrated lighting, calibration boards and middle marking of the running belt
A static analysis in standing, sitting or lying down is one thing. An analysis of the dynamics is something else. The analysis of the movement is ideally suited to detect motion related problems and solve them. Of course training results, therapeutic or other interventions need to be documented. Here motion analysis places many demands on a treadmill system.

h/p/cosmos® offers an ideal solution for all applications with its diverse range of treadmill models, different handrails, middle marking, reverse belt rotation, safety arch with fall stop, various measurement possibilities, hardware and software.

**an ideal solution for everybody**

The application of motion analysis is very diverse – from running shoe advice, insoles in orthopaedic technology to therapy and progress control in rehabilitation up to optimisation of performance orientated running techniques, scientific and industrial research.

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**movement analysis for optimisation of training?**

**the ideal equipment – for complete motion analysis?**

**handrail always in the way – what can I do?**

**good results – well documented**

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Therefore h/p/cosmos® offers a wide range of system solutions:

**standard motion analysis**

The h/p/cosmos mercury® med, approved for medical use, with 2 cameras, safety arch and reverse belt rotation is the perfect system solution for therapeutic, rehabilitative or orthopaedic applications.

**motion analysis professional**

h/p/cosmos quasar® treadmill offers larger more comfortable running surface on which taller sportsmen can also run using their full stride length.

As an alternative the larger h/p/cosmos pulsar® 3p, h/p/cosmos venus® and h/p/cosmos saturn® models can also be used in combination with additional options and software for motion analysis.

In addition we also offer the h/p/cosmos Kistler gateway treadmill solution with integrated force plates particularly for professional sports and research.

Another alternative is the zebris FDM-System with integrated pressure sensors which allows measurement of the ground reaction forces. For 3D movement analysis we offer individually tailored solutions with an unrestricted view of the runner on request.
detachable handrails – the right choice

When choosing the handrails we are confronted by two conflicting needs: for the best analysis in the sagittal plane it is better when there is no handrail in front of the camera - because this is usually at the level of the hip and complicates the analysis. On the other hand limited ambulatory users want the support and security of long handrails at least to get started.

Particularly for this requirement in rehabilitative motion analysis we offer detachable handrails. These can be used as long handrails for therapeutic applications. At the same time you can remove the rear part of the handrails for an unrestricted sagittal view of the runner during a motion analysis assessment.

h/p/cosmos para motion® – the quick and easy solution for documented analysis

A software solution for motion analysis must offer the option of multiple measurements, analysis and documentation but it also needs to be user friendly at the same time.

The h/p/cosmos para motion® software solution offers you full support to help you with quick and meaningful analysis, discussions with users and athletes and control over the agreed follow-up actions. You can store your own results in user definable reports that allow quick and easy analysis of the therapeutic results. In addition the integrated control of the treadmill gives you access at all times to many of the relevant parameters.

h/p/cosmos para motion® is not medical software according to EN 62304 and doesn’t provide any clinical data or therapeutic recommendations, however it can be a very useful tool to support the control, recording and documentation. Particularly valuable is the automatic correlation of patient data and video recordings in the database together with the integrated documentation of speed and elevation in the video image.
identify crossover – thanks to middle marking

During frontal shots it is important to determine how far apart the feet are and their relation to the centre of gravity. An orientation line is useful for the objective measurements. However the line must not be too conspicuous or the runner may be irritated or influenced to “walk the line”.

The narrow and inconspicuous milled centre marking in the running belt serves a simple guide during frontal shots allowing an objective evaluation of “crossover”.

combined lighting and height adjustment: the camera stands

Optimal lighting is essential for an accurate analysis. It is particularly important that as much light as possible comes from the direction of the camera and that the camera is always at the same height as the joint that is to be analysed – in order to prevent perspective distortion. Analysis of the ankle needs to conducted just above the running surface and that of the hip at the corresponding height.

The h/p/cosmos® camera stand combines both needs. Lighting is provided by the lighting system which is included in the camera stand set. The height adjustable camera mount allows simple and quick height changes. An additional special ceiling lighting set provides for enough lighting from above which is particular value for precise movement analysis.
clearly marked – with ruler and pen

The analysis of certain problems is easier if the skin is marked with the corresponding points and guidelines. Not all marker pens are usable as they may cause skin irritation. If you want to mark lines on the skin you will need a flexible ruler that adjusts to the contours of the body surface. It is these details that often determine the quality, accuracy and success or failure of the motion analysis.

The skin marker is especially suited and approved for marking human skin. With the flexible ruler it is even possible to mark bulging muscles quickly and clearly – for ideal analytical results.

movement analysis without boundaries: foot pressure measurements, integrated force plates and automatic marker tracking

Next to video based movement analysis there are further possibilities to identify biomechanical problems and document therapeutic progress.

In cooperation with Zebris medical GmbH h/p/cosmos® offers a treadmill with an integrated pressure distribution sensor. Furthermore the h/p/cosmos gaitway treadmill, with integrated KISTLER force plates, allows the measurement of the vertical ground reaction forces. Both systems can of course be combined with a video analysis system.

If you work with 3D marker based movement analysis with automatic tracking we are pleased to offer the ideal treadmill with an uninterrupted view of the runner.
comprehensive analysis with 2 cameras

Normally two cameras are used for movement analysis. One from the rear and one from the side of the treadmill. However it is also desirable for views from the front as well as from the opposite side.

This is exactly what reverse belt rotation allows. The subject turns round on the treadmill and runs in the opposite direction. The safety arch with fall-stop means that runner is always safe despite the lack of an unrestricted safety area behind the running surface and they can run without fear. Through this feature you can use a 2 camera set up in a restricted space to carry our a full analysis form all 4 sides. If required and if both space and budget allow the h/p/cosmos para motion® software offers an alternative with up to 4 cameras running concurrently so that videos from all 4 sides can be made at the same time.

technology, knowledge and experience from a single source

For the successful introduction and implementation of motion analysis in a therapeutic situation it’s not just the ideal treadmill solution that is important but the knowledge of the use of the system in the daily routine.

To this end we offer not only the hard and software but also the installation and instruction in the operation of the system in cooperation with external specialists with whom we also offer seminars and courses. This means you can work successfully from the start. Dates and details can be found on our website at www.h-p-cosmos.com
For individually tailored courses on your premisses quotations are available on request.
### gait and motion analysis professional h/p/cosmos quasar® med

<table>
<thead>
<tr>
<th>pos.</th>
<th>qty</th>
<th>order number</th>
<th>product description</th>
</tr>
</thead>
</table>
| 1.   | 1   | cos30003va20 | running machine h/p/cosmos quasar® med  
running surface 170 x 65 cm, speed range 0 ... 25 km/h, elevation 0 ... 28%, motor system 3.3 kW, interface port com1 for PC, ECG, Ergospirometry, Blood-pressure system or printer - compatible to most of the systems worldwide, incl. PC software h/p/cosmos para control for device control and monitoring |
| 2.   | 1   | cos10181-01  | reverse belt rotation (downhill) - for video recording from all sides and simulating downhill |
| 3.   | 1   | cos14168     | centre mark of running belt |
| 4.   | 1   | cos10170     | safety arch with harness, fallstop, chest belt + autom. running belt stop. CE mark for 200kg |
| 5.   | 1   | cos14903-03-L| chestbelt system L for safety arch harness |
| 6.   | 1   | cos14903-03-M| chestbelt system M for safety arch harness |
| 7.   | 1   | cos14903-03-S| chestbelt system S for safety arch harness |
| 8.   | 1   | cos10670-01  | spare rope for safety arch |
| 9.   | 1   | cos00097010035| interface connection cable RS232 10 m |
| 10.  | 1   | cos14151     | h/p/cosmos calibration-chart front |
| 11.  | 1   | cos14152     | h/p/cosmos calibration-chart side |
| 12.  | 2   | cos14239     | camera-/ spotlight-post „frontal“, 150 cm, adjustable with scaling, incl. spotlight |
| 13.  | 2   | cos14149     | FireWire cable set for camcorder 10 m |
| 14.  | 2   | cos14148-02  | HDV Camcorder |
| 15.  | 1   | cos15508+5sta| software h/p/cosmos para motion® „standard“ for analysis and evaluation of the videos with up to 2 cameras, incl. treadmill control-software, analysis schemata, individual report functions etc.  
cos15508+5pro  
onlineal / alternative: h/p/cosmos para motion® professional (up to 4 HDV camcorders (cos14148-02)) |
| 17.  | 1   | cos16425     | steel ruler, flexible, for contour-accurate marking on the skin |
| 18.  | 1   | cos14771     | skin marker, water resistant, especially suited for eudermic marking |
| 19.  | 1   | cos10223     | potential equalization cable, 5 m (required for medical systems) |
| 20.  | 1   | cos10177     | packing running surface 170 x 65 cm (safety arch) pallet + cardboard parts assembled |
| 21.  | 3   | cos60098010004| labour costs per hour for service engineer |
| 22.  | 1   | cos14318     | 1 full day workshop treadmill applications in gait and motion analysis |

Total price net, excluding VAT, excluding custom duties

VAT (19 % in Germany, other VAT and/or custom duties may apply in other countries)

**system price h/p/cosmos solution for gait and motion analysis:**  
please ask your dealer for a quotation
running machine: h/p/cosmos® quasar med
order number: cos30003va20
applications: running for sports, sports medicine, cardiology, rehabilitation, stress tests & medicine
WITH UserTerminal (6 displays & keyboard), MCUS. stand alone and/or remote control via interface.
running surface: L: 170 cm (66.93") W: 65 cm (25.59")
access Height: 23 cm (9.06")
- shock load reduction for the joints
- reinforced running belt with profiled surface, 5 mm thick
- max. permissible load: 200 kg (440 lbs)
speed range: 0...25.0 km/h (0...6.9 m/s) (0...15.5 mph)
special speed up to 45 km/h (27.96 mph) on request
acceleration: 7 levels (3...131 sec from 0 to max. speed)
from 0.047...2.037 m/sec² programmable via para control also for deceleration (for manual or program mode)
elevation: 0...28 % (0...15.6°) adjustable electr. resolution 0.1 %
up to -28 % when using optional reverse belt rotation
running direction: switch for reversing running belt direction (option, extra charge), running belt must be adjusted for reverse belt rotation. Max. permissible reverse speed 5 km/h (3.1 mph) if no safety-harness with fail-stop prevention system is used.
motor system: 3.3 kW (4.5 HP) 3-phase A.C. motor (maintenance free and running direction: switch for reversing running belt direction (option, extra charge), running belt must be adjusted for reverse belt rotation. Max. permissible reverse speed 5 km/h (3.1 mph) if no safety-harness with fail-stop prevention system is used.)
power transmission: frequency inverter, poly-V-belt, very quiet operation
safety: CE0123, directive 93/42/EEC + 2007/47/EC; MDD; machinery directive 2006/42/EC, EN 60601-1;
EN 60601-1-1; EN 60601-1-2 (EMC approved); EN 60601-1-4; EN 60601-1-6; EN 62304; EN 62353; EN 957-1; EN 957-6; EN 14971
ISO 9001; EN ISO 13485; emergency-off switch
EN 60601-1; EN 60601-1-4; EN 62304; EN 60601-1-6; EN 60611-1; EN 60611-2 (EMC approved); EN 60611-3; EN 60611-4 (EMC approved); EN 60611-5; EN 60611-6; EN 60611-7; EN 60611-8; EN 14971
EN ISO 9001; EN ISO 13485; emergency-off switch
degree of protection: class 1 (IEC 601)/ type B / IP 20
leakage current: 0.2 mA
ambient condition: +10...+40 °C (-30...+50 °C on request)
30...70 % humidity (up to 100 % on request)
700...1080 hPa barometric pressure
3000 m (~10000 ft) max. altitude without pressurization
display (resolutions): 6 LCD displays, 4 LEDs for operation modes, 20 LEDs for display of units & profile no, steps, etc.
speed (0.1 km/h or m/sec or min/m or mph), time (00:00) in hours, minutes & seconds, elevation (0.1% or degrees)
distance (1 meter...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: POLAR wireless, 1 channel receiver
ECG-accurate measurement and display beat-to-beat; automatic control of speed and elevation according to programmed target heart rate (cardio mode)
digital interface: 1 x RS 232 com1 with 9600bps; incl. PC-protocol, h/p/cosmos coscom® & printer protocol serial.
option extra charge: USB-RS222-converter; com2; com3 with 115 200bps com4.
programs: 42 programs / profiles
-6 exercise profiles (scalable, 756 variations)
-28 test profiles (UKK 2 km Walktest, Bruce, Graded Test, Naughton, Ellistad, Gardner, Conconi etc.)
-8 free definable programs with 40 program steps
free PC software: h/p/cosmos para control® for display & remote control
software (at extra charge): h/p/cosmos para graphical®, para analysis® & para motion®.
PC software for monitoring, recording & motion analysis.
accessory (free of charge): user manual, bottle holder with 2 h/p/cosmos 0.5 l bottles, service box incl. special oil, 5 m (16 ft 4.85") PE-cable
colour of frame: grey aluminium RAL 9007 (powder coated)
handrails: both sides: steel tubes Ø 60mm (2.36") covering 1/3 track length front; cross bar Ø 38mm (1.42") with mounting clamps
evoltage supply: 230 Volt AC 1~/NPE 50/60 Hz 16A-fuse, dedicated line
size of frame: L: 230 cm (90.54") W: 105 cm (41.34") H: 145 cm (57.08")
net weight: approx. 380 kg (836 lbs)
gross weight: approx. 530...580 kg (1166...1276 lbs)

Optionally available at extra charge: Special frame colours, other handrail designs, special specifications, special voltage supply, special deck sizes and accessories. Weight and package specifications can deviate according to options, accessories and packing.

ESOE. Subject to alterations without prior notice.

Performance limitations:
Please consider the natural and physical performance limitations of the single phase 230 volt voltage power supply. The single phase 230 volt voltage power supply is sufficient up to normal fitness performance diagnostics, but is not sufficient for all special high performance applications (uphill/downhill, speed running, controlled jumps, sidesteps, heavy subjects at higher speed etc.). 3-phase running machine models with 3x400 volts power supply (for example model pulsar® 3p, venus® or saturn®) are recommended for high performance applications.

Warning:
Installation, commissioning, instruction and maintenance only to be conducted by h/p/cosmos trained and authorized personnel. For running surfaces with 200x75cm or bigger, special applications, at higher speeds or for subjects with higher risk of falling, or if there is not enough safety space behind the treadmill, a fall prevention system (e.g. safety arch with harness & chest belt) is obligatory.

Keep min. L: 2 m (78.74") x W: 1 m (39.37") safety space behind treadmills!

No children on or near to treadmills.
recommended configuration gait and motion analysis standard h/p/cosmos mercury® med

<table>
<thead>
<tr>
<th>pos.</th>
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<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>cos30000va068</td>
<td>running machine h/p/cosmos mercury med</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>running surface 150 x 50 cm, Speed 0 ... 22 km/h, Elevation 0 ... 25 %, Drive motor 3.3 kW</td>
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<td></td>
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<td></td>
<td>Interface port com1 for PC, ECG, Ergospirometry-, Blood-pressure system or printer - compatible to most of the systems worldwide, incl. PC software h/p/cosmos para control for device control and monitoring</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>cos14546</td>
<td>handrail rolled short 1 pillar 150/50 - für optimale sagitale Aufnahmen</td>
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<tr>
<td>3.</td>
<td>1</td>
<td>cos9086100045</td>
<td>reverse belt rotation (Downhill) - for video recording from all sides and simulating downhill</td>
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<td>4.</td>
<td>1</td>
<td>cos14288</td>
<td>centre mark of running belt</td>
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<tr>
<td>5.</td>
<td>1</td>
<td>cos10079</td>
<td>safety arch with harness, fallstop, chest belt + autom. running belt stop. CE mark for 200kg</td>
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<tr>
<td>6.</td>
<td>1</td>
<td>cos14003-03-L</td>
<td>chestbelt system L for safety arch harness</td>
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<tr>
<td>7.</td>
<td>1</td>
<td>cos14003-03-M</td>
<td>chestbelt system M for safety arch harness</td>
</tr>
<tr>
<td>8.</td>
<td>1</td>
<td>cos14003-03-S</td>
<td>chestbelt system S for safety arch harness</td>
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<tr>
<td>9.</td>
<td>1</td>
<td>cos10670-01</td>
<td>spare rope for safety arch</td>
</tr>
<tr>
<td>10.</td>
<td>1</td>
<td>cos90097010035</td>
<td>interface connection cable RS232 10 m</td>
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<tr>
<td>11.</td>
<td>1</td>
<td>cos14151</td>
<td>h/p/cosmos calibration board „frontal“ for camera adjustment</td>
</tr>
<tr>
<td>12.</td>
<td>1</td>
<td>cos14152</td>
<td>h/p/cosmos calibration board „sagittal“ for camera adjustment</td>
</tr>
<tr>
<td>13.</td>
<td>2</td>
<td>cos14239</td>
<td>camera- / spotlight-post „frontal“, 150 cm, adjustable with scaling, incl. spotlight</td>
</tr>
<tr>
<td>14.</td>
<td>2</td>
<td>cos14149</td>
<td>FireWire-Cable-Set for video cameras, 10 m, 6/6 pin, incl. 2 adapter 6/4</td>
</tr>
<tr>
<td>15.</td>
<td>2</td>
<td>cos14148-02</td>
<td>HDV Camcorder</td>
</tr>
<tr>
<td>16.</td>
<td>1</td>
<td>cos15008b5da</td>
<td>software h/p/cosmos para motion®, „standard“ for analysis and evaluation of the videos with up to 2 cameras, incl. treadmill control-software, analysis schemata, individual report functions etc.</td>
</tr>
<tr>
<td>17.</td>
<td>1</td>
<td>cos14670</td>
<td>h/p/cosmos satellit® PC med - medical PC mini-tower according to IEC 60601-1, Windows XP incl. 19“ LCD Monitor, keyboard, mouse, CD-ROM writer, FireWireCard, colour laser printer and PC-trolley</td>
</tr>
<tr>
<td>18.</td>
<td>1</td>
<td>cos16425</td>
<td>steel ruler, flexible, for contour-accurate marking on the skin</td>
</tr>
<tr>
<td>19.</td>
<td>1</td>
<td>cos14771</td>
<td>skin marker, water resistant, especially suited for eudermic marking</td>
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<tr>
<td>20.</td>
<td>1</td>
<td>cos10223</td>
<td>potential equalization cable, 5 m (required for medical systems)</td>
</tr>
<tr>
<td>21.</td>
<td>1</td>
<td>cos10177</td>
<td>packed part assembled on pallet with carton hood, width 65 cm with safety arch</td>
</tr>
<tr>
<td>22.</td>
<td>3</td>
<td>cos9008010004</td>
<td>labour costs per hour for service engineer</td>
</tr>
<tr>
<td>23.</td>
<td>1</td>
<td>cos14318</td>
<td>1 full day workshop treadmill applications in gait and motion analysis</td>
</tr>
</tbody>
</table>

total price net, excluding VAT, excluding custom duties

VAT (19 % in Germany, other VAT and/or custom duties may apply in other countries)

system price h/p/cosmos solution for gait and motion analysis standard:
please ask your dealer for a quotation
running number: h/p/cosmos® mercury med

order number: cos30000va08

applications: running for sports, sports medicine, cardiology, rehabilitation, stress tests & medicine

WITH UserTerminal (display & keyboard), MCU5.

stand alone or remote control via interface.

running surface:

- L: 150 cm (59.05") W: 50 cm (19.68")
- Height 19 cm (7.5")
- shock load reduction for the joints
- belt surface with non slip material
- max. permissible load: 200 kg (440 lbs)

speed range: 0...22.0 km/h (0...13.6 mph)
special speed up to 30 km/h (18.64 mph) on request.

acceleration: 7 levels (0...131 sec. from 0 to max. speed)
also for deceleration (for manual or program mode)

elevation: 0...-25 % (0...14.0”) adjustable elec., resolution 0.1%
(-25 %...-25 % when using optional reverse belt rotation)

motor system:

- 3.3 kW (4.5 HP) 3-phase A.C. motor (maintenance free and
- elevation: 0...25 % (0...14.0”) adjustable elec., resolution 0.1%
(-25 %...-25 % when using optional reverse belt rotation)

speed range: 0...22.0 km/h (0...13.6 mph)
special speed up to 30 km/h (18.64 mph) on request.

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- elevation: 0...25 % (0...14.0”) adjustable elec., resolution 0.1%
(-25 %...-25 % when using optional reverse belt rotation)

power transmission:

- frequency inverter, poly-V-belt, very quiet operation

safety:

- CEE0123; directive 93/42/EEC + 2001/44/EC; NID;
machinery directive 2006/42/EC; EN 60601-1-1;
EN 60601-1-2; EN 60601-1-3; EN 62304; EN 62335;
EN 957-1; EN 957-2; EN 13485; emergency-off switch
(mains off), potential equalisation bolt,
ISO 9001; EN ISO 13485; emergency-off switch
(mains off), potential equalisation bolt,

fit for purpose: class I / type B / IP 20

tolerance: ±10...±40 °C (-30...+50 °C on request)

humidity: 30...70 % humidity (up to 90 % on request)

barometric pressure: 700...1060 hPa

display (resolutions):

- 6 LCD displays, 4 LEDs for operation mode,
- 20 LEDs for display of units & profile no, steps, etc.
speed (0.1 km/h or m/sec or m/min or mph), time (00:00)
in hours, minutes & seconds, elevation (0.1 % or degrees)
distance (1 meter...999.9 km or miles), METS (1 MET)
program step/number, energy (1 kJ/kcal), fitness index (1)
in hours, minutes & seconds, elevation (0.1 % or degrees)
speed (0.1 km/h or m/sec or m/min or mph), time (00:00)

heart rate monitoring:

- POLAR wireless, 1 channel receiver
- ECG-accurate measurement and display beat-to-beat;
- automatic control of speed and elevation according to
- programmed target heart rate ('cardio mode')

digital interface:

- 1 x RS 232 com1 with 9600bps incl. PC-protocol,
h/p/cosmos coscom & printer protocol serial;
- option extra charge: USB-RS232-converter;
com2; com3 with 115200bps com4.

programs:

- 42 programs / profiles
- 6 exercise profiles (scalable, 756 variations)
- 28 test profiles (UKK 2 km Walktest, Bruce, Graded Test,
Naughton, Eltestad, Gardner, Conconi etc.)
- 8 free definable programs with 40 program steps

free PC software: h/p/cosmos para control® for display & remote control
inclusive 1 x RS232 interface cable 5 m (16 ft 4.85")

software:

- h/p/cosmos para graphical®, para analysis® & para motion®.

(extra charge):

- PC software for monitoring, recording & analysis.

accessory (free of charge):

- user manual, bottle holder with 2 h/p/cosmos 0.5 l
- bottles, service box incl. special oil, 5 m (16 ft 4.85") PE-cable

colour of frame:

grey aluminium RAL 9007 (powder coated)

handrails:

- steel tube handrails 60 mm (2.36") diameter on both sides

voltage supply:

- 230 Volt AC 1~/N/PE 50/60 Hz 15A fuse, dedicated line

- 210 cm (82.67") B: 82 cm (32.28") H: 138 cm (53.33")

net weight:

- approx. 200 kg (440 lbs)

gross weight:

- approx. 300...350 kg (660...770 lbs)

power transmission:

frequency inverter, poly-V-belt, very quiet operation

safety:

- CEE0123; directive 93/42/EEC + 2001/44/EC; NID;
machinery directive 2006/42/EC; EN 60601-1-1;
EN 60601-1-2; EN 60601-1-3; EN 62304; EN 62335;
EN 957-1; EN 957-2; EN 13485; emergency-off switch

(degree of protection: class I / type B / IP 20

classification:

- IIIb medical device / S, I, A (EN 957)

leakage current:

0.2 mA

ambient condition:

+10...+40 °C (-30...+50 °C on request)

humidity: 30...70 % humidity (up to 90 % on request)

barometric pressure: 700...1060 hPa

3000 m (~10000 ft) max. altitude without pressurization

extra charge:

- Special frame colours, other handrail designs,
special specifications, special voltage supply, special deck sizes and accessories.
Weight and package specifications can deviate according to options, accessories and
packaging.

E&OE. Subject to alterations without prior notice.

Performance limitations:

- Please consider the natural and physical performance limitations of the single phase
230 volt voltage power supply. The single phase 230 volt voltage power supply is
sufficient up to normal fitness performance diagnostics, but is not sufficient for all
special high performance applications (uphill/downhill, speed running, controlled jump-
s, sidesteps, heavy subjects at higher speed etc.), 3-phase running machine models
with 3x400 volts power supply (for example model pulsar 3p, venus or saturn®)
are recommended for high performance applications.

Warning!

Installation, commissioning, instruction and maintenance only to be conducted by
h/p/cosmos trained and authorized personnel. For running surfaces with 200x75cm or
bigger, special applications, at higher speeds or for subjects with higher risk of falling,
or if there is not enough safety space behind the treadmill, a fall prevention system
(e.g. safety arch with harness & chest belt) is obligatory.

Keep min. L: 2 m (78.74") x W: 1 m (39.37") safety space behind treadmills!

No children on or near to treadmills.

Specifications can deviate according to options, accessories and
packaging.

No safety harness with fall-stop prevention system is used.

rotation. Max. permissible reverse speed 5 km/h (8.0 mph) if
no safety harness with fall-stop prevention system is used.

E&OE. Subject to alterations without prior notice.

Performance limitations:

- Please consider the natural and physical performance limitations of the single phase
230 volt voltage power supply. The single phase 230 volt voltage power supply is
sufficient up to normal fitness performance diagnostics, but is not sufficient for all
special high performance applications (uphill/downhill, speed running, controlled jump-
s, sidesteps, heavy subjects at higher speed etc.), 3-phase running machine models
with 3x400 volts power supply (for example model pulsar 3p, venus or saturn®)
are recommended for high performance applications.

Warning!

Installation, commissioning, instruction and maintenance only to be conducted by
h/p/cosmos trained and authorized personnel. For running surfaces with 200x75cm or
bigger, special applications, at higher speeds or for subjects with higher risk of falling,
or if there is not enough safety space behind the treadmill, a fall prevention system
(e.g. safety arch with harness & chest belt) is obligatory.

Keep min. L: 2 m (78.74") x W: 1 m (39.37") safety space behind treadmills!

No children on or near to treadmills.