original directions for use
h/p/cosmos® robowalk® expander

h/p/cosmos® model names
h/p/cosmos® robowalk® expander F-M
h/p/cosmos® robowalk® expander B-M

h/p/cosmos® robowalk® expander F-QP
h/p/cosmos® robowalk® expander B-QP

h/p/cosmos® robowalk® expander AW

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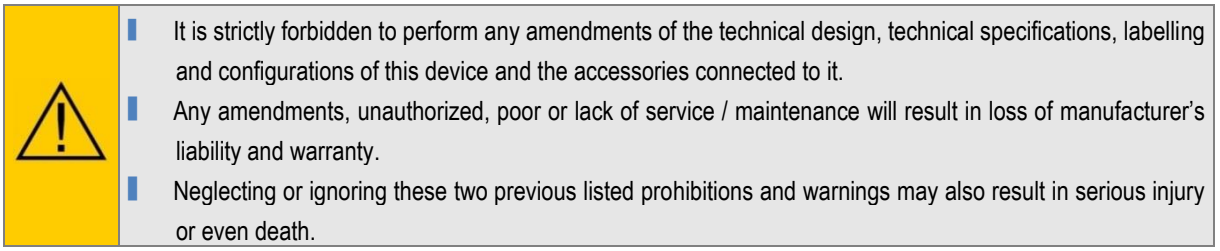
manual-version
version 1.1, revision 06.02.2014
order-no.: [cos30022man-en]

These directions for use are only valid for the original configuration of the first delivery of this device. Changes of the system configuration or retrofittings of additional equipment or accessories can result in invalidity of these directions for use. In case of alterations of the device or the additional equipment, the latest version of these directions for use or the corresponding additional information should be always considered.

The latest version of the directions for use is always available in PDF version on the h/p/cosmos website:
http://www.h-p-cosmos.com/en/company/downloads.htm



- It is strictly forbidden to perform any amendments of the technical design, technical specifications, labelling and configurations of this device and the accessories connected to it.
- Any amendments, unauthorized, poor or lack of service / maintenance will result in loss of manufacturer's liability and warranty.
- Neglecting or ignoring these two previous listed prohibitions and warnings may also result in serious injury or even death.

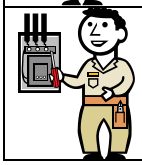
Dear customer,

We would like to express our gratitude for putting your trust in us, in deciding for this top of the range equipment.
Since 1988 h/p/cosmos® has been developing and manufacturing running machines, systems and accessories for applications in sports, rehabilitation, medicine, diagnostics and science. When it comes to technology, ergonomy, design and safety, we have set extremely high standards for ourselves.

With the h/p/cosmos® robowalk® expander we want to make your work easier and give you and your patients the chance to achieve your therapy results in a faster and more comfortable way.

Because the power of the expanders, you must pay special attention to the mentioned safety regulations.
If proper notice is taken to the safety regulations, the operation of your h/p/cosmos® device is almost without any risk. The neglect of the safety regulations could result in dangerous situations and serious accidents. Therefore please read the directions for use and the danger precautions before taking the device into operation.

Some simple maintenance and monitoring (no repair work!), as described, can easily be done or even has to be done by yourself. All kinds of installation and repair work and most maintenance work are to be performed only by trained and authorized technicians who have been certified by h/p/cosmos. The following symbols will indicate which work can be done by the customer and which work has to be done by authorized technicians only:

	The customer/user should perform this maintenance and monitoring work. Some safety checks or monitoring have to be performed on daily basis. It is not expedient to contract certified technicians for such maintenance work. However, where it is practical, all maintenance and monitoring work marked with this symbol can also be performed by certified technicians.
	All installation, maintenance, repair and monitoring work marked with this symbol must only be performed by trained and authorized technicians who have been certified by h/p/cosmos. Customers / users must not perform these kinds of tasks and work.

We recommend calling our competent service team or entering into a maintenance contract for a routine service at an interval of 6 or 12 months for standard machines and standard applications. A form for registration of your institution and device is included in the delivery. In order to be able to supply you with the latest technical information and service, it is important for you to fill out the form. Therefore please fill out the form for registration immediately and send it back via fax, email or mail.

These directions for use as a firm part of the delivery have to be accessible to the user at any time. It has been written with great care. Should you, however, still find any details which do not correspond with your device, please notify to us so we can correct any mistakes as soon as possible.

We wish you a lot of fun and success while exercising and working with your h/p/cosmos® robowalk® expander.

Franz Harrer
President & CEO
h/p/cosmos sports & medical gmbh

1 Model overview

The h/p/cosmos® robowalk® expander can be used in combination with the following running machines:

CE 0123 medical running machines	CE sports & fitness running machines
h/p/cosmos® locomotion® 150/50 E med	
h/p/cosmos® locomotion® 150/50 DE med	
h/p/cosmos® locomotion® 190/65 E med	
h/p/cosmos® locomotion® 190/65 DE med	
h/p/cosmos® locomotion® 190/65-3p E med	
h/p/cosmos® locomotion® 190/65-3p DE med	

h/p/cosmos® stratos® lt med	
h/p/cosmos® stratos® med	h/p/cosmos® stratos® lt
h/p/cosmos® mercury® lt med	h/p/cosmos® stratos®
h/p/cosmos® mercury® med	h/p/cosmos® mercury® lt
h/p/cosmos® Kistler Gaitway® II F	h/p/cosmos® mercury®
h/p/cosmos® Kistler Gaitway® II S	

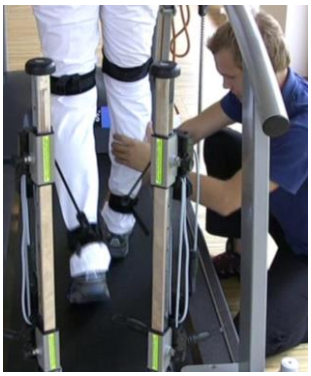
h/p/cosmos® stellar® lt med	
h/p/cosmos® stellar® med	
h/p/cosmos® quasar® lt med	h/p/cosmos® stellar® lt
h/p/cosmos® quasar® med	h/p/cosmos® stellar®
h/p/cosmos® pulsar® lt	h/p/cosmos® quasar® lt
h/p/cosmos® pulsar®	h/p/cosmos® quasar®
h/p/cosmos® pulsar® lt 3p	
h/p/cosmos® pulsar® 3p	

2 Introduction

2.1 Description

The h/p/cosmos robowalk® expander is attached to the h/p/cosmos treadmill. In total it consists of 8 expander cables, 4 in the front, and 4 in the rear. The expander cables are attached to the patient via leg cuffs.

With the h/p/cosmos robowalk® expander you can either support or load the patient.



In manual locomotion therapy the systems assists the therapist in moving the patient's legs rather than moving them only manually. This leads to reduced fatigue in both patient and therapist and will enable extended treatment time leading to more successful therapy. The robowalk® expander is a great help for the especially challenging work with neurological patients.
In order to strengthen specific muscle groups it is also possible to load the patient with the expander cables.
For gait correction the patient may be supported and/or loaded in a way the patient is automatically driven in the right gait pattern.
In manual locomotion therapy the front robowalk® expander system with its traction force support can be compared to a power steering system of a vehicle. The power consuming work and motion is supported by the system, but not fully replacing the human effort.

The h/p/cosmos robowalk® expander is easy to use and therapists will appreciate the simple settings. Forces and angles of tension cables can be set individually via raster holes to match the skills of the patient or the requirements of the therapist. Due to the flexibility of the expander cables, the movement can be set from almost any point in front of or behind the patient. The rear expanders have very different functions and benefits compared to the front expanders. The rear cables do not create traction support like the front cables, but work as a resistance system for muscle training and gait correction. The rear expander cables can even be set outside the width of the treadmill so that adjustments from the side can be made to the patient´s leg positioning.

Since in many cases it is not required that the therapist works permanently hands on 'contact' with the patient, it allows the therapist to observe the movement of the patient and to observe the treatment progress by viewing the patient from different angles.

Once you have found the perfect setting for a patient you will want to use this at the next visit straight away. Each setting is numbered so that the therapists can easily record each patient´s specific setup for future therapy and training sessions.

2.2 Safety equipment

A safety system to prevent from falling must be used when using the h/p/cosmos robowalk® expander. We recommend the h/p/cosmos safety arch with chest belt, rope and automatic stop of the treadmill or an unweighting system that prevents from falling. Alternatively to a safety arch an unweighting system may be utilized as a fall prevention system. We recommend the h/p/cosmos airwalk se 135. The use of the h/p/cosmos robowalk® expander without a fall protection system is strictly prohibited and may lead to accidents and injuries with fatal consequences.

3 Intended and forbidden use

The intended use, discussed in the following, can be performed with any h/p/cosmos robowalk® expander system in combination with an h/p/cosmos treadmill and fall stop prevention or unweighting system.

Always regard the safety istructions of the treadmill, fall stop prevention system and unweighting system.

3.1 Intended use

- Locomotion therapy
- Unloading of patient – supporting gait cycle
- Loading of patient – concrete extra stimulation
- Gait correction
- Gait training

The correct loading form must be prescribed by a medical doctor. The manufacturer cannot make any declaration or recommendation, because the therapy depends on the patient, the clinical picture, the degree of disability and the progress of rehabilitation.

The h/p/cosmos medical equipment may be operated in medical facilities by medical staff only.

3.2 Forbidden use

- The h/p/cosmos robowalk® expander must not be used without a fall prevention system (safety arch / unweighting system).
- Do not modify the system and do not connect to other equipment which is not explicitly declared as compatible by all involved manufactures.
- The system must not be used without carefully trained specialist staff and without the staff having been instructed on the safety regulations.
- The subject must interrupt the training immediately if he/she starts feeling sick or dizzy and should see a doctor.
- Subjects with any kind of physical restriction must see a doctor before using the system and ask for permission.
- Children and animals are not allowed to use the system without a supervisor (medical doctor or therapist) and must not get near to it (4 m safety zone) without a supervisor.
- Other use than the explicitly mentioned intended use.
- In the event of any detected and/or assumed malfunctions and/or defects or unreadable safety warning labels, the device has to be taken out of operation, clearly marked as such and disabled. The supplier and authorized service personnel have to be informed in writing.
- Under no circumstances should a subject/patient or other user be overloaded or overstressed.
- All prohibitions in the chapter entitled "Safety precautions, safety regulations, prohibition and warnings".
- All forbidden uses as stipulated in the treadmill's operation manual also apply.

4 Safety notes, warnings, precautions



4.1 General

Important notes, warnings and precautions are marked with this sign. It also reminds you of concerns which have to be considered for measurements and connection with other devices.

- These directions for use
  - are part of the device and must always be accessible for every user.
  - have to be read carefully before using the device.
  - have to be observed and followed exactly for appropriate operation and safety.
- Any other use than that explicitly listed in the field of application is prohibited.
- All regulations and prohibitions are to be followed.
- The safety notes, warnings and precautions of this device and it's accessory
  - have to be read especially careful before using or maintaining the device.
  - have to be pointed out to every user.
  - have to be displayed within sight of the device.
- Pay special attention to all maintenance and service instructions and the safety notes, warnings and precautions in the service manual (see chapter 7 entitled "Service").
- This device must only be used
  - in medical facilities.
  - under permanent supervision of medical staff.
  - after careful instruction by authorized service personnel.
- All material or parts of this device are to be kept away from children and animals and should neither be drunk nor eaten.
- Safety, reliability, function and accuracy can only be achieved if installation, commissioning, instruction, extension, alteration, recommended preventive maintenance, safety checks and repair are performed by authorized staff.
- In the event that a user connects standard components to support, diagnose or appraise in terms of in-house production according to the MPG (German Medical Devices Act), he creates a system and therefore has to perform and verify a simplified conformity validation process.

Disregard of intended and forbidden use, safety notes, warnings and precautions, unauthorized or lack of maintenance and / or regular safety checks may lead to injuries or even death and / or can damage the device and will result in loss of any liability and warranty.

4.2 Preparation of the patient / user

- It is strongly recommended to consult a doctor before using an exercise device.
- Subjects with a cardiac pacemaker or those who suffer from any kind of physical restriction must see their doctor and get permission before using the exercise device.
- Animals are not allowed to use the running machine and must not go too near (4 m distance).
- It is prohibited to use the device under the influence of alcohol, drugs and/or anaesthetics.
- Training or therapy must always be performed with sports or running shoes (no spikes) and sports clothing. It must never be used with bare feet.
- Harnesses, chest belts, waist belts, patients' vests, forearm arm rests, leash and cuffs are not designed for direct skin or mucous membrane contact.
- For the attachement of the leg cuffs follow the instructions in these directions for use.

4.3 Preparation of the device

- The h/p/cosmos robowalk® expander must not be used without a fall prevention system (safety arch / unweighting system).
- The safety arch with chest belt system must be checked for wear and damage before each use. In particular, the rope, harness and all links such as the snap hook and the rope brake are to be checked.
- All wear and tear parts of the system (expander, rope, harness and all links such as snap hook and rope brake) are to be changed immediately in case of damage.
- Check the expanders before every use optically. In case of any damage the device has to be taken out of function until the expander is replaced.

4.4 During exercise

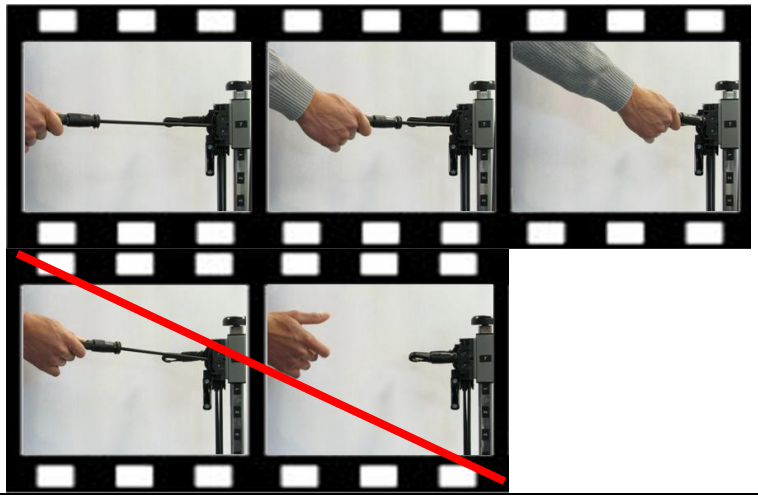
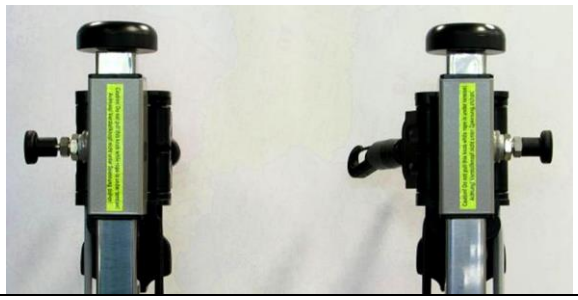
- The h/p/cosmos robowalk® expander must not be used without a fall prevention system (safety arch / unweighting system).
- The h/p/cosmos robowalk® expander must only be used under permanent supervision of medical staff.
- Never set too high loads if the health and the condition of the subject/patient do not permit and a medical doctor has not authorized these loads. Disregard may cause injuries and dangerous health problems or even death. Under no circumstances should the test person/subject/patient be overloaded.
- The subject must interrupt training immediately if he/she starts feeling sick, dizzy or feels pain. The patient should consult his/her doctor in this case.
- The emergency stop of the treadmill must be within reach of the subject and the supervisory staff at all times.
- The emergency stop of the treadmill should only be used in an emergency, especially when there is a danger of falling. It is not to be used as a normal stop key.
- In any case of emergency, e.g. danger of stumbling and/or falling, etc: Grab the front crossbar and/or both side handrails and jump onto the treadmill's foot rails (step platforms) with both feet. Press the emergency stop button of the treadmill immediately!
- Take special care for your fingers around the cable rolls to prevent contusion.
- The subject must be disconnected from the h/p/cosmos robowalk® expander first before it is released from the safety construction.

4.5 Machine care

In case of any detected and/or assumed malfunctions, defects or unreadable safety labels, the device must be left immediately. The device must be marked. The supplier and authorised service personnel are to be informed in writing immediately.

- All wear and tear parts are to be replaced at least every two years or earlier if necessary due to first sign of wear and/or damage.

4.6 Danger zones

No.	Illustration	Description
1.		Illustration shows possible danger zone around the cable rolls. There may be risk of being jammed. Take care for your fingers.
2.		Illustration shows possible danger of expanders. Return expanders slowly. Do not let them shoot back to prevent user and material from damage.
3.		Illustration shows possible danger of pulling knob while expander is under tension. Do not pull the knob while the expander is connected to the patient or in any other way under tension (e.g. pre-tension). Slide will shoot down immediately!
4.		Safety information: “Caution! Do not pull knob while rope is under tension!” (According to point above.)

5 Operation

5.1 Connection to safety arch

No.	Illustration	Description
1.		Put on the chest belt so that the h/p/cosmos logo is at the front. Close the buckle. Attach the carabiner to the vertical belt (1).
2.		Adjust the length of the rope. The rope should be that long, the patient is able to move freely but would not touch the running belt with the knees when falling.
3.		Alternatively to a safety arch an unweighting (BWS Body Weight Support) system may be utilized as a fall prevention system. Picture left: h/p/cosmos airwalk se 135 with locomotion 150/50 DE med treadmill. For the correct adaption to the unweighting system see the correspondig directions for use.

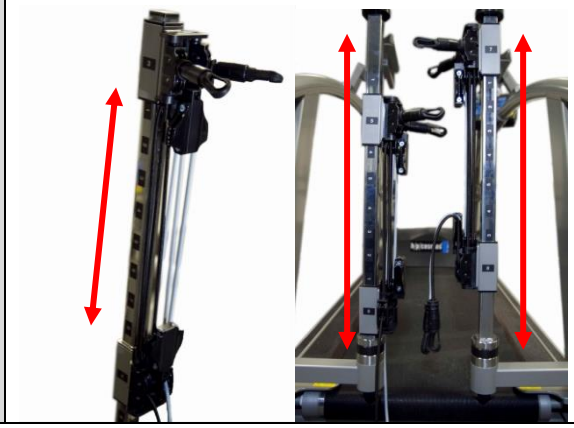
5.2 Attachment of cuffs

No.	Illustration	Description
1.		1.1. There are left and right leg cuffs. A “left/right” sign is at the end of the black band.
2.		2.1. Fix the cuff around the thigh (or ankle) with the h/p/cosmos sign readable. 2.2. The Velcro tape is just for first fixation. It is not sufficient as only fixation!
3.		3.1. For a safe fixation close the buckle and tighten the band by pulling. 3.2. Make sure the grommets head to front and back.

5.3 Setting the load

The expander slides are vertically and horizontally movable. Find the right postion to choose the direction of load for your therapy application.
In order to increase the pulling force, make use of the pretension.

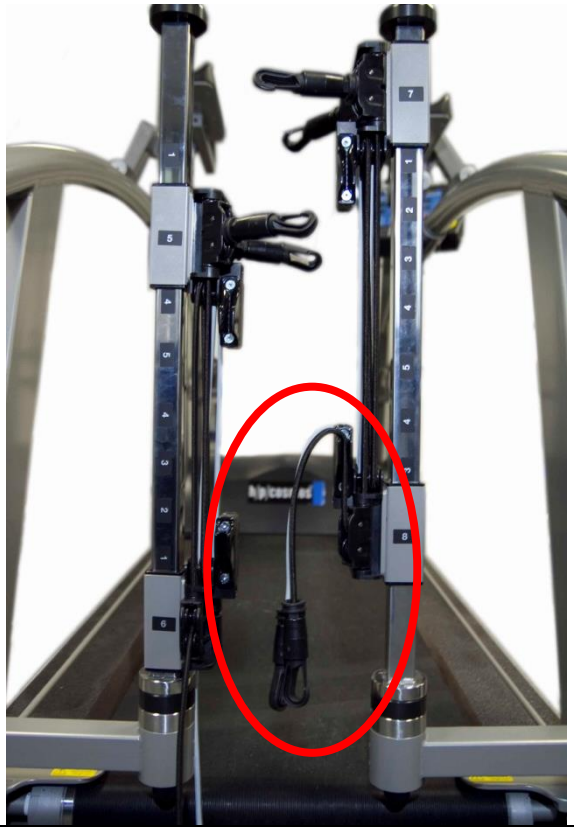
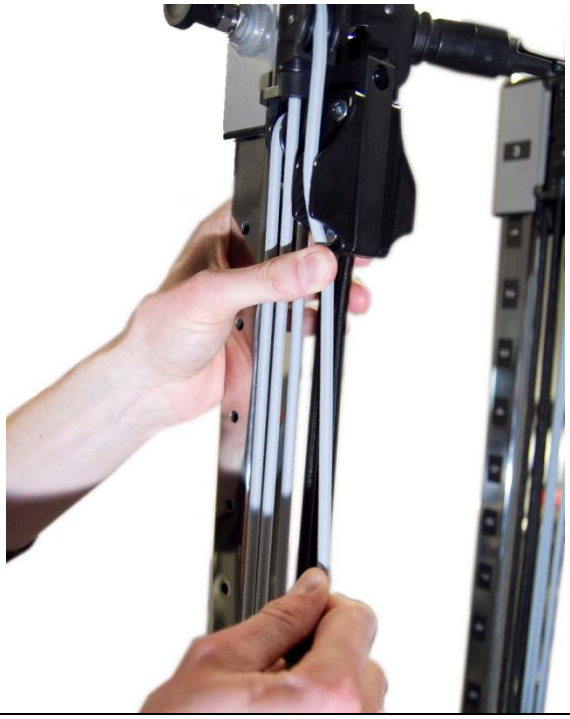
5.3.1 Vertical adjustment

No.	Illustration	Description
1.		1.1. Vertical adjustment 1.1.1. Make sure the expander is not under tension / disconnect patient 1.1.2. Pull knob, move slide to desired position, release knob 1.1.3. Reconnect patient
2.		2.1. Vertical adjustment 2.1.1. Front: scale 1-8, 8-1 2.1.2. Back: scale 1-5-1

5.3.2 Horizontal adjustment

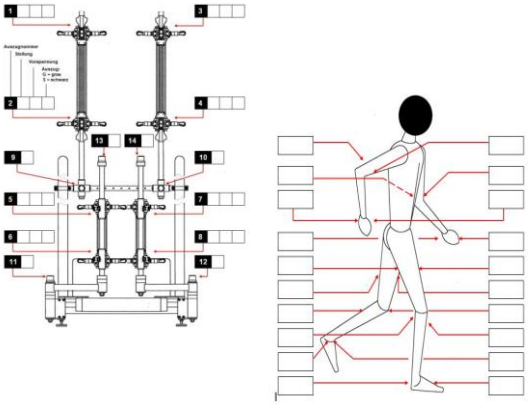
No.	Illustration	Description
1.		1.1. Horizontal adjustment, front 1.1.1. Pull knob, move adapter unit to desired position, release knob
2.		2.1. Rear adjustment unit 2.1.1. Pull knob, move unit to desired position, release knob 2.1.2. Take care for your fingers
3.		3.1. Horizontal adjustments 3.1.1. Front, horizontal slide adjustment 3.1.2. Scale 1-5-1

5.3.3 Pretension

No.	Illustration	Description
1.		1.1. Pre-tension 1.1.1. Shortens expander to increase tension 1.1.2. Take care for well fitting
2.		2.1. Pre-tension 2.1.1. Make sure expander fits and can't remove 2.1.2. The end of the expander must not lay on the running surface

5.3.4 Reproducability

As soon as you have found the right setting for your application use the adjustment table (see appendix) for reproducability.

No.	Illustration	Description
1.		1.1. To obtain reproducibility you have to determine the individually optimal adjustments for each testing person and note it down appropriately (e.g. in a patient file). We have deliberately refrained from giving you standard settings for particular heights, because the adjustment can widely differ according to the posture and the individual situation of the testing person. 1.2. All adjustments can be protocolled and displayed on the adjustment table in the appendix.
2.		2.1. Scaled hooks 2.1.1. Scale 1-5 2.1.2. Must not be pulled further than STOP 2.1.3. No units behind (2 not equal to 2 kg or 2 N or 2...) 2.1.4. May help to compare tension in static state

5.4 Connecting the expander

No.	Illustration	Description
1.		1.1. Make sure the grommets head to front and back. 1.2. Now the expander can be attached by linking the hook to the grommet.

6 Application Examples

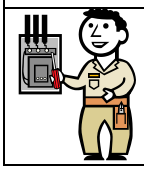
These application examples are part of a Bachelor thesis for medical professions, written in 2012 by Doerthe Beckmann Hemmers at the European Hochschule Nordhessen in Kassel, Germany.

No.	Illustration	Description
1.		**Invigoration of the front thigh musculature:** ▪ Walking forward ▪ Expander tension from dorsal ▪ Leg cuff mounting either on the thigh or foot (the further distal the more muscle activity is required) ▪ Cave: distal tension can have negative effects on patients with back pain as the lever action is too big in case of strength deficits. **Invigoration of the posterior thigh musculature:** ▪ Walking backwards ▪ Tension from ventral ▪ s.a.
2.		**Improvement of the hip joint flexion** ▪ Walking forward ▪ Tension from ventral ▪ Leg cuff mounting: thigh ▪ A diagonal pull has proved to be more optimal since there will be less exercise in abduction, and more in adduction.
3.	**Picture follows in next version**	**Improvement of knee flexion:** ▪ Walking backwards ▪ Tension from dorsal ▪ Leg cuff mounting: foot
4.	**Picture follows in next version**	**Improvement knee extension:** ▪ Walking forward ▪ Pull from ventral ▪ Leg cuff mounting: foot ▪ Pull from ventral- cranial optimal, as more extension is possible in the knee

5.	**Picture follows in next version**	**Improvement of the free leg phase:** ▪ Walking forward ▪ Pull from ventral ▪ Leg cuff mounting possible both in combination thigh and foot/ lower leg as well as solo
6.		**Improvement of the stance phase:** ▪ Walking forward ▪ Pull from dorsal ▪ Leg cuff mounting ideally on the thigh ▪ Here the patient has to work against a resistance and therefore reaches an improved steadfastness in this walking phase
7.		**Improvement of the adduction in the hip joint:** ▪ Walking forward ▪ Pull from dorsal/ lateral ▪ The more distal the leg cuff is placed the more difficult it is for the patient resp. the more strength it takes the patient to get the leg into adduction.
8.	**Picture follows in next version**	**Facilitation of coordination:** ▪ e.g. walking sideways, backwards or forward ▪ Tension according to the requirements of the therapist ▪ Diagonal grasping exercises towards fixed target points

7 Service

Some simple maintenance and monitoring (no repair work!), as described, can easily be done or even have to be done by yourself. All kind of installation and repair work as well as most maintenance work is to be carried out only by trained and authorized technicians who have been certified by h/p/cosmos. The following symbols will indicate which work can be done by the customer and which work has to be done by authorized technicians:

	The customer / user should perform this maintenance and monitoring work. Some safety checks or monitoring (for examples of harnesses and ropes, running belt condition and position, etc.) have to be performed on a daily basis. For this reason it is not practical to contract certified technicians for such tasks. However, where it is practical, all maintenance and monitoring work marked with this symbol can also be performed by certified technicians.
	All installation, maintenance, repairs and monitoring work indicated with this symbol must only be performed by trained, authorized technicians who have been certified by h/p/cosmos. Customers/users must not perform these kinds of tasks.

We recommend calling our competent service team or entering into a maintenance contract for a routine service at an interval of 6 or 12 months for standard machines and standard applications. A form for registration of your institution and device is included in the delivery. In order to be able to supply you with the latest technical information and service, it is important for you to fill out the form. Therefore please fill out the form for registration immediately and send it back.

7.1 Safety notes, warnings, precautions

7.1.1 Room conditions

- h/p/cosmos devices must not be used outdoor and/or in environmental conditions other than those specified in the chapter entitled „technical data“ and “Environmental requirements”.
- The installation room has to meet the requirements of DIN and VDE installation directives.
- Never install the device in a flammable or volatile location. This may cause explosion or fire.
- Never install the device where acid or corrosive gases are present as current leakage or electric shock may result due to corrosion.

7.1.2 Transport and Installation 

- The manufacturer does not assume liability for any damage, complaints or missing parts which are not reported immediately upon delivery on the packing list/delivery note.
- In order to ensure proper installation and safety, the manufacturer, an authorised service crew or an authorised dealer must always transport and install the devices.
- *Failure to comply with the conditions listed in this operation and service manual and listed in the operation and service manuals of other respective devices which may be used in connection with this device, failure of performing recommended maintenance and safety inspection intervals, unauthorized maintenance or amendments of the design and/or performance and/or specifications and/or labelling of the devices shall absolve h/p/cosmos sports & medical gmbh from any responsibility for the safety, reliability and performance of this equipment.*
- All material and all other parts should be kept away from children and animals.
- Do not modify the device and do not connect to other equipment which is not explicitly declared compatible by all involved manufacturers.
- Only connect accessories that are confirmed as compatible by all manufacturers.
- If the device is to be stored unused in an unsupervised area for an extended period, ensure that children do not have access.
- Do not put packing plastic bags, plastic foils or other materials within reach of children as suffocation may result.

7.1.3 Maintenance and safety inspections

- Maintenance and repair of the devices (also opening of the device) have to be performed by service engineers authorized and certified by h/p/cosmos, preferably within the scope of a maintenance contract. The installation by unqualified personnel may cause damages or injury due to a malfunction. Never disassemble, repair, or modify the device yourself.
- In case of any detected and/or assumed malfunction and/or defects and/or unreadable safety labels, the device is to be disengaged immediately. The device is to be marked and secured against operation and the supplier and authorized service personnel has to be informed in writing immediately.
- Before intervention in the device, switch the running machine off and pull the mains plug from the power supply.
- In case of any maintenance work on the treadmill's accessory, ties have to be removed. The tie might be pulled in and the person wearing will be strangled

8 Installation 

8.1.1 Unpacking and packaging

When receiving the device in a crate or unpacked, make sure the device, the accessories and/or the packaging is not damaged. If you discover any damage and/or missing parts make a note on the packing-list / delivery note of the carrier. Inform h/p/cosmos and your dealer immediately in writing about any damage and/or missing parts.

The manufacturer does not assume liability for any damage, complaints or missing parts which are not reported immediately upon delivery on the packing list/delivery note.

Before unpacking the machine and accessories, read the instructions on the crate. Pay special attention to small parts, so that you do not dispose of them or any instructions with the packaging. Within Germany, most devices are delivered and assembled by h/p/cosmos directly or by an authorised forwarder. If delivered by h/p/cosmos, the packaging will be removed and recycled.

If the device is delivered by a carrier, you can recycle the packaging yourself or send it back to the manufacturer (transportation to be paid by the customer).

8.1.2 Transport

The h/p/cosmos robowalk® expander system is usually delivered in two h/p/cosmos standard boxes and with an h/p/cosmos treadmill (see shipment instruction in the treadmill manual).

Some of the components are heavy in weight!
Please notice that the installation must be done by h/p/cosmos authorized technicians.

8.1.3 Storage

Store the devices at a temperature of – 20° ... + 50° C.

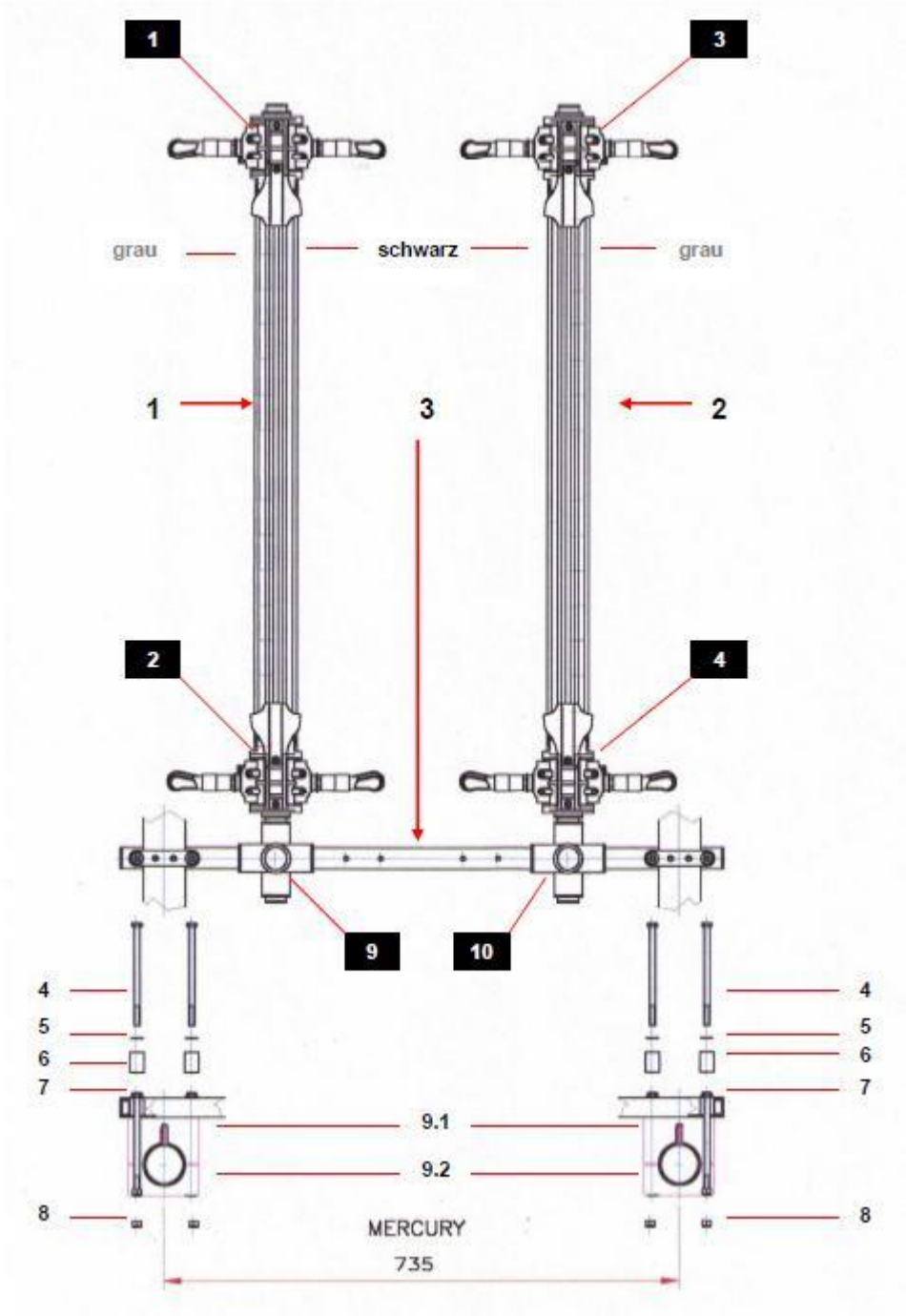
8.1.4 Environmental requirements / room configuration

Running machines are not to be used in medically utilized rooms with a danger of explosions or in easily inflammable atmospheres. The devices must not be installed near to e.g. an x-ray device, motors or transformers with high voltage connection, as the electric and magnetic interference can falsify measurements or even render them impossible. High voltage lines must be avoided nearby the device. h/p/cosmos electrical devices with mains connections must neither be used in wet and humid areas (e.g. swimming pools, saunas, etc.) nor in environmental chambers. If not stated otherwise in the delivery information, h/p/cosmos devices are designed for operation in normal climatic surroundings:

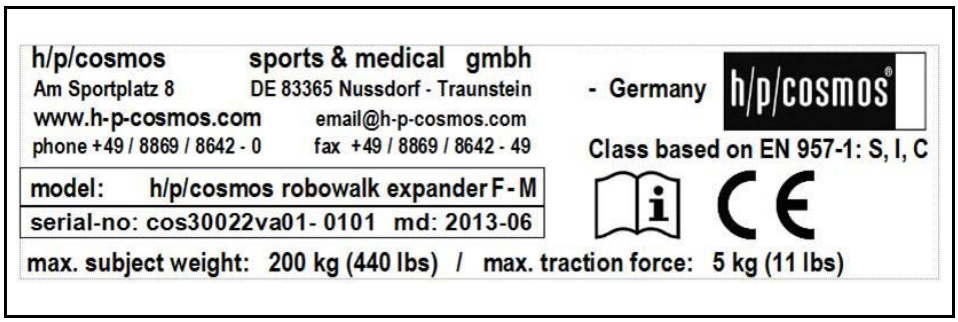
Temperature:	+ 10° ... + 40°C
Relative humidity:	30 ... 70 % (non condensing!)
Air pressure:	700 ... 1060 mbar
Maximum operating altitude:	approx. 10,000 feet (3000 m), without pressurization

The device should be protected from high humidity.

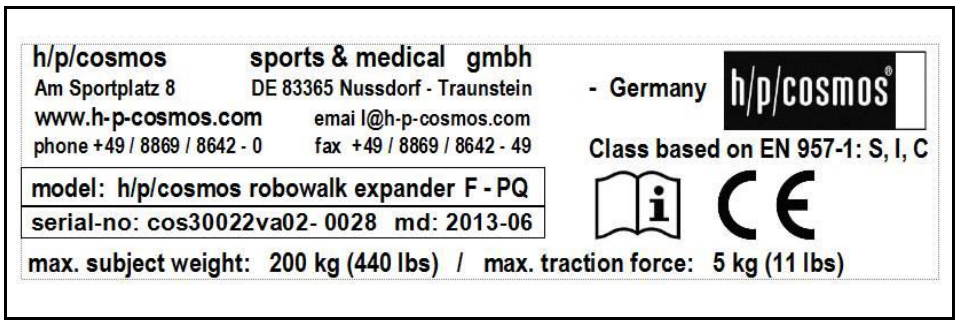
8.2 Installation – Front



8.2.1 Identification of the device



example 1 (front system for treadmill models mercury with running belt width 50 cm):
cos30022va01 h/p/cosmos robowalk® expander F 150/50



example 2 (front system for treadmill models quasar / pulsar with running belt width 65 cm):
cos30022va02 h/p/cosmos robowalk® expander F 170/190-65

8.2.2 Tools and material required

- Instruction manual
- Fork wrench, size 13 mm
- Measuring tape / gauge / air level

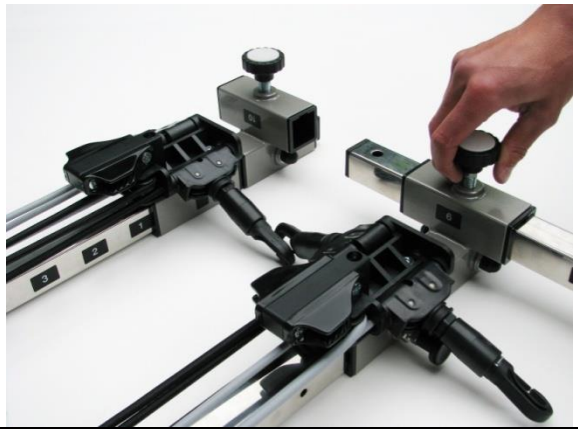
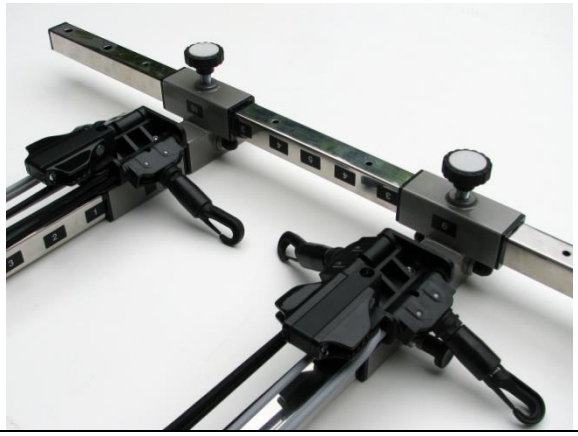
8.2.3 Time / personnel needed

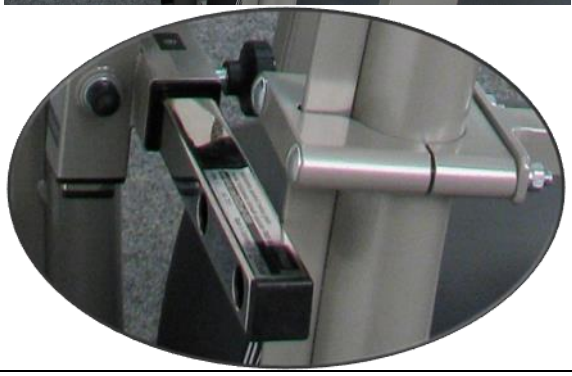
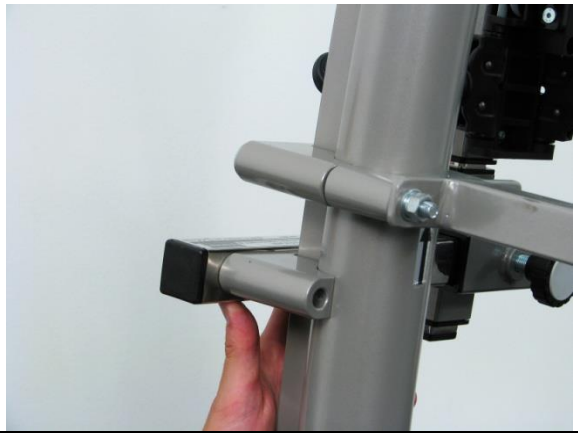
Time needed for the entire assembling, 2 persons, approximately 15 minutes.

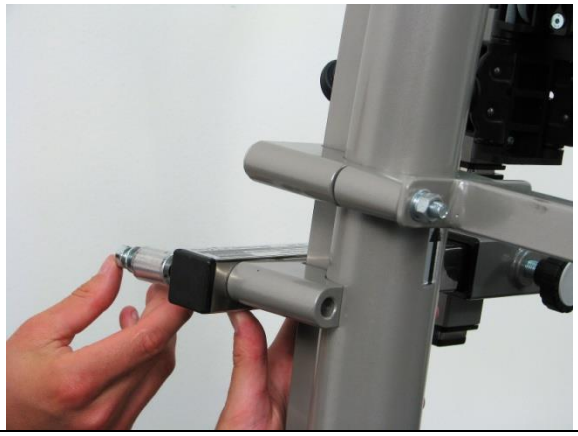
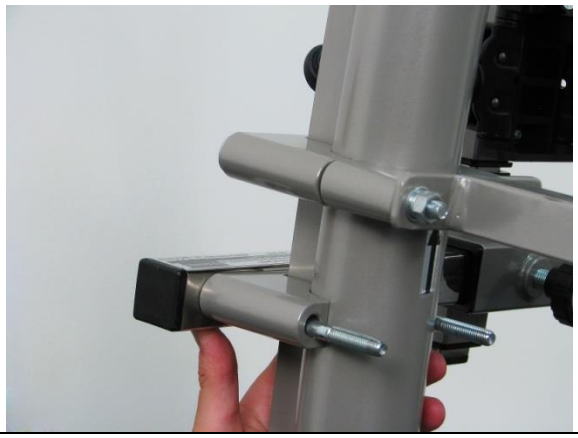
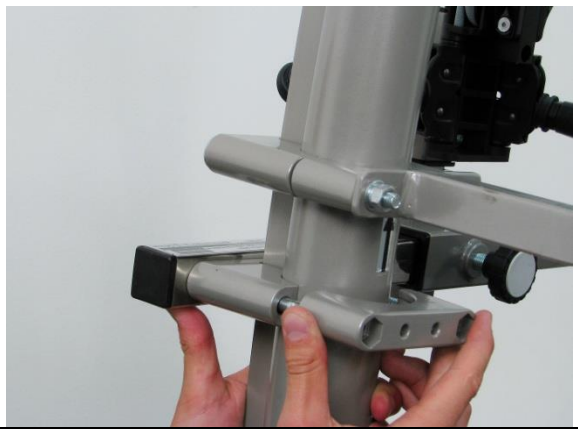
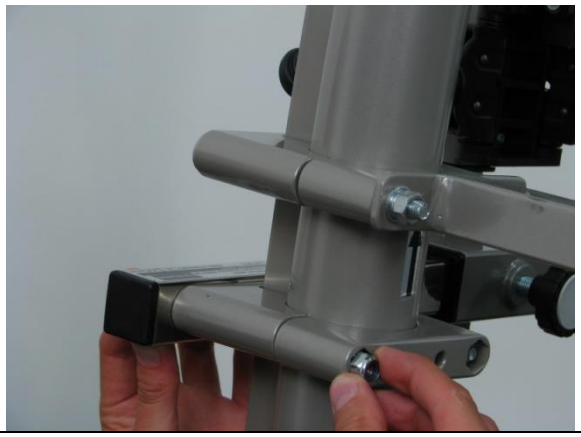
8.2.4 Work preparation

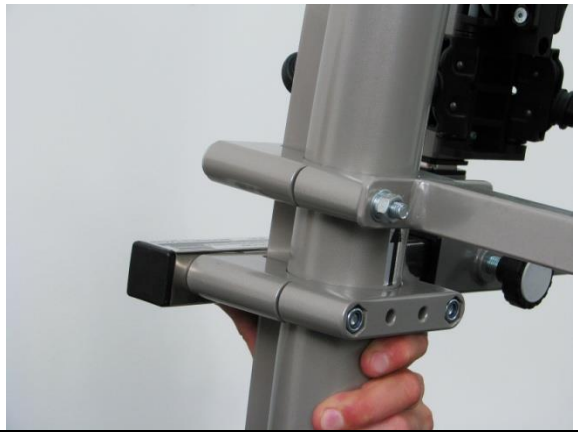
Please check all parts delivered from h/p/cosmos.

8.2.5 Work steps

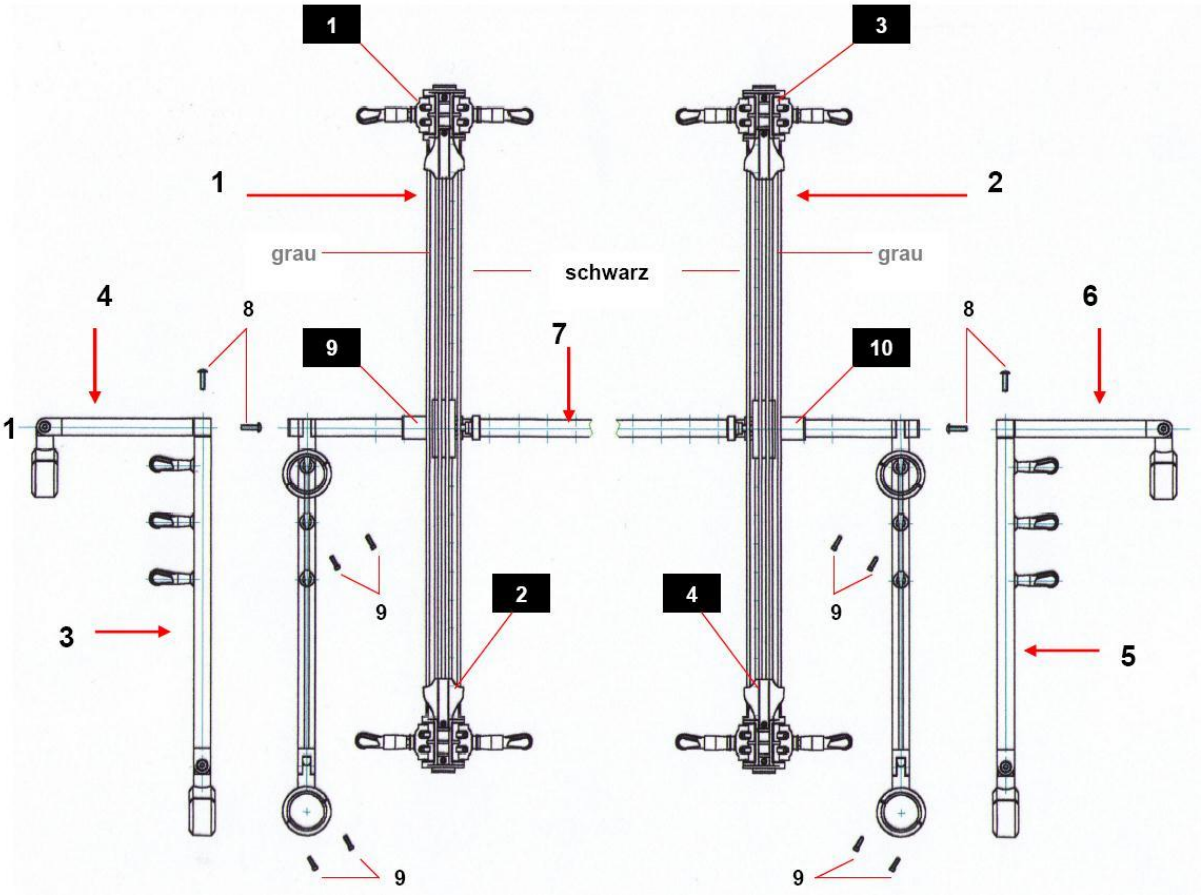
No.	Illustration	Description
1.		1.1. Prepare vertical and horizontal bars for mounting (as shown). 1.2. Take care the grey expanders are located at the outer side. 1.3. The scale of the horizontal bar is only readable head first in this position (see detail view).
2.		2.1. Pull the adjustment screw and bring the horizontal bar in the adapter of the vertical bar.
3.		3.1. Bring the horizontal bar in both adapters of the vertical bars and center them.

4.	 	4.1. The premounted system is held approximately 5cm below the mounting cuffs of the safety arch by a second person.
5.		5.1. Put the upper half cuff (with groove) between the horizontal bar robowalk® and the safety arch.

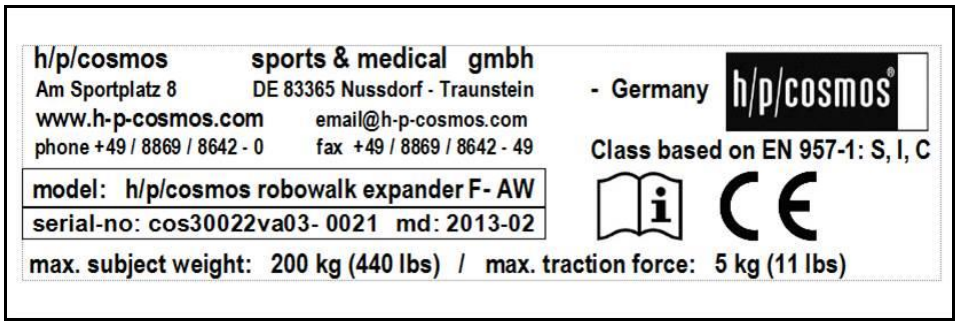
6.		6.1. Put the hex head screw 140mm through the wisher, distance cylinder, horizontal bar and upper half cuff.
7.		7.1. Bing both screws completely in the horizontal bar and upper half cuff.
8.		8.1. Arrange the lower half cuff from treadmill side.
9.		9.1. Put the self locking nut into the lower half cuff.

10.		10.1. Fix the hex head screws manually and adjust the cuff by the lower end of the mounting arrow.
11.		11.1. Pull the screws tight with a fork wrench size 13mm.
12.		12.1. Add the cover caps.
13.		13.1. In case the unweighting system h/p/cosmos airwalk 70 or 160 is used instead of a safety arch, the robowalk system is mounted on the additional mounting-bracket-set (cos101355) as described on the picture left hand side.

8.3 Installation – Front (airwalk se)



8.3.1 Identification of the device



cos30022va03 h/p/cosmos robowalk® expander F airwalk se 135

8.3.2 Tools and material required

- Instruction manual
- Hex head wrench, size 4 mm
- Hex head wrench, size 6 mm

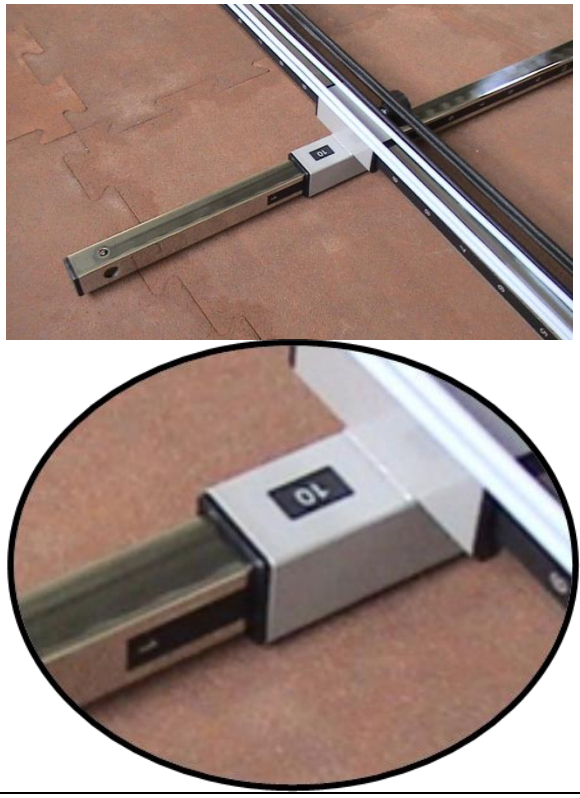
8.3.3 Time / Personnel needed

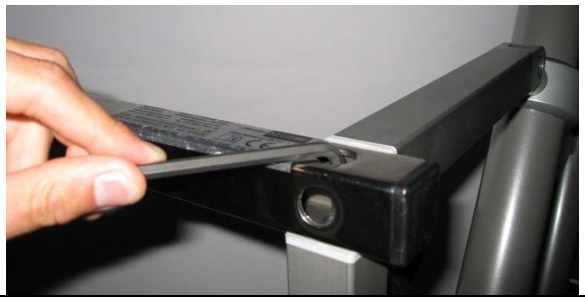
Time needed for the entire assembling, 2 persons, approximately 30 minutes.

8.3.4 Work preparation

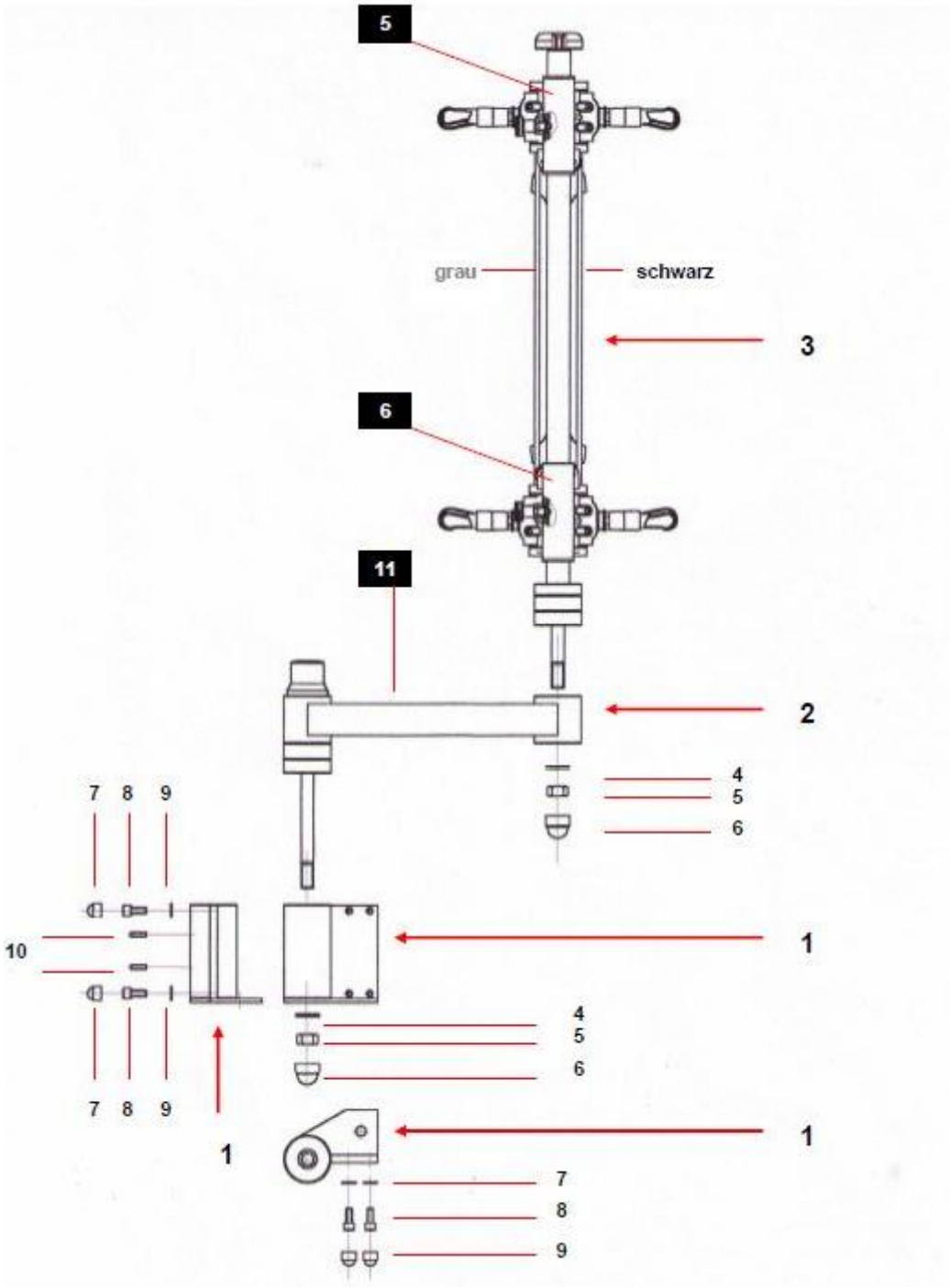
Please check whether all parts are delivered from h/p/cosmos.

8.3.5 Work steps

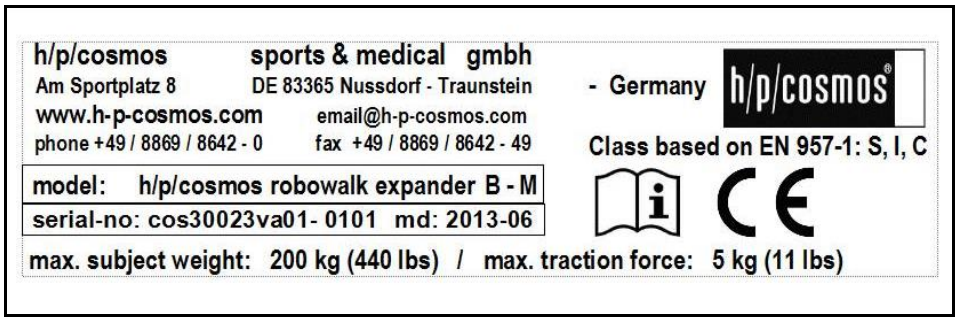
No.	Illustration	Description
1.		1.1. Insert vertical bar into mounting element of vertical bar 1.2. Take care the grey expanders are located at the outer side. 1.3. The scale of the horizontal bar is on top as the vertical bars are in upright position (see detail view).
2.		2.1. Fix the vertical mounting bars to the horizontal bar slightly.
3.		3.1. Fix the horizontal mounting bars to the horizontal bar slightly.

4.		4.1. The robowalk® system should look like this right now. 4.2. Release the fixation screws of the brackets and remove the loose ends (all four of them)
5.		5.1. The system should be placed with the upper brackets just above the airwalk stiffening plates. (as shown) 5.2. While one person is holding the system, fix the loose part of the brackets again.
6.		6.1. As the system is attached to the airwalk, fix the screws of the mounting bars.
7.		7.1. The robowalk® system is now mounted to the h/p/cosmos airwalk se.

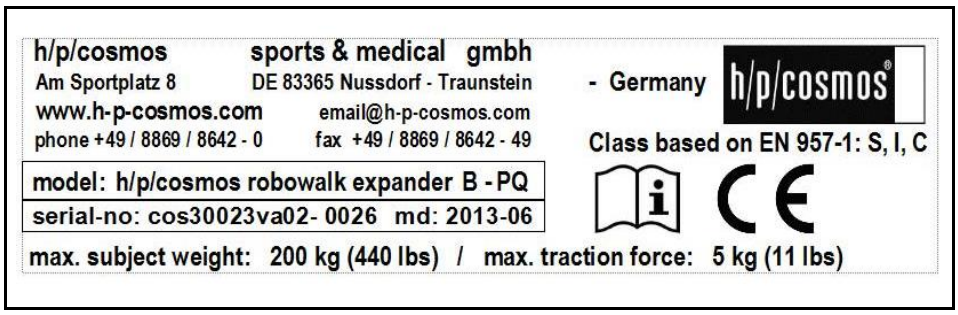
8.4 Installation – Back



8.4.1 Identification of the device



example 1 (back system for treadmill model mercury with running belt width 50 cm):
cos30023va01 h/p/cosmos robowalk® expander B 150/50



example 2 (back system for treadmill models quasar / pulsar with running belt width 65 cm):
cos30023va02 h/p/cosmos robowalk® expander B 170-190/65

8.4.2 Tools and material required

- drawing cos30023 incl. part list
- hex head wrench, size 3 mm
- hex head wrench, size 6 mm
- fork wrench, size 19 mm
- fork wrench, size 24 mm
- bent for lifting up the treadmill
- air level
- grease

8.4.3 Time / Personnel needed

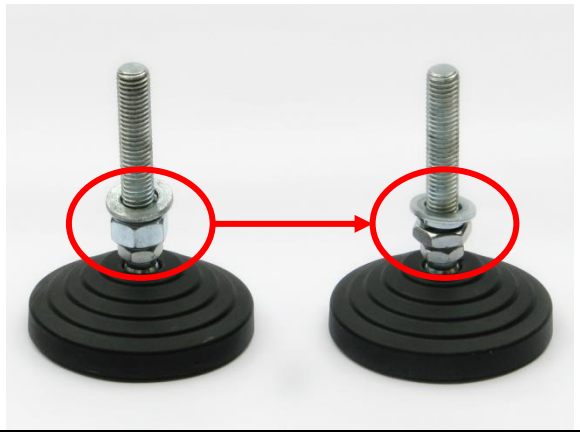
Time needed for the entire assembling, 2 persons, approximately 30 minutes.

8.4.4 Work preparation

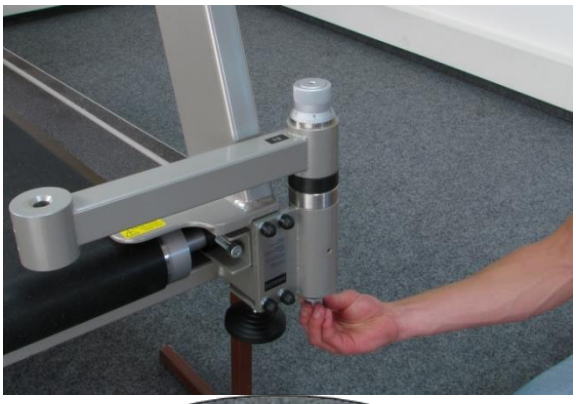
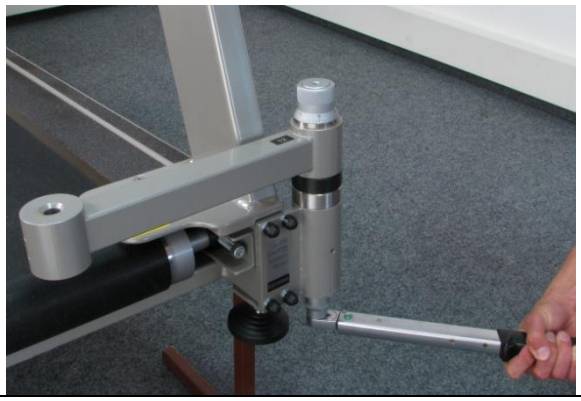
Please check whether all parts are delivered from h/p/cosmos.

8.4.5 Work steps

No.	Illustration	Description
1.		1.1. The installation steps 1 to 6 are only valid for robowalk® devices with manufacturing date before 01/2013. If your device is younger go on with step 7, since the levelling sockets do not need to be removed any more. 1.2. Measure the ceiling height of the room (must be at least 3m) 1.3. Elevate the treadmill up to 10%.
2.		2.1. Lift the back of the treadmill on a stable bent or anything else (load on bent approx. 100 kg / 220 lbs). **CAUTION!** Make sure that the construction undenerath the treadmill for temporarily elevation of the system is very firm and stable and that it does not tilt. Make sure that the safety arch of the device does not hit any ceiling parts and/or lighting systems. Make sure that nobody gets injured during lifting and/or lowering the device and that all worker's safety regulations concerning heavy lifting of parts are followed. Use 4 persons to lift for distributing the weight. Alternatively to lifting the device for a better working ergonomy, the assembling of robowalk can take place without lifting so high, but then the working height is not so convenient.
3.		3.1. Use a slotted screwdriver to remove the cover caps from the back of the treadmill frame.

4.		4.1. Loosen the adjustable feet with a fork wrench size 19mm.
5.		5.1. Unscrew the whole foot.
6.		6.1. In case the treadmill has a running deck size of 150/50, replace the standard nuts (left) with the thinner delivered nuts (right). 6.2. For running deck size 170-190/65 this action is not needed.
7.		7.1. Hold the mounting adapter with one hand on the back of the treadmill frame. 7.2. Screw the adjustable foot through the adapter into the frame. Manufacturing date after 01/2013: 7.3. Foot does not have to be removed. Just loosen the nut and hold the mounting adapter in the right position (picture).

8.		8.1. Screw the foot as far as possible 8.2. The mounting adapter is held by the foot now.
9.		9.1. Take the screws with rings and washers and screw them into the mounting adapter manually. 9.2. **Attention!** In case the h/p/cosmos robowalk® system is attached to an h/p/cosmos locomotion treadmill, the upper screws have to be replaced by lens head screws.
10.		10.1. Tighten the screws.
11.		11.1. Cover the screw heads by the delivered cover caps.

12.		12.1. Lubricate the shaft of the turning unit with some grease to prevent from rust and corrosion. 12.2. Bring the turning unit in the mounting adapter.
13.	 	13.1. Adjust the turning unit parallel to the end of the treadmill. 13.2. Take care the arrest element is in zero position (detail view). 13.3. Fix the turning element with washer and nut manually.
14.		14.1. Tighten the nut with a torque of 200 Nm.

15.		15.1. Bring the vertical bar in the turning unit.
16.		16.1. Fix the vertical bar with washer and nut manually.

17.		17.1. Tighten the nut with a torque of 200 Nm.
18.		18.1. Cover the nuts of the turning unit and vertical bar by the delivered cover caps.
19.		19.1. Remove the bent and put the treadmill back on the floor. 19.2. Adjust the treadmill as described in the treadmills manual. 19.3. Carry out the lifting test as described in the treadmills manual.

8.5 Installation checklist and instruction of the user

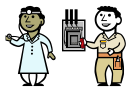
The authorized technician (distributor or service partner) checks whether the installation of the device has been performed properly. Among other things, he ensures that at least the nine points of the following checklist have been performed and/or checked before the customer is introduced to the operation of the h/p/cosmos device. For detailed information and instructions on installation and commissioning please refer to all respective chapters in this manual.
Then, the h/p/cosmos employee / h/p/cosmos partner instructs the user according to the instruction protocol in appendix 2. It is important to include all people in the instruction and commissioning who are going to work with the running machine. After the instruction is completed, the instruction protocol has to be signed by the h/p/cosmos technician and all trained persons and returned, together with the signed delivery note and the registration form, to h/p/cosmos.

No.	Illustration	Description
[01]		Compare the delivery note with the installed device. Are all parts (device, accessories, service box and device folder) complete and without damage? accomplished ❑
[02]		Readjust the treadmill's levelling sockets. accomplished ❑
[03]	**See chapter 8 Installation** 	Make sure the device is installed according to the installation instructions in these directions for use. Pay special attention to: ▮ robowalk® F is aligned horizontally ▮ robowalk® F & B grey expanders on the outside ▮ robowalk® B zero-position adjusted correctly accomplished ❑
[04]		Tighten all fixation screws. accomplished ❑

9 Maintenance and safety inspections

- **Maintenance and repair of the devices are to be performed only by service engineers authorized and certified by h/p/cosmos, preferably within the scope of a maintenance contract.**
- **In case of a detected and/or assumed malfunction and/or defects and/or unreadable safety labels, the device is to be disengaged immediately. Mark the device and ensure that it cannot be operated. Inform the supplier and authorized service personnel in writing immediately.**
- **Disregarding warnings, notifications of intended and forbidden use, precautions as well as unauthorized or lack of maintenance and/or regular safety checks may lead to injuries or death and/or can damage the device. Furthermore it will result in loss of any liability and warranty.**
- **During all maintenance work and safety tests make sure that no third parties are directly or indirectly in contact with the device under test and/or the technician performing the test. Keep a safety zone of 2 m radius clear.**

9.1 Preventive maintenance



The h/p/cosmos authorised service engineers are happy to help you in case problems occur.
Preventive maintenance can prevent future problems and is indispensable for the safety of technical devices. Therefore, ask our service department for an annual preventive maintenance contract, which is highly recommended by the manufacturer. Some basic regular maintenance and regular safety checks as stipulated in the following chapters are obligatory!

Before starting to work with the device, the user always has to check visually:

- expanders
- hooks
- arretierelemente
- labelling
- leg cuffs

9.2 Immediate maintenance

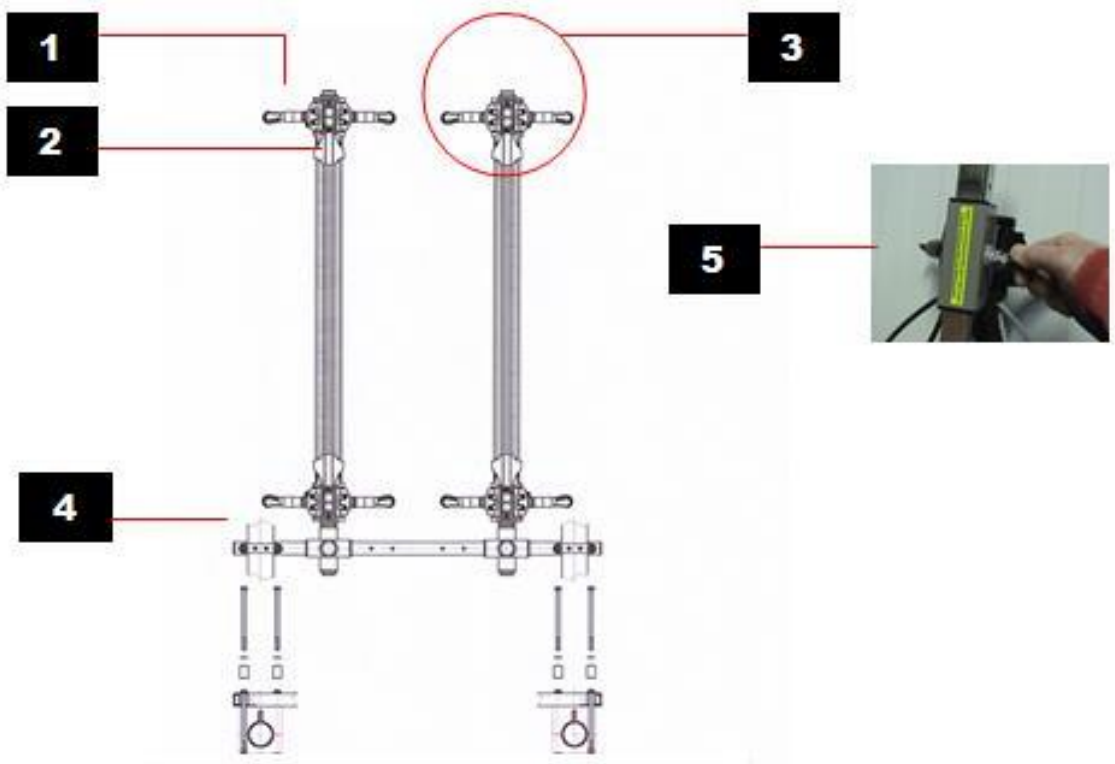
Immediate maintenance is necessary:

- if a defect or malfunction of the device has been detected or is suspected at preventive maintenance
- every 12 months.

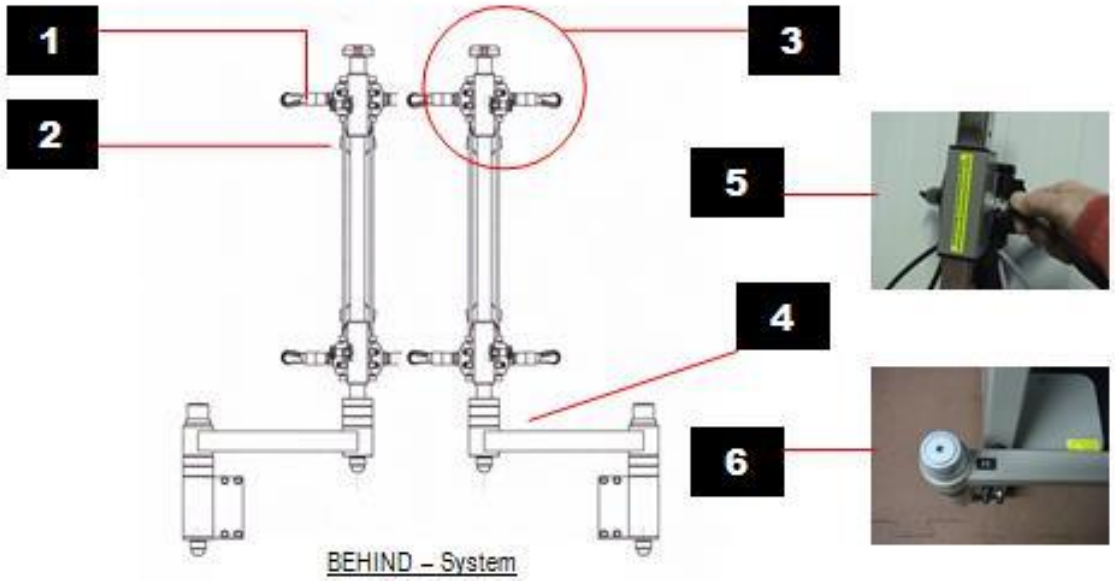
Only a properly and regularly serviced device is safe.

9.3 Maintenance Checklist

1) Check pulling units
2) Check expanders
3) Check roller units
4) Check labelling
5) Check adjustment units
6) Check all units for tight fitting
7) Check leg cuffs

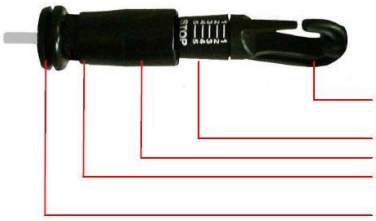


FRONT - System

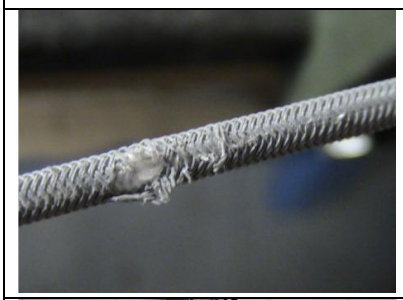
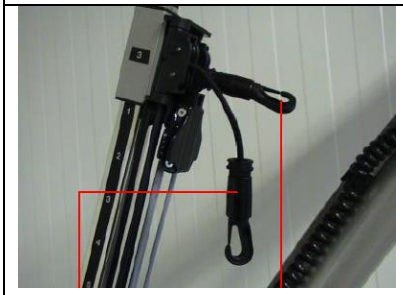


BEHIND – System

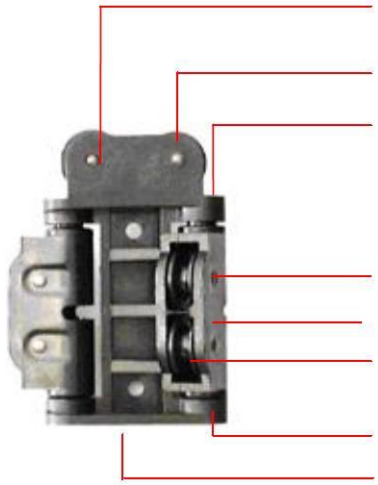
1) Check pulling units

Illustration	Description	Service in case of defect
	Check expander for tight fitting in hook. Pull hook and expander until "STOP" is completely readable. Expander must not loosen.	fix expander again (see chapter 9.4 "Change of expanders and hooks") ☐ expanders fit tightly ☐ expanders fixed
 	Check pulling units for damage hook clamp shell scale adapter fixation adapter damping ring hooks with destroyed lock have to be replaced	replace parts needed ☐ everything ok ☐ parts replaced

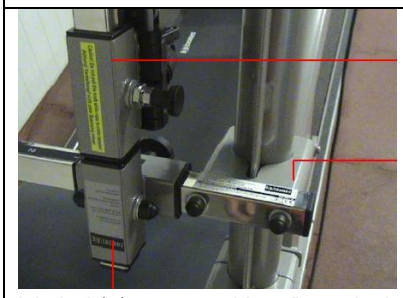
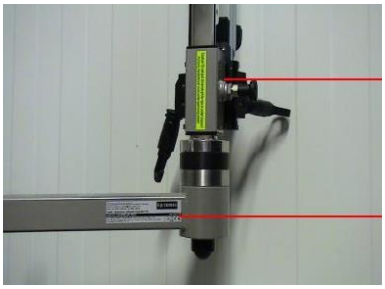
2) Check expanders

Illustration	Description	Service in case of defect
	Check expanders visually Defect coating	replace expanders (see chapter 9.4 "Change of expanders and hooks") ☐ expanders ok ☐ expanders replaced
	Check expanders for defects of inner material. 1. Connect hooks to each other to set expanders under tension 2. Check expanders manually for swellings / thinnings	replace expanders (see chapter 9.4 "Change of expanders and hooks") ☐ everything ok ☐ parts replaced
 worn new	Replace worn expanders. Expanders hanging out of the pulling unit for more than 8cm are worn and have to be replaced.	replace expanders (see chapter 9.4 "Change of expanders and hooks") ☐ expanders ok ☐ expanders replaced

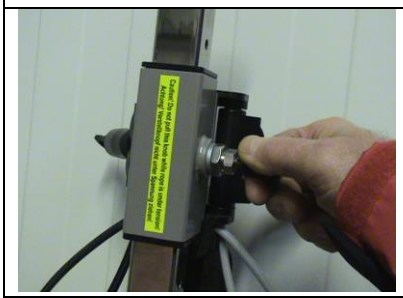
3) Check roller units

Illustration	Description	Service in case of defect
	cylinder pin expander roll roller block bearing cylinder pin roller block roller roller block bearing roller block mount 1. Check platic parts for mechanical defects 2. Check cyclinder pins for tight fitting	replace total roller units ☐ no defects ☐ roller units replaced
	3. roller blocks move freely	
	4. rollers move freely	

4) Check labelling

Illustration	Description	Service in case of defect
 label “h/p/cosmos address” on both adapter units	warning label on each pulling unit serial number plate	replace total roller units ☐ All labels present and readable ☐ Missing labels replaced
	warning label on each pulling unit serial number plate	
	label “h/p/cosmos address” on both mounting adapters	

5) Check adjustment units

Illustration	Description	Service in case of defect
	1. open locking pin 2. move adjustment unit 3. release locking pin 4. move adjustment unit until pin locks in place	replace locking pin ☐ locking pin works correctly ☐ replace locking pin

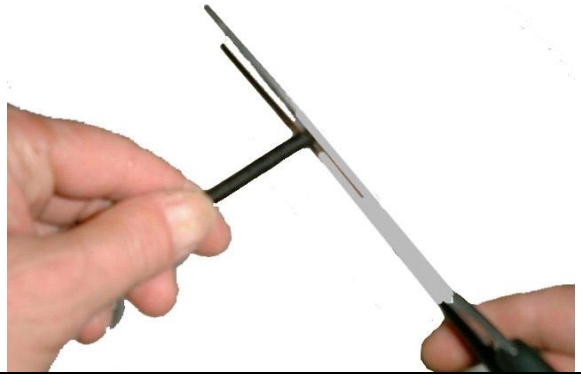
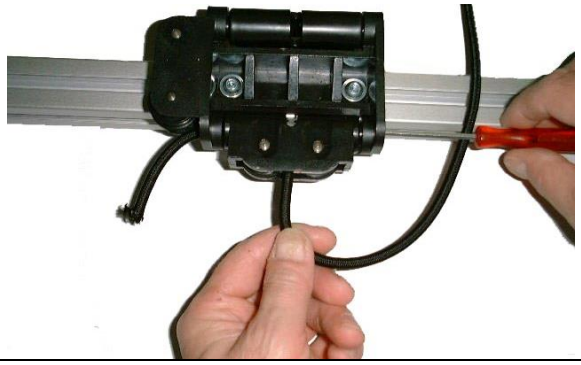
6) Check all units for tight fitting

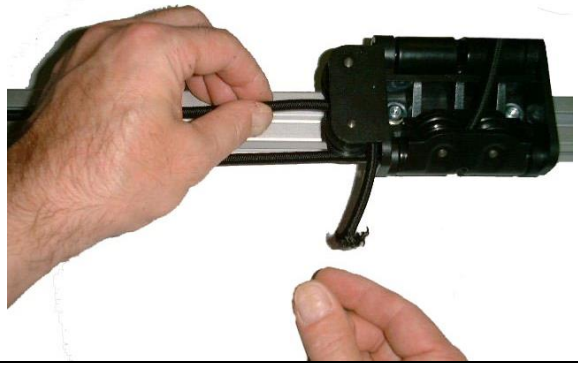
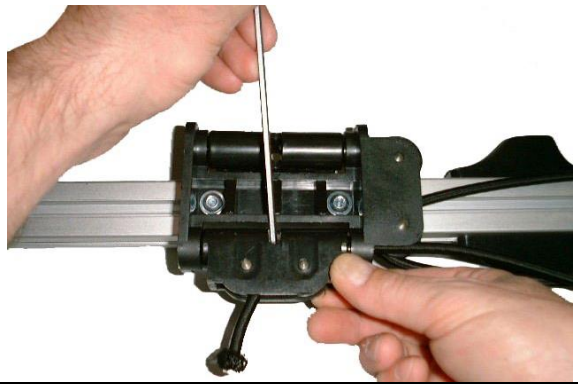
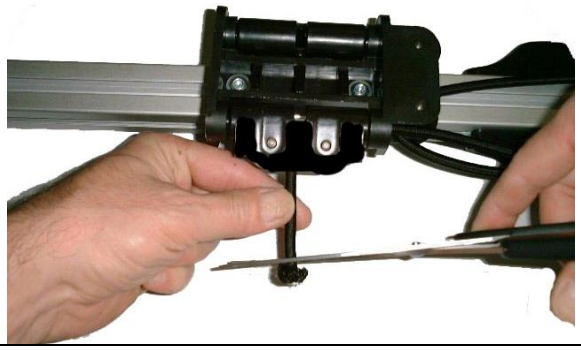
Illustration	Description	Service in case of defect
	Check each screw for tight fitting. Check rear system with special care. System must not be turnable if locked.	tighten loose screws ☐ Every connecting fits well ☐ Screws tightened.

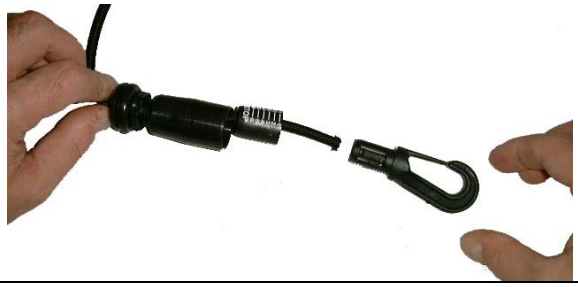
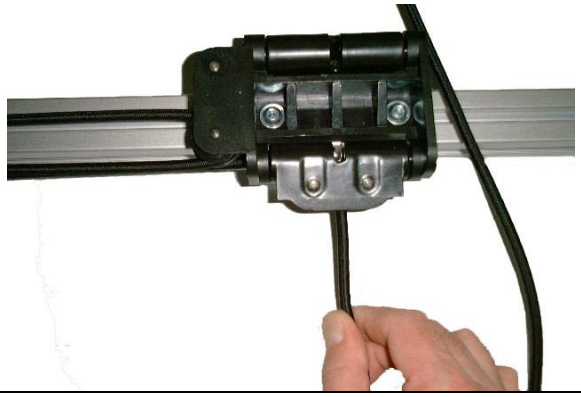
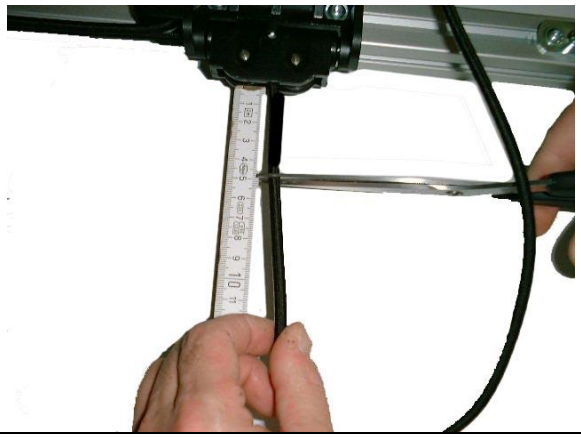
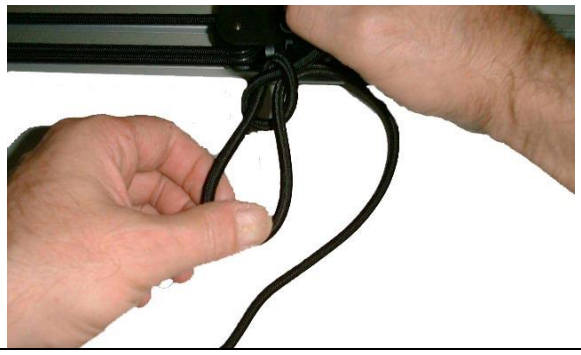
7) Check leg cuffs

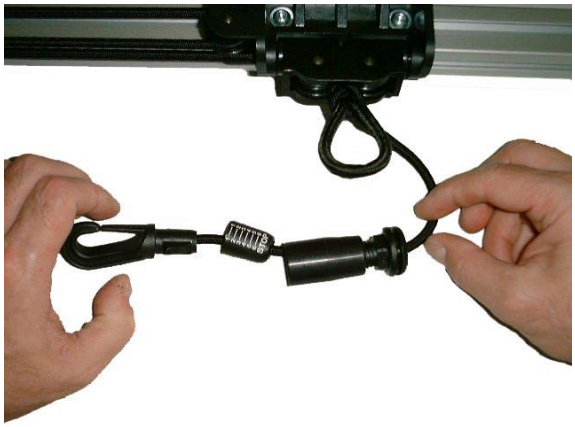
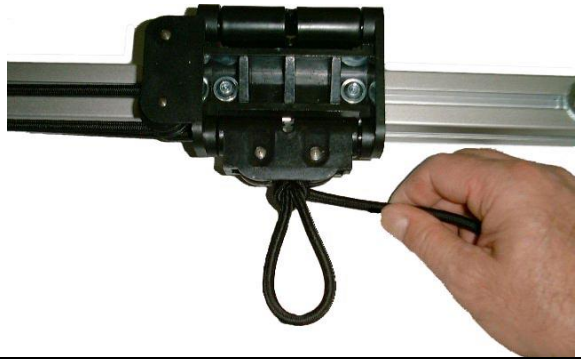
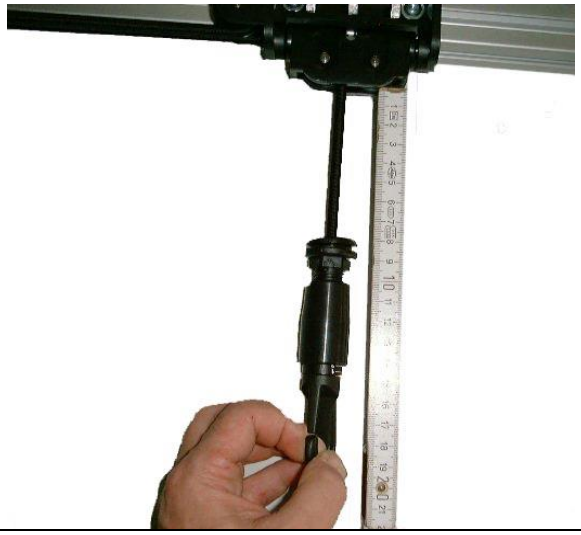
Illustration	Description	Service in case of defect
 **cos101051-XS**  **cos101050-S**  **cos101050-M**  **cos101050-L**  **cos101052**	Included: (1 pair = 1 left and 1 right) 1x cos101051-XS leg cuff shank (size XS / black) 1x cos101050-M leg cuff thigh (size M / blue) Further cuffs with following specifications are available: (1 pair = 1 left and 1 right) cos101050-S thigh cuff (size S / red) cos101050-L thigh cuff (size L / yellow) cos101052 foot lifter rubber belt (one size)	replace missing or worn leg cuffs ☐ Cuffs present and in correct condition ☐ Cuffs replaced

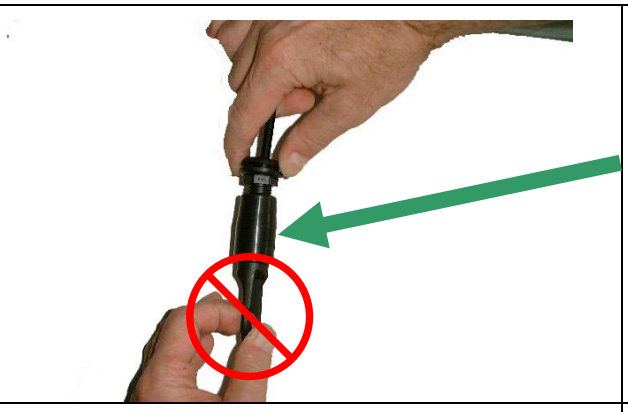
9.4 Change of expanders and hooks

No.	Illustration	Description
1.		1.1. Material needed 1.1.1. Expander 1.1.2. Scissors 1.1.3. Stick (about 3mm diameter) 1.1.4. Fork wrench, size19 1.1.5. 2x Damping ring 1.1.6. 2x scale adapter 1.1.7. 2x clamping cover with scale 1.1.8. 2x hook
2.		2.1. You don't need to cut the whole expander into pieces 2.2. Just cut off the very first part of the expander
3.		3.1. Put the expander between the rolls as shown 3.2. Take the stick to push it out at the lower end.
4.		4.1. Pull the expander to the lower roller unit. 4.2. Pull it from out- to inside through the roller block.

5.		5.1. Move the expander to the upper roller unit again. 5.2. Push it from in- to outside through the roller block.
6.		6.1. Remove expander to the lower cable unit. 6.2. Push it back in the lower roller unit.
7.		7.1. Take the stick to move it out between the rolls.
8.		8.1. Cut off the end of the expander
9.		9.1. Move the expander through the new damping ring and scale adapter. 9.2. Move the clamping cover with scale over the expander.

10.		10.1. Move the expander into the hook. 10.2. In the case the expander frazzled, cut off the end again.
11.		11.1. Move the clamping cover over the hook
12.		12.1. Take the other end of the expander (without hook yet). 12.2. Pull it out until it is lightly tensioned. 12.3. Expanders should be parallel now.
13.		13.1. Cut it off 5 cm from the rollers.
14.		14.1. Pull it out (about 50cm) and make a loose noose. 14.2. The noose should be openable just by pulling.

15.		15.1. Carry out steps 9 to 11 again.
16.		16.1. Push the single pieces together. 16.2. Do not screw them yet.
17.		17.1. Release the noose.
18.		18.1. Because of the different expander forces and lengths, there are different adjustment parameters. The pull out lengths are as follows: For the grey expander on pull out 1, 2, 3, 4 = 18 cm For the black expander on pull out 1, 2, 3, 4 = 32 cm For the grey expander on pull out 5, 6, 7, 8 = 12 cm For the black expander on pull out 5, 6, 7, 8 = 22 cm

19.		19.1. Turn the mounting adapter into the scale adapter (lightly by hand). 19.2. Take care to hold the scale adapter (not the hook.
20.		20.1. Use the fork wrench to turn in the mounting adapter completely. 20.2. Take care to hold the scale adapter (not the hook.
21.		21.1. Control of adjustment 21.2. Make sure the scale is not visible in mounted condition (not as shown on the illustration). In this case remove the mounting adapter and repeat steps 19-21. 21.3. Finally remove the damping ring from the mounting adapter until the thread is visible, put a drop of glue on the thread and pull the damping ring back in its initial position.

9.5 Regular inspections / examinations

For use in sports and medical fields as well as for private, public and military applications, refer to the date on the inspection sticker on your device.

To keep the condition of the device in due order, examinations have to be performed regularly according to the local laws and requirements of your country (e.g. in Germany based on BGV A3, regulations for prevention of accidents as well as safety requirement inspections in accordance with MDD Medical Device Directive, etc.).

For h/p/cosmos sports and medical running machines, a maintenance interval respectively technical safety checks of one year have been set. These examinations are only to be performed by trained and authorized electricians.

The main inspection sticker on the device (e.g. running machine) also certifies the inspection of the optional equipment and the accessories. However, inspection intervals for optional equipment and accessories (e.g. rope of h/p/cosmos airwalk unweighting system, chest belt for safety harness, compressors, etc.) may deviate significantly from inspection intervals of the main device. Read the manuals for details.

For all required measurements and control steps consider also local requirements of your country and see detailed instruction and protocol form order no. [cos11690xx].

9.6 Hygiene and cleansing

Pay attention to the safety notes, warnings and precautions of the running machine, the accessories and the disinfectant.

The h/p/cosmos devices are neither sterile nor can they be sterilized.

The surfaces of the device can be cleaned with a light moistened cloth. For disinfection h/p/cosmos recommends **Bacillol plus** which can be ordered from h/p/cosmos, order number **[cos12179]**. Before use of cleaning and disinfection substances, always test the compatibility of the substance at poorly visible places.
In the event that patients with communicable diseases use the device, the device must be disinfected at the discretion of the doctor or medical stuff after the treatment. This must also be done when a communicable disease is merely presumed. This covers all parts the patient may have contacted.

Cleansing of outside and applied parts
Spray contact surfaces, impact, wipe and rub off. Spray disinfectant onto a tissue and rub clean any surfaces that may be contaminated.
Always follow the manual of the disinfectant manufacturer, especially the safety warning and regulations regarding disposal.

9.7 Spare parts & consumables

order number	description
cos101045	pulling rope grey by meter, robowalk exp
cos101044	pulling rope black by meter, robowalk exp
cos12736-01a	plastic hook with scale
cos101024	bearing bushing horizontal, robowalk F
cos101003	Clam Cleat Holder, robowalk Exp.
cos101004	Clam Cleat, robowalk Exp.
cos101005	adjustm. unit locking pin, robowalk Exp.
cos101073	cylinder head srew M 8 x 30 A2K GEFU 2
cos13158	cover cap hexagon head screw M 10
cos101031	plastic cap M 16

10 Technical data

10.1 h/p/cosmos robowalk® expander

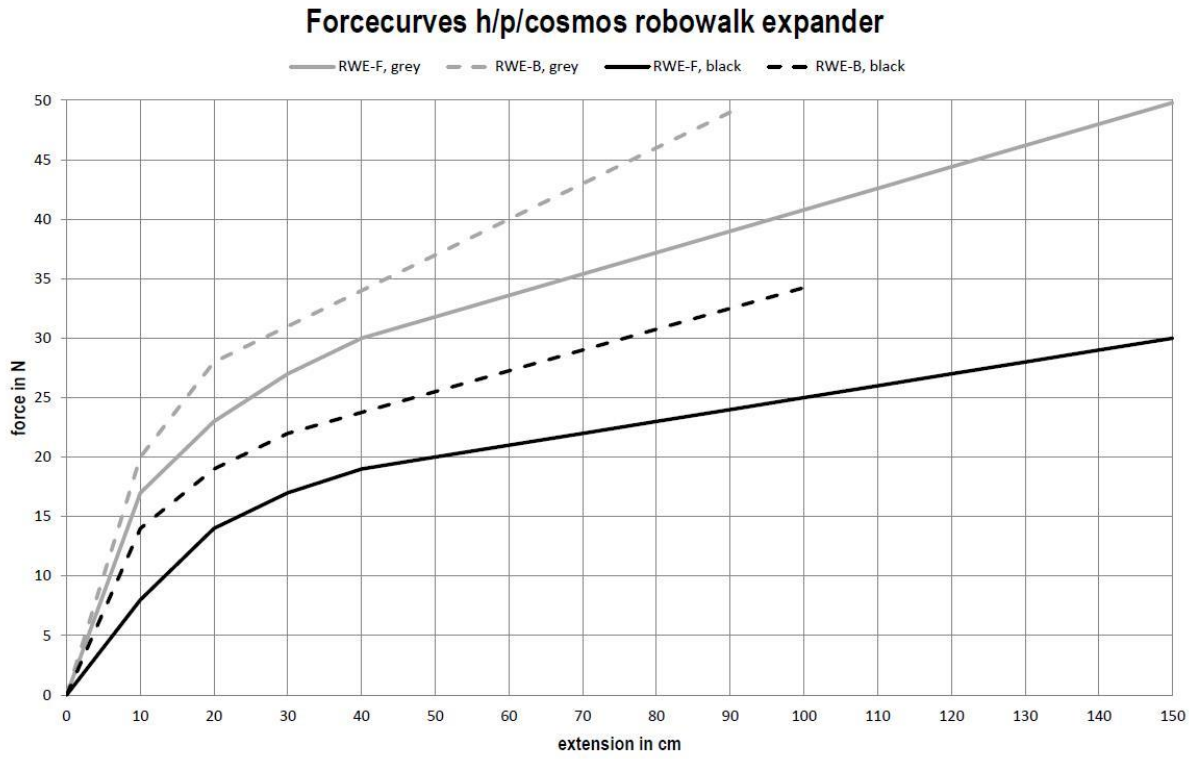
 robowalk® expander	h/p/cosmos robowalk® expander F-M	h/p/cosmos robowalk® expander B-M	h/p/cosmos robowalk® expander F-QP	h/p/cosmos robowalk® expander B-QP	h/p/cosmos robowalk® expander AW
compatible devices	h/p/cosmos mercury h/p/cosmos locomotion		h/p/cosmos quasar h/p/cosmos pulsar		h/p/cosmos airwalk se
measures W x H x D (packed)	20 x 20 x 120 cm	20 x 30 x 120 cm	20 x 20 x 120 cm	20 x 30 x 120 cm	20 x 20 x 170 cm
measures W x H x D (mounted)	115 x 90 x 10 cm	100 x 100 x 10 cm	115 x 115 x 10 cm	120 x 100 x 10 cm	165 x 125 x 10 cm
minimum additional length	-	5 cm	-	5 cm	-
maximum additional length	-	35 cm	-	50 cm	-
minimum width (mounted)	-	100 cm	-	120 cm	-
maximum width (mounted)	-	160 cm	-	210 cm	-
weight	15 kg	30 kg	15 kg	35 kg	20 kg
design	grey aluminium RAL9007, powder coated				
Safety standards	CE MDD, directive 93/42/EEC + 2007/47/EC, EN 957-1, EN 957-6				
Field of application / accuracy	sports and medical: S,I,C (EN 957)				
Classification according to MDD	passive therapeutic device, risk class I				
Environmental conditions: Transport and storage	temperature: –30...+50 °C, humidity: 0...95 % - without condensation barometric pressure: 700...1060 hPa				
Environmental conditions: Operation	temperature: +10...+40 °C (deviation on request), humidity: 30...70% - without condensation (up to 95% on request), barometric pressure: 700...1060 hPa Maximum operating altitude: approx. 10,000 feet (3000m), without pressurization				

Ask for further details and optional equipment or visit www.h-p-cosmos.com. Subject to technical alterations without prior notice.

10.2 Economic life time

The economic life time of the h/p/cosmos robowalk® expander system is determined at common usage and application to 10 years. Every maintenance and repair work needs to be carried out by authorized h/p/cosmos technicians. For expendable parts a shorter life-time is due.

10.3 Force curves



11 Disposal

Upon request and at the expense of the client, h/p/cosmos might take over the disposal of old or defective devices. Please contact service@h-p-cosmos.com for a detailed offer. Note the information for possible disposal of the running machine parts or components through the client or a subcontractor.
The disposal of the device should be accomplished by appropriate personnel.

Disassemble and cut up
Use personal protective equipment when cutting up material of any kind with the appropriate tools (eye-protection, dust-mask, etc.). Contact service@h-p-cosmos.com to receive the safety data sheet of the European Commission Directive 91/155/EEC.

h/p/cosmos devices
h/p/cosmos devices consist of powder-coated and galvanized metals from different producers and qualities, stainless steel parts, aluminum parts, plastics, rubber, electronics with cables, boards and condensers as well as batteries. These materials can be recycled by bringing them to the official municipal valuable substance depot or to authorized disposal partners of valuable substance disposal. Pay attention to the regulations of the disposal company.

12 Appendix 1: Certificates

Latest versions always: http://www.h-p-cosmos.com/en/company/certificates.htm

12.1 Certificate of the TSA (TÜV) according to ISO 9001

TÜV SÜD Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

h/p/cosmos sports & medical gmbh
Am Sportplatz 8, 83365 Nußdorf
Germany

has established and applies
a Quality Management System for

Design and development, production, distribution and service of treadmill ergometers, ergometers, diagnosis, therapy and training systems, unweighting (body weight support) devices, motion therapy devices

An audit was performed, Report No. **70078857**

Proof has been furnished that the requirements according to

ISO 9001:2008

are fulfilled. The certificate is valid from **2013-12-01** until **2016-11-30**.

Certificate Registration No. **12 100 24355 TMS**

Product Compliance Management
Munich, 2013-10-28

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-03

MS01-07/10

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstraße 65 • 80339 München • Germany TÜV®

12.2 Certificate of the TSA (TÜV) according to EN ISO 13485

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE

No. Q1N 13 09 45283 011

Holder of Certificate: **h/p/cosmos sports & medical gmbh**
Am Sportplatz 8
83365 Nussdorf - Traunstein
GERMANY

Certification Mark:

Scope of Certificate: **Design and development, production, distribution and service of treadmill ergometers, ergometers, diagnosis and therapy systems**

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality system which meets the requirements of the listed standard(s). See also notes overleaf.

Report No.: 713028751

Valid from: 2013-12-01
Valid until: 2016-11-30

594557

Date, 2013-11-06

Hans-Heiner Junker

Page 1 of 2

DAkkS Deutsche Akkreditierungsstelle D-ZE-11321-01-00

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

DAkkS CRT3 / 10.13

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE
No. Q1N 13 09 45283 011

Applied Standard(s): EN ISO 13485:2012/AC:2012
Medizinprodukte – Qualitätsmanagementsysteme – Anforderungen für regulatorische Zwecke
Medical Devices – Quality Management Systems – Requirements for regulatory purposes

Facility(ies): h/p/cosmos sports & medical gmbh
Am Sportplatz 8, 83365 Nussdorf - Traunstein, GERMANY

DAkkS Deutsche Akkreditierungsstelle D-ZE-11321-01-00

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

TÜV®

DAkkS CRT3 / 10.13

h/p/cosmos

13 Appendix 2: Protocols

13.1 Adjustment table

For a successful therapy it is necessary to get reproducible data of the patient's progress (or regress). Therefore the h/p/cosmos robowalk® expander allows you to note any parameter you set for your patient.

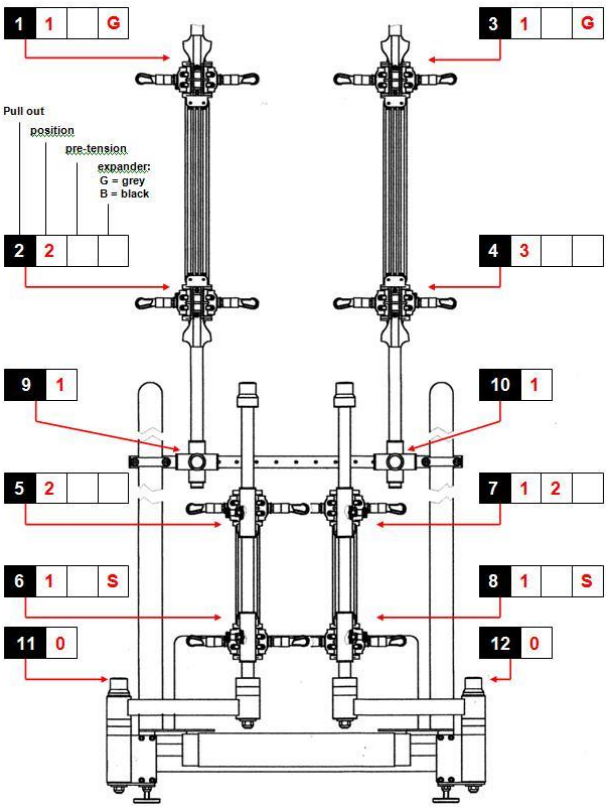
Use the following adjustment table from the first treatment on, to facilitate your daily work. Maybe the first settings will cost some more time until you found the right parameters for each patient, but later on you will have the data on your sheet and setting becomes much faster.

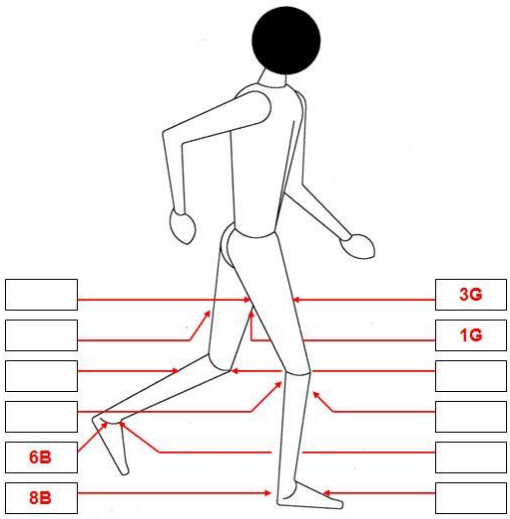
The adjustment table allows you to:

- confer the settings from one day to the next.
- confer the settings from one patient to the next.
- document the training / therapy without interruption

In the following you will get an introduction in the way of documentation for the h/p/cosmos robowalk® expander system by some examples.

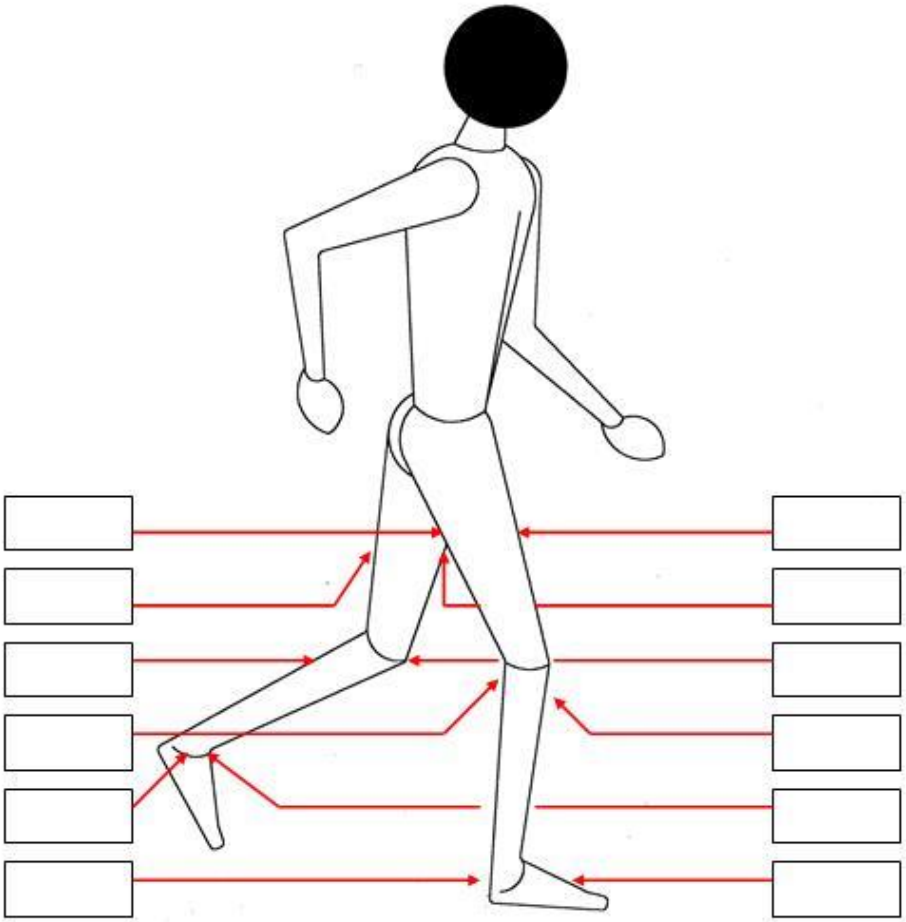
1. Right ankle on expander 8, position 1, black expander. Pull out 7 is also on position 1 and increases the power by pretension 2 (expander is pulled out until scale shows a pretension of 2, than it is fixed in the clam cleats).
2. Left ankle on expander 6, position 1, black expander. Pull out 5 is on position 2 to decline the pulling force.
3. The arrest elements are on position 0 at the moment.
4. Right upper leg on expander 3, position1, grey expander. Pull out 4 is on position 3 to decline the pulling force.
5. Left upper leg on expander 1, position 1, grey expander. Pull out 2 is on position 2 to decline the pulling force.
6. Paul Patient trained with a treadmill velocity of 2 km/h with 0% elevation for 10 minutes.





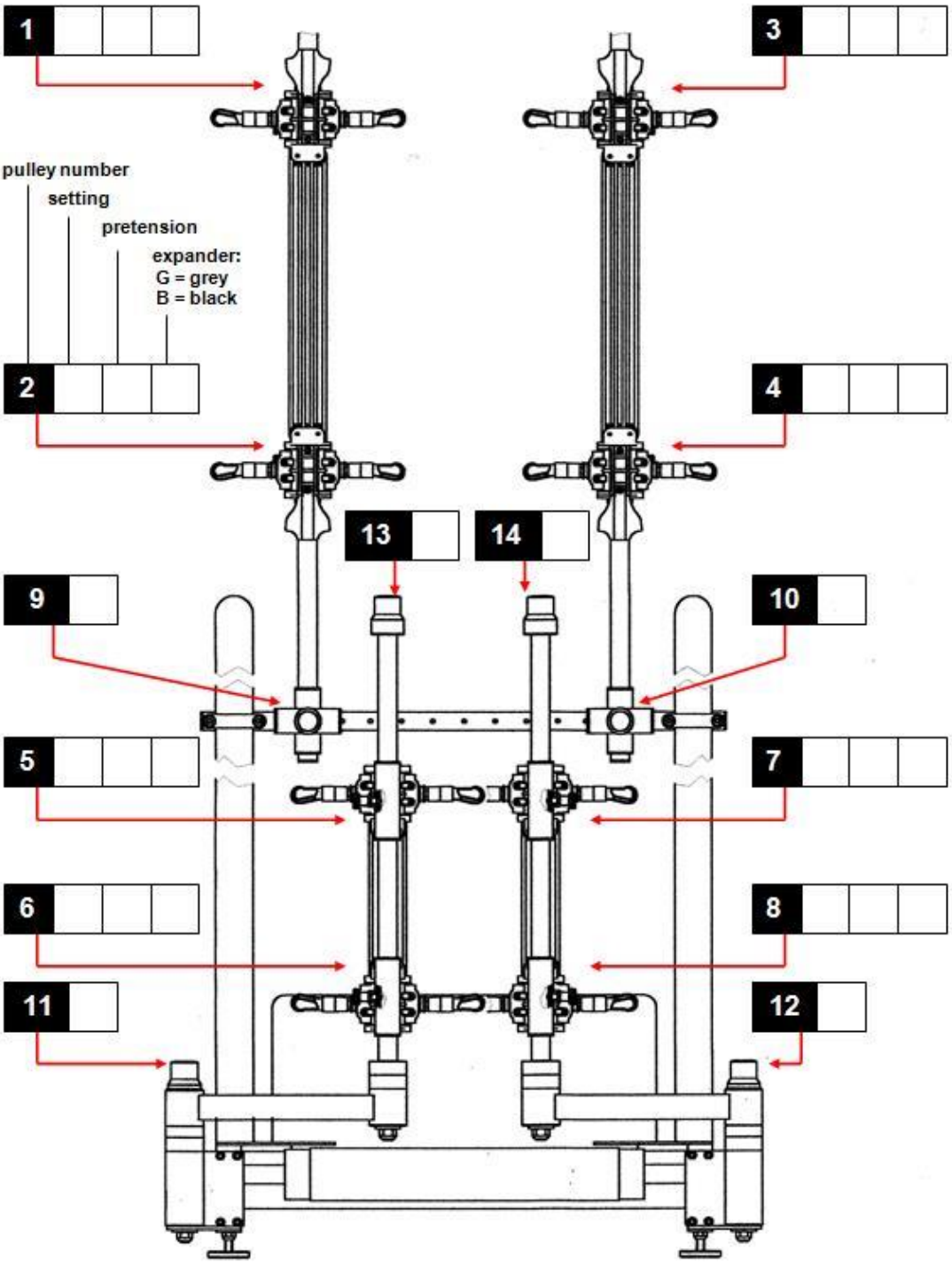
Treadmill settings		Patient data	
Speed	...2km/h.....	Last Name	...Patient.....
Elevation	...0%.....	First Name	...Paul.....
Training time	...10min.....	Date	...17.05.2011.....
Program	.....		
Comments		Comments	

adjustment data sheet: h/p/cosmos robowalk® expander



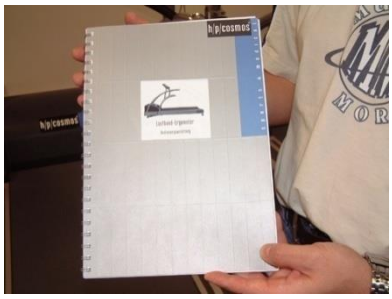
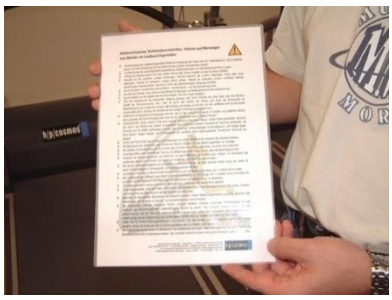
treadmill settings		**person data**
speed:	.....	last name:
inclination:	.....	.....
duration:	.....	first name:
profile:	.....	.....
comments:		comments:
.....		.....
.....		.....
.....		.....

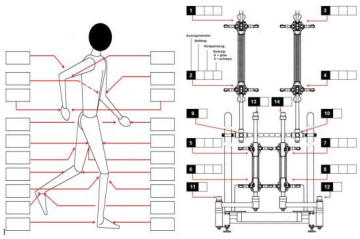
adjustment data sheet: h/p/cosmos robowalk® expander



13.2 Instruction protocol, checklist

Once the installation of the h/p/cosmos robowalk® expander has been completed, the h/p/cosmos employee or h/p/cosmos partner starts commissioning of the device and instruction of the user. It is important to include all people in the instruction and commissioning who are going to work with the device. After the instruction is completed, the instruction protocol is to be signed by the h/p/cosmos technician and all trained persons. Signed instruction protocol, signed delivery note and the registration form are to be sent to h/p/cosmos.

	Instruction on general operation	
1.		Hand over directions for use. Inform about directions for use (always keep within reach of all users).  accomplished ❑
2.		Refer to safety notes, warnings and precautions in these directions for use. Place the print-out of the safety instructions (DIN A4 form in the delivery folder) close to the device.  accomplished ❑
3.		In particular point out the necessity of the safety arch. Point out that the use of the h/p/cosmos robowalk® expander without safety arch is strictly forbidden. accomplished ❑
4.		Show the customers how to use the leg cuffs. Point out that the velcro tape is just for first fixation. accomplished ❑

5.		Show the customer the full amount of adustability of the h/p/cosmos robowalk® expander system. accomplished ❑
6.		Show how to attach the patient to the system. accomplished ❑
7.		Introduce the advantages of the adjustment tables to the customer accomplished ❑

13.3 Instruction protocol, signatures

By signing this protocol, the authorised h/p/cosmos technician and the h/p/cosmos customer confirm the receipt and understanding of all warnings, safety information, the performed instruction and commissioning according to form cos15228-03. The customer and user confirm the receipt of the listed devices including all accessories and options according to the h/p/cosmos delivery note. Disregard of warnings, disregard of intended and forbidden use, safety notes or precautions as well as unauthorized maintenance or lack thereof and/or regular safety checks may lead to injuries or even death and/or can damage the device. This will furthermore result in loss of liability and warranty. Please fill out the instruction protocol and send it back to h/p/cosmos **via Fax to +49 86 69 86 42 49, or via email to sales@h-p-cosmos.com or via post**

h/p/cosmos sports & medical gmbh Am Sportplatz 8 DE 83365 Nussdorf-Traunstein / Germany

h/p/cosmos sports & medical gmbh
Am Sportplatz 8
DE 83365 Nussdorf-Traunstein
Germany

customer's (end-user's) stamp / customer address:

h/p/cosmos device, model name	device serial number

	name in clear block letters	h/p/cosmos dealer / technician	date and signature
instructor			

	name in clear block letters	position / function / department	date and user's signature
instructed persons / customer / user / operator			

14 Appendix 3: Symbols

All symbols used comply with the respective norms IEC417, IEC878, EN957-1 and Council Directive 2002/96/EC.

CE	EC Declaration of Conformity for sports and fitness running machines		Non-sterile product
	Read manufacturer's guide, advice, instructions and manual ISO 7000-1641		Risk/danger of entanglement
	Symbol based on ISO7010:2003-M002. Follow manufacturer's guide, advice, instructions in the manual. Manual contains relevant safety information.		Applied part of type B IEC 60417-5840
	Date of manufacture ISO 7000-2497		Warning / safety precautions Pay attention to accompanying instructions / ISO 7010-W001
	Manufacturer ISO 7000-3082		

15 Contact

For additional orders and technical enquiries please have the model type, serial number and installation date of your device ready. If you have any further questions about delivery dates, service or maintenance, orders for consumables etc., please contact the corresponding phone, fax or email for qualified help.

For service support and remote support we recommend using Skype with webcam additionally.

Service department

phone	+49 86 69 86 42 0
phone direct	+49 86 69 86 42 25
mobile	+49 171 720 69 88
fax	+49 86 69 86 42 49
email	service@h-p-cosmos.com
skype	@h-p-cosmos.com (search & select name)

Sales department

phone	+49 86 69 86 42 0
fax	+49 86 69 86 42 49
email	sales@h-p-cosmos.com
youtube	www.youtube.com/hpcosmos
twitter	www.twitter.com/hpcosmos
facebook	www.facebook.com/hpcosmos
skype	@h-p-cosmos.com (search & select name)

Headquarters

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DE 83365 Nussdorf-Traunstein
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phone +49 18 05 16 76 67
fax +49 18 05 16 76 69
email@h-p-cosmos.com
www.h-p-cosmos.com

Building 1 (top picture)
h/p/cosmos development & production
Am Sportplatz 8
DE 83365 Nussdorf-Traunstein

Building 2 (picture below)
h/p/cosmos sales & service
Feldschneiderweg 5
DE 83365 Nussdorf-Traunstein