



optimized for both patient and therapist



- an early start into locomotion therapy – but how?
- getting up safely from a wheelchair?
- manual locomotion without back pain for the physiotherapist?
- locomotion therapy ergonomic and motivating for therapist?

safer start to the therapy – also from a wheelchair

Those who want to learn to walk ... must walk! Therefore, functional training on a treadmill is a key component of a neurological treatment facility. At the same time locomotion in practice is not always easy to implement. It starts when a wheelchair patient begins their therapy.

Getting onto the treadmill deck can be a challenge already. Therefore h/p/cosmos has equipped the system with an ergonomic wheelchair ramp. Furthermore the handrails contain telescopic extensions which can be pulled out 55 cm (21.65") to give additional support to the patients. They can assist and hold the handrails in many cases even during entering the treadmill on the ramp. And most patients are happy to help if we give them such tools.

Then they can stand up directly out of the wheelchair with support from the h/p/cosmos airwalk® vest and un-weighting system holding on to the individually adjusted handrails. Thus, the therapy can start successfully without much effort.





early start of therapy with body weight support

In neurological rehabilitation it is important for the patient to start exercising as early as possible. Therefore an individual and optimal un-weighting system is crucial for the patient. The h/p/cosmos airwalk un-weighting system supports a natural gait pattern. The single-point suspension allows dynamic up and down movement when walking and at the same time allows freedom in movement and body rotations where wanted. Additional fixation straps for further stabilization may be utilized if desired and if recommended for the patient. The un-weighting, depending on the progress of therapy, can be adjusted electronically between 1 kg and 75 kg (2.2 and 165 lbs). The treadmill itself starts at 0.1 km/h speed and is driven by a very powerful 3.3 kW (4.5 HP) drive motor. Even heavy patients at low speeds can exercise smoothly without juddering.

The remote control for electronically re-adjustment of un-weighting has magnet holder and can be positioned on either side for the seated therapists. This is really important during therapy! With the h/p/cosmos system therapists can perform frequently required re-adjustments of parameters from seating position.



improved ergonomics for healthier therapist

Due to an un-ergonomic working position and the difficulty of manipulating the patient's legs the therapist may find it difficult or even impossible to work with normal treadmills in manual locomotion therapy. Especially after several consequential sessions the therapists experience fatigue and often pain in shoulders and in the back. These problems can get worse when working with spastic patients. It may even lead to an early termination of the therapy. Therefore h/p/cosmos has developed a very sophisticated and ergonomic solution, which cares for the therapist first. We understand that only motivated and healthy therapists can serve the patient's needs best.



The simple to adjust rotating therapist seats – with excellent lumbar support – and corresponding foot supports on both sides of the treadmill allow the therapist to sit comfortably and firmly positioning themselves optimally.

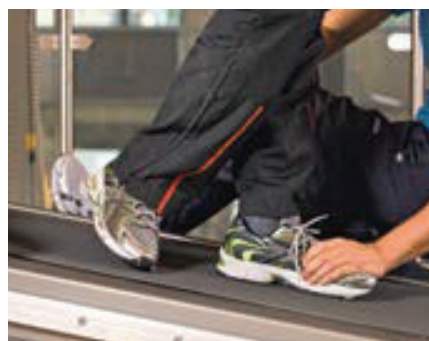
For locomotion therapy the specially designed seats are positioned very close to the center of the deck, so the posture of the therapist is optimized. Very wide running surfaces would lead to further problems, therefore h/p/cosmos recommends the 50 cm (19.68") wide deck for this application and not the 65 cm deck of the h/p/cosmos quasar® med. No obstructive bars from un-weighting frames or other obstacles give the therapist un-interrupted access to the patient's legs. The arch design of the h/p/cosmos airwalk se 135 perfectly supports that. This is also important for lateral motion analysis.

simple operation and control for therapist and patient

Altering the speed, changing the elevation and stopping - the therapist must always have access to these functions. Frequently standing up of the therapists during locomotion therapy for re-adjustment of un-weighting, speed and elevation parameter would interrupt the manual motion support to the patient's legs. It would mean confusion and burden to patient and therapist and would make the therapy much less attractive and effective. Therefore this shall be avoided.

To simplify this, the additional keyboard and the additional stop can be placed by therapist quickly and easily in the desired position. Both controls come with a flexible magnetic attachment and additional velcro strap for secure mounting and fast changing of positions either on the handrails (facing up or down) or on the vertical telescope pillars or even on the nearby tubes of the arch shaped unweighting system frame.





optionally: biomechanical-module

Optionally the h/p/cosmos locomotion 150/50 DE med treadmill can be equipped with sophisticated force plates and additional gait analysis software. This allows measuring and visualization of vertical ground reaction forces, force distribution, centre of pressure, step length and stride length and a variety of time based and other valuable biomechanical parameters. This leads to a state of the art biomechanical gait analysing system for therapy, research and sports and can be even combined with motion analysing components and EMG through the h/p/cosmos coscom® interface card.



downhill for optimal therapeutic results

Among other potential uses in therapy, especially for patients with weakness of the dorsiflexors, the possibility of walking downhill with a sufficient gradient is a big help. By using the reverse belt rotation the incline of the treadmill can be used as a downhill gradient up to 15% in this system. With the single point suspension un-weighting system the patient just turns round on the treadmill in no time. By simply turning a key switch, the running belt moves in the opposite direction. The automatic belt centring aligns the running belt during reverse and downhill operation on the h/p/cosmos locomotion® treadmill.

traceable results of treatment through fast documentation

The results of the treatment course should be well documented. This is not just important for patients and families, but also for the participating doctors and insurance companies. Good documentation must be readily available and easy to interpret.

As soon as the therapy session has finished and the stop button is pressed the h/p/cosmos satellite printer, which is connected directly to the treadmill, prints the comprehensive documentation. This allows an easy and quick understanding regarding documentation of treatment progress without significant expenditure of time. All relevant exercise results and data such as duration, speed, elevation, distance, heart rate, fitness index, date, time and even treadmill serial number for traceability are included in the printout, even without using any PC or software. Just write the patient's name and remarks by hand.



recommended configuration gait therapy and athletic training h/p/cosmos pulsar® med 3p

pos.	qty.	order number	product description
1.	1	cos30004va04	running machine h/p/cosmos pulsar® 3p running surface 190 x 65 cm, speed 0 ... 40 km/h, elevation -25 ... +25 %, drive motor 4.3 kW with high-performance 3-phase power supply
2.	1	cos101277va02	„science port“ speed output with raw speed data excluding the "smoothing algorithms"
3.	1	cos10159va01-va06	special speed 0 ... 45 km/h / 0 ... 28 mph / 0 ... 12.5 m/s
4.	1	cos15133-03	handrail crossbar „speed“, in front
5.	1	cos14763-01	handrail „speed“ shortened including additional ergonomic handhold, left hand side (surcharge)
6.	1	cos102187	footboard „speed“ right for safe jumping on and off the moving running belt, extra width and yellow/black safety marking
7.	1	cos14764	footboard „speed“ left for safe jumping on and off the moving running belt, extra width and yellow/black safety marking
8.	1	cos101626	LCD Monitor TV 46" (with a small monitor stand for table)
9.	1	cos101624	Monitor stand mobile for LCD TV 46" (max. load: 30 kg; height: 180 cm))
10.	1	cos13476-01va02	DELL® laptop computer
11.	1	cos00097010035	interface connection cable RS 232 10 m (32 ft 9.70")
12.	2	cos12769-01	interface adapter / converter USB / RS 232
13.	1	cos16487	3rd interface RS 232 com3 with coscom v3, baudrate 115.200 bps
14.	1	cos30022-01va02	h/p/cosmos robowalk® expander F (front) , including 4 ropes, forces and angles of forces are adjustable vertically & horizontally
15.	1	cos30023-01va02	h/p/cosmos robowalk® expander B (back) , including 4 ropes, forces and angles of forces are adjustable vertically & horizontally
16.	2	cos101050-S	leg cuff thigh, size S (colour code red, for thigh circumference 250 ... 390 mm / 9.8" ... 15.4") for robowalk expander
17.	2	cos101050-M	leg cuff thigh, size M (colour code blue, for thigh circumference 360 ... 510 mm / 14.2" ... 20.1") for robowalk expander
18.	2	cos101050-L	leg cuff thigh, size L (colour code yellow, for thigh circumference 490 ... 750 mm / 19.3" ... 29.5") for robowalk expander
19.	2	cos101051-XS	leg cuff shank, size XS (for ankle circumference 140 ... 270 mm / 5.5" ... 10.6") for robowalk expander
20.	1	cos30028	h/p/cosmos airwalk® ap (max. 200 kg / 440 lbs body weight) unweighting system dynamic up to ca. 120 kg with fall-stop-prevention & automatic running-belt-stop
21.	1	cos102342	emergency stop for airwalk® ap
22.	1	cos102342	Option fall-stop prevention (with chest belt) for fall prevention and automatic stop of the running belt in fall
23.	1	cos102489	Option air spring mode (allows progressive bodyweight support and a reduction of air consumption)
24.	6	cos14903-03-S/M/L	chest belt system for safety arch harness Small/Medium/Large
25.	1	cos10094	air compressor for h/p/cosmos airwalk 50/90/ap, up to 8 bar, very silent with 3 m air connection hose, (operation: 230V / 10A fuse)
26.	1	cos101664va02	Optogait® LED motion/gait analysis system for treadmills 190/65; incorporated optical LED gait analysis system for treadmills 190/65 (incl. trigger function)
27.	1	cos10177	packing on pallet + cardboard hood, airwalk ap disassembled
28.	1	cos10177	packing on pallet + cardboard hood, treadmill partially assembled, running surface 190 x 65 cm (safety arch)
29.	1	cos60098010021	transport / shipping charge (please specify if truck, sea or air freight; for overseas sea shipment is recommended)
30.	1	cos10194	installation, commissioning and instruction through authorised and trained personnel
31.	1	cos101341	1 full day workshop treadmill applications in speed & agility
32.	2	cos101094	1 full day practical workshop robowalk & functional training, details in handling equipment & software

system price h/p/cosmos treadmill solution for gait therapy and athletic training: please ask your dealer for a quotation



recommended configuration locomotion therapy h/p/cosmos locomotion 150/50 de med

pos.	qty.	order number	product description
1.	1	cos30001va02	running machine h/p/cosmos locomotion 150/50 de med running surface 150 x 50 cm, speed 0...10.0 km/h, elevation -15...+15%, reverse belt rotation; adjustable therapist seats with ergonomic lumbar support and corresponding foot rests, adjustable handrails in height and width with gas spring support, extra emergency stop, extra keyboard, drive motor 3.3 kW, interface port com1 and com2, electronic motor brake, movable user terminal; h/p/cosmos para control PC software for remote control
2.	1	cos14663	wheelchair ramp for easy access to the running surface; suitable for wheelchairs with a width of up to 78 cm (30.71"); footprint of wheelchair ramp: (L x W): 120 x 80 cm (47.24" x 31.50")
3.	1	cos16487	3rd interface port RS232 com3 with 115,200 bps for PC, ECG-, ergospirometry-, blood-pressure-monitor system or printer
4.	1	cos14970-01	h/p/cosmos satellite PC med - with potential isolation transformer according to IEC 60601-1, potential equalization pin, Windows® OS incl. 19" LCD Monitor, keyboard, mouse, DVD-ROM writer, colour laser printer and PC-trolley with 4 casters
5.	3	cos10223	potential equalization cable, 5 m (required for medical systems)
6.	1	cos00097010035	interface cable RS232, 10 m
7.	1	cos10084	packing pallet & cardboard hood for treadmill
8.	1	cos102291	zebris® FDM platform 3i running deck, pressure distribution platform with 7.168 sensors
9.	1	cos101730	zebris® visual stimulation locomotion 150/50 video projector, mounting and software for gait training through step projection on treadmill
10.	1	cos100384	zebris® FDM-Stance module for stance and balance analysis
11.	1	cos101062	zebris® virtual training software module; interactive gait training on a virtual forest walk
12.	1	cos30017-01	unweighting system h/p/cosmos airwalk 135se dynamic spring also unweighting system, patient weight: max. 125 kg (207 lbs), patient height: max. 200 cm (6' 6.72"), dynamic spring force: 100 N (22.48 lbf) footprint of unweighting system with treadmill without wheelchair ramp: L 207 cm (11' 7.37" x 6' 9.48") footprint of unweighting system with treadmill without wheelchair ramp: L 204 x W 207 cm (7' 8.12" x 6' 9.48")
13.	1	cos10112	vest XSmall for h/p/cosmos airwalk, light blue for waist size for children
14.	1	cos10095	vest Small for h/p/cosmos airwalk, red for waist size 55...80 cm (22...32")
15.	1	cos10096-01	vest Medium for h/p/cosmos airwalk, blue for waist size 81...112 cm (32...44")
16.	1	cos10097-01	vest Large for h/p/cosmos airwalk, yellow for waist size 112...145 cm (44...57")
17.	1	cos100320	replacement un-weighting rope for h/p/cosmos airwalk® se
18.	1	cos100573va23	crate for transport h/p/cosmos airwalk® 135se
19.	1	cos60098010021	shipping costs door to door within Europe (confirmed price on request)
20.	1	cos15732-os/-eu	installation & instruction treadmill
21.	1	cos14320	presenter / workshop* for 1 day practical work with unweighting and treadmills total price net, excluding VAT, excluding custom duties VAT(19 % in Germany, other VAT and/or custom duties may apply in other countries)

Article [cos30017-01] is no longer available:
replaced with [cos30028]

*The 1-day-workshop is recommended for beginners for these applications. In case you are already experienced in this application utilizing this type of equipment, then you do not need this workshop and it can be deleted from the configuration and the total offered package price.
Please refer to the information about product specifications which can be found on pages 138 ... 149.