# HOVERBOARD®

#### User manual

**Edition: 3/2022** 



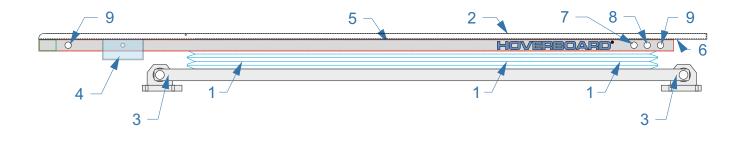
### General information

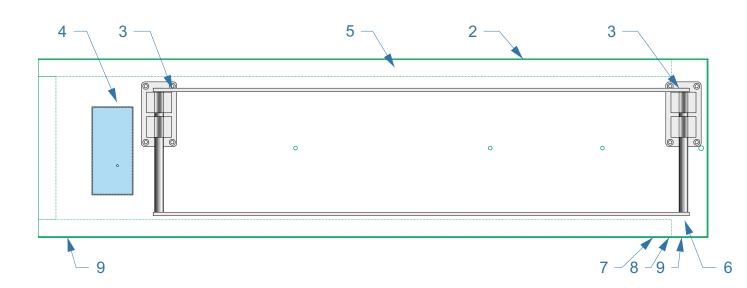
- \* It is essential that you and any other operator of this product read and understand the content of this manual before installing and using this product!
- \* In order to avoid operating errors, these manual must be accessible to the staff at all times.
- \* The Hoverboard should only be used for the purpose as described. Please refer particularly to the instructions of the used stretcher.
- \* The illustrations do not necessarily correspond to the delivered equipment and are not true to scale.
- \* We take no liability for damages caused by operating errors or incorrect assembly or repair.
- \* Please pay close attention to the country-related, applicable safety regulations for patient transfer.
- \* Subject to technical changes.

# 

### Specification

- 1... Pneumatic suspensions with automatic weight adjustment from 40-520 kg/88-1146 lbs and hydraulic shock absorbers. Total vertical stroke 170 mm/6.7"
- 2... Stretcher mounting platform
- 3... Lateral movement device with pneumatic release (option)
- 4... Switch box, contains: a) Relay, 12V
  - b) Magnetic valves 12Vc) Terminal block
- 5... Air pressure tank (approx. 4.5 litres/1.2 gal) with pressure switch
- 6... Reed switch
- 7... Blue main switch (option)
- 8... Red toggle switch for highest (rigid) position (option)
- 9... Pushbuttons for pneumatic release of the lateral movement device (option)







### Assembly

The Hoverboard may only be installed by qualified personnel (e.g. car technicians or body fitters) and in accordance with the assembly instructions supplied.

The assembly operator is responsible for damages caused by improper assembly!

#### Technical data

- $^*$  Customized Hoverboard for Ferno iNX $^{ ext{ iny 8}}$  System together with Ferno iNLINE $^{ ext{ iny 8}}$
- Height lowered: 150 mm 5.9"
   Height when active: 230 mm 9.1"
   Height for reanimation (rigid): 320 mm 12.6"
- \* Standard length: 2273 mm 89.5", short version: 2153 mm/84.8"
- \* Total length: 2183 mm 88.9"
- \* Total weight 96/124 kg 212/273 lbs
- \* Maximum loading capacity 520 kg / 1146 lbs (incl. Ferno iNX )

The ambulance builder is responsible for the permanent readiness for use of the Ferno iNX® by means of the original integrated charging system (ICS®) from Ferno, which has to be passed through the Hoverboard, so that the battery is always charged.

\* Electrical connection: Dimension of all wires must be at least 2,5 mm2!

Brown = ground (wire no. 31)

Red = permanent positive (For release of the lateral movement device)

fused in the vehicle with 5A (wire no. 30)

Orange = ignition positive, fused in the vehicle with 30A (wire no. 15)

#### Never connect the ignition line together with permanent positive !

This could lead to consequential damages, which are not covered by warranty!

- \* The valve-control-circuit is internally fused with 5A
- \* Max. power consumption 25A at 12V DC



### Operation

After successfull assembly and electric connection, start ignition of vehicle and turn on the blue main switch.

The Hoverboard now automatically adjusts to the patient's weight and rises to the level for optimal suspension comfort, the switch (if on the device) lights up blue.

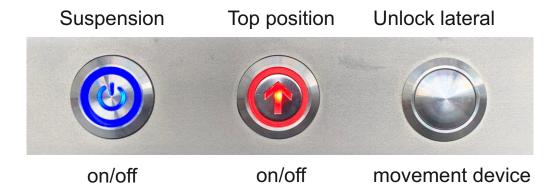
The Hoverboard is all-automatic, i.e. when the supply pressure decreases to 8 bar, the compressor starts again for approx. 20 seconds, so that there is always sufficient operating pressure.

By switching off the ignition or pressing the main switch again, the Hoverboard lowers automatically for easy loading and unloading. It also lowers if you unlock the PowerLoad on the Hoverboard.

Pressing the switch for the optional CPR-position (for resuscitation) raises the Hoverboard to the highest (fixed) position, the switch (if on the device) lights up red. This function is only active when the main switch is switched on. By pressing it again, the Hoverboard gently lowers to suspended mode.

#### **ATTENTION:**

When lifting to the highest position, the compressor runs continuously for approx. 3 minutes. Multiple lifting in short intervals will overheat the compressor! The thermal protection switch will turn off the compressor and needs approx. 1 hour to cool down!



By pushing one of the pushbuttons, the lateral movement device (option) will unlock pneumatically. While keeping pushed, you can move the Hoverboard crosswise in 8 positions of 32 mm / 1,25" (total = 256 mm / 10"). Releasing the button means locking in the nearest position. This option also works with ignition off.



# HOWERSOARD®

### Operation



The pneumatic release is supplied by the air tank, which will only be refilled when the main switch is on.

Frequently use while the Hoverboard is switched off leads to temporary malfunction.

In case of malfunction or lack of air pressure you may unlock it by the knobs.

For correct loading and unloading please refer to the instructions of the stretcher. Please pay attention to the correct locking of the stretcher on the Hoverboard.



#### Serial number

The serial number is located on the bottom of the plate at the rear right end and contains the production date.

E.g. serial number **204004** means: 20**20 - 40**th week, **4**th production unit.

Please always quote this number for any complaints or spare parts orders!



#### Maintenance

One of the many advantages of the Hoverboard-types Airbase, Powerbase, Inbase and Vivibase compared to conventional stretcher tables is that they are not classified as medical devices according to Medical Devices Act (MPG) and are therefore not required to be checked mandatory every year.

Hoverboards are basically maintenance-free, but we recommend an annual inspection with a functional check, regarding e.g. the Inbase, as part of the maintenance of the Ferno iNX.

This can be managed by one of our certified service partners, whom you find up-to-date on

#### www.hover.at

You may also contact us directly if you have any questions or problems.

#### **Purification**

All Hoverboards are made of high quality stainless steel of the type 1.4301 and are carefully processed in protective atmosphere.

However, "stainless" does not mean that the material is resistant to all aggressive chemicals, such as e.g. ionized chlorine solutions.

At outside temperatures below -5 ° (23F), calcium chloride is often used as antifreeze solution, which is much more aggressive than the commonly used sodium chloride ("common salt").

This aggressive solution is brought to the surface of the plate by the wheels of the stretcher and causes surface corrosion as a result.

For a consistently beautiful appearance, it is therefore important to rinse and wipe the surface of the plate daily with clear water during such conditions.

A final impregnation with oil-based stainless steel care products can also help prevent corrosion.

On request, we will be happy to send you a special cleaning and care set.



#### Disinfection

On the European market, there is such an abundance of disinfectants, solvents and cleaning agents , so that not every single product can be tested.

In addition, the manufacturers are constantly changing and adapting their recipes.

That is why we only use 1.4301 quality for all stainless steel parts, because it means the optimal synthesis of corrosion protection, processability and cost.

The correct (means not too high) concentration of the disinfectant is most important. Never use disinfectants with chloroacetic acid or other corrosive ingredients!

The bellows is made of polyester fabric with a PVC coating and a PVC support frame. These materials are generally trouble-free, but too high concentrations of disinfectants may cause color damage (bleaching).

The disinfectant also should not remain on the surface anywhere, but should be wiped off after it has acted or also rinsed away with clear water.

### **Quality**

All Hoverboards are tested in accordance with the latest standards by DEKRA in Klettwitz and comply with EN 1789: 2020, EN 1865-5: 2012 and ECE R17 (20 g test).

The exclusive use of components of ISO certified pre-suppliers provides industrial manufacturing quality.

Because of our CIP (Continuos improvement programme) and advancement of our products, your Hoverboard may vary from this description.

In case of malfunctions or questions, please contact our hotline

Phone +43 - 660 - 800 9000 Mail <u>info@hover.at</u> www.hover.at

Have always a save ride with your new



# HOVERBOARD®



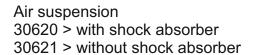
## Connection layout

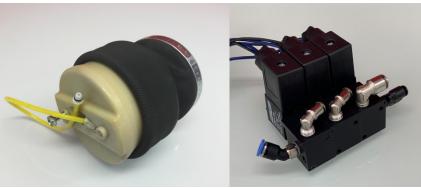
Option lateral movement device (LMD): blue, Option reanimation (RA):red

target	colour c	oss-s	ection		target colo	ur/cross-sec	tion
ground (31) bridge	brown grey	2,5		0 0	compressor	black	2,5
bridge	grey			0 0	mag. valve 1	black	1,0
bridge	grey				mag. valve 2	black	1,0 1,0
bridge bridge	grey				LMD mag.valve RA mag. valve		1,0
bridge	grey grey				check valve	black	1,0
bridge	grey				relay	black	1,0
bridge	grey			0 0	main switch	black	1,0
2.1490	9 )			0 0	toggle switch	black	1,0
				0 0	mag. valve 1	blue	1,0
toggle switch	blue	1,0		0 0	mag. valve 2	blue	1,0
pressure switc	h grey	1,0		0 0	relay (85)	green	1,0
pressure switc	h grey	1,0		0 0			
main switch	green	1,0		0 0	reed switch	yellow	0,5
main switch	orange	1,0		0 0	fuse 5A	orange	1,0
relay (87)	light blue	2,5		0 0	compressor	red-white	2,5
				0 0	check valve	blue	1,0
ignition (15)	orongo	2.5		0 0	relay (30) fuse 5A	orange	2,5
ignition (15) LMD switch	orange ye/wt	2,5 1,0			LMD sw. front	orange rd-wt	1,0 1,0
LMD switch		1,0			LMD sw. rear	blue-white	
LIVID Mag.varv	Coluc	1,0		0 0	LMD sw. front		
positive (30)	red	2,5		0 0	LMD sw. rear	blue-white	
toggle switch	white	1,0		0 0	reed switch	yellow	0,5
toggle switch	pink	1,0		0 0	RA mag. valve	•	1,0

# HOVERBOARD®







30311 air cushion

30057 magnetic valve block



30058 magnetic valve 1

30059 magnetic valve 2

30209 external compressor (without Box)



30291 level control valve

30292 valve control bow

30272 air fittings

# HOVERBOARD®







30302 adjustable shock absorber

30072 Reed switch

30073 Block magnet



31270 terminal grey 31272 terminal blue 31275 terminal orange



30251 fuse holder 30252 fuse 30A 30253 fuse 5A



30500 connector 2 pins, T, f 30501 connector 3 pins, T, f 30502 connector 2 pins, ger., f 30504 connector 2 pins, T, m 30505 connector 3 pins, T, m 30506 connector 2 pins, ger., m 30508 connector 10 pins, f 30509 connector 10 pins, m



31020 quick connector 4-4-4 31021 quick connector 4-4 31022 quick connector 6-6



30520 relay 30530 relay holder



31283 cord clip

# HOVERBOARD®



35010 main switch (blue)

35011 toggle switch (red)

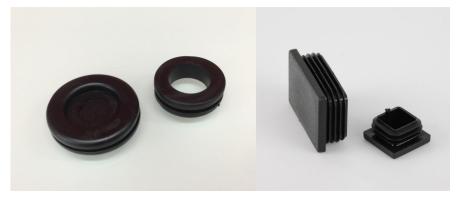
35012 LMD pushbutton



30244 pressure tube 4 mm, red 30245 pressure tube 4 mm, blue 30246 pressure tube 4 mm, yellow 30240 pressure tube 6 mm, red

30248 teflon tube, white 31080 thermal protectiontube, red

30066 pressure switch, pre-adjusted 8,5 bar



30344 rubber grommet

30361 plug 60 x 40

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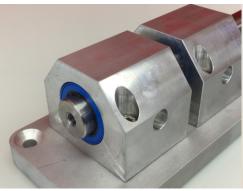
30083 bellows, without lateral movement device 30084 bellows, with lateral movement device



30221 box for external compressor (without compressor)



31011 LMD pneumatic cylinder



31030 linear bearing



31040 knob



51031 toothcomb back 51041 toothcomb front



51062 locking bolt