

Service Manual

for

AVERO Motion Bathtub

Part No. 810150550



PRISM MEDICAL

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1. Preface

This service instruction is valid only in association with the directions for use.

The activities described in these directions may be implemented only by persons authorized and trained by BEKA Hospitec GmbH.

Maintenance, as well as technical safety control-checks, may be implemented only by BEKA Hospitec or specialist firms authorized by BEKA Hospitec.

Assemblies, extensions, changes or repairs may be implemented only by BEKA Hospitec or specialist firms authorized by BEKA Hospitec.

In case of technical interventions, such as attachments or changes to our devices, which are not implemented by BEKA Hospitec or specialist firms authorized by BEKA Hospitec, any guarantee for the changes, as well as for the device and/or device functions which are associated with the changes, is voided.

2. Spare Parts List AVERO Motion

Part No.	Description	Unit / Quantity	Illustration
K4000120	Connecting hose 1/2"x1/2" 90 cm/ 35.43 in	1	
K4000150	Connecting hose 3/4"x3/4" 40 cm / 15.75 in	1	
K4000100	Connecting hose 1/2"x1/2" 50 cm / 19.69 in	1	
K4000110	Connecting hose 1/2"x1/2" 30 cm / 11.81 in	1	
K4000130	Connecting hose 1/2"x1/2" 120 cm / 47.24 in	1	
K9100245	Thermostat mixer (Valve)	1	
Z9101710	Control Panel	1	
W9100930	8x distributor including check valve	8	
Z9200580	Door Sealing profile C	1	



K4000310	Excenter drain fitting	1	
K4000320	Excenter Control Set	1	
K4000185	Air nozzle	2	
K4000035	Bracket for Hand-held shower	1	
Z0000131	Temperature sensor (Hand-held shower / bathtub inlet)	1	
K0900280	Waters stop level sensor	1	
K0900057	Fan motor	1	
K4000210	Blower hose (incl. Clips)	1	
K0904010	Remote Control for sound system	1	
K9104040	Hand set Control with cable AVERO Motion	1	
K4000020	Hand-held shower	1	

K4000045	Shower hose	2	
810150585	Disinfection hand-held shower, yellow	1	
K9103310	Ball-joint wall-mounted holder	1	
K4000075	Injector - CSA	1	
S9100003	Lock box complete	1	
W9100731	Door handle without protection pin (standard)	1	
W9100730	Door handle with protection pin (option)	1	
K9103790	Lifting motor	1	
K9103800	Tilt motor	1	
K0900180	Clamps for hose	2	
K9101010	Clear silicon hose	1	

K9100330	Bracket for handheld shower	1	
K0904000	Structure-borne sound transducer	1	
K0902335	LED floodlight (white)	1	
K9103335	Solenoid valve 1/2" (Hand-held shower & disinfection)	1	
K9103336	Solenoid valve 3/4" (bathtub inlet)	1	
K4000410	T-piece air system	2	
K4000420	Angle air system	2	
K4000400	seal for air system	5	
K4000220	Air hose (ring)	1	
Z0000132	Temperature sensor (bathwater)	1	
K0904232	USB interface	1	

T9100940	Bathtub safety grip (pair)	1	
K0904230	Sound system unit	1	
Z0000114	Mainboard Avero Universal (120 V)	1	
K9103530	Bath spout	1	
Z9101731	Rotating knob Thermostat (without crossbar cut-out)	1	
Z9101730	Rotating knob Thermostat (with crossbar cut-out)	1	
K9100247	Spring cover Thermostat	1	
K4000300	Air diffuser M28/1 (incl. seal)	1	
T9100890	Screen for door hinge	1	
H9100660	Front plate	1	
K0900630	Drain hose D=41	1	

K9101120	Drain hose End-nozzle D=41	1	
K9101035	Disinfection cover lock (2x key direct-closing)	1	
K0902750	Mounting foot M12	1	
K9103810	Plummer plastic	1	
K0103620	Gas spring	1	
Z9101650	Pom bearing	1	
N3002002	Plain bearing with collar	2	
K9104200	Toggle-type switch	1	
K9104230	Charger 24 V	1	
K9104240	Accumulator 12 V	2	
S9100005	Check valve	1	

K0900630 with K9101120	Drain and overflow hose 550 mm/l with end piece D41	1	
N3000023	Sliding disk D=8, D=15, H=5 IGUS	1	

3. Installation instruction

3.1 Removal of the existing 8x Torx bolt (M10) above and below

Illustration 1:

Tools required:
1x Ratchet ¼ inch
with Torx 40

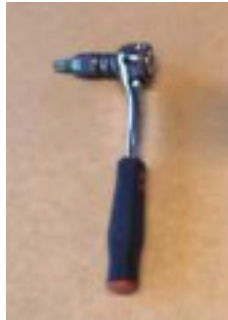


Illustration 2:

The illustration shows the motor in the as-supplied condition with screwed-on Torx bolts.



Illustration 3:

Loosen the bolts from the motor housing.

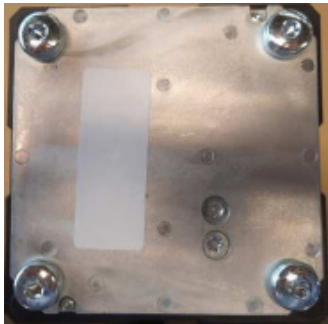
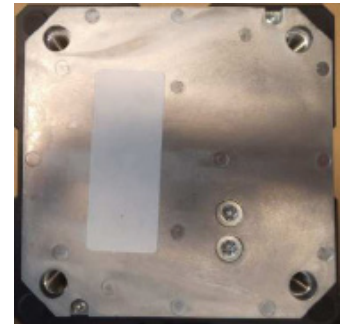


Illustration 4:

The illustration shows the bolts loosened from the motor.



3.2 Fastening of the motor on the lift frame

Illustration 1:

Tools required:

- 1x ratchet ½ inch
- 1x nut 17 mm
- 1x ratchet with Torx 40
- 1x Weicon screw locking adhesive

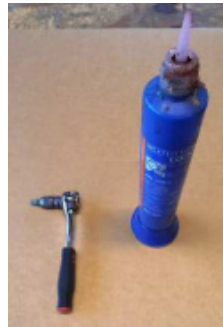


Illustration 2:

Loosen the bolts from the motor housing.

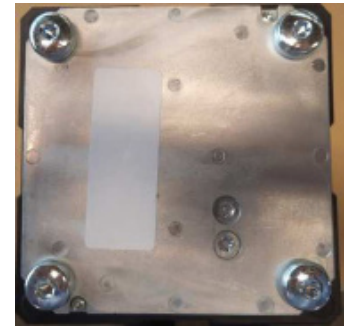


Illustration 3:

Attention: The bolts must be removed before the motor can be screwed onto the lift frame.

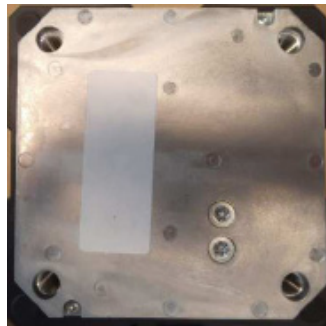


Illustration 4:

Apply the screw locking paint over the entire surface of the screw thread.

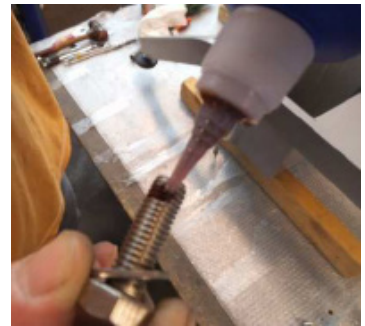


Illustration 5:

Tighten the bolts securely.



Illustration 6:

The illustration shows the fixed motor on the lift frame.



Illustration 7:

The illustration shows the inserted motor on the lift frame.

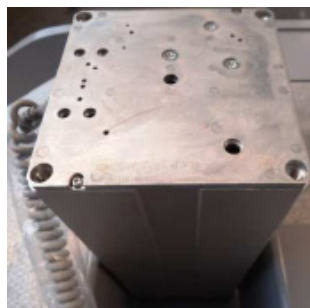
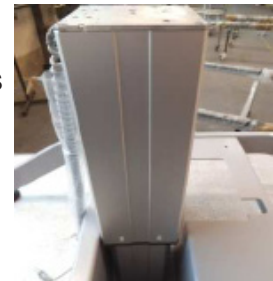


Illustration 6:

This illustration shows the assembled motor on the lift frame in the extended position.



3.3 Upper-part assembly on the lift frame for the fixing of the bathtub (bathtub receptacle)

Illustration 1:

Tools required:

- 1x Ratchet ½ inch
- 1x Nut 17 mm
- 1x Hexagon socket screw wrench AF 4
- 1x Weicon screw locking adhesive



Illustration 2:

- 4x Bolts M10 x 30
- 4x Spacing washer Ø 10 mm.
- 4x Countersunk-head hexagon sockets M6 x 16
- 1x Upper part for lift frame
- 1x Spacer (POM)

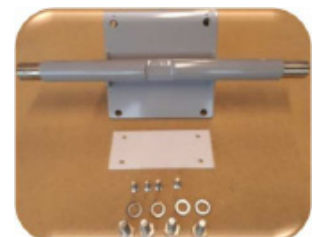


Illustration 3:
Insert the spacer (POM) into the upper part

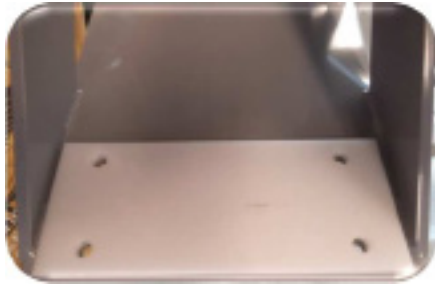


Illustration 4:
Now place the upper part with the spacer onto the upper side of the lift frame.



Illustration 5:
Now attach the 4 bolts for fixing. Ensure that you fix the spacer as well.



Illustration 6:
The illustration shows the spacer assembled on the lift frame.



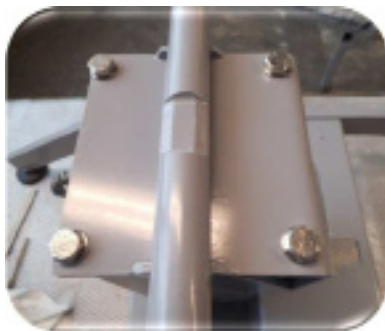
Illustration 7:
Apply the screw locking paint (medium-viscosity) on the screw thread over the full surface.



Illustration 8:
Now fix the 4 upper bolts to the lift frame.



Illustration 9:
The illustration shows the assembled upper part on the lift



3.4 Socket receptacle for inclined motor

Illustration 1:
Tools required:
1x Plastic hammer



Illustration 2:
1x Socket 12
10 x 1.3 mm



Illustration 3:
Insert the socket receptacle into the bore of the upper part on the lift frame.



Illustration 4:
Now drive in the socket receptacle carefully with the plastic hammer so that it fits into the bore.



Illustration 5:
The illustration shows the socket of the inclined motor inserted into the socket receptacle.



3.5 Insertion of the inclined motor into the lower motor receptacle

Illustration 1:
Tools required:
1x Groove joint pliers



Illustration 2:
1x Inclined motor
1x Sliding disks 10 x 35 / 3.2 mm
1x Insert split-pin 3.2 x 25 mm
1x Securing pin



Illustration 3:
As represented here in the illustration, insert the sliding disks into the lower receptacle of the motor.



Illustration 4:
Place on the inclined motor with the lower side on the socket receptacle (upper part on lift frame).



Illustration 5:
Now attach the fastening bolt from left to right through the bore.

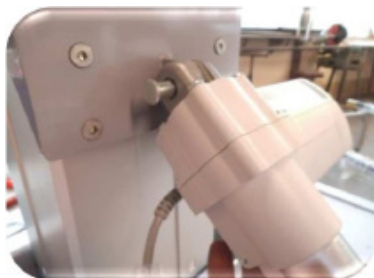


Illustration 6:
Now attach the spacing washer and insert splitpin on the opposite side. Ensure you bend open the insert split-pin.



Illustration 7:

The illustration shows the inserted inclined motor with the secured insert split-pin.



3.6 Fastening of the braided hoses (flexible hoses general)

Illustration 1:

Tools required:

1x Open-end wrench 24 mm (shortened length, 150 mm overall length)



Illustration 2:

1x Braided hose (flexible hose) ½ inch
1x BG screwed connection for mains connection M20 x 1.5
2x Ring gaskets



Illustration 3:

Seal is already inserted (by manufacturer). Check that the seal is in place.



Illustration 4:

Place on and screw up!



Illustration 5:

Now apply the retaining nut straight onto the screw thread of the angle connection and screw it handtight.



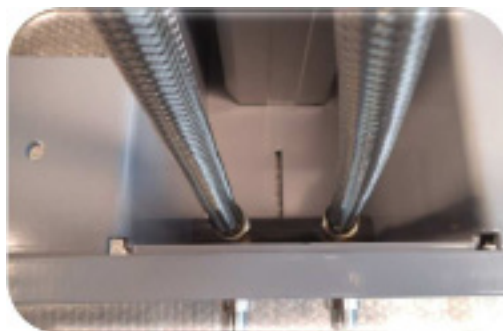
Illustration 6:

Now tighten the retaining nut securely with the key and repeat the procedure (Illustration 1 - illustration 6) for the other hose.



Illustration 7:

The illustration shows the braided hoses for cold and hot water in the assembled status.



3.7 Cover placement

Illustration 1:

Tools required:

- 1x Groove joint pliers 150 mm
- 1x Groove joint pliers 180 mm
- 1x Hexagon socket screw wrench AF4



Illustration 2:

The illustration shows the covering for the disinfectant container.



Illustration 3:

Hold the grip ball with the hand, turn bolts with hexagon socket screw wrench.



Illustration 4:

Illustration shows removed grip ball.

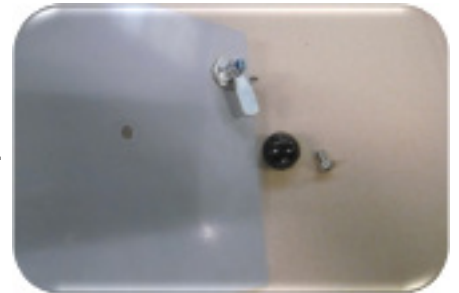


Illustration 5:

Hold lock bolt with small pliers, loosen nut with widened pliers.



Illustration 6:

Illustration shows removed locking cylinder.



3.8 Screen and door complete

Illustration 1:

Tools required:

1x T-hexagon socket

AF 5 x 150

1x Screwdriver

hexagon AF 2.5



Illustration 2:

Open the door as described in the directions for use and bring it into the uppermost position.

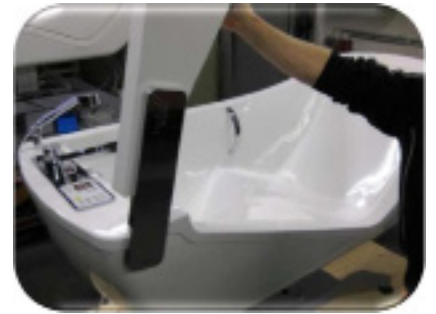


Illustration 3:

Now loosen the upper locking screw of the covering.



Illustration 4:

Now loosen the lower locking screw of the covering.



Illustration 5:

Now remove the covering.



Illustration 6:

The illustration shows the covering removed.



Illustration 7:

Now loosen and remove the lower bolt of the door receptacle.



Illustration 8:

The illustration shows the lower bolt removed from the door receptacle.

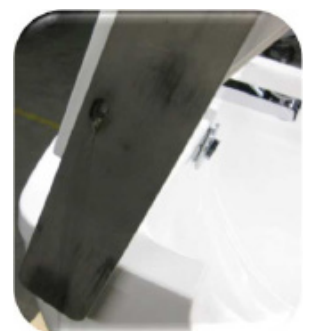


Illustration 9:

Loosening and remove the upper right bolt from the door receptacle.



Illustration 10:

The illustration shows the upper right bolt removed from the door receptacle.



Illustration 11:

Now allow the door body to lower slowly down onto the inner edge of the bathtub.



Illustration 12:

Now loosen and remove the upper left bolt from the door receptacle with the left hand and hold the door body securely with the right hand.



Illustration 13:

Now withdraw the door body. Ensure that the spacer plate (POM) does not damage the bathtub while taking out the door.



3.9 Back cover (controls)

Illustration 1:

Tools required:

- 1x Phillips screwdriver PH 2
- 1x Screwdriver flat 0.3x 3.0
- 1x Screwdriver hexagon AF 2.5



Illustration 2:

Remove the 5 caps from the screw heads with the screwdriver.



Illustration 3:

The illustration shows the removal of the upper cap.



Illustration 4:

The illustration shows the removal of the lower cap.



Illustration 5:

Loosen and remove the right bolt at the lower edge of the covering.



Illustration 6:

Loosen and remove the left bolt at the lower edge of the covering.



Illustration 7:

Loosen and remove the lower right bolt of the covering.



Illustration 8:

Loosen and remove the lower left bolt of the covering.



Illustration 9:

Loosen and remove the upper bolt from the covering. Ensure that you hold the covering securely with one hand.



Illustration 10:

Now withdraw the covering from the bathtub.



Illustration 11:

The illustration shows the withdrawal of the covering from the bathtub.



Illustration 12:

The illustration shows the removed covering.



Illustration 13:

For the closing of the bathtub, place on the covering and first fix with the upper bolt.



Illustration 14:

Next attach one of the lower bolts and then the remaining 3 bolts.



3.10 Disinfection group complete

Illustration 1:

Tools required:

- 1x Groove joint pliers small size
- 1x Allen wrench inch 1/2
- 1x Hexagon socket screw wrench AF 3



Illustration 2:

Loosen bolts below on the wall connection bend covering, then pull off the covering towards the front.



Illustration 3:

Hold the disinfection group with the left hand and then screw off the module assembly from externally with the Allen wrench.



Illustration 4:

Disinfection module assembly, see DEMA injector



3.11 Emergency function in case of power failure (switch, battery and power supply unit)

Illustration 1:

Tools required:

- 1x Groove joint pliers small size
- 1x Ring/open-end wrench 10 mm
- 1x Screwdriver flat approx. 0.3 x 3.0l



Illustration 2:

Press the switch down with the finger.



Illustration 3:

Illustration shows the removed switch with stick-on label On/Off



Illustration 4:

Pull off both cable lugs, if necessary with small groove joint pliers.



Illustration 5:

Illustration shows housing: Battery and adapter for emergency function.

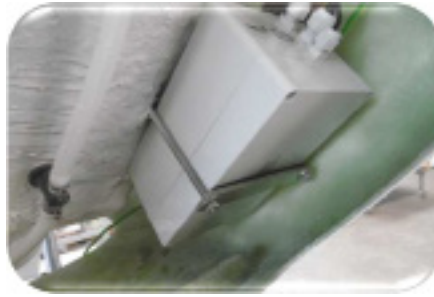


Illustration 6:

Loosen the bolts with the open-end wrench 10 mm until the housing is loose.

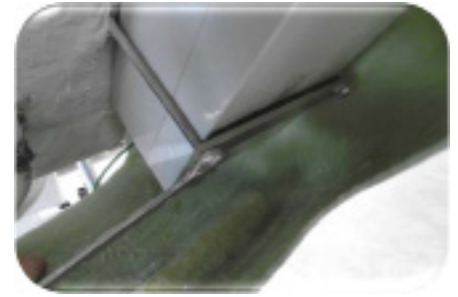


Illustration 7:

Now withdraw the housing.



Illustration 8:

Now screw on the 4x flat bolts in the corners of the housing.



Illustration 9:

In order to exchange the 12 V accumulator, please note instruction in housing cover!

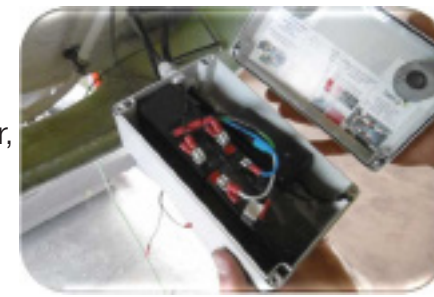


Illustration 10:

Raise mains adapter and pull off plug connectors (mains side).



Illustration 11:

Now pull off the cable lugs on the accumulator, if necessary with small groove joint pliers.



Illustration 12:

Illustration shows the removed mains adapter.



3.12 Change panel and front cover (valves)

Illustration 1:

Tools required:

- 1x Hexagon screwdriver AF 2.5
- 1x Phillips screwdriver PH 2
- 1x Screwdriver flat 1.0 x 7.0 mm
- 1x Open-end wrench 7 mm



Illustration 2:

Loosen the 5 caps with a screwdriver.



Illustration 3:

The illustration shows the withdrawal of the cap. Withdraw all 5 caps.



Illustration 4:

Loosen the upper bolt from the front covering.



Illustration 5:

Remove the upper bolt from the front covering.



Illustration 6:

Loosen all bolts from the covering.



Illustration 7:

Remove all bolts from the covering and hold the covering in position with your hand.



Illustration 8:

Withdraw the covering from the bathtub.



Illustration 9:

Loosen the bolts with a 7 mm openend wrench (1x per film corner).



Illustration 10:

The illustration shows the pressing with the screwdriver against the individual guides of the operating film in order to loosen the film from the valve-fittings frame.



Illustration 11:

The illustration shows the lifting of the operating unit on one side.



Illustration 12:

The illustration shows the lifting of the operating unit completely.

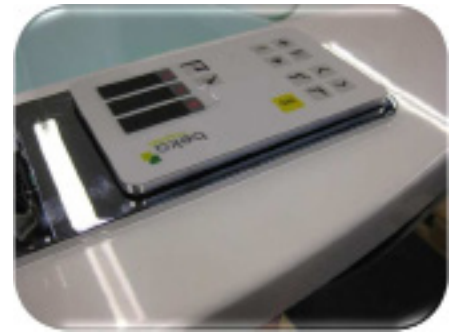


Illustration 13:

Now you can withdraw the operating unit, including the film, from the plate.

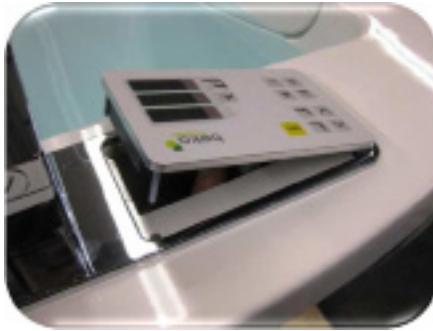


Illustration 14:

Open the control box (see 3.21) and remove the plug connector from the printed circuit board.



3.13 Hand-held shower sensor

Illustration 1:

Tools required:
1x Groove joint pliers medium size
1x Teflon tape



Illustration 2:

The illustration shows the installed sensor of the hand-held shower.

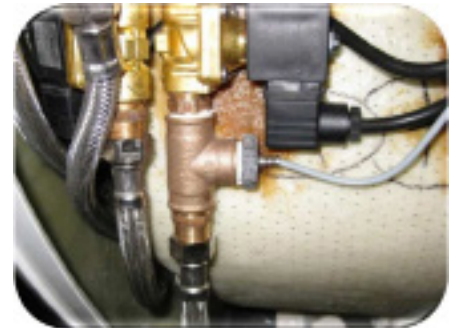


Illustration 3:

Loosen the sensor with a pipe wrench.



Illustration 4:

Withdraw the sensor and loosen the cable ties which fix the cable.



Illustration 5:

Open the control box (see 3.21) and remove the cable of the sensor from the plug-in slot.



3.14 Bathtub inlet sensor

Illustration 1:

Tools required:
1x Groove joint pliers
medium size
1x Teflon tape



Illustration 2:

The illustration shows the installed sensor of the hand-held shower.



Illustration 3:

Loosen the sensor with a pipe wrench.



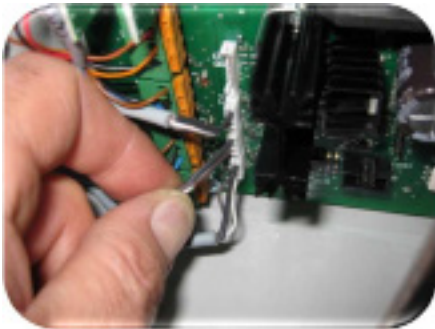
Illustration 4:

Withdraw the sensor and loosen the cable ties which fix the cable.



Illustration 5:

Open the control box (see 3.21) and remove the cable of the sensor from the plug-in slot.



3.15 Bathtub water sensor

Illustration 1:

Tools required:
1x Open-end wrench
19 mm
1x Replacement
screw-thread agent
Loctite 5331



Illustration 2:

The illustration shows the sensor for the bathtub water.



Illustration 3:

Loosen and remove the nut from the sensor of the bathtub water.



Illustration 4:

Loosen the cable ties that fix the cable. Open the control box (see 3.21) and remove the cable of the sensor from the plug-in slot.



Illustration 5:

Now you can withdraw the sensor through the bathtub.



3.16 Replace blower

Illustration 1:

Tools required:

- 1x Screwdriver hexagon socket 7 mm
- 1x Phillips screwdriver PH 3
- 1x Screwdriver flat 0.3x 3.0 mm
- 1x Open-end wrench 13 mm



Illustration 2:

Loosen the hose clamp with the socket spanner.



Illustration 3:

Now remove the hose from the blower.



Illustration 4:

Now remove the hose from the air nozzle through light pulling and press the hose to the side.



Illustration 5:
Now loosen and remove the 1st locking screw from the blower motor.



Illustration 6:
Now loosen and remove the 2nd locking screw from the blower motor.



Illustration 7:
Open the control box (see 3.21) and remove the cable of the motor from the terminal. Then remove the cable from the control.



Illustration 8:
Now you can withdraw the blower motor.



3.17 Replace support socket, door mechanism

Illustration 1:
Tools required:
1x Plastic hammer
50 mm diameters
1x Screw clamp 140
1x Phillips bit PH 3



Illustration 2:
The illustration shows the receptacle plate for the door mechanism, including the sockets.



Illustration 3:
Place on the receptacle plate so that you can impact the external socket carefully with the plastic hammer.



Illustration 4:
Now place on the inner socket and press into the guide with the aid of a screw clamp.



Illustration 5:
Now place on the plastic bearing for the axes at the interior of the receptacle plate and screw this tight with the 4 bolts.



Illustration 6:
The illustration shows the procedure for screwing on the plastic bearing with the Phillips bit.



Illustration 7:

The illustration shows the receptacle plate with plastic bearing and the sockets.



Illustration 8:

Now you can mount the receptacle plate.



3.18 Solenoid valves general

Illustration 1:

Tools required:

- 1x Open-end wrench 8 mm
- 1x Open-end wrench 14 mm
- 1x Screwdriver Phillips PH 1
- 1x Screwdriver Phillips PH 2



Illustration 2:

The illustration shows the position of the solenoid valve.



Illustration 3:

Loosen the nut from the reactance coil body of the solenoid valve.



Illustration 4:

Loosen and remove the bolts from the plug connector of the solenoid valve.



Illustration 5:

Now you can remove the plug connector from the coil of the solenoid valve.



Illustration 6:

Now you can remove the nut for the protection of the solenoid valve.



Illustration 7:

Now remove the coil from the solenoid valve.



Illustration 8:

Loosen and remove the 4 bolts of the membrane upper part of the solenoid valve.



Illustration 9:
Remove the membrane upper part from the solenoid valve.

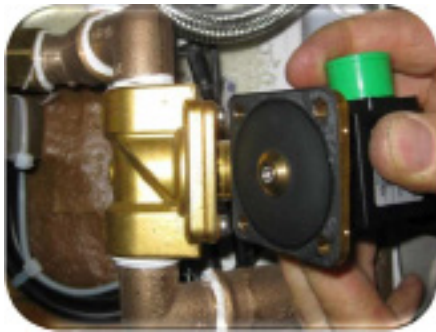


Illustration 10:
The illustration shows a solenoid valve with the membrane upper part removed.



3.19 Replace Structure-borne sound transducer

Illustration 1:
Tools required:
1x Plastic hammer
50 mm diameters
1x Screw clamp 140
1x Phillips bit PH 3



Illustration 2:
Loosen and remove all 4 bolts of the housing lid from the sound transducer.



Illustration 3:
Remove the cover from the sound transducer.



Illustration 4:
Loosen the screwed cable gland on the housing of the sound transducer.



Illustration 5:
Slide approx. 3 - 4 cm of the cable into the interior of the housing.



Illustration 6:
Now loosen and remove the 4 nuts on the sound transducer.



Illustration 7:
Now loosen the sound transducer from the housing by light levering with a flat screwdriver.



Illustration 8:
The illustration shows the loosened sound transducer.



Illustration 9:

Now remove the two cable lugs from the sound transducer and take it out.



3.20 Sound system

Illustration 1:

Tools required:

- 1x Side cutter 160 mm
- 1x Screwdriver flat 1.0 x 7.0 mm
- 1x Phillips screwdriver PH 2
- 1x Groove joint pliers large



Illustration 2:

The illustration shows the position of the USB transfer point.



Illustration 3:

Loosen and remove the cover of the USB transfer point.



Illustration 4:

Loosen the retaining nut with the pipe wrench and then, with the side cutter, remove the cable ties on the housing of the USB transfer point.



Illustration 5:

Take the control box of the sound system out of its position.



Illustration 6:

Loosen all 4 bolts from the cover of the sound system and then take out the cover.

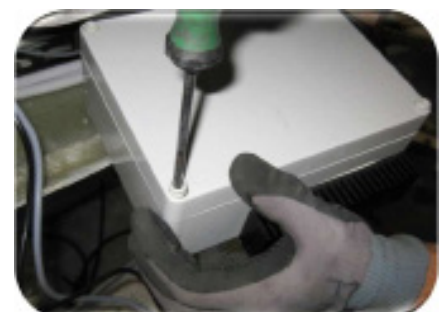


Illustration 7:

Loosen and remove the nut from the cable passage and remove the cable from the plug-in slot.

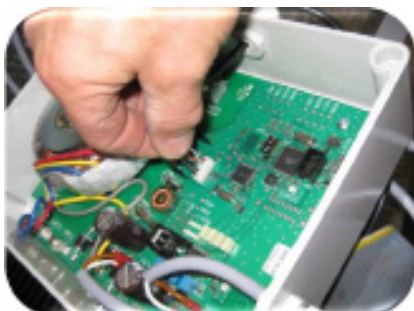


Illustration 8:

Now you can remove the USB transfer point with the cable from the bathtub housing.



3.21 Control (Mainboard)

Illustration 1:

Tools required:

- 1x Groove joint pliers small size
- 1x Side cutter 160 mm
- 1x Screwdriver flat 1.0 x 6.5
- 1x Screwdriver flat 0.3



Illustration 2:

The illustration shows the position of the control box of the AVERO Motion.



Illustration 3:

Press lightly with one hand on the clamp strap and loosen the upper wing-nut with the other hand.



Illustration 4:

Remove the upper wing-nut.



Illustration 5:

Loosen the lower wing-nut by a few turns.



Illustration 6:

Now pivot away the clamp strap to the right.



Illustration 7:

Now you can withdraw the control from the support bracket.



Illustration 8:

Now loosen all 4 bolts of the cover of the control.



Illustration 9:

Remove the cover from the control.



Illustration 10:

In order to facilitate the work, attach the control into the support again.



Illustration 11:
Bring the clamp strap again into a position where you can screw on the wing-nut.



Illustration 12:
Tighten the wingnut hand-tight in order to hold the control in position.



Illustration 13:
The illustration shows the opened control in the support.

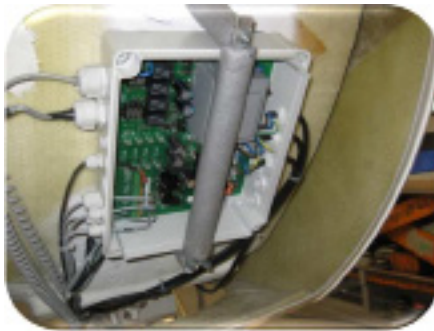


Illustration 14:
Now you can remove the individual cables from their plug-in / terminal positions.



Illustration 15:
Loosen the respective cable passages and remove the cables from the control.



Illustration 16:
Now loosen and remove the upper wing-nut of the clamp strap.



Illustration 17:
Now loosen and remove the lower bolt of the clamp strap.



Illustration 18:
Remove the clamp strap with one hand and hold the control in position with the other hand. Now you can replace the control with a new one.



3.22 Drain hose

Illustration 1:

Tools required:

- 1x Screwdriver with hexagon socket 7 mm
- 1x Screwdriver flat 0.3 x 3.0



Illustration 2:

The illustration shows the drain hose to be dismantled.



Illustration 3:

Loosen the straps of the pipe clamps with the aid of the screwdriver.



Illustration 4:

The illustration shows the strap of the second pipe clamp.

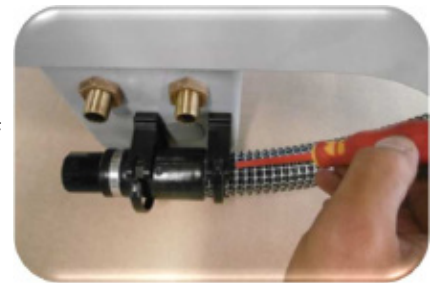


Illustration 5:

Fold the strap down or remove the strap completely.



Illustration 6:

Now pull the drain hose from the pipe clamps.



Illustration 7:

Loosen the bolts on the hose clamp and pull the hose off (at the eccentric fitting).



Illustration 8:

Remove connection nozzle: Loosen the bolts of the hose clamp and pull the pipe socket from the hose.



Illustration 9:

The illustration shows the dismantled drain hose with clamps and end-nozzle D41, as well as connection nozzle.



3.23 Excenter fittings

Illustration 1:

Tools required:

- 1x Hexagon screwdriver AW 3
- 1x Geberit special tool / bolt attachment (included in the scope of delivery)
- 1x Screwdriver with hexagon socket 7 mm



Illustration 2:

Insert the hexagon screwdriver AW3 into the rotation actuation and loosen bolt, after that pull off the rotation actuation.



Illustration 3:

Remove the screw-in upper part from the excenter fitting (with Geberit Special tool).



Illustration 4:

Illustration shows the loosened screw-in part.



Illustration 5:

Now take out the excenter part and let it hang loose.



Illustration 6:

Remove the excenter plug.



Illustration 7:

Rotate the bolt from the drainage grating with the special tool.



Illustration 8:

Withdraw the bolt and the drainage grating.



Illustration 9:

Loosen the bolt of the hose clamp and pull off the drain hose.



Illustration 10:

Now withdraw the loose excenter fitting.



Illustration 11:

Loosen the bolt of the hose clamp and pull off the drain hose.



Illustration 12:

Loosen the bolts of the hose clamps.....



Illustration 13:

..... and pull the end-nozzles from the excenter fitting.



Illustration 12:

The illustration shows the dismantled excenter fitting.



3.24 LED-spot

Illustration 1:

Tools required:

1x Groove joint pliers medium size



Illustration 2:

The illustration shows the installed LED spot.



Illustration 3:

As described in section 3.21, open the control and remove the cable for the LED spot from the mainboard.



Illustration 4:

The illustration shows the LED spot from the inner side of the bathtub body.



Illustration 5:

Press with the fingers on the edge of the LED spot.



Illustration 6:

Loosen the self-locking counter-nut with a pipe wrench and remove it.



Illustration 7:

You can now withdraw the LED spot to external.



Illustration 8:

The illustration shows the withdrawn LED spot.



3.25 Air nozzle

Illustration 1:

Tools required:

- 1x Groove joint pliers small
- 1x Groove joint pliers large
- 1x Flat screwdriver 0.6 x 3.5
- 1x Side cutter



Illustration 2:

Insert the screwdriver into the side opening of the nozzle covering and lift it carefully; the cover now springs off.

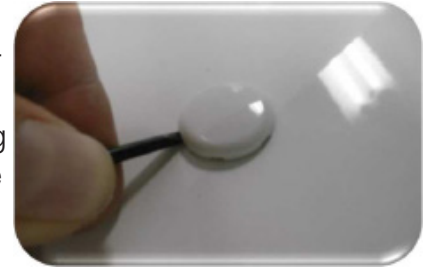


Illustration 3:

Nozzle without cover.



Illustration 4:

Now cut out the ring clamp with the side cutter.



Illustration 5:

Slide the opened ring clamp down.



Illustration 6:

Loosen the hose with the screwdriver around the nozzle connection angle.



Illustration 7:

Now pull off the loosened hose.



Illustration 8:

Now screw the nozzle connection angle from the tuyère connection.



Illustration 9:

Now withdraw the tuyère connection upward from the bathtub body.



Illustration 10:

The illustration shows the air nozzle with all parts.



3.26 Mattson thermostat valve and screen

Illustration 1:

Tools required:

- 1x Groove joint pliers medium size
- 1x Groove joint pliers small size
- 1x Screwdriver with hexagon socket 9 mm
- Screwdriver 1x flat 0.6 x 3.5 mm
- 1x Screwdriver hexagon AF 2.5
- 1x Open-end wrench 13 mm
- 1x Open-end wrench 10 mm
- 1x Open-end wrench 8 mm



Illustration 2:

Illustration shows thermostat valve complete. (CSA approved)



Illustration 3:

Loosen and remove the hose to the bathtub inlet.



Illustration 4:

Loosen and remove the hose on the feed.



Illustration 5:

Loosen the bathtub inlet screwed connection.



Illustration 6:

Illustration shows solenoid valve bathtub inlet with shaped pieces.



Illustration 7:

Loosen and remove the hotwater supply flow hose.



Illustration 8:

With the pipe wrench, loosen the retaining nut for hot water at the thermostat.



Illustration 9:

Illustration shows non-return Mattson hot water with shaped piece.



Illustration 10:

With the pipe wrench, loosen the retaining nut for cold water on the thermostat.



Illustration 11:

The illustration shows the solenoid valve disinfection and non-return Mattson cold water with shaped pieces.



Illustration 12:

Illustration shows remaining hand-held shower module assembly with solenoid valve and shower temperature sensor.



Illustration 13:

Loosen and remove the handheld shower hose.



Illustration 14:

Loosen the 4x nuts of the operating film



Illustration 15:

Loosen the nuts of the baseplate (4 items)



Illustration 16:

Loosen the nuts of the baseplate (4 items).



Illustration 17:

Loosen the nuts of the baseplate (4 items)



Illustration 18:

Remove the cap from the rotating knob with the screwdriver (flat).



Illustration 19:

Loosen and remove the bolts with the screwdriver (hexagon).



Illustration 20:

Remove the rotating knob upward.



Illustration 21:
Loosen and remove the self-aligning ring of the thermostat valve. Pull it off upwards!



Illustration 22:
Remove the baseplate with touch panel, after the bathtub inlet dismantling (see 3.32).



Illustration 23:
The illustration shows the removal of the baseplate with control panel.

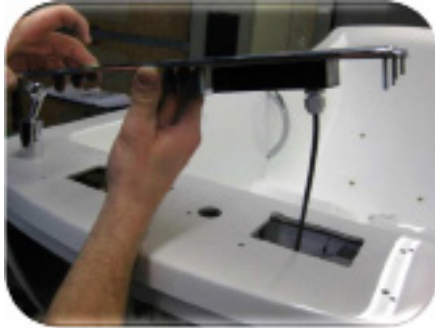


Illustration 24:
The illustration shows the thermostat valve from above.



Illustration 25:
Loosen and remove the bolts of the covering for the thermostat inserts.

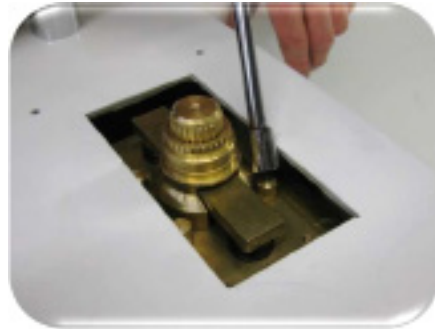


Illustration 26:
Loosen and remove the bolts of the covering for the thermostat inserts.

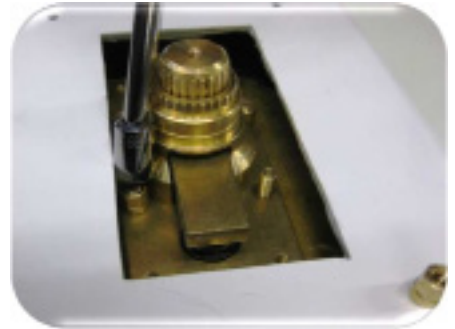


Illustration 27:
Loosen and remove the bolts of the covering for the thermostat inserts.

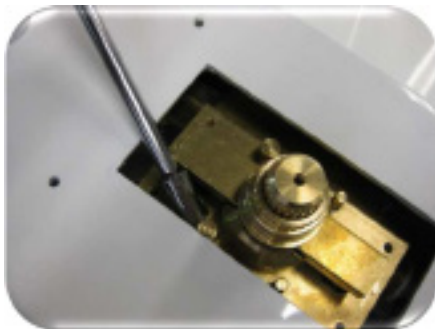


Illustration 28:
Loosen and remove the bolts of the covering for the thermostat inserts.



Illustration 29:
Now remove the covering of the thermostat inserts.



Illustration 30:
The illustration shows the three thermostat inserts.



Illustration 31:

Loosen the thermostat inserts carefully with the pipe wrench.



Illustration 32:

Now you can withdraw the thermostat inserts with the fingers.

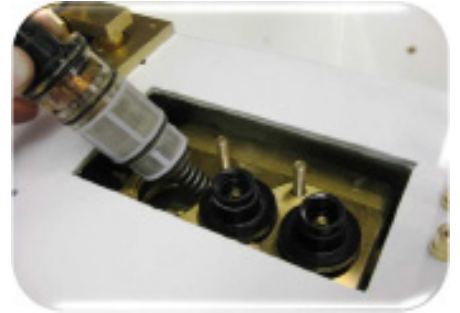


Illustration 33:

The illustration shows the thermostat with the withdrawn thermostat inserts.

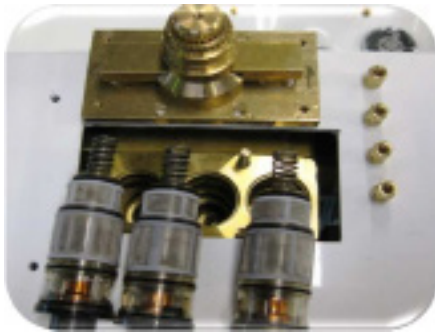


Illustration 34:

The illustration shows the thermostat without the withdrawn thermostat inserts.



Illustration 35:

Now loosen and remove the left bolt on the thermostat valve.



Illustration 36:

Now loosen and remove the right two bolts on the thermostat valve.



Illustration 37:

The illustration shows the thermostat valve with the removed bolts.



Illustration 38:

Remove the thermostat valve from the support bracket.



Illustration 39:

Remove the thermostat valve from the support bracket.



Illustration 40:

Remove the thermostat valve from the support bracket.



Illustration 41:

The illustration shows here the withdrawn thermostat valve (without inserts).



Illustration 42:

The illustration shows the connection piping for the cold water connection with solenoid valve disinfection.



Illustration 43:

Hold the pipe connection piece fixed with the hand and remove/loosen the Mattson nonreturn with the large groove joint pliers.

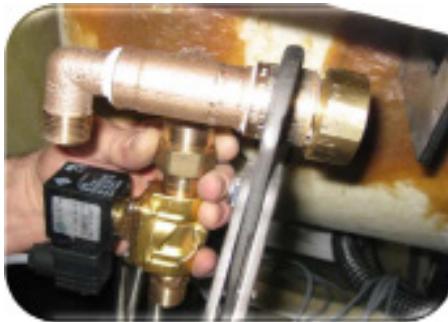


Illustration 44:

The illustration shows the removed Mattson non-return from the cold water connection.



Illustration 45:

The illustration shows the removed Mattson non-return from inside (cold water connection).

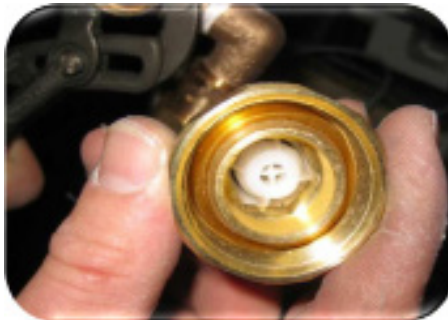


Illustration 46:

The illustration shows the removed Mattson non-return from the hot water and cold water connection.



Illustration 47:

Mattson non-return! Unscrew angle, now replaceable (hot water).



Illustration 48:

Screw non-return Mattson from module assembly, now replaceable (cold water).



3.27 Crossbar plate

Illustration 1:

Tools required:

- 1x Ratchet ¼ inch
- 1x Nut ¼ inch 7 mm
- 1x Extension ¼ inch x 50 mm



Illustration 2:

The illustration shows the installed crossbar plate.



Illustration 3:

Loosen and remove the four (4) nuts with spacing washer.



Illustration 4:

Loosen and remove the four (4) nuts with spacing washer.



Illustration 5:

Loosen and remove the four (4) nuts with spacing washer.



Illustration 6:

Loosen and remove the four (4) nuts with spacing washer.



Illustration 7:

Now you can remove the crossbar plate.



3.28 Crossbar guide (is used to adjust the door seal)

Illustration 1:

Tools required:

- 1x Ratchet ¼ inch
- 1x Nut ¼ inch 13 mm
- 1x Extension ¼ inch x 50 mm



Illustration 2:

The illustration shows the assembled crossbar guide with running roller.



Illustration 3:

Loosen and remove the two (2) nuts with spacing washer.



Illustration 4:

Loosen and remove the two (2) nuts with spacing washer.



Illustration 5:

Now you can withdraw the crossbar guide with running roller.



Illustration 6:

The illustration shows the removed crossbar guide with running roller.



**For the installation please note the sequence of the illustrations
6 → 2!**

3.29 Door locking mechanism

Illustration 1:

Tools required:

- 1x Ratchet ½ inch
- 1x Ratchet ¼ inch with hexagon AF 4
- 1x Ratchet ring spanner 13 mm
- 1x Nut ½ inch x 13 mm
- 1x Nut ½ inch x 17 mm
- 1x Extension ½ inch x 200 mm
- 1x Socket T-grip AF5 x 150
- 1x Open-end wrench 13 mm
- 1x Groove joint pliers small size



Illustration 2:

Required aid resources:

The illustration shows all components which relate to the door mechanism.



Illustration 3:

Place on the bearing bush as described in section 3.17. Then attach the receptacle plate in the bathtub.



Illustration 4:

Now attach the lower nut with washer to the receptacle plate.



Illustration 5:

Now attach the upper nut with washer to the receptacle plate.



Illustration 6:

Now insert a fastening screw through the laminating iron and the receptacle plate.



Illustration 7:

Now attach the spacing washer and the nut on the bolt.



Illustration 8:

Now attach the second bolt as well as spacing washer with nut.



Illustration 9:

Now insert the articulated link plate and shaft from externally through the socket guides.

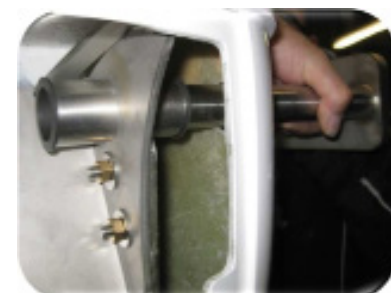


Illustration 10:

Now attach the clamping strap.



Illustration 11:

Position the clamping strap as can be seen here on the illustration.



Illustration 12:

Now attach the setting ring.



Illustration 13:

The illustration shows the spacing washers of brass which must be attached on the shaft.



Illustration 14:

Now attach the brass washers on the shaft.

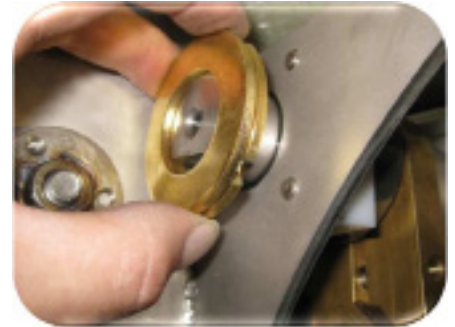


Illustration 15:

The illustration shows the limit stop which also must be attached on the shaft.



Illustration 16:

Now attach the limit stop on the shaft and note the fit.



Illustration 17:

The illustration shows the attached limit stop on the shaft.



Illustration 18:

Now attach the set screw (M8).



Illustration 19:

Now tighten the set screw securely



Illustration 20:

Spray grease into the area of the shaft with the limit stop.



Illustration 21:

Now attach the machine disk to the limit stop.



Illustration 22:

Now screw the self-locking counter-nut onto the set screw.



Illustration 23:

Now tighten the nut securely with the ring spanner.



Illustration 24:

Now attach the door and align so that it is flush with the edge.

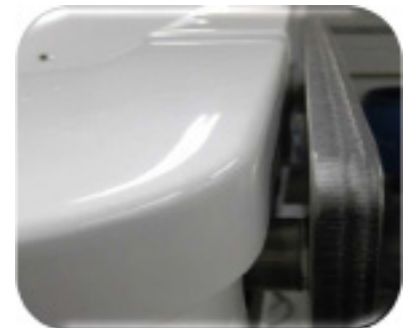


Illustration 25:

Slide the setting ring against the POM and tighten the setting ring securely.



Illustration 26:

Now tighten the lower bolt securely on the receptacle plate.



Illustration 27:

Now tighten the upper bolt securely on the receptacle plate.



Illustration 28:

Now tighten the lower bolt securely on the installation plate and the receptacle plate.



Illustration 29:

Now tighten the upper bolt securely on the installation plate and the receptacle plate.



Illustration 30:

Now attach the slip ring to the upper fastening point of the damper.



Illustration 31:

The illustration shows the assembled slip ring on the receptacle.



Illustration 32:

Now mount the damper on the receptacle above.



Illustration 33:

Now place the second slip ring onto the screw thread.



Illustration 34:

Now attach the self-locking counter-nut to the screw thread.



Illustration 35:

Now tighten the self-locking counter-nut securely.



Illustration 36:

Now attach the sliding disk to the second upper receptacle for the damper.



Illustration 37:

Now attach the second damper and the second sliding disk.



Illustration 38:

Now attach the self-locking counter-nut to the second damper.



Illustration 39:

Now tighten the selflocking counter-nut securely.



Illustration 40:

Now attach the slide sockets to the damper receptacle below.



Illustration 41:
Now attach the slide sockets to the damper receptacle below.



Illustration 42:
Now attach the damper receptacle to the bracing.

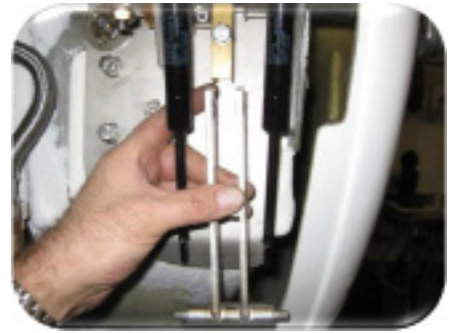


Illustration 43:
Now attach the damper receptacle to the bracing.



Illustration 44:
Now attach the safety pin to the bracing (from the right).



Illustration 45:
The illustration shows the inserted safety pin.

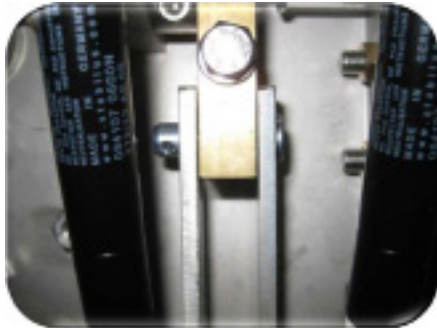


Illustration 46:
Now attach the securing pin to the safety pin.



Illustration 47:
Now take a pipe wrench and spread the securing pin.



Illustration 48:
Now take a pipe wrench and spread the securing pin.



Illustration 49:
The illustration shows the spread-out securing pin (secure).



Illustration 50:
Now attach the left plain bearing to the damper receptacle (below).



Illustration 51:

Now attach the right plain bearing to the damper receptacle (below).



Illustration 52:

Now attach the sliding disks (left and right) to the damper receptacle (below).



Illustration 53:

Now attach the dampers, the sliding disks as well as the self-locking counternuts to the damper receptacle and tighten the nuts securely.

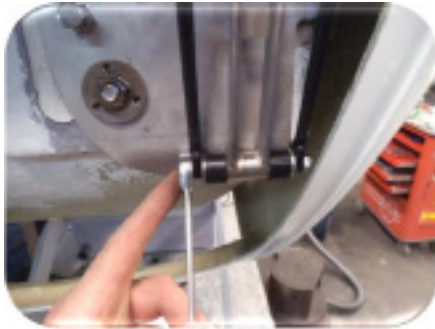


Illustration 54:

The illustration shows the damper assembled on the damper receptacle (below).

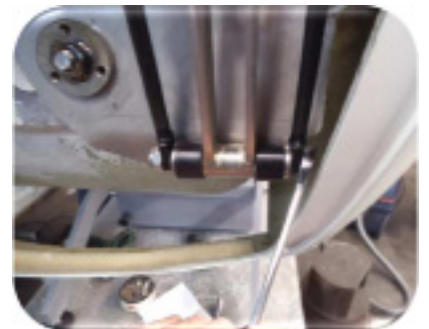


Illustration 55:

Open the door of the AVERO Motion and bring the door into the 90° setting.



Illustration 56:

The illustration shows the door of the AVERO Motion in the 90° setting (door edge to door receptacle).



Illustration 57:

Now fix the bolts on the limit stop; secure the position of the bolts with the counter nut.



Illustration 58:

Now tighten the bolts securely on the bracing (45 Nm).



Illustration 59:

The illustration shows the doorclosing mechanism with closed door.



3.30 Door seal

Illustration 1:

Required tools and aid resources:

- 1x Cleaner e.g. Tangit
- 1x Cleaning cloth
- 1x Scraper 20 mm
- 1x Door seal
- 1600 mm long
- 1x Special adhesive for door seal



Illustration 2:

Loosen the seal at the outermost location on the door.



Illustration 3:

Pull out the seal carefully from the slot.



Illustration 4:

Continue to pull out the seal from the slot over its length.



Illustration 5:

The illustration shows the slot of the seal.



Illustration 6:

Now scrape the coarse residual pieces of adhesive from the slot.



Illustration 7:

Now remove the remaining adhesive from the slot with a cleaner.



Illustration 8:

Now free the slot of any grease residue.



Illustration 9:

Now attach the adhesive for the new seal in the slot.



Illustration 10:

Now attach the seal. Start by bonding in the seal from the end of the slot.



Illustration 11:

Press the seal into the slot without simultaneous pulling on the seal.



Illustration 12:

The illustration here shows how the seal is inserted into the slot.



Illustration 13:

The illustration shows the seal bonded into the door.



Illustration 14:

The illustration shows the door with the bonded in seal.



NOTE:



After the seal has been bonded completely into the door, the door must be locked.

The adhesive must harden for 24 hours, only after that may the bathtub be used again.

3.31 Door handle and lock box

Illustration 1:

Required tools:

- 1x Groove joint pliers medium size
- 1x Screwdriver AW20
- 1x Open-end wrench 7 mm
- 1x Screwdriver hexagon AF 2.5



Illustration 2:

Loosen and remove the Allen screw from the grip axis.



Illustration 3:

Take the grip with hub from the axis.



Illustration 4:

Loosen the bonded-in bolts with the pipe wrench.



Illustration 5:

Now turn out the bolts with the fingers.



Illustration 6:

Loosen the bolt for the deflection lever with the open-end wrench.



Illustration 7:

Remove the bolt for the deflection lever.



Illustration 8:

Now loosen and remove the upper bolt of the door interlocking.

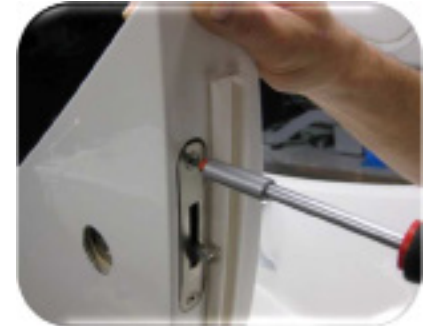


Illustration 9:

Now loosen and remove the lower bolt of the door interlocking.



Illustration 10:

Now withdraw the door interlocking, where you grip the strut with a pipe wrench and pull it out.



Illustration 11:

The illustration shows the removed door interlocking.



3.32 Bathtub inlet

Illustration 1:

Required tools:

1x Open-end wrench 8 mm

1x Groove joint pliers medium size



Illustration 2:

Loosen the nut with the pipe wrench from the braided hose for the bathtub inlet.



Illustration 3:

The illustration shows the removed braided hose.



Illustration 4:

Loosen and remove the nut with spacing washer.



Illustration 5:

Loosen and remove the self-locking counternut with the pipe wrench.



Illustration 6:

Now you can remove the bathtub inlet from the bathtub.



Illustration 7:

The illustration shows the withdrawn bathtub inlet.



3.33 Cold and hot water supply flow

Illustration 1:

Required tools:

- 1x Groove joint pliers medium size
- 1x Open-end wrench 24 mm (shortened, 150 mm length)



Illustration 2:

With the pipe wrench, loosen the cap nuts on the thermostat valve for cold water.

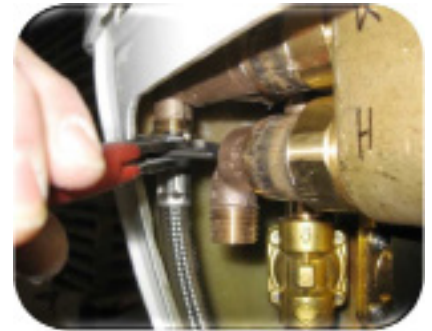


Illustration 3:

With the pipe wrench, loosen the cap nuts on the thermostat valve for hot water.



Illustration 4:

The illustration shows the braided hoses for cold and hot water in the assembled status.

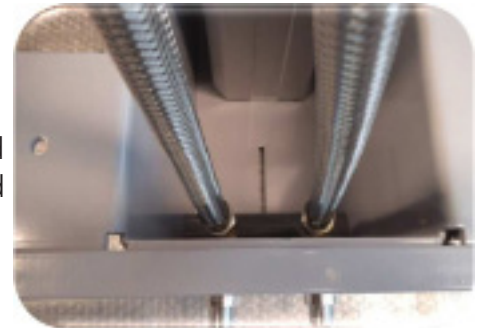


Illustration 5:

Now loosen the retaining nut with the key and repeat the procedure for the second hose. Then you can remove both hoses.



3.34 Gas spring

Illustration 1:

Tools required:

1x Screwdriver

flat .5 x 6.5

1x Ring/Open-end
wrench 13 mm



Illustration 2:

Open the door



Illustration 3:

Lift up the door with
the right-hand lever
and hold at the
uppermost setting.



Illustration 4:

Illustration shows
the two gas
springs with
open door.



Illustration 5:

Now loosen the bolts
of the carrier and
then the door is
without gas-spring
support.



Illustration 6:

Illustration shows
the loosened door.



Illustration 7:

Now allow the door
to lower slowly.



Illustration 8:

Illustration shows
the lowered door.



Illustration 9:

Illustration shows the gas springs extended (as-supplied condition as a spare part).

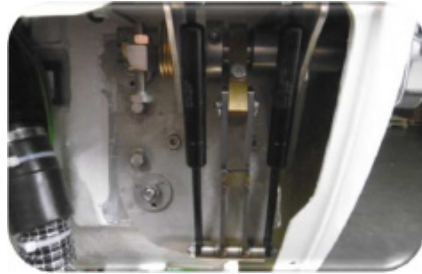


Illustration 10:

Loosen the 13 mm stop nut above on the gas spring.

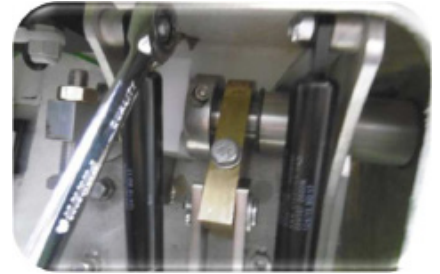


Illustration 11:

Loosen the 13 mm stop nut below on the gas spring.



Illustration 12:

Slide the gas spring from the fixing base socket with the flat screwdriver.

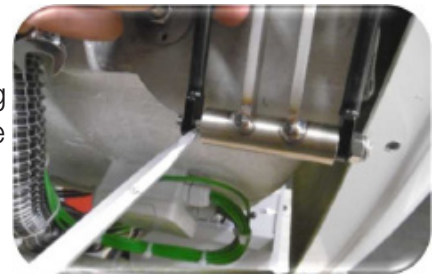


Illustration 13:

As illustration 12.



Illustration 14:

Pull off gas spring!



Illustration 15:

Illustration shows removed gas spring.



Illustration 16:

Illustration shows support disk IGUS!



3.35 Air diffuser with check valve

Illustration 1:

Tools required:
1x Side cutter
1x Screwdriver
hexagon socket
7 mm



Illustration 2:

Loosen the hose clamp on the output distributor.



Illustration 3:

Cut through the earring clamps.



Illustration 4:

Illustration shows the cutthrough clamps.



Illustration 5:

Now pull off the air hose.



Illustration 6:

Cut through the cable ties; now the air diffuser is loosened.



Illustration 7:

Illustration shows the air diffuser.
Now repeat steps in Illustrations 3 - 5 on the remaining outlets.



3.36 Automatic water stop sensor and blower/disinfection sensor

Illustration 1:

Tools required:

1x Cutting knife

1x Groove joint pliers large



Illustration 2:

Illustration 2 shows blower/disinfection sensor.



Illustration 3:

Illustration shows water stop sensor.



Illustration 4:

Remove sensor with cutting knife, all-round.



Illustration 5:

Loosen sensor allround with cutting knife.



Illustration 6:

After loosening with the cutting knife, turn off sensor with the groove joint pliers. Similar process.



4. Changing display from “celsius” to “fahrenheit”

Step 1: Switch off mains voltage

Step 2: Set DIP-switch no. 1 to “ON” (see pic. no. 1)

Step 3: Switch on mains voltage

Step 4: Press yellow button (9) “DIS” (see pic. no. 2)

Now the basic setting “celsius” will be changed to “fahrenheit”.

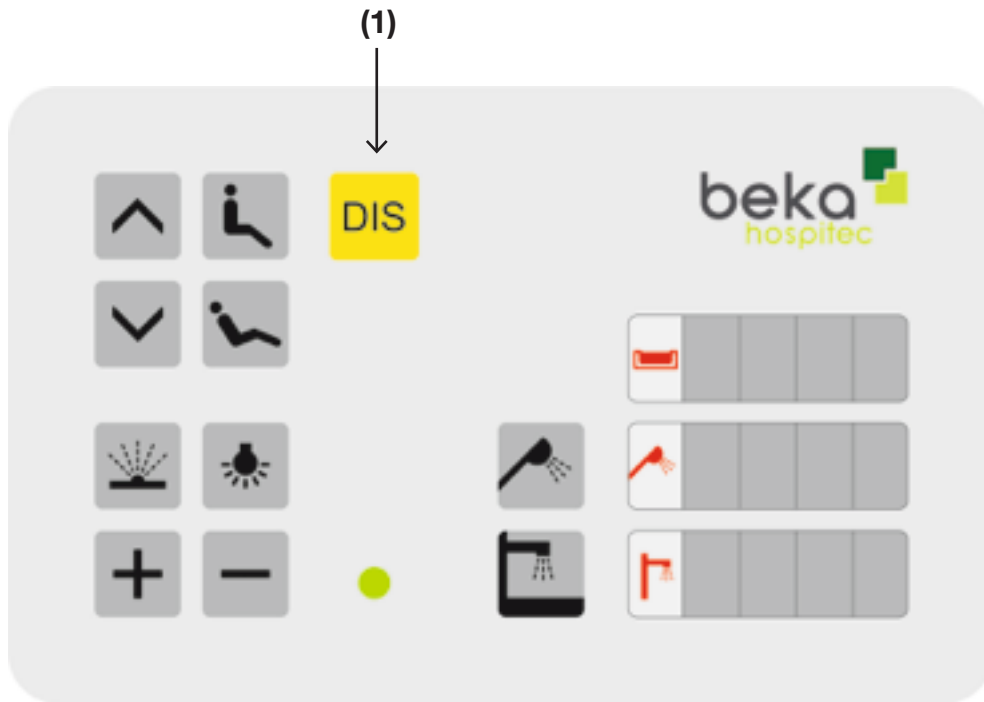
This will also be shown on the display.

Step 5: Set DIP-switch no.1 to “OFF” (Please note, that the mains voltage still have to be “ON”, otherwise the changes to setting will not be saved)

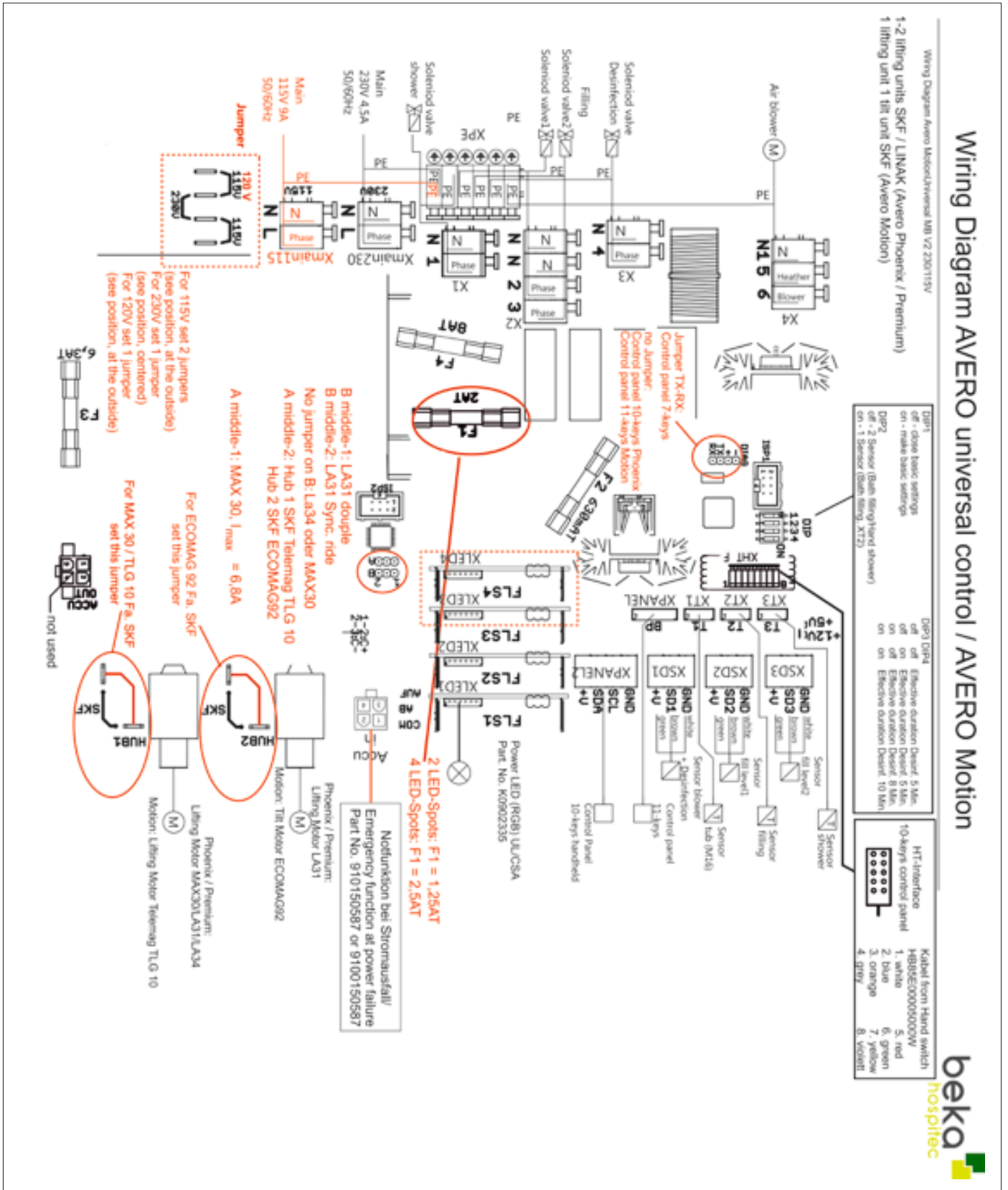
Picture no. 1 (Step 2.)



Picture no. 2 (Step 4.)
Operating control unit lifting tub Avero Motion



5. Wiring diagram for AVERO universal control



6. Accessories/Options

AVERO Motion bathtub

Part	Description	Part No.
Cable remote control	For the following adjustments: up-/down, reclining, water filling and hand shower as an option for a user.	810150555
Automatic tub filling/water stop AVERO Motion	Sensor controlled stop of the water at the designated water level.	810150560
Music-sound-system AVERO Motion	Integrated music sound system with USB-connection. Installation outside of the inner tub for using the tub body as resonance body for optimal sound streaming. Operation via remote control.	810150572
Air-jet-whirl-system AVERO Motion	Special air-jet system for intense cleaning and exhilarant effect. Air- jets are embedded in tub bottom and equipped with integrated water flow back protection for highest hygienic demands. Warm air blower (40° C/ 100° F) with a flow rate of 600 l/min. Microprocessor controlled operation panel with intensity and interval control. Power 230 V/ 110 V, working power 12 V	810150570
Emergency function at power failure	Battery operated control system with independent power supply allows to lift the tub up and down via the push buttons on the control panel in case of power failure. At Avero Motion/Motion E additionally the tilting function is ensured too. All other functions are deactivated	810150857
Color-light-therapy-system AVERO Motion	Inside the tub built-in LED underwater lights allow a glare-free light therapy for highest demands. Freely selectable color or automatic interval program.	810150575
Disinfection-system AVERO Motion	Disinfection fluid container integrated in the base frame with a lockable cover. With disinfection fluid admixture via injector system; suitable for all standard disinfection fluids. Disinfection control via touch panel. Disinfection can only be activated when tub is empty (safety control).	810150585
Second holder for hand shower	Easily reachable second holder for hand shower mounted on the side edge of the tub for an independent use of the hand shower by a resident.	910150586
Comfort neck pillow		810150565

7. Manufacturer

For additional information, contact the manufacturer:



BEKA Hospitec GmbH
Am Rübenmorgen 3 • 35582 Wetzlar
Fon: +49(0)641-9 22 20 - 0
Fax: +49(0)641-9 22 20 - 20
info@beka-hospitec.de
www.beka-hospitec.de

or its authorized distributor:

PRISM MEDICAL



485 Millway Ave. Concord Ont. L4K 3V4 | T 1.800.265.0677 | F 416.260.5580
www.prismmedical.ca