

Installation instructions

for stair lift
HIRO 160 Q



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Please keep these instructions for further reference!

2. Key to symbols

Key to symbols



Caution! Risk of personal injury!



Attention! Risk of material damage!



Note

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Germany

3. Assembly and installation procedure HIRO 160 Q

3.1 Tools

The following tools are required for assembling and installing a HIRO 160 Q stair lift:

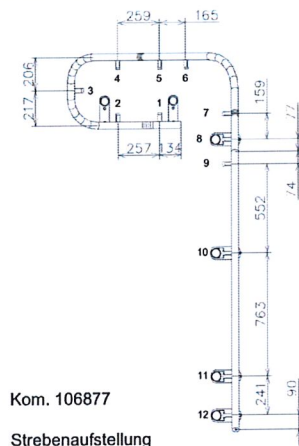
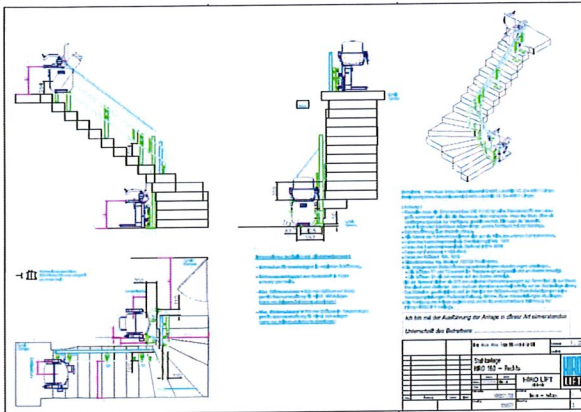


- Percussion drill
- Percussion drill bits 6 - 14 mm
- Power drill
- Set of drill bits and taps for metric thread sizes M4 - M12
- Power screwdriver
- Angle grinder
- Vacuum cleaner
- Set of socket spanners
- Set of open-ended/ring spanners
- Torx spanner T40
- Set of screwdrivers
- Electric power tool
- 2 x chain hoist 250 kg
- Set of metric Allen keys
- Hydraulic jack
- Spirit level
- Tape measure

3. Assembly and installation procedure HIRO 160 Q



3.2 Preparations for work



Kom. 106877

Strebenaufstellung

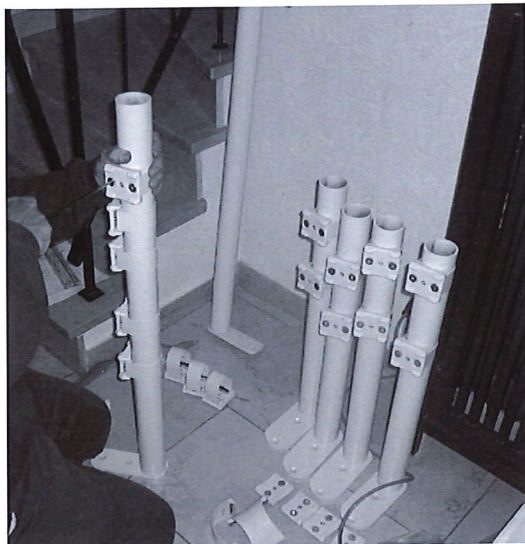
Kommission 106877

Stütze Nr	Länge	028127	0203793	Sonder	Flüße- Korpus	Wandab- längung	Zeichnung auf Aufplatte
1	640	1			031086		
2	620	1			031086		
3	640	1			031086		
4	640	1			031086		
5							
6							
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The lift unit is supplied in the following packages:

1. Drive unit
2. Seat
3. Cover panels
4. Guide rail beams
5. Production parts list, lift unit drawing with list of supports and fixing materials for the stops
6. Guide rail supports
7. Fixing brackets and screws for anchoring guide rails and supports
8. Wall mount for charger unit
9. Electrical accessories kit with charger unit, charging cable, charging bars, fixing materials, magnets and bolts and screws
10. Lift unit drawing and documentation
11. Circuit diagram, list of parameters and operating instructions for the control
12. Instructions and acceptance inspection documentation

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Before starting installation work, please check whether the dimensions given in the lift unit drawing agree with the actual dimensions on the installation site.

Check against the lift unit drawing and the production parts list to ensure that the lift unit delivered is complete.

Arrange the guide rail supports according to length and position.

Please refer to the list of supports to see which support length is required in each case. The position of the supports is shown in the lift unit drawing.



All the dimensions relevant for the installation work are shown in red on the lift unit drawing.

All dimensions on the lift unit drawing refer to the centre of the guide rail tube.

The guide rail supports are shown as S1/S... in the lift unit drawing and are indicated in the parts list with their various lengths.



Take the fixing brackets out of the enclosed accessories kit and take out the accompanying screws for assembling the supports.

Place the guide rail supports, guide rail brackets, clips and fixing screws on the staircase treads specified in the lift unit drawing.

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3.3 Installation of guide rails



In lift units where the guide rails are fixed to the wall only, be sure to use through bolts or wall anchors.

Where guide rails are fixed to the wall, the fixing points are shown as W1 - W... on the lift unit drawing.

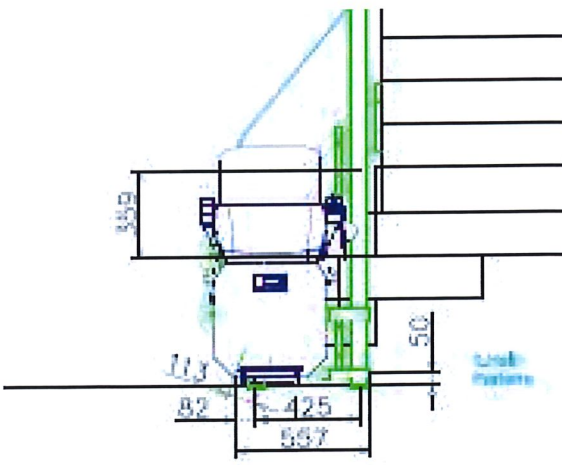
If the guide rails are to be fixed to concrete, only approved adhesive anchors or stud bolts must be used.



When fixing the supports, they must be supported with a bracket attached to the nearest wall wherever possible.

The lift unit drawing specifies the distances between the guide rail and the staircase tread.

Lay the lower end of the guide rail track on the floor. The lower edge of the guide rail track is specified in the lift unit drawing from the outer edge of the staircase tread (zero point).

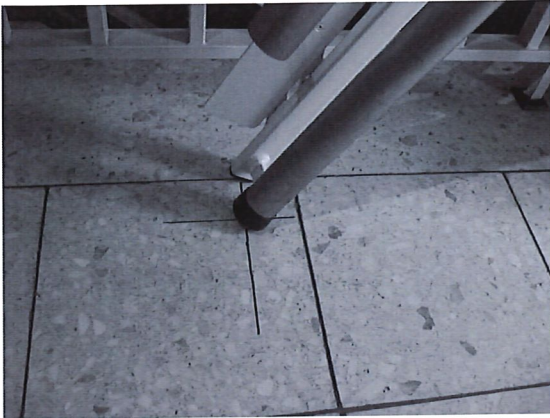


For lifts with a horizontal travel path, the height dimension specified is that of the guide rail track.

Adjust the guide rail track with the supports loosely attached or using a hydraulic jack.

Particular attention must be paid to ensure that the guide rail track and the supports are properly anchored.

3. Assembly and installation procedure HIRO 160 Q



Note!

Before installing the guide rails, the lower guide rail cap must first be attached.

For lift units with guide rail supports in the stairwell, the supports must be fitted first as shown in the lift unit drawing.



The dimensions for each of the supports are given in the lift unit drawing.

All dimensions refer to the centre of the tubular supports.



Mark the positions of the supports.

Place the supports on the pencilled in positions and mark the position of the screw holes.

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The size of drill bit to be used depends upon the fixing materials contained in the enclosed accessories kit and shown in the list enclosed with the accessories.

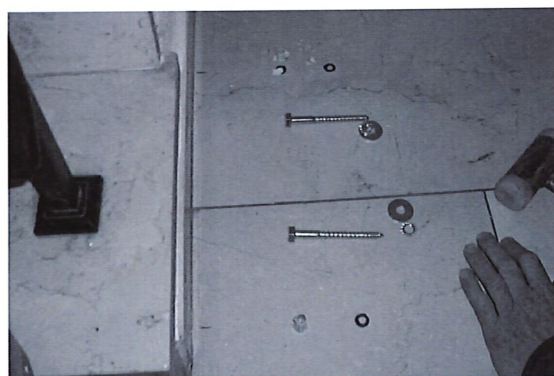


Attention!

Before drilling, ensure that there are no cables or underfloor heating present in the area concerned.



Different types of fixings are possible depending on the subsurface and the floor covering.



Attention!

If the subsurface is loose, then the supports must be fixed to concrete.

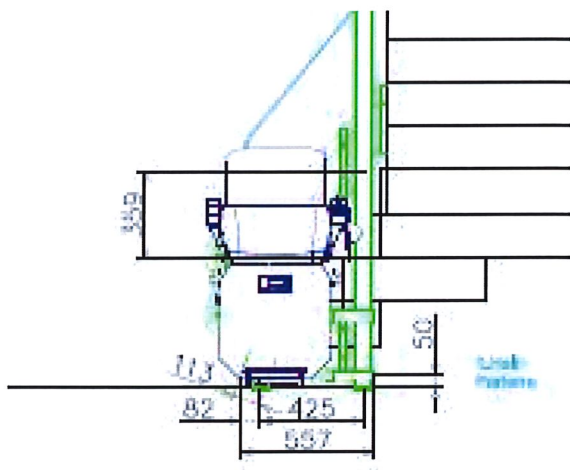


3. Assembly and installation procedure HIRO 160 Q



When fixing the supports, ensure that the supports are correctly aligned both horizontally and vertically.

If it is possible to brace the supports to the wall or a similar surface, then the supports must also be fixed by an additional means.

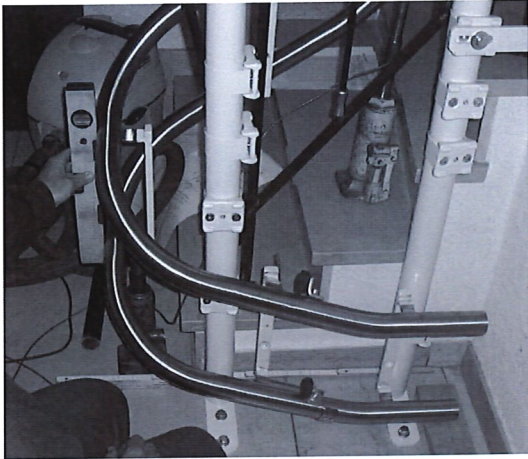


Refer to the drawing for the zero point (guide rail starting point) and mark this point on the floor.

Align the guide rail on the zero point and install the first guide rail beam as described above.

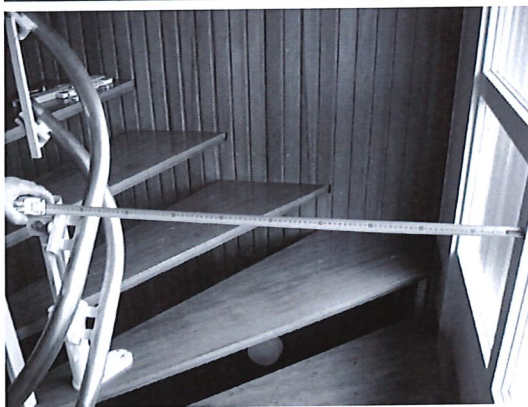


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Align the guide rails in all directions using the spirit level.

The lift unit drawing shows the height dimensions at each join position between the guide rail beams.



Compare the clearance dimensions and the height dimensions with the actual dimensions at the installation site, and if necessary, adjust the guide rail track.



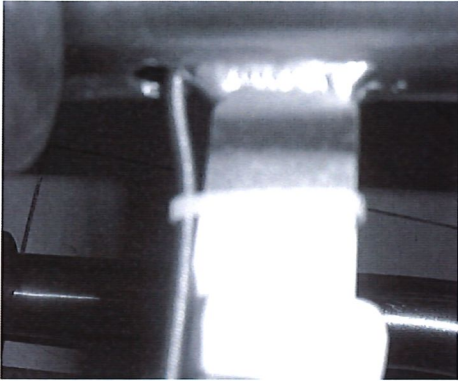
To lay the charging cables, use a coiled cable or the cable supplied.

After installing the first guide rail beam, the charging cable must be laid inside the upper guide rail tube.



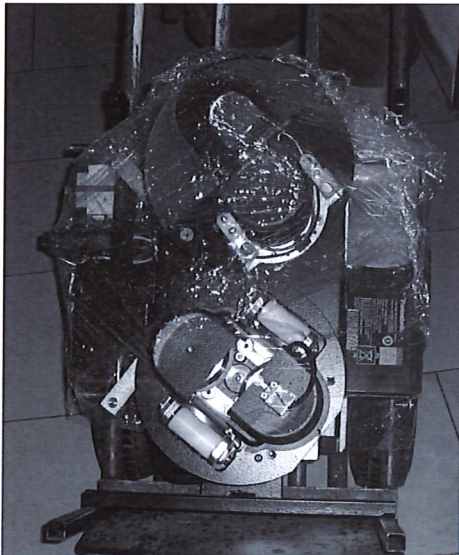
3. Assembly and installation procedure HIRO 160 Q

3.4 Installation of drive unit



At the lift stops, a ready-drilled hole is provided in the upper guide rail tube near the guide rail fixing plate for the purpose of laying the charging cable.

Secure the cable to the guide rail fixing plate.



Carry out the following steps to install the drive unit:

Remove the packaging.

To allow the drive unit to be set down, a transport frame is attached underneath it.

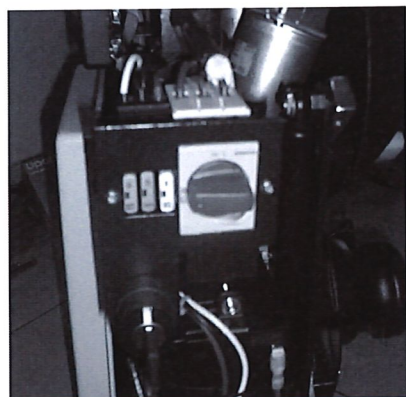
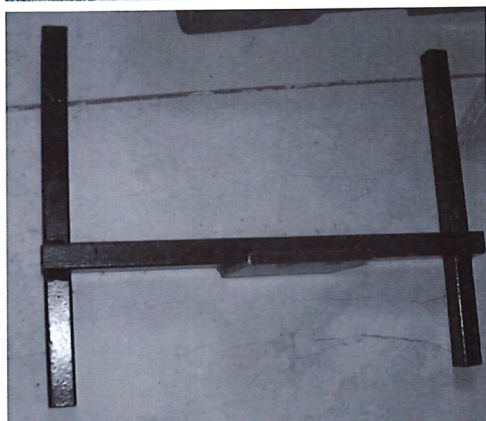
Install the footrest contact tray.



3. Assembly and installation procedure HIRO 160 Q



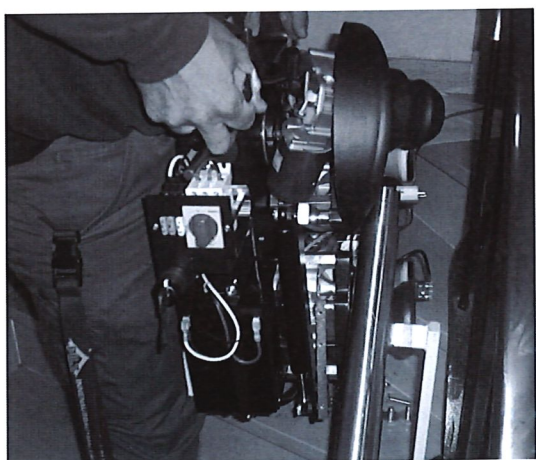
To suspend the drive unit in the guide rail, the transport frame must be removed as shown in the picture.



Switch the main switch to *ON* and insert the emergency operation key into the appropriate key switch.

Check the direction of rotation of the rollers by turning the key switch.

Before suspending the drive unit, adjust the set of rollers to the same angle of incline as that of the guide rail track.



Lift the drive unit together with the set of rollers onto the ends of the guide rail track.

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By turning the key switch to the DOWN direction of emergency operation, you can insert the drive unit into the guide rail track.

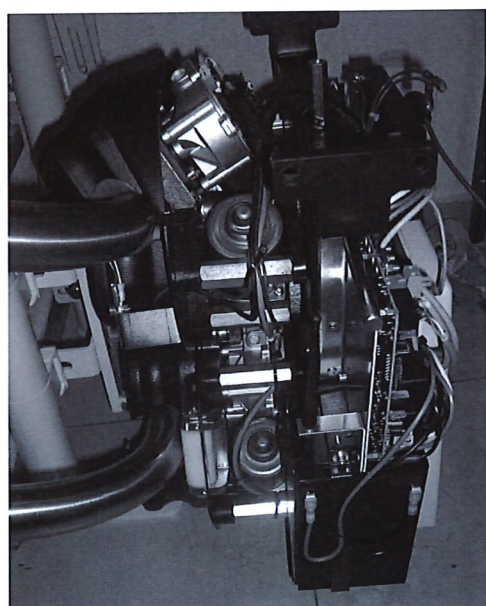


Attention!

Ensure that the drive unit and the rollers are not tilted.



Use the emergency operation facility to move the drive unit into the lowest position and switch the main switch to *OFF*.

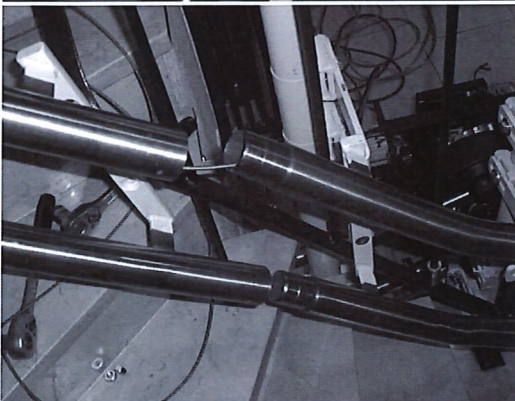


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The remaining guide rail beams are identified by consecutive numbers.

The job number and the guide rail beam number are shown on each guide rail beam.

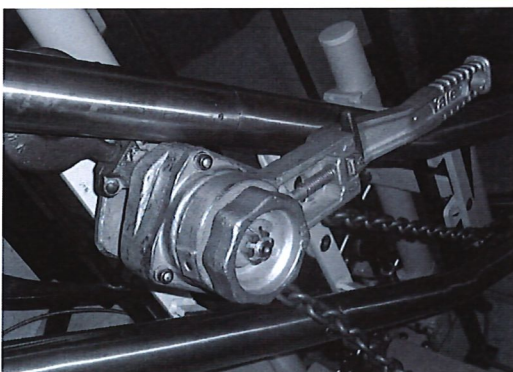


Before inserting the guide rail beam, the charging cable must first be laid in the guide rail tube.

Take care not to damage the charging cable when fitting the guide rail beams together.

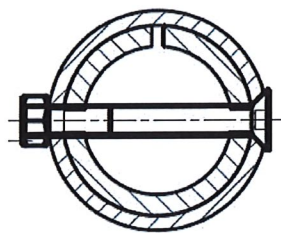
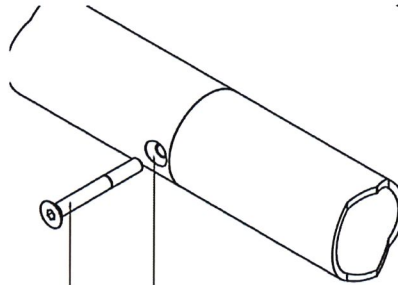


Grease both the guide rail ends and sleeves before fitting the guide rail beams together.



If necessary, pull the guide rails together carefully with a chain hoist.

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The ends of the guide rails must be fitted together without leaving any gap between them.

If necessary, maintain the tension between the guide rails using a chain hoist or a screw clamp.

For joining the guide rail tubes together, M6 x 50 mm countersunk bolts with M6 nuts are supplied in the enclosed accessory kit.

The sleeve and the guide rail tube have a pre-drilled bolt hole but the bore must be enlarged and countersunk.

In order to drive in the M6 bolt, the bore in the guide rail tube must be enlarged to 5.2 mm. The front of the tube must be countersunk so that the bolt head will be flush with the outside tube surface, and the bore enlarged to 6 mm. The rear hole must be tapped with a M6 thread.



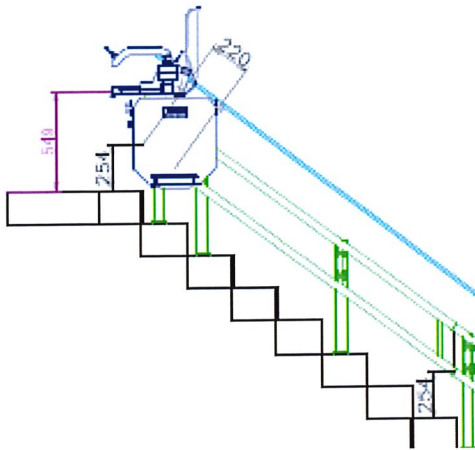
After cutting the rear M6 thread, secure the M6 bolt with a medium-strength thread-locking compound and tighten the bolt. The bolt must be secured with a M6 counter nut to prevent the bolt from loosening.



After fixing the bolt head, grind it with an angle grinder and an abrasive brush to leave a surface that is flush with the guide rail tube.



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The dimensions for further aligning the guide rail beams are given in the lift unit drawing.

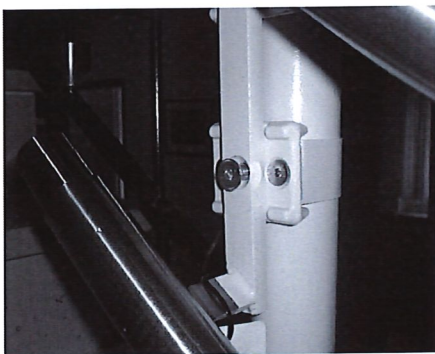
At each join position between the guide rail beams, the drawing gives the height dimension from the stair tread to the centre of the lower guide rail tube.

The guide rail braces must be aligned perpendicularly. The guide rails can be adjusted at the fixings by altering the position of the clip.



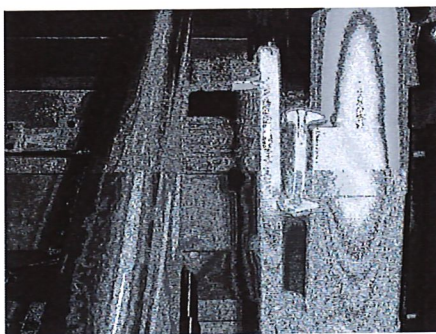
Check all the dimensions specified in the drawing.

After adjusting the position of the guide rails, check that all fixings and supports are tightened sufficiently, and re-tighten all bolts and screws if necessary.



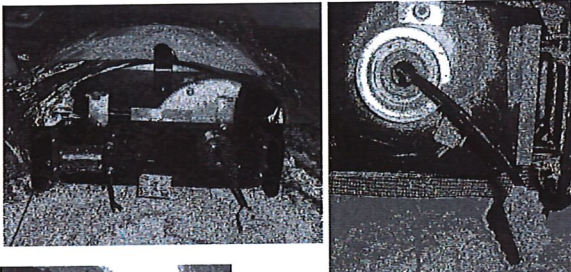
Check the dimensions of the guide rail track for accuracy (centre distance).

The centre distance, measured vertically from the centre of the upper guide rail tube to the centre of the lower guide rail tube, must be 250 mm.



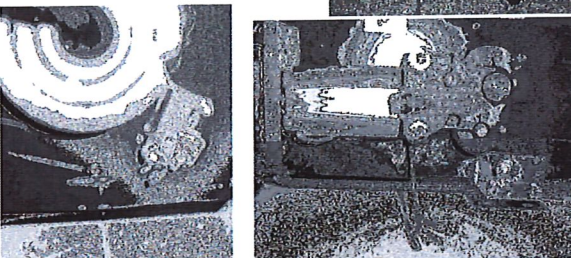
3. Assembly and installation procedure HIRO 160 Q

3.5 Installation of chair

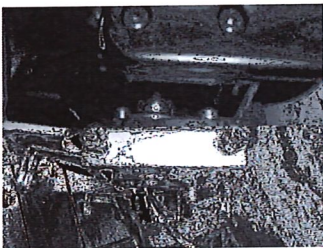


Please carry out the following steps to install the swivel seat assembly:

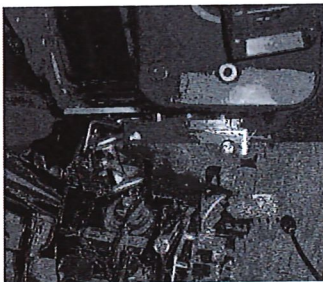
Attach the swivel seat assembly to the drive unit with four fixing screws.



Connect the armrest controls, swivel seat switch and swivel seat motor to the drive unit using plug-in connections.

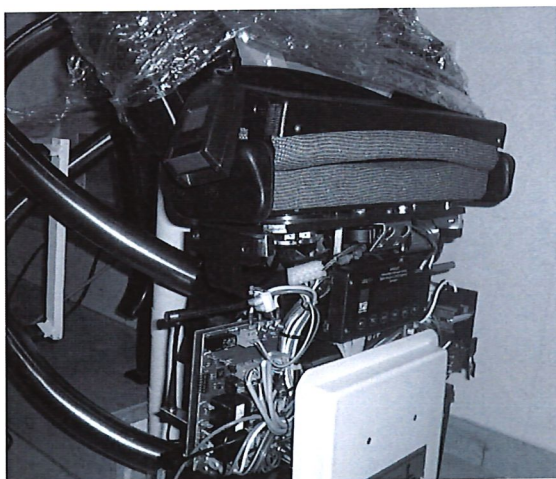


Insert the seat assembly between the U-bolts of the drive unit, as shown in the pictures.

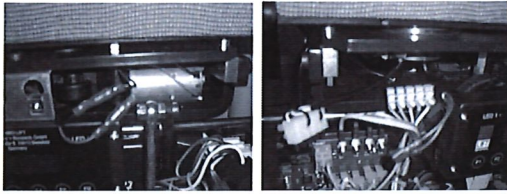


Ensure that no cables are damaged.

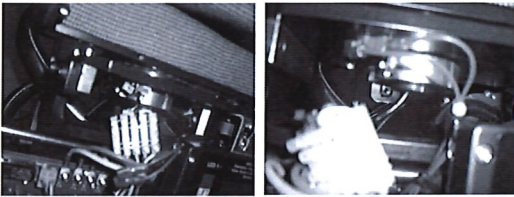
Fix the seat assembly in position at the side with the four hexagon socket screws.



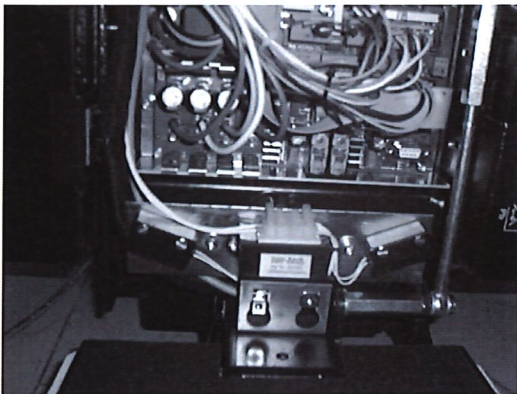
3. Assembly and installation procedure HIRO 160 Q



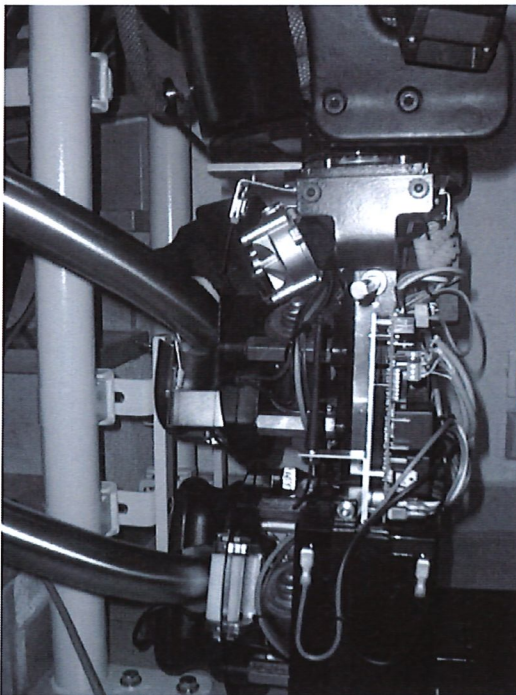
Connect the plug-in connections for the armrest controls, swivel seat switch and swivel seat motor, as shown in the picture.



In the case of lift units with a swivel seat in a centre position, there is an additional potentiometer at the pivotal point for detecting the position of the swivel seat. Connect this plug, too, with its counterpart.



The lift can be moved to the lower access point using the emergency operation key.



Once the desired position has been reached, mark this position for installing the charging points and the magnets (lift stop).

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3.6 Installation of upper/lower lift stops



The *positive/negative* charging pins and the emergency limit switch can be seen in the picture.

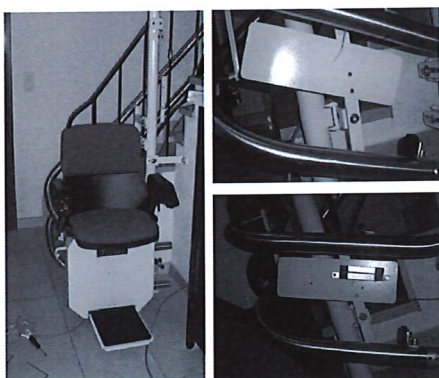
The accessories kit supplied contains the following parts:

1. Charger unit
2. Wall mount for charger unit
3. Cable for the charging stations
4. Charging bars
5. Magnets
6. Radio transmitter and wall mount
7. Emergency end buffers
8. Bolts and screws and plug kit
9. Circuit diagram



Install the charger unit with the wall mount near the guide rails (lift stop).

The plates for the magnets and charging bar at the lift stops have been factory-fitted in the lift stop area.

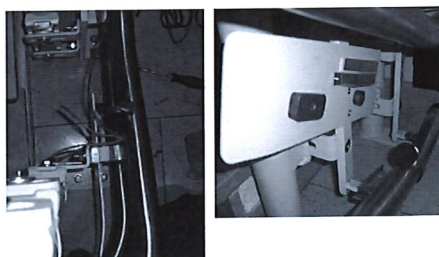


The emergency contact strip and the limit stops (buffers) have been factory-fitted at the upper and lower lift stops.

At the lower stop, the charging bars and the magnets still have to be fitted.

Fit the long magnet approx. 120 mm before the (round) magnet that is located at the lift stop.

After the learning run has been carried out, the lift always stops at the centre of the round magnet. Position the charging bars (*positive* pole at the top/*negative* pole at the bottom) at the "centre of the charging pins" and connect them to the charger unit.



3. Assembly and installation procedure HIRO 160 Q

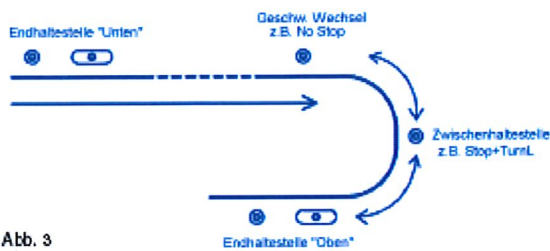
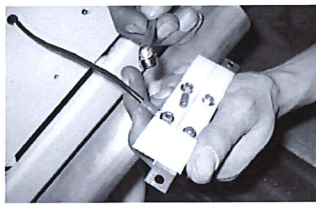
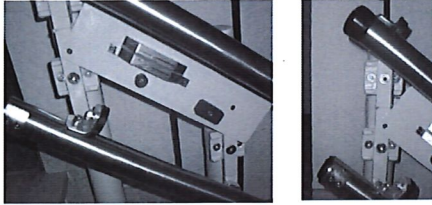
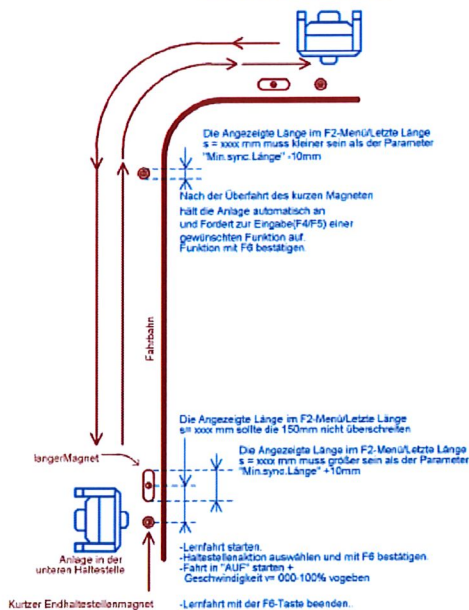


Abb. 3

Nach dem Erreichen der obersten Haltestelle hält die Anlage automatisch an und fordert zur Eingabe einer gewünschten Haltestellenaktion (F4/F5) auf. Eine gewünschte Funktion mit F6 bestätigen und die Lernfahrt in die Abwärtsrichtung starten.



Install the upper stop in the same way as the lower stop. Fit the long magnet approx. 120 mm before the (round) lift stop magnet. After the learning run has been carried out, the lift always stops at the centre of the round magnet. Position the charging bars (*positive* pole at the top/*negative* pole at the bottom) at the "centre of the charging pins" and connect them to the charger unit.

As you can see from the picture, only the positive cable is connected to the upper charging bar. The negative cable is connected straight to the guide rail track from the charger unit.

Install all intermediate stops and charging points in just the same way; for the stopping position, only a round magnet must be affixed.

A round magnet must be affixed before and after bends in order to reduce the speed at bends.

Attach all magnets with the brass screws provided.

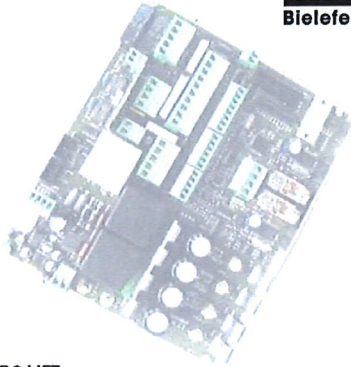
After all magnets have been positioned and attached, the learning run can be carried out.

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Liftsteuerung P40C

Version 0.3x



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A description of the *Learning Run* and *Settings* is found in the operating instructions supplied for the P40 control.

The circuit diagram and the operating instructions are provided together with the current list of parameters for all setting values.



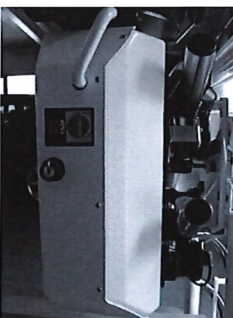
Once all settings have been made and the learning run has been carried out, the outer cover panels can be fitted.



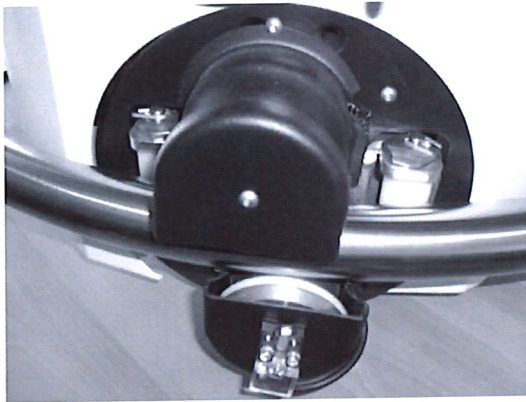
The handles on the foot rest must be taken off in order to attach the cover panels.



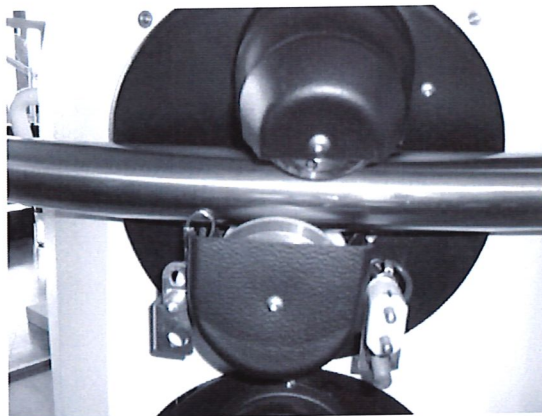
Once the cover panels have been fitted, the handles can be re-attached.



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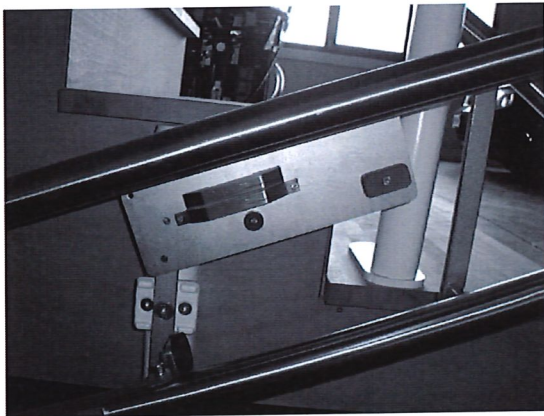


On the lower set of rollers there are two eccentric guide rollers which are secured at the side with a grub screw. Loosen the grub screws and adjust the guide rollers so that they are just touching the guide rail tube. After carrying out this adjustment, re-tighten the grub screws.



Check that the earthing connection is properly attached and that the loop is touching the guide rail.

Lubricate the charging pins and check for easy action.



Lubricate the copper bars at each lift stop and charging point.

Clean the guide rail tubes and rollers with methylated spirit.

Vorsicht - Gefahr

Halten Sie die Fahrbahn stets trocken & sauber!
Reinigen Sie die Fahrbahnrohre ausschließlich mit Spiritus oder Aceton.

Verwenden Sie dafür niemals Seife, Fett oder sonstige Schmierstoffe! Ansonsten besteht die Gefahr eines Abrutschens der Anlage.

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3.7 Setting and testing of safety switches

Montageprotokoll / Sicherheitsprüfung

für HIRO Treppenschrägaufzüge
und Hebebühnen



After fully assembling and installing the lift unit, fill in the installation log and conduct all safety tests and weight checks as described in the log.

PRÜFBUCH

für
Treppenschrägaufzüge
und
Hebebühnen

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Germany

Version 1.6

Montageprotokoll / Sicherheitsprüfung



Checkliste zur Überprüfung des Überlastungsschutzes
für Treppenschrägaufzüge und Hebebühnen

Fabriknummer: _____ Anlagen typ: HIRO _____

Bezugsnr.: _____ Tragekraft: _____ Gewicht: _____

Hersteller oder Lieferant: HIRO LIFT GmbH, Meller Str. 6, 33619 Bielefeld

Bestellern/Kundenadresse: _____

Bei der Lastprüfung müssen sowohl dynamische als auch statische Prüfungen durchgeführt werden. Die dynamische Prüfung muss 10% mehr als die Nennbelastung betragen. Beladen Sie das Lastaufnahmeittel mit der entsprechenden Prüflast und starten Sie dann den Prüfbetrieb. Der Lift muss in der Abwärtsrichtung zum Stillstand verzögern und zum Stillstand kommen. Die statische Prüfung muss 25% mehr als die Nennlast betragen. Beladen Sie das Lastaufnahmeittel mit der entsprechenden Prüflast und starten Sie dann den Prüfbetrieb. Der Lift muss in der Abwärtsrichtung zum Stillstand verzögern und zum Stillstand kommen.

Dynamische Prüfung

Gewicht: _____ kg

Ergebnis: OK nicht OK _____

Statische Prüfung

Gewicht: _____ kg

Ergebnis: OK nicht OK _____

Unterschrift von Meister/Prüfer: _____ Datum: _____

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Attention!

The main switch must be turned off before carrying out any work on the electronics.



Attention!

If it is not switched off, the drive motors may be damaged.



Note!

All defects and damage must be reported to the manufacturer.

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