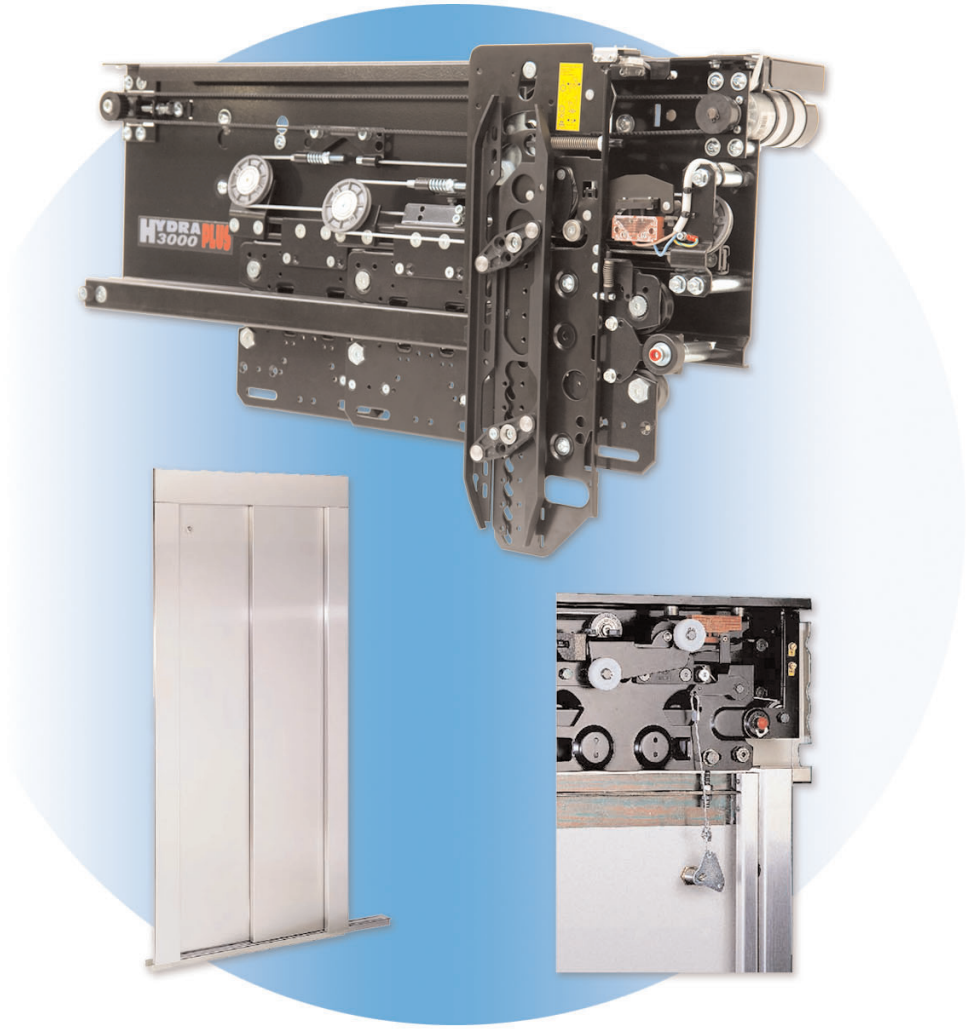
WITTUR

Code	GM.2.002086.EN
Version	B
Code	3201.32.0392
Version	B
Date	12.05.2014

INSTRUCTION HANDBOOK

Hydra 3000 PLUS



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SELCOM®
a WITTUR brand

HYDRA 3000 PLUS CAR DOOR

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MOD.	DESIGNATION	DATE
B	General up-dating	12/05/14
A	Up-dated document's Lay-out and the following pages: 27, 28, 29, 30, 31, 32	17/06/11

HYDRA 3000 PLUS CAR DOOR

INDEX

The points that are important under the safety viewpoint and danger warnings are indicated with these symbols:


Danger general


Important warnings


Risk of personal injury (e.g. sharp edges, protruding parts)


Risk of damage to mechanical parts (e.g. incorrect installation)


Live parts

HYDRA 3000 PLUS CAR DOOR

Congratulations on choosing a **WITTUR** product!
Before starting the installation of this product, read the information contained in this document.
Before installation work begins, it is in your own interests to clarify what structural and spatial conditions are available for installation work, so that you can see which installation procedures should/must be carried out. Therefore it is recommended that all circumstances be taken into consideration, and to mentally plan the installation sequence before any rash or badly planned work is carried out. Check the goods or parts for correct and full delivery upon receipt.
You will find important warnings on how to assemble and maintain your **WITTUR** product in good operating conditions and to get the maximum of your investment.
You will also find important information concerning the product care and maintenance which are an important factor to ensure safety at all times.
WITTUR has long been involved in research aimed at reducing noise level and in design that takes into due consideration the product quality and the conservation of environment.

This document is an integral part of the supply and must be available in the lift power room at all times.
All products are provided with identification type label and in case with certification marks in accordance with the current rules.
In case of need concerning the product, the identification data on the label must be always communicated to us.
We hope you will get full satisfaction from this **WITTUR** product. Yours faithfully.

WITTUR

WARNINGS

- **WITTUR** will not be held liable for any damage caused by tampering of the packing material by thirds.
- Before starting assembly, check that the product received corresponds to the order and to the packing list and that no damage has occurred in transit.
- Within its policy of continual research, **WITTUR** reserves to make changes to its products without notice. The figures, descriptions and data contained in this manual are intended as purely indicative and not binding.
- To ensure the safety of the product, avoid any alteration or tampering.
- **WITTUR** liability will be limited to the original components only.
- **WITTUR** product is intended for use in the lift sector only, therefore **WITTUR** liability shall be limited to such use.
- This product is intended for professional use. Any improper use, including for hobby or DIY, is prohibited.
- In order to prevent any injury to persons and damage to property, the handling, installation, adjustment and maintenance must be carried out by suitably trained personnel, using appropriate clothing and equipment.
- Any masonry work connected with the correct installation of the product must be executed in a workmanlike manner according to the applicable laws.
- The connection of the electric/electronic units to the local power supply must be executed in a workmanlike manner according to the applicable laws.
- All metal parts supporting the electric/electronic units must be connected to an earth system in a workmanlike manner according to the applicable laws.
- Before connecting the product to the power supply check that the product's requirement corresponds with the power supply available.
- Before starting any work on the electric/electronic components disconnect power from the system.
- **WITTUR** shall have no responsibility on the execution of masonry works or the connection of electric/electronic components to the power supply.
- **WITTUR** shall not be liable for damages/injury to property/persons caused by improper use of the emergency opening devices.

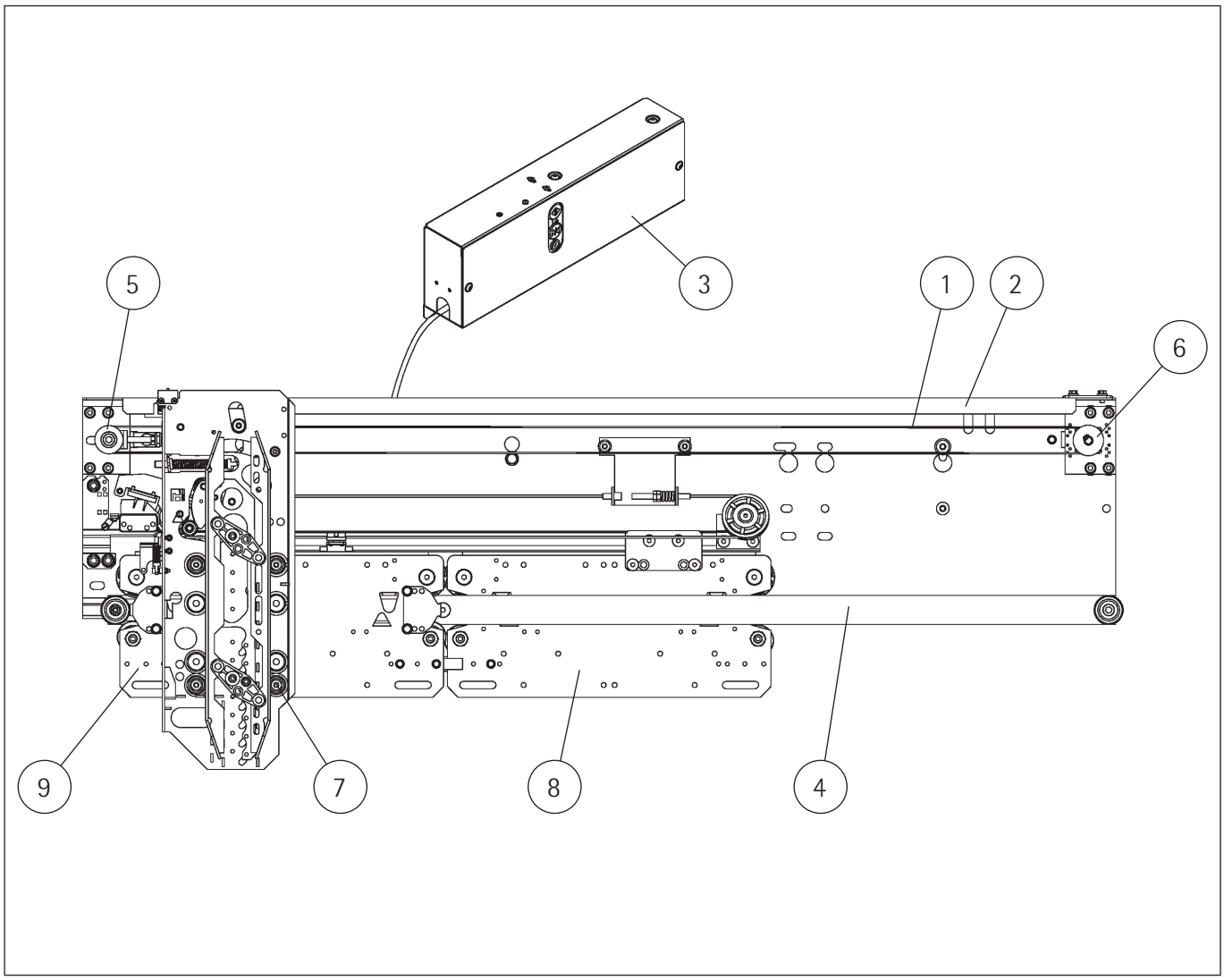
SUGGESTIONS

- Keep the material in the original packing, protected from bad weather and direct exposure to sun during the storage period in order to avoid the accumulation of water/condensation inside the packing material.
- Never dispose of packing material in the environment.
- Once dismantled, the product should be conveniently disposed as provided for by the local laws; never dispose of in the environment.
- Whenever possible, re-cycling is preferable to disposal in dump sites.
- Before re-cycling check the nature of the various materials and re-cycle in the appropriate way.

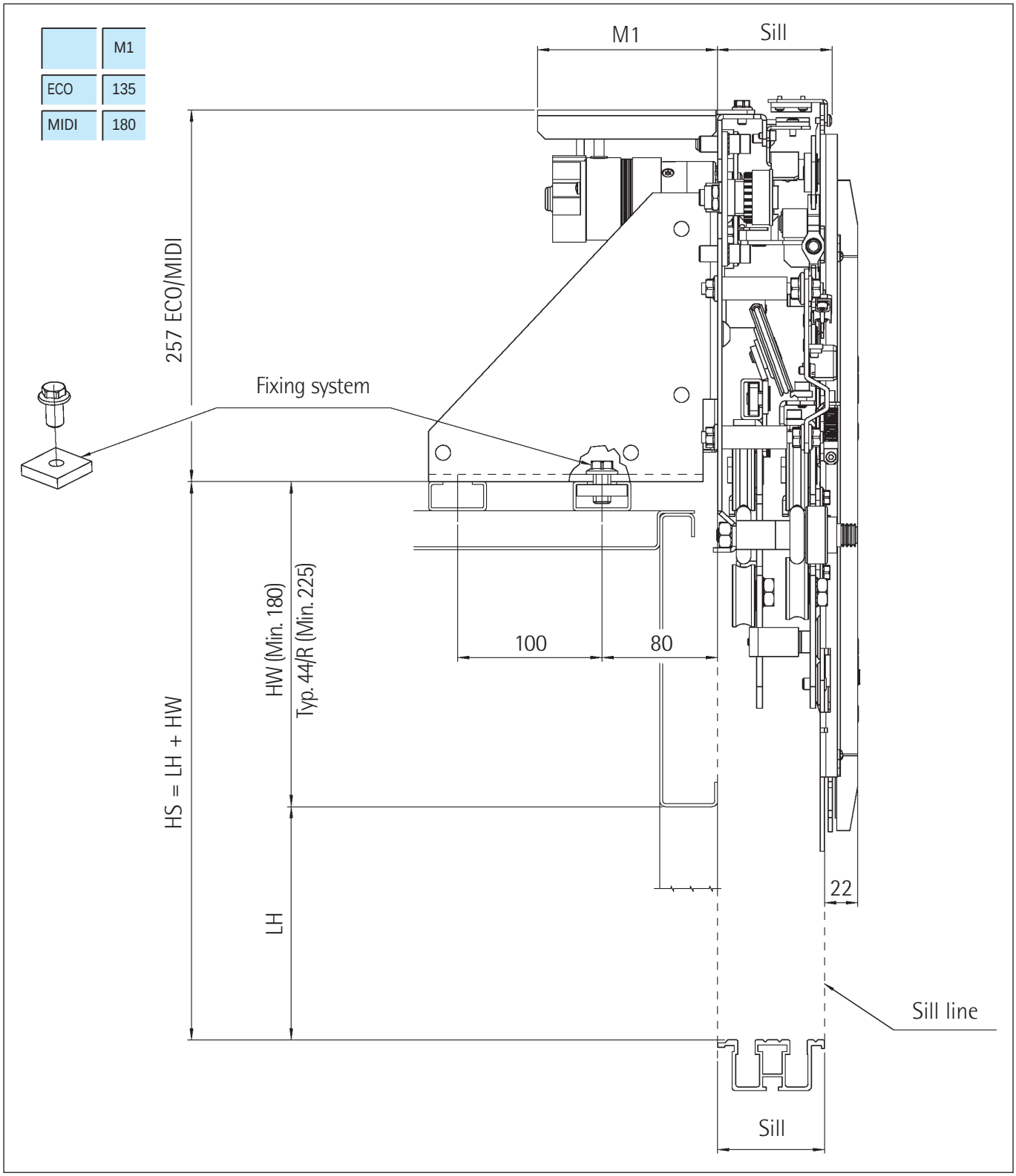
HYDRA 3000 PLUS CAR DOOR

1. GENERAL DESCRIPTION

Linear car door 3201-HYDRA 3000 PLUS with tooted belt transmission (1) consisting of support plate (2) onto which are fixed guide rails (4), transmission pulleys (5-6), electronic card (7), transformer (8) and switchboard (3).
The coupler (7) is attached to the toothed belt (1) for driving the door trucks (8-9) open and close.



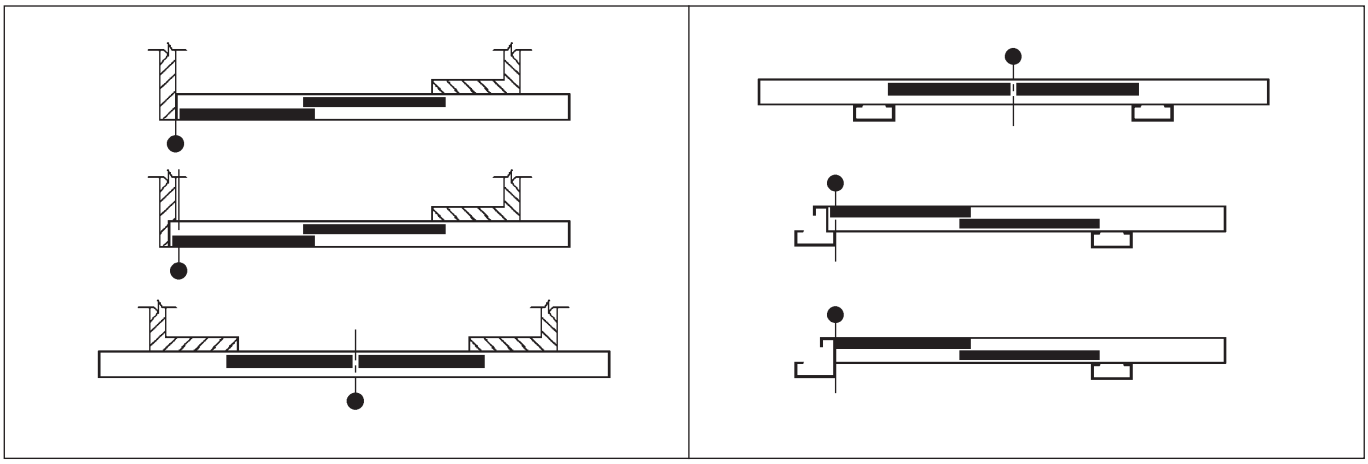
1.1 - OPERATOR FIXING ON CAR ROOF



HYDRA 3000 PLUS CAR DOOR

2. LANDING DOOR ALIGNMENT WITH CAR DOOR

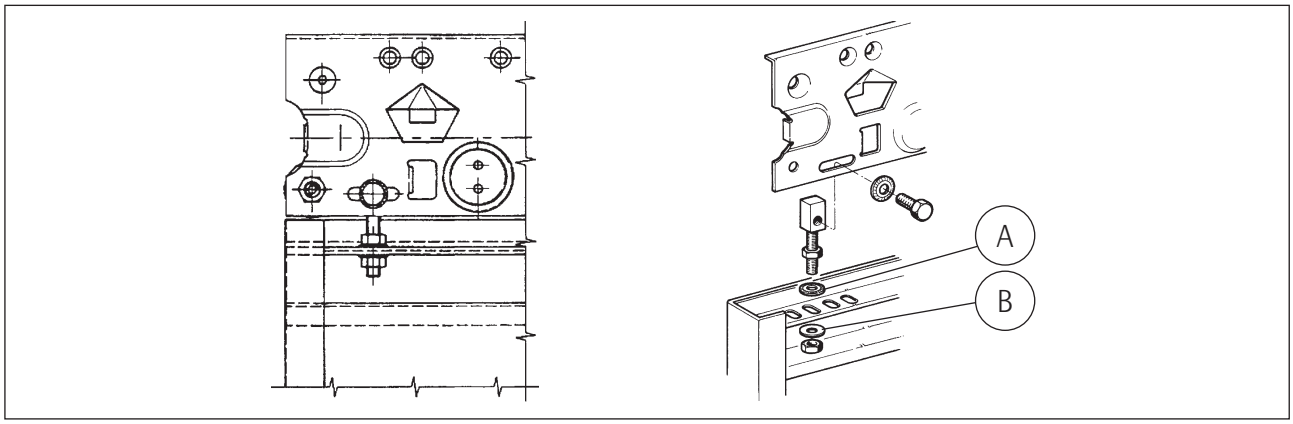
The red buffer on top track fixing screw, represents the vertical reference for the position of all the landing and car doors.
While for the telescopic doors the red buffer indicates the door's clear opening line, runby excluded, for central opening doors it indicates the center of the clear opening.



HYDRA 3000 PLUS CAR DOOR

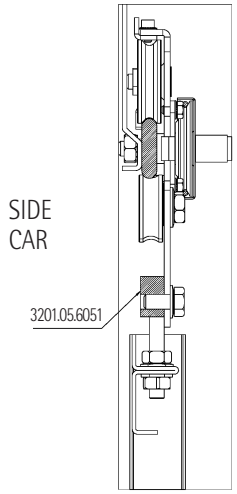
3. ASSEMBLY OF PANEL FIXING BOLTS

Each panel must have at least two fixing points. The "A" type conical washers should be placed on the top part of the door fixing profile. The "B" type flat washer beneath.

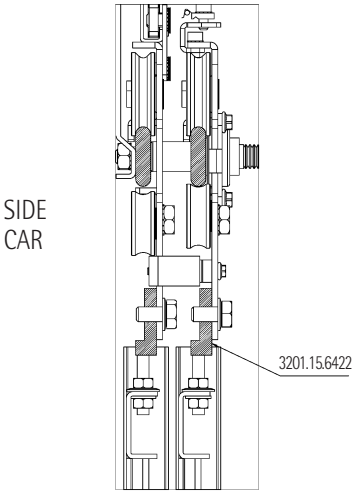


HYDRA 3000 PLUS CAR DOOR
INSTRUCTIONS FOR PANELS FIXING BOLTS

Typ. 02/C



Typ. 12/R-L



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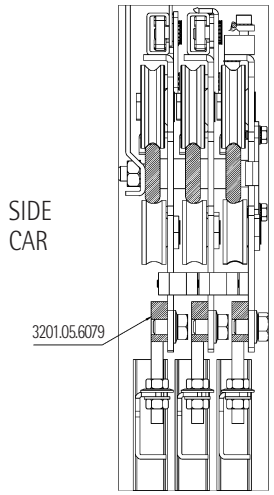
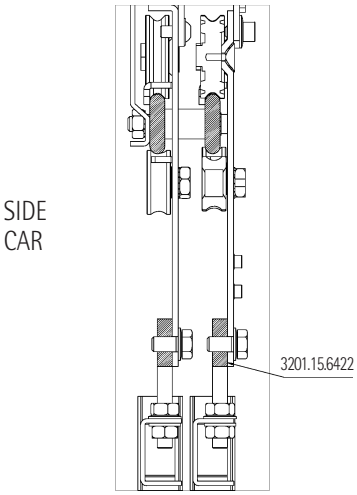


Typ. 44/R



4. CLEARANCE RECOVERING OF THE PANEL ASSEMBLING BOLTS

When the panels are hung to the hanger tracks the fixing screws should be placed according to figure (1). For standard opening doors (up to 850 mm) the distance between the screws "B" is small compared to the clear opening height (at least 2 metres high). This means that the clearance "A" can be varied by means of adjusting panel hanger bolts, which permits up to 30 mm of adjustment. This can be avoided by installing panels as figure (2) during erection. The panel height adjustment must be made after having effected the clearance recovering.

Standard position for the fixing screws of panel hanger bolts at the time of assembling.

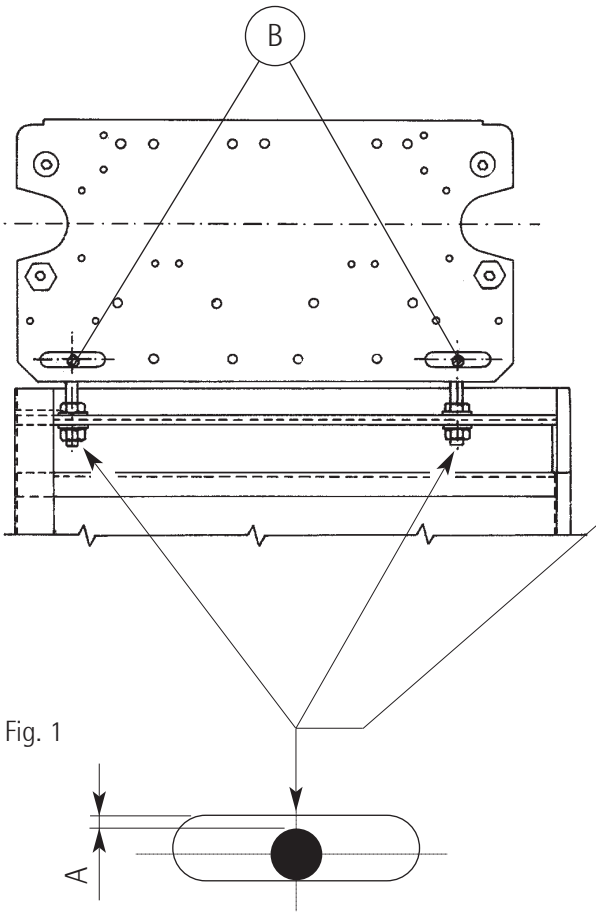


Fig. 1

Position to be assumed by the fixing screws of panel hanger bolts; in order to get it, please push the panel in the direction of the opening.

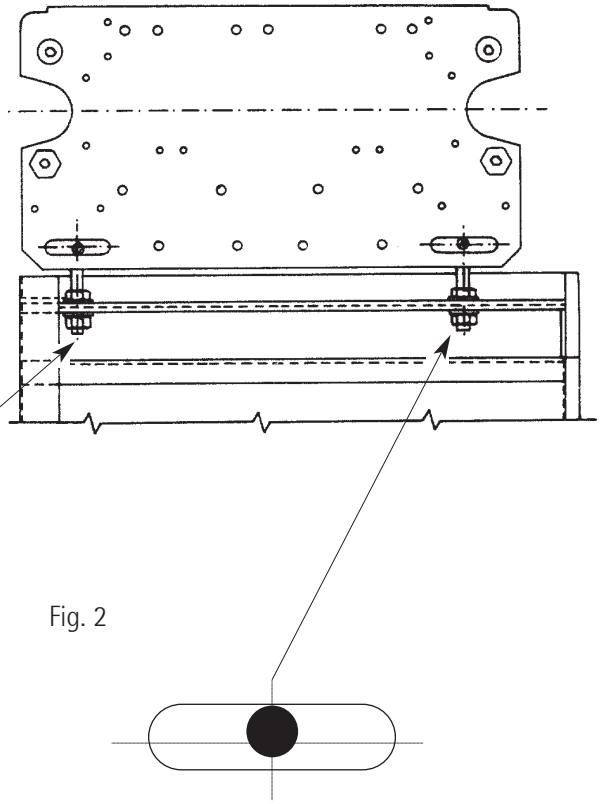


Fig. 2

5. BOTTOM SLIDING SHOES ASSEMBLY, MAINTENANCE AND REPLACEMENT

The shoe on the retaining pin is mounted with slight pressure until the proper tongues fit inside the groove (Fig. 1).
For the disassembling it is sufficient to push it from the rear side and at the same time with a small screw-driver to, part the tongues (1) one after the other.
The shoe mounting and disassembling to the panel is very easy even with assembled panels: in fact it is enough to turn them 90 degrees, put them in a horizontal position (Fig. 2) and pull them towards the outside or push them into the sill's groove.
The pin's eccentricity and the presence of the slots allow considerable adjustment.
Fix bottom sliding shoes of the opening side as drawing Fig. 3, so that in case of breaking down of door panel the bottom shoe can't fall out from the sill channel.

☞ Each door must have at least two sliding blocks.
☞ Check during maintenance that sliding guide shoes are present, securely fixed and have impermissible wear.

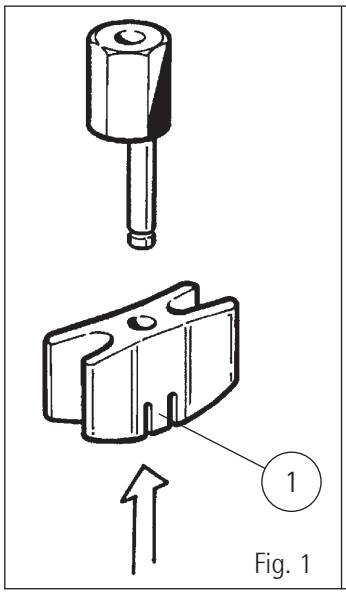


Fig. 1

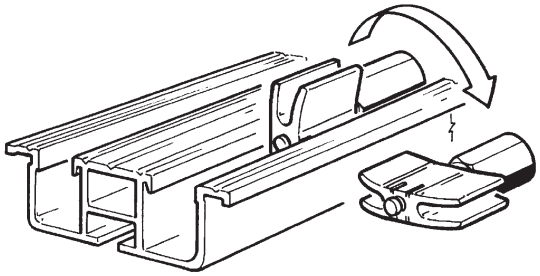


Fig. 2

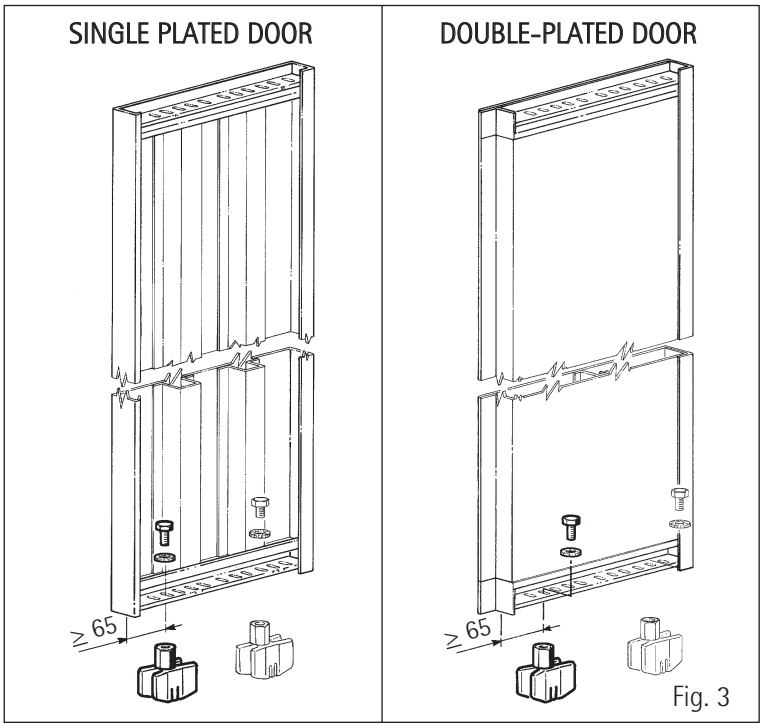


Fig. 3

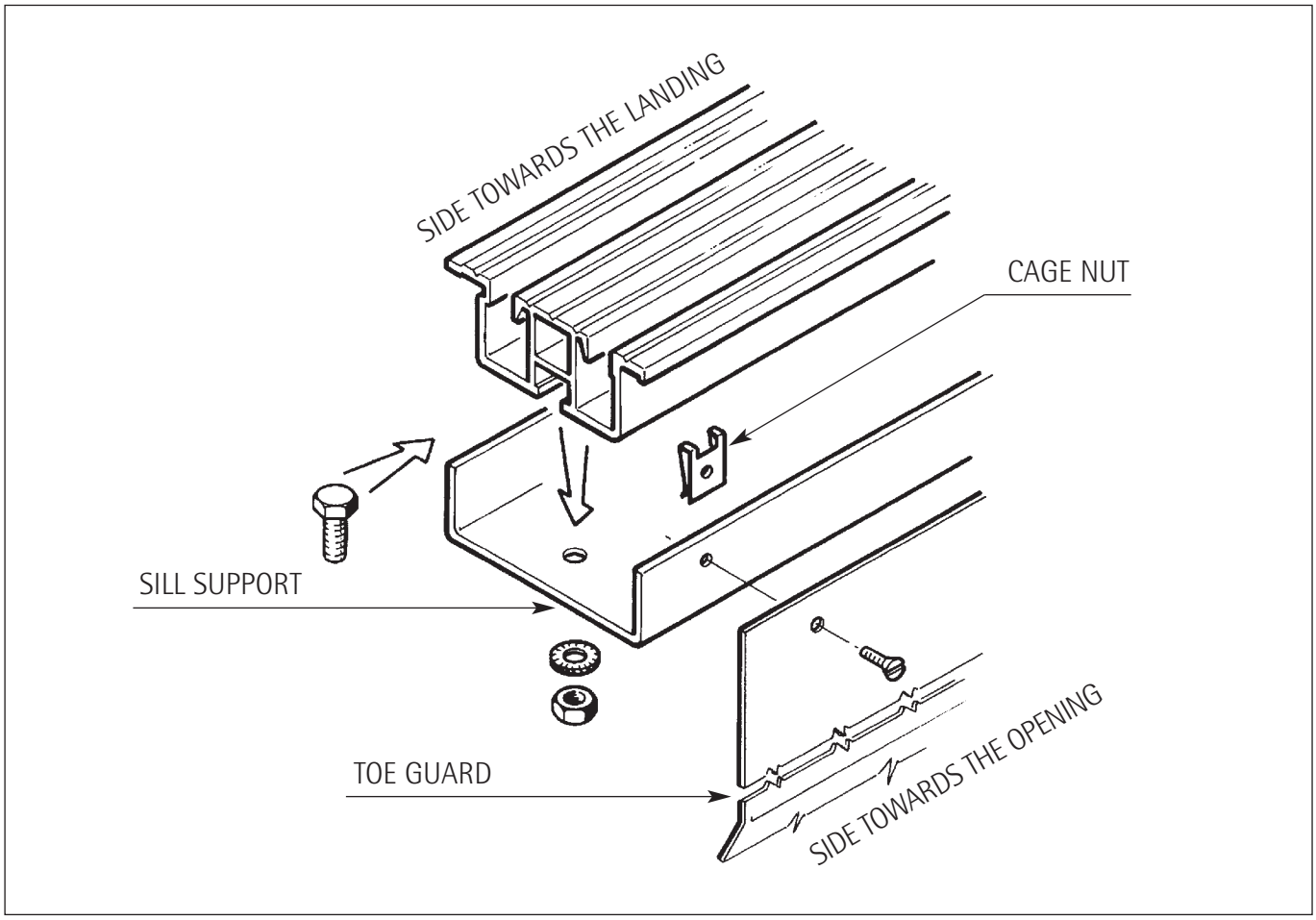
HYDRA 3000 PLUS CAR DOOR

6. ASSEMBLY OF SILL AND TOE GUARD TO SUPPORT

Standard sill:
The toe guard fixing is executed as shown in the picture.
Reinforced aluminium sill:
The face is fixed directly through threaded holes without using the cage nut.

In the event of screws being lost, use M5 x 8 type flat socket screws.

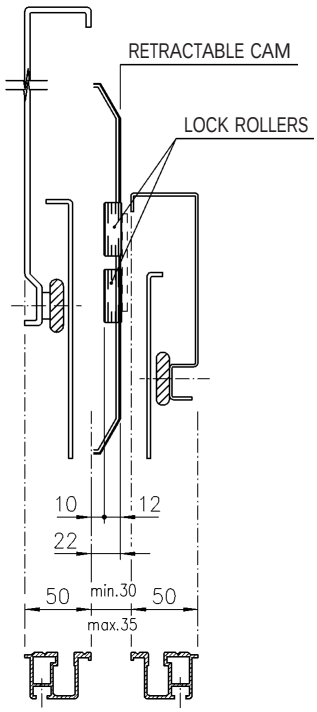
NOTE: longer screws can interfere with panel shoes.



7. PLACING THE MECHANISMS ON THE THRESHOLDS

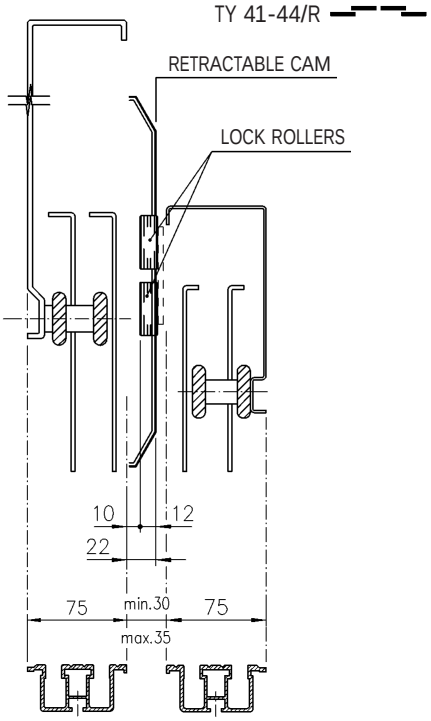
Align to plumb with reference to the internal edge of the thresholds.

TY 01-02/C

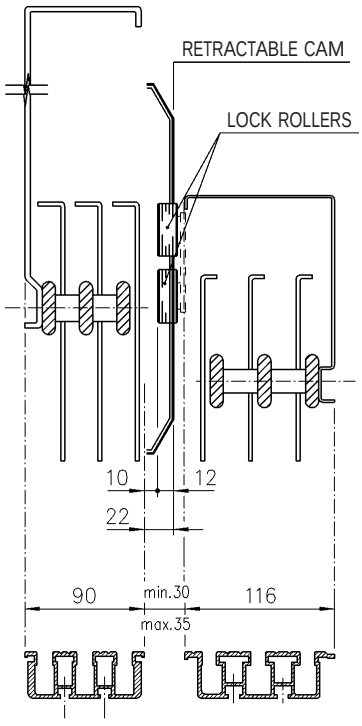


TY 11-12/R-L

TY 41-44/R



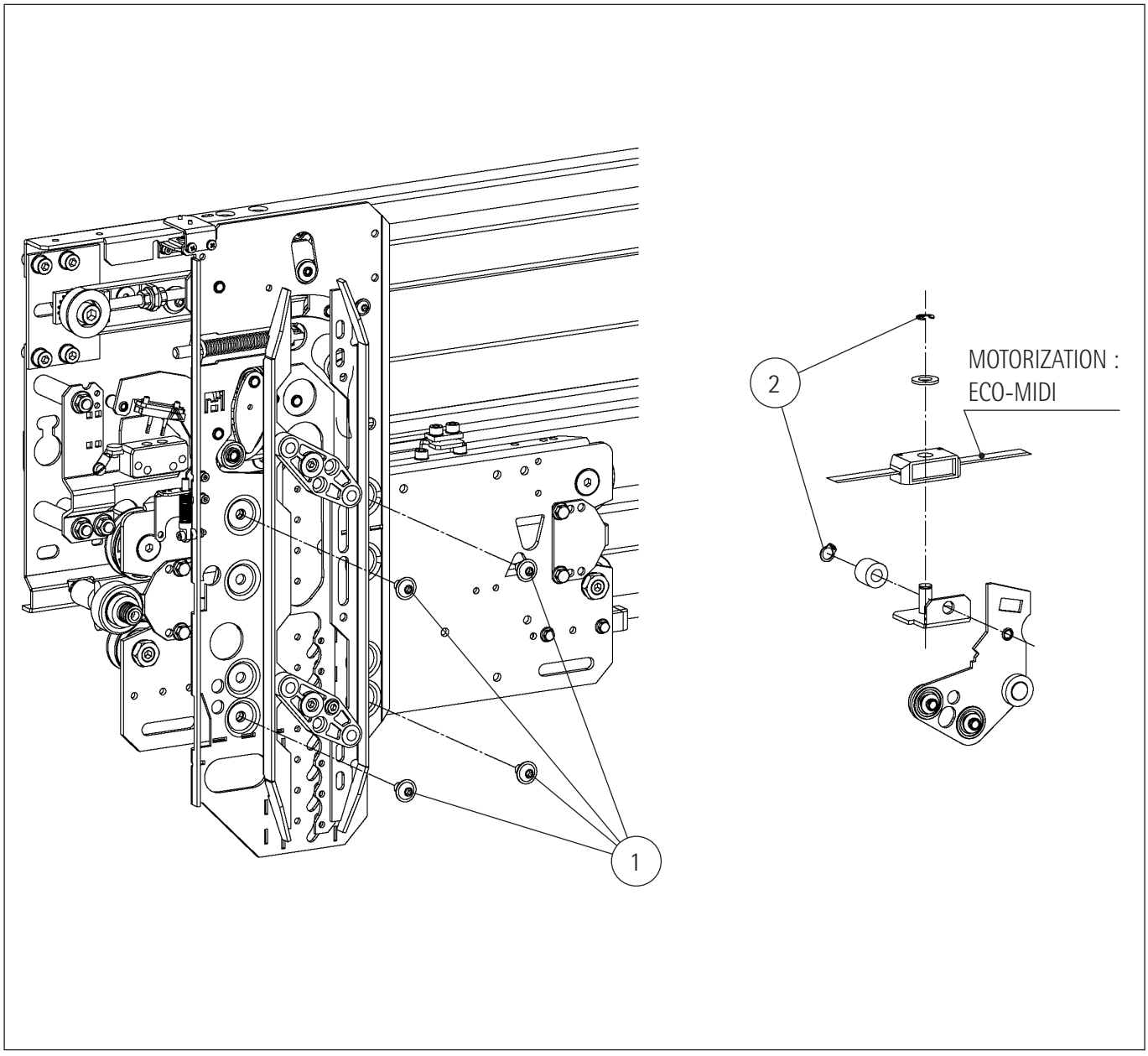
TY 31-35/R-L



HYDRA 3000 PLUS CAR DOOR

8. FIXING OF THE COUPLER

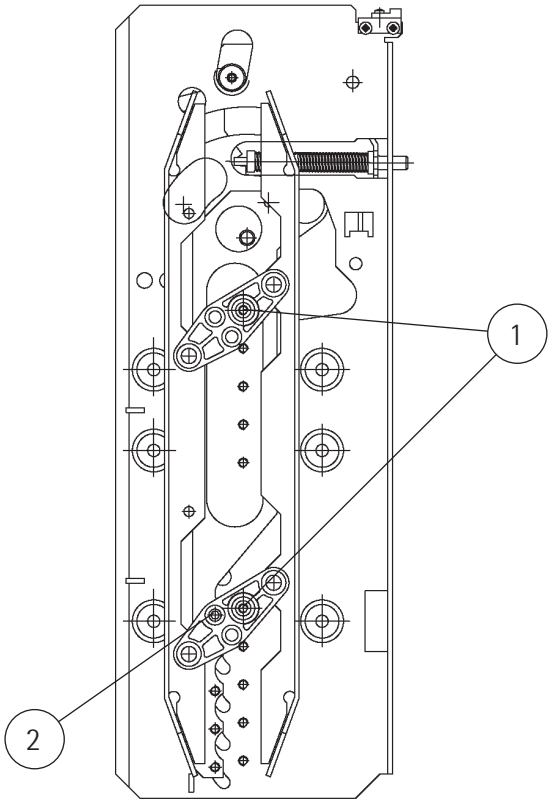
After the assembly of the door panels proceed by fixing the coupler using the 4 screws (1) and the relevant belt-fixing systems (2).



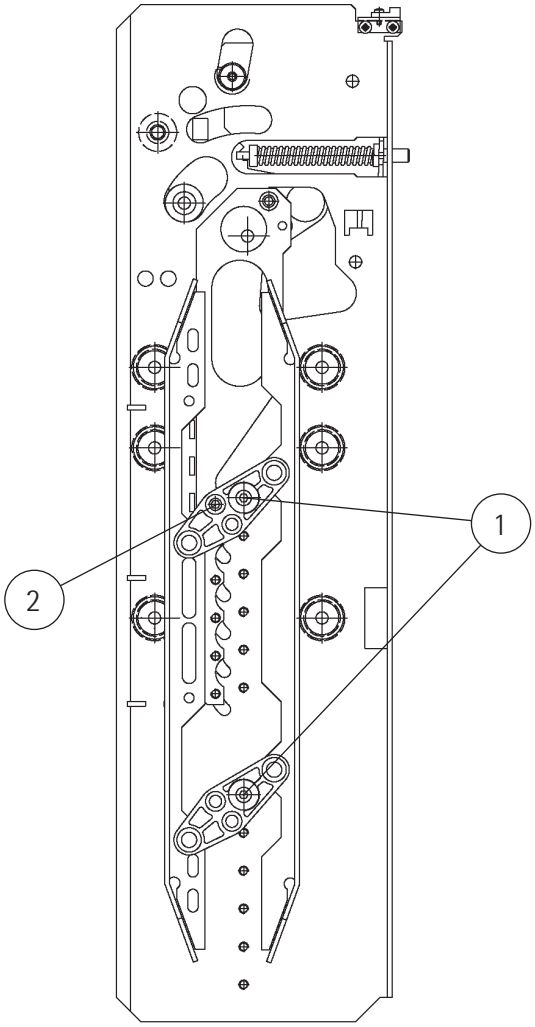
9. ADJUSTMENT OF COUPLER HEIGHT

Adjust the offset of the coupler's vanes by unloosing the screws (1) and the screw (2), by placing the vanes in the required position and re-tightening the screws (1) and screw (2). Further shifting-offsets every 25 mm are possible.

Coupler with shifting-offset from 0 up to 100 mm



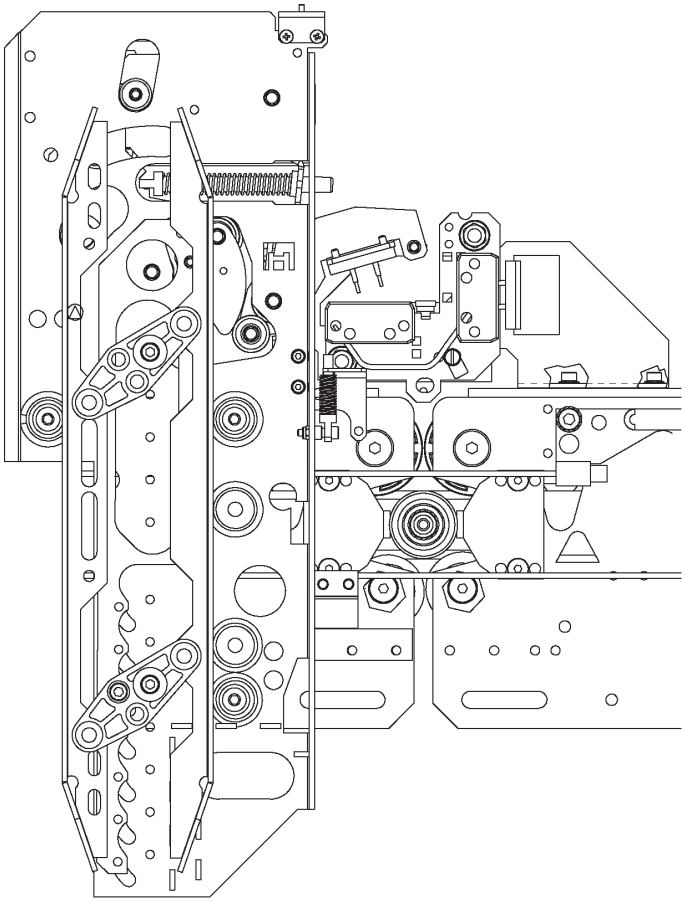
Coupler with shifting-offset from 125 up to 250 mm

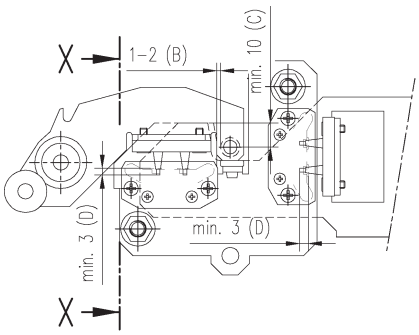


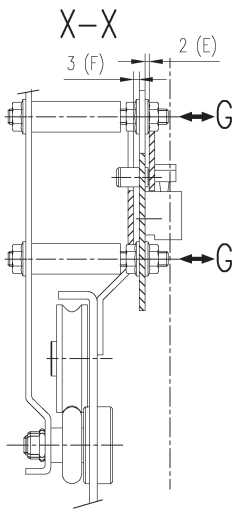
10. CAR DOOR LOCK (OPTIONAL)

10.1 - MUST BE CHECKED DURING INSTALLATION AND MAINTENANCE

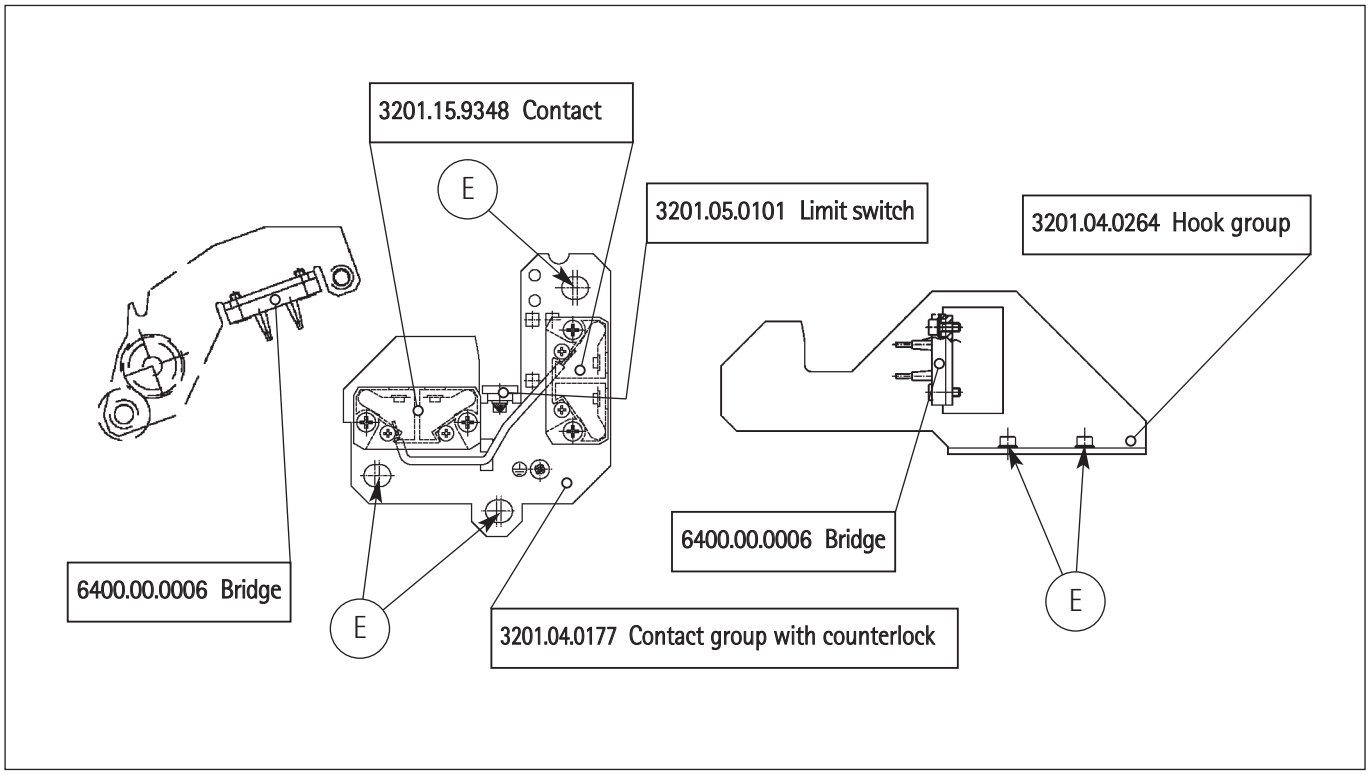
- **Maintenance has to be done at least one time per year.**
- The car door lock must lock the door if the car is out of unlocking zone. Lock hook must touch buffer.
- All parts of lock coupler, lock notch and additional lock notch (only centre opening) must be securely fixed (A).
- Safety circuit must be interrupted if the door opens.
- Lock hook and beak overlap when lock is fully closed must be min. 10 mm (C).
- Gap between lock hook and notch should be 1-2 mm (B).
- Contacts should be clean and have minimal wear (metal visible).
- Lock hook and beak overlap when contact operates must be min. 7 mm.
- The contact bridge should push the contact surface down min. 3 mm (D).
- Electrical terminations should be tight and secure.
- Contact bridge should be aligned to the middle of contact holes, not touching the hole edges.
- The distance between the lock hook and the lock notch should be 2 mm (E). The distance between Lock notch and additional lock notch should be 3 mm (F). If necessary adjust the lock notch accordingly (G).







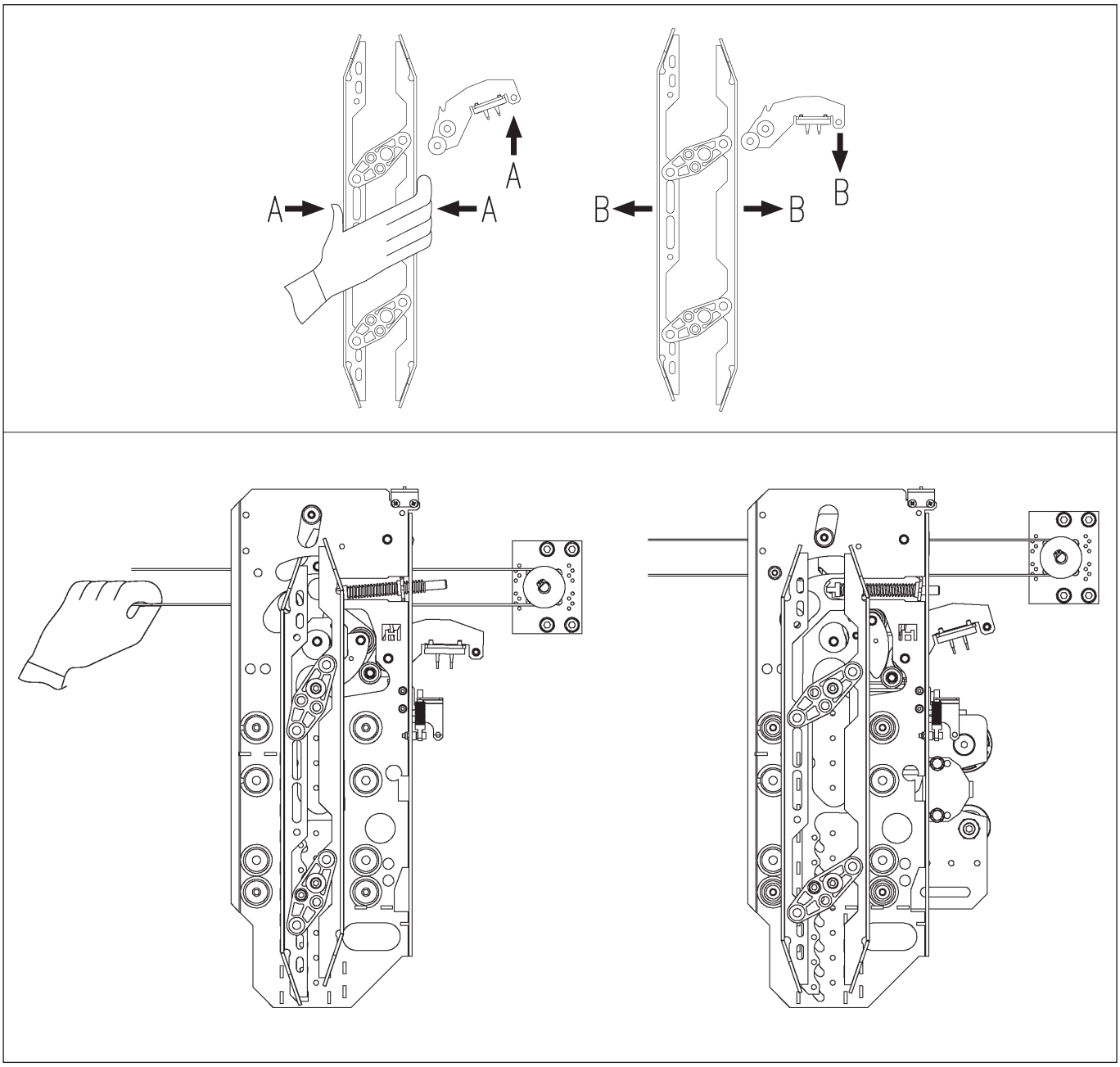
- Slots (E) to allow a small contacts adjustment.



10.2 - ENSURE PROPER FUNCTION OF CAR DOOR LOCK

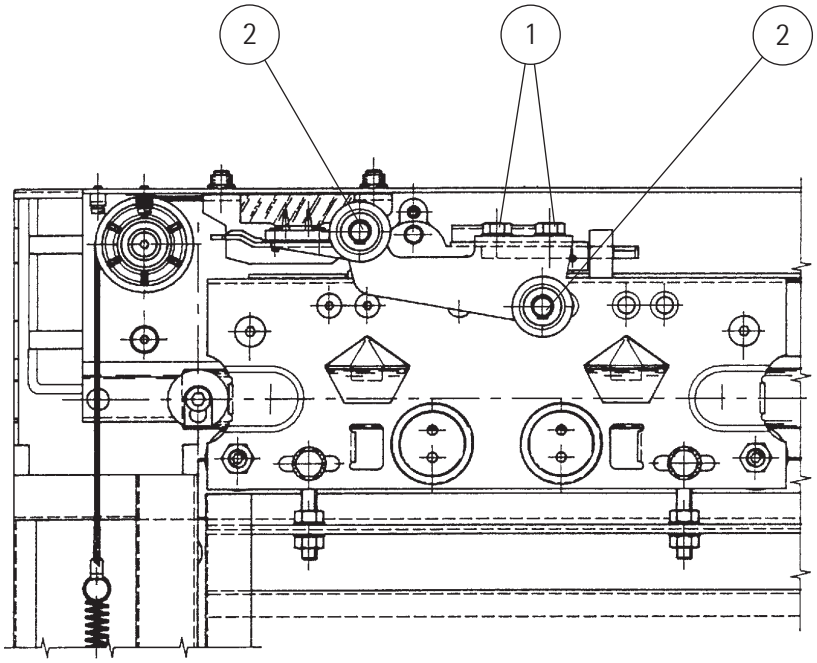
- Check that lock hook is moving freely when pressing the lock vanes (A, B).
- Check that all bearing points of the car door lock are running smoothly with following method:
  - Turn the power of the operator OFF!
  - Move the door by hand on the belt to the completely close position - coupler must be fully retracted (C).
  - Release the belt, and check that the coupler is running itself (by spring force) to the completely extracted position. The lock hook must remain during this operation in the fully locked position (D).
- If the above mentioned test criteria are no longer fulfilled, the car door lock must be replaced.

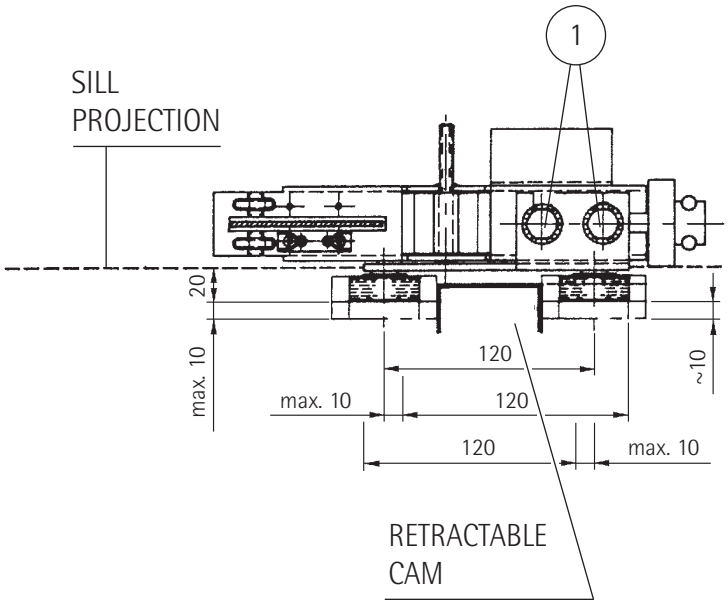
- To ensure a reliable function, the car door lock must be also replaced latest after:
  - 1 Million cycles or 5 years in combination with the ECO drive.
  - 3 Million cycles or 5 years in combination with the MIDI drive.



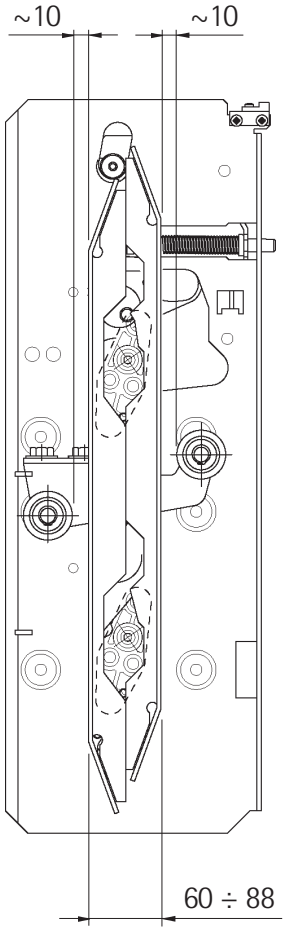
11. ADJUSTMENT THE LOCK ROLLERS

Using a CH-17 spanner, loosen screws (1) and set the alignment of the lock wheels (2), starting from the lowest level, as the car is operated upwards.
Move the wheel assembly unit and position it as shown on page 17.
Make sure that between the lock rollers and the car sill there is sufficient clearance to provide runby.



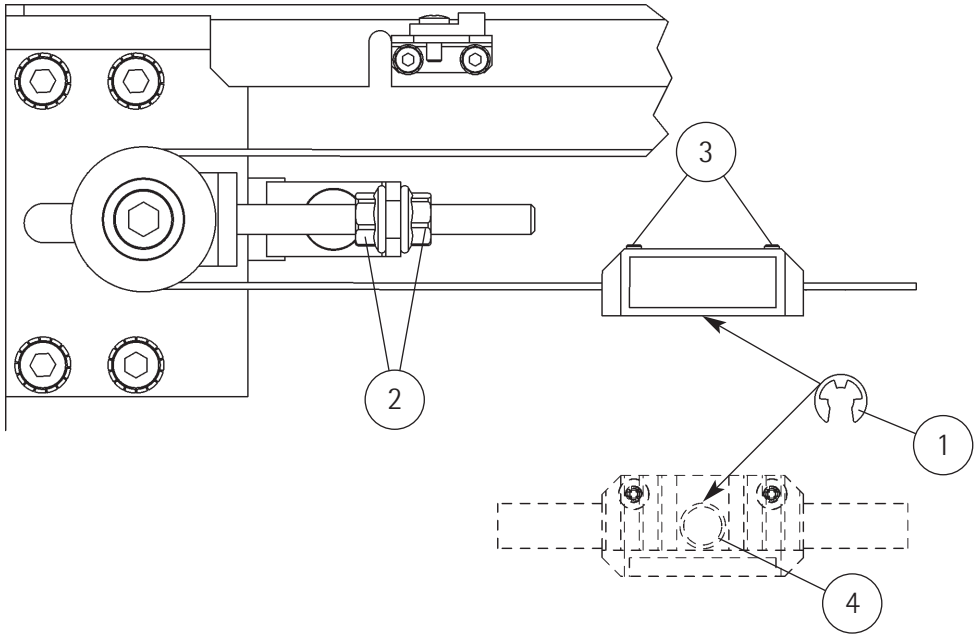


12. POSITION OF THE COUPLER BETWEEN THE LANDING LOCK ROLLERS



ECO-MIDI

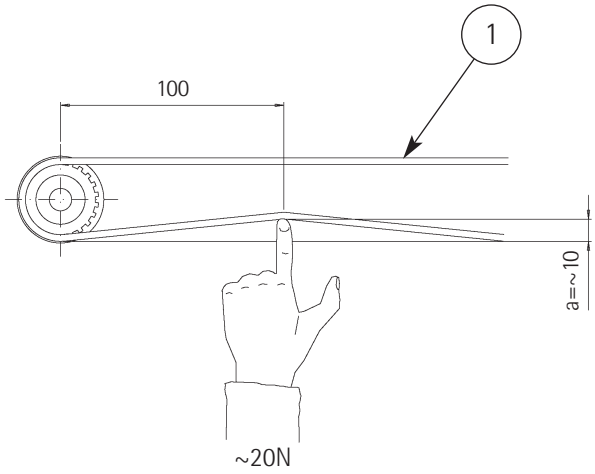
Remove the safety washer (1).
Loosen the screws (2) without removing them completely in order to loosen the belt.
Loosen the 2 screws (3) from the belt clamp (4) to loose the belt completely.

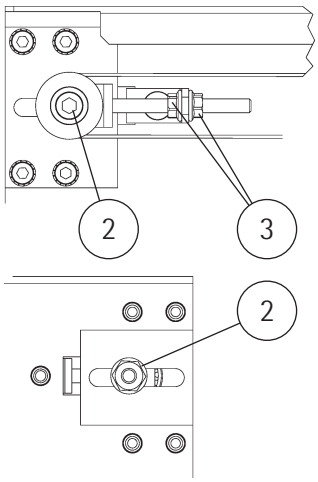


14. ADJUSTMENT OF TOOTHED BELT TENSION

To adjust tension of toothed belt (1) loosen screw (2) and adjust screws (3)to tighten belt and check the "a" dimension; then fix this position by tightening screws (2).

ECO MIDI Tension of toothed belt: 170N (+0/-10%)



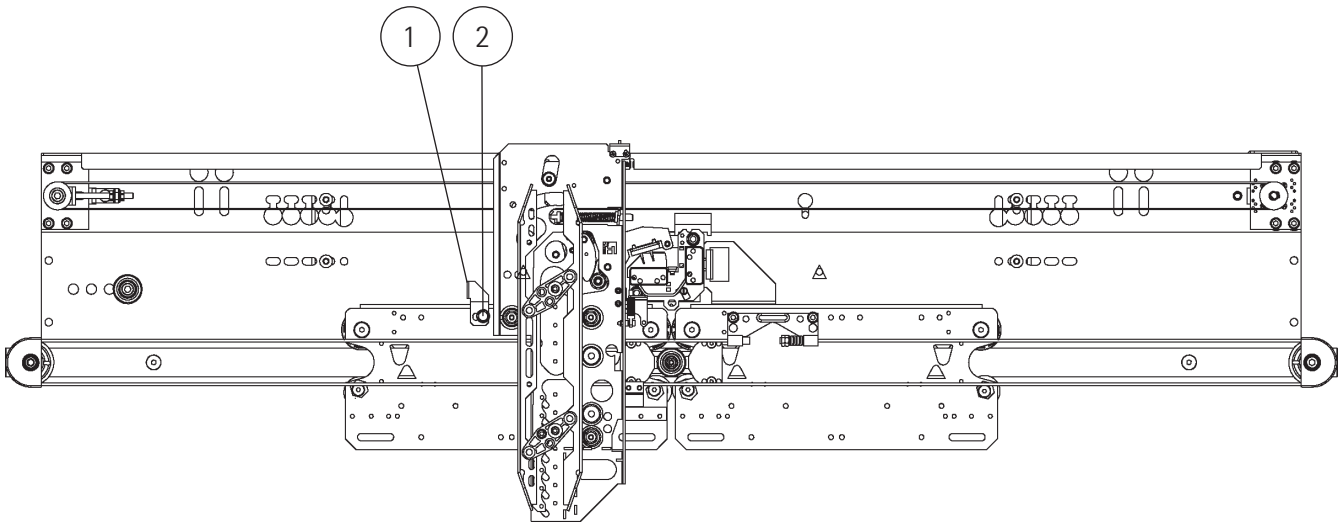


HYDRA 3000 PLUS CAR DOOR

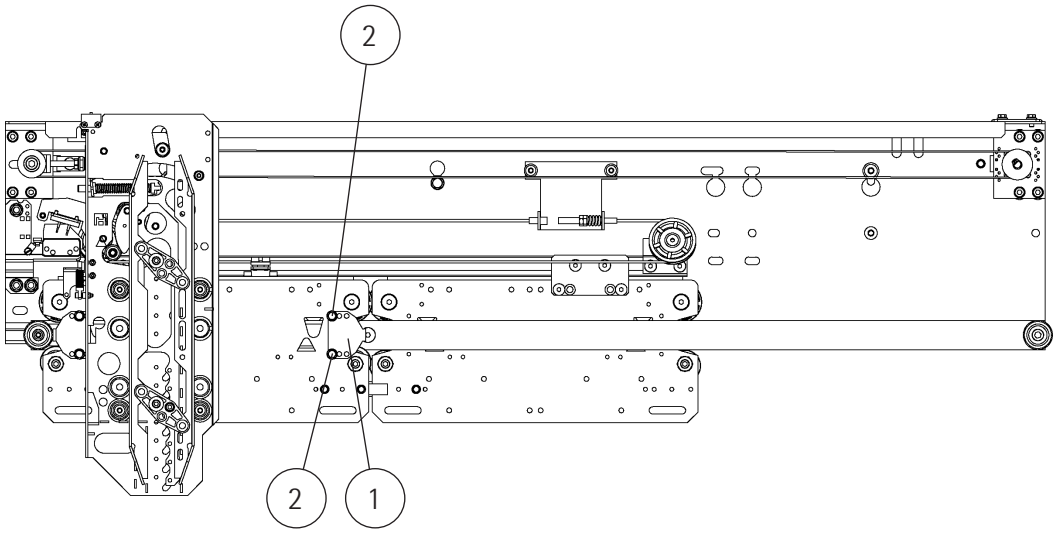
15. ADJUSTING THE CLEAR OPENING

Adjustment of the clear opening is obtained by means of an adjustable retainer (1) placed on high speed truck, opening side.
To adjust clearance simply tighten or loosen screw (2).

Typ. 02/C

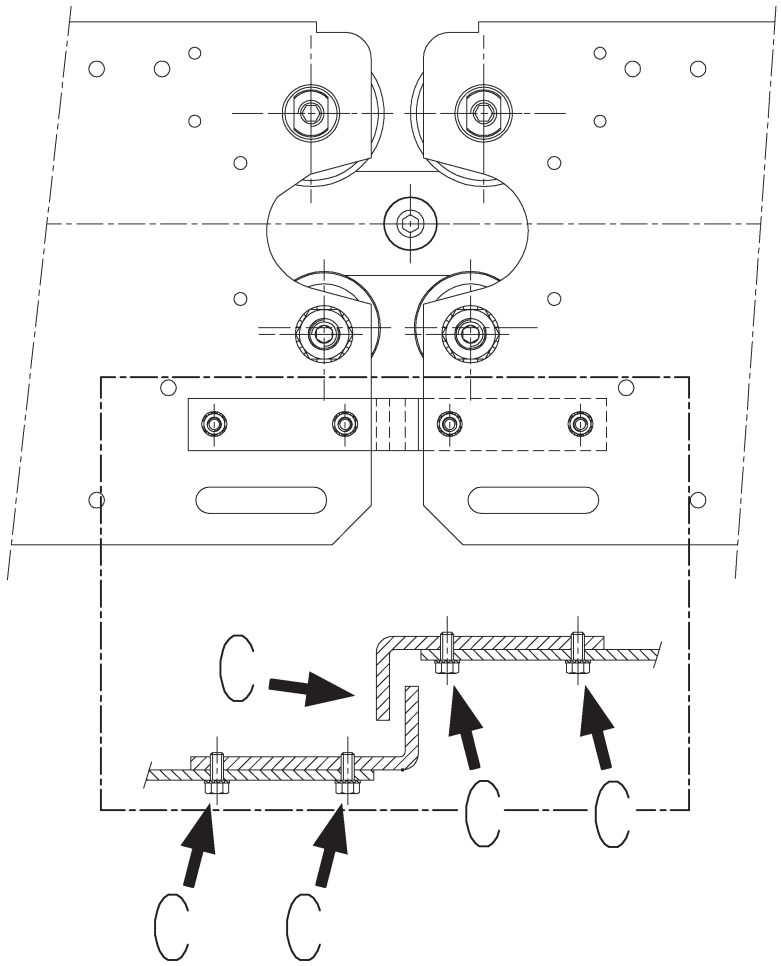


Typ. 12/R-L



16. SLOW HANGER SYNCHRONISATION

Check during maintenance that the emergency driving hook is present and securely fixed.



17. SLIDING ROLLERS

The design of the top rollers race is different from the guide's so that they do not sit at the race centre (see Fig. 1).
These rollers should be replaced because worn out when a contact marking with the guide at the race bottom is noticed (see Fig. 2).
Other factors that indicate the need for roller replacement are:

- Excessive noise of the bearing (caused by the penetration of dirt between the balls).
- Excessive noise due to eccentric deformation (normally this occurs when the doors stand still for long periods of time).

☞ Without any of the above listed problems we suggest to change the upper and lower rollers every 7 years.

Fig. 1

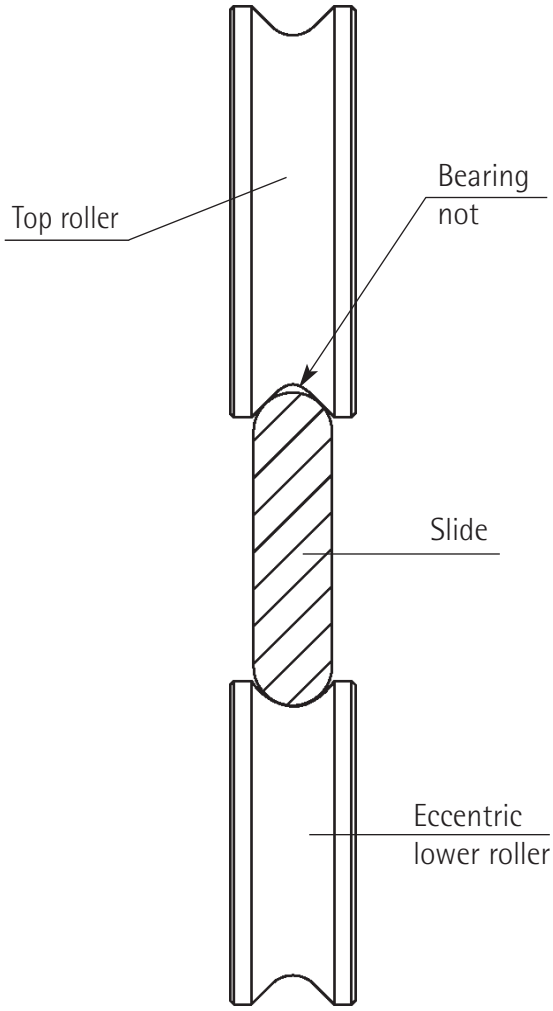
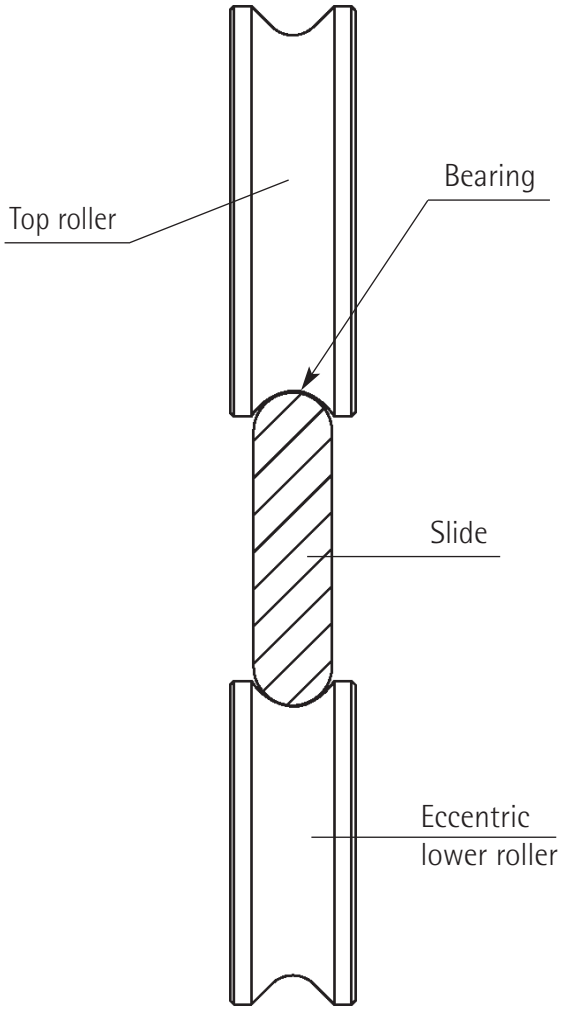
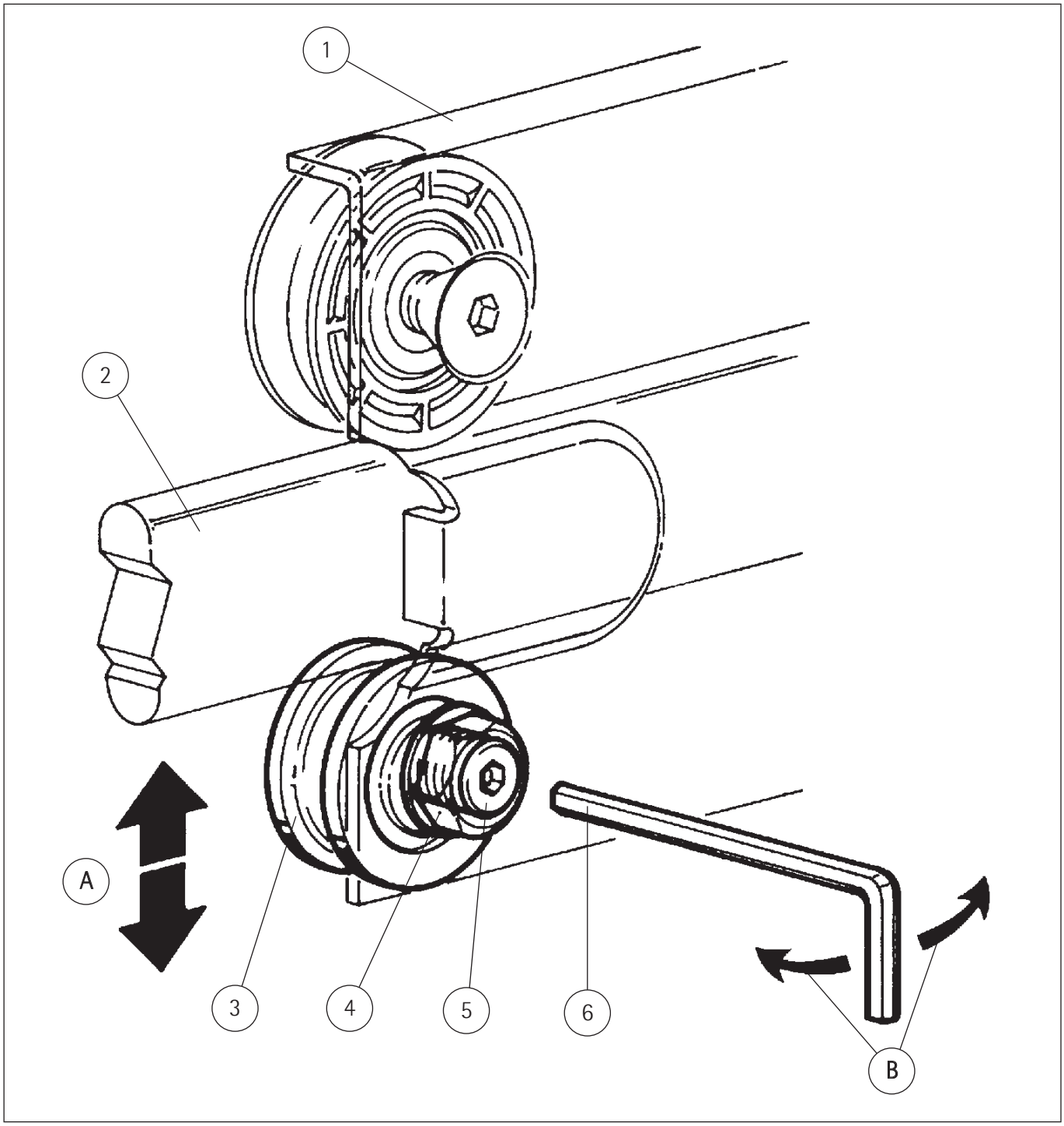


Fig. 2



18. SLIDING ROLLERS ADJUSTMENT

To get rid of the play between the hanger (1) and the sliding guide (2), adjust the excentric bolt on the bottom roller (3).
Unscrew the bolt (4) with a 19 mm spanner and turn the excentric bolt (5) clockwise or anticlockwise, as indicated by the arrows (B) with a 6 mm allen-key (6) so as to get rid of the play between the guide and roller but leaving enough play to allow the roller to rotate freely.
After this adjustment, rescrew the roller stopping bolt (4).

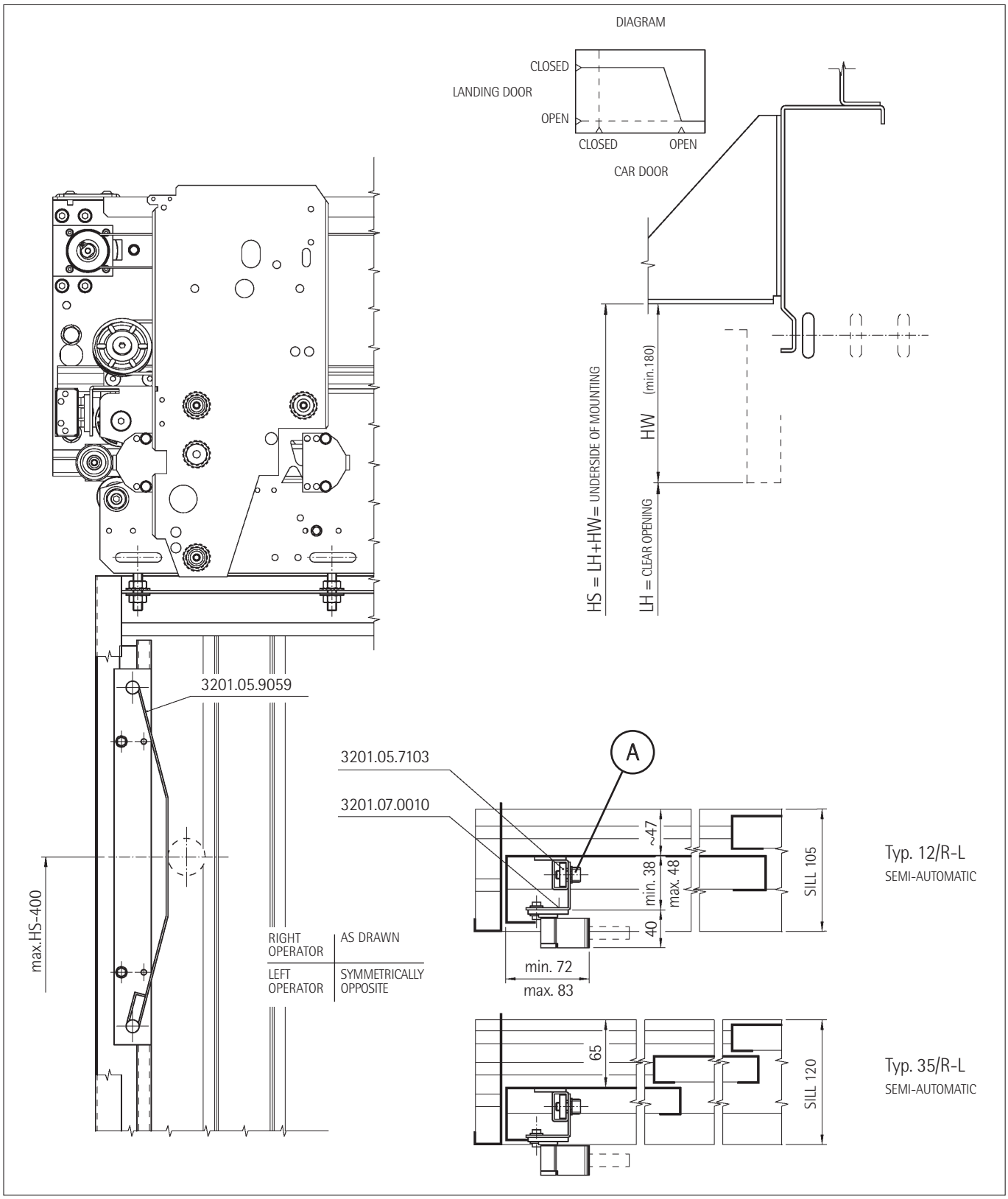


19. OPTIONS

19.1 - MECHANICAL RELEASE ASSEMBLY

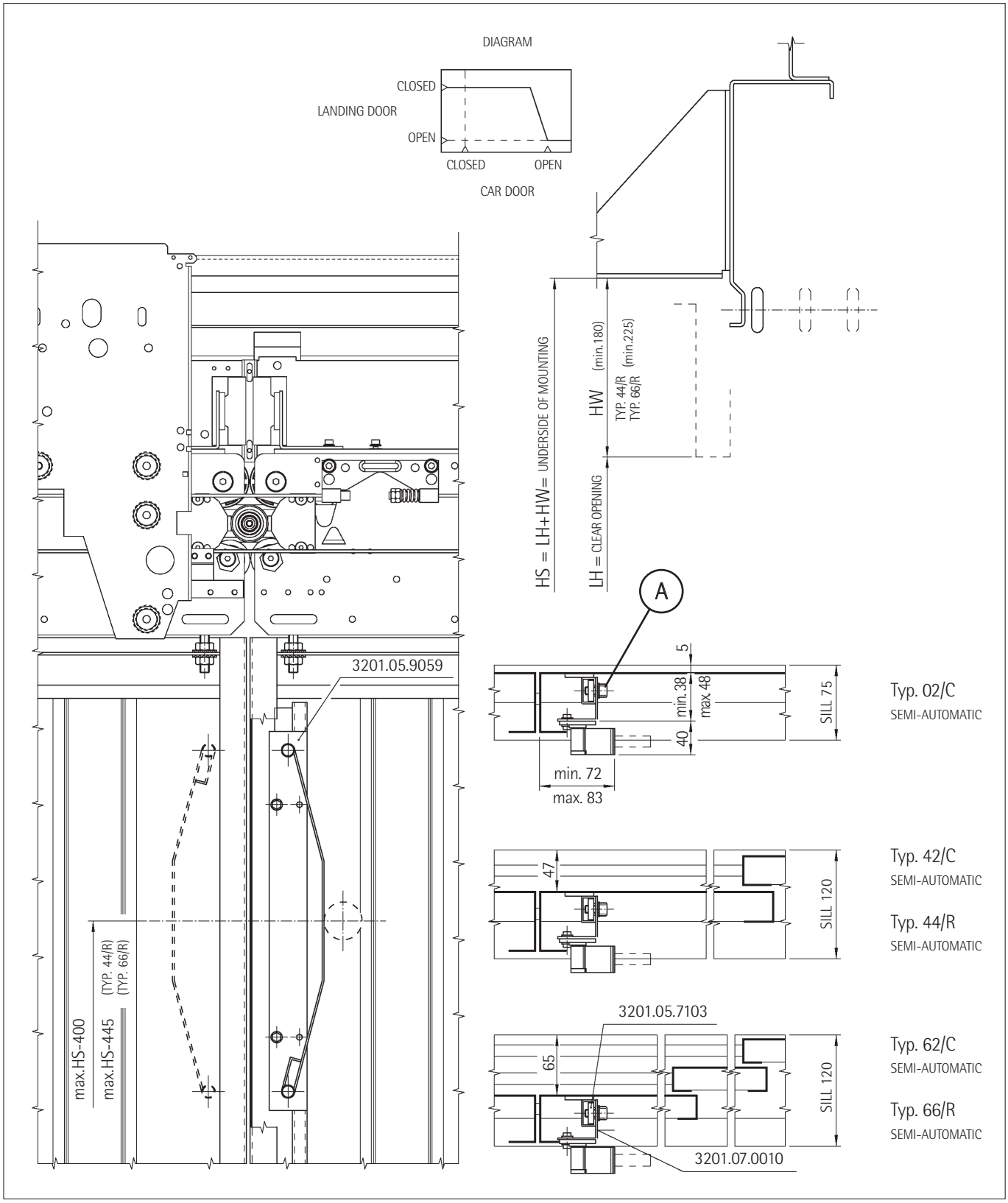
TYPE 1118 - SIDE OPENING CAR DOORS

Vertical adjustment of the mechanical release mounted on the fast panel is made using the two screws (A).



TYPE 1119 - CENTRE OPENING CAR DOORS

Vertical adjustment of the mechanical release mounted on the right or left fast panel is made using the two screws (A).



HYDRA 3000 PLUS CAR DOOR

19.3 - FIXING

LIGHT FRONT FIXING SYSTEM SUITABLE FOR ECO AND MIDI MOTORS

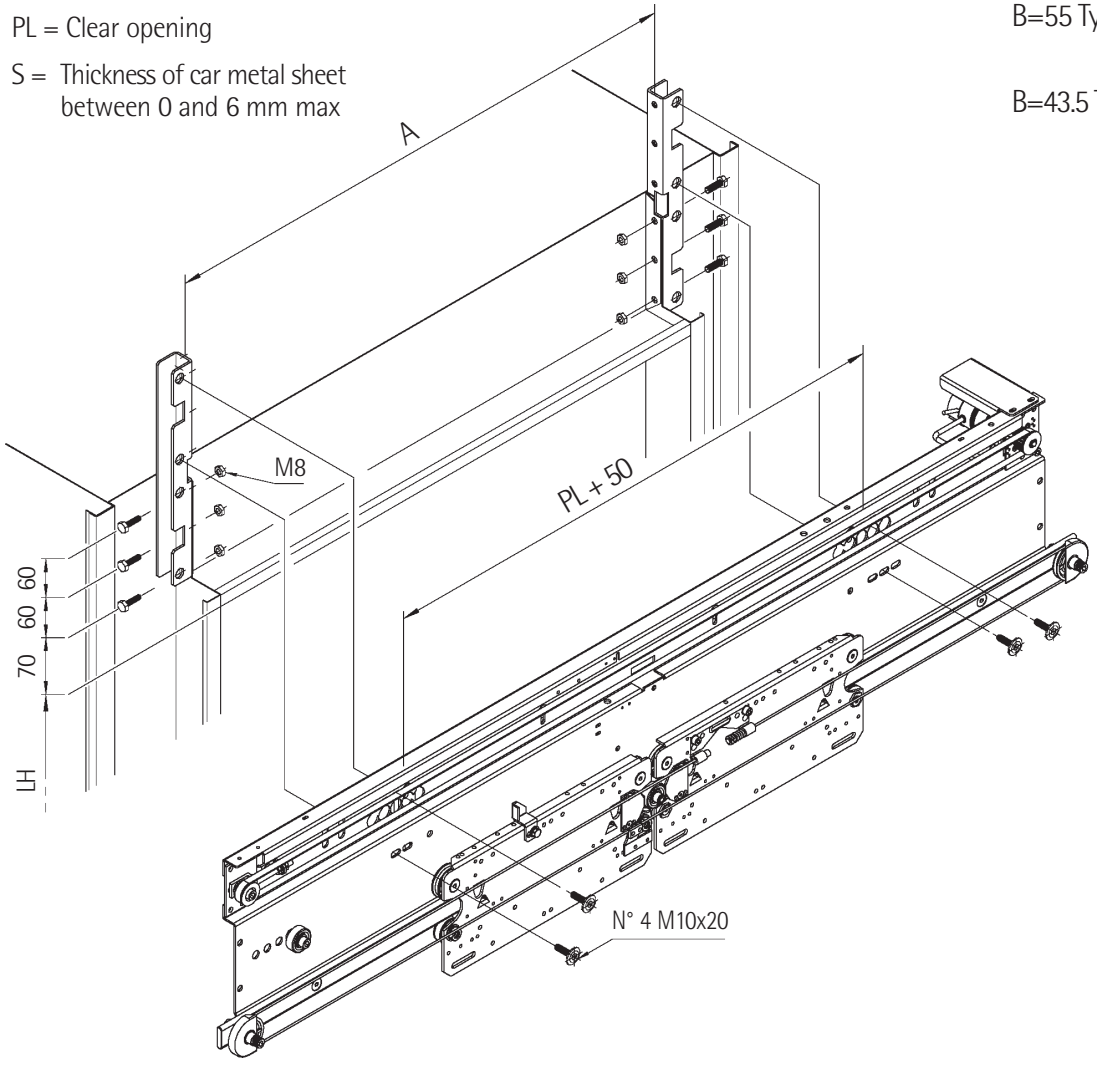
A = PL + (2xS)

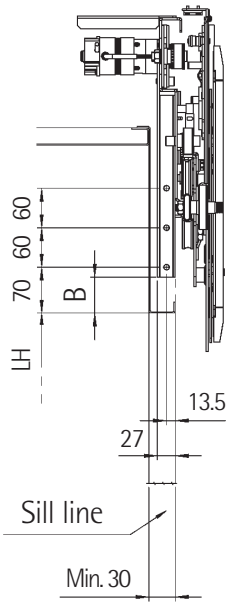
PL = Clear opening

S = Thickness of car metal sheet between 0 and 6 mm max

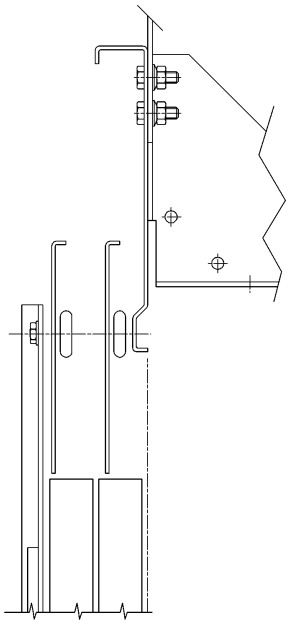
B=55 Typ.: 02/C, 44/R, 12/R-L

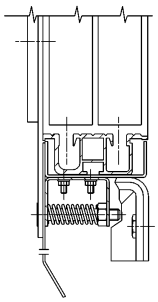
B=43.5 Typ.: 35/R-L

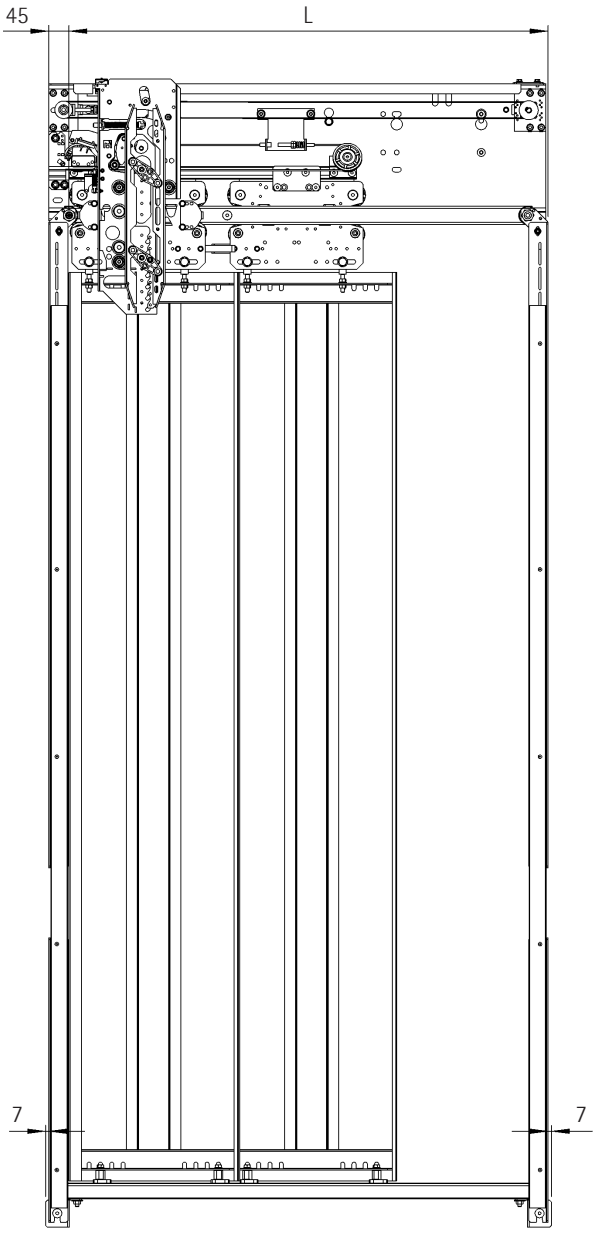


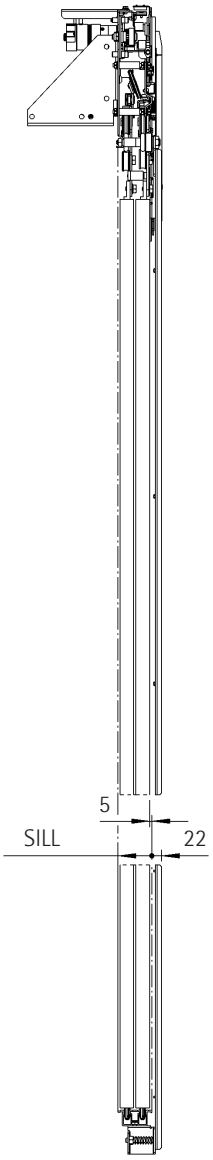


19.4 - MAXIMUM DIMENSIONS FOR FIXED SUPPORT OF WSE EDGE EXECUTION FOR SIDE-OPENING CAR DOORS TYPES 12/R-L - 35/R-L









TY 12/R-L

PL	L
600	960
650	1010
700	1060
750	1145
800	1195
850	1245
900	1360
950	1410
1000	1460
1050	1510
1100	1550
1150	1610
1200	1810

TY 35/R-L

PL	L
600	900
650	950
700	1000
750	1050
800	1140
850	1190
900	1265
950	1315
1000	1365
1050	1415
1100	1465
1150	1600

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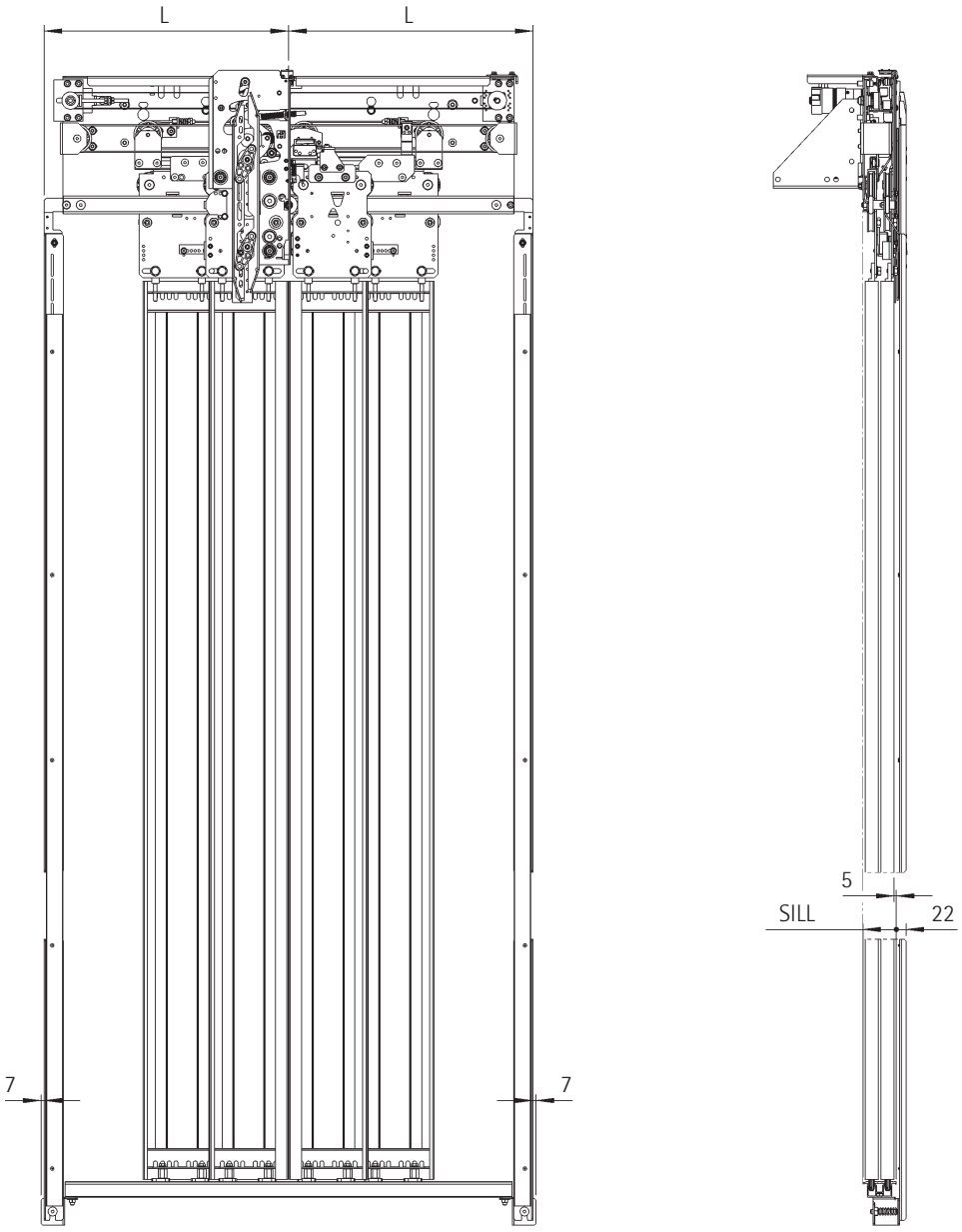
EXECUTION FOR CENTRAL OPENING CAR DOORS TYPES 02/C - 44/R



TY 02/C

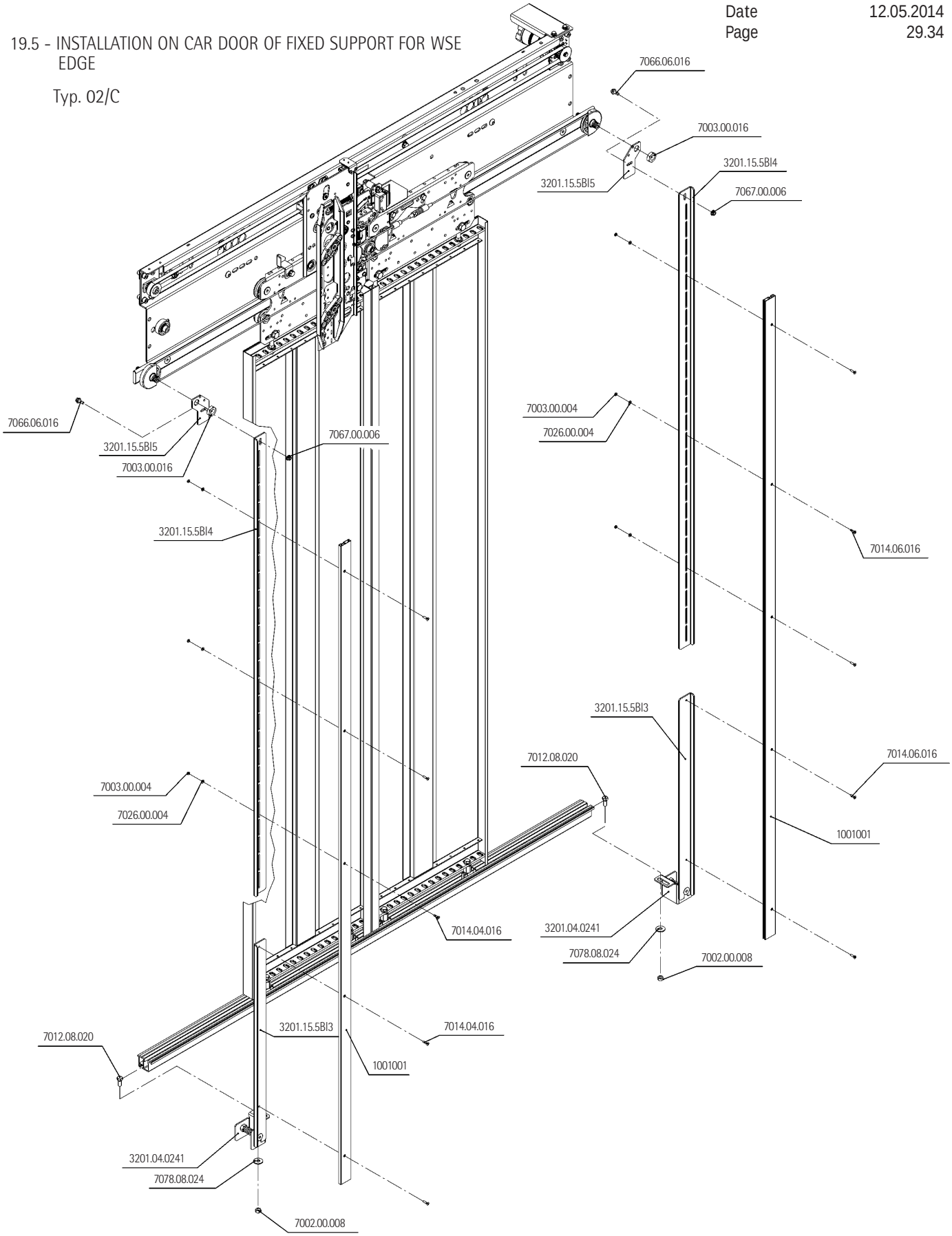
PL	L
600	630
650	655
700	705
750	740
800	790
850	815
900	880
950	930
1000	955
1050	980
1100	1005
1150	1030
1200	1180

TY 44/R

PL	L
600	547
650	572
700	597
750	642
800	672
850	697
900	717
950	772
1000	822
1050	847
1100	897
1150	922

19.5 - INSTALLATION ON CAR DOOR OF FIXED SUPPORT FOR WSE EDGE

Typ. 02/C



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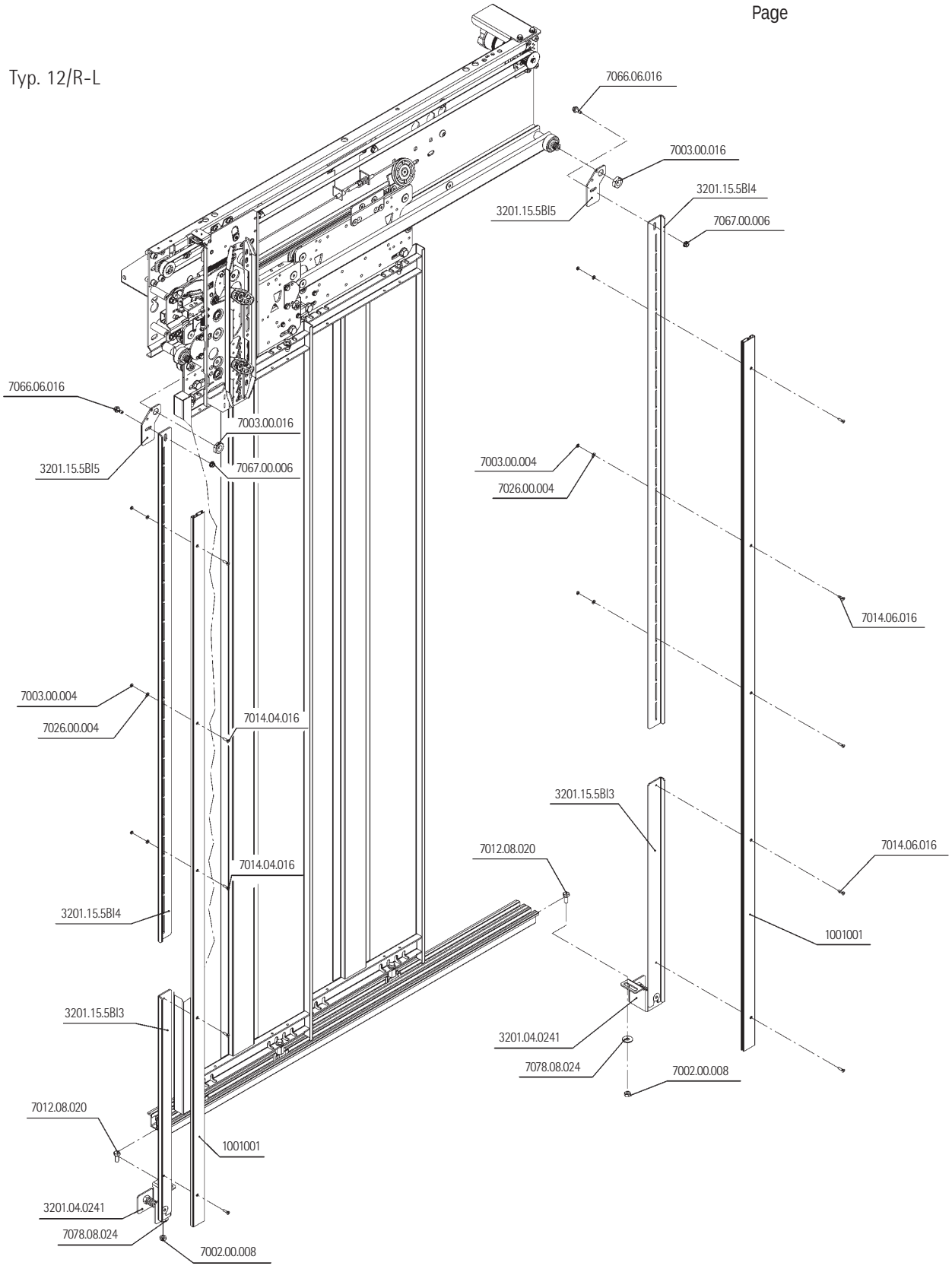
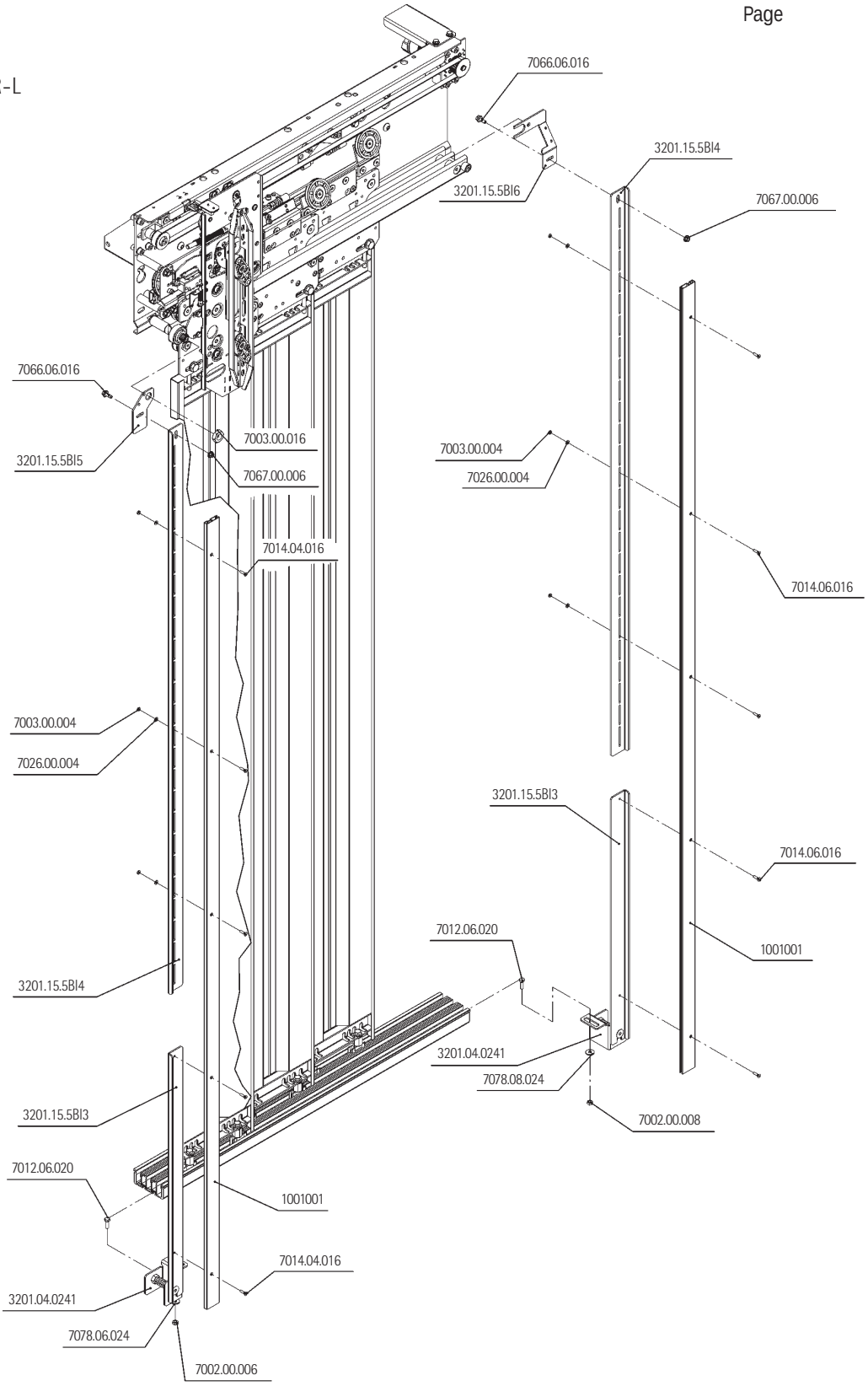
Typ. 12/R-L



HYDRA 3000 PLUS CAR DOOR

Code	GM.2.002086.EN
Version	B
Code	3201.32.0392
Version	B
Date	12.05.2014
Page	31.34

Typ. 35/R-L



HYDRA 3000 PLUS CAR DOOR

Code	GM.2.002086.EN
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Code	3201.32.0392
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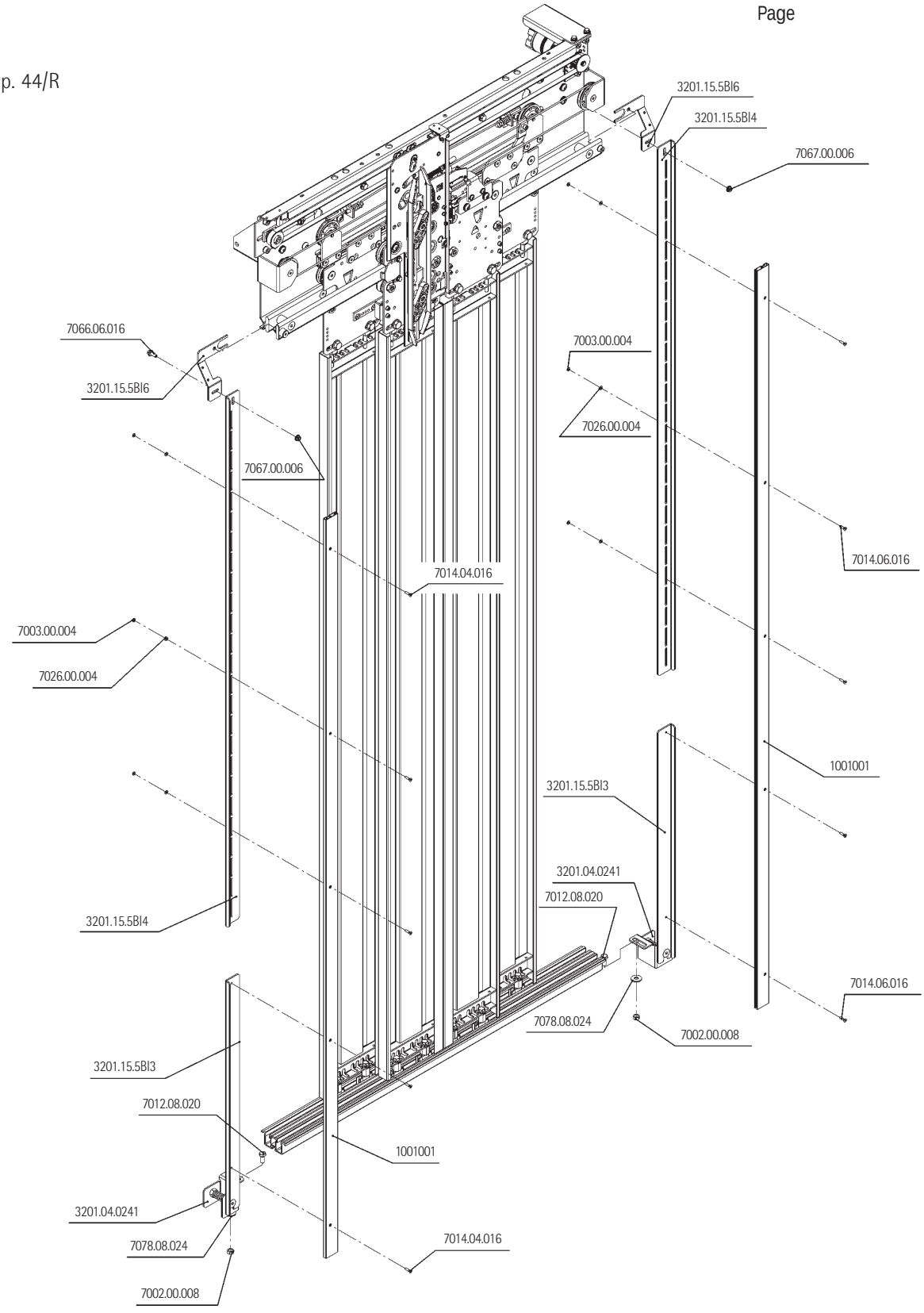
Typ. 44/R



WARNINGS ON HOW TO KEEP THE DOORS IN GOOD OPERATING CONDITIONS

In order to prevent failures or incorrect operation and to maintain the system in good conditions, the technical efficiency of the system should periodically be checked, to ensure compliance with the applicable laws.
The technical efficiency depends on various factors such as:

- Work load
- Years of operation
- Door weight
- Climatic and environmental conditions
- Cleanness of environment
- Correct maintenance
- Etc.

And it can affect:

- Clearance/interference between the doors, and between the doors and posts according to the applicable laws
- Clearance of coupling device
- Status/conditions of fixing and coupling elements
- Conditions of parts affected by wear
- Efficiency of the lock and relevant contacts
- Any other parts that may be affected by the type of application.

For these reasons it is not possible to establish a general part replacement programme beforehand.

All screws used for the assembly of our product are screwed by means of a tightening torque as shown on following table:

Screw	Max torque (Nm)	Min torque (Nm)
M3	1,1	0,9
M4	2,6	2,1
M5	5,1	4,1
M6	9	7
M8	21	17
M10	42	34
M12	71,4	57,1

In case of need please refer to above table.

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