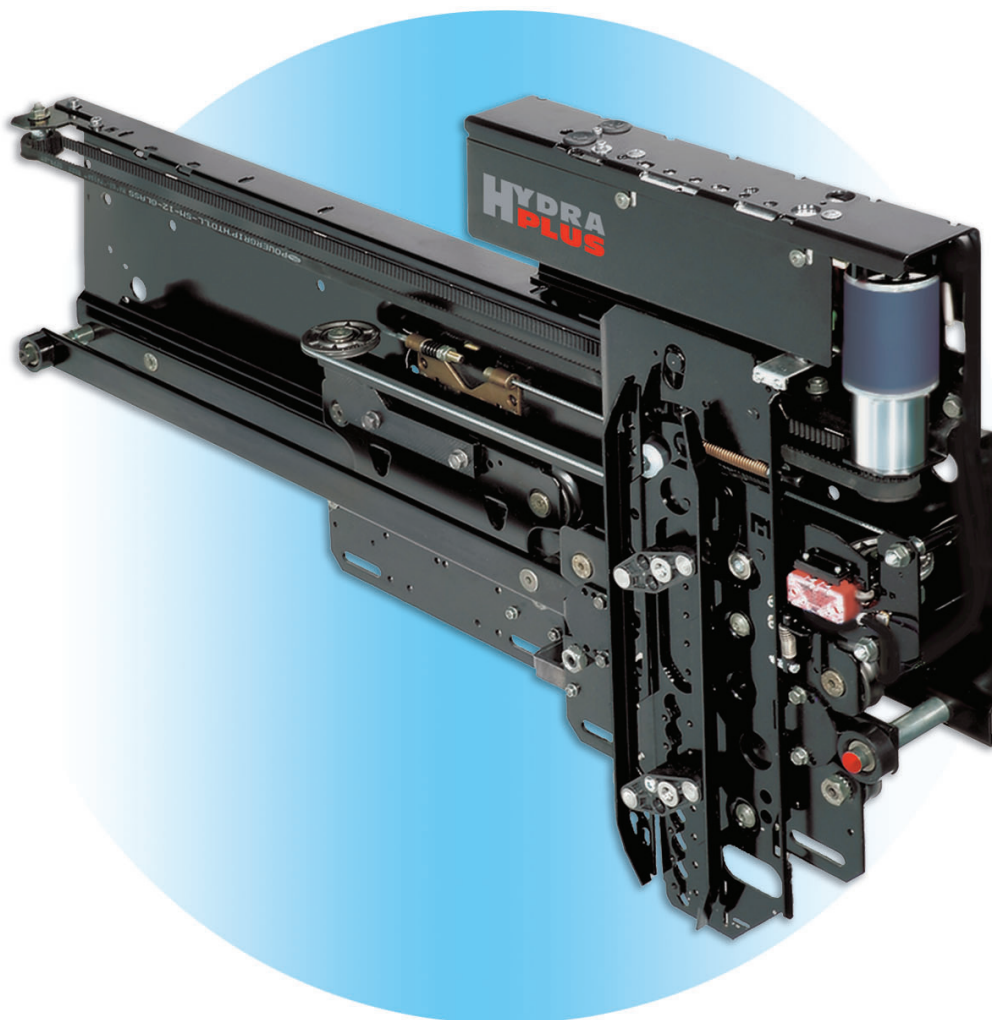




Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012

INSTRUCTION HANDBOOK

Hydra PLUS



No part of this publication may be reproduced or translated, even in part, without prior written permission from WITTUR.

© Copyright WITTUR 2012

URL: <http://www.wittur.com>
e-mail: info@wittur.com

Subject to change without notice!



HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012

I	General up-dating	02/08/12
H	Up-dated document's Lay-out and the following point: 10.1	26/01/09
G	Up-dated document's Lay-out and the following point: 15	19/11/08
MOD.	DESIGNATION	DATE

HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	1.38

INDEX

Symbols used	Pag. 1
Foreword and warnings	Pag. 2
Suggestions	Pag. 2
1. General description	Pag. 3
2. Landing door alignment with car door	Pag. 5
3. Assembly of panel fixing bolts	Pag. 5
4. Clearance recovering of the panel assembling bolts	Pag. 6
5. Bottom sliding shoes assembly, maintenance and replacement	Pag. 7
6. Assembly of sill and toe guard to support	Pag. 8
7. Placing the mechanisms on the thresholds	Pag. 9
8. Fixing of the coupler	Pag. 10
9. Adjustment of coupler height	Pag. 11
10. Car door lock (optional)	Pag. 12
11. Adjustment the lock rollers	Pag. 15
12. Position of the coupler between the landing lock rollers	Pag. 16
13. Replacement of belts	Pag. 17
14. Adjustment of toothed belt tension	Pag. 18
15. Adjusting the clear opening	Pag. 19
16. Slow hanger synchronisation	Pag. 20
17. Sliding rollers	Pag. 21
18. Sliding rollers adjustment	Pag. 22
19. Options	Pag. 23
Warnings on how to keep the doors in good operating conditions	Pag. 38

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 PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	2.38

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.

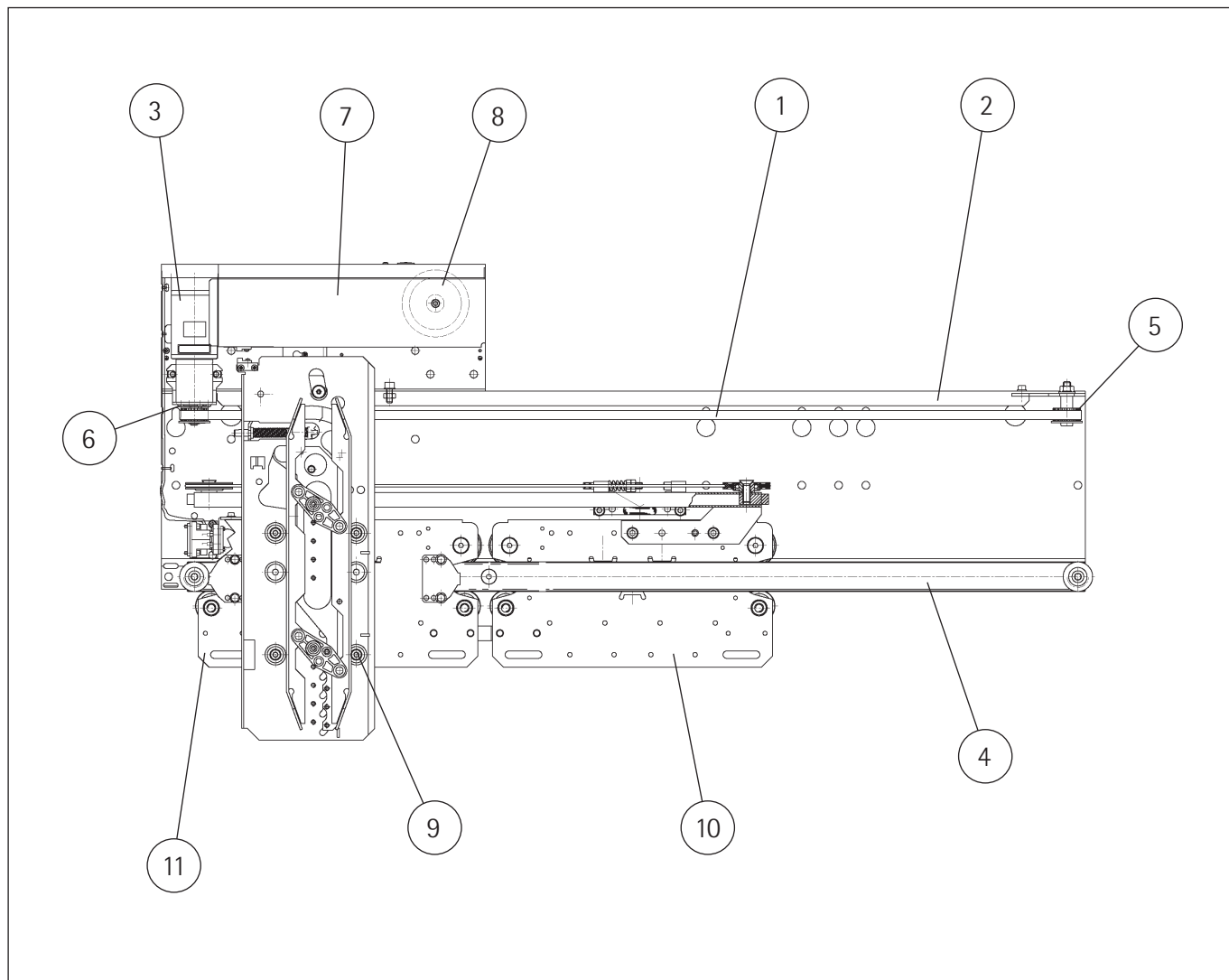
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 3.38

1. GENERAL DESCRIPTION

Linear car door 3201-HYDRA-PLUS with toothed belt transmission (1) consisting in a plate (2) which supports the door drive (3) and mounting of top tracks (4), transmission pulleys (5-6), as well as electronic assembly layout (7) and transformer (8). The coupler (9) is attached to the toothed belt (1) for driving the door trucks (10-11) open and close.

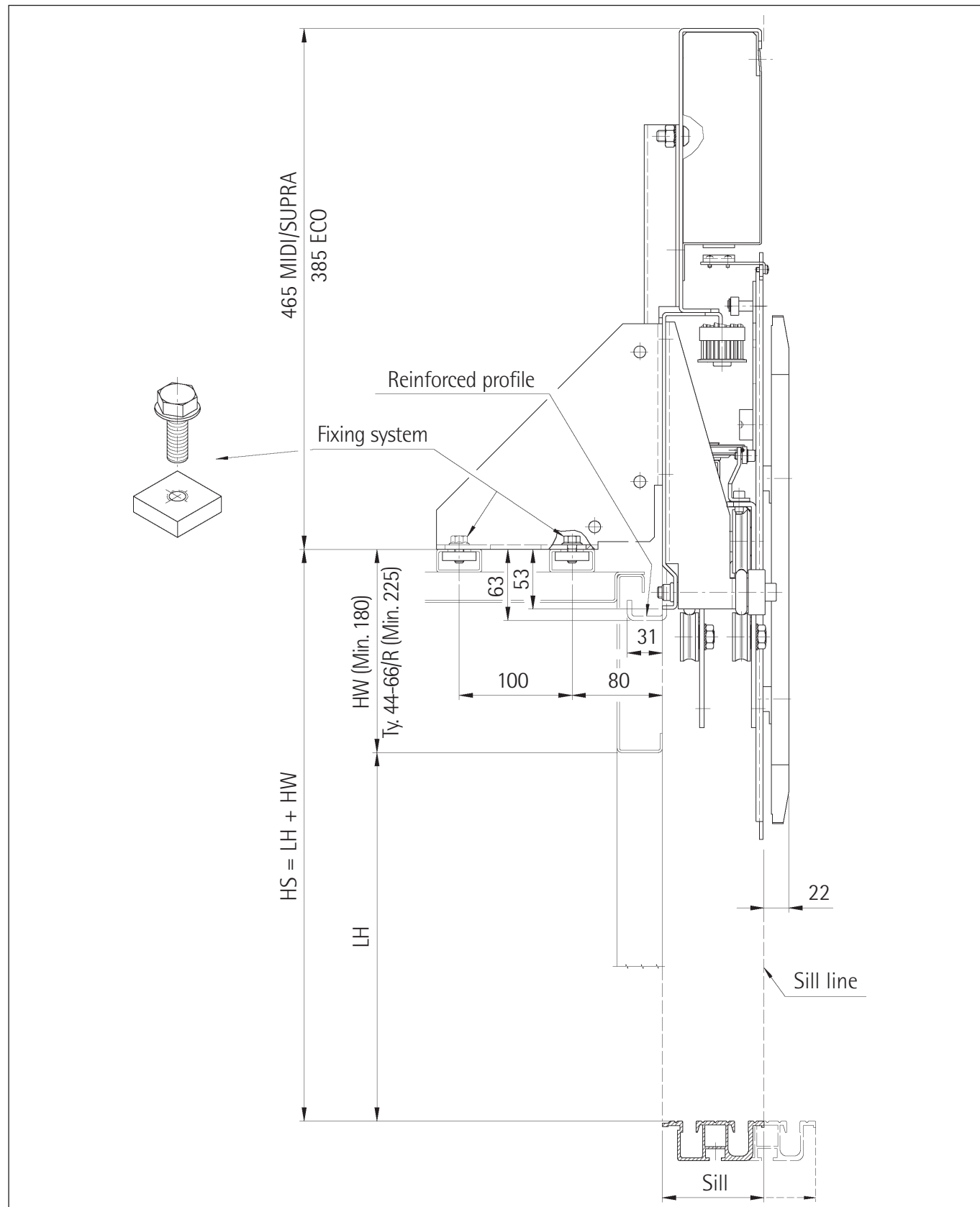


HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 4.38

1.1 - OPERATOR FIXING ON CAR ROOF



Subject to change without notice!

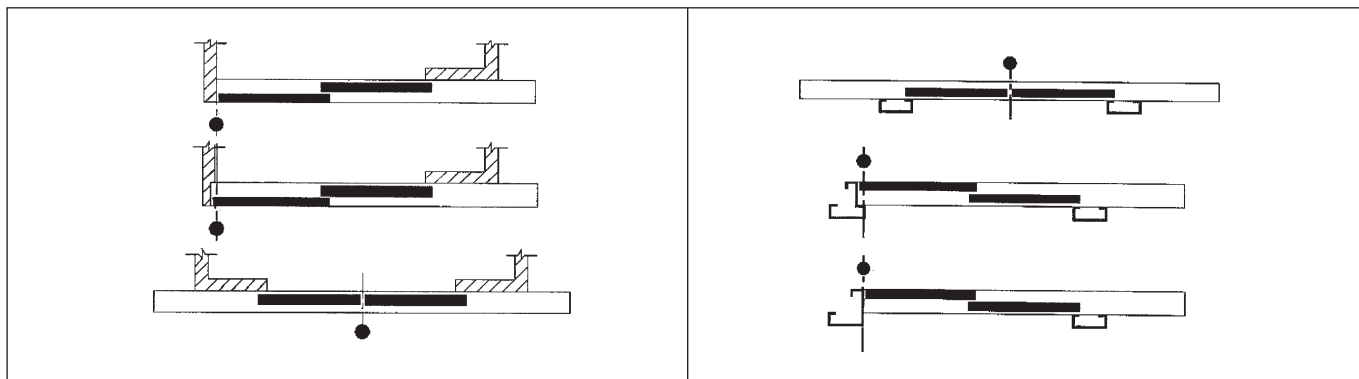
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 5.38

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.



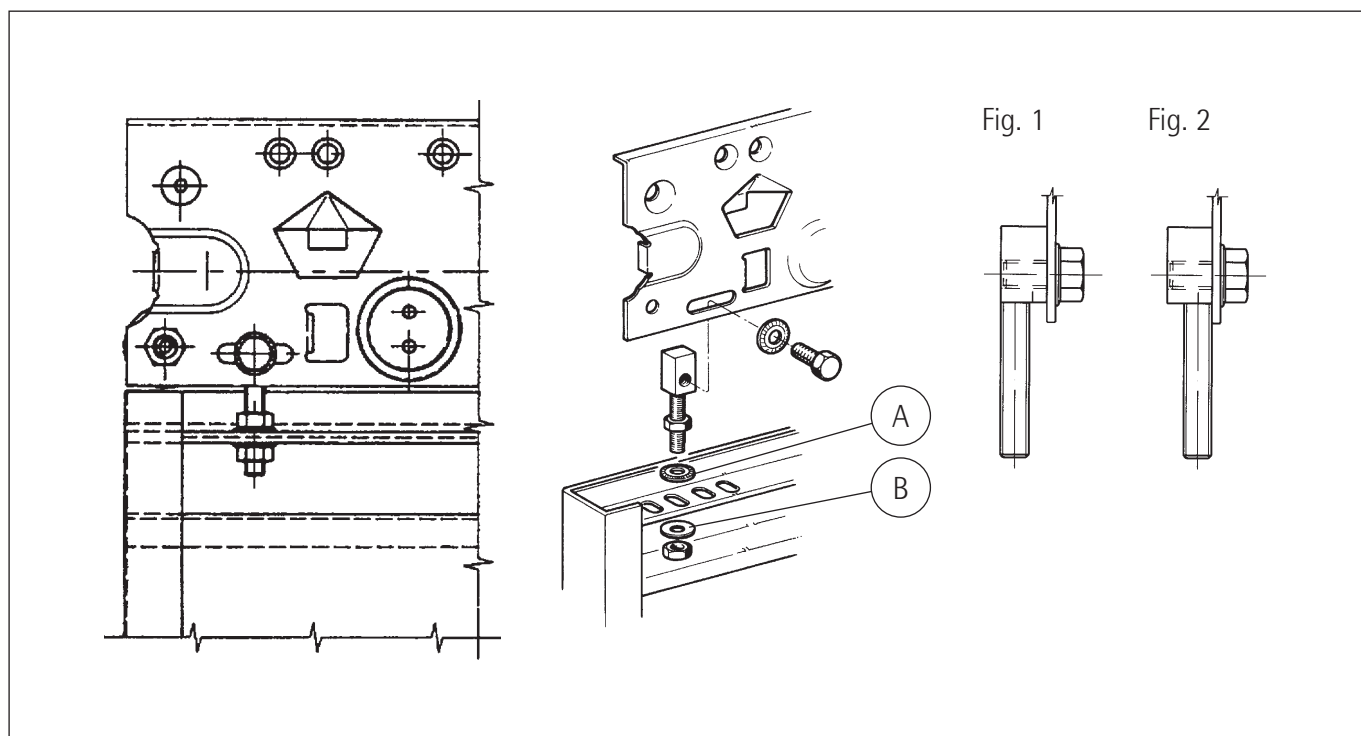
3. ASSEMBLY OF PANEL FIXING BOLTS

Each panel must have at least two fixing points.

For the antirust panels mount the bolts according to figure 1.

For the panels having a covering of more than 1mm thick, mount the bolts according to figure 2.

The "A" type conical washers should be placed on the top part of the door fixing profile. The "B" type flat washer beneath.



HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 6.38

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.

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.

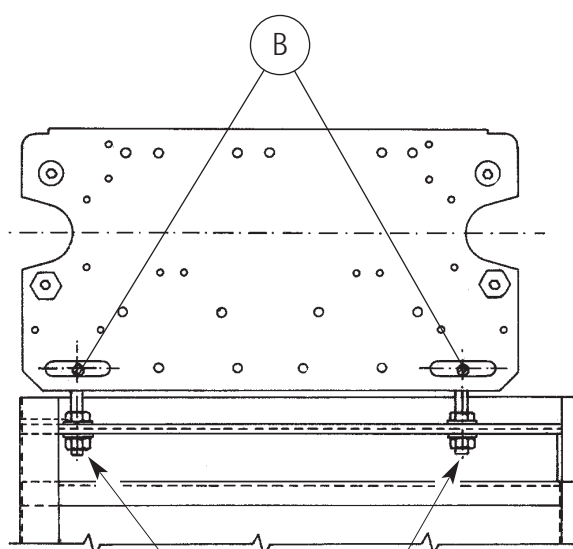


Fig. 1

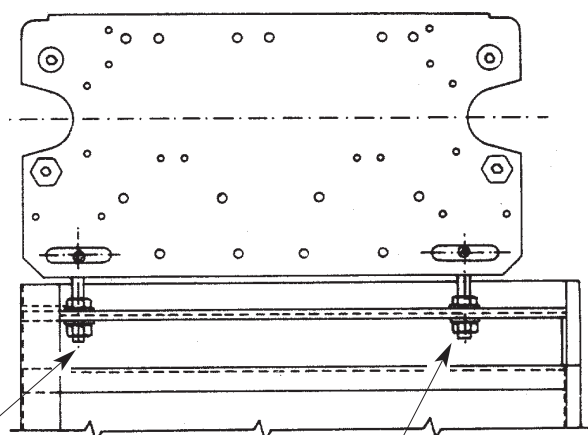
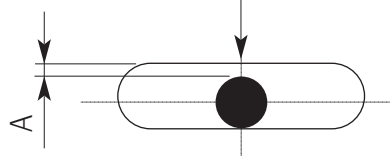
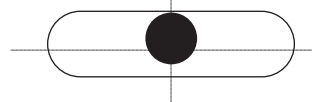


Fig. 2



HYDRA PLUS CAR DOORS

Code
Version

GM.2.002487.EN
0

Code
Version
Date
Page

3201.32.0209
I
02.08.2012
7.38

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.

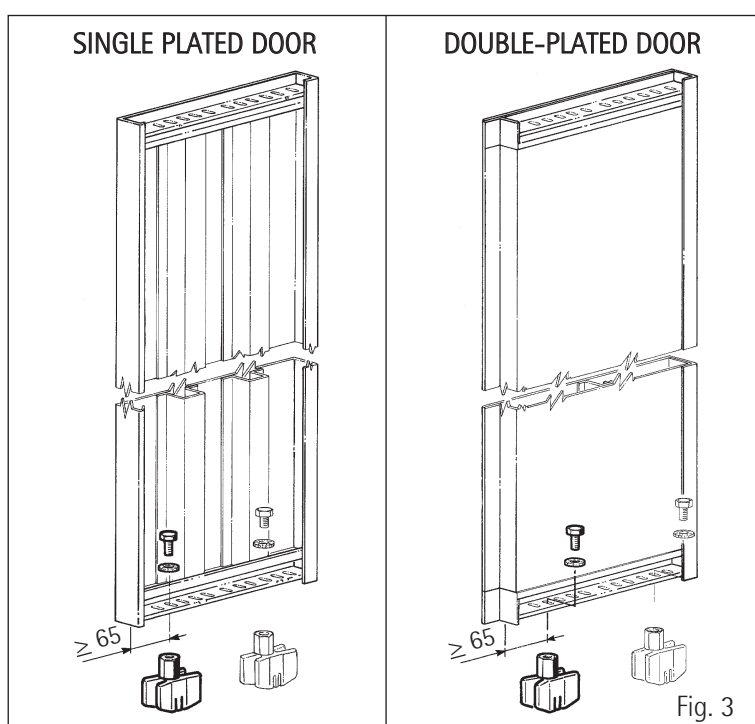
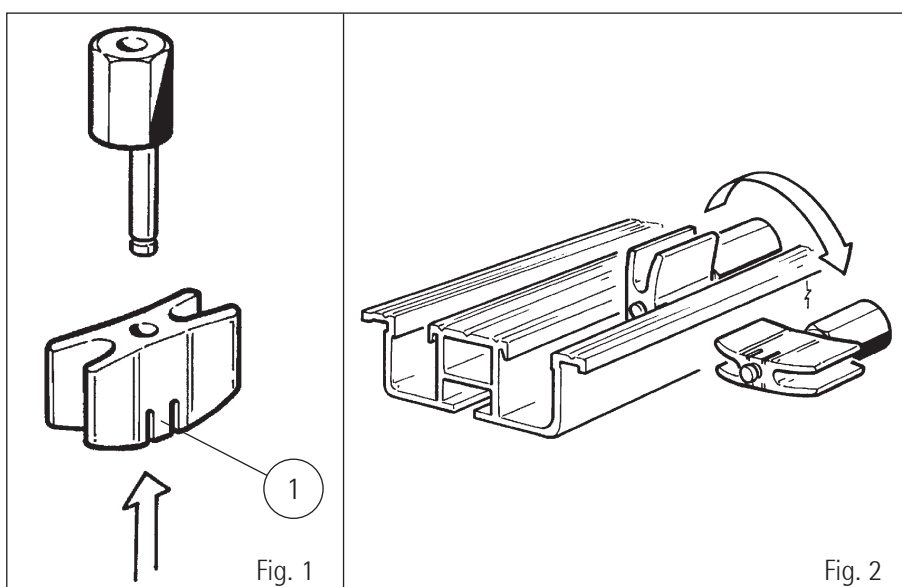
The shoe mounting and disassembling to the panel is very easy even with assembled panels: in fact it is enough to turn them 90 degrees, put them in a horizontal position (Fig. 2) and pull them towards the outside or push them into the sill's groove.

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.



HYDRA PLUS CAR DOORS

Code
Version

GM.2.002487.EN
0

Code
Version
Date
Page

3201.32.0209
I
02.08.2012
8.38

6. ASSEMBLY OF SILL AND TOE GUARD TO SUPPORT

Standard sill:

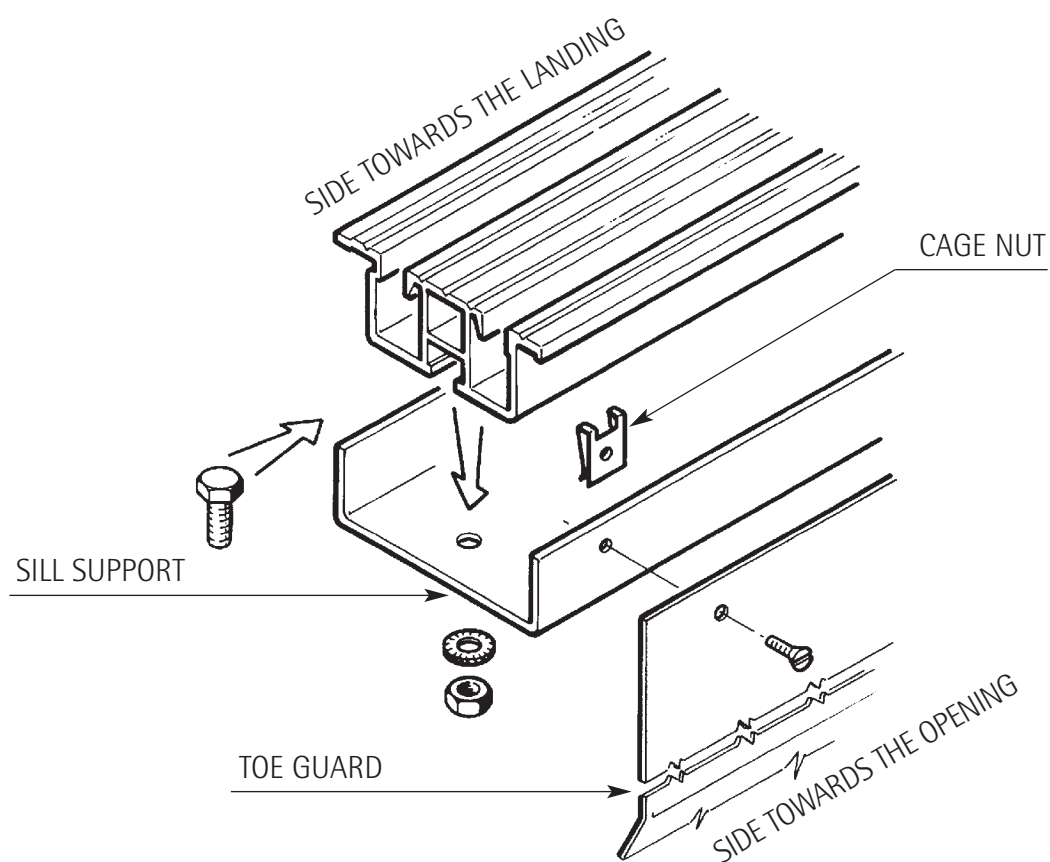
The toe guard fixing is executed as shown in the picture.

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.



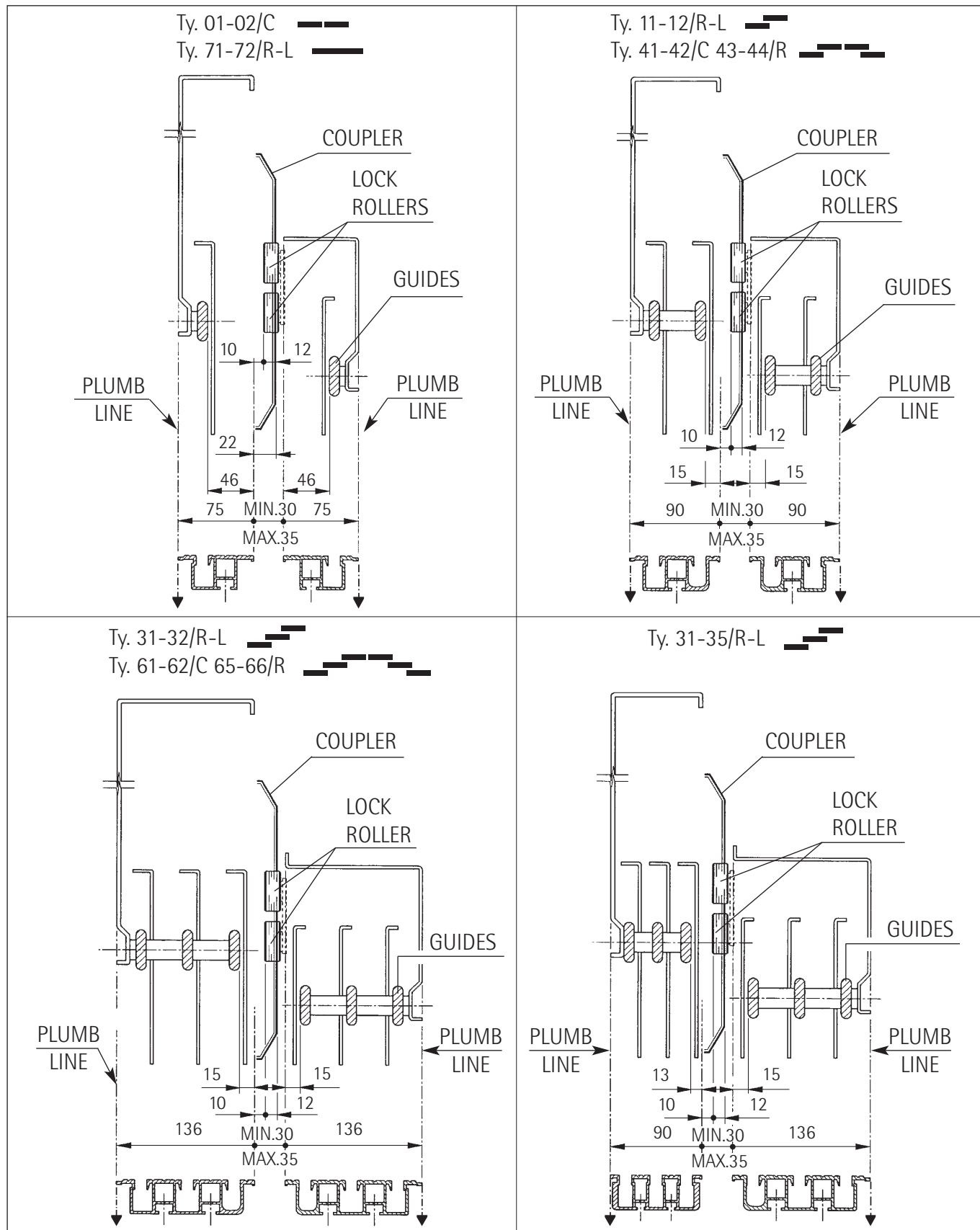
HYDRA PLUS CAR DOORS

Code Version GM.2.002487.EN 0

Code Version 3201.32.0209 I
Date 02.08.2012
Page 9.38

7. PLACING THE MECHANISMS ON THE THRESHOLDS

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



Subject to change without notice!

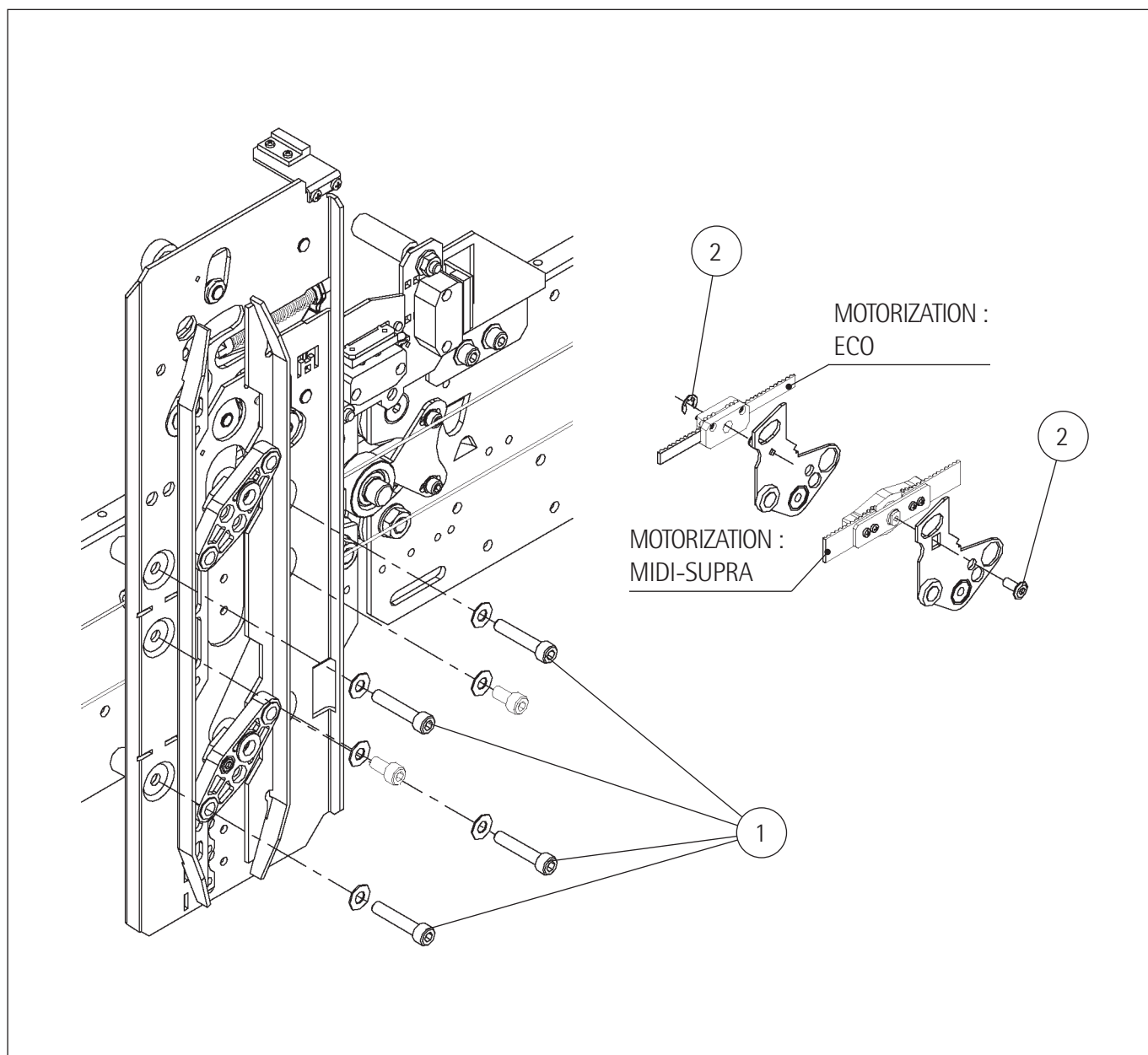
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 10.38

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).



HYDRA PLUS CAR DOORS

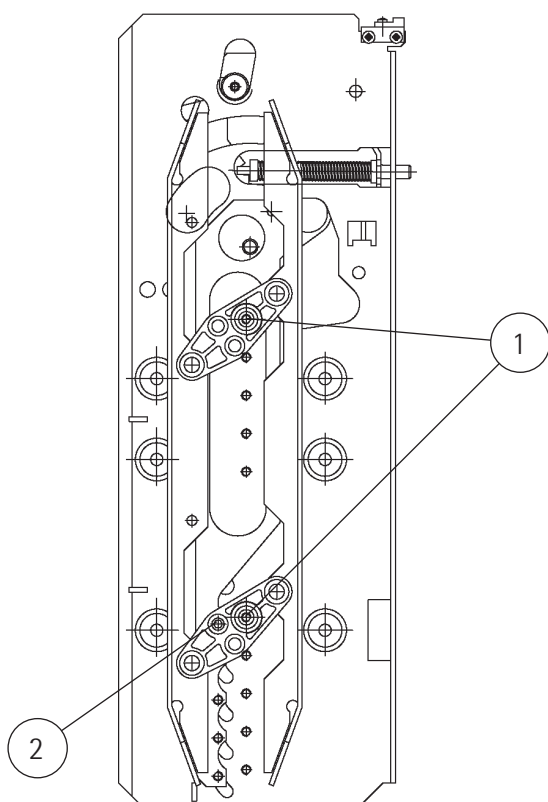
Code GM.2.002487.EN
Version 0

9. ADJUSTMENT OF COUPLER HEIGHT

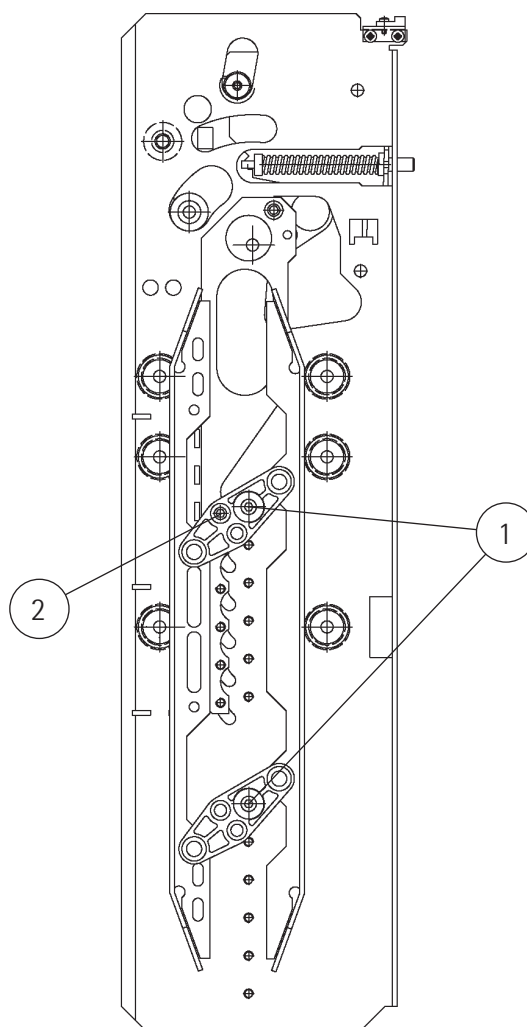
Code 3201.32.0209
Version I
Date 02.08.2012
Page 11.38

Adjust the offset of the coupler's vanes by unloosening 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



HYDRA PLUS CAR DOORS

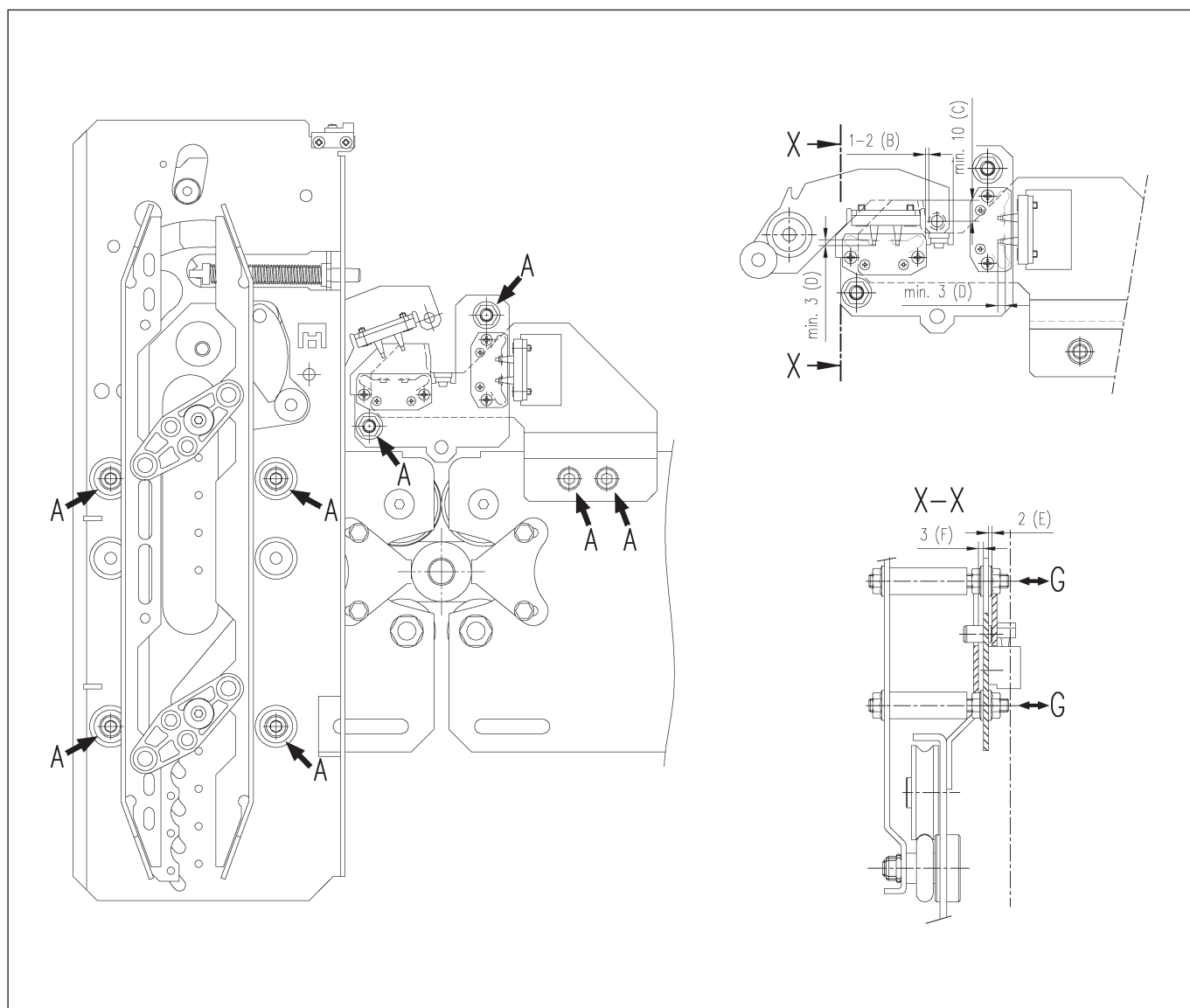
Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 12.38

10. CAR DOOR LOCK (OPTIONAL)

10.1 - MUST BE CHECKED DURING INSTALLATION AND MAINTENANCE

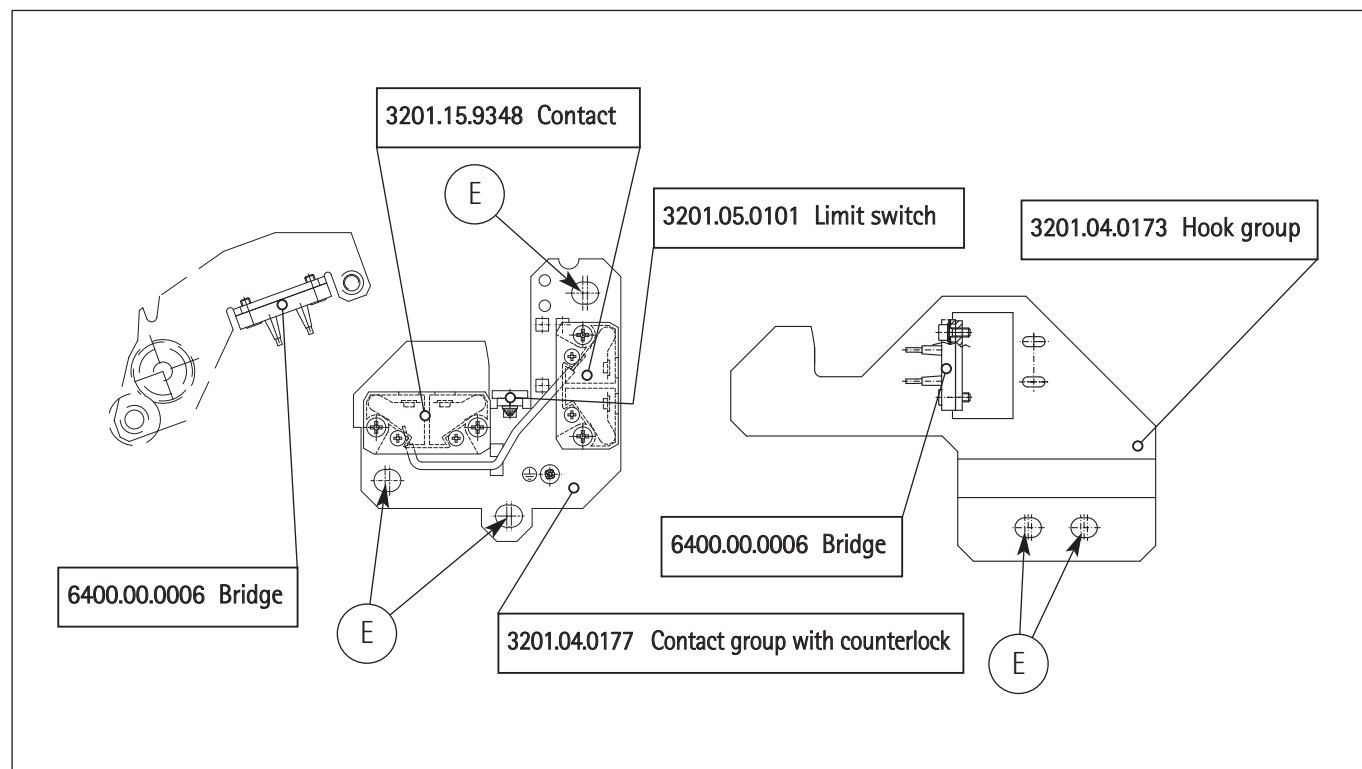
- **Maintenance has to be done at least one time per year.**
- The car door lock must lock the door if the car is out of unlocking zone. Lock hook must touch buffer.
- All parts of lock coupler, lock notch and additional lock notch (only centre opening) must be securely fixed (A).
- Safety circuit must 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).



HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	13.38

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

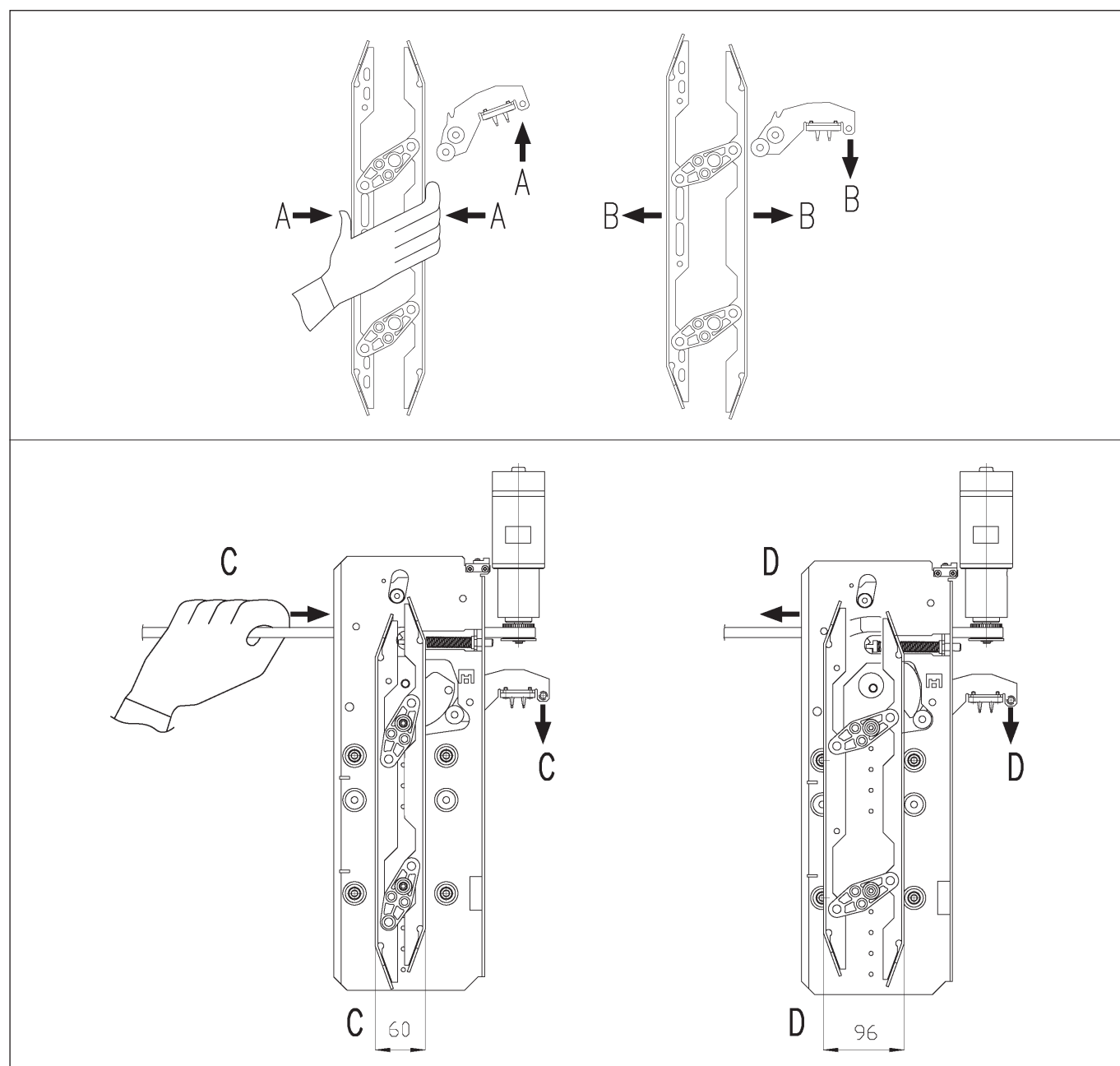


HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	14.38

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/SUPRA drive.



Subject to change without notice!

HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

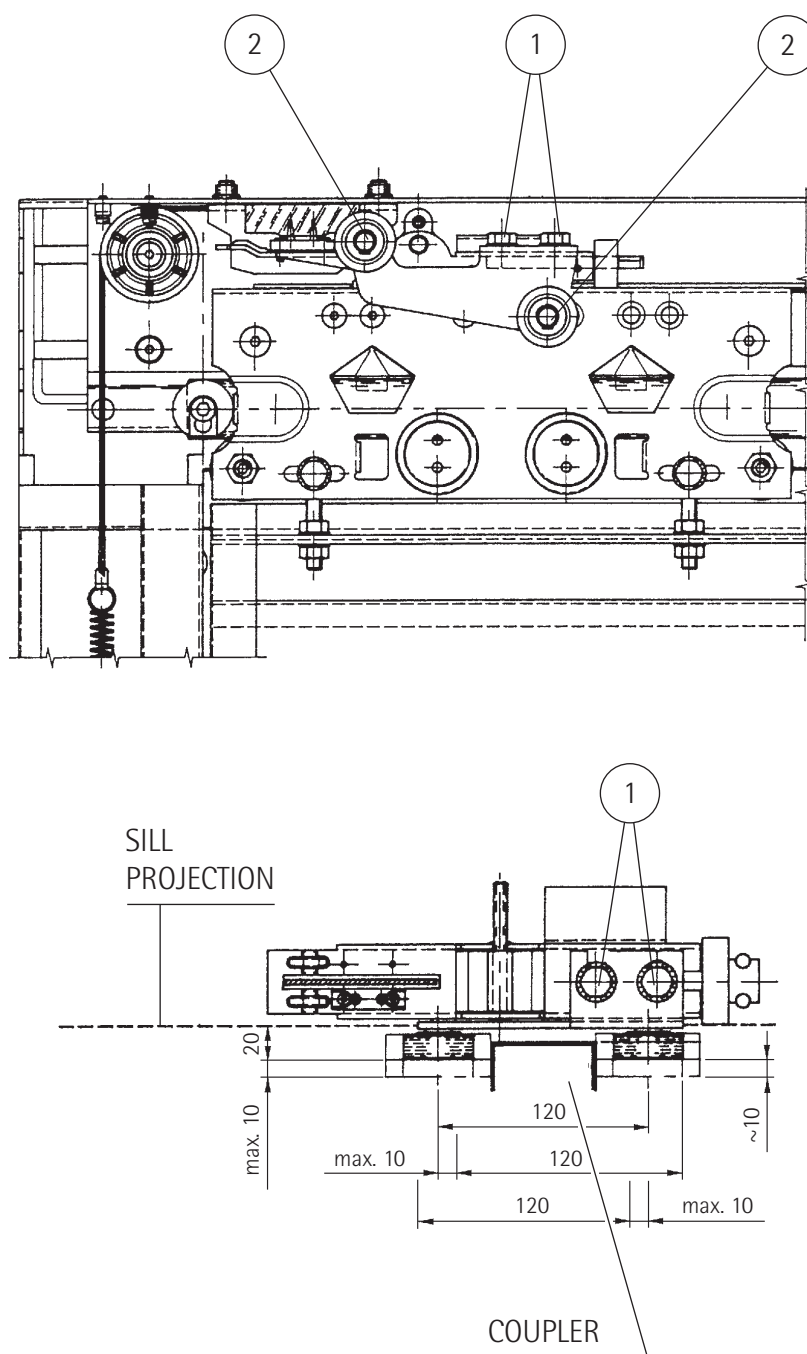
11. ADJUSTMENT THE LOCK ROLLERS

Code 3201.32.0209
Version I
Date 02.08.2012
Page 15.38

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 16.

Make sure that between the lock rollers and the car sill there is sufficient clearance to provide runby.

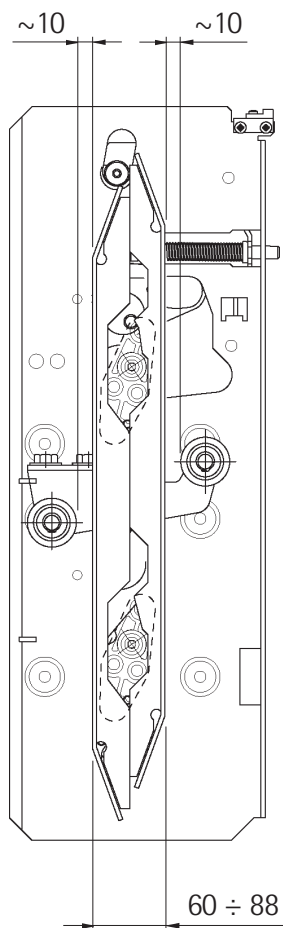


HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 16.38

12. POSITION OF THE COUPLER BETWEEN THE LANDING LOCK ROLLERS



HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 17.38

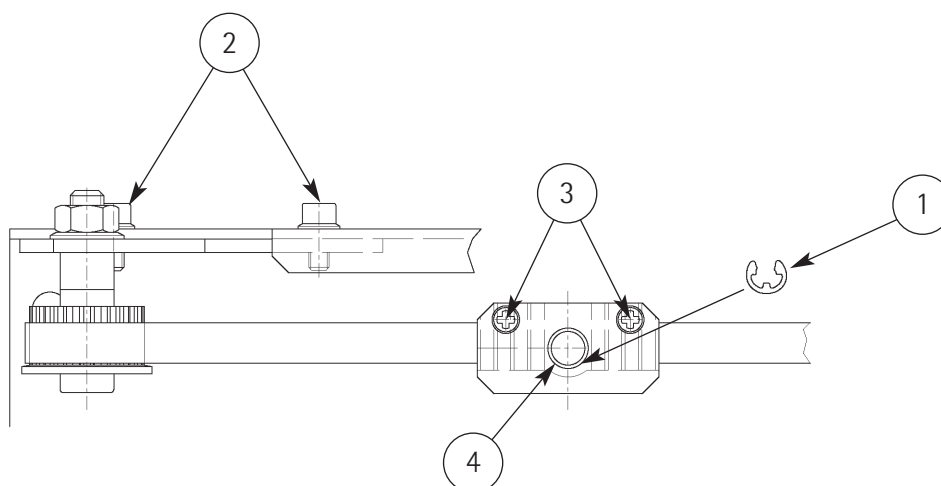
13. REPLACEMENT OF BELTS

ECO

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.

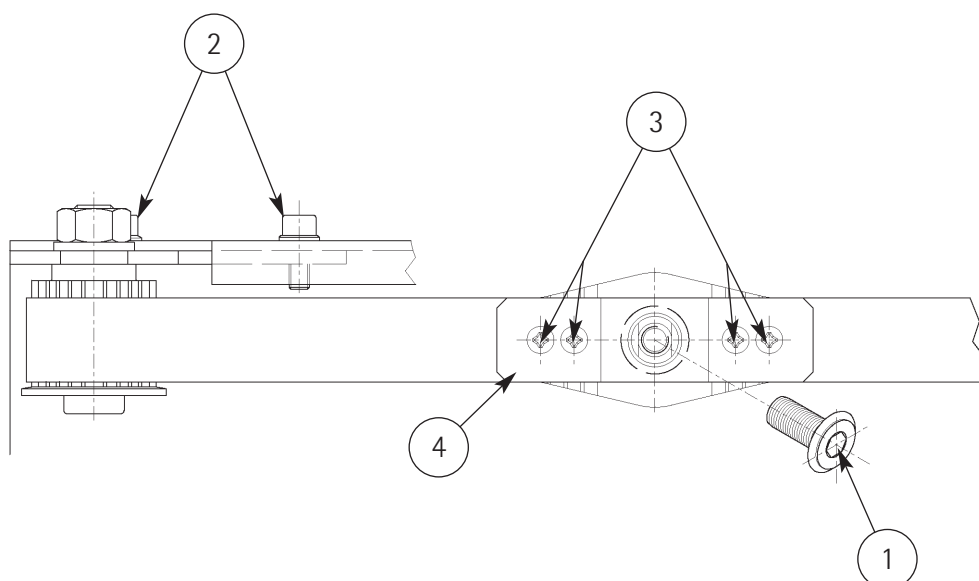


MIDI/SUPRA

Loosen screw (1) to unfasten the belt-clamp at the cam.

Loosen the screws (2) without removing them completely in order to loosen the belt.

Loosen the 4 screws (3). Remove cover plate (4) to completely take out belt.



HYDRA PLUS CAR DOORS

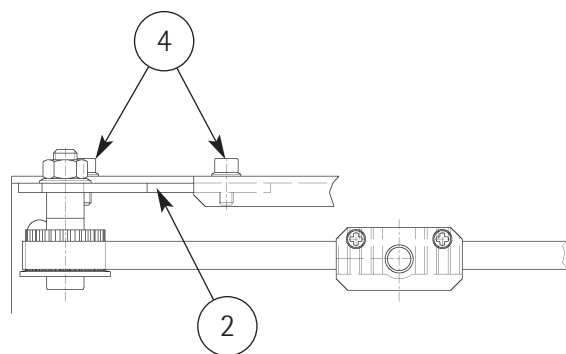
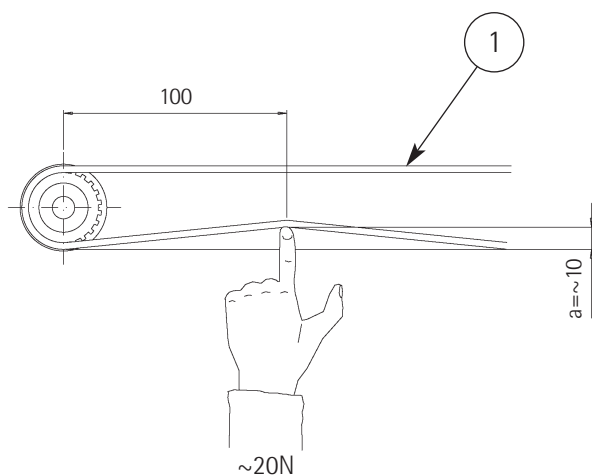
Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 18.38

14. ADJUSTMENT OF TOOTHED BELT TENSION

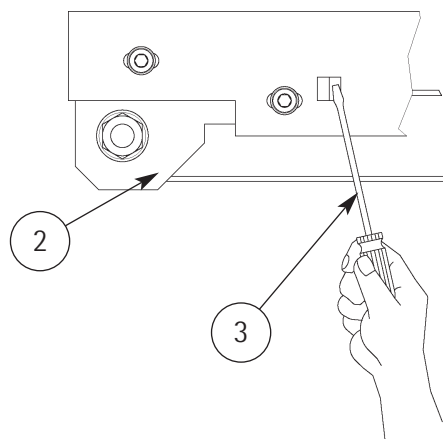
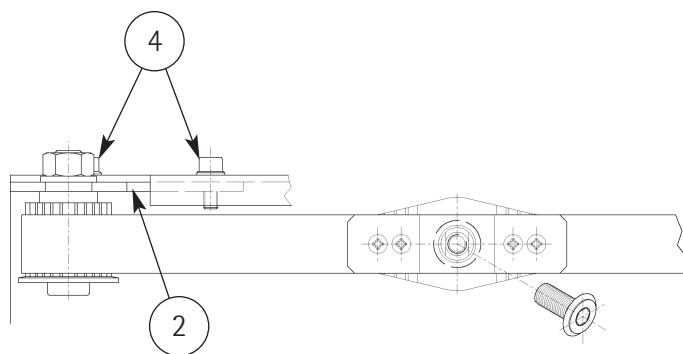
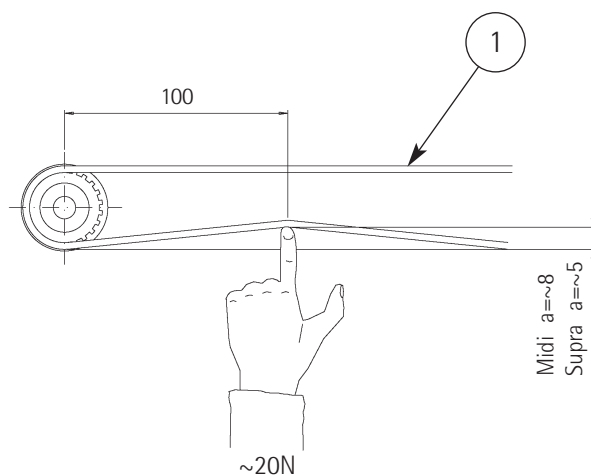
To adjust tension of toothed belt (1) pry on support (2) using a screwdriver (3) and verify dimension "a", then fix the position by tightening the screws (4).

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



MIDI Tension of toothed belt: 400N (+0/-10%)

SUPRA Tension of toothed belt: 550N (+0/-10%)



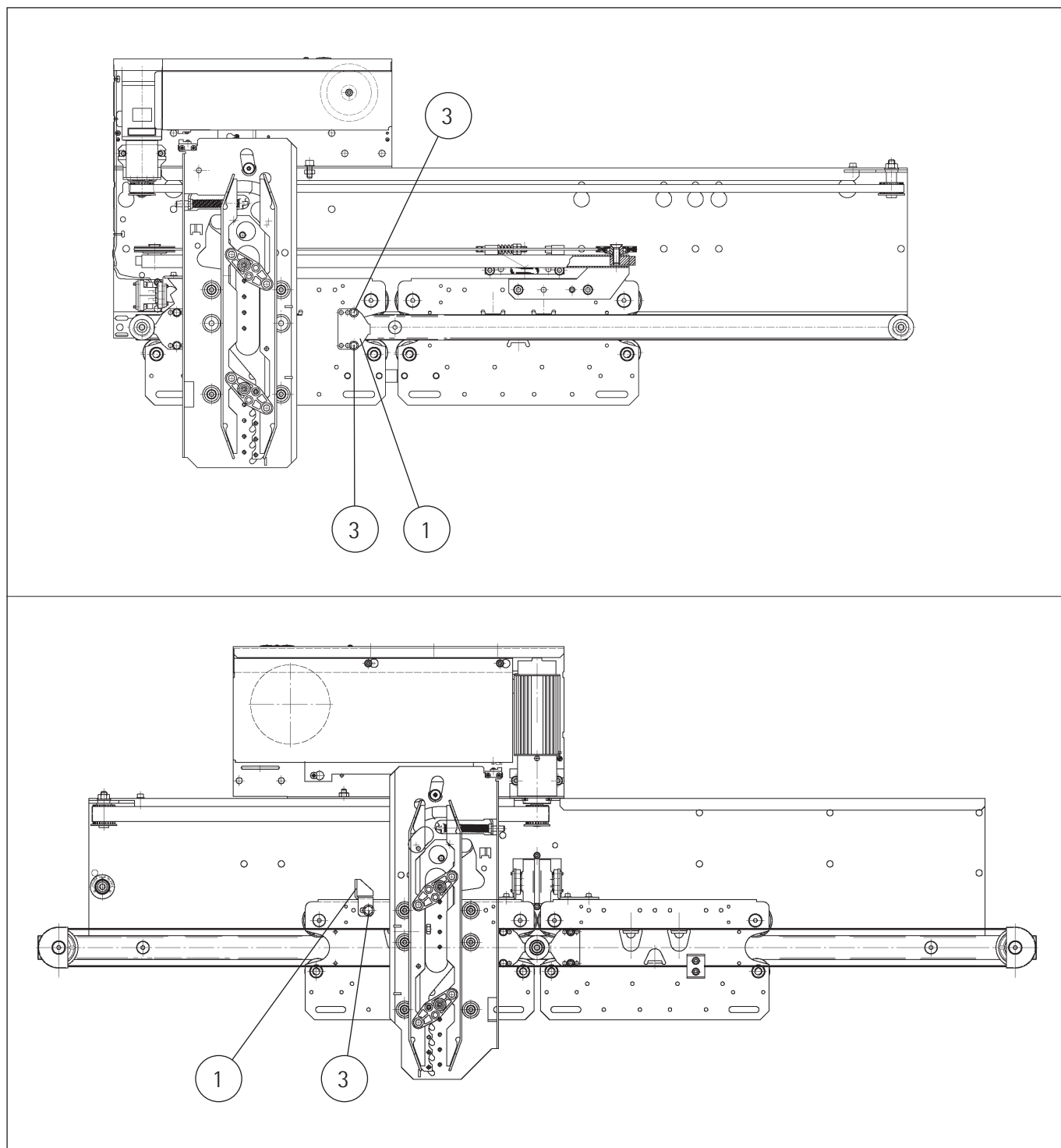
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 19.38

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 (3).



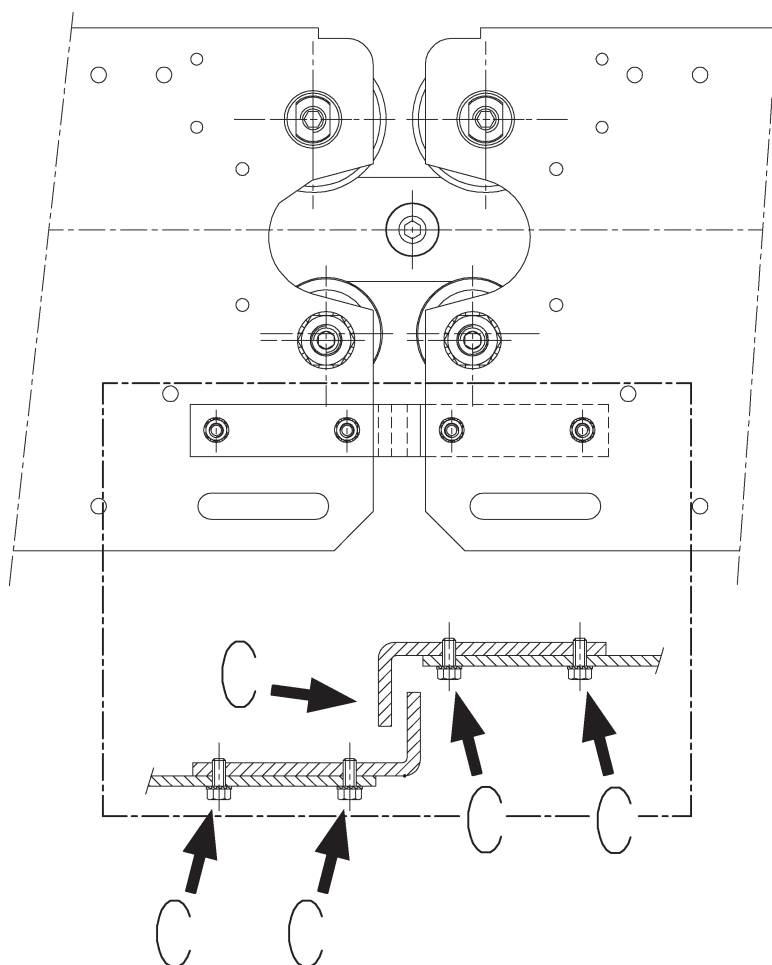
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

16. SLOW HANGER SYNCHRONISATION

Code 3201.32.0209
Version I
Date 02.08.2012
Page 20.38

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



HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 21.38

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

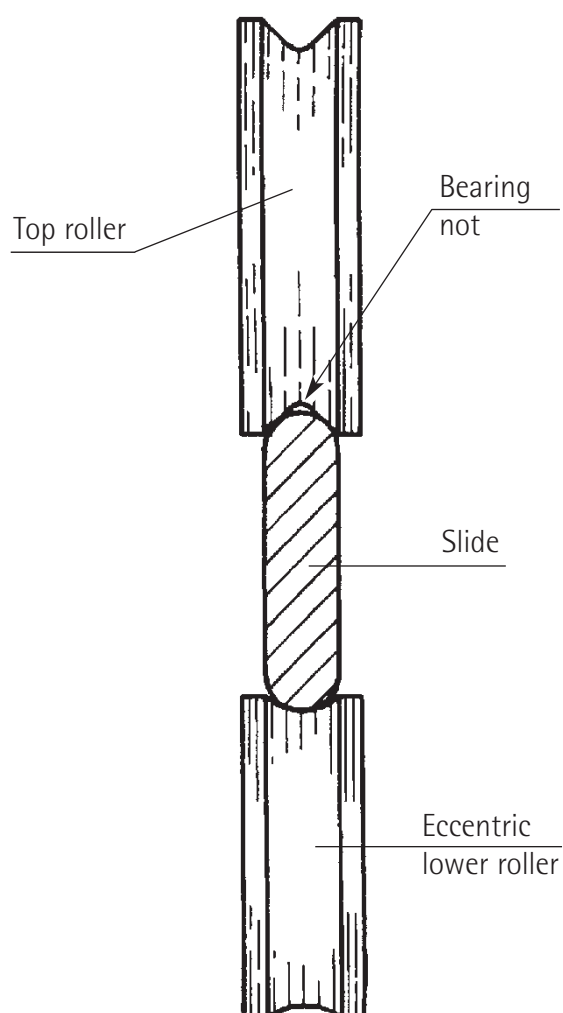
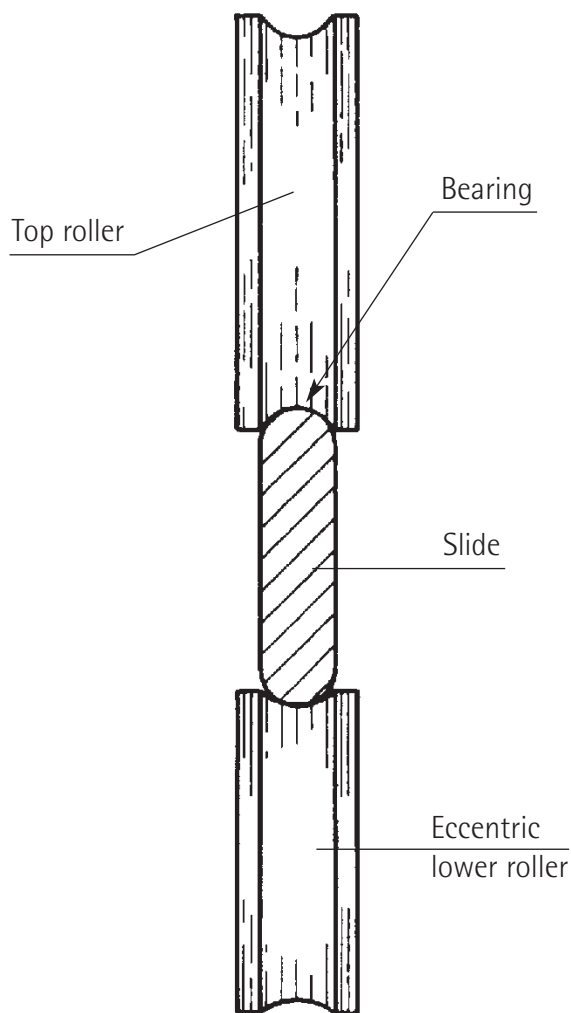


Fig. 2



HYDRA PLUS CAR DOORS

Code
Version

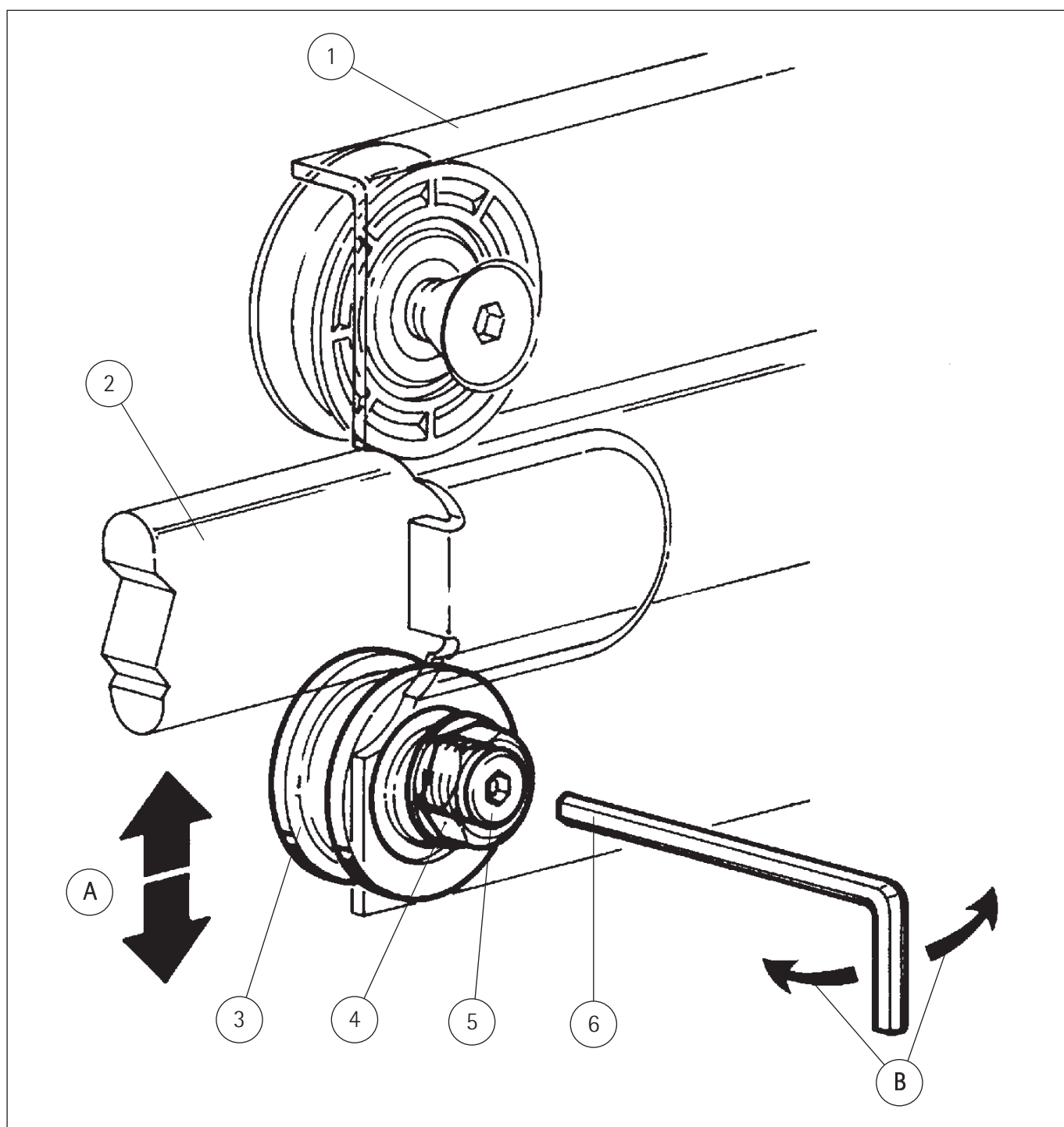
GM.2.002487.EN
0

Code
Version
Date
Page

3201.32.0209
I
02.08.2012
22.38

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).



HYDRA PLUS CAR DOORS

Code Version GM.2.002487.EN 0

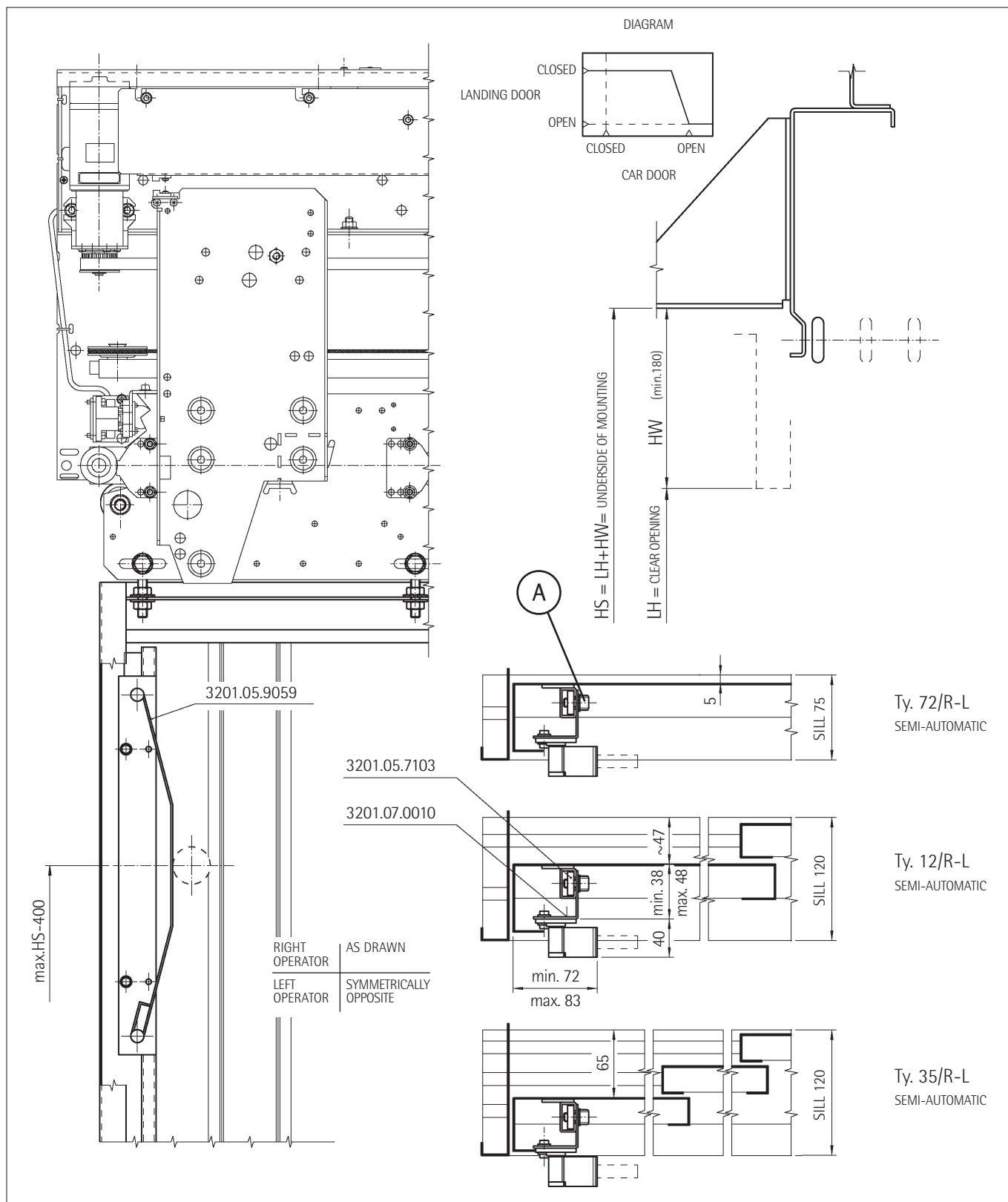
19. OPTIONS

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).

Code Version 3201.32.0209 I
Date 02.08.2012
Page 23.38



Subject to change without notice!

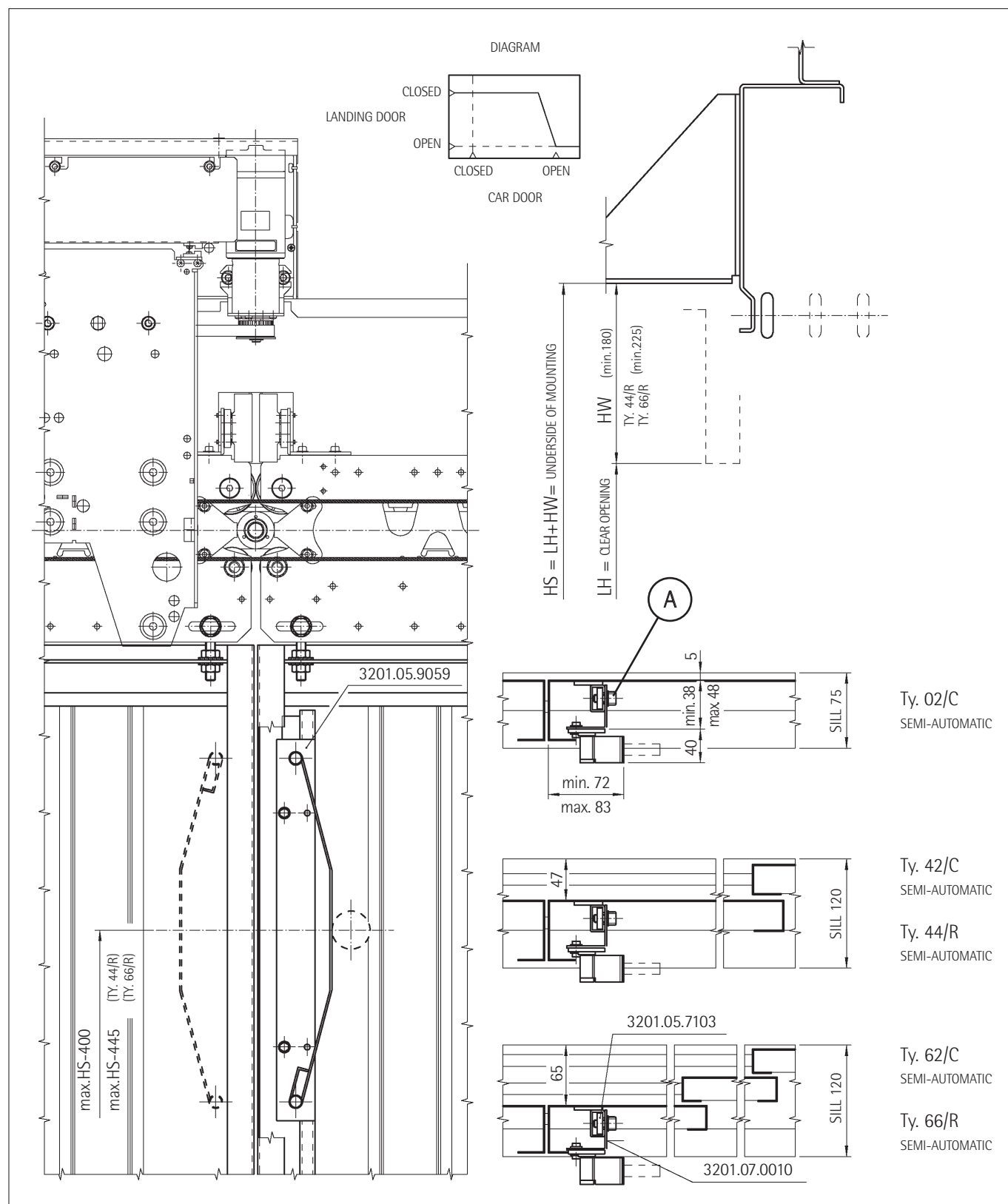
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 24.38

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).



Subject to change without notice!

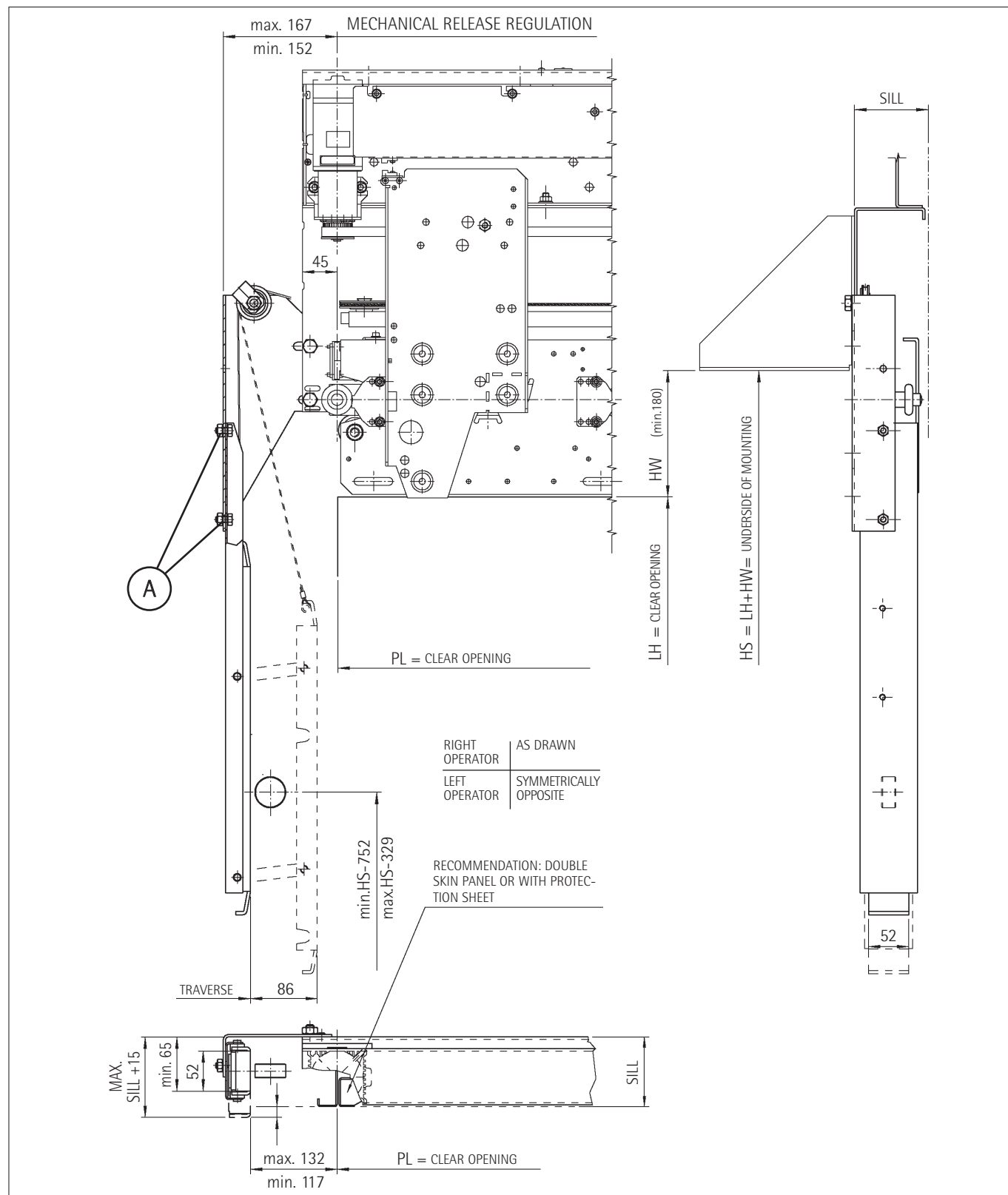
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 25.38

TYPE 1200 - SIDE OPENING CAR DOORS

Mounting and depth adjustment of the mechanical release is made using the two screws (A).



Subject to change without notice!

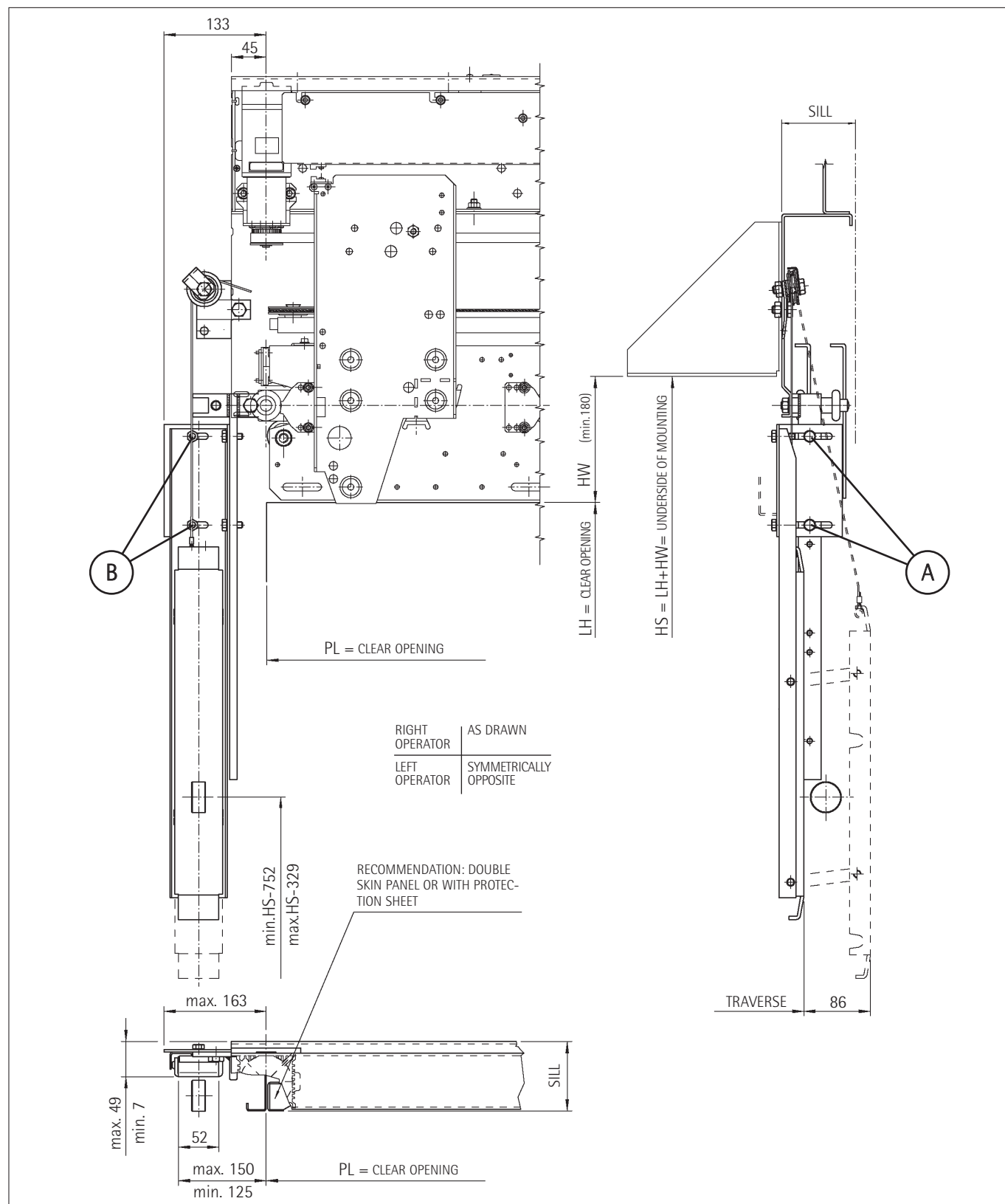
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 26.38

TYPE 1201 - SIDE OPENING CAR DOORS

Mounting and depth adjustment of the mechanical release is made using the two screws (A) and (B).



Subject to change without notice!

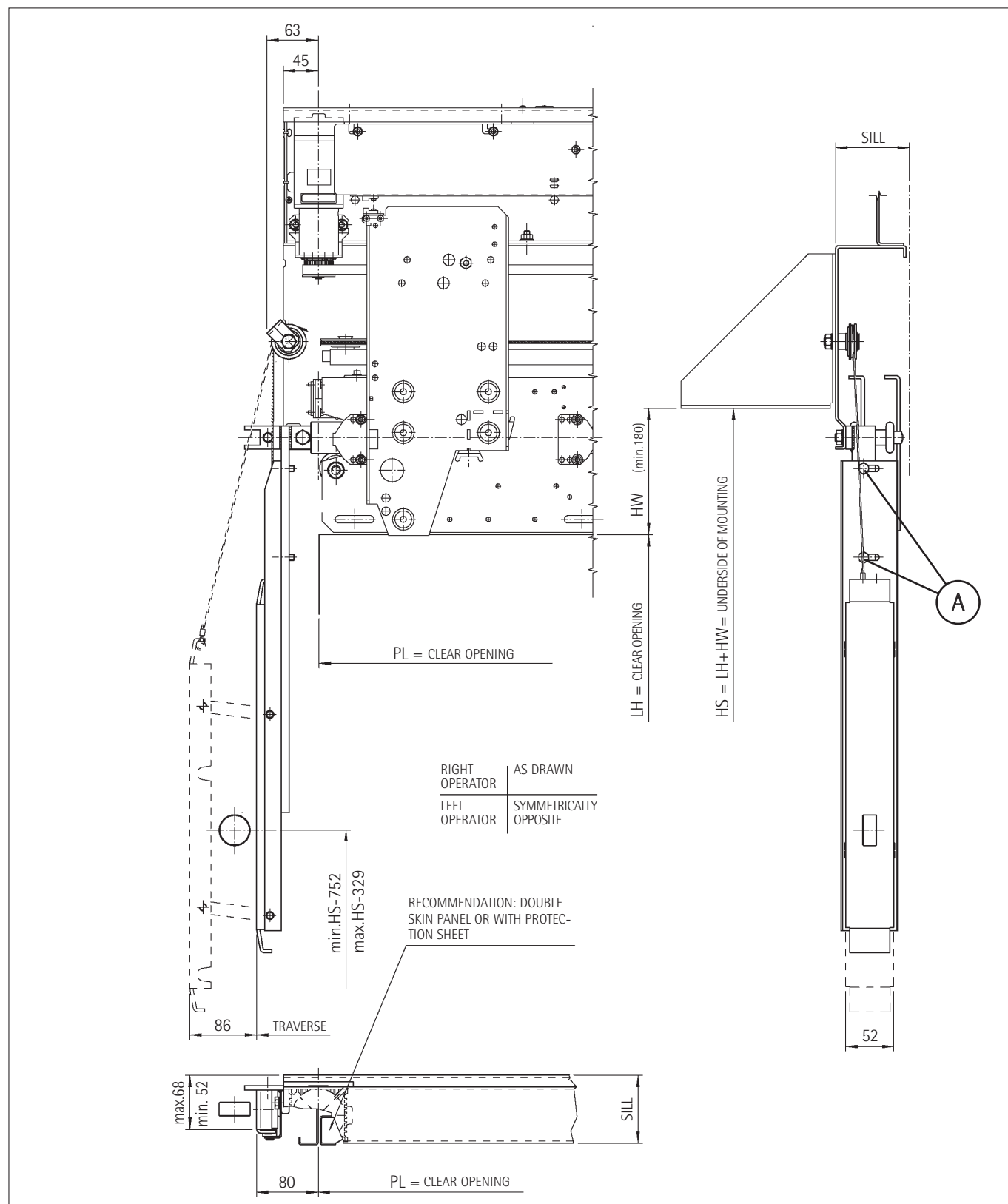
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 27.38

TYPE 1202 - SIDE OPENING CAR DOORS

Mounting and depth adjustment of the mechanical release is made using the two screws (A).



Subject to change without notice!

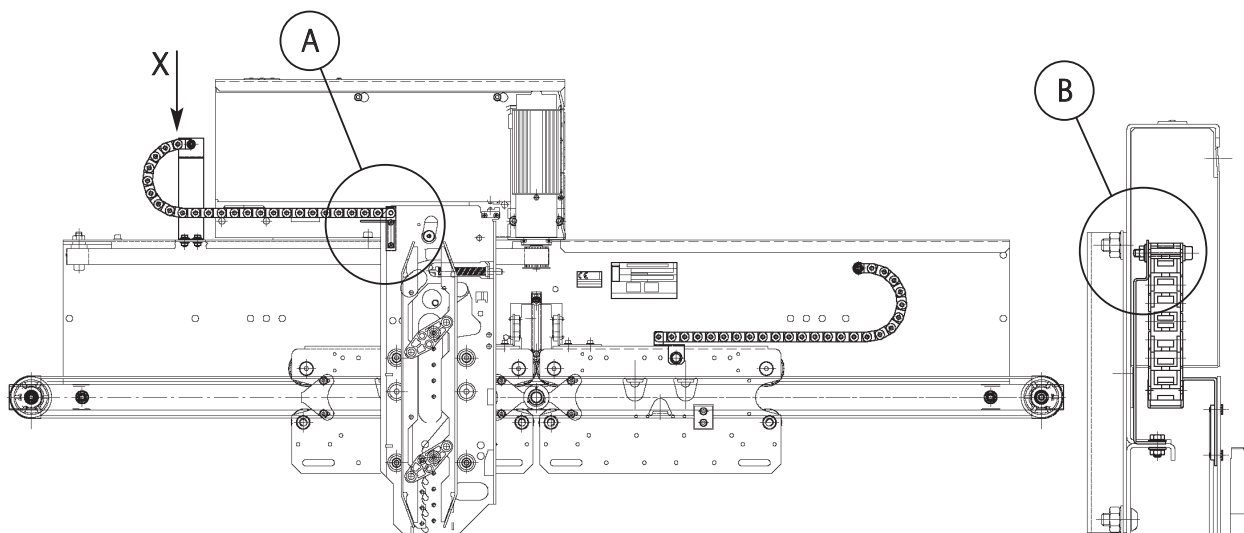
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

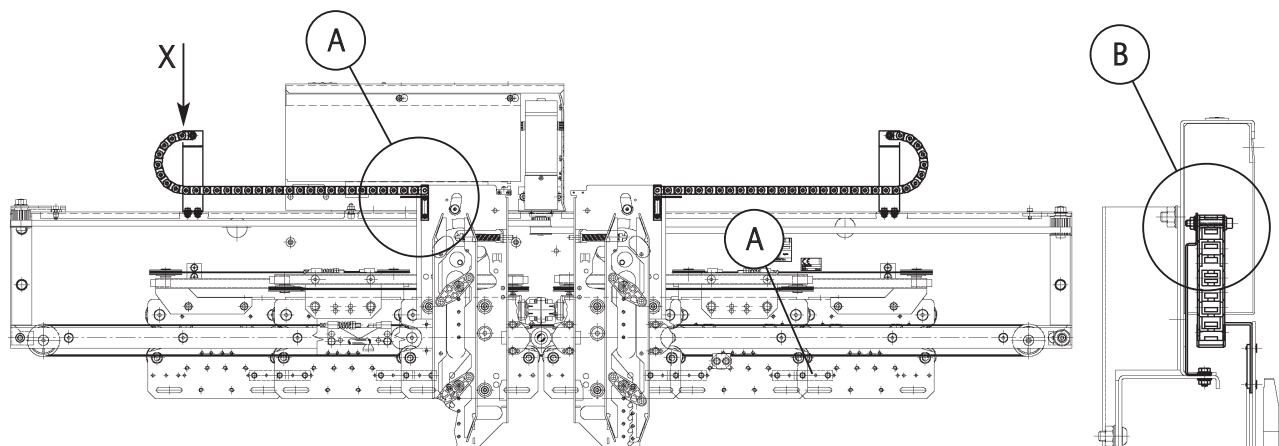
Code 3201.32.0209
Version I
Date 02.08.2012
Page 28.38

19.2 - CABLE GUIDE ASSEMBLY

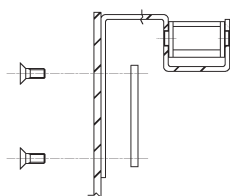
VERSION FOR CENTRE OPENING DOORS



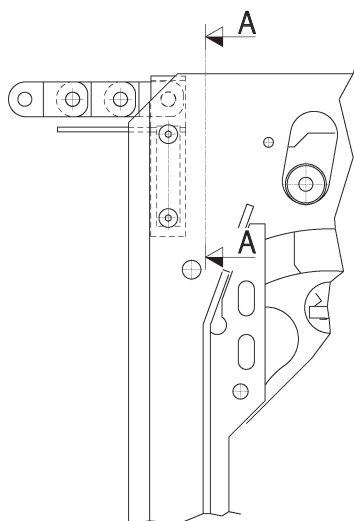
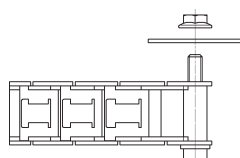
VERSION FOR CENTRE OPENING DOORS WITH 2 COMBINATIONS



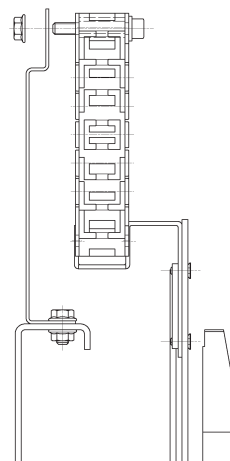
Det. A



Viewed from X



Det. B

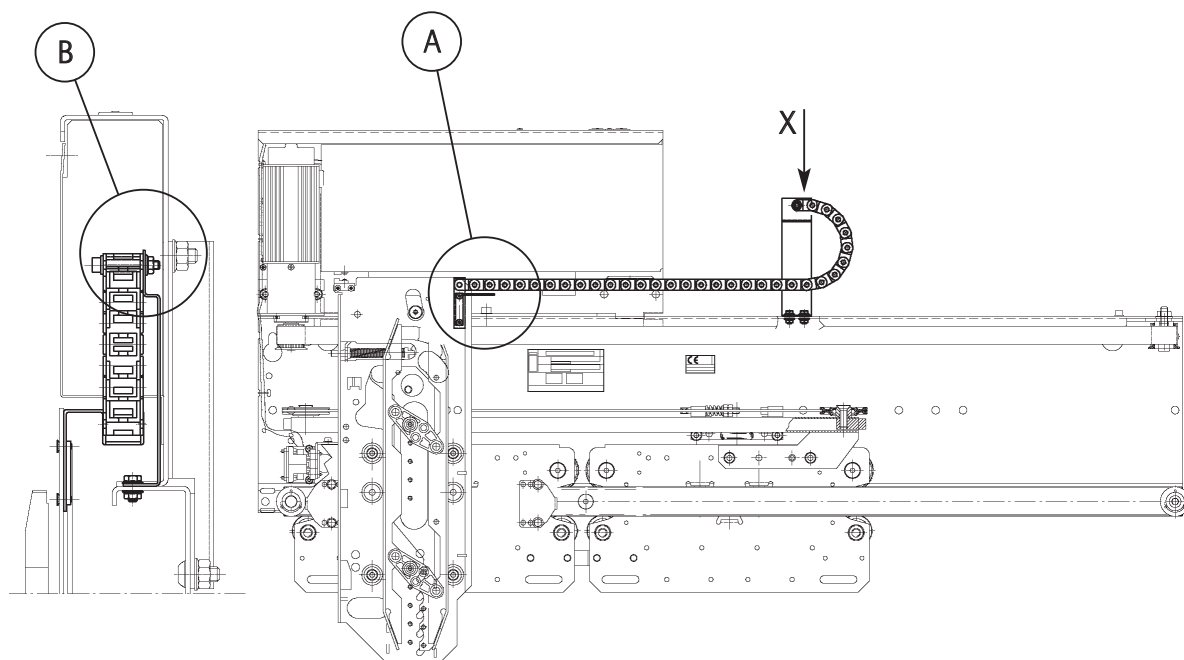


HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

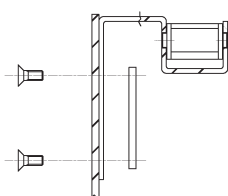
Code 3201.32.0209
Version I
Date 02.08.2012
Page 29.38

VERSION FOR SIDE OPENING DOORS

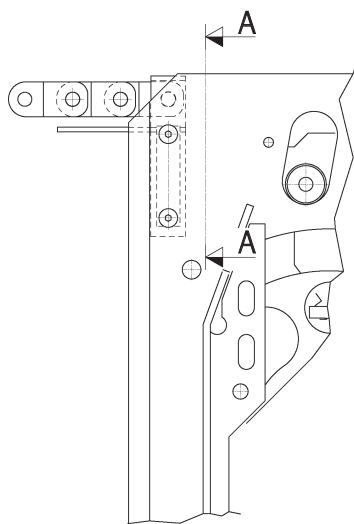
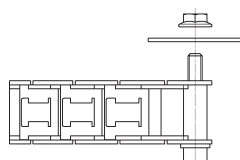


Det.

A

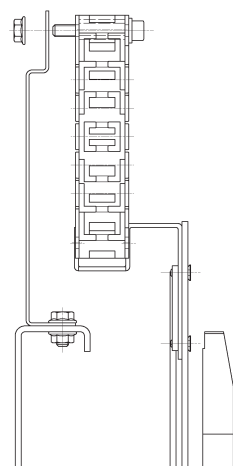


Viewed from X



Det.

B



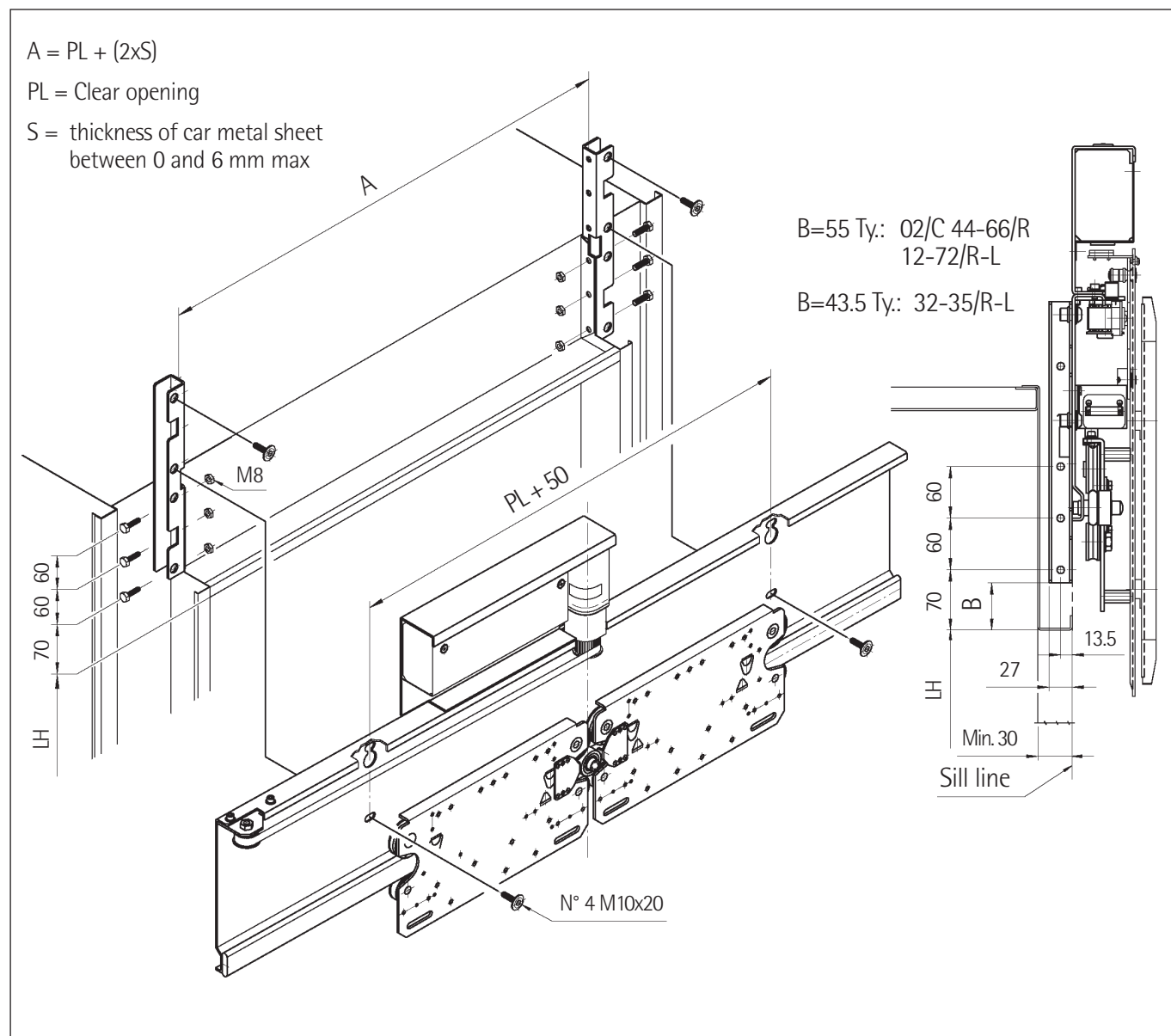
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 30.38

19.3 - FIXING

LIGHT FRONT FIXING VALID ONLY FOR ECO MOTORIZATION



HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 31.38

TABLES FOR FRONT FIXING APPLICATIONS MAXIMUM ADMISSIBLE WEIGHT FOR CAR DOORS AND LANDING DOORS 130 kg

TY 02/C

PL \ LH	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700
600																	
650																	
700																	
750																	
800																	
850																	
900																	
950																	
1000																	
1050																	
1100																	
1150																	
1200																	
1250																	

TY 12/R-L

PL \ LH	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700
600																	
650																	
700																	
750																	
800																	
850																	
900																	
950																	
1000																	
1050																	
1100																	
1150																	
1200																	
1250																	
1300																	
1350																	
1400																	

TY 32-35/R-L

PL \ LH	1900	1950	2000	2050	2100	2150	2200	2250	2300
600									
650									
700									
750									
800									
850									
900									
950									
1000									
1050									
1100									
1150									

TY 44/R

PL \ LH	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400
600											
650											
700											
750											
800											
850											
900											
950											
1000											
1050											
1100											
1150											

TY 66/R

PL \ LH	1900	1950	2000	2050	2100	2150
900						
950						
1000						
1050						

TY 72/R-L

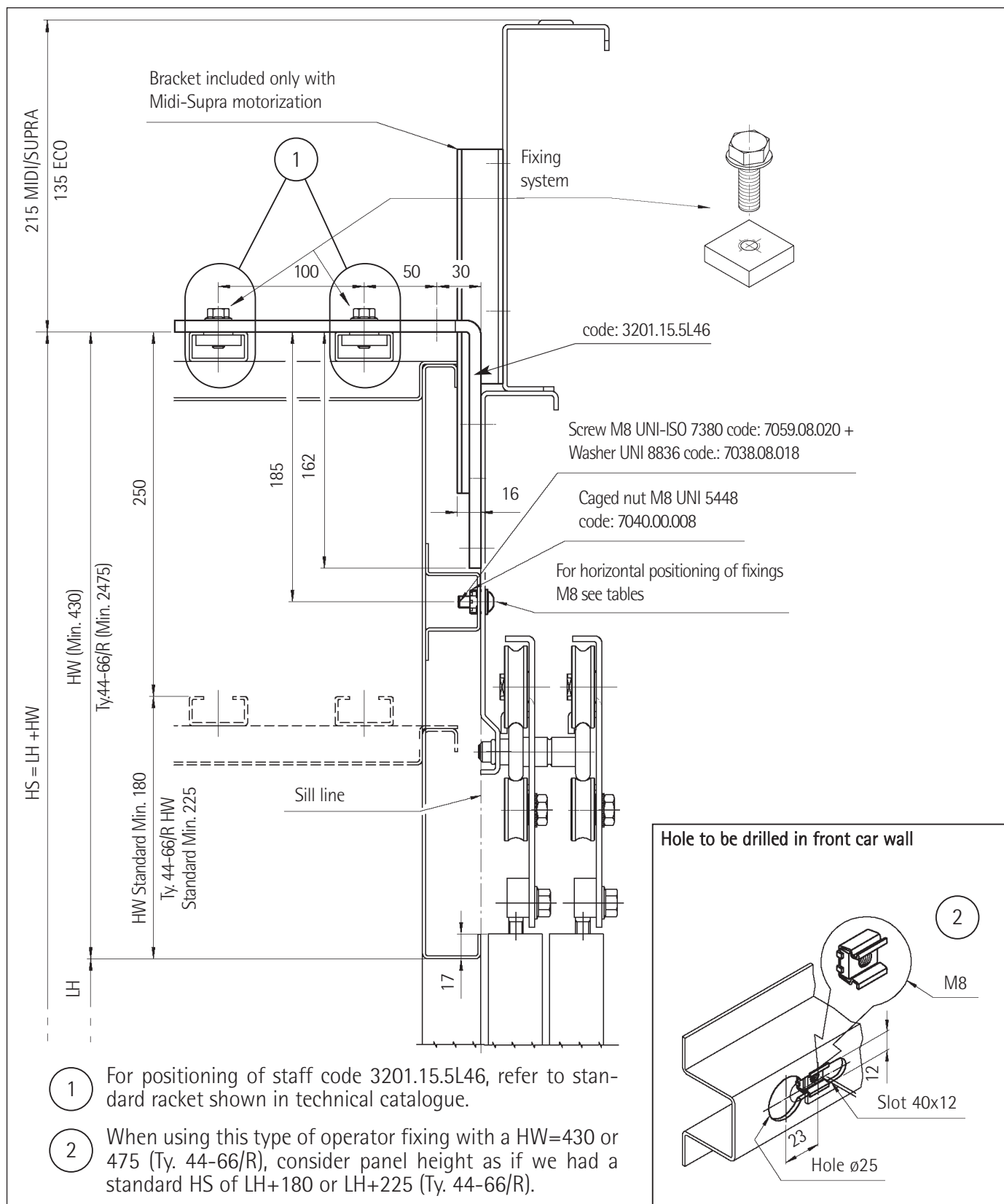
PL \ LH	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
600																																	
650																																	
700																																	
750																																	
800																																	
850																																	
900																																	
950																																	
1000																																	
1050																																	
1100																																	
1150																																	
1200																																	
1250																																	
1300																																	
1350																																	
1400																																	

HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 32.38

HEAVY FRONT FIXING VALID FOR ECO-MIDI-SUPRA MOTORIZATION

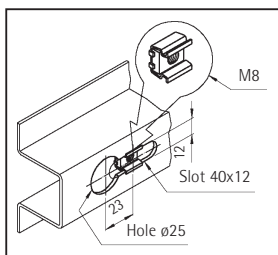
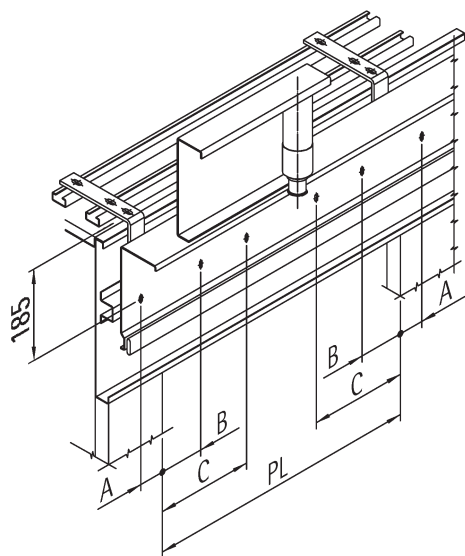


Subject to change without notice!

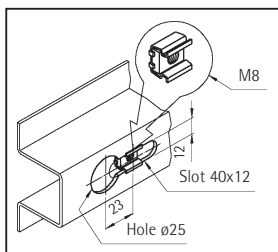
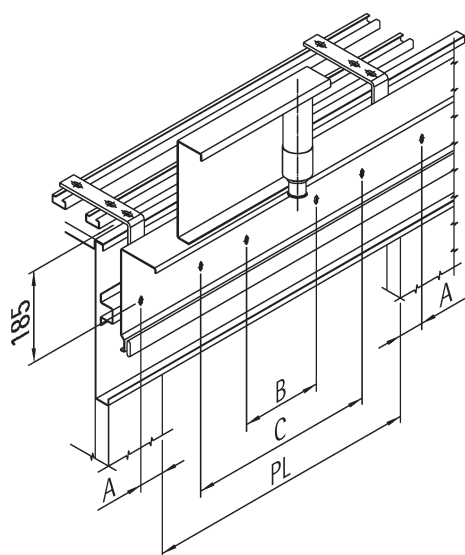
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

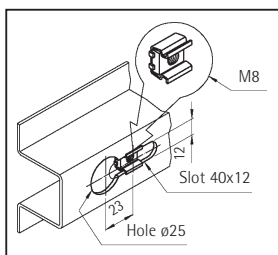
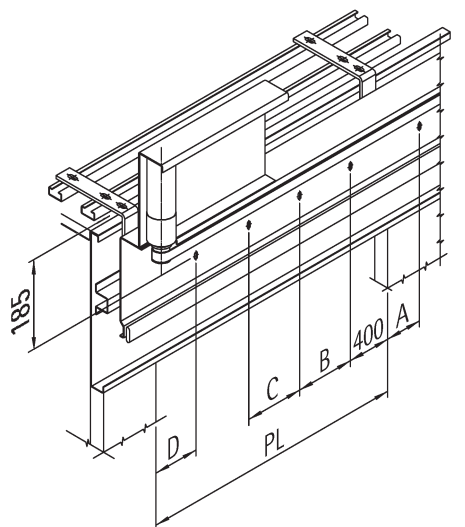
Code 3201.32.0209
Version I
Date 02.08.2012
Page 33.38



A	B	C	PL	DOOR TYPE
PL/4	200	/	600 ÷ 1450	02/C
	200	600	1500 ÷ 1800	02/C
PL/8	200	/	600 ÷ 1150	44/R
PL/12	200	/	900 ÷ 1450	66/R



A	B	C	PL	DOOR TYPE
PL/8	750	/	1200 ÷ 1800	42/C
	1000	/	1850 ÷ 2200	42/C
	1300	/	2250 ÷ 2650	42/C
	1500	/	2700 ÷ 2900	42/C
	1000	2400	2950 ÷ 3200	42/C
PL/12	750	/	1500 ÷ 1800	62/C
	1000	/	1850 ÷ 2200	62/C
	1300	/	2250 ÷ 2650	62/C
	1500	/	2700 ÷ 2900	62/C
	1000	2400	2950 ÷ 3200	62/C



A	B	C	D	PL	DOOR TYPE
PL/4	/	/	60	600 ÷ 1350	12/R-L
	500	/	60	1400 ÷ 1800	12/R-L
PL/6	/	/	60	600 ÷ 1350	32/R-L
	500	/	60	1400 ÷ 1850	32/R-L
	500	500	60	1900 ÷ 2100	32/R-L
PL/6	/	/	60	600 ÷ 1350	35/R-L
	500	/	60	1400	35/R-L
PL/2	/	/	100	600 ÷ 1350	72/R-L
	500	/	100	1400	72/R-L

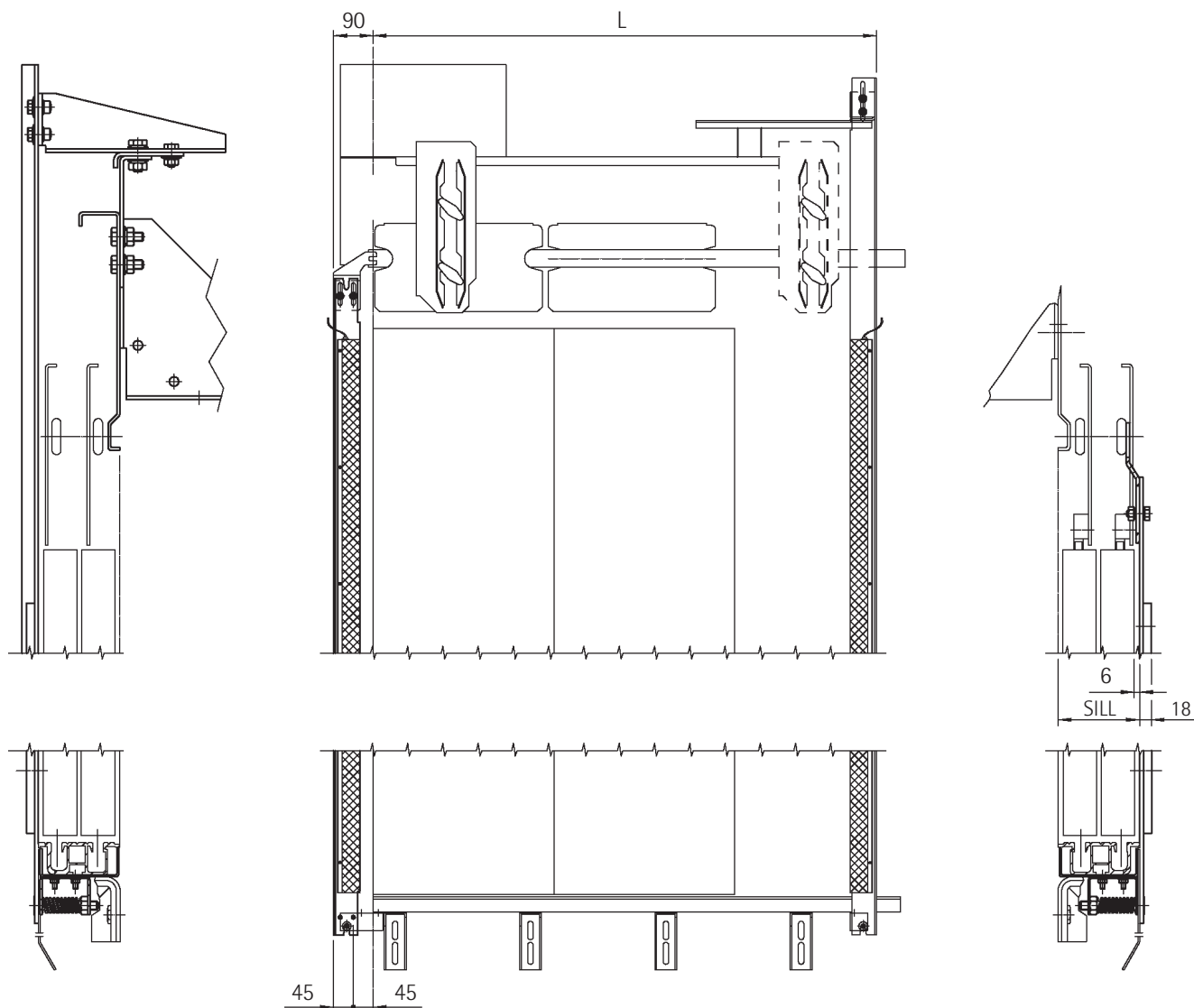
HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 34.38

19.4 - FICO EDGE MOUNTING

VERSION FOR SIDE OPENING DOORS TYPE 12/R-L - 35/R-L - 32/R-L - 72/R-L



TY 12/R-L

PL	L	PL	L
600	945	1250	1795
650	995	1300	1845
700	1045	1350	1895
750	1095	1400	1945
800	1145	1450	2050
850	1195	1500	2100
900	1345	1550	2140
950	1345	1600	2190
1000	1345	1650	2240
1050	1495	1700	2290
1100	1485	1750	2340
1150	1495	1800	2500
1200	1660		

TY 35/R-L

PL	L
600	935
650	985
700	1035
750	1085
800	1135
850	1185
900	1235
950	1285
1000	1335
1050	1385
1100	1435
1150	1525
1200	1575
1250	1625
1300	1675
1350	1800
1400	1800

TY 32/R-L

PL	L	PL	L
600	935	1400	1780
650	985	1450	1880
700	1035	1500	1930
750	1085	1550	1980
800	1135	1600	2030
850	1185	1650	2080
900	1235	1700	2130
950	1285	1750	2180
1000	1335	1800	2380
1050	1385	1850	2430
1100	1435	1900	2480
1150	1525	1950	2530
1200	1575	2000	2580
1250	1625	2050	2630
1300	1675	2100	2680
1350	1780		

TY 72/R-L

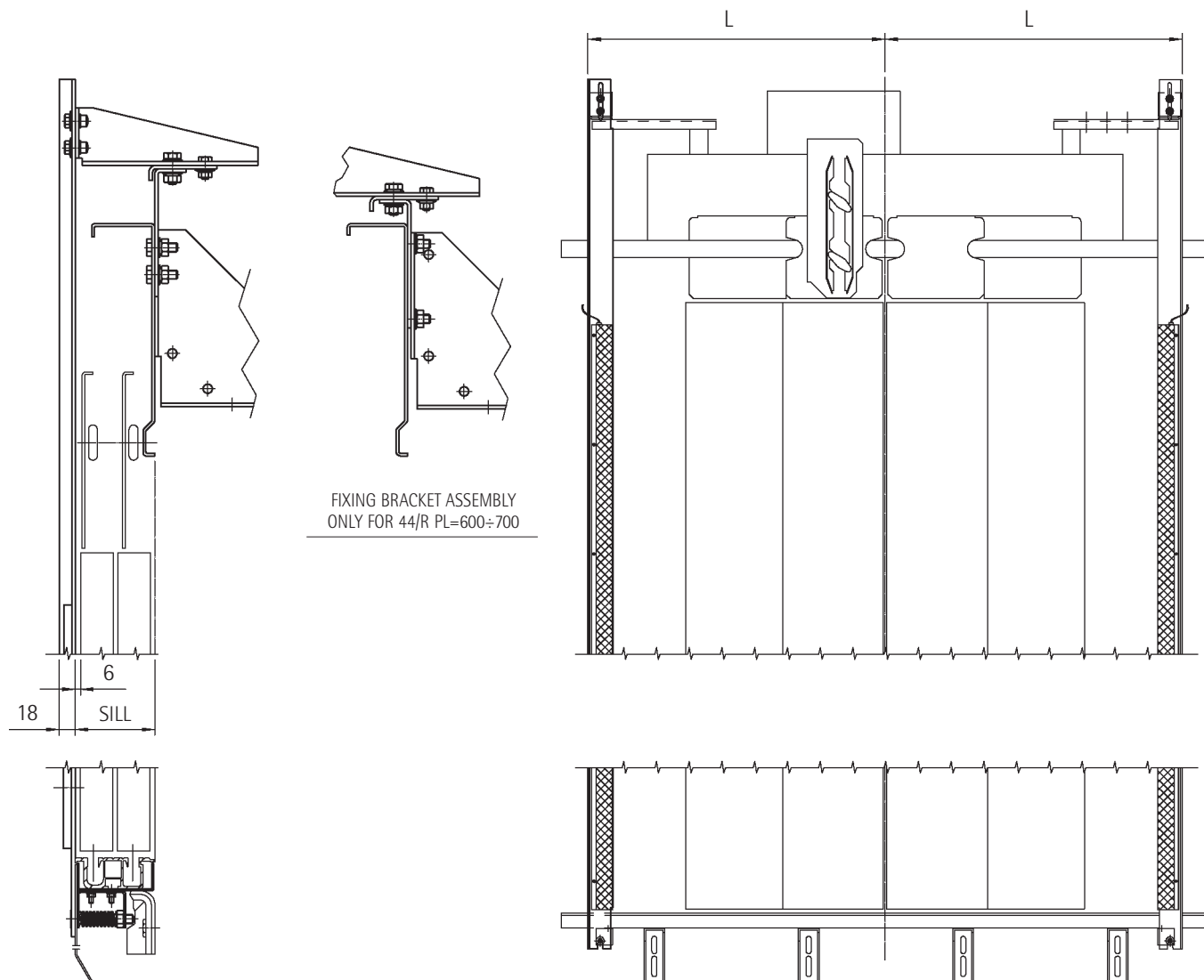
PL	L
600	1050
650	1100
700	1265
750	1400
800	1400
850	1560
900	1650
950	1795
1000	1845
1050	2075
1100	2120
1150	2275
1200	2375
1250	2420
1300	2575
1350	2675
1400	2775

HYDRA PLUS CAR DOORS

Code GM.2.002487.EN
Version 0

Code 3201.32.0209
Version I
Date 02.08.2012
Page 35.38

VERSION FOR CENTRE OPENING DOORS TYPES 02/C - 44/R - 42/C - 66/R - 62/C



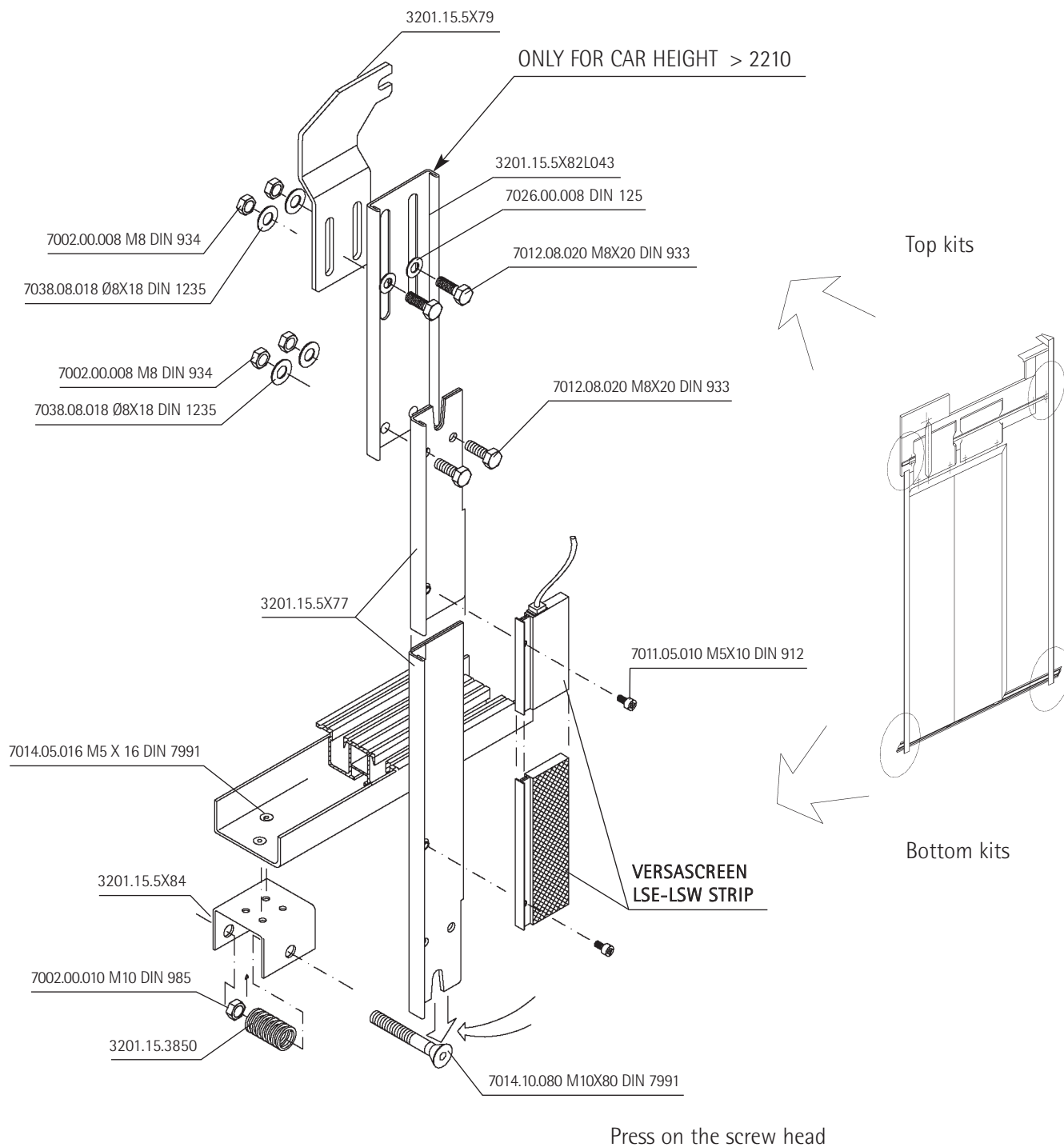
TY 02/C				TY 44/R		TY 42/C				TY 66/R		TY 62/C	
PL	L	PL	L	PL	L	PL	L	PL	L	PL	L	PL	L
600	635	1250	1025	600	560	1200	935	1800	1340	900	710	1500	1085
650	660	1300	1050	650	585	1250	960	1850	1365	950	735	1550	1110
700	685	1350	1075	700	610	1300	985	1900	1375	1000	760	1600	1135
750	710	1400	1100	750	635	1350	1010	1950	1375	1050	785	1650	1160
800	735	1450	1225	800	660	1400	1035	2000	1440	1100	810	1700	1185
850	760	1500	1250	850	685	1450	1075	2050	1450	1150	835	1750	1210
900	785	1550	1275	900	710	1500	1095	2100	1450	1200	860	1800	1235
950	810	1600	1300	950	735	1550	1120	2150	1450	1250	885	1850	1260
1000	835	1650	1325	1000	760	1600	1145	2200	1450	1300	910	1900	1285
1050	860	1700	1350	1050	800	1650	1170	2250	1450	1350	935	1950	1310
1100	950	1750	1375	1100	825	1700	1195	2300	1450	1400	960	2000	1335
1150	950	1800	1500	1150	850	1750	1210			1450	985	2050	1360
1200	1000											2100	1385
												2150	1410
												2200	1435
												2250	1460

Subject to change without notice!

HYDRA PLUS CAR DOORS

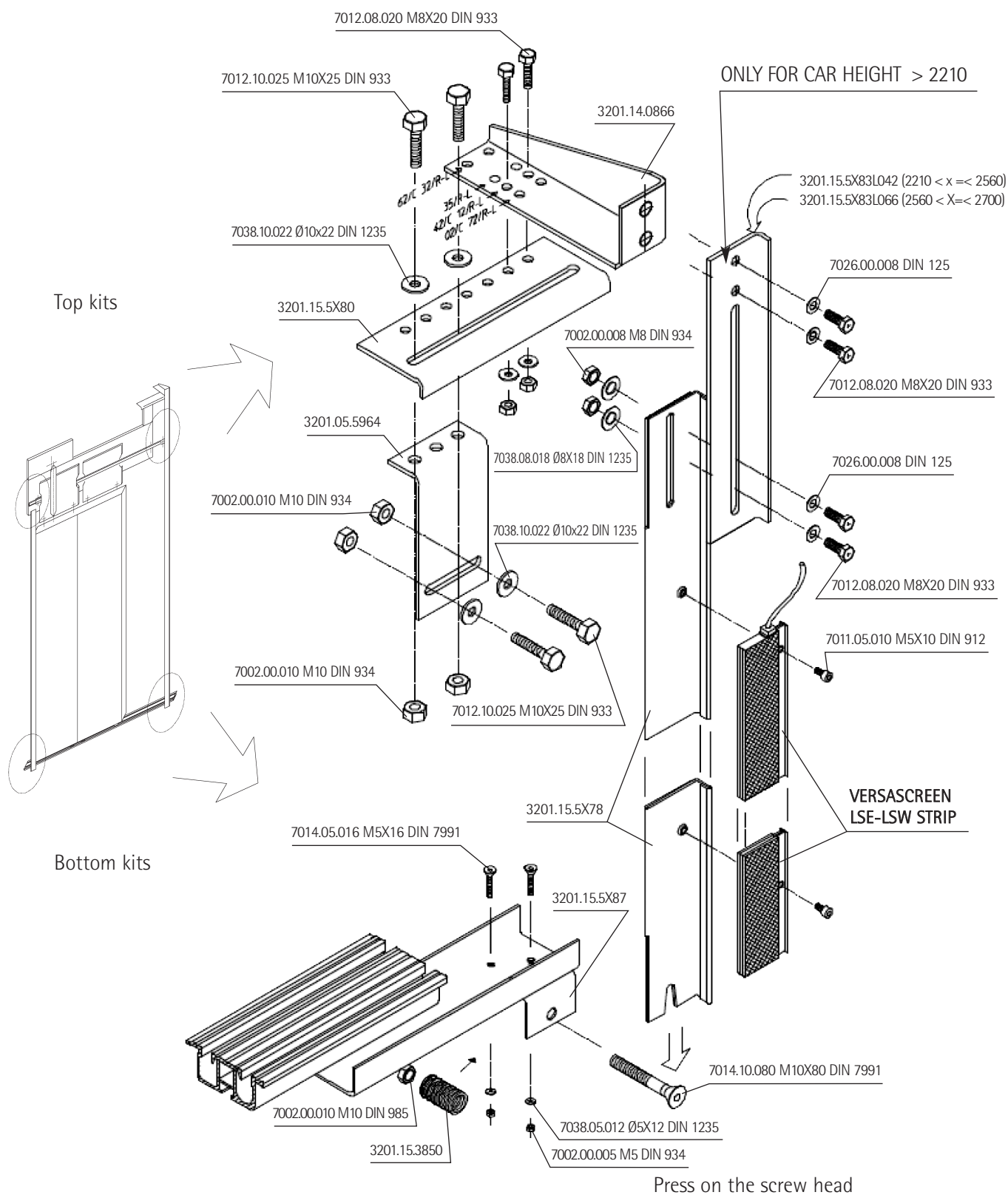
Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	36.38

19.5 - ASSEMBLY ON OPERATOR



HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	37.38



HYDRA PLUS CAR DOORS

Code	GM.2.002487.EN
Version	0
Code	3201.32.0209
Version	I
Date	02.08.2012
Page	38.38

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.