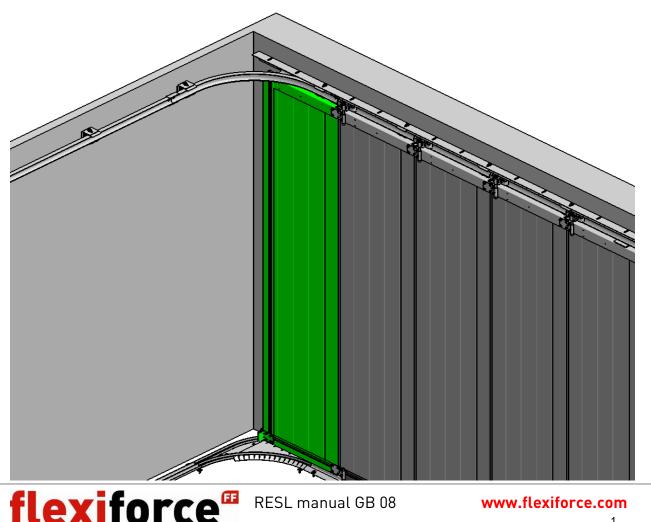


CE RESL Hardware system for side sliding sectional garage doors **INSTALLATION / MAINTENANCE / USAGE**

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novations for overhead doors





ATTENTION! GENERAL WARNING!

To install, use and maintain this door safely, a number of precautions must be taken. For the safety of all concerned, pay heed to the warnings and instructions given below! If in doubt, contact your supplier.

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- ✓ This manual has been written for use by experienced fitters and as such is not suitable for d.i.y. purposes or for use by trainee fitters.
- ✓ This manual describes the installation of the hardware set components, door sections (panels) and refers to installation manuals of the electrical operator. Be sure to supplement this manual if needed with instructions for any additional components not described in this manual.
- Before starting, read this manual carefully!
- Certain components may be sharp or have jagged edges. As such you are advised to wear safety gloves.
- ✓ All the components which have been supplied are designed for use with this specific overhead door. Replacement or adding additional components may have an adverse effect on the safety of, and the guarantee on, the door. Also the CE-approval which has been granted to this door will be cancelled when components are changed or installation is not done according to this manual! Installer is responsible for this.
- Ensure that there is sufficient light during installation. Remove obstacles and dirt. Make sure that there is no one else present other than the fitters. Other people (children!) may get in the way or endanger themselves during the installation.
- ✓ SPECIAL SAFETY WARNINGS OR REMARKS IN THIS MANUAL ARE INDICATED WITH THIS SYMBOL: ▲ READ THESE WARNINGS CAREFULLY.

GUARANTEE, CONDITIONS AND TERMS

The general terms and conditions of delivery and payment issued by the Metaalunie and designated as METAALUNIE CONDITIONS are fully applicable to all our quotations, contracts and their implementation. We expressly reject all other terms and conditions. On request we will send you a copy of these terms and conditions free of charge. A copy may also be downloaded from our website www.flexiforce.com.

FlexiForce strives to deliver 100 % in conformance with the order. In practice, in spite of all our controls, this is not always possible. However we will rectify any errors as quickly as possible, in order to minimise the inconvenience caused to you or the user. As such, it is important that you inform us as soon as possible about any problem with the delivery (include the order number and week of production) and give us the opportunity to offer a suitable solution.

FlexiForce will only reimburse third party costs if we have given explicit permission for this in advance. The reimbursement is based on normal rates and travelling expenses over distances of 1 hour away at most.

For large-scale projects we strongly advise you to first install 1 door completely before installing the other doors. In this way, any errors can be detected early on and rectified comparatively cheaply.

This manual does not confer any rights. Technical modifications may be made without written notice.

FlexiForce has endeavoured to design and put together this hardware set in conformance with the applicable CE-norms. However, we recommend to check our configuration against any local national specification.



RESL manual GB 08



SPACE OF

FlexiForce has applied the mandated INITIAL TYPE TESTING for doors described in this manual, at the SP-Institute in Sweden (as Notified Body Nr. 0402). The INITIAL TYPE TESTING REPORT that has been rewarded, can be transferred to the door producing company. This is needed to complete your CE files according to product standard EN13241-1. Contact FlexiForce for acquiring this report.

APPLICATION RANGE

FlexiForce has developed a completely new hardware system for side sliding, residential (garage) sectional doors. Designed for all built-in situations depending on the available space. The system includes the following features:

- Suitable for single and double garages, Wmax = 5.000 mm, Hmax = 2.500 mm.
- Max door weight is 165 kg, max. 13kg/ m2 panel)
- Suitable for only 500mm sections, only the closed door section in the curve can be 610mm.
- CE approved when selecting the proper FlexiForce components.

In this handbook we restrict our instructions for the proper assembly of the complete door. For installation of not mentioned products or parts, including any components added by the supplier, as well as for a user handbook, we refer you to the supplier of the complete overhead door who is also responsible for the correct CE marking of the door. These instructions have been prepared for use by experienced professional fitters and are therefore not suitable for the "DIY" fitter or the apprentice fitter.

This door can only be installed according to the CE-certificate if all parts are according to the parts lists of the SP-certificate. See <u>www.flexiforce.com</u>.

We wish you every success with the installation of this hardware set. If anything is unclear or should you have queries, you should of course contact Flexi-Force B.V. or your supplier. This set has to be completed with the assembled door sections. Panels brands and types according to the list of approved panels.

Attention! In this set, the fixing material required to install the track set to the building is not included. It is the responsibility of the qualified door installer to make sure that the building (stone, concrete, wood, etc.) is strong enough at the points of fixation to ensure a reliable construction. The door installer has to select proper fixing materials.

TOOLS REQUIRED FOR CORRECT AND RAPID ASSEMBLY

(Battery) drill with	Bit 4.0 mm Bit 6,5 mm Plug 10 mm
	Plug 13 mm
Hexagonal key	4 mm
Socket screw spanner	8mm (in)
Ring /open ended spanner	10 mm
Ring /open ended spanner	13 mm
Ring /open ended spanner	15 mm
Ring /open ended spanner	17 mm
Socket wrench	with ¼" square
Wrench	
Gluing clamp	
Cord	
Water level (hose)	
2 blocks of ca. 20 en 40mm in h	eight
Measuring equipment	



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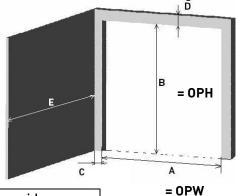


CHECKING DIMENSIONAL DETAILS

Before assembling the system the details below should be checked on the basis of this figure.

- A = Days Opening Width = OPW B = Days Opening Height = OPH
- C = Side area
- D = Top area
- E = Side wall free space

OPW max = A max = 5.000mm 0PH max = B max = 2.500mm



C min	Curve side	Closing side
Option 1 (Liftmaster)	150mm	70mm
Option 2 (Other)	150mm	70mm
Option 3 (Liftmaster	200mm	70mm
on side wall		

100mm
142mm
115mm

E min = A

PARTS LISTS RESL DOOR

	Article code	Explanation function	Qty for door 2,5x2,5m	Qty for door 5 x 2,5m
Upper track + suspension				
	5060L3240 5060L5220	Suspension angle, horizontal, lintel. Together with the RL310 and RL320, this is the suspension of the 2V running track.	1	1
2RL925-400	2RL925-400	Upper curve RESL, 2V-J- corner, made out of standard 2V track, bended differently on special new tooling in FF HU.	1	1



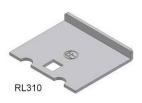
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	///
	// 1
	/ /
0	2V









rev.4 Aug-l	18	2,5x2,5m	5 x 2,5m
2V	Standard 2V track for upper guidance at the lintel, length is opening width –/- 370mm.	1	1 x 4630mm
2V	Standard 2V track for upper guidance at the wall side, length is opening width +130mm.	1	1 x 5130mm
RL300	Angle bracket for track suspension on the wall. In combination with RL310 and RL320.	5	10
RL310	Top bracket, together with RL320 this carries the 2V track.	9	20
RL320	Rail plate, in combination with the RL310, this carries the 2V track.	9	20

Qty for door Qty for door





RL330

Upper roller system

2 2 RL330 2V-connection bracket, at the point where the upper curve and 2V track connect. 1088BN 5 10 Socket capscrew, forms the "shaft" which connects the double roller RL592 with the hinge on the panel. M10x140mm. DIN912 2050-8 10 Washer. Steel washer that is 5 placed between the bolt 1068MN and the collar of the RL592. DIN125A 2052-8 Washer. Nylon washer that 5 10

is placed between the bolt 1068MN and the collar of the

rev.4 Aug-08

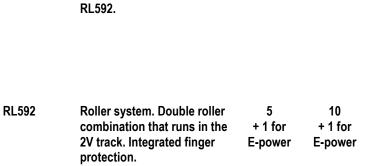


DIN433

2050-8

2052-8	







Qty for door Qty for door

5 x 2,5m

2,5x2,5m



1030L-S6090	Aluminium bottom profile. Used as "end cap" at the bottom side of the door. NB! For fingersafe sections, this profile has to be cut into section height, following more or less the shape of the panel. At this position it also holds the 1038INS2550 and the sealing brush 1087B. Also used at both sides of the door leaf. In 1st panel with seal 1037. In last panel without seal.	2	5 (2pcs 2990 1pcs 5100)
1038INS2550 1038INS3050	Alu profile for holding the brush 1087B. It fits into the 1030L-S profile.	1	2
1087B1	Brush. Forms the seal between panel and steel threshold RLT3000.	3 m	5 m
	1038INS2550 1038INS3050	 Used as "end cap" at the bottom side of the door. NB! For fingersafe sections, this profile has to be cut into section height, following more or less the shape of the panel. At this position it also holds the 1038INS2550 and the sealing brush 1087B. Also used at both sides of the door leaf. In 1st panel with seal 1037. In last panel without seal. 1038INS2550 Alu profile for holding the brush 1087B. It fits into the 1030L-S profile. 1087B1 Brush. Forms the seal between panel and steel 	Used as "end cap" at the bottom side of the door. NBI For fingersafe sections, this profile has to be cut into section height, following more or less the shape of the panel. At this position it also holds the 1038INS2550 and the sealing brush 1087B. Also used at both sides of the door leaf. In 1st panel with seal 1037. In last panel without seal.11038INS2550 1038INS3050Alu profile for holding the brush 1087B. It fits into the 1030L-S profile.11087B1Brush. Forms the seal between panel and steel3 m





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91VR	91VR3015 91VR5000	Alu profile that is used in combination with the new seal 1088S at the sides and lintel part of the door. At the outside of the door this gives a proper appearance (black line around the door).	1	1 pcs 5000 or 2pcs 3015
10885	1088S-3060	Sealing, that fits on the 91VR alu profile.	3	5
	1037	Seal. Standard available FF seal. Fitted at the side of the first panel, into the 1030L- S6090. It seals of the "locking" side of the door, against the 9VRL angle that is fitted on the wall.	2,5 m	2,5 m
9VRL	9VRL2525 9VRL3025	Vertical angle. On the closing side of the door, fitted on the wall, together with 2100-15. Is standard 9VR only extra holes.	1	1 pcs
Hinges and brackets on the panels	415RL	End roller bracket. Holds the 447 slide with RL580 roller. Is fitted on the first panel of the door (so in the corner).	1	1
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447RL	447RL	Slide 11mm. Roller carrier for RL580. Used on the first panel in combination with 415RL, on the last panel used alone (directly on the panel).	3	3	
	RL580	Bottom roller. Guides the door through the steel threshold RLT3000.	6	11	
423FZ	423FZ etc.	Hinge. Standard FF hinge range 424FZ, 423FZ can be used. At top and bottom.	8	18	
	40ES500L/R etc.	Endcap. Standard FF end caps to cover the upper parts of the sections.	4	9	
	423HZ etc.	Intermediate hinge. Standard FF hinge depending on panel choice.	4	9	





Bottom track and curves				
RLB-L/R	RLB-L/R	Bottom corner. "Low side room" corner. Connects to steel threshold and to 2x RL15U3000 bottom tracks.	1 Left Or Right	1 Left Or Right
	RLT3000	Threshold, steel. Days opening width -/- 250mm. With holes for mounting to the floor. Guides the panel through the days opening.	1	2
	RL15U3000	U-profile. To be assembled 2 next to each other, connected with 850RL plates. Length is days opening width. Guides door sections along the side wall.	2	4
850RL 3	850RL	Rail fixing strip for assembling 2 x RL15U3000 tracks.	4	8





Locking / anti-burglar products			Qty for door 2,5x2,5m	Qty for door 5 x 2,5m
650L	650L	Lock extension. If you take a standard 650BL-etc. lock, you can add this 650L part with latch and strike. One piece is mounted on the 9VRL angle. The other piece on the panel.	option	option
	901	Anti-lift bracket. If the door is mounted, 3 of these brackets ensure that you cannot lift the door out of the bottom track. So, burglar protection. E-operation 3x901 is needed. Manual operation 2x901 and then on the side of the panel 1 x 902H/902WB.	2 or 3	2 or 3
902H	902H	Anti-lift bracket. If you mount this bracket on the door panel (corner panel), and you fix the 902WB to the wall, when closing the door these "click in" and prevent that the door can be lifted out of the threshold.	1 Only manual operation	1 Only manual operation
902WB	902WB	Anti-lift bracket. If you mount this bracket to the wall and fix the 901H on the door panel (corner panel), when closing the door these "click in" and prevent that the door can be lifted out of the threshold.	1 Only manual operation	1 Only manual operation





E-operation parts			Qty for door 2,5x2,5m	Qty for door 5 x 2,5m
RL210	RL210	E-bracket	1	1
	RL220	Drive unit bracket	1	1
RL230	RL230	Draw arm	1	1
557-90Z	557-90Z	Roller	1	1
557BUS8	557BUS8	Bush	2	2





Fixation material and faste	eners				
057B16	ISO4017	1057B16	Hex.bolt M8x16	1	1
1057B60	ISO4017	1057B60	Hex.bolt M8x60	1	1
1059B50	ISO4014	1059B50	Hex.bolt M10x50	1	1
1068MN	DIN985	1068MN	Nyloc nut M8	6	11
1072B	DIN603	1072B	Mushroom bolt	9	20
1006B		1006B	Pressbolt M6	9	9









1058F









		,- ,-	- ,-	
1055BV	Screw	60	90	
1058F	Flange nut M10	1	1	
1062BF	Flat mushroom M6x16	2	2	
1062M	Flange nut M6	11	11	

1068M	Flange nut M8	13	24
2100-15	Buffer	1	1

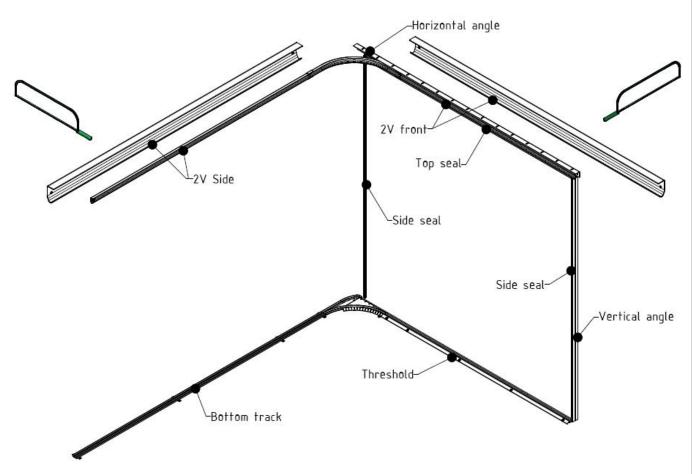
Buffer

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CALCULATION LENGTHS OF PROFILES



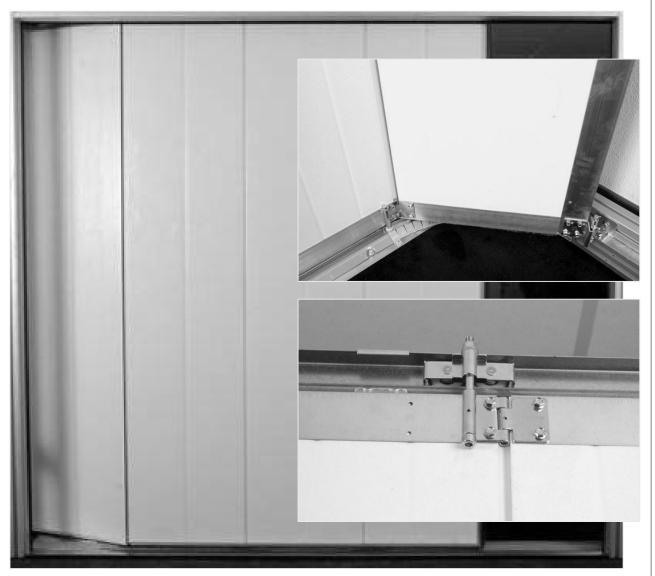
Article number	Description	Formula for length
5060L	L-profile suspension	0PW(A)+C1+30
1038INS2550	Brush profile	0PW(A)+40
1087B	Brush	0PW(A)+40
10885	Top seal	OPW(A)
1088S	Side seal	0PH(B)+25(2x)
91VR	Alu profile for top seal	0PW(A)(1x)
91VR	Alu profile for side seal	0PH(B)+25(2x)
9VRL	Angle	0PH(B)+25
2V front	Track lintel	0PW(A) +C1-520
2V side	Track wall	0PW(A)+C1-20
RL15U3000	U-profile	0PW(A)-C1+150(2x)
RLT3000	Threshold	0PW(A)+C1-400
1030L-S	Vertical alu profile on panel	0PH(B)-17(2x)
1030L-S	Bottom profile (panel)	0PW(A)+100(1x)
1037	Side seal (on panel)	0PH(B)-15
C1 is built-in size curve side		





MAX TORQUE FIXATION MATERIALS

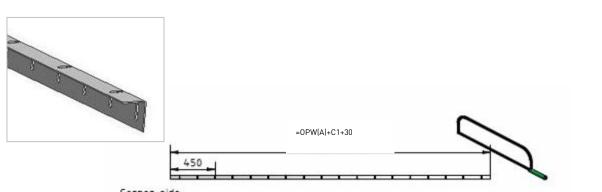
	Max Torque (Nm)		Max Torque (Nm)
2V in RL320 etc		RL210 to panel	5
1072B	23,1	1055BV	10
1068B	23,1	447RL, 423FZ-etc.,	415RL to panel
2V to 2RL925-400		1055BV	10
1006B	9,1	447RL to 415RL	
1062M	9,1	1062BF	9,1
RL220 to RL592		1062M	9,1
1059B50	46,2	2100-15 in 2V	
1058F	46,2	1006B	5,3
RL555 to RL210		1062M	5,3
1057B60	23,1		
1068M	23,1		



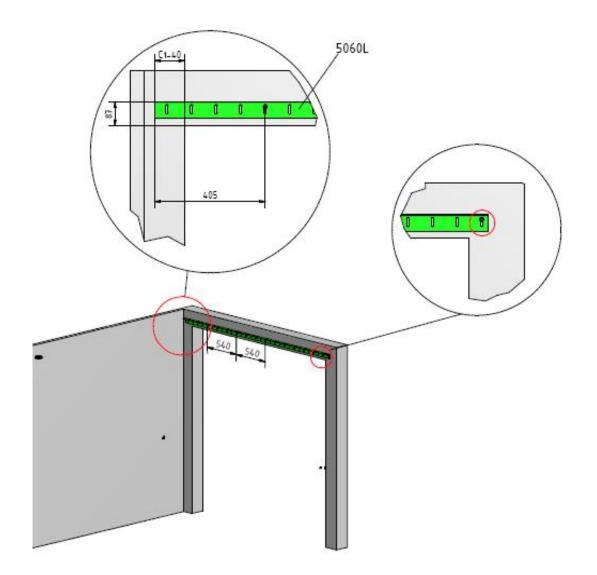




INSTALLATION 5060L ON LINTEL



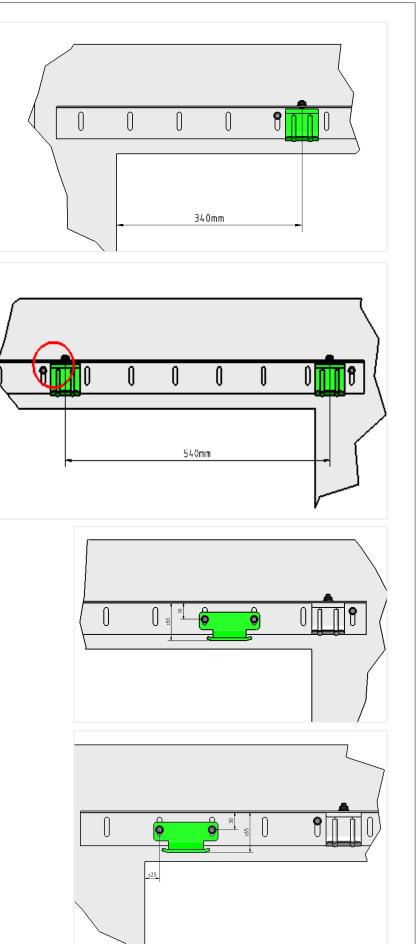
Corner side









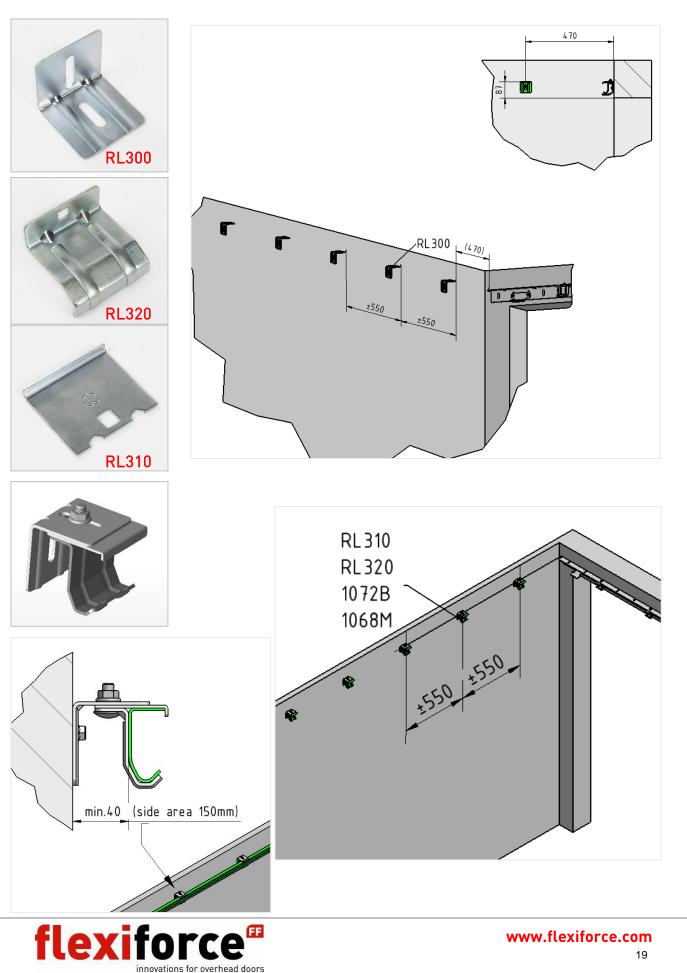




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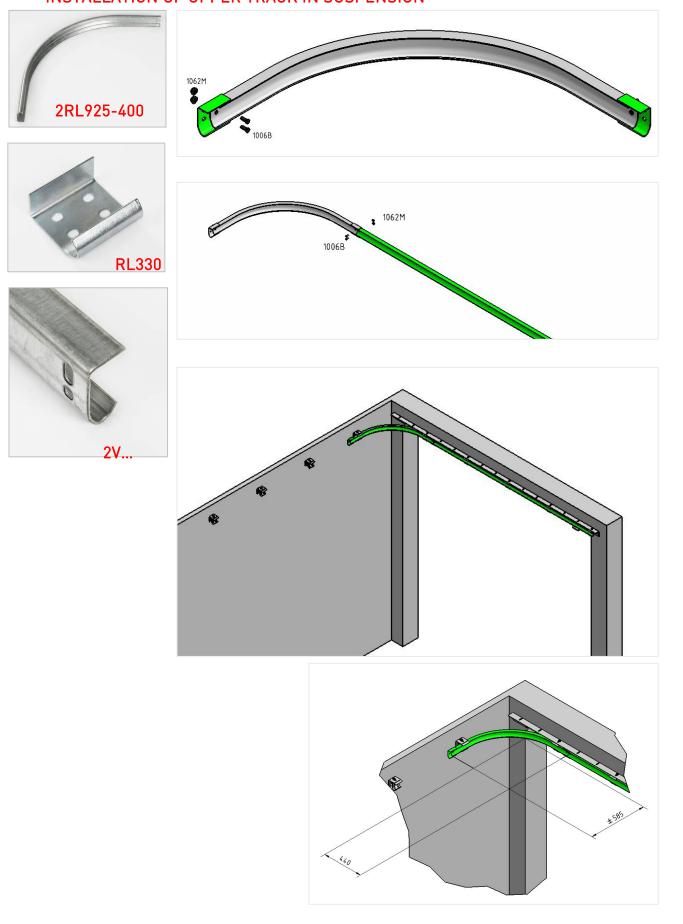








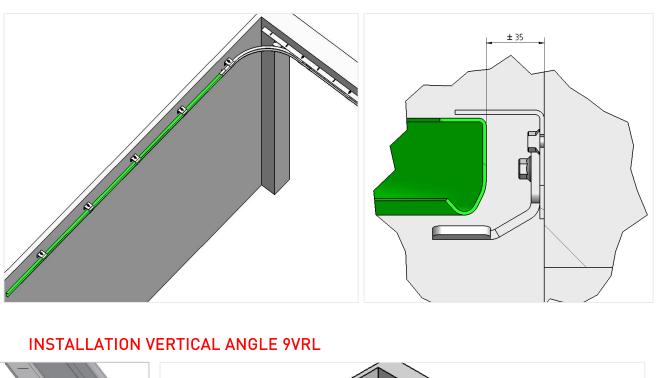


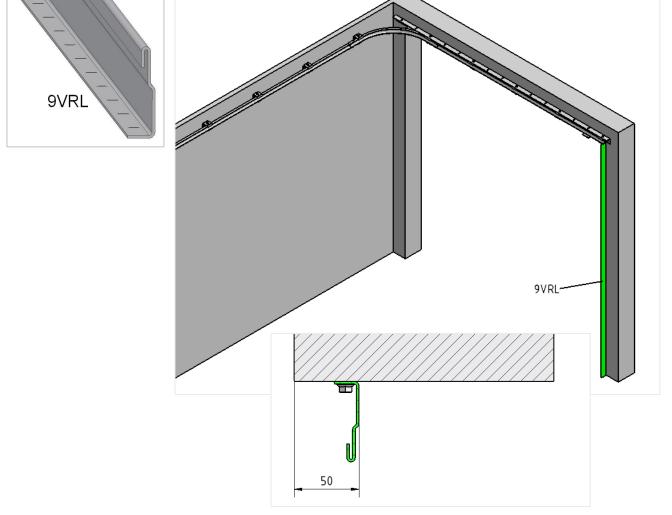




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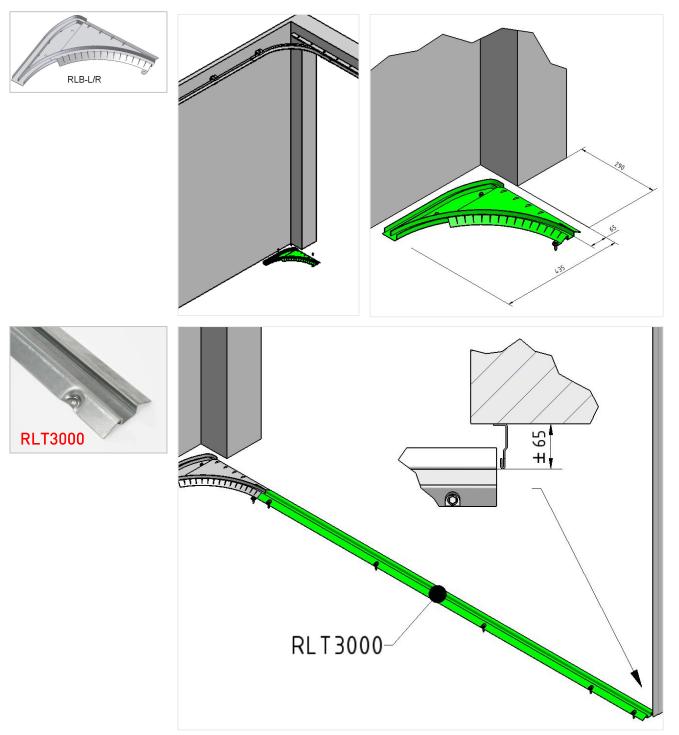






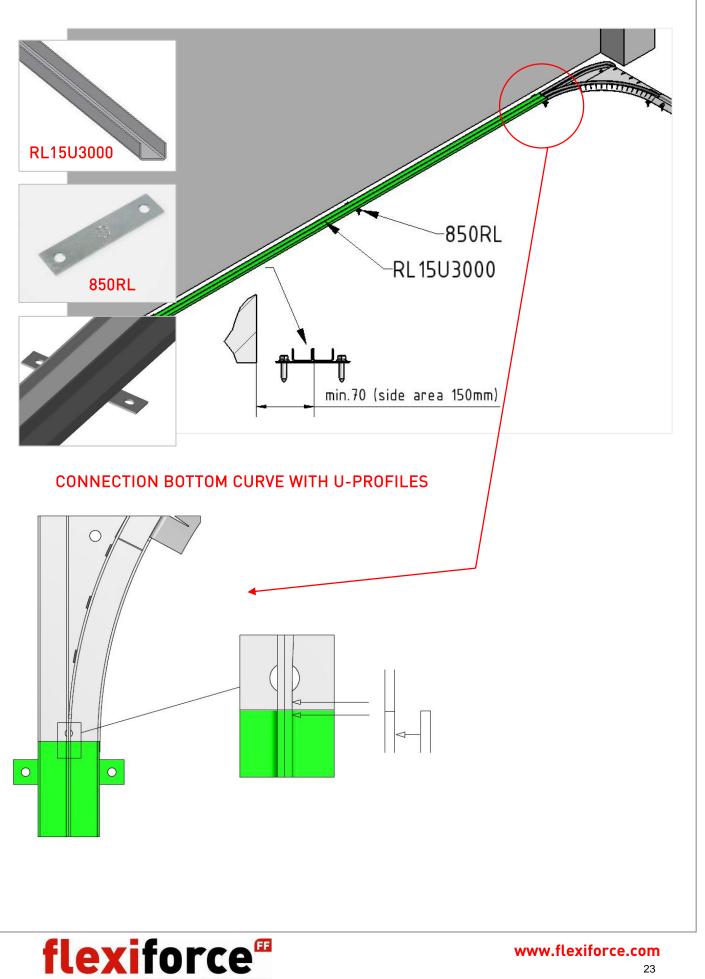












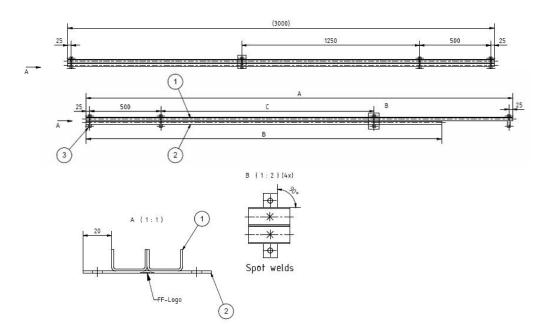
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RL15U3000 and 850RL AVAILABLE AS PRE-ASSEMBLED KIT

The combination RL15U3000 and 850RL as described above is also available from stock as a pre-assembled kit. This kit exists out of 2 RL15U profiles spot welded with 850RL. By buying a pre-assembled kit, installation of the profiles simplifies and saves time. The article numbers and max. door width for the kits are:

Article number	Description	Α	В	С
RLB30	Bottom rail	n.a.	n.a.	n.a.
RLB30-25	Bottom rail	3000	2500	1500
RLB25-20	Bottom rail	2500	2000	1000
RLB20-15	Bottom rail	2000	1500	500

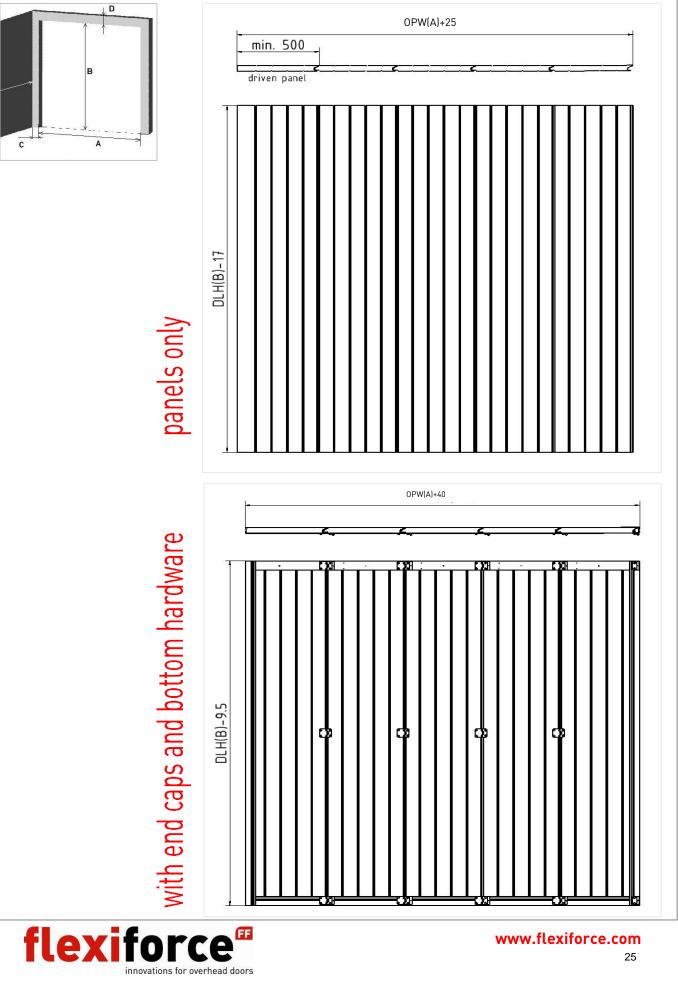






PANEL ASSEMBLY (CUTTING PANELS TO SIZE)

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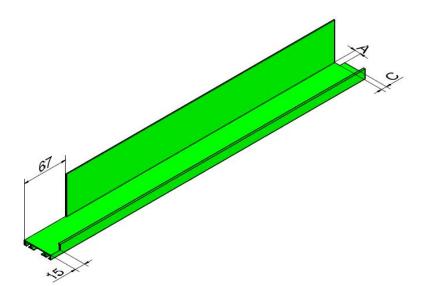
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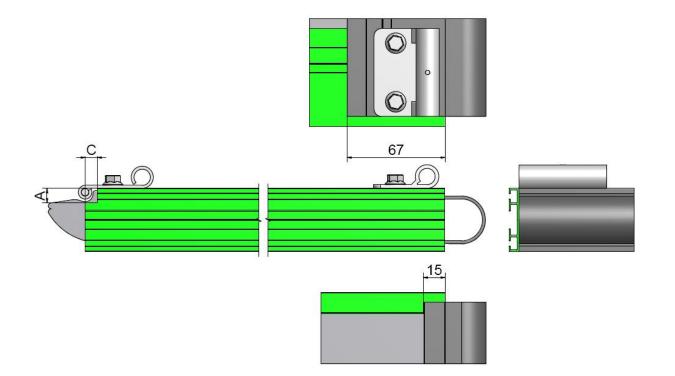


PANEL ASSEMBLY: CUTTING TO SIZE OF 1030L-S6090

Type of panel	Α	В	С
Bremet	10	9	9
Kingspan	10	11	7
Tescedo	10	10	11
Thyssen	13	11	11

1st panel

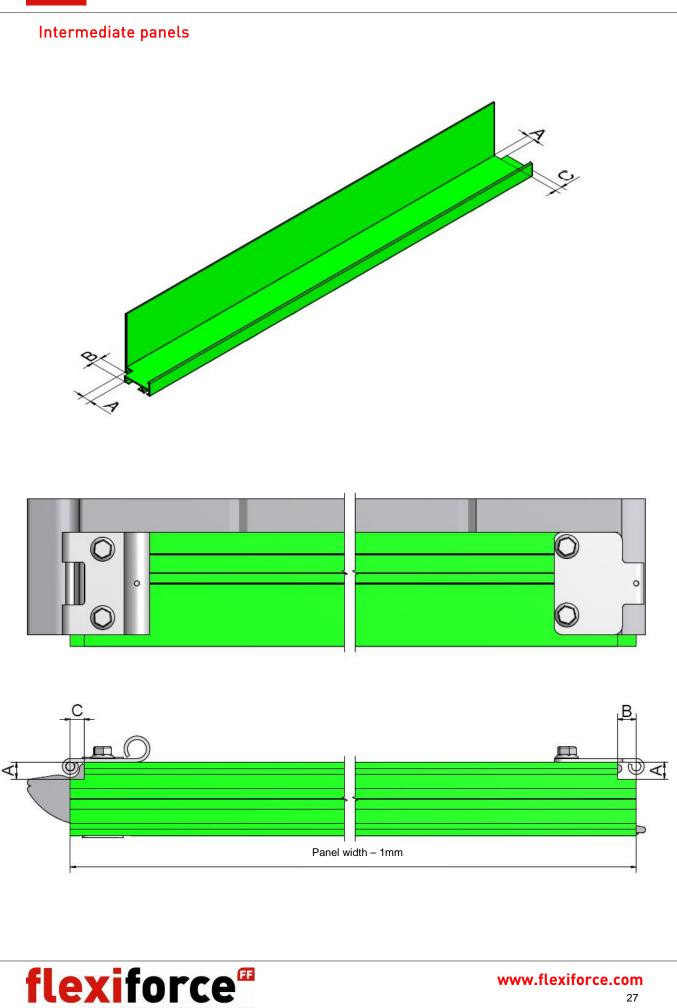






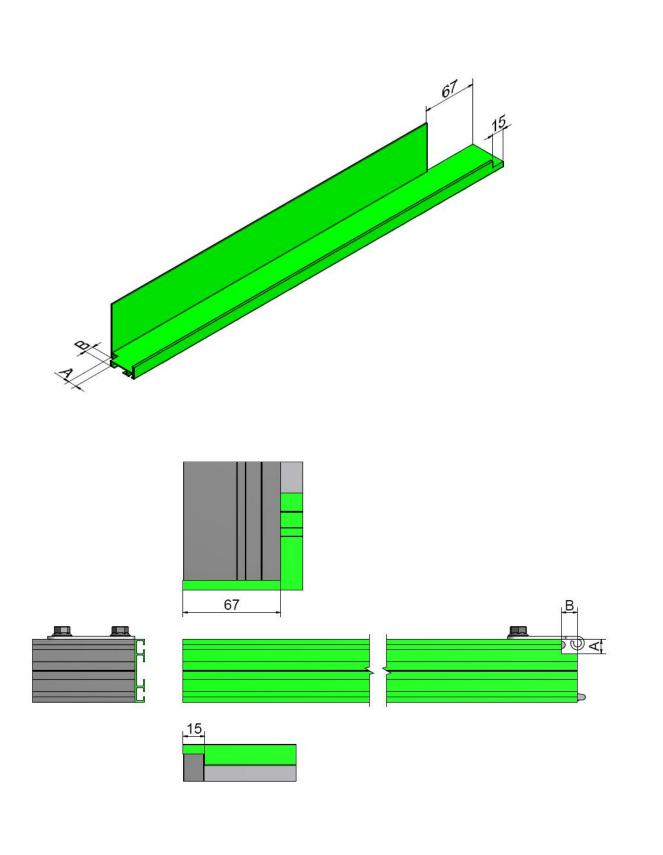


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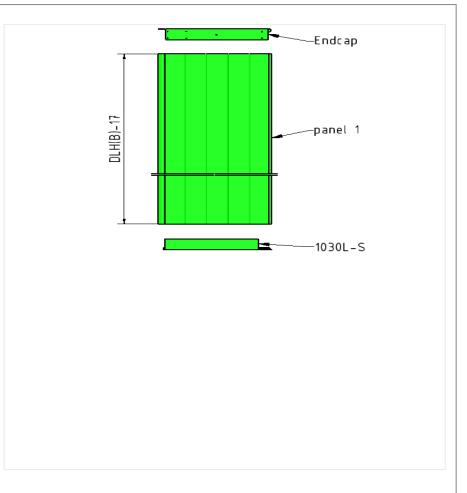


Last panel

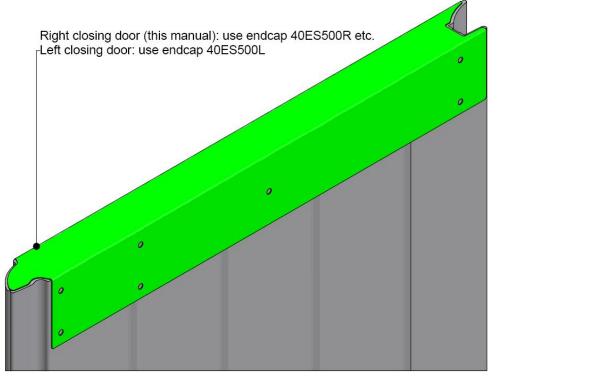








PANEL ASSEMBLY: INSTALLATION END CAP





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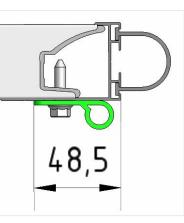


PANEL ASSEMBLY (STARTING WITH 1st PANEL)

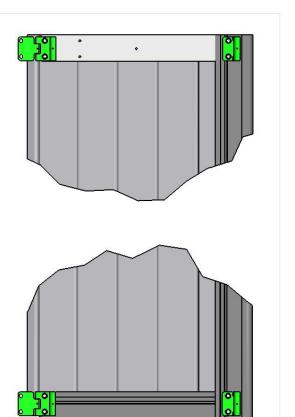






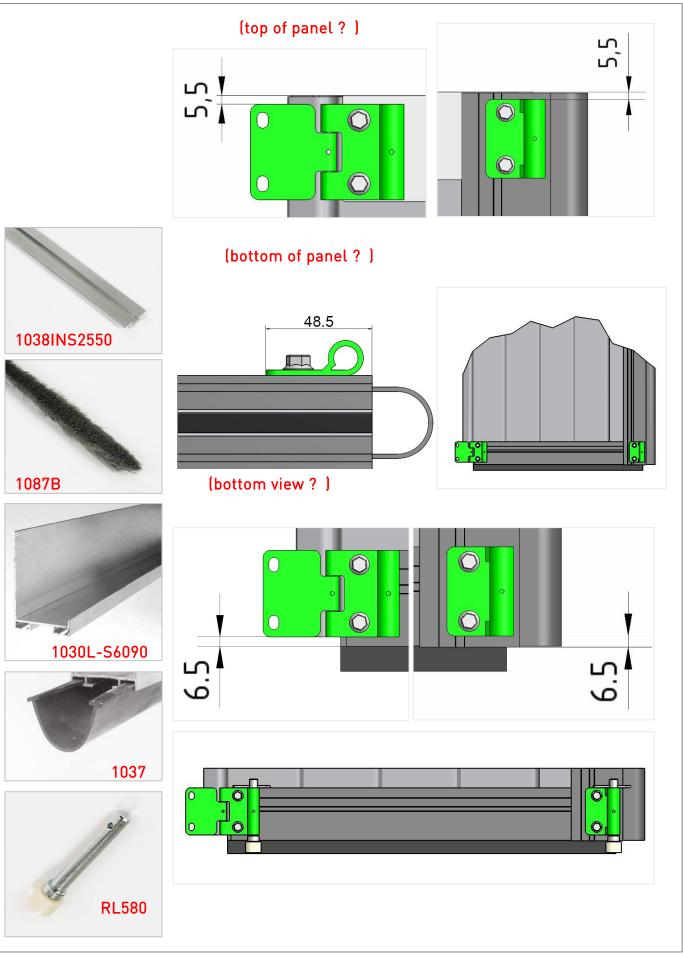


(top view ?)



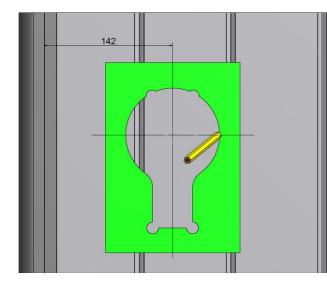


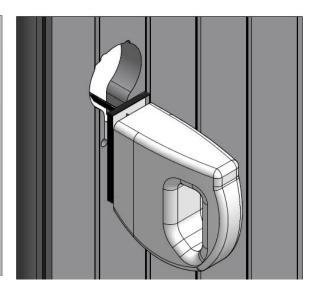




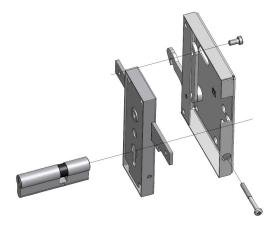


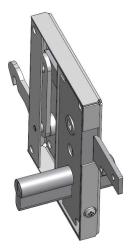
PANEL ASSEMBLY: INSTALLATION LOCK 650-40RAL/ RBL and 650E



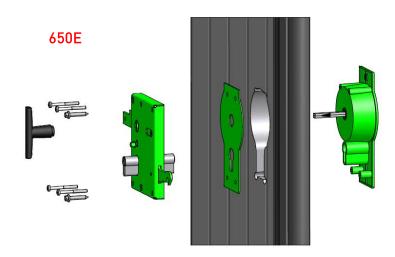


ASSEMBLY 650E WITH 650CLM





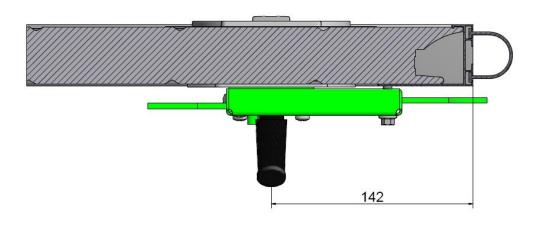
EXPLANATION INSTALLATION LOCK IN PANEL



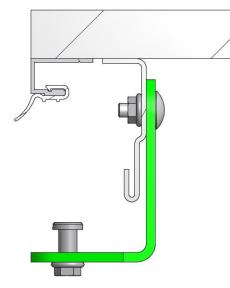




POSITION LOCK ON PANEL (top view)

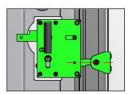


LOCK BRACKET FIXED TO 9VRL



LOCK COMPLETE INSTALLED ON RESL

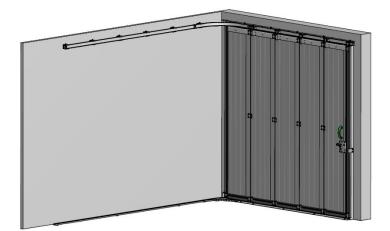








GRIP INSTALLED ON DOOR RESL







DOOR INSTALLATION

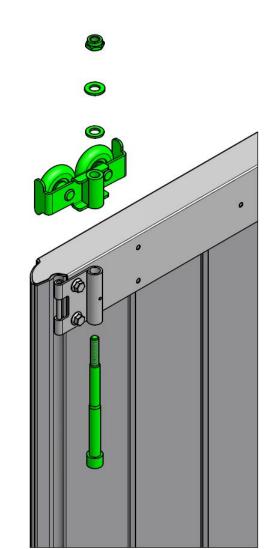




















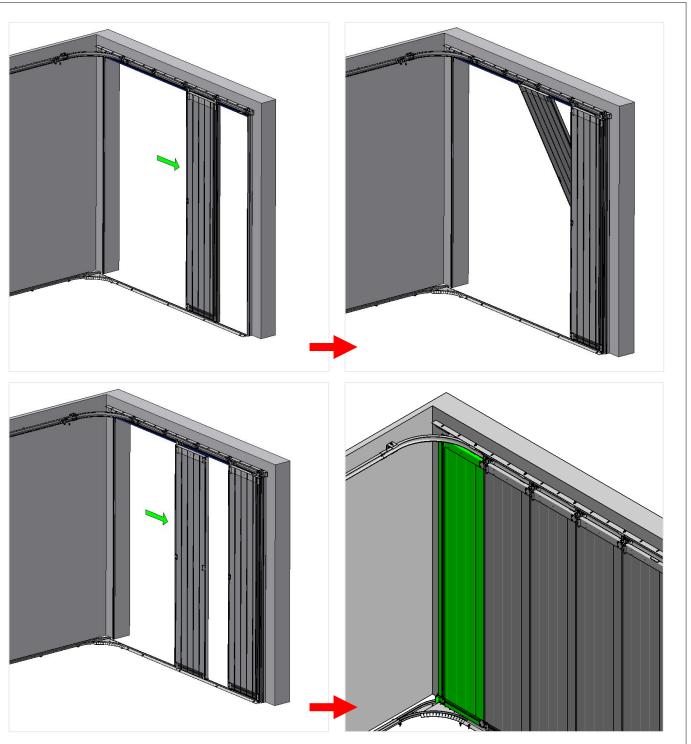
INSTALLING THE PANELS (SECTIONS) IN THE TRACK SYSTEM





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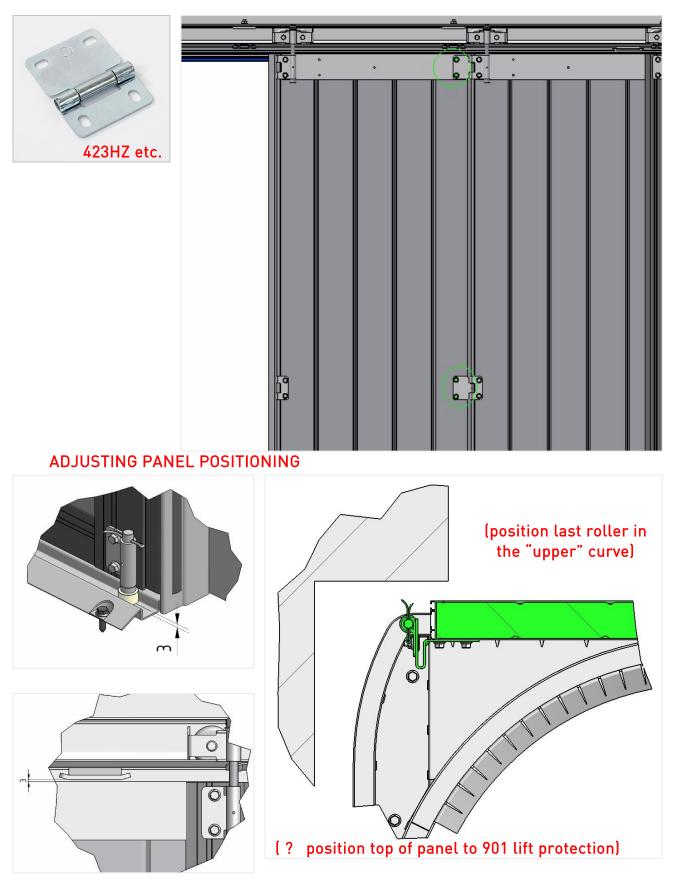








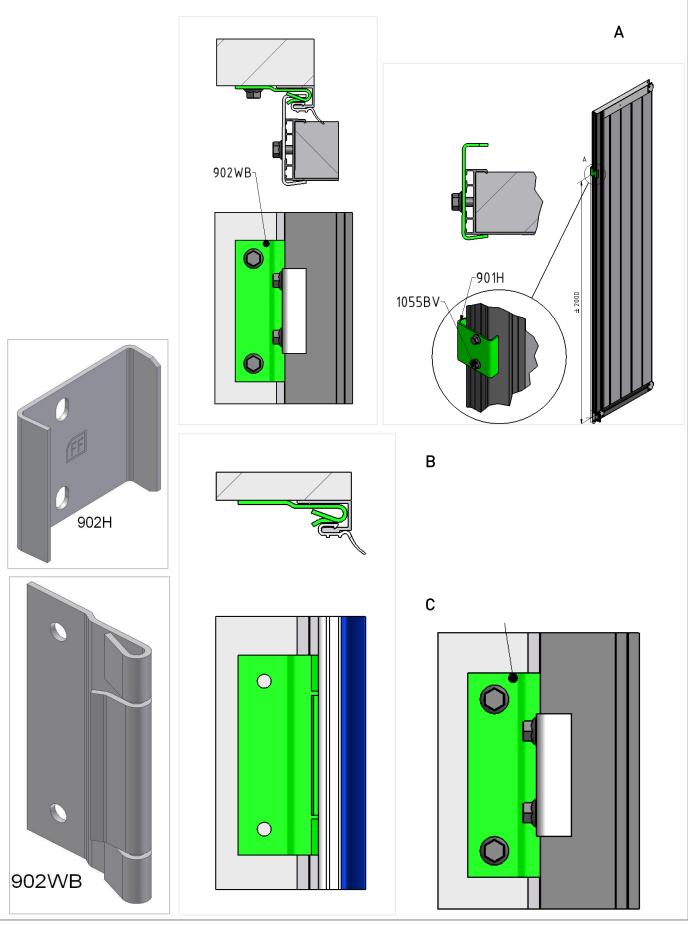
FIXATION LATERAL HINGES AND INSTALLATION INTERMEDIATE HINGES





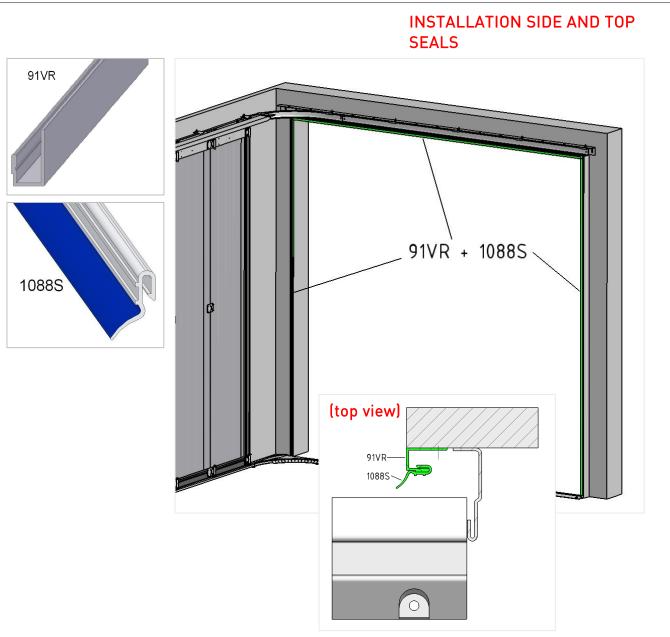






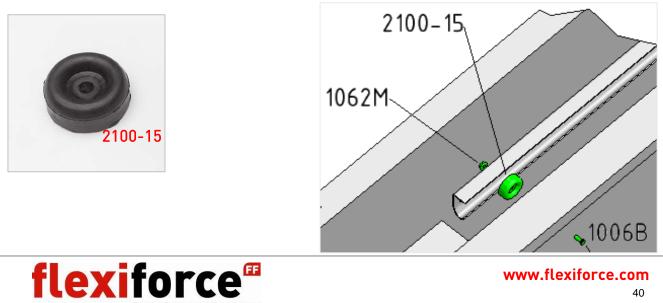
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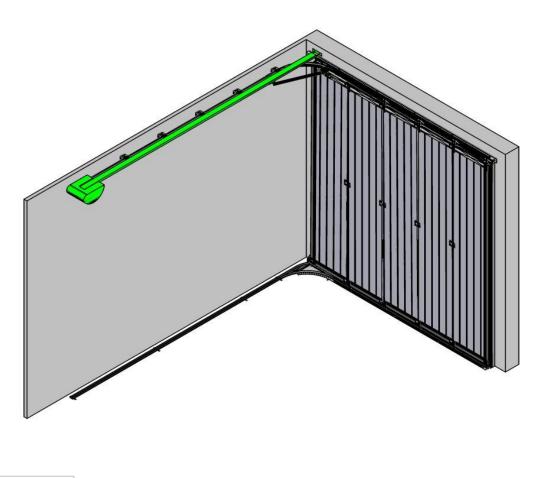
INSTALLING END STOP IN SIDE TRACK

innovations for overhead doors

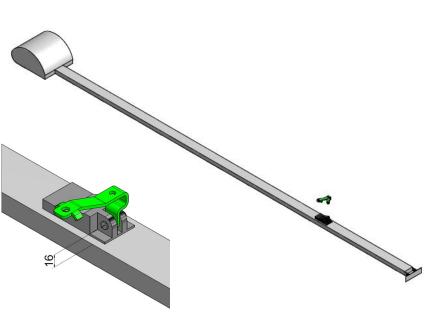




E-OPERATION INSTALLATION: OPTION 1 LIFTMASTER

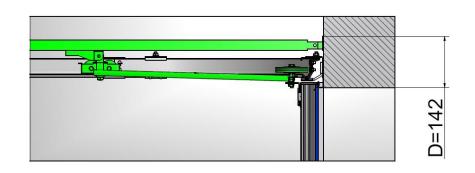




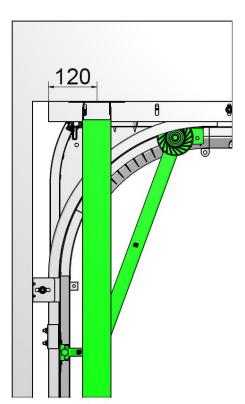








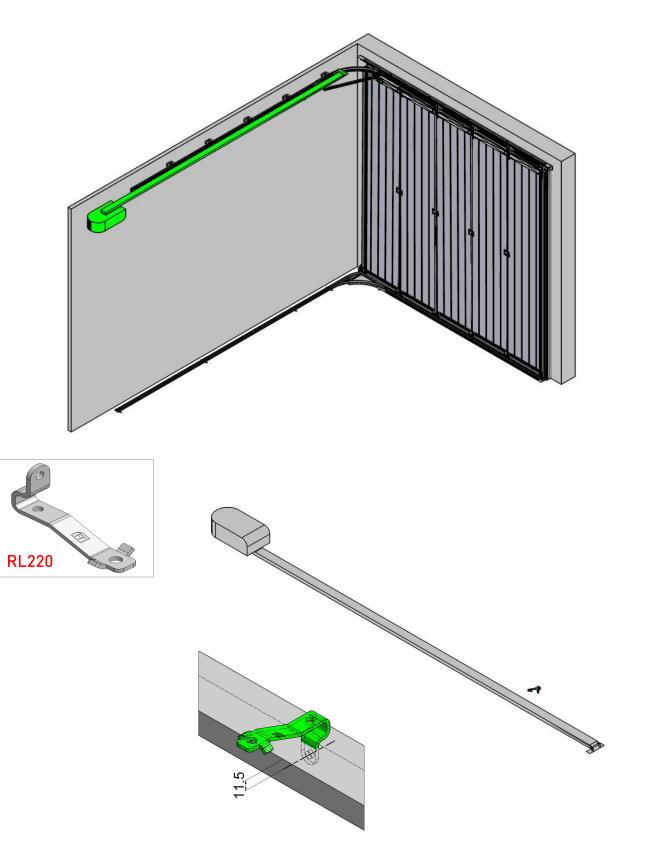
(days opening \rightarrow)





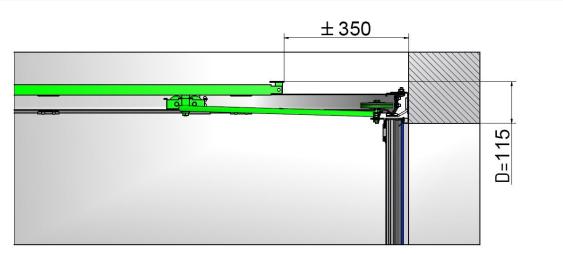


E-OPERATION INSTALLATION: OPTION 2 OTHER

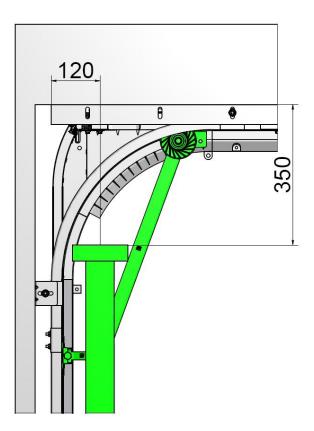








(days opening \rightarrow)









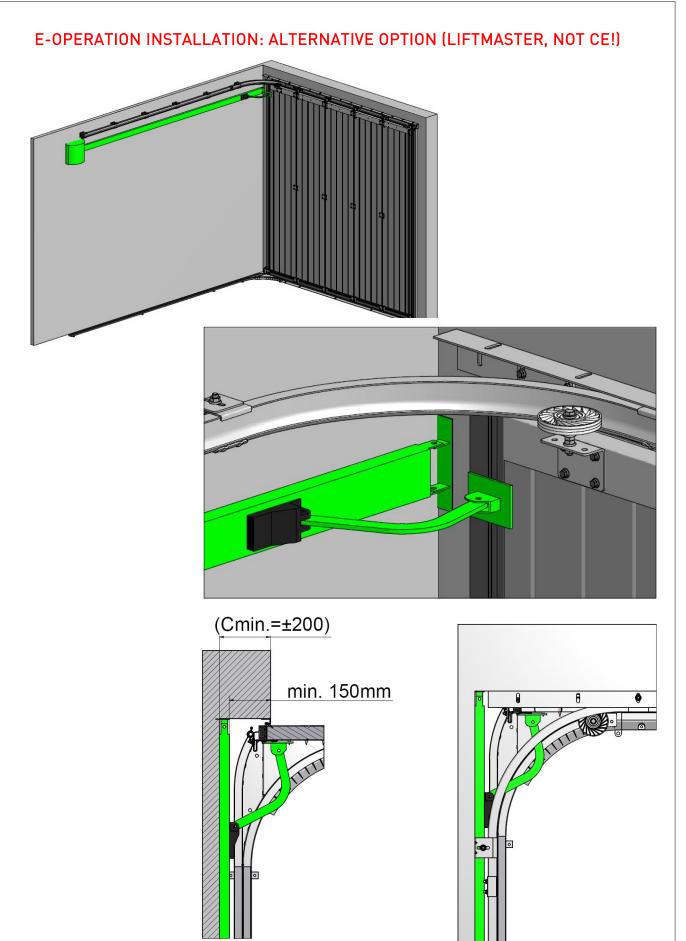
















ATTENTION WITH E-OPERATION

When you have selected an electrical operator drive (LIFTMASTER LM60K/R or other), then this should be assembled in conformity with the handbook supplied with this operator and above displayed instructions. You should clearly follow the instructions for electrical operation in this handbook.

In order to maintain the closing peak force of the door within the CEstandards the attachment point (97014) of the drawbar should be fixed at the proper position. Ask your supplier for the correct position.!

NB! The person installing the door must check thoroughly if the combination between this door and the selected operator is safe to use (ITTR-approval report). Keep in mind the max. peak force that is allowed when closing the door. People could get hurt if the adjustment of the operator software, or the installation of the operator or the selected operator on this door, are not checked correctly!!





FINISHING THE DOOR

Install any additional accessories that you have ordered separately such as: Handgrip, lock, etc. See separate instructions in product packaging.



B! A lock may not be fitted to an electrically driven door.

NB! A manually operated door should always be equipped with a hand grip, installed at a safe location on the door.

- Oil all hinges and all bearing rollers with one drop of oil (WD40).
- Let some drops of oil go into the curve of the track. This lubricates the connection between track and nylon roller, which allows a smooth operation of the door.
- The roller shafts are being greased during installation.
- Place your CE identification plate on the door (mandated!!) together with any warning labels required.
- Hand over necessary documents to the end-user:
 - o User manual
 - o Dismantling instructions (included in this manual)
 - o Maintenance instructions (included in the user manual)
 - o Service log book
 - Declaration of conformity IIa declaring the door is according to EN-13241-1.
- Visit <u>www.flexiforce.com</u> for more information on your obligations towards handing over a safe-to-use door.

DISMANTLING THE RESL DOOR

- 1. Take the power supply of the operator
- 2. Dismantle the operator arm and brackets
- 3. Remove the operator and draw-bar
- 4. Remove the seals and alu profiles from the lintel
- 5. Remove the 902 anti-lift brackets
- 6. Disconnect the panels by loosening the hinges
- 7. Lift panels out of the threshold and turn them piece by piece out of the upper track
- 8. Remove the upper and bottom track system
- 9. Make sure that you remove all the parts and panels in an environment kindly way. Check with your local authorities where and how you can leave this as garbage.

FOR ANY DETAILS ON THESE <u>DISMANTLING</u> INSTRUCTIONS, WE REFER TO THE <u>INSTALLATION</u> CHAPTERS OF THIS MANUAL WHERE DRAWINGS AND DETAILS ARE DISPLAYED.





MAINTENANCE AND REPLACEMENT OF PARTS RESIDENTIAL DOORS

An side sliding sectional garage door should be maintained and checked regularly to ensure safe operation and use. This is described in the EN-norms.

GENERAL:

- Replacement of broken or weared components should always be done by qualified 1 door mechanics.
- 2 When checking the door, always disconnect the electrical main power supply. Make sure that it is blocked against re-engaging without you knowing it.

REGULAR MAINTENANCE:

After installation:

2. 3. 4. 5. 6. 7.	Grease the shafts of the rollers	MECHANIC MECHANIC MECHANIC MECHANIC MECHANIC USER USER
1.		MECHANIC
2.		MECHANIC
3.	Grease all the above mentioned points if needed	MECHANIC
	6 months (or after every 750 cycles):	
		USER
2.	Check top seal on damage or wear and tear	USER
3.	Check bottom brush on damage or wear and tear	USER
4.	Check seals in panels	USER
5.	Grease all above mentioned points	USER
6.	Clean the panels	USER
7.	Remove dirt and waste from the door or its surroundings	USER
8.	Keep track of bottom rollers clean (threshold, corner and siderail)	USER
Every	12 months (or after every 1500 cycles):	
1.	Check the rollers on wear and free moving space	MECHANIC
2.	Check the hinges on functioning and tightening of screws	MECHANIC
3.	Check the panels on damage, wear and rust	MECHANIC
4.	Check and test the safety edge system with operator	MECHANIC
5.	Check the manual operation of the door	MECHANIC
6.	Check side seals on damage or wear and tear	MECHANIC
7.	Check top seal on damage or wear and tear	MECHANIC
8.	Check bottom brush on damage or wear and tear	MECHANIC
9.	Check seals in panels	MECHANIC
	Grease all the above mentioned points	MECHANIC
	Check bolts of coupling to operator system	MECHANIC
12		
	Check the connections of the track system Check the suspension of the door to the lintel, side wall and ceiling	MECHANIC MECHANIC

Use for greasing

: PTFE or SAE20 or WD40

Use for cleaning

: Soft soap with water. Do not use aggressive soap or cloth.

