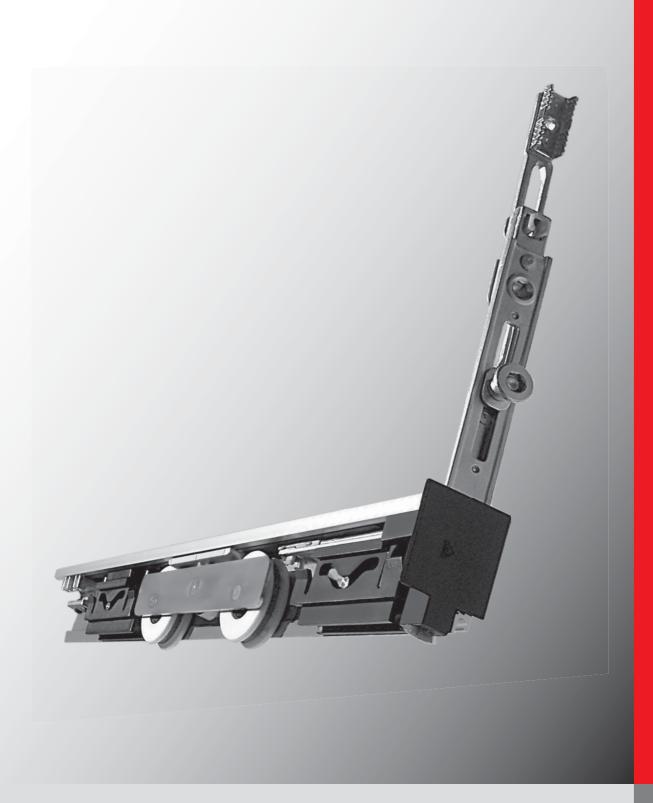


# WE OPEN SPACE



**Roto Patio Life** 

# The Patio hardware system Installation instructions

for Patio Life timber sliding systems

### Folded drawing sheet enclosed

A folded drawing sheet with vertical and horizontal profile cross-sections for the timber version is in the pocket on the inside back-cover. If this folded drawing sheet is missing, you can gladly request another one from us. Installation instructions and the folded drawing sheet are available in Adobe Reader .pdf file format.

Further documentation (brochures, price lists, profile-related data sheets, etc.) for Patio Life is available upon request.

Contents



Product liability guidelines	Page 4
General Patio Life advice	7
Patio Life design description	8
Schematic overview	9
Hardware overview	10
Parts list	11–15
Drilling jigs and installation aids	16
Sash sizes and required components	17
Sash installation; preparation	18
Sash installation; sash components	19
Sash installation; gaskets	20
Frame installation; preparation	21
Installing the threshold & weather profile	23
Frame installation; frame components	24–25
Mullion installation; gaskets	26
Frame installation; strikers	27
Mullion installation; centre-closers	28–29
Diagram C - installation preparation	30–31
Diagram D - installation preparation	32–35
Hinging and unhinging the sash	36
Maintenance and operating information	37

**Product liability guidelines** 

### Sliding hardware for balcony door and window sashes

According to the defined manufacturer's liability described in paragraph 4 of the "product liability law", the following information regarding sliding hardware for balcony doors and windows should be observed. Non-compliance exempts the manufacturer of his liability.

### 1. Product information and stipulated application

Sliding hardware as covered by this definition is hardware for sliding sashes for balcony-doors and windows, which are mainly used as glazed exterior-structures. In combination with the sliding sashes, fixed-glazing-units and/or further sashes i.e. Turn-Only sashes for cleaning purposes can be situated in a window element.

The sashes that are equipped with this sliding hardware are capable of:

- sliding,
- · lifting and sliding,
- tilting and sliding,
- lifting, tilting and sliding
- parallel-retracting and sliding,
- tilting, parallel-retracting and sliding.

Sliding hardware is used on vertically installed windows and balcony-door sashes made of timber, PVC, aluminium or steel, and their corresponding material combinations. Sliding hardware as covered by this definition is equipped with a locking mechanism that locks the sliding sash to the frame, as well as rollers located on the bottom horizontal plane of the sliding sash. In addition, a scissors stay-arm for tilting and a mechanism to lift and/or parallel-slide the sashes can be designated. By means of the hardware, the sashes are locked, brought into the ventilation position and pushed to the side.

Differing applications do not correspond to its stipulated use. Burglar-resistant window and balcony doors, window and balcony doors for damp rooms and those for use in environments with aggressive, corrosive air content, require hardware adapted for the respective application and individually agreed upon performance features.

Opened window and balcony-door sashes achieve only a shielding function and do not meet any demands on joint impermeability, water tightness, sound reduction, heat insulation and burglary resistance.

In the case of wind and draught, the window and balconydoor sashes must be closed and locked. Wind and draught as covered by this definition is present, if a window or balcony door sash while in one of it's opening positions, can open or close on it's own, in an uncontrolled manner by means of either air pressure or air suction. A static opening position of windows and balcony door sashes can only be achieved with additional hardware.

The resistance against wind loads in a closed and locked state is dependent on the respective designs of windows & balcony doors. Should wind loading in accordance with DIN EN 12210 occur (in particular pressure test p3), suitable hardware compilations are to be matched in relation to the respective window design and frame material, and each case individually agreed upon.

Generally speaking, the sliding hardware can fulfil the demands made for barrier-free dwellings in accordance with DIN 18025. However corresponding hardware compilations and installations for windows and balcony doors are necessary, which must be co-ordinated and each case individually agreed upon.

### 2. Misuse

Misuse (therefore not the specified product utilisation) of sliding hardware for windows and balcony doors occurs in particular:

- if obstacles are inserted in the opening vicinity, thus preventing its proper specified use.
- if additional loads are exerted on window or balcony-door sashes,
- if while sliding over and/or locking, someone reaches between the sash and frame, and/or a person or body-part is in this vicinity while sliding.

### 3. Liability

The respective entire hardware set may only consist of hardware components from Roto Frank AG. In the case of inappropriately assembled hardware, and/or the use of nonoriginal accessory components, and/or non-approved factory accessory components, no liability is accepted.

### 4. Product performance

## 4.1 Maximum sash weights and sash rebate dimensions

The following listed maximum sash weights for the individual hardware versions may not be exceeded. The component with the least, permissible load-carrying capacity determines the maximum sash weight. Application diagrams and component classification are to be adhered to. (Refer to the following pages)



### 4.2 Hardware combination

The manufacturers' regulations concerning the combination of hardware are obligatory. (For example: the exterior-handle arrangement, the hardware layout for burglary-resistant windows and balcony-door sashes).

### 5. Product maintenance

Security relevant hardware components are to be examined at least once a year for stability and wear and tear. Subject to the requirements, the fixing-screws are to be tightened and/or parts replaced. In addition to this, the following maintenance operations are to be carried out at least annually:

- All movable parts and all locking points of the sliding hardware are to be lubricated and tested.
- Only cleaning and maintenance agents which do not damage the corrosion protection of the hardware components are to be used.

The hardware adjustments, as well as the replacement of parts, are to be carried out by a specialist company.

When coating - for example when painting or varnishing - the windows' and balcony doors hardware is to be excluded from this process and is also to be protected against any impurities (paint/varnish splashes).

#### 5.1 Preservation of the surface finish

Electrolytically applied zinc coatings are not attacked in a normal room climate, if no condensation can form on the hardware or occasionally formed condensation can dry rapidly. In order to permanently preserve the hardware's surface quality and to avoid deterioration by corrosion, it is imperative to observe the following points:

- The hardware and/or the rebate areas are to be ventilated sufficiently in particular during the building phase so that they are not exposed either to direct wetness or condensation.
- The hardware is to be kept free from deposits and soiling from building materials (building dust, plaster, cement etc.).
- Aggressive vapours in the rebate area (for example: by means of formic acid or acetic acid, ammonia, amine or ammonia compounds, aldehydes, phenols, tannic acid etc.) in connection with small formations of condensation can lead to fast corrosion of the hardware. In the case of such aggressive vapours occurring, a general adequate ventilation of the rebate areas of windows and balcony doors is to be ensured. This is particularly valid for windows and balcony doors made of oak or other types of timber with a high concentration of (tannic-) acid.

- Furthermore no acetic-acid or cross-linked acidic sealing compounds or those with the above mentioned contents may be used, since both the direct contact with the sealing compound and it's vaporisation can attack the surface.
- The hardware may only be cleaned with mild, pH-neutral cleaning agent in diluted form. Under no circumstances may aggressive, acidiferous cleaners or abrasive cleaning agents whose contents are listed in the above paragraph be used.

#### 6. Obligation to issue information and instructions

In order to fulfil the information and instruction obligations, as well as the maintenance operations according to the "product liability law", the following is available:

- for planning engineers "planning documents"
- for specialised dealers "catalogues"
- for fabricators "installation instructions" and "factory drawings"
- for builders and end users: "service & maintenance instructions" as well as "operating manuals".

In order to ensure proper functioning of sliding hardware on balcony-door and window sashes:

- Planning engineers are obliged to request and comply with the manufacturers or specialised dealers' product information.
- The specialised dealers are obliged to observe and request product information from the manufacturer and to pass this on to the fabricators, in particular installation instructions, factory drawings, service & maintenance instructions as well as operating manuals.
- Fabricators are obliged to observe the product information and in particular to request service & maintenance instructions as well as operating manuals from the manufacturer or specialised dealer, and to pass these on to the builders and end users.

#### 7. Application of related hardware

Related hardware with rollers and locking mechanisms - for example hardware for Slide&Fold doors - are to be treated accordingly with regard to product information and intended use, misuse, product features, product maintenance and the obligation to issue information & instructions.

**General advice** 



### Functional safety of the hardware

**Product liability regulations** 

### Product liability - Liability exclusion

### Balcony doors with timber profiles: in 68mm x 92mm profile sections / 28mm sash distance

- To ensure continual functional safety of the hardware, the following should be observed:
- 1. Application ranges and/or sash rebate width & height, max. sash weight and total element width and profile manufacturers' regulations are to be observed.
- 2. Professional installation of the hardware components according to these installation instructions.
- 3. Professional installation of the elements throughout the installation process.
- 4. Observation of the maintenance and operation instructions.
- 5. The entire hardware may consist of only original Roto system components. The use of non-Roto components excludes any liability on our part.
- 6. Bottom roller-tracks and top guide-tracks are to be cleaned regularly from dust and dirt, so that the rollers' smooth operation is maintained.

■ The window handle is to be fixed with M5 x .. DIN 965 countersunk screws. When fixing the central locking hardware components, corrosion protected hardware-adapted fenestration screws are to be used. The window fabricator must ensure adequate fixing of the hardware components, consulting the screw manufacturer if necessary. The glazing spacer-block regulations for the glazing method are to be adhered.

The hardware manufacturer is not liable for malfunctions or damage to the hardware and to the windows or balconydoors equipped with the hardware, if any such malfunctions or damage have been caused by inadequate tendering procedures or failure to adhere to the installation instructions and application drawings.

### Liability exclusion

All specifications in this brochure were compiled carefully and reviewed. Due to technical progress, whether by means of modification or through lapse of time, the results automatically lead to changes. We therefore hope you shall understand that we cannot be held liable for the correctness and completeness of the contents. All rights, in particular the right to copy and circulate, reserved.

# The Roto sliding hardware for large Lift&Slide profiles up to 300kg

### Product description:

Patio Life makes operating doors easier; the innovative convenient sliding hardware saves you the laborious task of having to lift the door. All gasket components are controlled via the handle and completely seal the door. The Patio Life application range for large Lift&Slide profiles is for up to sash widths of 3235mm, 2670mm sash height and 300kg sash weight.

Various schematic diagrams enable various opening possibilities, in particular in hotels, cafés etc.

### An overview of the advantages:

### **Operation:**

- Easy operation, as the door does not have to be lifted to unlock and/or open.
- Operating and locking forces are independent of the sash weight
- Easy and logical door operation adopting the well known Tilt&Turn handle positions, thus avoiding mishandling; locked mode → handle down.

### **Functionality:**

• Very good smooth operation due to the high-quality bogie technology and additional cleaning brushes integrated in the bogies ensure optimal operation and durability.

- By means of the 180° handle position, a safeguarded night ventilation function is enabled that is not visible from outside. When the door is completely closed and locked, the bottom gasket components are forced down, creating an approx. 5mm ventilation gap across the overall width on the top.
- Low threshold for barrier-free living.

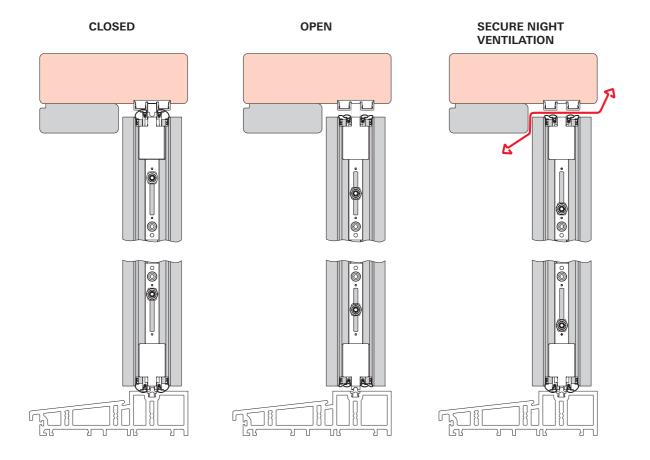
### Security:

- The espagnolette for door sizes is already equipped with 4 locking points in the standard version.
- Jemmying the door is extremely difficult due to the design.
- Additional locking points in the mullion vicinity enable further burglary inhibition.
- The application of electronic locking monitoring systems is possible.

### Impermeability / isothermal efficiency:

 New enhanced threshold. A special material mix of heat insulating substances produces optimal isothermal efficiency and prevents unwanted cold bridges. → The cold-heat exchange is reduced to a minimum.

Sash widths:	
Sash heights:	690mm – 2670mm
Frame outside width:	max. 6500mm
Max. sash weight:	max. 300kg



### **Schematic overview**



The wide range of Patio Life variations:

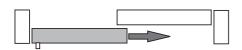


Diagram A DIN left-hand

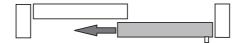
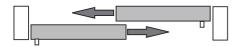


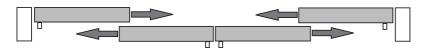
Diagram A DIN right-hand



### Diagram C



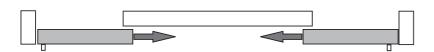
### Diagram D



### Diagram F

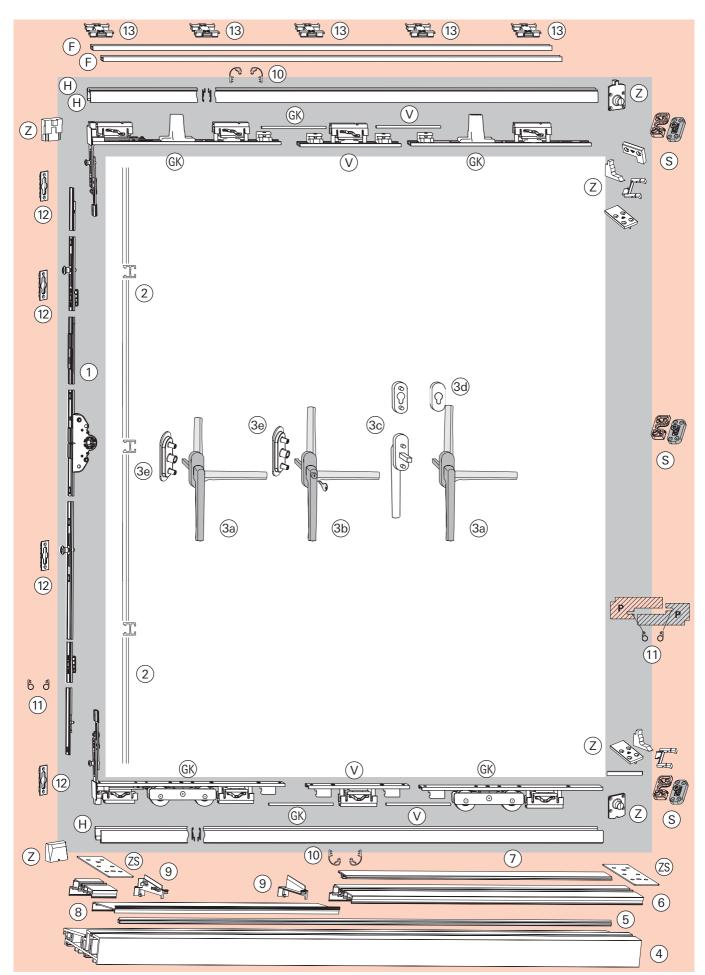


### Diagram G2



### Diagram K

Hardware overview of diagram A, DIN left-hand (viewed from the inside)



Page 10/AB 541-2 GB

Dated: December 2006. Subject to change.

### Parts list



Description				Material	
Patio Life basic carton – diagram A					389 580
— D —	Con	tents: 1 >	top corner	component,	
	1 x	bottom c	orner compo	onent,	
	2 x -	400mm o	connecting t	ubes, 1 x top end comp	onent,
	1 x	bottom e	nd compone	ent & 2 x NT faceplate f	laps
	(not	depicted	4)		
					200 504
Patio Life basic carton – diagram C (not depicted)					389 581
Contents: 1 x top corner component without supporting-pin 2 x 400mm connecting tubes, 1 x top end component, 1 x					uns,
2 x 400mm connecting tubes, 1 x top end component, 1 x To build a diagram C Patio Life door, one needs 1 basic					m (
-	carton to	r ulayrai		asic carton for diagra	
Patio Life extension unit	400		a. tuk		389 582
Contents: 1 x bottom central part, 1 x top central part & 2 x			g tubes		
	Sash	widths		Qty. of V-cams	
	min.	S.W. 82	5mm – 1124	mm 0	
		112	5mm – 1640	0mm 1	
Component to be	_	164	1mm – 2160	0mm 2	
installed on top		216	1mm – 2680	0mm 3	
		268	1mm – 3235	imm 4	
		Backset	Component	Handle position (measured	Material no
			length	from the top of the track)	
Patio Life espagnolette 690 – 870mm variable/centred handle-height	1 🔽	30	580	345-435	349 135
Patio Life espagnolette 871 – 1270mm variable/centred handle-height	1 🔽	30	980	435-635	349 136
Patio Life espagnolette 1671 – 1870mm fixed handle-height	2 🔽	30	1590	1000	349 137
Patio Life espagnolette 1871 – 2070mm fixed handle-height	2 🔽	30	1790	1000	386 800
Patio Life espagnolette 2071 – 2270mm fixed handle-height	2 🔽	30	1990	1000	349 138
Patio Life lockable espagnolette 1671 – 1870mm fixed handle-height	2 🔽	30	1590	1000	349 139
Patio Life lockable espagnolette 1871 – 2070mm fixed handle-height	2 🔽	30	1790	1000	386 835
Patio Life lockable espagnolette 2071 – 2270mm fixed handle-height	2 🔽	30	1990	1000	349 184
Patio Life 200mm espagnolette extension (not depicted)	1 🔽				349 188
Roto NT 200mm C.L. (standard NT / not depicted)					308 267
Roto NT 400mm C.L. (standard NT / not depicted) Diagram C:					297 858
		20	1590	1000	374 759
	thout come			1000	
Espagnolette 1671-1870mm (not depicted) with	thout cams	30 30	1790	1000	386 841



H

2

Patio Life adapter profile for espagnolette side 2600mm (for 22mm groove width)

349 189

### Parts list

Description	Material no.:
4 Patio Life threshold 3000mm grey	441 952
Patio Life threshold 3500mm grey	441 953
Patio Life threshold 4000mm grey	441 954
Patio Life threshold 4500mm grey	441 955
Patio Life threshold 5500mm grey	441 956
Patio Life threshold 6500mm grey	441 957
5 Patio Life roller track – 3000mm EV1 (anodised silver)	441 958
Patio Life roller track – 3500mm EV1 (anodised silver)	441 959
Patio Life roller track – 4000mm EV1 (anodised silver)	441 960
Patio Life roller track – 4500mm EV1 (anodised silver)	441 961
Patio Life roller track – 5500mm EV1 (anodised silver)	441 962
Patio Life roller track – 6500mm EV1 (anodised silver)	441 963
fr.	
ZS) Patio Life black sponge-rubber plate for threshold (2 pieces are needed )	per threshold) 447 209
Patio Life threshold fixing set (6 pieces in a bag)	473 228
6) Patio Life assembly profile, grey, 3500mm	441 949
6a) Patio Life assembly profile, grey, for diagram D, 3500mm	447 080
Patio Life assembly profile, grey, for diagram D, 6500mm	473 265
Patio Life reinforcement sheeting (50m. roll)	473 230
7) Patio Life adapter profile, grey, 3500mm	441 950
٦-ملكاليب	
8) Patio Life aluminium cover for the passage area, 3200mm (optional)	441 951
8a) Patio Life circular cord for the assembly profile, weather profile and alur	ninium cover (50m. roll) <b>469 104</b>
Ba) Patio Life circular cord for the assembly profile, weather profile and alur	409 104

### Parts list



	Description	Material no.:
9)	Patio Life cover-caps pair for assembly profile (optional, if with alu cover)	444 823
9a)	Patio Life cover-caps pair for assembly profile (without alu cover)	447 082
	Patio Life weather profile 6500mm EV1 (anodised silver) for threshold	472 766
	Available from 01/04/2007	
	Patio Life end-cap pair for threshold	473 229
	Available from 01/04/2007	
	Patio Life roller track for 42mm timber routing (not depicted):	
	Patio Life roller track – 42mm 3500mm EV1 (anodised silver)	350 377
	Patio Life roller track – 42mm 4500mm EV1 (anodised silver)	349 432
		343 432
	Patio Life roller track – 42mm 5500mm EV1 (anodised silver)	349 433
10	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)	349 433
$\asymp$	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)	349 433 349 434
$\asymp$	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)	349 433 349 434 450 571
10 11 12	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)	349 433 349 434 450 571 349 734
11)	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)     Image: Constraint of the second	349 433 349 434 450 571 349 734 457 483
11	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)     Image: Constraint of the structure	349 433 349 434 450 571 349 734 457 483 349 735 349 446
11	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)     Image: Constraint of the structure	349 433 349 434 450 571 349 734 457 483 349 735 349 446
11)	Patio Life roller track – 42mm 6500mm EV1 (anodised silver)     Image: Constraint of the structure	349 433 349 434 450 571 349 734 457 483 349 735 349 446 469 833

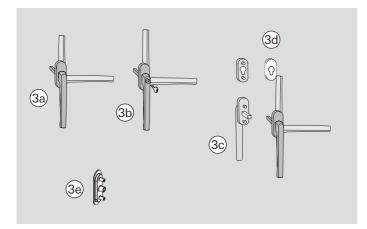
Parts list

	Description	Material no.
H	Patio Life lifting track 3300mm (required: 4 pieces x sash-width)	443 704
F	Patio Life top guide-track 3500mm (required: 2 pieces x frame internal width)	350 378
$\bigcirc$	Patio Life top guide-track 4500mm (required: 2 pieces x frame internal width)	348 489
	Patio Life top guide-track 5500mm (required: 2 pieces x frame internal width)	348 488
	Patio Life top guide-track 6500mm (required: 2 pieces x frame internal width)	348 083
13)	Patio Life striker plate for top guide-track (20 pcs. in a bag)	387 483
Z)	Patio Life accessories for 68mm timber / 28mm sash distance – diagram A	348 344
	Contents: 1 x bottom stop plate, 1 x top stop plate, 1 bottom espagnolette gasket block, 1 top espagnolette gasket block, 1 x bottom 68mm frame mullion-gasket, 1 x top 68mm frame mullion-gasket, 2 x sealing plates, 1 x adapter plate, 1 x 150mm support profile, 2 x L-shaped gasket components	
	Patio Life accessories for 56mm timber / 10mm sash distance – diagram A	349 603
	Contents: 1 x bottom stop plate, 1 x top stop plate, 1 bottom espagnolette gasket block, 1 top espagnolette gasket block, 1 x bottom 56mm frame mullion-gasket, 1 x top 56mm frame mullion-gasket, 2 x sealing plates, 1 x adapter plate, 1 x 150mm support profile, 2 x L-shaped gasket components	
	Patio Life accessories for 68mm timber / 28mm sash distance – diagram C	349 380
	Patio Life accessories for 56mm timber / 10mm sash distance – diagram C	349 377
	Patio Life accessories for 68mm timber / 28mm sash distance – diagram D	349 381
	Patio Life accessories for 56mm timber / 10mm sash distance – diagram D	349 379
S	Patio Life gasket compression adjustable centre-closers – suitable for burglary-resistance grade 2 / WK2. (3 pieces per sash)	349 444
	Accessories: Patio Life end-stop (diagram D, F, H and internal/external operation)	349 600

### **Parts list**



	Description	Material no.:
(3a)	Patio Life RotoLine handle – traffic white R07.2	349 382
	Patio Life RotoLine handle – medium bronze R05.3	349 383
	Patio Life RotoLine handle – silver R01.1	349 384
(3b)	Patio Life RotoLine lockable handle – traffic white R07.2	349 405
$\bigcirc$	Patio Life RotoLine lockable handle – medium bronze R05.3	349 406
	Patio Life RotoLine lockable handle – silver R01.1	349 407
(3c)	Patio Life RotoLine external handle with PC escutcheon cover – traffic white R07.2*	349 408
G	Patio Life RotoLine external handle with PC escutcheon cover – medium bronze R05.3*	349 409
	Patio Life RotoLine external handle with PC escutcheon cover – silver R01.1*	349 410
(3d)	Patio Life RotoLine internal PC escutcheon cover – traffic white R07.2	349 411
$\bigcirc$	Patio Life RotoLine internal PC escutcheon cover – medium bronze R05.3	349 412
	Patio Life RotoLine internal PC escutcheon cover – silver R01.1	349 413
(3e)	Patio Life recessed grip 63mm – traffic white R07.2	349 426
$\bigcirc$	Patio Life recessed grip 63mm – medium bronze R05.3	349 427
	Patio Life recessed grip 63mm – silver R01.1	349 428
	Alternatively: 43mm recessed grips when using standard RotoLine handles	
	Patio Life recessed grip 43mm – traffic white R07.2	350 928
	Patio Life recessed grip 43mm – medium bronze R05.3	350 929
	Patio Life recessed grip 43mm – silver R01.1	350 930



\*Please note: When using the external handle set, the end-stop 349 600 must also be used. The opening distance is reduced around approx. 200mm.

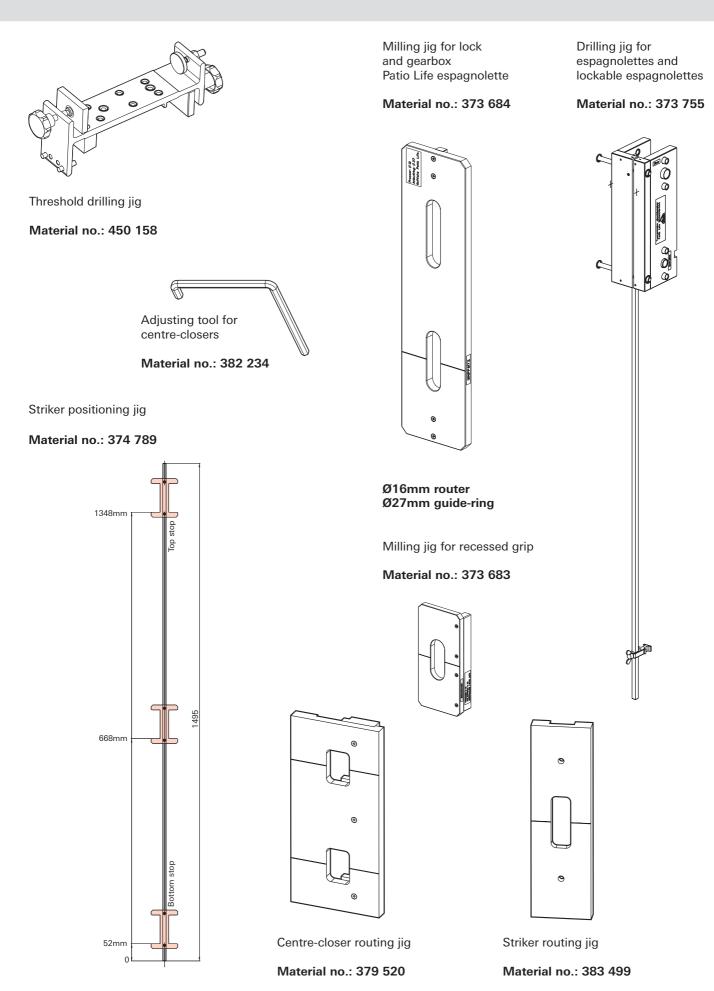


Gasket-insertion roller tool: **Trelleborg Dipro GmbH** Hermann-Kemper-Strasse 12 D-49762 Luthen, Germany



Adhesive "Cosmoplast 500": Weiss Chemie + Technik GmbH & Co. KG Hansastrasse 2 D-35708 Haiger, Germany

### Drilling, milling and striker positioning jigs



Page 16/AB 541-2 GB

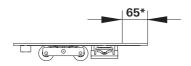


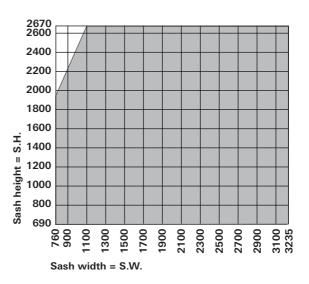
### Sash sizes and required components

### Application ranges

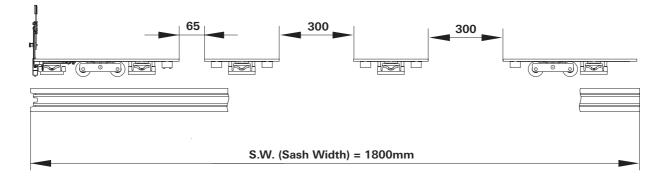
Sash widths:	*760mm – 3235mm
Sash heights:	690mm – 2670mm
Frame external width:	max. 6500mm
Max. sash weight:	max. 300kg

\* On sash widths from 760mm to 825mm, the top and bottom end components must be shortened by 65mm. Undo the centre-fixing (preset centred cam-fixing) and crop while in the final position.





### Example of 1800mm sash width:



### Recommendation to position the components

Position the extension units at a distance of 300mm. (connecting rod = 400mm) The first extension unit is cut to measure.

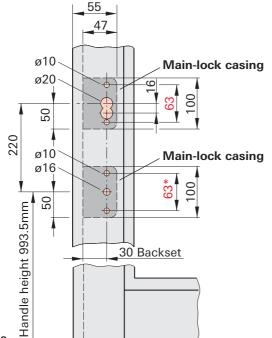
Sash widths	E-unit qty.	Remarks
min. S.W. 825mm – 1124mm	0	
1125mm – 1640mm	1	(Please note! on sash widths 1125 - 1340mm; position the extension unit centrally!)
1641mm – 2160mm	2	
2161mm – 2680mm	3	
2681mm – 3235mm	4	

### Sash installation – Preparation

### Drill holes and millings for handle and recessed grip

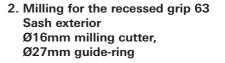
1. Carry out espagnolette millings and drill holes with drilling jig.

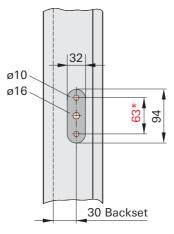
- 2. Mill out for the recessed grip on the outer side of the sash.
  - 1. Drill holes for the lockable espagnolette with recessed grip 63 and Patio Life handle



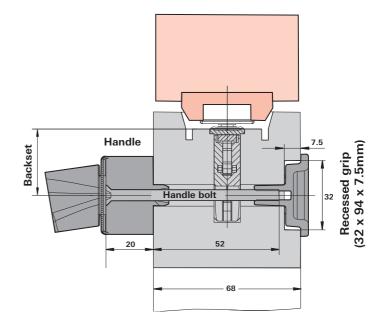
Sash edge

\* On the recessed grip 43, the drill holes are positioned 43mm apart.



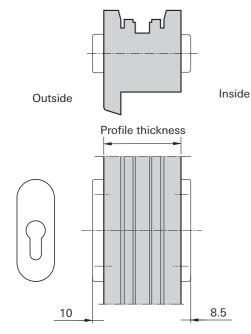


\* On the recessed grip 43, the drill holes are positioned 43mm apart.



Screw length = Profile thickness + 4mm

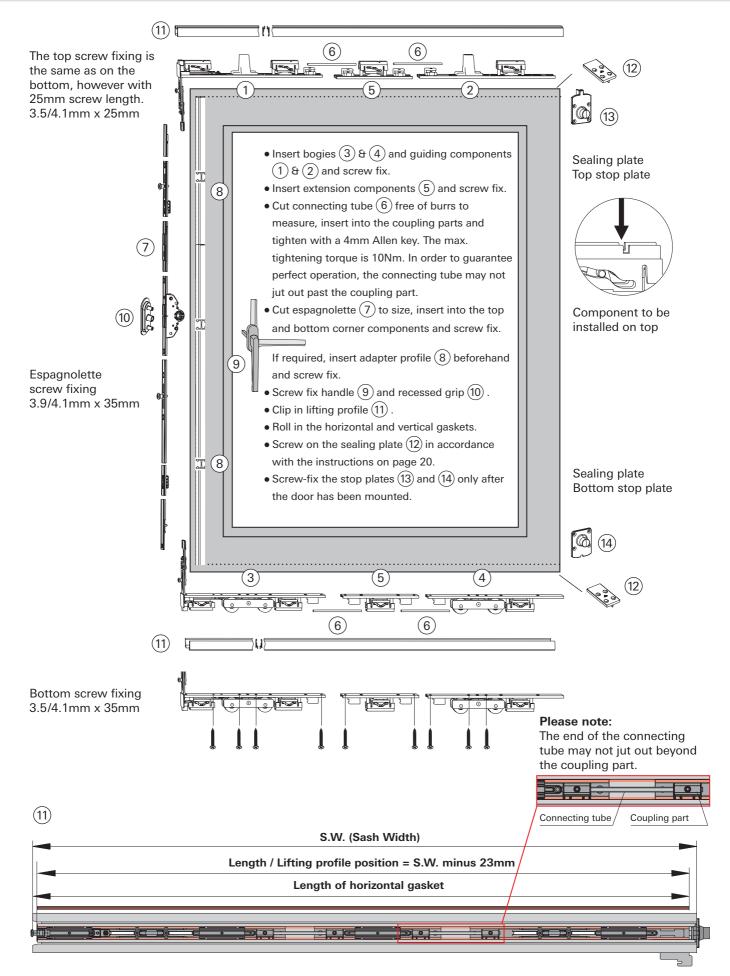
### Profile cylinder length



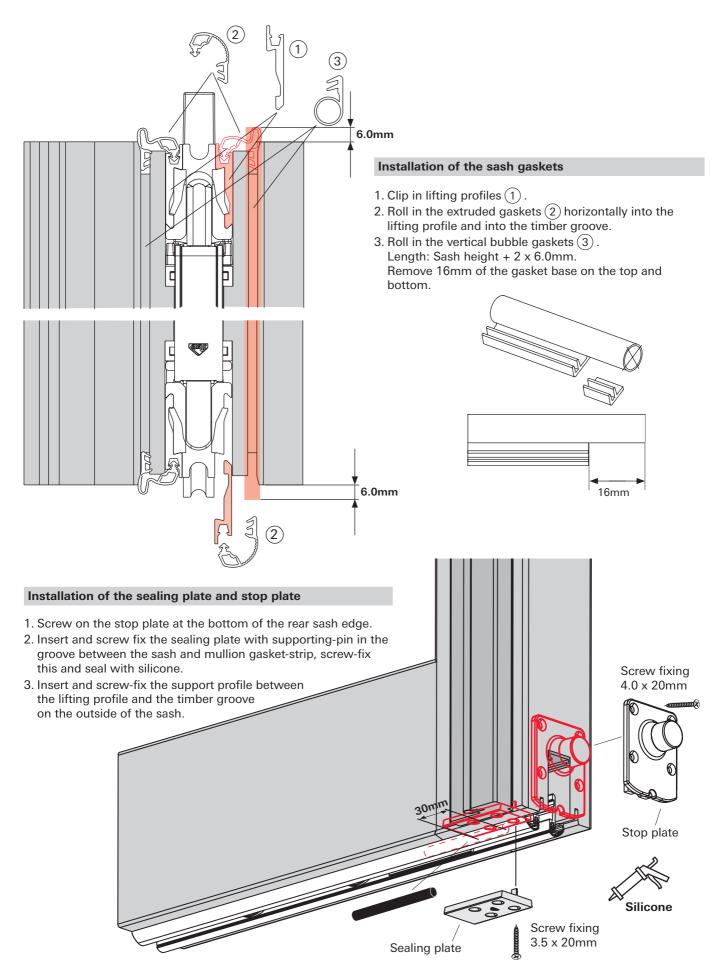
Dated: December 2006. Subject to change.

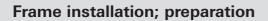
### Installation of sash components & handle fixing



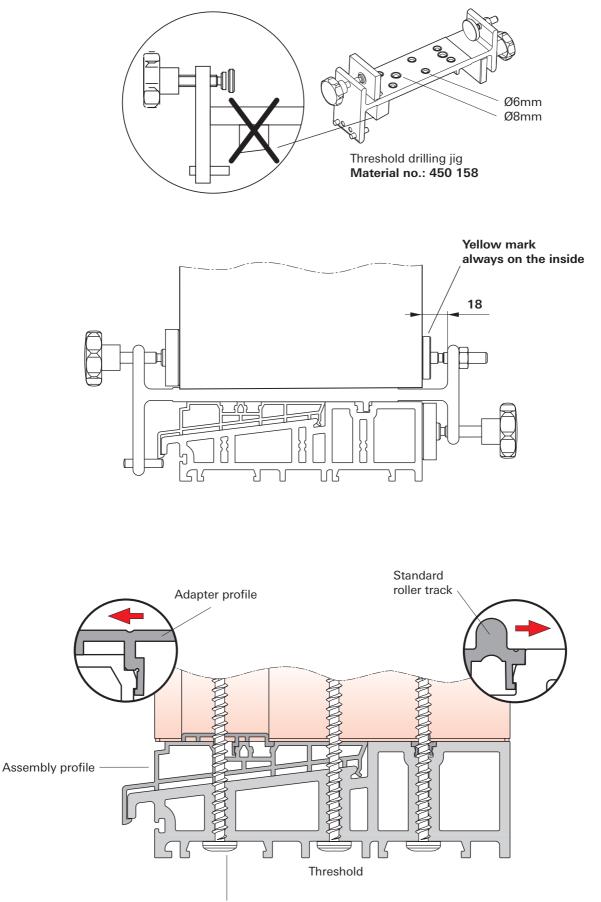


Sash – gasket installation



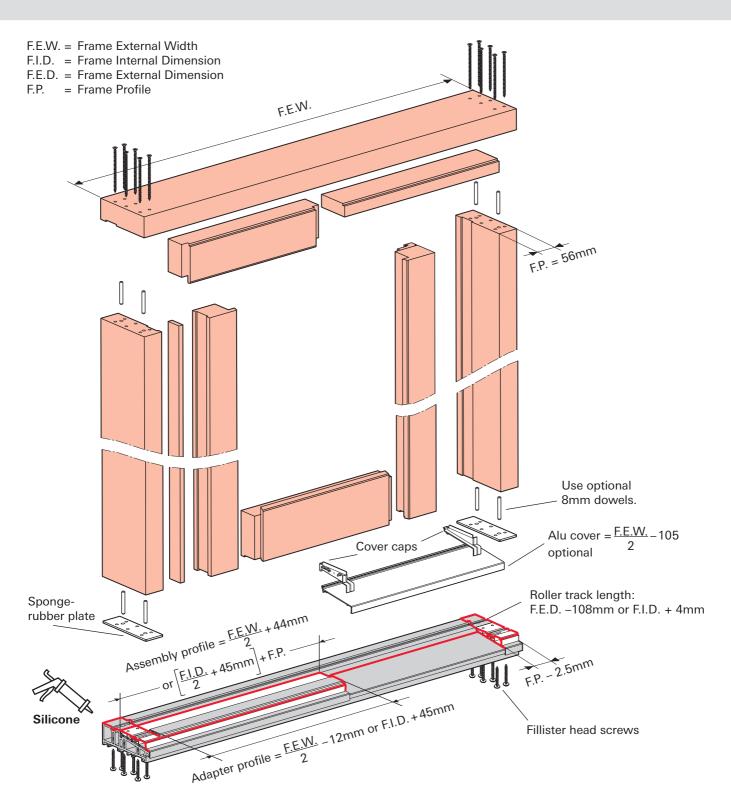






Deformation-free tightening with fillister head screws or flat-headed screws with collar (in accordance with DIN 967)

### Frame installation and threshold sealing



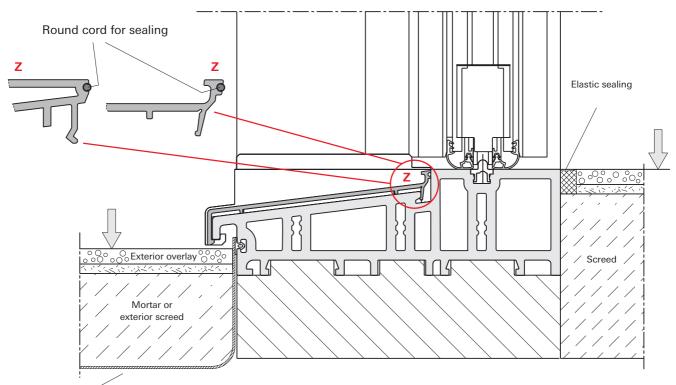
### **Frame installation**

- 1. Cut the frame profiles to length and screw together.
- 2. Predrill the threshold and the vertical frame profile + sponge-rubber plate using the drilling jig, and screw-fix with fillister head screws. Please note! Tighten without causing deformations.
- 3. Cut the assembly profile to length, roll in the round cord into the receptive groove, and clip the assembly profile into position.
- 4. Cut the adapter profile to length and clip in (refer to the mark).
- 5. Insert the fixed unit and screw fix. Seal the fixed unit to the threshold using silicone.
- 6. Position the cover caps and stick with adhesive. Seal the cover caps to the assembly profile using silicone.
- 7. Cut the alu cover (optional) to length if needed, clip it in below the cover caps and seal with silicone. Use round cord to seal between the threshold and alu cover.

### **Threshold installation**



Pack up the threshold over the entire length every approx. 300mm! Max. permissible unevenness over the entire length of the threshold: 2–3mm.

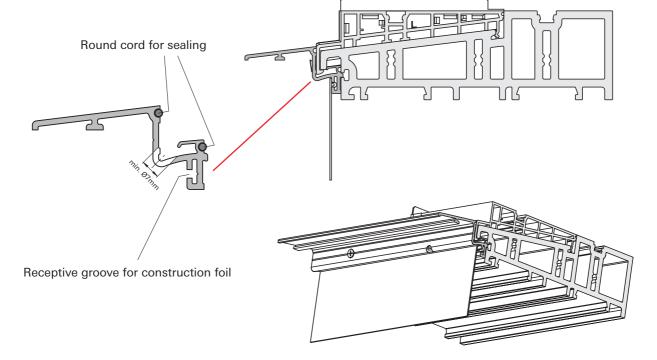


### For example: -

Construction foil, e.g. NOVAwall EPDM plastic sheeting, rolled in with SG4039 adhesive. Supplier: Messrs. Funke gasket technology

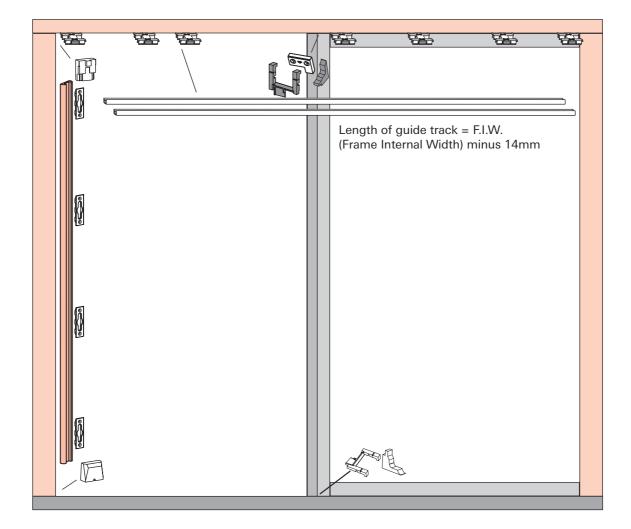
Installation instructions for building seals in accordance with DIN 18195-9 to be adhered to.

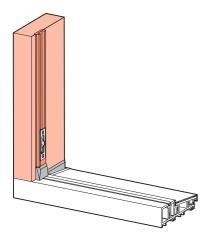
### Weather profile installation



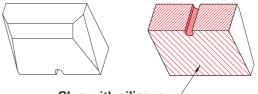
Installation of frame components

### Overview



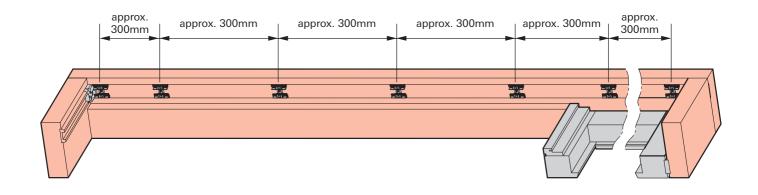


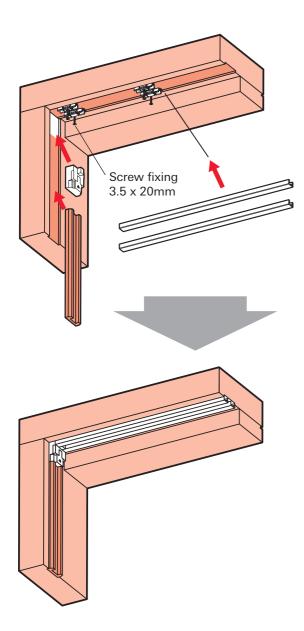
Bottom espagnolette gasket-block



Glue with silicone -



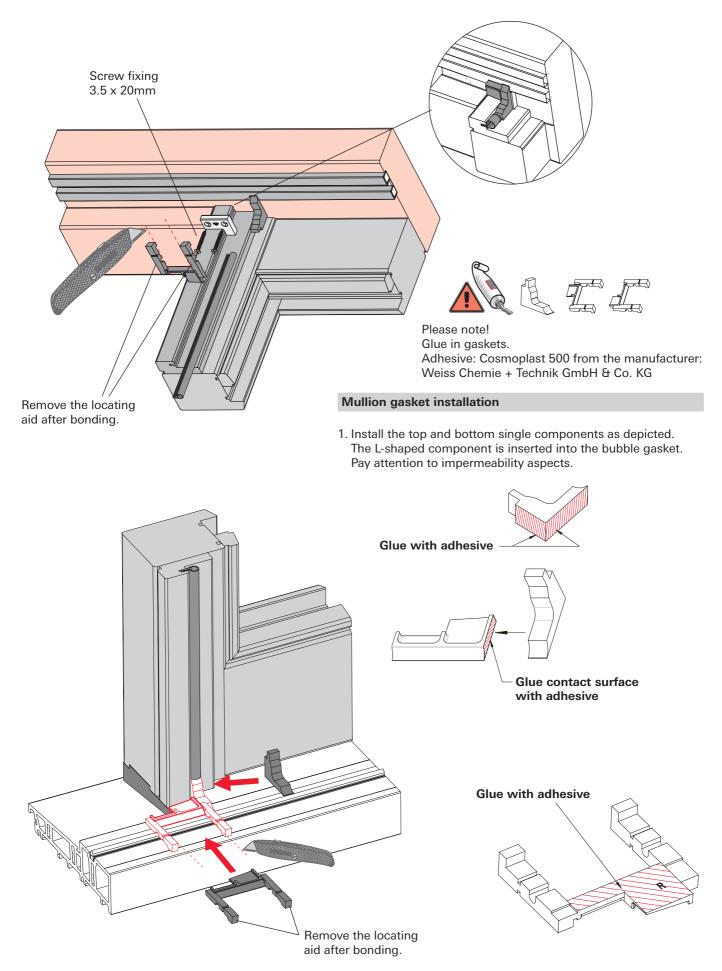




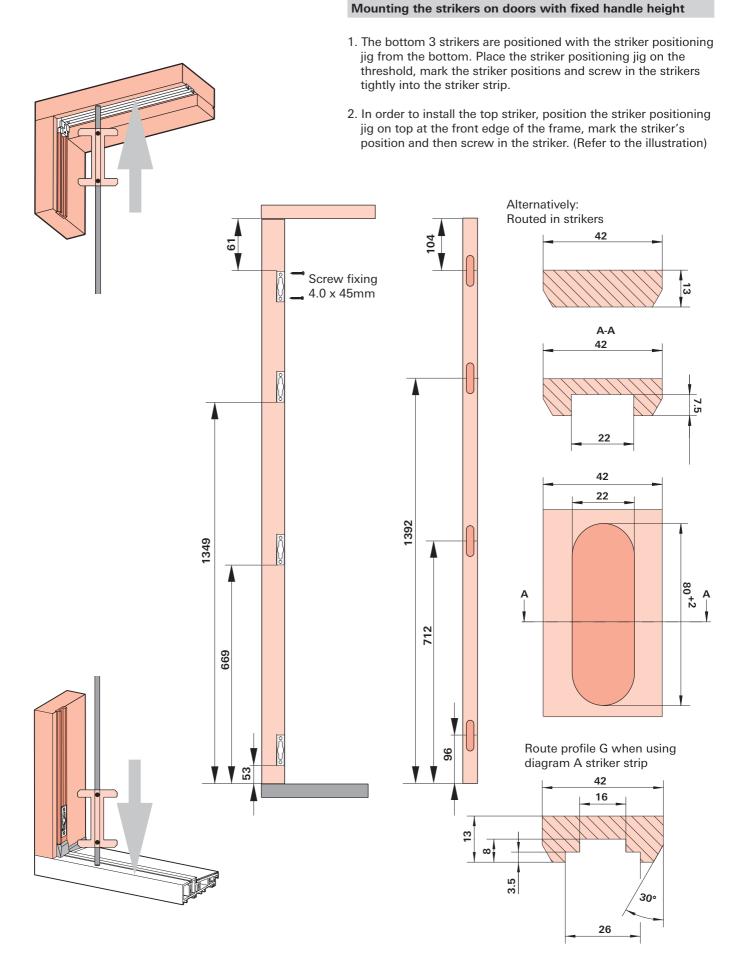
### Installation of frame components

- 1. Top gasket block to be glued into the frame corner using silicone. Afterwards install the one-pieced striker strip onto the gasket block.
- 2. Glue in the bottom gasket block using silicone.
- 3. Install the striker plates for the guide track in the frame. Position and fix the first striker plate flush with the top gasket block. Install the remaining striker plates in accordance with the distances shown above.
- 4. Crop and clip on the guide tracks.Length of guide track = F.I.W. minus 14mm (F.I.W. = Frame Internal Width)

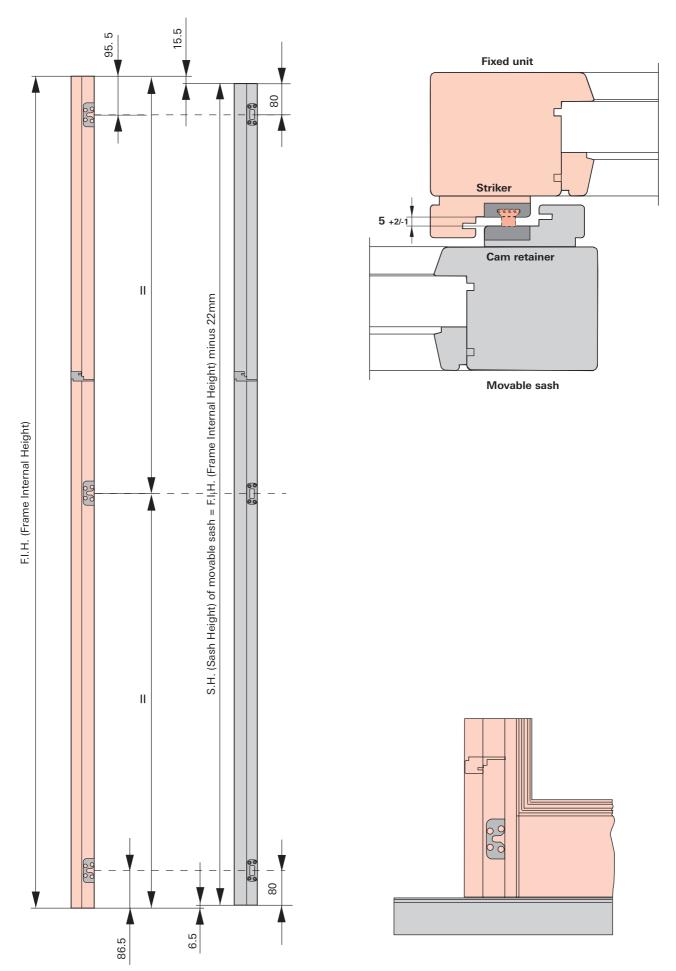
**Mullion gaskets** 





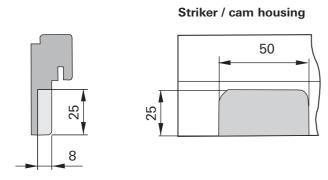


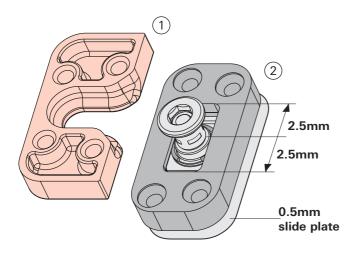
**Centre-closer installation** 





### **Routing dimensions**





Gasket-compression adjustment +2mm / -1mm

**Patio Life gasket-compression adjustable centre-closer** Suitable for burglary-resistance grade 2 (WK2)

(1) Patio Life security striker

VIIIIIIIIIIIIIII

(2) Patio Life housing with movable cam

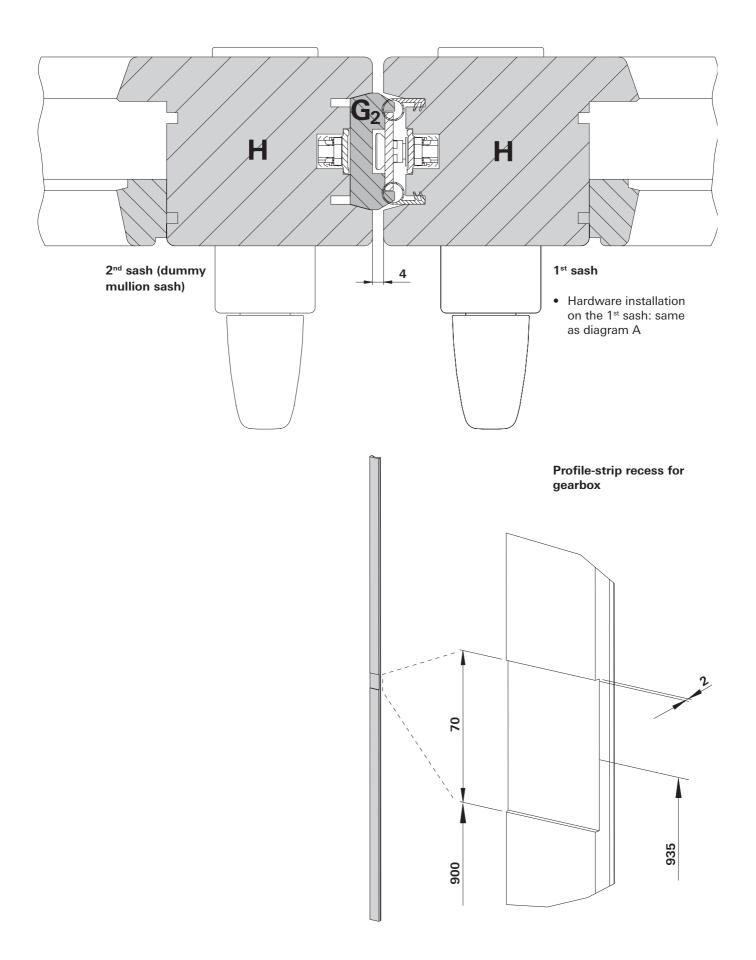
Screw fixing

4.0 x 45mm

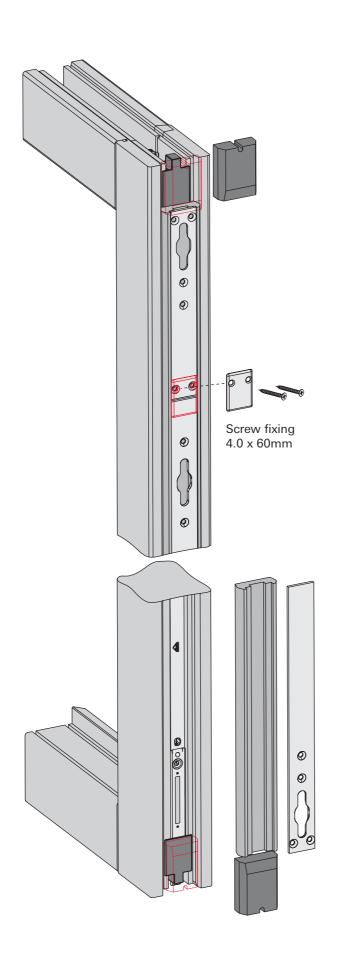
Adjusting tool for centre-closers

Material no.: 382 234

Diagram C – Sash-Installation preparation







### Mounting the 2<sup>nd</sup> sash (sash with floating mullion)

- Screw the bogies and horizontal guiding components in the 47mm groove.
  Note: Do not screw the espagnolette side yet.
- 2. Cut the espagnolette to size and insert the corner components on the top and bottom.
- 3. Cut the profile strip to size (sash height minus 96mm) and route the recess for the gearbox (refer to the illustration).
- 4. Cut the bottom one-piece striker strip to size (sash height minus 300mm), if the sash height is less than 2270mm. Cut the bottom one-piece striker strip to size (sash height minus 700mm), if the sash height is larger than 2270mm.
- 5. Position the top and bottom one-piece striker-strip on the profile strip, predrill and screw the one-piece striker strip to the profile strip through the espagnolette.
- 6. Mount the faceplate flap.
- 7. Fix the top and bottom gasket block with silicone on the guide bracket.
- 8. Use the one-piece striker strip (374 756) on sash heights <2270mm, use the top one-piece striker strip 600mm (441 965) on sash height >2271mm.

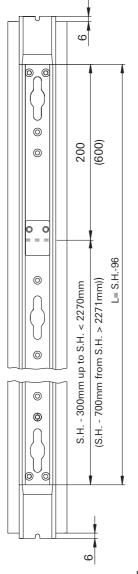
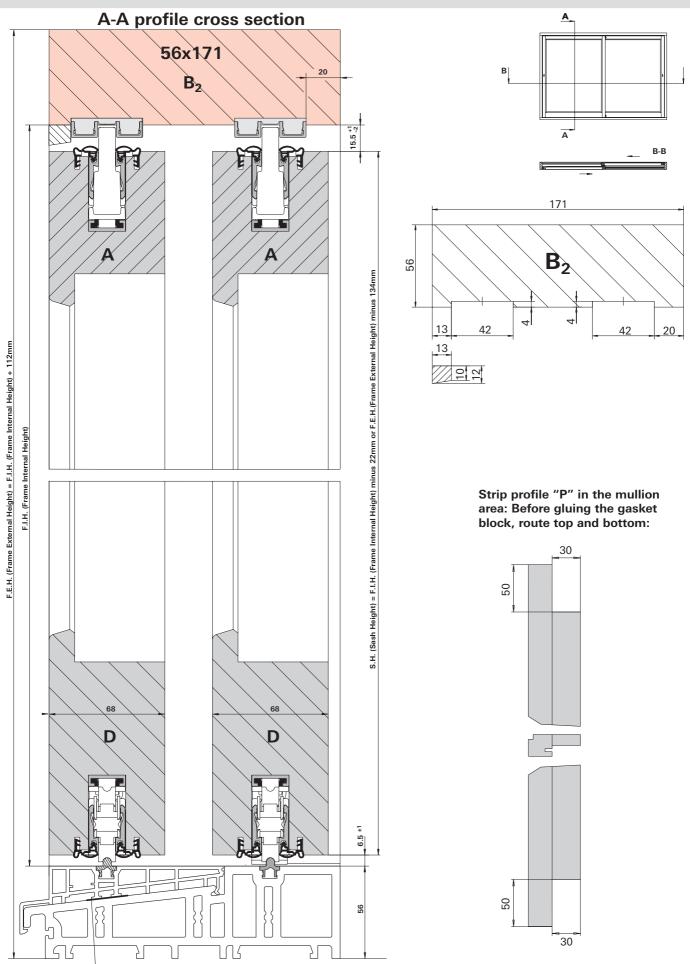


Diagram D – Sash-Installation preparation



Reinforcement sheeting for diagram D, material no. 473 230



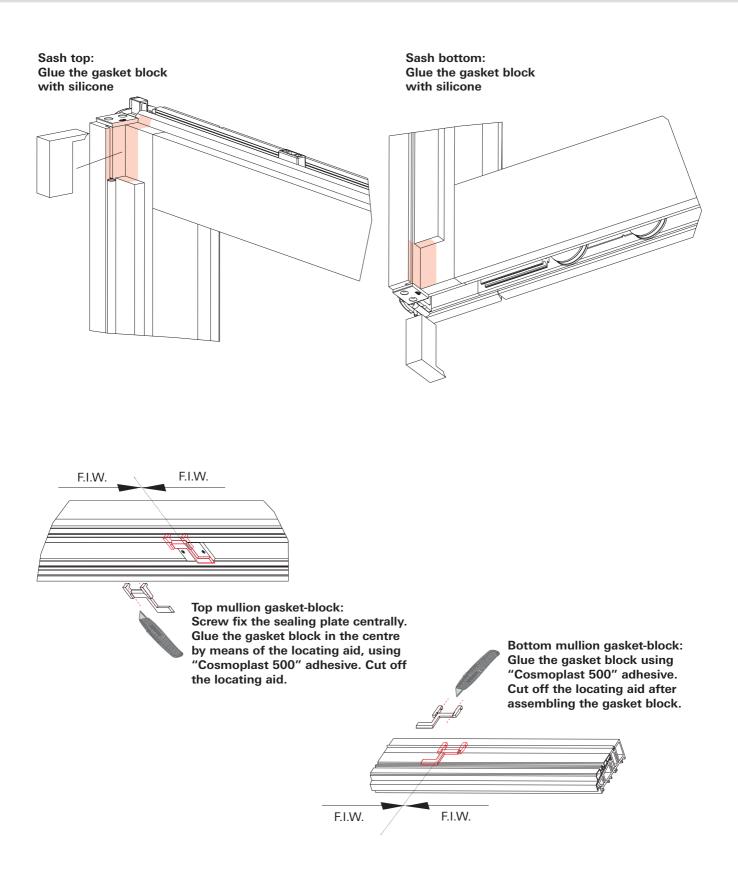
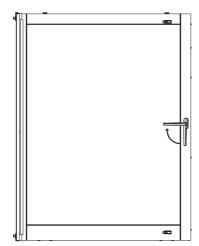
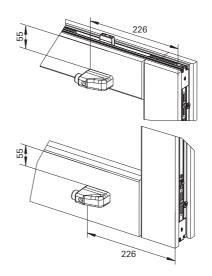
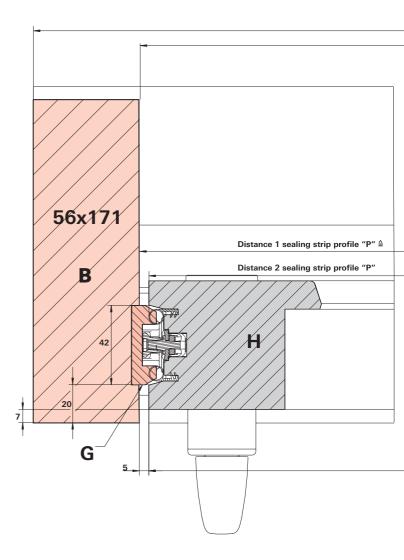


Diagram D – Sash-Installation preparation

Mount the end-stops on both sashes.



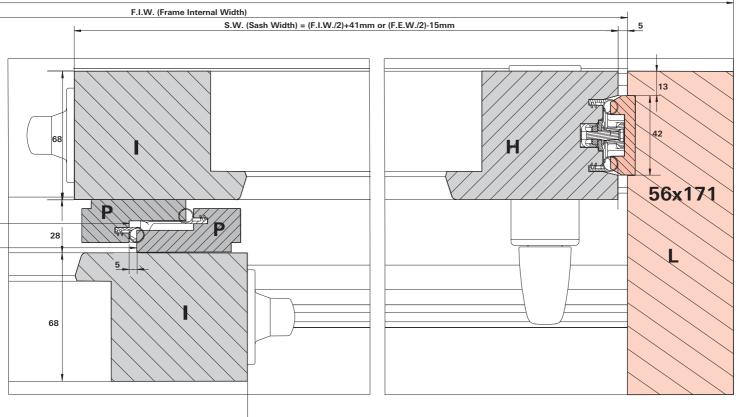






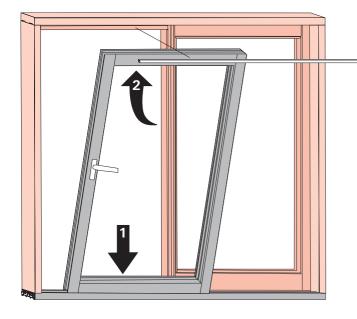
## **B-B** profile cross section

F.E.W. (Frame External Width) = F.I.W. (Frame Internal Width) + 2x56mm



S.W. (Sash Width) = (F.I.W./2)+41mm or (F.E.W./2)-15mm

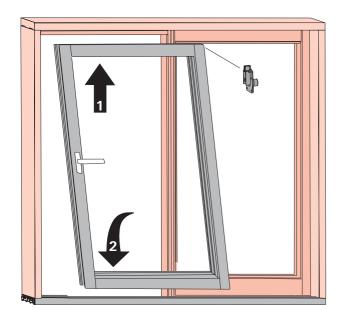
Hinging and unhinging the sash



### Version 1

Hinging the door on the bottom first: Ideal for large and/or heavy doors.

- Remove the front top guide-track from the frame.
- Move the handle into the "sliding" position.
- Place the sash with the rollers on the roller track.
- Position the sash with adapters against the top rear guide track, and then clip in the front guide track.
  It may be necessary to move the sash for this purpose, so that the guide track engages into the striker plates.



### Version 2

Hinging the door on the top first: Ideal for standard doors.

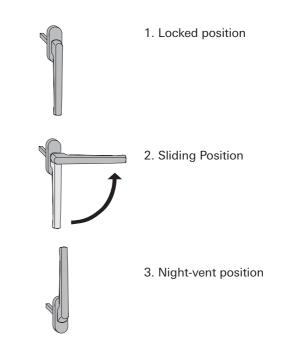
- Do not install the top stop plate yet.
- Move the handle into the "sliding" position.
- Push the sash with adapters between the two top guide tracks, then position the sash on the bottom via the roller track and place the rollers on the roller track.
- The stop plate can now be screwed on.

## **Roto Patio Life** Maintenance and operating information

Your window / balcony door has been equipped with high-quality Roto Patio Life hardware. In order to ensure perfect permanent hardware operation, the following maintenance operations and/or inspections should be carried out:

- Free all hardware components from lime, cement and mortar splashes to prevent malfunctions due to obstruction.
  The bottom roller track must always be kept clean.
- Oil or grease all movable parts and all locking points at least once a year.
  Use only acid-free oil or grease! For example; Roto material number 457 464!
- Adjusting sash (gasket) compression: By adjusting the cams, the gasket-compression can be changed.

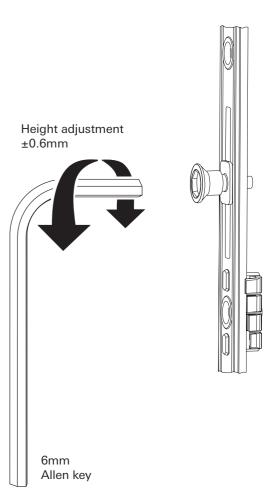
## Patio Life hardware adjustments are only to be carried out by a specialist company!



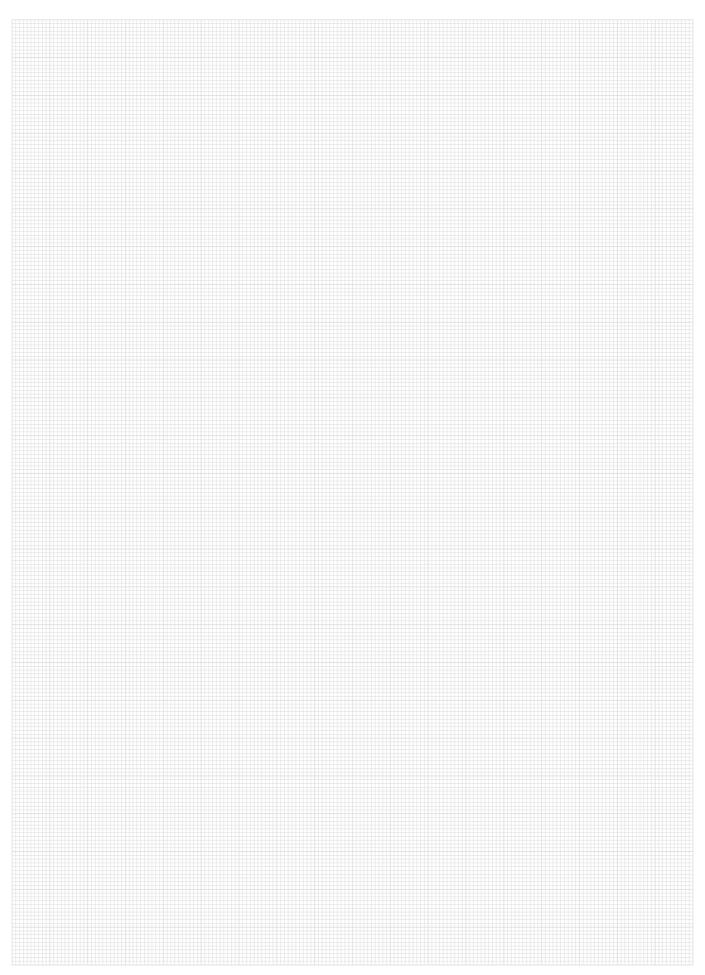


### Please note:

Particular attention must be given while closing the Patio Life sliding door; ensure that no limbs are crushed between the frame and sash. Particularly children and domestic animals are at risk of being crushed.









## COMPETENCE WITHOUT BOUNDARIES

#### International subsidiaries:

#### Germany

Roto Frank AG Velbert factory Eintrachtstrasse 95 42551 Velbert Tel +49 2051 203-1 Fax +49 2051 203-251

#### Italy

Roto Frank Italia S.r.l. Via delle Industrie, 17 20040 Caponago (MI) Tel +39 02 95742024 Eax +39 02 95744022 E-Mail info@roto-frank.it

#### Russia

Roto Frank AG Kosmodamianskaja nab. 52, Geb 1 113054 Moscow Tel +7 095 96124-27/-30 Fax +7 095 96124-31 E-Mail info@roto.ru

#### USA

Roto Frank of America, Inc. 14 Inspiration Lane Chester, CT 06412 Tel +1 860 526 4996 Fax +1 860 526 8390 E-Mail info.usa@roto-frank.com

## Belgium

S.A. Roto Frank N.V. Rue du Bosquet 1 Zoning Industriel II 1400 Nivelles Tel +32 67 894140 Fax +32 67 841456 E-Mail info.bel@roto.be

#### Netherlands

Roto Frank B.V. Dorpsstraat 134 3991 BZ Houten Tel +31 30 6385550 Fax +31 30 6342840 E-Mail info.nl@roto-frank.com

Switzerland Roto Frank AG Bernstrasse 390 8953 Dietikon Tel +41 44 7458555 Fax +41 44 7458556 E-Mail info.ch@roto-frank.com

#### **Peoples Republic of China**

Beijing Roto Frank Building Materials Co., Ltd. Xindudongzhan, East of Xisanqi, Haidian District 100 096, Beijing Tel +86 10 82950045/46 Fax +86 10 82920115 E-Mail info.china@roto-frank.com

#### Austria

Roto Frank Austria GmbH Lapp-Finze-Strasse 21 8401 Kalsdorf Tel +43 3135 504-0 Fax +43 3135 52727

Spain Roto Frank S.A. C/ Ca n'Esteve No. 4B 08160 Montmeló (Barcelona) Tel +34 93 5689048 Fax +34 93 5689092 E-Mail info.sp@roto-frank.com

#### France

Roto Frank Ferrures S.A.S. 42 rue de Longchamp 57502 Saint Avold Cédex Tel +33 3 87292440 Fax +33 3 87292444

### Poland

Roto Frank Okucia Budowlane Sp z oo Wal Miedzeszynski 402 03-994 Warsaw Tel +48 22 87216-00/-04 Fax +48 22 87216-11 E-Mail info.pl@roto-frank.com

Turkey Roto Frank Ltd. Sti. Alemdağ Cad. Site Yolu No. 10 34768 Ümraniye - Istanbul Tel +90 216 6340901 Fax +90 216 6341578

E-Mail info.tr@roto-frank.com

#### Great Britain

Roto Frank Ltd. Swift Point Rugby, CV21 1QH Tel +44 1788 558600 Fax +44 1788 558605 E-Mail info.uk@roto-frank.com

#### Romania

Roto Romania S.r.l. Com. Pantelimon, Bd. Biruintei, Nr. 102 Jud. Ilfov, 077145 Tel: +40 21 3007400 Fax: +40 21 3007401 E-Mail info.ro@roto-frank.com

### Hungary

Roto Elzett Vasalatkereskedelmi Kft. 9461 Lövö Kossuth u. 25 Tel +36 99 534-400 Fax +36 99 367-132 E-Mail info.hun@roto-frank.com

Prunty)

### International representatives:

#### Estonia

Roto Frank Ehitusrautised OÜ Peterburi tee 81-512 11415 Tallinn Tel +372 632 6980 Fax +372 632 6980 E-Mail roto@uninet.ee

#### Slovenia

Kovinoplastika Lož, d.d. Lož, Cesta 19, oktobra 57 1386 Stari trg pri Ložu Tel +386 1 7095100 Fax +386 1 7058466 E-Mail info@kovinoplastika.si

#### Greece

**Eurotechnica** Industrial area of Thessalonica A7 O.T. 18 Nr. 34 57022 Sindos/P O Box 198 Tel +30 2 310 796950 Fax +30 2 310 796783 E-Mail info@eurotechnica.gr

59231 Nové Město na Moravě

E-Mail nove.mesto@roto-nm.cz

## Latvia

Roto Frank pārstāvniecība Latvijā Vidus prosp. 59 2010 Jūrmala Tel +371 7752394 Fax +371 7752394 E-Mail uldis.kreslins@rotofrank.lv E-Mail rotofrank@takas.lt

#### Ukraine

Roto Frank AG ul. Marina Raskowoj, 17-612 02002 Kiev Tel/Fax +380 44 5010418 Tel/Fax +380 44 5685396 E-Mail rotokiev@adamant.net Lithuania

Roto Frank Atstovybÿe Lietuvoie Verkiu 34-200 LT 08221 Vilnius Tel +370 2 700751 Fax +370 2 700746

### Belarus

Roto Frank AG Str. R. Luxemburg 220036 Minsk Tel +375 17 2561911 Fax +375 17 2561912 E-Mail rotominsk@tut.by

Slovenia Roto Lož d.o.o.

Cesta 19. oktobra 52 1386 Stari trg pri Ložu Tel +386 1 7095181 Fax +386 1 7095190

Roto Frank AG - headquarters Stuttgarter Strasse 145-149 • 70771 Leinfelden-Echterdingen • Germany Telephone: +49 711 7598-0 • Telefax: +49 711 7598-253 info@roto-frank.com • www.roto-frank.com

**Czech Republic** 

Roto Nové Město

Křičkova ulice 373

Tel +420 566 652411

Fax +420 566 652413



WE OPEN SPACE

