

WE OPEN ROOMS

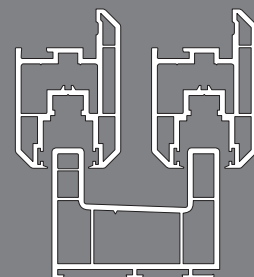


Roto In-line Sliding

In-line Sliding Hardware

Parts Brochure

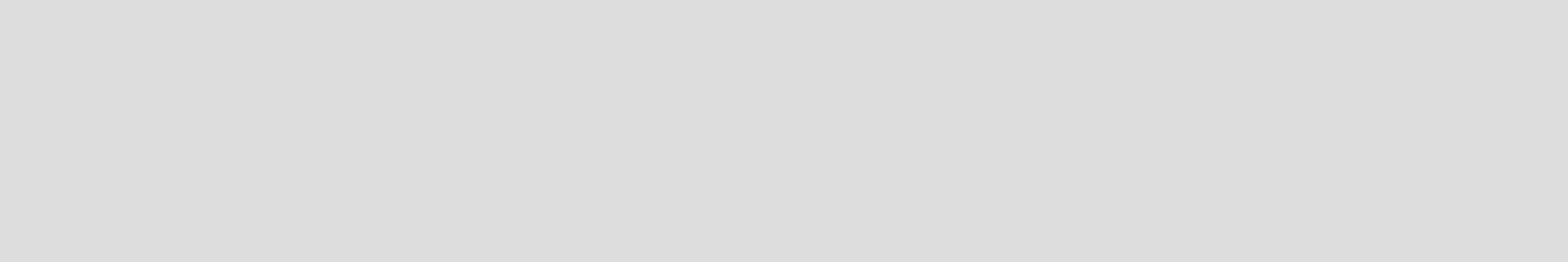
for Windows and Doors





Index

Product Liability Guidelines	5
Hardware Overview	6 – 9
In-line Sliding Espagnolettes	
General Design Description	11
Locking System with Adjustable Cams – Order & Technical Details	12 & 13
600 Locking system with Hooks – Order & Technical Details	14 & 15
1800 Non-Locking System – Order & Technical Details	16 & 17
1800 Locking System – Order & Technical Details	18 & 19
Routing Details	20
In-line Sliding Shootbolt Espagnolettes	
General Design Description	21
RA 2000	
Sliding Window Extensions with 5 mm Hooks – Order & Technical Details	22 & 23
Sliding Window Extensions with 14 mm Hooks – Order & Technical Details	24 & 25
Gearbox – Technical Details	26
Gearbox – Routing Details	27
RAD 2000	
Sliding Door Extensions with 5 mm Hooks – Order & Technical Details	28 & 29
Sliding Door Extensions with Claws – Order & Technical Details	30 & 31
Gearbox – Technical Details	32
Gearbox – Routing Details	33
In-line Rollers	
Specification	35
Fixed Height Single Rollers	36
Adjustable Tandem Rollers	37
Buffer Stop – Order & Technical Details	38
Handles	
RAD 2000 Patio Handles	40 – 42
Pop-up Handles	44 – 45
Profile Related Guide to Hardware & Strikers	45 – 47



In-line Sliding

Product Liability & Warranty

1. Product information and appropriate use

According to this definition, fastening systems are fittings for windows/doors made of timber, PVC-u or aluminium, and corresponding combinations of materials, the principal function of which is to lock windows/doors.

Locking is understood to mean holding a window/door closed in such a way that it cannot be opened by being pulled or pushed, but can be opened in a straightforward manner, such as by the operation of a handle.

All locking elements engage into corresponding recesses in the window/door frame, or in locking plates, etc.

All locking elements are moved by the operation of the handle for locking and unlocking.

The fastening systems are not designed to tolerate variations in form and variations in the seal, arising from temperature differences or modifications to the construction.

The overall fitting (fastening system) in each case must be assembled from original Roto components only. Using components which are not part of the system may result in damage which excludes liability.

In order to ensure appropriate use, correct combination with permissible fittings and means of locking (such as keys, cylinders) and accessories (such as locking plates) during assembly, fitting must be made in accordance with installation instructions or with accepted DIN standards, including those for maintenance.

Special fittings are required for windows/doors in humid rooms and for use in environments with aggressive, corrosive air content.

Binding legal provisions must be observed.

2. Misuse

The following cases in particular constitute misuse of fastening systems – i.e. inappropriate use of the product:

- if normal use is prevented by the introduction of other and/or unsuitable objects into the fastening system or into the locking plate.
- if obstructions are introduced into the opening area and thus prevent normal use.
- if the fastening system or locking plate are interfered or tampered with, with a resultant change to the construction, to the mode of operation or to the function.
- if the exposed locking elements are assembled or worked at a later stage, e.g. repainted, in a manner which has an adverse effect on their operation.
- if inappropriate loads, exceeding the normal force of a hand are brought to bear upon the handle linkage.
- if non-associated locking means, such as locking equipment with different dimensions or which is inserted incorrectly, are used.
- if tools or aids which have a leverage effect are used to operate the fastening system.
- if additional loads are imposed upon the window/door.

3. Product performance

Where product performance is not set down in concrete terms in our catalogues and promotional literature, the requirements to be imposed upon the individual fastening systems must be agreed with us.

The suitability of fastening systems for use is dependent upon, amongst other things, the frequency of operation, the mode of operation, environmental influences and maintenance.

Assembly of window/door fittings.

The manufacturer's specifications pertaining to the assembly of window/door fittings (such as the arrangement of handles or additional elements of the fitting) are binding.

4. Product maintenance

Security-relevant elements of fittings should be tested for stability and checked for wear on a regular basis. If required, the fixing screws should be tightened or components should be replaced.

Furthermore, the following maintenance should be carried out at least once a year – or more frequently, depending upon the demands imposed upon the equipment:

- all moving parts and all locking points of the fastening system should be greased and tested to ensure that they are functioning properly.
- only cleaning materials which do not have an adverse effect upon the anti-corrosion treatment on the components of the fitting should be used.

Work on the fastening systems and on the associated components of the fitting, or replacement of components, should be carried out by specialist enterprises only.

5. Obligations to provide information and instruction

The following documentation is available to designers, to specialist suppliers, to processing enterprises, to clients and to users for compliance with the obligations to provide information and instruction and for maintenance work in accordance with the "Product Liability Act":

- design documentation
- catalogues
- works drawings
- maintenance and servicing instructions

In order to ensure that fastening systems for windows/doors operate effectively:

- designers are obliged to request product information from the manufacturer and to observe that information.
- specialist suppliers are obliged to observe product information and, in particular, to request works drawings, maintenance and servicing instructions from the manufacturer and to supply these to the processing enterprises.
- processing enterprises are obliged to observe the product information and in particular to request maintenance and servicing instructions as well as operating instructions from the manufacturer and to pass these on to clients and users.

6. Use of related fittings

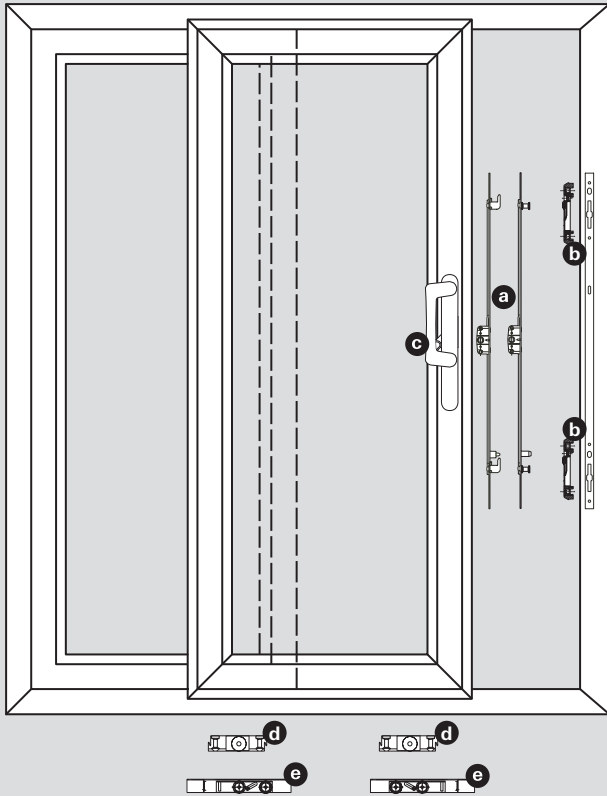
In terms of product information and proper use, misuse, performance, product maintenance and obligations to provide information and instruction, the variants possible within the individual fastening systems should be treated as appropriate, depending upon the features in question.

7. Information on surface finish for fittings

Fittings are available in gold (RotoNor) or silver (RotoSil) finishes.

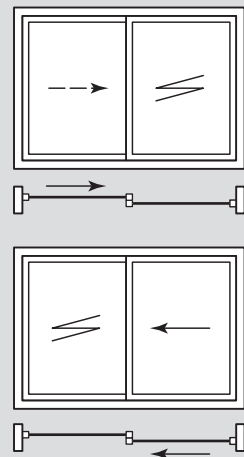
In-line Sliding

Hardware Overview

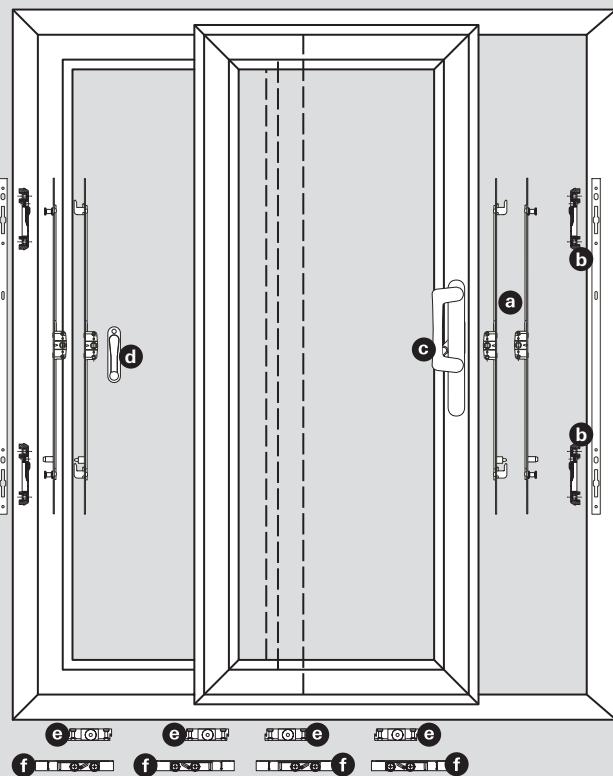


In-line Sliding espagnolettes pages 11 – 15

- a** In-line Sliding espagnolettes for windows & doors
- b** Strikers (one piece or individual)
- c** Handle
- d** Fixed height, single rollers
- e** Adjustable, tandem rollers

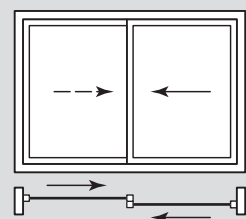


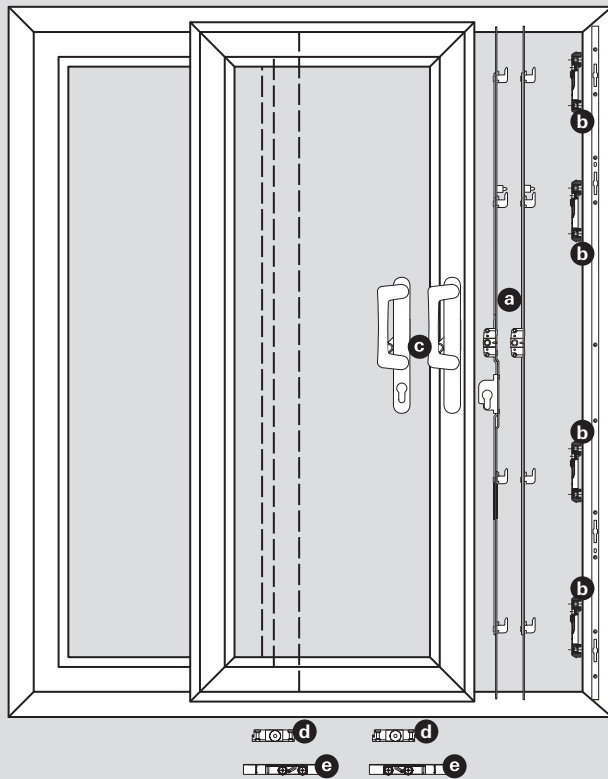
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In-line Sliding espagnolettes pages 11 – 15

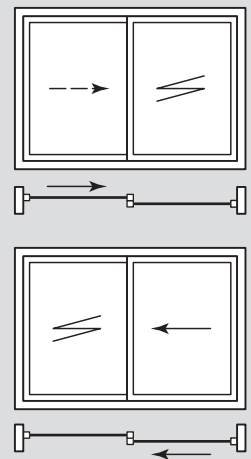
- a** In-line Sliding espagnolettes for windows & doors
- b** Strikers (one piece or individual)
- c** Handle
- d** Pop-up handle
- e** Fixed height, single rollers
- f** Adjustable, tandem rollers



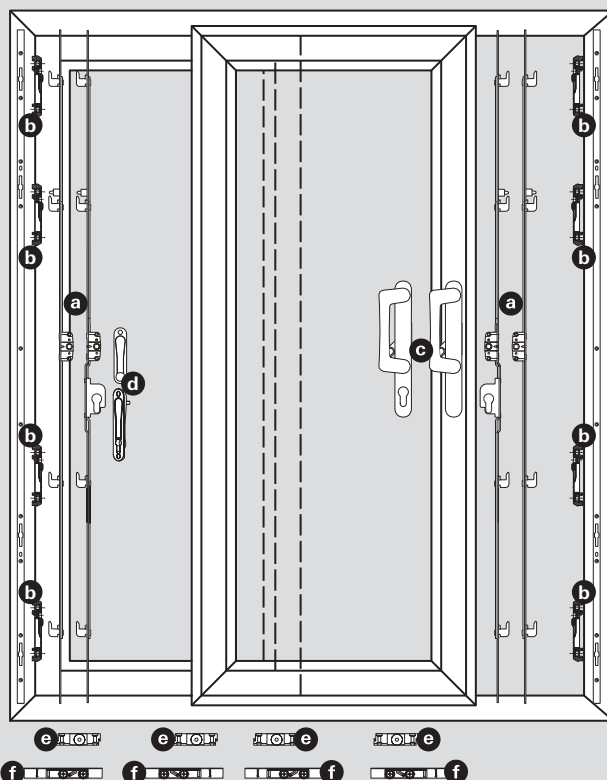


In-line Sliding espagnolettes (1800) pages 16 – 20

- a** In-line Sliding espagnolettes for doors (locking & non-locking)
- b** Strikers (one piece or individual)
- c** Handles (locking & non-locking)
- d** Fixed height, single rollers
- e** Adjustable, tandem rollers

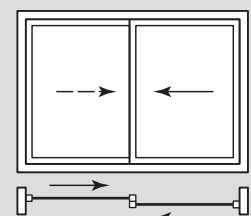


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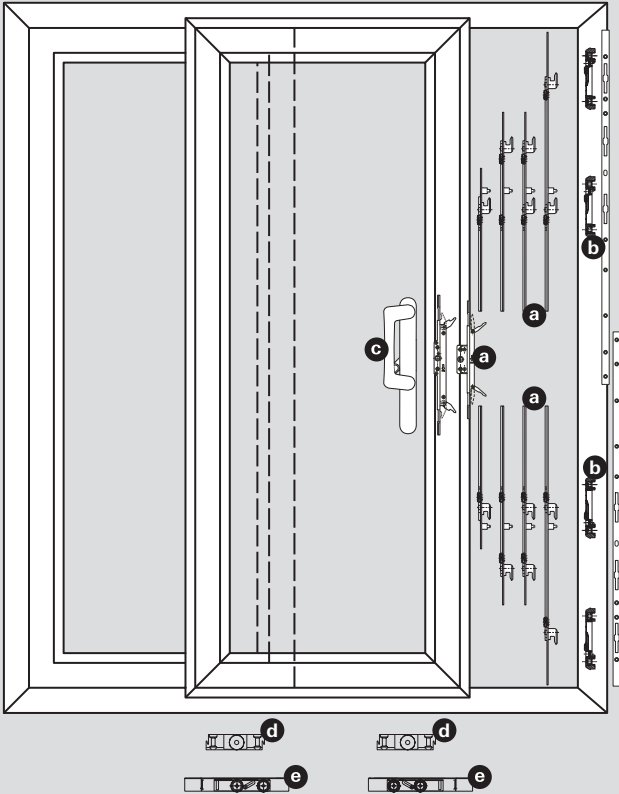


In-line Sliding espagnolettes (1800) pages 16 – 20

- a** In-line Sliding espagnolettes for doors (locking & non-locking)
- b** Strikers (one piece or individual)
- c** Handles (locking & non-locking)
- d** Pop-up handle (locking & non-locking)
- e** Fixed height, single rollers
- f** Adjustable, tandem rollers



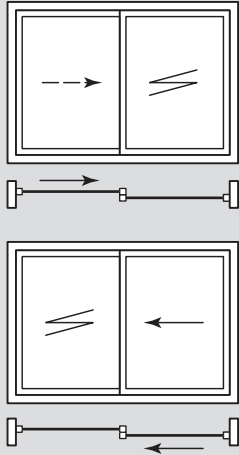
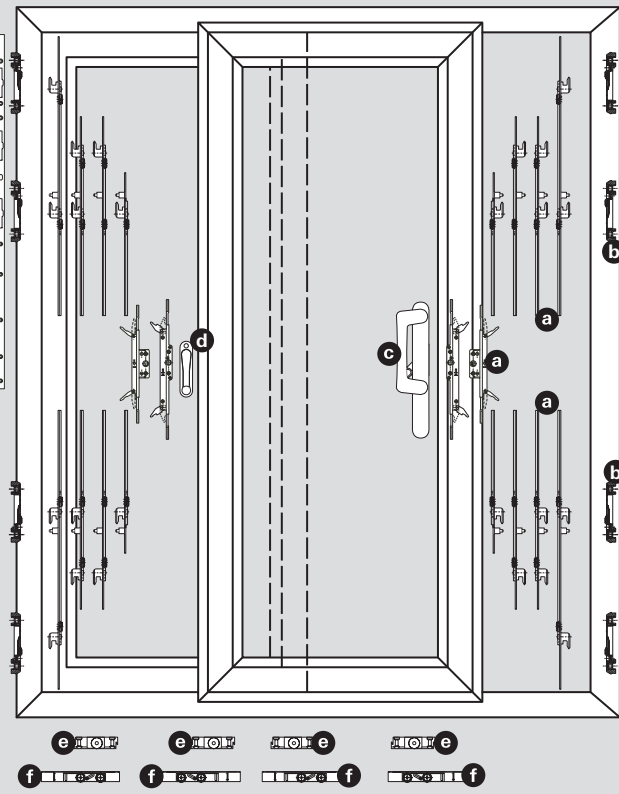
In-line Sliding Hardware Overview



In-line Sliding – RA 2000 pages 21 – 27

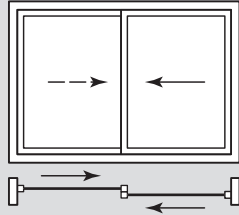
- a** RA 2000 gearboxes & extensions (shown with 14 mm hooks)
- b** Strikers (two piece or individual)
- c** Non-locking handle
- d** Fixed height, single rollers
- e** Adjustable, tandem rollers

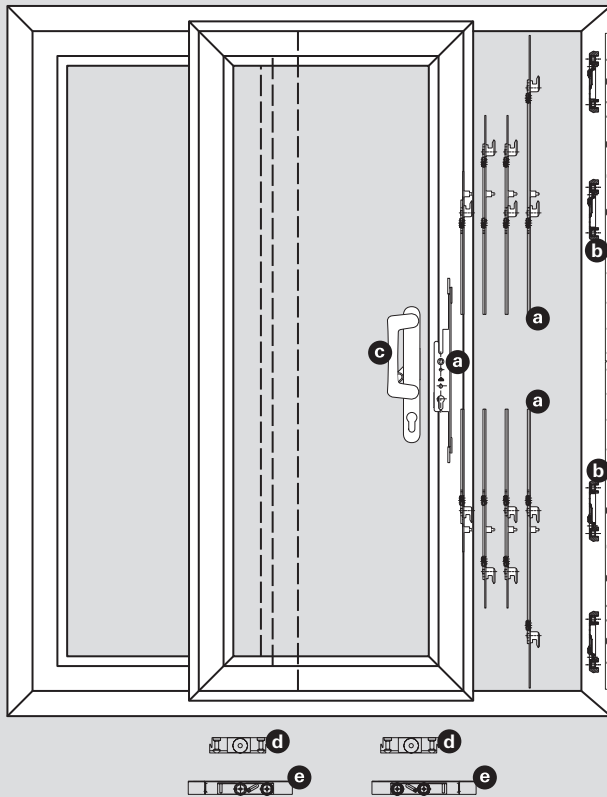
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In-line Sliding – RA 2000 pages 21 – 27

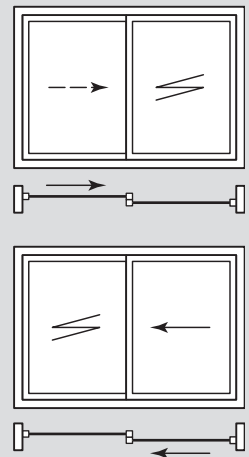
- a** RA 2000 gearboxes & extensions (shown with 14 mm hooks)
- b** Strikers (two piece or individual)
- c** Non-locking handle
- d** Pop-up handle
- e** Fixed height, single rollers
- f** Adjustable, tandem rollers



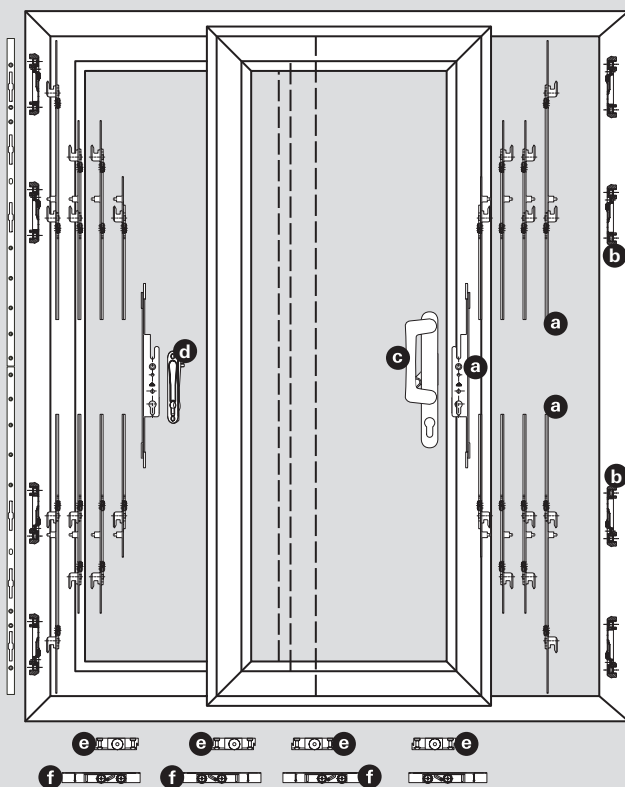


In-line Sliding – RAD 2000 pages 28 – 33

- a** RAD 2000 gearbox & extensions (shown with 14 mm hooks)
- b** Strikers (two piece or individual)
- c** RAD Locking handle
- d** Fixed height, single rollers
- e** Adjustable, tandem rollers

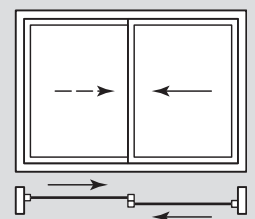


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In-line Sliding – RAD 2000 pages 28 – 33

- a** RAD 2000 gearbox & extensions (shown with 14 mm hooks)
- b** Strikers (two piece or individual)
- c** RAD Locking handle
- d** Pop-up handle with cylinder
- e** Fixed height, single rollers
- f** Adjustable, tandem rollers



In-line Sliding Espagnolettes

General Design Description

Sliding Window Espagnolettes

These espagnolettes provide solutions for in-line sliding windows. They are based on the same design as the standard espagnolette for outward opening windows, but incorporate additional elements, such as an anti lift pin and hooks.

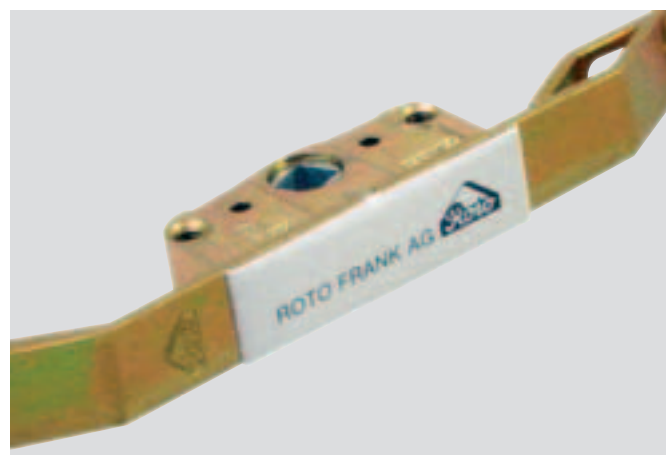
Also available is a range of one piece extensions which are 600 mm long and incorporate an anti lift pin and two hooks of varying size.

- 7 or 17 mm backsets available
- Faceplate width 16 mm
- One piece lock assembly
- Four point security including adjustable mushroom cams and sliding hooks of varying sizes.
- Anti lift pin incorporated on all designs
- One piece or individual striker options
- All surfaces are coated with either a gold (RotoNor) or silver (RotoSil) finish.

Sliding Door Espagnolettes

- 17 mm backset
- Faceplate width 16 mm
- One piece lock assembly
- Four point security including 8 mm adjustable, mushroom cams, sliding hooks or claws.
- Anti lift pin incorporated on all designs
- One piece or individual striker options
- All surfaces are coated with either a gold (RotoNor) or silver (RotoSil) finish.

- A plastic "infoclip" is available to order for these products, which allows fabricators to include their contact details on the hardware.



In-line Sliding Espagnolettes

Locking System with Adjustable Cams

Order Details

17 mm backset espagnolette with adjustable cam & pin



17 mm backset, 8 mm adjustable cam & pin

Application range (mm)	Faceplate length (mm)	Packing quantity	No. of strikers	RotoNor Part number	RotoSil Part number
240 – 400	240	1000	2	298 102	–
400 – 600	400	700	2	298 103	–
600 – 800	600	720	2	298 104	–
800 – 1000	800	720	2	298 105	–
1000 – 1200	1000	720	3	298 106	–
1200 – 1800	1200	720	3	298 107	–

7 mm backset espagnolette with adjustable cam & pin



7 mm backset, 8 mm adjustable cam & pin

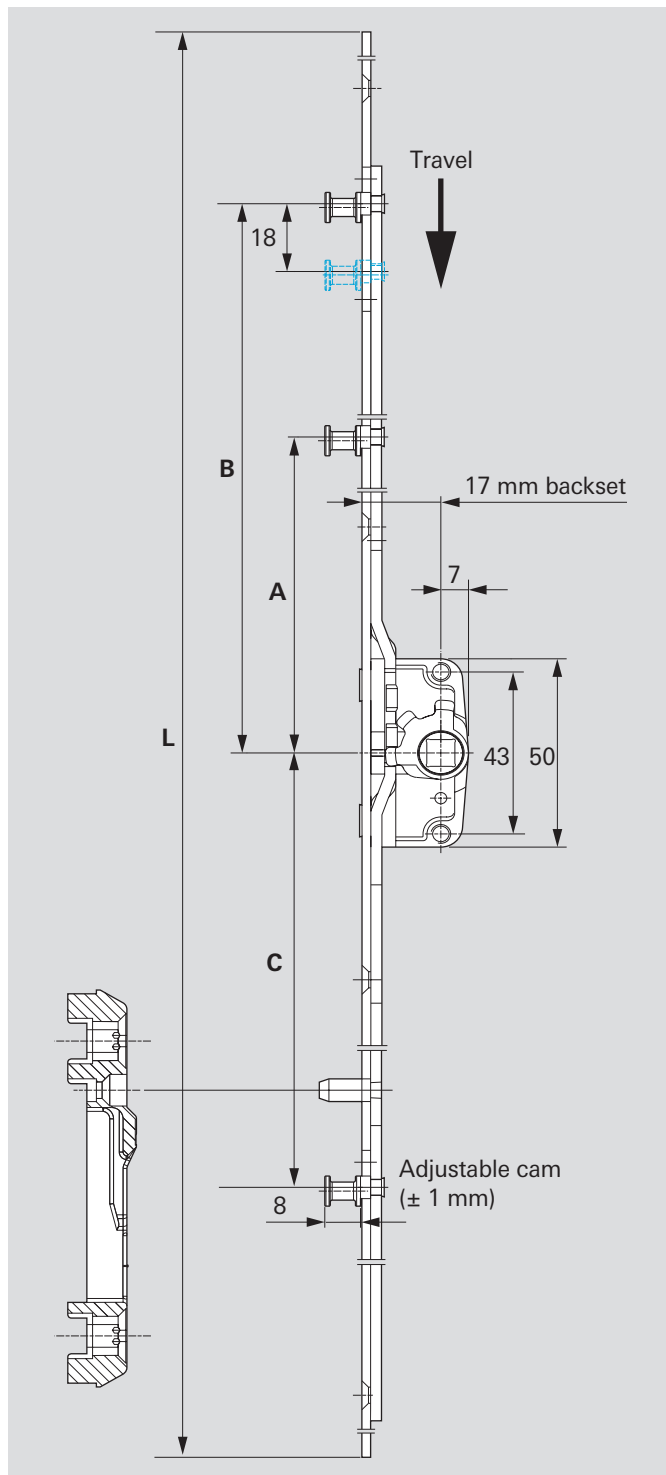
Application range (mm)	Faceplate length (mm)	Packing quantity	No. of strikers	RotoNor Part number	RotoSil Part number
400 – 600	400	700	2	309 753	329 051
600 – 800	600	720	2	309 754	329 052
800 – 1000	800	720	2	309 755	329 053
1000 – 1200	1000	720	3	309 756	329 054
1200 – 1800	1200	720	3	309 757	329 055

Locking System with Adjustable Cams

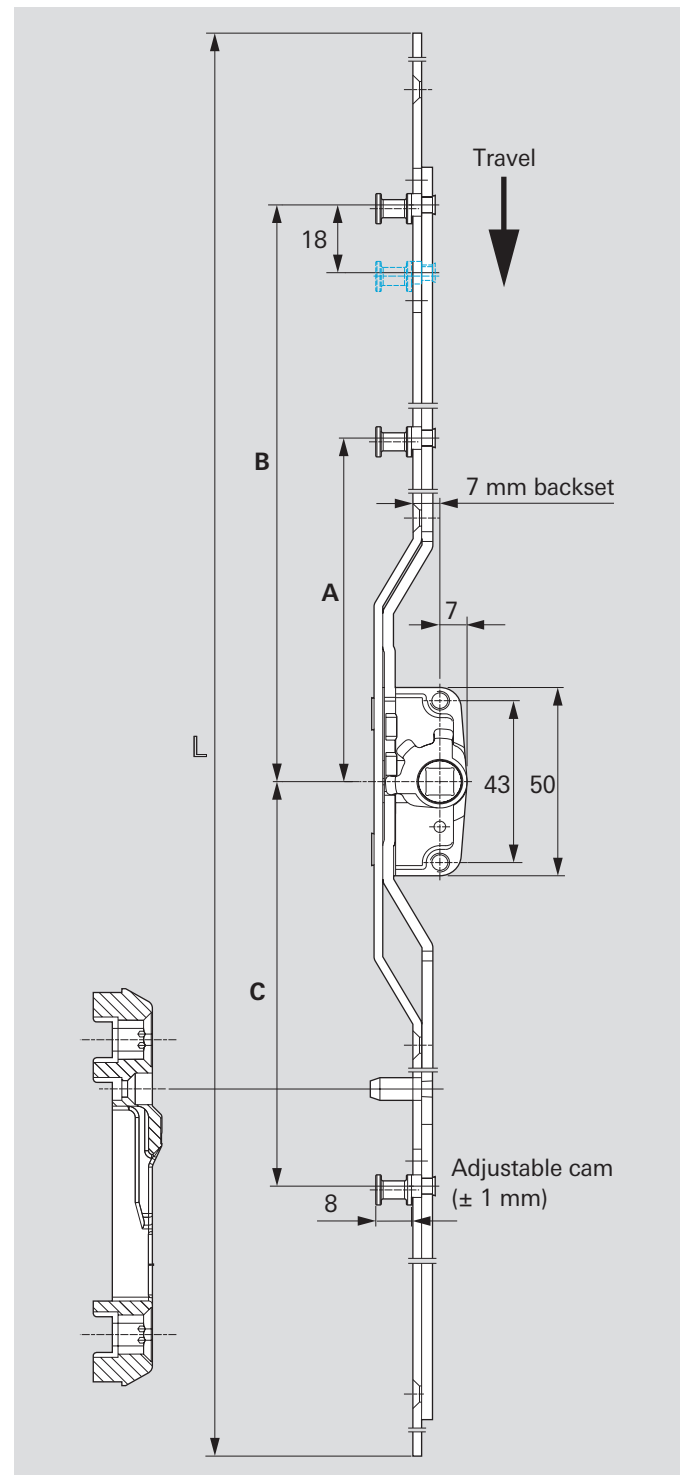
Technical Details



17 mm backset



7 mm backset



L	A	B	C
240 mm	without	88 mm	72 mm
400 mm	without	143 mm	127 mm
600 mm	without	243 mm	227 mm
800 mm	without	343 mm	327 mm
1000 mm	128 mm	443 mm	427 mm
1200 mm	128 mm	543 mm	527 mm

L	A	B	C
400 mm	without	143 mm	127 mm
600 mm	without	243 mm	227 mm
800 mm	without	343 mm	327 mm
1000 mm	128 mm	443 mm	427 mm
1200 mm	128 mm	543 mm	527 mm

In-line Sliding Espagnolettes

600 Locking System with Hooks

Order Details

17 mm backset espagnolette with 14 mm hooks

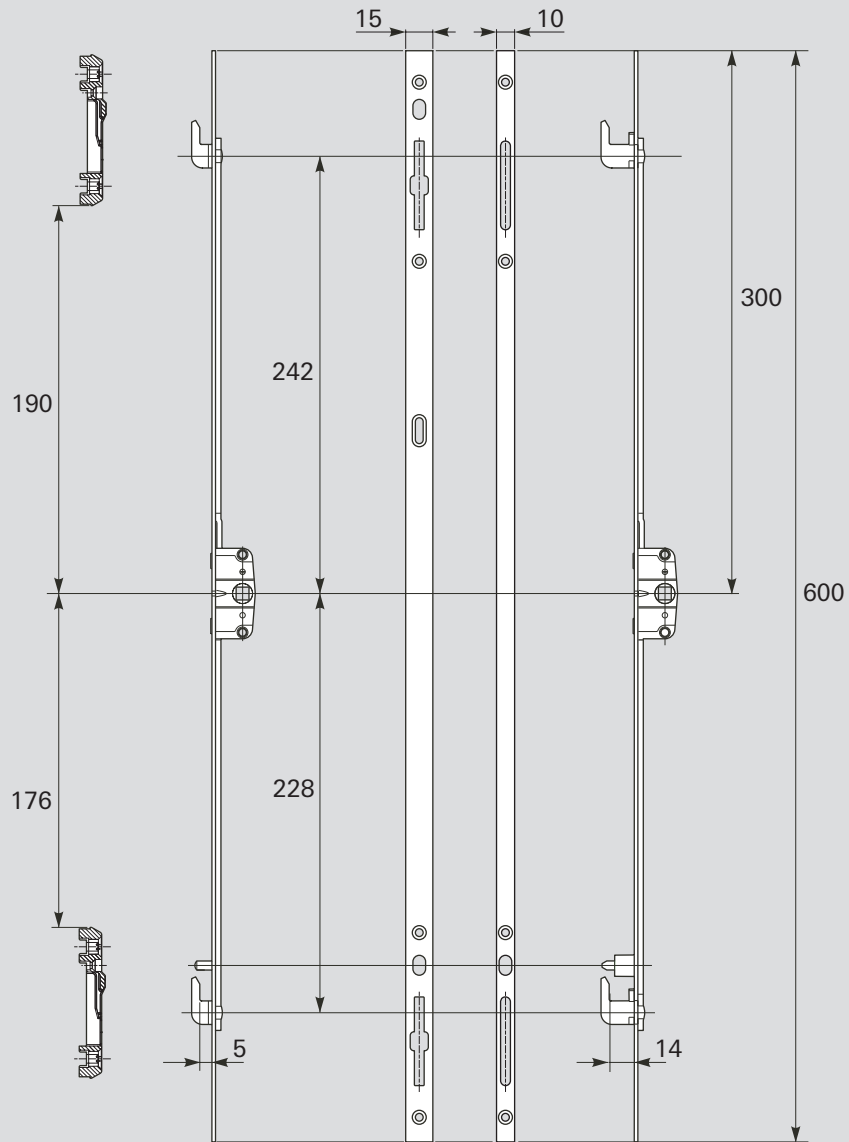


Faceplate length (mm)	Packing quantity	No. of strikers	RotoNor Part number	RotoSil Part number
17 mm backset & two 5 mm hooks				
600	600	2 or 1	320 353	328 932
17 mm backset & two 14 mm hooks				
600	600	1 piece	320 356	328 973

The one piece 600 mm striker can be used with either item but individual strikers can only be used with the 5 mm hooks.

Refer to table on pages 46 & 47

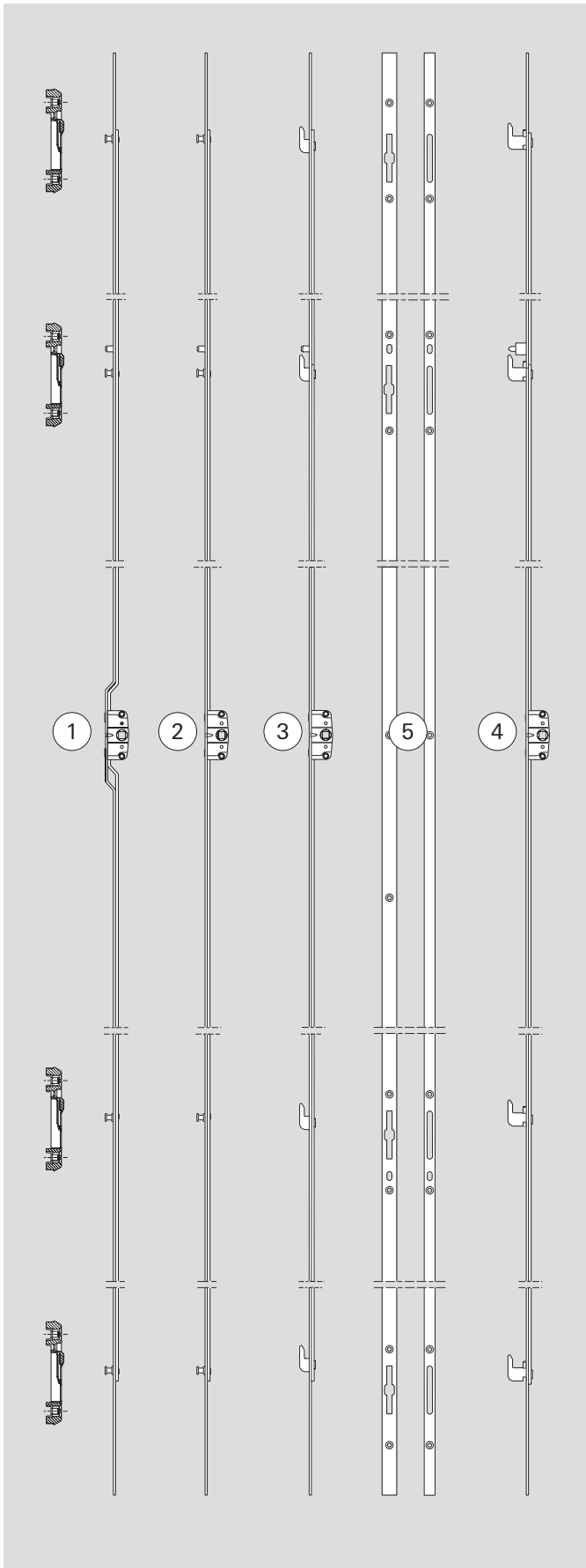
600 Locking System with Hooks Technical Details



In-line Sliding Espagnolettes

1800 Non-Locking System

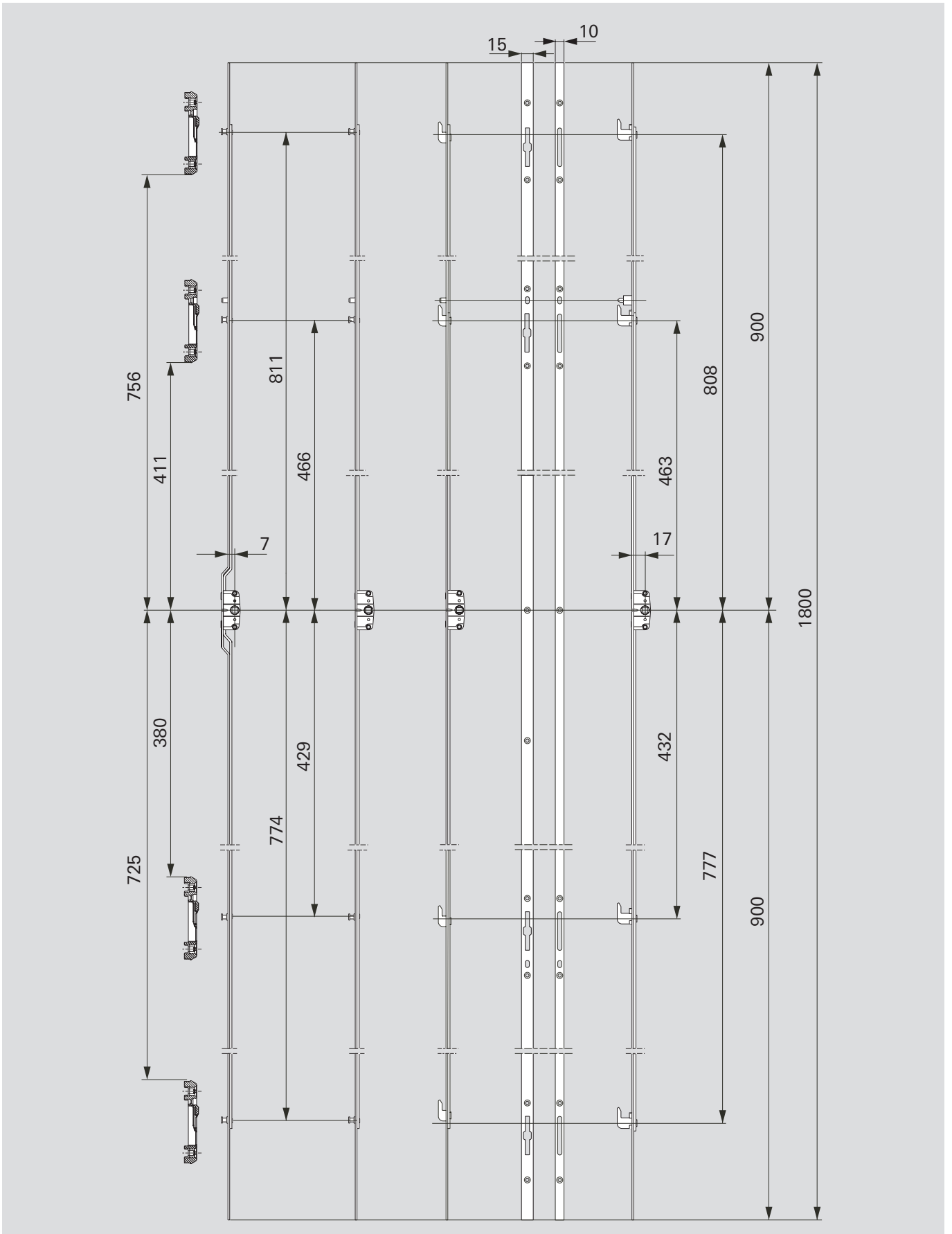
Order Details



	No. of strikers	RotoNor Part No.	RotoSil Part No.
Pos. 1	1800 espag. with four cams and a pin. (7 mm backset)		
	4	315 600	329 057
Pos. 2	1800 espag. with four cams and a pin. (17 mm backset)		
	4 or 1	315 601	328 974
Pos. 3	1800 espag. with four 5 mm hooks and a pin. (17 mm backset)		
	4 or 1	319 386	328 991
Pos. 4	1800 espag. with four 14 mm hooks and a pin. (17 mm backset)		
	1 piece	319 388	328 992
Pos. 5	One piece striker can be used with positions 2, 3 or 4.		

Individual strikers are also available for positions 1, 2 or 3. Refer to pages 46 & 47 for further information on strikers.

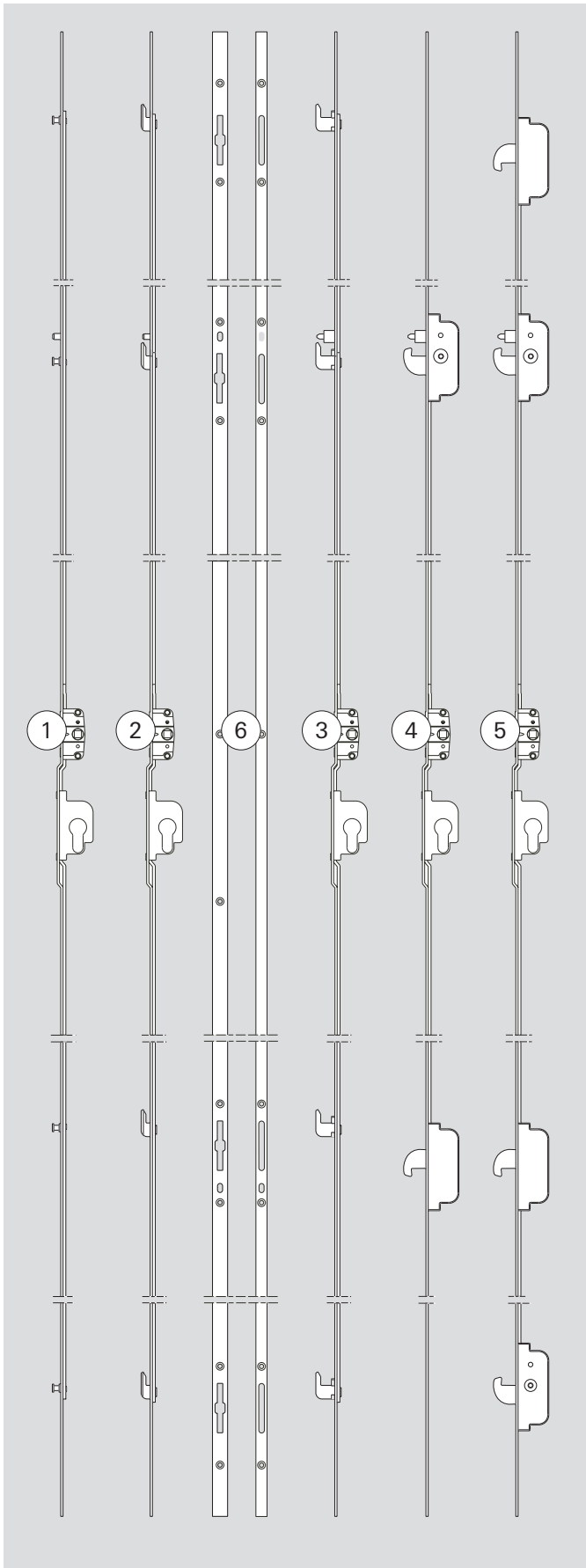
1800 Non-Locking System Technical Details



In-line Sliding Espagnolettes

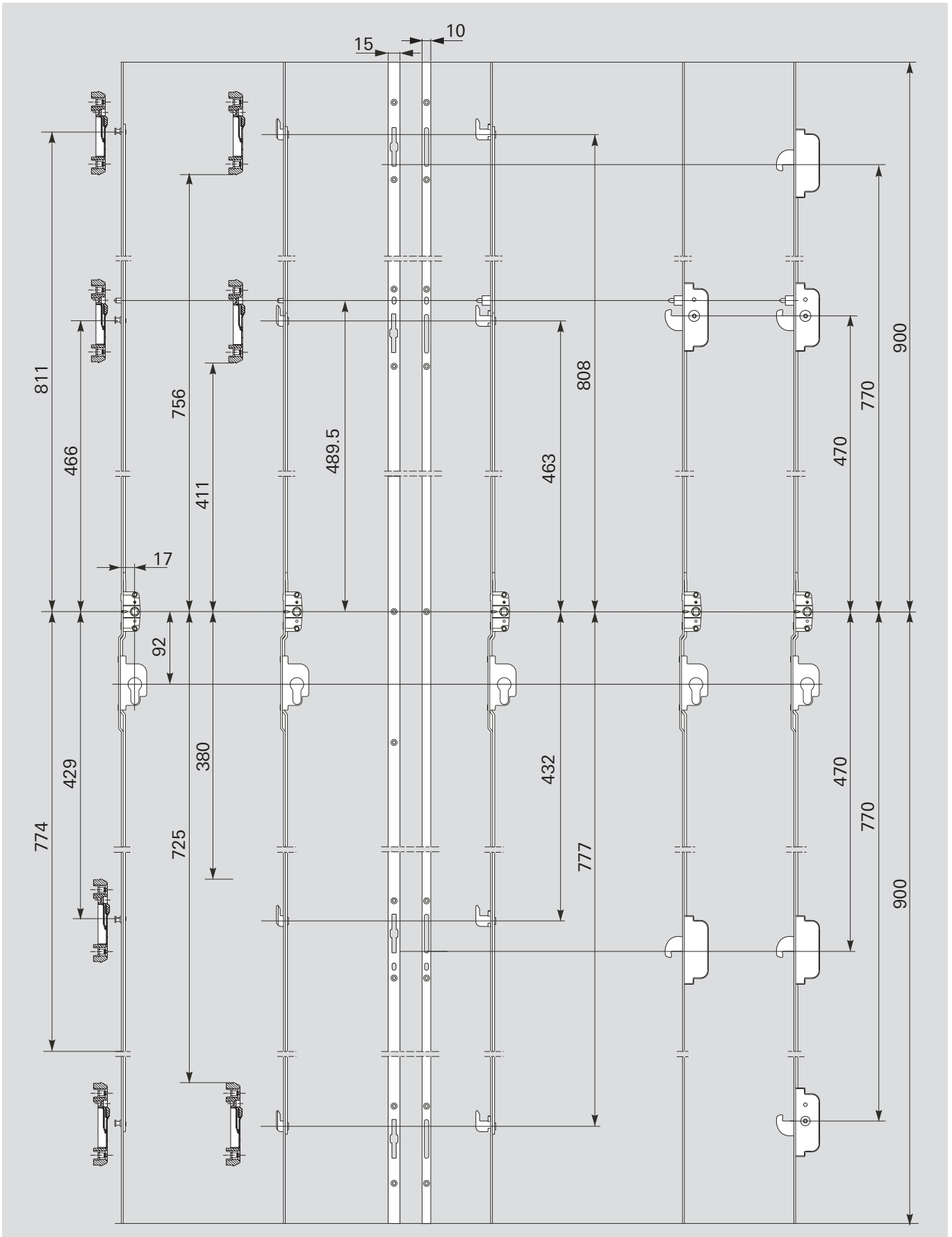
1800 Locking System

Order Details



	No. of strikers	RotoNor Part No.	RotoSil Part No.
Pos. 1	1800 espag. with four cams and a pin. (17 mm backset)		
	4	312 539	328 994
Pos. 2	1800 espag. with four 5 mm hooks and a pin. (17 mm backset)		
	4	319 389	328 996
Pos. 3	1800 espag. with four 14 mm hooks and a pin. (17 mm backset)		
	1 piece	312 541	329 002
Pos. 4	1800 espag. with two claws and a pin. (17 mm backset)		
	1 piece	312 542	329 009
Pos. 5	1800 espag. with four claws & a pin (17 mm backset)		
	1 piece	312 545	329 010
Pos. 6	One piece striker can be used with positions 3, 4 or 5.		
Individual strikers are also available for positions 1 and 2. Refer to pages 46 & 47 for further information on strikers.			

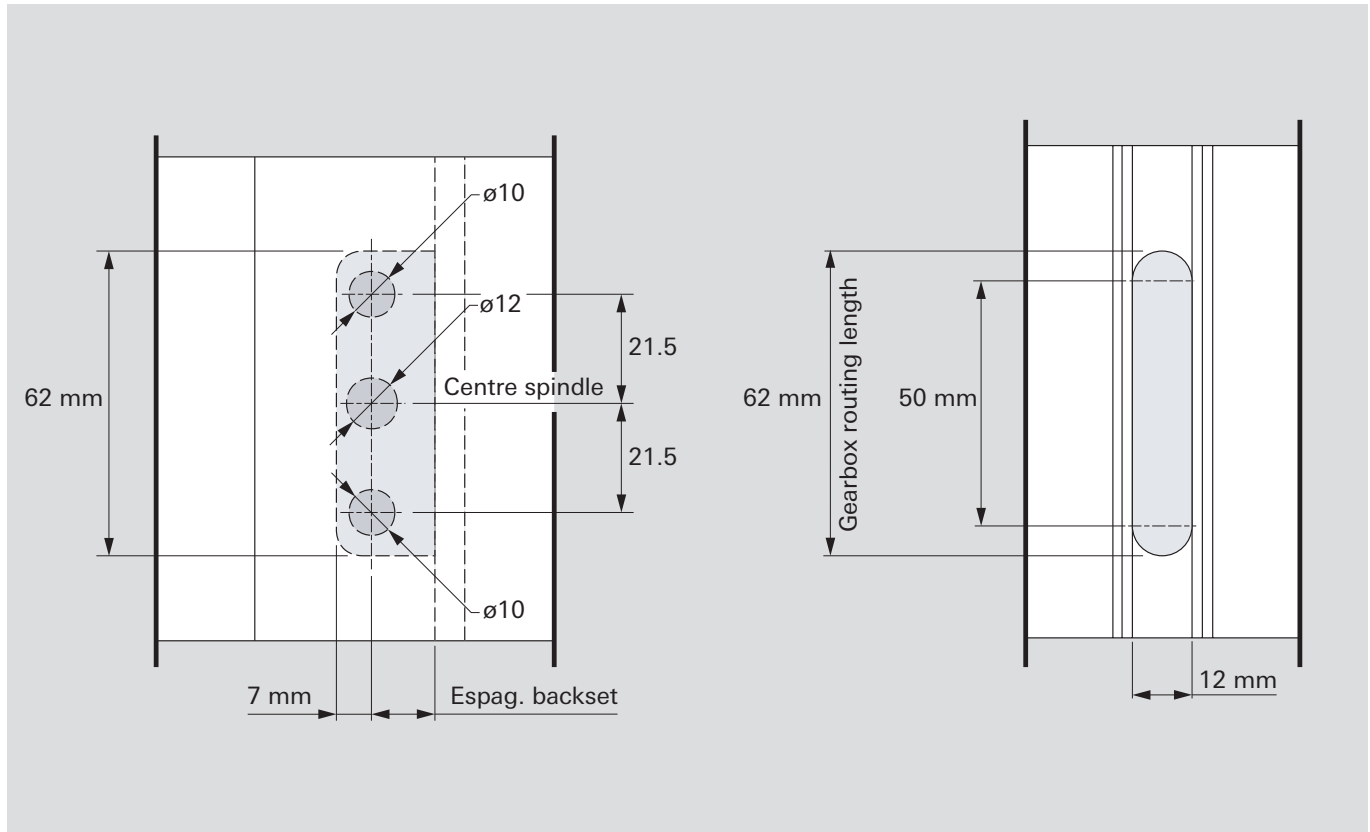
1800 Locking System Technical Details



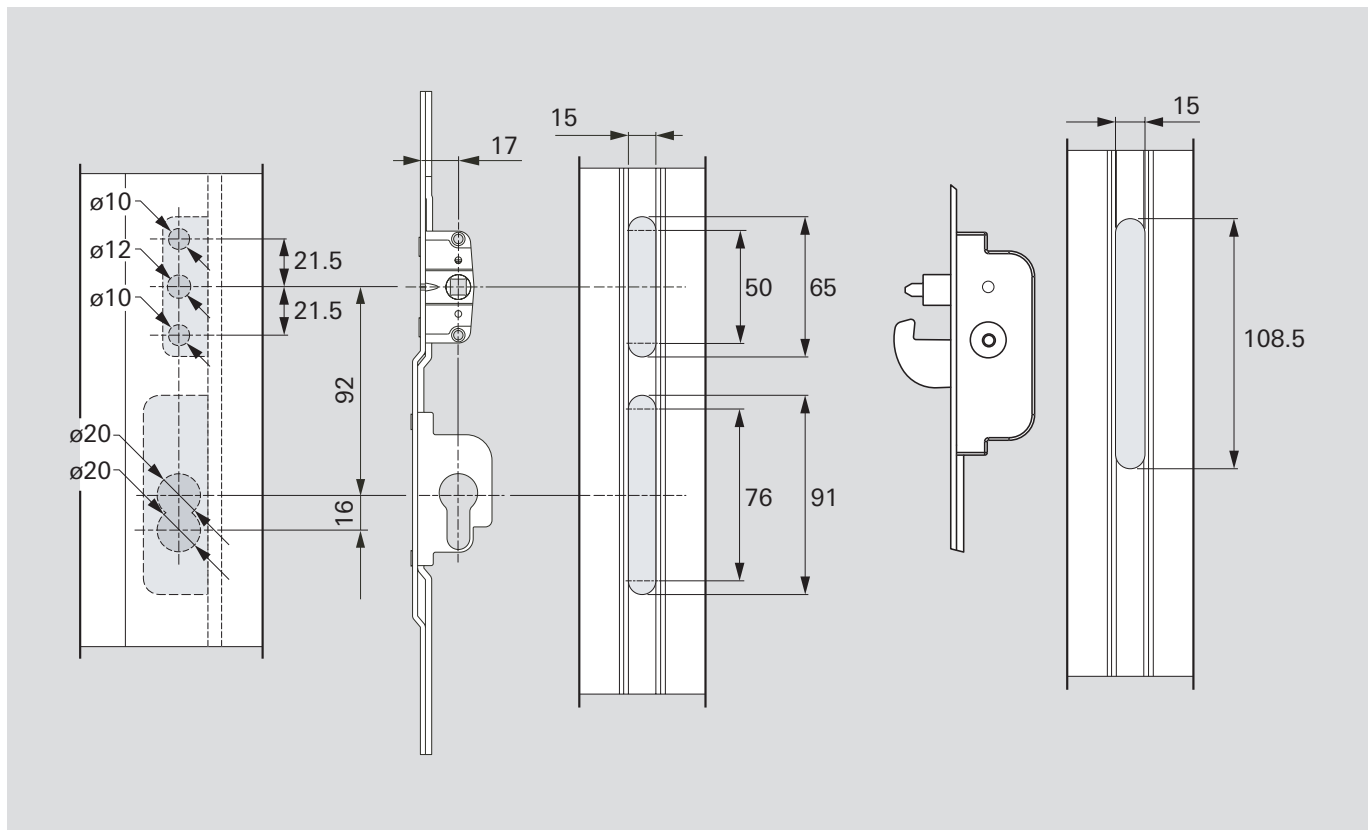
In-line Sliding Espagnolettes

Routing Details

Standard & 600 Espagnolettes



1800 Espagnolettes



In-line Sliding Shootbolt Espagnolettes

General Design Description



RA2000

- Designed for use on timber, PVCu and aluminium systems with a minimum eurogroove depth of 5 mm.
- Available in 7, 20 or 22 mm backsets.
- Faceplate width 16 mm.
- Routing length for the gearbox is only 60 mm x 9 mm and if this dimension is adhered to, barbs on the gearbox grip within the routed slot.
- Fixing screws are positioned well clear of the routed slot ensuring secure fitting every time.
- An arrow on the gearbox indicates direction of the handle when in the closed position.
- Precise design of internal components ensures a smooth and regular operation.
- A 'snap down' fixing plate retains the extensions and ensures the drive rod is held in position. These are then held in place with screws providing secure protection against any attack.
- All parts are pre-set in the open position for easy fitting. Initial operation of the handle releases the mechanism.
- All surfaces are coated with a gold (RotoNor) finish.

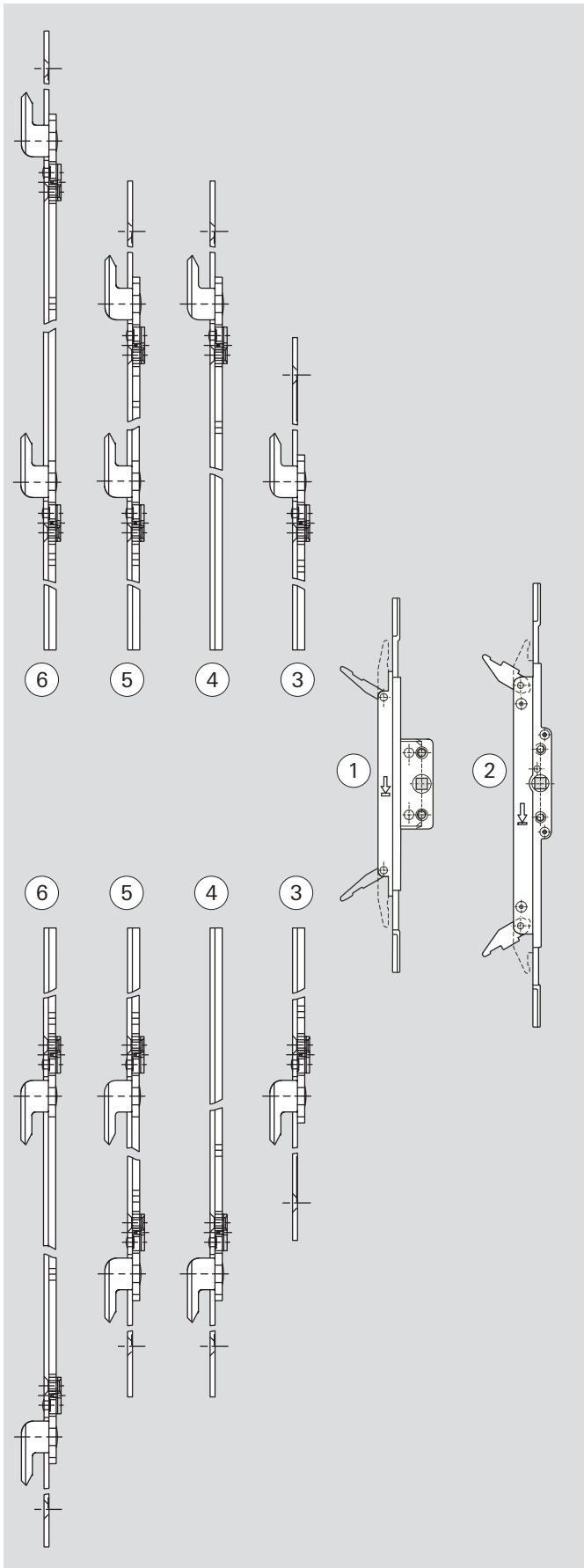
RAD2000

- The general design description lists characteristics of the Roto RAD2000 sliding system.
- Designed for use on timber, PVCu and aluminium systems with a minimum eurogroove depth of 5 mm.
- Available in 17 mm or 25 mm backsets.
- Faceplate width 16 mm.
- Precise design of internal components ensures a smooth and regular operation.
- All parts are pre-set in the open position for easy fitting.
- Initial operation of the handle releases the mechanism.
- All surfaces are coated with a gold (RotoNor) finish.

RA 2000

Sliding Window Extensions with 5 mm Hook

Order Details



Top extensions

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	521 – 920 mm (563 – 962 mm)	390 mm	1	204 951
4	861 – 1260 mm (903 – 1302 mm)	560 mm	1	204 975
5	861 – 1260 mm (903 – 1302 mm)	560 mm	2	204 959
6	1261 – 1660 mm (1303 – 1702 mm)	760 mm	2	204 967

Dimensions in brackets indicate application range when using the 7 mm backset gearbox (item 2).

Gearbox

Pos.	Backset	Faceplate	Part No.
1	20 mm	140 mm	294 449
	22 mm		294 450
2	7 mm	182 mm	257 616

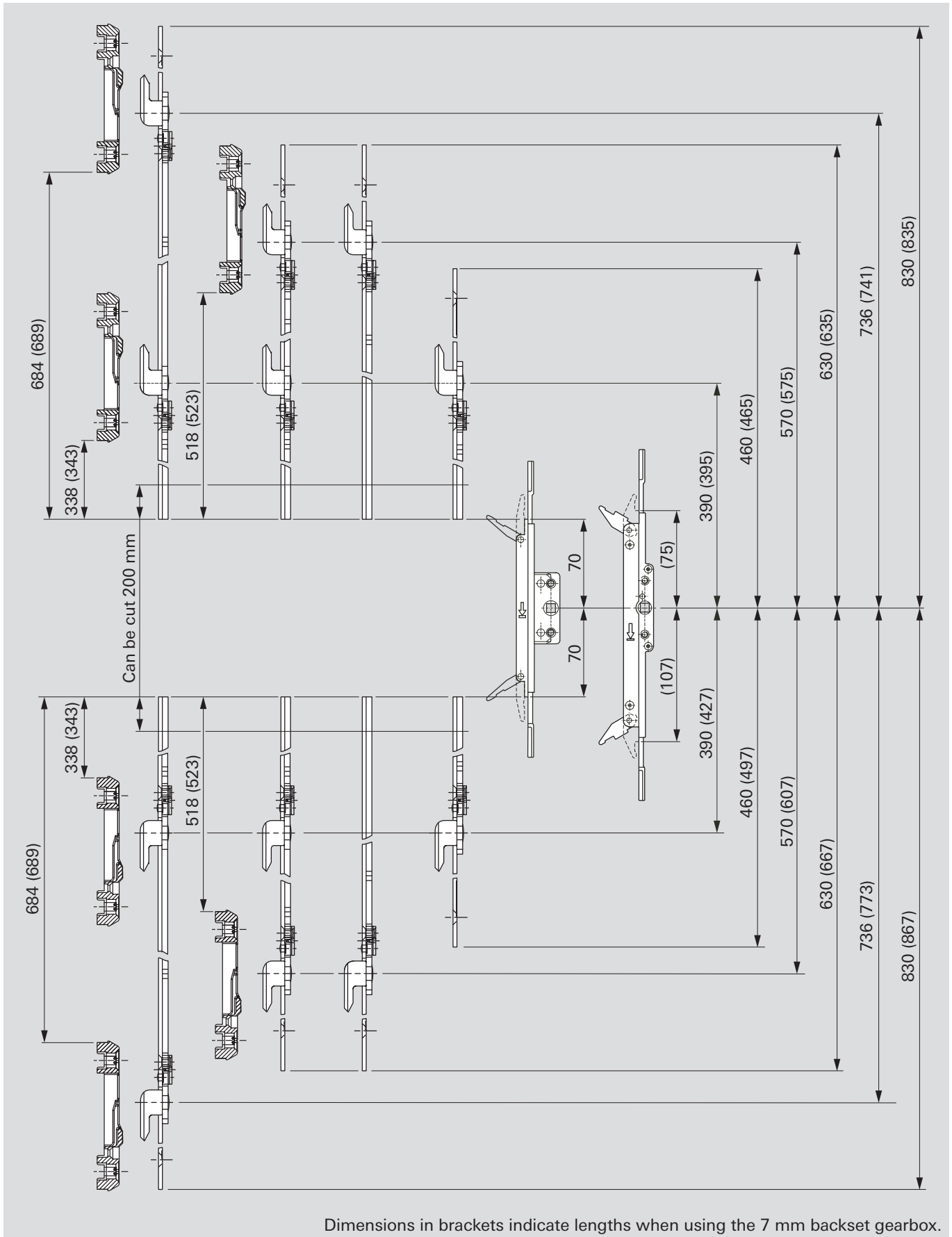
Bottom extensions

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	521 – 920 mm (563 – 962 mm)	390 mm	1	204 951
4	861 – 1260 mm (903 – 1302 mm)	560 mm	1	204 975
5	861 – 1260 mm (903 – 1302 mm)	560 mm	2	204 959
6	1261 – 1660 mm (1303 – 1702 mm)	760 mm	2	204 967

Dimensions in brackets indicate application range when using the 7 mm backset gearbox (item 2).

Refer to pages 46 & 47 for further information on strikers.

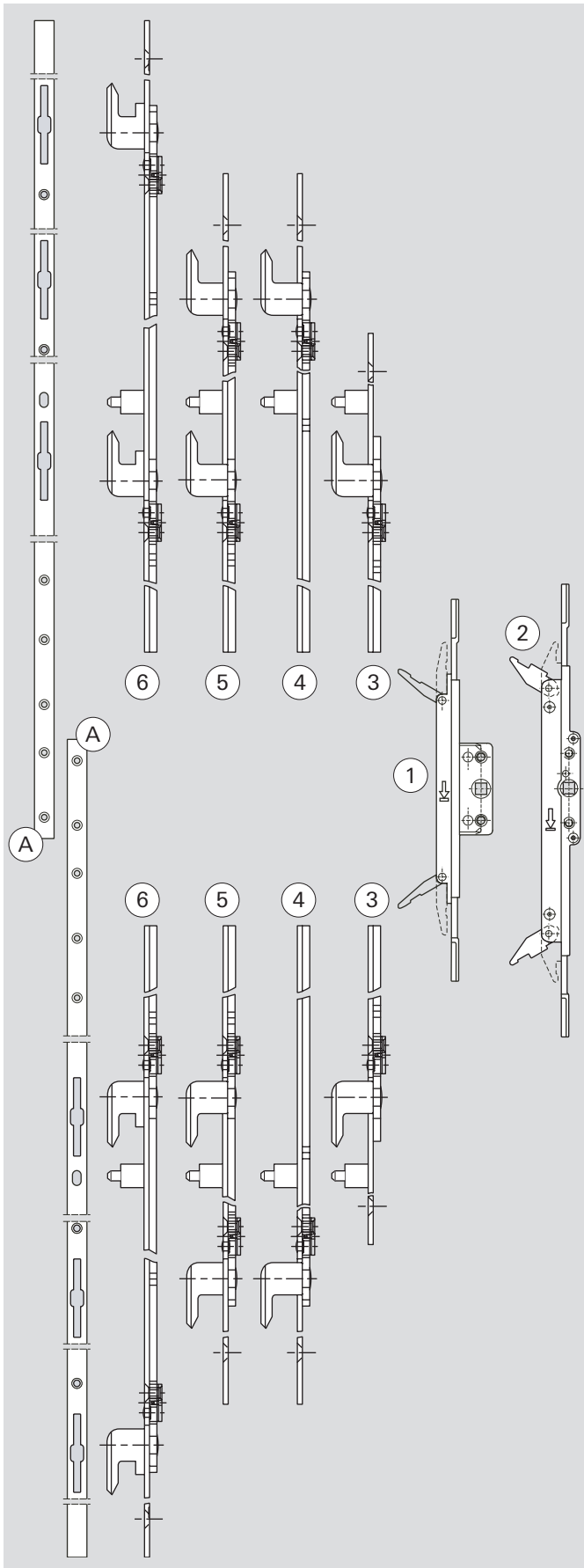
Technical Details



RA 2000

Sliding Window Extensions with 14 mm Hook

Order Details



Top extensions

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	521 – 920 mm (563 – 962 mm)	390 mm	1	312 019
4	861 – 1260 mm (903 – 1302 mm)	560 mm	1	312 018
5	861 – 1260 mm (903 – 1302 mm)	560 mm	1	312 017
6	1261 – 1660 mm (1303 – 1702 mm)	760 mm	1	312 016

One piece striker

A	521 – 1702 mm	960 mm	see pages 46 – 47
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Dimensions in brackets indicate application range when using the 7 mm backset gearbox (item 2).

Gearbox

Pos.	Backset	Faceplate	Part No.
1	20 mm	140 mm	294 449
	22 mm		294 450
2	7 mm	182 mm	257 616

Bottom extensions

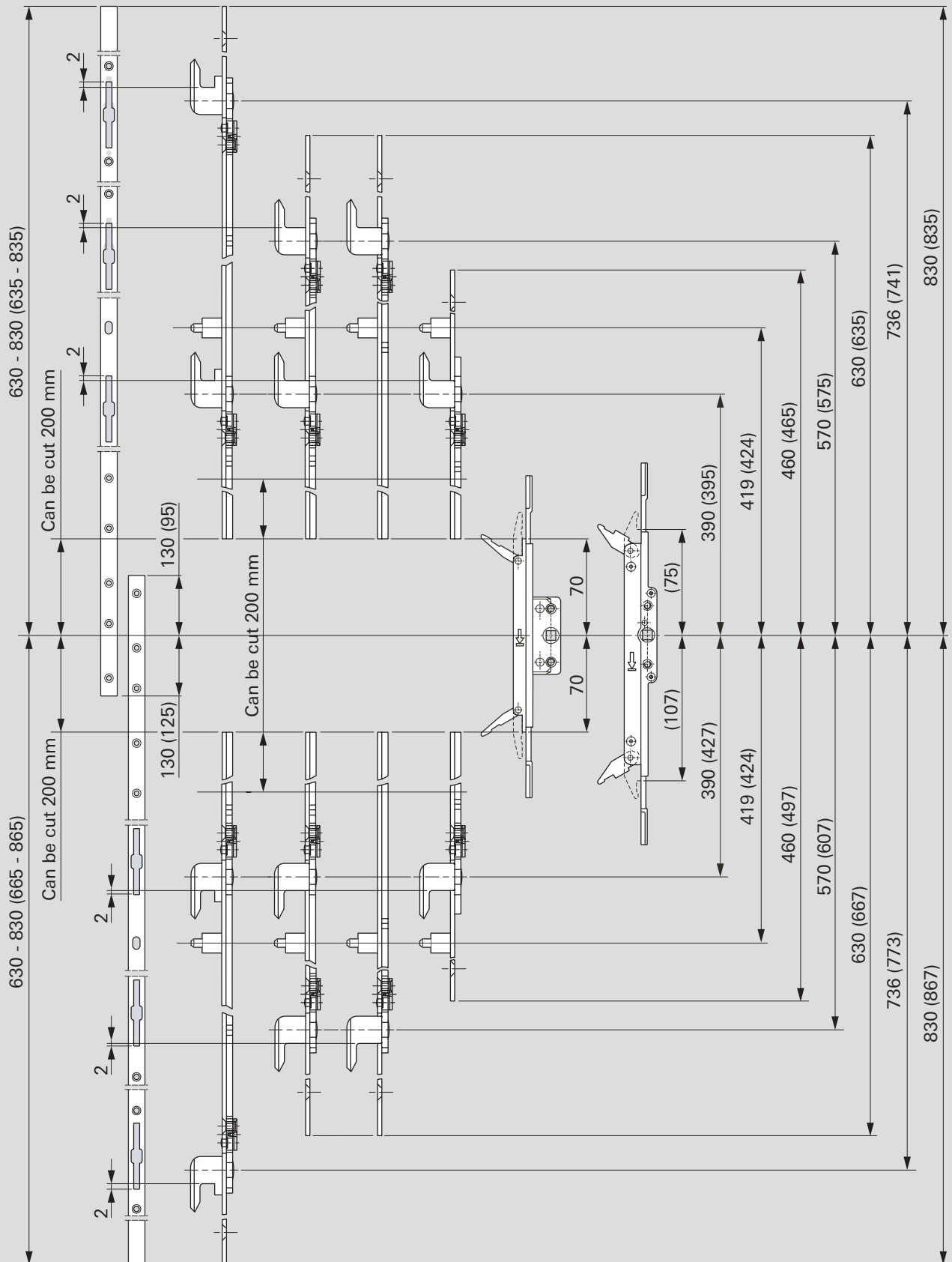
Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	521 – 920 mm (563 – 962 mm)	390 mm	1	312 019
4	861 – 1260 mm (903 – 1302 mm)	560 mm	1	312 018
5	861 – 1260 mm (903 – 1302 mm)	560 mm	1	312 017
6	1261 – 1660 mm (1303 – 1702 mm)	760 mm	1	312 016

One piece striker

A	521 – 1702 mm	960 mm	see pages 46 – 47
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Dimensions in brackets indicate application range when using the 7 mm backset gearbox (item 2).

Technical Details



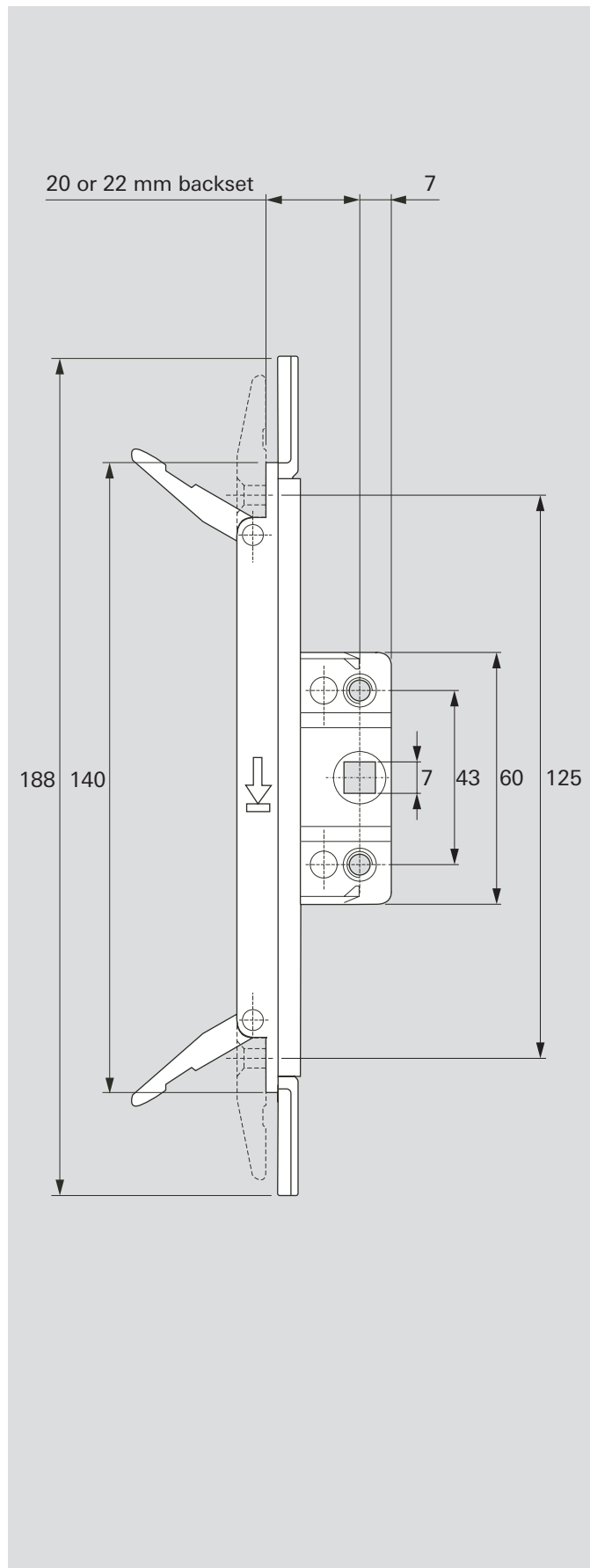
Dimensions in brackets indicate lengths when using the 7 mm backset gearbox.

RA 2000

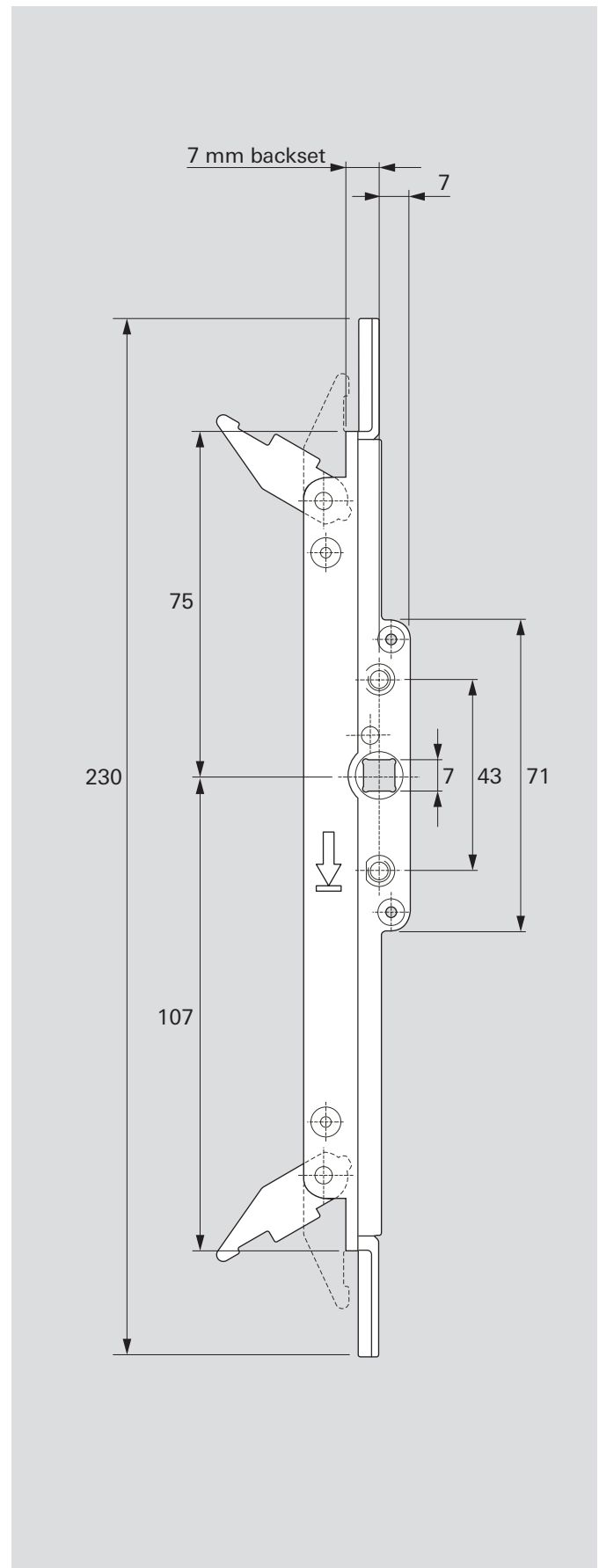
Gearbox

Technical Details

20 & 22 mm backsets

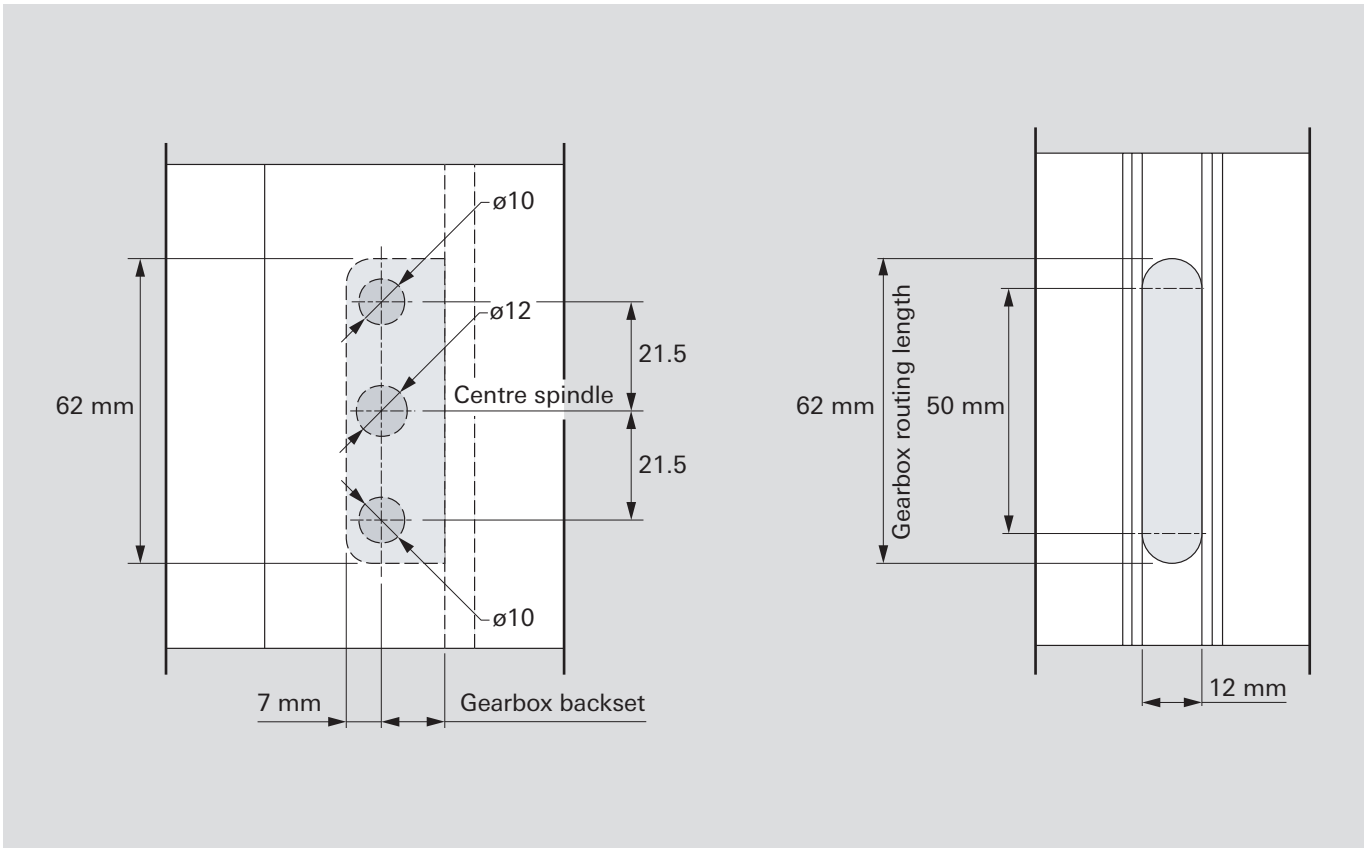


7 mm backset

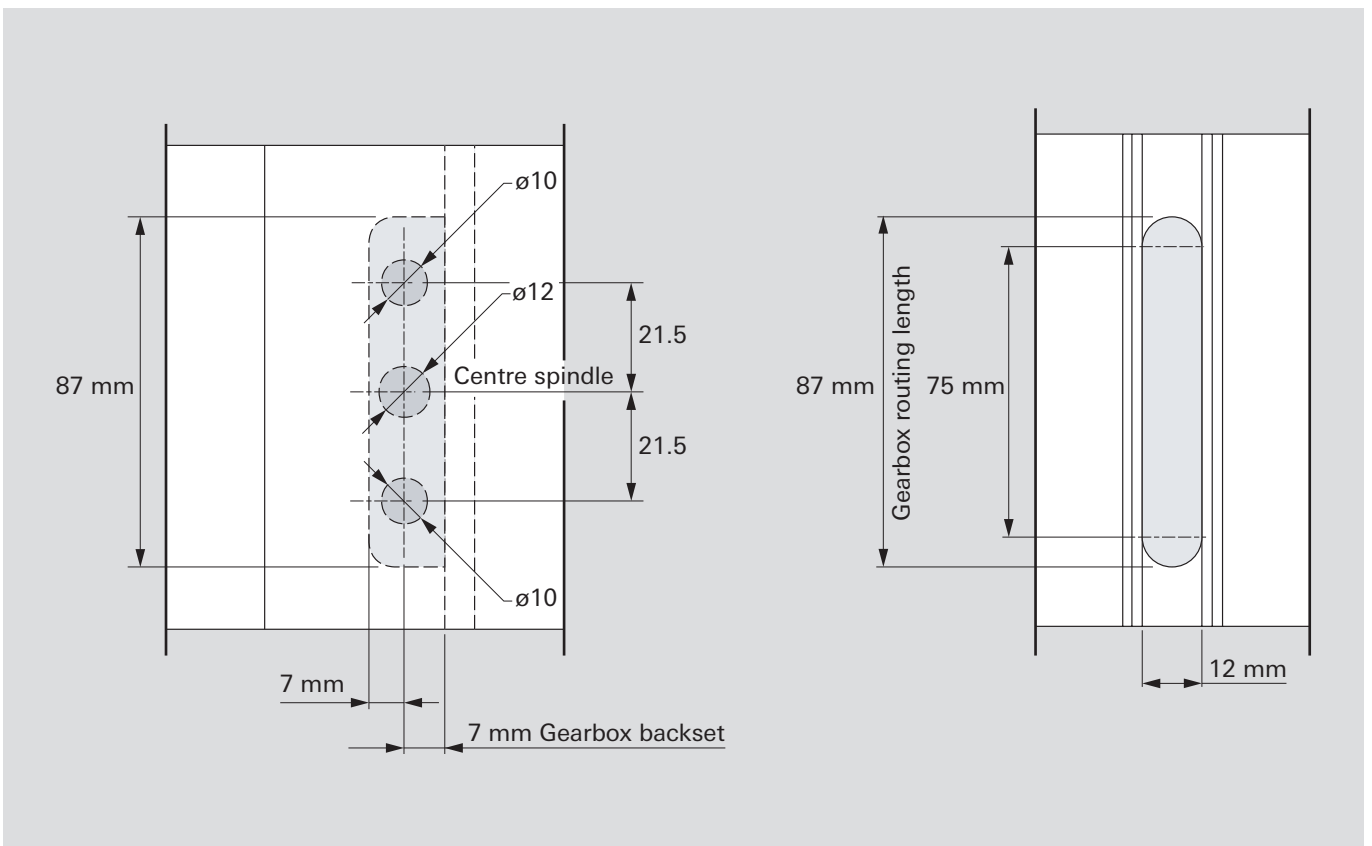


Routing Details

20 & 22 mm backsets



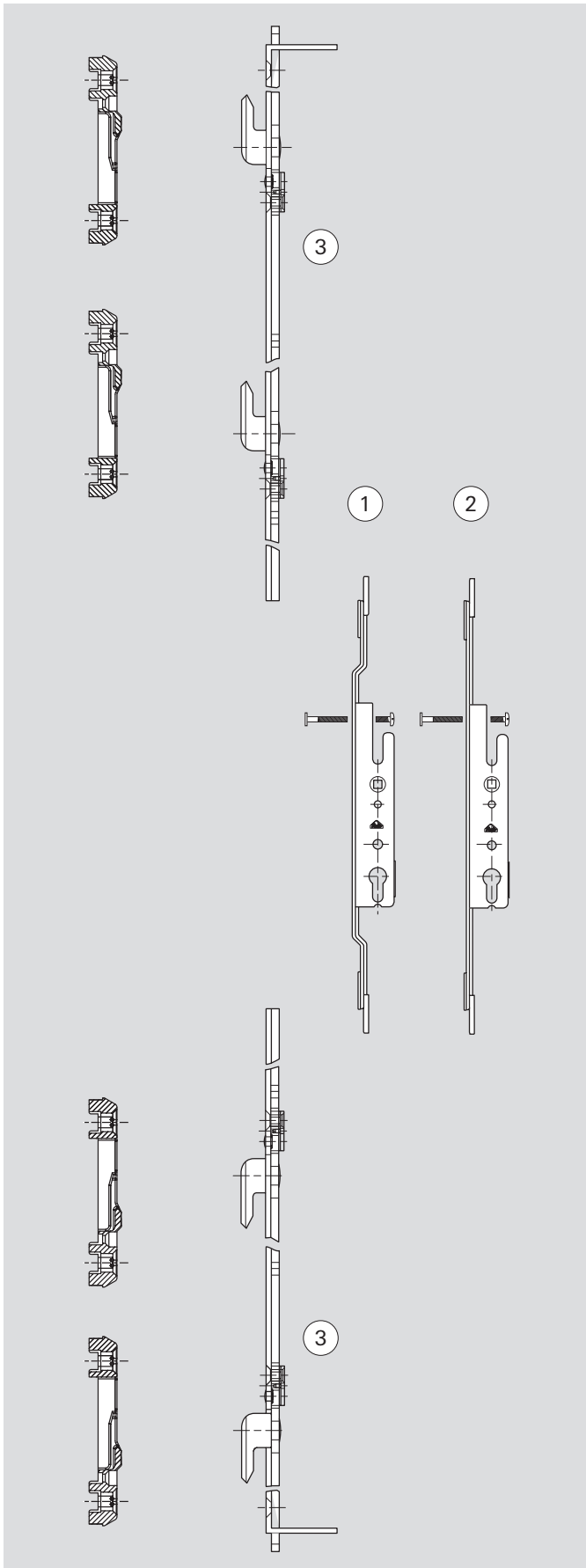
7 mm backset



RAD 2000

Sliding Door Extensions with 5 mm Hook

Order Details



Top extension

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	1860 – 2260 mm	930 mm	2	243 405

An additional striker is required for the shootbolt

Gearbox (including anti-mishandling device)

Pos.	Backset	Faceplate	Part No.
1	17 mm	400 mm	280 369
2	25 mm	400 mm	280 370

Gearbox (excluding anti-mishandling device)

1	17 mm	400 mm	222 154
2	25 mm	400 mm	222 153

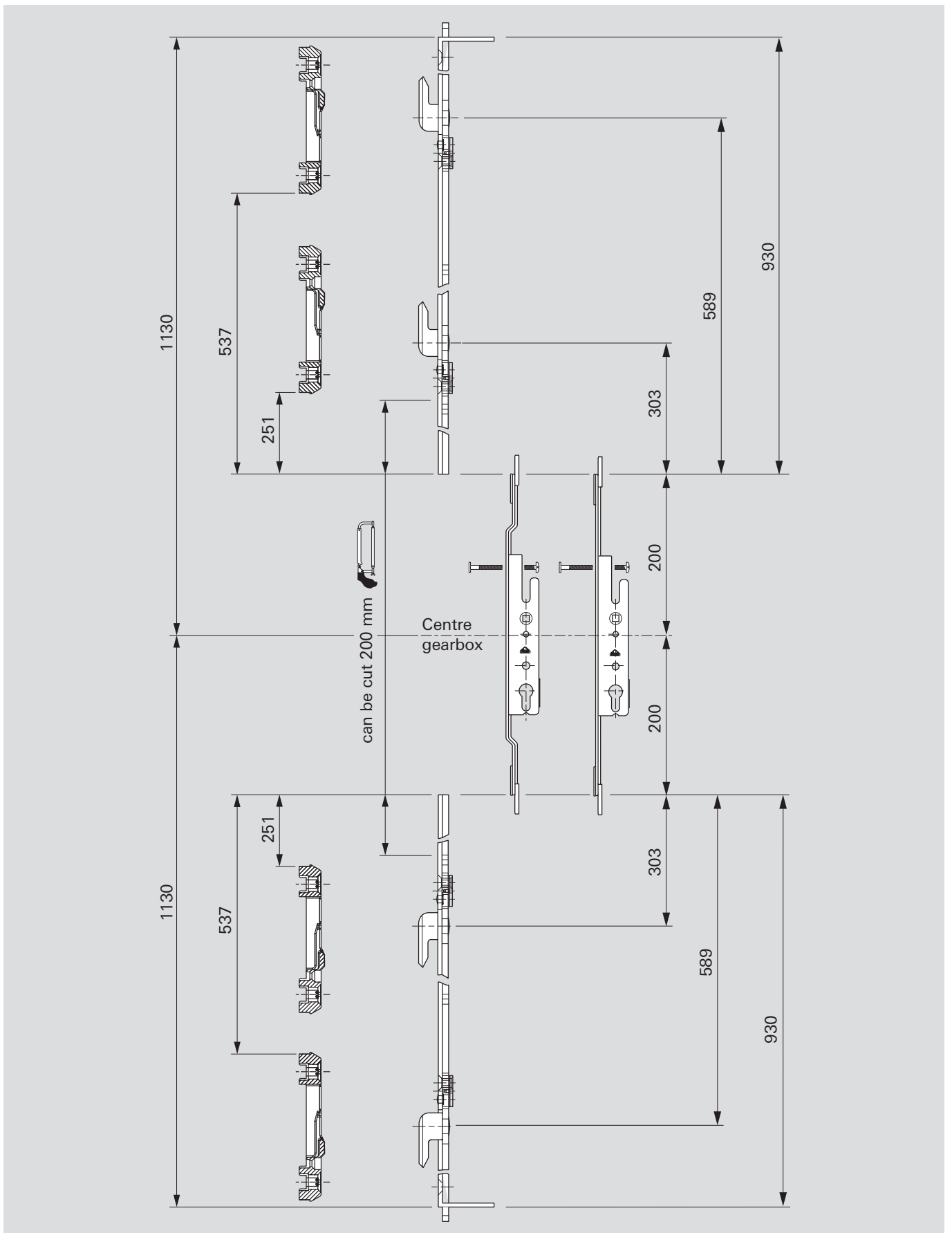
Bottom extension

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	1860 – 2260 mm	930 mm	2	243 405

An additional striker is required for the shootbolt

Refer to pages 46 & 47 for further information on strikers.

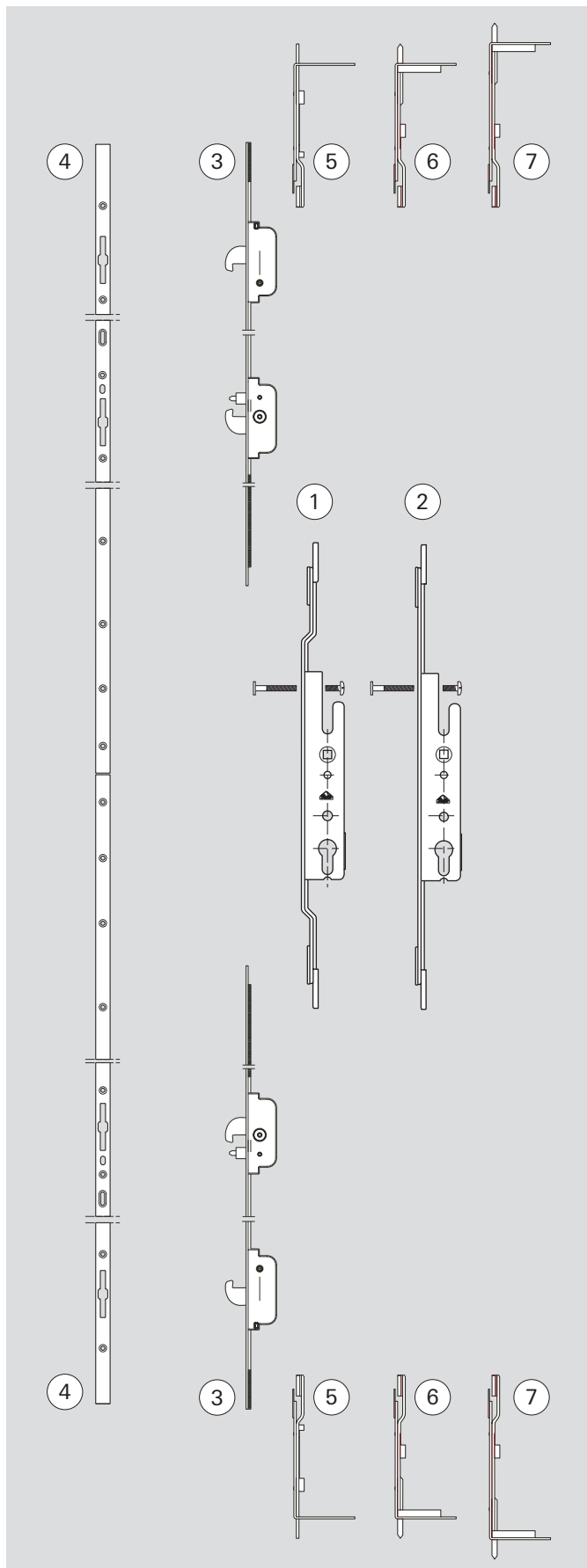
Technical Details



RAD 2000

Sliding Door Extensions with Claws

Order Details



Top extension

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	1520 – 1920 mm	760 mm	1	312 014

Top striker

4	760 – 960 mm	960 mm	see pages 46–47	
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Shootbolts

5	–	135 mm	1	243 009
6	–	135 mm	1	224 062
7	–	200 mm	1	224 065

The application ranges stated do not include the shootbolts

Gearbox (including anti-mishandling device)

Pos.	Backset	Faceplate	Part No.
1	17 mm	400 mm	280 369
2	25 mm	400 mm	280 370

Gearbox (excluding anti-mishandling device)

1	17 mm	400 mm	222 154
2	25 mm	400 mm	222 153

Bottom extension

Pos.	Application range	Faceplate length	No. of strikers	Part No.
3	1520 – 1920 mm	760 mm	1	312 014

Bottom striker

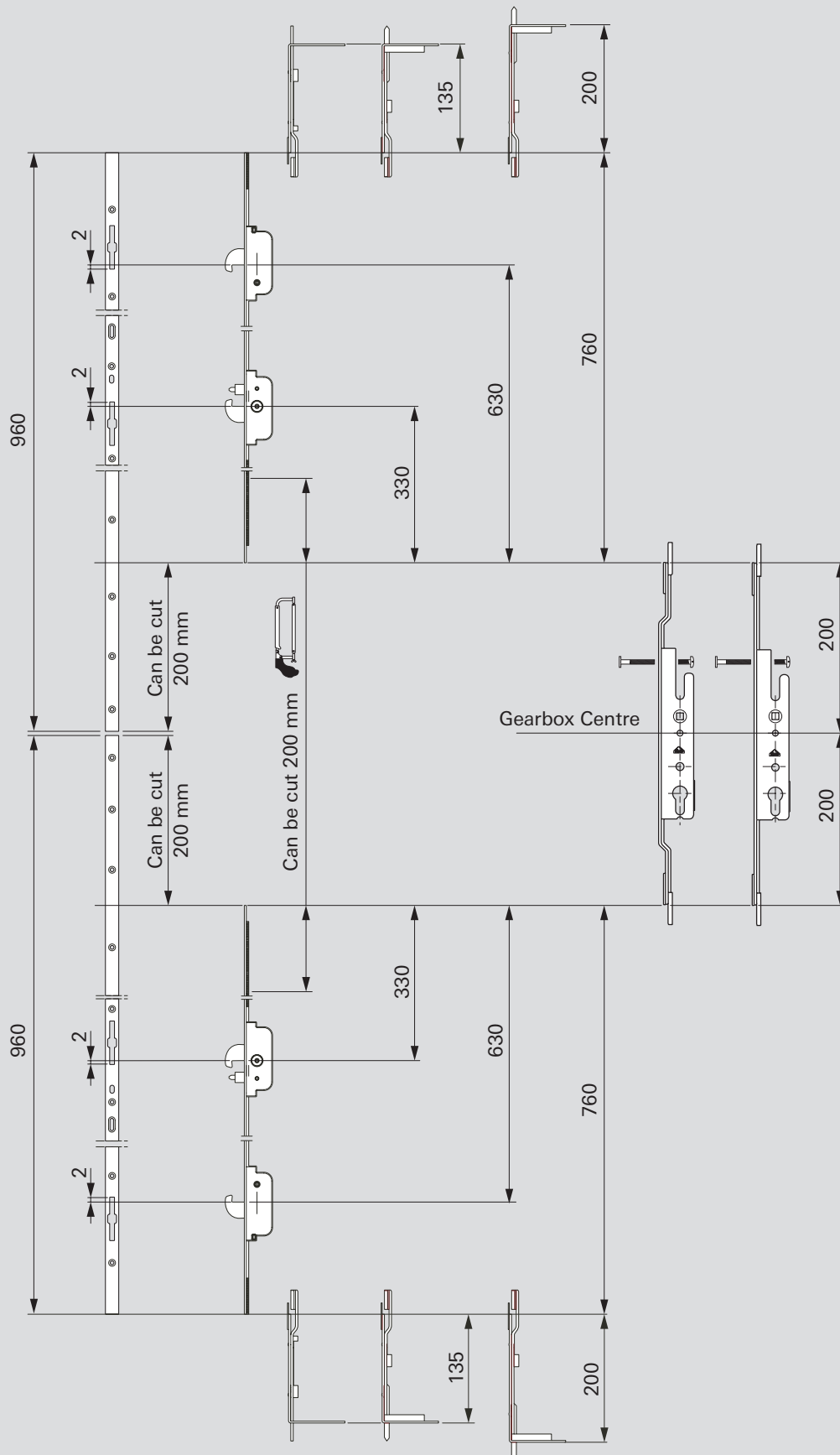
4	760 – 960 mm	960 mm	see pages 46–47	
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Shootbolts

5	–	135 mm	1	243 009
6	–	135 mm	1	224 062
7	–	200 mm	1	224 065

The application ranges stated do not include the shootbolts

Technical Details

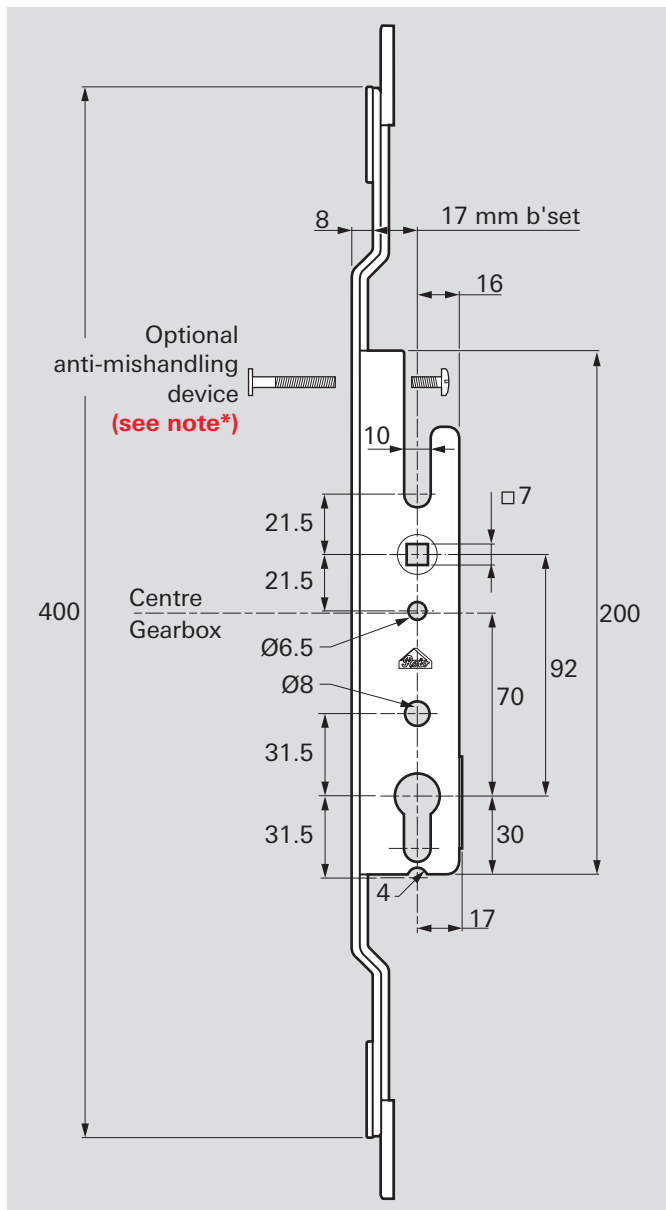


RAD 2000

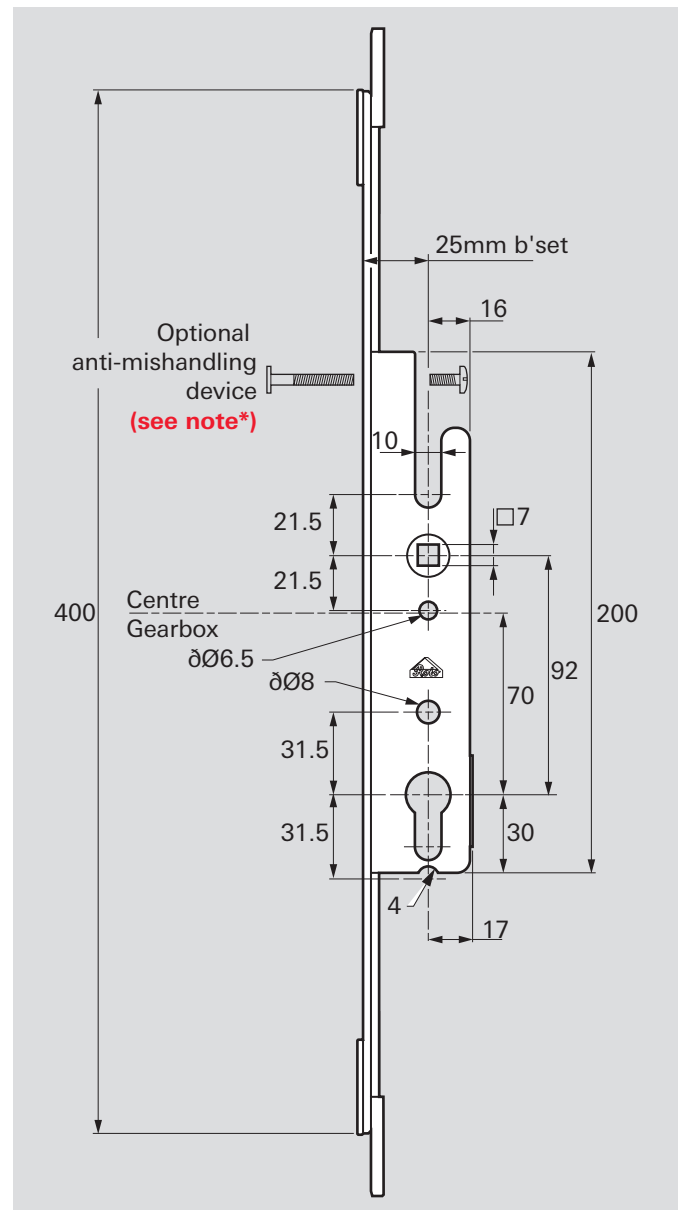
Gearbox

Technical Details

17 mm backset gearbox



25 mm backset gearbox



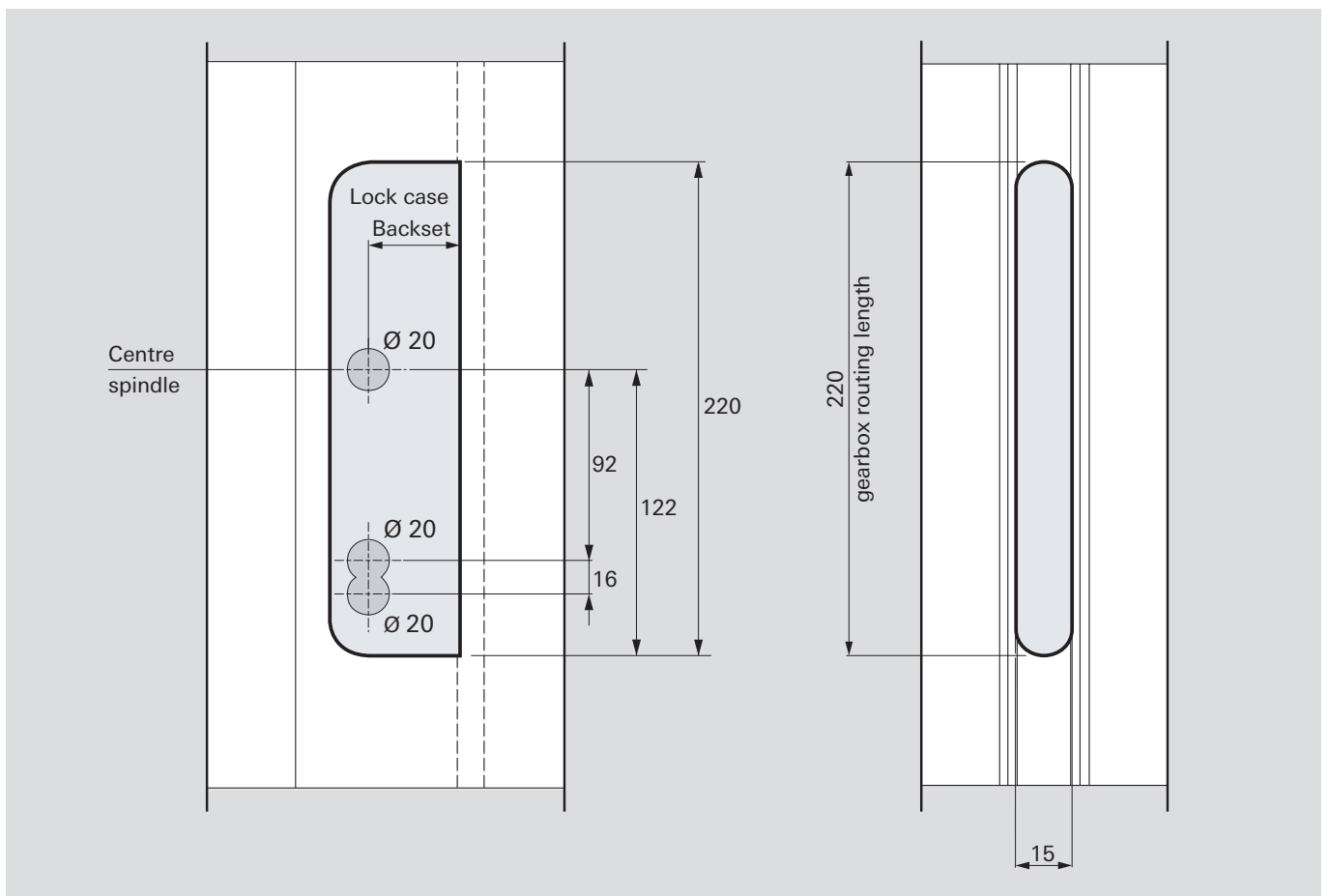
*** Note:**

The anti-mishandling device allows the locking points to be moved only when the door is closed, therefore eliminating the possibility of damage arising from the door being slammed shut with the hardware in the "locked" position.

Two different types of screw are supplied with the gearboxes. Only one of each should be fitted to a gearbox, depending on whether or not the anti-mishandling function is required.

- To make use of the anti-mishandling feature, screw the flat-headed plunger into the socket in the faceplate and adjust to suit the gap between faceplate and frame. An allen key size 3 mm should be used.
- To make the gearbox operable at all times with no anti-mishandling function, take the silver cross-headed screw, insert it into the socket on the back of the gearbox and tighten. A Phillips-type screwdriver should be used.

Routing Details



In-line Rollers Specification



Single Roller

Characteristics of the single roller:

- No routing required – 12 mm outer carriage locates in the eurogroove.
- Made of a zinc die cast body with acetal tyre.
- Available in two pre-set heights of 17 mm & 21 mm.
- Maximum sash weight of 50 kg.
- Yellow passivated finish to comply with requirements of the following standards:
 - **BS7479**
Salt spray corrosion tests in artificial atmospheres.
 - **DIN50021**
Spray tests with different sodium chloride solutions.
- Can be connected together to increase sash weight capability.
- **prEN13126 pt15 (DRAFT)**
20,000 cycles with a mass of 50 kg per pair of rollers.

Tandem Roller

The tandem roller is available in the following formats:

- Standard 12 mm wide carriage
- Standard 14 mm wide carriage
- Slimline R (radiused track) 12 mm wide carriage
- Slimline V ("v" track) 12 mm wide carriage

Characteristics of the standard tandem rollers:

- Adjustable between 19 mm & 26 mm.
- Sash weight capability, 122 kg per pair of rollers.

Characteristics of the slimline rollers:

- Adjustment between 15 mm & 19 mm.
- Sash weight capability, 100 kg per pair of rollers.

Common characteristics:

- No routing required – outer carriage locates in the eurogroove.
- Yellow passivated finish to comply with requirements of the following standards:
 - **BS7479**
Salt spray corrosion tests in artificial atmospheres.
 - **DIN50021**
Spray tests with different sodium chloride solutions.
- Plastic end blocks, making it easier to locate height adjuster and fixing screws.
- **prEN13126 pt5 (DRAFT)** 20,000 cycles with a mass of 120kg per roller.

As with all Roto products, a brand synonymous with quality, you are guaranteed a virtually maintenance free, smooth operating sliding patio door.

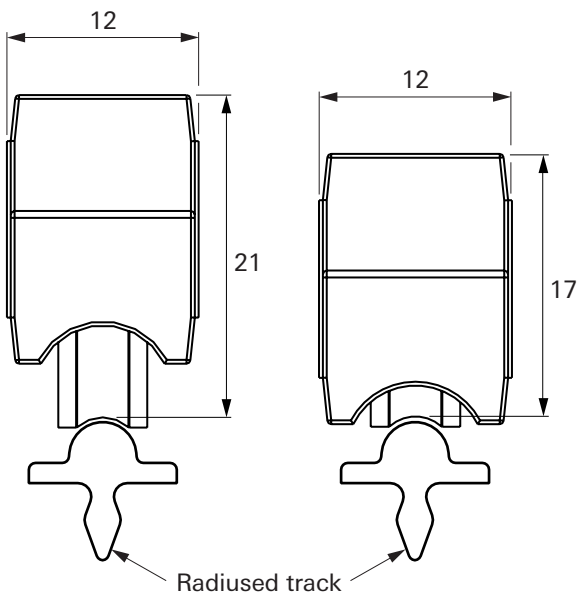
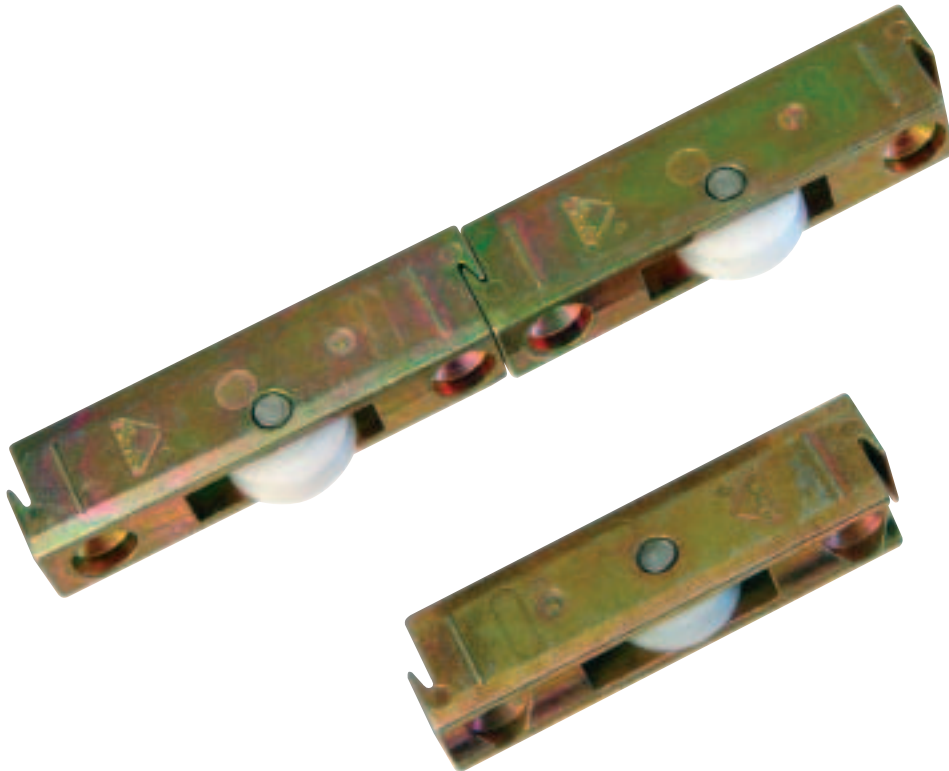
In-line Rollers

Fixed Height Single Rollers

The single rollers are die cast with an acetal tyre, compatible with the majority of standard radiused tracks.

Ideal for sliding windows with a maximum sash weight of 50 kg, they are available in two fixed heights of 17 mm and 21 mm, accommodating a wide range of profile systems.

Description	Part No.
Fixed height, single roller – 17 mm	297 217
Fixed height, single roller – 21 mm	297 218



This diagram shows how the differing heights are measured, and the radiused track.

Adjustable Tandem Rollers

Adjustable, standard tandem rollers

The standard roller is available in two widths; 12 mm for conventional eurogrooves and 14 mm for wider euro-grooves.

Both versions are adjustable from 19 mm to 26 mm and can carry a maximum sash weight of 120 kg.

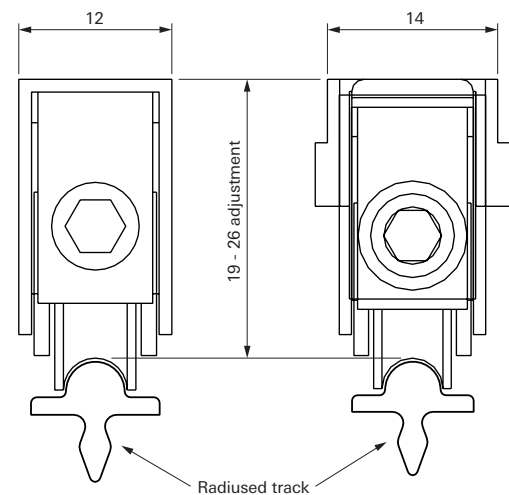
Adjustment

Roller height adjustment tool.

Part Number: 263 088



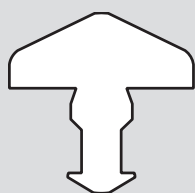
Description	Part No.
Adjustable, standard 12 mm roller	280 445
Adjustable, standard 14 mm roller	312 896



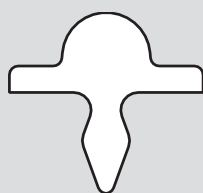
Adjustable, slimline tandem rollers

The slimline roller is available in two formats; one for a radiused ("R") track, and one for a "V" track.

Both versions are adjustable from 15 mm to 18.5 mm and can carry a maximum sash weight of 100 kg.



"V" track



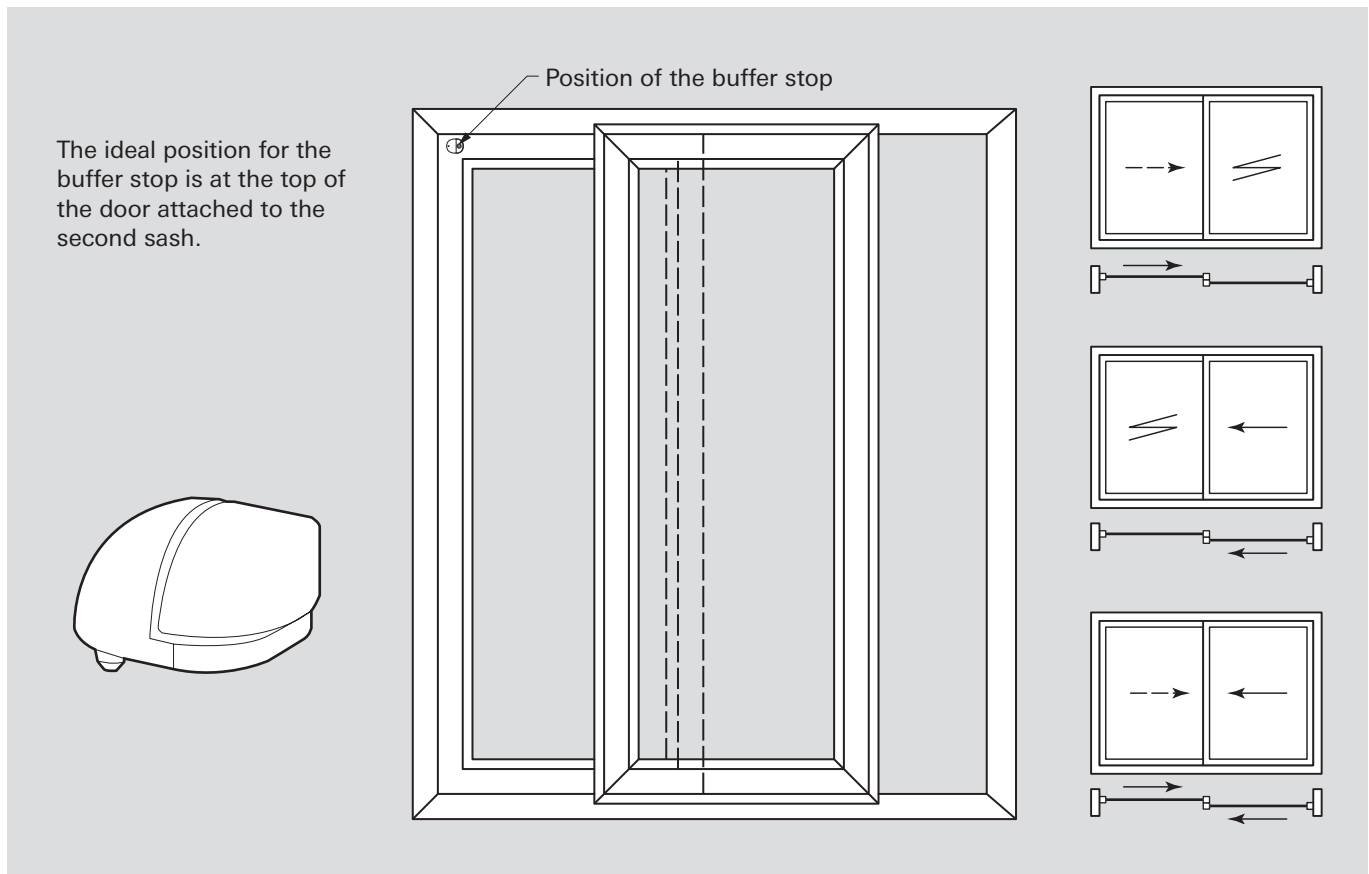
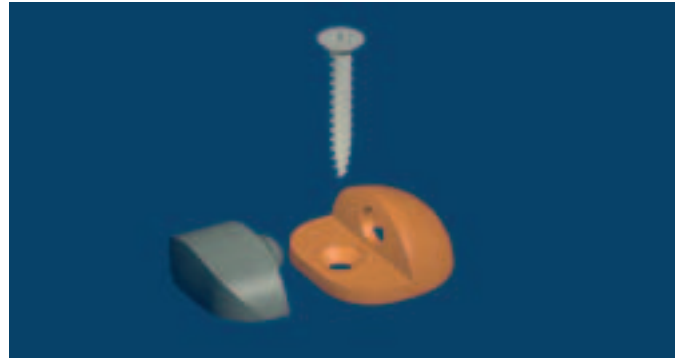
Radiused "R" track

Description	Part No.
Adjustable slimline "R" 12 mm roller	312 897
Adjustable slimline "V" 12 mm roller	297 216

Buffer Stop

Order & Technical Details

Description	Part number
Buffer stop – mill finish	317 249
Buffer stop – white (RAL 9016)	317 250
Buffer stop – grey brown (RAL 8019)	317 251
Buffer stop – black (RAL 9005)	335 555
Rubber part – black	317 252



Handles

Rad 2000 Patio Handles

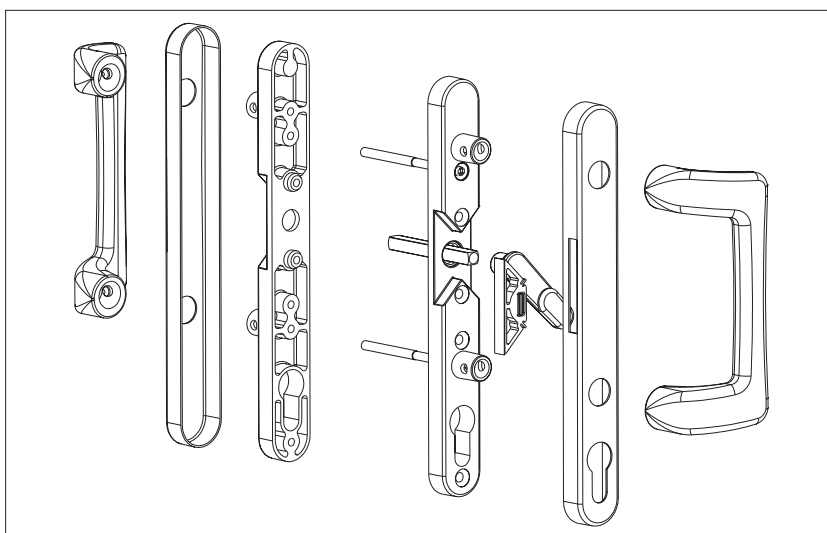


Variation 01

Internal locking half cylinder.

This combination comprises of an external, non-locking handle and an internal locking handle with lever.

Description	Part Number
White (RAL 9016)	291 131
Gold	291 144
Brown (RAL 8019)	262 644

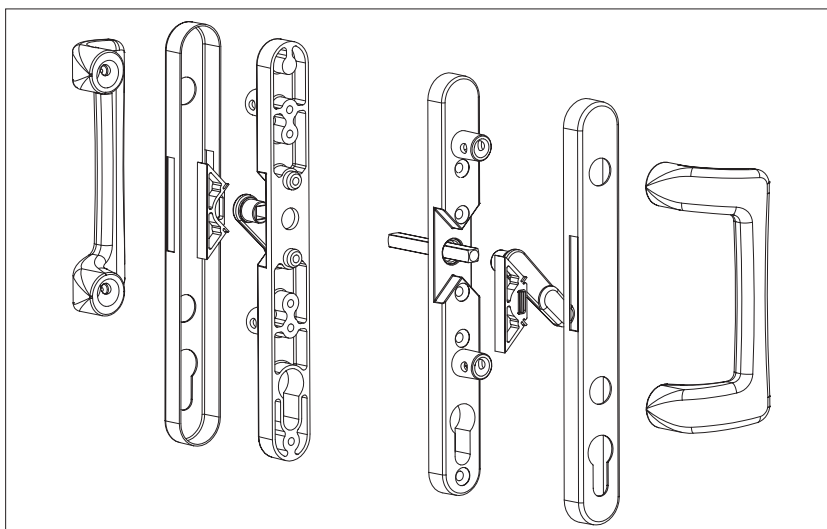


Variation 02

Internal / external locking.

This combination comprises of internal and external locking handles with levers.

Description	Part Number
White (RAL 9016)	291 137
Gold	291 146
Brown (RAL 8019)	262 645



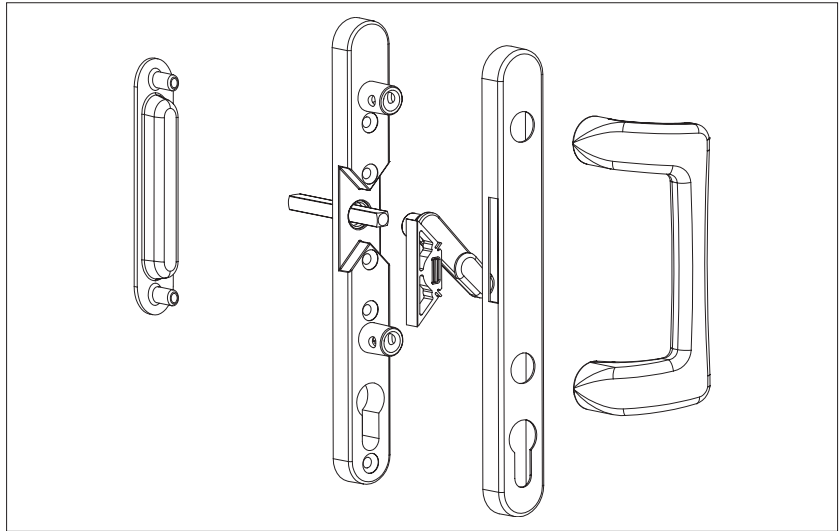
Order Details

Variation 03

Internal lever & cylinder / external finger pull.

This combination comprises of an external, flush mounted finger plate and an internal locking handle with lever.

Description	Part Number
White (RAL 9016)	291 142
Gold	291 148
Brown (RAL 8019)	262 646

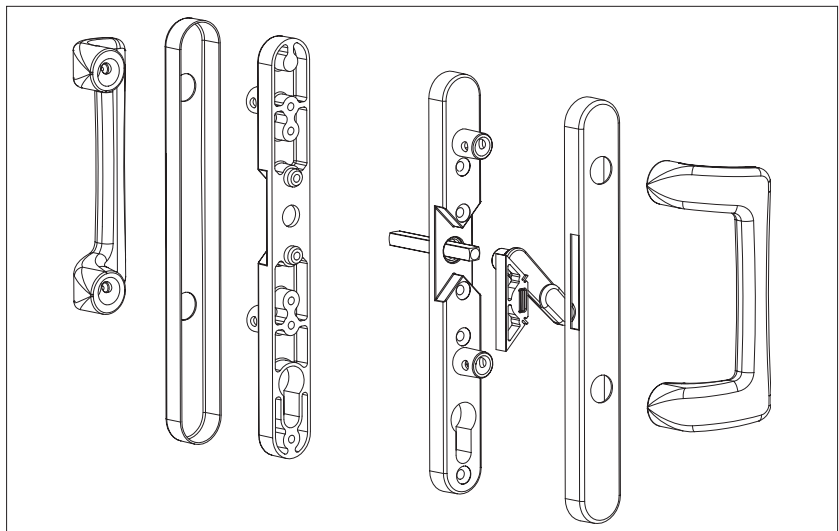


Variation 04

Non-locking lever inside.

This combination comprises of an external, non-locking handle and an internal non-locking handle with lever.

Description	Part Number
White (RAL 9016)	291 140
Gold	291 147
Brown (RAL 8019)	262 647

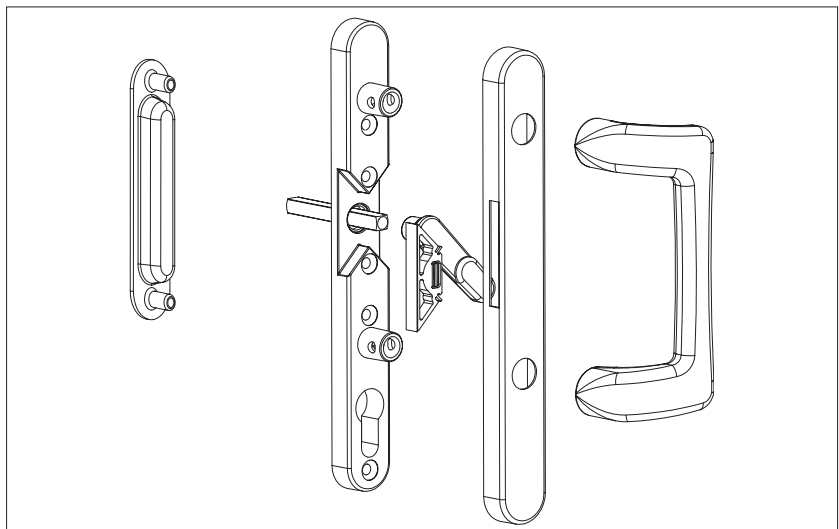


Variation 05

Internal lever / external finger pull.

This combination comprises of an external, flush mounted finger plate and an internal non-locking handle with lever.

Description	Part Number
White (RAL 9016)	291 143
Brown (RAL 8019)	262 648



Handles

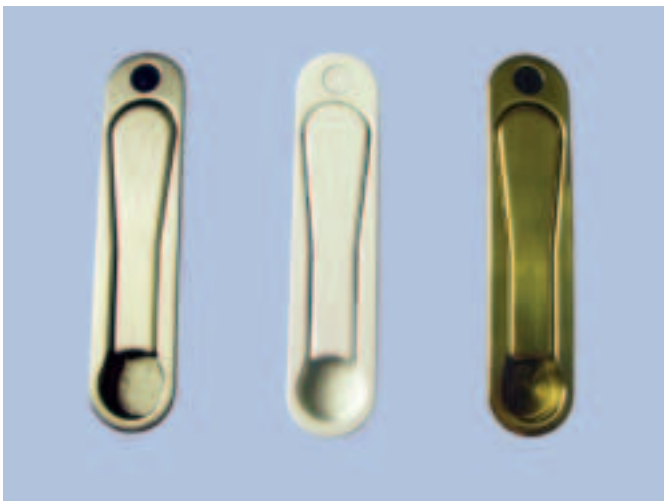
Pop-up Handle without Cylinder



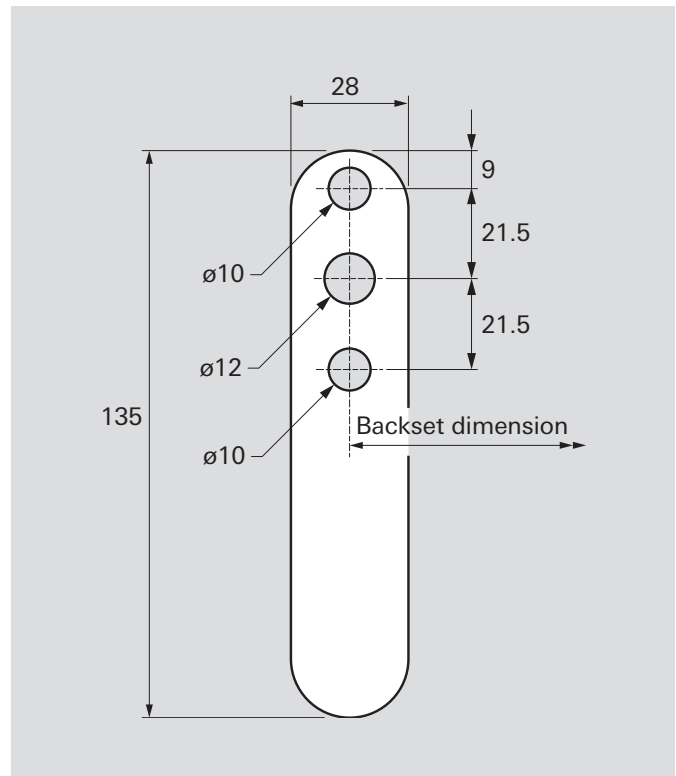
Roto's "pop-up" handle provides an ideal solution to the problem where two sliding sashes overlap. The handle sits almost flush with the profile, but by simply lifting it from the backplate and turning, operation of the gearing is made possible with minimum effort. Once completed the handle can then be placed back in its original position, allowing the sliding sashes to overlap.

Description	Part Number
White handle (RAL 9016)	312 766
ROH handle	312 769
Handle (RAL 9010)	323 275
Handle (RAL 8019)	323 277
Gold handle	323 279
Brushed stainless steel handle	323 280

Colour range



Routing Details



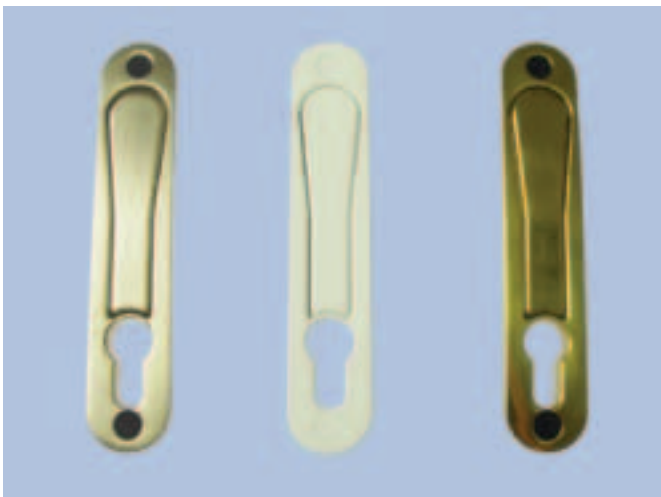
Pop-up Handle with Cylinder



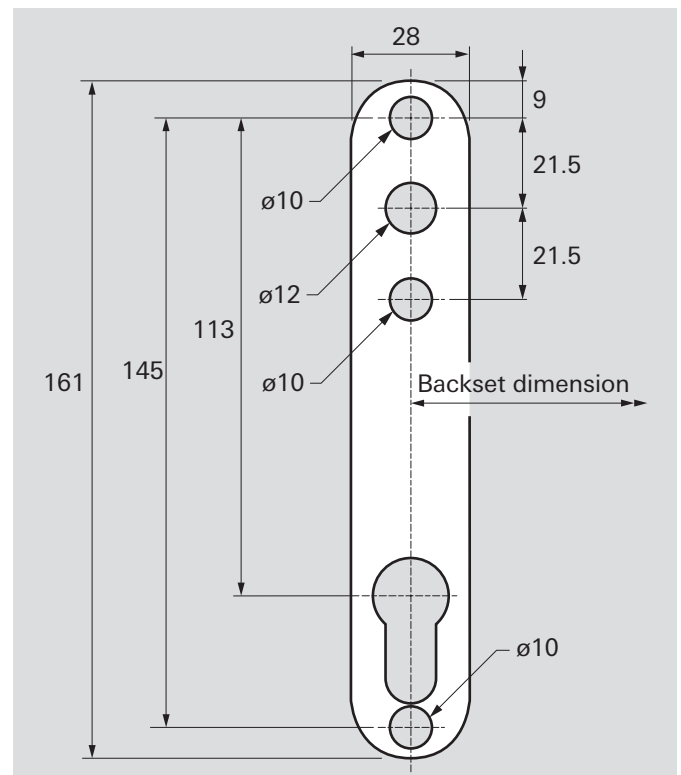
This version of the “pop-up” handle operates in an identical way to the standard, but offers the addition of cylinder locking.

Description	Part Number
White handle (RAL 9016)	323 282
Gold handle	323 286
Handle (RAL 9010)	323 281
Handle (RAL 8019)	323 283
Brushed stainless steel handle	323 287

Colour range



Routing Details



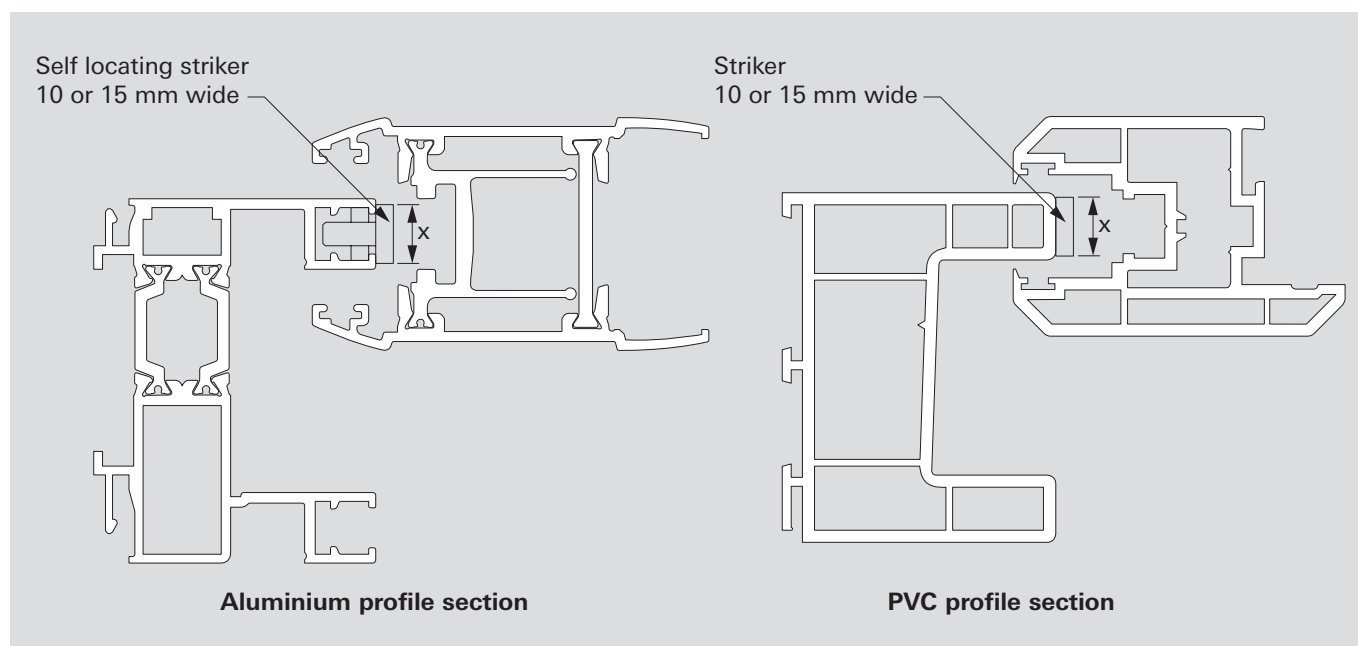
Strikers

Single strikers – refer to the table on pages 46 & 47

Description	Finish	Part number
600 mm, one piece strikers, 15 mm wide	Gold (RotoNor)	312 554
	Silver (RotoSil)	329 015
	White (RAL 9016)	312 555
600 mm, one piece strikers, 10 mm wide	Gold (RotoNor)	–
	Silver (RotoSil)	334 061
	White (RAL 9016)	–
960 mm, two piece strikers for RA & RAD 2000, 15 mm wide only.	Gold (RotoNor)	312 556
	Silver (RotoSil)	–
	White (RAL 9016)	312 557
1800 mm, one piece strikers, 15 mm wide	Gold (RotoNor)	312 558
	Silver (RotoSil)	329 021
	White (RAL 9016)	312 559
1800 mm, one piece strikers, 10 mm wide	Gold (RotoNor)	–
	Silver (RotoSil)	334 062
	White (RAL 9016)	–

Strikers for aluminium profiles

600 mm, one piece strikers with clip, 15 mm wide	Silver (RotoSil)	328 045
600 mm, one piece strikers with clip, 10 mm wide	Silver (RotoSil)	328 044
1800 mm, one piece strikers with clip, 15 mm wide	Silver (RotoSil)	328 047
1800 mm, one piece strikers with clip, 10 mm wide	Silver (RotoSil)	328 046



In-line Sliding Guide to Hardware

Profile Manufacturer	Frame No.	Sash No.	Page 37	Page 36	Pages 28 – 33
			Tandem Rollers (Max. sash weight 120 kg / 2 rollers)	Single Rollers (Max. sash weight 50 kg / 2 rollers)	RAD2000 Gearbox
Aluplast	73S	F004	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
BNBM (China)	System301	System301	312897 – Slimline Adjustable	297217 – Fixed 17.00 mm roller	
Cougnaud S.A.	MP405	MP408	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Deceuninck	2450	2460	312897 – Slimline Adjustable	N/A	NO
Deceuninck	2450	2465	280445 – Standard Adjustable	N/A	280369 / 222154
Deceuninck	2457	2465	280445 – Standard Adjustable	N/A	280369 / 222154
Deceuninck **	803	1892	280445 – Standard Adjustable	N/A	NO
Deceuninck **	803	2019	280445 – Standard Adjustable	N/A	280369 / 222154
Demax (China)	S-25800125	S-25800126	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	
Dimex (China)	610800 -900	610700 -611000	280445 – Standard Adjustable	N/A	
Dongbao (China)	N/A	N/A	312897 – Slimline Adjustable	N/A	
Duraflex	TD3601	TD3600/TD3615	N/A	N/A	N/A
Eurocell	EWS050	EWS051	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Finstral	D901	D902	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Finstral 900	D901	N/A	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Hailuo (China)	N/A	N/A	312897 – Slimline Adjustable	297217 – Fixed 17.00 mm roller	
Huasu (China)	N/A	N/A	312897 – Slimline Adjustable	297217 – Fixed 17.00 mm roller	
Interplast (Ghana)	INT1	INT2	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Kaijie (China)	ST7701-2 -3	ST7702 -1 -R	312897 – Slimline Adjustable	N/A	
KBE	700	710	297216 – Special Slimline Adjustable	N/A	280369 / 222154
Kömmerring SF2	1385	1386	312896 – Special Adjustable	N/A	NO
Kömmerring SF2	1385	1391	312896 – Special Adjustable	N/A	280369 / 222154
Kömmerring SF2 (China)	P1238	P1239	312896 – Special Adjustable	N/A	
Kömmerring SF3	1397	1396	312897 – Slimline Adjustable	297217 – Fixed 17.00 mm roller	NO
LB (GERMANY)	N/A	N/A	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Medabil S.A.	PEW2401	PEW2403	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Perfekt 60	610800	610700	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Perfekt 70	610900	611000	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Plastmo	6035028	6035088	280445 – Standard Adjustable	N/A	280369 / 222154
Plastmo	6038020	6038080	280445 – Standard Adjustable	N/A	280369 / 222154
PlusPlan AG	HS58 MIC	FR70 MIC	312897 – Slimline Adjustable	297217 – Fixed 17.00 mm roller	NO
Premier	9601	9602	280445 – Standard Adjustable	N/A	280369 / 222154
Rehau S717	624802	557100	312897 – Slimline Adjustable	N/A	280369 / 222154
Rehau S781	614823	614833	312897 – Slimline Adjustable	N/A	280369 / 222154
Schüco	7836	7843	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Selecta **	8740	8741	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Shide (China) Greiner	N/A	N/A	312897 – Slimline Adjustable	N/A	NO
Spectus	SW263	SW264	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Status	SW2370	SW2369	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Synseal	PF01	PZ01	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Technoplast	N/A	N/A	280445 – Standard Adjustable	N/A	280369 / 222154
Thyssen	SR1	SF1	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Thyssen	ST1	ST5	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Tigre Window (Brasil)	N/A	N/A	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Tigre Door (Brasil)	N/A	N/A	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Trocal	915100	925500	312897 – Slimline Adjustable	N/A	280369 / 222154
Trocal Economic (China)	917000	927000	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	
Veka	105069	105095	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Veka	105101	105102	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Veka (U.S.A.)	DS0101	SI0138	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	NO
Veka 58 (China)	105710	105712	312897 – Slimline Adjustable	N/A	
Veka 73 (China)	105101	105715	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	
Vista Windows	P15	P16	280445 – Standard Adjustable	N/A	
WHS Halo	P10150	P10151	280445 – Standard Adjustable	N/A	280369 / 222154
Wymar	2400	2402	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Wymar	2401	2404	280445 – Standard Adjustable	297218 – Fixed 21.00 mm roller	280369 / 222154
Yufeng (China)	HS60LC	SF68LC	312897 – Slimline Adjustable	N/A	
Xinhang (China)	N/A	N/A	312897 – Slimline Adjustable	N/A	

** = Contact Roto offices

Contact Roto offices for information on profiles not listed.



Pages 21 – 27		Pages 11 – 20				
RA2000 Gearbox	Backset 7mm espagnolettes	Backset 17mm espagnolettes without cylinder	Backset 17mm espagnolettes with cylinder	Individual strikers 8.0 mm cams/5 mm hooks	Strikers single-double use 600 mm x 1, 960 mm x 2, 1800 mm x 1	Frame preparation required? (rail width)
294449	YES	YES	YES	256765	Use 10 mm strikers (see page 44)	NO (14.0 mm)
294449	YES	YES	YES	TBA	Use 15 mm strikers (see page 44)	YES (15.0 mm)
257616	YES	NO	NO	297220	Use 10 mm strikers (see page 44)	YES (11.6 mm)
294449	YES	YES	YES	297220	Use 10 mm strikers (see page 44)	YES (11.6 mm)
294449	YES	YES	YES	297220	Use 10 mm strikers (see page 44)	YES (11.6 mm)
257616	YES	YES	NO	256765 (8.0 mm cams only)	Use 15 mm strikers (see page 44)	NO (29.5 mm)
294449	YES	YES	YES	256765 (8.0 mm cams only)	Use 15 mm strikers (see page 44)	NO (29.5 mm)
294449				N/A	N/A	N/A
294449	YES	YES	YES	203376	Use 15 mm strikers (see page 44)	NO (26.0 mm)
257616	YES	NO	NO	261819	Use 15 mm strikers (see page 44)	NO (16.0 mm)
294449	YES	YES	YES	261819	Use 15 mm strikers (see page 44)	NO (16.0 mm)
294449	YES	YES	YES	TECH001 / 297220	Use 10 mm strikers (see page 44)	YES (11.0 mm)
294449	YES	YES	YES	256765	Use 10 mm strikers (see page 44)	NO (12.0 mm)
257616	YES	NO	NO	KOM003 / KOM005	N/A	YES (14.5 mm)
294449	YES	YES	YES	KOM003 / KOM005	N/A	YES (14.5 mm)
257616	YES	NO	NO	KOM008/ 256765	Use 10 mm strikers (see page 44)	NO (12.0 mm)
294449	YES	YES	YES	LB008	Use 10 mm strikers (see page 44)	NO (13.0 mm)
257616	YES	NO	NO	N/A	Use 10 mm strikers (see page 44)	YES (13.0 mm)
294449	YES	YES	NO	N/A	Use 10 mm strikers (see page 44)	NO (13.0 mm)
294449	YES	YES	YES	N/A	Use 10 mm strikers (see page 44)	NO (13.0 mm)
294449	YES	YES	YES	203378	Use 15 mm strikers (see page 44)	NO (16.0 mm)
294449	YES	YES	YES	203378	Use 15 mm strikers (see page 44)	NO (16.0 mm)
257616	YES	NO	NO	PLUSPLANAG001	Use 15 mm strikers (see page 44)	YES (15.0 mm)
294449	YES	YES	YES	PREM011	Use 15 mm strikers (see page 44)	NO (16.0 mm)
294449	YES	YES	YES	REHAU020(245248)	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	REHAU020(245248)	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	256765	Use 15 mm strikers (see page 44)	NO (14.0 mm)
294449	YES	YES	YES	N/A	Use 15 mm strikers (see page 44)	NO (27.0 mm)
294449	YES	YES	NO	N/A	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	SPECTUS018	Use 15 mm strikers (see page 44)	NO (16.0 mm)
294449	YES	YES	YES	203378	Use 15 mm strikers (see page 44)	NO (15.5 mm)
294449	YES	YES	YES	SYNSEAL009	Use 15 mm strikers (see page 44)	NO (28.0 mm)
294449	YES	YES	YES	TECH001 / 297220	Use 10 mm strikers (see page 44)	YES (11.0 mm)
294449	YES	YES	NO	N/A	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	261819	Use 10 mm strikers (see page 44)	NO (21.0 mm)
294449	YES	YES	NO	297220	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	297220	Use 10 mm strikers (see page 44)	YES (12.0 mm)
294449	YES	YES	YES	TROC010(203375) / 261819	N/A	NO (16.0 mm)
294449	YES	YES	YES	VEKA013 / 261819	Use 15 mm strikers (see page 44)	NO (15.0 mm)
294449	YES	YES	NO	VEKA013 / 261819	Use 15 mm strikers (see page 44)	NO (15.0 mm)
257616	YES	NO	NO	VEKA013 / 261819	Use 15 mm strikers (see page 44)	NO (15.0 mm)
294449	YES	YES	YES	256765	Use 15 mm strikers (see page 44)	NO (20.0 mm)
294449	YES	YES	YES	328583	Use 10 mm strikers (see page 44)	YES (13.0 mm)
294449	YES	YES	YES	328583	Use 10 mm strikers (see page 44)	YES (13.0 mm)

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