SLIDING DOORS

L15.11
LIFT-SLIDE SYSTEM

01.04.2016

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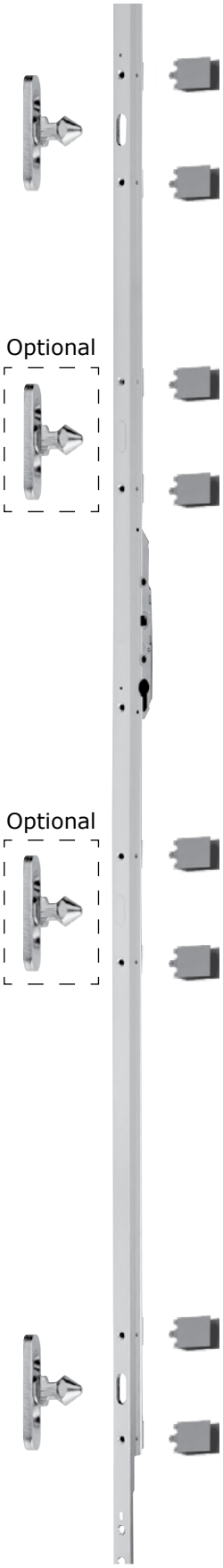
1. General characteristics



- The lift-slide systems HS200, HS300 and HS400 incorporate advanced technology, based on a simple principle with 3 functions: lifting, sliding and lowering of the door.
- Suitable for very large and heavy door vents: vent weights up to 400 kg.
- Suitable for 2-, 4- and 6-part lift-slide doors.
- Due to the roller assemblies with bearings, the doors slide effortlessly even for large glass areas and heavy weights. The doors move very smoothly from lift to slide position and back.
- Normally two keeps will be provided, but it is possible to place two additional keeps in the pre-punched holes in the lock, so that resistance against burglary will increase.
- To support the lock and the front roller assembly, packers will be mounted close to the fixing screws. The packers in synthetic material are available in different heights so that a wide range of profile systems can be reached. The packers are easy to install.

- On the roller assemblies, brushes are mounted so that at every sliding movement dirt will be removed from the rail. These brushes guarantee a smooth, quiet movement and a longer durability.
- The wheels of the roller assemblies are free of weight in closed position by means of an accessory.
- The use of the patented spring support system, which is optional, reduces the operating force for the user, because the spring system is supporting the vent. This support can be installed with vent weights over 300 kg, because this additional roller assembly absorbs about 80 kg.
- Maintenance is simple: lubricate of the lock rod is done through the special holes in the lock.
- The components of the lift-slide system are made of high quality steel, zinc alloy and aluminium castings. Dependant on the material, the parts are either zinc plated and passivated, or anodised.

2. Size range

- Size range HS200:
  - Vent width: 630-2200 mm
  - Vent height: 730-2860 mm
  - Vent weight: 200 kg
  - Ratio vent height Fh/vent width Fb = max. 2,5

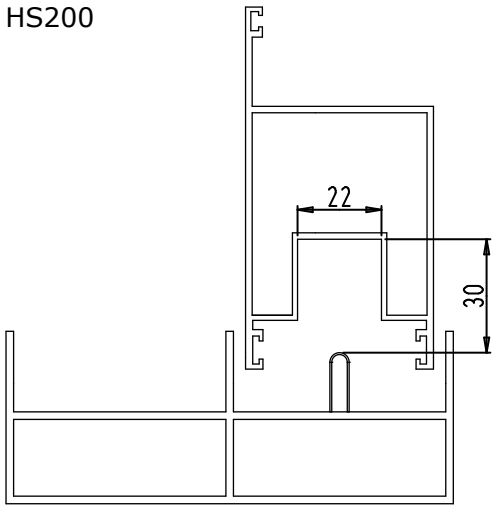
- Size range HS300:
  - Vent width: 740-3385 mm
  - Vent height: 730-2860 mm
  - Vent weight: 300 kg
  - Ratio vent height Fh/vent width Fb = max. 2,5

- Size range HS400:
  - Vent width: 1200-3385 mm
  - Vent height: 730-2860 mm
  - Vent weight: 400 kg
  - Ratio vent height Fh/vent width Fb = max. 2,5

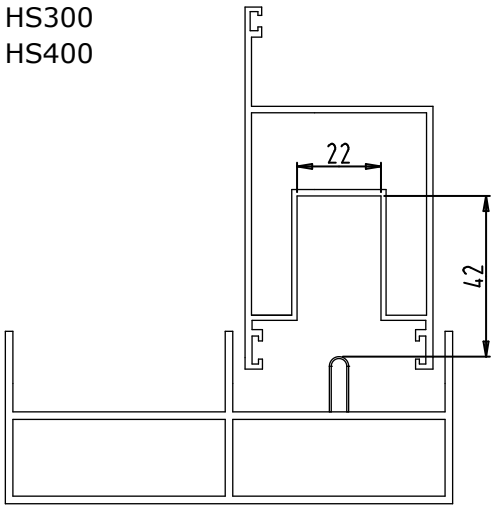
- The minimum and maximum dimensions depend on the profile.

- Section requirements: see drawing below.

HS200

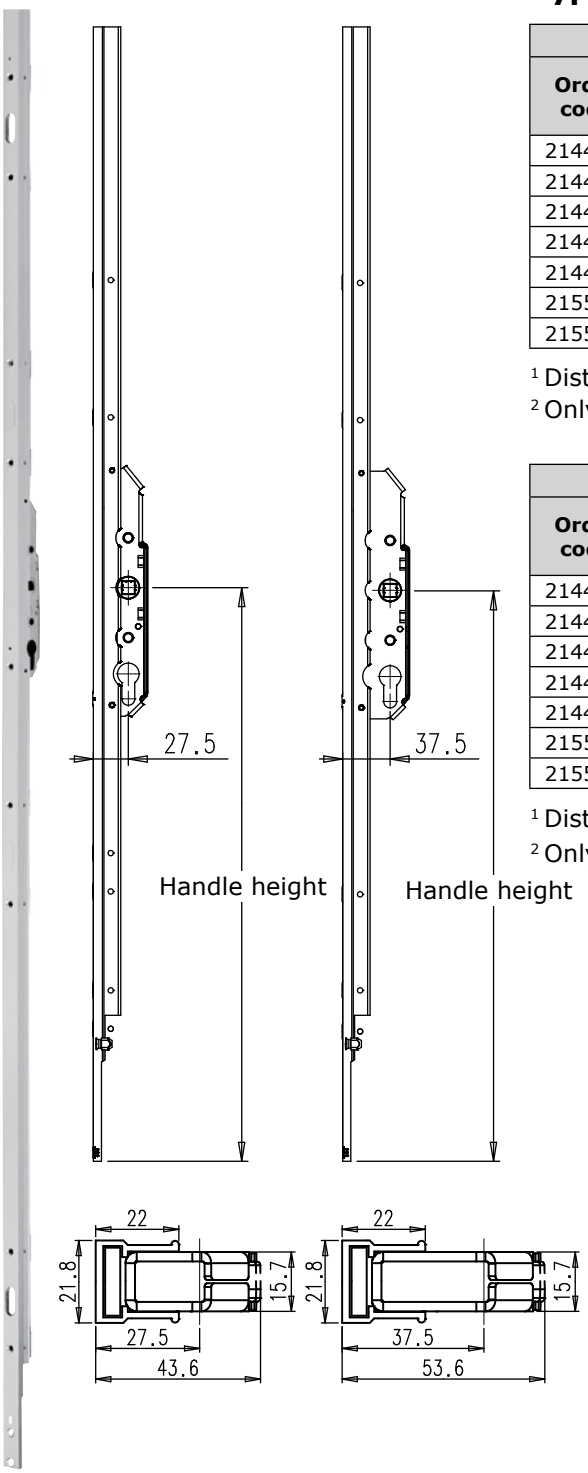


HS300
HS400



3. Locks

- The locks, for use with euro profile cylinder, are available with 27.5 mm and 37.5 mm backset.
- Same locks for lift-slide doors up to 200 kg as well as for lift-slide doors up to 400 kg.
- There are several locks dependant on the height of the lift-slide door and the installation circumstances. The lock can be cut off at the top side.



Types:

Lock with backset 27.5 mm				
Order code	**Length lock (mm)**	**Lock shortened at the top side (mm)**	**Vent height (mm)**	**Handle height[1] (mm)**
214410	1300	614	730-1360	396.5
214411	1700	500	1260-1760	396.5
214412	2100	500	1660-2160	996.5
214413	2500	500	2060-2560	996.5
214414	2800	400	2460-2860	996.5
215557[2]	3300	500	2760-3360	996.5
215559[2]	3800	500	3260-3860	996.5

[1] Distance measured from the top side of the rail.
[2] Only available on request.

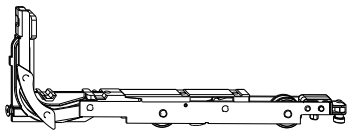
Lock with backset 37.5 mm				
Order code	**Length lock (mm)**	**Lock shortened at the top side (mm)**	**Vent height (mm)**	**Handle height[1] (mm)**
214415	1300	614	730-1360	396.5
214416	1700	500	1260-1760	396.5
214417	2100	500	1660-2160	996.5
214418	2500	500	2060-2560	996.5
214419	2800	400	2460-2860	996.5
215558[2]	3300	500	2760-3360	996.5
215560[2]	3800	500	3260-3860	996.5

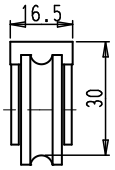
[1] Distance measured from the top side of the rail.
[2] Only available on request.

4. Roller assemblies

Roller assemblies n° 210491 and 210492 for HS200

- Order codes:
  - Front roller assembly: n° 210491
  - Back roller assembly: n° 210492

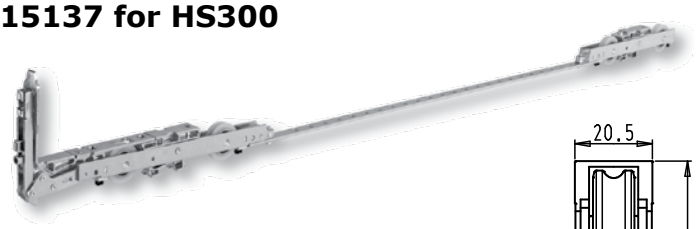


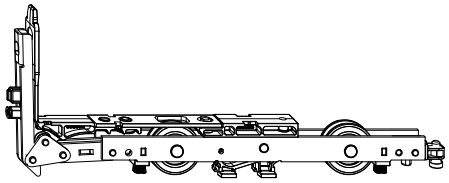


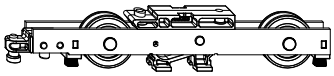
- Roller assemblies for vent weights up to 200 kg.
- The roller assemblies have 2 wheels in high quality synthetic material on needle bearings.
- The front and back roller assemblies are connected to each other by a horizontal connection bar.

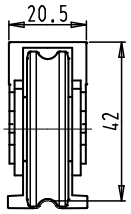
Roller assemblies n° 215136 and 215137 for HS300

- Order codes:
  - Front roller assembly: n° 215137
  - Back roller assembly: n° 215136



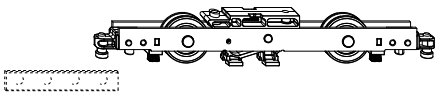






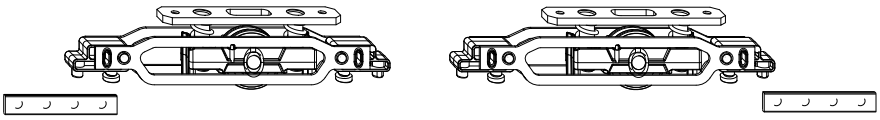
- Roller assemblies for vent weights up to 300 kg.
- The roller assemblies have 2 wheels in high quality synthetic material on needle bearings.
- The front and back roller assemblies are connected to each other by a horizontal connection bar.

Additional roller assembly n° 215138 for HS400



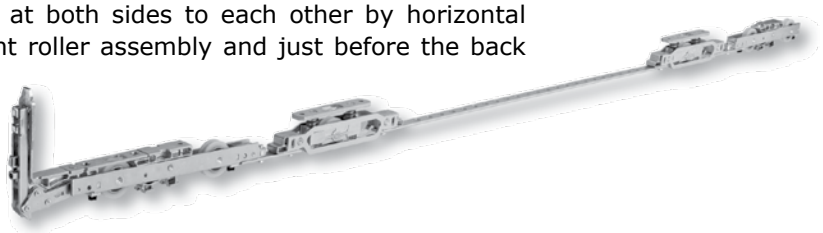
- For vent weights up to 400 kg, two additional roller assemblies are needed. The minimum vent width is 1335 mm.
- The roller assemblies are connected at both sides to each other by horizontal connection bars, just behind the front roller assembly and just before the back roller assembly.

Set additional roller assemblies with spring assistance n° 103071 for HS400



- Set additional roller assemblies for vent weight up to 400 kg.
- The set contains 2 additional roller assemblies with spring assistance and 2 short connection bars. The minimum vent width is 1200 mm.

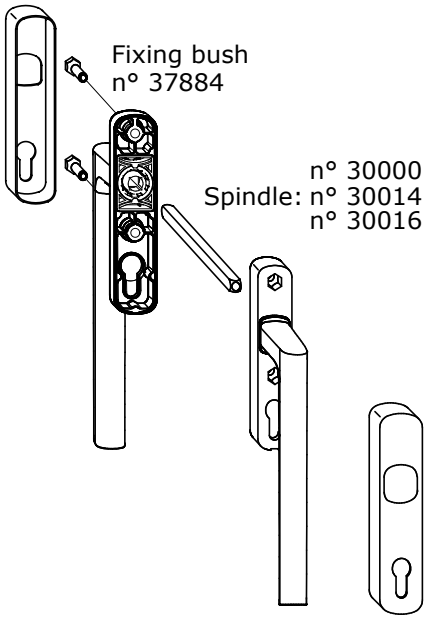
- The use of the patented spring support system reduces the operating force for the user, because the spring system is supporting the vent. This support can be installed with vent weights over 300 kg, because it absorbs about 80 kg.
- The roller assemblies are connected at both sides to each other by horizontal connection bars, just behind the front roller assembly and just before the back roller assembly.



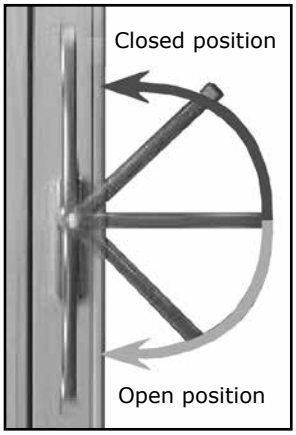
5. Handles

5.1. General

- Solid aluminium handle on a long backplate with concealed fixing, anodised or polyester powder coated in more than 450 RAL colours.
- Can be used in combination with a handle, with or without cylinder, or a finger pull on the outside.
- The square spindle is available in 3 different lengths with a section of 10 mm:
  - N° 30000: 10 x 78 mm
  - N° 30014: 10 x 84 mm
  - N° 30016: 10 x 138 mm
- The length of the square spindle depends on the profile depth and on the position of the lock. For small profile depths the square spindle can be cut off.
- The set of fixing bushes n° 37884 is used when a handle is placed on the outside in combination with a handle on the inside.



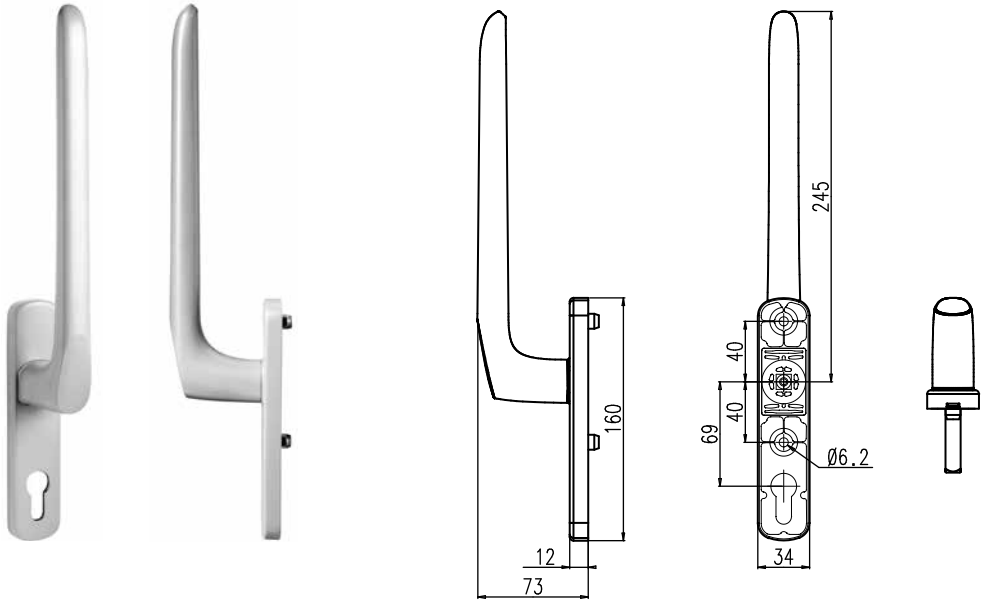
Function of handle:

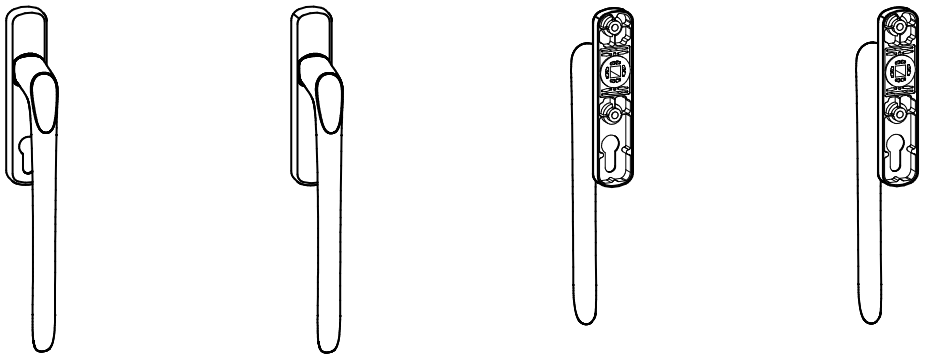


- Handle downwards: open position.
- Handle upwards: closed position.

5.2. HORIZON handles

Standard HORIZON handle





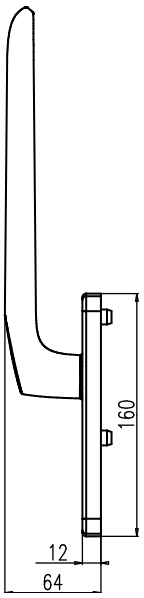
Handle inside
n° 74012L

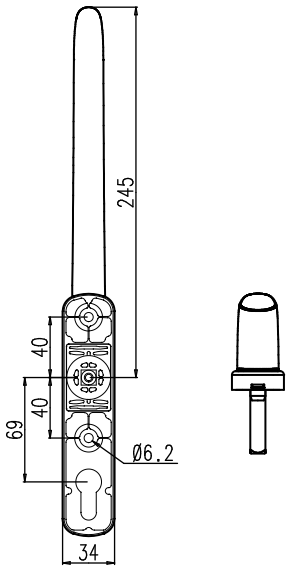
Handle inside
n° 74012CL

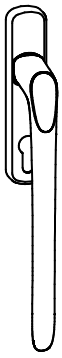
Handle outside
n° 74013L

Handle outside
n° 74013CL

HORIZON handle with lower depth

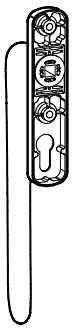




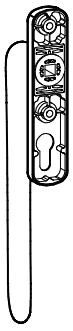


Handle inside
n° 74012BL

Handle inside
n° 74012BCL

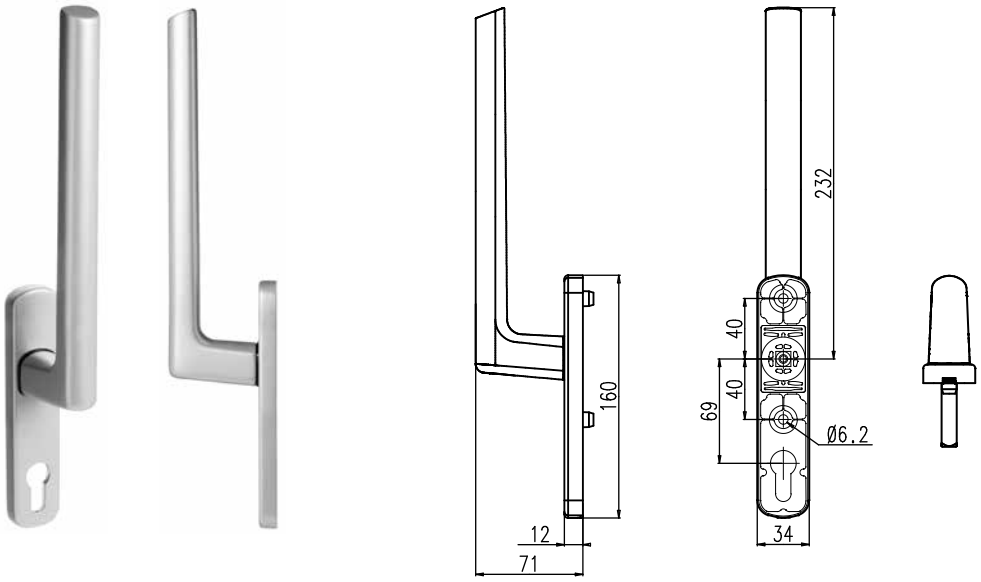


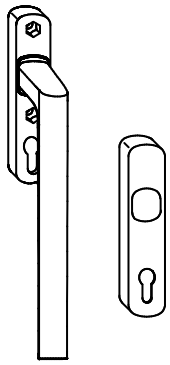
Handle outside
n° 74013BL



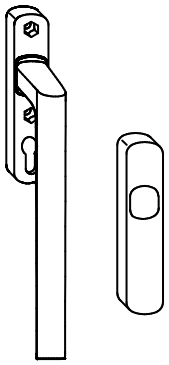
Handle outside
n° 74013BCL

5.3. Standard handle

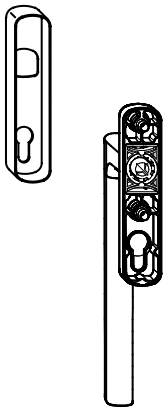




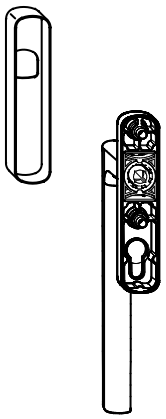
Handle inside
n° 74010L



Handle inside
n° 74010CL



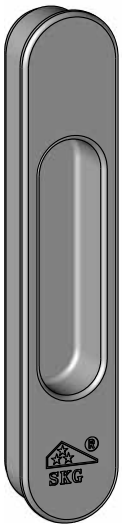
Handle outside
n° 74011L

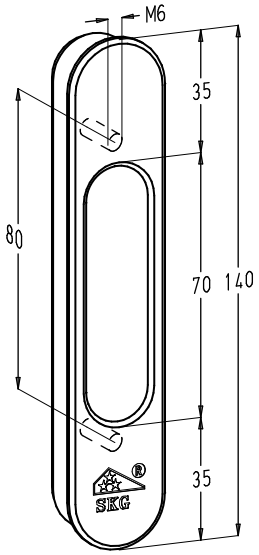


Handle outside
n° 74011CL

5.4. Finger pulls

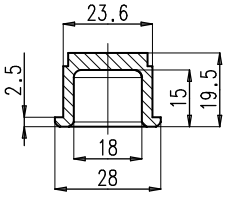
HORIZON finger pull n° 82190L VI



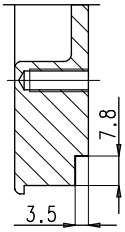


n° 82190L VI

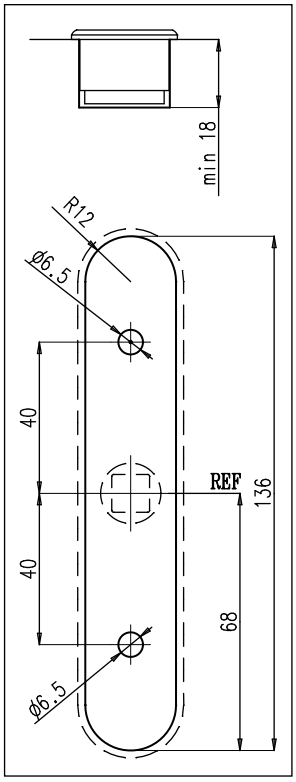
Cross section of the grip.



Clearance cavity for half cylinder.

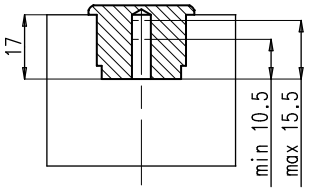


Profile preparations



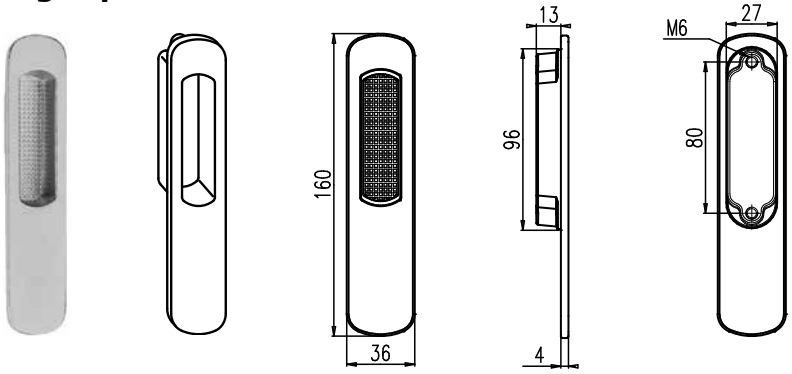
- The finger pull is developed for the lift-slide system and can be used in combination with every handle on the inside.
- The finger pull with ergonomic grip is mounted at the outside and is provided with invisible fixing holes.
- Finish: aluminium, anodised or polyester powder coated in more than 450 RAL colours.
- The finger pull and handle are fixed to each other with screws M6 DIN 965.
- The finger pull is **SKG approved, 3 stars**.

Calculation of screw lengths

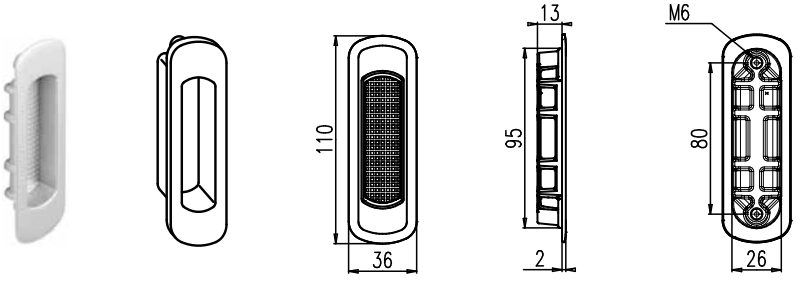


Standard finger pulls

N° 36269



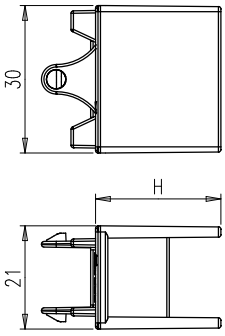
N° 357563



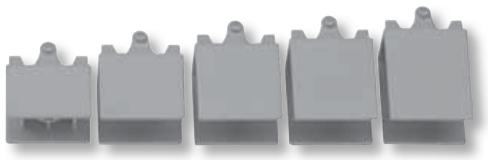
6. Packers

- The locks are installed in combination with packers according to the available installation depth. The packers in synthetic material are available in different heights.
- The packers can be placed on the lock and on the roller assemblies. On the lock 8 packers should be placed.
- The installation is easy, because the packers are simple to place in the assigned punched holes.

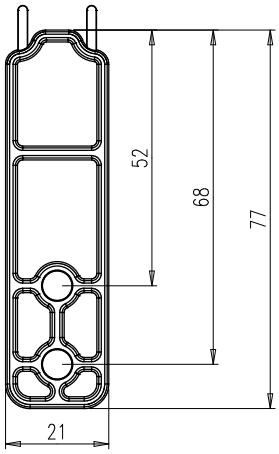
6.1. Packers for lock



Packer lock	Height H (mm)
366456	10
369363	14
361276	20.5
364646	22
361277	25.5
361279	32
361280	36



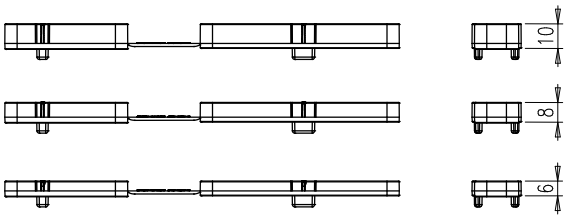
6.2. Packer for roller assembly-lock



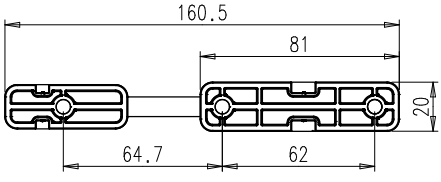
Packer roller-lock	Height H (mm)
366455	10
369362	14
361270	20.5
364647	22
361271	25.5
361274	32
361275	36

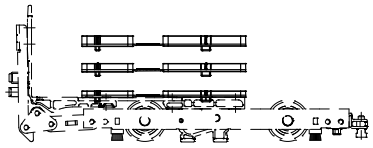
6.3. Packer for roller assembly

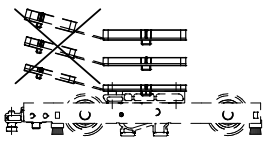
- The packers are used to take up the potential space between the roller assemblies and the profile.
- The packers are useful for the front and back roller assembly. For the back roller assembly the smallest part must be cut off.



Packer roller assembly	Height H (mm)
363819	6
363820	8
363821	10

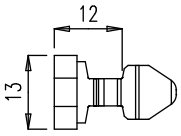




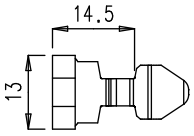


7. Keeps

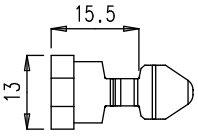
- The keeps are in steel zinc plated.



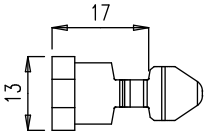
N° 217086



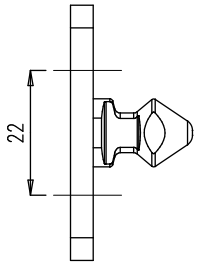
N° 216029



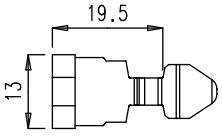
N° 217084



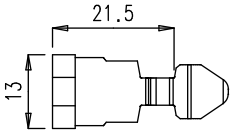
N° 227679



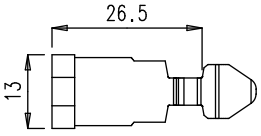
Side view



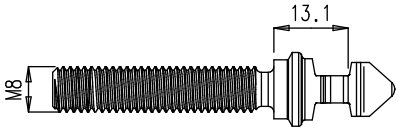
N° 217082



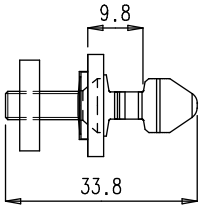
N° 217080



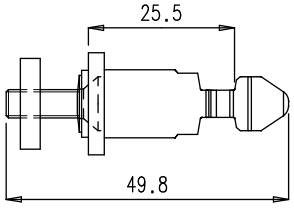
N° 217078



N° 364580



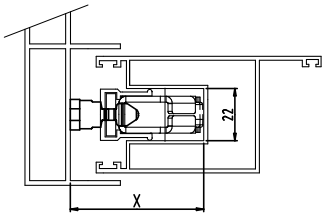
N° 103099



N° 103619

- The keeps n° 103099 and 103619 are provided with a clamping plate and 2 screws and are used on a double lift-slide: see page L15.11.24.
- These keeps are mounted on the lock of the second vent.

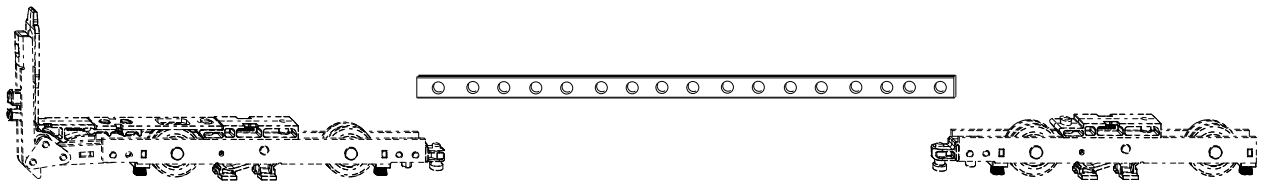
8. Overview table keeps-packers



X	without packer	366456 10	369363 14	361276 20.5	364646 22	361277 25.5	361279 32	361280 36
217086	26.5-28	36.5-38	40.5-42	47-48.5	48.5-50	52-53.5	58.5-60	62.5-64
216029	29-30.5	39-40.5	43-44.5	49.5-51	51-52.5	54.5-56	61-62.5	65-66.5
217084	30-31.5	40-41.5	44-45.5	50.5-52	52-53.5	55.5-57	62-63.5	66-67.5
227680	31.5-33	41.5-43	45.5-47	52-53.5	53.5-55	57-58.5	63.5-65	67.5-69
217082	34-35.5	44-45.5	48-49.5	54.5-56	56-57.5	59.5-61	66-67.5	70-71.5
217080	36-37.5	46-47.5	50-51.5	56.5-58	58-59.5	61.5-63	68-69.5	72-73.5
217078	41-42.5	51-52.5	55-56.5	61.5-63	63-64.5	66.5-68	73-74.5	77-78.5

9. Accessories

Connection bar for roller assemblies

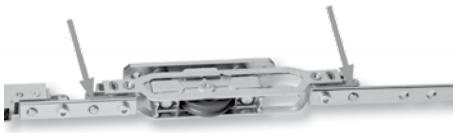


- The connection between the lift-slide roller assemblies is carried out by means of a galvanized steel pre-punched connection bar.
- The smallest connection bar is used to connect the additional roller assemblies. The choice of the other connection bars depends on the vent width.
- Between the pre-punched holes there is a space of 24 mm.

Lock n°	Length lock (mm)	Vent width (mm)
359638	96	-
359639	692	785-1350
359640	1196	1275-1850
359641	1700	1775-2350
359642	2204	2275-2850
359643	2708	2775-3385
361173	3192	630-3385

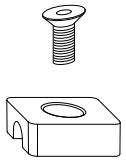
[1] Profile dependant.

The fixed pin captures the tension while lifting.



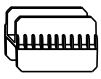
Locking piece

- The locking piece n° 103060 is only used for the roller assemblies up to 300 kg and up to 400 kg.
- This locking piece is also applied for a double lift-slide door on the same track with one vent closing on the other vent. This is necessary because otherwise both vents can slide together.



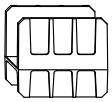
N° 103060

Guiding pieces



N° 362651

N° 359803

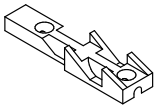


N° 359802

- Guiding piece n° 362651 is used to improve the guiding of the connection bar in the groove. This guiding piece can only be used for roller assemblies up to 200 kg.
- Guiding piece n° 359802 is used to improve the guiding of the connection bar in the groove. This guiding piece can only be used for roller assemblies up to 300 kg and up to 400 kg.
- Guiding piece n° 359803 is used to prevent the connection bar touching the rail on larger vents. This piece must be installed in the middle of the connection bar.

Night ventilation keep

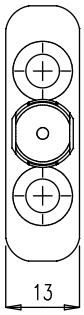
- The night ventilation keep n° 41673 can only be used for the roller assemblies up to 200 kg.
- The night ventilation keep is also applied for a double lift-slide door on the same track with one vent closing on the other vent. This is necessary because otherwise both vents can slide together.

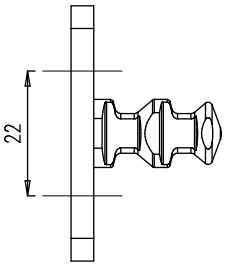


N° 41673

Night vent keep

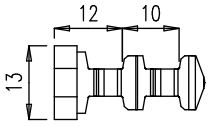
- The lift-slide doors are placed in ventilation position by means of a night vent keep. The night vent keep is mounted on the lower keep position.
- The night vent keeps are combined with keeps. See page L15.11.13.
- The night vent keeps are made in galvanized steel.



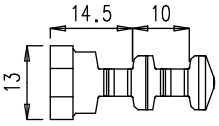


Side view

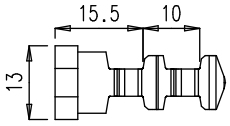
Night vent keep	In combination with keep
217087	217086
216030	216029
217085	217084
227680	227679
217083	217082
217081	217080
217079	217078



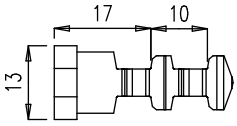
N° 217087



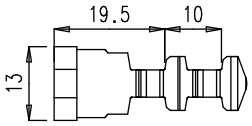
N° 216030



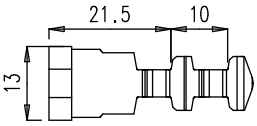
N° 217085



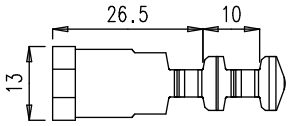
N° 227680



N° 217083



N° 217081

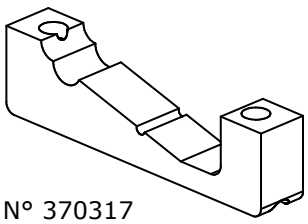


N° 217079

Support pieces

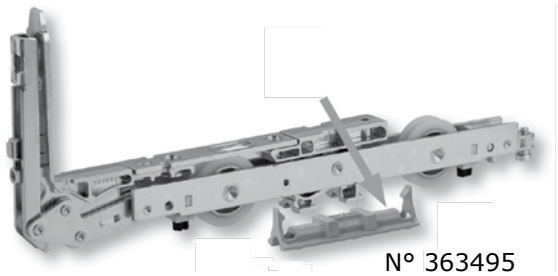
- The wheels of the roller assemblies are free of weight in closed position by means of a support piece.
- The support piece should be installed under both front and back roller assembly.
- The support piece is required if the vent does not rest on the frame.

For small roller assembly: n° 370317



N° 370317

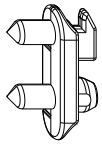
For big roller assembly: n° 363495



N° 363495

Marking piece

- By using a marking piece n° 363159, which is placed on the vent door, the fixing holes of the keeps are marked on the frame by closing the sliding door. As a result, installation is much easier.

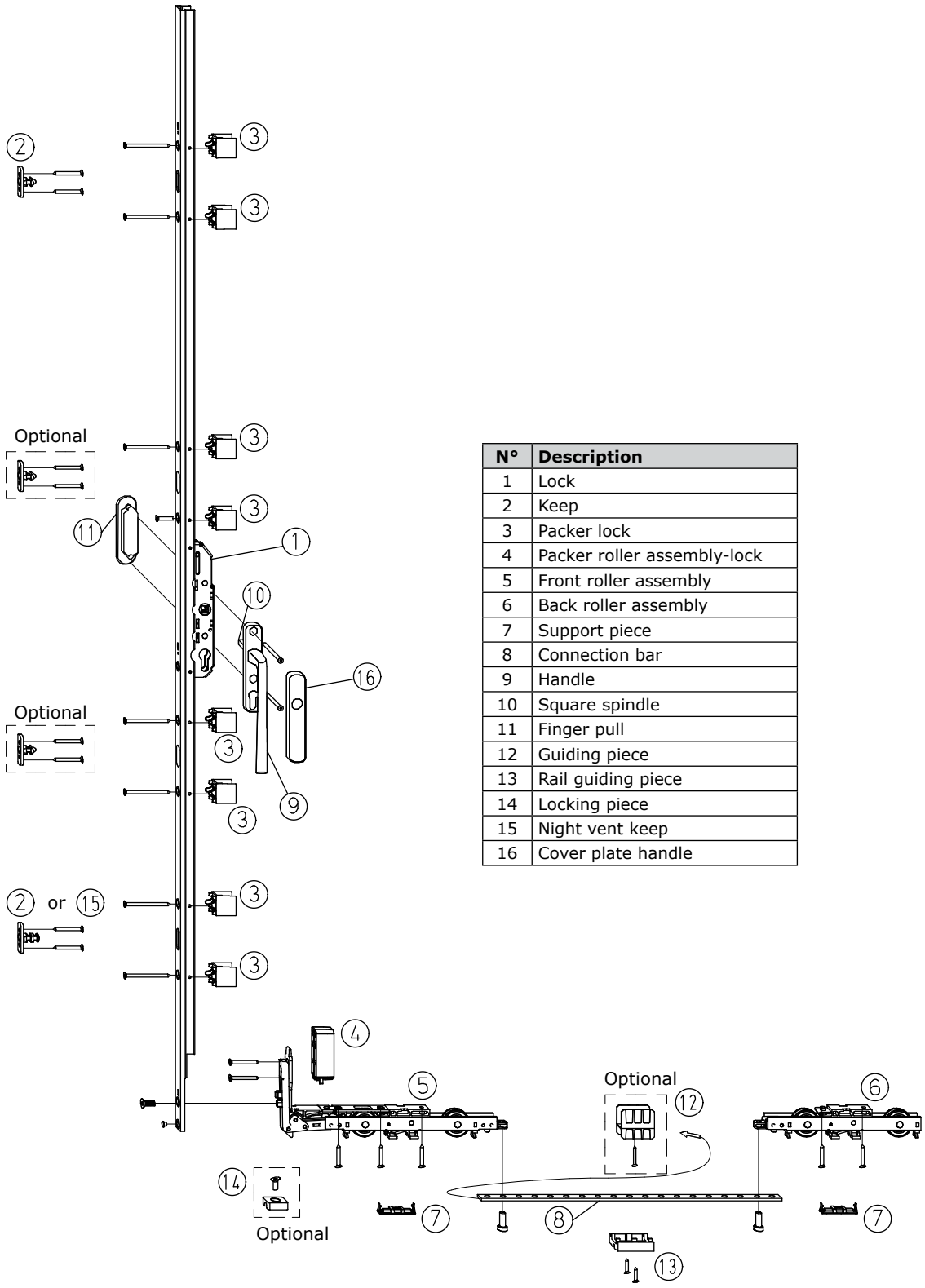


N° 363159

Installation instructions

9.1. Hardware overview

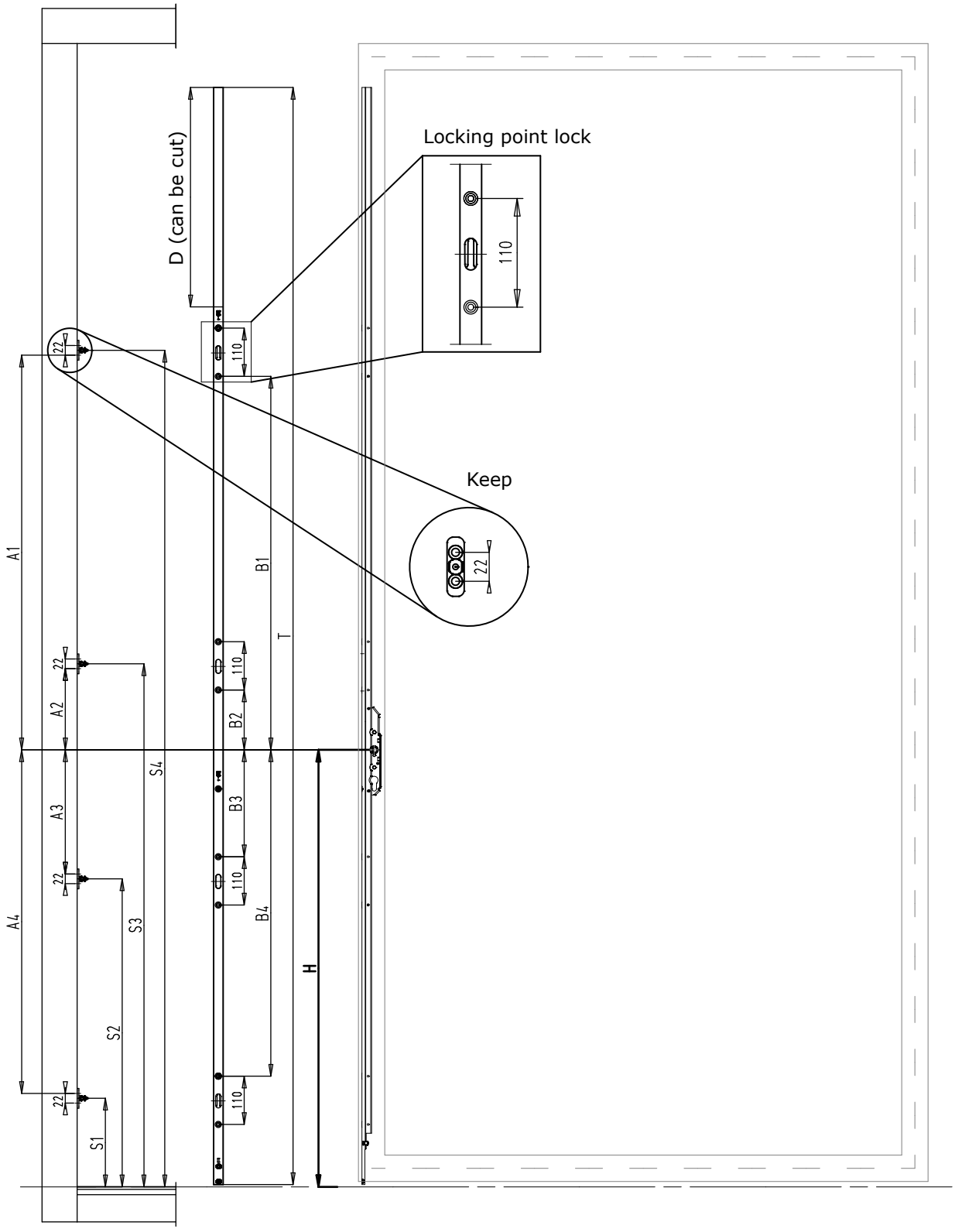
- Below you will find the installation overview for lift-slide doors.
- The standard hardware is supplied with two keeps. For a higher resistance against burglary two additional keeps can be installed.



N°	Description
1	Lock
2	Keep
3	Packer lock
4	Packer roller assembly-lock
5	Front roller assembly
6	Back roller assembly
7	Support piece
8	Connection bar
9	Handle
10	Square spindle
11	Finger pull
12	Guiding piece
13	Rail guiding piece
14	Locking piece
15	Night vent keep
16	Cover plate handle

9.2. Lock dimensions

- Below you will find a drawing with the lock dimensions of lift-slide system HS300 in aluminium profiles.
- The dimensions of the keeps and the handle height are measured from the top side of the rail.



• Installation dimensions for the vent:

Lock n°	Handle height H (mm)	T (mm)	B1 (mm)	B2 (mm)	B3 (mm)	B4 (mm)	D (mm)
214410 214415	396.5	1300	-	136.5	143.5	-	614
214411 214416	396.5	1700	651	136.5[1]	143.5	-	500
214412 214417	996.5	2100	451	136.5[1]	243.5[1]	743.5	500
214413 214418	996.5	2500	851	136.5[1]	243.5[1]	743.5	500
214414 214419	996.5	2800	1251	136.5[1]	243.5[1]	743.5	400

[1] optional

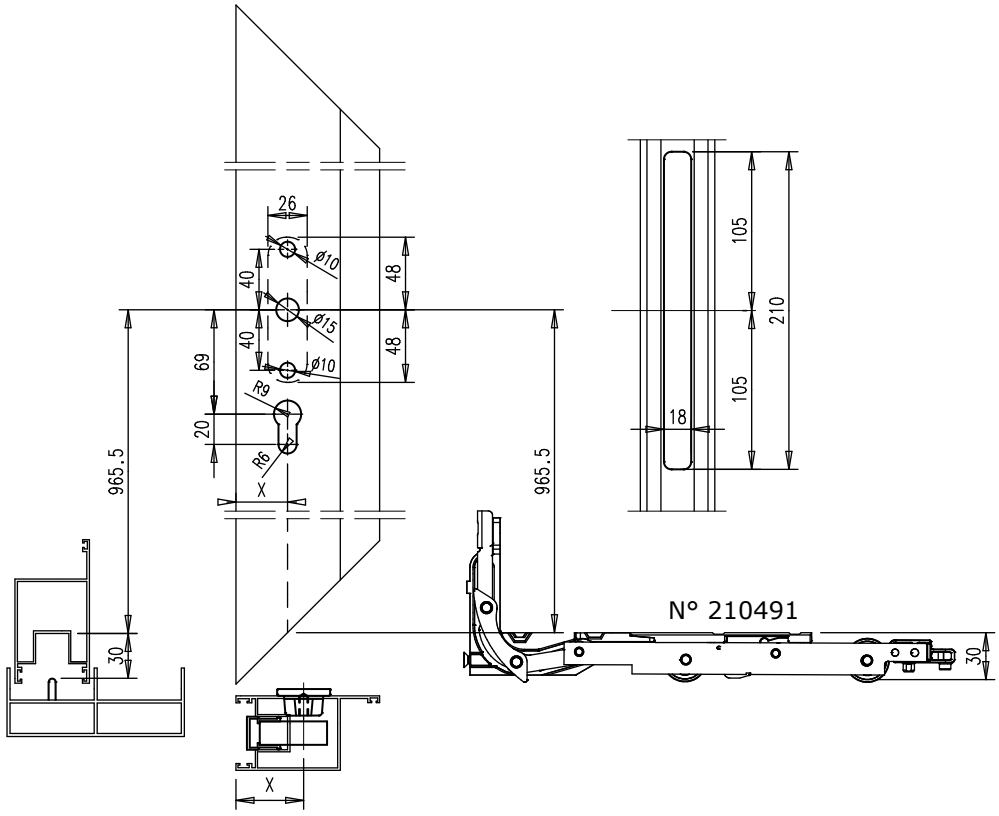
• Installation dimensions for the frame:

Lock n°	Handle height H (mm)	A1 (mm)	A2 (mm)	A3 (mm)	A4 (mm)	S1 (mm)	S2 (mm)	S3 (mm)	S4 (mm)
214410 214415	396.5	-	185	183	-	202.5	592.5	-	-
214411 214416	396.5	699.5	185[1]	183	-	202.5	592.5	1107	-
214412 214417	996.5	499.5	185[1]	283[1]	783	202.5	702.5	1192.5	1507
214413 214418	996.5	899.5	185[1]	283[1]	783	202.5	702.5	1192.5	1907
214414 214419	996.5	1299.5	185[1]	283[1]	783	202.5	702.5	1192.5	2307

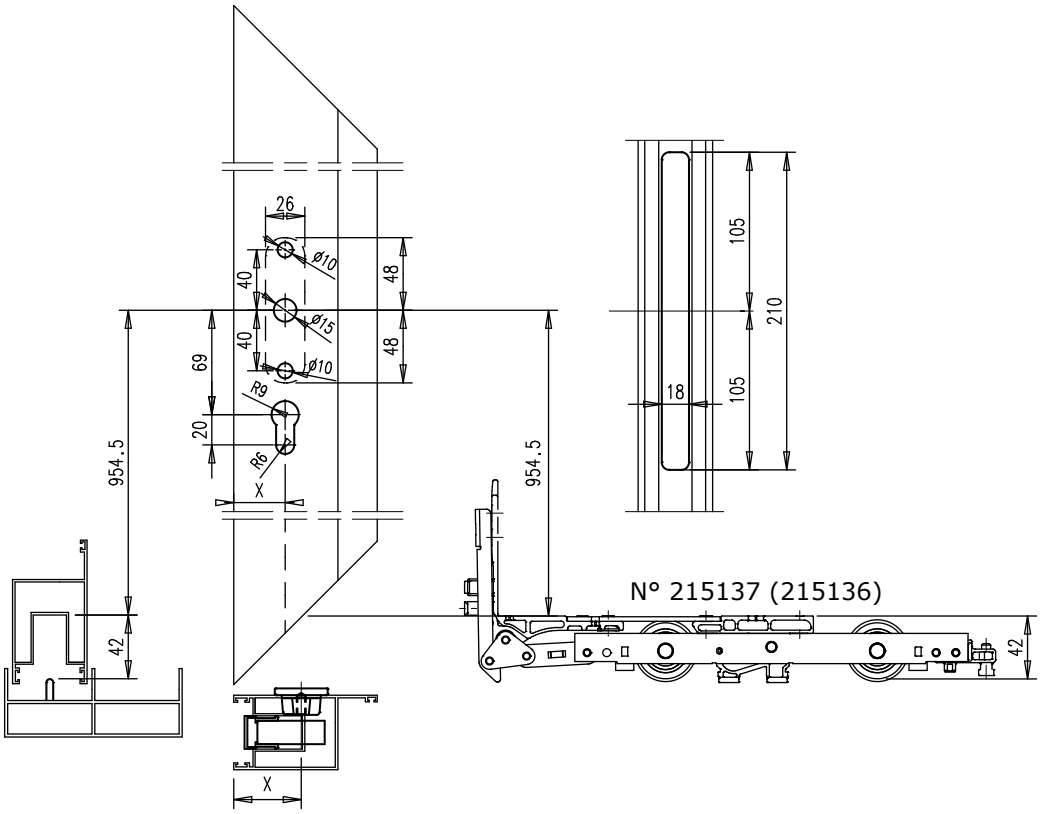
[1] optional

9.3. Handle preparations

9.3.1. Preparations lock and handle for HS200



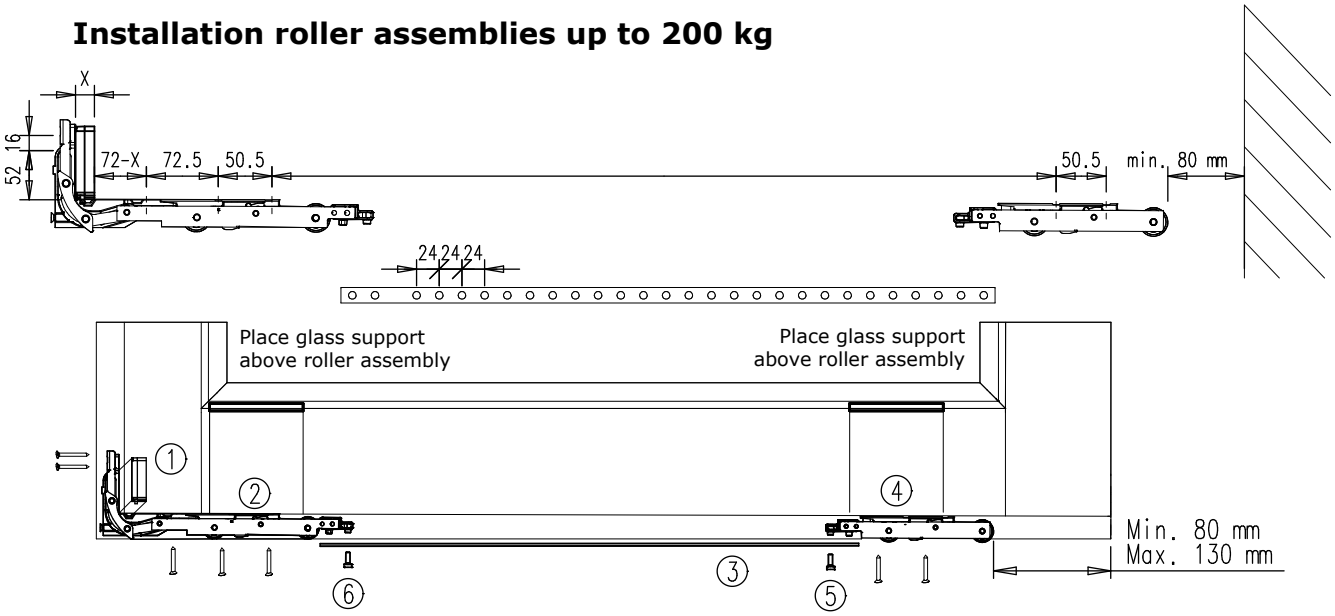
9.3.2. Preparations lock and handle for HS300 and HS400



9.4. Installation instructions

9.4.1. Installation roller assemblies

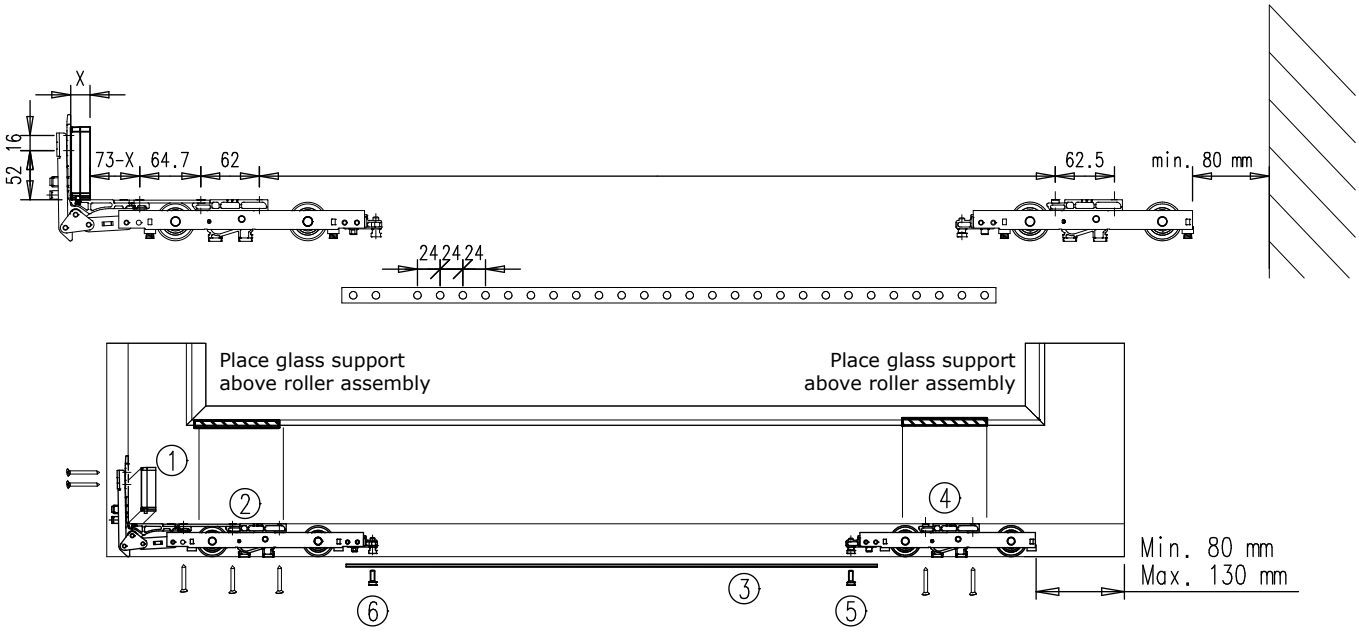
Installation roller assemblies up to 200 kg



1. Install packer on front roller assembly.
2. Install front roller assembly and tighten the screws.
3. Cut off the connection bar to the required length.
4. Install back roller assembly. The distance between the back roller assembly and the vent end must be at least 80 mm and maximum 130 mm.
5. Demount the screw (5) of the back roller assembly and fix the connection bar with this screw.
6. Demount the screw (6) of the front roller assembly and fix the connection bar with this screw.

Note: The roller assemblies are supplied in closed position and can be installed immediately.

Installation roller assemblies up to 300 kg

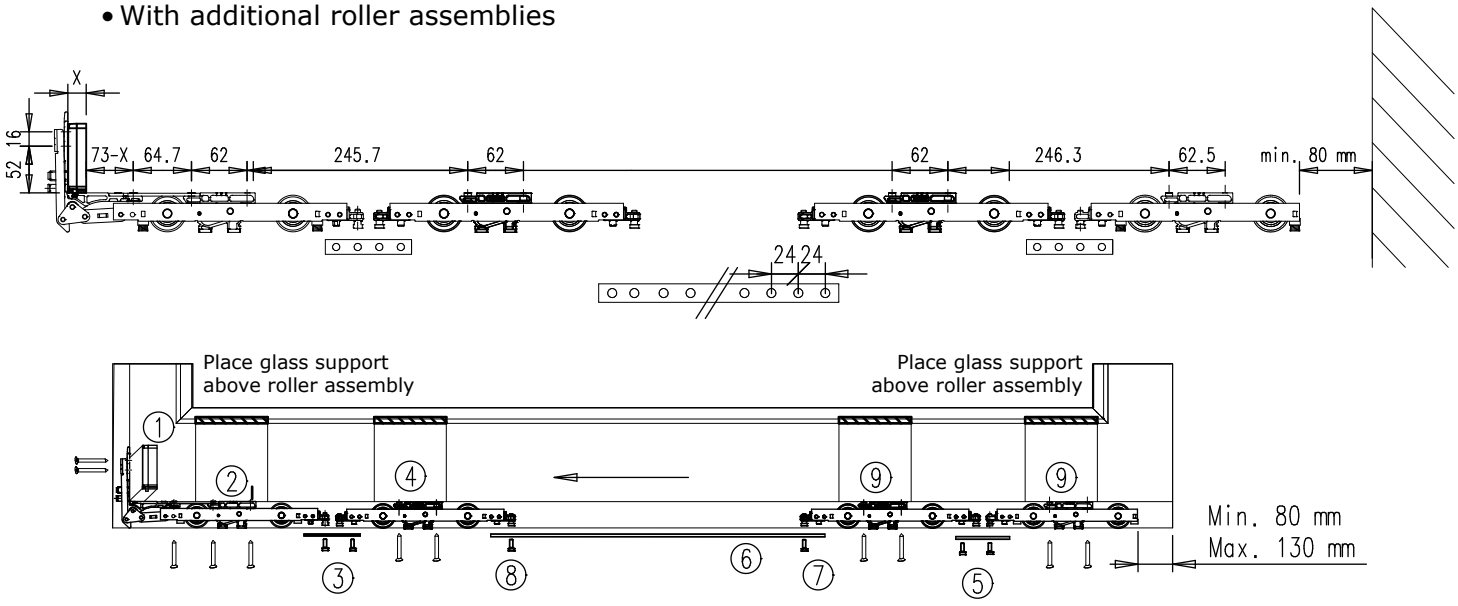


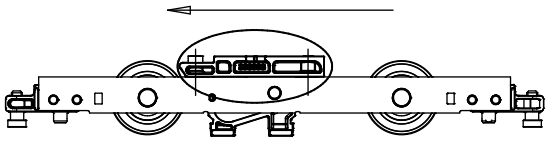
1. Install packer on front roller assembly.
2. Install front roller assembly and tighten the screws.
3. Cut off the connection bar to the required length.
4. Install back roller assembly. The distance between the back roller assembly and the vent end must be at least 80 mm and maximum 130 mm.
5. Demount the screw (5) of the back roller assembly and fix the connection bar with this screw.
6. Demount the screw (6) of the front roller assembly and fix the connection bar with this screw.

Note: The roller assemblies are supplied in closed position and can be installed immediately.

Installation roller assemblies up to 400 kg

- With additional roller assemblies

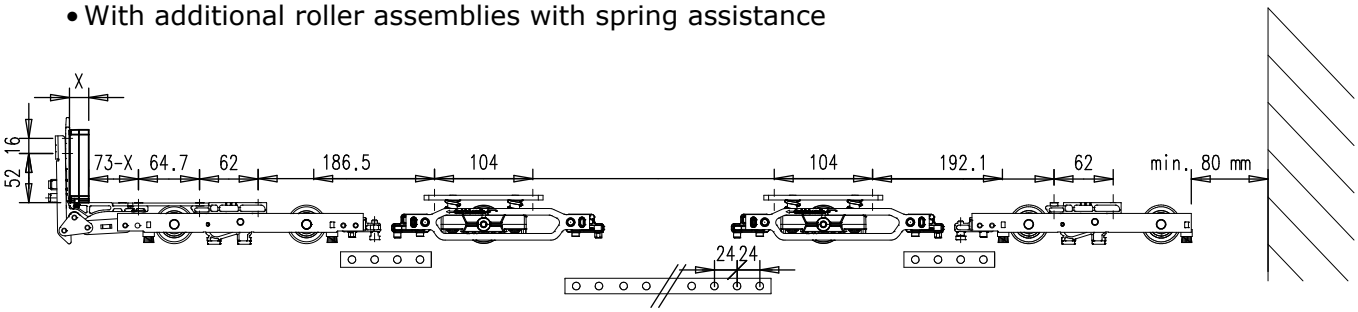


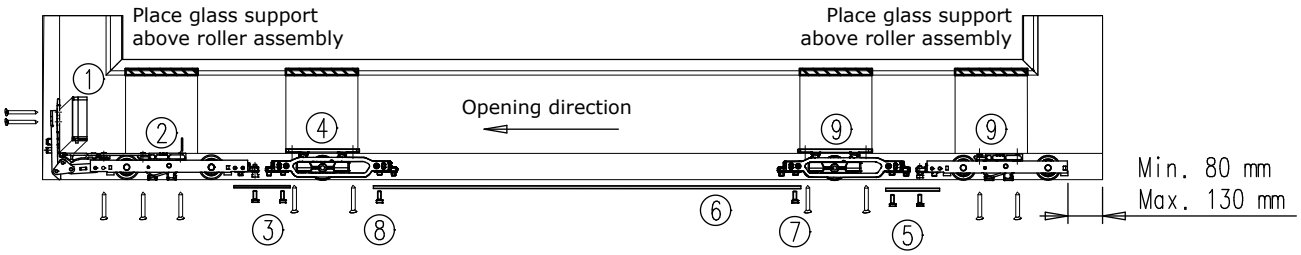


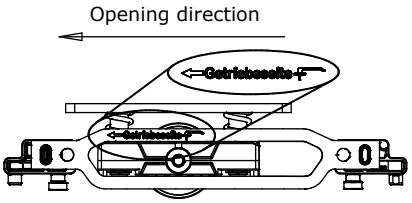
1. Install packer on front roller assembly.
2. Install front roller assembly and tighten the screws.
3. Connect front and first additional roller assembly by means of the small connection bar (n° 359638). It is important that the rollers assemblies are positioned in the right direction.
4. Install and fix first additional roller assembly.
5. Connect back and second additional roller assembly by means of the small connection bar (n° 359638).
6. Cut off the connection bar to the required length. The distance between the back roller assembly and the vent end must be at least 80 mm and maximum 130 mm.
7. Install back and second additional roller assembly to the connection bar.
8. Tighten the screws of additional rollers assemblies to the connection bar.
9. Tighten the back roller assembly and the second additional roller assembly to the vent groove.

Note: The roller assemblies are not parallel after installation. The roller assemblies will be parallel after the first operation of the lift-slide door.

- With additional roller assemblies with spring assistance



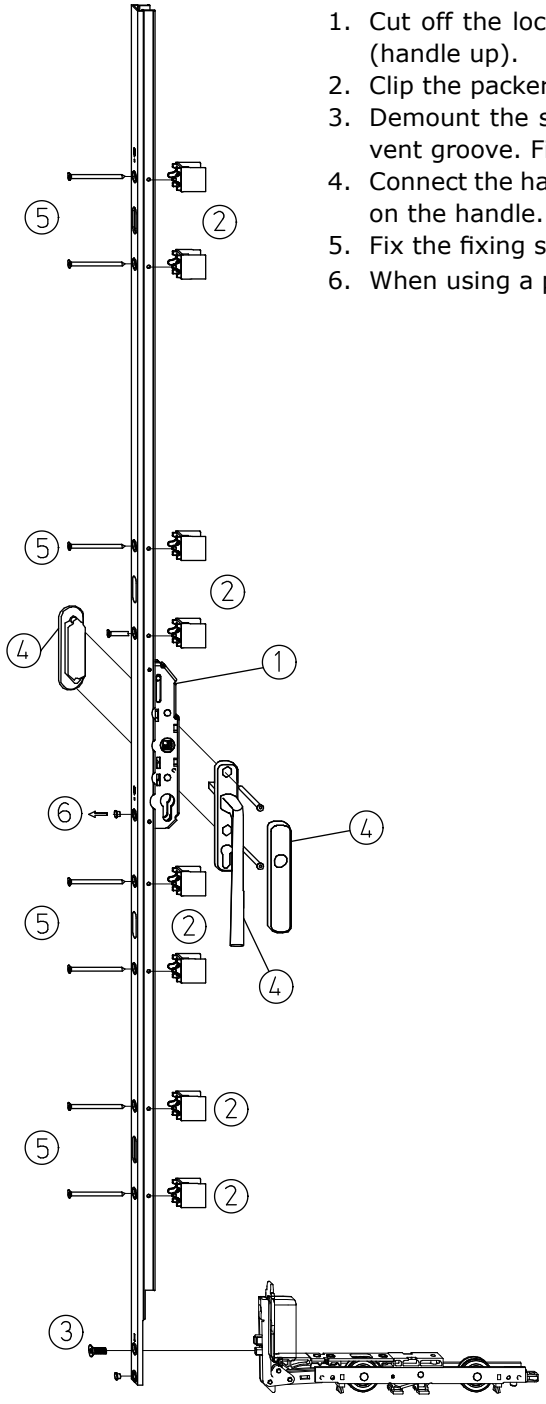




1. Install packer on front roller assembly.
2. Install front roller assembly and tighten the screws.
3. Connect front and first additional roller assembly by means of the small connection bar (n° 359638). It is important that the rollers assemblies are positioned in the right direction.
4. Install and fix first additional roller assembly.
5. Connect back and second additional roller assembly by means of the small connection bar (n° 359638).
6. Cut off the connection bar to the required length. The distance between the back roller assembly and the vent end must be at least 80 mm and maximum 130 mm.
7. Install back and second additional roller assembly to the connection bar.
8. Tighten the screws of additional rollers assemblies to the connection bar.
9. Tighten the back roller assembly and the second additional roller assembly to the vent groove.

Note: The roller assemblies are not parallel after installation. The roller assemblies will be parallel after the first operation of the lift-slide door.

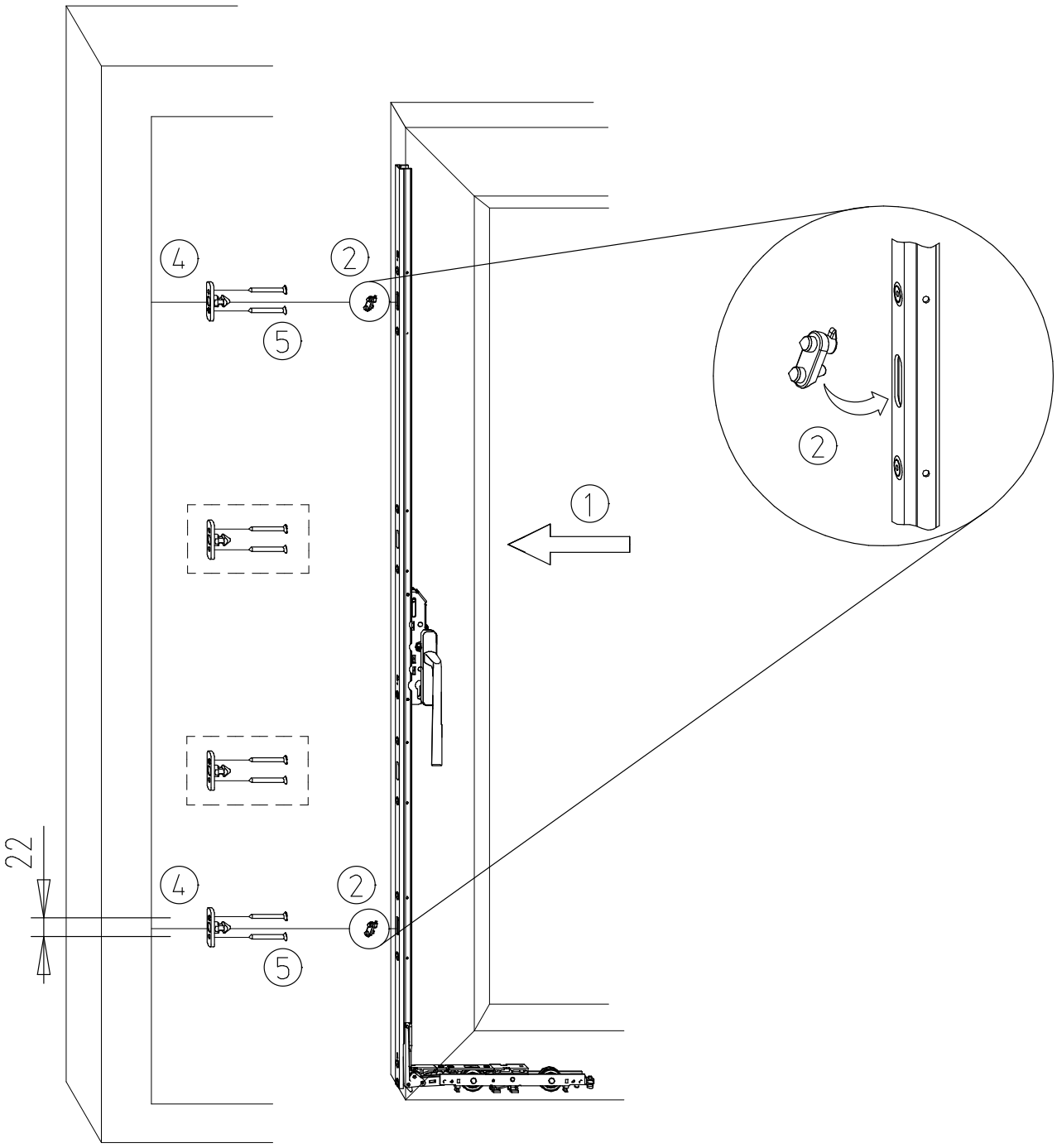
9.4.2. Installation lock



1. Cut off the lock to the required length and put the lock in closed position (handle up).
2. Clip the packers for the lock in the assigned punched positioning holes.
3. Demount the screw of the front roller assembly and install the lock in the vent groove. Fix the lock to the front roller assembly by means of a screw.
4. Connect the handle and the finger pull with each other. Place the cover plate on the handle.
5. Fix the fixing screws of the lock in the fixing holes.
6. When using a profile cylinder, remove the small synthetic cap.

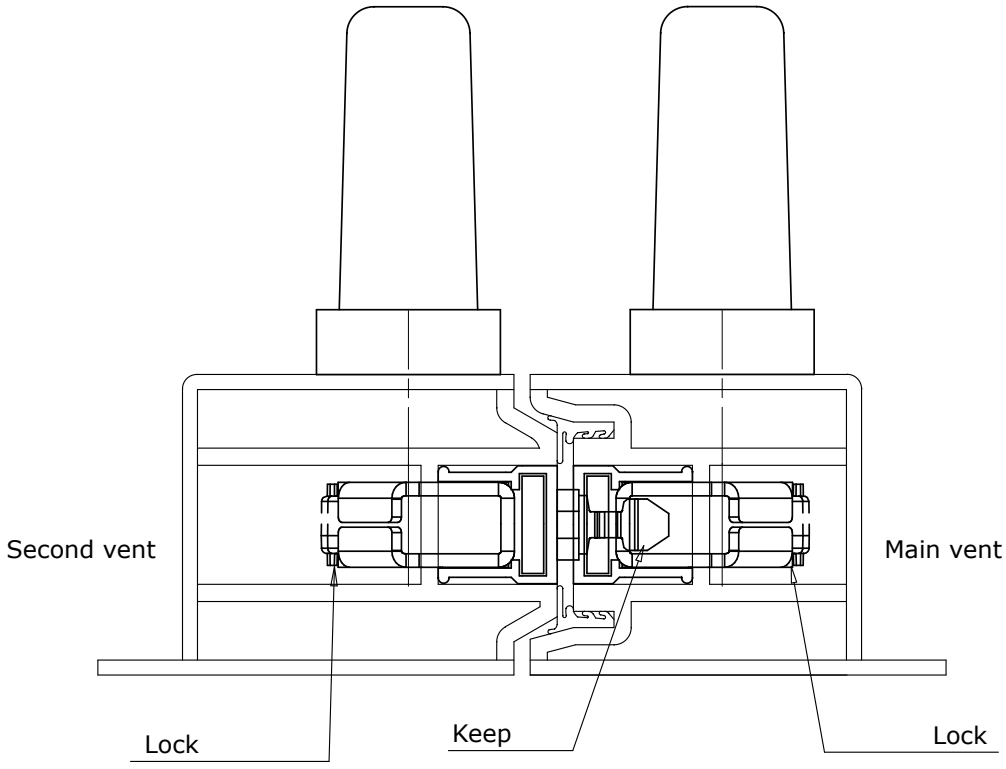
9.4.3. Installation keeps

1. Put the vent in slide position (handle down).
2. Place the marking piece in the keep opening. Optionally it is possible to place more than two keeps, but the openings of the additional keep must be opened.
3. Slide the vent against the frame so that the marking piece will indicate marking points on the frame.
4. Drill screw holes on the indicated points.
5. Fix the keeps.

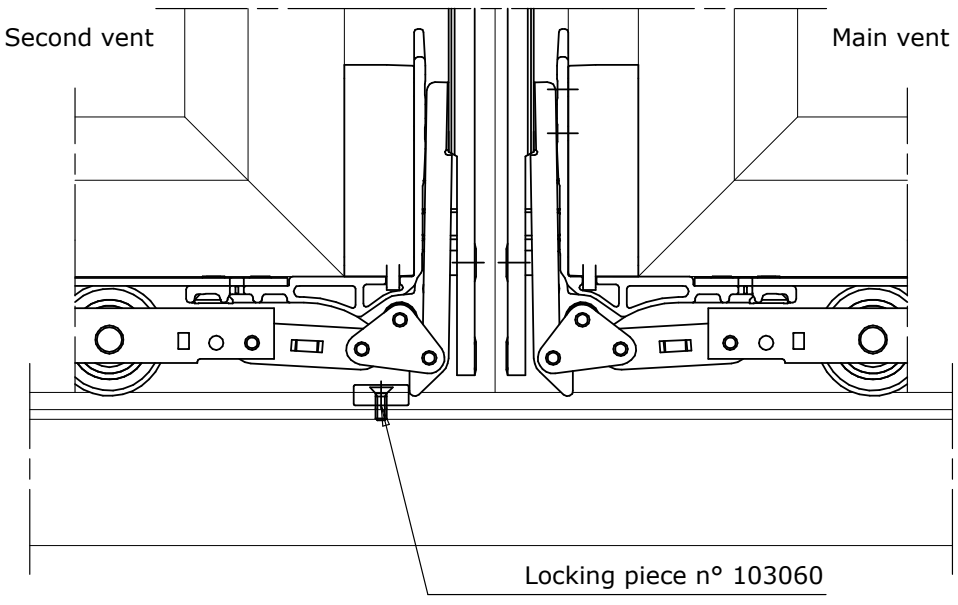


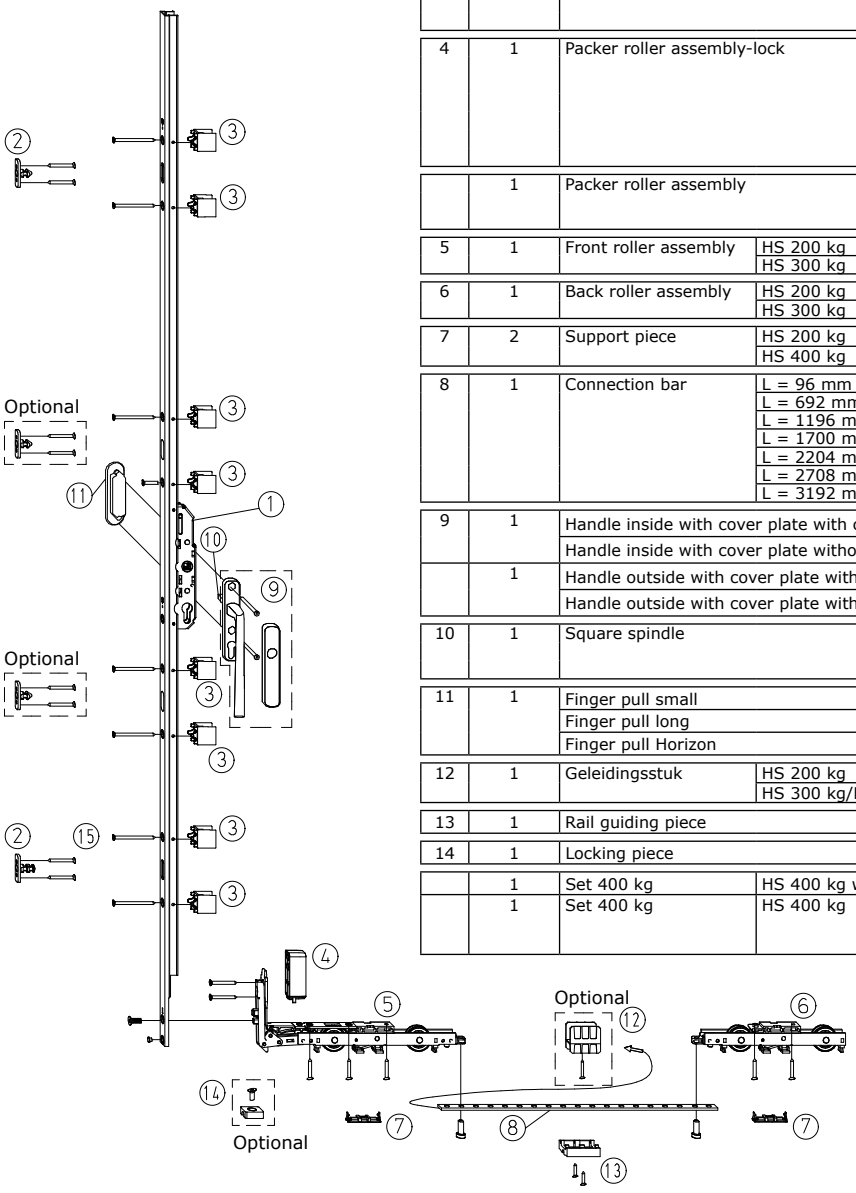
10. Double lift-slide door

- Example:



- For a double lift-slide door on one track, the keep n° 103099 must be applied. This keep is fixed to the faceplate of the lock of the second vent by means of a clamping plate and 2 screws.
- In this situation the locking piece n° 103060 must be fitted for both vents. Otherwise it is possible to slide both vents together.
- Note:
  - When opening: operate first the main vent.
  - When closing: operate first the second vent.



11. Overview table

N°	Quantity	Description			Order code		
1	1	Lock	backset 27.5 mm	730-1360 mm	214410		
				1260-1760 mm	214411		
				1660-2160 mm	214412		
				2060-2560 mm	214413		
				2460-2860 mm	214414		
			backset 37.5 mm	730-1360 mm	214415		
				1260-1760 mm	214416		
				1660-2160 mm	214417		
				2060-2560 mm	214418		
				2460-2860 mm	214419		
2	2	Keep					
				12 mm	217086	217087	
				14.5 mm	216029	216030	
				15.5 mm	217084	217085	
				17 mm	227679	227680	
				19.5 mm	217082	217083	
				21.5 mm	217080	217081	
				26.5 mm	217078	217079	
15	1	Night vent keeps					
	2	Extra keeps for higher security against burglary					
3	7	Packer lock		10 mm	366456		
				14 mm	369363		
				20.5 mm	361276		
				22 mm	364646		
				25.5 mm	361277		
				32 mm	361279		
				36 mm	361280		
4	1	Packer roller assembly-lock		10 mm	366455		
				14 mm	369362		
				20.5 mm	361270		
				22 mm	364647		
				25.5 mm	361271		
				32 mm	361274		
				36 mm	361275		
	1	Packer roller assembly		6 mm	363819		
				8 mm	363820		
				10 mm	363821		
5	1	Front roller assembly	HS 200 kg		210491		
			HS 300 kg		215137		
6	1	Back roller assembly	HS 200 kg		210492		
			HS 300 kg		215136		
7	2	Support piece	HS 200 kg		370317		
			HS 400 kg		363495		
8	1	Connection bar	L = 96 mm	-	359638		
			L = 692 mm	785-1350 mm	359639		
			L = 1196 mm	1275-1850 mm	359640		
			L = 1700 mm	1775-2350 mm	359641		
			L = 2204 mm	2275-2850 mm	359642		
			L = 2708 mm	2775-3385 mm	359643		
			L = 3192 mm	630-3385 mm	361173		
9	1	Handle inside with cover plate with cylinder hole			74010L	74012L	74012BL
		Handle inside with cover plate without cylinder hole			74010CL	74012CL	74012BCL
	1	Handle outside with cover plate with cylinder hole			74011L	74013L	74013BL
		Handle outside with cover plate without cylinder hole			74011CL	74013CL	74013BCL
10	1	Square spindle		10 x 78 mm	30000		
				10 x 84 mm	30014		
				10 x 138 mm	30016		
11	1	Finger pull small			357563		
		Finger pull long			36269		
		Finger pull Horizon			82190LVI		
12	1	Geleidingsstuk	HS 200 kg		362651		
			HS 300 kg/HS 400 kg		359802		
13	1	Rail guiding piece			359803		
14	1	Locking piece			103060		
	1	Set 400 kg	HS 400 kg with spring assistance		103071		
	1	Set 400 kg	HS 400 kg		2x 215138 2x 359638 (2x 363495)