



SIDE HUNG WINDOWS



C13.11
**LOCKCASES, CONNECTION
PIECES AND HANDLES**

01.06.2018



LOCKCASES, CONNECTION PIECES AND HANDLES

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LOCKCASES, CONNECTION PIECES AND HANDLES

1. General

Limitations and conditions

- This chapter only provides you an overview of the possibilities regarding the operation of side hung open out windows.
- Please may we ask you to send us always your profile drawings as well as all necessary additional information so that we can provide you the best solution. The following information is very important:
 - frequency of use (balcony doors, window doors)
 - vent dimensions
 - vent weight
 - wind pressure
 - type of building
 - number of windows
- The net opening for standard windows must be limited to 200 mm with a window stay to prevent that:
 - the windows would be blown over
 - the hinges would get damaged
 - persons would fall through the window when operating the window
 - persons at the outside would get hurt when opening the window
- The available mounting surface for the handle is limited due to the configuration of profiles for side hung open out windows.

Possibilities

- The profiles can be designed in several ways:
 1. With eurogroove on both internal and external side of the profiles
 - Possibility to fit hinges.
 - Distance between handle and locking system is small: short fork, simple connection piece.
 2. With eurogroove on the external side of the profiles
 - Possibility to fit hinges.
 - Distance between handle and locking system is big: long fork (disadvantage), special connection piece may be necessary.
 3. With eurogroove on the internal side of the profiles
 - Hinges are not possible, only friction hinges.
 - Distance between handle and locking system is small: short fork, simple connection piece.
 4. Without frame groove, only vent groove
 - Hinges are not possible, only friction hinges.
 - Clampable keeps are not possible: screwed keeps.

Standard windows

- **The maximum opening must be restricted to 200 mm!**
- Vent dimensions (determined by the perimeter locking system):
 - Vent width: max. 1400 mm.
 - Vent height: max. 2400 mm.
- Hinges and vent weight:
 - Visible Chrono hinges: max. 90 kg.
 - Adjustable visible Chrono hinges: max. 130 kg.
 - Vent weight > 90 kg: + reinforcement set
 - Vent height > 1200 mm: + 1 hinge wedge
 - Vent height > 1800 mm: + 2 hinge wedges
 - Concealed Chrono Invision Go hinges: max. 90 kg.
 - Vent width: max. 1300 mm
 - Concealed Chrono Invision Pro hinges: max. 170 kg.
 - Vent weight > 130 kg: + reinforcement set

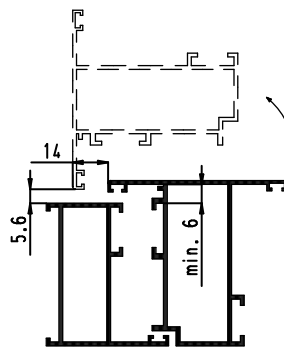
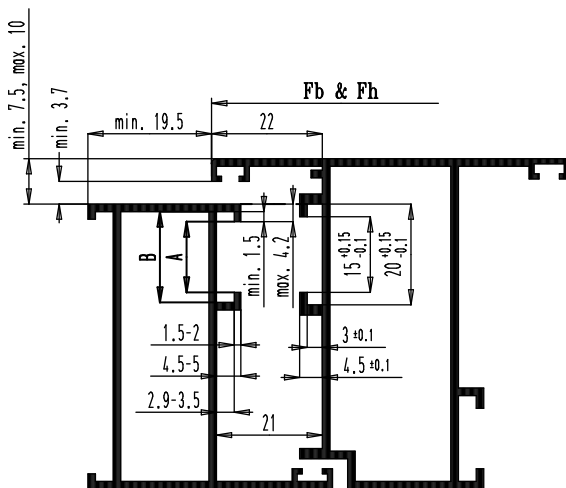


LOCKCASES, CONNECTION PIECES AND HANDLES

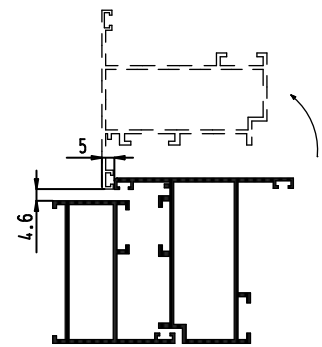
Balcony doors/window doors

- Balcony doors or window doors are windows with an access function for persons so that these doors are heavily used.
- **The opening angle must be restricted at 90° by a door stay with buffer:**
 - n° 684-420: $F_{bmin}=750$ mm or
 - n° 684-500: $F_{bmin}=900$ mm
- Vent dimensions (determined by the perimeter locking system):
 - Vent width: max. 1200 mm.
 - Vent height: max. 2400 mm.
- Hinges and vent weight:
 - Reinforced visible Chrono hinges: max. 130 kg.
 - Concealed Chrono Invision Go hinges: max. 90 kg.
 - Concealed Chrono Invision Pro hinges: max. 170 kg.
 - Vent weight > 130 kg: + reinforcement set

Profile dimensions

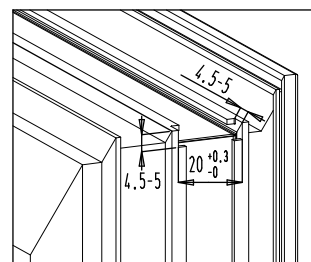


Chrono Invision Pro



Chrono Invision Go

	Frame groove 14/18 mm	Frame groove 10/14 mm
A	14 ± 0.5	10 ± 0.5
B	18 ± 0.5	14 ± 0.5

Cut out
vent groove

- **Vent dimensions and vent weights out of standard range on request.**

Information hinges

- See chapter C13.12.



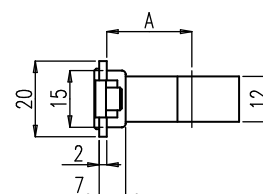
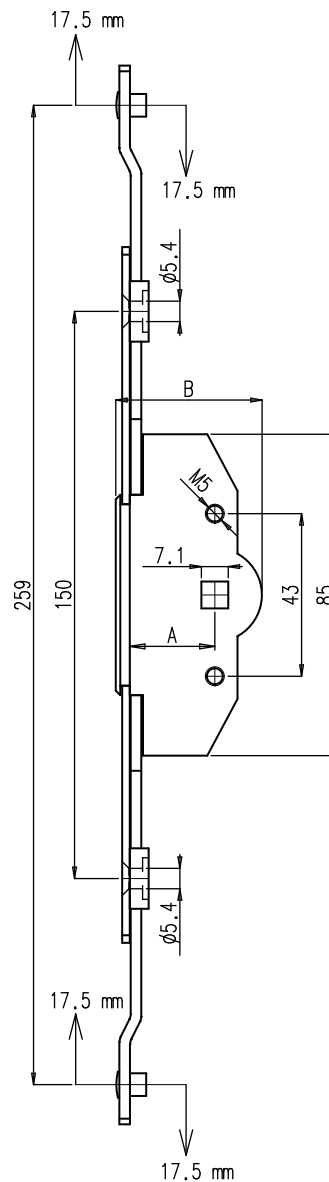
2. Lockcases

2.1. General characteristics and dimensions



Lockcase illustrated in neutral position.

Order code	Backset A	Depth B
161167	22.5 mm	39 mm
175392	27.5 mm	44 mm
176331	32.5 mm	49 mm
176334	37.5 mm	54 mm



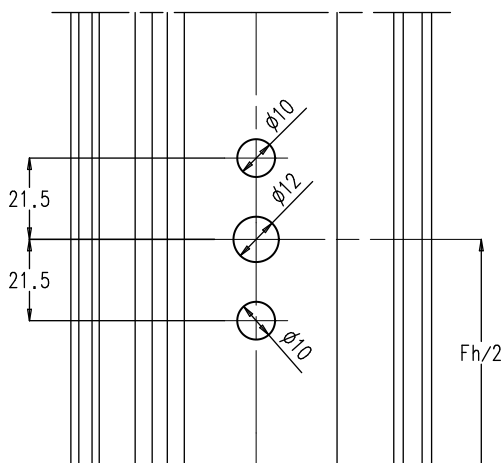
- Solid lockcase, available in 4 sizes for side hung open out windows.
- The lockcase is operated by a handle with square spindle 7x7 mm.
- The unidirectional lockcase is connected to the aluminium rods and has a throw of 17.5 mm when turning the handle 90°.
- Materials:
 - Faceplate and rod: stainless steel.
 - Lockcase and gear wheels: zinc alloy.



LOCKCASES, CONNECTION PIECES AND HANDLES

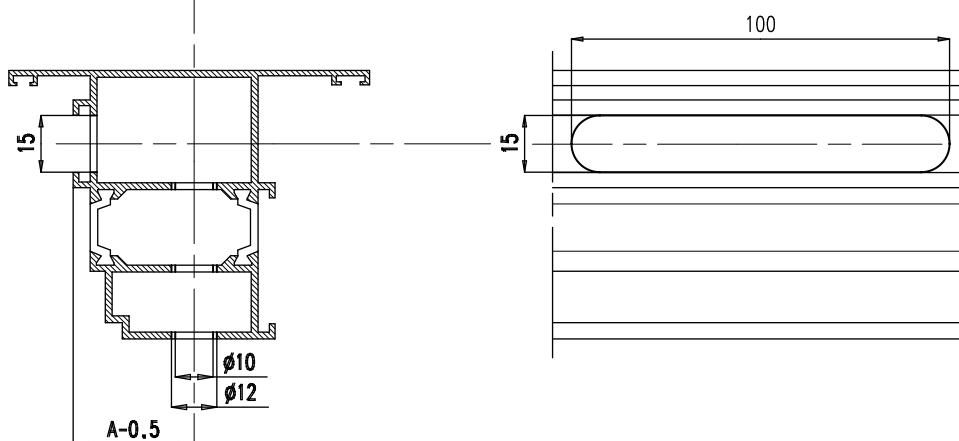
2.2. Profile preparations and installation example

Milling

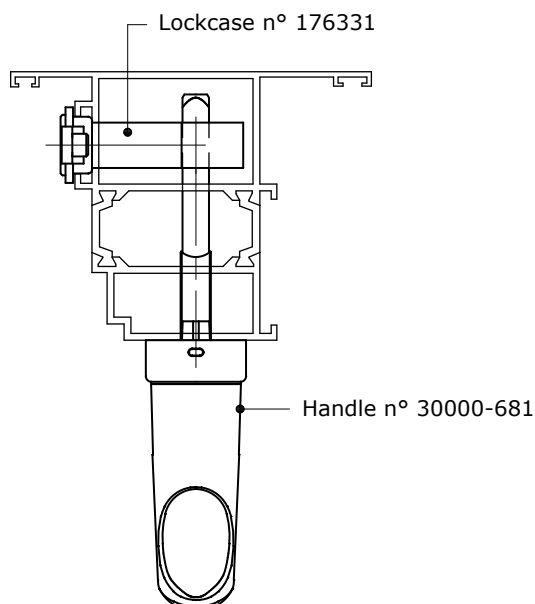


- The lockcase is fixed in the vent groove by means of 2 self-drilling screws or 2 tapping screws (pre-drill the holes).
- The holes $\phi 10$ mm to fix the handle to the lockcase are suitable for handles with positioning pins.

Lockcase	Backset A
161167	22.5 mm
175392	27.5 mm
176331	32.5 mm
176334	37.5 mm



Installation example

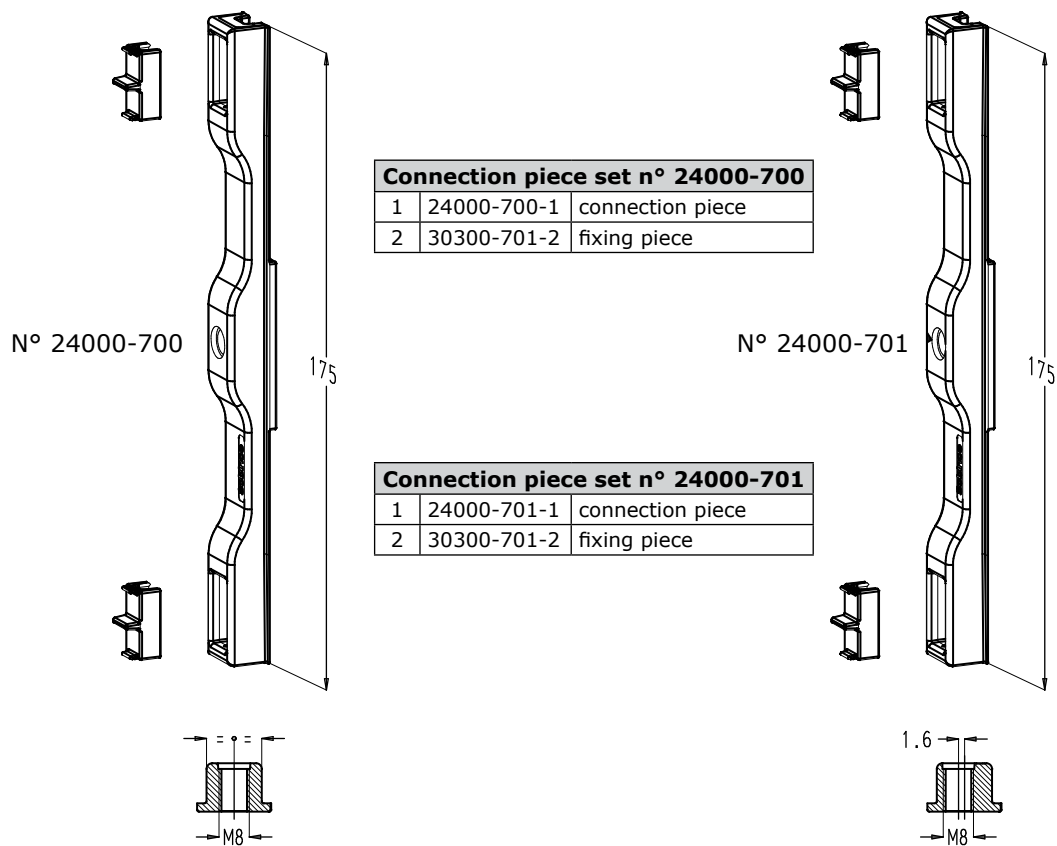




3. Chrono connection pieces

3.1. Connection piece n° 24000-700 and n° 24000-701

- Connection piece in which the drive pin n° 10000-721-.. is fixed.
- The drive pin is 1.6 mm out of centre when mounted on connection piece n° 24000-701.
- Finish:
 - connection piece: zinc alloy, black passivated
 - fixing pieces: black synthetic material.





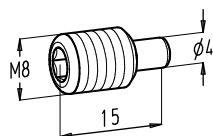
LOCKCASES, CONNECTION PIECES AND HANDLES

3.2. Drive pins n° 10000-721-..

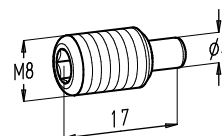
- The handle is connected to the perimeter locking system by means of a drive pin.
- The pin in stainless steel is available in different lengths and provided with an internal hexagon SW4.
- The pin is fully screwed in the connection piece up against its stop.



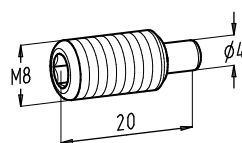
SW4



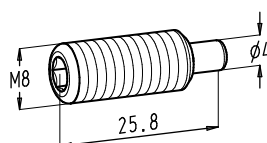
N° 10000-721-10



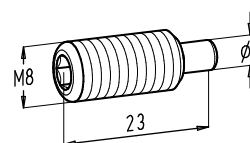
N° 10000-721-11



N° 10000-721-12



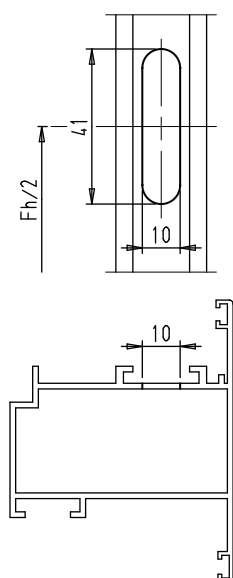
N° 10000-721-13



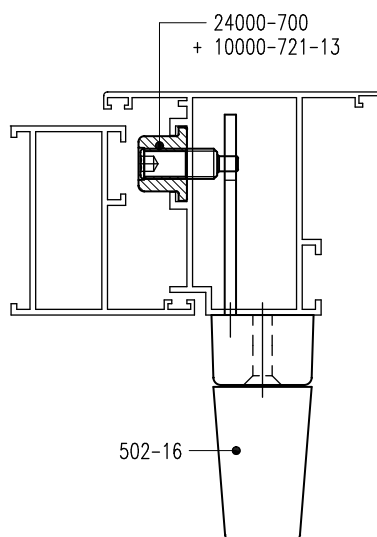
N° 10000-721-14

3.3. Milling and installation example

Milling



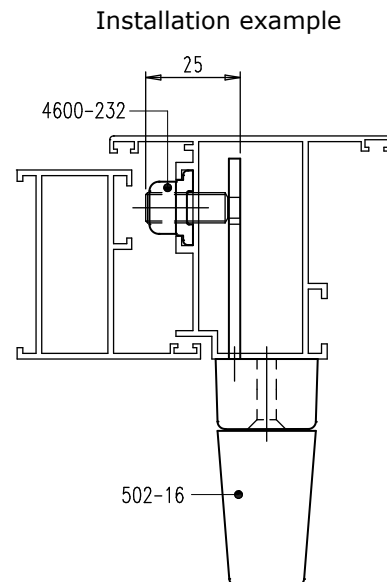
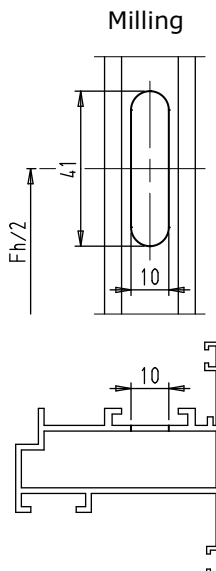
Installation example





4. Salto connection pieces

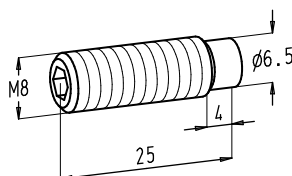
4.1. Connection piece n° 4600-...



Order code	Pin length L	Vent groove
4600-232	25 mm	15/20 mm
4600-232C	30 mm	15/20 mm
4600-432	25 mm	14/18 mm
4600-432C	30 mm	14/18 mm

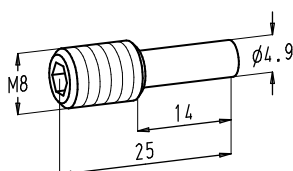
- Zinc alloy connection piece with stainless steel drive pin.
- The drive pins are also available separately: see next page.

4.2. Drive pins for connection piece n° 4600-...

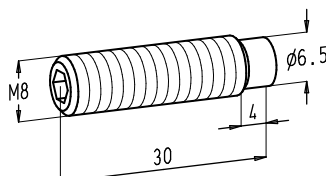


N° 4600-232.2

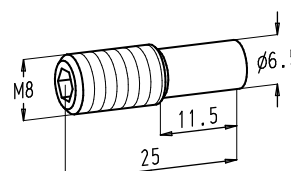
- The drive pins in stainless steel are suitable to use in combination with the connection pieces n° 4600-232.1 and n° 4600-432.1.



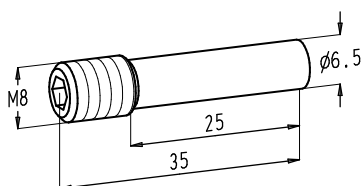
N° 4600-232B.2



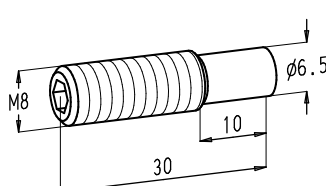
N° 4600-232C.2



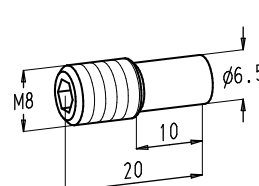
N° 4600-232.3



N° 4600-232.4



N° 4600-232.5

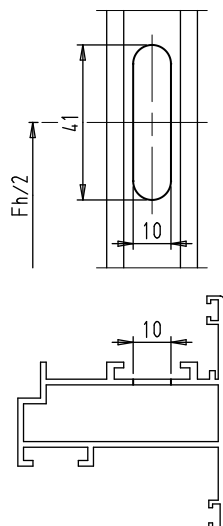


N° 4600-232.6

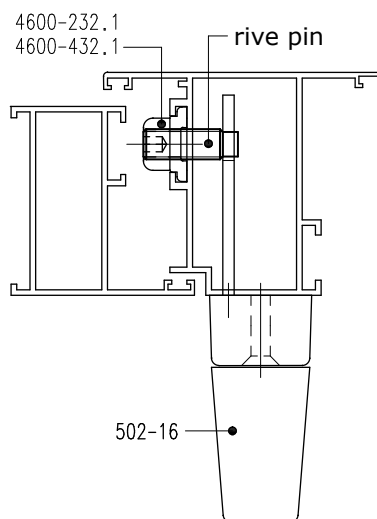


4.3. Milling and installation example

Milling

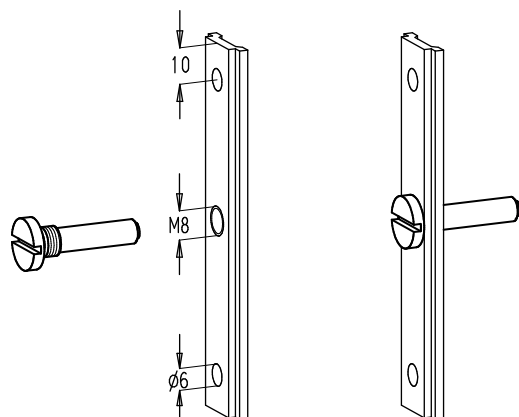


Installation example

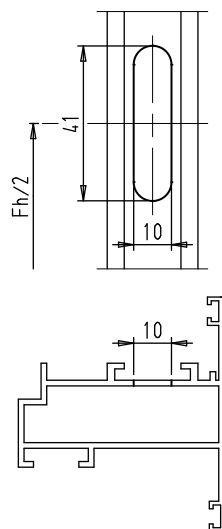


5. Various drive pins and connection pieces

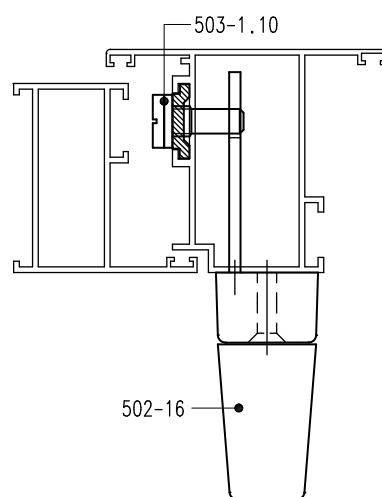
5.1. Drive pins



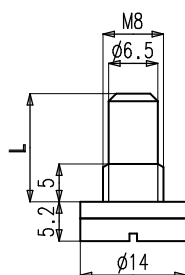
Milling



Installation example



Order code	L mm
503-1.10B	13
503-7.10	14.5
503-1.10	19
503-1.10C	22
504V-1.10	23
503-2.10	28
502-16.10	31

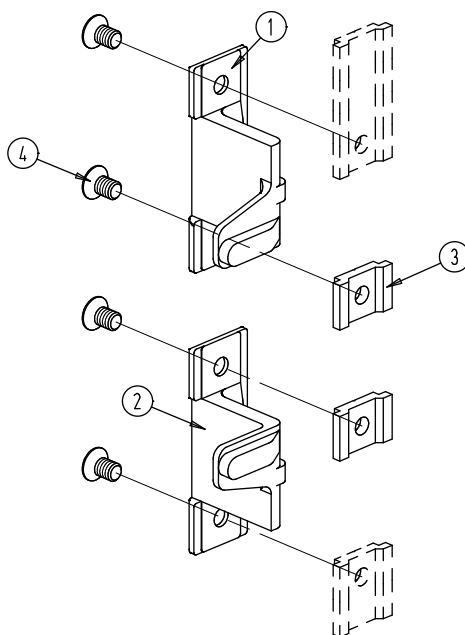
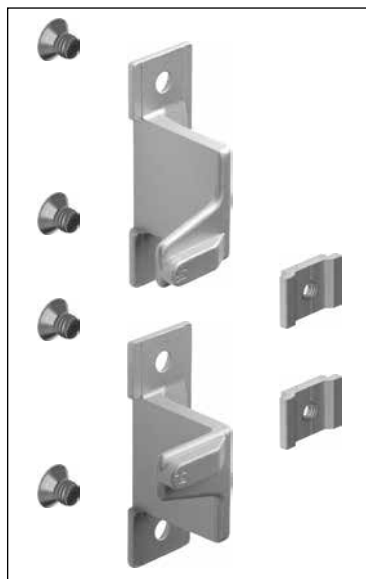


- The stainless steel drive pin which fits in the slotted fork, must be ordered separately.

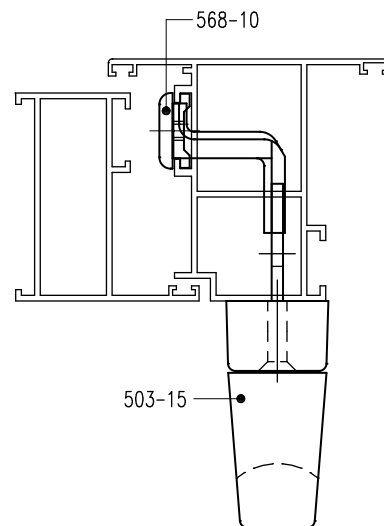


LOCKCASES, CONNECTION PIECES AND HANDLES

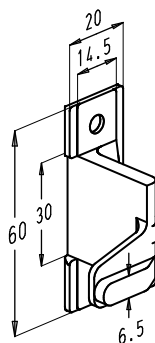
5.2. Connection piece set n° 568-10 and n° 568-11



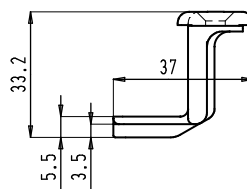
Installation example



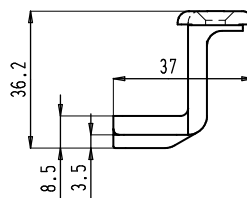
- The set is used in combination with handles series 503 or 5030.
- When you want to apply handles 502 or 5020 you only need half of the set (single fork). These parts are ordered separately.
- This set is required when the profiles are deeper and at the same time the groove is close to the external face of the profiles.
- The cut-out for the handle may be different from the ones on page C13.1114 because the connection pieces must be turned in the profiles while mounting them resulting in a wider cut-out: see dimension A.



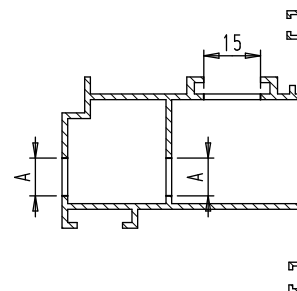
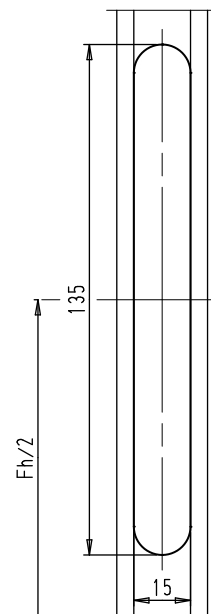
N° 568-3R (L)



N° 568-1R (L)



Milling



Connection piece set n° 568-10		
1	568-3R	right hand connection piece (1)
1	568-3L	left hand connection piece (2)
2	568-2	clamping piece (3)
4	M5x6 DIN 965	screw (4)

Connection piece set n° 568-11		
1	568-1R	right hand connection piece (1)
1	568-1L	left hand connection piece (2)
2	568-2	clamping piece (3)
4	M5x6 DIN 965	screw (4)

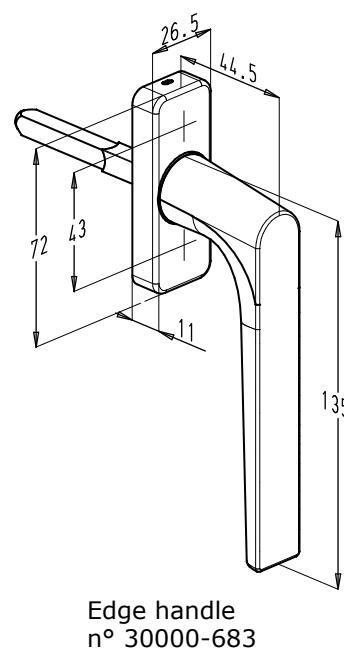
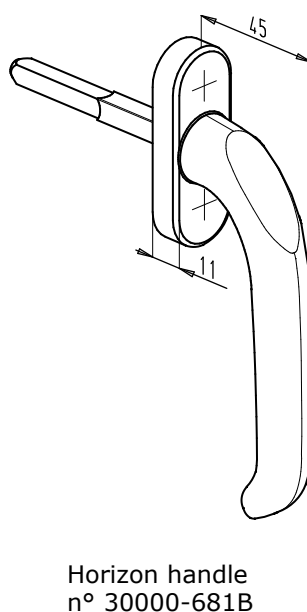
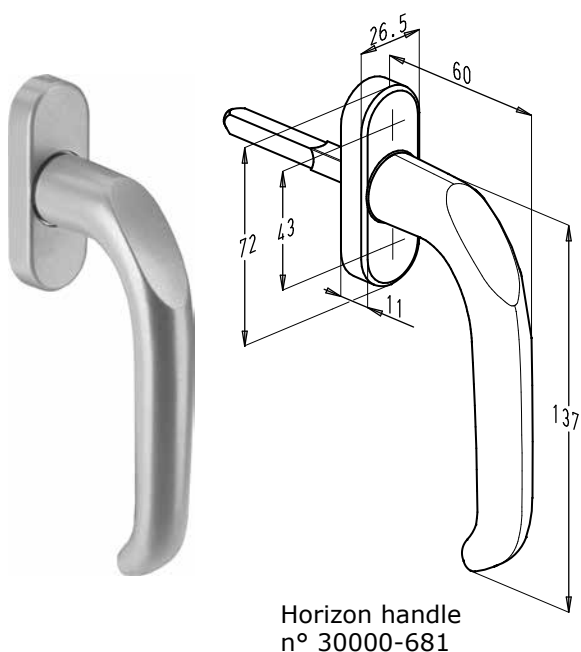


6. Handles

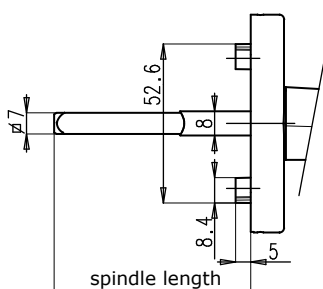
6.1. Handles with square spindle

Handles n° 30000-681, -681B and -683

- The Horizon handles n° 30000-681 and n° 30000-681B and the Edge handle n° 30000-683 are suitable for side hung open out windows.
- Handle n° 30000-681B has a lower grip.
- Square spindle 7x7 mm in steel, zinc plated.
- Finish: grip and base in aluminium, anodised or polyester powder coated in more than 450 RAL colours.



- Spindle lengths:



Handle	Spindle length
30000-681	65 mm
30000-681B	78 mm
30000-683	65 mm



LOCKCASES, CONNECTION PIECES AND HANDLES

Sobinox handles

- For more information: see chapter C11.15.
- Some handles are available in aluminium (AL).
- For side hung open out windows, the square spindles with length 25 mm and 38 mm are not long enough in most cases. Then you have to order a handle without square spindle (for example 1850-0) and order the square spindle n° 37476 separately.

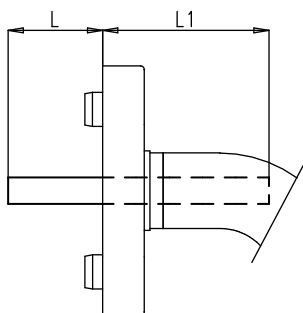


n° 1850(AL)-0 n° 1850(AL)-25 n° 1850(AL)-38	n° 1851-0 n° 1851-25 n° 1851-38	n° 1852(AL)-0 n° 1852(AL)-25 n° 1852(AL)-38	n° 1752-0 n° 1752-25 n° 1752-38	n° 1852CYL-0 n° 1852CYL-25 n° 1852CYL-38	n° 1853-0 n° 1853-25 n° 1853-38	n° 1854-0 n° 1854-25 n° 1854-38
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n° 1855(AL)-0 n° 1855(AL)-25 n° 1855(AL)-38	n°. 1856-0 n° 1856-25 n° 1856-38	n° 1857(AL)-0 n° 1857(AL)-25 n° 1857(AL)-38	n° 1757-0 n° 1757-25 n° 1757-38	n° 1857CYL-0 n° 1857CYL-25 n° 1857CYL-38	n° 1858-0 n° 1858-25 n° 1858-38	n° 1859-0 n° 1859-25 n° 1859-38
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- Square spindle n° 37476 of 7x7 mm, length 114 mm, steel zinc plated:



Handle	Minimum spindle length L	Maximum spindle depth L1
1850-.. 1855-..	70 mm	44 mm
1851-.. 1856-..	72 mm	42 mm
1852-.. 1757-.. 1857-..	56 mm	58 mm
1853-.. 1858-..	54 mm	60 mm
1854-.. 1859-..	62 mm	52 mm

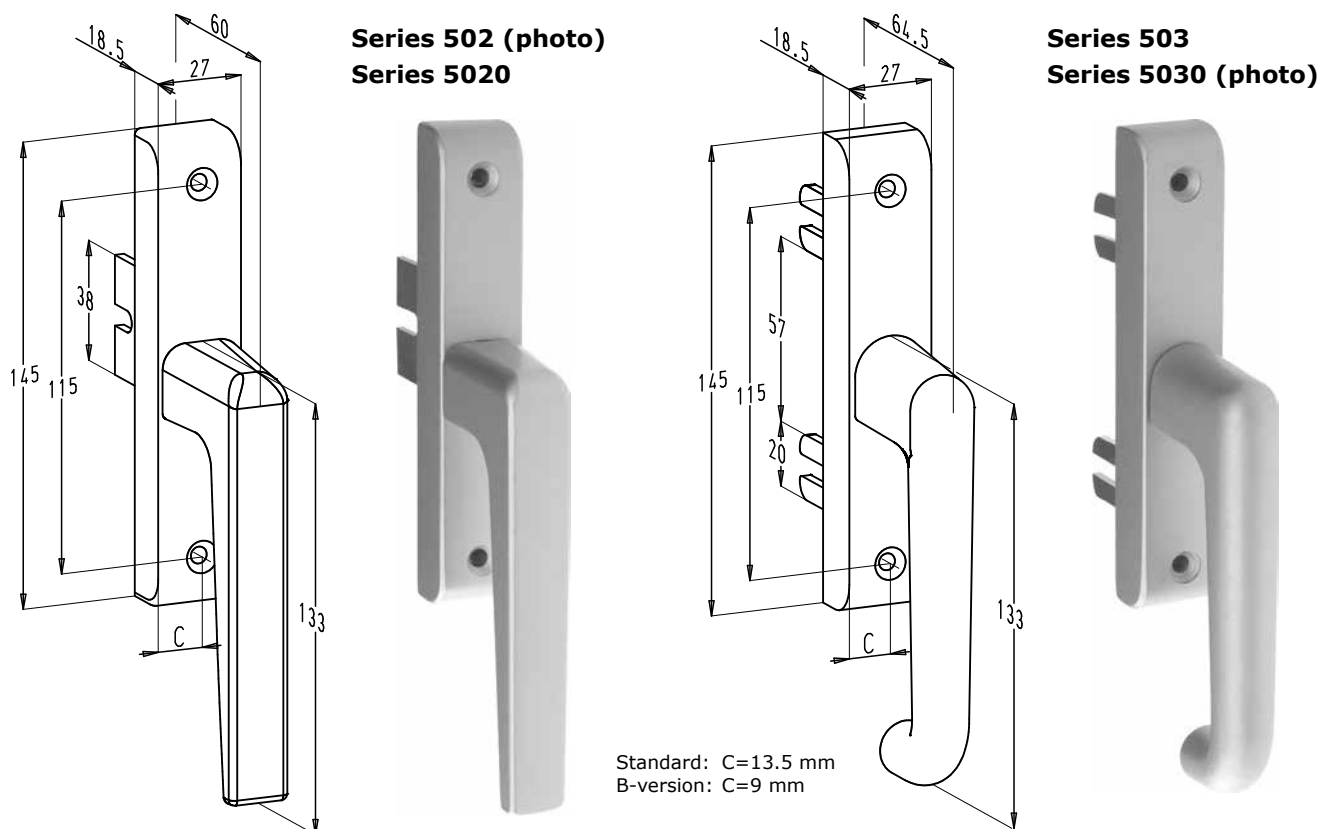


LOCKCASES, CONNECTION PIECES AND HANDLES

6.2. Handles with 1 or 2 forks

Dimensions

- For more information regarding these handles, see chapter H13.11.



Preparations

Handles with 1 fork (502 and 5020)

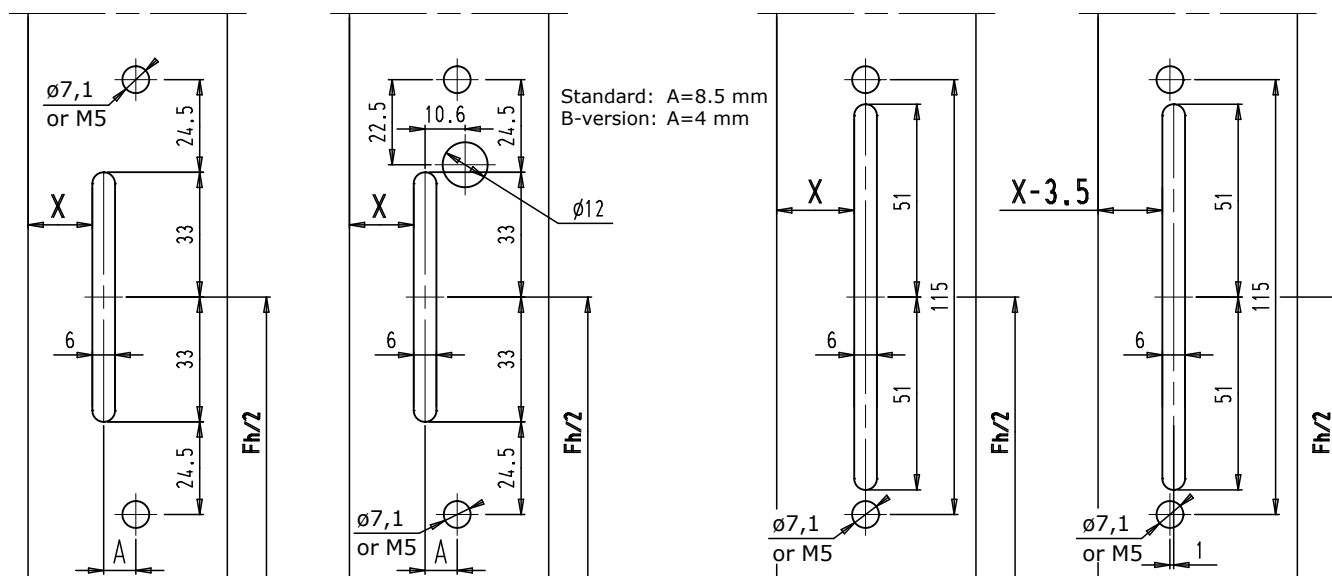
Handles with 2 forks (503 and 5030)

Without cylinder

With cylinder

Fork in the middle

Fork out of centre



- Only the handles with 1 fork are possible with cylinder.
- Dimension X is profile-related.
- The handles are preferably fixed with blind rivnuts. Therefore you must drill holes with diameter $\varnothing 7.1$ mm. Fixing holes M5 when you fix directly in the profile.