



FENSTERTECHNIK
TÜRTECHNIK
AUTOMATISCHE EINGANGSSYSTEME
GEBÄUDEMANAGEMENTSYSTEME



WINDOW TECHNOLOGY - ORDER CATALOGUE

Architectural Hardware for Aluminium Windows & Doors

Edition 05/2016

- Tilt-turn hardware systems JET-AK8
- Lift&Slide hardware
- Casement hardware
- Curtainwall & multi-point lock system
- Inline sliding hardware
- Turn-Only hardware
- Tilt&Slide hardware
- Fold&Slide hardware
- Horizontal and vertical pivot hardware
- Fanlight openers and electric drivers
- Multi-point lock for security door
- Lock cylinder
- Door closer & Floor spring

Securing technology for you
Vorsprung mit System





GU Product System

Window Technology

(Aluminium PVC Timber)

- Tilt Turn fittings
- Side Hung fittings
- Curtainwall multi-point lock
- Casement fittings
- Sliding fittings
- Lift sliding fittings
- Inline sliding fittings
- Fold sliding fittings
- Horizontal pivot fittings
- Vertical pivot fittings
- Fanlight
- Smoke and heat exhaust ventilation systems (RWA)
- Doors & windows accessories

Door Technology

- Door hinge
- Cylinder
- Multi-point lock system
- Panic lock
- Electric lock
- Mortise lock
- Master key system
- Handle
- Door closer
- Panic device
- Floor Spring
- Patch fitting
- Accessories

Automatic Entrance

- Auto sliding doors system
- Curved sliding door system
- Revolving doors system
- Swing door drives
- Security doors system
- Glass sliding partition, manual
- Glass sliding partition, automatic





CERTIFICATE

The AGQS Qualitäts- und Umweltmanagement GmbH hereby certifies that the company



Gretsch-Unitas GmbH Unternehmensgruppe
Johann-Maus-Straße 3
D-71254 Ditzingen

for the scope

design, manufacturing and sales of fittings, locks and locking cylinders for wooden, PVC and aluminium windows and doors as well as trading of accessory products

with the sites mentioned in the annex

has implemented and maintains a quality management system. An audit, documented in a report, has verified that this management system fulfils the requirements of the following standard:

DIN EN ISO 9001:2008



Remscheid, 2015-04-22



Deutsche
Akreditierungsstelle
D-2M-18078-01-00

Audit 035-QMS-R60 AGQS Qualitäts- und Umweltmanagement GmbH

Certificate 035-QMS-95-06 Elberfelder Straße 77 D-42853 Remscheid

Valid from 2015-05-01 Telefon +49 2191 438 24

Valid until 2018-04-30 Telefax +49 2191 438 26

1st certification 1995-01-26 email@agqs.de





Annex to the main certificate QM-035-95-05

site 01 to the main certificate:

Gretsch-Unitas GmbH Baubeschläge, Johann-Maus-Straße 3, D-71254 Ditzingen

design, manufacturing and sales of fittings, locks and locking cylinders for wooden, PVC and aluminium windows and doors, trading of accessory products

sub certificate QM-035-95-05-01, 1st certification 1995-01-26

site 02 to the main certificate:

Gretsch-Unitas Logistik GmbH, Wellendorfer Straße 48-52, D-71254 Ditzingen

storage, commissioning and distribution of building fittings and accessory products

sub certificate QM-035-95-05-02, 1st certification 1995-01-26

site 03 to the main certificate:

BKS GmbH, Heidestraße 71, D-42549 Velbert

development, production and sales of locking cylinders, locking suites, locks for house and internal doors, door furniture, door closers as well as emergency door systems

sub certificate QM-035-95-05-03, 1st certification 1995-01-26

site 04 to the main certificate:

FERCO INTERNATIONAL S.A., 2, rue du Vieux Moulin F-57446 Redling,

design, manufacturing and sales of fittings and locks for wooden, PVC and aluminium windows and doors as well as trading of accessory products

sub certificate QM-035-95-05-04, 1st certification 1995-01-26

and

site 05 to the main certificate:

GU SLOVENSKO, s.r.o., Priem. Park Nitra-Sever, Dolné Hony 24 SK-3951 41 Lutiansky

manufacturing and sales of fittings and locks for wooden, PVC and aluminium windows and doors as well as trading of accessory products

sub certificate QM-035-95-05-05, 1st certification 2012-04-30



Remscheid, 2012-05-11



QMS-TGA-ZM-01-93-00

Audit QM-035-R50

Certificate QM-035-95-05

Valid from 2012-05-01

Valid until 2015-04-30

1st certification 1995-01-26

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G-U Group

ISO 9001 Standardization and Environmental
Protection Certificate



ISO Certificates of G-U Companies



GU

Tilt&Turn hardware systems JET-AK8	P08-P23	1
Lift&Slide hardware	P24-P35	2
Casement hardware	P36-P39	3
Multi-point lock for curtain wall	P40-P45	4
Inline sliding hardware	P46-P51	5
Turn-Only hardware	P52-P55	6
Tilt&Slide hardware	P56-P63	7
Fold&Slide hardware	P64-P73	8
Horizontal/Vertical pivot hardware	P74-P79	9
Fanlight openers and electric drivers	P80-P91	10
Multi-point lock for security door	P92-P97	11
Lock cylinder	P98-P101	12
Door closer & Floor spring	P102-P103	13

Tilt&Turn hardware systems JET-AK8



- With the development and completion for hundreds of years, G-U window hardware has been widely promoted and applied in high-end residences and commercial buildings at home and abroad.
- Pass diverse standard and strict tests in Europe and Germany, such as EN13126 and RAL-RG 607/3.
- AK8 is characteristic of max. weight capacity, most adjustable functions, strongest connection mode and best manufacturing process and material selection, and hence, it is the first hardware solution for aluminum tilt-turn doors and windows.





Application

Application for turn-only and tilt&turn hardware :

- One-sash windows and balcony-doors
- Double-sash folio windows and balcony-doors
- Lockable one-sash balcony-doors
- Lockable double-sash balcony-doors

Technical data

- JET AK8 turn-only and tilt&turn hardware
- The hardware is connected with the frame sashes by screws, and the screw hole on the sash isn't required. The gap of frame sashes is 21 mm, the sash groove is 15/20mm, and the frame groove is 14/18mm.
- The most weight of the sash is about 80kg; the pivot rest can be adjusted +2.5mm/-1.5mm up and down and ±1mm in left and right way; the stay can be adjusted ±3mm in left and right way; and the pressing force of the sash can be adjusted ±1mm.
- The most weight of the sash of JET AK 8 tilt & turn hardware may be 130kg through that 130kg of accessory is added.

Handle

- The handle is made from aluminum. The wrong operation safety device may be assembled with the handle. In addition, it includes lockable handle, removable handle and geared handle.

Stand Color (Handle and Hinge)

EV1	Silver gray aluminum
UC5	Dark bronze
Black	Matt black(RAL 9005)
White	White (RAL 9016 或 RAL 9010)

Gearing

- The hardware is installed in the sash groove in concealed way, which is operated by outer handle.
- All gearings are applicable for Euro 15/20mm sash groove. The lock points in gear stay and Corner transmission can be adjustable. If required, an adjustable lock base may be installed to reach the best pressing force of window sash. When the width of window sash is more than 1400mm, an additional stay is needed to be installed.

Treatment of Material and Surface, G-U Anti-Corrosion Treatment ferGUard*silver

AK 8 hardware is made from high-quality steel, zinc and aluminum. The zinc hardware has been treated by special galvanization for anti-corrosion; after the treatment by chromate, the surface of zinc hardware is covered with special spangled silver (ferGUard*silver), owned by GU. The aluminum hardware has been treated by anodization or covered with power. The steel hardware is made of stainless steel.

Abbreviation

G	Handle for standard sash	SD	Turn-only door and window
GIS	Handle for auxiliary sash	SH	Sash height
IA	Auxiliary sash	ST	Sash thickness
L	Length	SW	Sash width
ML	Middle lock	TT	Tilt-turn hardware
PU	Packing unit		

Example for Product No. (Order No.)

Product No. (Order No.)

6-24533-00-0-

6-24533- - - Category No.

- -00- - Specification

- - -L- Left Part

- - -R- Right Part

- - -0- Left and Right Parts

- - - -1T Silver

- - - -1 F1/EV1, Silver grey zinc

- - - -2 F2/EV2, Champagne

- - - -3 F3, Golden

- - - -4 UC 3, Bronze

- - - -5 UC 5, Dark bronze

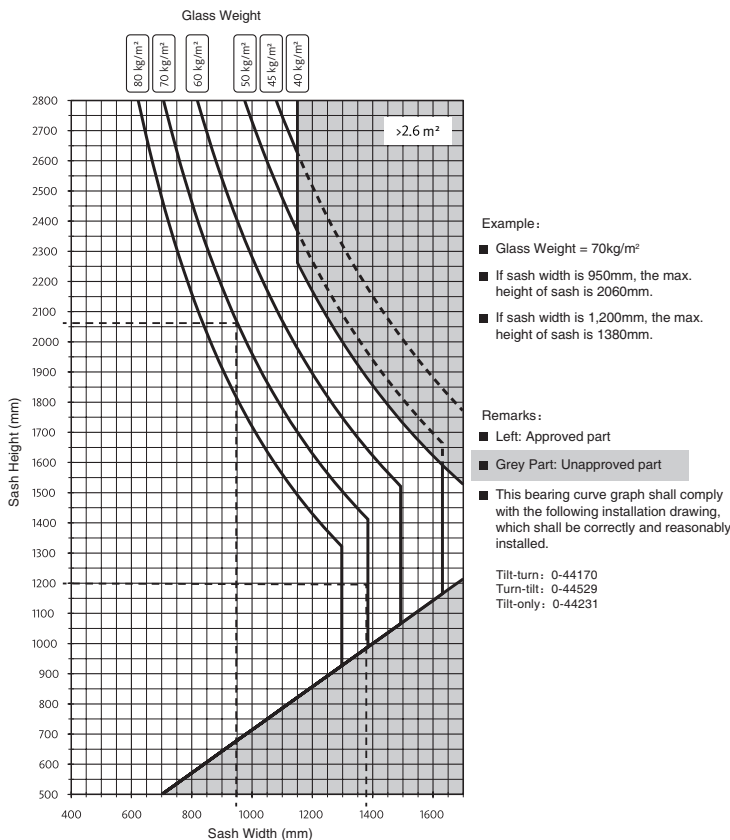
- - - -6 Black (RAL 9005)

- - - -7 White (RAL 9016)

- - - -7T White (RAL 9010)

- - - -8 Stainless Color

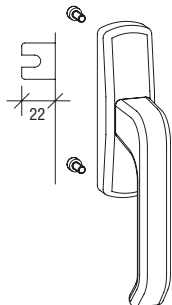
- - - -* Other Colors



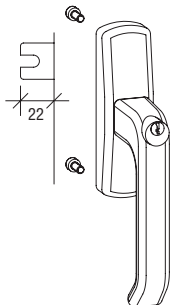


SPACIO geared handles

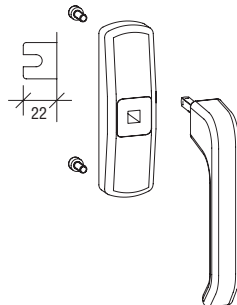
Aluminium, painted – 1 carrier fork 22mm



SPACIO Geared handle set
Not lockable
2 screws
G-46551-00-0*



SPACIO Geared handle set
Lockable
2 screws, 2 keys
G-46553-00-0*



SPACIO Geared rosette
2 screws
C-46555-00-0*

SPACIO Geared handle set
Lockable for first-title hardware
2 screws, 2 keys
G-46557-00-L/R*

SPACIO Removable handle
C-18888-00-0*

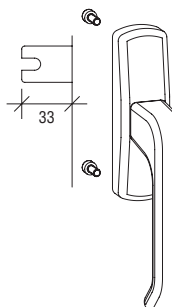


SPACIO geared handle accessory,
2 carrier forks 22 mm - DIN left hand
Can be replaced by 2 carrier forks 22 mm -
DIN right hand

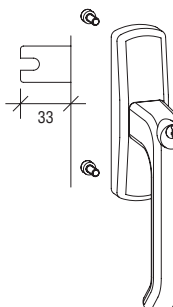
G-46550-00-L-1

SPACIO geared handles

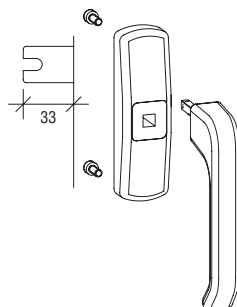
Aluminium, painted – 1 carrier fork 33mm



SPACIO Geared handle set
Not lockable
2 screws
G-46595-96-0*



SPACIO Geared handle set
Lockable
2 screws, 2 keys
G-46597-96-0*



SPACIO Geared rosette
2 screws
C-46596-96-0*

SPACIO Removable handle
C-18888-00-0*



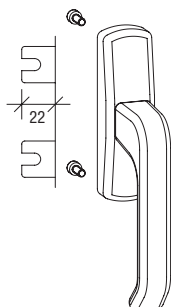
Wrong operation safety device
Hole distance mm

84 and 98 for -00-handle 6-31065-10-0-1

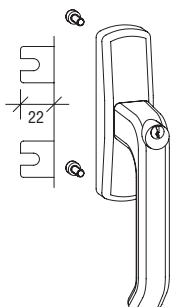
96 and 104 for -96-handle 6-31065-40-0-1

SPACIO geared handles

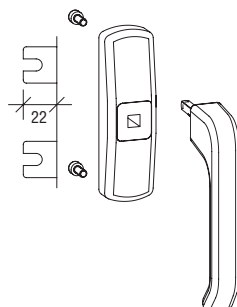
Aluminium, painted – 2 carrier forks 22 mm-DIN right hand



SPACIO Geared handle set
Not lockable
2 screws
G-46552-96-R*



SPACIO Geared handle set
Lockable
2 screws, 2 keys
G-46554-96-R*

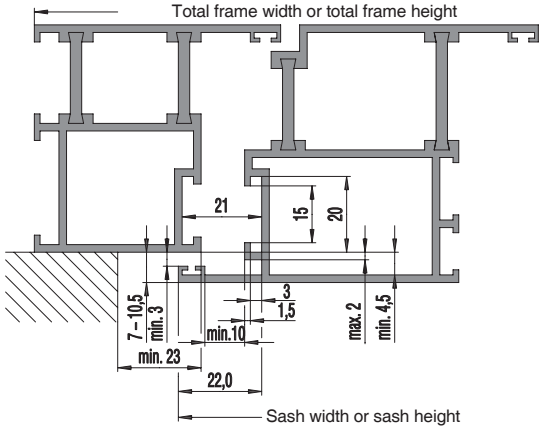


SPACIO Geared rosette
2 screws
C-46556-96-R*

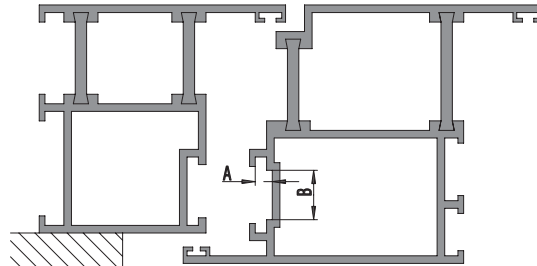
SPACIO Removable handle
C-18888-00-0*



Installation dimensions-frame and sash profile



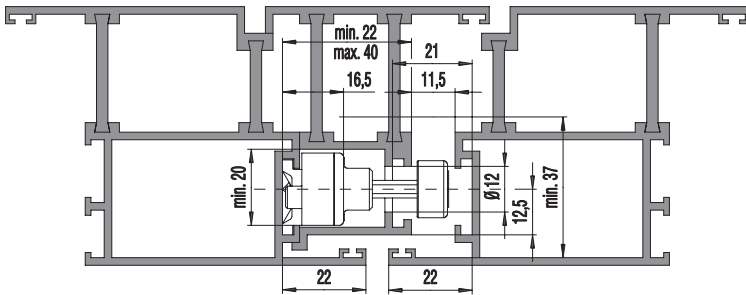
Frame and sash profile
Euro groove sash 15/20



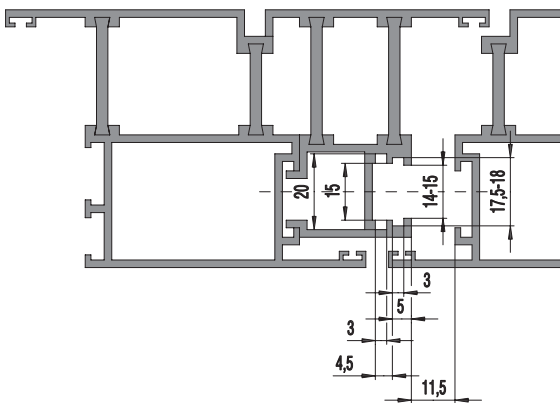
Corner transmission

- 6-30889-00-0-1 Euro groove 15/20
Deepened Euro groove 15/20,
Dim.A=max.3.9mm, dim.B=max.13mm,
- 6-30889-01-0-1 Deepened Euro groove 15/20 dim.A=4.0-5.1mm
Frame and sash profile
Euro groove sash 15/20

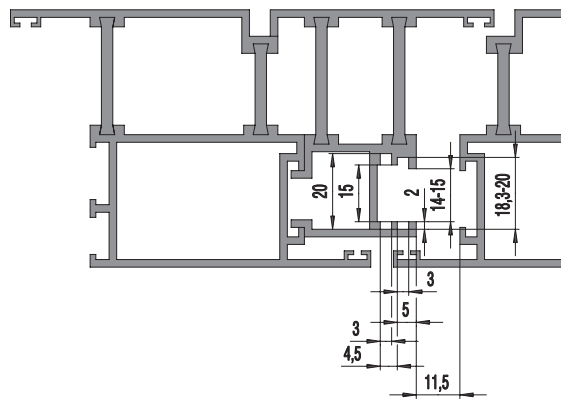
Installation dimensions-false mullion profile



False mullion profile with single groove for locking plates
Locking with inactive sash gear or shoot bolts



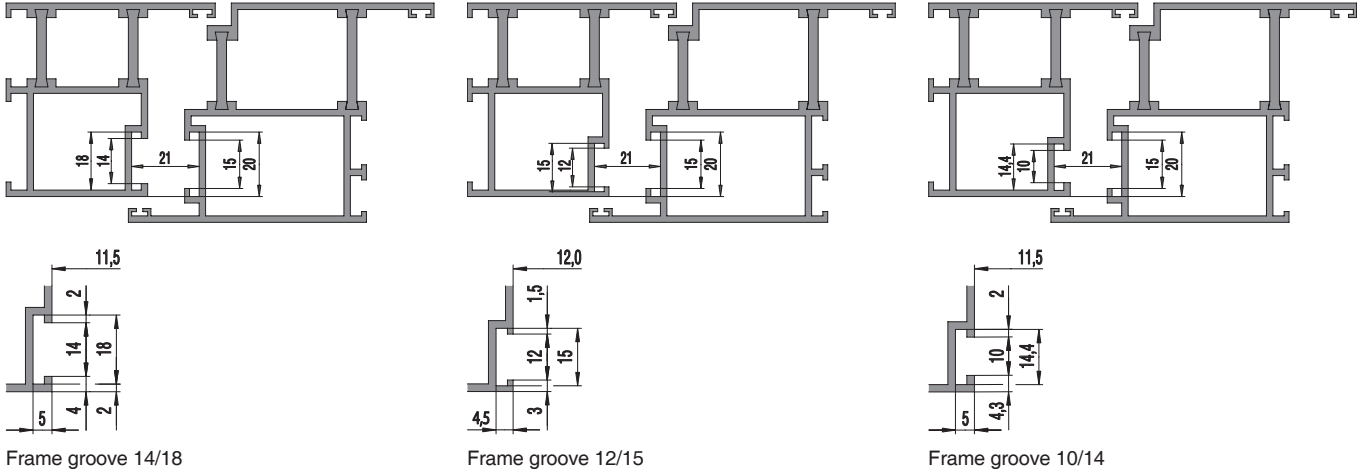
False mullion profile with double grooves for locking plates
Locking with groove shoot bolt or shoot bolts



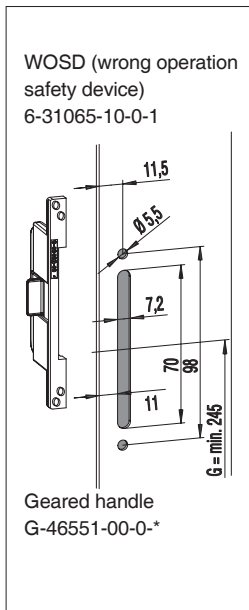
False mullion profile with symmetrical double groove for locking plates
Locking with groove shoot bolt or shoot bolts



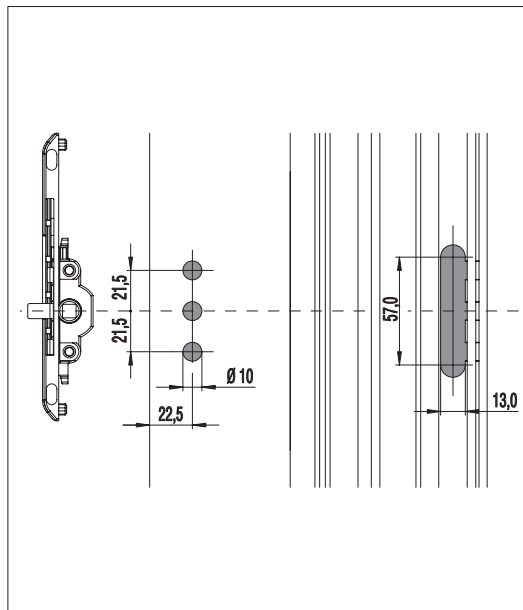
Installation dimensions-frame profile



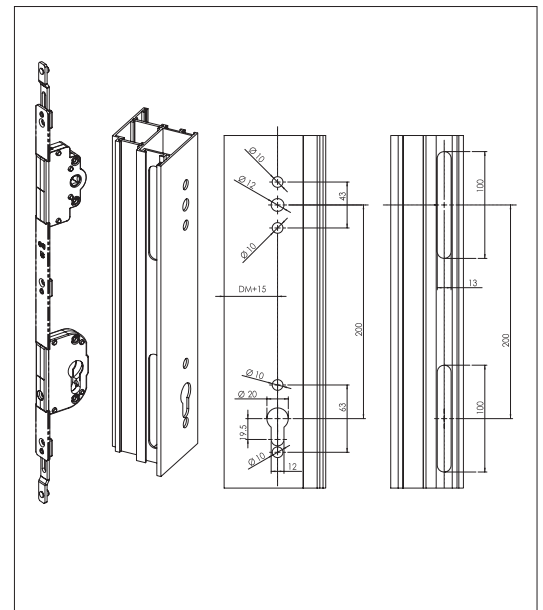
Drilling and milling dimensions



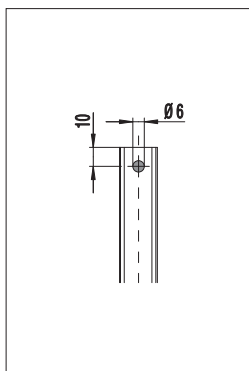
Dimensions for geared handle and WOSD



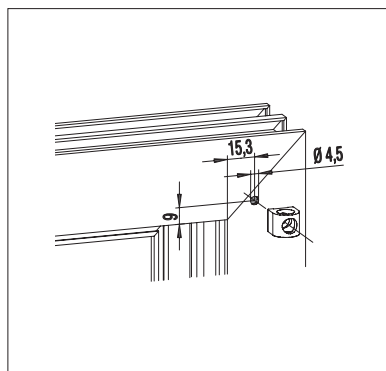
Installation Dimensions for mill-in gears with or without WOSD (wrong operation safety device)
6-30534-00-0-1



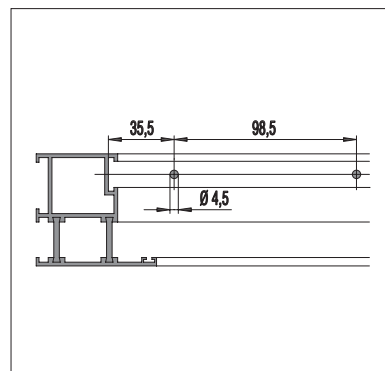
Installation Dimensions for mill-in gears with or without WOSD and lock with cylinder bore
Drilling jig Figure: C-90252



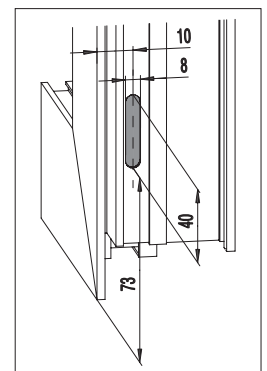
Push rod drill holes



Installation Dimensions for stay bearing 130kg in frame profiles



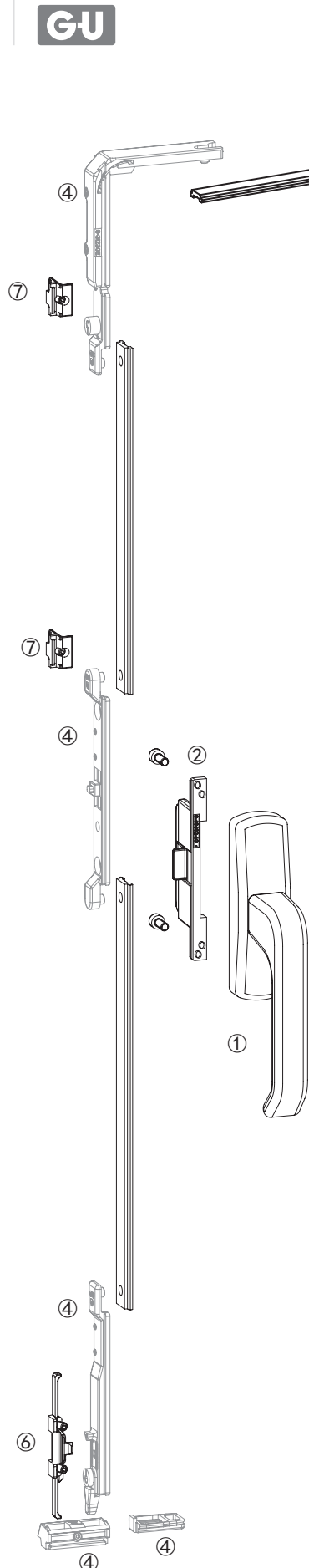
Installation Dimensions for additional stay in frame profiles



Dimensions for shoot bolts in false mullion profile with single groove

JET AK8 Hardware

Sash width 355-700mm, Tilt-turn, One and double sashes



Hardware configuration

No.	Description	Article No.	Qty.
①	SPACIO geared handle [1] Screw hole distance 98 mm	G-46551-00-0-*	1
②	Wrong operation safety device Screw hole distance 98 mm	6-31065-10-0-1	1
③	JET AK 8 stay set	K-15805-12-0-1	1
④	Gearing set	K-15801-00-0-1	1
⑤	Hinge set[1]	K-15800-00-0-*	1
⑥	Titling locking plate	6-30964-00-0-1	1
⑦	Locking plate	6-30959-00-0-1	1/3
Optional:			
⑧	Middle lock set [2]	K-15808-00-0-1	1
⑨	Limiting stay length: 150mm	K-17138-15-0-1	1

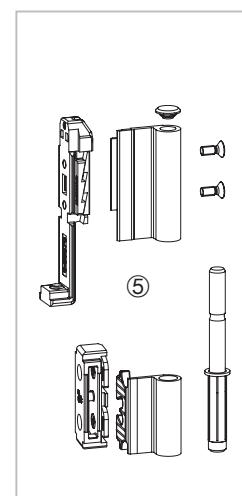
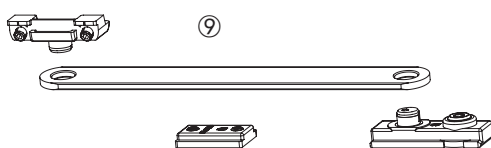
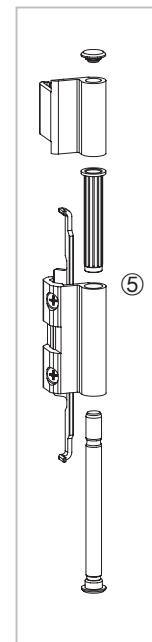
Application:

Sash width 355-700mm
Sash height 500-2800mm
Max. sash weight 80kg

[1] * = Color: 1=silver F 1/EV 1, 5=dark brown, 6=black (RAL 9005),
7=White(RAL 9016),

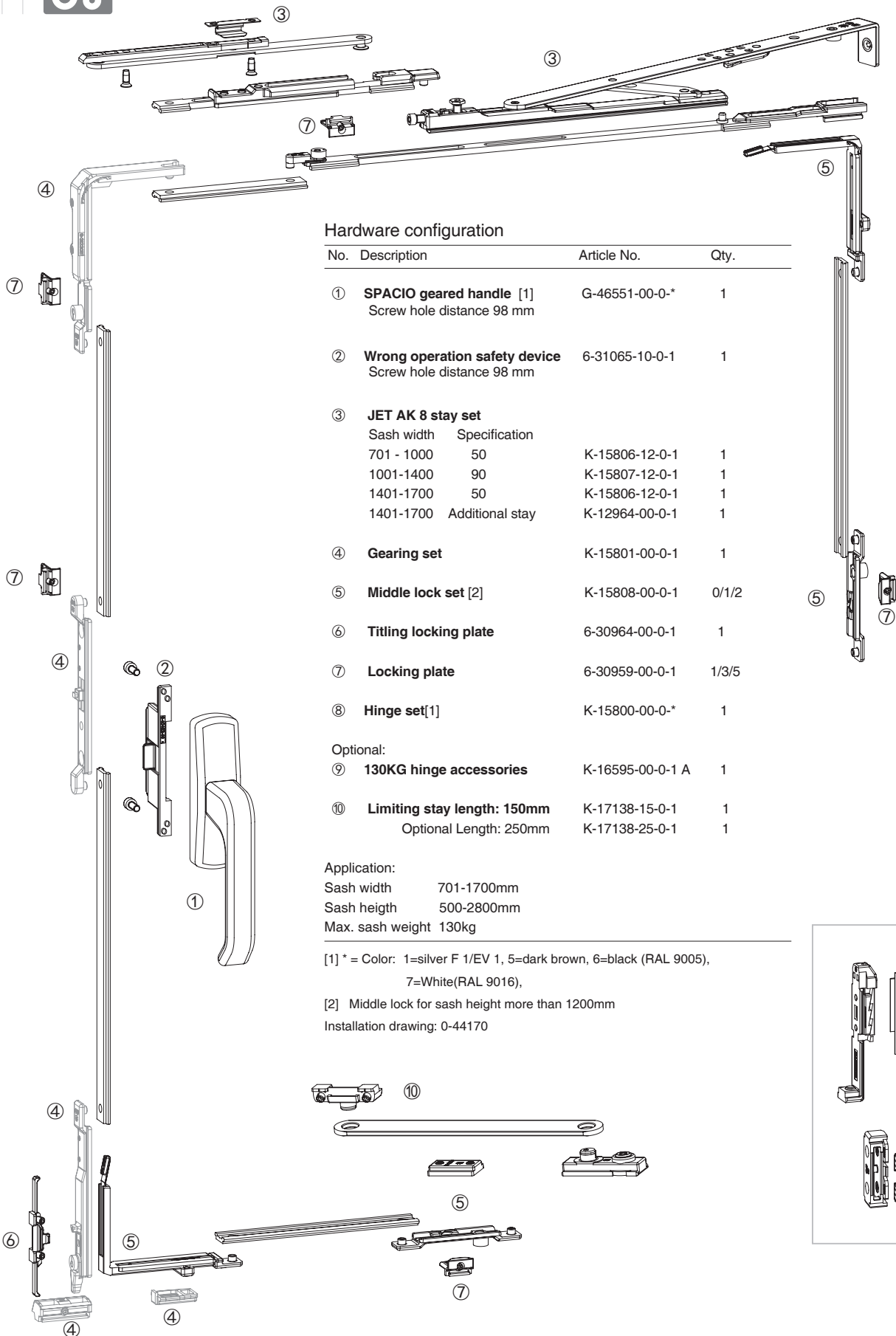
[2] Middle lock for sash height more than 1200mm

Installation drawing: 0-44170



JET AK8 Hardware

Sash width 701-1700mm, Tilt-turn, One and double sashes



Hardware configuration

No.	Description	Article No.	Qty.
①	SPACIO geared handle [1] Screw hole distance 98 mm	G-46551-00-0*	1
②	Wrong operation safety device Screw hole distance 98 mm	6-31065-10-0-1	1
③	JET AK 8 stay set		
	Sash width Specification		
	701 - 1000 50	K-15806-12-0-1	1
	1001-1400 90	K-15807-12-0-1	1
	1401-1700 50	K-15806-12-0-1	1
	1401-1700 Additional stay	K-12964-00-0-1	1
④	Gearing set	K-15801-00-0-1	1
⑤	Middle lock set [2]	K-15808-00-0-1	0/1/2
⑥	Tilting locking plate	6-30964-00-0-1	1
⑦	Locking plate	6-30959-00-0-1	1/3/5
⑧	Hinge set [1]	K-15800-00-0*	1
Optional:			
⑨	130KG hinge accessories	K-16595-00-0-1 A	1
⑩	Limiting stay length: 150mm	K-17138-15-0-1	1
	Optional Length: 250mm	K-17138-25-0-1	1

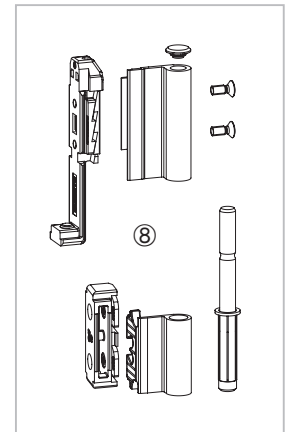
Application:

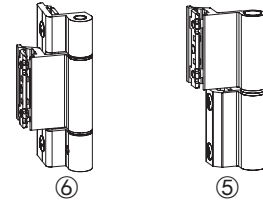
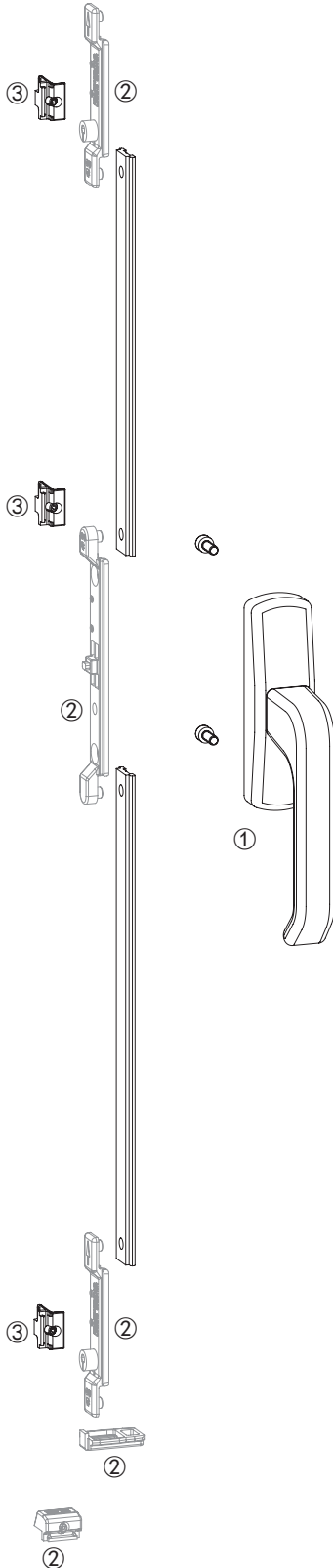
Sash width 701-1700mm
Sash height 500-2800mm
Max. sash weight 130kg

[1] * = Color: 1=silver F 1/EV 1, 5=dark brown, 6=black (RAL 9005),
7=White(RAL 9016),

[2] Middle lock for sash height more than 1200mm

Installation drawing: 0-44170





Hardware configuration

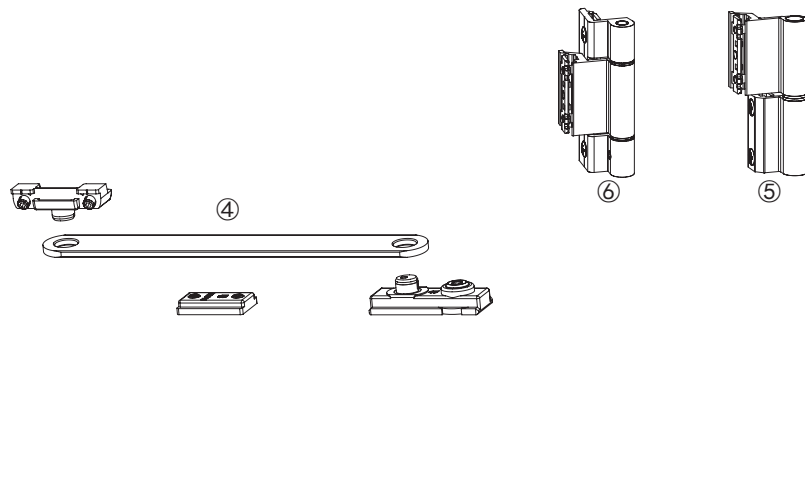
No.	Description	Article No.	Qty.
①	SPACIO geared handle [1] Screw hole distance 98 mm	G-46551-00-0-*	1
②	Turn-only gearing set	K-15802-00-0-1	1
③	Locking plate	6-30959-00-0-1	2/3
④	Limiting stay length: 150mm Optional Length: 250mm	K-17138-15-0-1 K-17138-25-0-1	1 1
⑤	Clamp-on hinge-2 Parts [1] [2]	K-15820-00-0-*	2/3/4
⑥	Clamp-on hinge-3 Parts Alternative [1] [2]	K-15887-00-0-*	2/3/4

Application:

Sash width 400-1500mm
Sash height 500-2800mm
Max. sash weight 100kg

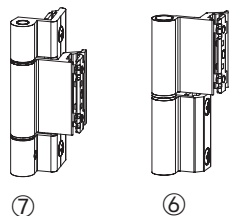
[1] * = Color: 1=silver F 1/EV 1, 5=dark brown, 6=black (RAL 9005),
7=White(RAL 9016),

[2] 3 hinges for sash height 1200-2000mm; 4 hinges for sash height 2001-2800mm
Installation drawing: 0-44231



JET AK8 Hardware

Inactive sash, double sash, false mullion profile with single groove



Hardware configuration

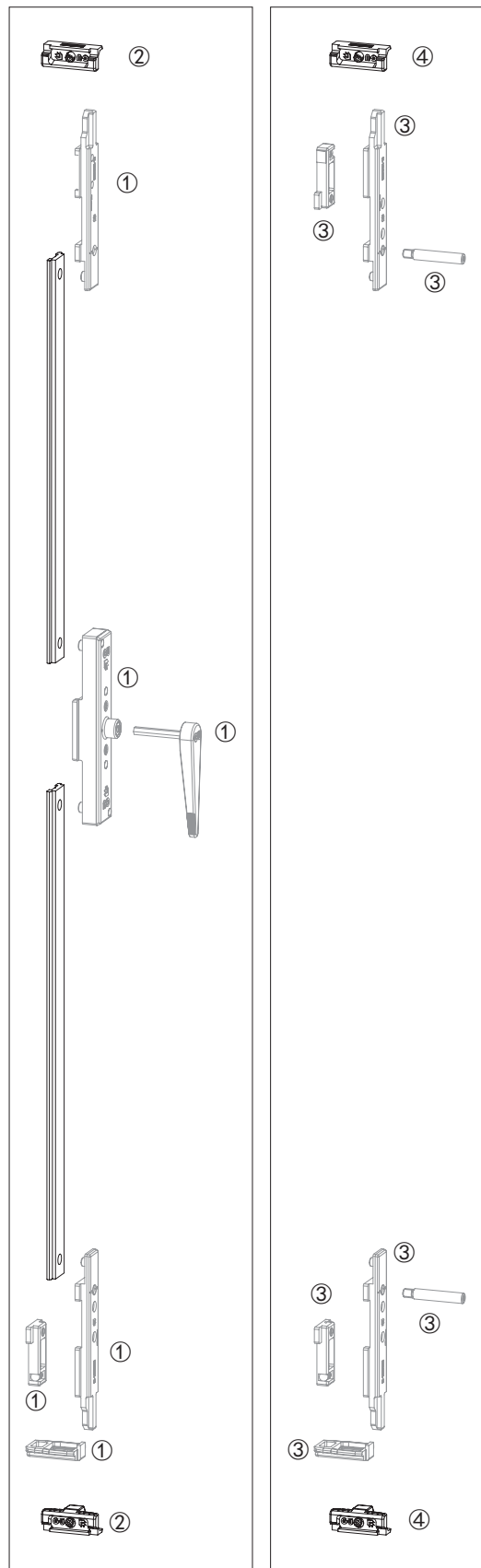
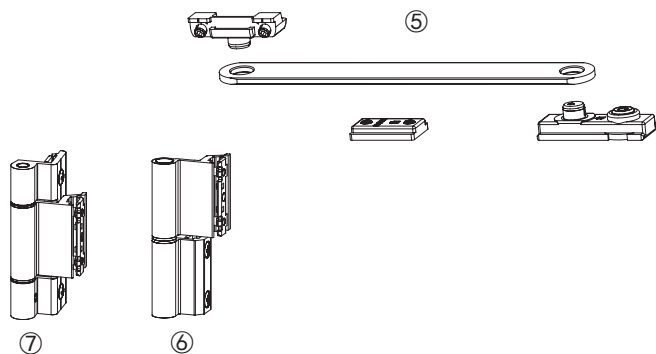
No.	Description	Article No.	Qty.
①	Groove shoot bolt	K-15810-00-0-1	1
②	Locking plate	6-30961-00-0-1	2
Optional:			
③	Shoot bolt	K-15804-30-0-1	1
④	Locking plate	6-30961-00-0-1	2
⑤	Limiting stay length: 150mm	K-17138-15-0-1	1
	Optional Length: 250mm	K-17138-25-0-1	1
⑥	Clamp-on hinge-2 Parts [1] [2]	K-15820-00-0-*	2/3/4
⑦	Clamp-on hinge-3 Parts Alternative [1] [2]	K-15887-00-0-*	2/3/4

Application:

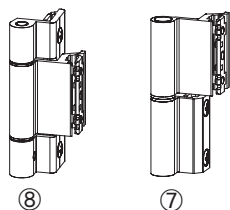
Sash width 400-1500mm
 Sash height 500-2800mm
 Max. sash weight 100kg

[1] * = Color: 1=silver F 1/EV 1, 5=dark brown, 6=black (RAL 9005),
 7=White(RAL 9016),

[2] 3 hinges for sash height 1200-2000mm; 4 hinges for sash height 2001-2800mm
 Installation drawing: 0-44231



1



Hardware configuration

No.	Description	Article No.	Qty.
-----	-------------	-------------	------

Groove shoot bolt pattern:

①	Groove shoot bolt set	K-15803-00-0-1	1
②	Gearing rod length 1600 mm	9-40859-16-0-1	2
③	Locking plate for inactive sash	6-30961-00-0-1	2

Optional: Single bolt pattern

④	Shoot bolt	K-15816-00-0-1	2
⑤	Bolt rod set	K-15818-00-0-1	1
⑥	Locking plate for inactive sash	6-30961-00-0-1	2
⑦	Clamp-on hinge-2 Parts [1] [2]	K-15820-00-0-*	2/3/4
⑧	Clamp-on hinge-3 Parts Alternative [1] [2]	K-15887-00-0-*	2/3/4

Application:

Sash width 400-1500mm

Sash height 500-2800mm

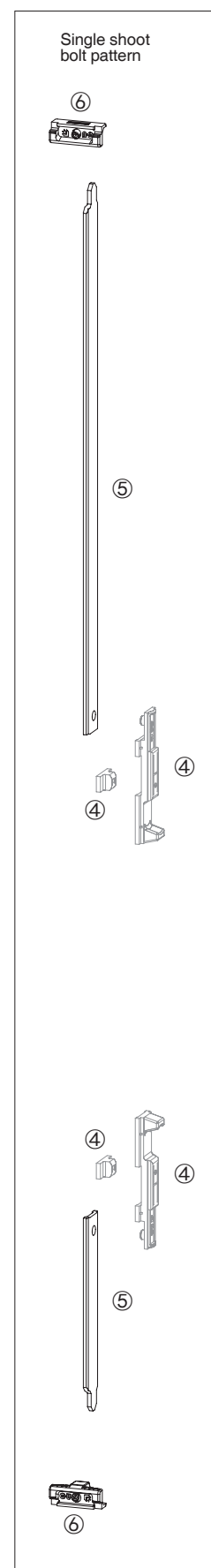
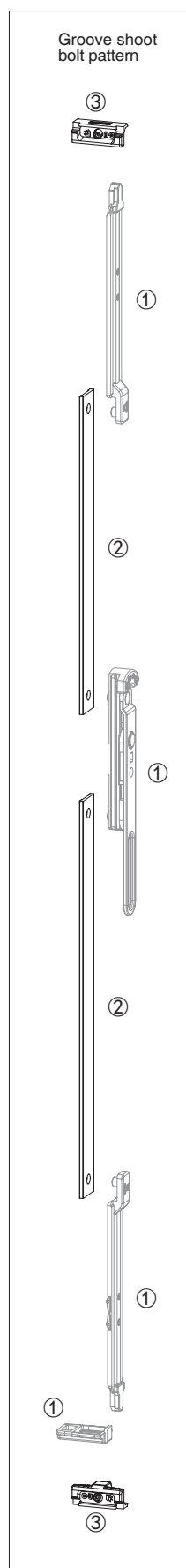
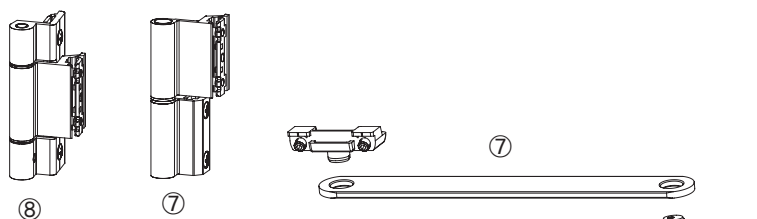
Max. sash weight 80kg

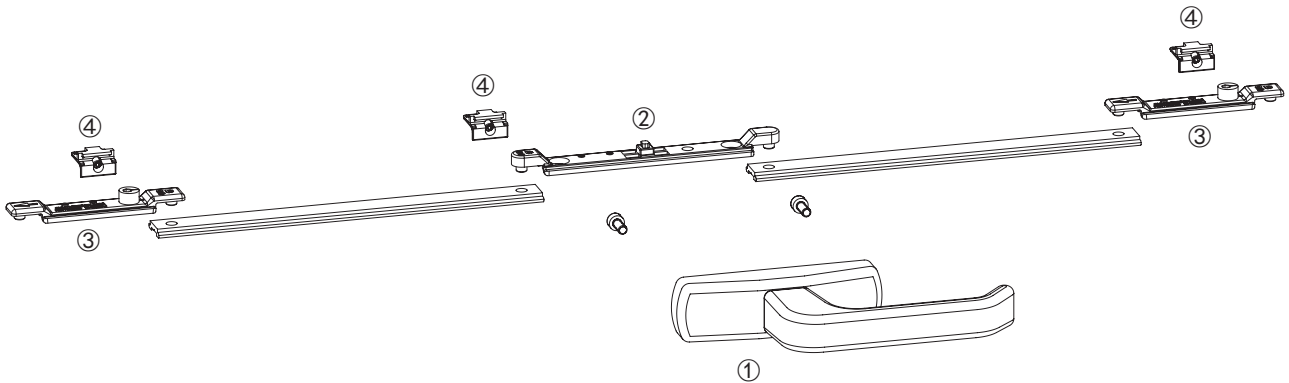
[1] * = Color: 1=silver F 1/EV 1, 5=dark brown, 6=black (RAL 9005),

7=White(RAL 9016),

[2] 3 hinges for sash height 1200-2000mm; 4 hinges for sash height 2001-2800mm

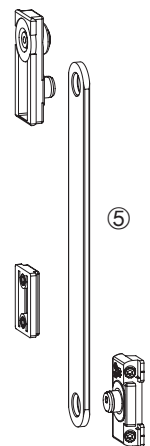
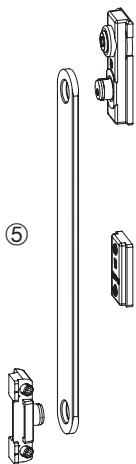
Installation drawing: 0-44231



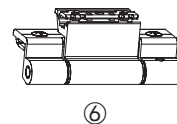
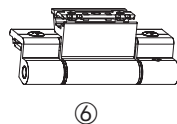


Hardware configuration

No.	Description	Article No.	Qty.
①	SPACIO geared handle [1] Screw hole distance 98 mm	G-46551-00-0-*	1
②	Gearshift	6-30984-00-0-1	1
③	Locking pin element	6-24539-00-0-1	2/3
④	Locking plate	6-30959-00-0-1	2/3
⑤	Limiting stay length: 150mm Optional Length: 250mm	K-17138-15-0-1 K-17138-25-0-1	2 2
⑥	Clamp-on hinge-3 Parts Alternative [1]	K-15887-00-0-*	2/3



[1] * = Color: 0= uncoated, 1=silver F 1/EV 1, 5=dark brown,
6=black (RAL 9005), 7=White(RAL 9016),

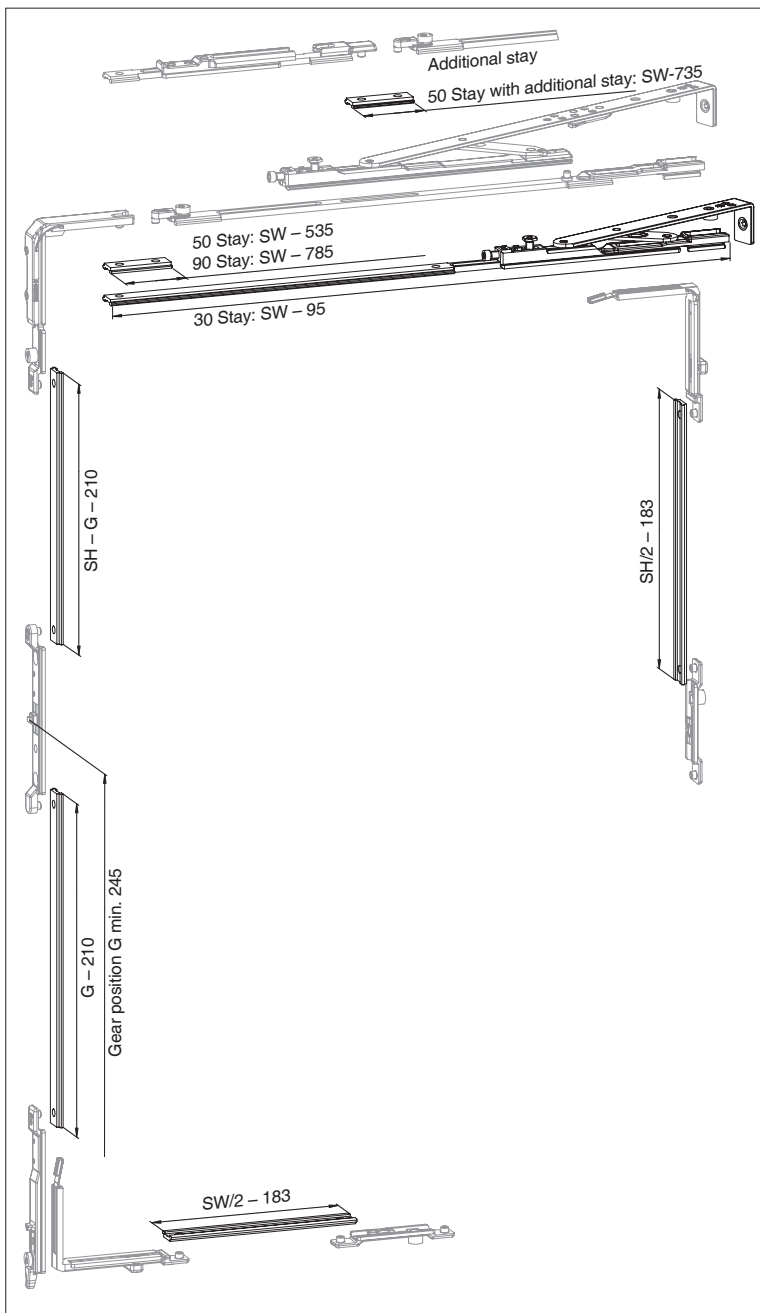


JET AK8 product profile

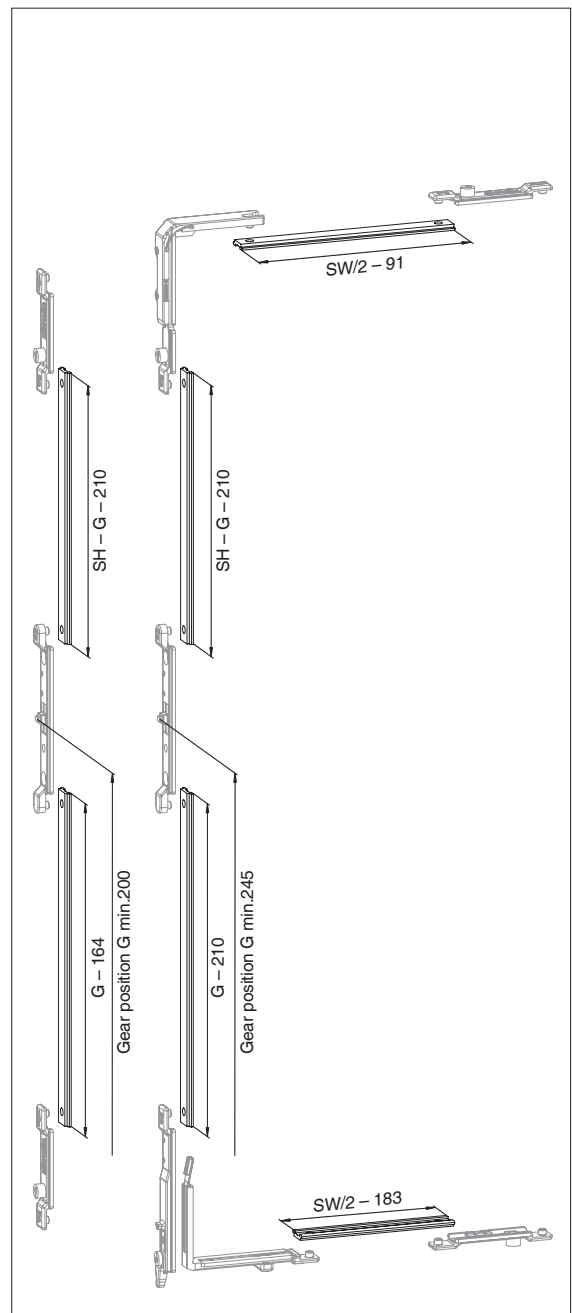
Push rod cutting lengths with 22mm sash overlap



Tilt-turn(first-turn) and tilt-turn(first-tilt)



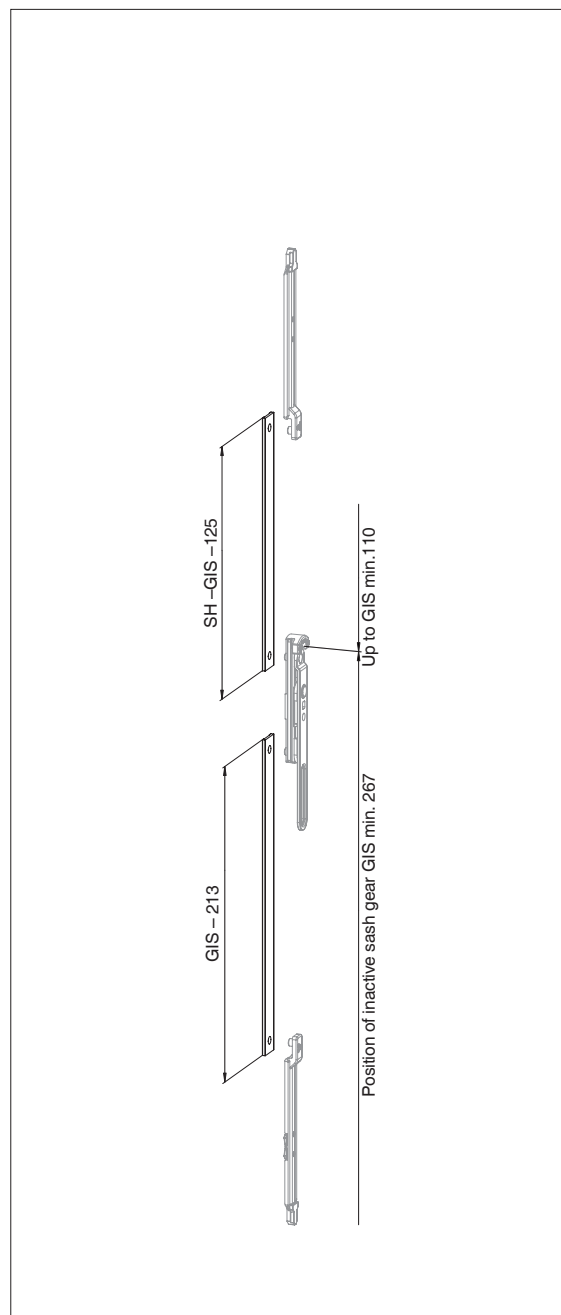
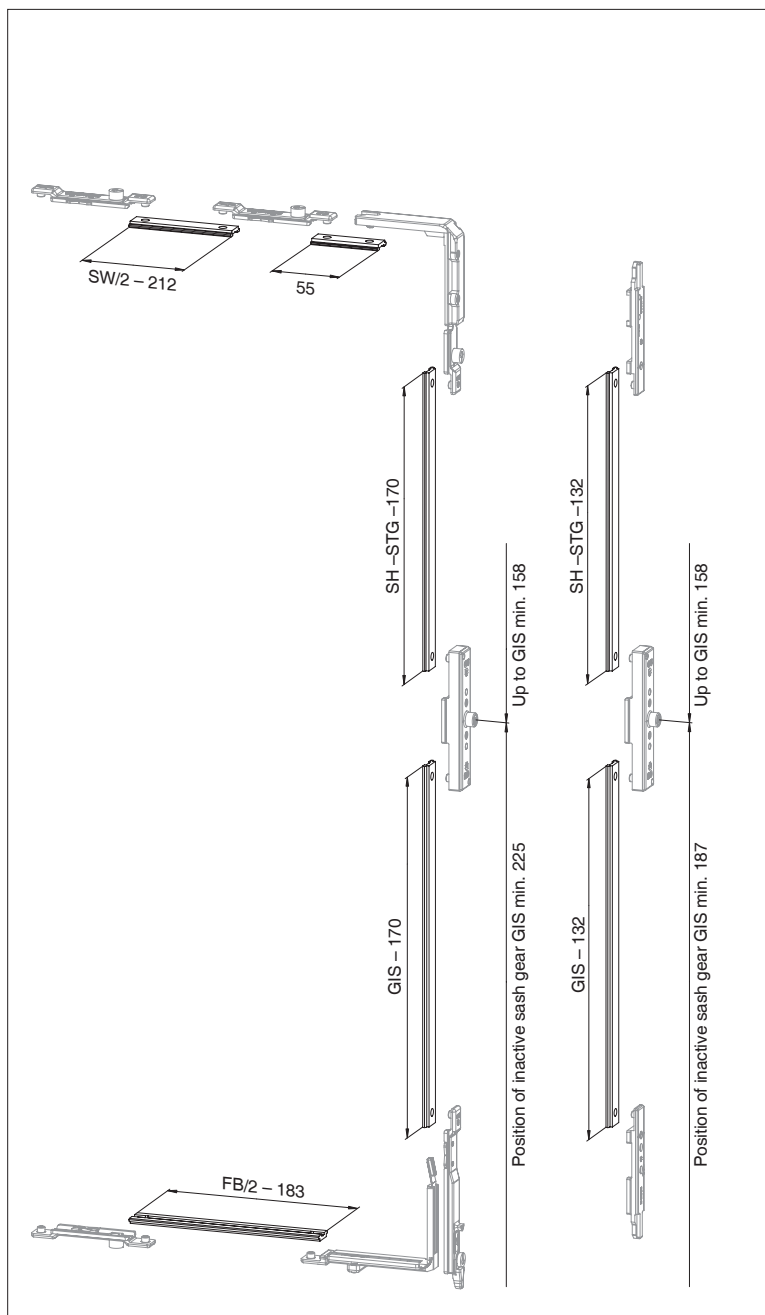
Turn-only hardware





Inactive sash
False mullion profiles with single groove

Inactive sash
False mullion profiles with double groove





VERLEIHUNGS- URKUNDE

AWARD CERTIFICATE

Nr. 4-21/03

Die Gütegemeinschaft Schlösser und Beschläge e.V. verleiht hiermit aufgrund der ihrem Güteausschuss vorliegenden Prüfprotokolle dem Drehkippschlag

JET AK 8

der Mitgliedsfirma
the membership company

Gretsch-Unitas GmbH Baubeschläge, 71252 Ditzingen

das vom RAL (Deutsches Institut für Gütesicherung und Kennzeichnung e.V.) anerkannte und durch Eintragung beim Deutschen Patentamt als Kollektivmarke geschützte Gütezeichen Schlösser und Beschläge mit der Inschrift „Drehkippschlag“

in der Klasse F80, geprüft nach RAL-RG 697/3, Ausgabe 02.1995
approved in class F80, according to RAL-RG 697/3, issued 1995

Die Führung des Zeichens setzt die Einhaltung und Überwachung nach dieser Güte- und Prüfbestimmung voraus. Die Kennzeichnung, die Gültigkeit und die wesentlichen Bestandteile des geprüften Produktes sind in dem gleichlautenden Prüfprotokoll beschrieben. Permission of using the RAL label is based on correct observation of RAL-RG 697/3 - Quality and testing instructions. Labeling, validity and main components of tested product are detailed in test report having same reference number.

D-42551 Velbert, den 22. Mai 2003

Gütegemeinschaft Schlösser und Beschläge e.V.

Geschäftsführer

Duplikat

German RAL JET AK8
Tilt-turn certificate

PIV Prüfzettel Schloßer
 und Beschläge Velbert
 Waldstraße 41
 D-42551 Velbert
 Fon +49(0)2051/5506-5
 Fax +49(0)2051/5506-69
 piv.velbert@online.de
 www.pivvelbert.de

PRÜFZEUGNIS

Test Certificate

DIN EN 13126-8:2006-05

Nr. / No. 32-16/08

Der Firma
Gretsch-Unitas GmbH Baubeschläge
D-71254 Ditzingen

wird bescheinigt, dass sie am
08. September 2003

die Anforderungen der DIN EN 13126-8
meet the requirements of DIN EN 13126-8

für das Produkt
JET AK 8 - 130

in der Ausführung
Drehkippschlag
tilt & turn hardware

entsprechend dem folgenden Klassifikationschlüssel erfüllt hat:
that complies with the classification

Einbauelemente mounting hardware	Einbauelemente locking hardware	Maximaler Hub mm	Maximale Standschwerkraft N	Einbauelemente Schließ- mechanismus mm x mm	Kennschwerlast mm x mm	Stütz- schraube mm	Ange- schraub- tiefe mm	Prüfdruck N
-	4	130	0	1	4	-	8	1300x1200

Diesem Prüfzeugnis liegt der Prüfbericht Nr. 4-27/03 nach RAL-RG 407/3 des PIV als Prüfgrundlage zugrunde. Die Gültigkeit des Prüfzeugnisses bleibt so lange erhalten, wie sich die Prüfgrundlage und/oder das geprüfte Produkt nicht ändert.

D-42551 Velbert, den 30. September 2008

I.A. H. Wichert

Dies ist eine Urkunde.
 Jede Nachfertigung oder Veränderung der Angaben ist untersagt. Missbrauch bedeutet Urkundenfälschung.
 Alle weiteren Prüfberichte nach DIN EN ISO/IEC 17025
 Akkreditierung-Zertifizierungsstelle nach DIN EN ISO 9001 (PIV CERT)
 PIV - Überwachung und Zertifizierungsstelle nach dem Beschlagskennzeichen (BCK)
 RAL-Produkte für Schloßer und Beschläge nach RAL-RG 407 / 8
 Überwachung und Zertifizierungsstelle nach ISO/IEC 17025
 bzw. ISO 9001 für Prüfverfahren - DIN CERTCO anerkannte Prüfstelle
 Institut für
 Rotor B&L Dipl.-Ing.
 RAL-CERT
 TÜV SÜD

German performance test report of
JET AK8 Tilt-turn hardware

ift-KONFORMITÄTSCERTIFIKAT

ift-CERTIFICATE OF CONFORMITY

Beschläge / Hardware

Produktfamilie
Dreh- und Drehkippschläge für Fenster und Fenstertüren
turn and tilt-hardware for windows and casement doors

Produkt
JET / UNI JET

Einsatzbereich
Systeme mit entsprechender Beschlagsaufnahme
systems with suitable hardware groove

max. Flügeltgewicht
max. casement weight
130 kg

Hersteller
Gretsch-Unitas GmbH Baubeschläge,
Johann-Maack-Str. 3, 71254 Ditzingen

Produktionsstandort
production site
FERCO International S.A.S.,
2, rue de veuve molin, F-57401 Sarrebourg-Cedex

GRETSCH-UNITAS

Das Zertifikat ist nur anwendbar, wenn die Hersteller alle Anforderungen des Beschlagsanforderungsprogramms (BAP) erfüllen (EN 13126-8:2006-05).

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Das Zertifikat ist nur anwendbar, wenn die Hersteller alle Anforderungen des Beschlagsanforderungsprogramms (BAP) erfüllen (EN 13126-8:2006-05).

ift INSTITUT FÜR
 ZERTIFIZIERUNG
 UND
 TECHNISCHE
 BERATUNG

German performance authentication
certificate for JET AK8 Tilt-turn hardware

Environmental Product Declaration

According to ISO 14025

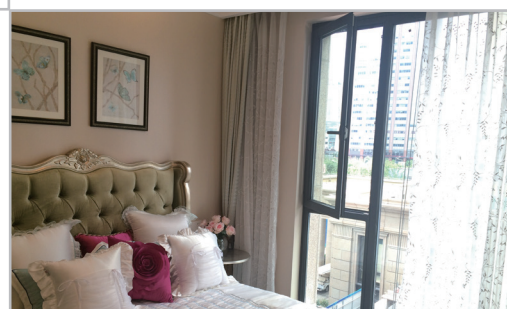
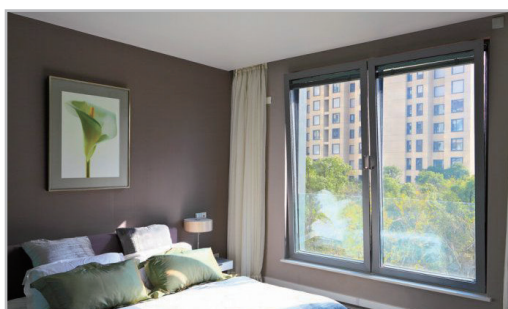
Declaration number
EPD-FVS-2019131-E
Institut Bauen und Umwelt e.V.
www.bau-umwelt.com

Window fittings

Fachverband
Schloss- und Beschlagsindustrie e.V.

Überreicht an: Gretsch-Unitas GmbH Baubeschläge

Environment certificates
for window hardware

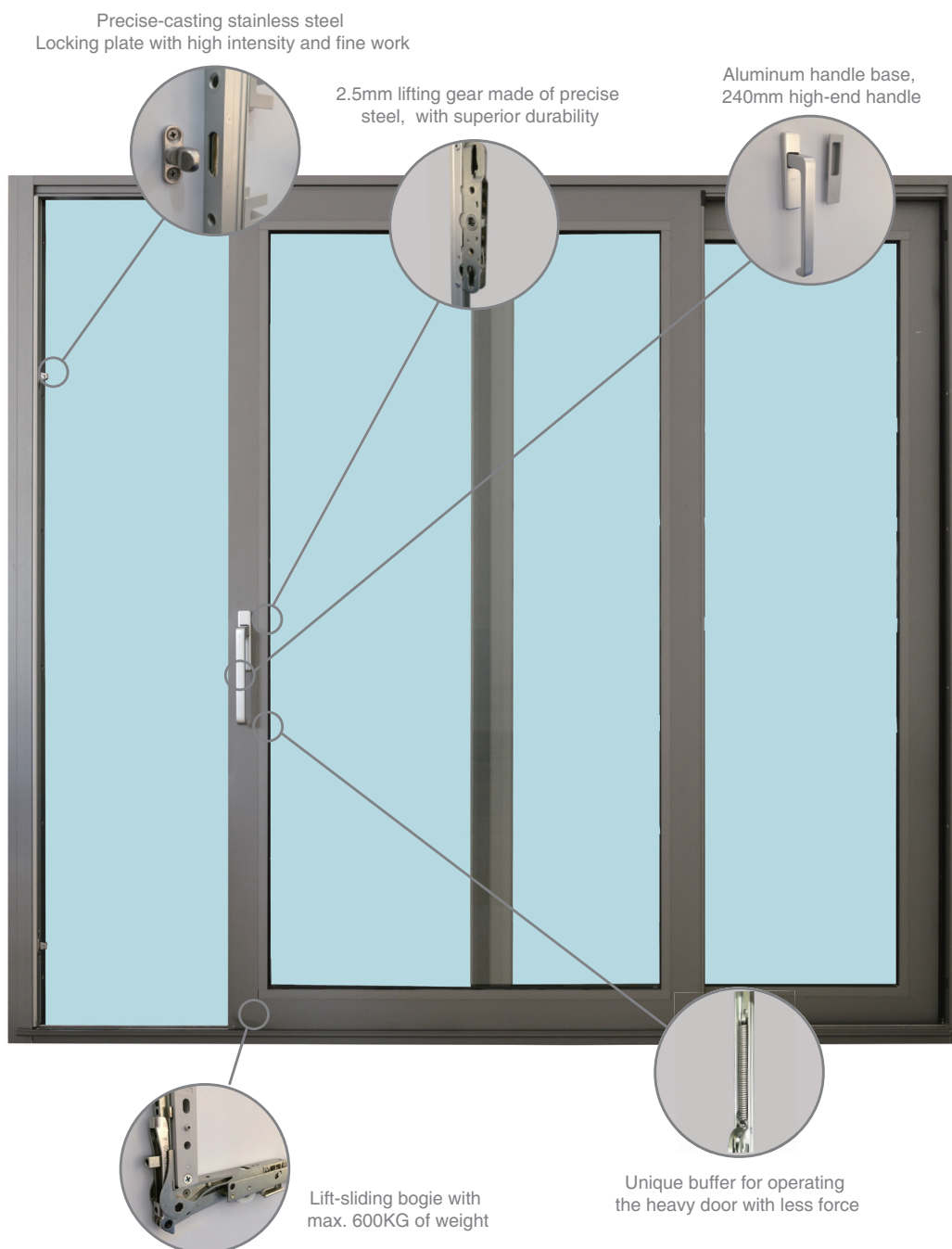


Lift&Slide hardware



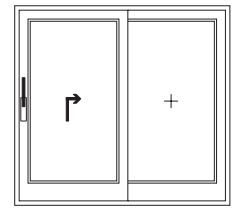
- G-U G-U invented lift-sliding hardware in 1958 and has expanded to global markets. Its hardware has been widely used and highly recognized in many famous constructions home and abroad.
- The lift-sliding hardware has characteristics of artful structure design, good leakproofness and sturdy and durable performance and is the perfected one for over-width and over-weight doors.
- As the inventor of lift-sliding hardware, G-U is the largest supplier of lift-sliding hardware in this industry. In addition to common lift-sliding hardware, G.U can provide many other patterns, such as lift-sliding (motorized) hardware, lift-sliding (ventilation) hardware, lift-sliding (corner) hardware and lift-sliding (speed limitation), which may meet various demands of consumers.

2

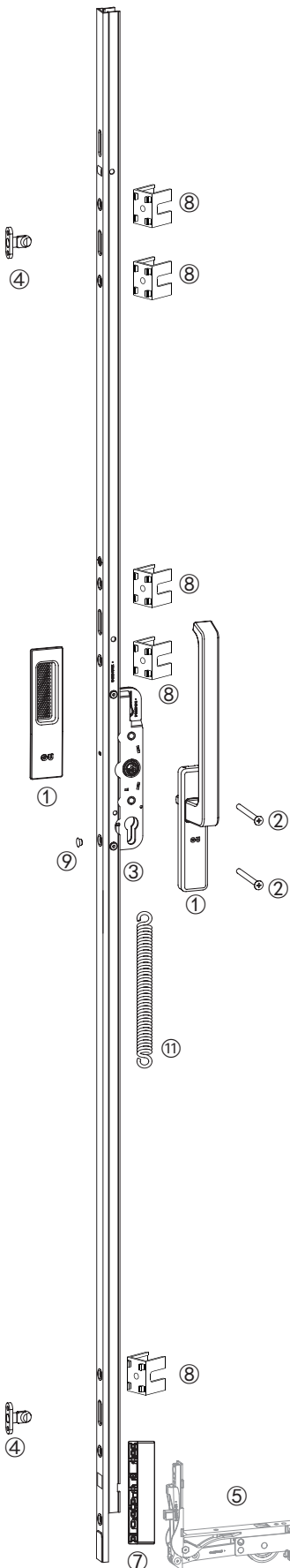


GU-934 lift-sliding hardware

One-sash lift-sliding hardware up to 300kg (optional: 400kg)



Pattern A



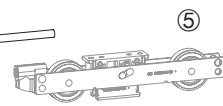
Hardware configuration

No.	Description	Article No.	Qty.	
①	Handle set [1] Sash Thickness 80mm	C-13785-00-0-*	1	
②	Countersunk screw for handle [2]	C-70002-**-0-8	2	
③	Lifting gear F37.5 [1] Sash height 1795-2295mm, Length 2270mm	6-30021-24-0-*	1	
④	Locking cam See specification in page 32	6-22648-**-0-8	2	
⑤	GU-934 bogies	K-16488-00-0-1	1	
⑥	Connecting road Ø 8, Length 1100mm Optional Length 1350mm Optional Length 1850mm Optional Length 3300mm	9-25476-11-0-1 9-25476-14-0-1 9-25476-18-0-1 9-25476-33-0-1	1	
⑦	Connecting packer of front bogie and gear See specification in page 32	9-47295-**-0-1	1	
⑧	Gear packer See specification in page 32	9-47296-**-0-1	5	
⑨	Locking cam hole cover [3]	9-26687-00-0-*	1	
⑩	Buffer [4]	K-12024-00-0-*	1/2	Alternatively
⑪	Handle tension spring for sash weight >200kg	9-40235-05-0-0	1	Alternatively
⑫	Middle bogie for sash weight 300-400kg See specification in page 33	K-17804-01-0-1	1	Alternatively

Application:

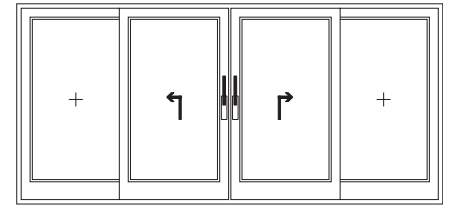
Sash width 700-3300mm
Sash height 1795-2295mm (Extended)
Max. sash weight 400kg

- [1] * = Color: 1=silver, 5=dark brown, 7=white
[2] ** = Screw length:60mm, 70mm, 80mm, 90mm, 100mm
[3] * = Color: 1=silver, 6=black
[4] * = Color: 6=black, 7=white

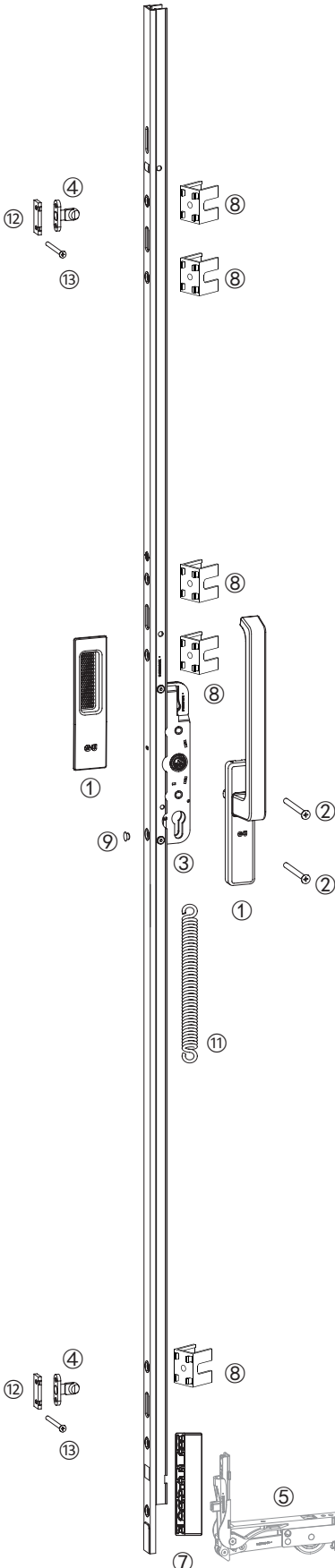


GU-934 lift-sliding hardware

Double-sash folio lift-sliding hardware up to 300kg (optional: 400kg)



Pattern C



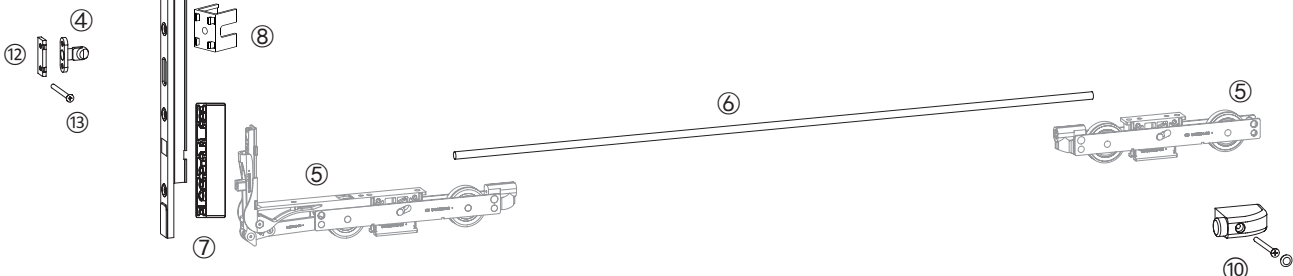
Hardware configuration

No.	Description	Article No.	Qty.
①	Handle set [1] Sash Thickness 80mm	C-13785-00-0-*	2
②	Countersunk screw for handle [2]	C-70002-**-0-8	4
③	Lifting gear F37.5 [1] Sash height 1795-2295mm, Length 2270mm	6-30021-24-0-*	2
④	Locking cam See specification in page 32	6-22648-**-0-8	2
⑤	GU-934 bogies	K-16488-00-0-1	2
⑥	Connecting road Ø 8, Length 1100mm Optional Length 1350mm Optional Length 1850mm Optional Length 3300mm	9-25476-11-0-1 9-25476-14-0-1 9-25476-18-0-1 9-25476-33-0-1	2
⑦	Connecting packer of front bogie and gear See specification in page 32	9-47295-**-0-1	2
⑧	Gear packer See specification in page 32	9-47296-**-0-1	10
⑨	Locking cam hole cover [3]	9-26687-00-0-*	1
⑩	Buffer [4]	K-12024-00-0-*	2/4 Alternatively
⑪	Handle tension spring for sash weight >200kg	9-40235-05-0-0	2 Alternatively
⑫	Countersunk screw for locking packer-Pattern C [5]	C-70001-**-0-1	4 Alternatively
⑬	Middle bogie for sash weight 300-400kg See specification in page 33	K-17804-01-0-1	1 Alternatively

Application:

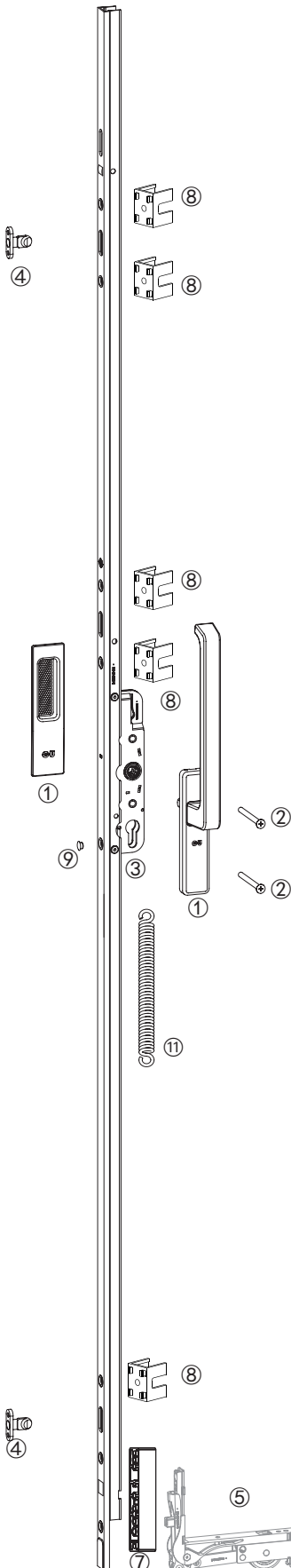
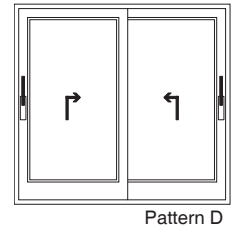
Sash width 700-3300mm
Sash height 1795-2295mm (Extended)
Max. sash weight 400kg

- [1] * = Color: 1=silver, 5=dark brown, 7=white
[2] ** = Screw length: 60mm, 70mm, 80mm, 90mm, 100mm
[3] * = Color: 1=silver, 6=black
[4] * = Color: 6=black, 7=white
[5] ** = Screw length: 35,40,45,50,60,70,80,85,95mm



GU-934 lift-sliding hardware

Sash up to 300kg (optional: 400kg)



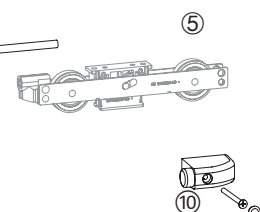
Hardware configuration (Figure: one of double sash)

No.	Description	Article No.	Qty.	
①	Handle set [1] Sash Thickness 80mm	C-13785-00-0*	2	
②	Countersunk screw for handle [2]	C-70002-**-0-8	4	
③	Lifting gear F37.5 [1] Sash height 1795-2295mm, Length 2270mm	6-30021-24-0*	2	
④	Locking cam See specification in page 32	6-22648-**-0-8	4	
⑤	GU-934 bogies	K-16488-00-0-1	2	
⑥	Connecting rod Ø 8, Length 1100mm Optional Length 1350mm Optional Length 1850mm Optional Length 3300mm	9-25476-11-0-1 9-25476-14-0-1 9-25476-18-0-1 9-25476-33-0-1	2	
⑦	Connecting packer of front bogie and gear See specification in page 32	9-47295-**-0-1	2	
⑧	Gear packer See specification in page 32	9-47296-**-0-1	10	
⑨	Locking cam hole cover [3]	9-26687-00-0*	2	
⑩	Buffer [4]	K-12024-00-0*	1/2	Alternatively
⑪	Handle tension spring for sash weight >200kg	9-40235-05-0-0	2	Alternatively
⑫	Middle bogie for sash weight 300-400kg See specification in page 33	K-17804-01-0-1	2	Alternatively

Application:

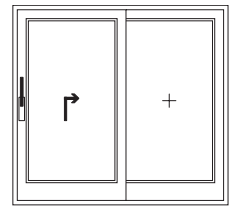
Sash width 700-1600mm
Sash height 1795-2295mm
Max. sash weight 400kg

- [1] * = Color: 1=silver, 5=dark brown, 7=white
[2] ** = Screw length:60mm, 70mm, 80mm, 90mm, 100mm
[3] * = Color: 1=silver, 6=black
[4] * = Color: 6=black, 7=white

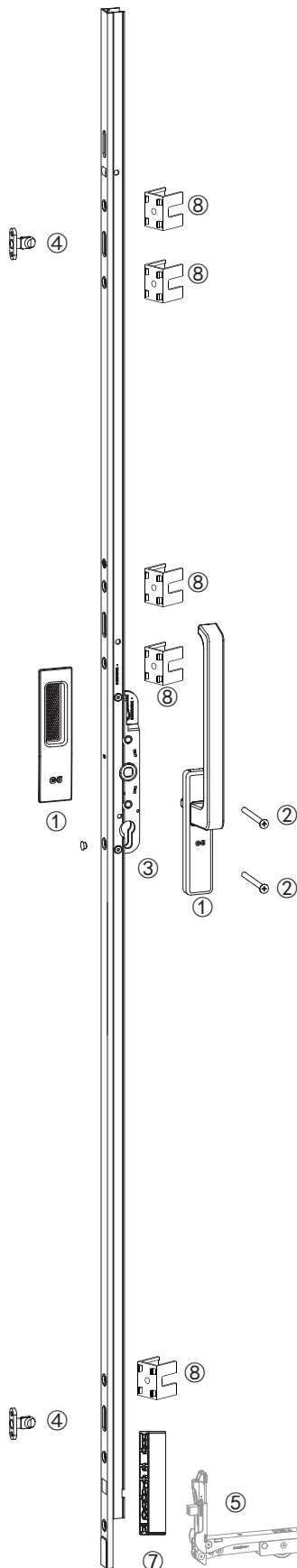


GU-937 lift-sliding hardware

Sash up to 150kg



Pattern A



Hardware configuration

No.	Description	Article No.	Qty.
①	Handle set [1] Sash Thickness 80mm	C-13785-00-0-*	1
②	Countersunk screw for handle [2]	C-70002-**-0-8	2
③	Lifting gear F27.5 [1] Sash height 1795-2295mm, Length 2270mm	6-30019-24-0-*	1
④	Locking cam See specification in page 32	6-22648-**-0-8	2
⑤	GU-937 bogies	C-16493-00-0-1	1
⑥	Connecting road Ø 8, Length 1100mm	9-25476-11-0-1	1
⑦	Connecting packer of front bogie and gear See specification in page 32	9-47295-**-0-1	1
⑧	Gear packer See specification in page 32	9-47296-**-0-1	5
⑨	Locking cam hole cover [3]	9-26687-00-0-*	1
⑩	Buffer [4]	K-12024-00-0-*	1/2 Alternatively

Application:

Sash width 700-1600mm
Sash height 1795-2295mm
Max. sash weight 150kg

[1] * = Color: 1=silver, 5=dark brown, 7=white

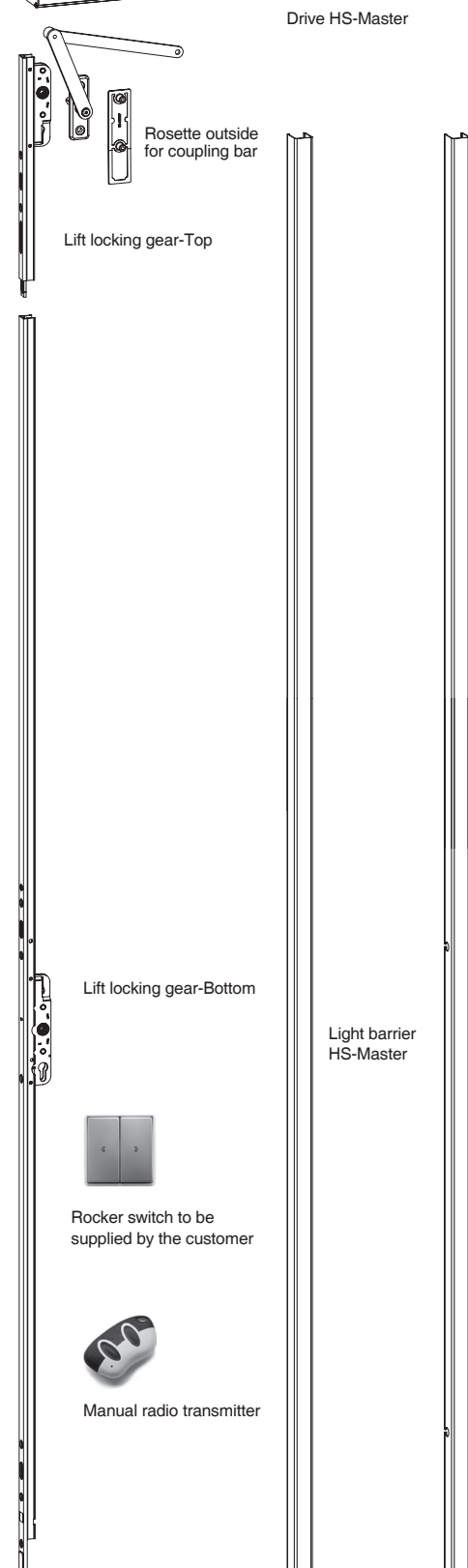
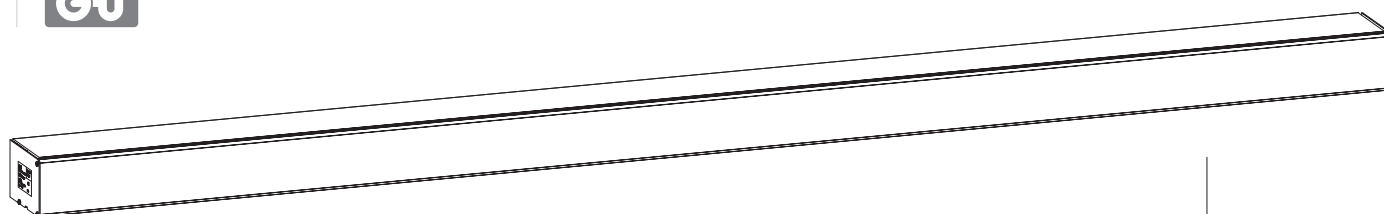
[2] ** = Screw length: 60mm, 70mm, 80mm, 90mm, 100mm

[3] * = Color: 1=silver, 6=black

[4] * = Color: 6=black, 7=white

HS-Master lift-sliding (motorized) hardware

Sash clearance 28mm and 10mm



HS-Master lift-sliding (motorized) hardware

Hardware configuration

Qty.	Description	PU	Article No. Pattern A	Pattern C
I. Drive HS-Master standard version				
1	Drive Hs-Master [1] 230V Standard version for – Operation with handle/push and go function – Operation via rocker switch (switch supplied by user)	1	6-32205-98-L/R-*	6-33625-98-L/R-*
	Optional: Drive HS-Master [1] 230V Additionally prepared for operation via manual radio transmitter	1	6-32654-98-L/R-*	6-33626-98-L/R-*
II. Drive HS-Master – with light barrier set				
1	Drive Hs-Master [1] 230V Additionally prepared for installation of light barrier set	1	6-32650-98-L/R-*	
	Optional: Drive HS-Master [1] Additionally prepared for operation via manual radio transmitter and for installation of light barrier set	1	6-32651-98-L/R-*	
1	Light barrier set HS-Master 230V Include: 2 light barrier rail, left and right 2 light barrier-transmitter, 2 light barrier-receiver 8 guides	1	K-16772-00-0-*	
III. Drive HS-Master – with light curtain				
1	Drive Hs-Master [1] 230V Additionally prepared for operation via manual radio transmitter and for installation of light barrier set	1	6-32652-98-L/R-*	
	Optional: Drive HS-Master [1] 230V Additionally prepared for operation via manual radio transmitter and for installation of light barrier set	1	6-32653-98-L/R-*	
1	Light curtain HS-Master outside	1	6-32640-00-0-0	
Components generally required with versions I, II, III				
1	Linkage HS-Master set [1] Include: 1 linkage, 1 rosette outside 1 fixing material	1	K-16750-00-0-*	K-16750-00-0-*
1	HS-Master lift-locking gear Sash height= 1855-2765 mm Include: 2 lift-locking gear HS-Master top/bottom 1 drilling jig, 1 connecting bar	1	K-16748-00-0-1	K-16748-00-0-1
–	Accessories-according to profile		(on request)	(on request)
1	G.U 934 lift-sliding hardware without lift-locking gear			

[1] * Color: 1=silver, 5=brown, 7=white

Accessories for HS-Master

Qty.	Description	Color	PU	Article No.
1*	Manual radio transmitter HS Master 2 channel	Grey-blue	1	6-32264-01-0-0
		Grey-amaranth	1	6-32264-02-0-0
		Grey-black	1	6-32264-03-0-0
		Grey-red	1	6-32264-04-0-0

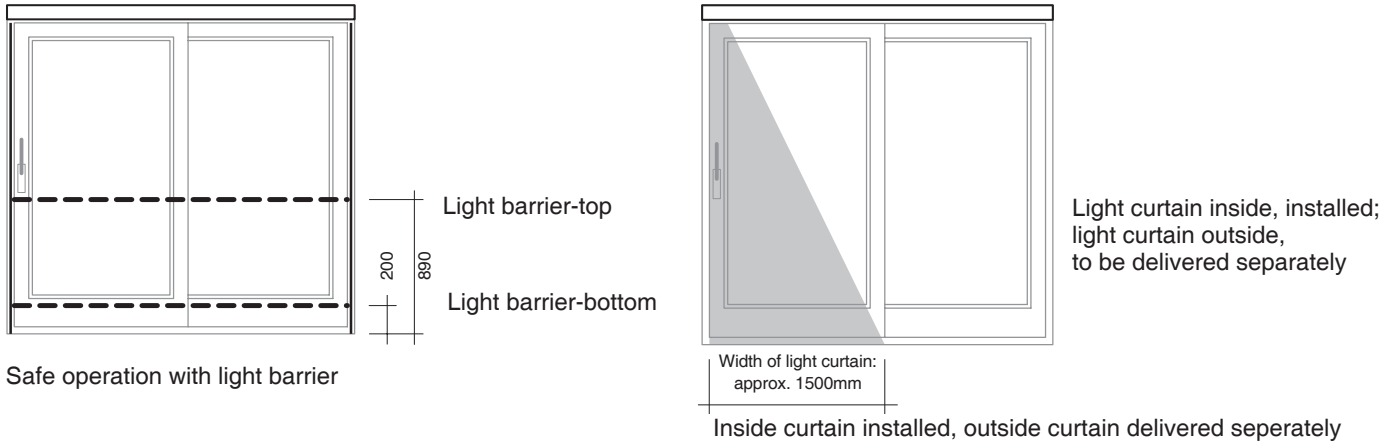
* = min. 1 unit, max. 85 units possible

HS-Master lift-sliding (motorized) hardware

For Pattern A (one-sash fixed+one-sash opened)

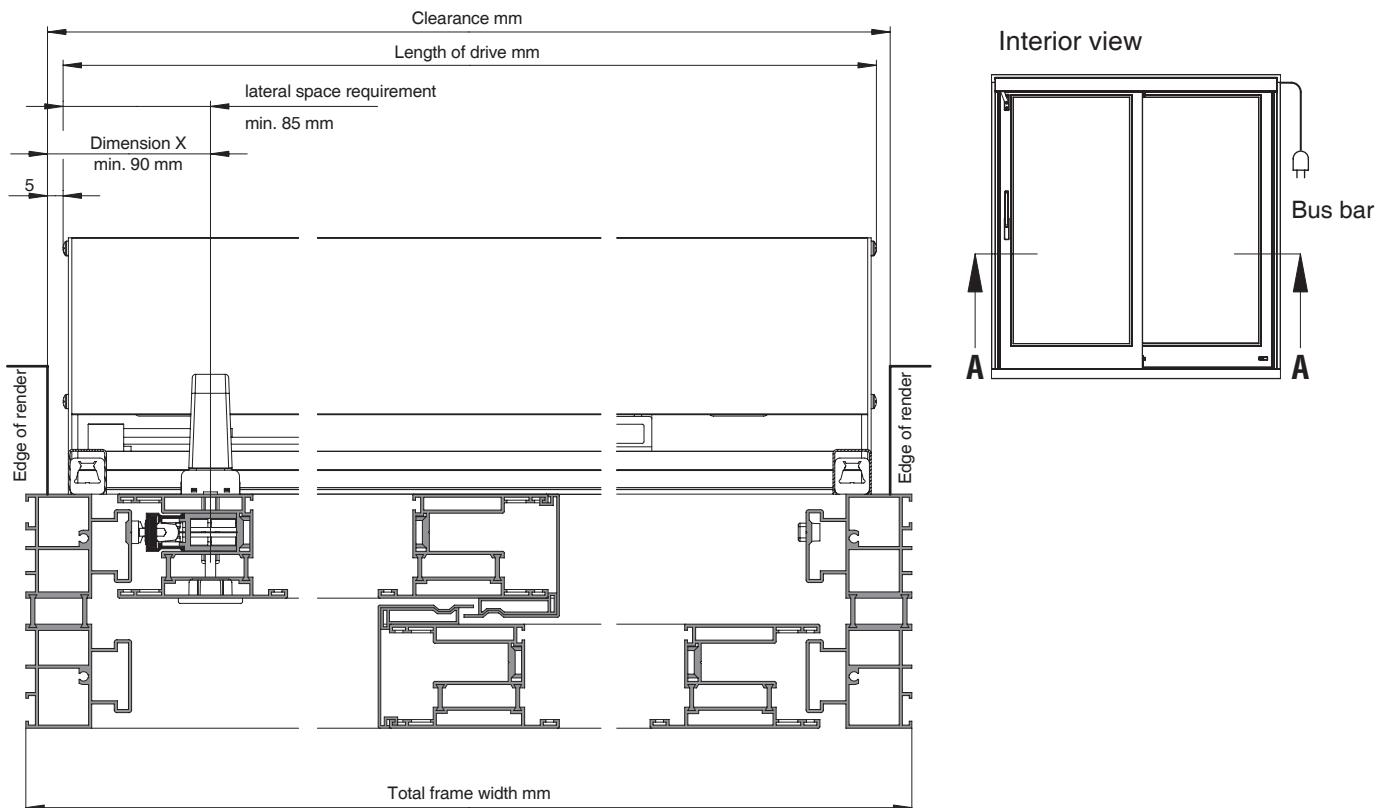


Security functions



Safe operation with light barrier

Order references



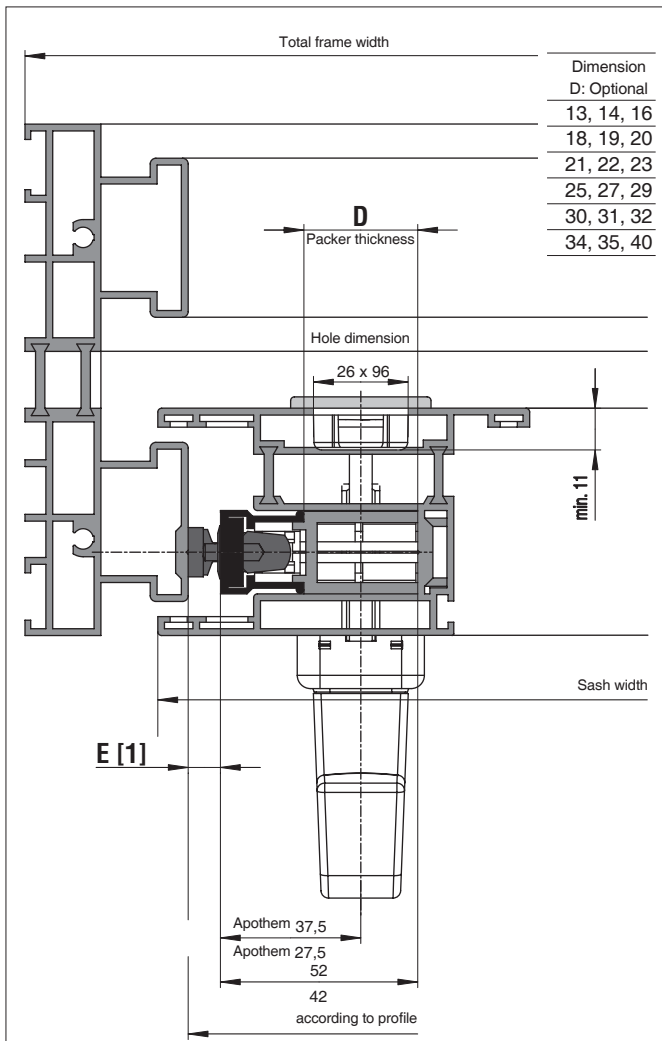
Section A-A (Figure shows left-hand active sash)

Description	Dimension mm
Length of drive LD =	
Dimension (min.) X =	
Position of handle [] Left [] Right	
Clearance CL =	
Total frame width TFW =	
Sash width SW =	
Sash height SH =	

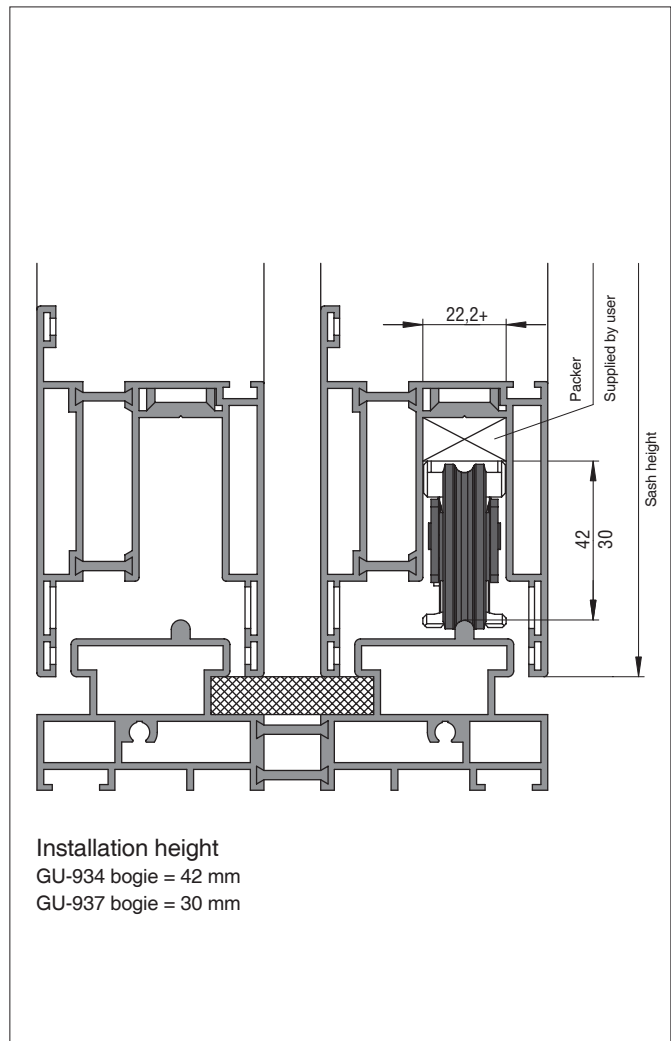
Specification of profile	
Manufacturer	
Profile series	

Applications

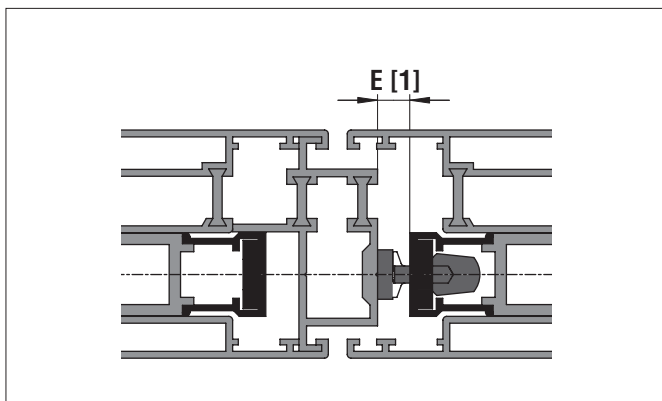
Pattern	A
Min. length of HS-MASTER drive	1900 mm
Sash width	950-3300 mm
Sash height	1855-2765 mm
Sash weight	up to 300 kg



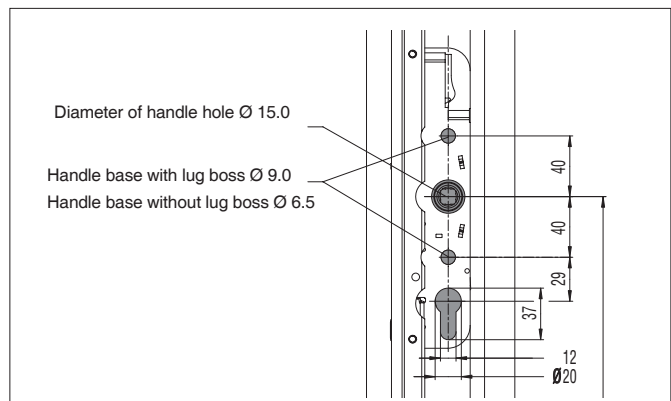
GU-934, GU-937 lift-sliding gear



GU-934, GU-937 bogie



Pattern C and Pattern F



Handle hole sample

[1] Dimension of locking cam clearance E

Dimension E mm	Locking cam
5.5	6-22648-01-0-8
6.5	6-22648-02-0-8
8.5	6-22648-03-0-8
9.5	6-22648-04-0-8
11.0	6-22648-05-0-8
13.0	6-22648-06-0-8



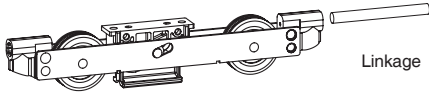
Dimension D mm	Connecting packer of front bogie and gear
18	9-47295-06-0-1
21	9-47295-09-0-1
22	9-47295-10-0-1
23	9-47295-11-0-1
24.5	9-47295-12-0-1
27	9-47295-13-0-1



Dimension D mm	Gear packer
18	9-47296-07-0-1
21	9-47296-10-0-1
22	9-47296-11-0-1
23	9-47296-12-0-1
24.5	9-47296-13-0-1
27	9-47296-16-0-1



GU-934 bogie, max. sash weight 300-400kg



Component bogie

GU-934 middle bogie (300-400kg)

K-17804-01-0-1 1 Set

Include:

2 component bogies 6-30016-01-0-1

Plus:

2 linkages Ø 8 mm, length 65 mm

(Linkage article No. is 9-25476-**-0-1 may be cut)

Installation drawing 0-44455

Each sash includes one set bags.

GU-934 lift-locking gear [1] [2]

Length G [3]	Article No.	Sash weight
1190 ~ 410	6-30021-11-0-*	750-1295
1770 ~ 410	6-30021-19-0-*	1165-1795
2270 ~ 1010	6-30021-24-0-*	1795-2295
2670 ~ 1010	6-30021-28-0-*	2045-2695

GU-937 lift-locking gear [1]

Length G [3]	Article No.	Sash weight
1190 ~ 410	6-30019-11-0-*	830-1250
1770 ~ 410	6-30019-19-0-*	1200-1830
2270 ~ 1010	6-30019-24-0-*	1830-2330
2670 ~ 1010	6-30019-28-0-*	2080-2730

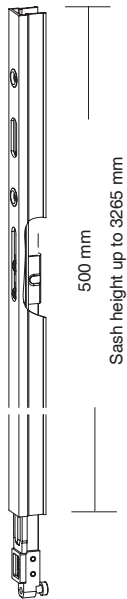
[1] = Color: 1=silver, 5=brown

[2] = Tension spring for sash weight >200kg
9-40235-05-0-0

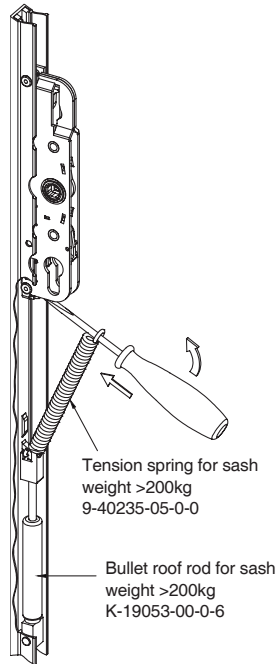
[3] = Handle height and position according to profile



Extension cover
9-28483-05-0-*

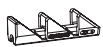


Gear extension
6-32030-00-0-*

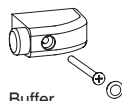


Tension spring for sash weight >200kg
9-40235-05-0-0

Bullet roof rod for sash weight >200kg
K-19053-00-0-6



Ventilation base-bottom
K-11929-00-0-1



Buffer
K-12024-00-0-*

* -6 = Black

* -7 = White



Bogie packer, Radius 2.5

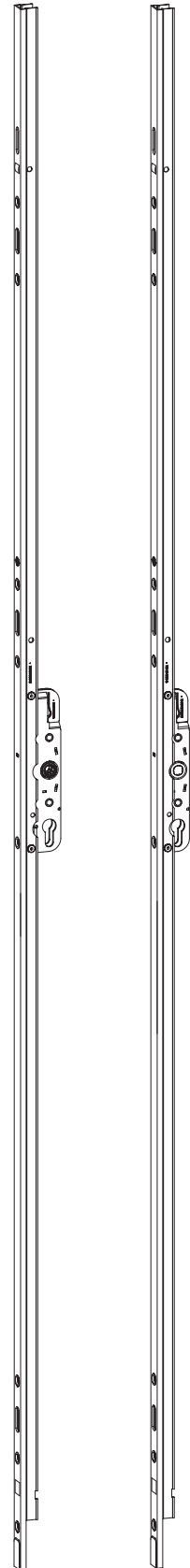
GU-934 Bogie packer-bottom

K-17455-03-0-0 1 Set

Include:

2 bogie packers, Radius 2.5

9-43614-03-0-1



G.U-934
lift-locking gear

G.U-937
lift-locking gear



Evidence of Performance
Resistance to wind load
Watertightness, Air permeability
Operating forces, Load-bearing capacity of safety devices

Test Report 192 35237/1e
Translation of Test Report 102 28227/1 dated 19 March 2005

Client: Gretsch-Unikas GmbH
Baubeschläge
Johann-Maus-Str. 3
71254 Ditzingen

Product: Single-leaf lifting sliding assembly
934 with 5 mm tracks
3500 mm x 2400 mm
laminated wood profiles (pine)
Based on comparative testing, it is possible to apply the characteristics determined to system 934 to a 15 mm track.

Resistance to wind load – EN 12210
Class C2/B2

Watertightness – EN 12208
Class E750

Air permeability – EN 12207
Class 4

Operating forces – EN 13115
Class 1

Load-bearing capacity of safety devices
Requirement fulfilled

ifit ROSENHEIM

Notes on publication: The ifit certificate should be used as evidence of technical characteristics of windows according to EN ISO 14353-1:2005/02.

Validity: The data and results are only valid for the tested and described window with a track of 5 mm and 15 mm.

Notes on publication: The ifit certificate should be used as evidence of technical characteristics of windows according to EN ISO 14353-1:2005/02.

Conducts: The report contains a total of 6 pages:
1. Cover
2. Procedure
3. Results/Results

ifit ROSENHEIM
7. Juli 2005

John Peter Lutz, Dipl.-Ing. (FH)
Head of Testing Department
ifit Center Windows & Fixtures

Stefan Reichert, Dipl.-Ing. (FH)
Test engineer
ifit Center Windows & Fixtures

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German performance test certificate of Lift-sliding door

Gutachtliche Stellungnahme
255 38437 vom 24. August 2005

zum Nachweis der einbruchhemmenden Eigenschaften

ifit ROSENHEIM

Auftraggeber: Gretsch-Unikas GmbH
Baubeschläge
Johann-Maus-Str. 3
71254 Ditzingen

Produkt: Einbruchhemmende Hebeschiebetüren
unterschiedlich

Aufbauart & Art: Systembezogen
Material: Aluminium, Kunststoff oder Holz
Angriffsart: Schiebeseite/Schiebefläche nach DIN 107
Driftlager: Hebeschiebe
Vergangen: nach DIN EN 355 Klasse PA oder DIN 52289-A3
Beschläge: Hebeschiebetürbeschlag Firma GU-Typ 934 und 933 mit abschließbaren Fenstergriff und Profiltastzylinder.

Einbruchhemmung
Widerstandsklasse 2*)

***) Auf der Basis der genannten Grundlagen und der angegebenen, einbruchhemmenden Eigenschaften.**

Grundlagen: DIN V EN 1627: 1999
Einbruchhemmende, abschließbare Einbruchhemmung – Anforderungen und Klassifizierung
DIN V EN 1628: 1999
DIN V EN 1629: 1999
DIN V EN 1630: 1999

Profizient Nr. 211 25188 vom 12. November 2004
Profizient Nr. 211 25188 vom 4. Juli 2002
Konstruktionsunterlagen
Anlage 1, Seite 1 bis 2

Gültigkeit: Die Prüfung der einbruchhemmenden Eigenschaften ermöglicht keine Aussage über andere festlegungs- und qualitätsbestimmende Eigenschaften der vorgetesteten Produkte.
Die Gutachtliche Stellungnahme verleiht kein Zeugnis und das Gutachten liegt der z. B. Grundlagen (Normen) zur Verfügung.

Veröffentlichungshinweise: Es gilt das Inkrafttreten „Hinweise zur Veröffentlichung von ifit-Profizienten“.
Das Dokument kann als Konstruktionsunterlagen verwendet werden.

Inhalt: Die Gutachtliche Stellungnahme umfasst insgesamt 5 Seiten
Deckblatt
Gutachtliche Stellungnahme
1. Auftrag
2. Grundlagen der Beurteilung
3. Herstellung
4. Ergebnisse und Aussage
Anlage 1, (2 Seiten)

ifit ROSENHEIM
24. August 2005

Christian Weber
V. i. S. d. Christian Weber, Dipl.-Ing. (FH)
Profizientenbüro
ifit Center Türen, Tore, Sicherheit

Matthias Lederhose
V. i. S. d. Markus Lederhose, Dipl.-Ing. (FH)
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German security test certificate of Lift-sliding door

PRÜFBESCHEINIGUNG

Auftrags-Nr.: F522/2006/107 – FT
Contract No.: Ersatz Prüfbescheinigung vom 24.07.2007
05.12.2007
84945a
zwei abweichend

Auftraggeber: Tischerservice GmbH
Wiedner Hauptstraße 53
A-1045 Wien

Auftragsgegenstand: F & T Modul 20061206_H3
Holztürsystem HS – GU1 – A Hebeschiebefenster
Subject: Holztafelung (TT) gem. ÖNORM EN 14351-1-1
Teiltürsystem gem. ÖNORM B 5300-1

Ergebnis: Bezugnehmend auf den Prüfbericht F522/2006/10 bestätigt die Holzfor-
Result: schung Austria, folgende Ergebnisse für

Hebeschiebefenster Schema A, HS – GU1 – A,
max. Gesamthöhe 7,5 m, max. Gesamtbreite 2,5 m

Ergebnis der Endprüfung (ITT) gem. ÖNORM EN 14351-1:

Widerstandsfähigkeit gegen Windlast – Profizient	Klasse 2
Widerstandsfähigkeit gegen Windlast – Rahmendeckelung	Klasse C
Schlagregensdichtheit – Ungeschützt (AZ)	Klasse 5A
Schallschutz	24 (-1;-2)
Wärmedurchgangskoeffizient	1,6
Luftdurchlässigkeit	Klasse 3

Klassifizierung gem. ÖNORM B 5300

Bedienungskräfte ÖNORM EN 13115	Klasse 1
Luftdurchlässigkeit ÖNORM EN 12207	Klasse 3
Schlagregen ÖNORM EN 12208	Klasse 5A
Widerstandsfähigkeit ÖNORM EN 12210	Klasse C2
Verkleidungen ÖNORM EN 13115	Klasse 2
Vibrationschutz ÖNORM B 810-4	U _{tr} = 1,6 W/m ² K
Schallschutz ÖNORM B 8115	R _a (C,C ₁) = 24 (-1;-2)dB

Geltungsdauer: 07/2007 bis 07/2010
Period of validity:

HOLZFORSCHUNG AUSTRIA
DI Th. Ansel
Zeichnungsbevollmächtigter

HOLZFORSCHUNG AUSTRIA
DI (FH) K. Hager
Bearbeiter/in

***) Die Holzschung Austria ist eine durch das BMBWF anerkannte und notifizierte Prüf- und Überwachungsstelle (Notified Body 1087) für folgendes Verfahren: ÖNORM EN 14351-1**

***) Akkreditiert als Prüf- und Überwachungsstelle durch das BMBWF und durch das OIB mit Bescheid OIB-19-004/06-006 für folgendes Verfahren: ÖNORM B 5300**

Forschungsinstitut und akkreditierte Prüf- und Überwachungsstelle der Österreichischen Gesellschaft für Holzforschung
HOLZFORSCHUNG AUSTRIA, A-1030 Wien, Franz Soltl-Ring 7
E-Mail: info@holzforch.at
Tel: +43 1 799 28 23 30, Fax: +43 1 799 28 23 30, E-Mail: Mail@holzforch.at, Homepage: www.holzforch.at

European performance test certificate of Lift-sliding door

PRÜFZEUGNIS DIN EN 13126-16:2008-04
Test Certificate

Nr. / No. 42-2/09

Der Firma: Gretsch-Unikas GmbH Baubeschläge
D-71254 Ditzingen

Wir bescheinigen, dass sie am: 11. Februar / February 2009
für das Produkt: Hebeschiebebeschlag GU 934
in der Ausführung: Hebeschiebebeschlag
Lift and slide fitting

entsprechend dem folgenden Klassifizierungsschlüssel erfüllt hat:
This complies with the classification:

Einbruchhemmung (EN 1627)	Widerstandsfähigkeit (EN 1628)	Maximale Öffnung (EN 1629)	Einbruchhemmung (EN 1630)	Einbruchhemmung (EN 1627)	Widerstandsfähigkeit (EN 1628)	Schutz (EN 1629)	Angriffsart (EN 1630)	Profizientennummer
5	300	0	1	5	-	16	12004/2000	

Diesem Prüfzeugnis liegt der Prüfbericht Nr. 42-2/09 des PIV als Beurteilungsgrundlage zugrunde. Die Gültigkeit des Prüfzeugnisses bleibt so lange erhalten, wie sich die Prüfgrundlage und/oder das geprüfte Produkt nicht ändern.
This certificate is based on the test report No. 42-2/09 by PIV. This certificate remains in validity as long as the products to be tested do not change and the test basis remains unchanged.

42551 Velbert, den 17. Februar / February 2009

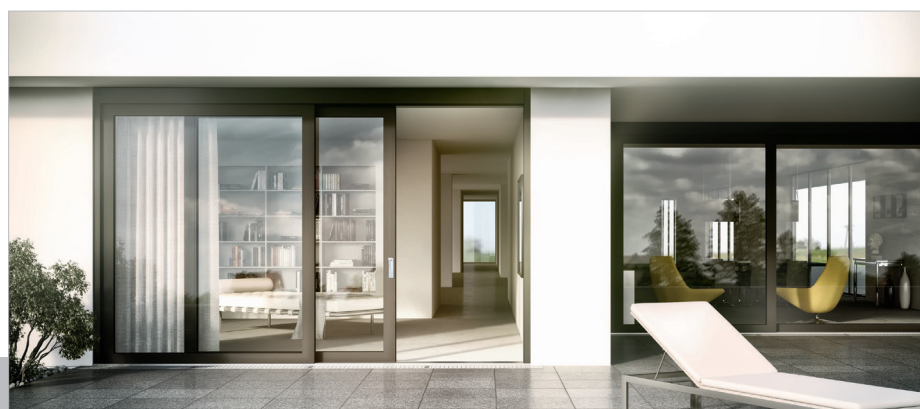
R. Bitts
Dipl.-Ing.

**Das ist eine Urkunde/acte
Nachweis der Veröffentlichung oder sonstiger Weitergabe ist unter www.issn.de/bescheinigung/bescheinigung.html möglich.**

**Alle weiteren Prüfberichte nach DIN EN ISO/IEC 17025
Akreditierte Zertifizierungsstelle nach DIN EN ISO 9001 (PIV ZSE)
Prüf-, Überwachungs- und Zertifizierungsstelle nach der Zulassungsgesetz (ZulZG)
Überwachungs- und Zertifizierungsstelle nach Bundesgesetz (BZG)
Das ist die Prüf- und Überwachungsstelle: DIN CERTCO member's Profile**

ifit ROSENHEIM
Rosenheim, Dipl.-Ing.
E-Mail: info@ifit-rosenheim.de

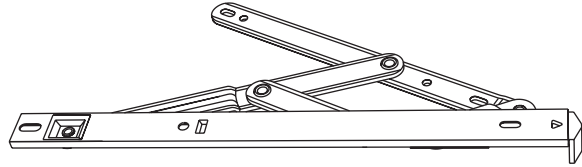
German performance test report of Lift-sliding door



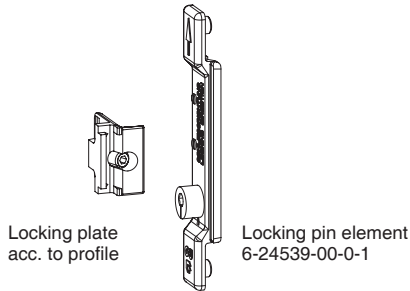
Casement hardware

Casement hardware - Mandrel handle pattern

Aluminum profile with Euro groove 15/20 mm

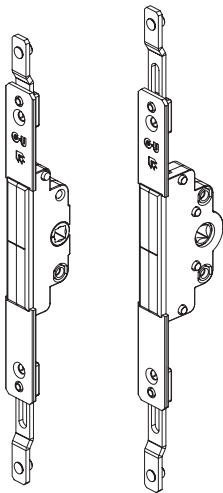


Frictional hinge



Locking plate
acc. to profile

Locking pin element
6-24539-00-0-1



One-way
gear
C-90254-**-0-8

Hardware configuration (See Page 45 for detailed specification)

Qty.	Description	Article No.
1	Frictional hinge (one pair)	
	Length	Max. opening angle
	12"	90°
	16"	90°
1	One-way gear	C-90254-**-0-8 [3]
2	Locking plate	acc. to profile
1	Casement handle	C-90607-**-0-* [2]
2	Countersunk screws	C-70001-**-0-1 [4]
2	Optional: Replace Locking pin element by locking pin	C-90273-00-0-8
1	Optional: DIRIGENT handle, acc. to profile	C-90603-**-0-* [5]

[1] *= Color:1=silver, 5=dark brown, 7=white

[2] **= Mandrel length: 30mm, 35mm, 40mm, 45mm, 50mm

[3] **= Apothem: 22/27mm (rear Apothem 6.5mm), 30/35/40mm (rear Apothem 12.3mm)

[4] **= M5 screws length: 30/35/40/45/50/60/70/75/80/85/95/100mm

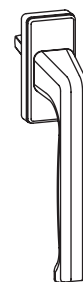
[5] *= Color:1=silver, 5=dark brown, 7=white **=29,33,40,45,50,65mm

[6] **= Mandrel length : 29/33/40/45/50/58/65/72mm

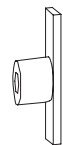
Note: See page 45 casement hinge specification and parameters



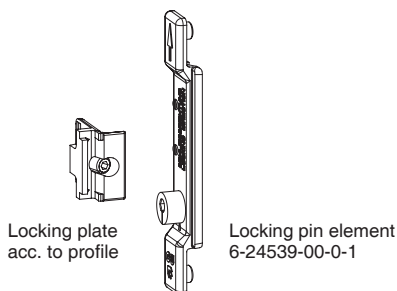
Casement handle
C-90607-**-0-*



Handle DIRIGENT-F
C-90603-29-0-* [1][6]

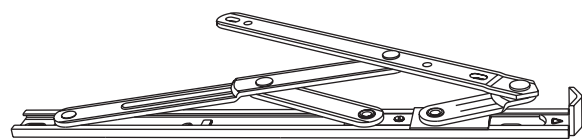


Locking pin
C-90273-00-0-8



Locking plate
acc. to profile

Locking pin element
6-24539-00-0-1

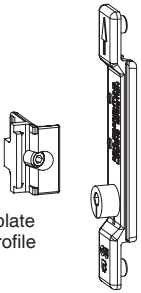


Frictional hinge

3

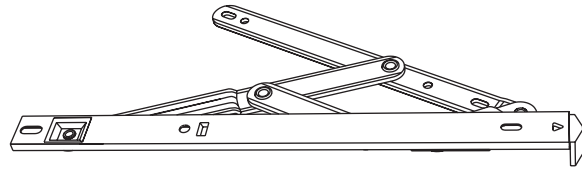
Casement Hardware- Geared Handle Pattern

Aluminum profile with Euro groove 15/20 mm



Locking plate
acc. to profile

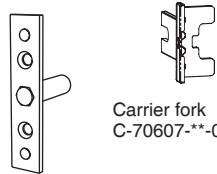
Locking pin element
6-24539-00-0-1



Frictional hinge

Hardware configuration

Qty.	Description	Article No.
1	Frictional hinge (one pair)	
	Length	Max. opening angle
	12"	90°
	16"	90°
2	Locking pin element	6-24539-00-0-1
2	Locking plate	acc. to profile
1	SPACIO handle-without carrier fork	C-90205-**-0-* [1]
1	Carrier fork	C-70607-**-0-1 [3]
1	T-typed connecting part	C-90726-**-0-8 [2]
2	Optional: Replace Locking pin element by locking pin	C-90273-00-0-8



T-typed connecting part
C-90726-**-0-8

Carrier fork
C-70607-**-0-1



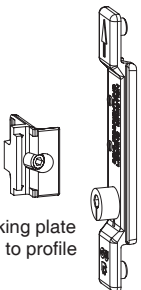
SPACIO handle
C-90205-**-0-*

[1] *= Color: 1=silver, 5=dark brown, 6=black, 7=white

[2]**= 25mm, 30mm, 40mm

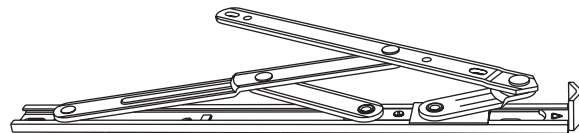
[3]**= Carrier fork length: 25, 35, 45, 55, 60mm

Note: See page 45 casement hinge specification and parameters



Locking plate
acc. to profile

Locking pin element
6-24539-00-0-1



Frictional hinge



Multi-point lock for curtain wall

Multi-point locking system for curtain wall

For aluminum casement glass curtain wall



Application:

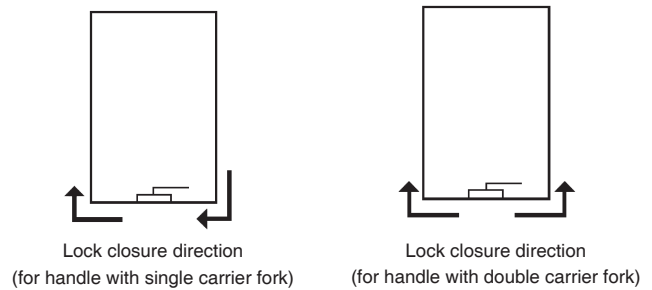
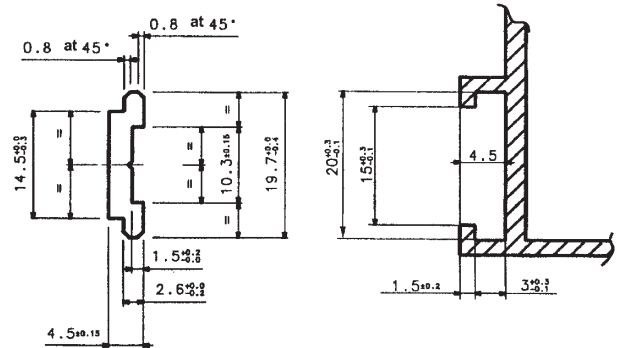
The multi-point locking system is designed for big aluminum top-hung casement windows and complies with the three following requirements:

- Strong wind resistance, applicable for high-rise buildings, max. 7700 pa by tests;
- The pressing force with 10 locking points more greatly improves the gas tightness and water tightness of doors and windows;
- The door and window's opening and closure is flexible due to handle with carrier forks; the handle has many colors.

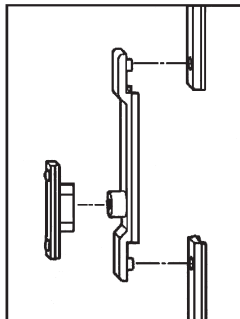
Main Characters:

- The handle with single carrier fork may control max. 10 locking points (max. 6 locking points for double carrier forks)
- Open and close by one-way or double-way lock.

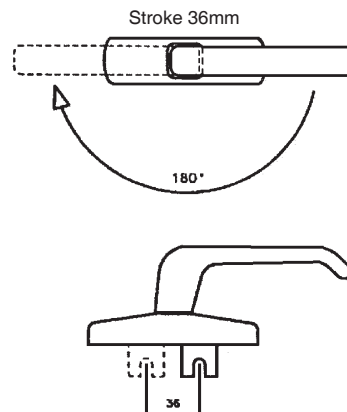
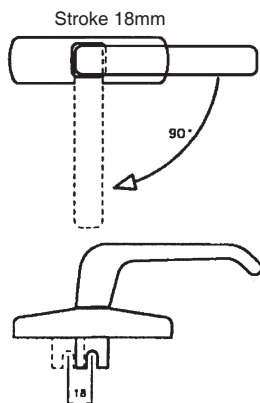
Dimension of coupling bar and profile



Adjustable points

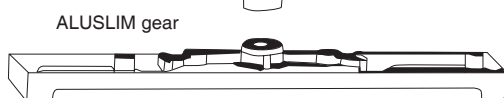
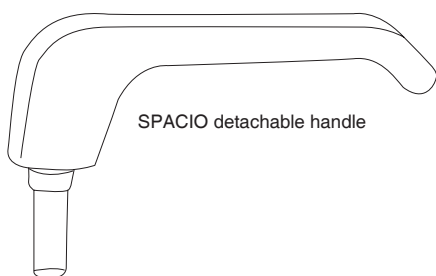


The handle with single carrier fork may provide two ways as the following figure:

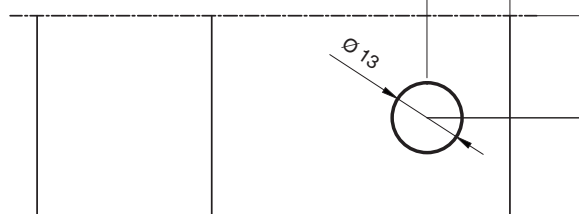
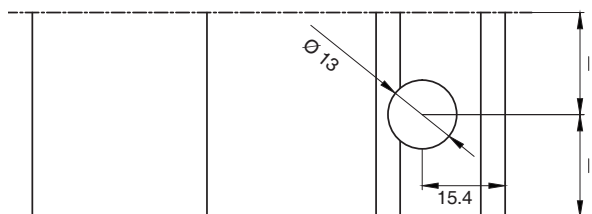
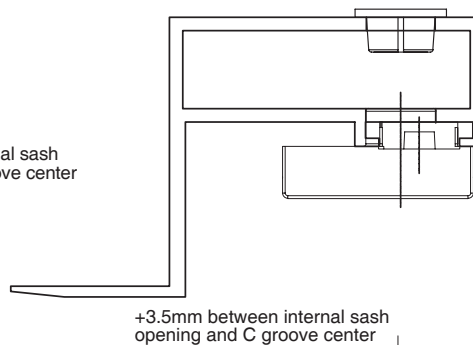
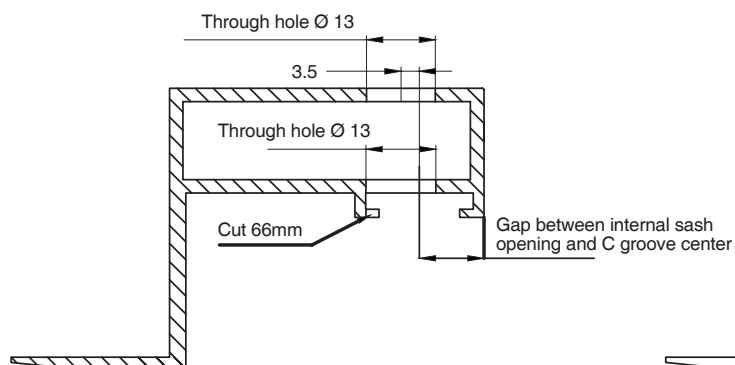
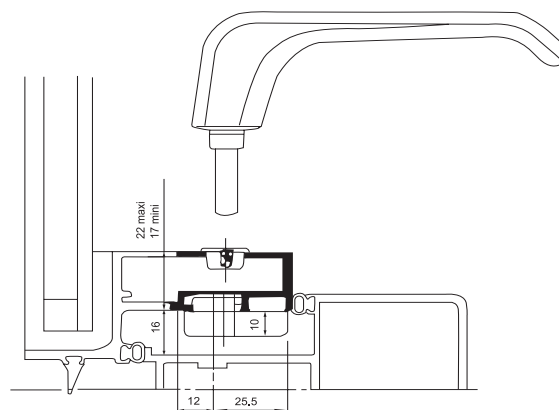
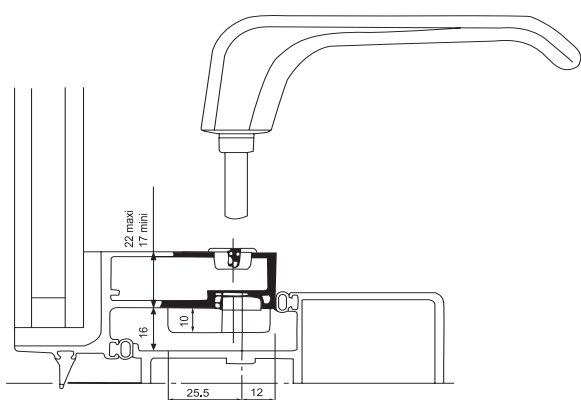


Multi-point locking system for curtain wall

Detachable handle and Aluslim concealed gear

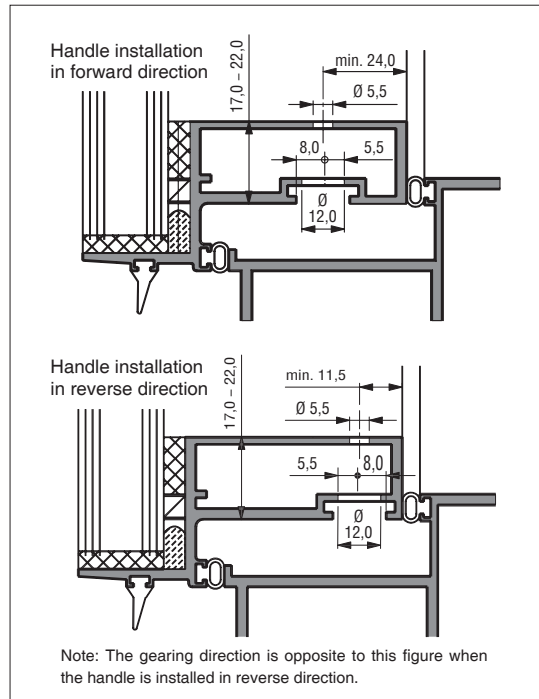


Description	Article No.
SPACIO detachable handle	C-19279-00-0*
Plastic cover	E-19278-00-0-6
ALUSLIM gear without inside screw	G-19270-00-0-1
Optional (fixedly connected with mandrel handle)	
ALUSLIM gear with inside screw	G-19270-01-0-1
May be connected with fixed mandrel handle	

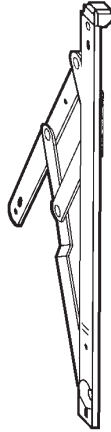


4-point locking system for curtain wall

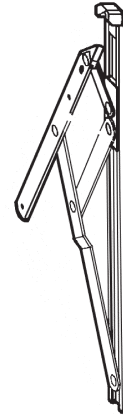
Adjustable point



Frictional hinge



Frictional hinge



4

Hardware configuration

Qty.	Description	Article No.
Single hardware		
1	SPACIO handle with carrier fork, 22mm	G-46551-00-0-*
2	Corner transmission, 8.00mm height for point (optional)	6-24529-08-0-1
2	Locking pin element, 8.00mm height for point (optional)	6-24539-08-0-1
2	Locking plate	E-17719-02-0-1
1	Change-over rod, without point	6-30984-00-0-1
1	See Page 45 frictional hinge, curtain wall support	

*1 = Silver EV1
 *5 = Dark brown UC5
 *6 = Black (RAL 9005)

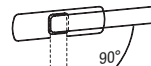
Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1

Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1

SPACIO handle with
single carrier fork
G-46551-00-0-*



Corner transmission
6-24529-08-0-1

Locking plate
E-17719-02-0-1

Lock closure direction

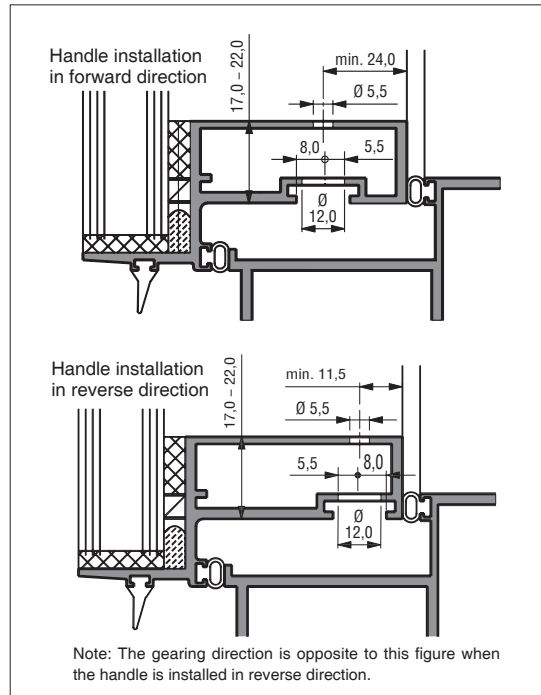
Corner transmission
6-24529-08-0-1

Locking plate
E-17719-02-0-1

Lock closure direction

7-point locking system for curtain wall

Adjustable point



Frictional hinge

Frictional hinge

Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1

Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1

Hardware configuration

Qty.	Description	Article No.
Single hardware		
1	SPACIO handle with carrier fork, 22mm	G-46551-00-0-*
2	Corner transmission, 8.00mm height for point (optional)	6-24529-08-0-1
4	Locking pin element, 8.00mm height for point (optional)	6-24539-08-0-1
7	Locking plate	E-17719-02-0-1
1	Change-over rod, 8.00mm height for point (optional)	C-90275-08-0-1
1	See Page 45 fictional hinge, curtain wall support	

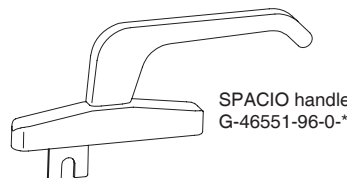
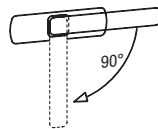
- *1 = Silver EV1
- *5 = Dark brown UC5
- *6 = Black (RAL 9005)
- *7 = White (RAL 9016)

Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1

Locking pin element
6-24539-08-0-1

Locking plate
E-17719-02-0-1



Corner transmission
6-24529-08-0-1
Locking plate
E-17719-02-0-1

Lock closure direction

Corner transmission
6-24529-08-0-1
Locking plate
E-17719-02-0-1

Change-over rod
C-90275-08-0-1
Locking plate
E-17719-02-0-1

Lock closure direction

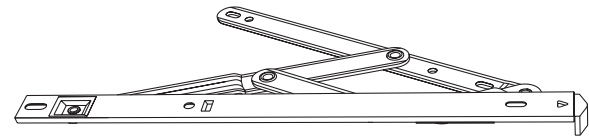
Frictional hinge

For casement windows and top-hung windows

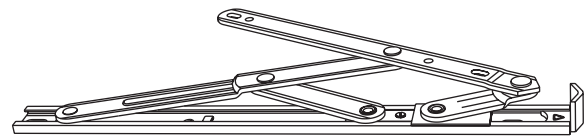


Frictional hinge for casement window (top and bottom)

No.	Technical data	Article no.
Light frictional hinge(one pair)		
01	8"/87/16/18.5/13.5/12kg[1]	C-90521-01-P-8[2]
02	12"/64/16/18.5/13.5/22kg	C-90523-01-P-8
03	14"/55/16/18.5/13.5/22kg	C-90524-01-P-8
04	16"/55/16/18.5/13.5/24kg	C-90525-01-P-8
05	8"/87/16/18.5/16.5/12kg	C-90521-02-P-8
06	10"/87/16/18.5/16.5/16kg	C-90522-02-P-8
07	12"/64/16/18.5/16.5/22kg	C-90523-02-P-8
08	14"/55/16/18.5/16.5/22kg	C-90524-02-P-8
09	16"/55/16/18.5/16.5/24kg	C-90525-02-P-8
Heavy frictional hinge (one pair)		
01	10"/90/18/22/16.5/23kg	C-90502-03-P-8
02	12"/90/18/22/16.5/28kg	C-90503-03-P-8
03	14"/90/18/22/16.5/33kg	C-90504-03-P-8
04	16"/90/18/22/16.5/38kg	C-90505-03-P-8
05	18"/90/18/22/16.5/43kg	C-90506-03-P-8
06	20"/60/18/22/16.5/45kg	C-90507-03-P-8
07	24"/45/18/22/16.5/50kg	C-90509-03-P-8



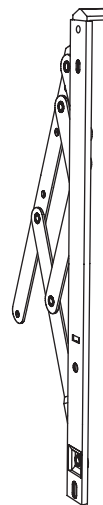
Frictional hinge
Casement window



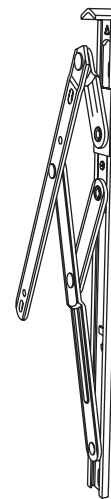
Frictional hinge
Casement window

Top-hung window on curtain wall (left and right)

No.	Technical data(one pair)	Article no.
01	12"/35/18/22.5/17/53[1]	C-90513-01-P-8[2]
02	14"/35/18/22.5/17/65	C-90514-01-P-8
03	16"/30/18/22.5/17/80	C-90515-01-P-8
04	18"/30/18/22.5/17/95	C-90516-01-P-8
05	20"/30/18/22.5/17/115	C-90517-01-P-8
06	22"/30/18/22.5/17/120	C-90518-01-P-8
07	24"/25/18/22.5/17/125	C-90519-01-P-8
Optional		
01	12"/35/18/22.5/16.5/48[1]	C-90513-02-P-8[2]
02	14"/35/18/22.5/16.5/58	C-90514-02-P-8
03	16"/30/18/22.5/16.5/73	C-90515-02-P-8
04	18"/30/18/22.5/16.5/80	C-90516-02-P-8
05	20"/30/18/22.5/16.5/95	C-90517-02-P-8
06	22"/30/18/22.5/16.5/100	C-90518-02-P-8
07	24"/25/18/22.5/16.5/105	C-90519-02-P-8



Frictional hinge
Top-hung window



Frictional hinge
Top-hung window

Curtain wall support

No.	Technical data(one pair)	Article no.
01	6"/16/28/16/16.5[3]	C-90561-02-P-8
02	8"/16/28/16/16.5	C-90562-02-P-8
03	10"/16/28/16/16.5	C-90563-02-P-8
04	12"/16/28/16/16.5	C-90564-02-P-8

[1]: Length (inch)/Opening angle/Top rod width/bottom sliding chute width/overlap height/bearing

[2]: 8=Stainless

[3]: Closed length (inch)/Stator width (sash part)/ sliding chute width/ stator width (frame part)/ overlap height



Curtain wall
support



Curtain wall
support

4

Inline sliding hardware

Sliding window hardware

16 mm axis

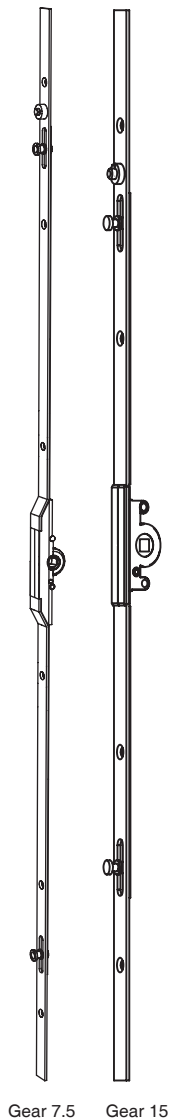


Anti-lifting base
C-70508-00-0-1



Locking plate
C-70491-00-0-1

Locking plate
C-70491-00-0-1



Gear 7.5 Gear 15

Hardware configuration

Qty.	Description	Article No.
1	Backset 7.5mm	
	Sash groove height	Lock point
	400-600	2
	601-800	2
	801-1000	2
	1001-1200	2
	1201-1400	3
	1401-1600	3
	1601-1800	3
Optional:		
1	Backset 15mm	
	Sash groove height	Lock point
	600- 800	2
	801-1000	2
	1001-1200	2
	1201-1400	3
	1401-1600	3
	1601-1800	3
2/3	Locking plate	C-70491-00-0-1 [3]
1	Anti-lifting base	C-70508-00-0-1
1	Handle DIRIGENT	C-90603-**-0-* [1]
2	Countersunk screws	C-70001-**-0-1 [6]
Optional:		
1	Concealed handle	C-90202-**-0-* [2]
2/4	Bogie, 40kg	C-90104-00-0-0
2/4	Bogie, 80kg	C-90106-03-0-1

[1]**= Color: 1=Silver, 5=Dark Brown, 6=Black, 7=White

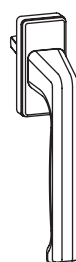
**=29mm,33mm,40mm

[2]**=20mm,25mm,30mm

[3]**=03,04

[4]**=06,12

[5]**=M5 screw length:30/35/40/45/50/60/70/75/80/85/95/100mm



Handle DIRIGENT
C-90603-**-0-*



Concealed handle
C-90202-**-0-*



Bogie, 40kg
C-90104-00-0-0



Bogie, 40kg
C-90104-00-0-0



Adjustable bogie, 80kg
C-90106-03-0-1



Adjustable bogie, 80kg
C-90106-03-0-1

5



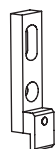
Hardware configuration

Qty.	Description	Article no.
1	MA sliding concealed lock for aluminum doors and windows	C-90221-01-0-* [1]
1	Bolt	C-70347-**-0-8 [2]
1	MA lock striker	C-70494-00-0-1
1	MA lock striker	C-70493-00-0-8
1	MA lock striker	C-80410-00-0-8

Optional:

2/4	Bogie, 40kg	C-90104-00-0-0
2/4	Bogie, 80kg	C-90106-03-0-1

[1]* = Color: 1=Silver, 5=Dark Brown, 6=Black, 7=White
 [2]**= Length:05, 06 05 Unbent 06 Bent



Striker
C-70494-00-0-1



Striker
C-70493-00-0-8



Striker
C-80410-00-0-8



Bolt
C-70347-**-0-8



MA concealed lock



Bogie, 40kg
C-90104-00-0-0



Bogie, 40kg
C-90104-00-0-0



Adjustable bogie, 80kg
C-90106-03-0-1



Adjustable bogie, 80kg
C-90106-03-0-1

Sliding door hardware

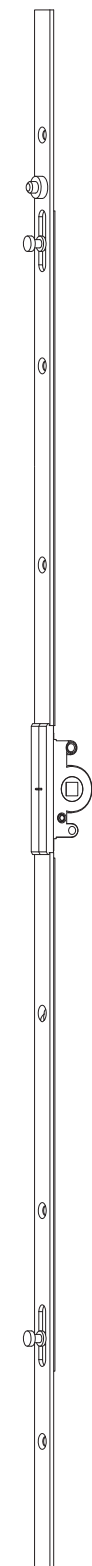
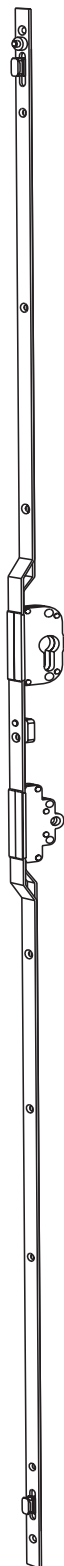
16 mm axis



Anti-lifting base
C-70508-00-0-1



Striker
C-70491-**-0-1



Striker
C-70491-**-0-1

Gear 15

Gear 15

Hardware configuration

Qty.	Description	Article no.
1	Gear backset with lock cam cover 15mm	
	Length	Lock point
	1600	2
		C-90137-10-0-1
Optional:		
1	Gear backset without lock cam cover 15mm	
	Length	Lock point
	1600	3
		C-90136-16-0-1
2/3	Striker	C-70491-00-0-1 [4]
1	Anti-lifting base	C-70508-00-0-1
1	Inward handle DIRIGENT	C-90603-00-0-* [1]
1	Outward handle DIRIGENT	C-90601-00-0-* [1]
1	Inside lock cover	C-90704-03-0-* [1]
1	Outsidelock cover	C-70439-02-0-*
2/4	Countersunk screws	C-70001-**-0-1 [3]
1	Mandrel	C-70428-**-0-1 [2]
1	Lock cylinder	acc. to profile
4	Adjustable bogie 80kg	C-90106-03-0-1
4	Adjustable bogie 120kg	C-90107-00-0-1
4	Adjustable stainless steel bogie 80kg	C-90108-00-0-8
1	Anti-collision block	K-12024-00-0-* [6]

[1]*=Color: 1=Silver, 5=Dark Brown, 6=Black, 7=White

[2]**:01=102mm,02=104mm,03=135mm,04=114mm

[3]**:30,35,40,45,50,60,70,80,85,95

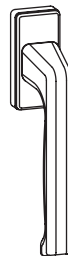
[4]**:00,04,06

[5]**:06,12

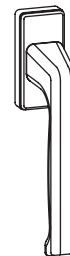
[6]*=Color: 6=Black, 7=White



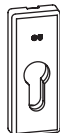
Turn handle
DIRIGENT-F
Mandrel 29 C-90603-29-0-*
Mandrel 33 C-90603-33-0-*



Turn handle
DIRIGENT-F
Inward turn handle
C-90603-00-0-*



Turn handle
DIRIGENT-S
Outward turn handle
C-90601-00-0-*



Inside lock
cover PZ
C-90704-03-0-*



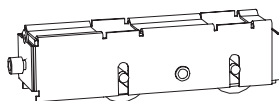
Outside lock
cover PZ/A
C-70439-02-0-*



Mandrel
C-70428-**-0-1
**=01 102mm
**=02 104mm
**=03 135mm
**=04 114mm



Inside hardware
Countersunk screws M5
C-70001-**-0-1



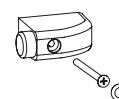
Adjustable stainless steel bogie, 80kg
C-90108-00-0-8



Adjustable bogie, 80kg
C-90106-03-0-1



Adjustable bogie, 120kg
C-90107-00-0-1



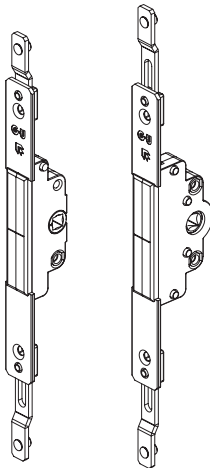
Anti-collision block
K-12024-00-0-*[1]



Locking plate
C-70491-00-0-1



Locking pin element
C-90206-00-0-1



One-way gear
C-90254-**-0-8



Locking plate
C-70491-00-0-1



Locking pin element
C-90206-00-0-1

Hardware configuration - one sash

Qty.	Description	Article No.
1	Stainless steel Mill-in gear alu 90°	C-90254-**-0-8[1]
2	Sliding Locking pin element	C-90206-00-0-1
2	Locking plate	C-70491-00-0-1
1	Handle	C-90603-**-0-* [2]
1	Fixed handle screw	C-70001-**-0-1 [4]
2	Adjustable bogie, 80kg	C-90106-03-0-1
2	Adjustable bogie, 120kg	C-90107-00-0-1
2	Adjustable stainless steel bogie, 80kg	C-90108-00-0-8
1	Anti-collision block	K-12024-00-0-*[5]

[1] **= Apothem 22/27mm (rear Apothem 6.5mm), 30/35/40mm (rear Apothem 12.3mm)

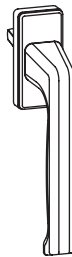
[2] *= Color: 1=Silver, 5=Dark brown, 6=Black, 7=White

**= Length of mandrel: 29,33,40mm

[3] **= 01=102mm, 02=104mm, 03=135mm, 04=114mm

[4] **= M5 screw length:30/35/40/45/50/60/70/75/80/85/95/100mm

[5] *= Color: 6=Black, 7=White



Handle DIRIGENT-F
Mandrel 29 C-90603-29-0-*
Mandrel 33 C-90603-33-0-*



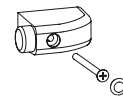
Countersunk screws M5
C-70001-**-0-1



Adjustable bogie, 80kg
C-90106-03-0-1



Adjustable bogie, 120kg
C-90107-00-0-1

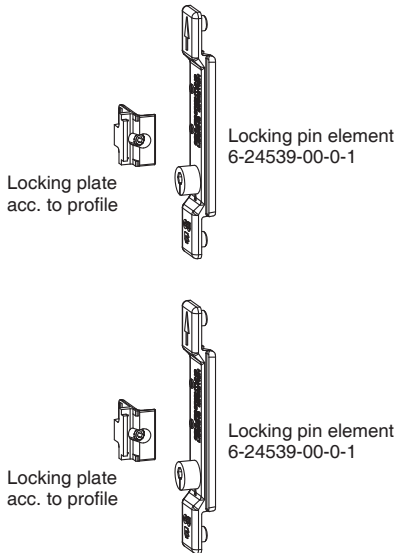


Anti-collision block
K-12024-00-0-*[1]

Turn-Only hardware

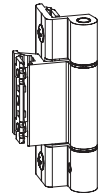
Turn-only hardware for doors

Euro groove 15/20 mm for aluminum profile



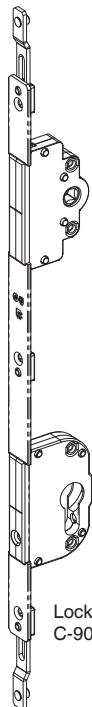
Hardware configuration

Qty.	Description	Article No.
1	Lockable gear 180°	C-90252-**-0-8 [1]
	Unlockable gear 180°	C-90254-**-0-8 [5]
3	Locking pin element	6-24539-00-0-1
3	Locking plate	acc. to profile
2	Big handle DIRIGENT Without mandrel	C-90613-00-0-* [2]
1	Mandrel	C-70428-**-0-1 [3]
1	PZ Inside lock cover	C-90704-03-0-* [2]
1	PZ Outside lock cover	C-70439-02-0-* [2]
1	59 Locking cylinder	acc. to profile
2	Countersunk screw for handle	C-80000-10-0-1 [4]
2	Countersunk screw for inside lock cover and outside lock cover	C-70001-**-0-1 [4]
3	Clamping hinge	K-15887-00-0-*
	Optional: 3D hinge	See page 54

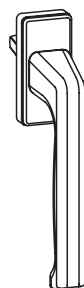


Clamping hinge,
93mm – 3 sections
K-15887-00-0-*

- [1] ** Apothem: 30mm, 35mm, 40mm
 [2] * Color: 1=silver, 5=dark brown, 6=Black, 7=white
 [3] ** 01=102mm, 02=104mm, 03=135mm, 04=114mm
 [4] ** M5 screw length: 30/35/40/45/50/60/70/75/80/85/95/100mm
 [5] ** Apothem: 22/27mm (rear Apothem 6.5mm), 30/35/40mm (rear Apothem 12.3mm)



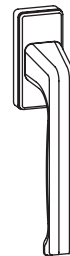
Lockable gear 180°
C-90252-**-0-8



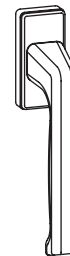
Big handle DIRIGENT-HL
32 x 81mm
C-90613-00-0-*



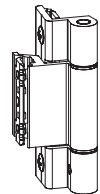
Handle DIRIGENT-F
Mandrel 29 C-90603-29-0-*



Handle DIRIGENT-F
Inward handle
C-90603-00-0-*

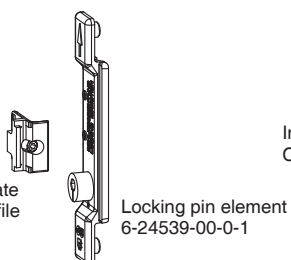


Handle DIRIGENT-S
Outward handle
C-90601-00-0-*



Clamping hinge,
93mm – 3 sections
K-15887-00-0-*

6



Locking plate
acc. to profile

Locking pin element
6-24539-00-0-1



Inside lock cover PZ
C-90704-03-0-*



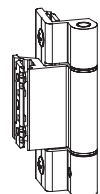
Outside lock cover PZ/A
C-70439-02-0-*



Mandrel
C-70428-**-0-1



Countersunk
screws M 5
C-70001-**-0-1



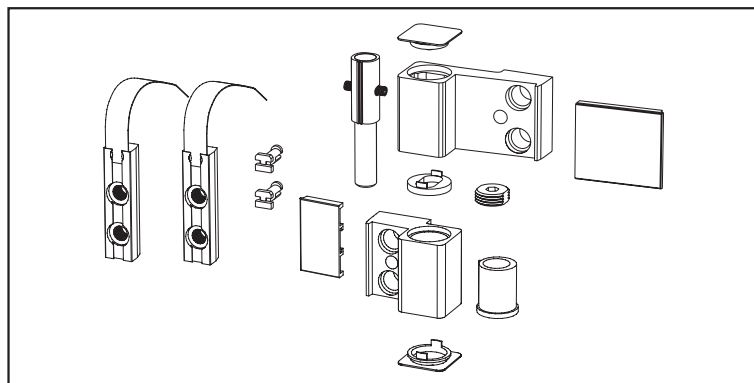
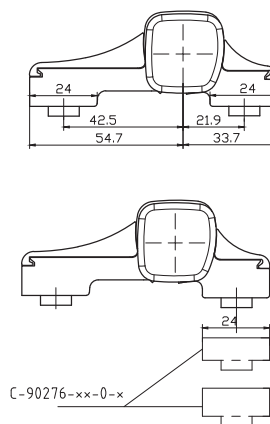
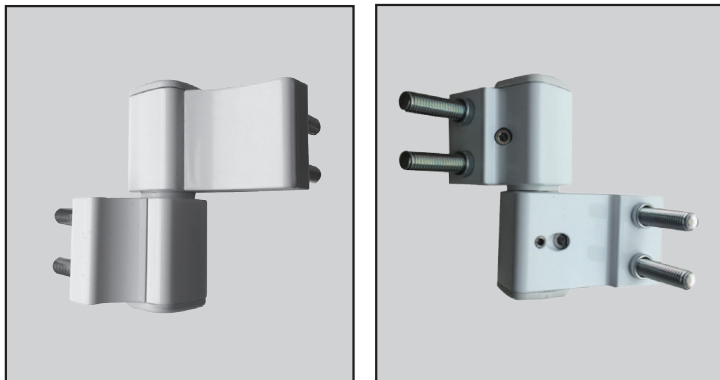
Clamping hinge,
93mm – 3 sections
K-15887-00-0-*

Turn-only door hinge

For aluminum profile



1. Aluminum turn-only hinge, 3D adjustable, max. door sash weight 100kg



Aluminum turn-only hinge, 3D adjustable, max. door sash weight 100kg

Description	Article No.
Aluminum turn-only door hinge	C-H0050-00-0-* [1]
Hinge packer	C-90276-**-0-* [1] [2]
M8 screw for hinge	C-70003-**-0-1 [3]

[1] *= Color: 1=Silver, 5=Dark brown, 6=Black, 7=White

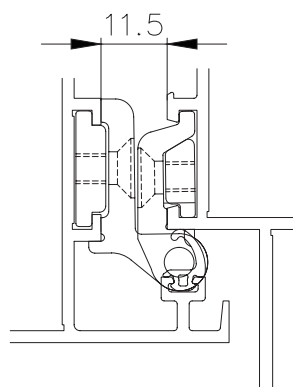
[2] **= Packer Thickness: 08=8mm, 10=10mm

[3] **= Screw length: 30=32mm, 35=37mm, 40=42mm, 50=52mm, 60=62mm

2. Aluminum turn-only hinge-concealed clamping hinge, max. door sash weight 120kg/3

K-18008-00-0-1,

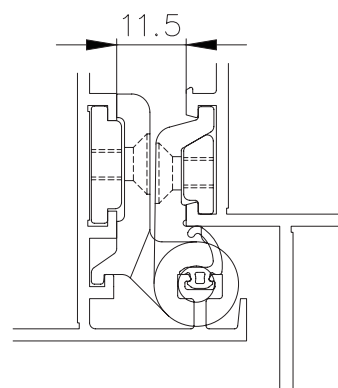
Screw is additionally required M5×10mm



Each hinge is additional required to 8 M5×10mm screws.

3. Aluminum turn-only hinge-concealed clamping hinge, max. door sash weight 250kg/3

K-17998-00-0-1

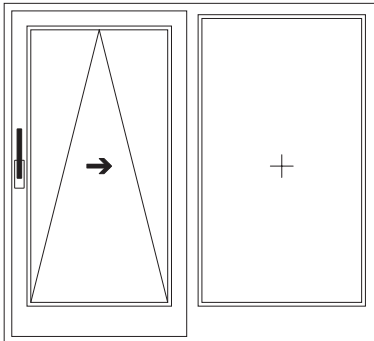


Each hinge is additional required to 8 M5×10mm screws.

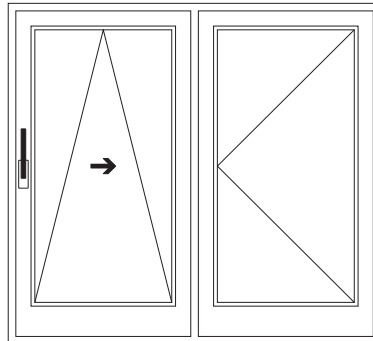
Tilt&Slide hardware



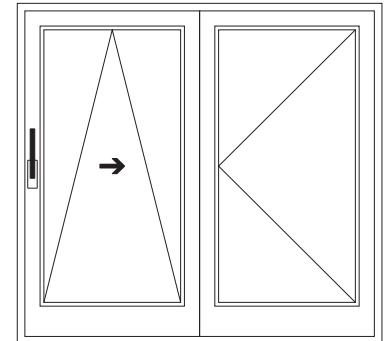
Door sash pattern A-K



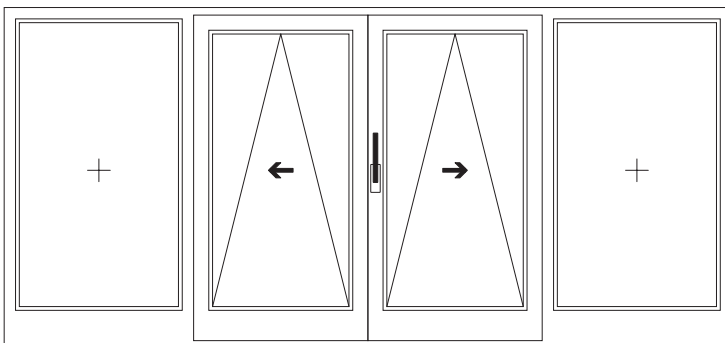
Pattern A - Mullion
1 tilt-sliding door sash, 1 fixed sash
Fig. shows handle-Left



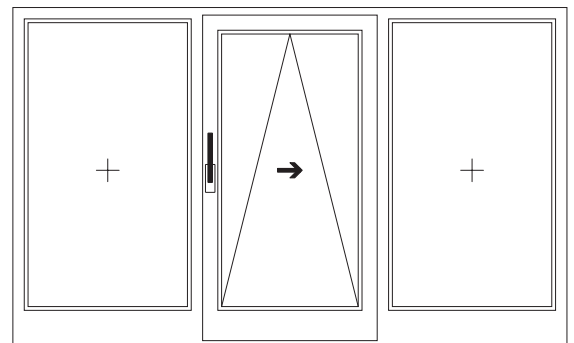
Pattern A - Mullion
1 tilt-sliding door sash, 1 turn-only sash
Fig. shows handle-Left



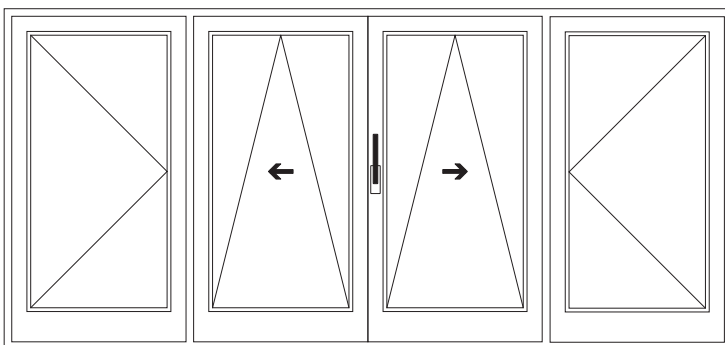
Pattern D-Dummy mullion
1 tilt-sliding door sash, 1 turn-only sash
Fig. shows handle-Left



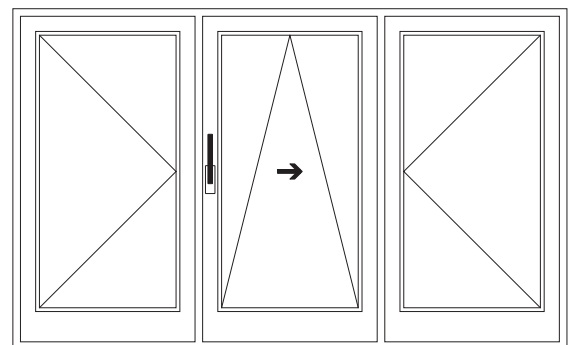
Pattern C-Mullion
2 tilt-sliding door sashes, 2 fixed sashes
Fig. shows handle-Left



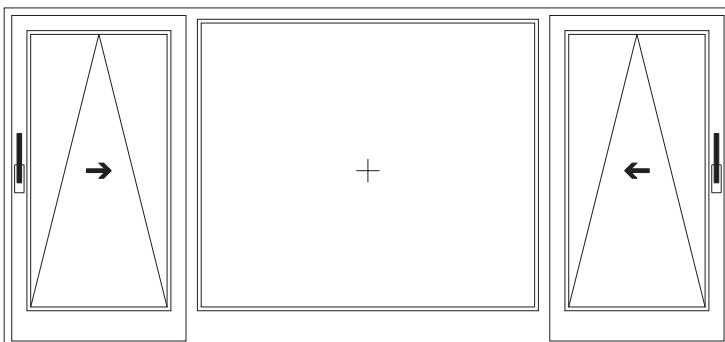
Pattern G-Mullion
1 tilt-sliding door sash, 2 fixed sashes
Fig. shows handle-Left



Pattern C-Mullion
2 tilt-sliding door sashes, 2 turn-only sashes
Fig. shows handle-Left



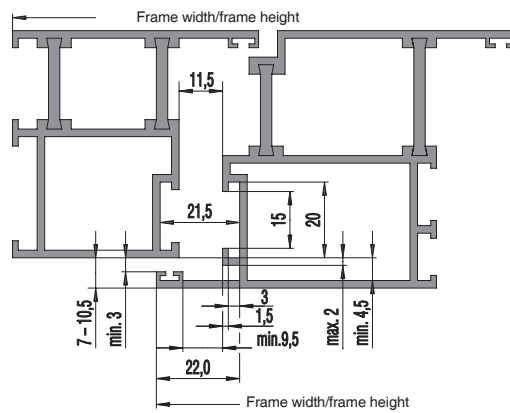
Pattern G-Mullion
1 tilt-sliding door sash, 2 turn-only sashes
Fig. shows handle-Left



Pattern K-Mullion
2 tilt-sliding door sashes, 1 turn-only sash
Fig. shows handle-Left and right

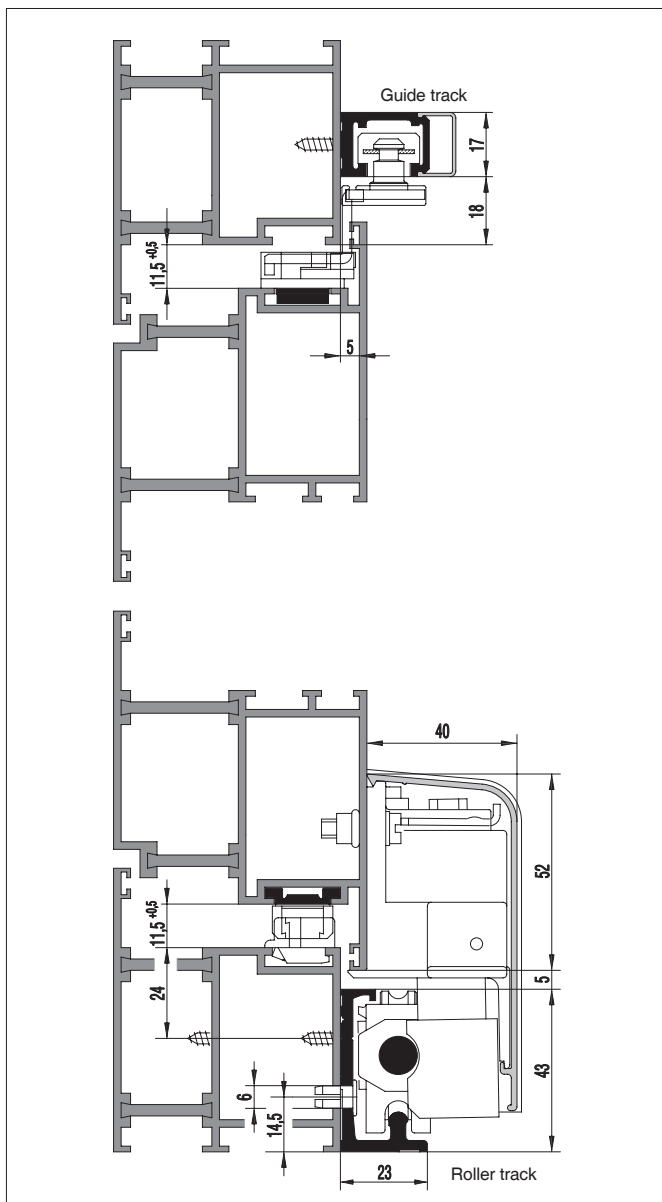


Installation Dimension
Frame/sash profile

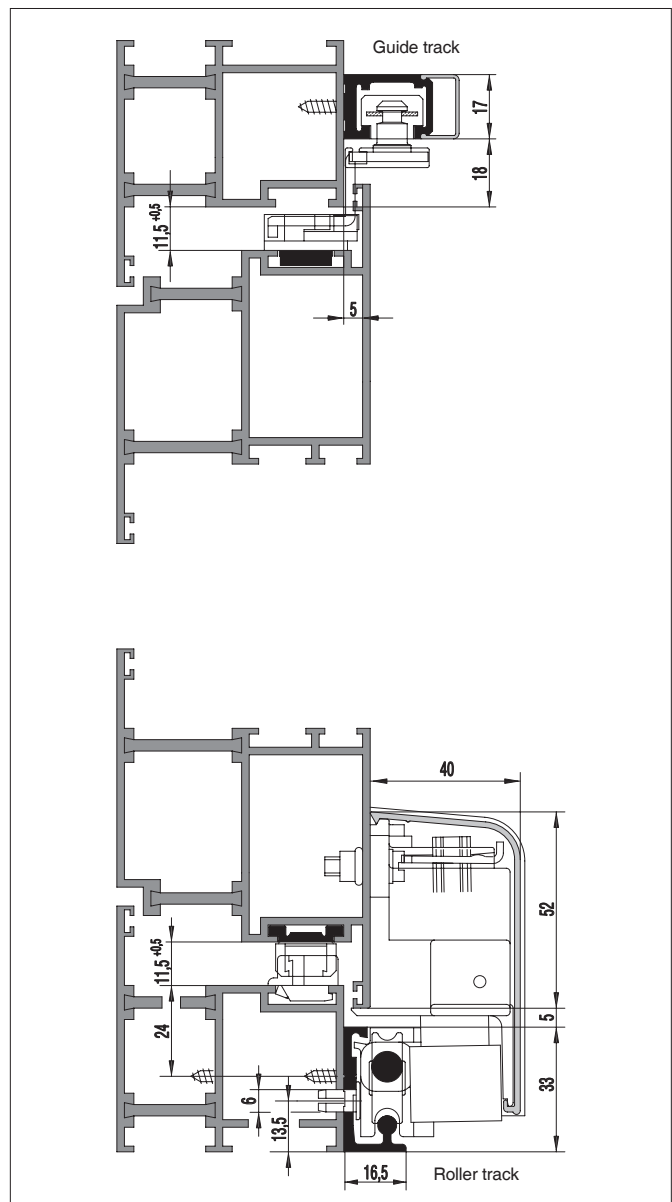


Euro groove 15/20mm for frame and sash profile

Installation Dimension - Roller track, Guide track and bogie



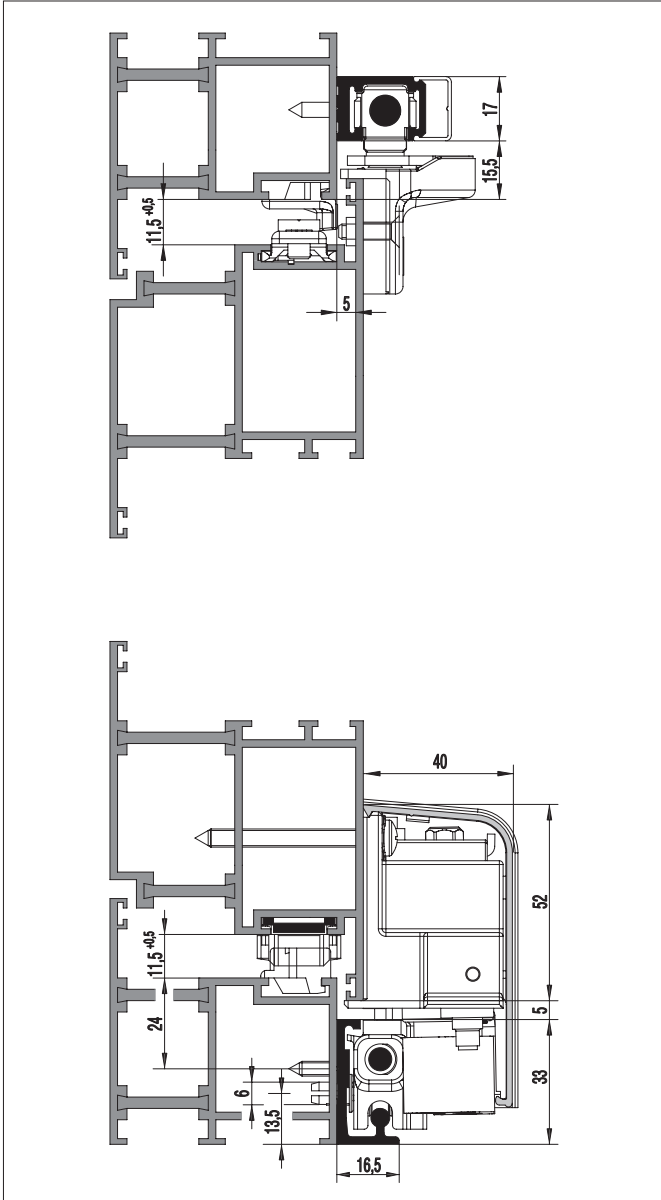
Tilt-sliding system GU-968/200 mZ



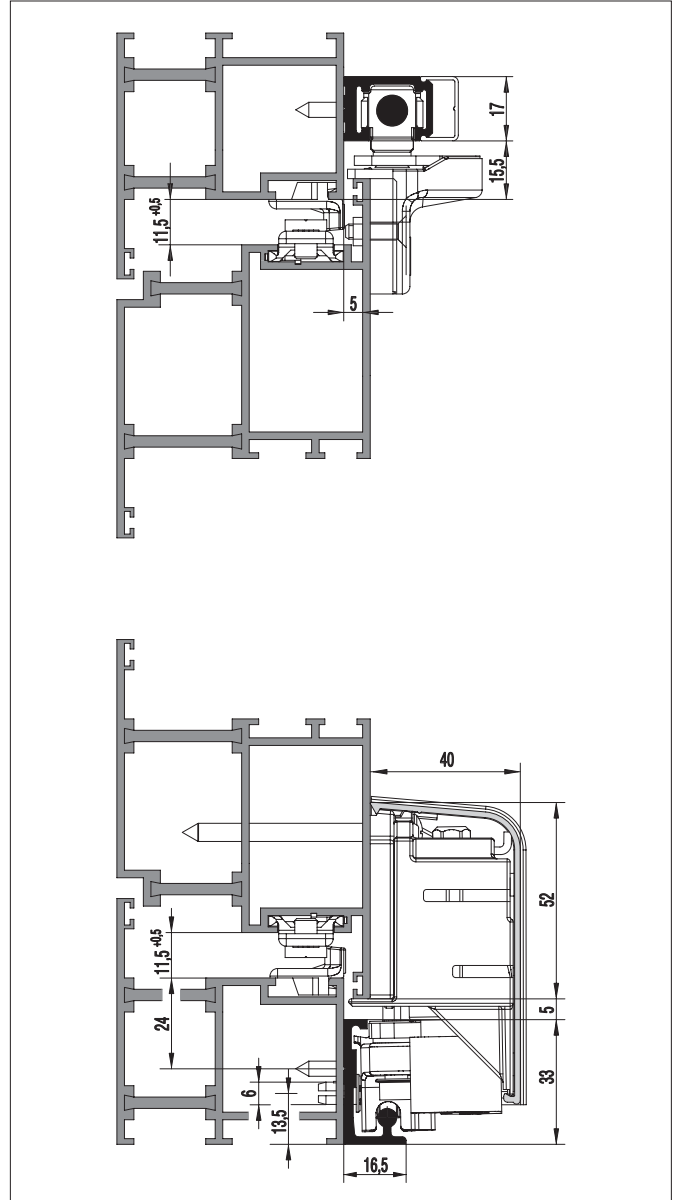
Tilt-sliding system GU-968/150 mZ



Installation Dimension - Frame/sash profile

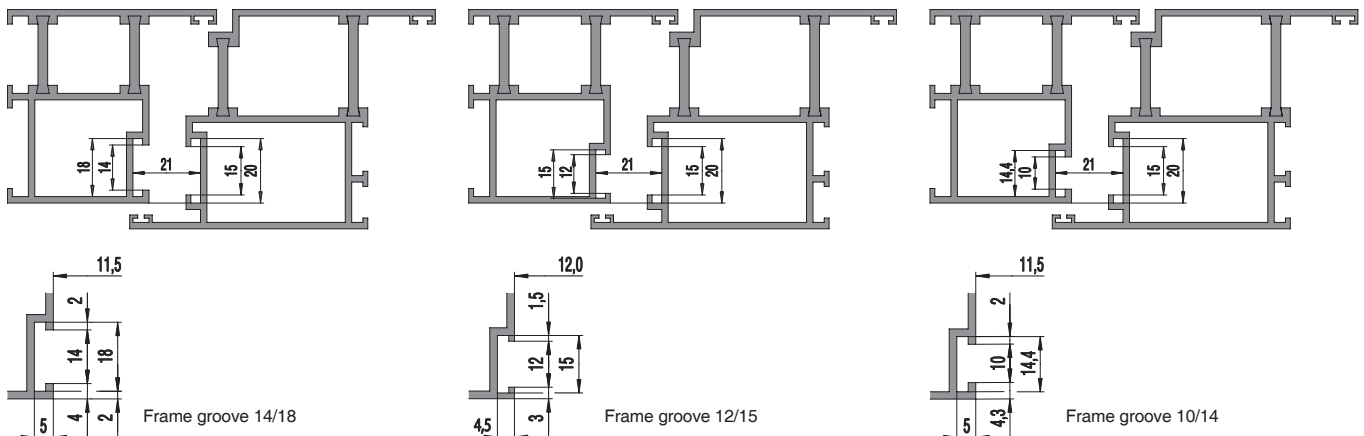


Tilt-sliding system GU-968/150 oZ



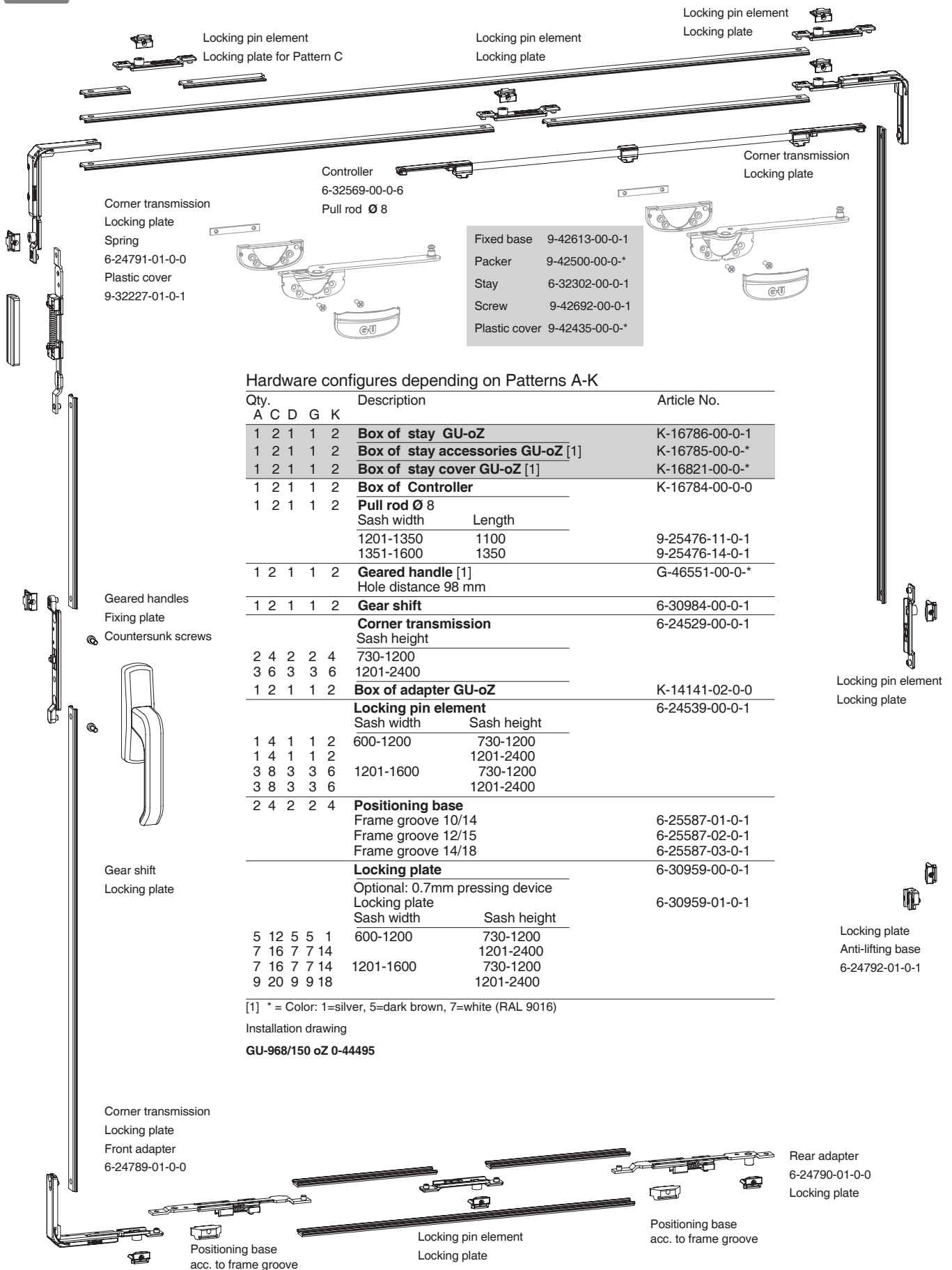
Tilt-sliding system GU-90 oZ , please confirm the configuration with the G-U technicians

Installation Dimension - Frame groove



Tilt-sliding hardware (150oZ)

For Euro groove 15/20mm



Corner transmission
Locking plate
Spring
6-24791-01-0-0
Plastic cover
9-32227-01-0-1

Controller
6-32569-00-0-6
Pull rod Ø 8

Fixed base 9-42613-00-0-1
Packer 9-42500-00-0-*
Stay 6-32302-00-0-1
Screw 9-42692-00-0-1
Plastic cover 9-42435-00-0-*

Hardware configures depending on Patterns A-K

Qty.	A	C	D	G	K	Description	Article No.
1	2	1	1	1	2	Box of stay GU-oZ	K-16786-00-0-1
1	2	1	1	1	2	Box of stay accessories GU-oZ [1]	K-16785-00-0-*
1	2	1	1	1	2	Box of stay cover GU-oZ [1]	K-16821-00-0-*
1	2	1	1	1	2	Box of Controller	K-16784-00-0-0
1	2	1	1	1	2	Pull rod Ø 8	
						Sash width	Length
						1201-1350	1100
						1351-1600	1350
1	2	1	1	1	2	Gearred handle [1]	G-46551-00-0-*
						Hole distance 98 mm	
1	2	1	1	1	2	Gear shift	6-30984-00-0-1
						Corner transmission	6-24529-00-0-1
						Sash height	
						730-1200	
						1201-2400	
1	2	1	1	1	2	Box of adapter GU-oZ	K-14141-02-0-0
						Locking pin element	6-24539-00-0-1
						Sash width	Sash height
						600-1200	730-1200
						1201-1600	1201-2400
						1201-1600	730-1200
						1201-2400	1201-2400
2	4	2	2	2	4	Positioning base	
						Frame groove 10/14	6-25587-01-0-1
						Frame groove 12/15	6-25587-02-0-1
						Frame groove 14/18	6-25587-03-0-1
						Locking plate	6-30959-00-0-1
						Optional: 0.7mm pressing device	
						Locking plate	6-30959-01-0-1
						Sash width	Sash height
						5 12 5 5 1	600-1200 730-1200
						7 16 7 7 14	1201-1600 1201-2400
						7 16 7 7 14	1201-1600 730-1200
						9 20 9 9 18	1201-2400

[1] * = Color: 1=silver, 5=dark brown, 7=white (RAL 9016)

Installation drawing

GU-968/150 oZ 0-44495

Corner transmission
Locking plate
Front adapter
6-24789-01-0-0

Rear adapter
6-24790-01-0-0
Locking plate

Positioning base
acc. to frame groove

Locking pin element
Locking plate

Positioning base
acc. to frame groove

Tilt-sliding hardware (mZ)

For Euro groove 15/20mm



End cap P 1225

Locking pin element
Locking plate

Rear stay-left
6-29657-02-L-8
Rear stay-right
6-29657-02-R-8

Front stay-left
6-29656-02-L-8
Front stay-right
6-29656-02-R-8

Hardware configures depending on Patterns A-K

Qty.	Description	Article No.	Handle left	Handle right
1	Box of stay GU-mZ	K-14713-00-L-8		K-14713-00-R-8
1	2• 1 1 2• Middle stay GU-mZ [3]	6-29349-02-L-8		6-29349-02-R-8
1	2 1 1 2 Middle stay guide	6-22755-00-0-0		
1	2 1 1 2 Middle stay cover [1]	9-35573-00-0-*		
Sash width [4]				
1851-2000				
1	2• 1 1 2• Box of handle GU-mZ [1]			
With WOSD (wrong operation safety device)		K-14712-00-L-*		K-14712-00-R-*
Locking pin element		6-27866-02-0-0		
	SW[4] SH SW(C) [4] SH(C)			
1	2 1 1 2	740-1200 895-1200 840-1500 895-1200		
2	4 2 2 4	1201-2400 1201-2400		
3	3 3 6	1201-1600 895-1200		
4	4 4 8	1201-2400		
5	6 5 5 10	1601-1850 895-1200 1501-1850 895-1200		
6	8 6 6 12	1201-2400 1201-2400		
7	10 7 7 14	1851-2000 895-1200 1851-2000 895-1200		
8	12 8 8 16	1201-2400 1201-2400		
4	Locking pin element C	6-27872-02-0-0		
2	4 2 2 4 Positioning base			
	Frame groove 10/14	6-25587-01-0-1		
	Frame groove 12/15	6-25587-02-0-1		
	Frame groove 14/18	6-25587-03-0-1		
	Locking plate	6-30959-00-0-1		
	SW[4] SH SW(C) [4] SH (C)			
5	12 5 5 10	740-1200 895-1200 840-1500 895-1200		
7	15 7 7 14	1201-2400 1201-2400		
7	7 7 14	1201-1600 895-1200		
9	9 9 18	1201-2400		
9	16 9 9 18	1601-1850 895-1200 1501-1850 895-1200		
11	19 11 11 22	1201-2400 1201-2400		
11	18 11 11 22	1851-2000 895-1200 1851-2000 895-1200		
13	21 13 13 26	1201-2400 1201-2400		
Optional:				
1	2 1 1 2 End cap P 1225	6-30388-00-0-6		

Handle

Left 6-28828-00-L-* [1]

Right 6-28828-00-R-* [1]

Hexagon nut

9-13214-00-0-0

Countersunk screws

9-13133-25-0-0

Countersunk tapping screws

9-13089-09-0-0

Gear shift

6-27862-02-0-0

Plastic cover

9-32227-01-0-1

Spring

6-28447-02-0-0

Corner transmission

6-28452-02-0-8

[1] * = Color: 1=silver, 5=dark brown, 7=white (RAL 9016)

[2] • = Include left and right handles

[3] Sash width, additionally require to install middle stay

[4] Max.sash width GU-968/150Mz=1600mm

Installation drawing:

GU-968/200 mZ 0-44709

GU-968/150 mZ 0-43905

Pattern C GU-968/200 mZ and GU-968/150 mZ - 0-43861

Locking pin element
Locking plate

Anti-lifting base
6-24792-01-0-1
Locking plate

Rear adapter
6-28449-02-0-0

Positioning base
acc. to frame groove

Locking pin element
Locking plate

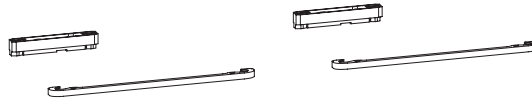
Positioning base
acc. to frame groove

Bogie, profile and accessories GU-968/200

For Euro groove 15/20mm, max. sash width 2000mm, max. sash weight 200kg



End cap 9-34523-00-0-^{*}
Guide track P 1225
Cover rail P 1480



Stay slide block 6-22755-00-0-0
Stay cover 9-35573-00-0-^{*}



Guide track P 1225
End cap 9-34523-00-0-^{*}
Cover rail P 1480

Hardware configures depending on Patterns A-K

Qty.	Description	Article No.	Handle left	Handle right
1 2 [*] 1 1 2 [*]	Box of bogie GU-968/200 Include		K-15268-00-L-0	K-15268-00-R-0
	1 Front bogie			
	1 Rear bogie			
1	Positioning pin for Pattern D	9-39897-00-0-1		
1 2 1 1 2	Box of profile GU-968/200 [1] Include			
	1 Connecting rod Ø 10 mm			
	1 Guide track P 1225			
	1 Roller track P 1213			
	1 Cover rail P 1480			
	1 Cover rail P 1603			
	1 Accessories bags			
	Sash width			
	740 -1100	K-15269-25-0- [*]		
	1101-1350	K-15269-30-0- [*]		
	1351-1600	K-15269-35-0- [*]		
	1601-1850	K-15269-40-0- [*]		
	1851-2000	K-15269-45-0- [*]		

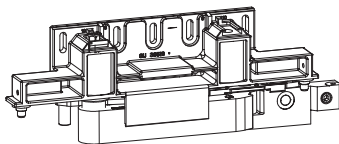
[1] ^{*} = Color: 1=silver, 5=dark brown, 7=white (RAL 9016)

[2] ^{*} = Bogie direction same with left handle or right handle

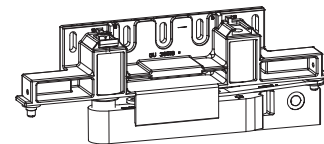
Installation drawing

GU-968/200 mZ 0-44709

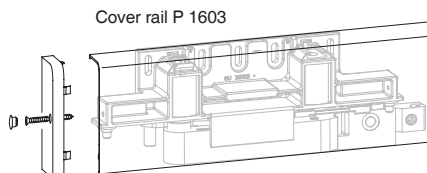
Pattern C GU-968/200 mZ C 0-43861



Front bogie left 6-32332-00-L-0
right 6-32332-00-R-0



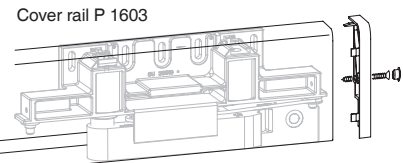
Rear Bogie left 6-29557-00-L-0
right 6-29557-00-R-0



Cover rail P 1603
Screw hole cover 9-26687-00-0-^{*}
Countersunk screws 9-13151-38-0-0
Left cover 9-38520-00-L-^{*}

Support base
9-38527-00-0-0

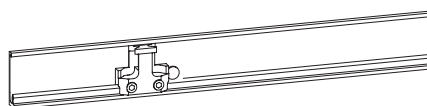
Connecting rod Ø 10 mm
Guide 6-29750-00-0-1



Cover rail P 1603
Screw hole cover 9-26687-00-0-^{*}
Countersunk screws 9-13151-38-0-0
Right cover 9-38520-00-R-^{*}



Roller track P 1213
Buffer 6-29564-00-0-^{*}



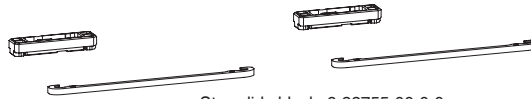
Roller track P 1213
Controller 6-33328-00-0-^{*}
Positioning pin for Pattern D

Bogie, profile and accessories GU-968/150

For Euro groove 15/20mm, max. sash width 1600mm, max. sash weight 150kg



End cap 9-34523-00-0-^{*}
 Guide track P 1225
 Cover rail P 1480



Stay slide block 6-22755-00-0-0
 Stay cover 9-35573-00-0-^{*}



Guide track P 1225
 End cap 9-34523-00-0-^{*}
 Cover rail P 1480

Hardware configures depending on Patterns A-K

Qty.	Description	Article No.	Handle right
A C D G K	[2]	Handle left	
1 2• 1 1 2•	Box of bogie GU-968/150 Include 1 Front bogie 1 Rear bogie	K-15278-00-L-0	K-15278-00-R-0
1	Positioning pin for Pattern D	9-39897-00-0-1	
1 2 1 1 2	Box of profile GU-968/150 [1] Sash width 600-1100 1101-1350 1351-1600	K-15279-25-0- [*] K-15279-30-0- [*] K-15279-35-0- [*]	

[1] * = Color: 1=silver, 5=dark brown, 7=white (RAL 9016)

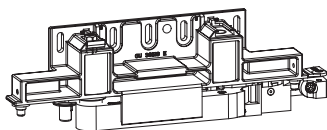
[2] • = Bogie direction same with left handle or right handle

Installation drawing

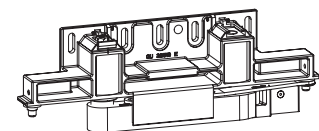
GU-968/150 mZ 0-43905

Pattern C GU-968/150 mZ 0-43861

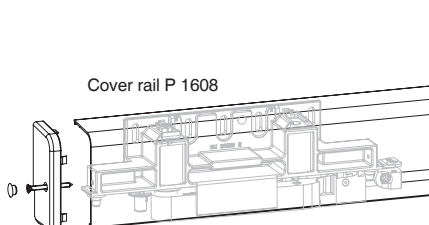
GU-968/150 oZ 0-44495



Front bogie left 6-32545-00-L-0
 right 6-32545-00-R-0



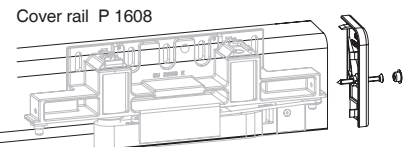
Rear Bogie left 6-29561-00-L-0
 right 6-29561-00-R-0



Cover rail P 1608

Support base
 9-38527-00-0-0

Connecting rod \varnothing 8 mm
 Guide 6-24764-00-0-1



Cover rail P 1608

Screw hole cover 9-13151-38-0-0
 Countersunk screws 9-26687-00-0-^{*}
 Right cover 9-38543-00-R-^{*}

Screw hole cover 9-26687-00-0-^{*}
 Countersunk screws 9-13151-38-0-0
 Left cover 9-38543-00-L-^{*}



Roller track P 1300
 Controller 6-33329-00-0-^{*}
 Positioning pin for Pattern D



Roller track P 1300
 Buffer 6-29565-00-0-^{*}

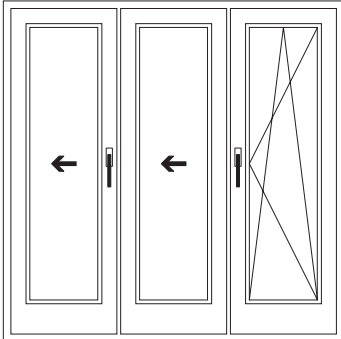
Fold&Slide hardware

Product Profile - Euro groove 15/20mm

Fold-sliding hardware for aluminum windows and balcony doors

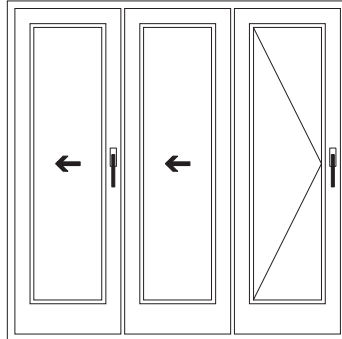


Many optional patterns, the active sash may be tilt-turn sash or turn-only sash



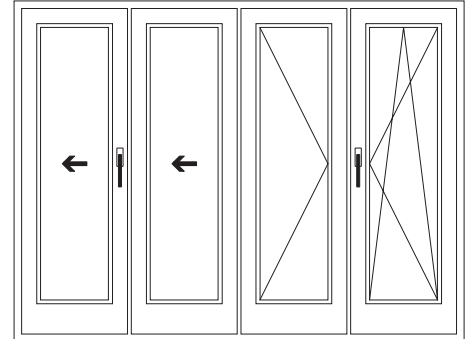
Pattern 321 [1]

Graph: 2 fold sashes, 1 tilt-turn sash



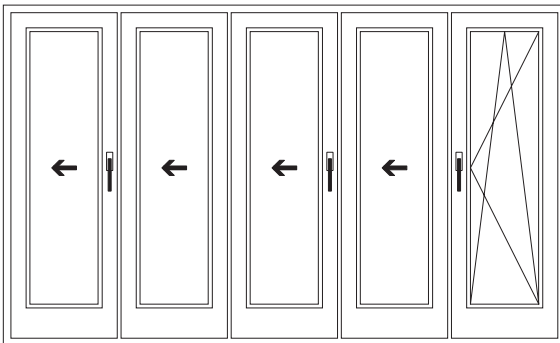
Pattern 330

Graph: 2 fold sashes, 1 turn-only sash



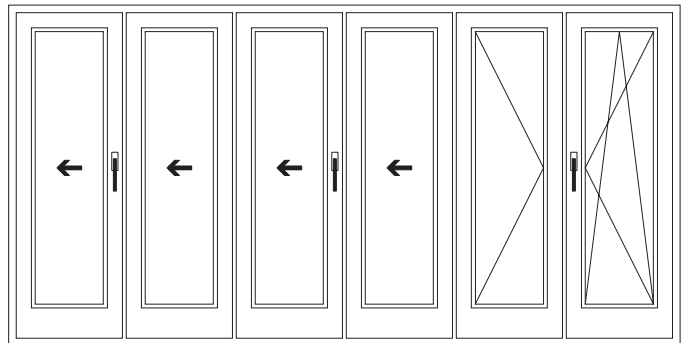
Pattern 431 [2]

Graph: 2 fold sashes, 1 turn-only sash, 1 tilt-turn sash



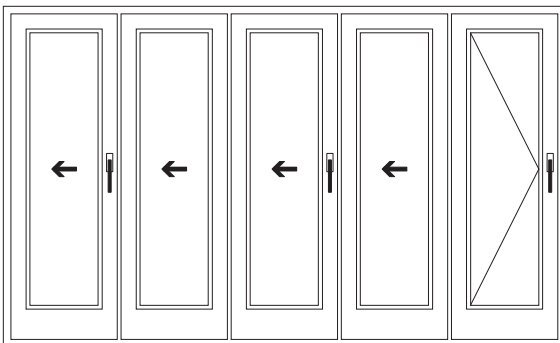
Pattern 541 [1]

Graph: 4 fold sashes, 1 tilt-turn sash



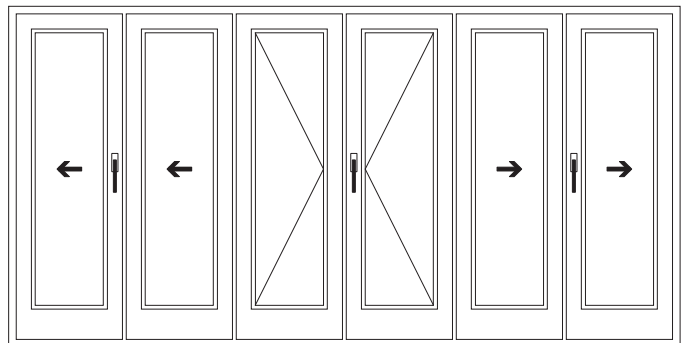
Pattern 651 [2]

Graph: 4 fold sashes, 1 turn-only sash, 1 tilt-turn sash



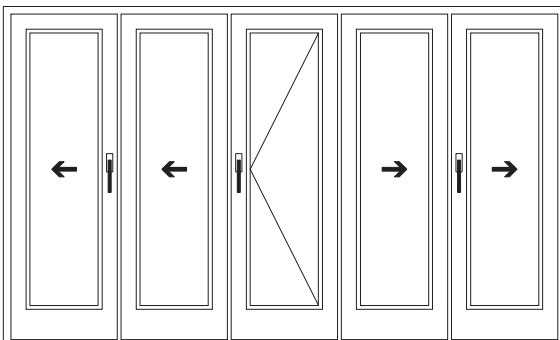
Pattern 550

Graph: 4 fold sashes, 1 turn-only sash



Pattern 633

Graph: 4 fold sashes, 1 turn-only active sash and 1 turn-only inactive sash



Pattern 532

Graph: 4 fold sashes, 1 turn-only sash

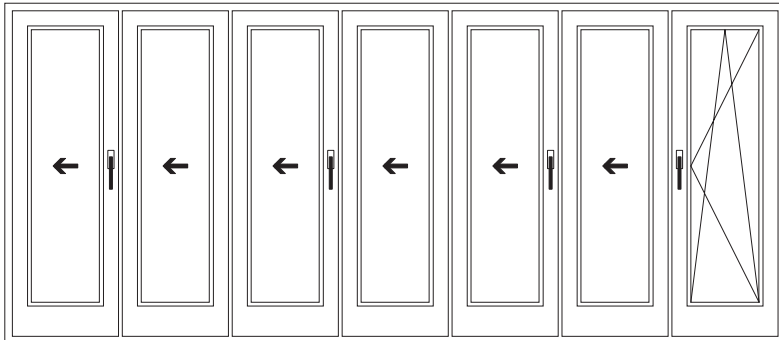
Note:

[1] The active tilt-turn sash may be changed into single turn-only sash

■ Ak8 turn-only hardware may be used.

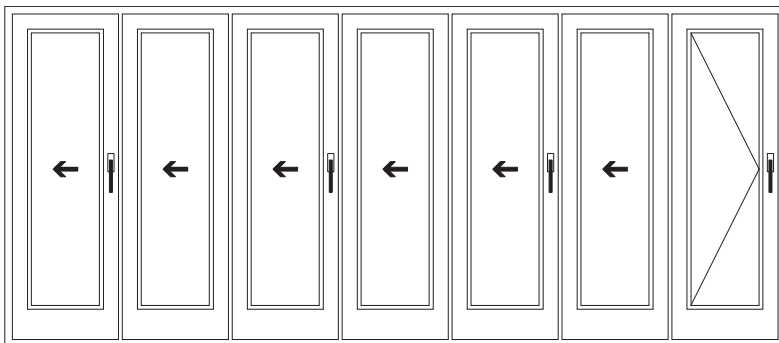


Many optional patterns, the active sash may be tilt-turn sash or turn-only sash



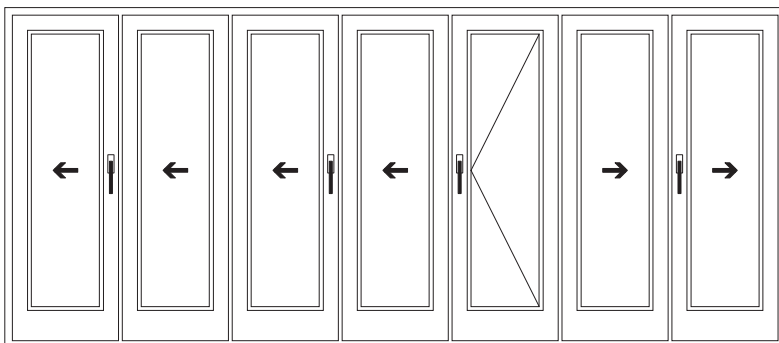
Pattern 761 [1]

Graph: 6 fold sashes, 1 tilt-turn sash



Pattern 770

Graph: 6 fold sashes, 1 turn-only sash



Pattern 743

Graph: 6 fold sashes, 1 turn-only sash

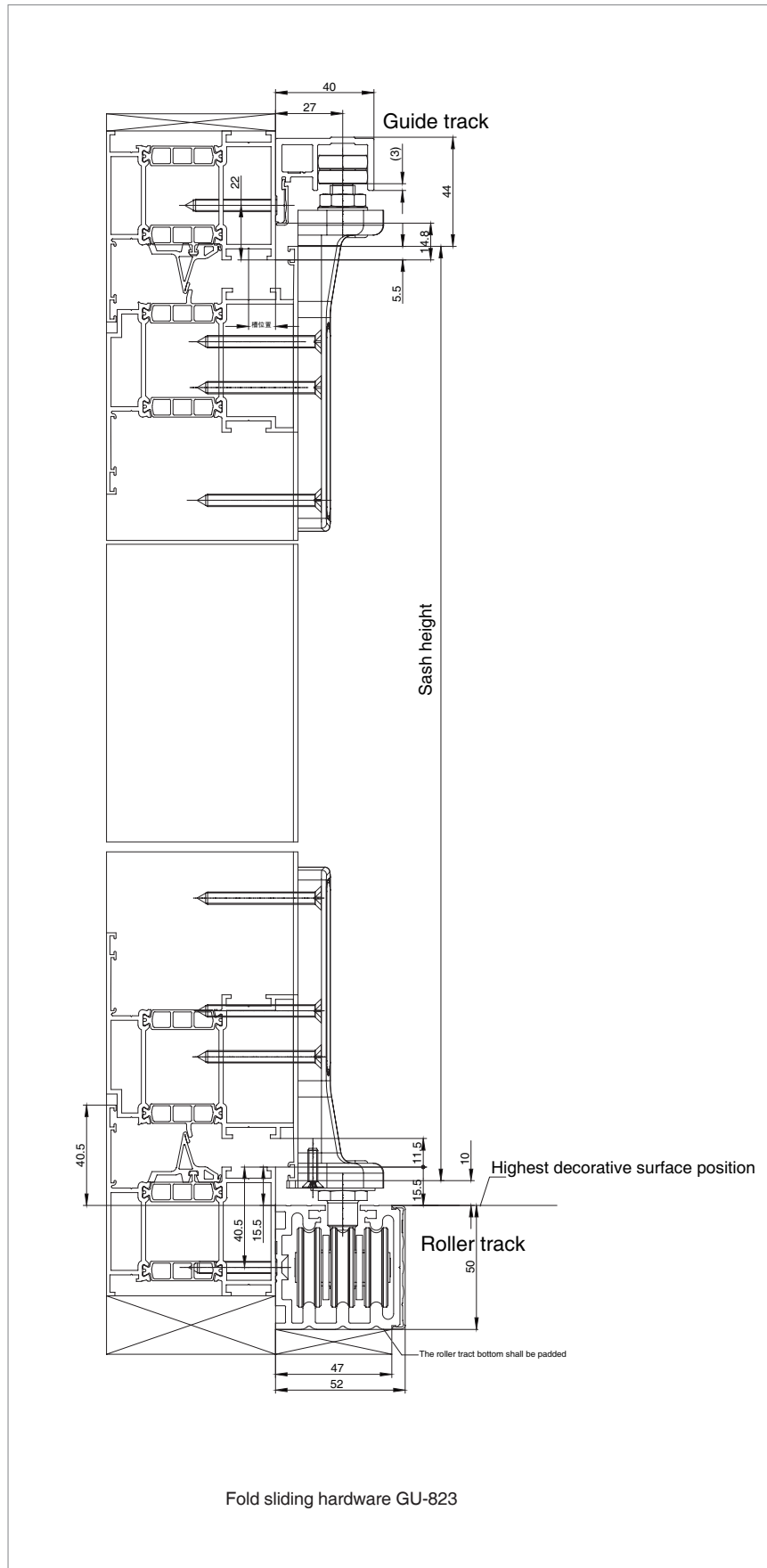
Note:

[1] The active tilt-turn sash may be changed into single turn-only sash

- Ak8 turn-only hardware may be used.

Product Profile - Euro groove 15/20mm

Installation dimension - Guide tract, roller track, bogie hinge

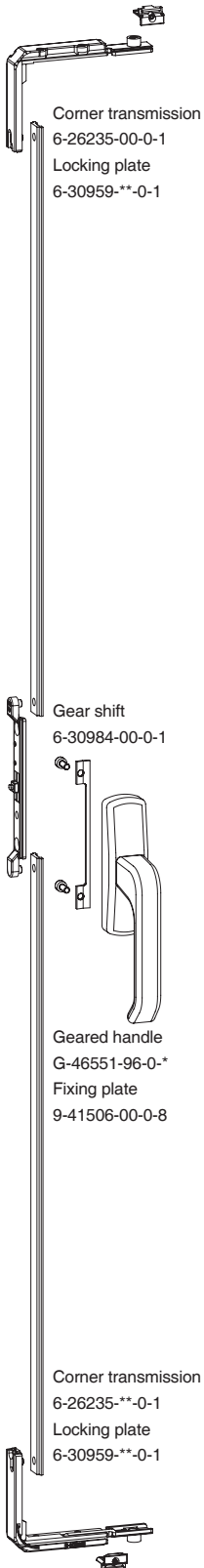


Fold-sliding hardware, turn-only

Patterns 321, 541 and 761 – Active sash, tilt-turn, Euro groove 15/20mm



Folding sash



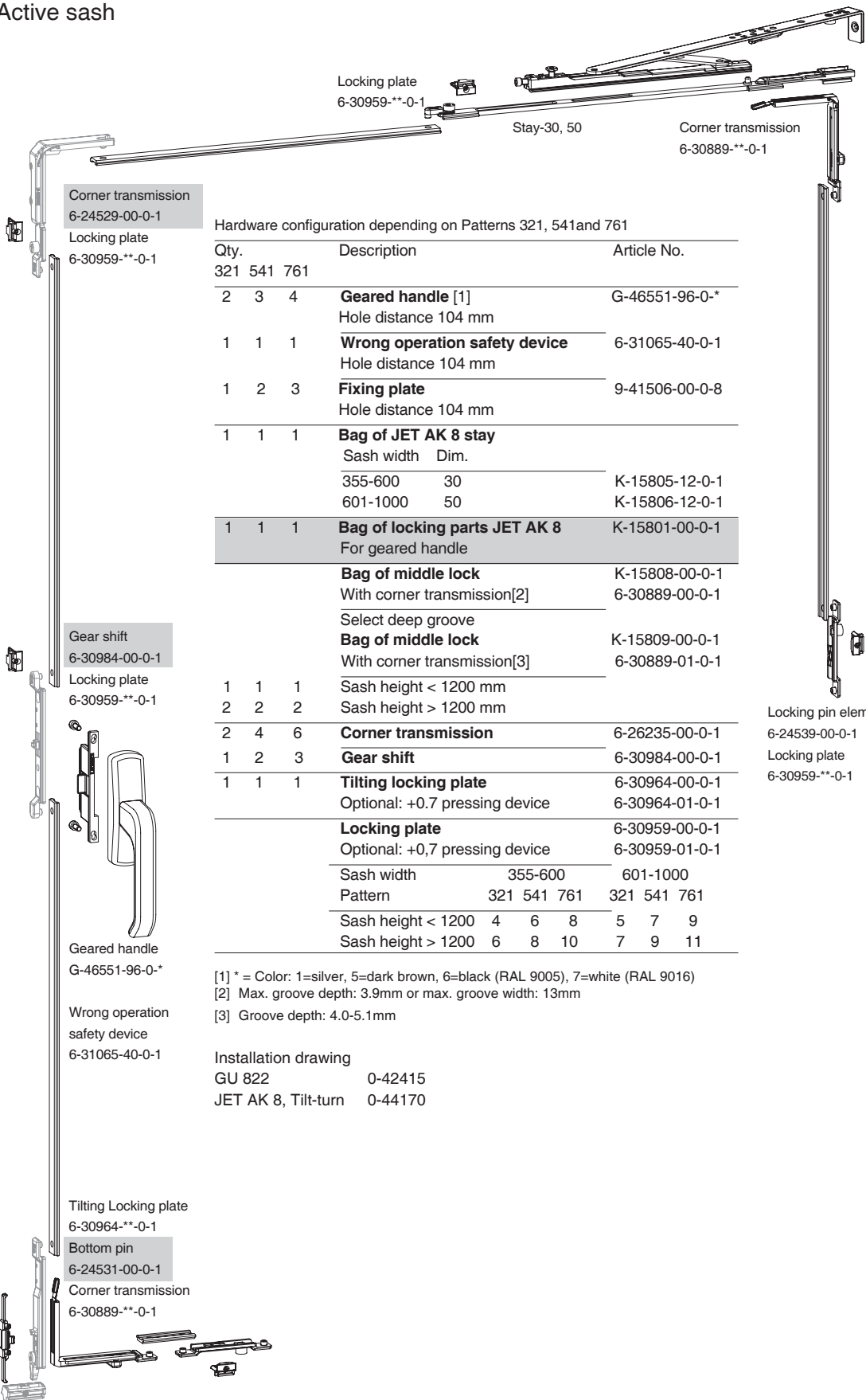
Corner transmission
6-26235-00-0-1
Locking plate
6-30959-**-0-1

Gear shift
6-30984-00-0-1

Geared handle
G-46551-96-0-*
Fixing plate
9-41506-00-0-8

Corner transmission
6-26235-**-0-1
Locking plate
6-30959-**-0-1

Active sash



Corner transmission
6-24529-00-0-1
Locking plate
6-30959-**-0-1

Gear shift
6-30984-00-0-1
Locking plate
6-30959-**-0-1

Geared handle
G-46551-96-0-*

Wrong operation
safety device
6-31065-40-0-1

Tilting Locking plate
6-30964-**-0-1

Bottom pin
6-24531-00-0-1

Corner transmission
6-30889-**-0-1

Support
6-31066-00-0-1

Hardware configuration depending on Patterns 321, 541 and 761

Qty.	321	541	761	Description	Article No.
2	3	4		Geared handle [1] Hole distance 104 mm	G-46551-96-0-*
1	1	1		Wrong operation safety device Hole distance 104 mm	6-31065-40-0-1
1	2	3		Fixing plate Hole distance 104 mm	9-41506-00-0-8
1	1	1		Bag of JET AK 8 stay Sash width Dim.	
				355-600 30	K-15805-12-0-1
				601-1000 50	K-15806-12-0-1
1	1	1		Bag of locking parts JET AK 8 For geared handle	K-15801-00-0-1
				Bag of middle lock With corner transmission[2]	K-15808-00-0-1 6-30889-00-0-1
				Select deep groove Bag of middle lock With corner transmission[3]	K-15809-00-0-1 6-30889-01-0-1
1	1	1		Sash height < 1200 mm	
2	2	2		Sash height > 1200 mm	
2	4	6		Corner transmission	6-26235-00-0-1
1	2	3		Gear shift	6-30984-00-0-1
1	1	1		Tilting locking plate Optional: +0.7 pressing device	6-30964-00-0-1 6-30964-01-0-1
				Locking plate Optional: +0.7 pressing device	6-30959-00-0-1 6-30959-01-0-1
				Sash width	355-600 601-1000
				Pattern	321 541 761 321 541 761
				Sash height < 1200	4 6 8 5 7 9
				Sash height > 1200	6 8 10 7 9 11

[1] * = Color: 1=silver, 5=dark brown, 6=black (RAL 9005), 7=white (RAL 9016)

[2] Max. groove depth: 3.9mm or max. groove width: 13mm

[3] Groove depth: 4.0-5.1mm

Installation drawing

GU 822 0-42415

JET AK 8, Tilt-turn 0-44170

Locking pin element 6-24539-00-0-1
Locking plate 6-30959-**-0-1

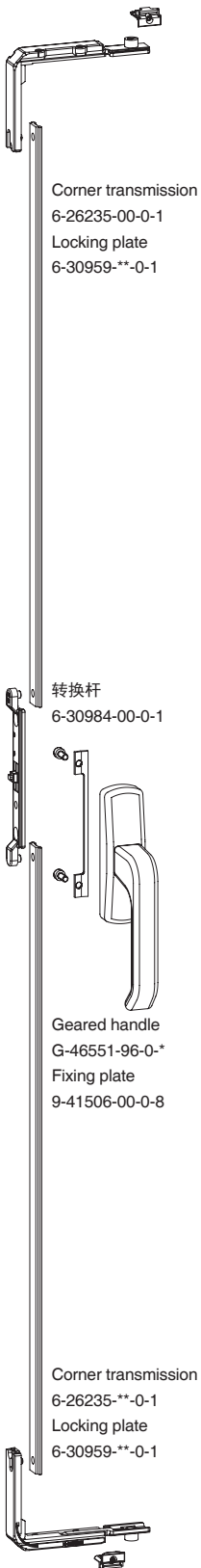
Locking pin element
6-24539-00-0-1
Locking plate
6-30959-**-0-1

Fold-sliding hardware, turn-only

Patterns 431 and 651 – Active sash, tilt-turn, Euro groove 15/20mm



Folding sash



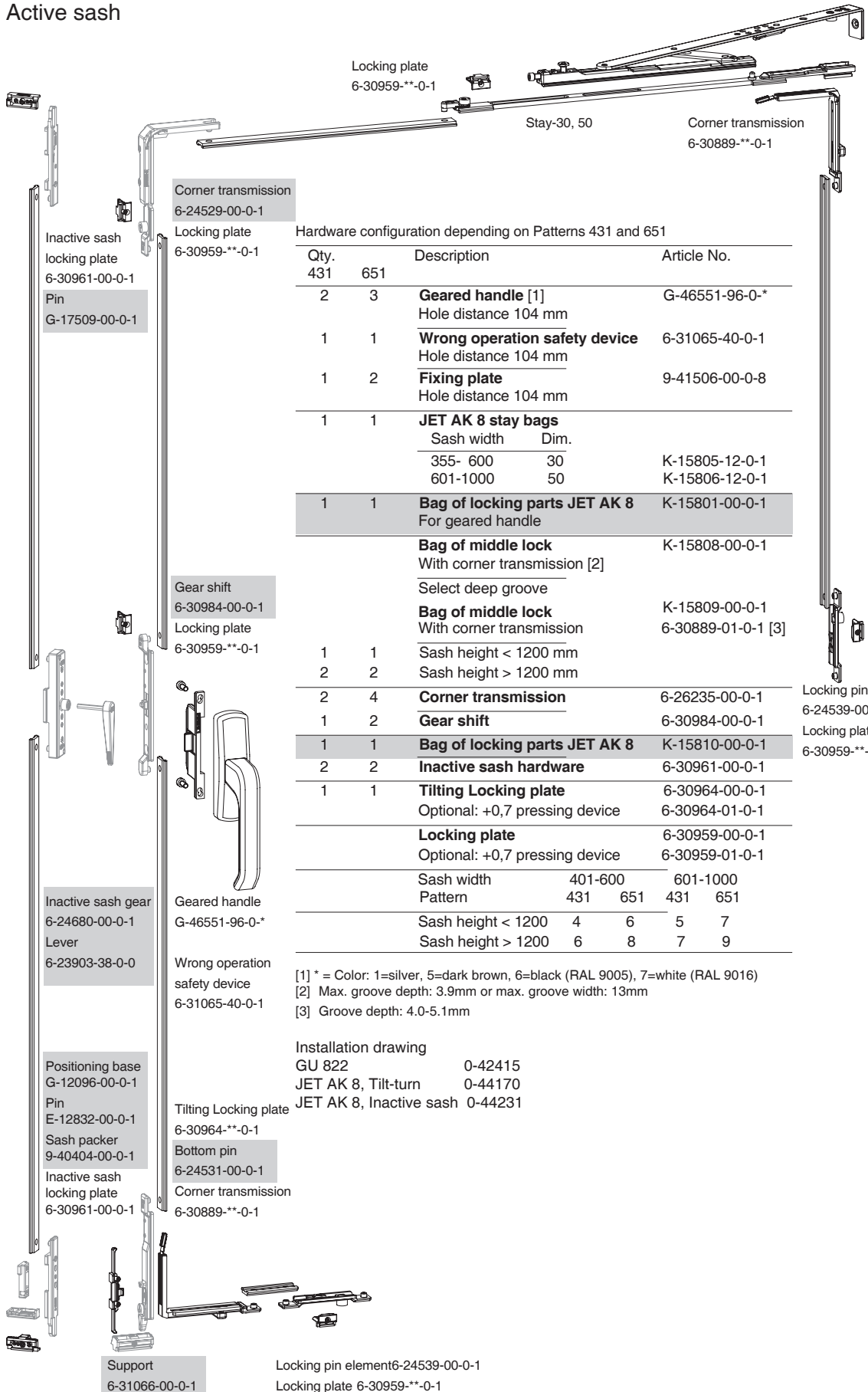
Corner transmission
6-26235-00-0-1
Locking plate
6-30959-**-0-1

转换杆
6-30984-00-0-1

Geared handle
G-46551-96-0-*
Fixing plate
9-41506-00-0-8

Corner transmission
6-26235-**-0-1
Locking plate
6-30959-**-0-1

Active sash



Locking plate
6-30959-**-0-1

Stay-30, 50

Corner transmission
6-30889-**-0-1

Corner transmission
6-24529-00-0-1

Locking plate
6-30959-**-0-1

Inactive sash
locking plate
6-30961-00-0-1

Pin
G-17509-00-0-1

Gear shift
6-30984-00-0-1

Locking plate
6-30959-**-0-1

Inactive sash gear
6-24680-00-0-1
Lever
6-23903-38-0-0

Geared handle
G-46551-96-0-*

Wrong operation
safety device
6-31065-40-0-1

Positioning base
G-12096-00-0-1
Pin
E-12832-00-0-1
Sash packer
9-40404-00-0-1

Inactive sash
locking plate
6-30961-00-0-1

Tilting Locking plate
6-30964-**-0-1

Bottom pin
6-24531-00-0-1

Corner transmission
6-30889-**-0-1

Support
6-31066-00-0-1

Hardware configuration depending on Patterns 431 and 651

Qty.	431	651	Description	Article No.
2	3		Geared handle [1] Hole distance 104 mm	G-46551-96-0-*
1	1		Wrong operation safety device Hole distance 104 mm	6-31065-40-0-1
1	2		Fixing plate Hole distance 104 mm	9-41506-00-0-8
1	1		JET AK 8 stay bags	
			Sash width Dim.	
			355- 600 30	K-15805-12-0-1
			601-1000 50	K-15806-12-0-1
1	1		Bag of locking parts JET AK 8 For geared handle	K-15801-00-0-1
			Bag of middle lock With corner transmission [2]	K-15808-00-0-1
			Select deep groove	
			Bag of middle lock With corner transmission	K-15809-00-0-1
1	1		Sash height < 1200 mm	6-30889-01-0-1 [3]
2	2		Sash height > 1200 mm	
2	4		Corner transmission	6-26235-00-0-1
1	2		Gear shift	6-30984-00-0-1
1	1		Bag of locking parts JET AK 8	K-15810-00-0-1
2	2		Inactive sash hardware	6-30961-00-0-1
1	1		Tilting Locking plate Optional: +0,7 pressing device	6-30964-00-0-1 6-30964-01-0-1
			Locking plate Optional: +0,7 pressing device	6-30959-00-0-1 6-30959-01-0-1
			Sash width	401-600 601-1000
			Pattern	431 651 431 651
			Sash height < 1200	4 6 5 7
			Sash height > 1200	6 8 7 9

[1] * = Color: 1=silver, 5=dark brown, 6=black (RAL 9005), 7=white (RAL 9016)

[2] Max. groove depth: 3.9mm or max. groove width: 13mm

[3] Groove depth: 4.0-5.1mm

Installation drawing

GU 822 0-42415
JET AK 8, Tilt-turn 0-44170
JET AK 8, Inactive sash 0-44231

Locking pin element
6-24539-00-0-1
Locking plate
6-30959-**-0-1

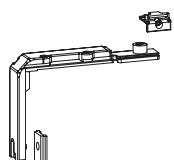
8

Fold-sliding hardware, turn-only

Patterns 330, 532, 550, 633, 743 and 770 – Active sash, tilt-turn, Euro groove 15/20mm

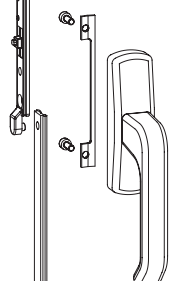


Folding sash



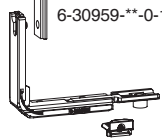
Corner drive
6-26235-00-0-1
Locking plate
6-30959-**-0-1

转换杆
6-30984-00-0-1

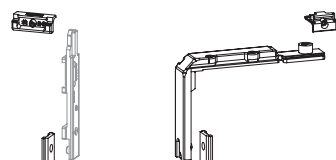


Geared handle
G-46551-96-0-*
Fixing plate
9-41506-00-0-8

Corner transmission
6-26235-**-0-1
Locking plate
6-30959-**-0-1



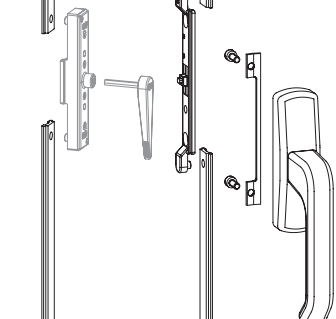
Active sash



Inactive sash
locking plate
6-30961-00-0-1
Pin
G-17509-00-0-1

Corner drive
6-26235-00-0-1
Locking plate
6-30959-**-0-1

Gear shift
6-30984-00-0-1
Locking plate
6-30959-**-0-1
(Exclude
Pattern 633)



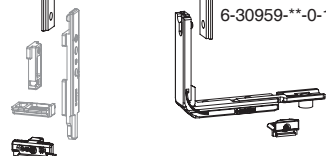
Inactive sash gear
6-24680-00-0-1
Lever
6-23903-38-0-0
(For pattern 633)

Geared handle
G-46551-96-0-*
Wrong operation
safety device
9-41506-00-0-8

Positioning base
G-12096-00-0-1
Pin
E-12832-00-0-1
Sash packer
9-40404-00-0-1

Inactive sash
locking plate
6-30961-00-0-1

Corner transmission
6-26235-**-0-1
Locking plate
6-30959-**-0-1



Hardware configuration depending on Patterns 330, 532, 550, 633, 743 and 770

Qty.	330	532	550	633	743	770	Description	Article No.
2	3	3	3	3	4	4	Geared handle [1] Hole distance 104 mm	G-46551-96-0-*
2	3	3	3	3	4	4	Fixing plate Hole distance 104 mm	9-41506-00-0-8
4	6	6	6	6	8	8	Corner transmission	6-26235-00-0-1
2	3	3	3	3	4	4	Gear shift	6-30984-00-0-1
				1			JET AK 8 stay bags	K-15810-00-0-1
				2			Inactive sash hardware	6-30961-00-0-1
							Locking plate	6-30959-00-0-1
							Optional: +0,7 pressing device	6-30959-01-0-1
4	6	6	6	6	8	8	Sash height < 1200 mm	
5	7	7	7	7	9	9	Sash height > 1200 mm	

[1] * = Color: 1=silver, 5=dark brown, 6=black (RAL 9005), 7=white (RAL 9016)

Installation drawing

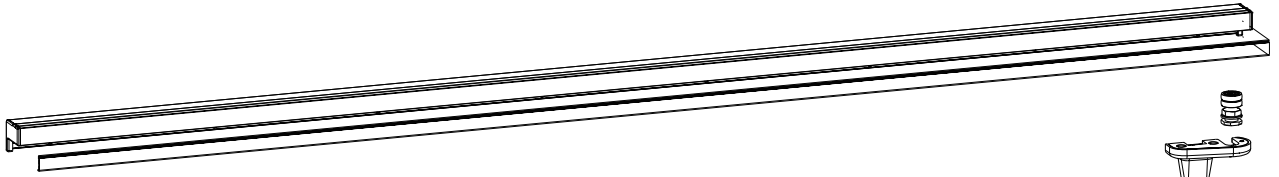
GU 822 0-42415

JET AK 8, Turn-only sash 0-44231

JET AK 8, Inactive sash 0-44231

GU-823 bogie, profile and hinge

Bottom bogie, Euro groove 15/20mm



Hardware configuration depending on the following patterns

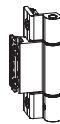
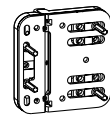
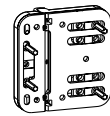
Qty.												Description	Article No.
321	330	431	541	550	532	651	633	761	770	743		Basic hardware set GU-823 [1]	K-18391-00-0*
1	1	1	2	2	2	2	2	3	3	3		Include	
												1 Bogie	1 Guide roller
												1 Pivot rest, left	1 Pivot rest, right
												1 Screws	2 Packer
1	2	2	3	4	3	4	4	5	6	5		Box of sash hinge GU-823	
												20/50	K-13205-01-0-1
6	3	6	6	3	6	6	6	6	3	6		Box of axial hinge	
												93 mm – 3 Sections [2]	K-15887-00-0*
[3]		[3]	[3]			[3]		[3]				Frame groove 14/18	
1	1	1	1	1	1	1	1	1	1	1		Bag of profile GU-823 [1]	
												Include	
												1 Roller track	
												1 Guide track	
												1 Cover rail	1 Cover rail
												2 End cap	
												Total frame width mm	
												-2960	K-18511-30-0*
												2961-3960	K-18511-40-0*
												3961-5000	K-18511-50-0*
												5001-6700	K-18511-67-0*
-	1	1	-	1	1	1	2	-	1	1		Bag of folding catch GU-823 [1]	K-18936-10-0*

[1] * = Color: 1=silver, 5=dark brown, 7=white (RAL 9016)

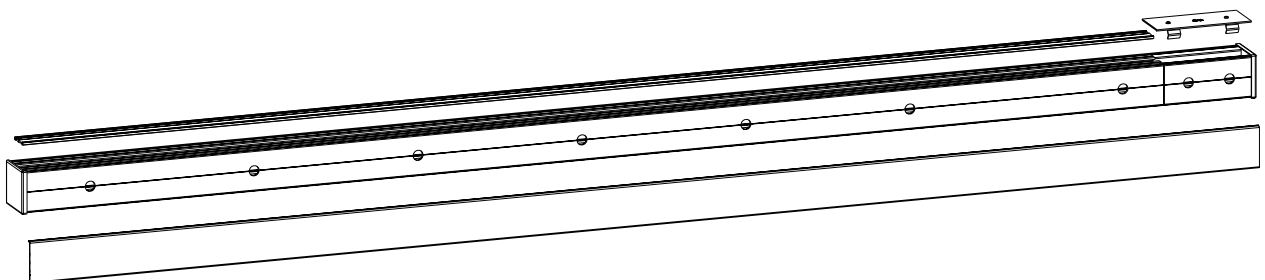
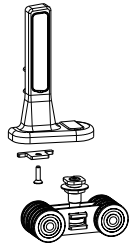
[2] * = Color: 1=silver, 5=dark brown, 6=black (RAL 9005), 7=white (RAL 9016)

[3] If the active sash is a tilt-turn sash (replacing turn-only sash), deduct 3 clamping hinges.

Installation drawing 0-42415



Clamping hinge-
93mm-3 sections



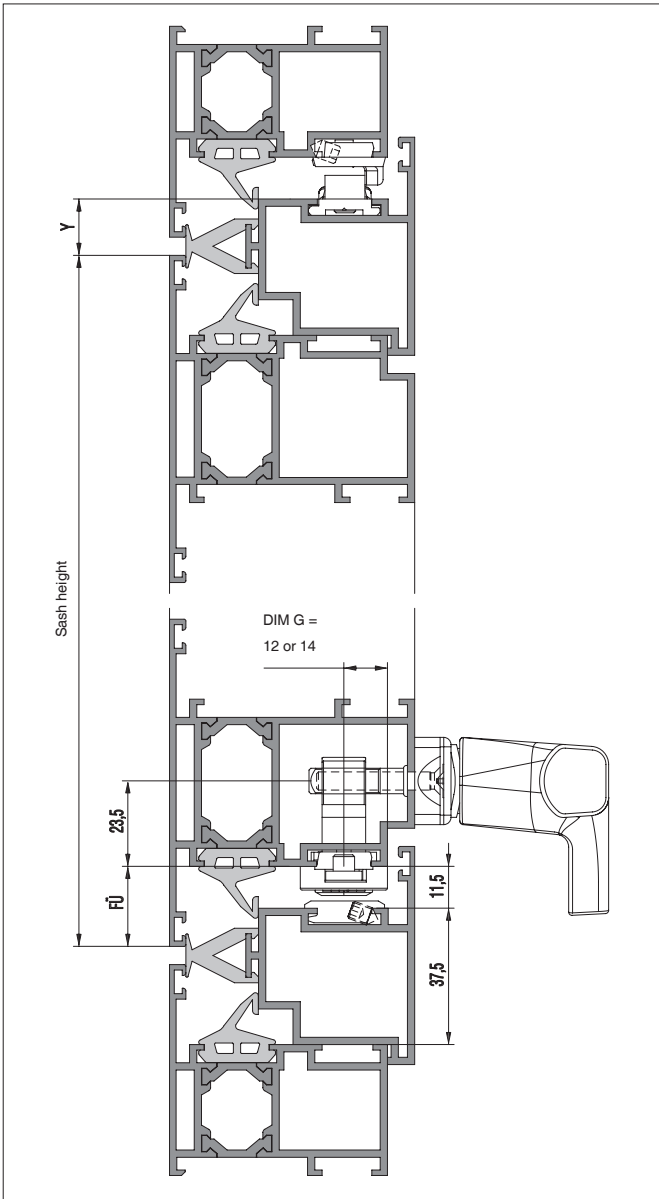


GU-823

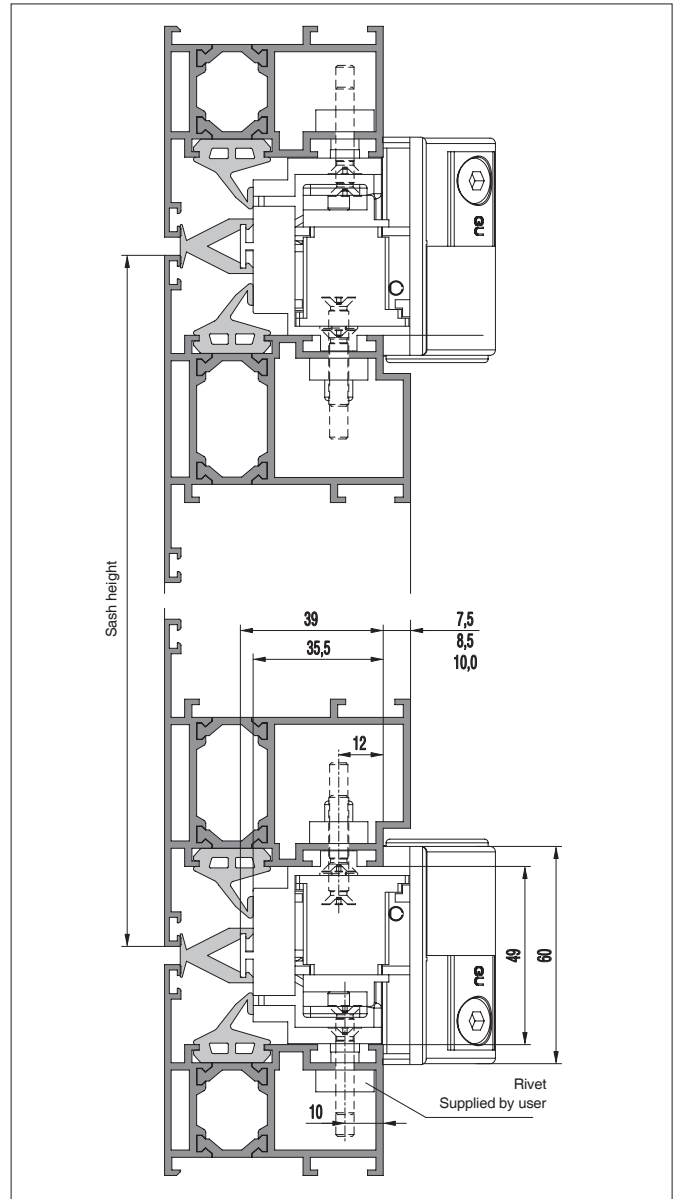
Application	Description	Article No
Pivot rest installation	Drilling jig for pivot rest	6-25831-01-0-9
Sash hinge and corner hinge installation	Hinge jig	6-25369-00-0-9
Roller track and guide track installation	Drilling jig for roller track or guide track	6-23616-00-0-1
Folding catch installation	Drilling jig for folding catch	6-25575-00-0-9



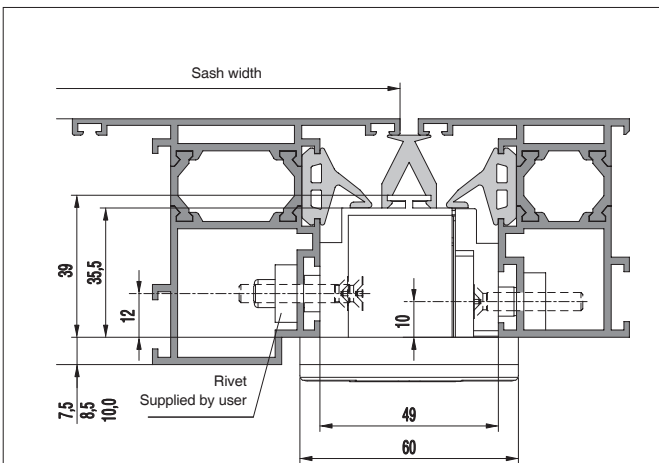
Horizontal/Vertical pivot hardware



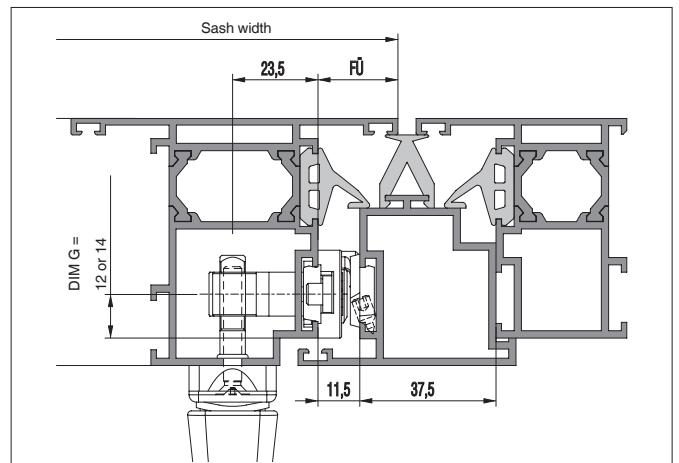
Horizontal pivot hardware UNITAS 18/3



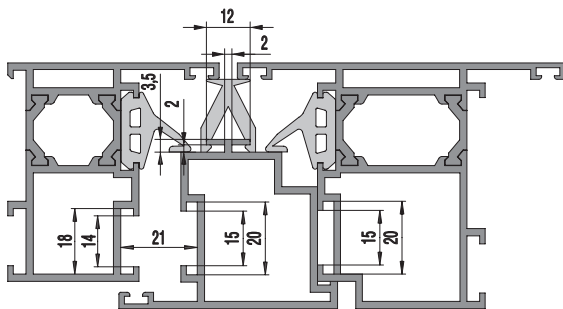
Vertical pivot hardware UNITAS 88



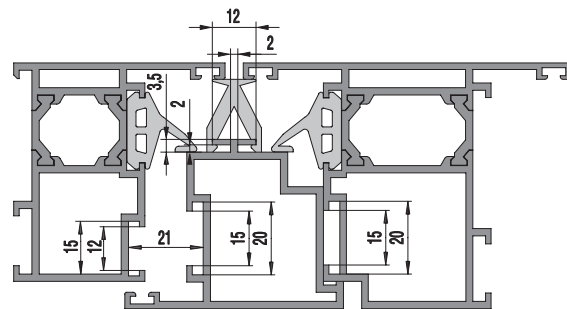
Horizontal pivot hardware UNITAS 18/3



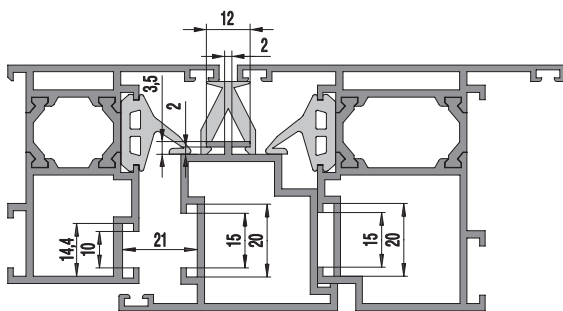
Vertical pivot hardware UNITAS 88



Frame groove 14/18

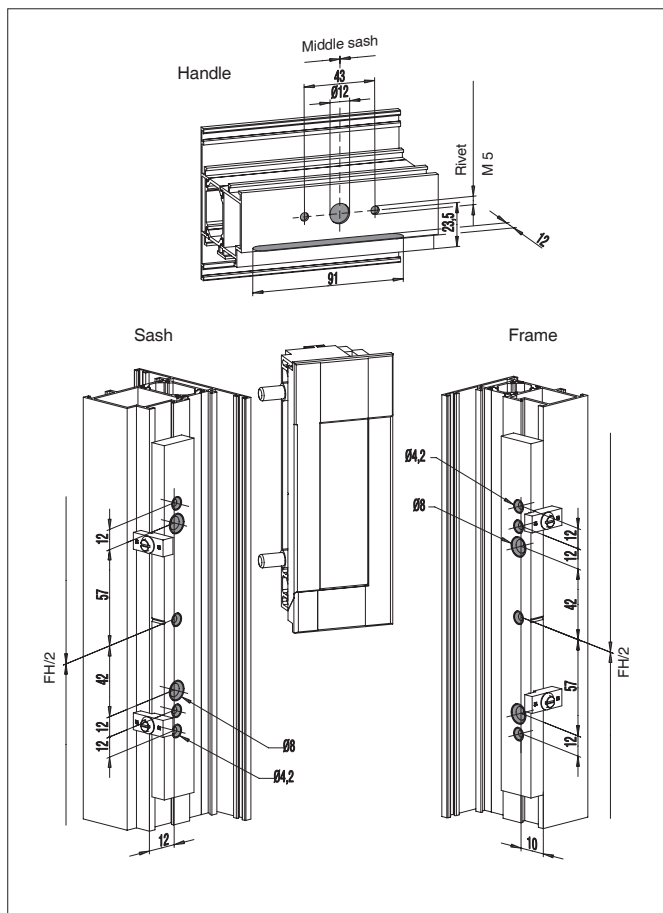


Frame groove 12/15

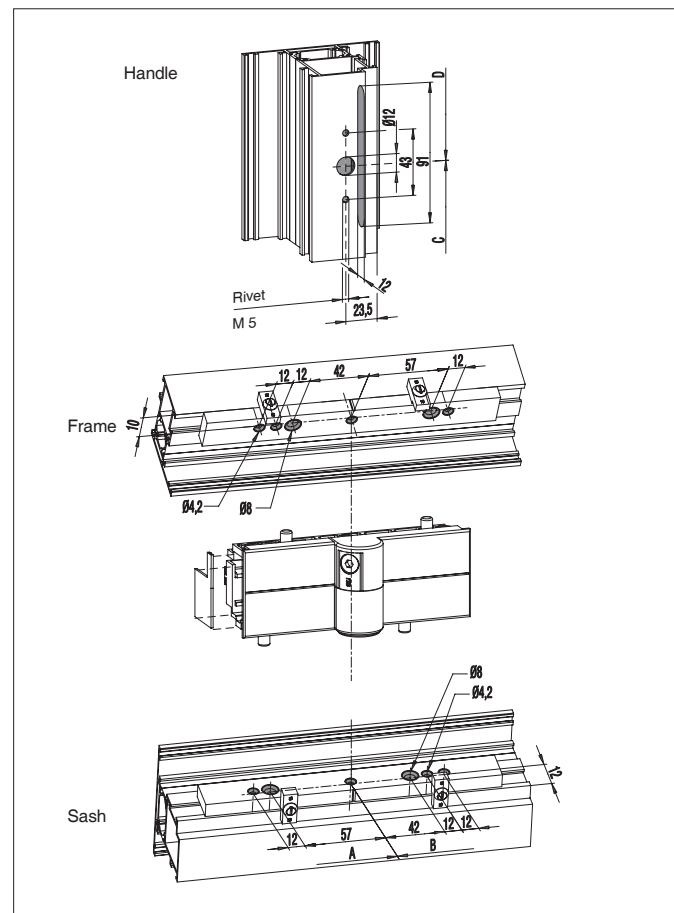


Frame groove 10/14

Drilling and milling reference dimension



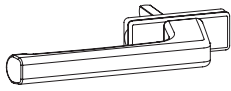
Horizontal pivot hardware UNITAS 18/3



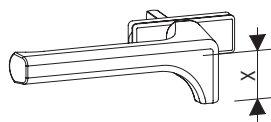
Vertical pivot hardware UNITAS 88

Handle, optional parts, drilling jigs

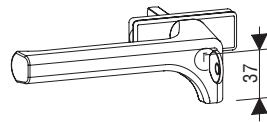
Aluminum horizontal/vertical pivot hardware



Handle DIRIGENT-S 44
Mandrel 30 6-29189-30-0-^{*}
Base 24 x 67 mm



Handle DIRIGENT-T 46 "X" = 42 mm
Mandrel 30 6-29187-30-0-^{*}
Base 24 x 67 mm

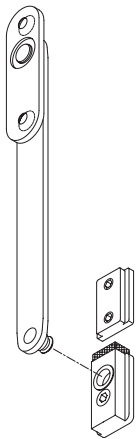


Handle DIRIGENT-F/Z
Lockable for aluminum windows



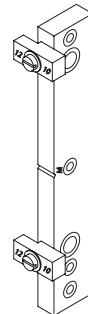
Automatic 180°
locking latch
9-20017-00-0-^{*}

Handle-T 49 "X" = 37 mm
Mandrel 30 6-29188-30-0-^{*}
Base 24 x 67 mm



Limiting stay
K-13393-00-0-1

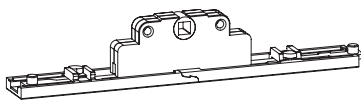
Installation drawing 0-42973



Drilling jig
Horizontal pivot hardware UNITAS 18/3
Vertical pivot hardware UNITAS 88
6-27419-00-0-0

Optional parts of limiting stay

Graph	Description	Article No.
	Ø 6 mm Ring For hole connection Ø 8 mm	9-45167-00-0-6



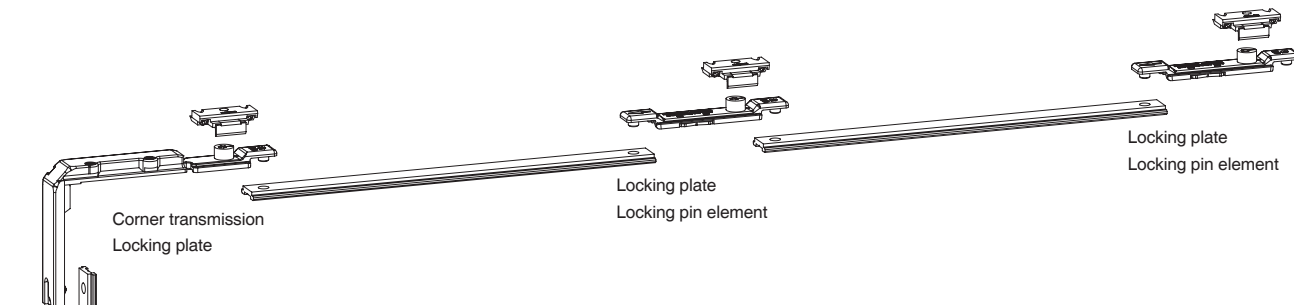
Mill-in gear alu 90°

Mill-in gear alu 90° with M5 screws

Sash groove	Description	Backset mm	Article No.
Euro groove 15/20	90° Gear	25	6-25948-25-0-1
		30	6-25948-30-0-1
		37	6-25948-37-0-1
		42	6-25948-42-0-1
		45	6-25948-45-0-1
		50	6-25948-50-0-1

Mill-in gear alu 90° , with holes Ø 4,8

Sash groove	Description	Backset mm	Article No.
Euro groove 15/20	90° Gear	30	6-25948-33-0-1
Groove 15/20	90° Gear	35	6-25948-35-0-1
		40	6-25948-40-0-1

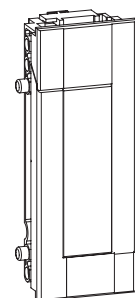


Hardware configuration depending on profile Ponzio Windstop 65 tt

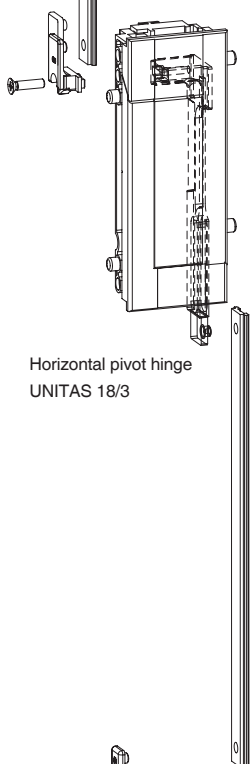
Qty.	Description	Ponzio Windstop 65 tt
1	Horizontal pivot hinge (pair)	6-27212-07-P.*
12	Countersunk screw M 5	9-13089-09-0-0
1	Handle DIRIGENT-T	6-29187-30-0-
1	Mill-in gear alu 90°	6-25948-35-0-1
2	Countersunk screw M 5	9-13089-60-0-8
2	Corner transmission	6-24529-00-0-1
4	Locking pin element	6-24539-00-0-1
3	Locking plate bottom	6-24666-00-0-1
3	Locking plate top	G-11071-00-0-1
1	Slit ventilation	6-25982-00-0-0

Optional parts and drilling jig

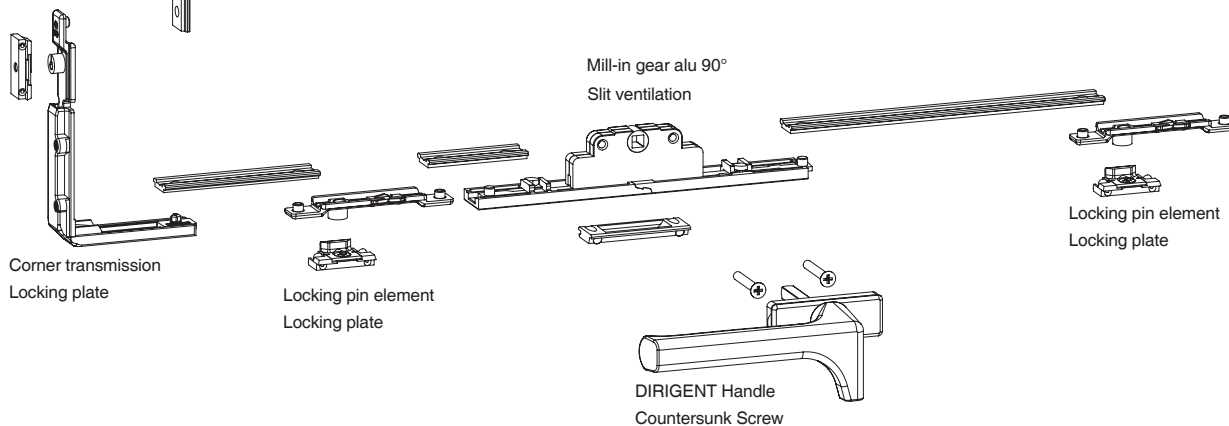
Automatic 180° locking latch	9-20017-00-0-*
Bag of limiting stay	K-13393-00-0-1
Drilling jig for horizontal pivot hinge	6-27419-00-0-0

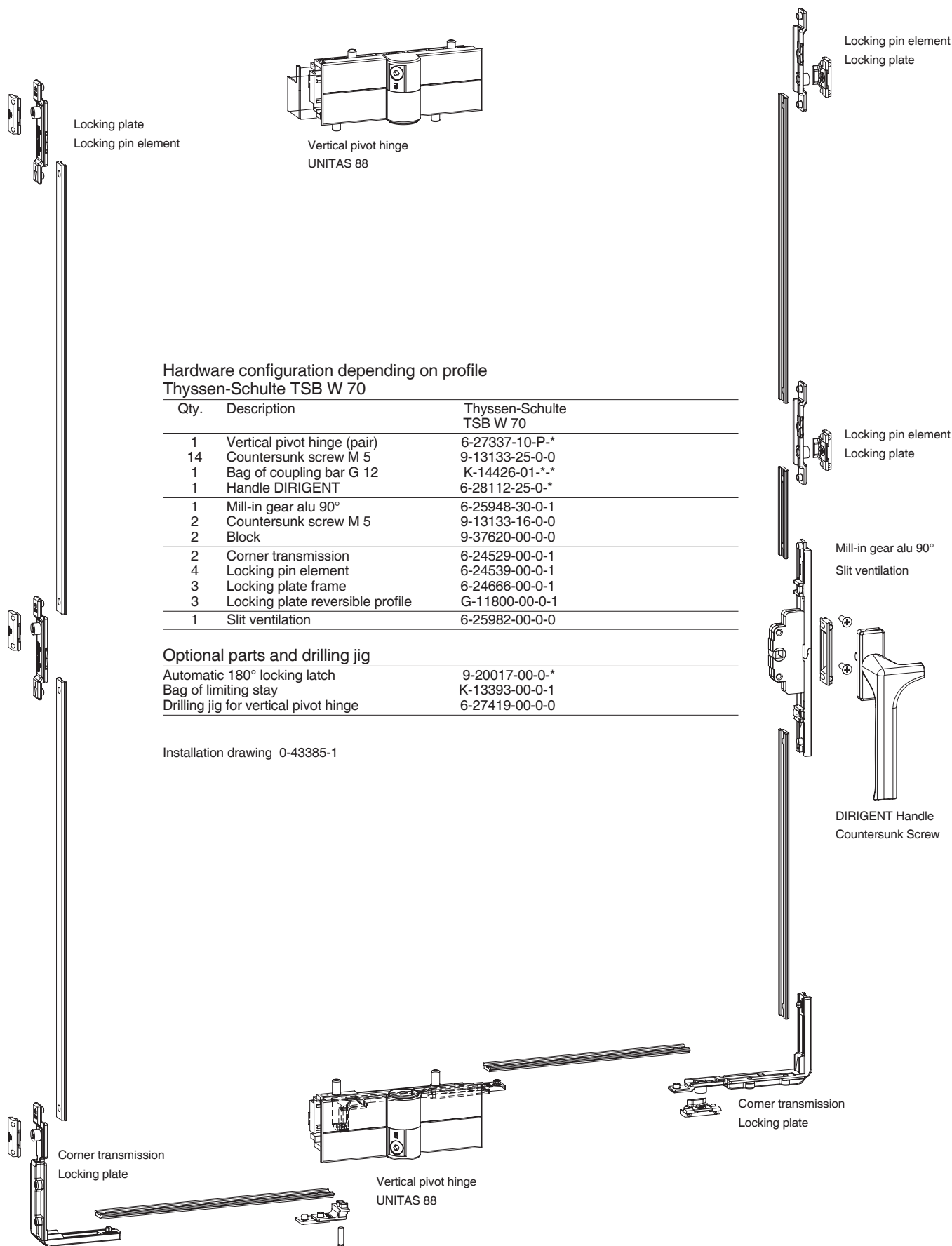


Horizontal pivot hinge
UNITAS 18/3



Installation drawing 0-45160-1





Hardware configuration depending on profile Thyssen-Schulte TSB W 70

Qty.	Description	Thyssen-Schulte TSB W 70
1	Vertical pivot hinge (pair)	6-27337-10-P.*
14	Countersunk screw M 5	9-13133-25-0-0
1	Bag of coupling bar G 12	K-14426-01-.*.*
1	Handle DIRIGENT	6-28112-25-0.*
1	Mill-in gear alu 90°	6-25948-30-0-1
2	Countersunk screw M 5	9-13133-16-0-0
2	Block	9-37620-00-0-0
2	Corner transmission	6-24529-00-0-1
4	Locking pin element	6-24539-00-0-1
3	Locking plate frame	6-24666-00-0-1
3	Locking plate reversible profile	G-11800-00-0-1
1	Slit ventilation	6-25982-00-0-0

Optional parts and drilling jig

	Automatic 180° locking latch	9-20017-00-0.*
	Bag of limiting stay	K-13393-00-0-1
	Drilling jig for vertical pivot hinge	6-27419-00-0-0

Installation drawing 0-43385-1

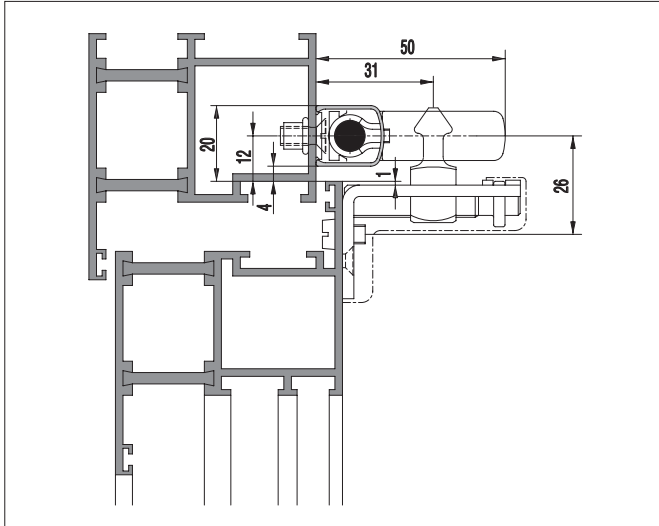
Fanlight openers and electric drivers

Product profile

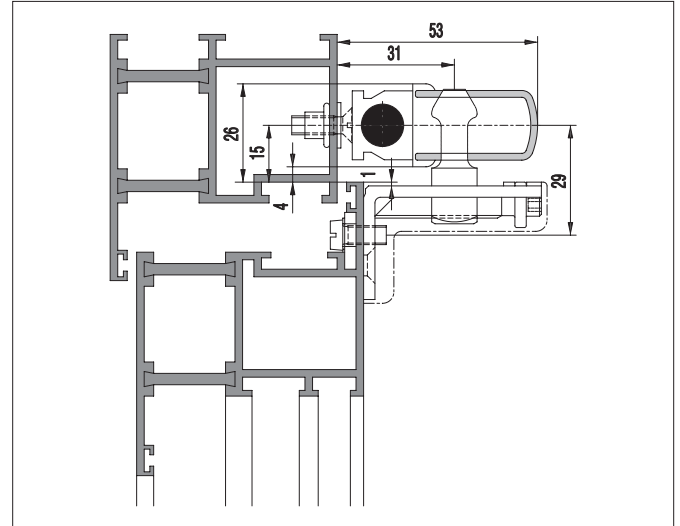
Fanlight Opener, face-fixed for aluminum profiles



Installation dimension turn-only



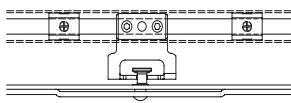
VENTUS F 200 fanlight opener



VENTUS F 300 fanlight opener

Security F200 fanlight opener

UNI-JET locking system in the sash groove



Hardware configuration depending on sash overlap and groove

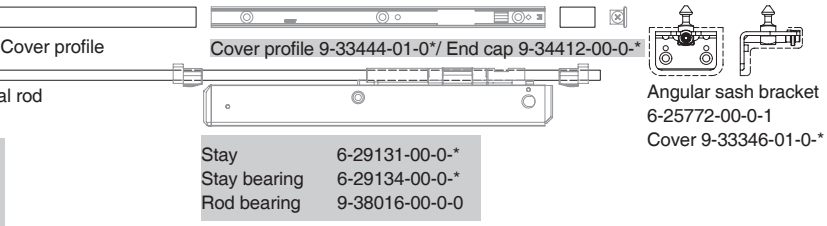
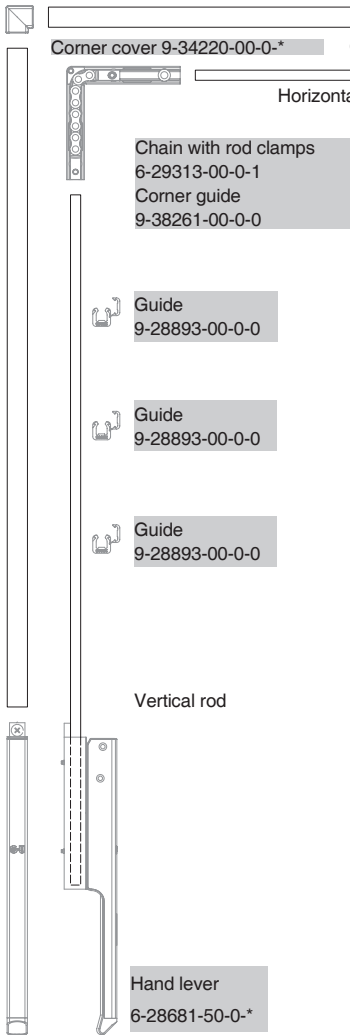
Application	Size 1 Aluminum	Size 2 Aluminum	Size 3 Aluminum
Sash overlap	18 mm	18 mm	20 mm – 22 mm
Groove	9 mm	9 mm or 13 mm	9 mm or 13 mm
Article No.	K-16718-01-0-*	K-16718-02-0-*	K-16718-03-0-*
Contents:			
1 Jet engaging fork	6-32154-01-0-1	6-32154-02-0-1	6-32154-03-0-1
2 Guides	9-28893-00-0-0	9-28893-00-0-0	9-28893-00-0-0
1 Cover profile [1]	9-39509-00-0-*	9-39509-00-0-*	9-39509-00-0-*

[1] = length 250 mm – with cut-out

Installation drawing 0-43813

VENTUS F200 fanlight opener

Top-hung fanlight standard version-with hand lever

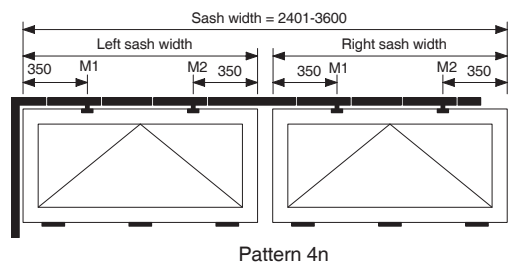
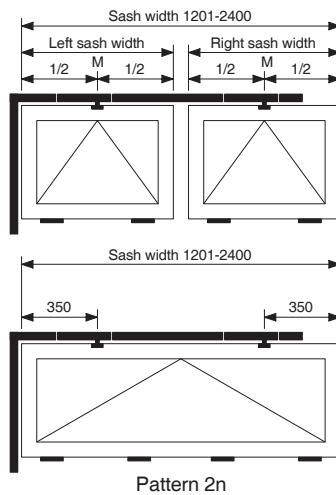
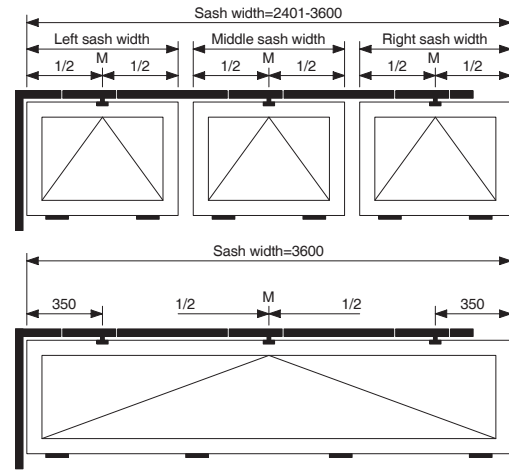
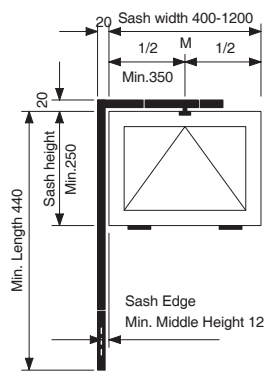


Hardware configuration for patterns 1 to 4n depending on stays

Fanlight opener with lever handle

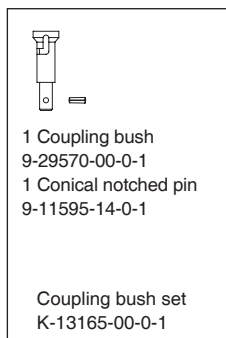
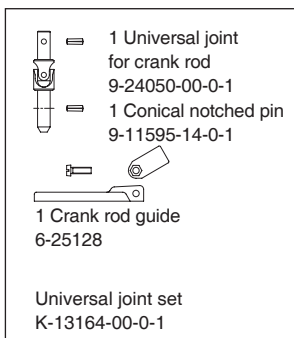
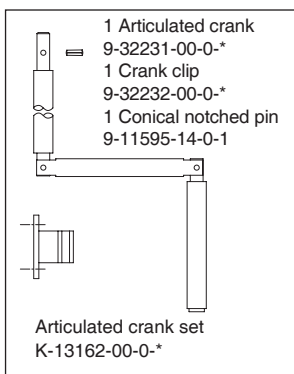
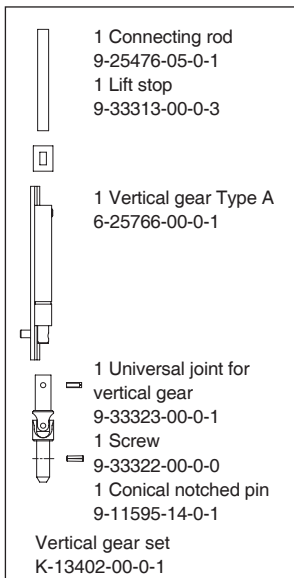
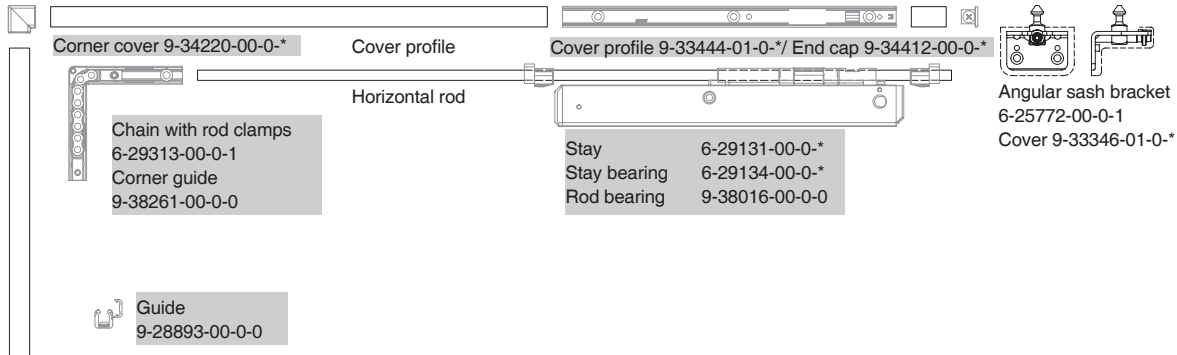
Qty.	Description	Article No.
1 2n 3n 4n	VENTUS F 200 basic hardware set With hand lever-Without sash bracket	K-15011-00-0-*
1 2 3	VENTUS F 200 opening stay set Without sash bracket	K-15013-00-0-*
1 2 3 4	VENTUS F 200Sash bracket set[1] Angular sash bracket for 0-25 mm overlap	K-15225-00-0-*
1 1 1 1	Horizontal and vertical rod	
	Rod $\Phi 8$, size18-length 1850mm	9-25476-18-0-1
	Rod $\Phi 8$, size33-length 3300mm	9-25476-33-0-1
alternatively:	Rod $\Phi 8$, size60-stock length 6000mm	9-25476-60-0-1
1 1 1 1	Cover profile	
	Cover profile, size 01-length 62mm	9-33444-01-0-*
	Cover profile, size 18-length 1800mm	9-33444-18-0-*
	Cover profile, size 33-length 3050mm	9-33444-33-0-*
alternatively:	Cover profile, size 60-stock length 6000mm	9-33444-60-0-*

Installation drawing: 0-43700



VENTUS F200 fanlight opener

Top-hung fanlight standard version-with articulated crank and vertical gear



Hardware configuration for patterns 1 to 4n depending on stays
Opener with vertical gear

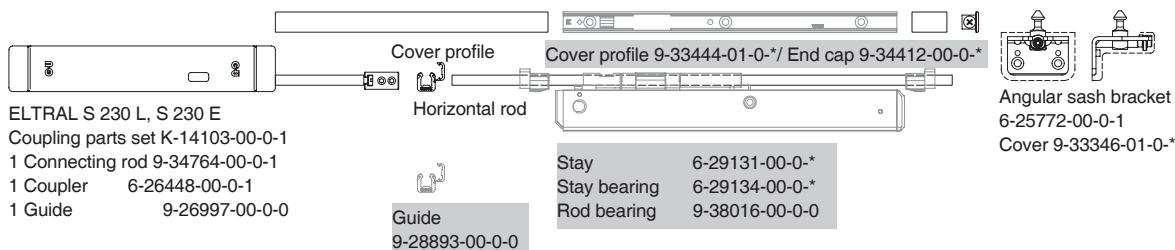
Qty.	1	2n	3n	4n	Description	Article No.			
1	1	1	1	1	VENTUS F 200 basic hardware set Without hand lever-Without sash bracket	K-15012-00-0-*			
		1	2	3	VENTUS F 200 opening stay set Without sash bracket	K-15013-00-0-*			
1	2	3	4		VENTUS F 200 opening stay set[1] Angular sash bracket for 0-25 mm overlap	K-15225-00-0-*			
1	1	1	1		Horizontal rod				
					Rod Φ 8, size 06-length 600mm	9-25476-06-0-1			
					Rod Φ 8, size 18-length 1850mm	9-25476-18-0-1			
					Rod Φ 8, size 33-length 3300mm	9-25476-33-0-1			
alternatively:					Rod Φ 8, size 60-stock length 6000mm	9-25476-60-0-1			
1	1	1	1	1	Cover profile				
					Cover profile, size 01-length 62mm	9-33444-01-0-*			
					Cover profile, size 06-length 800mm	9-33444-06-0-*			
					Cover profile, size 18-length 1800mm	9-33444-18-0-*			
					Cover profile, size 33-length 3050mm	9-33444-33-0-*			
alternatively:					Cover profile, size 60-stock length 6000mm	9-33444-60-0-*			
1	1	1	1	1	Vertical gear Type A	K-13402-00-0-1			
a	b	c	d	e	f	g	h		
1	1	1	1	1	1	1	1	Crank rod	
								Aluminium tube, 5000mm stock length	9-32230-50-0-*
1	1	1	1	1	1	1	1	Articulated crank set	K-13162-00-0-*
								Universal joint set for crank rod	K-13164-00-0-1
1	1	1	1	1	1	1	1	Coupling bush set	K-13165-00-0-1

Installation drawings:0-43700

10

VENTUS F200 fanlight opener

Top-hung fanlight standard version-ELTRAL installed at top



ELTRAL 300
 Coupling parts set K-15216-00-0-1
 1 Connecting rod 9-31018-01-0-1
 1 Coupler 6-29592-00-0-1

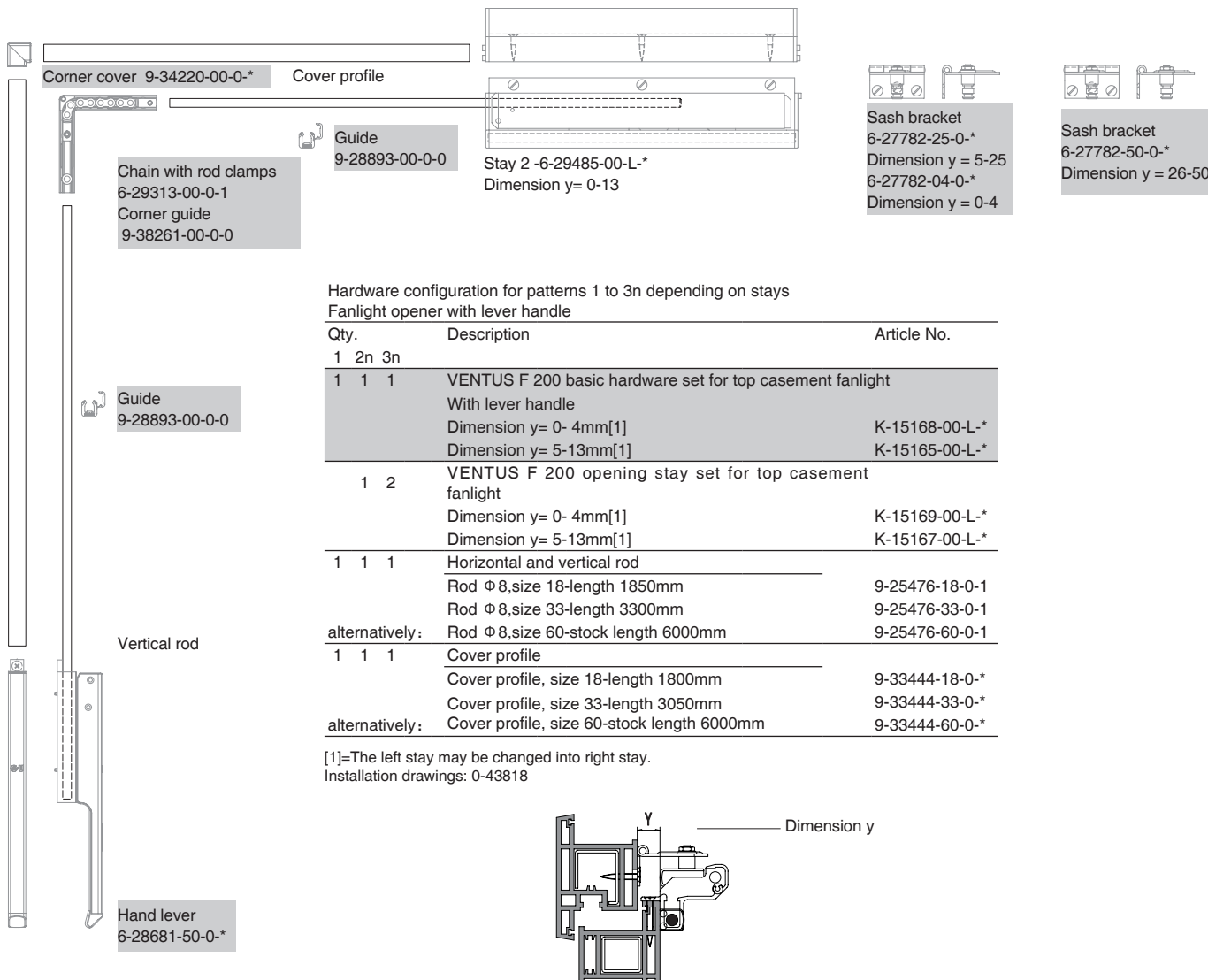
Hardware configuration for patterns 1 to 4n depending on stays
 Opener with ELTRAL at top

Qty.	Description	Article No.
1 2n 3n 4n		
1 2 3 4	VENTUS F 200 opening stay set Without sash bracket	K-15013-00-0-*
1 1 1 1	End cap	9-34412-00-0-*
1 2 3 4	VENTUS F 200 sash bracket set[1] Angular sash bracket for 0-25 mm overlap	K-15225-00-0-*
1 1 1 1	Horizontal rod	
	Rod Φ 8, size 06-length 600mm	9-25476-06-0-1
	Rod Φ 8, size 18-length 185mm	9-25476-18-0-1
	Rod Φ 8, size 33-length 3300mm	9-25476-33-0-1
alternatively:	Rod Φ 8, size 60-stock length 6000mm	9-25476-60-0-1
1 1 1 1	Cover profile	
	Cover profile, size 01-length 62mm	9-33444-01-0-*
	Cover profile, size 06-length 800mm	9-33444-06-0-*
	Cover profile, size 18-length 1800mm	9-33444-18-0-*
	Cover profile, size 33-length 3050mm	9-33444-33-0-*
alternatively:	Cover profile, size 60-stock length 6000mm	9-33444-60-0-*
1 1 1 1	ELTRAL S 230 L electric drive	6-31730-00-0-*
alternatively:	ELTRAL S 230 E electric drive	6-31732-00-0-*
1 1 1 1	Connecting parts set, W=650-3600	K-14103-00-0-1
alternatively:	ELTRAL 300 E1 electric drive	9-31020-01-0-*
alternatively:	Connecting parts set 300,W=650-3600	K-15216-00-0-1

Installation drawings:
 Standard 0-43700, ELTRAL:0-43791

VENTUS F200 fanlight opener

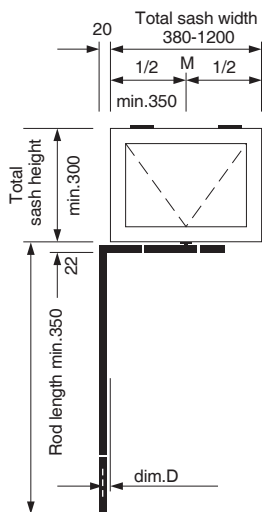
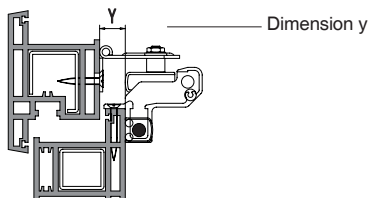
Casement fanlight standard version-with hand lever



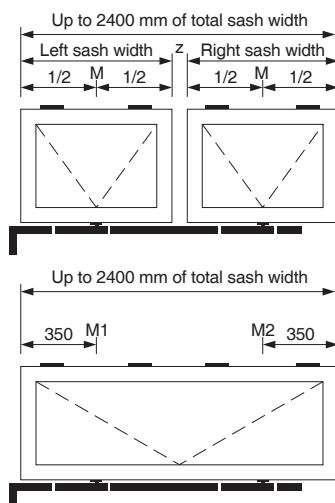
Hardware configuration for patterns 1 to 3n depending on stays
Fanlight opener with lever handle

Qty.	Description	Article No.
1 2n 3n		
1 1 1	VENTUS F 200 basic hardware set for top casement fanlight With lever handle Dimension y= 0- 4mm[1] Dimension y= 5-13mm[1]	K-15168-00-L-* K-15165-00-L-*
1 2	VENTUS F 200 opening stay set for top casement fanlight Dimension y= 0- 4mm[1] Dimension y= 5-13mm[1]	K-15169-00-L-* K-15167-00-L-*
1 1 1	Horizontal and vertical rod Rod Φ 8, size 18-length 1850mm Rod Φ 8, size 33-length 3300mm Rod Φ 8, size 60-stock length 6000mm	9-25476-18-0-1 9-25476-33-0-1 9-25476-60-0-1
1 1 1	Cover profile Cover profile, size 18-length 1800mm Cover profile, size 33-length 3050mm alternatively: Cover profile, size 60-stock length 6000mm	9-33444-18-0-* 9-33444-33-0-* 9-33444-60-0-*

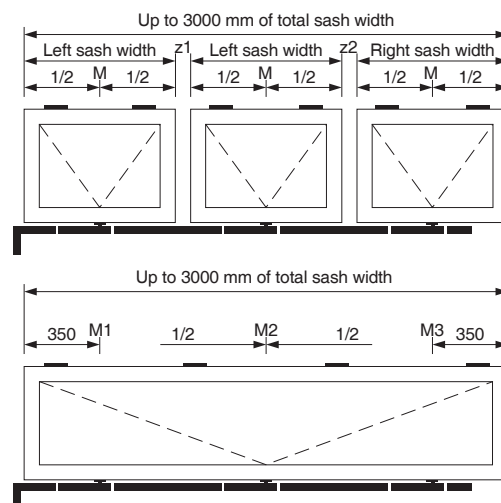
[1]=The left stay may be changed into right stay.
Installation drawings: 0-43818



Pattern 1

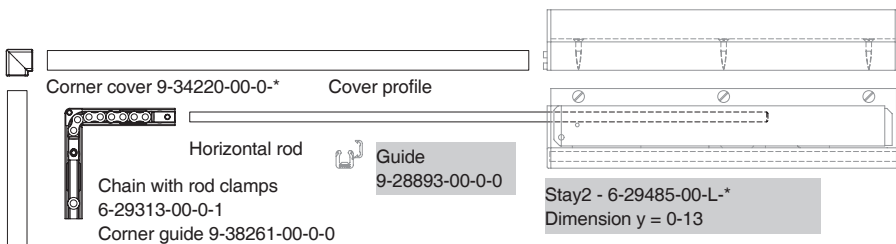


Pattern 2n



Pattern 3n

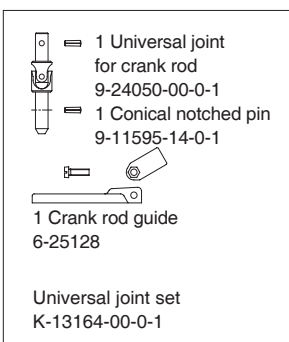
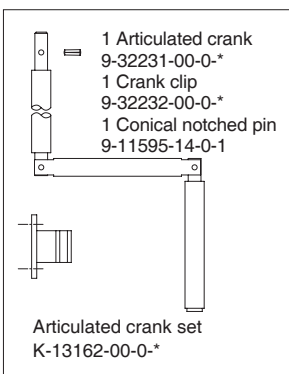
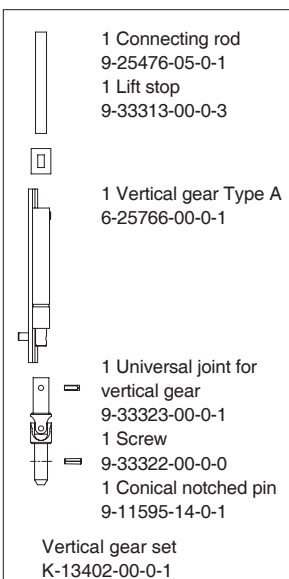
10



Angular sash bracket
6-27782-04-0-*
Dimension y = 0-4



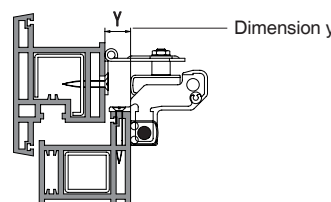
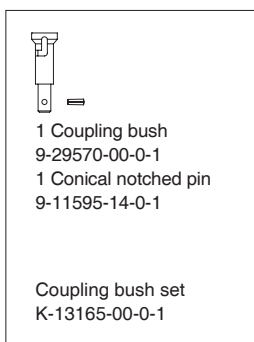
Angular sash bracket
6-27782-25-0-*
Dimension y = 5-25



Hardware configuration for patterns 1 to 3n depending on stays
Opener with vertical gear

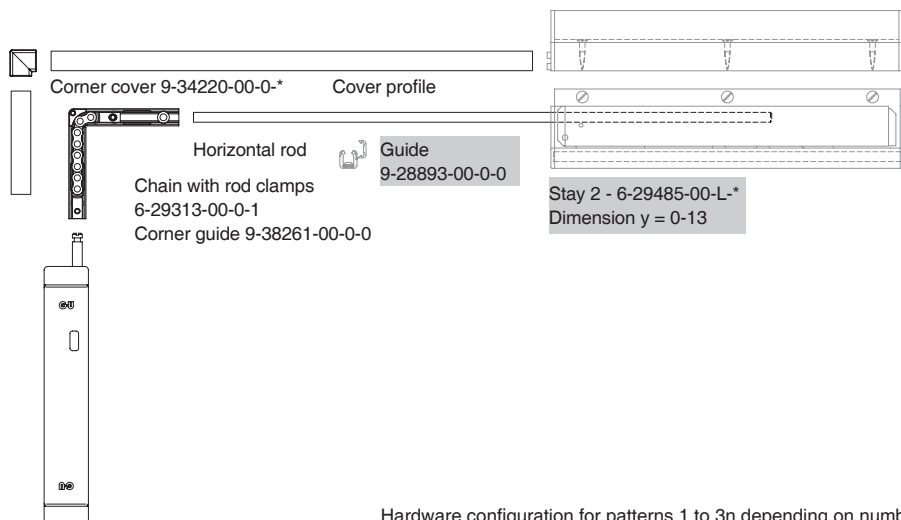
Qty.				Description	Article No.					
1	2n	3n								
1	2	3	VENTUS F 200 basic hardware set for top casement fanlight							
			With hand lever							
			Dimension y= 0- 4mm[1]			K-15169-00-L-*				
			Dimension y= 5-13mm[1]			K-15167-00-L-*				
1	1	1	Chain with rod clamps	6-29313-00-0-1						
1	1	1	Corner guide	9-38261-00-0-0						
1	1	1	Corner guide cover	9-34220-00-0-*						
1	1	1	Horizontal rod							
			Rod Φ 8, size 06-length 600mm	9-25476-06-0-1						
			Rod Φ 8, size 18-length 1850mm	9-25476-18-0-1						
			Rod Φ 8, size 33-length 3300mm	9-25476-33-0-1						
			Rod Φ 8, size 60-stock length 6000mm	9-25476-60-0-1						
alternatively:										
1	1	1	Cover profile							
			Cover profile, size 06-length 800mm	9-33444-06-0-*						
			Cover profile, size 18-length 1800mm	9-33444-18-0-*						
			Cover profile, size 33-length 3050mm	9-33444-33-0-*						
			Cover profile, size 60-stock length 6000mm	9-33444-60-0-*						
alternatively:										
1	1	1	Vertical gear Type A	K-13402-00-0-1						
a b c d e f g h										
1	1	1	1	1	1	1	1	Crank rod		
								Aluminium tube, 5000mm stock length	9-32230-50-0-*	
1	1	1	1	1	1	1	1	Articulated crank set	K-13162-00-0-*	
								Universal joint set for crank rod	K-13164-00-0-1	
1	1	1	1	1	1	1	1	Coupling bush set	K-13165-00-0-1	

[1]=The left stay may be changed into right stay.
Installation drawings: 0-43818



VENTUS F200 fanlight opener

Casement fanlight standard version-ELTRAL installed at side vertically

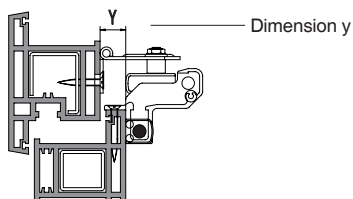


ELTRAL S 230 L, S 230 E
Connecting rod
9-34764-00-0-1

Hardware configuration for patterns 1 to 3n depending on number of stays
Opener with ELTRAL at side

Qty.	Description			Article No.	
1	2n	3n			
1	2	3	VENTUS F 200 basic hardware set for top casement fanlight Dimension y= 0- 4mm[1] Dimension y= 5-13mm[1]	K-15169-00-L- K-15167-00-L-*	
1	1	1	Chain with rod clamps	6-29313-00-0-1	
1	1	1	Corner guide	9-38261-00-0-0	
1	1	1	Corner guide cover	9-34220-00-0-*	
1	1	1	Horizontal rod		
			Rod Φ 8, size 06-length 600mm	9-25476-06-0-1	
			Rod Φ 8, size 18-length 1850mm	9-25476-18-0-1	
			Rod Φ 8, size 33-length 3300mm	9-25476-33-0-1	
alternatively:			Rod Φ 8, size 60-stock length 6000mm	9-25476-60-0-1	
1	1	1	Cover profile		
			Cover profile, size 06-length 800mm	9-33444-06-0-*	
			Cover profile, size 18-length 1800mm	9-33444-18-0-*	
			Cover profile, size 33-length 3050mm	9-33444-33-0-*	
alternatively:			Cover profile, size 60-stock length 6000mm	9-33444-60-0-*	
1	1	1	1	ELTRAL S 230 L electric drive	6-31730-00-0-*
alternatively:				ELTRAL S 230 E electric drive	6-31732-00-0-*
1	1	1		Connecting rod with 8mm diameter, Width: 400-3000	9-34764-00-0-1

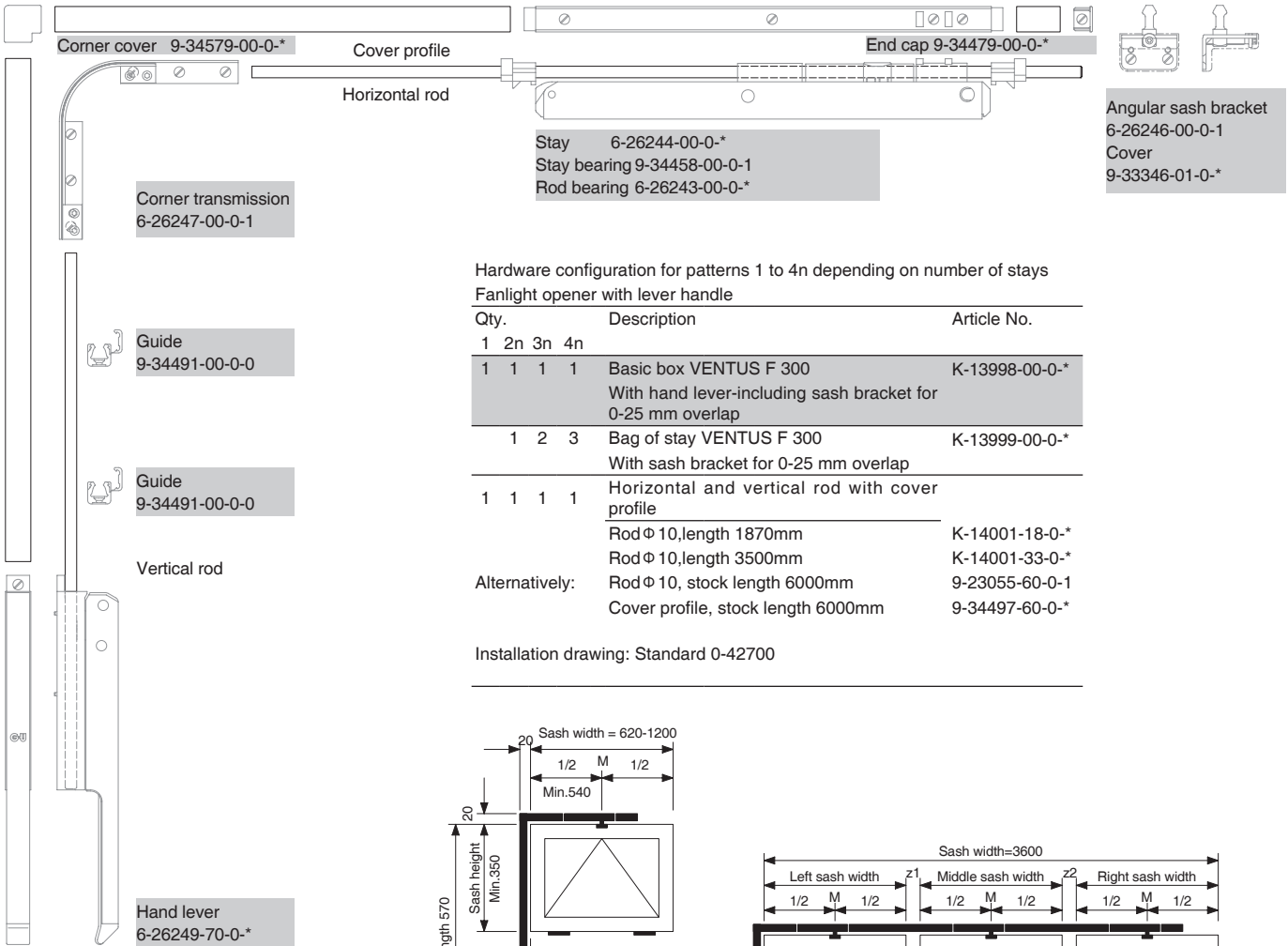
[1]=The left stay may be changed into right stay.
Installation drawings: 0-43831



10

VENTUS F300 fanlight opener

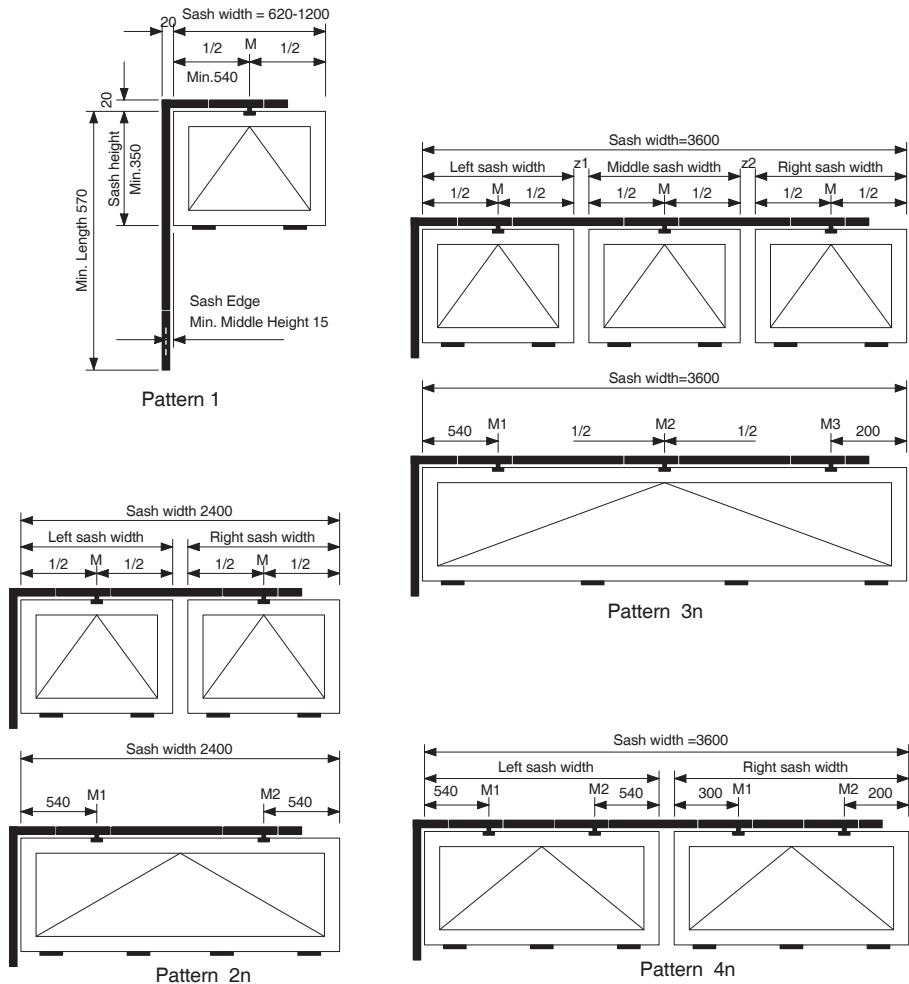
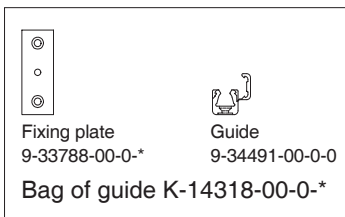
Side-hung fanlight standard version-with hand lever



Hardware configuration for patterns 1 to 4n depending on number of stays
Fanlight opener with lever handle

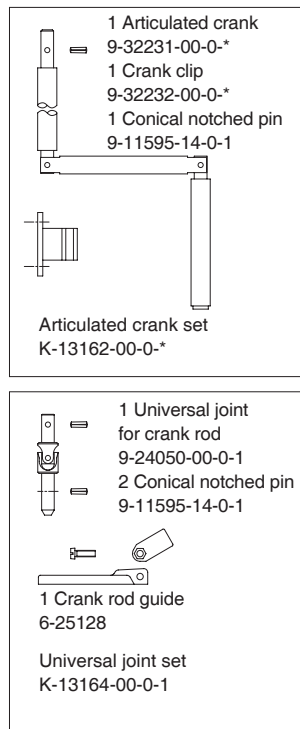
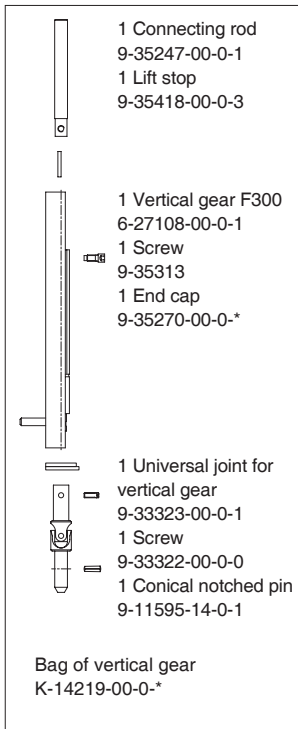
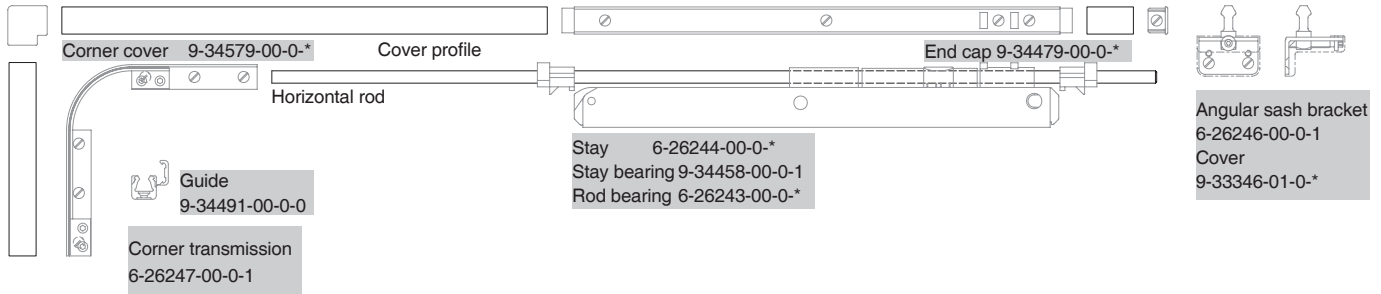
Qty.	1	2n	3n	4n	Description	Article No.
	1	1	1	1	Basic box VENTUS F 300 With hand lever-including sash bracket for 0-25 mm overlap	K-13998-00-0-*
	1	2	3		Bag of stay VENTUS F 300 With sash bracket for 0-25 mm overlap	K-13999-00-0-*
	1	1	1	1	Horizontal and vertical rod with cover profile	
					Rod Φ 10,length 1870mm	K-14001-18-0-*
					Rod Φ 10,length 3500mm	K-14001-33-0-*
Alternatively:					Rod Φ 10, stock length 6000mm	9-23055-60-0-1
					Cover profile, stock length 6000mm	9-34497-60-0-*

Installation drawing: Standard 0-42700



VENTUS F300 fanlight opener

Side-hung fanlight standard version- with articulated crank and vertical gear

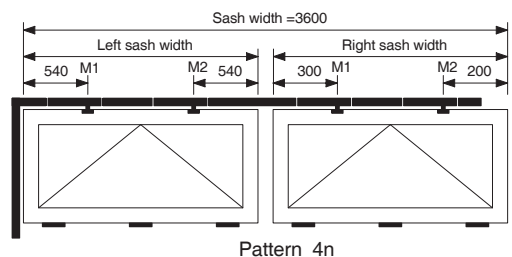
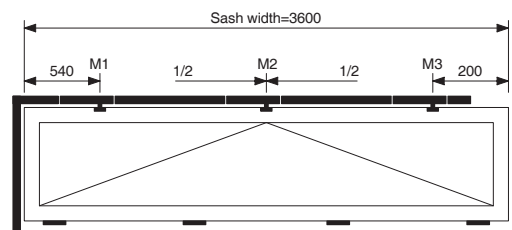
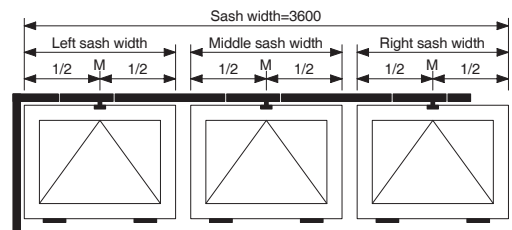
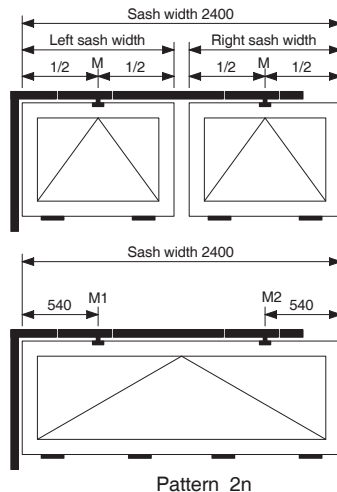
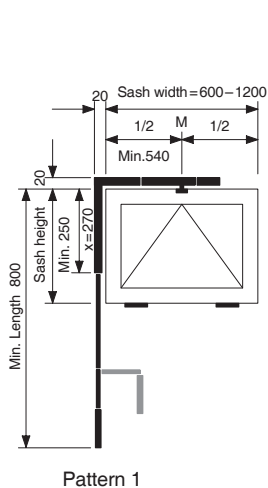
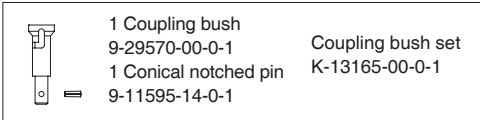


Hardware configuration for patterns 1 to 4n depending on number of stays

Opener with vertical gear

Qty.	1	2n	3n	4n	Description	Article No.
1	1	1	1	1	Basic box VENTUS F 300 Without hand lever-Including sash bracket for 0-25 mm overlap	K-14320-00-0-*
		1	2	3	Bag of stay VENTUS F 300 With sash bracket for 0-25 mm overlap	K-13999-00-0-*
1	1	1	1	1	Horizontal rod with cover profile	
					Rod Φ 10, length 600mm	K-14001-06-0-*
					Rod Φ 10, length 1870mm	K-14001-18-0-*
					Rod Φ 10, length 3500mm	K-14001-33-0-*
Alternatively:					Rod Φ 10, stock length 6000mm	9-23055-60-0-1
					Cover profile, stock length 6000mm	9-34497-60-0-*
1	1	1	1	1	Bag of vertical gear F300	K-14219-00-0-*
1	1	1	1	1	Crank rod-to be cutted, stock length 5m	9-32230-50-0-*
1	1	1	1	1	Bag of hinged crank	K-13162-00-0-*
1	1	1	1	1	Bag of universal joint for crank rod	K-13164-00-0-*
1	1	1	1	1	Bag of coupling horn	K-13165-00-0-*

Installation drawing: Standard 0-42700





F 200 fanlight opener

Lever handle, Stroke 40 mm 6-28681-40-0-*

Lever handle lockable, Stroke 50 mm 6-32100-50-0-*

Lever handle lockable, Stroke 40 mm 6-32100-40-0-*

Guide 9-28893-00-0-0

Accessories for vertical rod \varnothing 8 mm

Sleeve 6-22842-00-0-1

Guide 9-28893-00-0-0

Guide for corner transmission 9-33711-00-0-*

Swivelling level handle, Stroke 50 mm K-12608-00-0-*

Installation drawing 0-44366

Stay arm bearing 6-29134-00-0-*

Stay with lift-off security device 6-29589-00-0-*

Rod bearing(2) 9-38016-00-0-0

Fixing place for lever handle 9-33787-00-0-*

Bag of T angle VENTUS F 200

T cover 9-37591-00-0-*

Insert with brace 6-26267-00-0-1

T angle 9-34721-00-0-1

Rod clamp 6-26265-00-0-1

Chain with rod clamps 6-26268-00-0-1

Bow 9-34723-00-0-1

Bag of T angle VENTUS F 200 K-14194-00-0-*

Installation drawing 0-43822

F300 fanlight opener

Lever handle, Stroke 50 mm 6-26249-50-0-*

Lever handle lockable, Stroke 50 mm K-14242-50-0-*

Lever handle lockable, Stroke 70 mm K-14242-70-0-*

Guide 9-34491-00-0-0

Accessories for vertical rod \varnothing 10 mm

Sleeve 6-26813-00-0-1

Guide 9-34491-00-0-0

Stay with lift-off security device 6-27451-00-0-*

Stay arm bearing 6-26244-00-0-*

Rod bearing(2) 9-34458-00-0-0

Bag of T angle VENTUS F 300

Profile cover 9-35227-00-0-*

Guide 9-34491-00-0-0

T angle 6-27089-00-0-1

Bag of T angle VENTUS F 300 K-14201-00-R-*

(Left and right can be changed)

Installation drawing 0-43037

Electric drives

230V Electric drives



ELTRAL S 230 L

6-31730-00-0-*

ELTRAL S 230 E

6-31732-00-0-*



ELTRAL 300 E1

9-31020-01-0-*

24V Electric drives



ELTRAL S 24 L

6-31734-00-0-*



ELTRAL 300/24

9-31021-00-0-*

Radio remote control



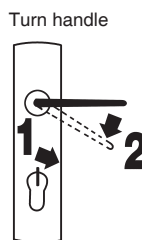
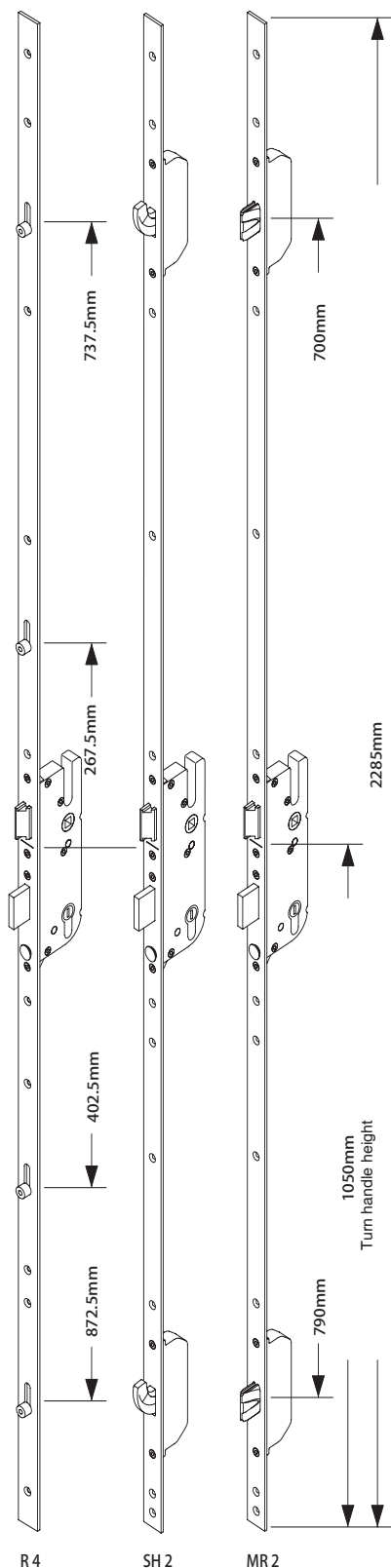
Hand-held transmitter
42 FH
9-42496-00-0-0



Radio actuator FAJ 6 UP
9-42495-00-0-0
Installation in flush-mounted
socket: 230 V AC 50Hz
Power rating: 250 V ~, 700 VA

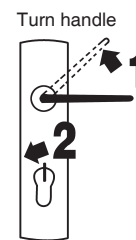


Multi-point lock for security door



Open

1. Turn the key, and open the multi-point lock of the door.
2. Press the turn handle, and open multi-point lock of the door.



Close

1. Lift the turn handle, and close multi-point lock of the door.
2. Turn the key, and open multi-point lock of the door.

SECURY multi-point door lock

Specifications				PU	Article No.
SECURY-EUROPA R 4[1]					
Knob bolt, dead bolt, turn handle height: 1050mm, lock pin with rings					
Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1730-2285	16	8	5	6-32159-01-0-1
35/92	1730-2285	16	8	5	6-30710-AQ-0-1
28/92	1730-2285	16	8	5	6-32159-02-0-1

SECURY multi-point door lock

Specifications				PU	Article No.
SECURY-EUROPA R 4[1]					
Knob bolt, dead bolt, turn handle height: 1050mm, lock pin without rings					
Axis distance	Sash height	Lock plate width	Mandrel		
35/92	1730-2285	16	8	5	6-32231-01-0-1
30/92	1730-2285	16	8	5	6-32231-03-0-1
28/92	1730-2285	16	8	5	6-32231-02-0-1

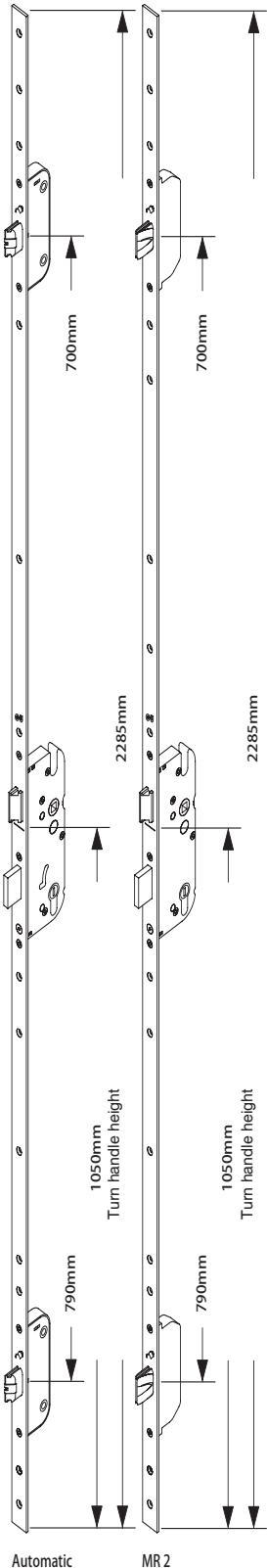
SECURY multi-point door lock

Specifications				PU	Article No.
SECURY-EUROPA SH 2					
Knob bolt, dead bolt, turn handle height: 1050mm, hooked lock pin					
Axis distance	Sash height	Lock plate width	Mandrel		
35/92	1730-2285	16	8	5	6-32201-01-0-1
45/92	1730-2285	16	8	5	6-32201-02-0-1

SECURY multi-point door lock

Specifications				PU	Article No.
SECURY-EUROPA MR 2					
Knob bolt, dead bolt, turn handle height: 1050mm, Flat thick lock pin					
Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1730-2285	16	8	5	6-32217-02-0-1
35/92	1730-2285	16	8	5	6-32217-01-0-1

[1]Europa R4 dynamic lock plate has racks on both top and bottom, can be connected with other lock parts after cut.



SECURY multi-point door lock

Specifications PU Article No.

SECURY-Automatic

Knob bolt, dead bolt, turn handle height: 1050mm, top & bottom automatic lock bolt

Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1735-2285	16	8	5	6-29041-31-0-*
40/92	1735-2285	16	8	5	6-29041-01-0-*
35/92	1735-2285	16	8	5	6-29037-31-0-*

SECURY multi-point door lock

Specifications PU Article No.

SECURY MR 2

Knob bolt, dead bolt, turn handle height: 1050mm, flat thick lock pin

Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1735-2285	16	8	5	6-31530-11-0-*
40/92	1735-2285	16	8	5	6-31528-11-0-*
35/92	1735-2285	16	8	5	6-31541-11-0-*
30/92	1735-2285	16	8	5	6-31526-11-0-*

SECURY multi-point door lock

Specifications PU Article No.

SECURY SH2

Knob bolt, dead bolt, turn handle height: 1050mm, hooked lock pin

Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1735-2285	16	8	5	6-27597-01-0-*
40/92	1735-2285	16	8	5	6-27596-01-0-*
35/92	1735-2285	16	8	5	6-27595-01-0-*

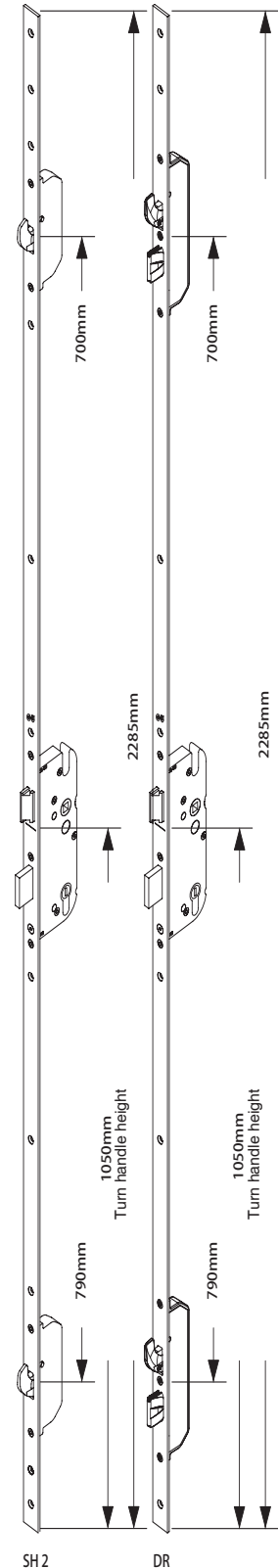
SECURY multi-point door lock

Specifications PU Article No.

SECURY DR

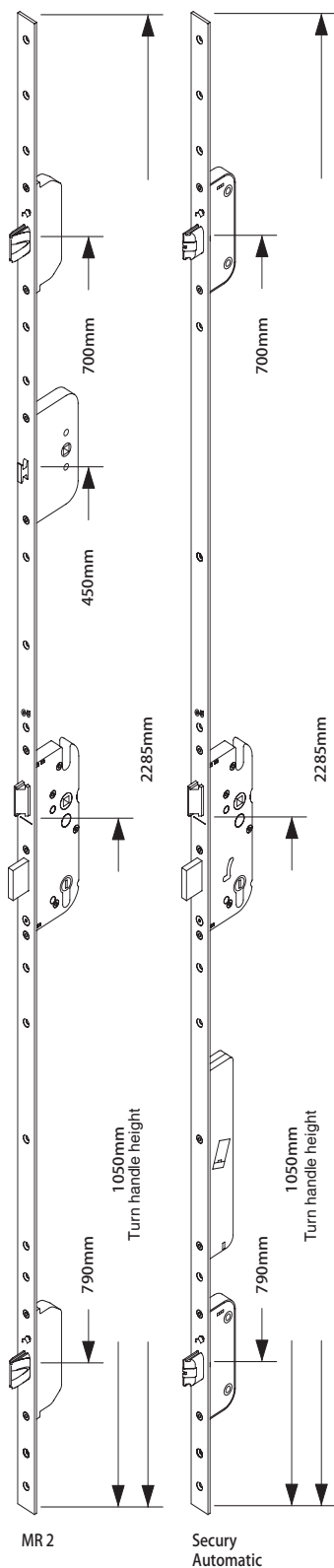
Knob bolt, dead bolt, turn handle height: 1050mm, top & bottom double lock bolt

Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1805-2285	16	8	5	6-31788-01-0-*
40/92	1805-2285	16	8	5	6-31787-01-0-*
35/92	1805-2285	16	8	5	6-31786-01-0-*



Automatic MR 2

SH 2 DR

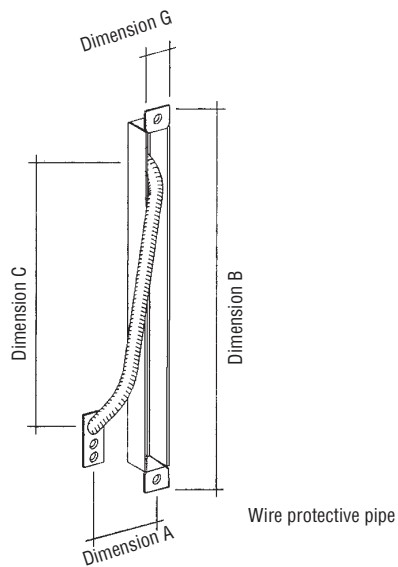


SECURY multi-point door lock

Specifications				PU	Article No.
SECURY-Automatic, with motor					
Knob bolt, dead bolt, turn handle height: 1050mm, top & bottom automatic lock bolt					
Axis distance	Sash height	Lock plate width	Mandrel		
45/92	1735-2285	16	8	5	6-29722-11-0-*
35/92	1735-2285	U24x6	8	5	6-29720-17-0-*
35/92	1735-2285	16	8	5	6-29720-11-0-*

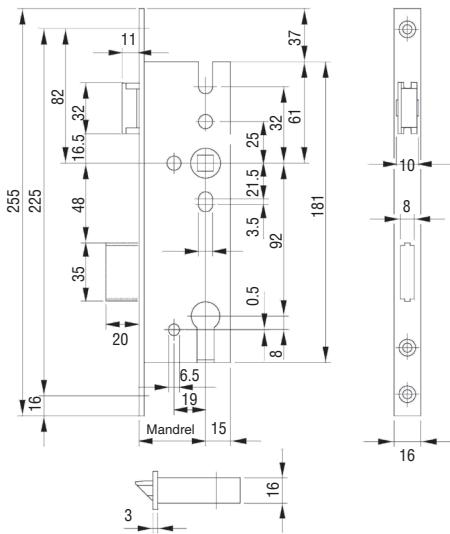
Concealed wire protective pipe
Used for safety door lock with electric control

Specifications		PU	Article No.
Concealed wire protective pipe, short			
Used for timber, PVC, metal cavity profile doors			
Box for protecting pipes			
Dimension A : more than 70mm, B: 260mm, C:190mm, G: 23mm			
Concealed wire protective pipe, long			
Used for timber, PVC, metal cavity profile doors			
Box for protecting pipes			
Dimension A : more than 70mm, B: 480mm, C: 410mm, G: 23mm			
Concealed wire protective pipe, short			
Used for timber and metal doors			
Dimension A: more than 70mm, B: 346mm, C: 280mm, G: 20mm			



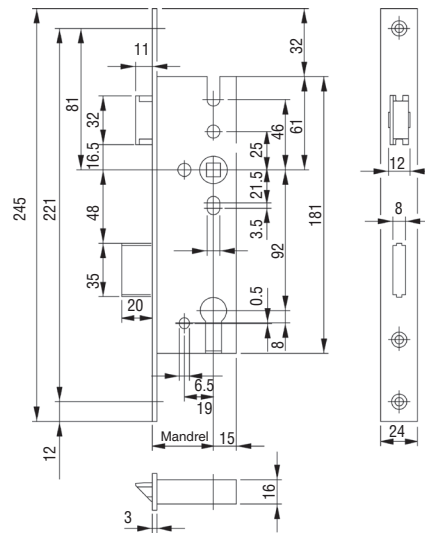
SECURY multi-point door lock

Specifications				PU	Article No.
SECURY MR 2, with burglary-resisting hasp					
Knob bolt, dead bolt, turn handle height: 1050mm, top & bottom thick lock bolt					
Axis distance	Sash height	Lock plate width	Mandrel		
50/92	1735-2285	16	8	5	6-31981-11-0-*
45/92	1735-2285	16	8	5	6-31778-11-0-*
40/92	1735-2285	U24x6	8	5	6-31918-17-0-*
35/92	1735-2285	16	8	5	6-31918-11-0-*



Narrow lock 1300
Square stainless steel panel: 3x16x255mm, Mandrel hole 8mm, Center distance 92mm

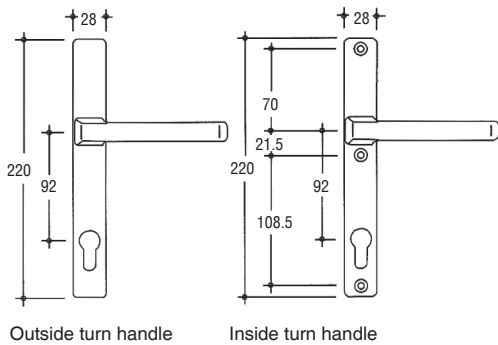
B 1300 000*
*=Mandrel dimension (apothem): 1-25mm, 2-30mm, 3-35mm, 4-40mm, 5-45mm



Narrow lock 1314
Square stainless steel panel: 3x24x245mm, Mandrel hole 8mm, Center distance 92mm

B 1314 000*
*=Mandrel dimension (apothem): 1-25mm, 2-30mm, 3-35mm, 4-40mm, 5-45mm

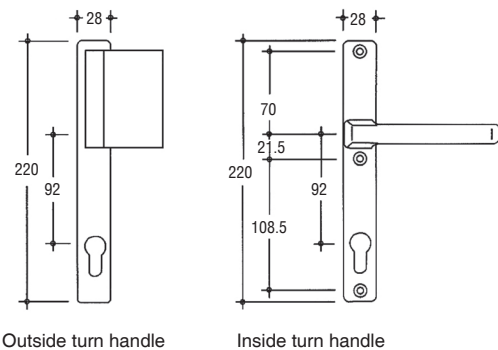
Inside and outside lock cover, lock cover width 28mm
Inside and outside turn handles (without spring)



DIRIGENT Monobloc door turn handle set

Description	PU	Color	Article No.
DIRIGENT T/S hardware			
Inside & Outside turn handle	5	Silver	H-01215-45-0-1
	5	Dark Brown	H-01215-45-0-5
	5	White	H-01215-45-0-7
Lock cover length	220mm		
Lock cover width	28mm		
Lock cover thickness	9mm		
Center distance	92mm		
Mandrel	8X130mm		
Screw M5x90mm	3		

Outside turn handle cover and inside lock cover-lock cover width 28mm
1 outside turn handle, 1 inside turn handle (without spring)



Description	PU	Color	Article No.
Monobloc hardware			
1 inside turn handle			
	2	Silver	H-01217-45-L/R-1
1 outside turn handle	2	Dark Brown	H-01217-45-L/R-5
	2	White	H-01217-45-L/R-7
Lock cover length	220mm		
Lock cover width	28mm		
Lock cover thickness	9mm		
Center distance	92mm		
Mandrel	8X130mm		
Screw M5x90mm	3		

Lock cylinder

Standard lock cylinder 59

Double lock cylinder

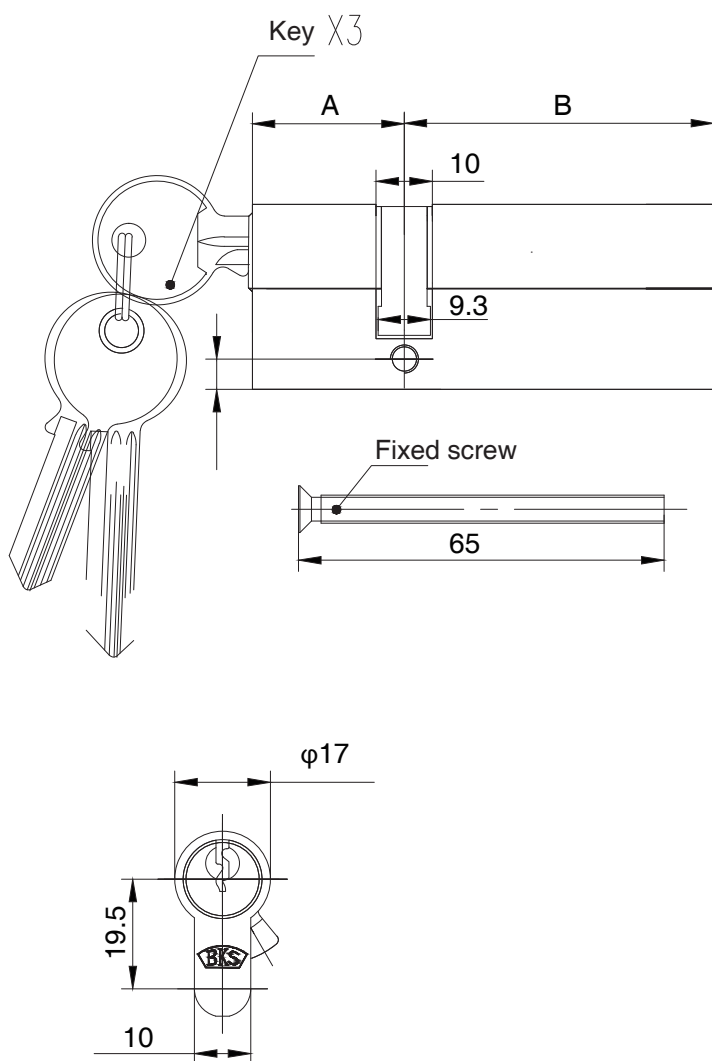
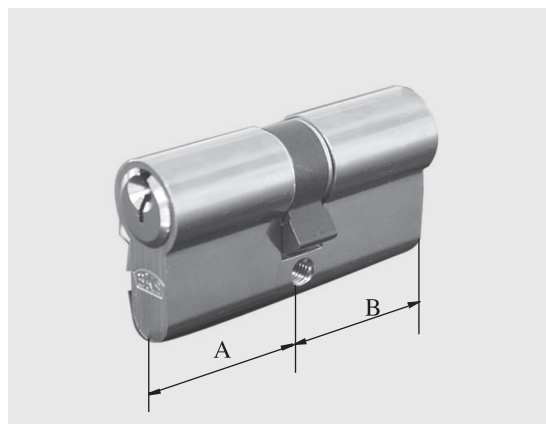


Standard lock cylinder 59

Cover, cylinder body are made of copper, nickel plating surface is polished, copper core axis, 3 copper alloy keys

M5x65 stainless steel screws, mushroom block, high-strength copper alloy spring.

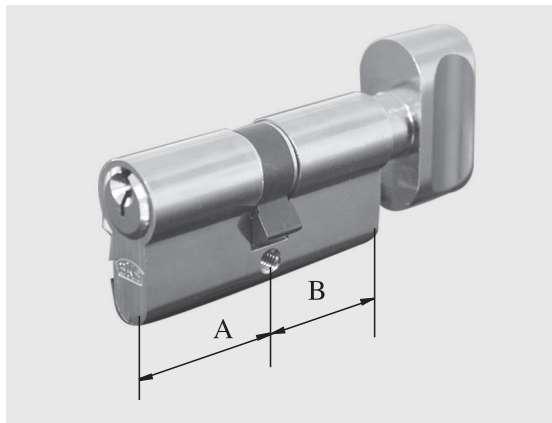
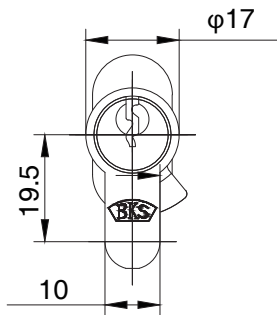
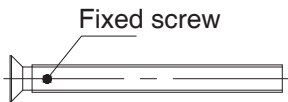
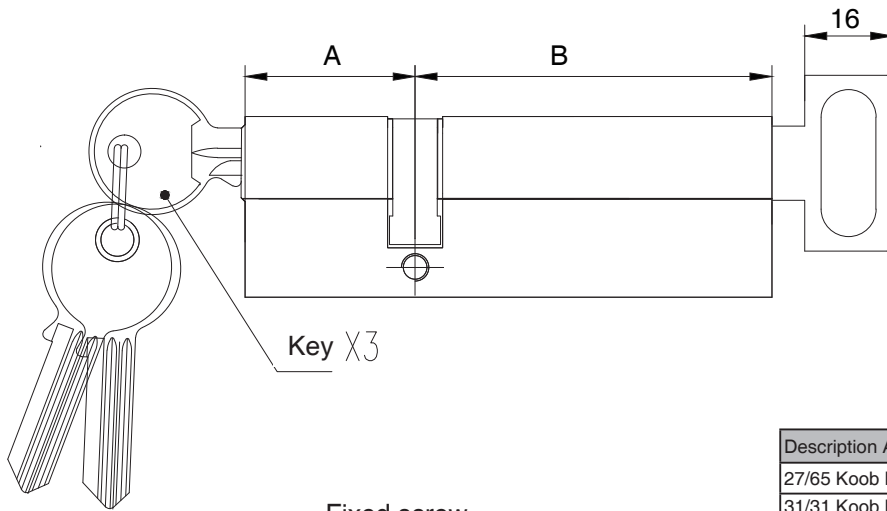
Packing: each box has one lock core, three keys, one M5x65 stainless steel screw.



Description A/B	Article No.
27/65 Double lock cylinder	C-B2765-59-0-1H
31/55 Double lock cylinder	C-B3155-59-0-1H
31/65 Double lock cylinder	C-B3165-59-0-1H
35/65 Double lock cylinder	C-B3565-59-0-1H
35/70 Double lock cylinder	C-B3570-59-0-1H
40/60 Double lock cylinder	C-B4060-59-0-1H
31/31 Double lock cylinder	C-B3131-59-0-1H
31/35 Double lock cylinder	C-B3135-59-0-1H
31/40 Double lock cylinder	C-B3140-59-0-1H
31/45 Double lock cylinder	C-B3145-59-0-1H
31/50 Double lock cylinder	C-B3150-59-0-1H
35/35 Double lock cylinder	C-B3535-59-0-1H
35/40 Double lock cylinder	C-B3540-59-0-1H
35/45 Double lock cylinder	C-B3545-59-0-1H
35/50 Double lock cylinder	C-B3550-59-0-1H
35/55 Double lock cylinder	C-B3555-59-0-1H
40/40 Double lock cylinder	C-B4040-59-0-1H
40/45 Double lock cylinder	C-B4045-59-0-1H
40/50 Double lock cylinder	C-B4050-59-0-1H
40/55 Double lock cylinder	C-B4055-59-0-1H
45/45 Double lock cylinder	C-B4545-59-0-1H
45/50 Double lock cylinder	C-B4550-59-0-1H
45/55 Double lock cylinder	C-B4555-59-0-1H
35/65 Double lock cylinder	C-B3565-59-0-1H
31/60 Double lock cylinder	C-B3160-59-0-1H
45/60 Double lock cylinder	C-B4560-59-0-1H
50/50 Double lock cylinder	C-B5050-59-0-1H
50/55 Double lock cylinder	C-B5055-59-0-1H
31/70 Double lock cylinder	C-B3170-59-0-1H
31/75 Double lock cylinder	C-B3175-59-0-1H
31/80 Double lock cylinder	C-B3180-59-0-1H
35/60 Double lock cylinder	C-B3560-59-0-1H
35/75 Double lock cylinder	C-B3575-59-0-1H
35/80 Double lock cylinder	C-B3580-59-0-1H
40/65 Double lock cylinder	C-B4065-59-0-1H
40/70 Double lock cylinder	C-B4070-59-0-1H
40/75 Double lock cylinder	C-B4075-59-0-1H
45/65 Double lock cylinder	C-B4565-59-0-1H
45/70 Double lock cylinder	C-B4570-59-0-1H

Standard lock cylinder 59

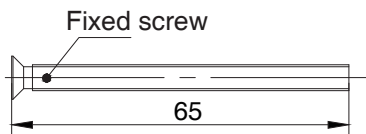
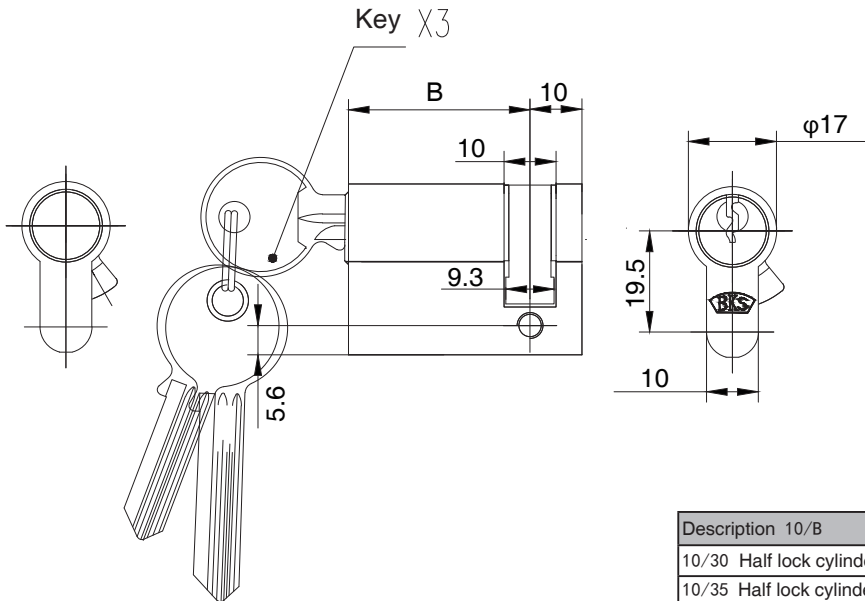
Knob lock cylinder



Description A/B	Article No.
27/65 Koob lock cylinder	C-B2765-59-T-1H
31/31 Koob lock cylinder	C-B3131-59-T-1H
31/65 Koob lock cylinder	C-B3165-59-T-1H
31/70 Koob lock cylinder	C-B3170-59-T-1H
35/35 Koob lock cylinder	C-B3535-59-T-1H
35/50 Koob lock cylinder	C-B3550-59-T-1H
40/40 Koob lock cylinder	C-B4040-59-T-1H
50/35 Koob lock cylinder	C-B5035-59-T-1H
50/50 Koob lock cylinder	C-B5050-59-T-1H
60/40 Koob lock cylinder	C-B6040-59-T-1H
70/31 Koob lock cylinder	C-B7031-59-T-1H
70/35 Koob lock cylinder	C-B7035-59-T-1H
31/35 Koob lock cylinder	C-B3135-59-T-1H
31/40 Koob lock cylinder	C-B3140-59-T-1H
31/45 Koob lock cylinder	C-B3145-59-T-1H
31/50 Koob lock cylinder	C-B3150-59-T-1H
31/55 Koob lock cylinder	C-B3155-59-T-1H
31/60 Koob lock cylinder	C-B3160-59-T-1H
31/75 Koob lock cylinder	C-B3175-59-T-1H
31/80 Koob lock cylinder	C-B3180-59-T-1H
35/40 Koob lock cylinder	C-B3540-59-T-1H
35/45 Koob lock cylinder	C-B3545-59-T-1H
35/55 Koob lock cylinder	C-B3555-59-T-1H
35/60 Koob lock cylinder	C-B3560-59-T-1H
35/65 Koob lock cylinder	C-B3565-59-T-1H
35/70 Koob lock cylinder	C-B3570-59-T-1H
75/40 Koob lock cylinder	C-B7540-59-T-1H
80/31 Koob lock cylinder	C-B8031-59-T-1H

Standard lock cylinder 59

Half lock cylinder



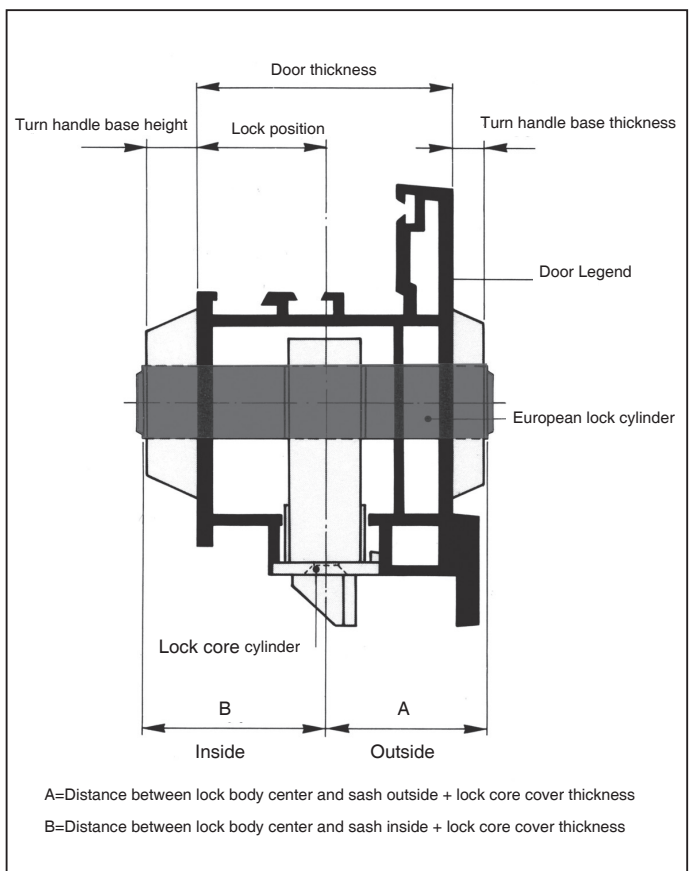
Description 10/B	Article No.
10/30 Half lock cylinder	C-B3110-59-0-1H
10/35 Half lock cylinder	C-B3510-59-0-1H
10/40 Half lock cylinder	C-B4010-59-0-1H
10/45 Half lock cylinder	C-B4510-59-0-1H
10/50 Half lock cylinder	C-B5010-59-0-1H
10/55 Half lock cylinder	C-B5510-59-0-1H

To determine the length of lock core, the following data must firstly confirm:

1. The type of lock core, such as a standard pattern or a round lock core
2. Door thickness
3. Thickness of outside base of the door turn handle
4. Thickness of inside base of the door turn handle
5. Position of lock core and lock body in door

In principle, the dimension of A and B of the lock core should be confirmed respectively according to the thickness of the base on both sides of the door turn handle. The outer side of the lock core should be slightly higher than the outer plane of the door turn handle base and shall not exceed the maximum 3mm.

For standard European lock core, the length of A and B, should measure to both sides according to the center of lock core mounting screw hole on the lock body protecting sheet. (see the right legend)

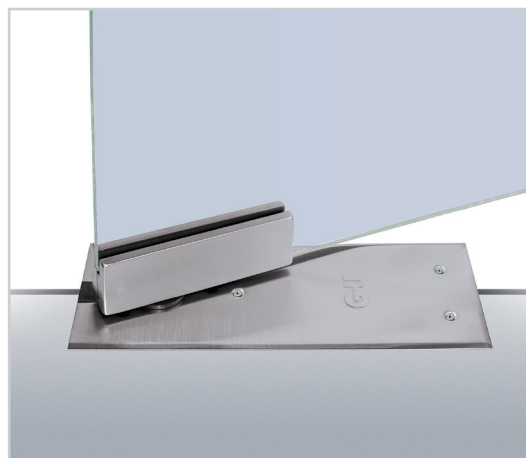


Door closer & Floor spring



Door closer model	Maximum door opening width	Article No. (silver closure)
OTS140 With standard arm	1100MM	K-17041-00-0-1
OTS140 With positioning arm	1100MM	K-17042-00-0-1
OTS200 Closure	1100MM	K-17830-00-0-1
OTS200 Standard arm	1100MM	C-83200-02-0-1
OTS200 Positioning arm	1100MM	K-17812-00-0-1
OTS200G Roller track arm	750MM	K-83200-01-0-1
OTS430 With standard arm	1250MM	K-17051-00-0-1 C
OTS536 With standard arm	1400MM	K-17729-00-0-1
OTS730 Roller track arm	1400MM	K-13429-00-0-1
OTS38C Concealed	950MM	C-91380-03-0-1

Floor spring model	Maximum load	Maximum door opening width	Article No.
UTS730	120KG	1100MM	C-92730-02-0-8
UTS650	150KG	1100MM	C-92650-02-0-8 C-92630-04-0-8
UTS620	250KG	1400MM	C-92620-02-0-8 C-92630-04-0-8



G-U Window Product Data List

Type	Profile	Min. SW/SRW	Max. SW/SRW	Min. SH/SRH	Max. SH/SRH	Max. SW	Installation Drawing No.
Tilt - Turn	Aluminium	355(400s-CONCEALED)	1700(1400s-CONCEALED)	500(350s-CONCEALED)	2800	130	0-44170 (0-45815s-CONCEALED)
	PVC	280(400s-CONCEALED)	1600(1400s-CONCEALED)	350	2800	130	0-44324+0-44325 (0-44889s-CONCEALED)
	Timber	280(400s-CONCEALED)	1600	280(350s-CONCEALED)	2800	150(130s-CONCEALED)	0-44324+0-44327 (0-45041s-CONCEALED)
Side Hung	Aluminium	355(360s-CONCEALED)	1700(1400s-CONCEALED)	500(350)	2800	130(400)	0-44170 (0-45815s-CONCEALED)
	PVC	280(360s-CONCEALED)	1600(1400s-CONCEALED)	350	2800	130	0-44324+0-44325 (0-44889s-CONCEALED)
	Timber	280(360s-CONCEALED)	1600	350	2800	150(130s-CONCEALED)	0-44324+0-44327 (0-45041s-CONCEALED)
Casement	Aluminium	200	1000	-	1500	50	-
	PVC	200	1000	-	1500	50	CN-00002-03C
	Timber	200	1000	-	1500	50	-
Top Hung	Aluminium	-	2000	300	2500	180	ZHA-M-0020
	PVC	-	2000	300	2500	180	CN-00002-04B
	Timber	-	2000	300	2500	180	-
Fanlight	Aluminium	400	3600	250	1000	80/200	0-43700/0-42700/0-43818
	PVC	400	3600	250	1000	80/200	0-43700/0-42700/0-43818
	Timber	400	3600	250	1000	80/200	0-43700/0-42700/0-43818
Lift Sliding (Standard)	Aluminium	720	3300	850	3250	400	0-44415
	PVC	700	3300	840	3250	400	0-44383
	Timber	700	3300	840	3250	400	0-44268/0-44280
Lift Sliding (Ventilation)	Aluminium	700	3300	750	3250	400	-
	PVC	620	3300	800	3250	400	0-45551
	Timber	620	3300	820	3250	400	0-44923
Lift Sliding (Motorized)	Aluminium	950	3300	1855	2765	300	0-45658
	PVC	950	3300	1855	2765	300	0-44827
	Timber	950	3300	1855	2765	300	0-44355
Tilt Sliding (Standard)	Aluminium	600	1600	730	2400	130	0-44495
	PVC	640	1600	700	2350	130	0-44384
	Timber	640	1600	700	2350	130	0-44386
Tilt Sliding (Motorized)	Aluminium	740	2000	895	2400	200	0-43905
	PVC	720	2000	820	2370	200	0-43775
	Timber	720	2000	820	2370	200	0-43775
Parallel Sliding	Aluminium	600	2000	730	2400	200	0-45960
	PVC	640	2000	730	2370	200	0-46030
	Timber	640	2000	730	2370	200	0-46029
POW_Manual	Aluminium	450	1100	380	3500	120	-
	PVC	450	1100	380	3500	120	-
	Timber	450	1100	380	3500	120	-
POW_Motor	Aluminium	450	2000	380	4000	400	-
	PVC	450	2000	380	4000	400	-
	Timber	450	2000	380	4000	400	-
Fold Sliding	Aluminium	401	1000	851	2350	80	0-42415/0-42454
	PVC	401	900	851	2350	80	0-44390/0-41470
	Timber	401	900	851	2350	80	0-44480/0-44500
Horizontal Pivot	Aluminium	580	2950	600	2200	175	0-42956
	PVC	576	2950	700	2200	175	0-42011
	Timber	576	2950	700	2200	300	0-41480
Vertical Pivot	Aluminium	600	2200	600	2950	175	0-42959
	PVC	-	-	-	-	-	-
	Timber	356	1600	1250	2850	175	0-41880