

BDT Series:

Fresh air with the push of a button –
individual, efficient and user-friendly.



D+H is one of the world's leading companies in the area of smoke extraction (RWA) and controlled natural ventilation (CNV). Our product developments have been regularly setting the standards for decades in the areas of safe window drives, smoke extraction and ventilation. Our systems feature perfectly coordinated components that guarantee the greatest level of long-term reliability and functional security. Many of our products optimally support your planning activities in accordance with standard green building certifications such as DGNB or LEED. Alongside a broad spectrum of standard products, we also offer you specialist and tailor-made facility-related applications. This ensures that we have solutions for almost all requirements and every structural issue.



D+H SERVICE AND SALES PARTNERS

Our global network of over 100 Service and Sales partners located across the world ensure that we can offer you a complete service package from one source. All D+H Service and Sales partners are certified and regularly trained specialist companies. In close association with the manufacturer D+H Mechatronic AG, they realise comprehensive system solutions for RWA and natural building ventilation.

We offer holistic support and continuous quality assurance in all phases of the project: from the consultancy, planning and project development through to installation, commissioning, maintenance and service. This enables us to reliably maintain the highest national and international quality standards.



NATURAL VENTILATION

HEALTHY INDOOR CLIMATE IS CONTROLLABLE



With parallel positioning of only 6 mm and limited pressure differences, sufficient air exchange rates are provided for raising room air hygiene.

Controlled natural ventilation with the BDT 010-RC fitting drive from D+H Mechatronic and the activPilot Comfort PADM fitting system from Winkhaus

- » Automated, user-independent and energy-efficient ventilation according to DIN 1946-6
- » Reduction of ventilation heat losses and resulting savings in heating costs
- » Regulation of room air hygiene and effective mould prevention
- » Ventilation without any loss in security is possible up to RC2
- » A real alternative to ventilation systems

A strong need for fresh air, comfortable temperatures and excellent room air hygiene is a crucial aspect in increasing the sense of well being within your own four walls. But how do you ventilate properly?

Either we ventilate too much and lose heat energy in the process or we ventilate too little and feel tired and weary as a result.

Controlled, fully-automated ventilation through a combination of the BDT fitting drive from D+H Mechatronic and the activPilot Comfort PADM from Winkhaus enables you to achieve an optimal combination of sufficient ventilation and low heating requirements! Whether in the bathroom, kitchen or bedroom – the stale air is constantly exchanged and odours and pollutants are removed permanently as a result! It's guaranteed to remove the problems of mould and poor room air hygiene.

WINKHAUS FITTING activPilot COMFORT PADM

CONVENIENCE IN PARALLEL ACTION



Always precise

- » Increased burglary prevention even in ventilation mode
- » Exchange of air without noticeable drafts
- » No banging of the window
- » Improved protection against driving rain
- » Improved noise protection compared to bottom hung windows
- » Helps to avoid building damage through user-independent ventilation (according to DIN 1946-6)
- » For use in plastic windows
- » Integrated fitting solution for installer-friendly installation

Please refer to the relevant Winkhaus catalogue for further details about the activPilot Comfort PADM fitting system.

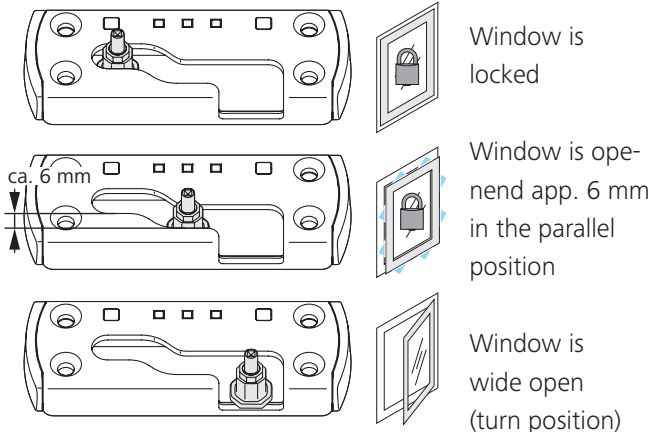
The Winkhaus activPilot Comfort PADM makes natural and energy-efficient room ventilation more comfortable than ever before. It is important to ensure regular and sufficient ventilation particularly with modern windows, which are almost completely airtight, in order to prevent dampness and resulting building damage. The window sash is opened six millimetres parallel to the frame through automatic parallel positioning in combination with the BDT fitting drive - ensuring an agreeable, effective and draft-free ventilation of your rooms. And this can even be achieved in your absence because the system is also suitable for anti-burglary windows up to RC2 in this opening mode.

The ventilation system delivers a natural exchange of air according to DIN 1946-6. It is possible to deliver user-independent provision of natural fresh air in interior rooms because different ventilation scenarios, e.g. predetermined ventilation times, can be set. As with all fitting systems from Winkhaus, the activPilot Comfort PADM is also particularly easy to install and it can be integrated without any difficulty using only a few additional elements from the activPilot series.

Window fitting companies can order this fitting system as usual from Winkhaus.

Technical Data:

Max. sash rebate width (FFB)	460 bis 1475 mm
Max. sash rebate height (FFH)	820 bis 2800 mm
Ratio	FFB : FFH ≤ 1,5:1
Sash size max.	2,5 m²
Sash weight max.	100 kg
Airgap	12 mm
Overlap	20 mm
Groove centre position	13 mm
Frame rebate depth min.	29 mm



D+H FITTING DRIVE BDT 010-RC

NEW HIGH-END DRIVE TECHNOLOGY, MORE PRACTICAL AND ENERGY-EFFICIENT THAN EVER BEFORE



BDT 010-RC
white / silver

BDT 010-RC
white / white

BDT 010-RC
black / silver

Ord.-No: 24.000.32 Ord.-No: 24.000.31 Ord.-No: 24.000.33



- » Flexible window operation by remote control or touch control
- » Backlit touch control operation for the different automatic functions
- » Integrated radio receiver with security encryption and a variable code against unauthorised operation
- » VNR mode (Ventilation Noise Reduction) for particularly quiet automatic operation
- » Refined design for harmonious integration with modern architecture
- » High-quality front metal cover
- » Window turning function at the push of a button
- » Drive can be installed for left or right hinged windows

Your rooms can now be able to receive fresh air regularly and user-independently using our new BDT fitting drive for parallel positioning in combination with the activPilot Comfort PADM fitting system from the company Winkhaus: The BDT ensures automatic and time-controlled operation for the necessary exchange of air in your rooms - delivering a healthy room climate throughout the house. Utilise the intelligent technology in our BDT system and the specially coordinated window mechanism provided by the activPilot Comfort PADM fitting system from Winkhaus to provide secure regulation of room air hygiene, effectively prevent the formation of mould and avoid unnecessary losses in heating energy through excessive ventilation.

The BDT impresses not least due to its attractive design and user-friendliness. The refined and timeless design is available in a number of different colours and fits perfectly into every living room. The backlit touch control operation with self-explanatory button symbols is easy to operate. In addition, the BDT can also be fitted with remote control operation for even more convenience.

The BDT is available via authorised D+H partners.

Technical Data:

Type	BDT 010-RC
Power supply	24 VDC \pm 15 %
Ripple	< 10%
Rated current	1 A
Standby current	max. 50 mA
Torque	10 Nm
Turning angle	90° or 180°
Running time	app. 8 Sec. / 180°
Lifetime	> 40.000 Cycles
Duty cycle	30% (cycle time 10min.)
Housing	Zinc die casting, ABS, polycarbonate
Ingress protection	IP 40
Temperature range	-5°C...+60°C
Connection	6 pole screw terminal

Scope of supply:

Drive with instructions for use, without power supply

BDT 010-RC

CONTROL ELEMENTS



Position indicator

Symbolizes the position of the fitting.

LED radio display

Every operation of the optional remote control will be acknowledged by a flashing of the radio display.

CLOSE

Briefly push to close the drive.

OPEN to the parallel opening position

Briefly push to move the drive to the parallel opening position.

OPEN to the turning position

Push for 1 s and the drive moves the window to the turning position for normal, manual opening.

Timer-controlled ventilation

Briefly push once to move the drive to the parallel opening position. After a ventilation time of 10 minutes, it moves back to the closed position. Pushing the key again extends the ventilation time by 10 minutes each time:

Pushed once: ventilate for 10 min.

Pushed twice: ventilate for 20 min.

Pushed three times: ventilate for 30 min.

Automatic/interval ventilation

Briefly pushing the automatic key activates automatic or interval ventilation. If this is activated, the room will be ventilated in the parallel opening position for 10 minutes every hour.

Info

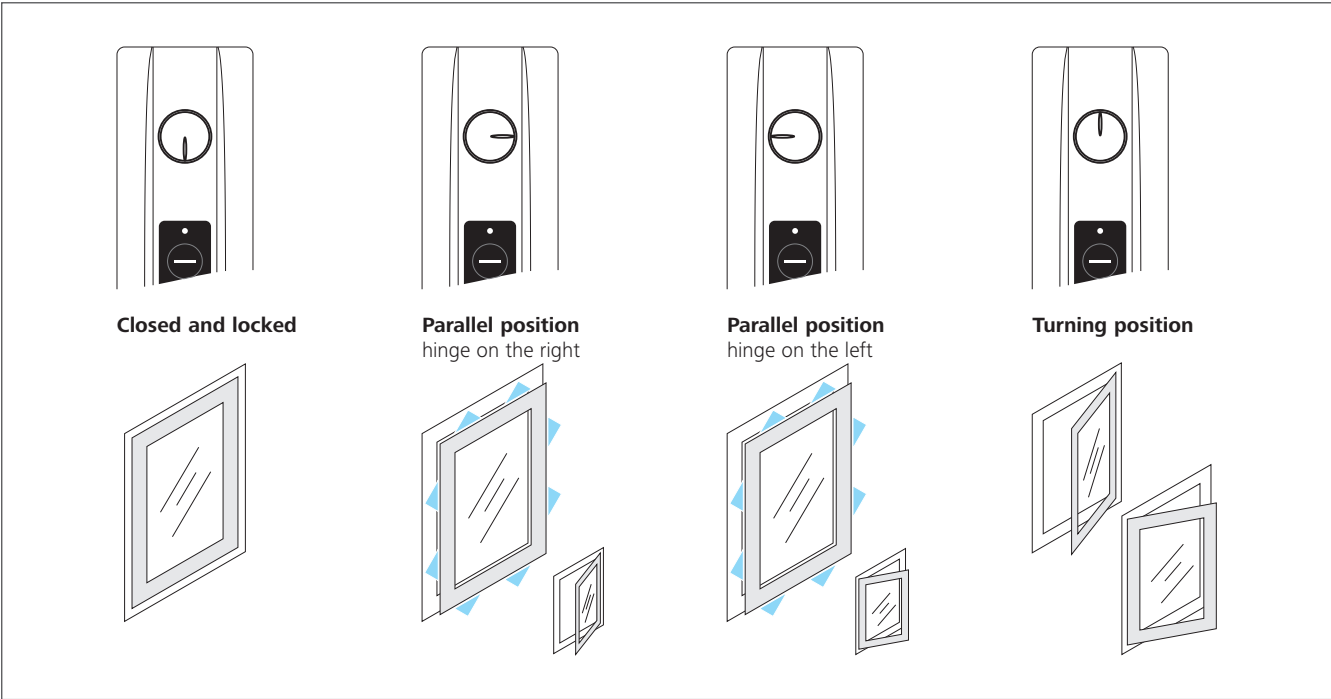
Briefly pushing the key will light up the symbols and display the current modes for 20 s when darkened.

Programming key

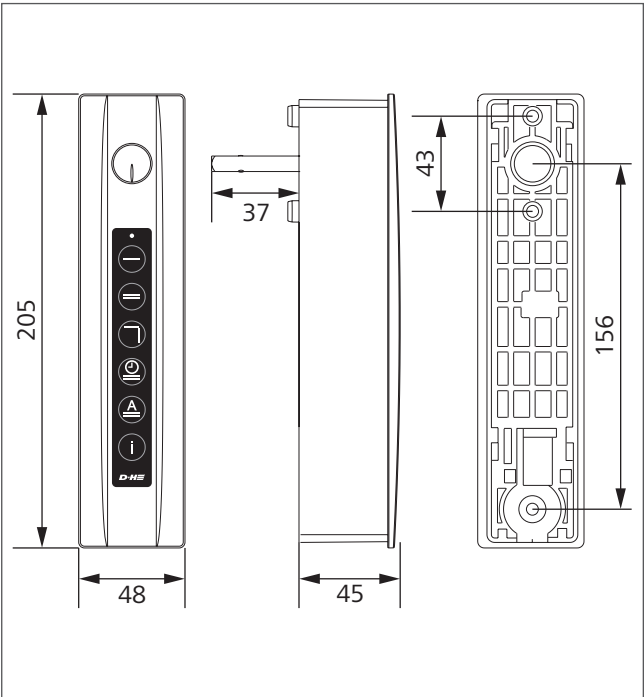
BDT 010-RC

POSITION INDICATOR, DIMENSIONS, SCOPE OF SUPPLY

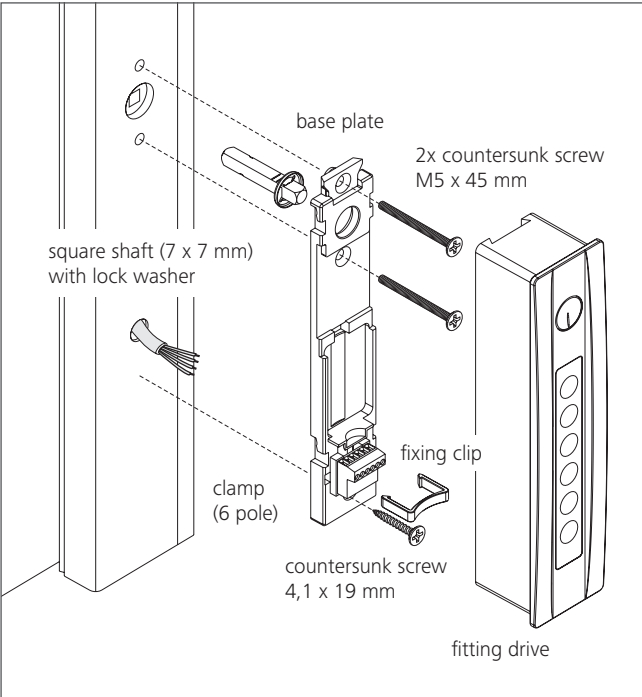
Position indicator



Dimensions



Scope of supply



ACCESSORIES

FOR BDT 010-RC



RCR 11-2



RCR 11-4



WU-RC

RCR 11-2

2 control levels

Ord.-No: 30.211.25

RCR 11-4

4 control levels

Ord.-No: 30.211.50

Remote control RCR 11-2 / RCR 11-4

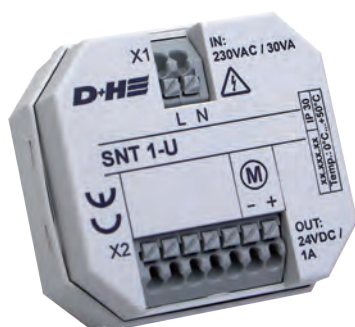
- » Remote control for controlling of D+H radio drives and radio modules
- » With 2 or 4 control levels

Technical data RCR 11-2 / RCR 11-4:

Radio frequency	868,3 MHz / FSK
Encryption	AES / 128 Bit
Radio standard	ETSI EN 300220-1:2010 ETSI EN 301489-1:2011 ETSI EN 301489-3:2002
Transm. power	app. 10 mW (e.r.p.)
Transm. range	up to app. 100 m (free field)
Material	ABS, POM
Battery type	2x lithium CR 2032

Scope of supply:

Remote control incl. description set, wall fastening (WU-RC) and batteries, screws and dowels



SNT 1-U

Ord.-No: 20.032.40

Power supply SNT 1-U

- » For supplying of BDT 010-RC
- » Per drive is one SNT required *

Technical data SNT 1-U:

Power supply	230 VAC, 50 Hz
Rated power	30 VA
Output	24 VDC, 1 A
Duty cycle	short time duty 20 %
Ingress protection	IP 30
Temperature range	0 ... 50°C
Dimensions	50 x 47,5 x 28 mm
Mounting	flush in switch box Ø 58 mm

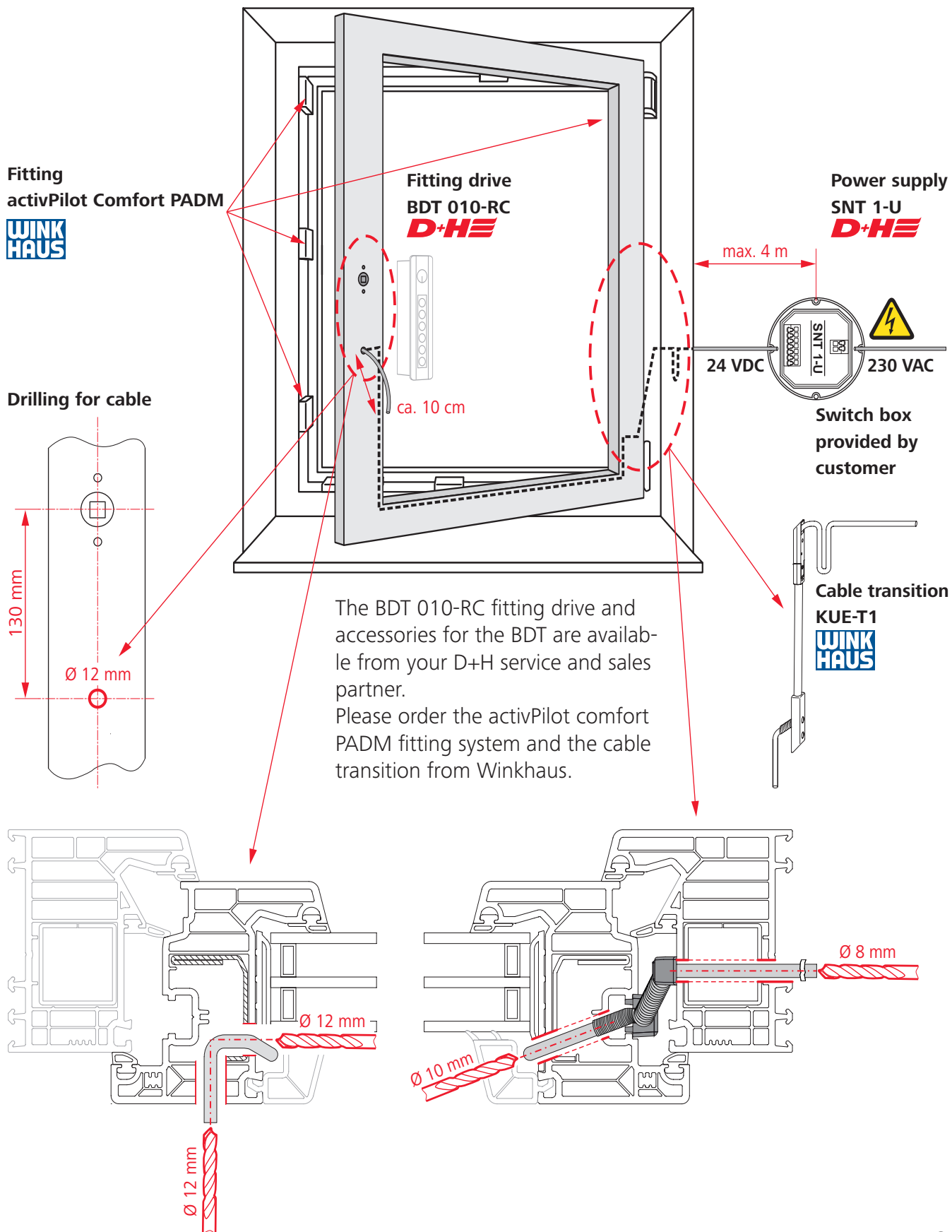
Scope of supply:

Power supply without switch box

* A central 24 V power supply can be used instead of multiple SNT 1-U.

PLANNING INFORMATION

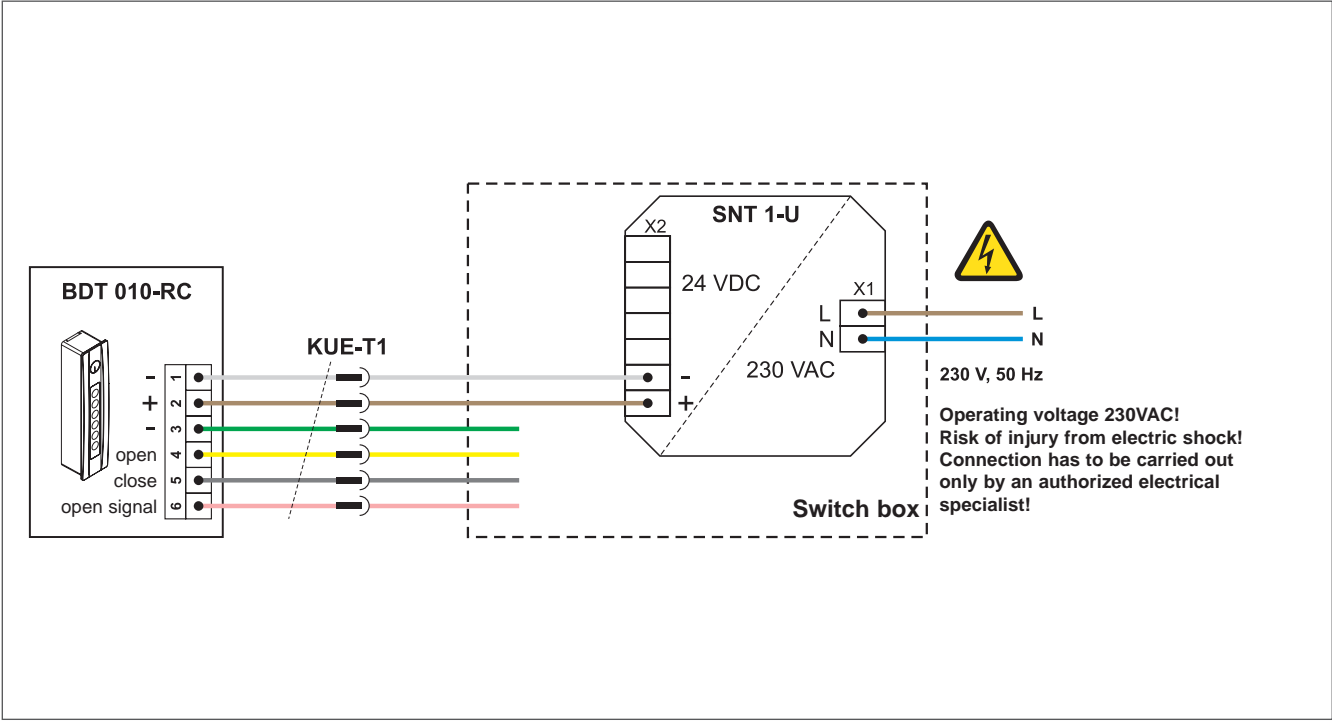
GENERAL SURVEY



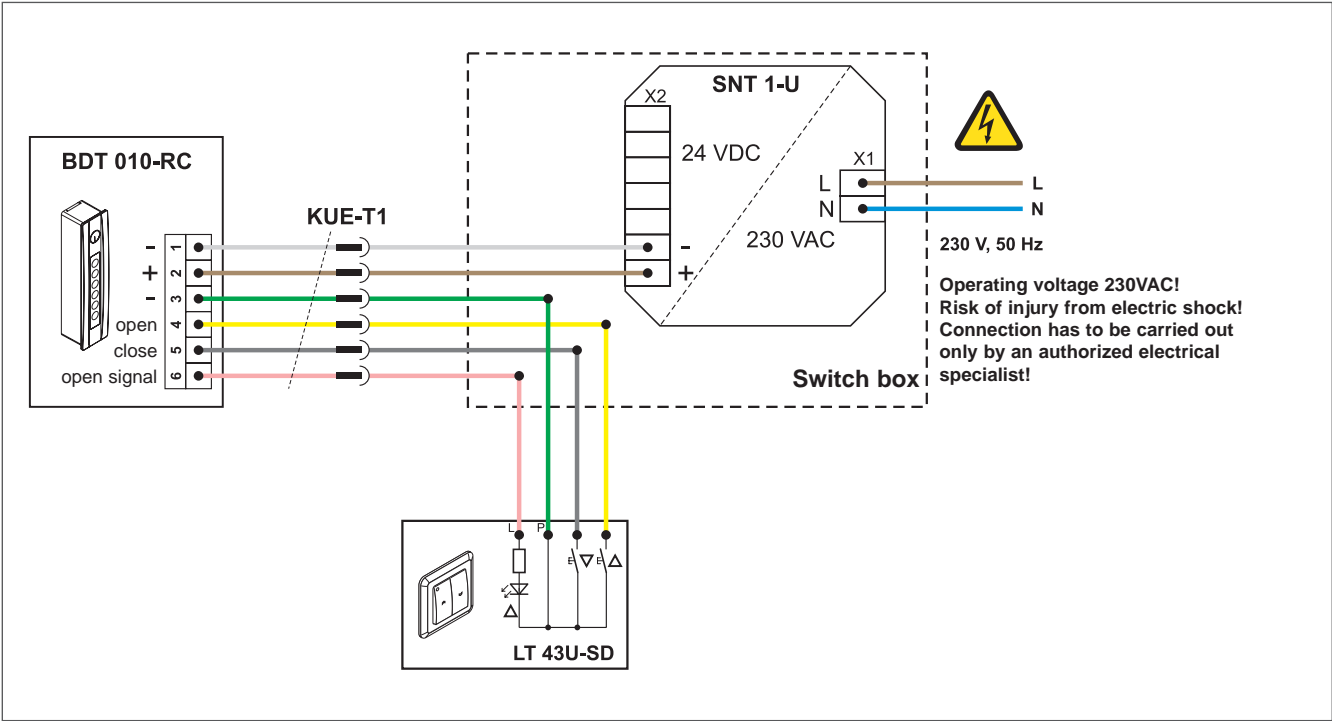
PLANNING INFORMATION

CONNECTION EXAMPLES

BDT 010-RC individual in connection with an SNT 1-U



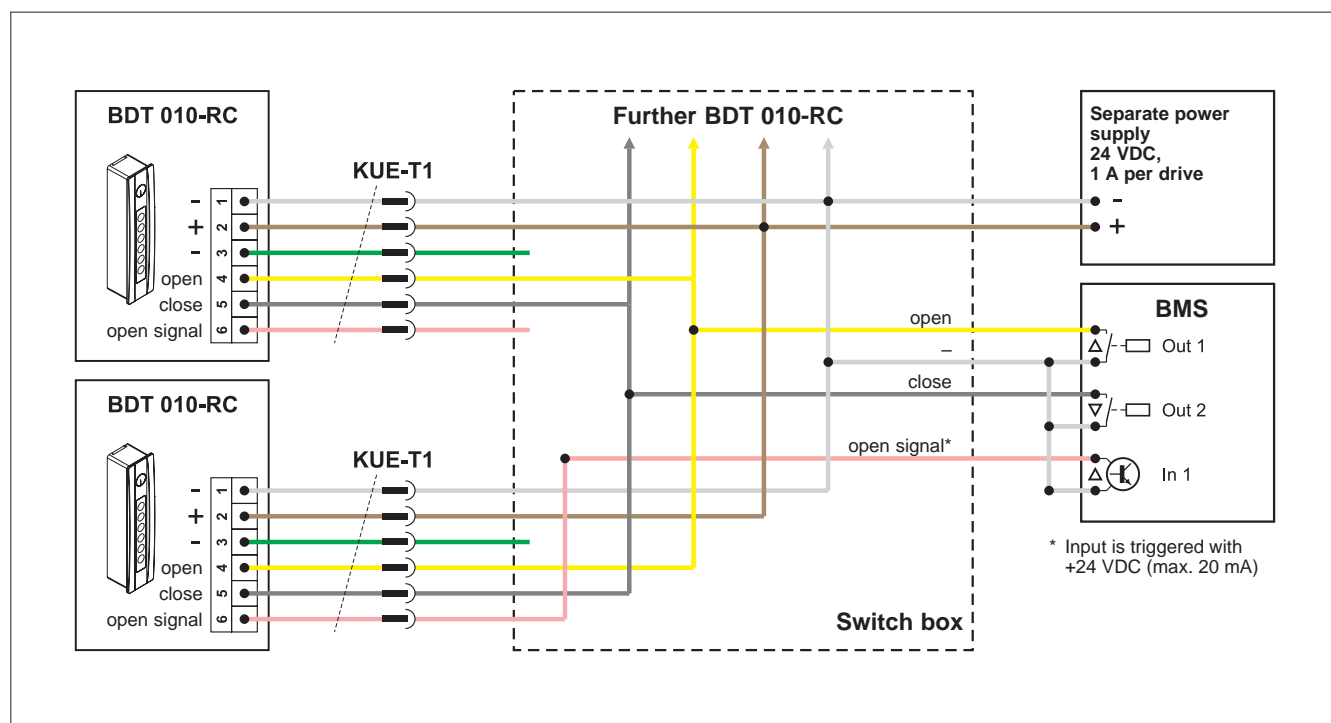
BDT 010-RC individual in connection with an SNT 1-U and additional ventilation button



PLANNING INFORMATION

CONNECTION EXAMPLES AND BASIC SETTINGS

BDT 010-RC in connection with BMS and power supply



Basic Settings

The configuration mode for setting the basic functions can be started by pressing (> 5 Sec.) the programming button. Press the relevant button to change the setting. Exit the configuration mode by pressing the programming button again.

Turning key
lights (factory setting)



= Window
hinge on the right
(drive left-hand mounted)

Turning key
does not light



= Window
hinge on the left
(drive right-hand mounted)

Info key
lights (factory setting)

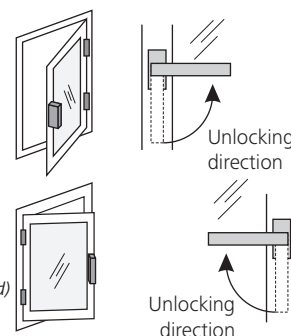


= Key illumination
switched on

Info key
does not light



= Key illumination
switched off

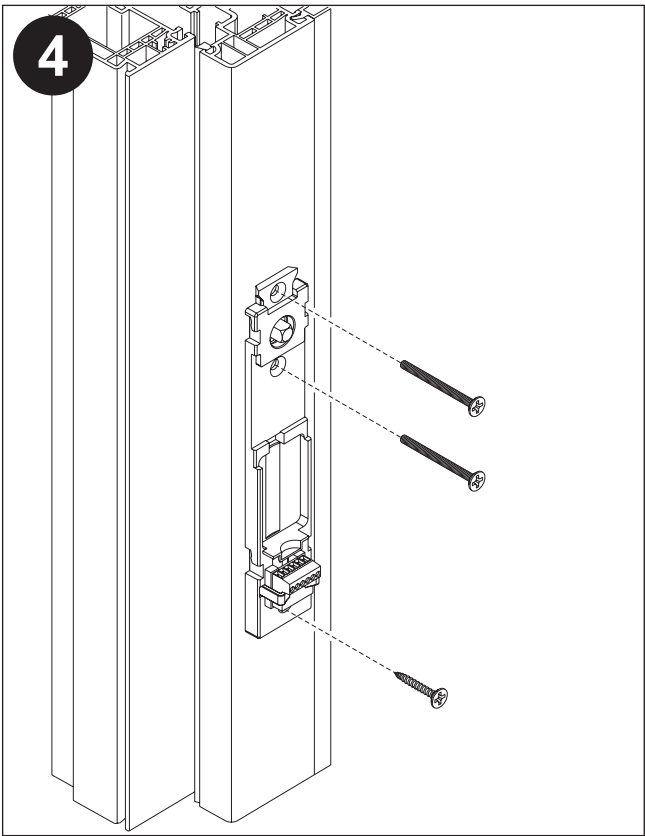
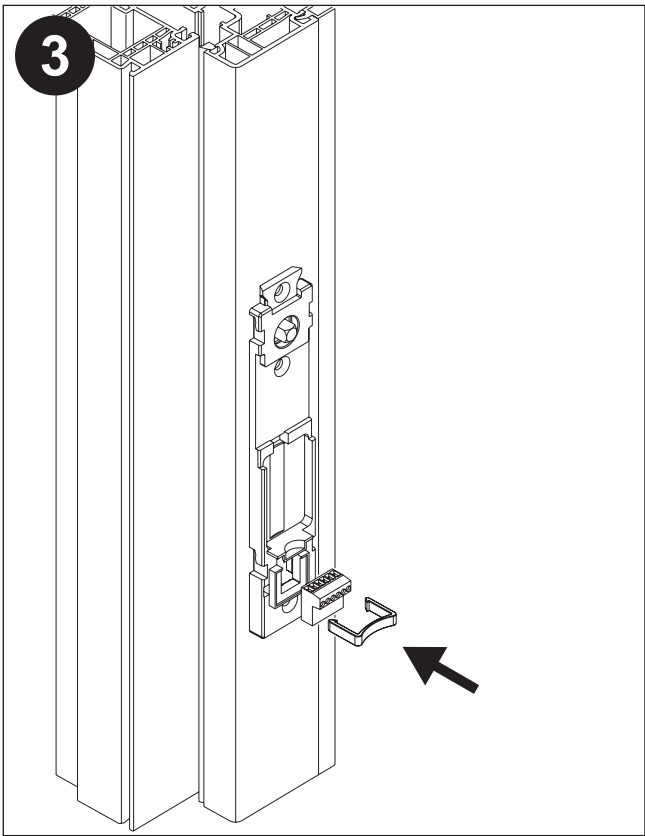
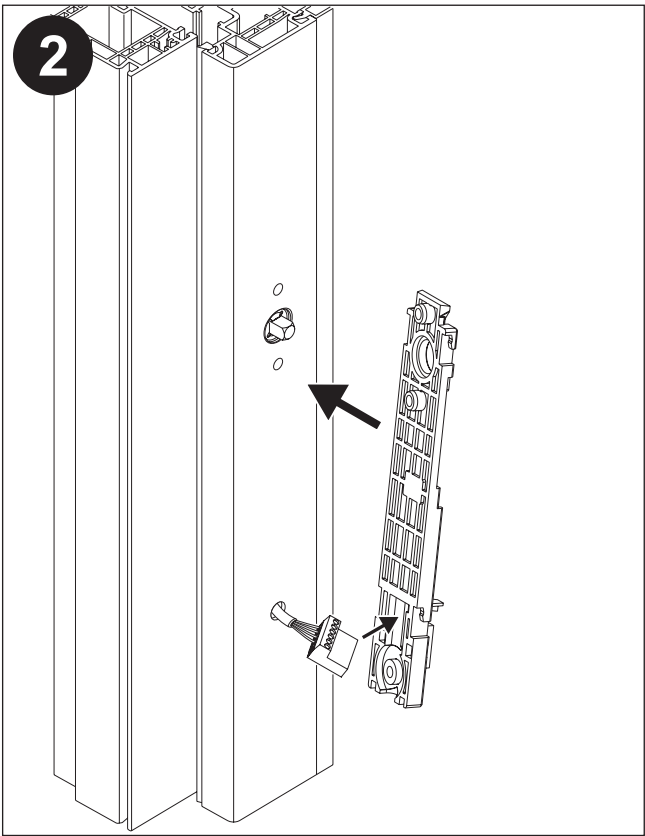
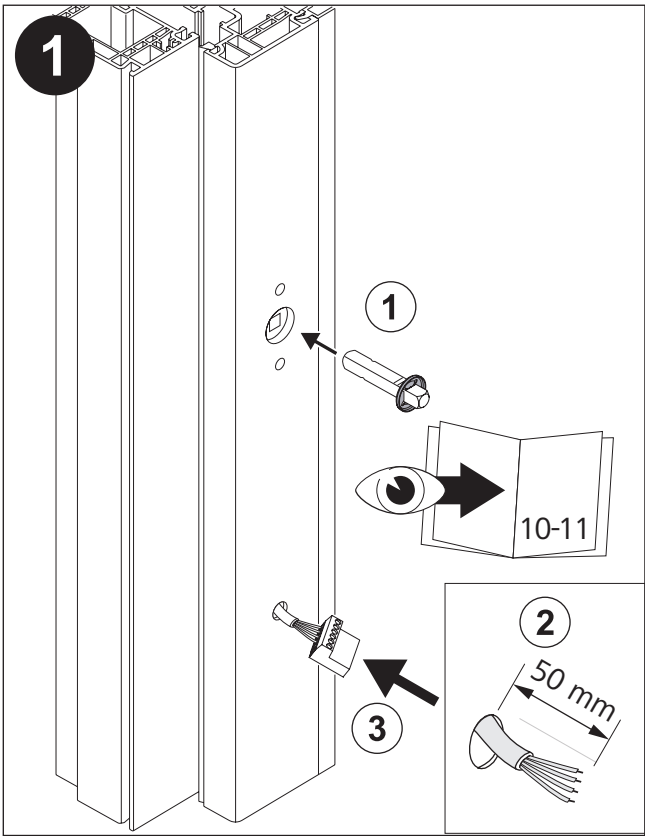


The condition of the drive is permanently displayed by lighting of the corresponding buttons.

The key illumination turns off automatically after 20 seconds.

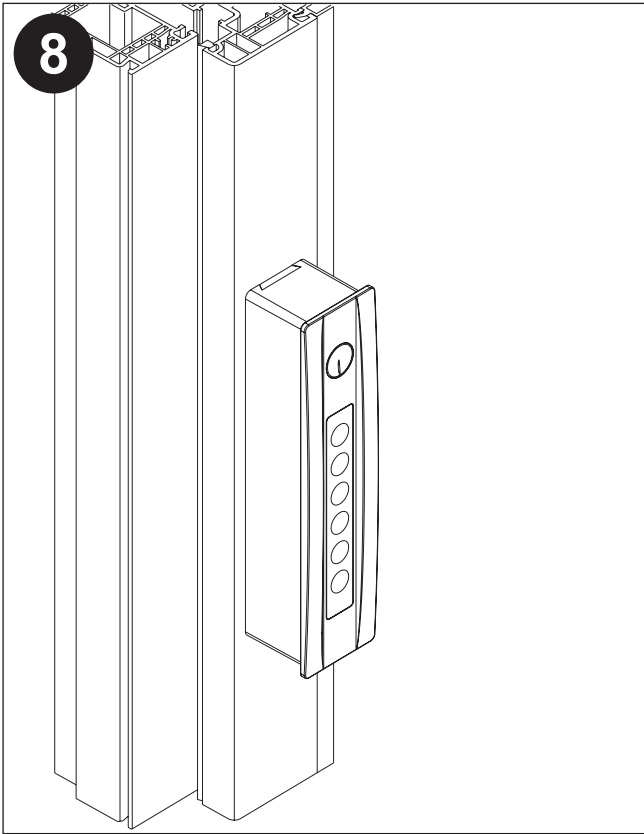
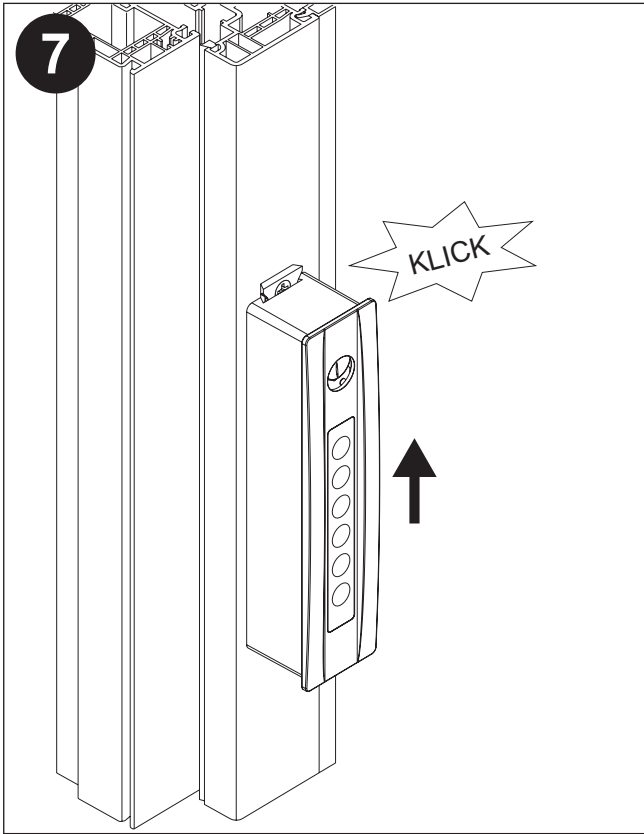
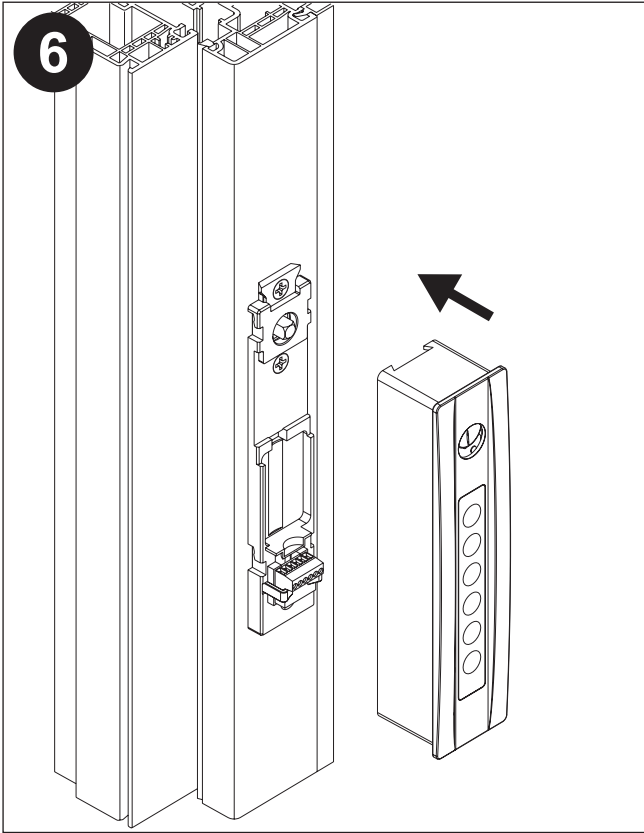
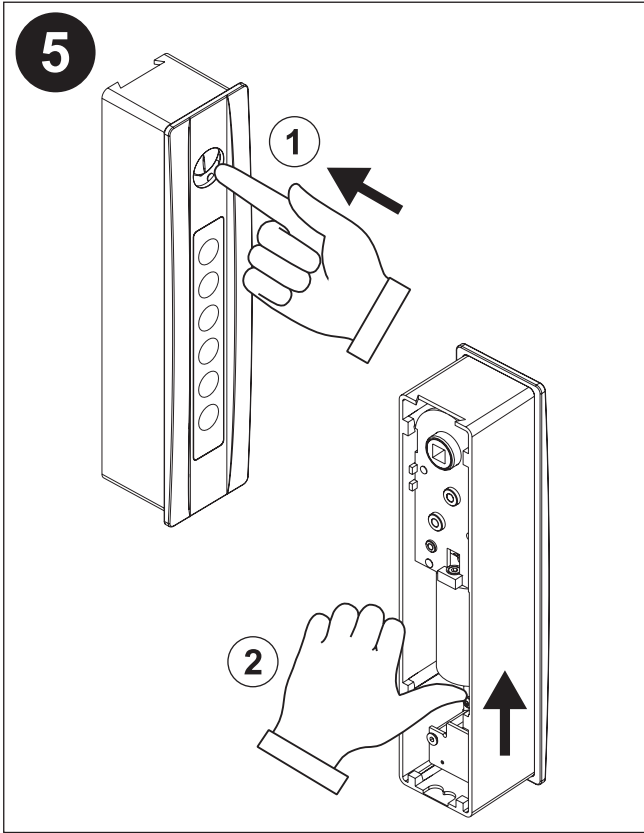
PLANNING INFORMATION

MOUNTING



PLANNING INFORMATION

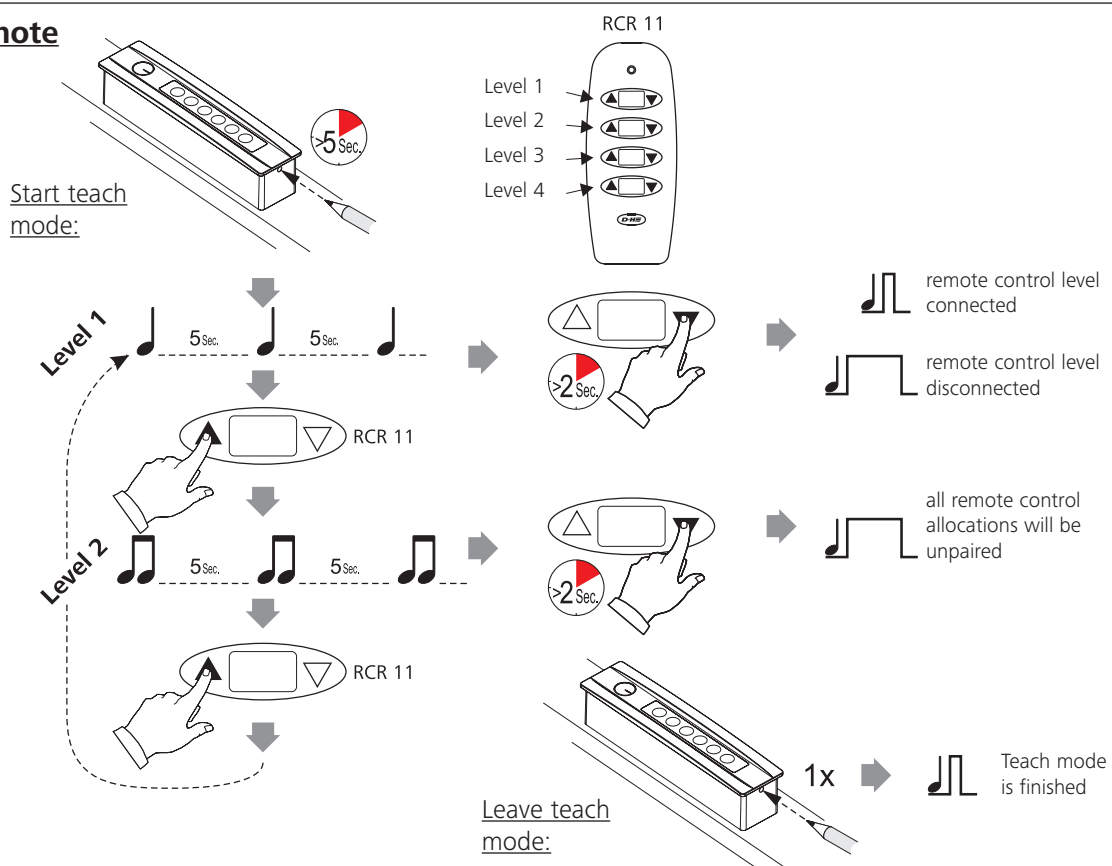
MOUNTING



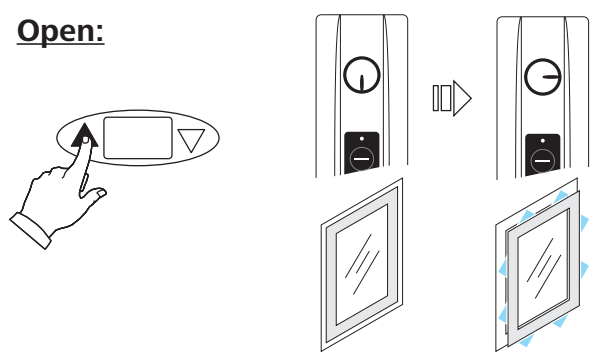
PLANNING INFORMATION

REMOTE CONTROL

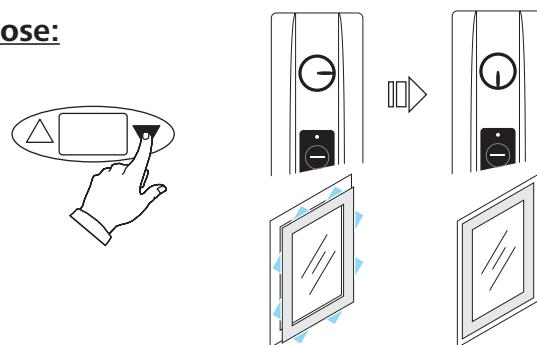
Pairing remote control:



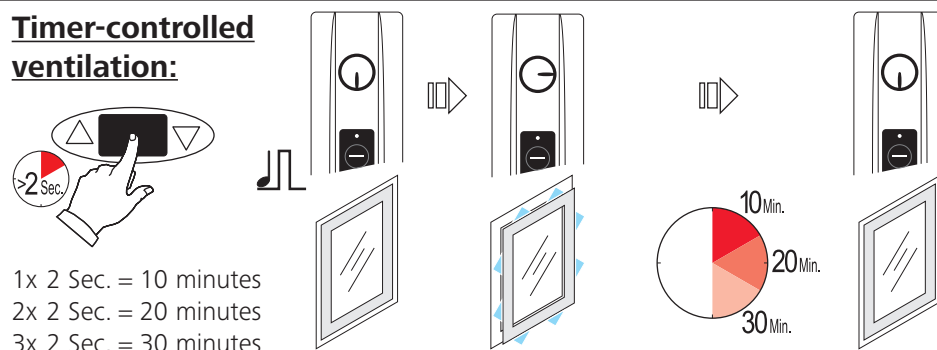
Open:



Close:

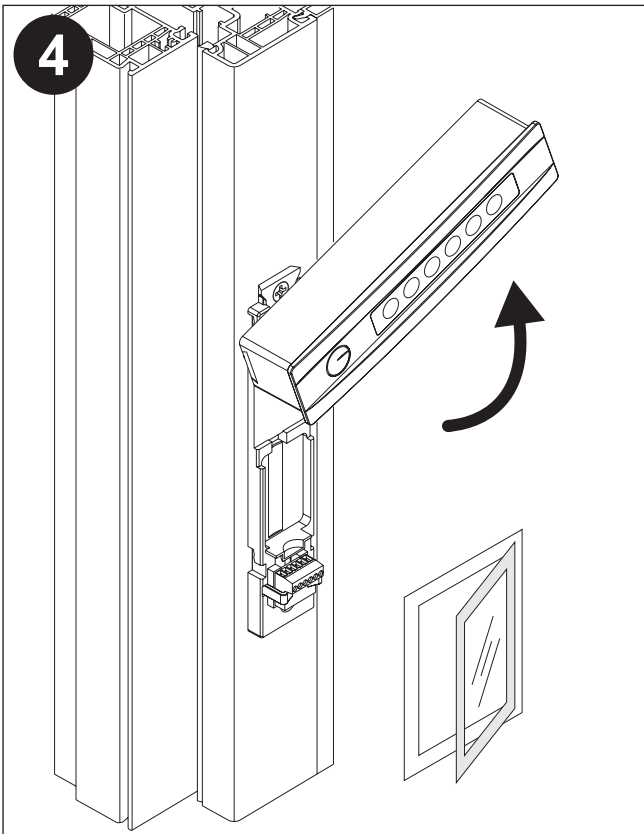
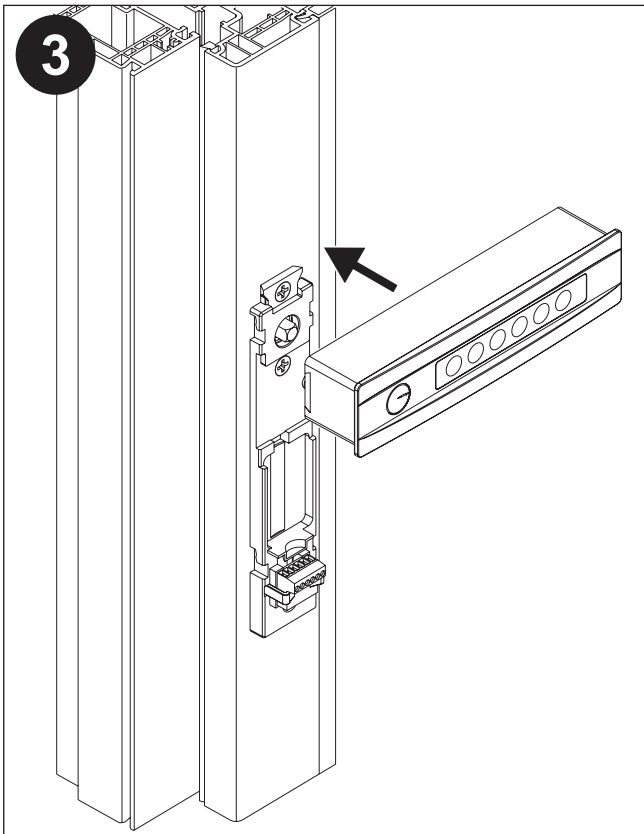
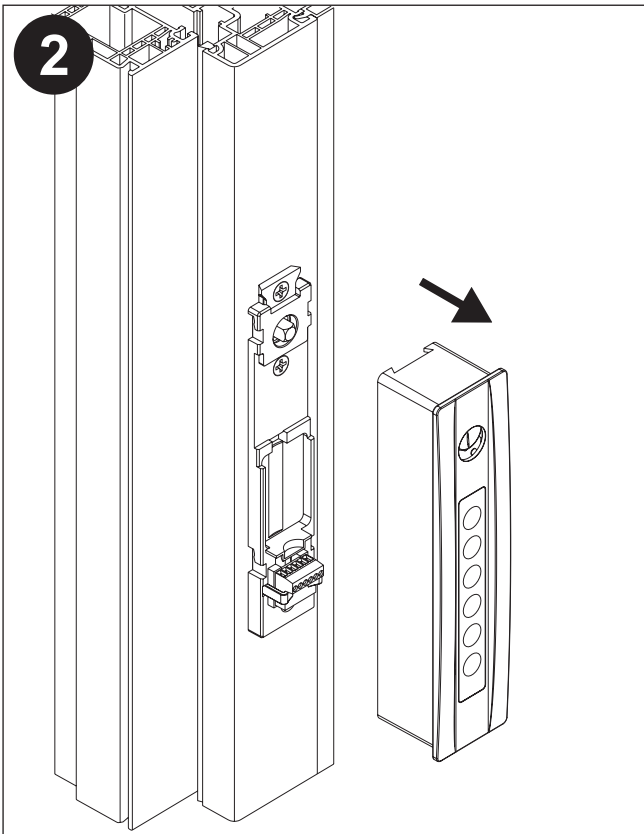
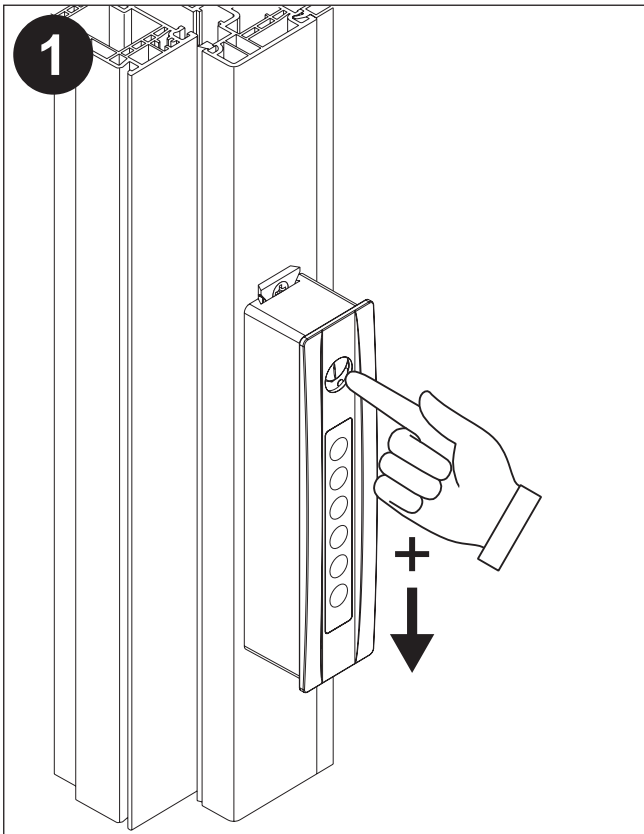


Timer-controlled ventilation:



PLANNING INFORMATION

EMERGENCY UNLOCKING



WWW.DH-PARTNER.COM

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activPilot Comfort PADM

The parallel action turn fitting system for motorised drives.

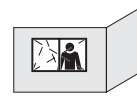


Product Catalogue 07/2012

Declaration of symbols



Sash weight max. 100 kg



Exterior view



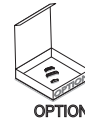
Max. sash size: 3 m²



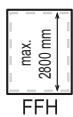
Basic set of fittings



Max. sash rebate width (FFB); 1725 mm



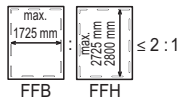
Optional fittings



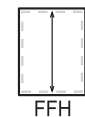
Max. sash rebate height (FFH): 2800 mm



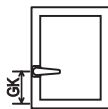
Size-dependent fittings depending on sash rebate width (FFB)



Ratio between sash rebate width (FFB) and sash rebate height (FFH) is less than or equal to 2 : 1



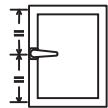
Size-dependent fittings depending on sash rebate height (FFH)



Fixed handle height



Direction of view



Central handle height



Pot hinge version



Turn sash (D)



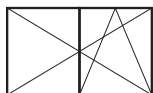
Rebate hinge version



Turn-tilt sash (DK)



Item for use on PVC-U windows



Turn/Turn-tilt double sash (D/DK-Stulp)



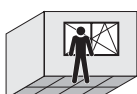
Item for use on wooden windows with 12 mm airgap



Parallel action



Item for use on aluminium windows



Interior view

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1 Recognitions from over 150 years of development work: 2 a new system of fittings

3 **activPilot: The new standard of turn-tilt fittings**

4 Developing a new system of fittings from the initial drafts to market maturity is a time-consuming process. It is not just a question of creative ideas, precise calculations and countless series of tests, but also of intensive monitoring of people and markets, evaluating current trends and ongoing analysis of general technical developments. We even question tried and trusted approaches to be able to leverage all this information, and apply our years of experience to create targeted, premium solutions that offer fitters and users a whole new range of opportunities. Both from an economical and functional point of view. It is this constant drive towards precision that has made Winkhaus one of the leading enterprises in the field of window and door technology. This is evident by the large number of industry standards that Winkhaus has established in over 150 years.

5 **From established standards to the next generation standard**

6 In designing activPilot we created all the solutions needed for the next-generation window fitting standard within a single system. An intelligent, clearly-structured modular system with far less components than was previously typical, activPilot meets all your requirements from a modern range of fittings. activPilot is suitable for any shape of window, any window material and any level of automation, from manual mounting to fully automated serial production. The high level of flexibility, the attractive auxiliary functions, the new locking system and the functional design all ensure that your business is perfectly geared today to meet your customers' needs and future requirements.

7 **Modular design**

8 activPilot optimises window construction. For the window builder, less components and multifunctionality mean uncomplicated and fast processing and rational mounting. Premounted components and the unique design furthermore ensure that additional functions and safety classes can be achieved easily by retrofitting. activPilot thus sets the scene for sustainably cutting your production, warehousing, logistics and administration costs.

9 **New locking system with octagonal locking bolts**

10 activPilot enhances comfort. The functionally perfect locking mechanism not only guarantees precise entry of the locking bolt into the frame keep, but also a perfect seal. This is ensured by the excellent air gap tolerance of 9.8 to 14 mm and the new octagonal locking bolt which allows easy manual adjustment of the contact pressure. Even adjusting forces and the non-positive and positive system fit of the components give this fitting the required stability and long-term functionality.

11 **Design**

12 activPilot offers you and your customers real added value. Surprising details, discreet accents, ergonomic design and comprehensive functions characterise the overall concept of the fitting system. In short, its attractive design will be a crucial factor when it comes to your customers making a purchase decision. activPilot also offers other convincing arguments such as outstanding durability, easy-to-clean surfaces, intuitive operation and, last but not least, aesthetically pleasing windows.

13 **Surface**

14 activPilot fittings feature a surface refinement finish based on nanotechnology, which is applied in our in-house electroplating facility. This surface stands out due to its very high resistance to all environmental influences. This is verified by quality controls consisting of alternate climate and salt spray testing according to DIN EN ISO 9227:2006-10 and is certified on a regular basis by tests. Winkhaus also carries out tests in outside areas, thus testing component behaviour under realistic conditions. This enables Winkhaus to offer a ten-year warranty for functions and surfaces.

15 **Effective security**

Thanks to the unique modular system, any window can be modified to achieve the required security standard – easily, quickly and cost-efficiently. There is no need for custom parts. Depending on the number and type of keeps, various security levels are achievable using the same platform.

At our works, comprehensive and strict tests – along with ongoing functional monitoring – ensure maximum security for customers. Approval marks and certificates by independent test authorities confirm our results. You can therefore rely on activPilot meeting customer requirements for a secure fitting system. Locking bolts are made of high-strength steel; even standard types guarantee effective basic security. Depending on the number and type of keeps, the fitting system can be enhanced for compliance with stricter security classes – including burglar protection to DIN V ENV 1627-1630, resistance class 2 / DIN EN 1627-1630, RC2.

Quality standard

The Winkhaus group successfully passed a group certification of production sites according to DIN ISO 9001:2008.

The group certification ensures that we use the same criteria and procedures in all Winkhaus subsidiaries and thus we can always offer consistent quality for our customers.



Winkhaus has successfully passed the demanding QM 328 certification.

Winkhaus's activPilot fittings are certified in accordance with QM 328. The turn-only and turn-tilt fittings for windows and French doors undergo a large number of tests in the stringent certification programme, which verifies aspects such as durability and quality control mechanisms. The certificate stands as a testament to Winkhaus's long tradition in high quality products.

Endurance test

Winkhaus activPilot is certified in accordance with EN 13126-8 (endurance test for turn-only and turn-tilt fittings) and EN 1191 (endurance test for windows and doors). The fitting thus complies with the latest EN standards. Winkhaus' own permanent control in accordance with established production control guidelines as well as regular external monitoring by the ift Rosenheim ensure outstanding product quality guaranteed on a long-term basis.

The activPilot Concept fitting series were tested for sash weights of up to 130 kg, for activPilot Select up to 150 kg. As a result they clearly exceeded the required load values. The fittings may now bear the ift quality certification mark.

Your partner for service

Our services are solution-orientated, reliable and precisely geared to match your requirements – just as you would expect from your partner. We are always at your service. With application engineers on site, professional help from our product data service, and innovative software solutions to help optimise your workflow we safeguard and extend your capacity to act. On top of this, our comprehensive product information system and sophisticated logistics service guarantee fast delivery at all times.

Product liability

To ensure compliance with German product liability laws (article 4 ProdHaftG), please observe our manufacturer's information on turn-tilt fittings for windows and glazed doors. Failure to observe releases the manufacturer from any liability. Please consult your Winkhaus contact person for further information on this topic.

Information on Winkhaus product services as well as specifications and instructions for end users have been specially summarised in the "Product Information and Processing Instructions" brochure.

Please also observe the guidelines issued by Gütegemeinschaft Schlösser und Beschläge e.V. (Association for Quality Control of Locks and Fittings).

This information can be obtained at the following Internet addresses: <http://www.winkhaus.de> (Products & Services/ Notices about products and liability) or <http://www.beschlagindustrie.de/ggsb/richtlinien.asp>

General product
information

Lists of Fittings

Drive rods

Corner drives

Top rods

Sash hinges/
Corner hinges

Shears/
Shear hinges

Turn hinges/
Tilt hinges

Extension rods

Accessories

Frame parts

Mounting
accessories

Mounting
instructions

Adjustment/
maintenance

Installation
drawings



Beschläge / Hardware

Produktfamilien
product families

Dreh- und Drehkippsbeschläge für Fenster und Fenstertüren
turn and tilt-turn hardware for windows and balcony door

Produkt
product

autoPilot, activPilot, proPilot

Einsatzbereich
field of application

Systeme mit entsprechender Beschlagsaufnahme
systems with suitable hardware groove

max. Flügelgewicht
max. casement weight

150 kg

Hersteller
manufacturer

Aug. Winkhaus GmbH & Co. KG,
August-Winkhaus-Str. 1, 48291 Telgte

Produktionsstandort
production site

Aug. Winkhaus GmbH & Co. KG,
August-Winkhaus-Str. 1, 48291 Telgte



Mit diesem Zertifikat wird bescheinigt, dass die benannten Beschläge den Anforderungen des ift-Zertifizierungsprogramms für Beschläge (QM328) entsprechen.

Grundlagen sind durch das Prüflabor erstellte Produktfamilien der aufgeführten Beschläge, Prüfung durch das Prüflabor nach EN 13126-8 : 2006-05 und EN 1191 : 2000-08 unter Berücksichtigung der Anwendungsdiagramme, eine werkseigene Produktionskontrolle des Herstellers und eine Fremdüberwachung der Fertigung durch die Überwachungsstelle in den benannten Standorten.

Die Gültigkeitsdauer des Zertifikates beträgt 5 Jahre. Mit der Erteilung des Zertifikates ist eine regelmäßige Fremdüberwachung des Herstellers verbunden.

Das Zertifikat darf nur unverändert vervielfältigt werden. Alle Änderungen der Voraussetzungen für die Zertifizierung sind dem ift-Q-Zert mit den erforderlichen Nachweisen unverzüglich schriftlich anzuzeigen.

Das Unternehmen ist berechtigt, die Beschläge gemäß der Einteilung des Zertifikates mit dem "ift-zertifiziert"-Zeichen zu kennzeichnen.

Dieses Zertifikat enthält 2 Anlagen:

- 1: Übersicht der Produktfamilien
- 2: Austauschbarkeit nach EN 14351-1 : 2006-03

The present certificate attests that the hardware mentioned fulfils the requirements of the ift-certification scheme for hardware (QM328).

Basis of the certificate are the product families of the hardware listed that have been compiled by the test laboratory, tests performed by the test laboratory as per EN 13126-8 : 2006-02 and EN 1191 : 2000-05 based on the application diagrams, factory production control by the manufacturer and third-party surveillance audits of the production by the surveillance bodies at the plants mentioned.

The certificate is valid for a period of 5 years. Award of the certificate is tied to regular third-party surveillance of the manufacturer.

The reproduction of the certificate without any change whatsoever from the original, is permitted. Any changes to the prerequisites applicable to certification shall be immediately communicated in writing to ift-Q-Zert accompanied by the necessary evidence.

The company is authorised to affix the "ift-certified"-mark to the hardware according to the "ift Rules for use of the "ift-certified"-mark.

This Certificate contains 2 Annexes:

- 1: List of product families
- 2: Interchangeability as per EN 14351-1 : 2006-03



EN 1191
EN 12400

Klasse 2



EN 14609
EN 14351-1

erfüllt



EN 12046-1
EN 13115

Klasse 2



EN ISO 9227
EN 1670

Klasse 4



Korrosionsschutz
corrosion protection

Christian Kehrer

Rosenheim
19.03.2012

Christian Kehrer
Leiter ift Zertifizierungs- und Überwachungsstelle
Head of ift Certification and Surveillance Body

Ulrich Sieberath

Ulrich Sieberath
Institutsleiter
Director of Institute

Vertrag-Nr. / Contract No.: 228 7019950

Zertifikat-Nr. / Certificate No.: 228 7019950-1-7

Gültig bis / Valid:

17.11.2013

2009-02 / 075



ift Rosenheim GmbH
Zertifizierungsstelle
Theodor-Giell-Str. 7-9
83026 Rosenheim
Germany



DAP-ZE-2288.00



DAP-ZE-2288.00

Anlage/annex 1

Blatt/page 1 von 2

Zertifikat-Nr./Certificate No.: 228 7019950-1-7

Hersteller/manufacturer: Aug. Winkhaus GmbH & Co. KG

Ausgabedatum/date of issue: 19.03.2012



In der Zertifizierung enthaltene Produktfamilien für Fenster- und Fenstertürsysteme mit geeigneter Beschlagaufnahme.
product families for window and casement window systems with groove designed for accommodation of hardware, covered by certification.

Id. Nr. / no.	Ausführung Bandseite/ type hinge side	Ausführung Flügelbe- schlag/ type case- ment hard- ware	Beschreibung der Ausführung der blendrahmensetzten Beschlagausführung detail description of frame member hardware type				Flügel- gewicht/ casement weight	Klassifizierung entsprechend der Nachweise nach EN 13126-8 classification in accordance with evidence as per EN 13126-8								
			Winkelband/ top stay connecting part	Scherenlager/ stay arm sup- port	Eckband/ corner hinge	Ecklager/ corner pivot		1 Gebrauchs- kategorie/ category of use	2 Dauerfunk- tions- tüchtigkeit/ durability	3 Masse (in kg) mass	4 Feuer- beständigkeit/ fire resistan- ce	5 Gebrauchs- sicherheit/ safety in use	6 Korrosions- beständigkeit/ corrosion resistance	7 Schutz- wirkung/ security	8 angew. Teil/ appl. part	9 Prüfgrößen (in mm) test sizes
1	activPilot H 100	activPilot H 100	SH.2.18-13	SL.H.18-12	FL.H. 18/13-12	EL.H. 18-12	100 kg	-	4	100	0	1	4	-	8	900/2300
2	autoPilot H 100	autoPilot H 100	SWTF 40-18/9-12	SWTF 18-12	FWTA 18/9-12	EWTA 18-12	100 kg	-	4	100	0	1	4	-	8	900/2300
3	autoPilot H 100	autoPilot H 100	SRV 30-9-Z	ohne	FV-1 mit FSV-1	EV-1-Z	100 kg	-	4	100	0	1	4	-	8	900/2300
4	autoPilot K 100	autoPilot K 100	SW 20/13	SWS 3-6	FK 20-6-20	ESV 6-3-16	100 kg	-	4	100	0	1	4	-	8	1300/1200
5	activPilot K 130	activPilot K 130	SK2.20-13	SL.KB.3-6	FWV 20-13	ESVW 6-3-16	130 kg	-	4	130	0	1	4	-	8	900/2300
6	activPilot K 100	activPilot K 100	SK2.20-13	SL.KS.3-6	FL.KA. 20-6-20	EL.K. 6-3-16	100 kg	-	4	100	0	1	4	-	8	1300/1200
7	autoPilot K 130	autoPilot K 130	SW 20-13	SWB 3-6	FWV 20-13	ESVW 6-3-16	130 kg	-	4	130	0	1	4	-	8	1300/1200
8	autoPilot VV K	autoPilot VV K	SVV	ohne	FWV	EVV	90 kg	-	4	100	0	1	4	-	8	1300/1200
9	proPilot	proPilot	SK.U.2.20-13	SL.K.U.3-3	FL.K.U.6	EL.K.U.3-3	70 kg	-	4	70	0	1	4	-	8	1300/1200
10	proPilot	proPilot	SK.U.2.20-13	SL.K.U.3-3	FL.K.U.6	EL.K.U.3-3	100 kg	-	4	100	0	1	4	-	8	1300/1200
11	activPilot H 130	activPilot H 130	SH2.T. 18-13-12	SL.HT.18-12	FL.HT. 18-13-12	EL.HT.Z. 18-12	130 kg	-	4	130	0	1	4	-	8	1300/1200
12	activPilot Select H 150	activPilot Select H 150	SH.SE.29-13	ohne	FL.SE	EL.H.SE. 29-13 mit FLS.SE	150 kg	-	4	150	0	1	4	8	8	1550/1400
13	activPilot Select K 150	activPilot Select K 150	SK.SE	ohne	FL.SE	EL.K.SE mit FLS.SE	150 kg	-	4	150	0	1	4	8	8	900/2300

Anlage/annex 1

Blatt/page 2 von 2

Zertifikat-Nr./Certificate No.: 228 7019950-1-7

Hersteller/manufacturer: Aug. Winkhaus GmbH & Co. KG

Ausgabedatum/date of issue: 19.03.2012



Id. Nr. / no.	Ausführung Bandseite/ type hinge side	Ausführung Flügelbe- schlag/ type case- ment hard- ware	Beschreibung der Ausführung der blendrahmensetzten Beschlagausführung detail description of frame member hardware type				Flügel- gewicht/ casement weight	Klassifizierung entsprechend der Nachweise nach EN 13126-8 classification in accordance with evidence as per EN 13126-8								
			Winkelband/ top stay connecting part	Scherenlager/ stay arm sup- port	Eckband/ corner hinge	Ecklager/ corner pivot		1 Gebrauchs- kategorie/ category of use	2 Dauerfunk- tions- tüchtigkeit/ durability	3 Masse (in kg) mass	4 Feuer- beständigkeit/ fire resistan- ce	5 Gebrauchs- sicherheit/ safety in use	6 Korrosions- beständigkeit/ corrosion resistance	7 Schutz- wirkung/ security	8 angew. Teil/ appl. part	9 Prüfgrößen (in mm) test sizes
14	activPilot Comfort PADK 100	activPilot Comfort PADK 100	SK2.PA.20-13	SL.KS.3-6	FL.FWPA 20-13	ESV 6-3-16	100 kg	-	4	100	0	1	4	-	8	1300/1200
15	activPilot ALU 130	activPilot ALU 130	SK2.20-13	SL.KB.3-6	FWV 20-13	ESVW 6-3-16	130 kg	-	4	130	0	1	4	-	8	1300/1200
16	activPilot Select ALU 150	activPilot Select ALU 150	SK.SE	ohne	FL.SE	EL.K.SE mit FLS.SE	150 kg	-	4	150	0	1	4	8	8	1550/1400
17	activPilot H 150	activPilot H 150	SH2.T.18-13-12	SL.HT.18-12	FL.HT.18-13-12	EL.HT.Z. 18-12	150 kg	-	4	150	0	1	4	8	8	900/2300
18	activPilot Select K 100	activPilot Select K 100	SK.SE	ohne	FL.SE	EL.K.SE	100 kg	-	4	100	0	1	4	-	8	1300/1200
19	activPilot Select H 130	activPilot Select H 130	SH.SE.20-9.Z	ohne	FL.SE	EL.H.SE. 20-9.Z	130 kg	-	4	130	0	1	4	-	8	1300/1200
20	activPilot K 130 S	activPilot K 130 S	SK2.20-13	SL.K.3-6.130	FL.K. 20-6-28 130	ESV 6-3-16	130 kg	-	4	130	0	1	4	-	8	900/2300

Die technische Dokumentation des Beschlagherstellers, insbesondere die entsprechenden Anwendungsdiagramme, sind zu beachten.
Observe technical documents of hardware manufacturer, in particular the relevant diagrams.

The new fitting system for a healthy indoor climate

In order to meet the increased demands put on standards and energy-efficient indoor ventilation, Winkhaus has developed an innovative and unique fitting system, activPilot Comfort PADM.

Rooms must be ventilated

We create moisture in our houses and apartments every day – for example caused by cooking, taking showers, breathing or flower watering. Approx. 2 – 3 litres a day evaporate per capita. If this humidity stays inside the house, construction damages, mould growth and a poor indoor climate may develop.

The reason is that indoor air can only absorb a limited amount of moisture, which depends on the ambient temperature. The warmer the air, the more humidity is absorbed. As it cools down the air releases the moisture and this is why condensation water is formed on cold surfaces, such as window panes or cool outside walls. Especially the corners of a room are prone to mould growth.

Apart from the moisture, harmful substances evaporating from wallpapers, carpets, wall paint and furniture may accumulate in the air. Humidity and harmful substances can only be discharged from the rooms if these are correctly ventilated.

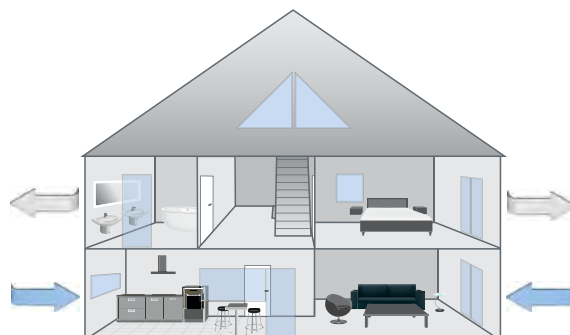
Modern living space presents new challenges

While energy efficiency of living spaces is rising, the requirements set on the tenants' ventilation behaviour is too. In former times houses were far less "tight" than today. Stale air was able to escape continuously through the outer shell, outside doors and windows. Tiny cracks and gaps allowed fresh outdoor air to enter without requiring action on part of the people. Condensation water temporarily formed on single-glazed windows and disappeared quickly thanks to the steady exchange of air.

Nowadays buildings are constructed or refurbished according to the new energy saving regulations (EnEV). Buildings are almost completely air-tight. For this reason it is the tenants themselves who must take care to ventilate their homes in the right way. However, due to insufficient time or due to the high loss of energy caused by open windows, the task is often neglected.

activPilot Comfort PADM performs many tasks at the same time.

For this reason Winkhaus has developed the unique activPilot Comfort PADM fitting system to perform several tasks at the same time. The fitting in combination with the BDT drive from D+H Mechatronic AG enables rooms to be ventilated naturally with burglar resistance remaining at a high level. Hence it provides for healthy ambient air and a positive energy efficiency. In this way people can ventilate their homes while they are absent. Intruders must stay outside and the entry of driving rain and traffic noise is substantially reduced.



Entry of air masses

Fresh air can enter and draughts are avoided at the same time.

Exit of air masses

Stale air escapes and the air consumed by lavatories, kitchens, bathrooms and solvents is completely exchanged.

Air mass in the building

The heat energy stays inside the room almost entirely.

Preventive against

house dust mites and mould (caused by permanently low air humidity), noise (compared with a tilted window) and draughts



Important: This only applies if the window is correctly designed and the ventilation concept is observed.

Standards and instructions

ENEV 2009

The energy saving regulations stipulate that buildings be tight when they are built or refurbished. This legal provision even applies to the restoration of old buildings when 1/3 of the entire building is replaced or rebuilt. The regulations must also be observed in case a building is enlarged by at least 30 m² or by a room of the same size (besides there are building regulations for fire and noise protection and for listed buildings). The building to be constructed must be matched with a reference building (according to EnEV2009). No deviations from the reference buildings are allowed.

DIN 1946-6:2009-05

§6 of the EnEV 2009 regulations stipulates the tightness of a building as well as a sufficient minimum exchange of air. DIN 1946-6:2009-5 can be used to provide evidence. A ventilation concept must be established in order to meet this standard's requirements. The result of such a ventilation concept can either be that a building is sufficiently ventilated or that additional action is required to observe the minimum exchange of air. If adequate ventilation is provided, no ventilation measures need to be taken. If, on the other hand, measures are necessary, the standard states that energetic exhaust systems must be operable without action required on part of users or that they have to include a heat pump.

Ventilation measures

for buildings to be refurbished

				Implementation to DIN1946-6 (2009-05)	
				Building unit	
				Single-storey *1	Multi-storey *2
Heat protection level	low	Wind area	weak	yes	yes (up to 80 m²)
			strong	yes	no
	high		weak	yes	no
			strong	yes (up to 140 m²)	no

for new buildings

				Implementation to DIN 1946-6 (2009-05)	
				Building unit	
Heat protection level	high	Wind area	weak	yes	yes (up to 80 m²)
			strong	yes (up to 140 m²)	no

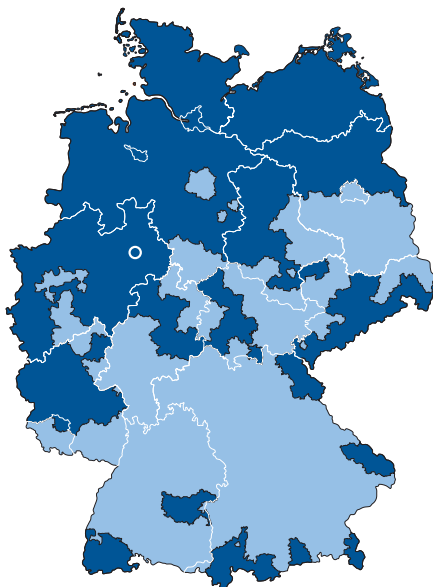
*1 n50 = 1,5h-1
*2 n50 = 2,0h-1

General product information	1
Lists of Fittings	2
Drive rods	3
Corner drives	4
Top rods	5
Sash hinges/ Corner hinges	6
Shears/ Shear hinges	7
Turn hinges/ Tilt hinges	8
Extension rods	9
Accessories	10
Frame parts	11
Mounting accessories	12
Mounting instructions	13
Adjustment/ maintenance	14
Installation drawings	15

Wind load zones in Germany

Dark blue areas: areas of strong wind

Light blue areas: areas of low wind



Further information on the subject of wind loads in Germany can be found here:

Dt. Institut für Bautechnik (German Institute for Construction) on http://www.dibt.de/de/geschaeftsfelder/brl_TB.html

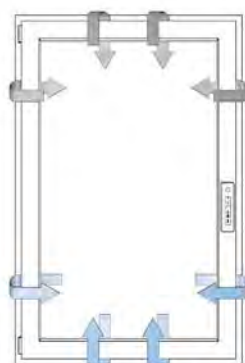
From Beuth Verlag (publishing house) DIN 1055-4

ift Rosenheim, <http://www.ift-rosenheim.de/rechentools.php>

Effective ventilation with activPilot Comfort PADM

Compared to conventional turn-tilt windows, the activPilot Comfort PADM fitting system provides three functions: locked – parallel action – turn position. Winkhaus has consistently pursued its strategy as market leader of the parallel action system and has developed a motorised version. Apart from the turn opening, the fitting system allows the sash to be opened in the parallel position, thus providing a motorised control of window positions for user-independent indoor ventilation. In the parallel position a small gap of approx. 6 mm is created between the window frame and the sash enabling a healthy and gentle ventilation in all weathers. The natural exchange of air ensures a healthy indoor climate. As with traditional systems, you can also open the window fully to let in fresh air.

The unique feature in this connection: The parallel opening position enables the same burglar resistance as the closed position of the window, burglar resistance to DIN EN 1627-1630 up to resistance class RC 2. The innovation: ventilate your home without letting burglars in!

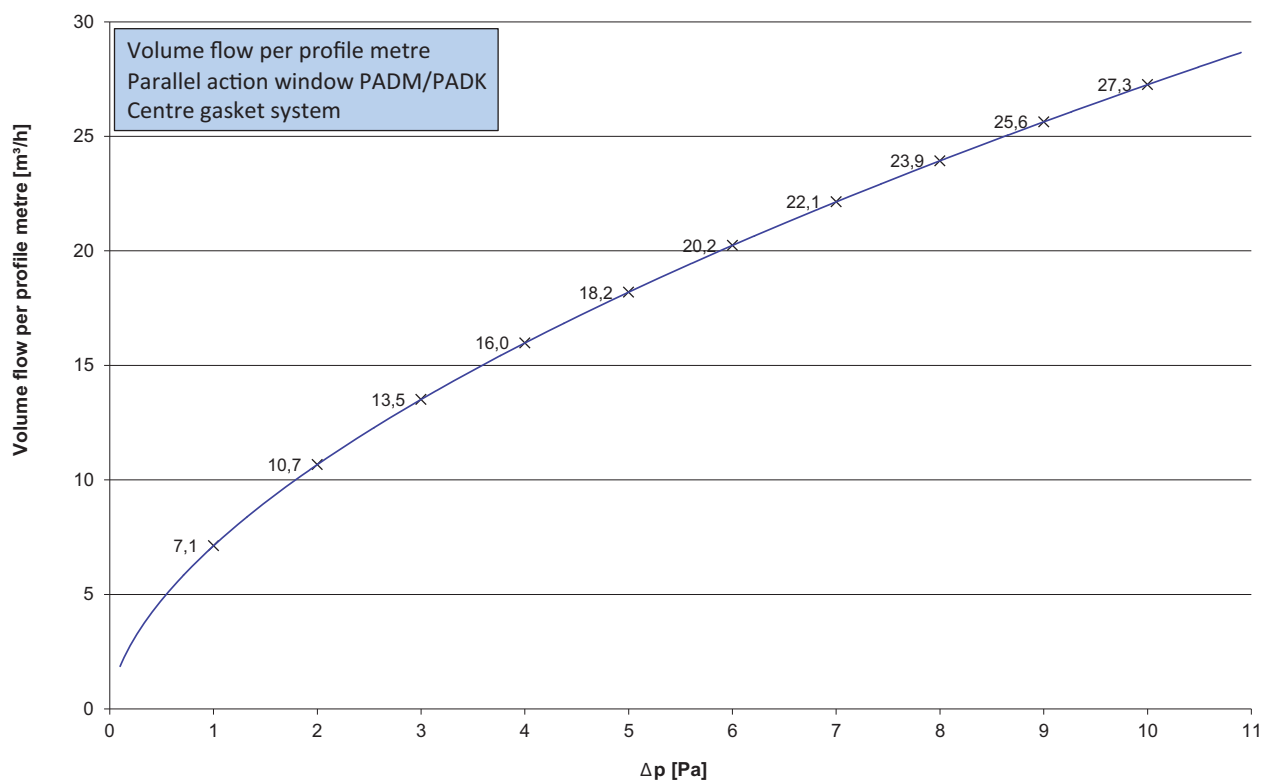


Operation and manufacturer-friendly system

activPilot Comfort PADM in combination with the BDT fitting drive from D+H enables a natural exchange of air in accordance with DIN1946-6. Since ventilation functions such as pre-set ventilation intervals can be adjusted as required, fresh air is supplied to interiors with no action needed on the part of users. In order to open the window fully, simply press the button that enables the bracket drive to release the sash for the turn position. Then the window can be opened manually.

The remote control unit facilitates the operation of windows that are difficult to access. Low power consumption, a backlit touch panel with self-explanatory button symbols as well as the low-noise mode round off the functions of this modern ventilation system. Like all Winkhaus fittings the activPilot Comfort PADM system is highly manufacturer-friendly and can be easily implemented with just a few additional components from the activPilot Concept range. The fittings are ordered with Winkhaus by window producers, as usual, and the bracket drive can be obtained from authorised D+H partners.

The innovative activPilot Comfort PADM window system is a real alternative to conventional ventilation systems.



The information given refers to a ventilation gap of approx. 6 mm.

Wind velocities

Pa/m²	m/sec	km/h	Wind strength in bft
2	1,8	6,6	2
3	2,2	8,1	
4	2,6	9,3	
5	2,9	10,4	
8	3,5	12,7	3
10	4,1	14,7	
15	5,0	18,0	
20	5,8	20,8	4
50	9,1	32,9	5
100	12,9	46,5	6
300	22,4	80,5	9
600	31,6	113,8	11

In order to ascertain the amount of air that can be exchanged against the pressure difference, you can use the chart to determine the volume flow per running metre (frame opening width of window).

Example:

With a pressure difference of 2 Pa there is an exchange of air of approx. 10.7 m³/h per running metre. This means that the air that is exchanged through a window 1 x 1 m amounts to 42.5 m³.

General product
information

1

Lists of Fittings

2

Drive rods

3

Corner drives

4

Top rods

5

Sash hinges/
Corner hinges

6

Shears/
Shear hinges

7

Turn hinges/
Tilt hinges

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activPilot Comfort PADM

Application diagram for ascertaining the admissible sash sizes

– Max. sash weight 100 kg



For PVC-U windows with 12 mm airgap



For parallel action/ turn rectangular window

Aspect ratio and additional load

Determining the value without additional load with an aspect ratio of 1.5:1

The application diagrams were established without considering additional loads. For ascertaining the max. sash sizes with additional loads, please ask your Winkhaus contact partners for comprehensive advice!

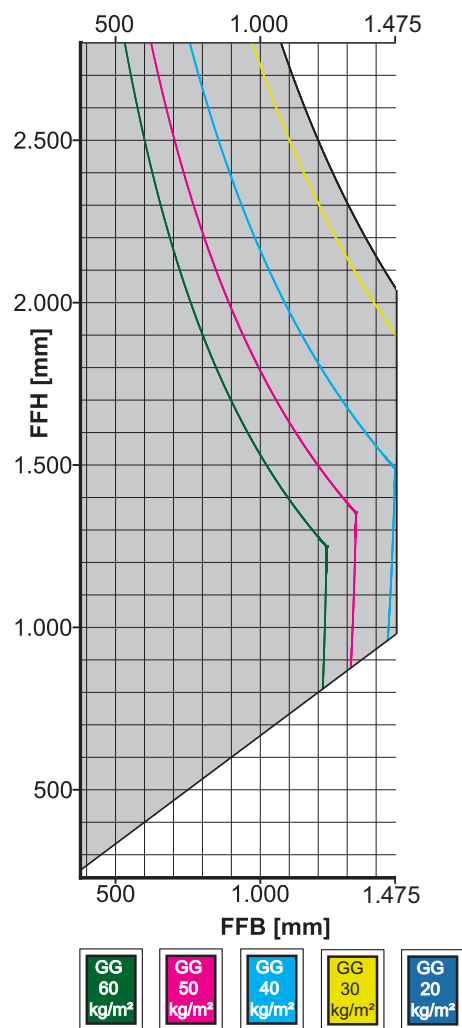
Advice for use

The permissible application range for using Winkhaus fittings is marked grey in the application diagrams. However, please do not take into account the complete grey surface, but only the part which is on the left side of the “filling weight GG” curve.

Application range

All fittings must be selected from the original Winkhaus activPilot fitting component range. We accept no liability in case of use of third party or non-approved system components.

- Min. sash rebate width 460 mm
- Max. sash rebate width 1,475 mm
- Min. sash rebate height 695 mm (surface-mounted cable transition)
- Min. sash rebate height 820 mm (concealed cable transition)
- Max. sash rebate height 2,800 mm
- Max. sash size 2.5 m²
- Max. sash weight 100 kg
- Width-height ratio FFB:FFH ≤ 1.5
- Airgap 12 mm
- Overlap 20 mm
- Groove centre position 13 mm
- Frame rebate depth min. 29 mm
- Only approved for central gasket systems



AWD_01.50_NR15_DK_100 kg_ohne_Zusatzlast_1,5_m

Abbreviations

- FFB = Sash rebate width [mm]
- FFH = Sash rebate height [mm]
- GG = Glass weight per square metre [kg/m²]
- ZSR = Additional shear (area on the right side of the interrupted line)

Basics

- 1 mm Glass ≈ 2.5 kg/m²

System Testing RC2 (Resistance Class 2)

The processing details RC 2 can be gathered from the RC2 system tests. The RC 2 fitting lists in this catalogue are only application examples. Please turn to your Winkhaus contact person.



Important: activPilot Comfort fittings are not suitable for use in panic doors!

Packing key in the Winkhaus logistics system

The shipping units were chosen in a way that our products can be handled without any problems at your works, ranging from cardboard packaging to complete pallet units. For instance, we provide KLTs (small load carriers) in different sizes which are eco-friendly and facilitate logistics. The reusable packaging units, which can be stacked on a europallet, have a bar code and enable optimal stock organisation and easy transport to the relevant workstations.

The packaging used for the products in question can be found on the corresponding product pages.



BL Goods packed in PE bags with bar code



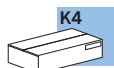
KT Goods packed in cardboard boxes with bar code



BD Tied goods



K3 Small cardboard box with bar code
Dim.: 395 x 295 x 205 mm



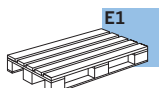
K4 Big cardboard box with bar code
Dim: 595 x 395 x 205 mm



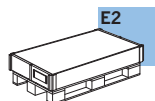
KK Small KLT 4321 Dim: 400 x 300 x 214 mm with cover, bar code, sealed, stackable



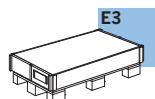
GK Big KLT 6412 Dim: 600 x 400 x 214 mm with cover, bar code, sealed, stackable



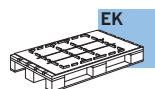
E1 europallet with KLT Pallet size 800 x 1,200 mm



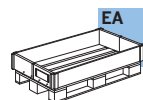
E2 europallet with cover box and bar code Pallet size 800 x 1,200 mm



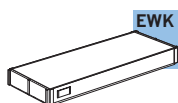
E3 One-way pallet with cover box and bar code



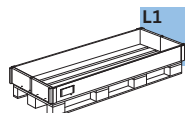
EK Europallet with KLT and fixing plate (avoids shifting of goods) Pallet size 800 x 1,200 mm



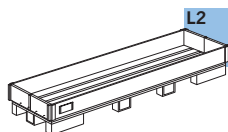
EA Europallet with frame and bar code Pallet size 800 x 1,200 mm



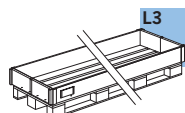
EWK Disposable cardboard box E3, L6 or L7



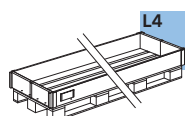
L1 Reusable pallet for long goods with frame and bar code Pallet size 800 x 1,800 mm



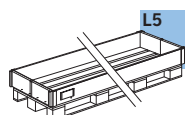
L2 Reusable pallet II for long goods with frame and bar code Pallet size 800 x 2,400 mm



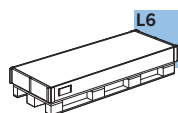
L3 Reusable pallet III for long goods with frame and bar code Pallet size 800 x 3,500 mm



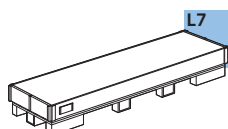
L4 Reusable pallet IV for long goods with frame and bar code Pallet size 800 x 4,200 mm



L5 Reusable pallet V for long goods with frame and bar code Pallet size 800 x 6,500 mm



L6 One-way pallet with cover box for long goods with bar code Pallet size 800 x 1,800 mm



L7 One-way pallet with cover box for long goods with bar code Pallet size 800 x 2,400 mm

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Further products

activPilot Concept

The turn-tilt fitting for PVC-U windows.

A modular system that combines the solutions of a future standard. A new closing system, attractive value-added functions and functional design.



activPilot Select

The new fully concealed turn-tilt fitting.

The fitting system features fully concealed shear, turn and corner hinges housed in the rebate. When installed as a standard model, this elegantly designed turn and tilt fitting is able to bear sashes weighing up to 100 kg. With just two additional components, it can easily support sashes weighing up to 150 kg.



activPilot Control

Closing sensors up to VdS Class C.

Unobtrusive closing sensors reliably report which windows and glazed doors are open or locked. At the same time heating and air-conditioning controls are supported.



activPilot Comfort PADK

Turn-tilt fittings with parallel action.

Allround security thanks to innovative technology. The convenient approach to a healthy indoor atmosphere and improved illegal entry protection in parallel position.



easyPilot

Fittings for turn windows.

Simple, rational and easy to handle. Perfectly geared to the needs of international fitters thanks to innovative, country-specific solutions.



duoPort SK

Slide-tilt fittings.

The slide-tilt doors delivered with the duoPort SK series support sash weights of up to 200 kg, with perfect functionality and elegant design. They can be operated conveniently by simply pressing the handle in combination with a pull-in shear device.



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Glossary

Code

AB.G.D	Drilling protection	GAK	Drive rod, fixed handle position
ADP	Adapter	GAKA	Drive rod, fixed handle position, lockable
AL...	Support plate	GAM	Drive rod, central handle position
AP...SE	Adapter plate, activPilot Select	GAMA	Drive rod, central handle position, lockable
AR	Corner drive	GASK	Double sash drive rod, fixed handle position
AS.SBA	Mini vent keep	GASM	Double sash drive rod, central handle position
ASP ER-A	End plate	GAVM	Locking drive rod activPilot, central handle position
AWDR	Blocking plate	GG	Handle set
		GK	Handle position
		GRT.RB	Round arch set
		GRT.SWR	Shear hinge set, round arch
BDT	Motor drive of the fitting system (D+H)		
BK	Balcony door catch	HFG	Window Handle Case HFG
BO	Catch bolt	HT	Wood, pot hinge
BS	Ground sill		
BST AP/FS	Punch		
D	Backset	K	Plastic
DB	Turn limiter	K.EL	Corner hinge cap
DFE	Dual function element	K.FL	Sash hinge cover
DL	Turn hinge	K.SB	Shear band cap
DLW ERW	Top hinge bracket	K.SK	Shear hinge cap K.SK
DML	„Turn only“ middle hinge	K.SL	Shear hinge cap
DS	Rotation stop device	KB	Tilt hinge
DWF	Turn hinge, rebate hinge	KBG	Tilt limiter
		KBSWF	Tilt hinge, rebate hinge
		KE	Coupling element
E	Corner drive	KLB	Tilt hinge
E1.A	Corner drive for studio windows	KR	Shootbolt
E1.SBS	Corner drive for double-sash window	KUE-T1	Cable transition, separable
EL	Corner hinges		
EL.KB	Corner hinge up to 130 kg	LE.B	Drilling jig
ELK	Corner hinge cap	LE.N	Jig
EW OR	Corner bracket	LIN AP/FS	Ruler of fittings press
EL.HW	Corner hinge, rebate hinge	LM-RG	Round handle
FBP	Window limiter	M	Interlocking rod
FH ...	Sash lifter	MK	Interlocking rod, extendable
FL	Sash hinges	MS.SO	Interlocking rod, double sash, keep top
FL.E.FPAD	Flügellager, PAD	MS.SU	Interlocking rod, double sash, keep bottom
FL.E.FWPA	Sash hinge, PADK	MSL.OS	Variable tilt device top rod
FL.KA	Sash hinge, pressure adjustment		
FLK	Sash hinge cover, rebate hinge	OBV	Opening limiter
FLS.SE	Sash hinge rail, activPilot Select	OS	Top rod
FS	Window lock	OS. ... PA. ...	Top rod, PADK
FSA	Fail safe device FSA	OS. ...E	Top rod (turn before tilt)
FSF	Fail safe device		
FSR	Rebate shear	PA	Parallel action
FSV	Window Lock FSV	PAD	Parallel action, turn
FT	Adapter	PADK	Parallel action, turn-tilt system
FWSB	Sash hinge, rebate hinge		
FWV	Sash hinge, rebate hinge, automated assembly		
		RADB.SE	Frame connection, activPilot Select
		RTDFE-TFE	Frame part, dual/triple function element
		RTDFE-TFES	Frame part, dual/triple function element, double-sash windows

Article description

S.FL	Sash hinge plug	...RS	Fitting direction right
SA	Keep limiter	...LS	Fitting direction left
SB SZV	Keep, pull-in device	...BR	brown, similar to RAL 8019
SBA...	Keep	...EV1	anodised silver
SBA...T	Mini vent keep	...F1	silver coloured
SBK	Security tilt keep	...F3	gold coloured
SBK...E	Tilt keep (tilt before turn)	...F9	titanium coloured
SBK...PA	Tilt keep (with slider), PADK	...SL	silver look (zinc galvanised)
SBS...	Security keep	...WS	white, similar to RAL 9016
SBS...PA. ...	Security keep, PADK	...CW	creme white, similar to RAL 9001
SBS...PAB. ...	Security keep PAB, PADK	...SG	silver-grey, similar to RAL 7001
SBS...PAD	Security keep PAD	...AGR	anthracite grey – similar to RAL 7016
SE	activPilot Select	...SGB	grey – similar to RAL 9006
SH...T	Shear, pot hinge	...BZ-RB	bronze – red brown
SHW	Shear, rebate hinge	...BZ-AM	bronze – antique brass
SK	Shear, PVC		
SK .. PA ...	Shear, PADK		
SK .. PAD ...	Shear PAD		
SK ... A	Shear studio window		
SK ... E	Shear (tilt before turn)		
SL	Shear hinges		
SLK	Shear hinge cap, rebate hinge		
SNH	Faceplate fastener		
SP R	Faceplate		
SR	Control unit		
SWHT	Shear hinge, rebate hinge		
SZP	Geared cover plate		
TFE	Triple function element		
V	Locking gap		
V.AK	Extension rod		
VS R	Connection rod		
VS RK	Connection rod round-arch window		
ZSR	Additional shear		
ZSRE	Additional shear (tilt before turn)		
ZSS.OS	Anti-slam device, top rod		
ZV.FT	Pull-in device, sash part		
ZV.RT	Pull-in device, frame part		

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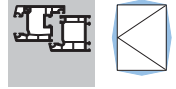
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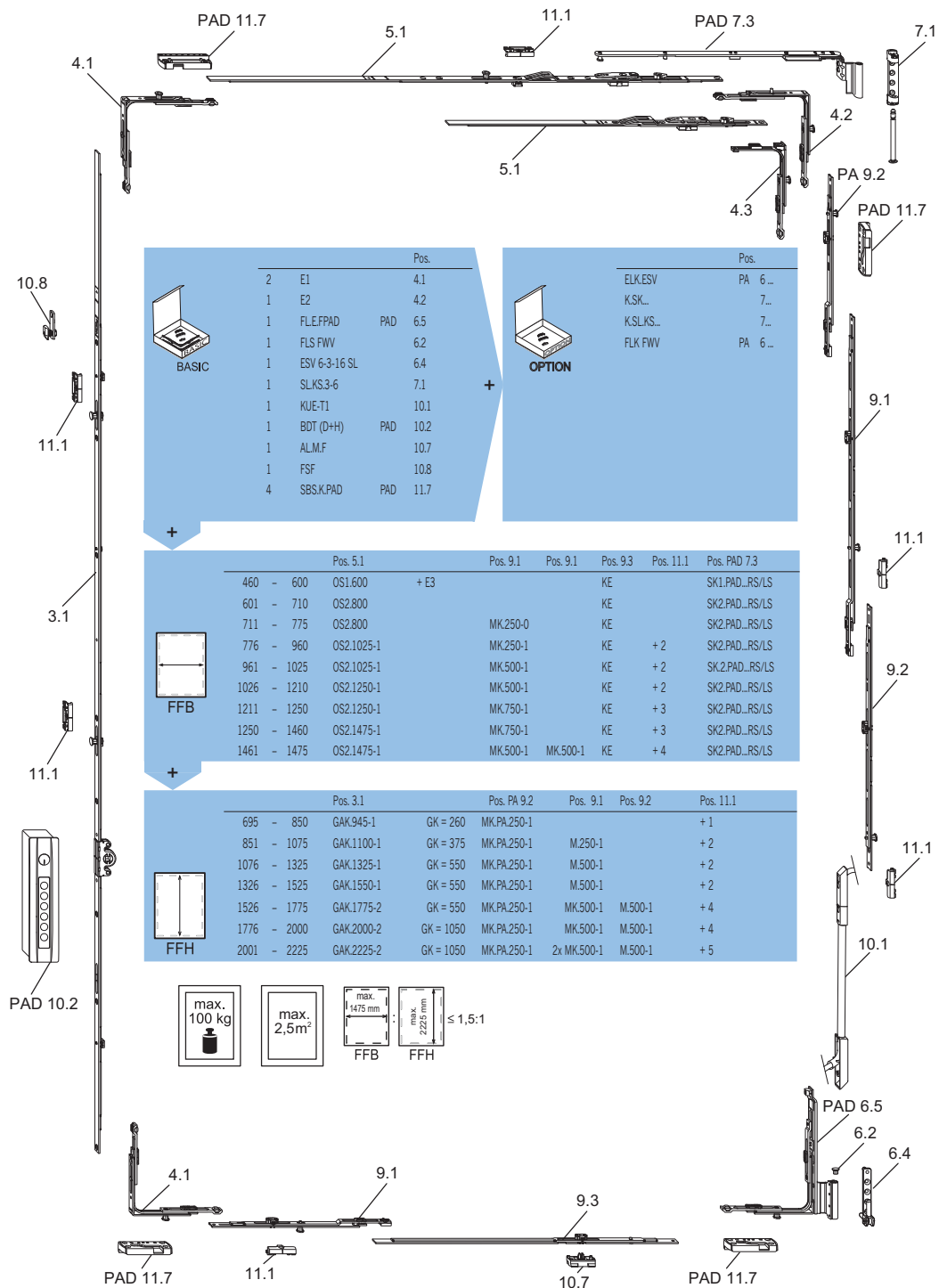
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Turn fitting with parallel action – fixed handle position



Basic equipment

activPilot Comfort PADM

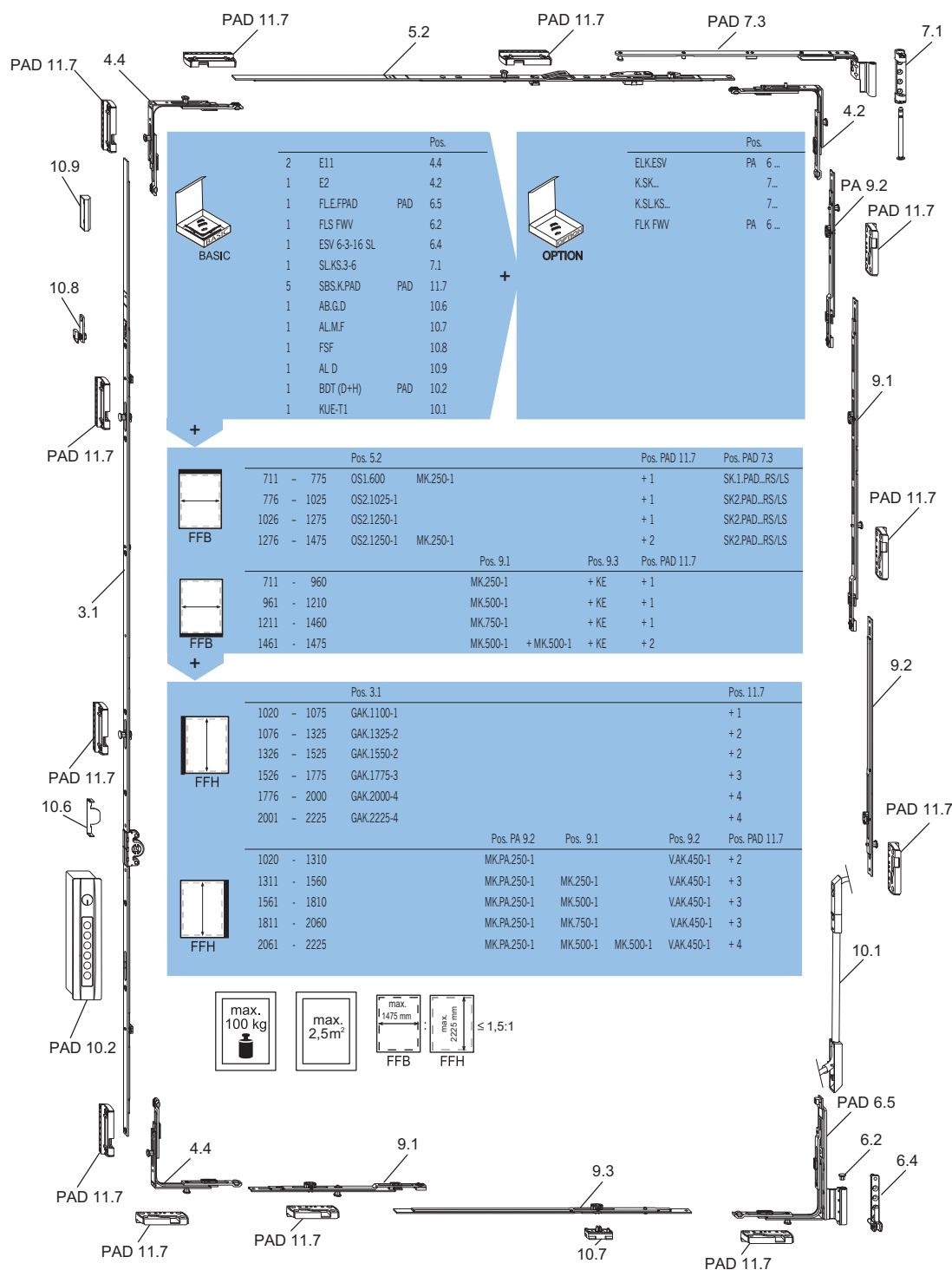


The elements marked "PAD" are specifically intended for use with activPilot Comfort PADM fittings.
Note: For control of the motor please contact D+H Mechatronic.

Turn fitting with parallel action – fixed handle position

Suitable for burglar-resistant windows WK2 /RC 2

activPilot Comfort PADM



The elements marked "PAD" are specifically intended for use with activPilot Comfort PADM fittings.
Note: For control of the motor please contact D+H Mechatronic.

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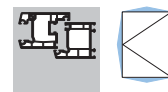
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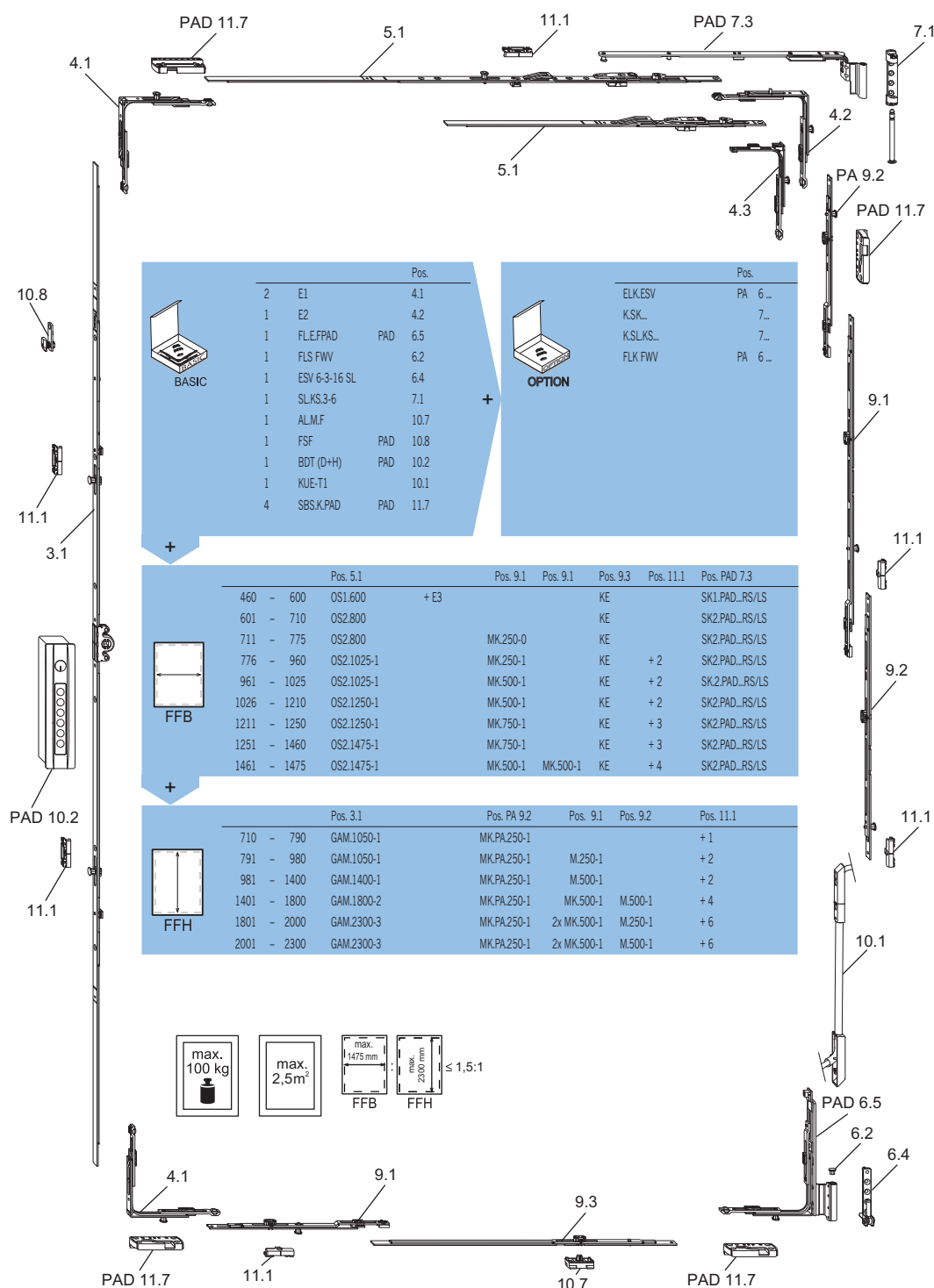
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Turn fittings with parallel action – central handle position



Basic equipment

activPilot Comfort PADM

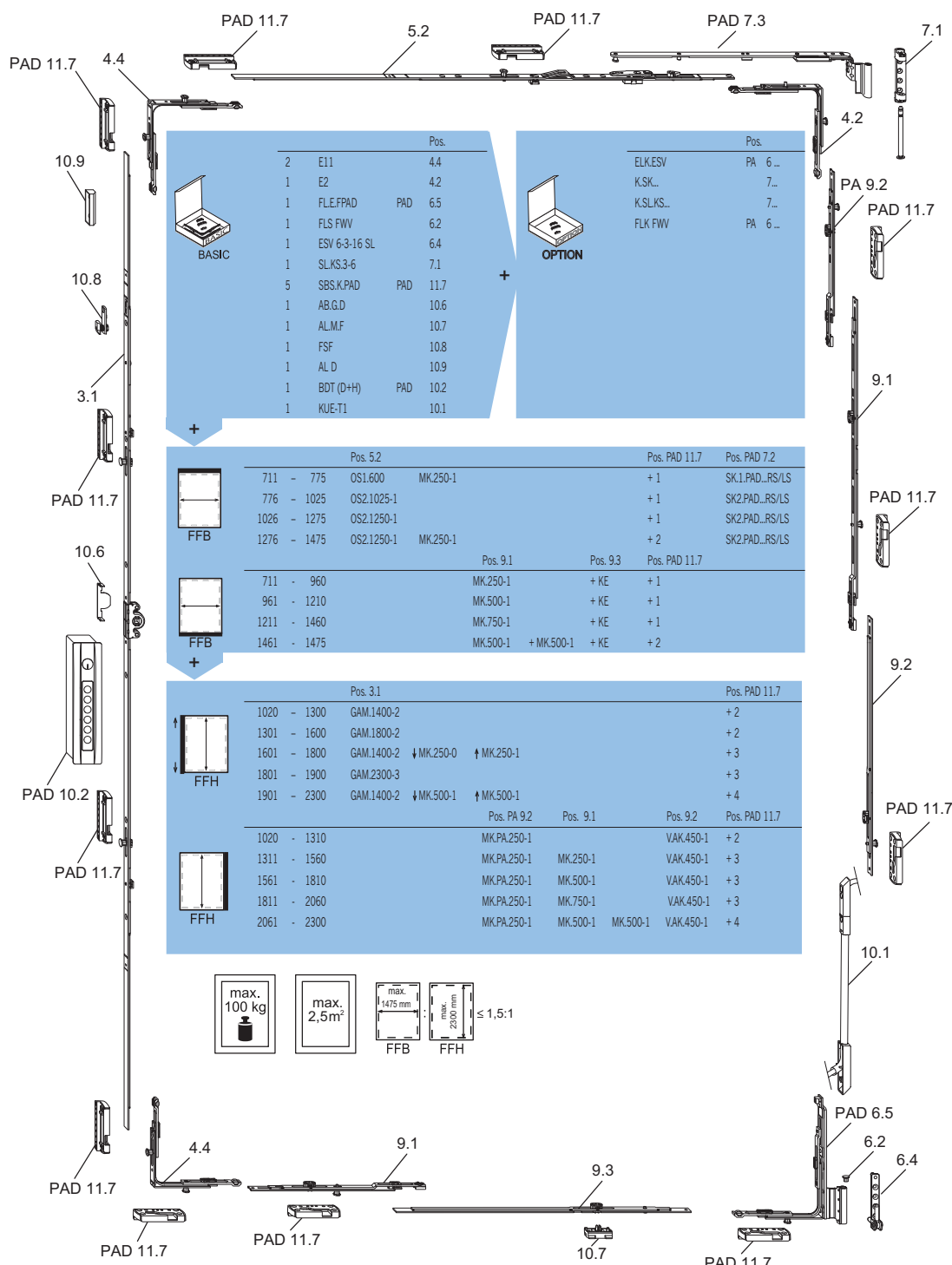


The elements marked "PAD" are specifically intended for use with activPilot Comfort PADM fittings.
Note: For control of the motor please contact D+H Mechatronic.

Turn fittings with parallel action – central handle position

Suitable for burglar-resistant windows WK2 /RC 2

activPilot Comfort PADM



The elements marked "PAD" are specifically intended for use with activPilot Comfort PADM fittings.
Note: For control of the motor please contact D+H Mechatronic.

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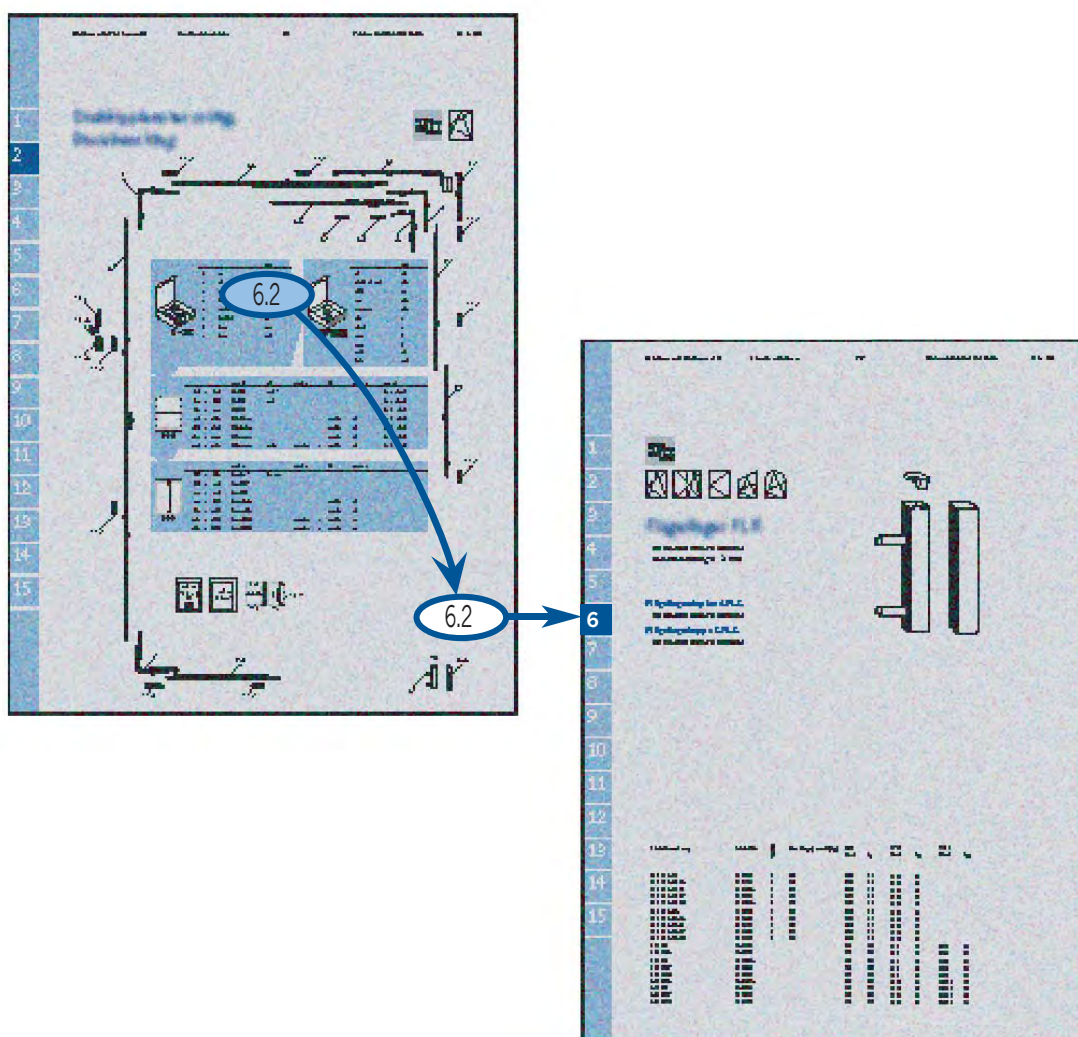
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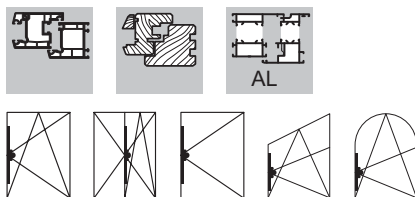
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Quick orientation

Our register system allows you to quickly allocate the listed component to the item in the fitting overview drawing. The item number specifies the chapter number in which the component can be found.





Drive rod GAK

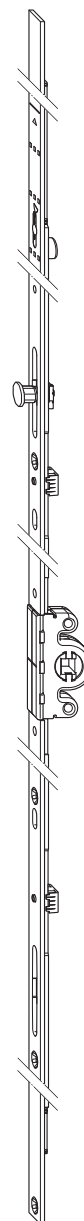
- Fixed handle position GK
- Backset 15.5 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- Handle position with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- For drilling and milling instructions see Group 15 installation drawings B-3-1
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Drive rod GAK ... BK

- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM

Drive rod GAK ... C

- incl. reinforced clamping mechanism within the profile groove



Article description	Article No.	Scope of application		Dimension GK	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
GAK.465	4926221	FFH 420 - 520	0	210		10	BD	100	KK	800	EK
GAK.465.C	4935841	FFH 420 - 520	0	210		10	BD	100	KK	800	EK
GAK.710	4926207	FFH 460 - 710	1	210		20	BD	600	EA		
GAK.710.C	4935843	FFH 460 - 710	1	210		20	BD	600	EA		
GAK.830	4926230	FFH 580 - 830	2	260		20	BD	600	EA		
GAK.830-1	4926231	FFH 580 - 830	2	260		20	BD	600	EA		
GAK.945	4926208	FFH 695 - 945	3	260	• •	20	BD	400	EA		
GAK.945-1	4926209	FFH 695 - 945	3	260	• •	20	BD	400	EA		
GAK.1100-1	4926234	FFH 850 - 1100	3	375	• •	20	BD	360	EA		
GAK.1195-1	4926236	FFH 945 - 1195	4	470	• •	20	BD	360	EA		
GAK.1195-2	4926237	FFH 945 - 1195	4	470	• •	20	BD	360	EA		
GAK.1325-1	4978659	FFH 1075 - 1325	4	550	• •	20	BD	360	EA		
GAK.1325-1.G500	4937485	FFH 1075 - 1325	4	500	• •	20	BD	360	EA		
GAK.1325-2	4978670	FFH 1075 - 1325	4	550	• •	20	BD	360	EA		
GAK.1550-1	4926224	FFH 1300 - 1550	5	550	• •	10	BD	400	L1		
GAK.1550-2	4926225	FFH 1300 - 1550	5	550	• •	10	BD	360	L1		
GAK.1775-2	4926228	FFH 1525 - 1775	7	550	• •	10	BD	400	L1		
GAK.1775-3	4926229	FFH 1525 - 1775	7	550	• •	10	BD	400	L1		
GAK.2000-2	4938089	FFH 1750 - 2000	8	1050	• •	10	BD	360	L2		
GAK.2000-2.BK	4942670	FFH 1750 - 2000	8	1050	• •	10	BD	360	L2		
GAK.2000-4	4938120	FFH 1750 - 2000	8	1050	• •	10	BD	360	L2		
GAK.2000-4.BK	4942671	FFH 1750 - 2000	8	1050	• •	10	BD	360	L2		
GAK.2225-2	4938122	FFH 1975 - 2225	9	1050	• •	10	BD	360	L2		
GAK.2225-2.BK	4942672	FFH 1975 - 2225	9	1050	• •	10	BD	360	L2		
GAK.2225-4	4938123	FFH 1975 - 2225	9	1050	• •	10	BD	360	L2		
GAK.2225-4.BK	4942673	FFH 1975 - 2225	9	1050	• •	10	BD	360	L2		

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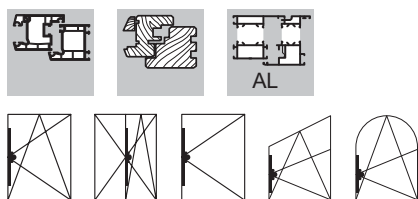
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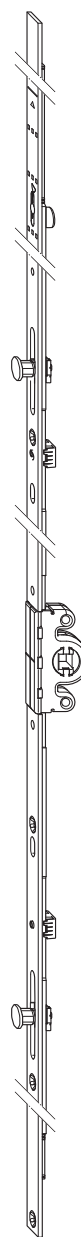


Drive rod GAK V < 700

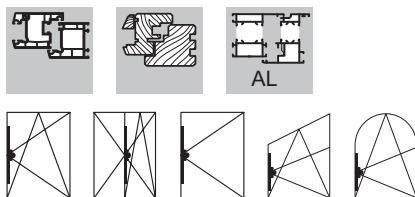
- Fixed handle position GK
- Backset 15.5 mm
- Locking gap less than 700 mm (V < 700)
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- Handle position with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- For drilling and milling instructions see Group 15 installation drawings B-3-1
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Drive rod GAK ... BK

- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM



Article description	Article No.	Scope of application		Dimension GK	DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAK.830-1	4926231	FFH 580 - 830	2	260			20	BD	600	EA
GAK.945-1	4926209	FFH 695 - 945	3	260	•	•	20	BD	400	EA
GAK.1100-1	4926234	FFH 850 - 1100	3	375	•	•	20	BD	360	EA
GAK.1195-2	4926237	FFH 945 - 1195	4	470	•	•	20	BD	360	EA
GAK.1325-2	4978670	FFH 1075 - 1325	4	550	•	•	20	BD	360	EA
GAK.1550-2	4926225	FFH 1300 - 1550	5	550	•	•	10	BD	360	L1
GAK.1775-3	4926229	FFH 1525 - 1775	7	550	•	•	10	BD	400	L1
GAK.2000-4	4938120	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2000-4.BK	4942671	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2225-4	4938123	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2
GAK.2225-4.BK	4942673	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2

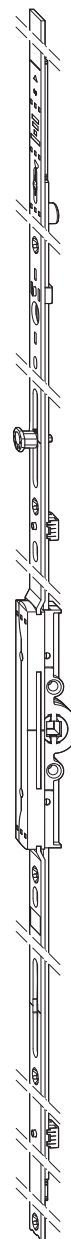


Drive rod GAK... D 7.5

- Fixed handle position GK
- Backset 7.5 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- Handle position with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- For drilling and milling instructions see Group 15 installation drawings B-3-2
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Drive rod GAK ... BK

- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM



Article description	Article No.	Scope of application		Dimension GK	DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAK.700.D7,5	4983049	FFH 530 - 700	2	260			20	BD	400	EA
GAK.830-1.D7,5	4969431	FFH 580 - 830	2	260			20	BD	400	EA
GAK.945-1.D7,5	4969430	FFH 695 - 945	3	260	•	•	20	BD	400	EA
GAK.1100-1.D7,5	4969429	FFH 850 - 1100	3	375	•	•	20	BD	360	EA
GAK.1195-1.D7,5	4969428	FFH 945 - 1195	4	470	•	•	20	BD	360	EA
GAK.1195-2.D7,5	4980490	FFH 945 - 1195	4	470	•	•	20	BD	360	EA
GAK.1325-1.D7,5	4969427	FFH 1075 - 1325	4	550	•	•	20	BD	360	EA
GAK.1325-2.D7,5	4969426	FFH 1075 - 1325	4	550	•	•	20	BD	360	EA
GAK.1550-1.D7,5	4969425	FFH 1300 - 1550	5	550	•	•	10	BD	400	L1
GAK.1550-2.D7,5	4969424	FFH 1300 - 1550	5	550	•	•	10	BD	400	L1
GAK.1775-2.D7,5	4969423	FFH 1525 - 1775	7	550	•	•	10	BD	400	L1
GAK.1775-3.D7,5	4969422	FFH 1525 - 1775	7	550	•	•	10	BD	400	L1
GAK.1850-2.D7,5	4969416	FFH 1600 - 1850	8	715	•	•	10	BD	360	L1
GAK.2000-2.D7,5	4969415	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2000-2.D7,5.BK	4969413	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2000-4.D7,5	4969412	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2000-4.D7,5.BK	4969411	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2225-2.D7,5	4969410	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2
GAK.2225-2.D7,5.BK	4969409	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2
GAK.2225-4.D7,5	4969407	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2
GAK.2225-4.D7,5.BK	4969406	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2

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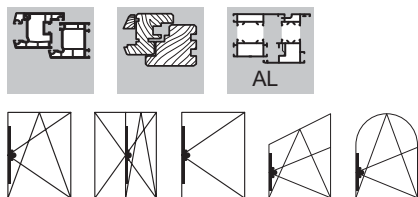
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Drive rod

GAK ... D 7,5 V < 700

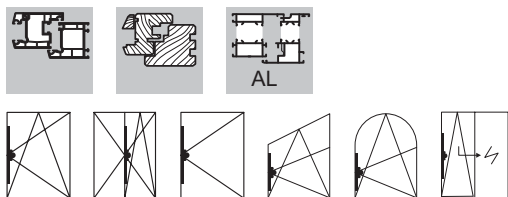
- Fixed handle position GK
- Locking gap less than 700 mm ($V < 700$)
- Backset 7.5 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- Handle position with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- For drilling and milling instructions see Group 15 installation drawings B-3-2
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Drive rod GAK ... BK

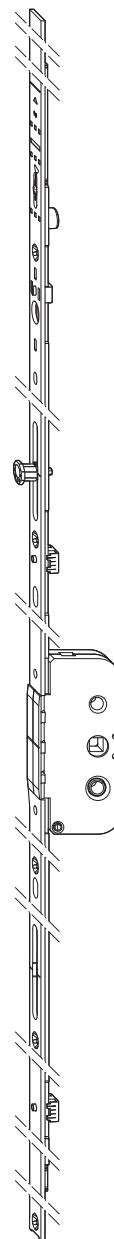
- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM

Article description	Article No.	Scope of application		Dimension GK	DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAK.830-1.D7,5	4969431	FFH 580 - 830	2	260			20	BD	400	EA
GAK.945-1.D7,5	4969430	FFH 695 - 945	3	260	•	•	20	BD	400	EA
GAK.1100-1.D7,5	4969429	FFH 850 - 1100	3	375	•	•	20	BD	360	EA
GAK.1325-2.D7,5	4969426	FFH 1075 - 1325	4	550	•	•	20	BD	360	EA
GAK.1550-2.D7,5	4969424	FFH 1300 - 1550	5	550	•	•	10	BD	400	L1
GAK.1775-3.D7,5	4969422	FFH 1525 - 1775	7	550	•	•	10	BD	400	L1
GAK.2000-4.D7,5	4969412	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2000-4.D7,5.BK	4969411	FFH 1750 - 2000	8	1050	•	•	10	BD	360	L2
GAK.2225-4.D7,5	4969407	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2
GAK.2225-4.D7,5.BK	4969406	FFH 1975 - 2225	9	1050	•	•	10	BD	360	L2



Drive rod GAK... D 25 - 50

- Fixed handle position GK
- The backset is optionally 25, 30, 35, 40, 45 or 50 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- Extensible with extension rods
- Handle position with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- For drilling and milling instructions see group 15, installation drawings B-3-4
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Article description	Article No.	Scope of application		Dimension GK	DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAK.1325-1.D25	4978671	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.1325-1.D30	4978672	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.1325-1.D35	4978673	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.1325-1.D40	4978674	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.1325-1.D45	4978675	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.1325-1.D50	4978676	FFH 1075 - 1325	4	550	•	•	10	BD	200	EA
GAK.2000-4.D25	4938143	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2000-4.D30	4938150	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2000-4.D35	4938151	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2000-4.D40	4938152	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2000-4.D45	4938153	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2000-4.D50	4938154	FFH 1750 - 2000	8	1050	•	•	10	BD	200	L2
GAK.2225-4.D25	4938145	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2
GAK.2225-4.D30	4938146	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2
GAK.2225-4.D35	4938147	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2
GAK.2225-4.D40	4938148	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2
GAK.2225-4.D45	4938149	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2
GAK.2225-4.D50	4938160	FFH 1975 - 2225	9	1050	•	•	10	BD	200	L2

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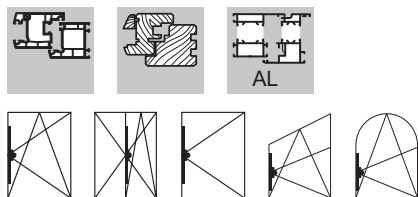
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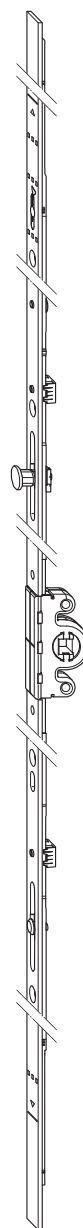


Drive rod GAM

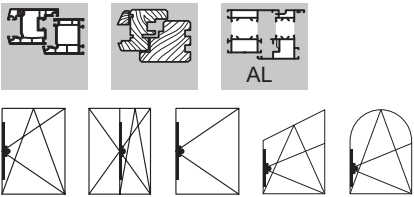
- Central handle position
- Backset 15.5 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- For drilling and milling instructions see Group 15 installation drawings B-3-1
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Drive rod GAM ... BK

- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM



Article description	Article No.	Scope of application		DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAM.800	4926267	FFH 510 - 800	2			20	BD	400	EA
GAM.1050	4926268	FFH 710 - 1050	2	•	•	20	BD	360	EA
GAM.1050-1	4926269	FFH 710 - 1050	2	•	•	20	BD	360	EA
GAM.1400	4926290	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1400-1	4926291	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1400-2	4926292	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1800	4926293	FFH 1300 - 1800	6	•	•	10	BD	360	L1
GAM.1800-2	4926295	FFH 1300 - 1800	6	•	•	10	BD	360	L1
GAM.2300	4938161	FFH 1800 - 2300	8	•	•	10	BD	360	L2
GAM.2300-3	4938163	FFH 1800 - 2300	8	•	•	10	BD	360	L2
GAM.2300-3.BK	4942674	FFH 1800 - 2300	8	•	•	10	BD	360	L2




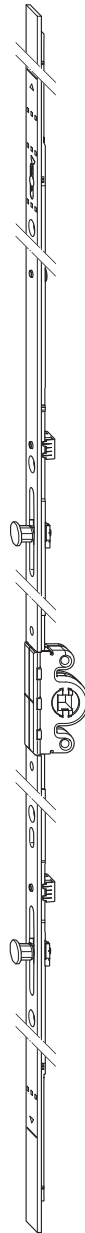
Drive rod GAM V < 700

- Central handle position
- Backset 15.5 mm
- Locking gap less than 700 mm (V < 700)
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- For drilling and milling instructions see Group 15 installation drawings B-3-1
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Drive rod GAM ... BK

- With pre-assembled balcony door catch bolt
- Not suitable for activPilot Comfort PADK/PADM

Article description	Article No.	Scope of application		DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAM.1400-2	4926292	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1800-2	4926295	FFH 1300 - 1800	6	•	•	10	BD	360	L1
GAM.2300-3	4938163	FFH 1800 - 2300	8	•	•	10	BD	360	L2
GAM.2300-3.BK	4942674	FFH 1800 - 2300	8	•	•	10	BD	360	L2



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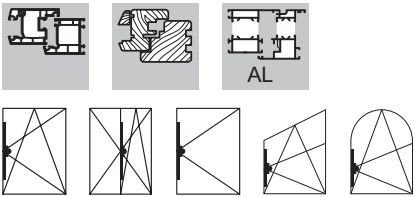
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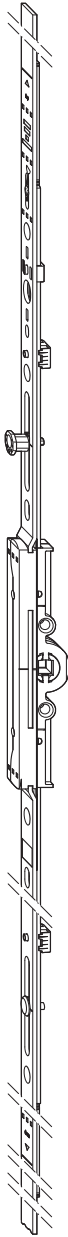
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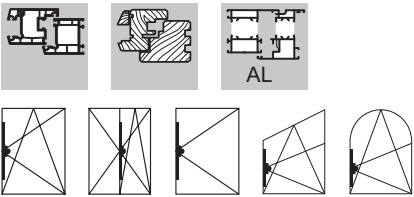


Drive rod GAM ... D 7.5

- Central handle position
- Backset 7.5 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- For drilling and milling instructions see Group 15 installation drawings B-3-2
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



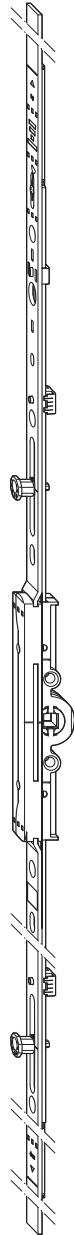
Article description	Article No.	Scope of application		DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAM.800.D7,5	4969404	FFH 575 - 800	2			20	BD	400	EA
GAM.1050-1.D7,5	4969403	FFH 710 - 1050	2	•	•	20	BD	360	EA
GAM.1400-1.D7,5	4969402	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1400-2.D7,5	4969401	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1800-2.D7,5	4969400	FFH 1300 - 1800	6	•	•	10	BD	360	L1
GAM.2300-3.D7,5	4969289	FFH 1800 - 2300	8	•	•	10	BD	360	L2




Drive rod

GAM ... D 7,5 V < 700

- Central handle position
- Backset 7.5 mm
- Locking gap less than 700 mm (V < 700)
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- For drilling and milling instructions see Group 15 installation drawings B-3-2
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Gear case for mounting in drilled hole
- Fasten the window handle attachment with M5 x ..., DIN 965, 43 mm screw centres
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Article description	Article No.	Scope of application		DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAM.1400-2.D7,5	4969401	FFH 900 - 1400	4	•	•	20	BD	360	L1
GAM.1800-2.D7,5	4969400	FFH 1300 - 1800	6	•	•	10	BD	360	L1
GAM.2300-3.D7,5	4969289	FFH 1800 - 2300	8	•	•	10	BD	360	L2

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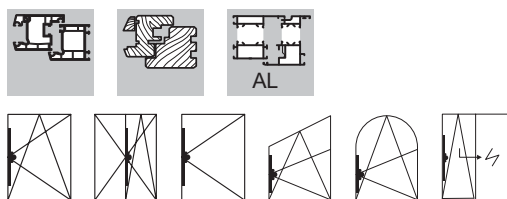
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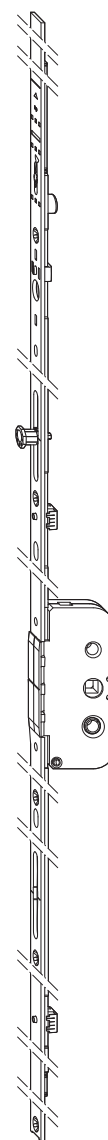
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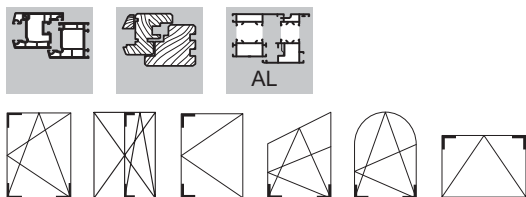


Drive rod GAM ... D25 - 50

- Central handle position
- The backset is optionally 25, 30, 35, 40, 45 or 50 mm
- Clampable in fitting groove
- Functional parts such as DFE and TFE retrofittable (see table), does not apply to activPilot Comfort PADK/PADM
- For drilling and milling instructions see group 15, installation drawings B-3-4
- Extensible with extension rods
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Gear case for milling from rebate
- Central fastening as standard
- Turn position is the factory default
- Drive stroke approx. 37 mm with window handle rotation by 180°
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Article description	Article No.	Scope of application		DFE	TFE	VPA1 Qty.	Type	VPA2 Qty.	Type
GAM.800.D25	4941067	FFH 510 - 800	2			10	BD	200	EA
GAM.800.D30	4941069	FFH 510 - 800	2			10	BD	200	EA
GAM.1050-1.D25	4941081	FFH 710 - 1050	2	•	•	10	BD	200	EA
GAM.1050-1.D30	4941082	FFH 710 - 1050	2	•	•	10	BD	200	EA
GAM.1400-1.D25	4927159	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-1.D30	4927171	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-1.D35	4927172	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-1.D40	4927173	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-1.D45	4927174	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-1.D50	4927175	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D25	4933312	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D30	4933313	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D35	4933315	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D40	4933316	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D45	4933317	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1400-2.D50	4933318	FFH 900 - 1400	4	•	•	10	BD	200	L1
GAM.1800-2.D25	4933319	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.1800-2.D30	4933340	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.1800-2.D35	4933341	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.1800-2.D40	4933342	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.1800-2.D45	4933343	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.1800-2.D50	4933344	FFH 1300 - 1800	6	•	•	10	BD	200	L1
GAM.2300-3.D25	4938167	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-3.D30	4938168	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-3.D35	4938169	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-2.D40	4936028	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-3.D40	4938170	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-3.D45	4938427	FFH 1800 - 2300	8	•	•	10	BD	200	L2
GAM.2300-3.D50	4938428	FFH 1800 - 2300	8	•	•	10	BD	200	L2



Corner drive E1

- Useable left and right hand
- Bracket length 98.5 mm
- Safety locking pin as a manually adjustable octagonal bolt
- Automatic and manual assembly possible
- Smooth operation, due to rust-free spring steel hinges inserted in C-rail
- Central fastening as standard
- Turn position is the factory default
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Corner drive E1.F

- Same design as E1, but clampable

Corner drive E11

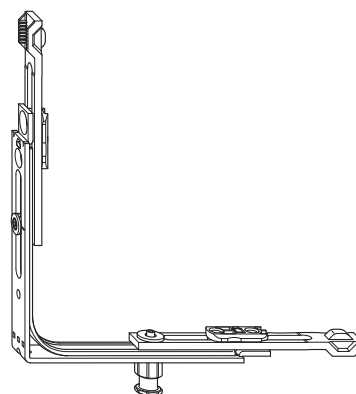
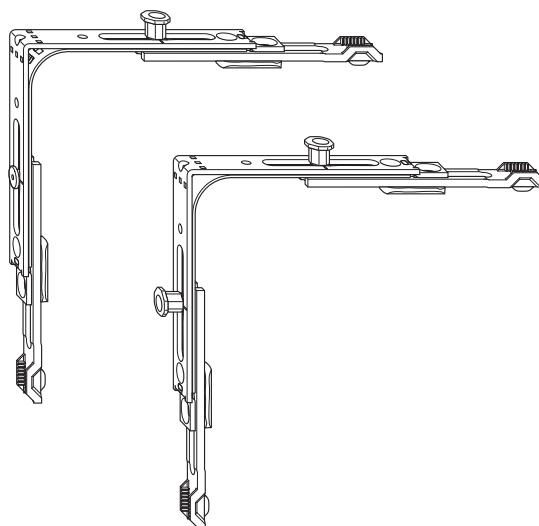
- Same construction as E1 with an additional octagonal bolt on the second arm

Corner drive E11.F


- Clampable design

Corner drive E1.BS

- Bottom corner drive with extended bolt for balcony doors with accessible threshold
- ...BS13 for airgaps 7 – 9 mm from upper edge of ground sill clip rail
- ...BS16 for airgaps 10 – 12 mm from upper edge of ground sill clip rail
- Not suitable for activPilot Comfort PADK/PADM



top (outside): E1
top (interior): E11
bottom: E1.BS

Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type
E1	2841823	4	100	KK	2400	EK
E1.F	4929912	4	100	KK	2400	EK
E11	4936017	4	100	KK	2400	EK
E11.F	4942960	4	100	KK	2400	EK
E1.BS13	4941425	4	100	KK	800	EK
E1.BS16	4926330	4	100	KK	800	EK

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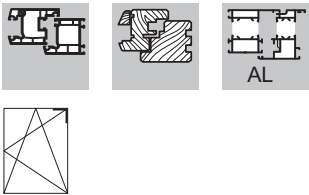
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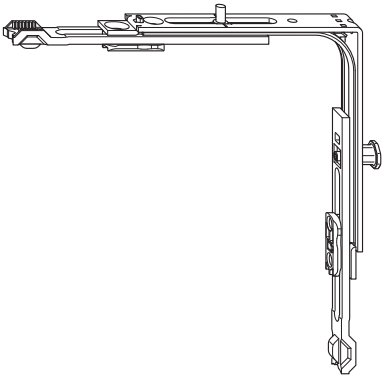
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Corner drive E2

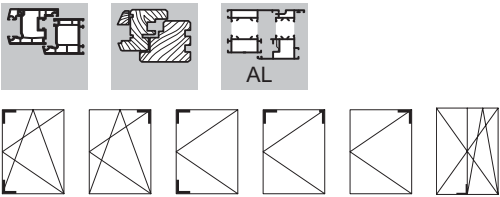
- Coupled with OS2 on the hinge side
- Useable left and right hand
- Bracket length 98.5 mm
- Safety locking pin as a manually adjustable octagonal bolt
- Automatic and manual assembly possible
- Smooth operation, due to rust-free spring steel hinges inserted in C-rail
- Central fastening as standard
- Turn position is the factory default
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Corner drive E2.F

- Same design as E2, but clampable

Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type
E2	2842017	4	100	KK	2400	EK
E2.F	4929914	4	100	KK	2400	EK



Corner drive E3

- Useable left and right hand
- Bracket length 98.5 mm (on one side)
- With shortened bracket on one side
- Safety locking pin as a manually adjustable octagonal bolt
- Automatic and manual assembly possible
- Smooth operation, due to rust-free spring steel hinges inserted in C-rail
- Central fastening as standard
- Turn position is the factory default
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates

Corner drive E3.F

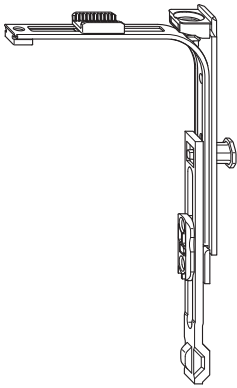
- Same design as E3, but clampable


Corner drive E3.L

- Automatic mounting carried out by Lemuth
- Corner piece for diagonal screw connection

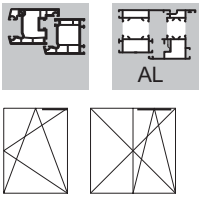
Corner drive E3.ZN

- Corner piece made of ZN (zinc diecast) for straight screw connection



Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type
E3	2842244	3	100	KK	2400	EK
E3.F	4929791	3	100	KK	2400	EK
E3.L	4927430	3	100	KK	2400	EK
E3.ZN	4932175	3	100	KK	2400	EK


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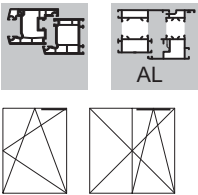


Top rod OS.1.600



- In combination with shears SK1/SH1/SHW1
- OS1.600 is always combined with an E3 corner drive on the hinge side
- Integrated anti-slam block in tilt position as standard
- Progressive shear retraction: adjustable from 18 to 25 mm
- After assembly the top rod and the shear are firmly attached to one another
- Clampable in fitting groove
- Useable left and right hand
- Central fastening as standard
- Turn position is the factory default
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates
- Variable tilt device MSL.OS as retrofit option for window profiles with a frame rebate depth of 25 mm


Article description	Article No.	Scope of application		VPA1 Qty.	Type	VPA2 Qty.	Type
OS1.600	2847141	FFB 370 - 600	3	20	BD	800	EA



Top rod OS2

- OS2 ... is used in combination with E2 on the hinge side
- In combination with shears SK2/SH2/SHW2
- After assembly the top rod and the shear are firmly attached to one another
- Clampable in fitting groove
- Progressive shear retraction: adjustable from 18 to 25 mm
- Integrated anti-slam block in tilt position as standard
- From 1475 mm sash rebate width with additional shear ZSR
- Safety locking pin as a manually adjustable octagonal bolt
- Useable left and right hand
- Central fastening as standard
- Turn position is the factory default
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Article description	Article No.	Scope of application		VPA1 Qty.	Type	VPA2 Qty.	Type
OS2.800	4928979	FFB 600 - 800	4	20	BD	800	EA
OS2.1025	2849278	FFB 775 - 1025	5	20	BD	500	EA
OS2.1025-1	2848275	FFB 775 - 1025	5	20	BD	500	EA
OS2.1250-1	2848291	FFB 1000 - 1250	6	20	BD	500	EA
OS2.1475-1	2848304	FFB 1225 - 1475	6	20	BD	500	L1

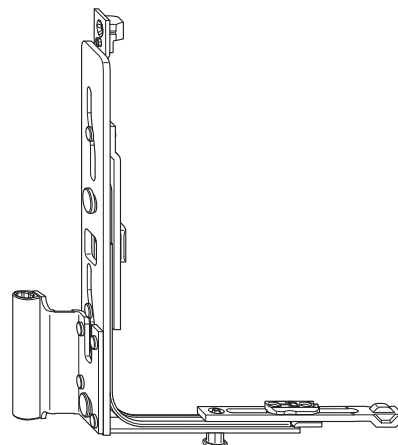
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Sash hinges

FL.E.FPAD.20-13


- Height adjustment +/- 3 mm
- Sash weight max. 100 kg
- Central fastening as standard
- Central position is the factory default
- Overlapping system linkage without connecting plates
- In combination with corner hinge ESV
- Parallel action possible via the control curve
- Switch sequence: locked position – parallel action – turn position



Sash hinge cover FLK FWV

Sash hinge plug S.FL.K...



Article description	Article No.		Max. sash weight (kg)	Overlap	Groove centre position	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
FL.E.FPAD.20-13.LS	4995737	4	100	20	13	50	GK	200	EK		
FL.E.FPAD.20-13.RS	4995735	4	100	20	13	50	GK	200	EK		
FL.E.FPAD.20-13.LS.F9	4995741	4	100	20	13	50	GK	200	EK		
FL.E.FPAD.20-13.RS.F9	4995740	4	100	20	13	50	GK	200	EK		
FL.E.FPAD.20-13.LS.WS	4995739	4	100	20	13	50	GK	200	EK		
FL.E.FPAD.20-13.RS.WS	4995738	4	100	20	13	50	GK	200	EK		
FLK FWV RS WS	2301616					100	BL	300	KK	2400	EK
FLK FWV LS WS	2301624					100	BL	300	KK	2400	EK
FLK FWV RS BR	2301595					100	BL	300	KK	2400	EK
FLK FWV LS BR	2301608					100	BL	300	KK	2400	EK
FLK FWV RS BZ-AM	4984414					100	BL	300	KK	2400	EK
FLK FWV LS BZ-AM	4984413					100	BL	300	KK	2400	EK
FLK FWV RS F1	2394162					100	BL	300	KK	2400	EK
FLK FWV LS F1	2394154					100	BL	300	KK	2400	EK
FLK FWV RS F3	4995001					100	BL	300	KK	2400	EK
FLK FWV LS F3	4995003					100	BL	300	KK	2400	EK
FLK FWV RS F9	2854801					100	BL	300	KK	2400	EK
FLK FWV LS F9	2854798					100	BL	300	KK	2400	EK
S.FL.K.F9	2846544					500	BL	3000	KK	72000	EK
S.FL.K.WS	2846536					500	BL	3000	KK	72000	EK

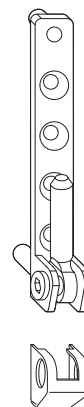
RS = right, LS = left

WS = white, BR = brown, SL = silver, EV1 = anodised silver, F1 = silver colour, F3 = gold colour, BZ-RB (F4) = bronze red brown, F9 = titanium coloured, CW = creme white



Corner hinge ESV

- Useable left and right hand
- ESV corner hinge with symmetrical drilling pattern, according to shear hinge SL.KS.3-6
- Corner hinge/shear hinge drilling possible on loose pieces
- Side adjustment +/- 2 mm
- Sash weight max. 130 kg
- In case of sash overlap of 20 mm: Corner hinge and cap flush with the lower edge of the sash
- For drill and screw templates see group 15, installation drawings B-6-3




Corner hinge cap ELK ESV

- Useable left and right hand

Please note:

- The load-bearing fitting components, such as corner, shear and sash hinges must be designed according to the TBDK guidelines.
- For sashes weighing more than 100 kg all 4 fixing screws of corner and shear hinges must be screwed into place in the steel reinforcement.

Article description	Article No.		Max. sash weight (kg)	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
ESV 6-3-16 SL	1898609	4	130	400	KK	9600	EK		
ESV 6-3-16 SL/BR	1930488	4	130	400	KK	9600	EK		
ESV 6-3-16 SL/CW	2548707	4	130	400	KK	3200	EK		
ESV 6-3-16 SL/F9	2010481	4	130	400	KK	9600	EK		
ESV 6-3-16 SL/WS	1930470	4	130	400	KK	9600	EK		
ELK ESV WS	4990509			200	BL	2000	KK	48000	EK
ELK ESV BR	4990531			200	BL	2000	KK	16000	EK
ELK ESV BZ-AM	4990539			100	BL	1000	KK	8000	EK
ELK ESV BZ-RB	4990590			100	BL	1000	KK	8000	EK
ELK ESV CW	4990533			100	BL	1000	KK	8000	EK
ELK ESV F1	4990535			100	BL	1000	KK	8000	EK
ELK ESV F3	4995111			100	BL	1000	KK	8000	EK
ELK ESV F3-MG	4990537			100	BL	1000	KK	8000	EK
ELK ESV F9	4990530			100	BL	1000	KK	8000	EK
ELK ESV SW	4990538			200	BL	2000	KK	16000	EK
ELK ESV LBR RAL8003	4990532			100	BL	1000	KK	8000	EK

WS = white, BR = brown, SL = silver, F1 = silver coloured, F3 = gold coloured, F9 = titanium coloured

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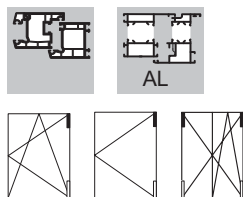
Frame parts **11**

Mounting accessories **12**

Mounting instructions **13**

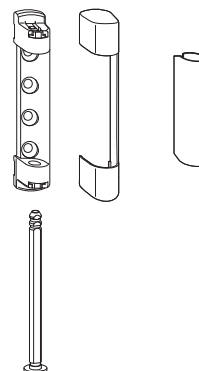
Adjustment/ maintenance **14**

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Shear hinge SL.KS

- Shear hinge SL.KS with symmetrical drill holes, corresponding to corner hinge EL.K
- Patented shear hinge pin protection
- Shear hinge and cover flush with upper edge of sash (for 20 mm sash overlap)
- With rotating locking of shear hinge pin
- Shear hinge/corner hinge drilling possible on unwelded profile pieces
- SL.KS shear hinge for sash weights up to 100 kg
- For drill and screw templates, see Group 15, installation drawings B-7-1



Shear hinge cap K.SL.KS

- Useable left and right hand


Shear hinge cap K.SK

- Useable left and right hand

left: shear hinge SL.KS

centre: shear hinge cap K.SL.KS

right side: shear hinge cap K.SK

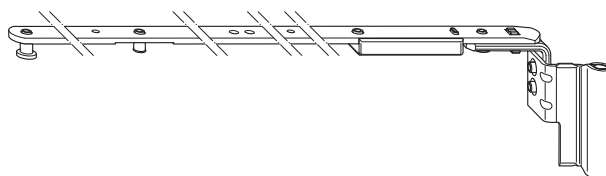
Article description	Article No.		Max. sash weight (kg)	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
SL.KS.3-3	4926253	4	100	200	KK	1600	EK		
SL.KS.3-3.WS	4928400	4	100	200	KK	4800	EK		
SL.KS.3-3.BR	4938869	4	100	200	KK	1600	EK		
SL.KS.3-3.CW	4938883	4	100	200	KK	1600	EK		
SL.KS.3-3.F9	4938885	4	100	200	KK	1600	EK		
SL.KS.3-6	2844434	4	100	200	KK	1600	EK		
SL.KS.3-6.WS	2844506	4	100	200	KK	1600	EK		
SL.KS.3-6.BR	4927491	4	100	200	KK	1600	EK		
SL.KS.3-6.CW	4928060	4	100	200	KK	1600	EK		
SL.KS.3-6.F9	2844531	4	100	200	KK	1600	EK		
K.SL.KS.WS	2844928			100	BL	300	KK	7200	EK
K.SL.KS.BR	4927420			100	BL	300	KK	7200	EK
K.SL.KS.CW	4927558			100	BL	300	KK	2400	EK
K.SL.KS.F1	4928483			100	BL	300	KK	2400	EK
K.SL.KS.F3	4995008			100	BL	300	KK	2400	EK
K.SL.KS.BZ-RB	4933295			100	BL	300	KK	2400	EK
K.SL.KS.F3-MG	4987448			100	BL	300	KK	2400	EK
K.SL.KS.F9	2845277			100	BL	300	KK	7200	EK
K.SL.KS.RAL8003	4939020			100	BL	300	KK	2400	EK
K.SL.KS. RAL 9005	4939052			100	BL	300	KK	2400	EK
K.SK.WS	2845285			100	BL	600	KK	14400	EK
K.SK.BR	4927421			100	BL	600	KK	14400	EK
K.SK.CW	4927572			100	BL	600	KK	4800	EK
K.SK.F1	4928484			100	BL	600	KK	4800	EK
K.SK.F3	4995009			100	BL	600	KK	4800	EK
K.SK.BZ-RB	4933296			100	BL	600	KK	4800	EK
K.SK.F9	2845293			100	BL	600	KK	14400	EK
K.SK.RAL 8003	4939036			100	BL	600	KK	4800	EK
K.SK. RAL 9005	4939055			100	BL	600	KK	4800	EK
K.SK.F3-MG	4987480			100	BL	600	KK	4800	EK



Shears

SK ... PAD.20-13

- Suitable for top rods OS1/OS2
- For 20 mm overlap and 13 mm groove centre position
- Adjustment for lifting and lowering the sash (+3.5/-2.0 mm)
- Parallel opening approx. 6 mm
- After assembly the top rod and the shear are firmly attached to one another
- Integrated turn restriction via plastic sleeve in shear hinge
- Sash weight max. 100 kg
- With integrated control curve
- Switch sequence: locked position – parallel action – turn position



Shear hinge cap K.SK

- Useable left and right hand
- See shear hinge SL

Article description	Article No.	VPA1		VPA2		VPA3	
		Qty.	Type	Qty.	Type	Qty.	Type
SK1.PAD.20-13.LS	4993973	10	BD	60	KK	1440	EK
SK1.PAD.20-13.LS.F9	4993977	10	BD	60	KK	1440	EK
SK1.PAD.20-13.LS.WS	4993975	10	BD	60	KK	1440	EK
SK1.PAD.20-13.RS	4993972	10	BD	60	KK	1440	EK
SK1.PAD.20-13.RS.F9	4993976	10	BD	60	KK	1440	EK
SK1.PAD.20-13.RS.WS	4993974	10	BD	60	KK	1440	EK
SK2.PAD.20-13.LS	4993979	10	BD	80	GK	960	EK
SK2.PAD.20-13.LS.F9	4993983	10	BD	80	GK	960	EK
SK2.PAD.20-13.RS	4993978	10	BD	80	GK	960	EK
SK2.PAD.20-13.RS.F9	4993982	10	BD	80	GK	960	EK
SK2.PAD.20-13.RS.WS	4993980	10	BD	80	GK	960	EK

RS = right, LS = left

WS = white, BR = brown, SL = silver, EV1 = anodised silver, F1 = silver colour, F3 = gold colour, BZ-RB (F4) = bronze red brown, F9 = titanium coloured, CW = creme white

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Interlocking rod MK.PA

- Useable left and right hand
- Clampable in fitting groove
- Faceplate width 16 mm
- Central fastening as standard
- Overlapping system linkage without connecting plates

Coupling element KE

- Application area: combination of two geared elements, such as an FL.E.FWPA sash hinge and an MK interlocking rod
- Cutting area 250 mm
- Component length 510 mm


Interlocking rod M

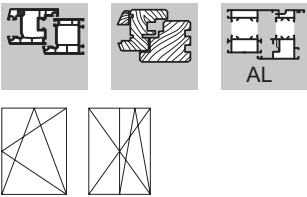
- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Faceplate width 16 mm
- Central fastening loosens automatically by tightening fitting screw
- Functional both vertically and horizontally
- Overlapping system linkage without connecting plates

Interlocking rod MK

- Extendable interlocking rod, can be combined with Winkhaus standard gearing
- Otherwise this design is identical to interlocking rod M




Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
MK.PA.250-1	4965415	3	20	BD	100	KK	800	EK
KE SL	4982891	2	10	BD	1000	EA		
M.250-1	2822471	2	20	BD	100	KK	800	EK
M.500-1	4933994	3	20	BD	100	GK	1200	EK
M.500-1.C	4933999	3	20	BD	100	GK	1200	EK
M.750-1	4940652	5	20	BD	500	EA		
MK.250-0	4929185	1	20	BD	100	KK	800	EK
MK.250-1	2824919	1	20	BD	100	KK	800	EK
MK.500-0	4929187	3	20	BD	500	EA		
MK.500-0.C	4932315	3	20	BD	500	EA		
MK.500-1	2824986	3	20	BD	500	EA		
MK.500-1.C	4932287	3	20	BD	500	EA		
MK.750-1	4940653	5	20	BD	500	EA		



Extension rod V.AK

- Used to position a locking point near the sash hinge (up to WK 2)
- Functional both vertically and horizontally
- Not extendable
- Clampable in fitting groove
- Useable left and right hand
- Component length 450 mm
- Cutting area 250 mm
- Faceplate width 16 mm
- Overlapping system linkage without connecting plates



Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type
VAK450-1	4942706	3	10	BD	1000	EA

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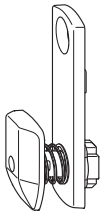
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Fail safe device FSF

- Prevents the operation of the handle while the window is open
- Separate frame part is not necessary (hits the frame)
- Suitable for groove positions from 9 to 13 mm
- Suitable for retrofit installation into drive rods GAK and GAM
- Useable left and right hand



Article description	Article No.		Groove centre position	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
FSF	4968753	1	9/13	100	BL	500	KK	4000	EK



Support plate

- For lifting the sash during closing
- Profile-independent due to sash-side mounting.
- Colour: anthracite grey

Support plate AL.M.F12

- For assembly in the suitable holes of the extension rod or for direct fitting in the sash-side fitting groove
- Colour: anthracite grey

Support plate AL FR BN 13/12 FC SL

- Direct fitting in the eurogroove

Support plate AL.BN.F12

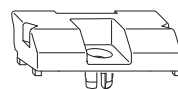
- Suitable for use on screwdriving units
- Colour: anthracite grey

Support plate AL.E.F

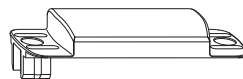
- Is fixed to the corner drive on the sash side if no interlocking rod is used
- Suitable for use on screwdriving units
- Colour: anthracite grey
- Not suitable for activPilot Comfort PADK/PADM

Support plate AL D

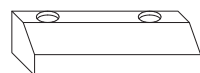
- Installation in frame
- Can be used for different profile systems thanks to adapter FT.WSK...




AL.M.F12

AL FR BN.../
AL.BN.F12

AL.E.F



AL D

Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
AL.M.F12	4927494	1	100	BL	400	KK	3200	EK
AL FR BN 13/12 FC SL	2295640	1	100	BL	400	KK	3200	EK
AL.BN.F12	4927493	1	100	BL	400	KK	3200	EK
AL.E.F	4933076	1	200	KK	1600	EK		
AL D WS	1475542	2	100	BL	400	KK	3200	EK

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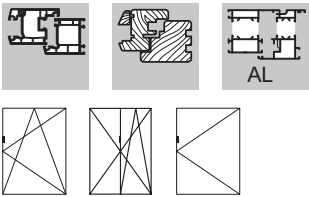
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maintenance

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Drilling protection AB.G.D

- Protects drive rods against drilling open from the outside in line with DIN EN 1627-1630
- Useable left and right hand
- Material: Steel 1 mm thick, hardened

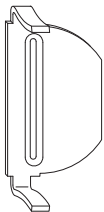


Drilling protection AB.G.D.15.5

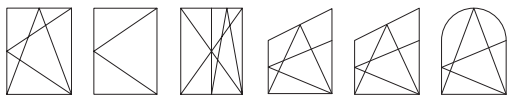
- Backset 15.5 mm

Drilling protection AB.G.D.7.5

- Backset 7.5 mm



Article description	Article No.	VPA1		VPA2		VPA3	
		Qty.	Type	Qty.	Type	Qty.	Type
AB.G.D.15,5	4939745	100	BL	1000	KK	8000	EK
AB.G.D.7,5	4939747	50	BL	250	KK	2000	EK



Cable transition

KUE-T1

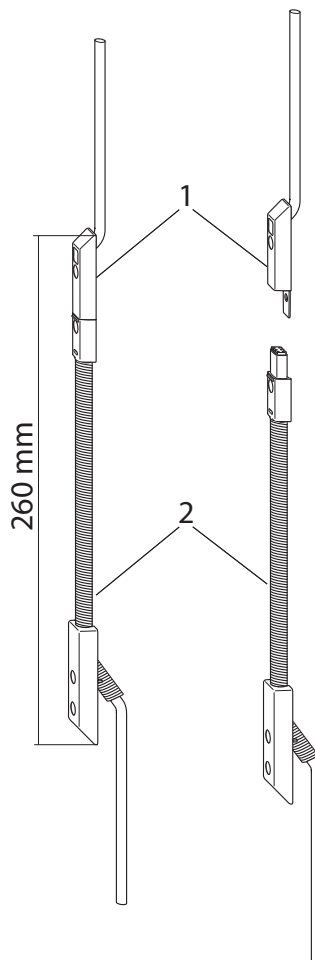
- Cable transition covered in the airgap, e. g. for motor-controlled windows
- Separable sash part and frame part which can be secured with a screw
- Serves as electric interface between the window sash and the frame
- Sash element with spring jacket and plug socket to screw into the 16 mm fitting groove
- Frame element with coupling point
- Installation drawing and laying of cables see group 15 drawing B-11-12
- Max. opening angle of the sash: 90°

Technical data

- Total length: approx. 260 mm
- Cable length of sash element: approx. 5 m
- Cable length of frame part: approx. 5 m
- Max. transmission voltage 48 Volt DC
- Max. switch current: 2 amperes per connection cable
- Wire cross section 6 x 0.25 mm²
- Conductor resistance: 0.25 mm², max. 78 ohm/km
- Cable length: 4.9 mm
- IP 54 rating (protected against dust and splash water)
- Cable: without CFC and halogen

Scope of delivery:

- Sash part
- Frame part
- 3 screws 3 x 20 mm
- 1 piece of screw 2.9 x 32 mm
- Mounting instructions



1. Frame part

2. Sash part

Wire colours: brown, white, rose, grey, green, yellow

Article description	Article No.	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
KUE-T1	4992274	1	BL	25	GK	300	EK

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Bracket drive BDT



BDT Series

Convenience in parallel action

The BDT bracket drive automatically controls ventilation in rooms at set times, for a healthy interior climate throughout the building.

The high-end bracket drive combines appealing looks and user-friendly operation. Its timeless, high-end design comes in several choices of colours, to harmonise with any interior. The backlit touch panel with self-explanatory button symbols is child's play to use. For even more convenience, the BDT can also be operated by remote control.

— CLOSE

Briefly press to close the drive.



OPEN to the turning position

Push for 1 s and the drive moves the window to the turning position for normal, manual opening.



Timer-controlled ventilation

Briefly push once to move the drive to the parallel opening position. After a ventilation time of 10 minutes, it moves back to the closed position. Pushing the key again extends the ventilation time by 10 minutes each time:

Pushed once: ventilate for 10 min.

Pushed twice: ventilate for 20 min.

Pushed three times: ventilate for 30 min.



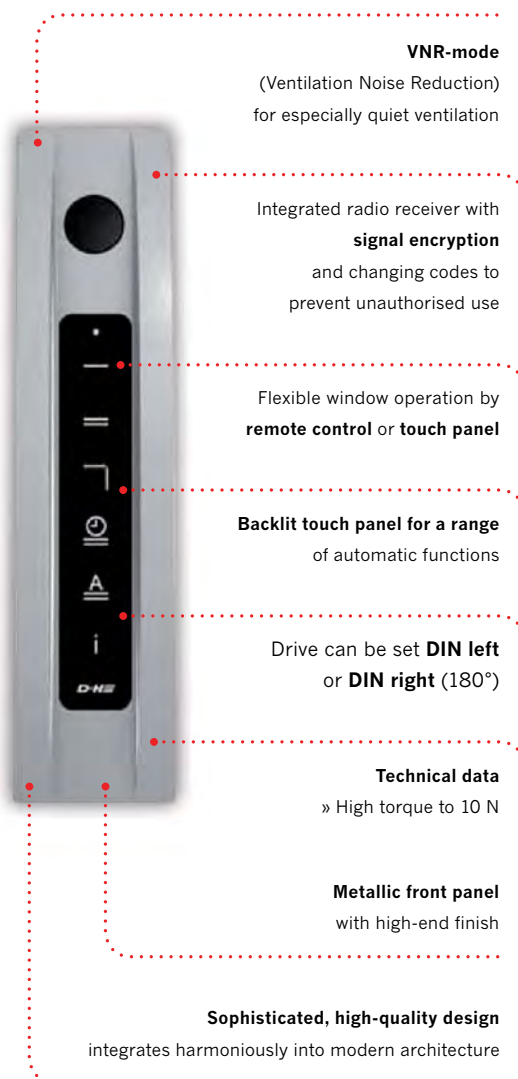
Automatic/interval ventilation

Briefly pushing the automatic key activates automatic or interval ventilation. If this is activated, the drive will move to the parallel opening position and ventilate the room for 10 minutes every hour.

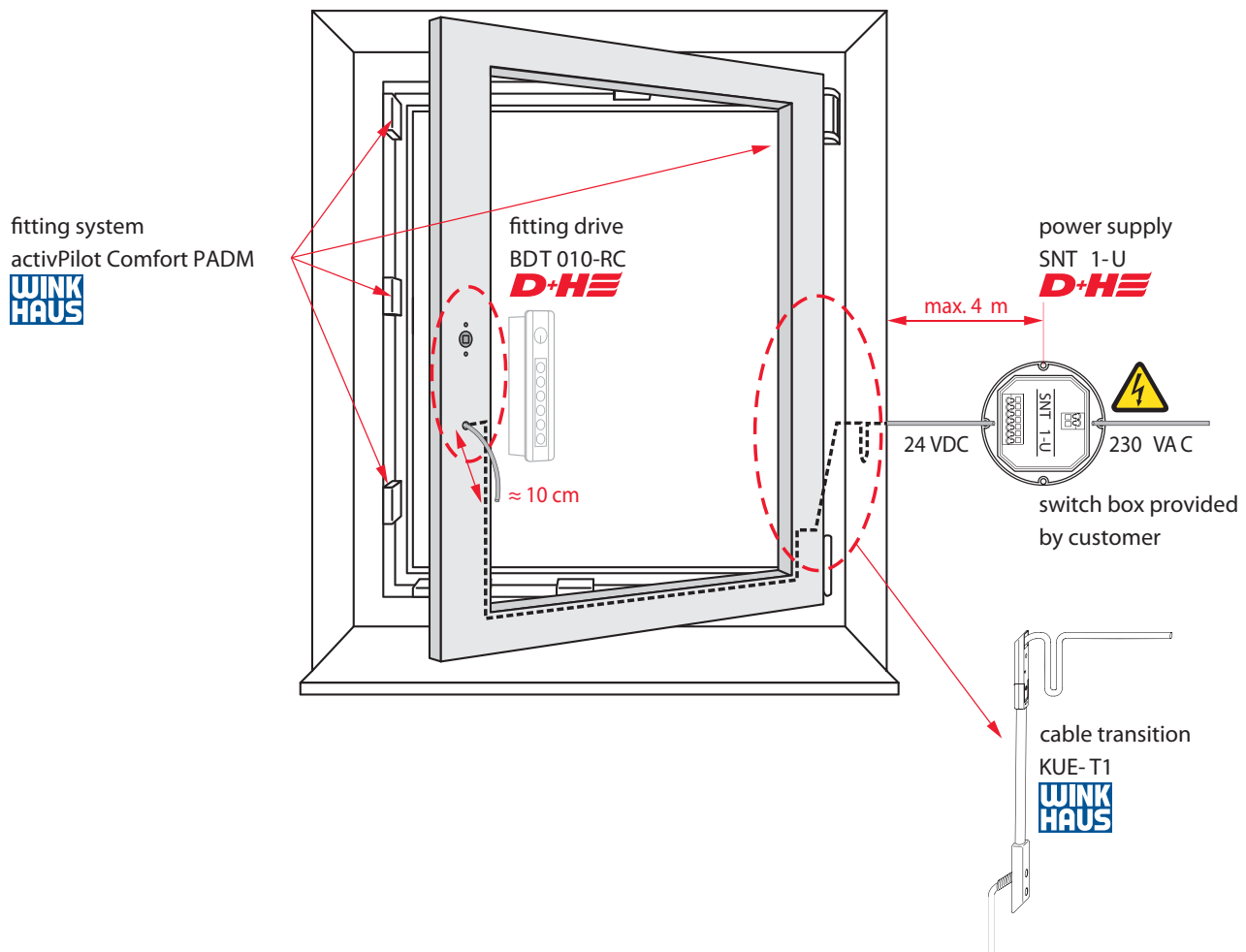


Info

Briefly pushing the key will light up the symbols and display the current modes for 20 s when darkened.



activPilot Comfort PADM with BDT 010-RC bracket drive



Please note: Winkhaus does not deliver the motor drive for activPilot Comfort PADM fittings. The drive is supplied by D+H Mechatronic AG.

Availability

The fitting drive BDT is a product of D+H Mechatronic AG.

D+H have an extensive network of service and sales partners to distribute their products.

Here are the contact details:

D+H Mechatronic AG
Georg-Sasse-Str. 28 - 32
D-22949 Ammersbek

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General product
information

Lists of Fittings

Drive rods

Corner drives

Top rods

Sash hinges/
Corner hinges

Shears/
Shear hinges

Turn hinges/
Tilt hinges

Extension rods

Accessories

Frame parts

Mounting
accessories

Mounting
instructions

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maintenance

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drawings



Security keep

SBS.K.PAD

- Profile dependent see group 11, frame parts
- Circumferential installation situation
- Available for mounting left and right hand
- Number of screws: 4
- The keep is marked “P” on the web for identification.
- Switch sequence: locked position – parallel action – turn position



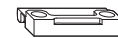
Keep SBAK

- Profile dependent see group 11, frame parts
- Useable left and right hand



Spacer FT WSK

- Profile dependent see group 11, frame parts
- Useable left and right hand



Aluplast	
Ideal 4000 - 8000	
FT WSK 66	1530185
SBA.K.161	2824071
SBS.K.PAD.161.RS	4995614
SBS.K.PAD.161.LS	4995615

Deceuninck	
Zendow	
FT WSK 169	2356596
SBA.K.169	4926362
SBS.K.PAD.169.RS	4995620
SBS.K.PAD.169.LS	4995621

Gealan	
6000, 7000, 8000	
FT WSK 62	1348121
SBA.K.162	4929796
SBS.K.PAD.162.RS	4995616
SBS.K.PAD.162.LS	4995617

Inoutic	
Arcade, Prestige, Deluxe, Elite, MD100, Eforte	
FT WSK 192	1330722
SBA.K.192	4932272
SBS.K.PAD.192.RS	4995622
SBS.K.PAD.192.LS	4995623

KBE	
70 AD / 70 MD	
FT WSK 205	1809590
SBA.K.205	2922210
SBS.K.PAD.205.RS	4995624
SBS.K.PAD.205.LS	4995625

Kömmerling	
Classic, Elegance, Avantgarde	
FT WSK144	1326221
SBA.K.144	2920652
SBS.K.PAD.144.RS	4995608
SBS.K.PAD.144.LS	4995609

Rehau	
Geneo	
FT WSK 60	1345393
SBA.K.160	4933116
SBS.K.PAD.160.RS	4995612
SBS.K.PAD.160.LS	4995613

S735, Brilliant, Thermo-Design, Brilliant-Design, Basic-Design	
FT WSK 60	1345393
SBA.K.60	2824046
SBS.K.PAD.60.RS	4995602
SBS.K.PAD.60.LS	4995603

Salamander	
2D / 3D / MD / Streamline	
FT WSK 134	1537651
SBA.K.28	4926452
SBS.K.PAD.28.RS	4995600
SBS.K.PAD.28.LS	4995601

Schüco	
Corona 70 / Corana SI 82	
FT WSK 61	1497653
SBA.K.166	4930272
SBS.K.PAD.166.RS	4995618
SBS.K.PAD.166.LS	4995619

Trocral	
InnoNova 2000 / 88+	
FT WSK 226	2304155
SBA.K.126	4926196
SBS.K.PAD.126.RS	4995604
SBS.K.PAD.126.LS	4995605

InnoNova A5 / M5	
FT WSK 226	2304155
SBA.K.226	2921090
SBS.K.PAD.226.RS	4995626
SBS.K.PAD.226.LS	4995627

VEKA	
Softline 70 AD/MD, Topline AD, Swingline, Alphaline	
FT WSK 152	1787079
SBA.K.152	2824062
SBS.K.PAD.152.RS	4995610
SBS.K.PAD.152.LS	4995611

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Shear hinges

Turn hinges/
Tilt hinges

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Accessories

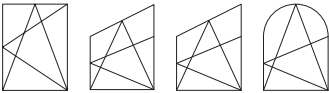
Frame parts

Mounting accessories

Mounting instructions

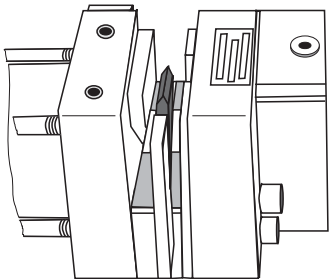
Adjustment/
maintenance

Installation drawings



Punch BST AP/FS

- Used to cut fitting elements
- Punch including footswitch
- Pedal operated
- Can be used together with fitting ruler
- Required operating pressure 6 bar

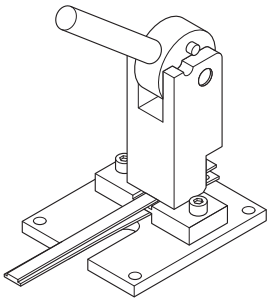
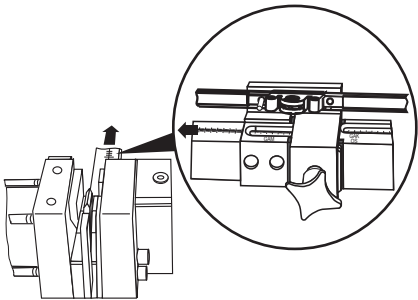


Ruler LIN AP/FS

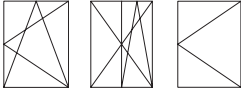
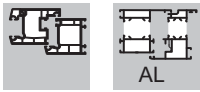
- Dimensional positioning of the fitting elements to be cut
- Cutting of both central and constant parts

Fitting punch, lever AP.HH

- Used to cut fitting elements
- Manual operation
- Serves as repair punch – not suitable for permanent use



Article description	Article No.	VPA1		VPA2	
		Qty.	Type	Qty.	Type
BST AP/FS	1466339	1	GK	12	EK
LIN AP/FS	1466321	20	L2		
APHH	4970430	1	KT	48	EA



Drilling jig LE.B.EL-SL.K

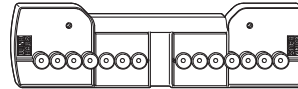
- Drilling jig to drill the pilot holes for corner and shear hinges
- Overlap dimension adjustable from 18 to 22 mm
- Preadjusted to a defined dimension

LE.B.EL-SL.K.3-3

- For hinge with 3 mm pin

LE.B.EL-SL.K.BR

- For 130 kg hinge



Article description	Article No.	Overlap
LE.B.EL-SL.K-18	4966329	18
LE.B.EL-SL.K-20	4966340	20
LE.B.EL-SL.K-21	4966341	21
LE.B.EL-SL.K-22	4966342	22
LE.B.EL-SL.K. 3-3-18	4966343	18
LE.B.EL-SL.K. 3-3-20	4966345	20
LE.B.EL-SL.K. 3-3-21	4966346	21
LE.B.EL-SL.K. 3-3-22	4966347	22
LE.B.EL-SL.K. BR-18	4966348	18
LE.B.EL-SL.K. BR-20	4966350	20
LE.B.EL-SL.K. BR-21	4966351	21
LE.B.EL-SL.K. BR-22	4966352	22

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Jig PADK

- Jig for positioning of security keeps SBS.K.PA and SBS.K.PAB



Article description	Article No.	VPA1		VPA2	
		Qty.	Type	Qty.	Type
LE.N.PADK	4969653	25	KK	200	EK

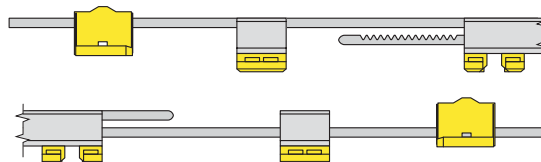


Jigs

- Used to position keeps in frame rebate
- Useable left and right hand
- How to use please see mounting instructions

Different models:

- LE.N.K jig, fixed handle position
- LE.N.T jig, central handle position (telescopic jig), locking drive GAM
- LE.N.T.ST jig, central handle position (telescopic jig), double-sash windows
- LE.N.T.GAVM jig, central handle position (telescopic jig) locking drive GAVM



Article description
 LE.N.T.GAVM 300
 LE.N.T.GAVM 420
 LE.N.T.GAVM 620
 LE.N.T.GAVM 920
 LE.N.T.GAVM 1320
 LE.N.T.GAVM 1850
 LE.N.T.ST.0550-1200
 LE.N.T.ST.1201-2170
 LE.N.K.0290-0709
 LE.N.K.0710-1100
 LE.N.K.1101-1550
 LE.N.K.1551-2225
 LE.N.K.2225-4
 LE.N.T.0710-1050
 LE.N.T.1051-1800
 LE.N.T.1801-2300

Article No.
 4936773
 4937047
 4937061
 4937063
 4937064
 4937065
 4926548
 4926549
 4926540
 4926541
 4926542
 4926543
 4941065
 4926545
 4926546
 4926547

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1

activPilot mounting instructions

2

3

Notes on these assembly instructions
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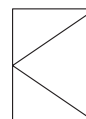
4

5

Shortening the fittings
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6

Assembly of the turn fitting system
Page 62 - 77



7

8

Function test
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9

10

11

12

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14

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Notes on these assembly instructions

The mounting instructions are designed for mounting Winkhaus activPilot fittings for windows and glazed doors only. Fittings are designed for the following sash rebate sizes and sash weights:

- Min. sash rebate width 460 mm
- Max. sash rebate width 1,475 mm
- Max. sash rebate height 2,800 mm
- Max. sash size 2.5 m²
- Min. sash rebate height 695 mm (surface-mounted cable transition)
- Min. sash rebate height 820 mm (concealed cable transition)
- Max. sash weight 100 kg
- (1 mm glass thickness = 2.5 kg/m²)
- Width-height ratio FFB:FFH ≤ 1.5



Note: In order to ascertain the permissible sash size, please refer to the diagrams in the chapter “General Product Information”

Persons involved in mounting fittings must have read and understood this fitting guide. For all work with fittings, always follow Winkhaus' Product Liability Information. The manufacturer will accept no liability in case of failure to comply with this guide, deployment of insufficiently qualified staff and unauthorised alterations.

Application range

All fittings must be selected from the original Winkhaus activPilot fitting component range. We accept no liability in case of use of third party or non-approved system components.



Attention! Winkhaus does not provide fastening screws for fittings. Always use fastening screws suitable for the window type and window dimensions. Please follow the guidelines on mounting fittings in the “Product Information and Processing Instructions” brochure.

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Important: activPilot Comfort fittings are not suitable for use in panic doors!



Please note: Winkhaus does not deliver the motor drive for activPilot Comfort PADM fittings. The drive is supplied by D+H Mechatronic AG.

Standard profile dimensions

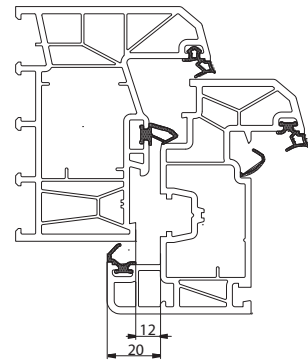
See figure: Profile cross-section

The fitting can be used on PVC-U windows with a standard euro-groove.

- Airgap 12 mm
- Overlap 20 mm
- Groove centre position 13 mm
- Frame rebate depth min. 29 mm



activPilot Comfort fittings can only be used for centre gasket systems.



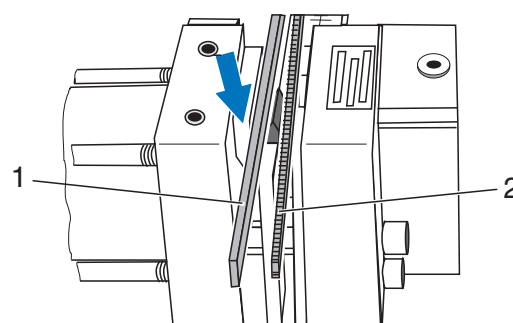
Profile cross-section

Shortening the fittings

A detailed description on shortening of fittings is available [here](#). This description will be referred to in the course of these assembly instructions.

See figure: Fittings prior to punching

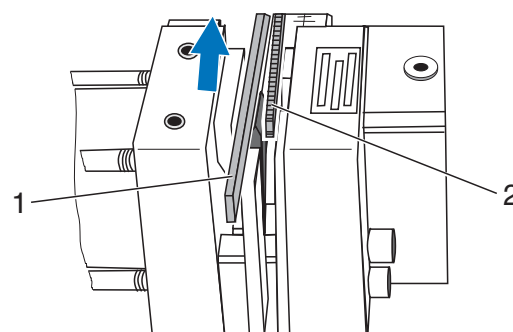
- Always insert the face plate (1) and drive rod (2) perpendicularly from the top with the face plate (1) pointing to the pressure cylinder.



Fittings prior to punching

See figure: Fittings after punching

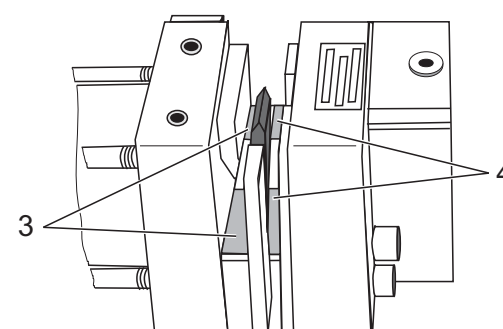
- After punching, always remove the face plate (1) and drive rod (2) perpendicularly in an upwards direction.



Fittings after punching

See figure: Cleaning the supporting surfaces

- Keep the supporting surfaces (3) and (4) clean.



Cleaning the supporting surfaces

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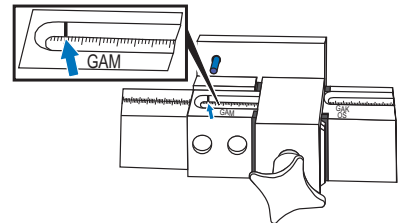
Shorten the drive rod GAM (central handle position)

See figure: Marking GAM

- Set measuring value FFH on the measuring device to the GAM mark.



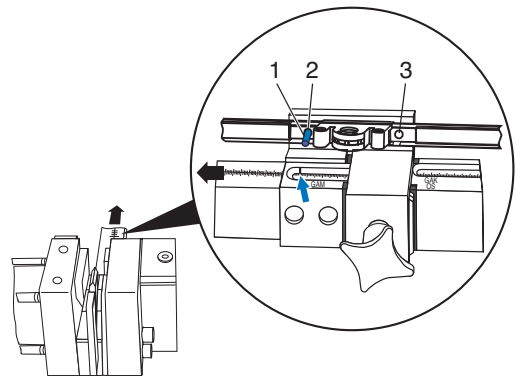
Attention! If the GAM scale is displaced by one submarking, this corresponds to a longitudinal shift of 2 mm.



Marking GAM

See figure: Position for shortening drive rod

- Position the GAM drive rod at the scale; slot drill hole (2) onto bolt (1).
- Turn the GAM drive rod around, and slot the drill hole (3) onto the bolt (1), then trim the other side.
- Shorten the drive rod using the fitting punch.



Position for shortening drive rod

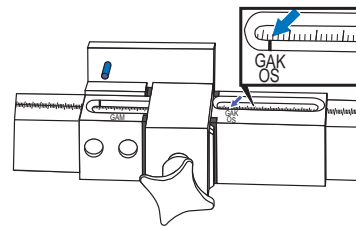
Shorten the GAK / GASK drive rod (fixed handle position) and top rod OS



Note: The double-sash drive rod must be trimmed before delivery.

See figure: Markings GAK and OS

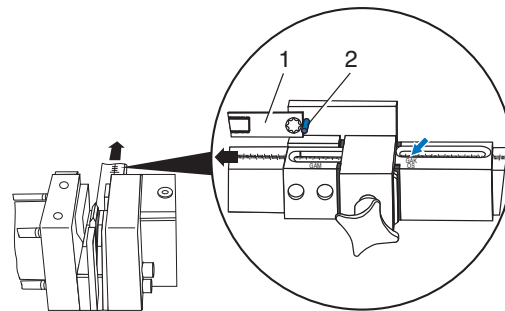
- Set the measuring value FFH (GAK/GASK) or FFB (OS) on the measuring device to the GAK/OS mark.



Markings GAK and OS

See figure: Position for shortening drive rod and/or top rod

- Cutting the top rod OS...
 - Position the drive rod GAK/GASK (fixed handle position) (1) or the top rod OS (1) at the bolt (2).
 - Shorten the drive rod (1) or the top rod (1).

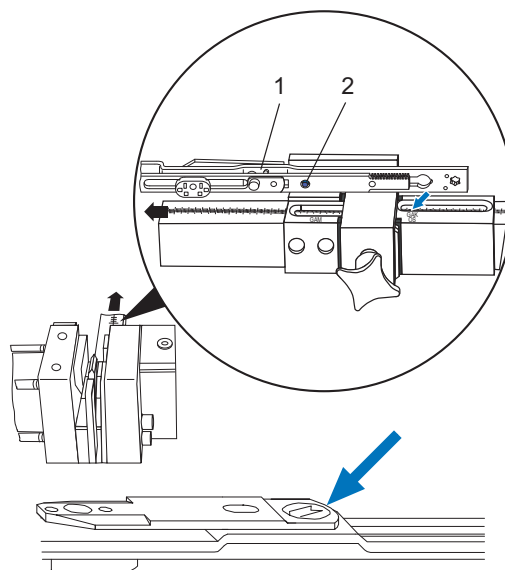


Position for shortening drive rod and/or top rod

Only applies to top rod OS1.600 (OS1.PA.600):

See figure: Position for shortening top rod

- Position the top rod (1) with square holes at bolt (2). Press the offset (see arrow) against the bolt (2).
- Shorten the top rod (1).



Position for shortening top rod

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1 Mounting of fittings on sash

2 Turn-tilt type – Rectangular window

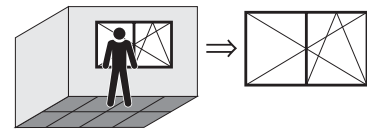
Prepare the window for fitting. Then proceed as follows.



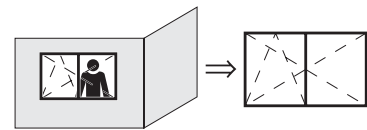
Please note: The following figures refer to a window for right-hand use. When fitting a window for left-hand use, the figures will be mirror-inverted.

The following also applies:

- When viewing the window from the inside, the symbol is depicted as a full line.



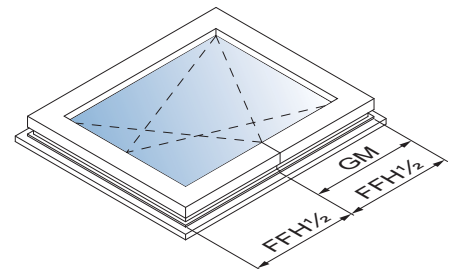
- When viewing the window from the outside, the symbol is depicted as a dotted line.



3 Determine the handle height:

4 Handle height for drive rod GAM

See figure: Sash rebate height FFH with central handle height GM
If you use a GAM drive rod ... (central handle position), dimension GM is half the sash rebate height FFH.

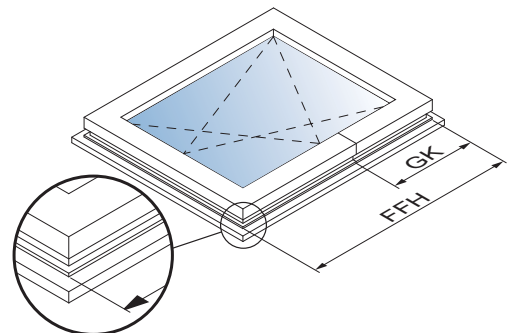


Sash rebate height FFH with central handle height GM

5 Handle height for drive rod GAK

See figure: Sash rebate height FFH with fixed handle position GK

If you use a GAK drive rod ... (fixed handle position), dimension GK changes to reflect the sash rebate height FFH. The exact dimensions are specified in the following table.



Sash rebate height FFH with fixed handle position GK

See figure: Synoptical table sash rebate height (FFH) / handle position

The table on the right gives a survey on the handle height (GK) of GAK with regard to the sash rebate height (FFH).

230 – 324	GK = 114 *
325 – 420	GK = 114 *
421 – 460	GK = 210
461 – 700	GK = 210
701 – 850	GK = 260
851 – 1100	GK = 375
1101 – 1325	GK = 550
1326 – 1525	GK = 550
1526 – 1775	GK = 550
1776 – 2000	GK = 1050
2001 – 2225	GK = 1050

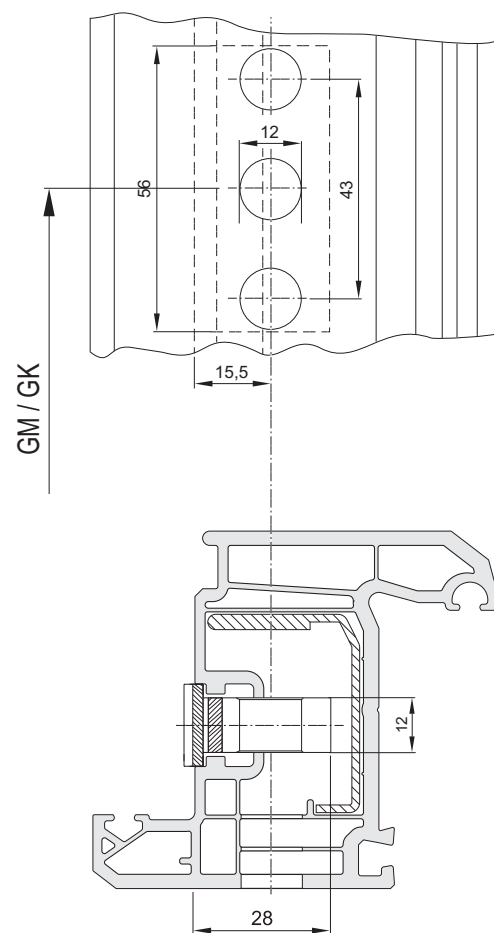
Synoptical table sash rebate height (FFH) / handle position

* Requires the use of E3 corner drive

See figure: Scale drawing “Gear lock”

- Drill holes for gear case (ø 12 mm) as per scale drawing.

Mill the gear housing from the rebate side.



Scale drawing “Gear lock”

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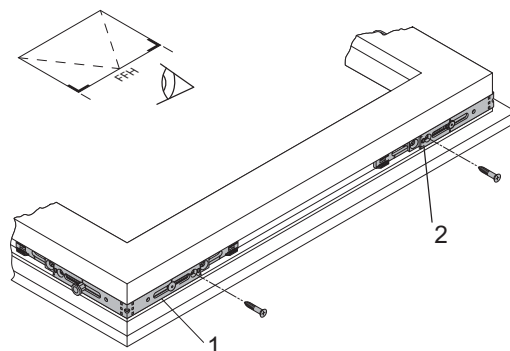
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See figure: Corner drive E1

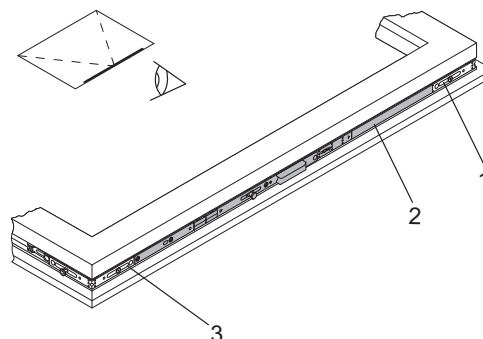
- Fit the corner drive (2) into the fitting groove at the top of the sash so that the octagonal bolt is on the top side.
- Fit the corner drive E1 (1) into the fitting groove at the bottom of the sash so that the octagonal bolt is on the drive side.
- Fix both corner drives (1, 2) on the drive side with a single screw each.
- Measure the sash rebate height (FFH).



Corner drive E1

See figure: Drive rod GAM/GAK

- Cut the drive rod according to the instructions.
- Mount the drive rod:
 - Abut the drive rod (2) flush against the corner drive (3).
 - Allow the teeth on the drive rod to click into position on the gear rack on the corner drive.
 - Clip the drive rod into the corner drive (1) in the same way.
 - Press the drive rod into the eurogroove.
 - Screw the drive rod from the bottom up.



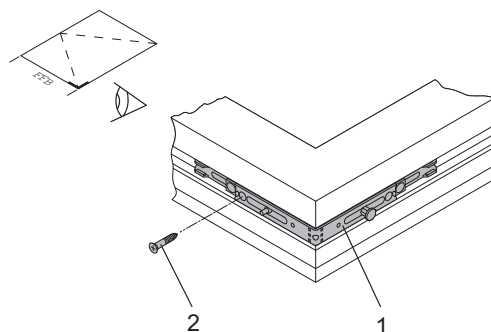
Drive rod GAM/GAK

See figure: Corner drive E2

- Fit the corner drive (1) into the fitting groove at the top of the sash so that the octagonal bolt is on the hinge side.
- Fasten the corner drive on the sash using a screw (2).
- Measure the sash rebate width (FFB).



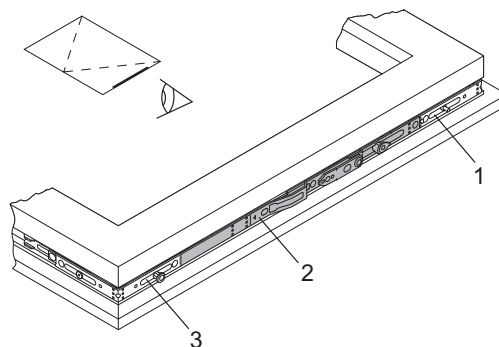
Please note: If you use an OS1.600 top rod, replace corner drive E2 with corner drive E3.



Corner drive E2

See figure: Top rod OS

- Cut the top rod (see chapter 'Shortening the fittings').
- Insert the top rod and screw into position.
 - Fit the top rod flush against the corner drive (1).
 - Allow the gear teeth to click into place on the rack in the corner drive.
 - Clip the top rod into the corner drive (3) in the same way.
 - Press the top rod into the fitting groove.
 - Screw the top rod from the hinge side to the drive side.



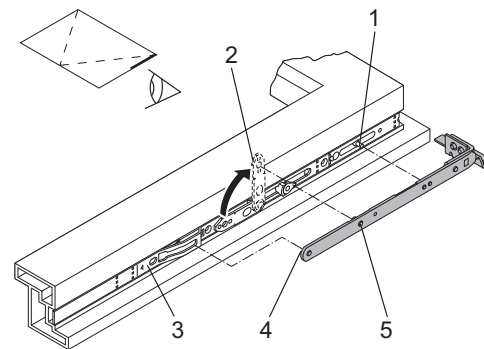
Top rod OS

See figure: Shear SK... PAD

- Mount the shear:
 - Swivel out the hold-up shore (2) (see arrow).
 - Clip shear into the top rod (3) using mushroom bolt (4).
 - Press the shear bolt (5) into the spring on the hold-up shore.
 - Swivel the hold-up shore and shear to home position.
 - Press the shear onto the bolt (1).



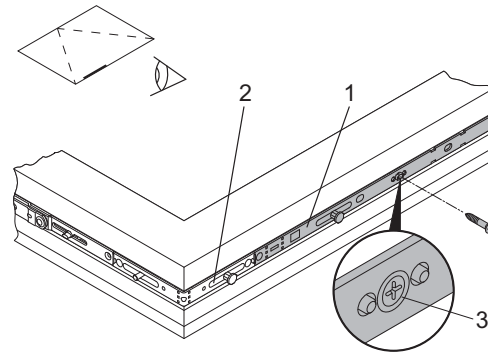
The sash can fall out and cause injuries if the shear and top rod are not securely fastened.



Shear SK... PAD

See figure: Interlocking rod MK.PA

- Install Interlocking Rod on the hinge side.
 - Fit the interlocking rod (1) flush against the corner drive (2).
 - Click the interlocking rod gears into the teeth of the corner drive.
 - Press the interlocking rod into the fitting groove.
 - Screw the interlocking rod from the top down.
 - Tighten the screw (3) fully to release the central fastening.
 - If necessary, use further interlocking rods / extension rods.



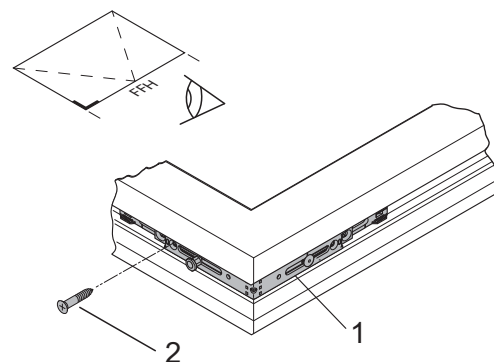
Interlocking rod MK.PA



Attention! Damage to fittings. If the central fastening is not released, the gearing cannot be actuated. Use of force will lead to torsion of the fittings. Always insert the screw fully up to the stop.

See figure: Corner drive E1

- Corner drive E1
 - Fix the screws necessary for the corner drive (1).



Corner drive E1

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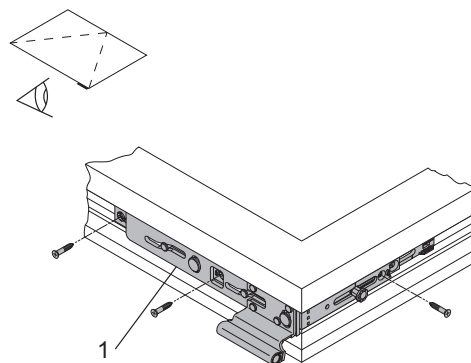
Installation drawings **15**

See figure: Sash hinge FLE.FPAD

- Fit the sash hinge:
 - Fit the sash hinge into the eurogroove at the bottom of the sash so that the octagonal bolt is on the underside.
 - Fix the sash hinge on the hinge side with 2 screws and on the underside using 1 screw.
 - Measure the sash rebate width (FFB).



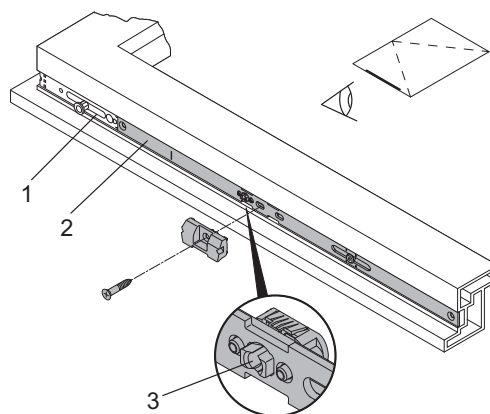
Note: Use screws Ø 3.9 to 4.2 mm to fix the sash hinge. Screw length must be at least 25 mm. Make sure the sash hinge is flush within the eurogroove.



Sash hinge FLE.FPAD

See figure: Support plate ALM.F12

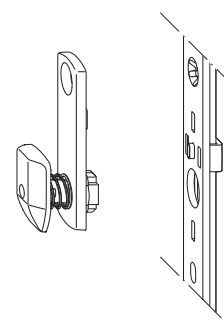
- Mount the coupling element, the interlocking rod and the support plate on the underside:
 - Fix the interlocking rod to the corner drive, depending on the sash rebate width.
 - Cut the coupling element to the required dimension.
 - Abut the coupling element against the sash hinge with the side to be cut pointing towards the drive side.
 - Click the coupling element gears into the teeth of the sash hinge.
 - Tighten the screw (3) fully to release the central fastening.
 - Fix the support plate on the coupling element with a screw.



Support plate ALM.F12

See figure: Fail safe device FSF

- Mount the fail safe device:
 - Insert the fail safe device on the hole pattern of the drive rod and fix with a screw.
 - If required, turn the head by 90° (depends on profile).
 - Mounting a frame part is not necessary.



Fail safe device FSF



Attention! Check if all screws are fixed into place on the fitting parts.

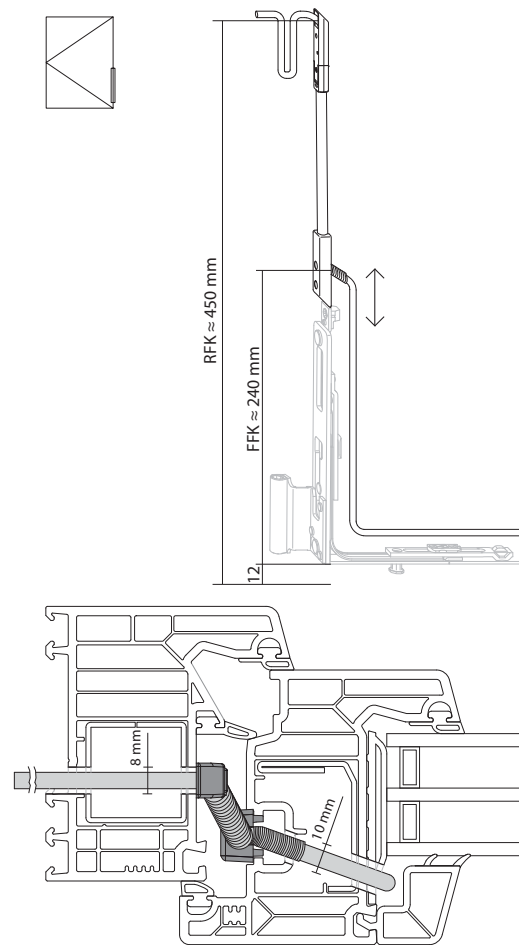


Please note: For a sash rebate height (FFH) and/or sash rebate width (FFB) of approx 800 mm (depending on the profile) an interlocking rod should also be fitted hinge-side and/or horizontally at the bottom / top. Observe the profile system supplier's processing guidelines in this respect.

Installation of cable transition

See figure: Installation drawing cable transition

- Installation of the frame part with coupling point on the hinge side (frame)
 - Provide for a \varnothing 8 mm passage hole for the cable to go through the frame at a height of RFK 450 mm (frame rebate edge). The cable should be led out laterally in order to avoid that it is damaged when the window is opened.
 - Run the cable through the frame. Provide cable loop in the frame.
 - Use a screw \varnothing 3 x 20 mm to fix the frame part (included in the scope of delivery).
 - Attach the cable reserve to the frame from the outside (transport securing device).



Installation drawing cable transition

FFK = sash rebate edge

RFK = frame rebate edge

See figure: Installation drawing cable transition

- Installation of the sash element with spring jacket and plug socket (sash/fitting groove)
 - Provide for a \varnothing 10 mm passage hole for the cable at a height of FFK 240 mm (sash rebate edge). The hole must be drilled from the fitting groove to the glass area.
 - The drill hole must be free of burrs. The spring must be lightly preloaded (10 mm), even if the window is closed.



Note: Run the cable only after inserting the window pane and observe the installation position.

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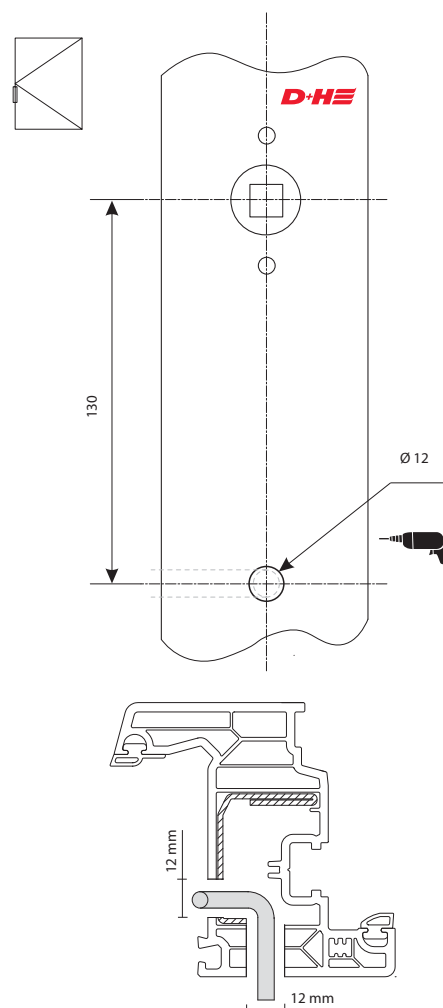
Installation drawings 15

See figure: Cable duct of the motor

- Drilling the cable outlet hole for the fitting drive (sash/drive side)
- Prepare a $\varnothing 12$ mm passage hole approx. 130 mm below the drive hole (see picture) to be drilled into the first chamber of the sash (e.g. the glass rebate). In addition, provide for another $\varnothing 12$ mm hole from the glass area into the first chamber.



Note: The drill hole must be burr-free.



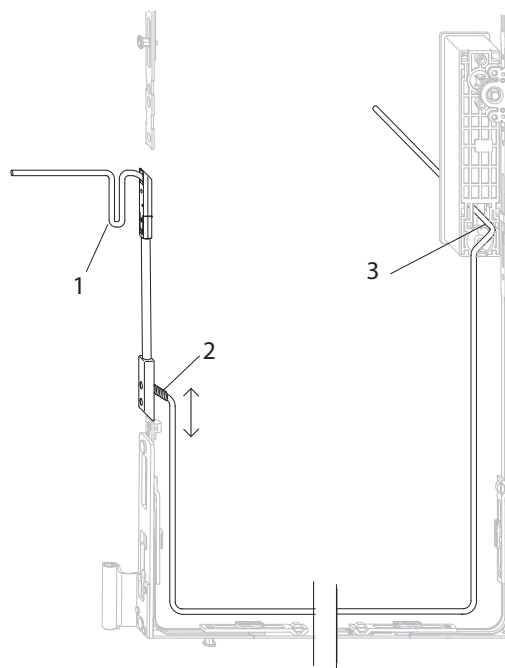
Cable duct of the motor

See figure: Cable installation on the sash

- Cable installation on the sash
- Insert the pane first.
- Lay the cable of the sash element for the motor through the window sash (e. g. glass rebate).
- On the drive side the cable must be fed out of the hole (approx. 10 cm). Provide an additional cable loop in the profile.
- Fix the sash part of the cable transition in the fitting groove at the hinge side using a screw $\varnothing 2.9 \times 32$ mm (included in the scope of delivery).
- In case the cable was laid within the glazing bead, insert the glazing beads.



Note: Please provide for a 3 – 5 cm cable reserve for the spring extension behind the sash component (hinge side)!



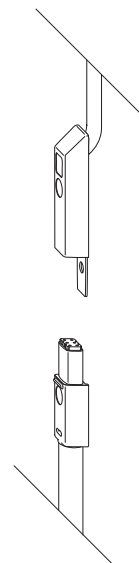
Cable installation on the sash

See figure: Connect cable transition

- Connecting the frame and sash parts
 - Establish the plug-in connection after mounting the sash.
 - Fasten the female connector to the frame part with screws Ø 3 x 20 mm (included in the scope of delivery).



Important: When removing the sash (e. g. when the frame is installed into the wall reveal) please completely remove the screw used to secure the socket. Insulate open wires of the cable!



Connect cable transition
(top: frame part; bottom: socket of the sash part)

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Mounting of fittings on the window frame

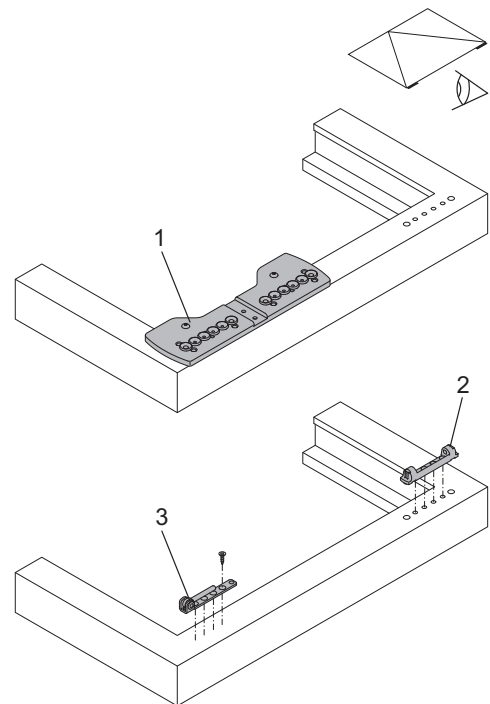
For parallel action rectangular turn window

See figure: Holes for corner and shear hinges

- Drill \varnothing 2.5 to 3 mm pilot holes for shear and corner hinges and drill \varnothing 6 mm pilot holes for spindle plug positions.
- Use the template (1) to drill holes for corner hinge (3) and shear hinge (2). Distance between drill holes for shear and corner hinges is the same.



Note: Fit the shear and corner hinges after fitting the keeps!



Holes for corner and shear hinges

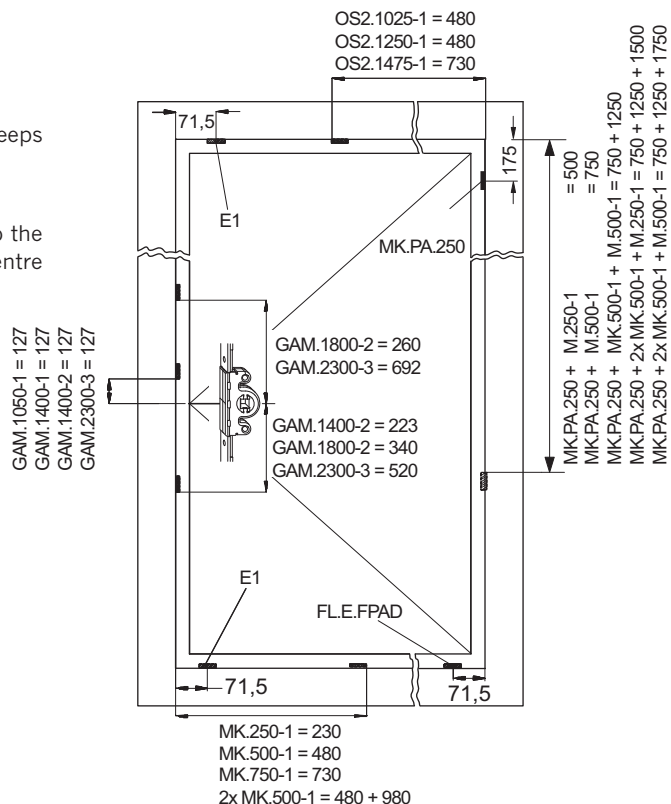
Positions of keeps (basic equipment)

For parallel action/ turn rectangular window

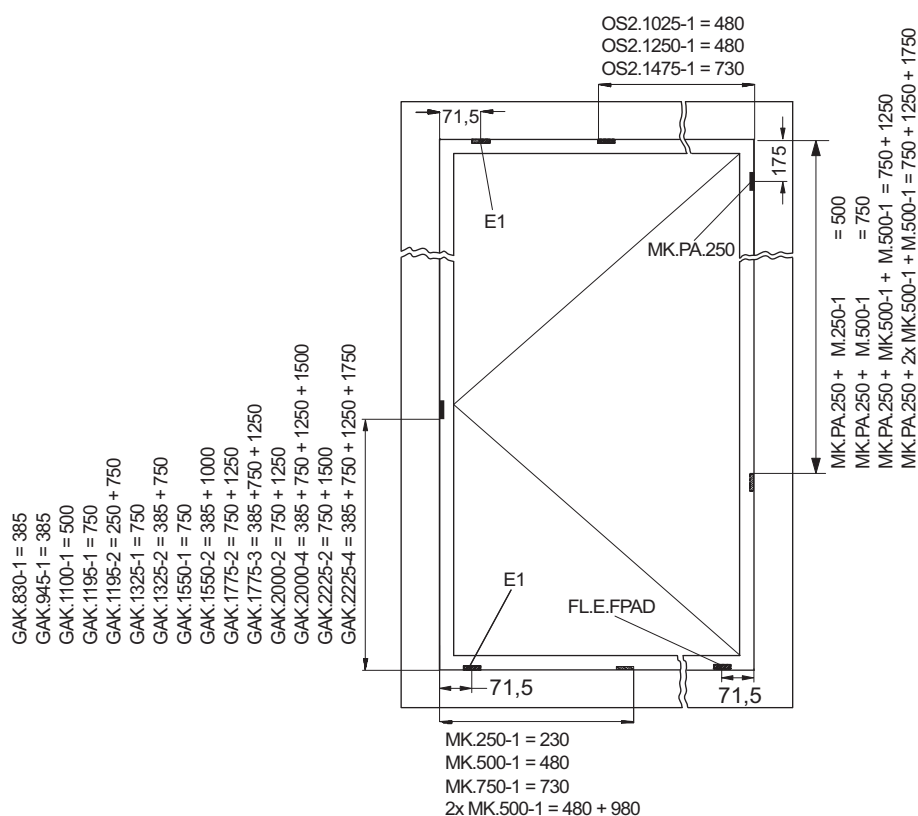
The figures show the keep position options. The number of keeps depends on the size of the window.



Note: The dimensions shown in the figures refer to the frame rebate edge to keep profile edge or frame centre to the keep!



Keep positions DK "central handle position"



Keep positions DK "fixed handle position"

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Fitting the keeps

Handling of mounting jigs is explained by reference to the LE.N.K. 710-1100 mounting jig in the following. Other mounting jigs are handled in the same way. To position keeps, place the mounting jig on the frame rebate edge.

Labelling of mounting jigs

↔ Horizontal attachment = red element (for top rod and interlocking rod)

↑ Vertical attachment = yellow element (for drive rods and interlocking rods)

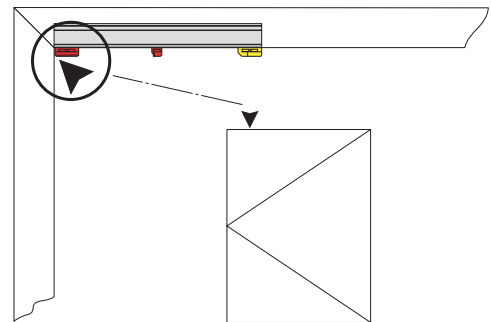
↕↔ Vertical / horizontal attachment = blue element (for corner drives)

→ = Keep run-in

Keep SBS...PAD drive side, top corner drive for E1

See figure: SBS...PAD

- Use a PADK jig for the keeps needed for the parallel position activPilot Comfort.
 - Align the mounting jig with the red element in the corner.
 - Attach the SBS... keep to the red element marked E1.PA, FLE.FWPA, E1.

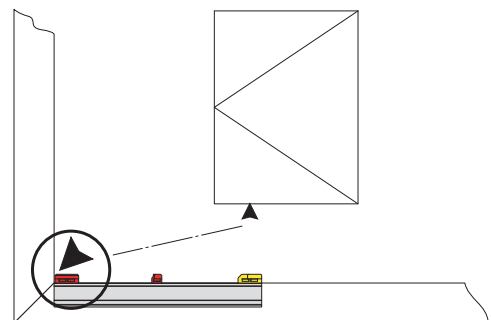


SBS...PAD

Keep SBS...PAD drive side bottom corner drive for E1

See figure: SBS...PAD bottom

- Use a PADK jig for the keeps needed for the parallel position activPilot Comfort.
 - Align the mounting jig with the red element in the corner.
 - Attach the SBS... keep to the red element marked E1.PA, FLE.FWPA, E1.

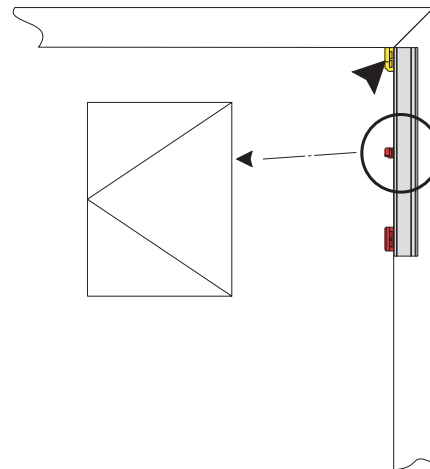


SBS...PAD bottom

Keep SBS...PAD top hinge side for MK.PA.250

See figure: SBS...PAD

- Use a PADK jig for the keeps needed for the parallel position activPilot Comfort.
 - Position the mounting jig with the yellow element in the upper corner.
 - Position the keep SBS...PA.. on the red element marked MK.PA.250.

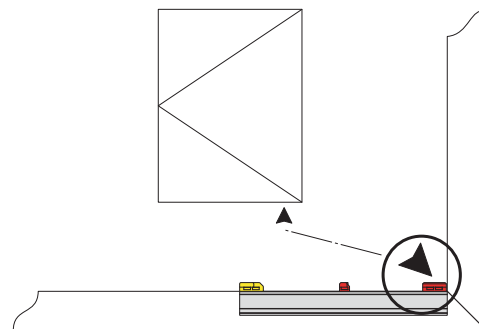


SBS...PAD

Keep SBS...PAD for sash hinge FL.E.FPAD bottom hinge side

See figure: SBS...PAD

- Use a PADK jig for the keeps needed for the parallel position activPilot Comfort.
 - Position the mounting jig with the red element in the corner.
 - Position the SBS...PAD keep on the red element marked E1.PA, FL.FWPA, E1.



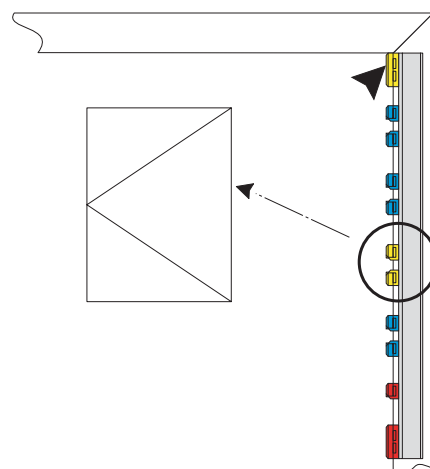
SBS...PAD

See figure: Keeps hinge side

- Keeps for interlocking rods, hinge side
 - Align the mounting jig with the yellow element in the top corner.
 - Position the keep for interlocking rod on the yellow element.



Please note: The labelling on the interlocking rod must match the labelling on the yellow templates. The interlocking rod MK is labelled e.g. "MK.750-1".



Keeps hinge side

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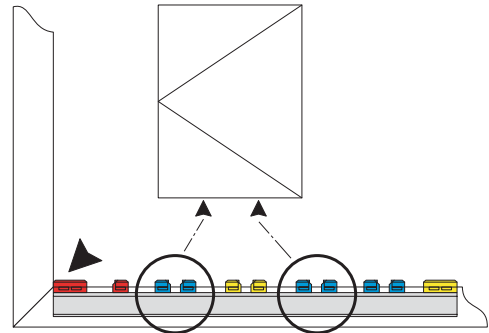
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Interlocking Rod M, bottom, horizontal

See figure: M bottom horizontal

- Align the mounting jig with the red element in the lower corner.
- Position the keep on the blue element marked "M" or "MK".

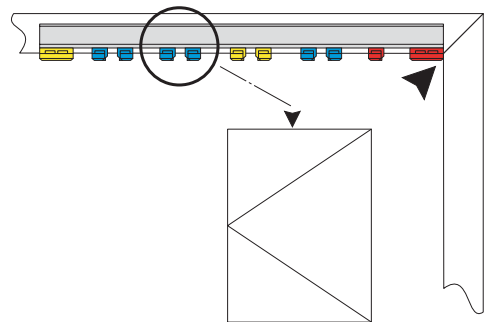


M bottom horizontal

Keep for top rod OS...

See figure: Keep for top rod OS...

- Align the mounting jig with the red element in the top corner.
- Place the keep SBA on the blue element labelled "OS. ...".

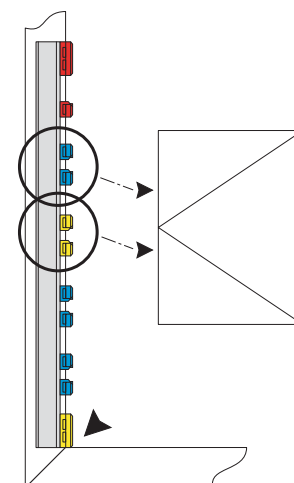


Keep for top rod OS...

Keeps for vertical GAK drive rod

See figure: SBA... for vertical GAK

- Align the mounting jig with the yellow element in the bottom corner.
- Place the SBA. ... keeps on the yellow and blue elements marked "GAK. ...".



SBA... for vertical GAK

Keeps for GAM

See figure: Keeps for GAM

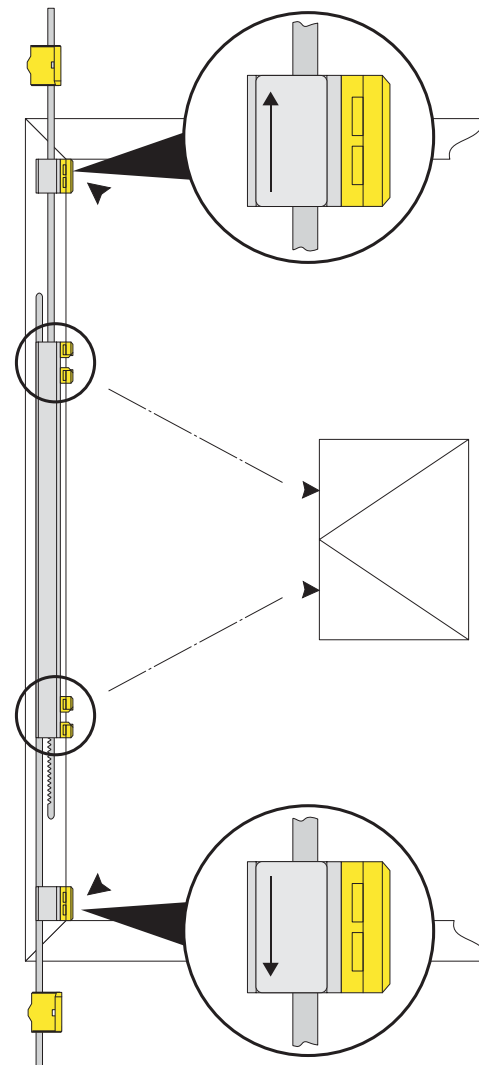
- Attach the corresponding mounting jig labelled 'top' or 'bottom'.
- Fit keeps in line with the labelling on the mounting template.

There are three telescopic jigs depending on the window height:

- L.E.N.T. 0710-1050 for drive rod GAM 1050-1
- L.E.N.T. 1051-1800 for drive rod GAM 1400-1/2 / 1800-2
- L.E.N.T. 1801-2300 for drive rod GAM 2300-3



Please note: The labelling on the drive rod must match the labelling on the yellow templates.



Keeps for GAM

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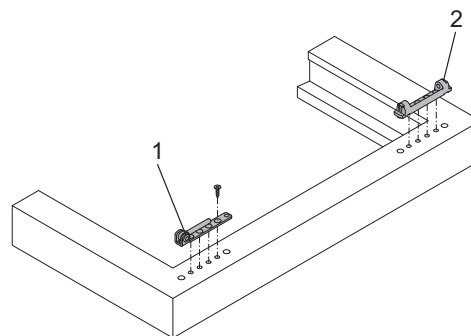
Mounting shear and corner hinges

See figure: Shear and corner hinges

- Fix the shear hinge (2) and corner hinge (1) into place using screws 3.9 mm to 4.2 mm. Min. length of screws 40 mm.



Please note: Window builders must ensure that hinges and their anchorings are designed to support the expected loads and are professionally mounted.



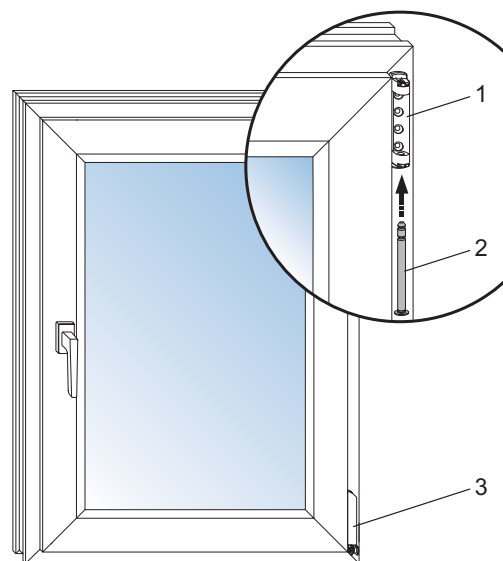
Shear and corner hinges

Fitting the sash

- Use the handle to move the sash from the 90° position (horizontal handle) into the 180° position (handle vertically upwards).
- Mount the sash, adjust for a good seal and fit the pin to secure against the shear hinge.
- Push all end caps and sealing caps onto the shear and corner hinges.



Note: Insert pin from bottom (see arrow). Please note: Initial actuation is not as easy as actuation in normal operations. A clicking noise will be heard during actuation. Keep the window closed during actuation.



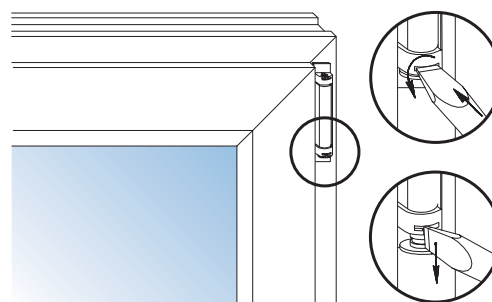
Shear and corner hinge

Dismounting of the sash

- Close the sash.
- Release the pin from the shear hinge.
- Remove the sash.



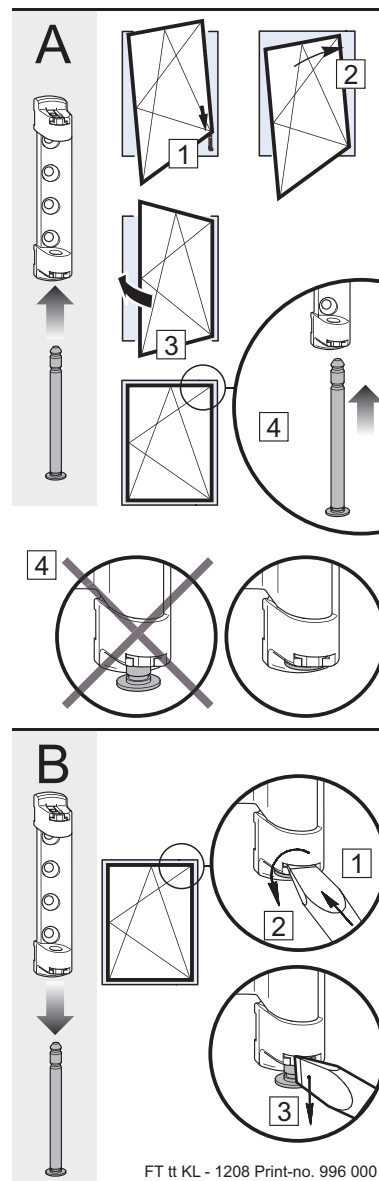
Attention! Damage to shear hinge. In case of improper use and if you attempt to drive out the pin forcibly, the shear hinge will be damaged. Use only a screwdriver to release the pin as shown in the figure.



Release the pin in the shear hinge

Notes on professional fitting and removing of sashes

For professional mounting and removal of the window sash please refer to our mounting advice. We recommend to place this mounting advice on the window sash.

**WINK
HAUS**

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Function test

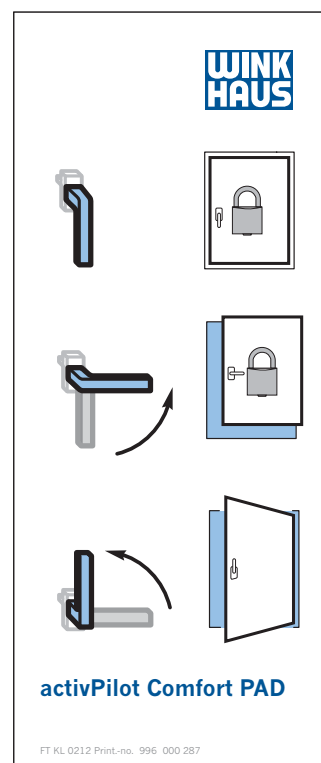
For parallel action rectangular turn window

Place the handle and operate once as follows to release the central fastening.

- If the handle is moved into the horizontal position from the bottom, the fitting is in the parallel action position. By further turning the handle by 90° the handle reaches the turn position (180°). In order to close the window the handle must be moved back down to the initial position.

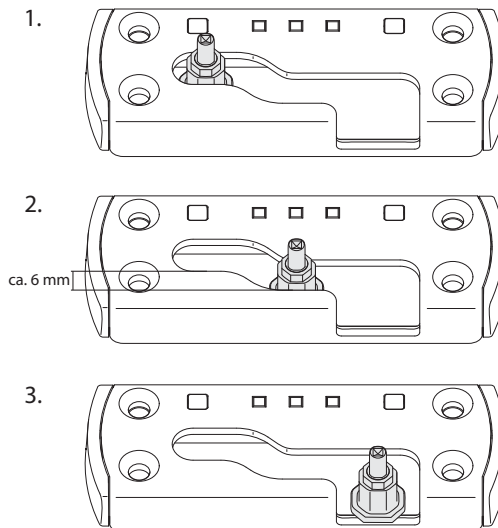


Please note: Initial actuation is not as easy as actuation in normal operations. A clicking noise will be heard during actuation. Keep the window closed during actuation.



See figure: Function SBS.K.PAD

- If the octagonal locking bolt is in position 1 the window is locked.
- If the octagonal locking bolt is located in the centre (position 2) the window is opened 6 mm in the parallel position.
- If the octagonal bolt is in position 3, the window is wide open (turn position).



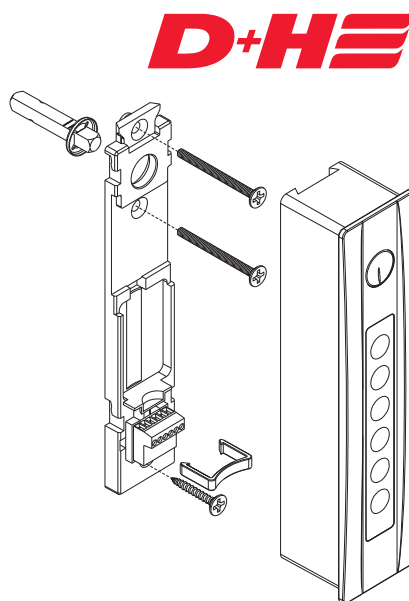
Function SBS.K.PAD

Installation of motor and base plate

The installation of the fitting drive as well as the electrical connection is described in the documentation of D+H Mechatronic AG.



Please note: Winkhaus does not deliver the motor drive for activPilot Comfort PADM fittings. The drive is supplied by D+H Mechatronic AG.



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15Adjustment and maintenance instructions for the specialist window company

General and safety-relevant notices

activPilot Comfort

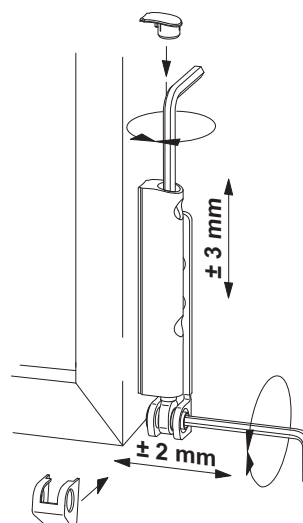
These instructions are intended for the specialist window company. They describe essential adjustment and maintenance work for the activPilot turn-tilt fittings. Please observe the following notices: Fitting parts are to be tested regularly to ensure they are seated firmly and checked for wear. Fastening screws are to be retightened and parts replaced as necessary. Their functionality is to be retested afterwards. Fittings may only be cleaned with mild, ph-neutral cleaning agents in diluted form. Use only cleaning agents which do not degrade the corrosion protection on fitting parts. Never use aggressive, acidic or caustic cleaners, scouring agents or sharp objects to clean fitting parts. Always also observe the guideline for product specifications/notices and liability (VHBH) when making adjustments or performing maintenance.

This information can be obtained at the following Internet addresses: <http://www.winkhaus.de> (Products & Services/Notices about products and liability) or <http://www.beschlagindustrie.de/ggsb/richtlinien.asp>

Adjustment options

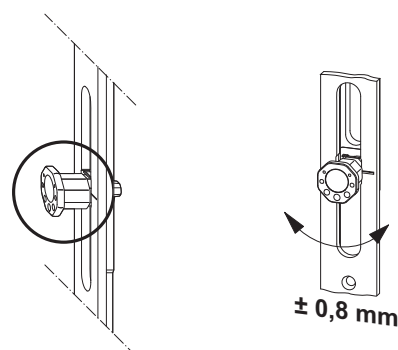
Corner hinge/sash hinge

Sash hinge height adjustment (± 3 mm) and corner hinge side adjustment (± 2 mm).



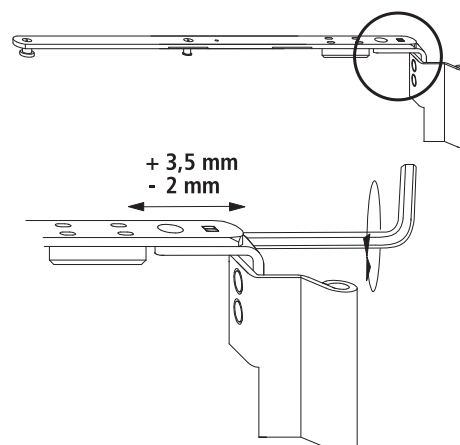
Octagonal bolt

Regulate the contact pressure between the sash and the frame (± 0.8 mm) by turning the octagonal bolt. The adjustment can only be carried out if the fitting is in the turn position. When the fitting is moved from the open position to the parallel position, the fail safe device must be pressed.



Shear – Rectangular window

Lifting and lowering the sash (from -2 to +3.5 mm) by means of a 4 mm Allen key.



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Maintenance

Lubrication points

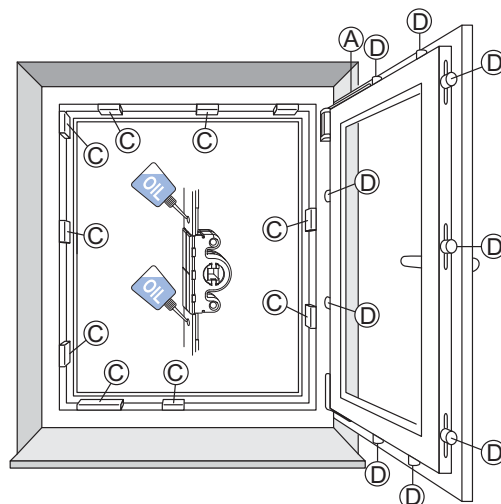
See figure: Overview of lubrication points

The figure shows the location of possible lubrication points which should be lubricated at least once a year.

Positions A, C, D = lubrication points relevant to function.



Please note: The fitting schematic shown adjacent does not necessarily match the existing fitting. The number of locking positions will vary depending on size and type of the window sash.



Overview of lubrication points

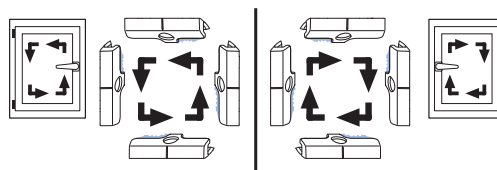


Attention! Risk of injury. The window could fall on removal and thus injure persons. Do not remove the window for maintenance.

Ascertaining the run-in sides

See figure: Run-in sides

- Left-handed window; handle right
- Right-handed window; handle left



Run-in sides

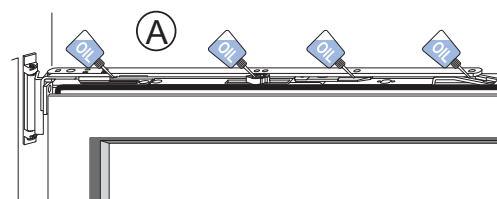
Shears

See figure: Shears

All of the shear's contact points with the top rod should be oiled once annually.



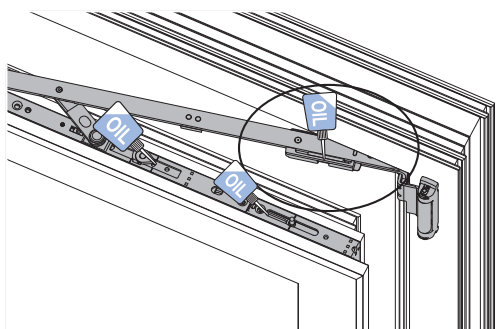
Note: The shear hinge must not be oiled or greased.



Shears



Note: Please make sure the shear is clean in the upper area.

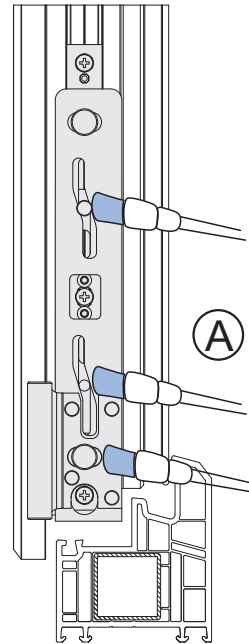


Sash hinges

See figure: Sash hinge FL.E.FPAD

All moving contact points on the sash hinge should be greased with a suitable lubricant once annually.

Coat lubricating points with non-resinous, non-corroding grease.



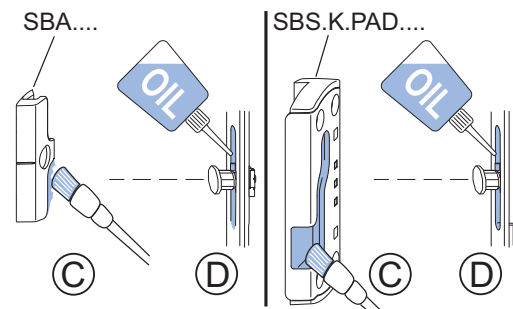
Sash hinge FL.E.FPAD

Keeps

See figure: Keeps

To keep fittings running smoothly, you must lubricate the keeps once a year.

- Lubricate the keeps (C) at the run-in side with technical Vaseline or any other suitable grease.
- Coat the running surfaces of the locking bolts (D) with an oil that is free of resins and acids.
- Frame parts must be kept clean.



Keeps

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Top rods **5**

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Shears/
Shear hinges **7**

Turn hinges/
Tilt hinges **8**

Extension rods **9**

Accessories **10**

Frame parts **11**

Mounting accessories **12**

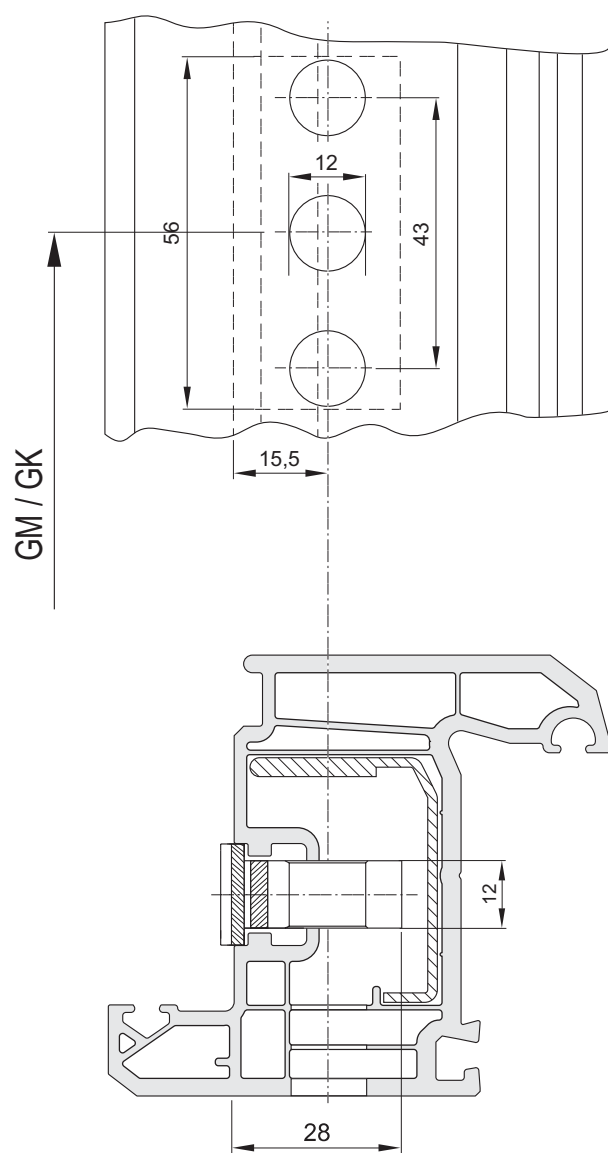
Mounting instructions **13**

Adjustment/
maintenance **14**

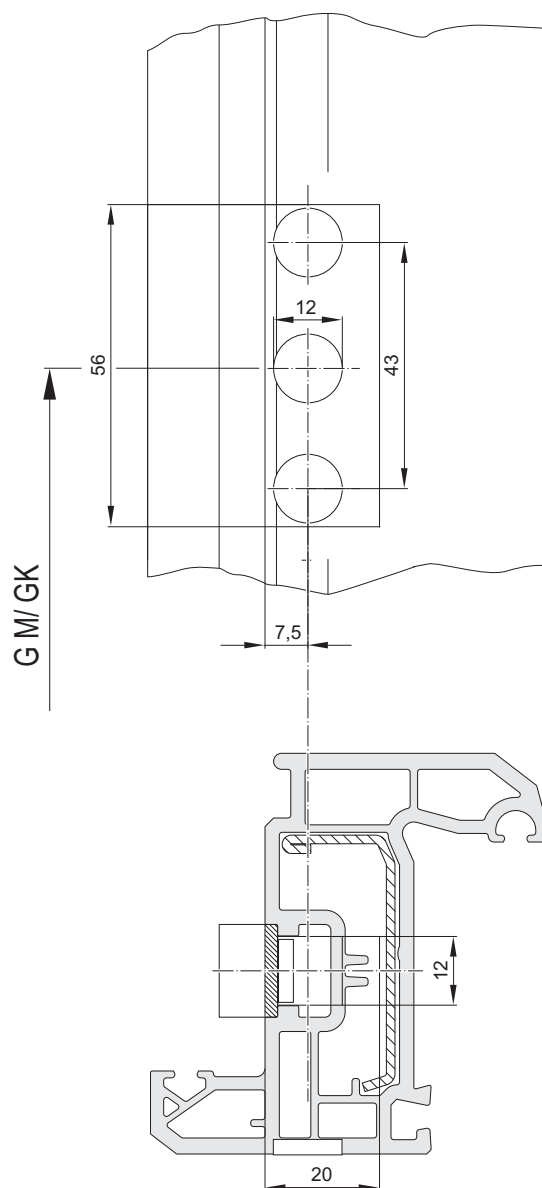
Installation drawings **15**

Installation drawings

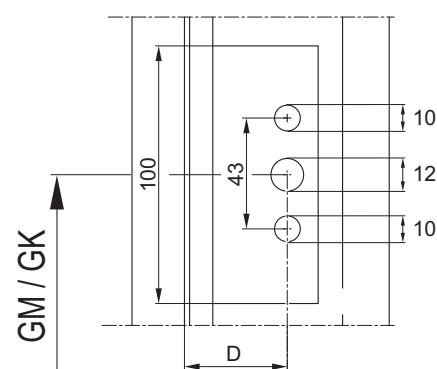
Drive rods



B-3-1: Drilling and milling instructions GAK/GAM ... D = 15.5 mm

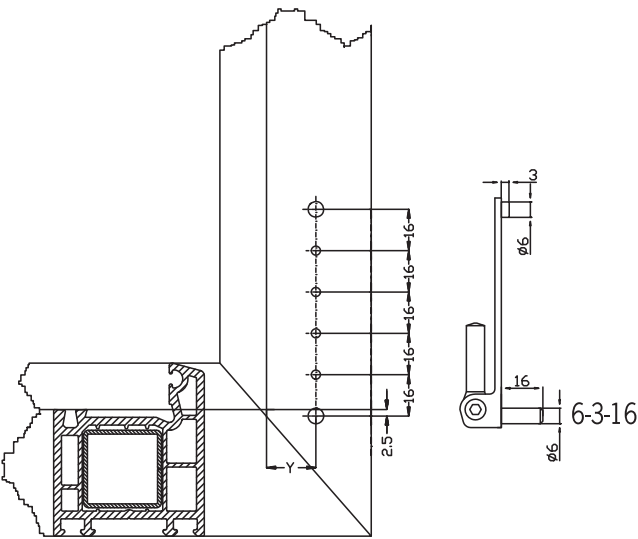


B-3-2: Drilling and milling instructions GAK/GAM ... D = 7.5 mm



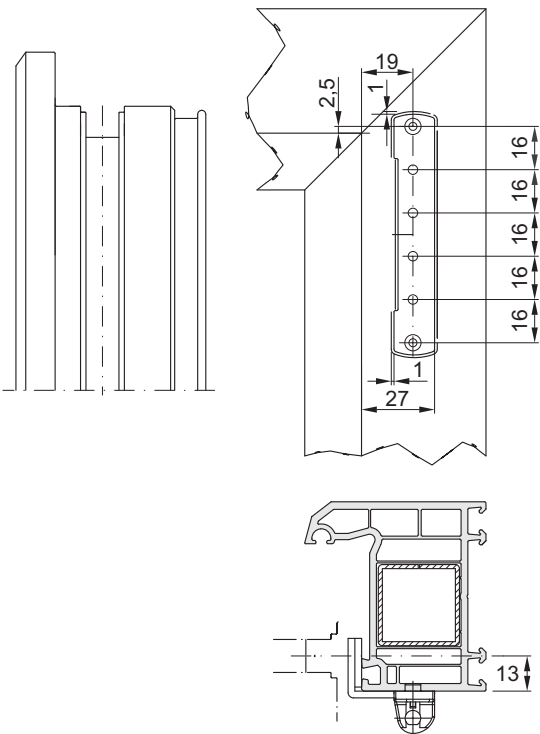
B-3-4: Drilling and milling instructions GAK/GAM ... D 25 ... 50
D = Backset

Corner hinge ESV



B-6-3: Drilling template corner hinge ESV
Y = 19 mm

Shears / shear hinges



B-7-1: Drilling template shear hinge SL.KS. ...

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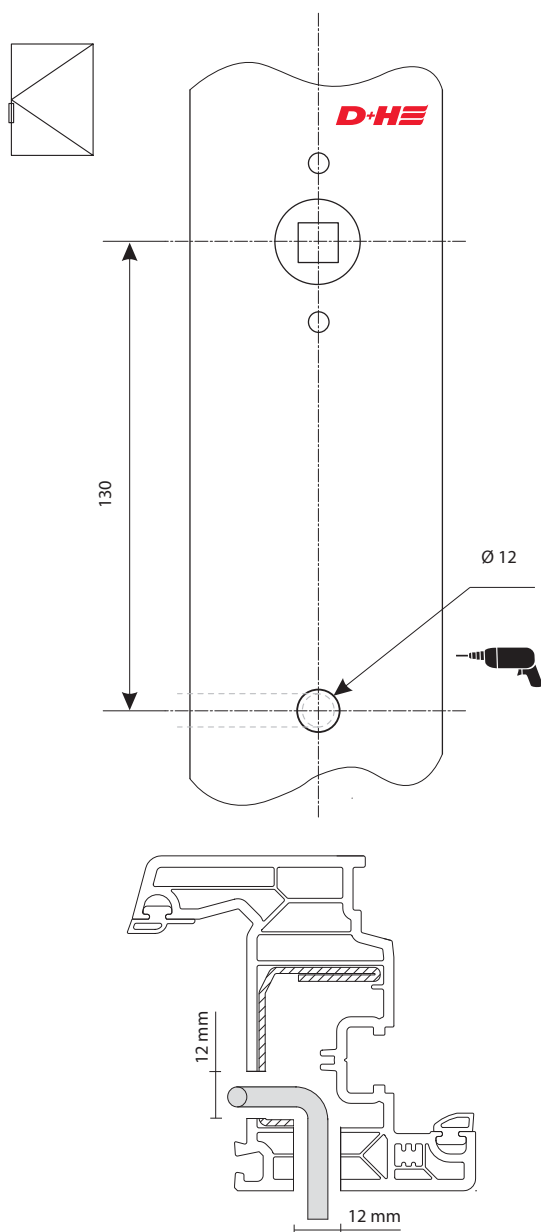
Adjustment/
maintenance

14

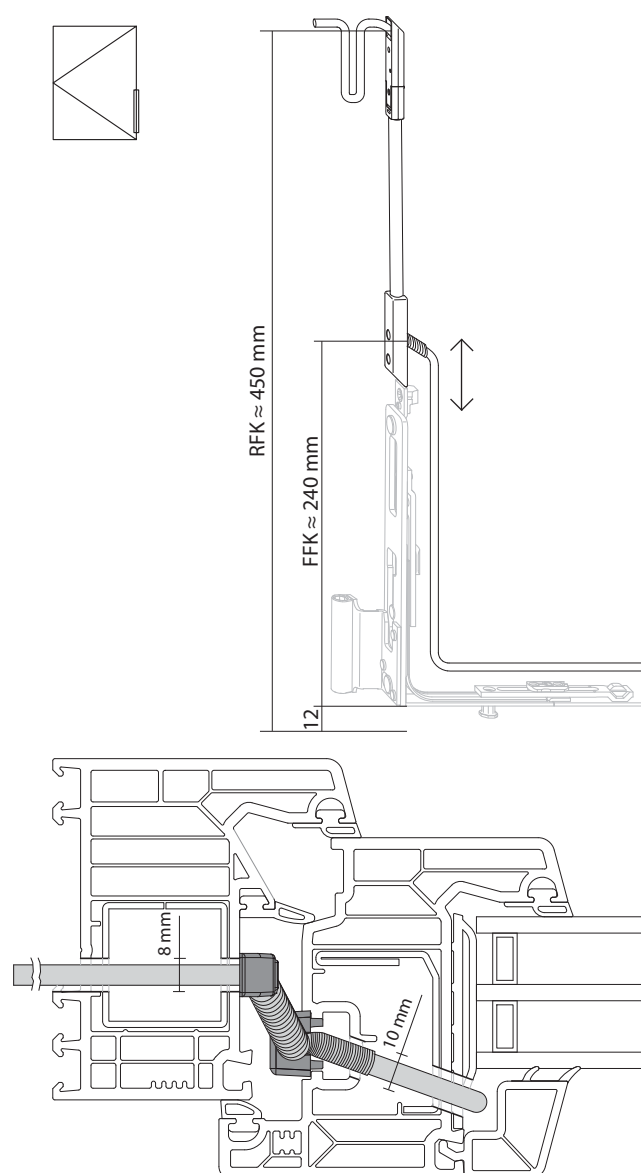
Installation
drawings

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D+H motor – base plate/cable outlet/cable installation



Cable transition KUE-T1



B-11-12 Installation drawing and cable laying Cable transition

FFK = sash rebate edge

RFK = frame rebate edge



The installation of the fitting drive as well as the electrical connection is described in the documentation of D+H Mechatronic AG.

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