

Always precise **WINK
HAUS**

activPilot Elegance

The invisible turn-tilt fitting
for the most exacting of requirements.



for
windows



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

activPilot: The new standard for turn-tilt fittings

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.

From established standards to the next generation standard

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.

Modularity

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.

New locking system with octagonal locking bolts

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.

Add-on functions

activPilot gives you the ability to react flexibly to customer requests. Innovative multi-purpose components make it easy to retrofit features at any time. The use of a duo and/or tri functional element makes it simple to add a fail safe device with integrated limiter support and balcony door catch.

Design

activPilot offers you and your customers genuine added value. Surprising details, unobtrusive accents, ergonomics and functionality characterise the overall impression of the fitting system. To keep a long story short: the attractive design is a decisive factor for your customers. Add to this, further convincing arguments such as premium solid quality, easy to clean, intuitive use, and finally more attractive windows. On top of this, electroplated surfaces in silver look not only give the fittings that final touch, but reliably protect them against corrosion (electroplating in line with RAL-RG 660/1-1, exposure group 4).



1. Individual protection

The modular frame part design allows for customised security levels. The RAL quality mark for locks and fittings is evidence of the premium quality and solid build. Security levels are customisable and can be upgraded to WK 2 with very little effort.



2. Easy to adjust

The activPilot window fitting has a totally new locking system based on an octagonal locking bolt. It is manually adjustable and thus allows easy regulation of the seal. Air gap tolerances are automatically compensated to a large extent.



3. Premium quality

The Winkhaus activPilot fitting's premium quality is documented by RAL lifecycle testing. You can rest assured in the knowledge that you are buying a quality product.



4. Energy savings

The variable tilt device supports different sash tilt angles and thus fast, easily adjustable ventilation settings. This ensures a continuous supply of fresh air without significant energy loss. This not only protects your health, it also protects your wallet.

* Concept and Select systems only.
Tilt limiter option for Elegance system.



5. Attractive design

The attractive design of the fitting elements gives windows a special quality that sets them apart from run-of-the-mill, mass-produced products. Add value to your windows with Winkhaus activPilot.



6. Flexible retrofitting

The innovative, modular activPilot system is easily extendable and supports additional functionality. You too can benefit from activPilot's flexibility for a completely 'new home' happiness feeling.

6 reasons for choosing the activPilot fitting:

- Individual protection
- Easy to adjust
- Premium quality
- Energy savings
- Attractive design
- Flexible retrofitting



activPilot Elegance

Pure design for demanding architecture

Less is more attractive

activPilot Elegance allows you to design your windows attractively. The window design is not impaired by visible bearing pieces because they are integrated in the rebate. The ideal solution of the demanding aesthetic requirements of modern building concepts. activPilot Elegance gives you the ability to implement timelessly beautiful designs, not only in new buildings, but also in renovation and restoration work. This helps to keep the original looks of old buildings. A major advantage of buildings listed for preservation.

Color deviations between the window and external fitting elements? activPilot Elegance solves this problem by giving you a free choice of colors for the window sash and frame.

Comfort and care

No external bearing elements must be cleaned; and this makes care very simple. Even years later, activPilot Elegance will continue to enthrall the viewer with its plain, perfect elegance.

Winkhaus Plus

- + Aesthetic, timeless windows thanks to “invisible” fittings
 - + Ideal for modern architectural concepts in new buildings, renovation and restoration work
 - + Free choice of colours for sash and frame
-

activPilot - the intelligent modular system

Tailor-made functionality - adaptable at any time.

activPilot Elegance is a variant of the Winkhaus activPilot system of fittings. The activPilot product range includes specific solution models for a variety of window design requirements, including models with innovative, integrated locking sensors. The activPilot system of fittings is modular. All components used in the system are compatible. This means that any activPilot fitting can be retrofitted with value-added functions at any time. The system's locking bolts are generally burglary-resistant, WK security approved.

Winkhaus - technology setting standards

For decades, Winkhaus has been a leading specialist for premium-quality door and window fittings. Motivated and inventive product development has led to numerous innovations and patents. For example, the first fully concealed window fittings was made by Winkhaus, and it has been a successful model for more than 20 years. What was a technical revolution at the time, is the industry standard today. The activPilot fitting system sees Winkhaus once again setting new standards in window building technology. An abundance of benefits and unique combinations - activPilot Elegance now brings this standard to tilt turn windows/doors.

Winkhaus. Always precise.

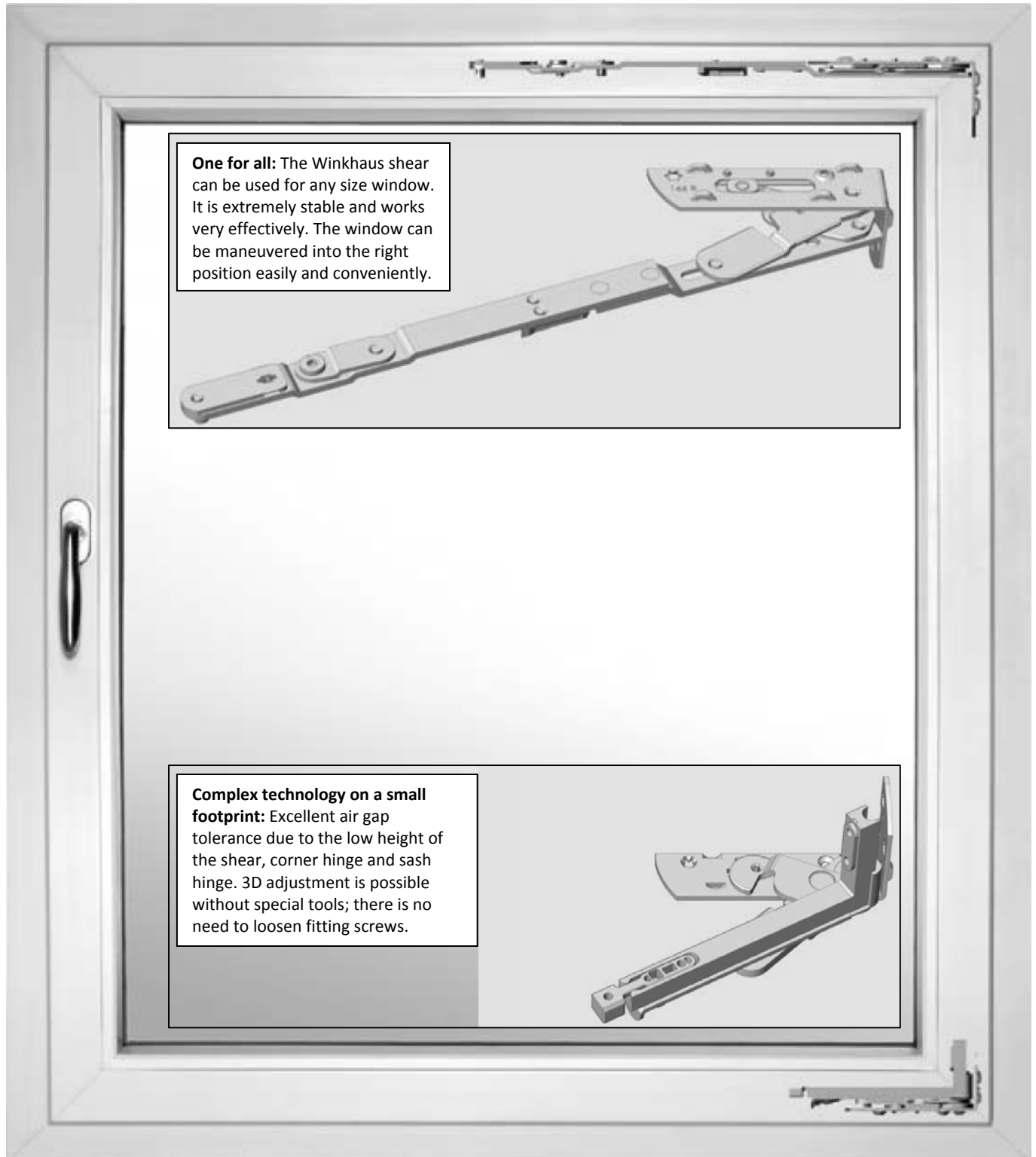
Winkhaus's company history goes right back to the year 1854. At the time, innovative solutions and maximum added value for customers were the focus of our work. Individual solutions are our response to special requirements....Based on standard modules, we provide value-for-money custom-built products that meet most exacting quality standards.

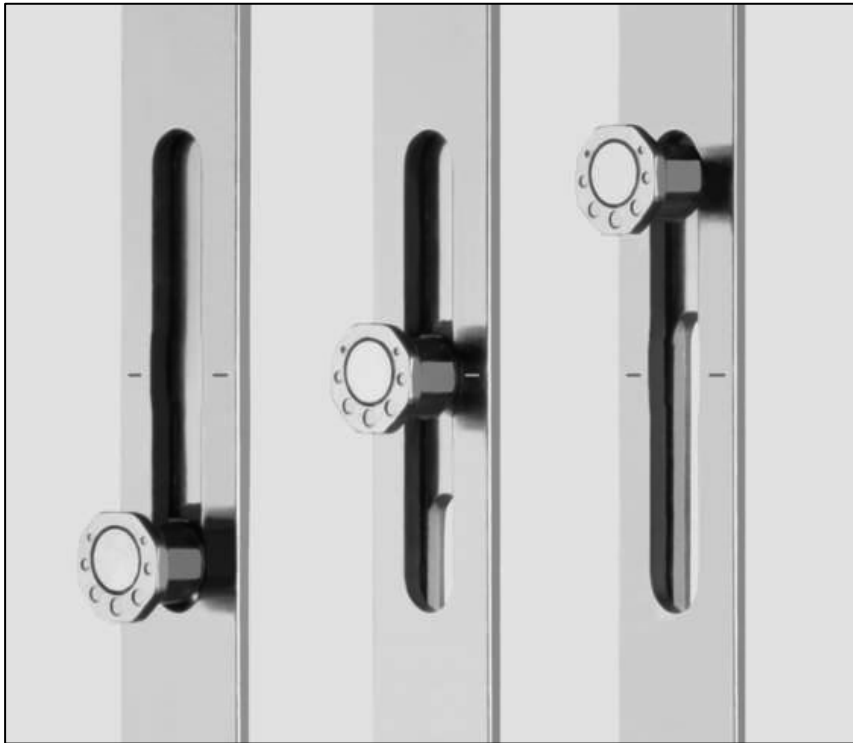
Winkhaus Plus

- + Intelligent, modular design supports individual system configuration and easy retrofitting
 - + Quick installation thanks to few components and greater air gap tolerances
 - + Easy mounting, rapid adjustment without special tools
-

activPilot Elegance

Innovative technology adding hidden strength





Octagonal bolt locking design means secure trouble-free locking.



Dual function device includes lifting and anti-mishandling features.



The blue push button release lever on double sash windows means the swing sash is more easily opened than ever.

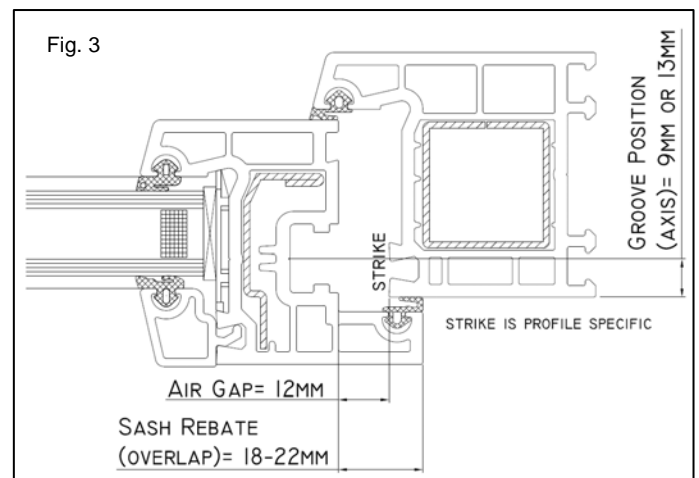
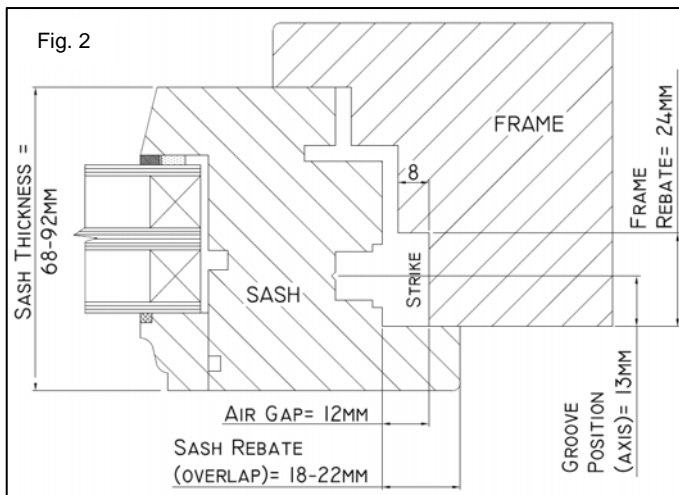
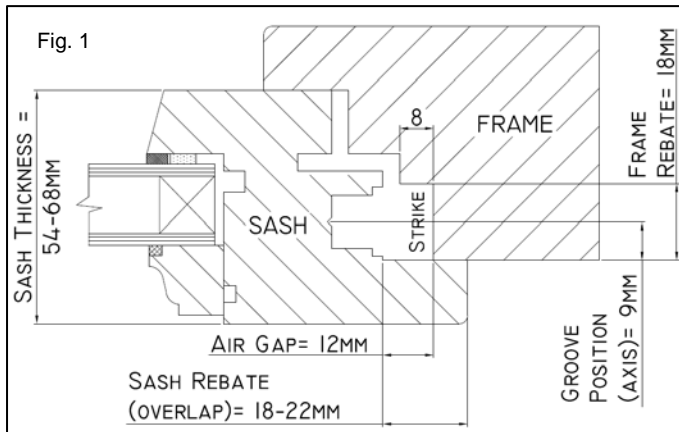
Winkhaus activPilot "Elegance" fittings are designed for pvc or wood windows and glazed doors only. Fittings are designed for the following sash rebate sizes and sash weights:

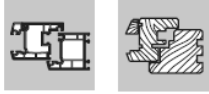
Range

- min. sash rebate width = 370mm*.
 - max. sash rebate width = 1400mm.
 - min. sash rebate height = 460mm*.
 - max. sash rebate height (constant handle height) = 2725mm.
 - max. sash rebate height (central handle height) = 2800mm.
 - max. sash weight = 100kg.
 - max. sash size = 2.0 m² (21.5 ft²)
 - width to height ratio FFB:FFH ≤ 1.5
- * See page 12 for details on allowable sash rebate sizes

Standard Profile Dimensions

The Winkhaus activPilot Elegance fittings are suitable for rectangular windows and glazed doors with standard (16mm euro) fitting groove, groove position (axis) of 9mm with 18mm frame rebate or groove position (axis) of 13mm with 24mm frame rebate, an air gap of 12mm, overlaps (sash rebates) of 18-22mm (Fig. 1, 2, 3). Winkhaus does not provide fastening screws for fittings. Always use fastening screws suitable for the window material and window dimensions. Please follow the guidelines on mounting fittings.



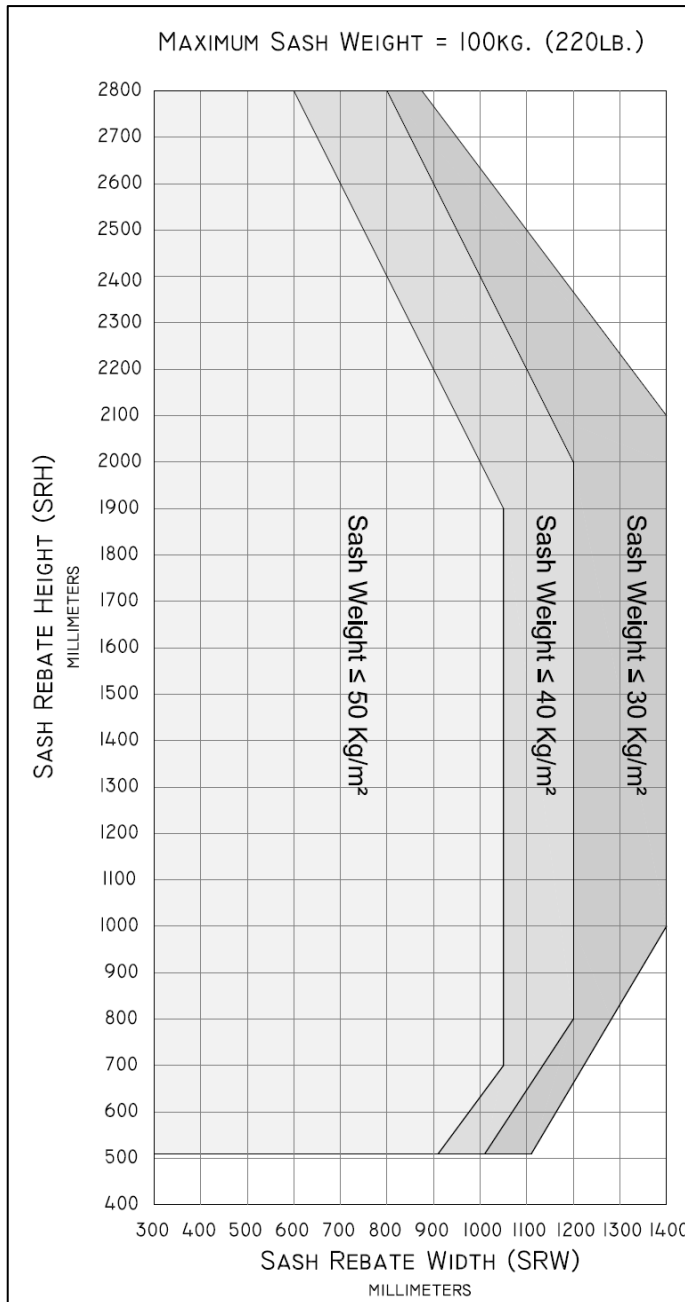


Sash sizes

The graph in the application diagram below show the permitted sash rebate height to width ratios, as determined by different weights of glass and/or overall glass thickness, The resulting sash rebate dimensions or sash formats (portrait/landscape) as well as the sash weight may under no circumstances be exceeded.



Diagram to determine permissible sash size

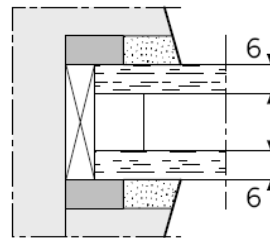
At a glass thickness of less than 12mm all sash sizes within the application range and the width-height ratio FFB/FFH ≤ 1.5 are permissible as long as they are in accordance with "Determining glass weight" below.



Determining glass weight-

mm	kg/m ²
24	60
22	55
20	50
18	45
16	40
14	35
12	30

1 mm Glass = 2.5 kg/m²
 = glass weight per square meter (m²)
 = glass thickness



glass thickness = 12 mm

Hardware Finish

The Winkhaus activPilot Elegance fittings are supplied with silver protective finish, corrosion protection - class 4 per EN 1624 standard.

activPilot Elegance

The tilt turn fitting for PVC-U / wood windows/doors.

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

Effective security

activPilot gives customers a convincing feeling of affordable safety. Thanks to this 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.



10 Year Warranty for Winkhaus autoPilot/activPilot fitting systems

Aug. Winkhaus GmbH & Co. KG, August-Winkhaus-Straße 31, 48291 Telgte gives a warranty of 10 years for the **Winkhaus autoPilot/activPilot** fitting range, thus considerably exceeding the legal warranty period.

Aug. Winkhaus GmbH & Co. KG guarantees no safety-relevant parts or interlinked components of the above-mentioned fitting systems will break. In case of a warranty claim, we will replace the defective parts free of charge.

No further reimbursements will be made.

This consent only applies if the fitting parts have been professionally mounted in accordance with valid mounting instructions, correctly operated according to our installation instructions and maintenance has verifiably been carried out as per our maintenance instructions. We are in a position to assume a warranty for the surface quality only if no aggressive environmental strains or cleaners work on the fittings from the outside or aggressive substances from the window material corrode the components (e. g. timber with aggressive components).

Furthermore, our General Product Information as well as the Guidelines on Product Liability must be observed.

The 10 year warranty exceeding the legal warranty period is valid from the day the goods are delivered.

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

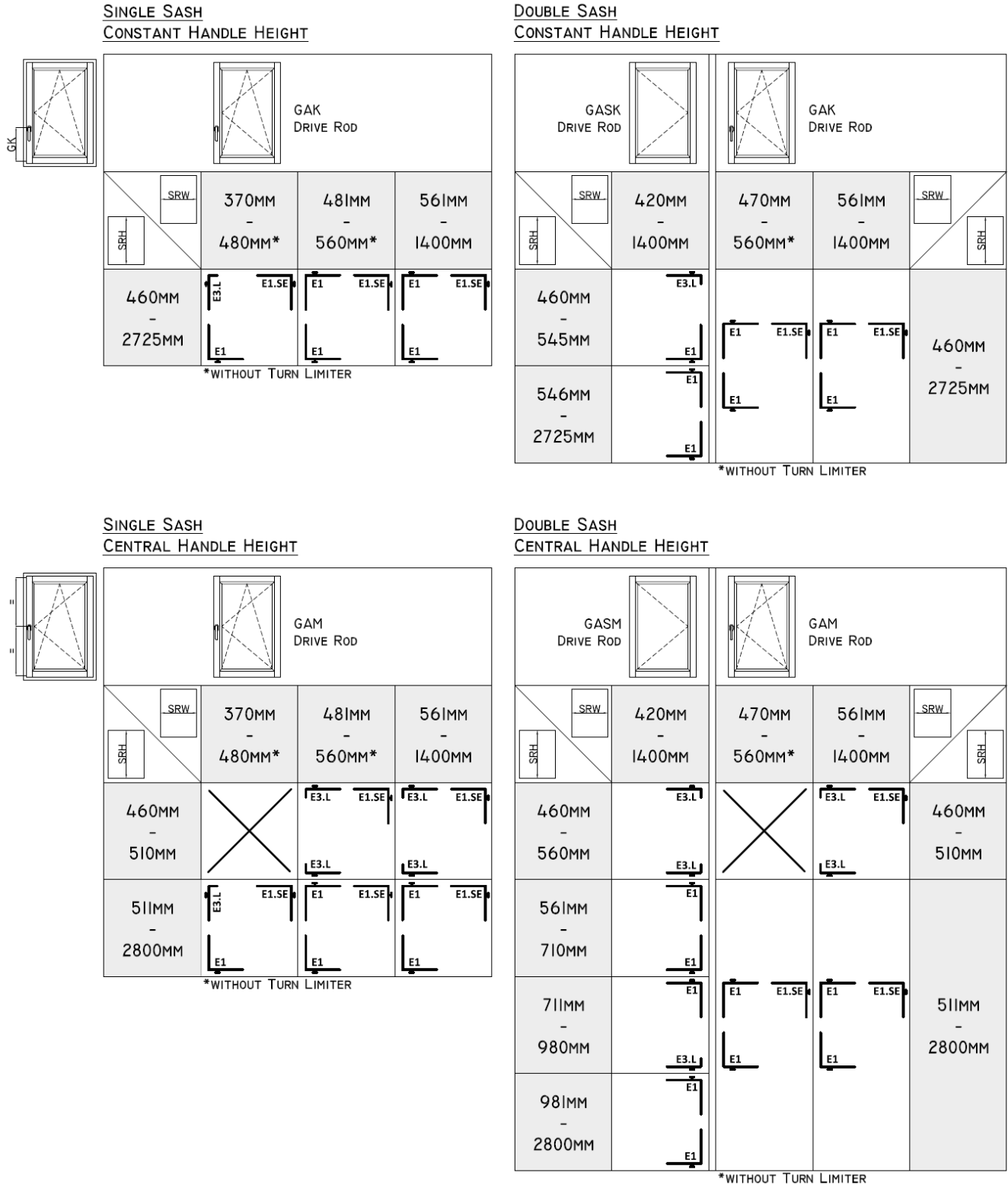
To ensure compliance with German product liability laws (Article 4 ProdHaftG), please observe our manufacturer’s notices on tilt and turn fittings for windows and glazed doors. Failure to observe releases the manufacturer from any liability. Please consult your Winkhaus advisor for “General Product Information”!

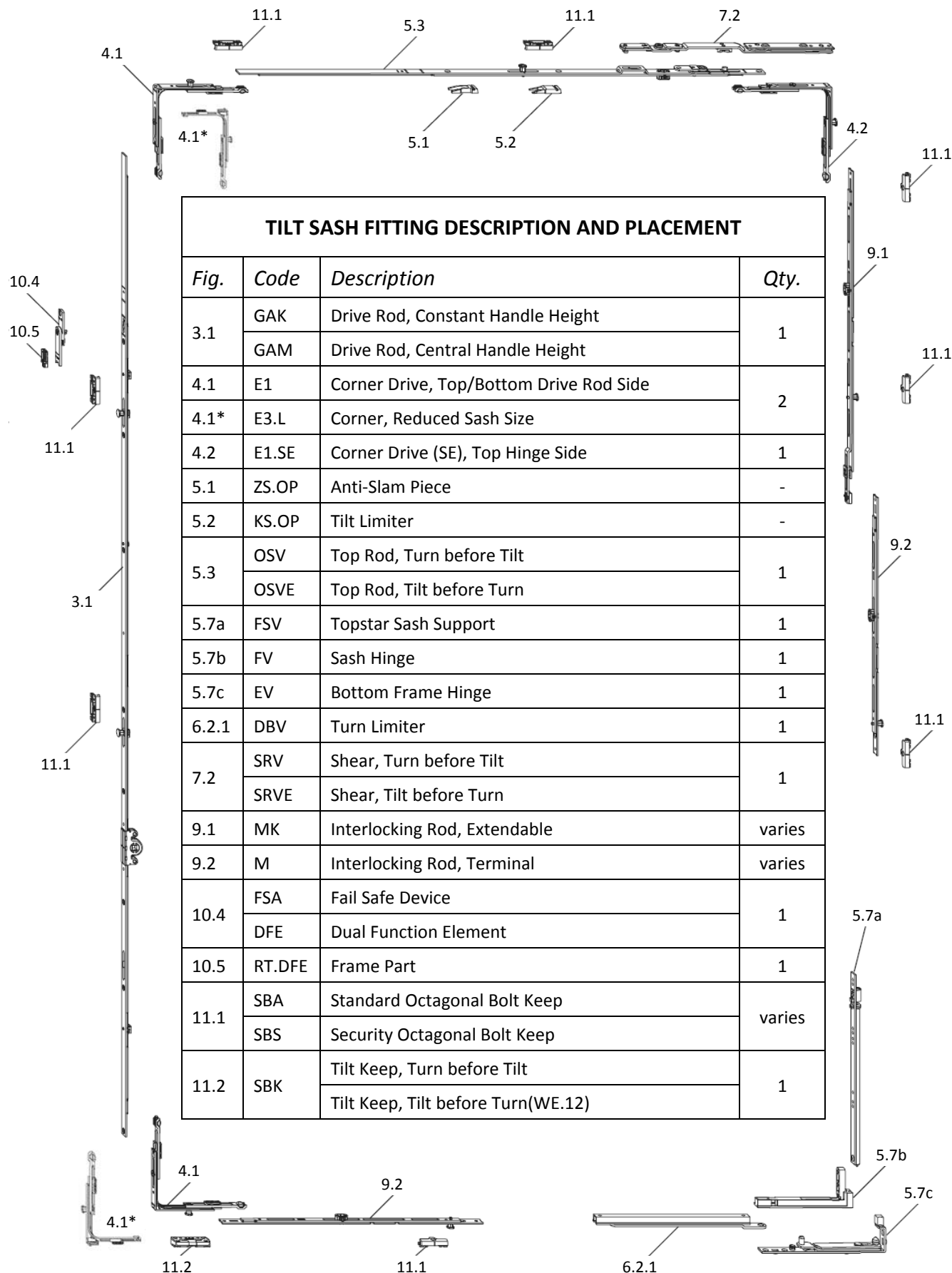
Declaration of symbols

	<p>Max. sash weight= 100kg. (220lb.)</p>		<p>Basic fittings</p>
	<p>Max. sash size= 2.0m² (21.5 ft²)</p>	<p>BASIC</p>	
	<p>Max. sash rebate width (FFB)= 1400mm See page 12 for details on allowable sash rebate widths.</p>		<p>Optional fittings</p>
	<p>Max. sash rebate height (FFH)= 2725mm Constant handle height drive rod 2800mm Central handle height drive rod* *See page 12 for details on allowable sash</p>	<p>OPTION</p>	
	<p>Ratio between sash rebate width (FFB) and sash rebate height (FFH) is less than or equal to 1.5 : 1</p>		
	<p>Constant (fixed) handle height</p>		
	<p>Central handle height</p>		
	<p>Turn French windows (D)</p>	<p>?</p>	
	<p>Tilt and turn sash (DK)</p>	<p>?</p>	
	<p>Turn/Tilt and turn French window style sash(D/DK-Stulp)</p>		

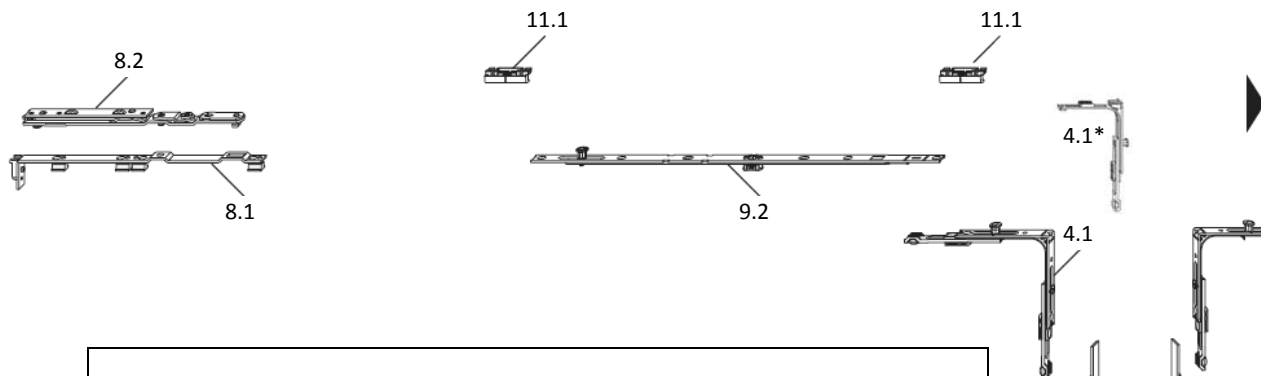
Allowable sash rebate dimensions

The below diagram shows the allowable sash rebate sizes and their applicable corner drive placement. Allowable sizes depend on single or double style windows and handle height drive rod type. Corner drive type and placement is also shown dependant on sash size.

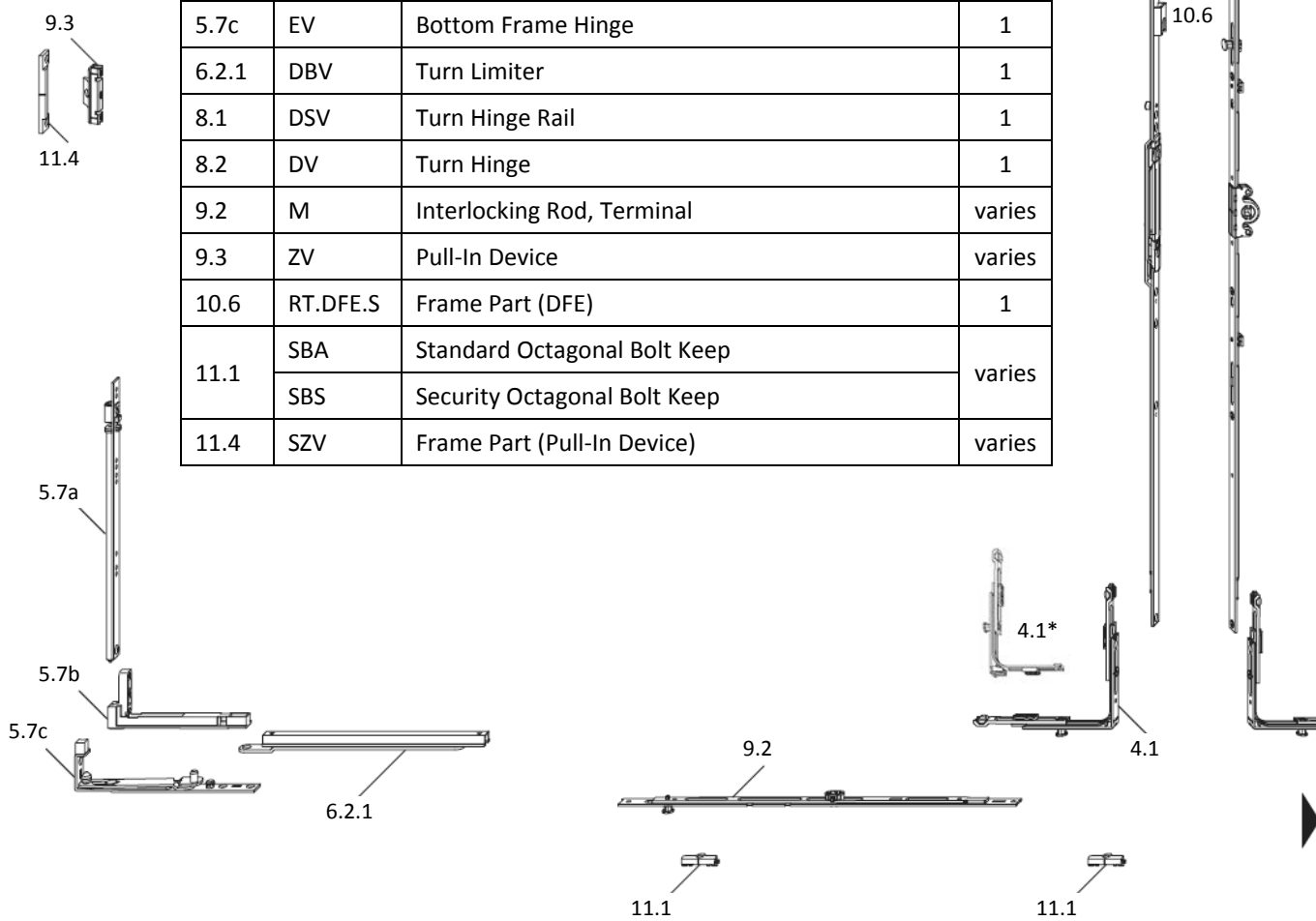




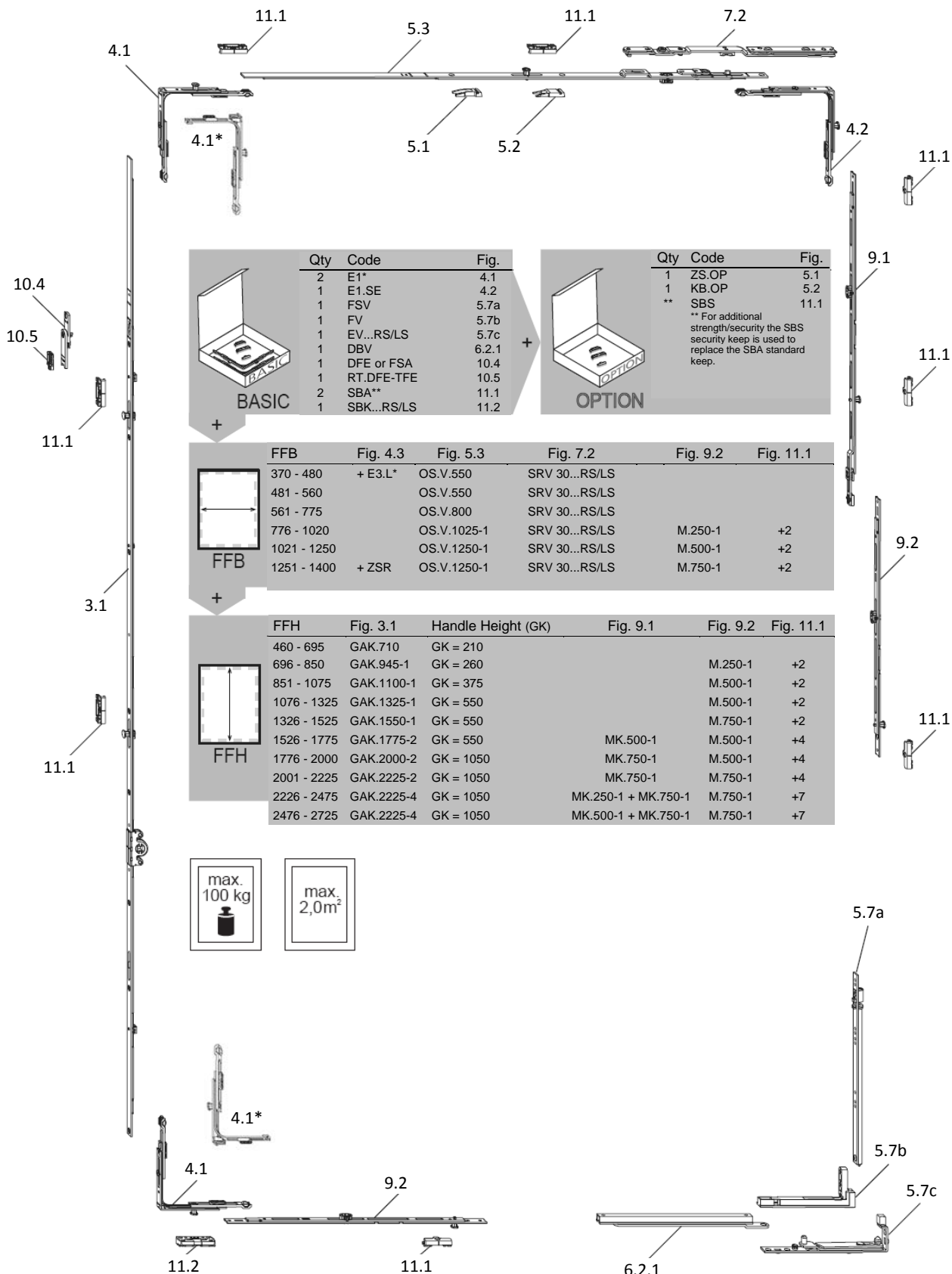
TILT SASH FITTING DESCRIPTION AND PLACEMENT			
<i>Fig.</i>	<i>Code</i>	<i>Description</i>	<i>Qty.</i>
3.1	GAK	Drive Rod, Constant Handle Height	1
	GAM	Drive Rod, Central Handle Height	
4.1	E1	Corner Drive, Top/Bottom Drive Rod Side	2
4.1*	E3.L	Corner, Reduced Sash Size	
4.2	E1.SE	Corner Drive (SE), Top Hinge Side	1
5.1	ZS.OP	Anti-Slam Piece	-
5.2	KS.OP	Tilt Limiter	-
5.3	OSV	Top Rod, Turn before Tilt	1
	OSVE	Top Rod, Tilt before Turn	
5.7a	FSV	Topstar Sash Support	1
5.7b	FV	Sash Hinge	1
5.7c	EV	Bottom Frame Hinge	1
6.2.1	DBV	Turn Limiter	1
7.2	SRV	Shear, Turn before Tilt	1
	SRVE	Shear, Tilt before Turn	
9.1	MK	Interlocking Rod, Extendable	varies
9.2	M	Interlocking Rod, Terminal	varies
10.4	FSA	Fail Safe Device	1
	DFE	Dual Function Element	
10.5	RT.DFE	Frame Part	1
11.1	SBA	Standard Octagonal Bolt Keep	varies
	SBS	Security Octagonal Bolt Keep	
11.2	SBK	Tilt Keep, Turn before Tilt	1
		Tilt Keep, Tilt before Turn(WE.12)	



TURN SASH FITTING DESCRIPTION AND PLACEMENT			
Fig.	Code	Description	Qty.
3.1	GASK	Drive Rod, Constant Handle Height	1
	GASM	Drive Rod, Central Handle Height	
4.1	E1	Corner Drive, Top/Bottom Drive Rod Side	2
4.1*	E3.L	Corner, Reduced Sash Size	
5.7a	FSV	Topstar Sash Support	1
5.7b	FV	Sash Hinge	1
5.7c	EV	Bottom Frame Hinge	1
6.2.1	DBV	Turn Limiter	1
8.1	DSV	Turn Hinge Rail	1
8.2	DV	Turn Hinge	1
9.2	M	Interlocking Rod, Terminal	varies
9.3	ZV	Pull-In Device	varies
10.6	RT.DFE.S	Frame Part (DFE)	1
11.1	SBA	Standard Octagonal Bolt Keep	varies
	SBS	Security Octagonal Bolt Keep	
11.4	SZV	Frame Part (Pull-In Device)	varies



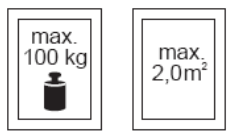
**Turn tilt fitting, basic fitting,
Constant handle position
Backset= 15.5mm, Air Gap= 12mm**



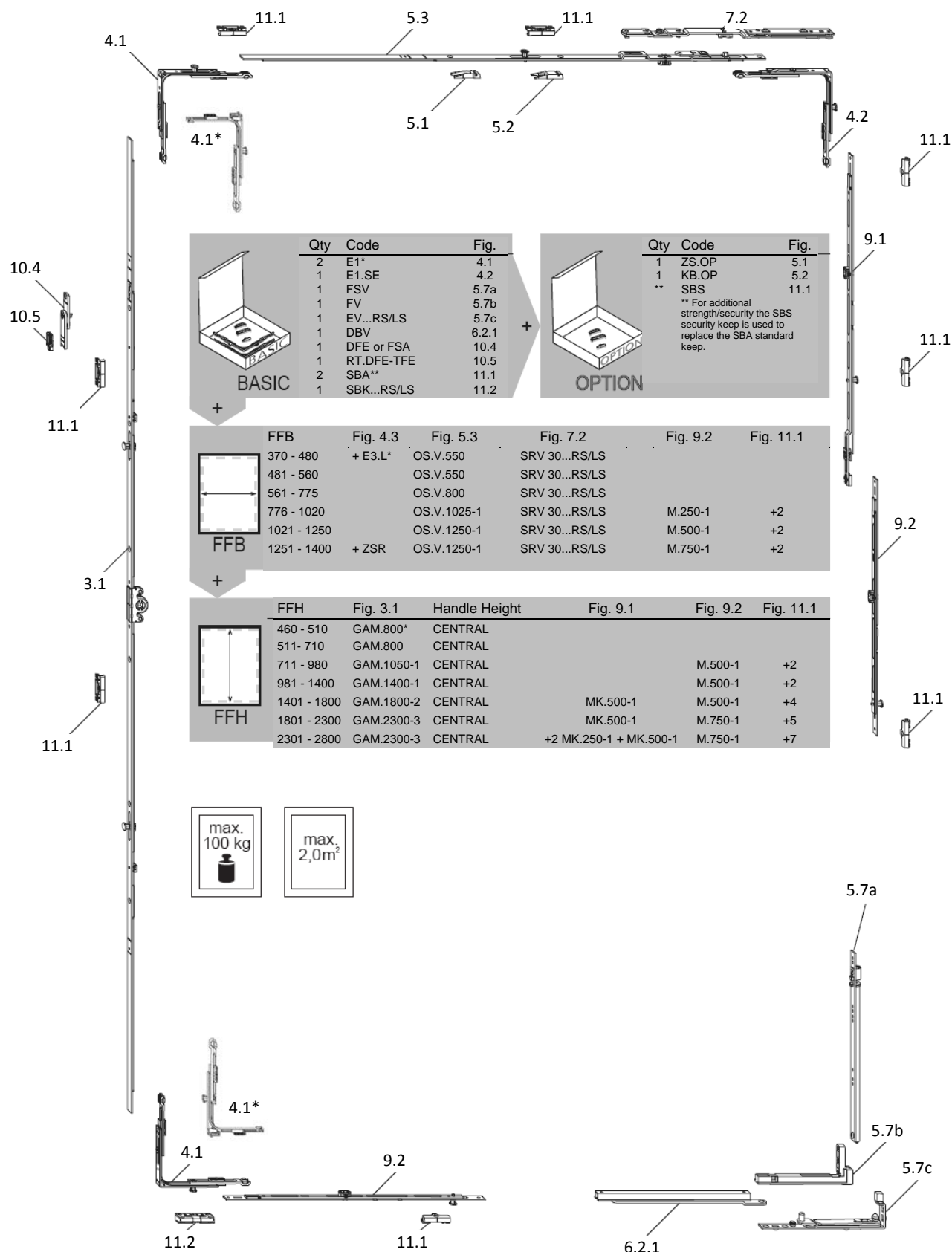
	Qty	Code	Fig.		Qty	Code	Fig.	
BASIC	2	E1*	4.1	OPTION	1	ZS.OP	5.1	
	1	E1.SE	4.2		1	KB.OP	5.2	
	1	FSV	5.7a		**	SBS	11.1	
	1	FV	5.7b		** For additional strength/security the SBS security keep is used to replace the SBA standard keep.			
	1	EV...RS/LS	5.7c					
	1	DBV	6.2.1					
	1	DFE or FSA	10.4					
	1	RT.DFE-TFE	10.5					
	2	SBA**	11.1					
	1	SBK...RS/LS	11.2					

FFB	Fig. 4.3	Fig. 5.3	Fig. 7.2	Fig. 9.2	Fig. 11.1
370 - 480	+ E3.L*	OS.V.550	SRV 30...RS/LS		
481 - 560		OS.V.550	SRV 30...RS/LS		
561 - 775		OS.V.800	SRV 30...RS/LS		
776 - 1020		OS.V.1025-1	SRV 30...RS/LS	M.250-1	+2
1021 - 1250		OS.V.1250-1	SRV 30...RS/LS	M.500-1	+2
1251 - 1400	+ ZSR	OS.V.1250-1	SRV 30...RS/LS	M.750-1	+2

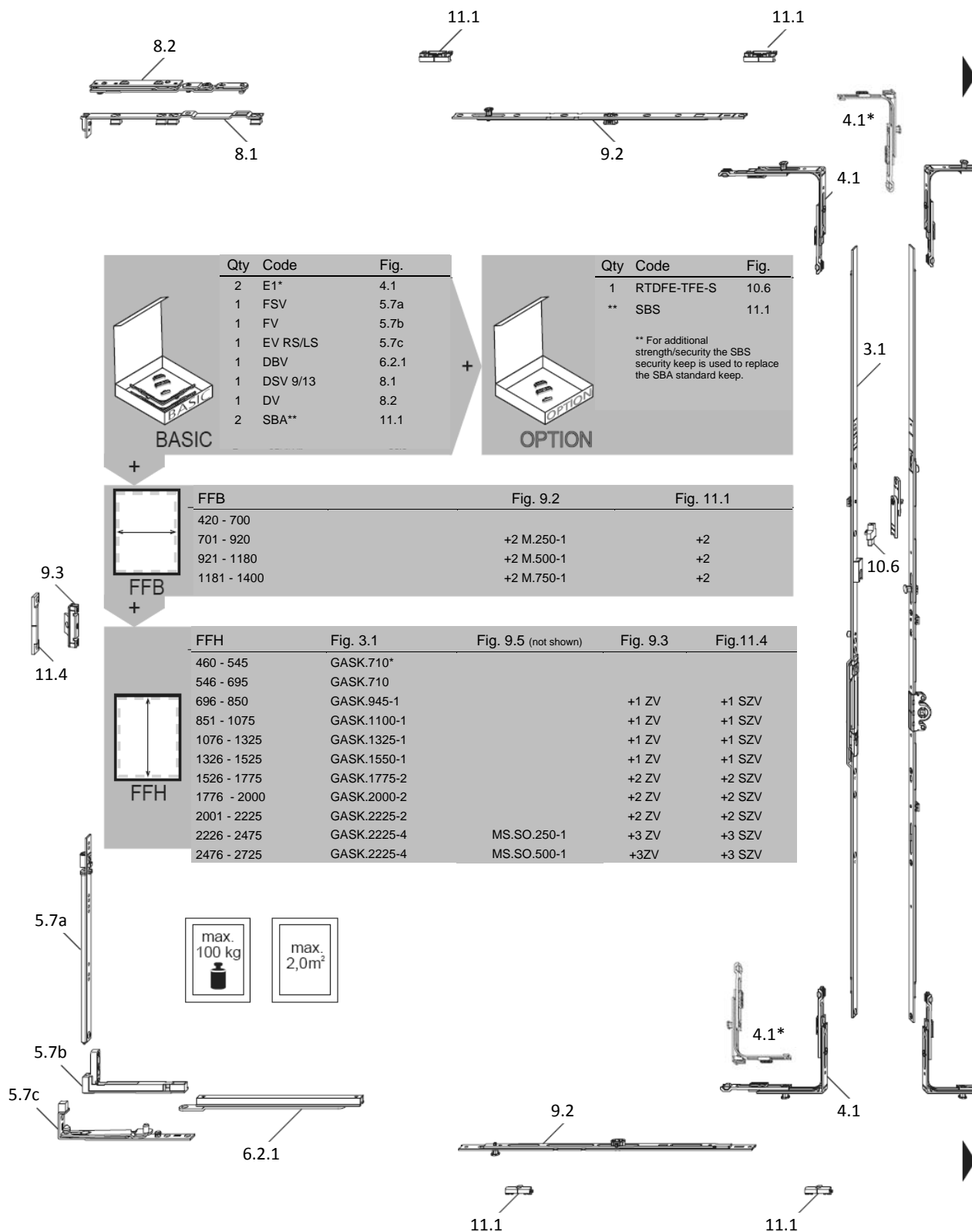
FFH	Fig. 3.1	Handle Height (GK)	Fig. 9.1	Fig. 9.2	Fig. 11.1
460 - 695	GAK.710	GK = 210			
696 - 850	GAK.945-1	GK = 260		M.250-1	+2
851 - 1075	GAK.1100-1	GK = 375		M.500-1	+2
1076 - 1325	GAK.1325-1	GK = 550		M.500-1	+2
1326 - 1525	GAK.1550-1	GK = 550		M.750-1	+2
1526 - 1775	GAK.1775-2	GK = 550	MK.500-1	M.500-1	+4
1776 - 2000	GAK.2000-2	GK = 1050	MK.750-1	M.500-1	+4
2001 - 2225	GAK.2225-2	GK = 1050	MK.750-1	M.750-1	+4
2226 - 2475	GAK.2225-4	GK = 1050	MK.250-1 + MK.750-1	M.750-1	+7
2476 - 2725	GAK.2225-4	GK = 1050	MK.500-1 + MK.750-1	M.750-1	+7



**Turn tilt fitting, basic fitting,
Central handle position
Backset= 15.5mm, Air Gap= 12mm**



**French fitting, basic fitting,
Constant handle position, turn type
Air Gap= 12mm**

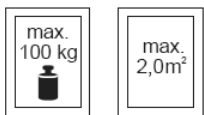


	Qty	Code	Fig.
<p>BASIC</p>	2	E1*	4.1
	1	FSV	5.7a
	1	FV	5.7b
	1	EV RS/LS	5.7c
	1	DBV	6.2.1
	1	DSV 9/13	8.1
	1	DV	8.2
	2	SBA**	11.1

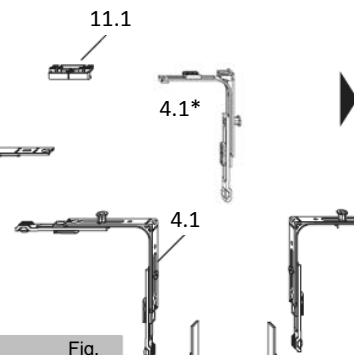
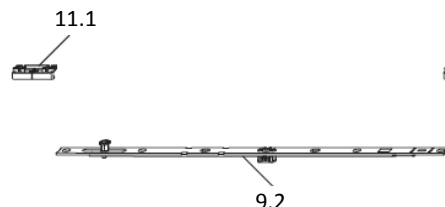
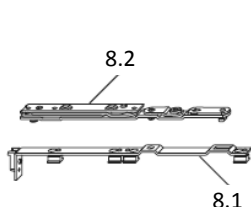
	Qty	Code	Fig.
<p>OPTION</p>	1	RTDFE-TFE-S	10.6
	**	SBS	11.1
	** For additional strength/security the SBS security keep is used to replace the SBA standard keep.		

FFB	Fig. 9.2	Fig. 11.1
420 - 700		
701 - 920	+2 M.250-1	+2
921 - 1180	+2 M.500-1	+2
1181 - 1400	+2 M.750-1	+2

FFH	Fig. 3.1	Fig. 9.5 (not shown)	Fig. 9.3	Fig.11.4
460 - 545	GASK.710*			
546 - 695	GASK.710			
696 - 850	GASK.945-1		+1 ZV	+1 SZV
851 - 1075	GASK.1100-1		+1 ZV	+1 SZV
1076 - 1325	GASK.1325-1		+1 ZV	+1 SZV
1326 - 1525	GASK.1550-1		+1 ZV	+1 SZV
1526 - 1775	GASK.1775-2		+2 ZV	+2 SZV
1776 - 2000	GASK.2000-2		+2 ZV	+2 SZV
2001 - 2225	GASK.2225-2		+2 ZV	+2 SZV
2226 - 2475	GASK.2225-4	MS.SO.250-1	+3 ZV	+3 SZV
2476 - 2725	GASK.2225-4	MS.SO.500-1	+3ZV	+3 SZV



**French fitting, basic fitting,
Central handle position, turn type
Air Gap= 12mm**



Qty	Code	Fig.
2	E1*	4.1
1	FSV	5.7a
1	FV	5.7b
1	EV RS/LS	5.7c
1	DBV	6.2.1
1	DSV 9/13	8.1
1	DV	8.2
2	SBA**	11.1

BASIC

Qty	Code	Fig.
1	RTDFE-TFE-S	10.6
**	SBS	11.1

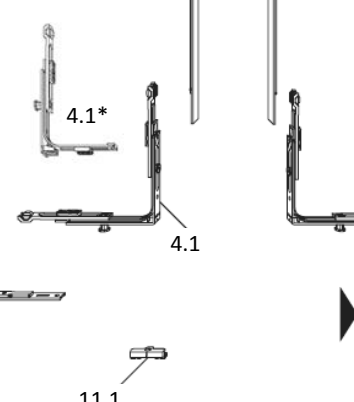
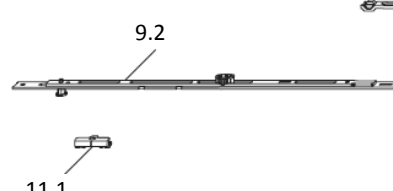
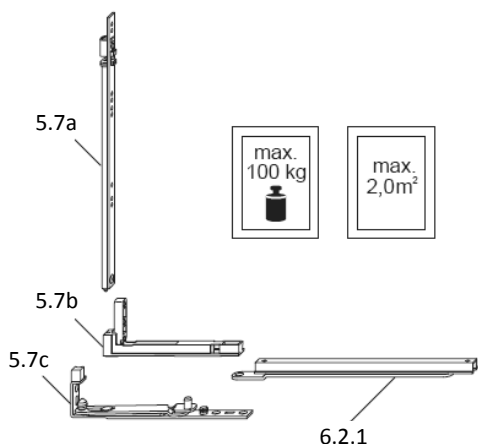
OPTION

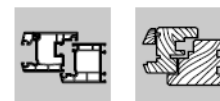
** For additional strength/security the SBS security keep is used to replace the SBA standard keep.



FFB	Fig. 9.2	Fig.11.1
420 - 700		
701 - 920	+2 M.250-1	+2
921 - 1180	+2 M.500-1	+2
111 - 1400	+2 M.750-1	+2

FFH	Fig. 3.1	Fig. 9.5 (not shown)	Fig. 9.3	Fig.11.4
460 - 560	GASM.800*			
561 - 710	GASM.800*			
711 - 980	GASM.1050-1.E3			
981 - 1400	GASM.1400-1		+1 ZV	+1 SZV
1401 - 1800	GASM.1800-2		+2 ZV	+2 SZV
1801 - 2300	GASM.2300-3		+2 ZV	+2 SZV
2301 - 2800	GASM.2300-3	MS.SO.250-1 + MS.SU.250-1	+3 ZV	+3SZV





Drive rod GAK


- Fixed handle height
- Handle height with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- Useable left and right hand
- 16mm faceplate
- 15.5mm backset
- Locks into fitting groove
- Safety locking pin as a manually adjustable octagonal bolt
- Functional parts such as DFE and TFE retrofittable
- Drive stroke approx. 37mm with handle rotation of 180°
- Gear case for handle attachment using M5 screws on 43mm centers
- Overlapping system linkage without faceplates

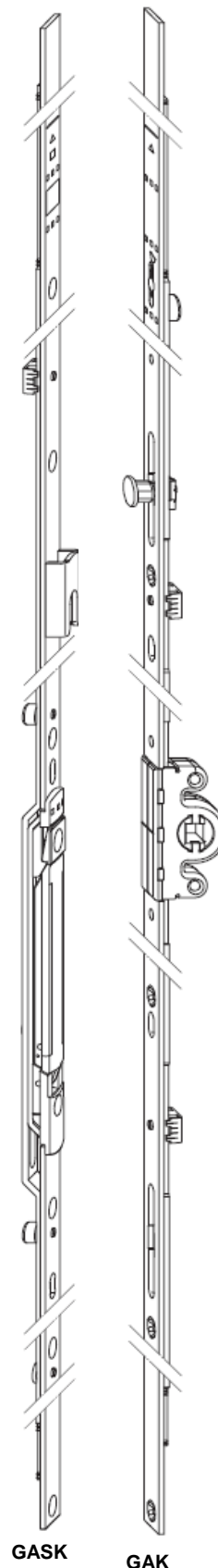
Part #	Description	Sash Height (FFH)	Handle Height (GK)	Cam		DFE FSA	Application	Box
4926207	GAK.710 drive rod	460 - 695	210	0	3	FSA	Wood/PVC	20
4926209	GAK.945-1 drive rod	696 - 850	260	1	5	DFE	Wood/PVC	20
4926234	GAK.1100-1 drive rod	851 - 1075	375	1	5	DFE	Wood/PVC	20
4926240	GAK.1325-1 drive rod	1076 - 1325	550	1	6	DFE	Wood/PVC	20
4926224	GAK.1550-1 drive rod	1326 - 1525	550	1	7	DFE	Wood/PVC	10
4926228	GAK.1775-2 drive rod	1526 - 1775	550	2	9	DFE	Wood/PVC	10
4938089	GAK.2000-2 drive rod	1776 - 2000	1050	2	10	DFE	Wood/PVC	10
4938122	GAK.2225-2 drive rod	2001 - 2225	1050	2	11	DFE	Wood/PVC	10
4938123	GAK.2225-4 drive rod	2001 - 2225	1050	4	11	DFE	Wood/PVC	10



Double-leaf mechanism GASK

- For fixed handle height, use with GAK drive rod
- Useable left and right hand
- 16mm faceplate
- Locks into fitting groove
- 1 piece
- Single locking stroke
- Adapter for functional elements DFE and TFE for mounting in safety keeps - as of GASK.945-1
- Safety keeps are preassembled
- Hidden control lever, easily accessible
- Overlapping system linkage without faceplates


Part #	Description	Sash Height (FFH)	Keep		DFE FSA	Application	Box
4927021	GASK.710 drive rod	460 - 695	0	3	FSA	Wood/PVC	20
4933702	GASK.945-1 drive rod	696 - 850	1	4	DFE	Wood/PVC	20
4933703	GASK.1100-1 drive rod	851 - 1075	1	6	DFE	Wood/PVC	20
4933705	GASK.1325-1 drive rod	1076 - 1325	1	7	DFE	Wood/PVC	20
4933707	GASK.1550-1 drive rod	1326 - 1525	1	8	DFE	Wood/PVC	10
4933709	GASK.1775-2 drive rod	1526 - 1775	2	9	DFE	Wood/PVC	10
4933721	GASK.2000-2 drive rod	1776 - 2000	2	10	DFE	Wood/PVC	10
4933723	GASK.2225-2 drive rod	2001 - 2225	2	11	DFE	Wood/PVC	10
4933724	GASK.2225-4 drive rod	2001 - 2225	4	11	DFE	Wood/PVC	10

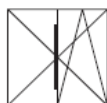




Drive rod GAM


- Central handle height
- Handle height with reference to the sash rebate edge, in conformity with "dimension GK" (see table)
- Useable left and right hand
- 16mm faceplate
- 15.5mm backset
- Locks into fitting groove
- Safety locking pin as a manually adjustable octagonal bolt
- Functional parts such as DFE and TFE retrofittable
- Drive stroke approx. 37mm with handle rotation of 180°
- Gear case for handle attachment using M5 screws on 43mm centers
- Overlapping system linkage without faceplates

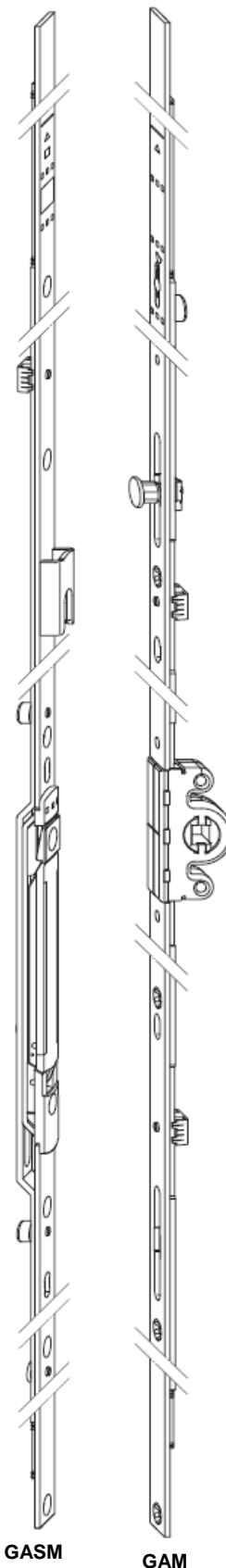
Part #	Description	Sash Height (FFH)	Handle Height (G)	Cam		DFE FSA	Application	Box
4926267	GAM.800 drive rod	460 - 710	Center	0	4	FSA	Wood/PVC	20
4926269	GAM.1050-1 drive rod	711 - 980	Center	1	4	DFE	Wood/PVC	20
4926291	GAM.1400-1 drive rod	981 - 1400	Center	1	6	DFE	Wood/PVC	20
4926295	GAM.1800-2 drive rod	1401 - 1800	Center	2	8	DFE	Wood/PVC	20
4938163	GAM.2300-3 drive rod	1801 - 2300	Center	3	10	DFE	Wood/PVC	10



Double-leaf mechanism GASM

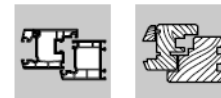
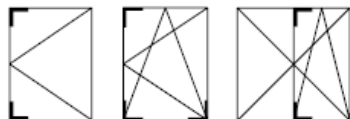
- Central handle height for use with GAM drive rod
- Useable left and right hand
- 16mm faceplate
- Locks into fitting groove
- 1 piece
- Single locking stroke
- Adapter for functional elements DFE and TFE for mounting in safety keeps
- Safety keeps are preassembled
- Hidden control lever, easily accessible
- Overlapping system linkage without faceplates

Part #	Code	Sash Height (FFH)	Keep		DFE FSA	Application	Box
4927021	GASM.800 drive rod	460 - 710	0	4	FSA	Wood/PVC	20
4933702	GASM.1050-1.E3 drive rod	711 - 980	1	6	DFE	Wood/PVC	20
4933703	GASM.1400-1 drive rod	981 - 1400	1	7	DFE	Wood/PVC	20
4933705	GASM.1800-2 drive rod	1401 - 1300	2	8	DFE	Wood/PVC	20
4933707	GASM.2300-3 drive rod	1801 - 2300	3	10	DFE	Wood/PVC	10




GASM

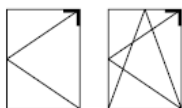
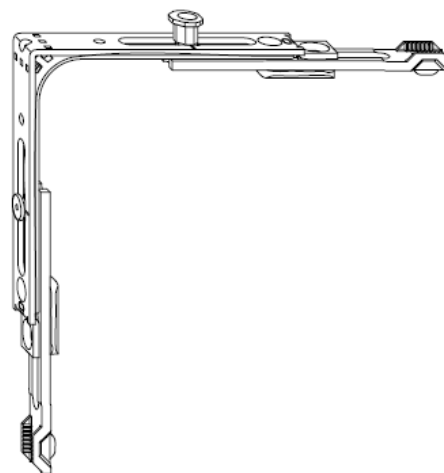
GAM



Corner drive E1 / E1.SE


- Useable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- 16mm faceplate
- Smooth operation, due to rust-free spring steel drive mechanism inserted in C-rail
- Fitting is standard for series
- Turn position is factory default
- Overlapping system linkage without faceplates

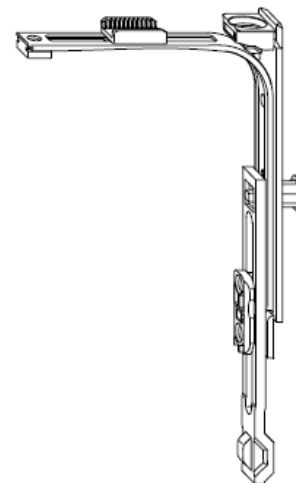
Part #	Description	Cam		Application	Box
2841823	Corner drive E1	1	4	Wood/PVC	100
4932051	Corner drive E1.SE	1	4	Wood/PVC	100

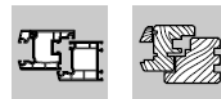
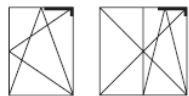


Corner drive E3.L

- Useable left and right hand
- Used at top of drive rod when sash width (FFB) = 370-480mm
- Safety locking pin as a manually adjustable octagonal bolt
- 16mm faceplate
- Smooth operation, due to rust-free spring steel drive mechanism inserted in C-rail
- Fitting is standard for series
- 16mm faceplate
- Turn position is factory default
- Overlapping system linkage without faceplates

Part #	Description	Cam		Application	Box
4927430	Corner drive E3.L	1	4	Wood/PVC	100





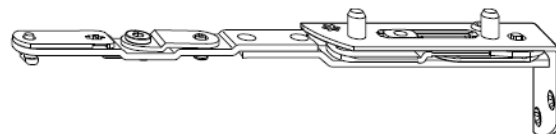
Top rod OS.V / OS.VE



- For tilt turn window with concealed top and bottom hinges
- Usable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- Integrated anti slam block in tilt position standard for series
- Central fitting standard for series
- 16mm faceplate
- Tilting opening width approx. 130mm
- After mounting, the top rod and the shear are firmly attached to one another
- Connect only with shear SRV/SRVE

Part #	Description	Sash Width (FFB)	Cam	⌄	Application	Box
4934219	OS.V.550 top rod, turn before tilt	370 - 560	0	3	Wood/PVC	20
4934221	OS.V.800 top rod, turn before tilt	561 - 775	0	4	Wood/PVC	20
4934222	OS.V.1025-1 top rod, turn before tilt	776- 1020	1	5	Wood/PVC	20
2921523	OS.V.1250-1 top rod, turn before tilt	1021 - 1250	1	6	Wood/PVC	20
4934225	OS.VE.550 top rod, tilt before turn	370 - 560	0	3	Wood/PVC	20
4934226	OS.VE.800 top rod, tilt before turn	561 - 775	0	4	Wood/PVC	20
4934228	OS.VE.1025-1 top rod, tilt before turn	776- 1020	1	5	Wood/PVC	20
4934230	OS.VE.1250-1 top rod, tilt before turn	1021 - 1250	1	6	Wood/PVC	20

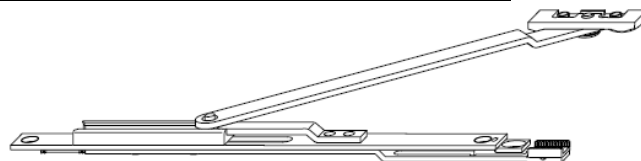
Shear SRV / SRVE



- Only one shear size
- Maximum sash opening angle to 90°
- Tilting opening width approx. 130mm
- Maximum sash weight = 100kg (220lb)
- Lifting / lowering sash adjustment +/- 2.0mm
- Connection with OS.V top rod
- Available 9mm or 13mm groove position (axis)

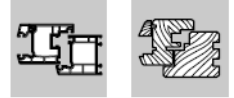
Part #	Description	Groove Position (axis)	Handing	⌄	Application	Box
1936265	Shear SRV 30-9-Z LS SL, turn before tilt	9mm	Left	4	Wood	10
1936521	Shear SRV 30-9-Z RS SL, turn before tilt	9mm	Right	4	Wood	10
2070432	Shear SRV 30-13-Z LS SL, turn before tilt	13mm	Left	4	Wood	10
2070416	Shear SRV 30-13-Z RS SL, turn before tilt	13mm	Right	4	Wood	10
1791617	Shear SRVE 30-9-Z LS SL, tilt before turn	9mm	Left	4	Wood	10
1791351	Shear SRVE 30-9-Z RS SL, tilt before turn	9mm	Right	4	Wood	10
Special	Shear SRVE 30-13-Z LS SL, tilt before turn	13mm	Left	4	Wood	10
Special	Shear SRVE 30-13-Z RS SL, tilt before turn	13mm	Right	4	Wood	10
Special	Profile specific, supply profile drawing			-	PVC	-
4970159	Drilling Jig (shear & turn hinge)	9mm	None	-	Wood	-
4970170	Drilling Jig (shear & turn hinge)	13mm	None	-	Wood	-

Additional shear ZSR / ZSRE



- Air gap 12mm
- 16mm faceplate
- Sash rebate (overlap) 18 to 22mm


Part #	Description	Sash Width (FFB)	⌄	Application	Box
1898625	Additional Shear ZSR SL, turn before tilt	1251 - 1400	4	Wood/PVC	10
2549873	Additional Shear ZSRE SL, tilt before turn	1251 - 1400	4	Wood/PVC	10



Sash hinge FV

- Side adjustment of +2.5mm / -1.5mm
- Usable left and right hand
- Maximum sash weight = 100kg (220lb)
- PVC version is profile specific, supply profile info




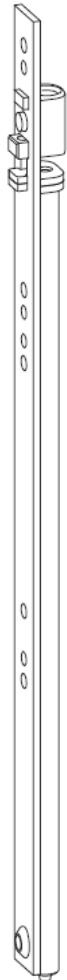
Part #	Description		Application	Box
2308068	Sash Hinge FV-1 SL	5	Wood	50
Special	Profile specific, supply profile drawing	-	PVC	-

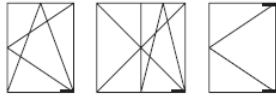
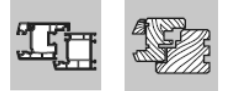


Topstar sash support hinge FSV

- Connection with bottom frame hinge EV and sash hinge FV
- Vertical adjustment of +3mm / -1mm
- Usable left and right hand
- Maximum sash weight = 100kg (220lb)
- Required for sash heights (FFH) > 460mm

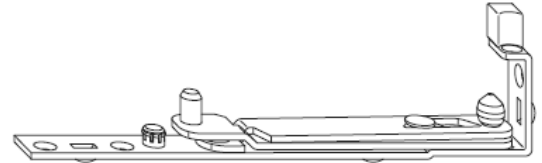
Part #	Description		Application	Box
1791001	Topstar Sash Support Hinge FSV-1 SL	5	Wood/PVC	10




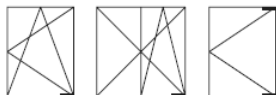


Bottom frame hinge EV

- Completely covered when sash is closed
- Maximum sash weight = 100kg (220lb)
- Available for 9mm or 13mm groove position (axis)
- For air gap 12mm
- Connects to sash hinge FV and topstar sash support hinge FSV
- PVC version is profile specific, supply profile info




Part #	Description	Groove Position (axis)	Handing		Application	Box	
1847191	Bottom Frame Hinge EV-1-Z LS SL	9mm	Left	4	Wood	50	
1846526	Bottom Frame Hinge EV-1-Z RS SL	9mm	Right	4	Wood	50	
2070361	Bottom Frame Hinge EV-13-Z LS SL	13mm	Left	4	Wood	50	
2070344	Bottom Frame Hinge EV-13-Z RS SL	13mm	Right	4	Wood	50	
Special	Profile specific, supply profile drawing				-	PVC	-
4970173	Drilling Jig (Bottom Frame Hinge)	9mm & 13mm	None	-	Wood	-	

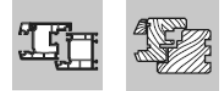
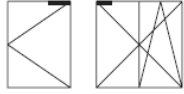


Turn limiter DBV

- Required for sash width (FFB) > 560mm
- Completely covered when sash is closed
- Limits sash opening angle to 90°
- Screw connection in sash profile
- Connection with bottom frame hinge EV




Part #	Description		Application	Box
2598456	Turn Limiter DBV SL	2	Wood/PVC	100



Turn hinge DV

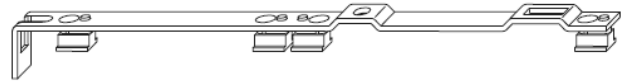
- Completely covered when sash is closed
- Available in right or left hand versions
- Maximum sash opening angle to 90°
- Maximum sash weight = 100kg (220lb)
- Available for 9mm or 13mm groove position (axis)
- Lifting / lowering sash adjustment +/- 2.0mm
- PVC version is profile specific, supply profile info




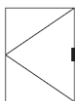
Part #	Description	Groove Position (axis)	Handing		Application	Box
2057027	Turn Hinge DV-9-Z LS SL	9mm	Left	4	Wood	50
2057001	Turn Hinge DV-9-Z RS SL	9mm	Right	4	Wood	50
2070678	Turn Hinge DV-13-Z LS SL	13mm	Left	4	Wood	50
2070651	Turn Hinge DV-13-Z RS SL	13mm	Right	4	Wood	50
Special	Profile specific, supply profile drawing			-	PVC	-
4970159	Drilling Jig (shear & turn hinge)	9mm	None	-	Wood	-
4970170	Drilling Jig (shear & turn hinge)	13mm	None	-	Wood	-

Turn hinge rail DSV

- Completely covered when sash is closed
- Available for 9mm or 13mm groove position (axis)
- Maximum sash opening angle to 90°
- Usable left and right hand

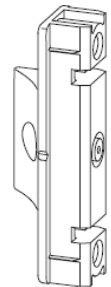



Part #	Description		Application	Box
1791123	Turn Hinge rail DSV-9/13 SL	4	Wood/PVC	10



Hinge side pull-in device ZV


- Sash part
- For turning window
- Locks into fitting groove
- Concealed in the rebate
- In combination with SZV frame part
- PVC version is profile specific, supply profile info

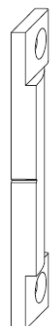


Part #	Description		Application	Box
1791131	Pull In device ZV SL	2	Wood	10
Special	Profile specific, supply profile drawing			-

Keep SZV-WSK

- Frame part
- For turning window
- Concealed in the rebate
- PVC version is profile specific, supply profile info

Part #	Description		Application	Box
1801803	Pull In Device Keep SZV SL	2	Wood	100
Special	Profile specific, supply profile drawing			-






Interlocking rod M



- Usable left and right hand
- Safety locking pin as a manually adjustable octagonal bolt
- 16mm faceplate
- Locks into fitting groove
- Centered attachment loosens automatically by tightening fitting screw
- Functional both vertically and horizontally
- Overlapping system linkage without faceplates


Part #	Description	Length	Cam		Application	Box
2822471	Interlocking Rod M.250-1	250mm	1	2	Wood/PVC	20
4933994	Interlocking Rod M.500-1	500mm	1	3	Wood/PVC	20
4940652	Interlocking Rod M.750-1	750mm	1	5	Wood/PVC	20



Interlocking rod MK




- Extendable interlock, can be combined with Winkhaus standard gearing
- Otherwise this type is identical with the interlocking rod M

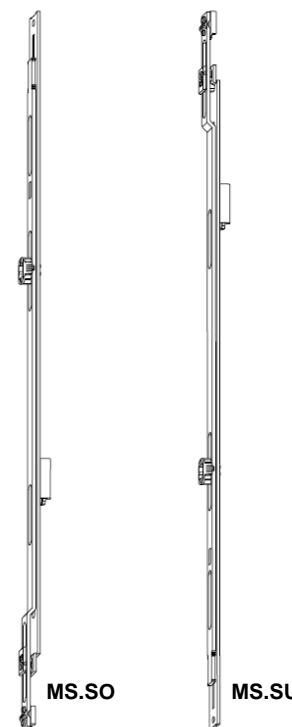
Part #	Description	Length	Cam		Application	Box
2824919	Interlocking Rod MK.250-1	250mm	1	2	Wood/PVC	20
2824986	Interlocking Rod MK.500-1	500mm	1	3	Wood/PVC	20
4940653	Interlocking Rod MK.750-1	750mm	1	5	Wood/PVC	20

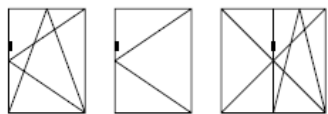


Interlocking rod MS.SU & MS.SO

- Usable left and right hand
- Safety keeps are generally preassembled
- 16mm faceplate
- Locks into fitting groove
- Centered attachment loosens automatically by tightening fitting screw
- MS.SU for fitting vertically below double-leaf mechanism
- MS.SO for fitting vertically above double-leaf mechanism
- Overlapping system linkage without faceplates


Part #	Description	Length	Keep		Application	Box
4933801	Interlocking Rod MS.SU.250-1	250mm	1	2	Wood/PVC	20
2838464	Interlocking Rod MS.SU.500-1	500mm	1	3	Wood/PVC	20
4934014	Interlocking Rod MS.SO.250-1	250mm	1	5	Wood/PVC	20
2838982	Interlocking Rod MS.SO.500-1	500mm	1	5	Wood/PVC	20





Dual function element DFE


- DFE includes the fail safe device and lifting support functions
- Centrally fixed and thus available for right and left handed use as supplied
- Mounted to faceplate of drive rod
- For use on all drive rods except GAK.710 and GAM.800
- Is activated on the sash after mounting

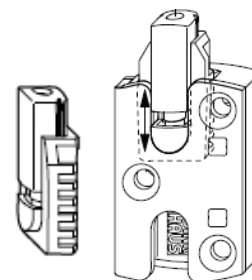
Part #	Description		Application	Box
4931451	Duofunction element (DFE)	1	Wood/PVC	50



Frame part RT.DFE-TFE


- Serves as an adaptor for dual function element in standard security keeps SBS... or in case of wood SBA... keep
- Neutral profile as the adaptor is fitted in the case of the safety keeps
- Height adjustable

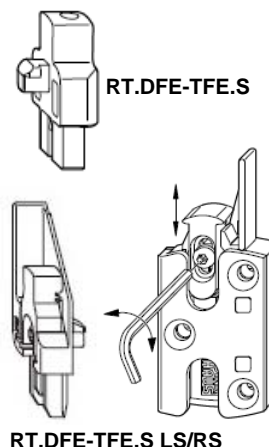
Part #	Description		Application	Box
4937821	Frame part RT.DFE-TFE	-	Wood/PVC	100



Frame part RT.DFE-TFE.S & (LS/RS)


- Serves as an adaptor for dual function element on double-leaf drive rods (GASK/GASM)
- Neutral profile as the adaptor is fitted in the case of the safety keeps
- Height adjustable

Part #	Description		Application	Box
4933544	Frame part RT.DFE-TFE.S	-	Wood	100
4933545	Frame part RT.DFE-TFE.S.RS	-	PVC	100
4933547	Frame part RT.DFE-TFE.S.LS	-	PVC	100



Fail Safe Device FSA

- Mounted to faceplate of drive rod
- Centrally fixed and thus available for right and left handed use as supplied
- Used on GAK.710 and GAM.800 drive rods
- Does not require frame part
- Is activated on the sash after mounting

Part #	Description		Application	Box
4940796	FSA.9 (Fail safe device)	-	Wood/PVC	100






Faceplate cover R

- For covering faceplate connection between components that have been shortened by a straight cut




Part #	Description		Application	Box
1934201	Faceplate Cover R SL	-	Wood/PVC	100

End cover plate ER-A

- Serves as an end profile on corner drives or extendable interlocking rods to cover the drive rod




Part #	Description		Application	Box
1793209	End Cover ER-A SL	-	Wood/PVC	100

Anti-slam device ZS.OP

- Usable left and right hand
- Prevents windows slamming shut in case of light drafts and low casements
- PVC version is profile specific, supply profile info




Part #	Description		Application	Box
2763095	Anti-slam device ZS.OP WS	2	Wood	100
Special	Profile specific, supply profile drawing	-	PVC	-

Tilt limiter KB.OP

- Usable left and right hand
- Reduces tilt opening width by approx. 50 mm
- Recommended for use with sash heights below 600 mm




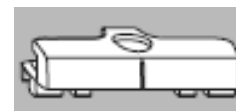
Part #	Description		Application	Box
2763095	Anti-slam device ZS.OP WS	2	Wood	100
Special	Profile specific, supply profile drawing	-	PVC	-



SBA. keep

- Standard octagonal bolt keep
- In case of wood SBA... keep is also used as "security keep" for fixing of frame part RT.DFE-TFE
- PVC version is profile specific, supply profile info

Part #	Description	Frame Rebate	Handing		Application	Box
4928276	Keep SBA.H.9-18	18mm	Left/Right	1	Wood	800
4928319	Keep SBA.H.9-20	24mm	Left/Right	1	Wood	800
Special	Profile specific, supply profile drawing			-	PVC	-




PVC



Wood

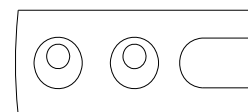
SBS. keep

- Standard security keep-additional fixing holes, octagonal bolt keep
- In case of PVC it is used for fixing of frame part RT.DFE-TFE
- In case of wood it used as additional security at any octagonal bolt lock point
- PVC version is profile specific, supply profile info

Part #	Description	Frame Rebate	Handing		Application	Box
4928310	Keep SBS.H.9-18 LS	18mm	Left	2	Wood	400
4928278	Keep SBS.H.9-18 RS	18mm	Right	2	Wood	400
4928321	Keep SBS.H.9-20 LS	24mm	Left	2	Wood	400
4928320	Keep SBS.H.9-20 RS	24mm	Right	2	Wood	400
Special	Profile specific, supply profile drawing			3	PVC	-




PVC

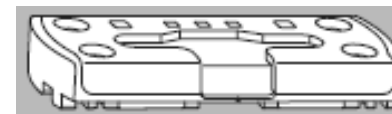


Wood

SBK. keep

- Tilt keep
- Positioned at lower corner drive octagonal bolt
- PVC version is profile specific, supply profile info

Part #	Description	Frame Rebate	Handing		Application	Box
4928313	Keep SBK.H.9-18 LS	18mm	Left	2	Wood	200
4928311	Keep SBK.H.9-18 RS	18mm	Right	2	Wood	200
4928324	Keep SBK.H.9-20 LS	24mm	Left	2	Wood	200
4928323	Keep SBK.H.9-20 RS	24mm	Right	2	Wood	200
2323209	Keep SBK.WE.12 SL (tilt before turn keep)	18/24mm	None	2	Wood	200
2237651	WE.12 SL Spacer for 24mm frame rebate	24mm	None		Wood	200
Special	Profile specific, supply profile drawing			-	PVC	-



PVC



Wood

Keeps for plastic profiles

Aluplast	
Profilsystem	2000/3000
SBA.K.61	2892073
SBS.K.61	2892129
SBK.K.61	2892209
SBK.K.61.V	2892170
FT WSK 61	1497653
ZV-RT 60 SL	1975336
SA 60 SL	1929209
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Profilsystem	> 4000
SBA.K.161	2824071
SBS.K.161	2861672
SBK.K.161	2861621
FT WSK 66	1530185
ZV-RT 60 SL	1975336
SA 66	2209887
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Deceuninck	
Profilsystem	Zendow
SBA.K.169	4926362
SBS.K.169	4926363
SBK.K.169	4926366
SBK.K.169.V	4926368
FT WSK 169	2356596
ZV-RT 169 RC	2398147
SA 169 SL	2359447
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Gealan	
Profilsystem	3000
SBA.K.62	4926222
SBS.K.62	4926363
SBK.K.62	4926255
FT WSK 62	1348121
ZV-RT 62 SL	2094258
SA 62 SL 6	2749461
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Profilsystem	> 6000
SBA.K.162	4926326
SBS.K.62	4926363
SBK.K.162	4926329
SBK.K.162.V	4926340
FT WSK 62	1348121
ZV-RT 162	2088350
SA 62 SL 6	2749461
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Rehau	
Profilsystem	
SBA.K.60	2824046
SBS.K.60	2861656
SBK.K.60	2861584
FT WSK 60	1345393
ZV-RT 60 SL	2312155
SA 60 SL	1929209
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Schüco	
Profilsystem	Corona 60
SBA.K.66	4926158
SBS.K.66	4926188
SBK.K.66	4926189
SBK.K.66.V	4926200
FT WSK 66	1530185
ZV-RT 60 SL	2312155
SA 66 SL	2209887
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Profilsystem	Corona 70 SI 82
SBA.K.166	4926043
SBS.K.166	4926057
SBK.K.166	4926058
SBK.K.166.V	4926059
SBK.K.166.BS	2920433
SA SL	1895895
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Kömmerling	
Profilsystem	Classic / Elegance / Avantgarde
SBA.K.144	2920652
SBS.K.144	2920661
SBK.K.144	2920687
FT WSK 144	1326221
ZV-RT 144 SL 14	2020081
SA 144 SL	2366911
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

KBE	
Profilsystem	AD
SBA.K.105	2920775
SBS.K.105	2920783
SBK.K.105	2920821
SBK.K.105.V	2920871
FT WSK 105	1323733
ZV-RT 105	1975344
SA 105 SL	2036681
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

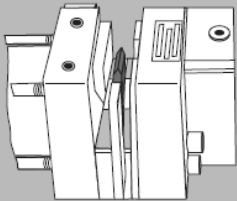
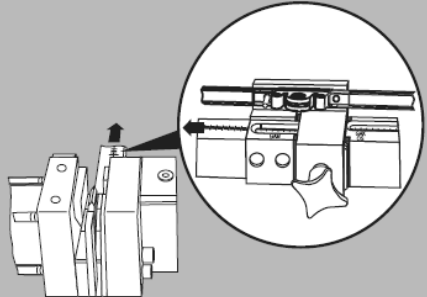



Profilsystem	AD u. MD 70
SBA.K.205	2922210
SBS.K.205	2922244
SBK.K.205	2922287
SBK.K.205.V	2922261
FT WSK 205	1809590
SA SL	1895985
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Trocal	
Profilsystem	Innova A5 / M5 / 2000
SBA.K.226	2921090
SBS.K.226	2921137
SBK.K.226	2921217
SBK.K.226.V	2921233
FT WSK 226	2304155
SA SL	1895985
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

VEKA	
Profilsystem	Topline Softline 70
SBA.K.152	2824062
SBS.K.152	2861664
SBK.K.152	2861613
FT WSK 152	1787079
ZV-RT 452/13	2074732
SA 152 SL	1787079
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Profilsystem	Softline
SBA.K.52	4926021
SBS.K.52	4926033
SBK.K.52	4926025
SBK.K.52.V	4926031
FT WSK 52	1331442
ZV-RT 452/9	2074741
SA 52 SL	2036710
RT.DFE-TFE	2864531
RT.DFE-TFE.S	2833639

Cutters and mounting jigs for windows and doors

	Description	Part #
	Punch press including footswitch	Contact customer service
	Ruler including work stand	Contact customer service
	Drilling jig for shear (timber) Drilling jig for bottom frame hinge (timber)	Shear-9/18 4970159 Shear-13/24 4970170 Bottom Frame Hinge 4970173
	Mounting jig L.E.N.K. 0710-1100 Mounting jig L.E.N.K. 1101-1150	4926541 4926542
	Mounting jig L.E.N.T. 0710-1100 Mounting jig L.E.N.T. 1101-1400 Mounting jig L.E.N.T. 1401-2300	4926545 4926546 4926547