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www.cross2dg.com



January 12, 2023

Pioneer Square Preservation Board
Department of Neighborhoods
P.O. Box 94649, Seattle, WA, 98124-4649
Attention: Genna Nashem, Coordinator
genna.nashem@seattle.gov

Re: Application for Certificate of Approval
Lofts Condominium Project Window Replacement
210 3rd Avenue South

Dear Genna,

Consistent with the Pioneer Square Preservation District's goals to encourage residential uses, Cross 2 Design Group is proposing an exterior window upgrade with historically compatible and energy efficient aluminum windows along the 3rd Avenue South façade to support the residential occupancy of The Lofts Condominium.

We have undertaken a comprehensive window survey of the existing windows and storefronts. *Attachment A, 210 Third Avenue South - West Unit Window Survey- Floors 2-5 And West Storefront Addendum - Floor 1.* The condition of the western facing windows is generally poor, with decay present in most windows and many windows no longer safely operable, which impacts the livability of the residential units. Repair and maintenance of the existing windows is not a viable option.

The storefronts at grade level have seen significant wear and replacement, because of nearly continuous human caused and environmental damage, like the upper floors they have had significant environmental exposure. Much of the woodwork appears to be relatively newer than the brick mold and horizontal mullion based on the visible contours left by the layering of paint. Based on historic photos the entry doors were all recessed and are of significantly newer construction.

The proposed solution is a high-quality aluminum window system that respects the historic character of the window openings and proportions. *Attachment B*, ARKA specifications. The proposed window system is designed to meet the National Park Service's Preservation Brief #9 guidance for window replacement and will provide improved energy efficiency. It should be noted that the selection of the replacement windows was the result of an exhaustive search to find windows that not only match the appearance of the existing windows but have the same pivot operation. This aspect is unusual and was very challenging to find.

Likewise in the case of the storefronts the proposal to integrate the existing wood brick mold while providing higher energy efficiency, human comfort and durability using aluminum storefront glazing. The aluminum framed storefront glazing will provide enhanced durability given the significant issues of damage at the street level. *Attachment C, Kawneer 451T Flyer.* The proposal is consistent with the Pioneer Square Preservation Board regulations and guidance. Installation of the high-quality windows and storefronts will support the continued historical stewardship of The Lofts Condominiums.

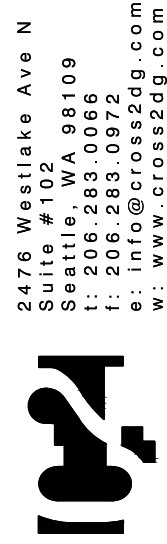
Sincerely,

Aaron Lemchen, AIA
Vice-President, Design & Projects

THE LOFTS

GLAZING REPLACEMENT

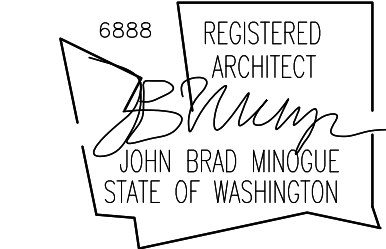
208-212 THIRD AVENUE SOUTH
SEATTLE, WA 98104



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(E) EAST AND
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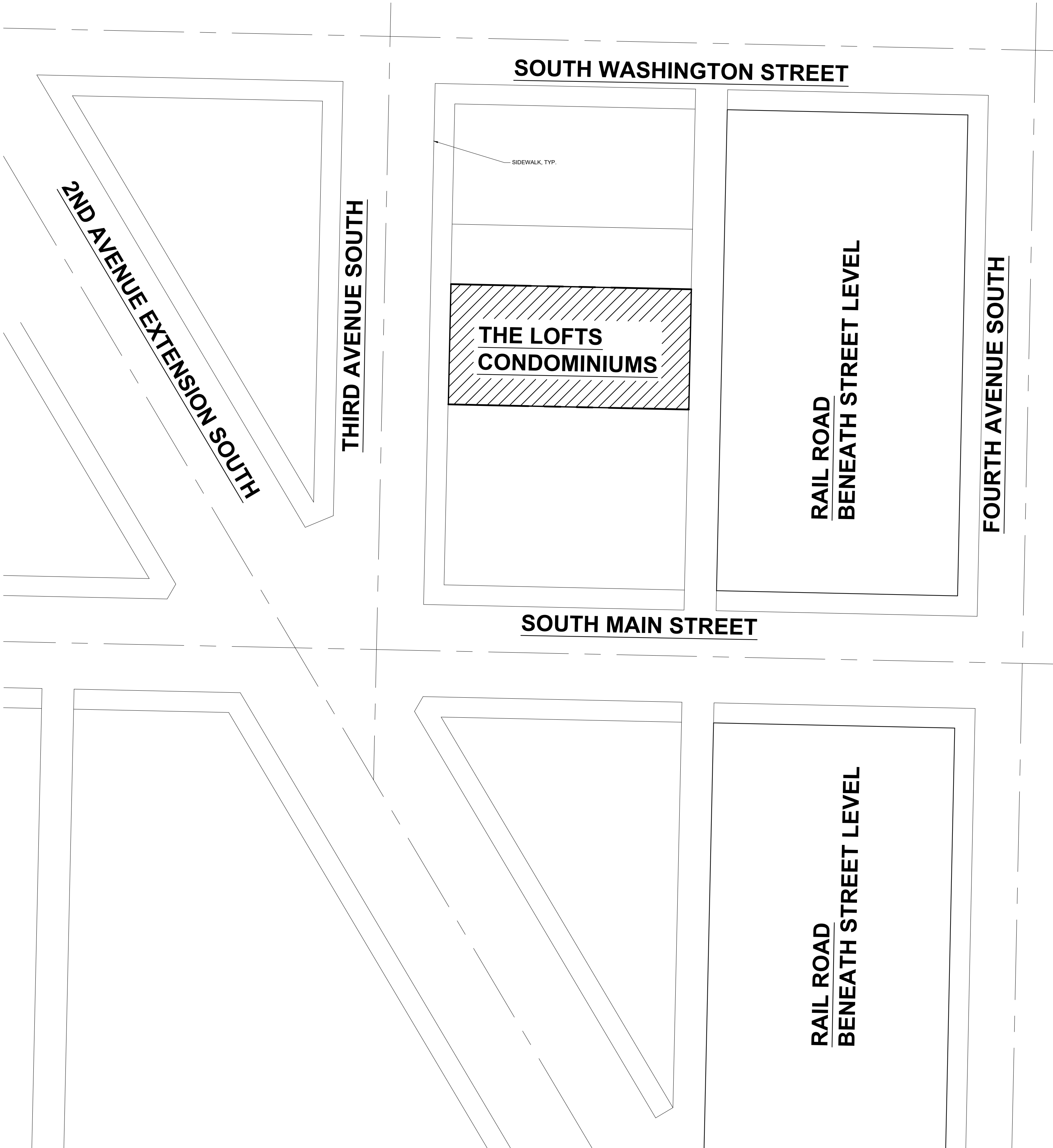
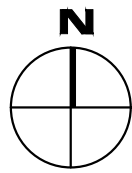
PRELIMINARY	2021-07-19
LANDMARK	2022-03-23
LANDMARK	2022-08-19
REVISION	2022-01-17
REVISION	2022-08-19

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DESIGN	AL
DRAWN	AZ
CHECK	AL

A1.1

PLOT DATE	Aug. 19, 22
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SITE PLAN


1

1/32" = 1'-0"

A3.1


THE LOFTS
GLAZING REPLACEMENT
208-212 THIRD AVENUE SOUTH
SEATTLE, WA 98104

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(E) EAST AND
WEST
EXTERIOR
ELEVATIONS

6888 REGISTERED
ARCHITECT

JOHN BRAD MINOGUE
STATE OF WASHINGTON

PRELIMINARY	2021-07-19
LANDMARK	2022-03-23
LANDMARK	2022-08-19

REVISION	1	2022-01-17
REVISION	2	2022-11-15

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DESIGN	AL
DRAWN	AZ
CHECK	AL

A3.1

PLOT DATE	Nov. 15, 22
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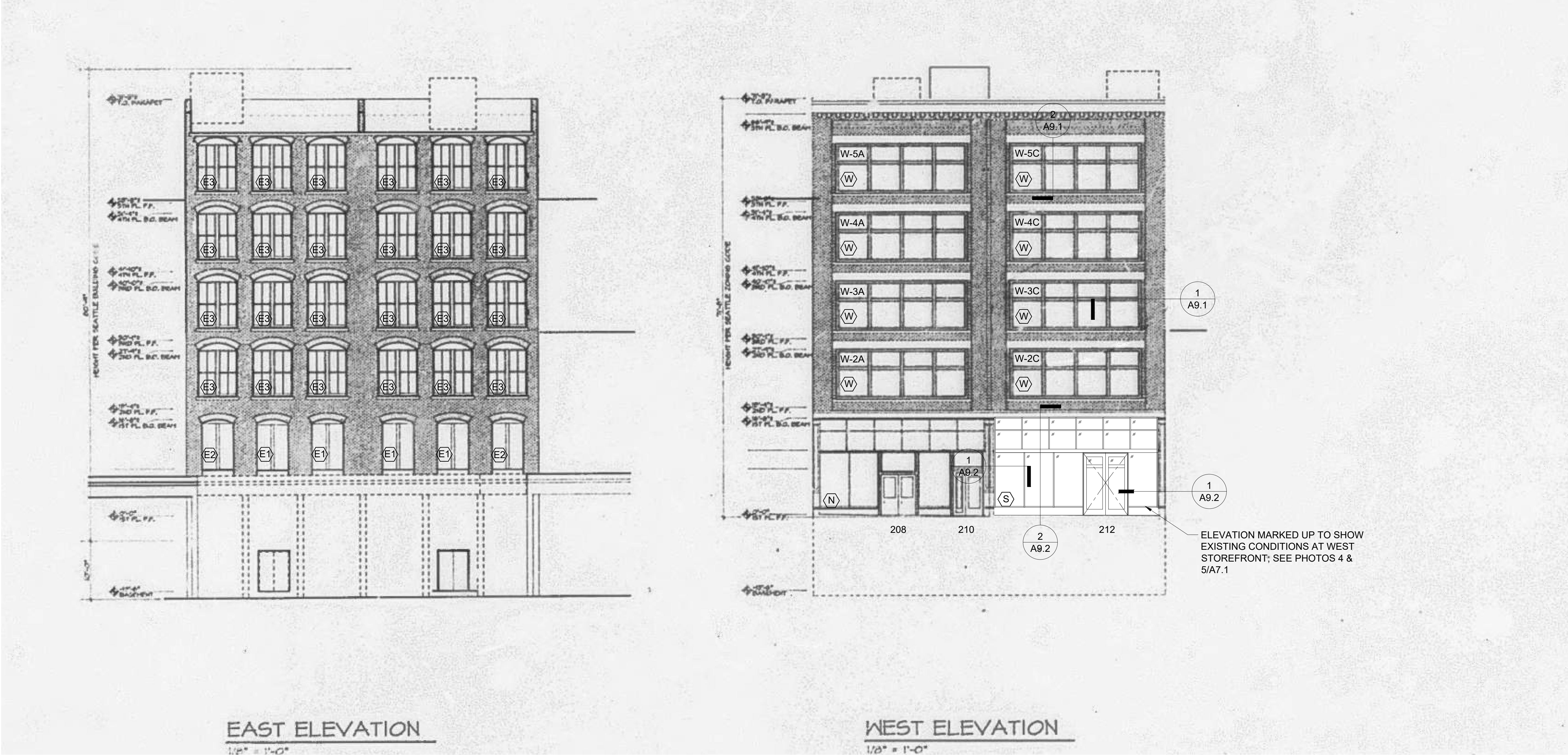


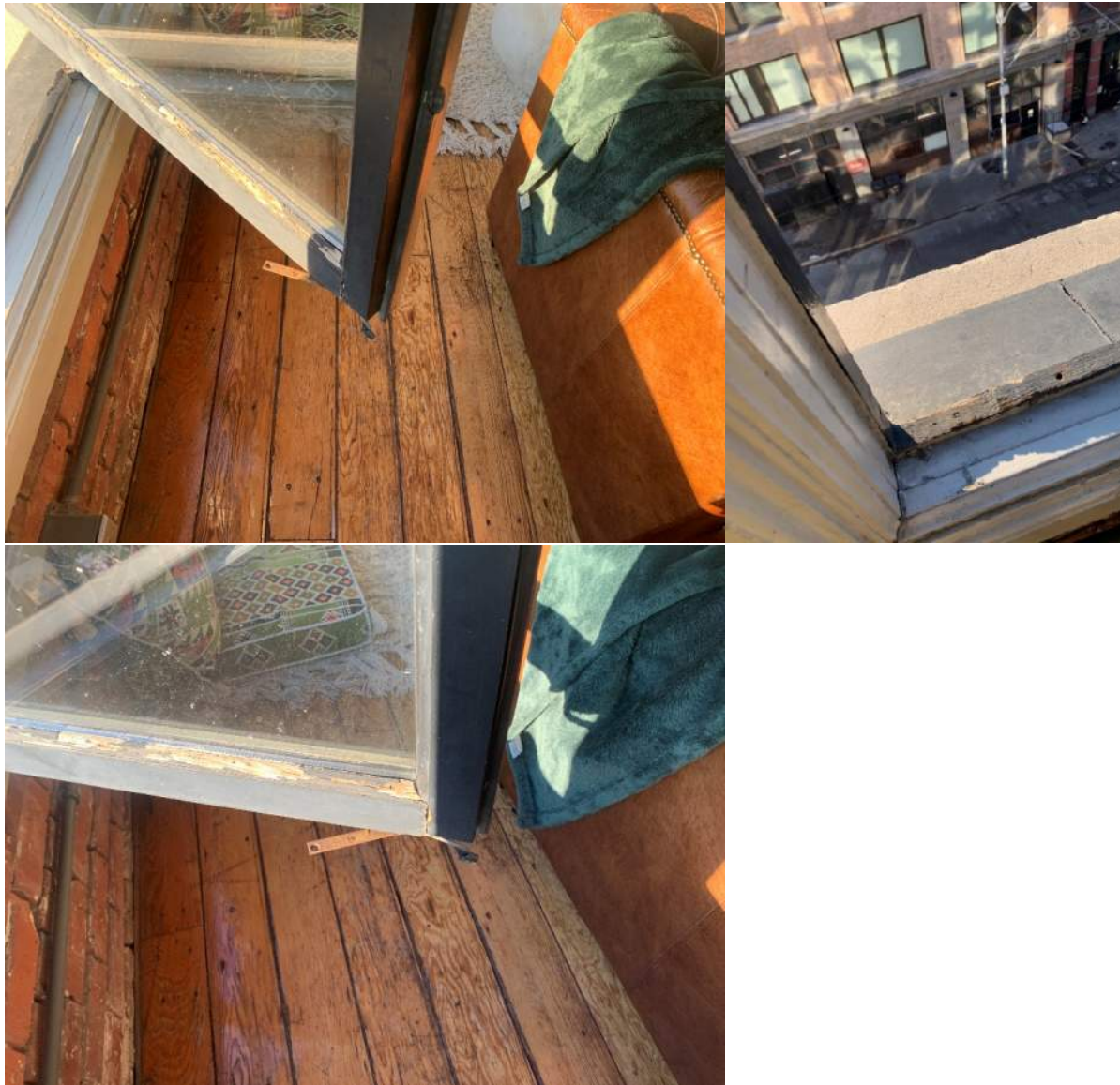


Diagram showing surveyed window locations on west elevation of 210 Third Avenue South.

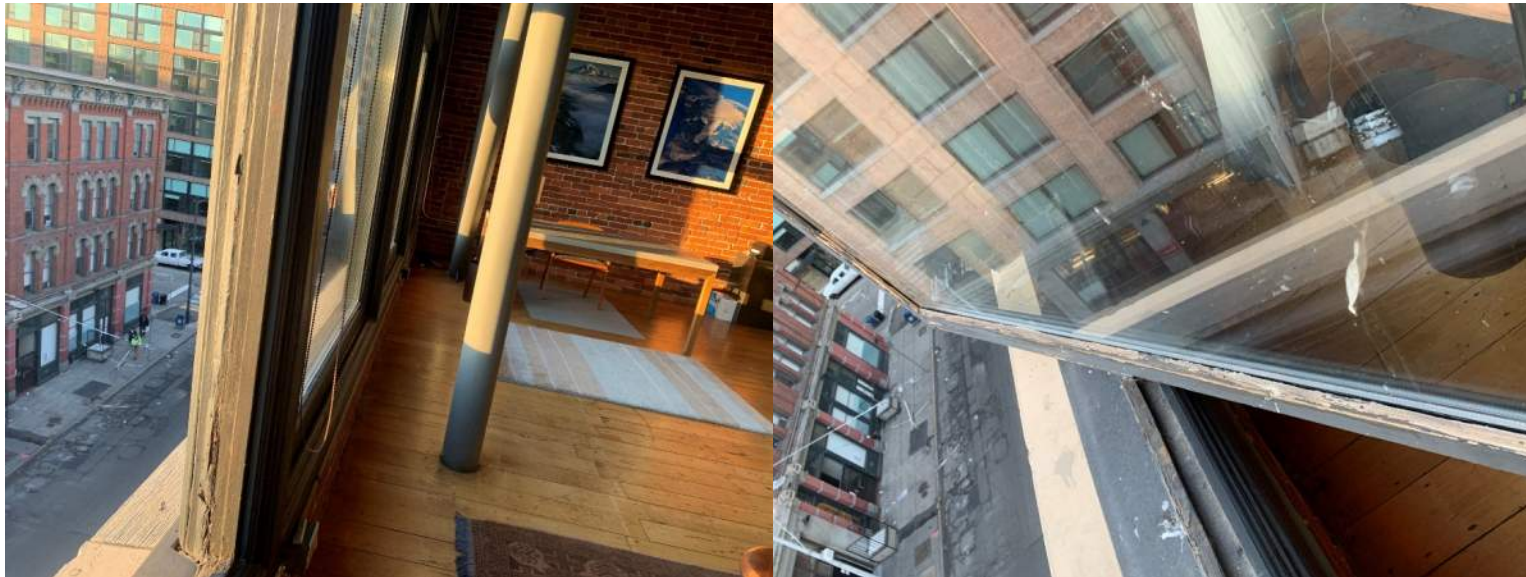
— Area of rot / damage to frame or sash
 X Window Not Safely Operable



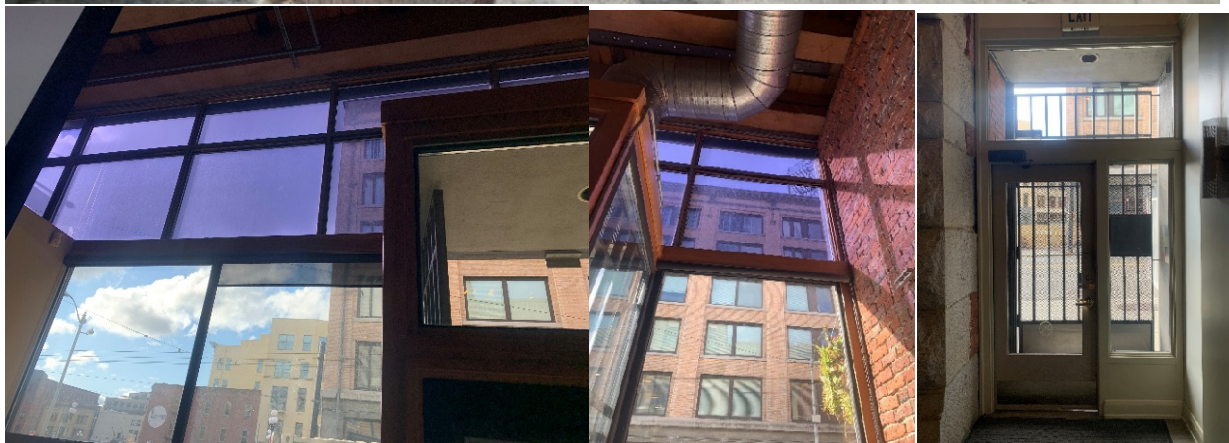
Unit 2C: Upper photos – (L) Damage at sill and sash. (R) Damage to frame, and sash. Lower photos – (L) Damage at pivot hardware, Right damage at sill and frame.



Unit 4A: (L) Upper and lower, loose joint in sash, damaged hardware, weatherchecking at sash and open joint (R) weatherchecking and damage / rot at sill.



Unit 5C: photos showing rot and damage in frame mullion(L) and in the sash and sill ®

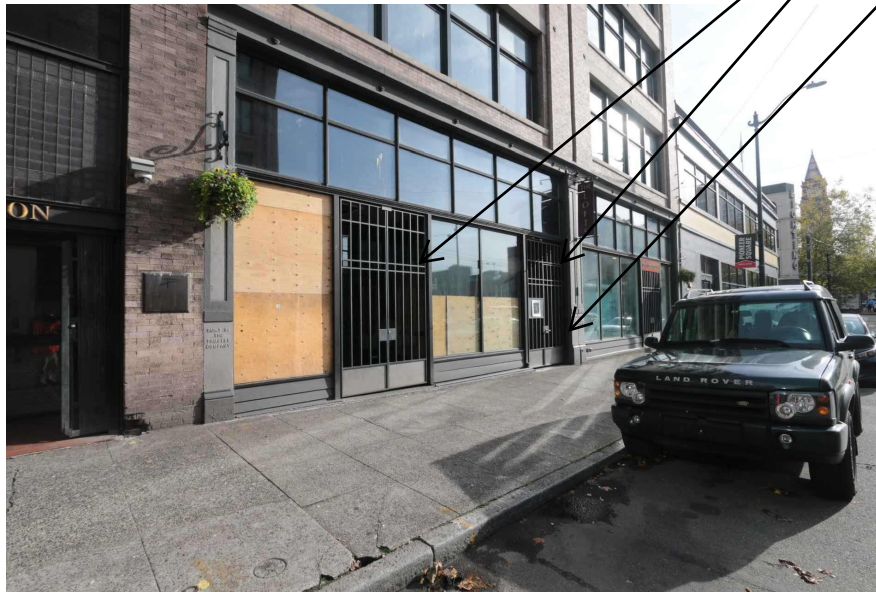




South (212) : Upper Left – staining and related damage at upper sash / muntin's. Upper Right – weathered brick at jamb and sill trim Lower Left – intersection of brick mold at jamb and horizontal mullion showing weathering .



208, 210, 212 storefront
cat. 1900



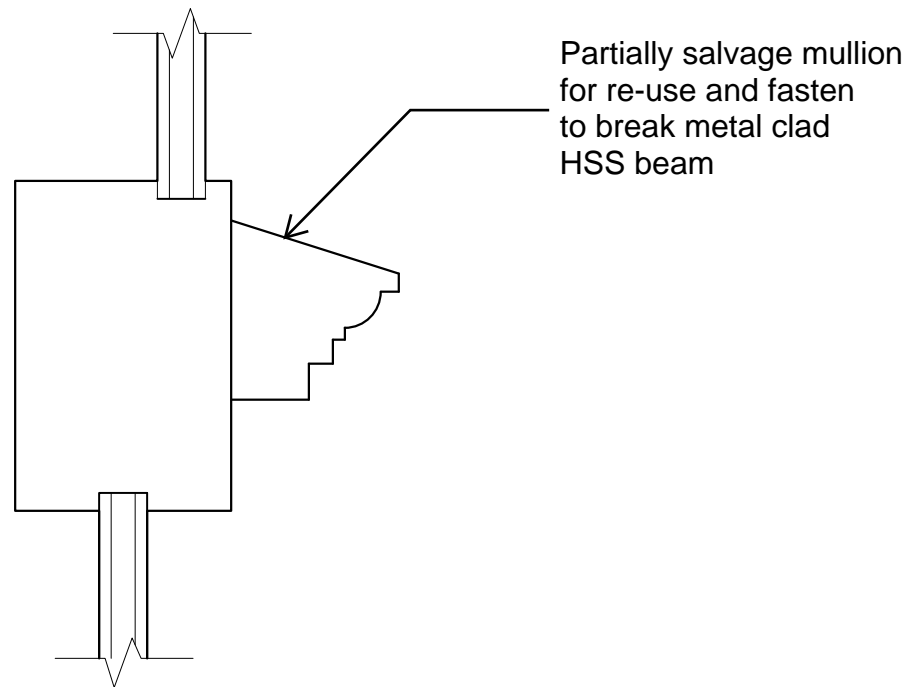
208, 210 & 212 Storefronts, 2021



208-214 Storefronts, C. 1940

relocated entries, c. 1996

all entries recessed, typ.



Proposed Storefront Horizontal Mullion

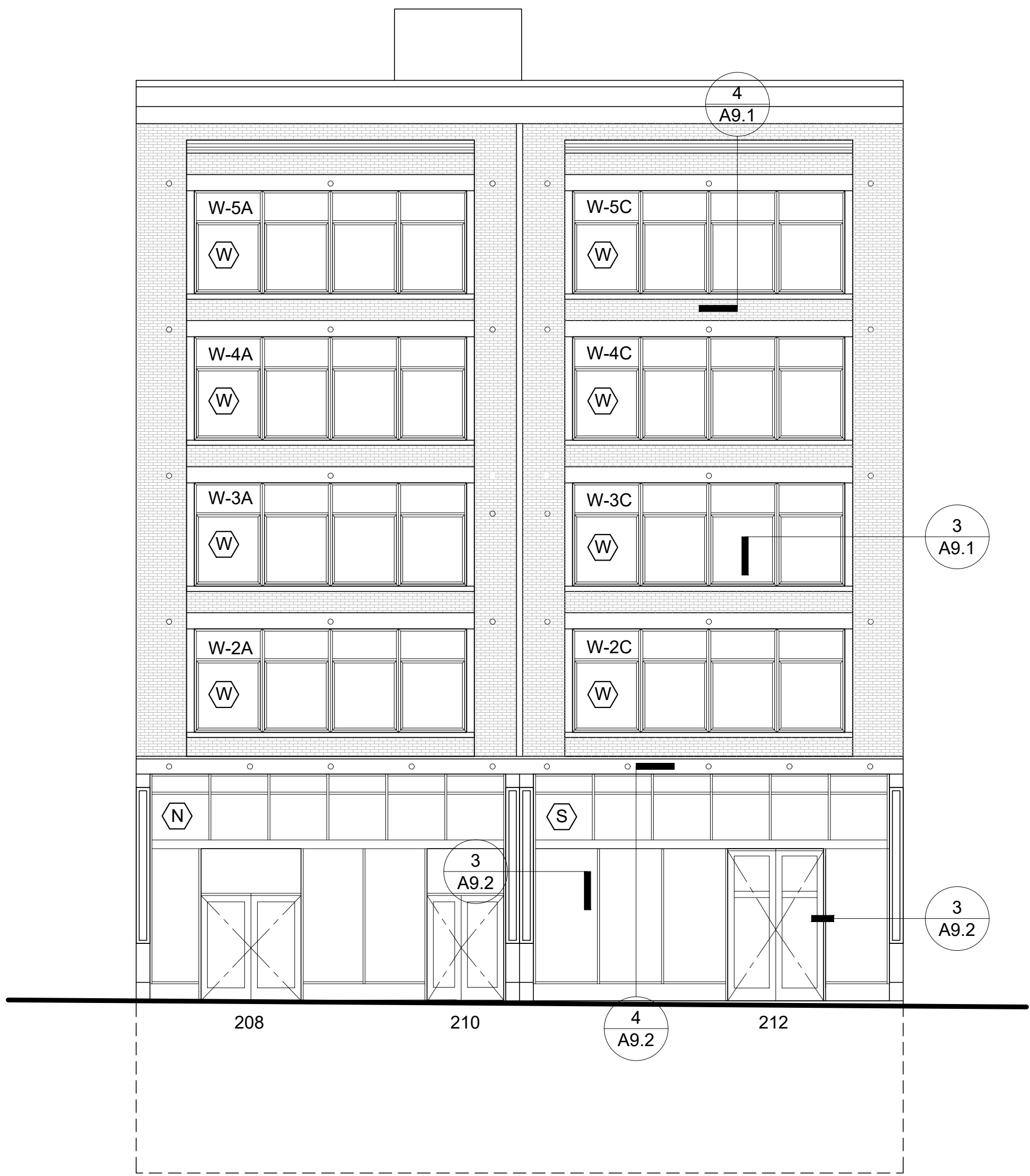


PROPOSED EAST EXTERIOR ELEVATION

2

1/8" = 1'-0"

A3.2



PROPOSED WEST EXTERIOR ELEVATION

1

1/8" = 1'-0"

A3.2


WINDOW / DOOR SCHEDULE								
NO.	SIZE		FRAME			U-FACTOR	MANUFACTURER	NOTE
	W	H	MAT	TYPE	FIN			
E1	1'-9"	5'-0"	ALUMINUM	WINDOW / FIXED	PAINT	0.30	ST. CLOUD WINDOW	1-4
E2	5'-0"	6'-8"	METAL CLAD WOOD	DOOR / OPERABLE	PAINT	0.30	ANDERSEN	1-4
E3	4'-0"	7'-1"	ALUMINUM	WINDOW / OPERABLE	PAINT	0.30	ST. CLOUD WINDOW	1-4
W	21' - 4"	8'-1"	WOOD	WINDOW / OPERABLE	PAINT	0.30	ARKA WINDOWS	1-4
N	27'-10"	16'-6"+	ALUMINUM	STOREFRONT / ENTRY	PAINT	0.34	KAWNEER	1-4
S	27'-10"	16'-6"+	ALUMINUM	STOREFRONT / ENTRY	PAINT	0.34	KAWNEER	1-4

THE LOFTS

GLAZING REPLACEMENT

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PROPOSED

EAST & WEST



EXTERIOR

ELEVATIONS

6888 REGISTERED ARCHITECT



JOHN BRAD MINOGUE
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DESIGN	AL
DRAWN	AL / AZ
CHECK	AL

A3.2



Customer Quote #: **87757-1**
Date: **09/23/2021**



ARKA Luxury Windows Doors Inc.

2915 Red Hill Avenue C107
Costa Mesa, CA 92626
(323) 522-4833
www.arkawindowsdoors.com



**TOGETHER
FOR BETTER**



Project Information

Customer: TRUE NORTH Construction Management, Inc.

Phone: 206-379-7395

Address:

Email: jordan@truenorthcm.com

ARKA Luxury Windows Doors Contact Information

Local Sales: Andrey Gab

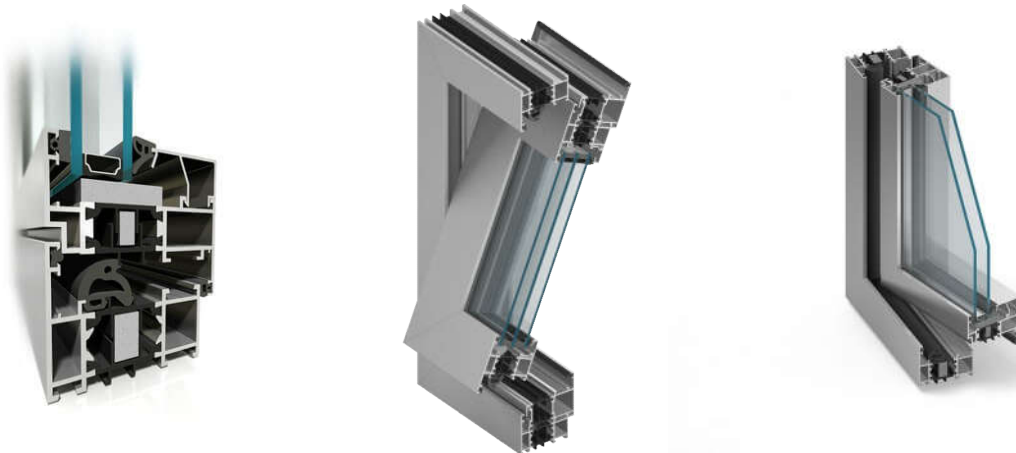
Phone: (310) 367-1209

Email: ag@arkawindowsdoors.com

Shipping Information*

Address:

Aluminum constructions in systems: ALUPROF S.A. (MB-70 HI)



The thermal insulation performance of frames of this system is considerably higher than the insulation performance of base systems. The value of heat transfer coefficient U_f for constructions of the MB-70HI system - depending on the applied profiles and accessories – ranges between 1.0 and 2.3 W/(m²K).

Enhanced thermal insulation performance is achieved due to placing special insulating inserts in the central insulating chamber, formed by connecting aluminum profiles with thermal breaks. Thus, formed inserts reduce heat transfer through this chamber due to low value of heat transfer coefficient. The central location of inserts additionally limits convection and thermal radiation.

PRODUCT TYPE: Vertical Pivot Windows

SYSTEM TYPE: ARKA MB 70 HI (New Gen Thermal Aluminum)

RECOMMENDED RO WIDTH: 65"

RECOMMENDED RO HEIGHT: 98"

NET FRAME WIDTH: 64"

NET FRAME HEIGHT: 97"

FRAME: Aluprof MB-70 Hi Bi-color

CUSTOM COLOR DETAILS

COLOR OUTSIDE: Matte Black RAL 9005 SeaSide Option Included

COLOR INSIDE: ADEC M 103 Mahogany

HARDWARE: Pivot Window Sabinco

HARDWARE FINISH: Brown

HARDWARE OPTION:

1. A handle can be located on a vertical part of the sash.
2. The window opens 180 degrees and has 22-degree fixed positions

GLASS TYPE: Triple pane 46mm

Outside Glass: ¼ Sunguard51/28Temp (6mm) TEMPERED
 Central Glass: Clear Laminated 3.3.1 (6mm)
 Inside Glass: 5/32 ClimaGuard Premium T (4mm) TEMPERED

Gas Type: Argon

Spacer: Black CHROMATECH Ultra or SWISSPACER ULTIMATE

U factor (Glass): 0.12

SHGC (Glass): 0.22

STC (Glass): 42

Vt: 0.45

Calculated Windows Thermal and Sound Performance

U factor: 0.19

SHGC: 0.15

STC: 37

Vt 0.30

CUSTOMER PRICING DETAILS

Total customer price for 32 (4*8) Pivot windows: \$199,862.06

Builder Discount 42% \$83,942.06

Factory Shipping & Handling Included

Installation Labor: Not Included

Freight / Delivery to Seattle \$5000.00

Total \$120,920.00

Sales Tax 0.0

Grand Total: \$120,920.00

The proposal is valid till October 10th, 2021



*Regular delivery estimate lead time – 16-20 weeks from order to ARKA's Luxury.

(due to Covid we are experiencing delays)

PRICING & PAYMENT

The quoted price is valid only for the product details listed and only for 30 days from the date of the Quote. Prices are subject to change if any revisions are made, or if an order is not placed within 30 days from the date of the Quote.

An initial payment of 70% is due on order and must be received before ARKA will process an order for production. The balance of payment for all products shipped regular Delivery is (1) wire transfer to ARKA's bank account to be received by ARKA before delivery or (2) personal, business or cashier's check on delivery to be handed over to the common carrier driver. For First Threshold delivery, the balance is due at ARKA's office two weeks before the given estimated time of arrival. As products are made to order, Buyer may not cancel or change an order once a Contract for Sale is formed. In the event of Buyer's repudiation of the Contract for Sale, ARKA is entitled to the full purchase price of the Contract for Sale.

SHIPPING & DELIVERY

Standard Delivery. The quoted freight amount is based on shipping to Buyer via ARKA's standard shipping methods to tailgate/curbside only. Buyer is responsible for unloading the product from the delivery truck and must plan to have sufficient manpower present for unloading. If the location is not easily accessible by common carrier, shipment will be made to the nearest freight terminal. Alternative shipping methods requested by Buyer may result in additional charges. Buyer can make its own transport arrangements from ARKA production sites within the U.S., and in the case of international production sites Buyer can make its own transport arrangements from the domestic port of entry.

First Threshold Delivery. First Threshold delivery is available for residential projects for an additional \$200 per position. First Threshold includes driver unloading the product and placing the shipment over the "first threshold" of the structure, typically a

garage. Uncrating or unpacking is not included. Full payment of the purchase price and First Threshold Delivery charges must be received by ARKA two (2) weeks prior to estimated delivery. ARKA must be notified at time of order if First Threshold delivery is required so the necessary arrangements can be made. This delivery method will add two (2) weeks to the standard lead time. It is not available for orders with large sliders.

MB-70

WINDOW AND DOOR SYSTEMS



TECHNICAL DATA	MB-70 / HI	MB-70US / HI
Frame depth (door / window)	70 mm	
Leaf depth (door / window)	70 mm / 79 mm	79 mm
Glazing thickness (permanent window and door / active window)	15 – 51 mm 23 – 60 mm	9 – 45 mm 18 – 54 mm
MIN. VISIBLE PROFILE WIDTH		
Frame (door / window)	51 mm / 47 mm	75 mm
Leaf (door / window)	72 mm / 32 mm	-
MAX STRUCTURE DIMENSIONS AND WEIGHT		
Max. dimensions of tilt-and-turn window	H to 2400 mm L to 1600 mm	H to 2100 mm L to 1400 mm
Max. dimensions of door leaf	H to 2400 mm L v 1300 mm	-
Max. weight of the leaf (door / window)	120 kg / 130 kg	130 kg

MB-70 / 70 HI

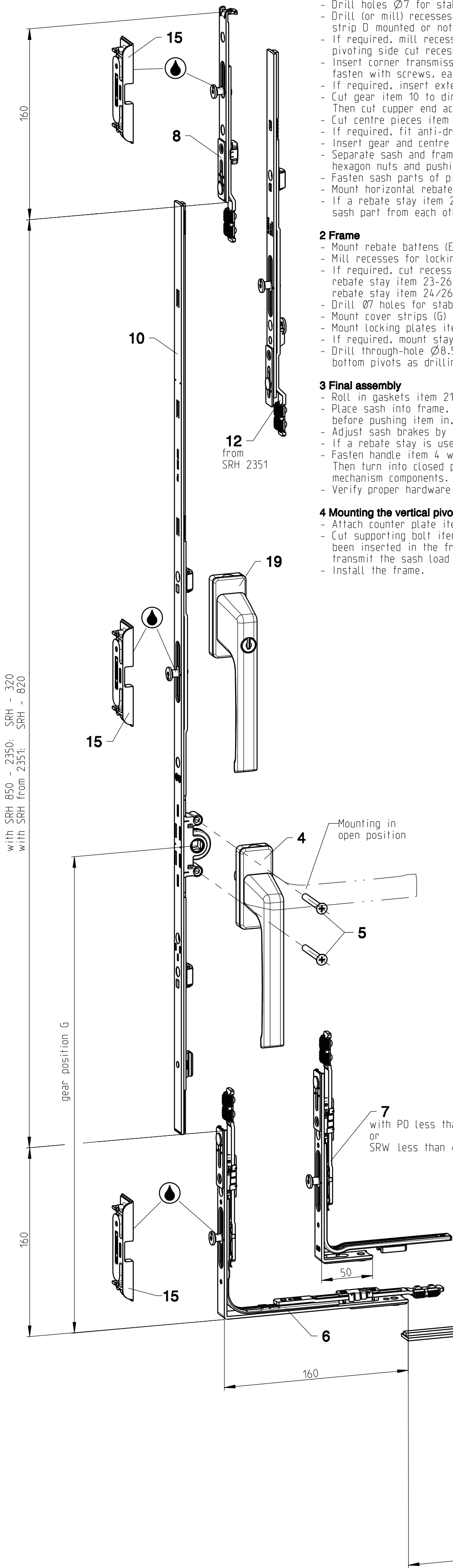
Aluminium windows based on MB-70 system are rigid, durable, and stable. They can be used to design safe windows, doors and sliding systems as well as large-size glazing. Several alternative solutions have been created based on MB-70, each giving you new possibilities.

Using MB-70 HI provides the building with better thermal insulation. Increasing thermal insulation is achieved by placing special insulating inserts in the central chamber. Windows made in the MB-70 HI system, as in the case of the base system, can be used both in individual buildings and in aluminium façades. MB-70 US is one of the most popular alternative solutions. Windows made using elements of this system have hidden leaves. This solution is also available in the MB-70 US HI version, which is equipped with additional insulation.

Alternative variants of MB-70 window profiles



MB-70 HI



Mounting instructions:

1 Sash

- Mount vertical rebate batten (A).
- Drill holes $\varnothing 7$ for stabilising pins of vertical pivots using drilling jig item 34.
- Drill (or mill) recesses for gear case and handle (with vertical cover strip D mounted or not).
- If required, mill recess for rebate stay 27 item 23/24; for mounting on inward pivoting side cut recess on loose rebate batten (B).
- Insert corner transmissions item 6 or 7 and extensions pieces item 8 and 9, fasten with screws, each.
- If required, insert extension item 12 and fasten with screws.
- Cut gear item 10 to dimensions 160 starting at the marking notch.
- Then cut copper end according to calculation formula.
- Cut centre pieces item 11 and 13 equally on both sides according to formula.
- If required, fit anti-drill plate item 41 on outside of gear case.
- Insert gear and centre pieces and fasten with screws.
- Separate sash and frame parts of vertical pivots item 1 by loosening the hexagon nuts and pushing out the bearing shafts.
- Fasten sash parts of pivots with screws.
- Mount horizontal rebate battens (B and C) as well as cover strips (D).
- If a rebate stay item 23-26 is used: Unlock the stay to disconnect frame and sash part from each other and mount the latter.

2 Frame

- Mount rebate battens (E and F) to outward opening sash side.
- Mill recesses for locking plates with cutter $\varnothing 16$.
- If required, cut recess for rebate stay packer item 28 (milling jig item 29) or frame part of rebate stay item 23-26 respectively, and drill hole $\varnothing 14$ for lockable rebate stay item 24/26.
- Drill $\varnothing 7$ holes for stabilising pins of vertical pivots using drilling jig item 34.
- Mount cover strips (G).
- Mount locking plates item 15, 16 and frame parts of vertical pivots item 1.
- If required, mount stay item 28 and frame part of rebate stay item 23-26.
- Drill through-hole $\varnothing 8.5$ for supporting bolt item 2 (use of frame part of bottom pivots as drilling jig).

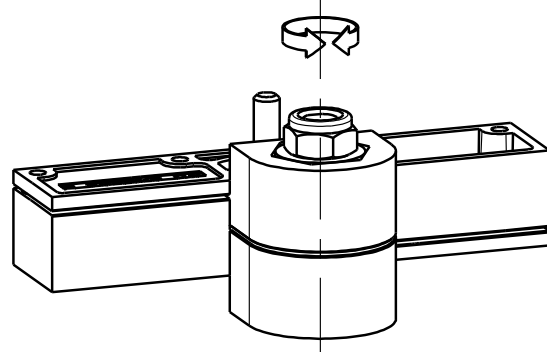
3 Final assembly

- Roll in gaskets item 21 with gasket roller item 22.
- Place sash into frame, grease surface of bearing shafts with small amount of lubricant before pushing item in, insert brown brake disc and washer, and lock with hexagon nut.
- Adjust sash brakes by tightening the hexagon nuts on top and bottom pivot evenly.
- If a rebate stay is used: engage stay arm in running rail of frame part and lock.
- Fasten handle item 4 with countersunk screws item 5.
- Then turn into closed position to shear off the locking pins on locking mechanism components.
- Verify proper hardware functioning.

4 Mounting the vertical pivot

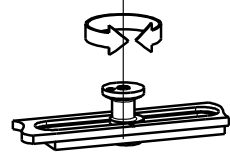
- Attach counter plate item 3 to lintel firmly.
- Cut supporting bolt item 2 to such a length that it will not protrude at the top after having been inserted in the frame part from underneath, and that it rests on the counter plate to transmit the sash load onto the lintel.
- Install the frame.

Adjusting the sash brake



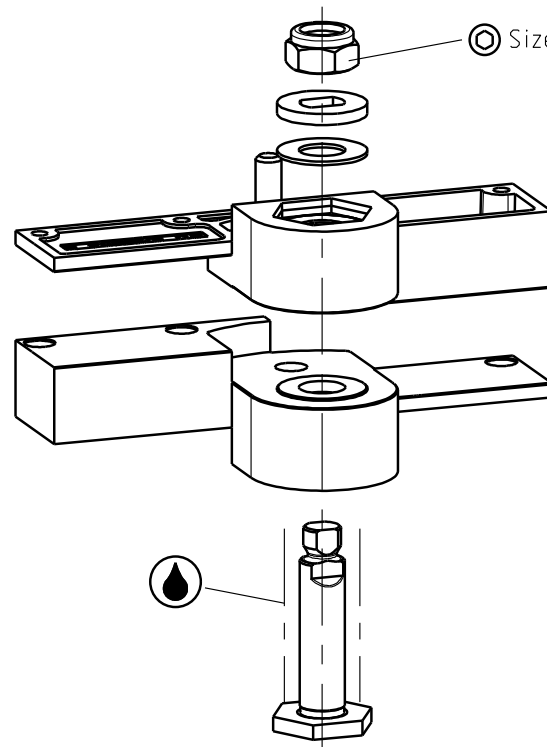
Adjustment on hexagon nut at top and bottom pivot using wrench size 17. The turn-brake must be tightened evenly on both pivots.

Adjusting the locking pins



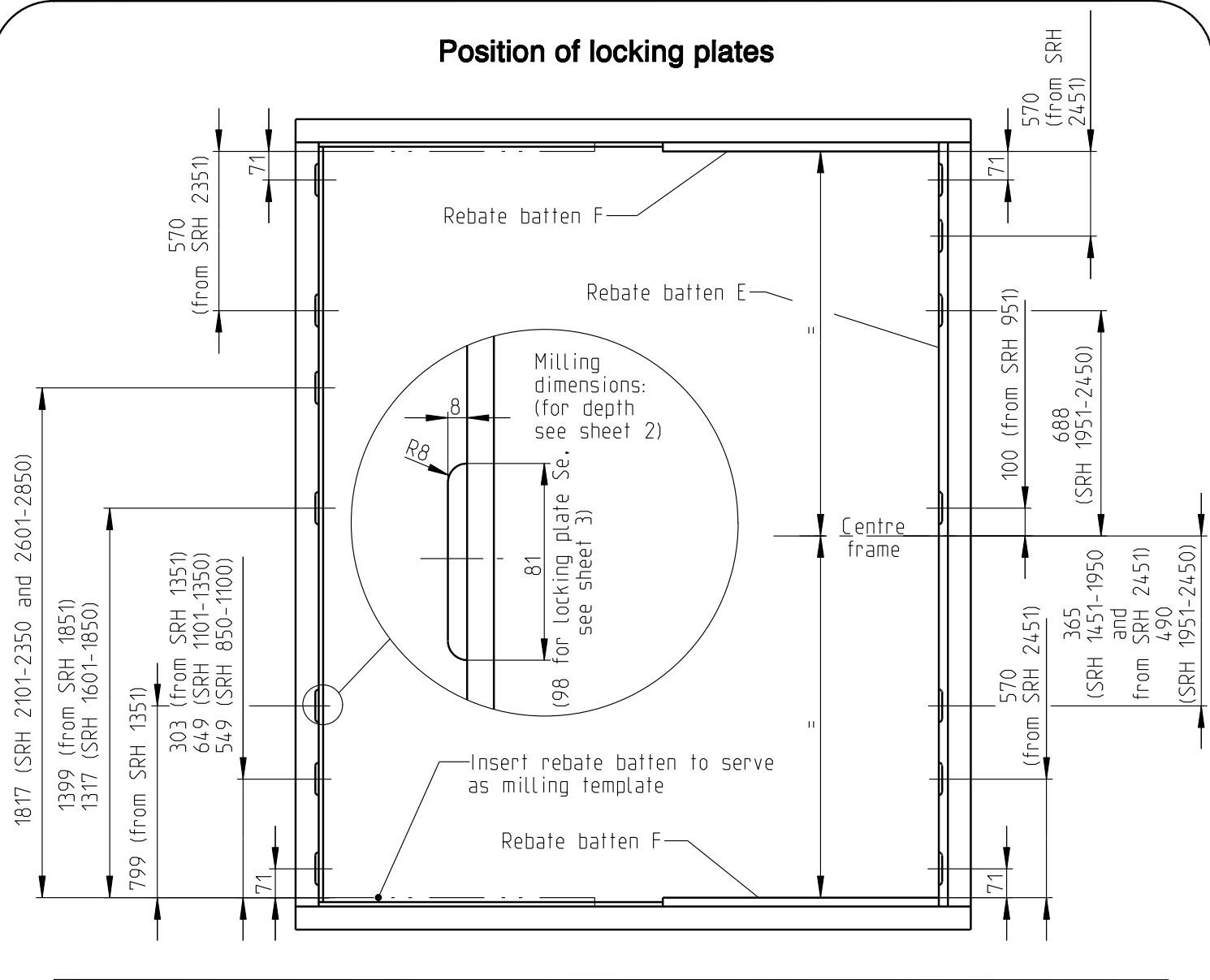
±1 mm $\varnothing 15$

Disassembly / assembly of vertical pivots



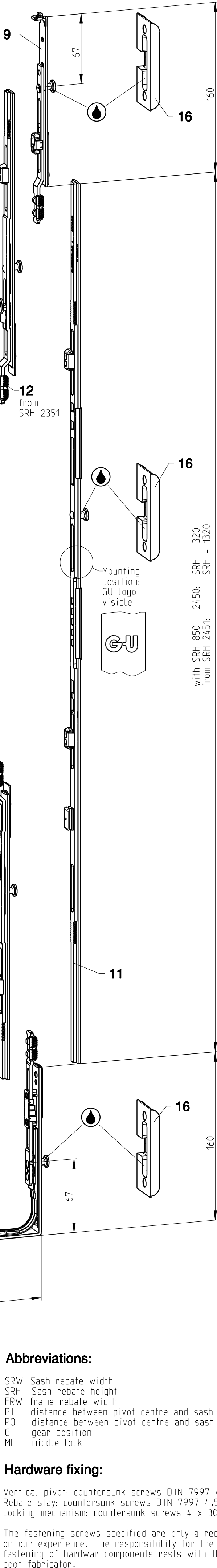
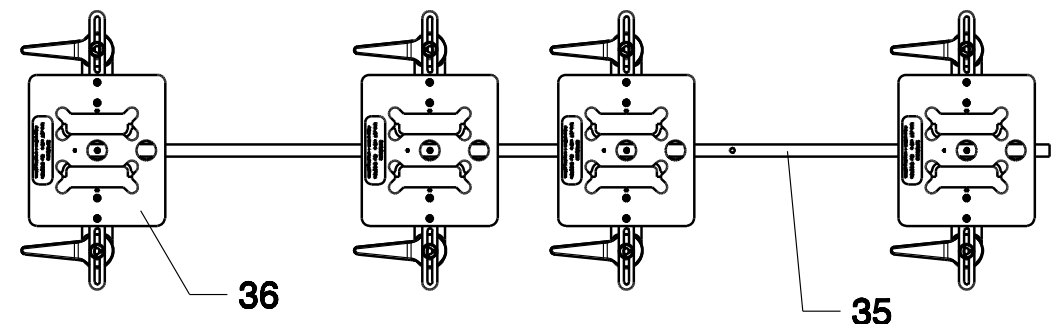
Lubricate all locking and sliding points with lubricants free of resin and acid. Vertical pivots: grease surface of bearing shafts only.

Position of locking plates



Cutting recesses for locking plates with milling jigs

For individual fabrication the recesses for locking plates can be cut with a router using the milling jigs of tilt-turn fittings UNI-JET; cutting is done from the front with the frame jamb placed horizontally (without cover strips). Cutter $\varnothing 16$, guide ring $\varnothing 27$. Inward opening sash side: Milling with inserted top and bottom rebate battens used as stop.



Abbreviations:

SRW Sash rebate width
SRH Sash rebate height
FRW frame rebate width
PI distance between pivot centre and sash rebate of inward pivoting side
PO distance between pivot centre and sash rebate of outward pivoting side
G gear position
ML middle lock

Hardware fixing:

Vertical pivot: countersunk screws DIN 7997 4 x 35 and 4 x 50
Rebate stay: countersunk screws DIN 7997 4,5 x 30 and 4 x 30
Locking mechanism: countersunk screws 4 x 30

The fastening screws specified are only a recommendation based on our experience. The responsibility for the appropriate fastening of hardware components rests with the window/window door fabricator.

Item	Description	Article no.	Piece										
1	Pair of vertical pivot fittings UNITAS 93 Bo	6-25851-00-P	1										
2	Supporting bolt												
3	Counter plate												
4	Handle DIRIGENT-F	6-28072-33-0	1										
5	Countersunk screw DIN 965 M5x40	9-13255-40-0	2										
6	Corner transmission	6-32021-00-0	2 [1]										
7	Corner transmission SLK	6-32224-00-0	alternative too Pos. 6 [2]										
8	Extension piece 90° (inward opening sash side)	6-32104-00-0	1										
9	Extension piece 180° (outward opening sash side)	6-32105-00-0	1										
Gear D15 (backset 15)													
10	SRH	Length	ML	G	850-110	940	1	400	G-22124-00-0	1			
					1101-1350	1190	2	500	G-22125-00-0				
					1351-1600	1440		600	G-22127-00-0				
					1601-1850	1690	3	980	G-22128-00-0				
					1851-2100	1940	4	G-22133-00-0					
					2101-2350	2190	3	G-22134-00-0					
					2351-2600	1940	4	G-22133-00-0					
					2601-2850	2190	3	G-22134-00-0					
Centre piece													
11	SRH	Length	ML	850-950	630	0			6-34106-01-0	1			
				951-1450	1130	1		6-34106-02-0					
				1451-1950	1630	2		6-34106-03-0					
				1951-2450	2130	3		6-34106-04-0					
				2451-2850	1630	2		6-34106-03-0					
12	SRH	Extension 500		1	1	6-32142-00-0	1						
		2351-2450	500				ML	3					
Centre piece type D													
13	SRH	at 2xitem6		1xitem6	1xitem7	at 2xitem7		Length	630	6-25447-11-0	1		
		576-950		466-840		356-488							
		951-1450		841-1340		-						1130	6-25447-12-0
		1451-1600		1341-1600		-						1630	6-35447-13-0
15	SRH	Locking plate 25/15, inward opening sash side								9-32730-00-0	3		
		850-1350										4	
		1351-1600										5	
		1601-2100										6	
		2101-2600										7	
16	SRH	Locking plate 35/15, outward opening sash side								9-32732-00-0	2		
		800-950										3	
		951-1450										4	
		1451-1950										5	
		1951-2450										6	
2451-2850											6		
accessories													
19	Handle DIRIGENT-F/Z (lockable)							6-28075-33-0	alternatively to item 4				
21	Gasket P 828 (sheet 2)							W-751015	Lfd. m				
22	Gasket roller (not shown in drawing)							9-23749-00-0	1				
23	Rebate stay 27 for top or bottom assembly							5-20143-00-9 [2]	1				
24	Rebate stay 27 lockable for top assembly							5-20152-00-9 [2]					
25	Rebate stay 27 A for top assembly							5-21306-00-9 [2]					
26	Rebate stay 27 A lockable							5-21689-00-9 [2]	1				
27	Key for lockable rebate stay							9-23074-00-0					
28	Packer for rebate stay							9-43774-35-0					
29	Milling jig for packer for rebate stay							6-34716-00-0					
34	Drilling jig for vertical pivot (sheet 2) with clamping device (not shown in drw) without clamping device							9-28600-00-0		1			
35	Rod for milling jig for locking plates L = 1850							9-28802-00-0	1				
	L = 2350							9-41858-00-0					
								9-41859-00-0					
36	SRH	Milling jig for locking plates with clamping device without clamping device							6-32784-02-0	3			
									6-32784-01-0				
		850 - 1350							4				
		1351 - 1600							5				
		1601 - 2100							6				
37	Rod guide							8-00805-00-0	6-9				
38	Locking plate Se							6-27522-0-00	alternatively to item 15-16				
40	Milling jig with clamping device for locking plate Se							6-27774-00-0	alternatively to item 36				
41	Anti-drill plate							9-41749-00-0	1				
42	Handle MODENA-F/Z 100 Nm (lockable)							6-34397-33-01	alternatively to item 4				

[1] 2 x Pos. 6 with SRW exceeding 575 and both PI and PO not less than 245
1 x Pos. 6 and 1 x Pos. 7 with SRW 466-575 and PI or PO less than 245
2 x Pos. 7 with SRW less than 466 or PI and PO less than 245, each

[2] For left hand inward opening sash: variant L at bottom, variant L at top
For right hand inward opening sash: variant R at bottom, variant L at top

Specify when ordering:

Sash rebate width SRW
Sash rebate height SRH
Colour for pivots and handle accessories

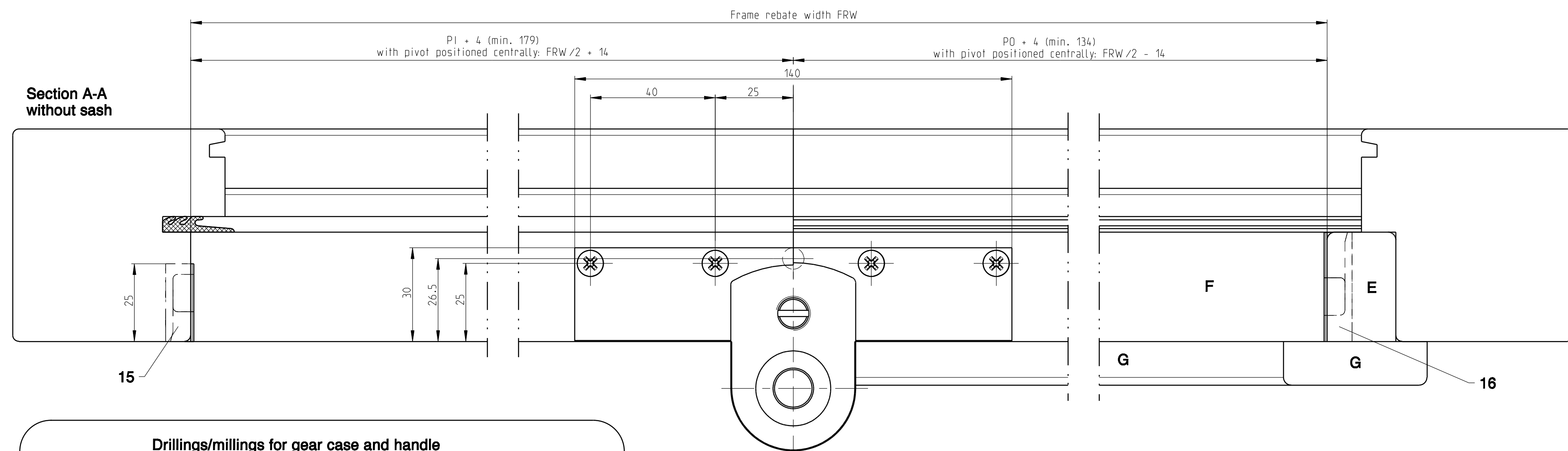
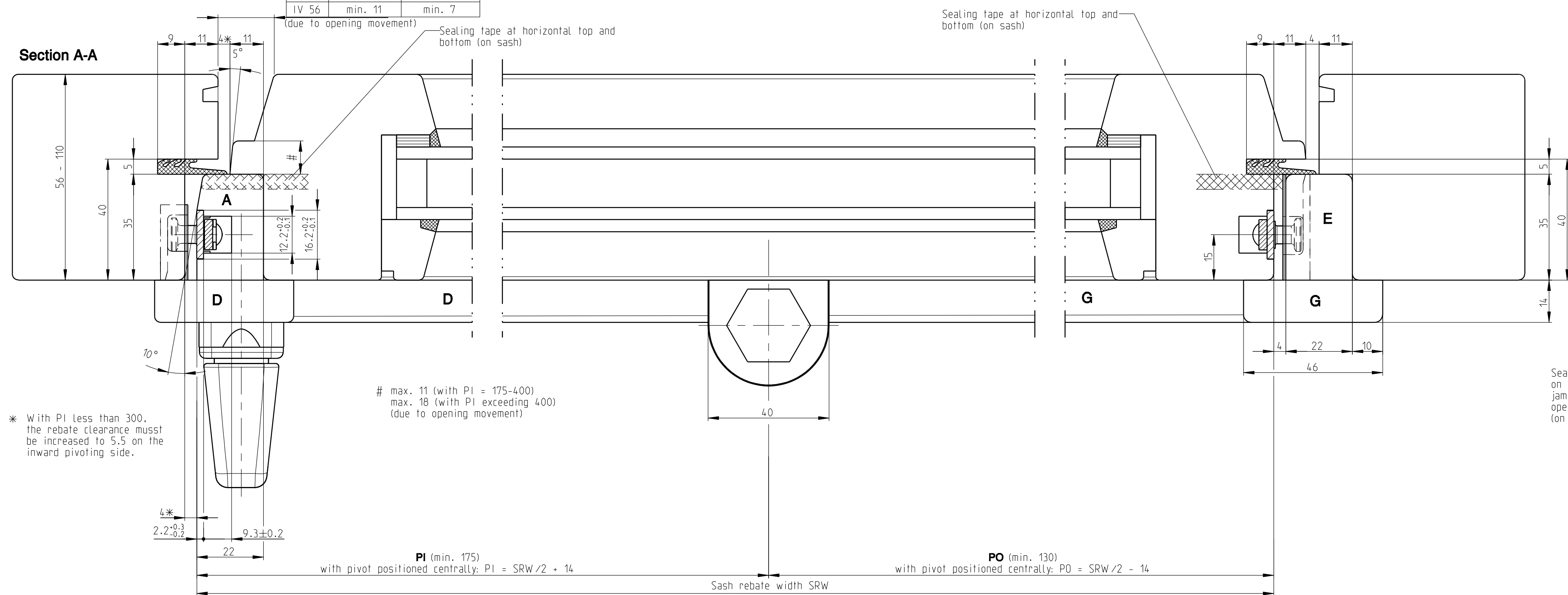
Range of applications

Max. sash weight 175 kg
Sash rebate width SRW 782-1600 mm
Sash rebate height SRH 800-2450 mm
Only for upright format sashes.
Timber window Profile IV56-IV110 (IV 68 shown in drawing)

Description Vertical pivot fittings UNITAS 93 Bo Central locking mechanism type D

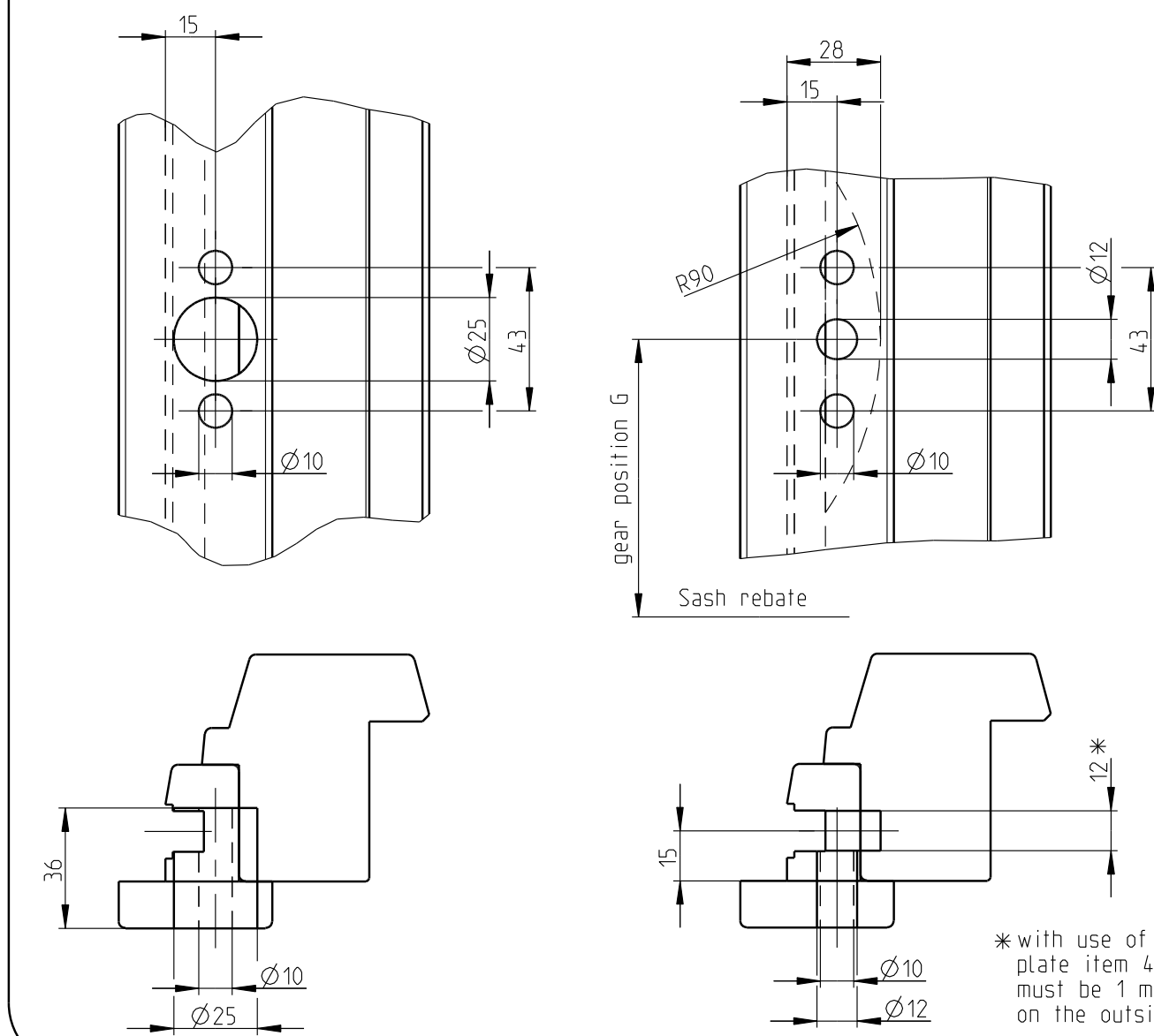
Release No.	Level	Released	Scale	Modification	Size
Mod. No. G28564	Ver. --	Mz	%	3	1
Replacement for --				Drawing No. 0-42020-AH-0-EN	Sheet 1/3

	with PI = 175-400	with PI exceeding 400
IV 110	--	min. 21
IV 92	min. 33	min. 15
IV 88	min. 30	min. 14
IV 78	min. 23	min. 12
IV 68	min. 17	min. 9
IV 56	min. 11	min. 7



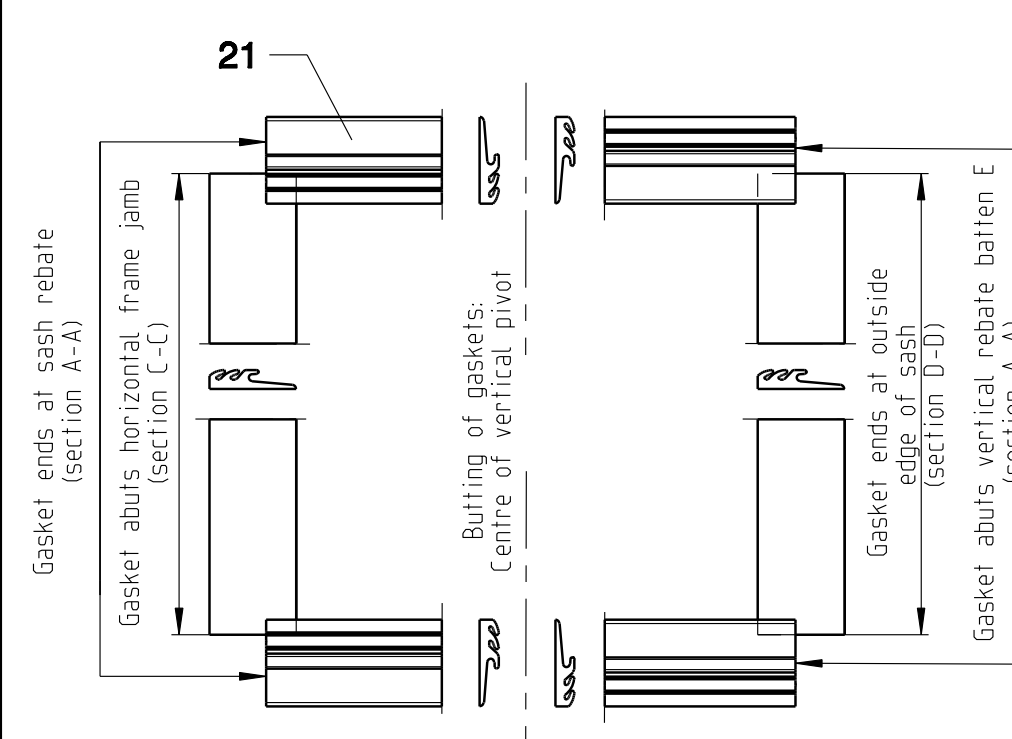
Drillings/millings for gear case and handle

Preparing the sash for the gear with rosette fixture can either be done by milling as shown on the right or by drilling with triple drill as shown on the left.

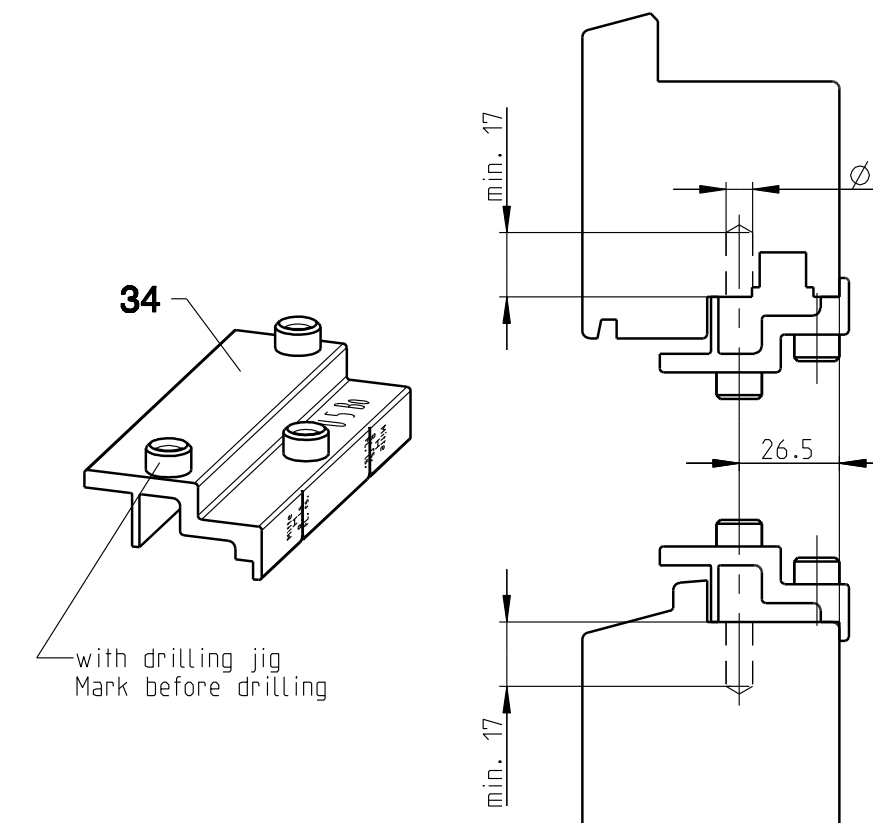


Peripheral gasket P 828

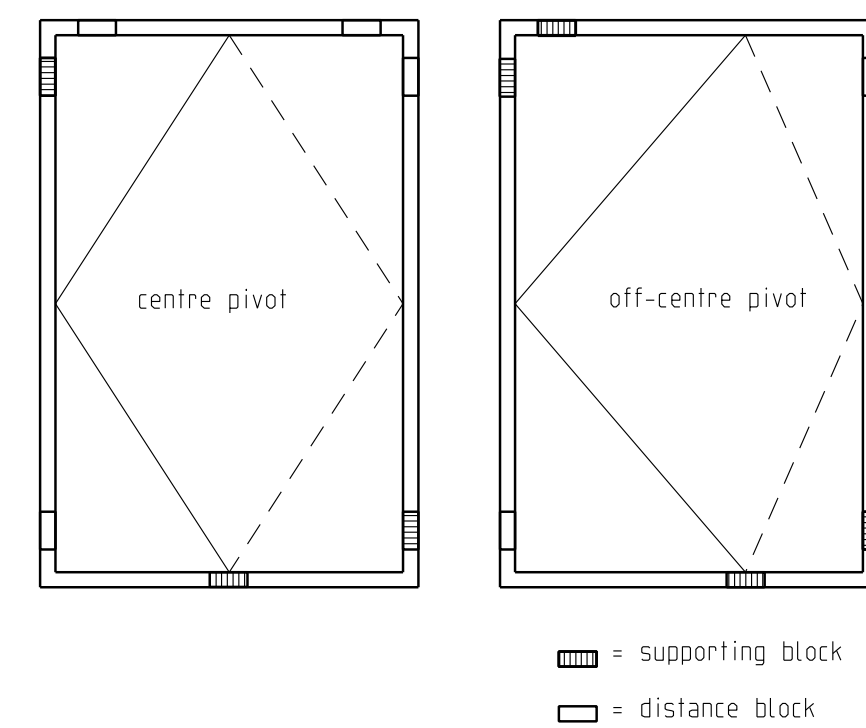
Requirement per sash: $L = 2 \times \text{SRH} + 2 \times \text{SRW} + 60$



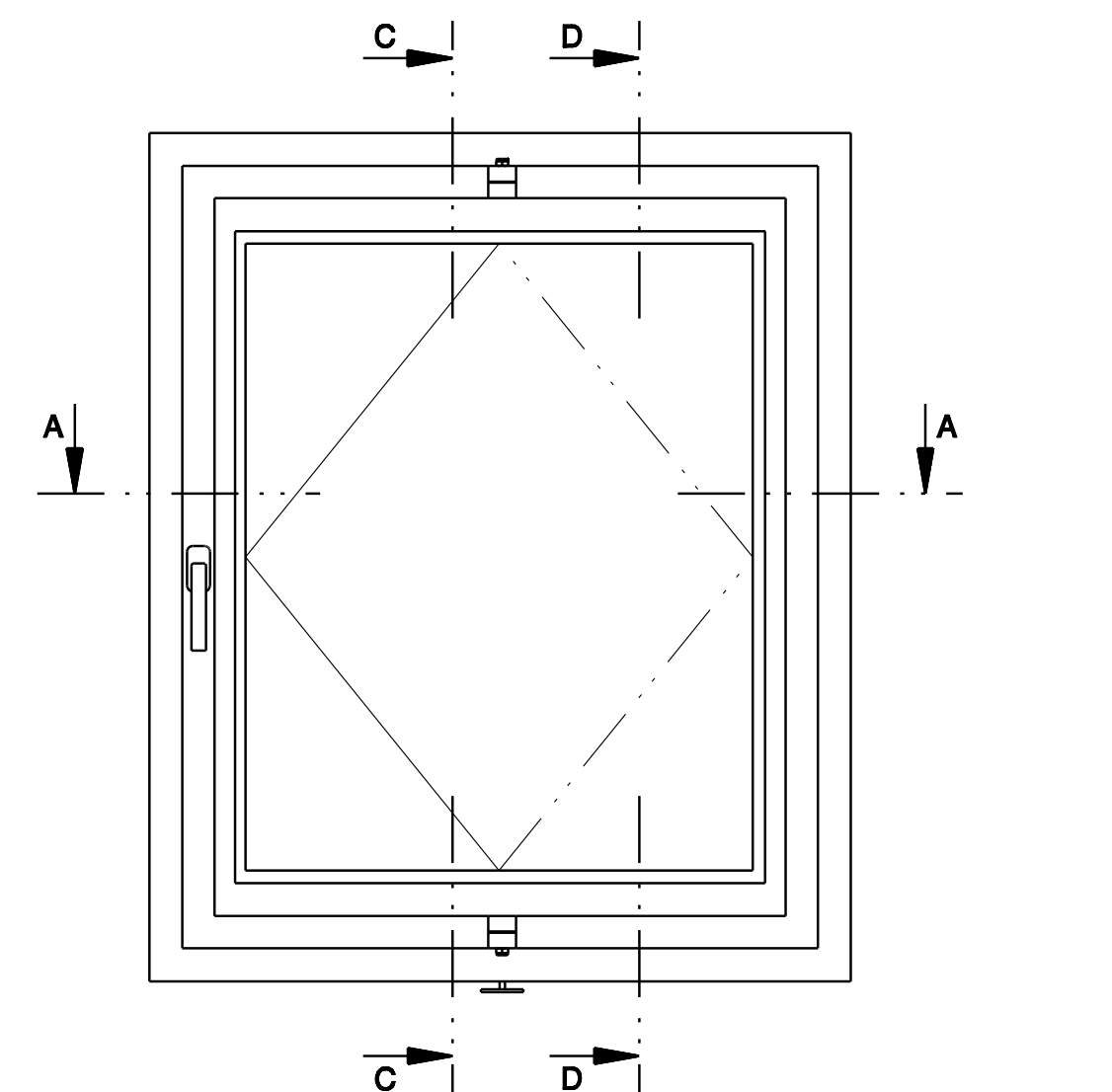
Bore for stabilising pin



Position of glazing blocks




The applicable glazing directives (e.g. 'Technical Directive of the German Glazier trade No. 3 - Blocking of Glazed Units') must be observed.



Description

Vertical pivot fittings UNITAS 93 Bo

Central locking mechanism type D

	Release No.	Level	Released		Scale	Modification	Size				
	--		--		%	3	1				
	Mod. No. G28564	Ver.	Mz								
			Draft	13.03.2015	Cs			Drawing No.			Sheet
		Replacement for --						0-42020-AH-0-E-N			2/3

Mounting the rebate stay

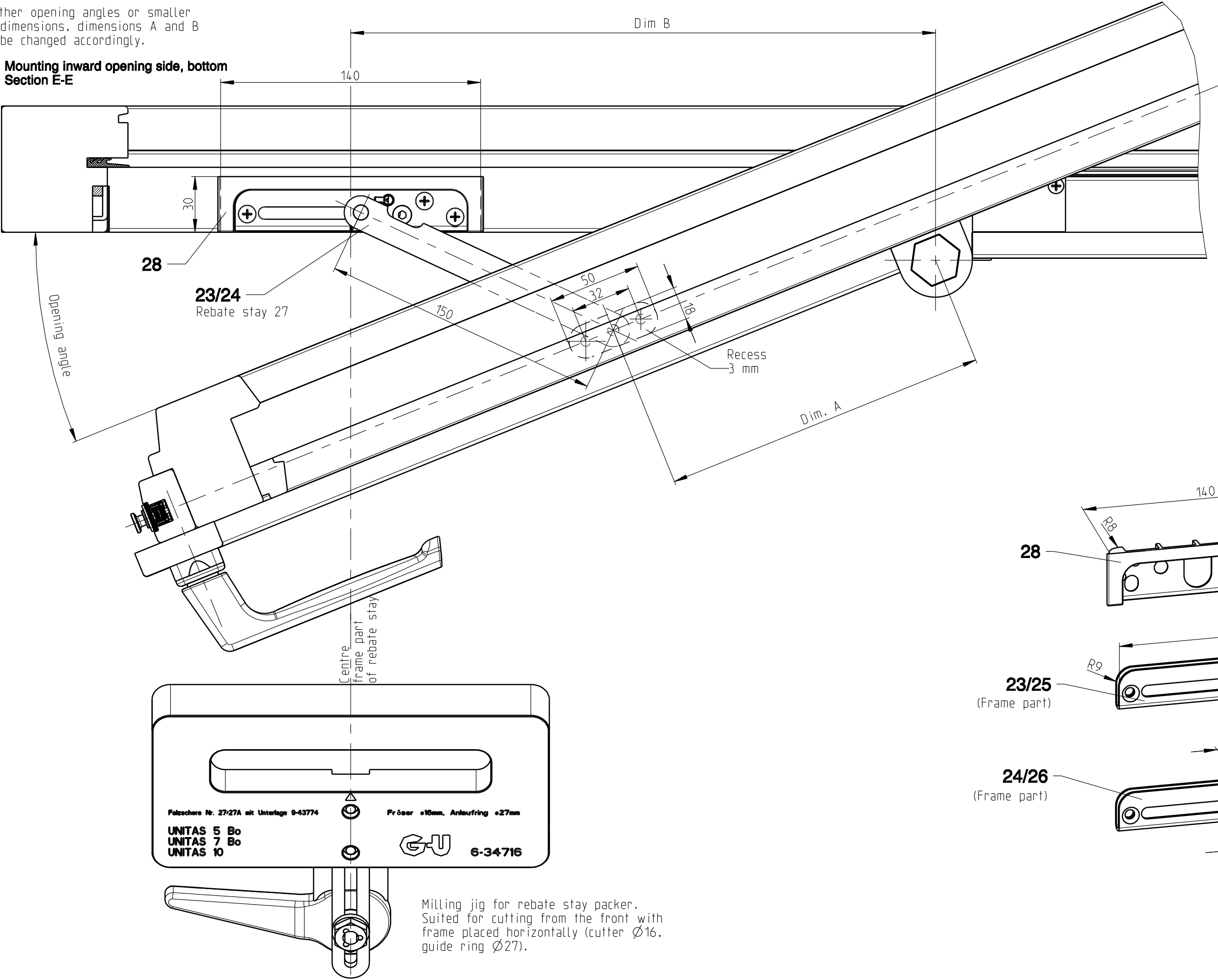
- Mounting options:
- at bottom of inward opening side
 - at top of outward opening side

We recommend mounting on inward opening sash side, provided the securing device on the frame part of the stay remains accessible after window installation (with regard to the lintel).

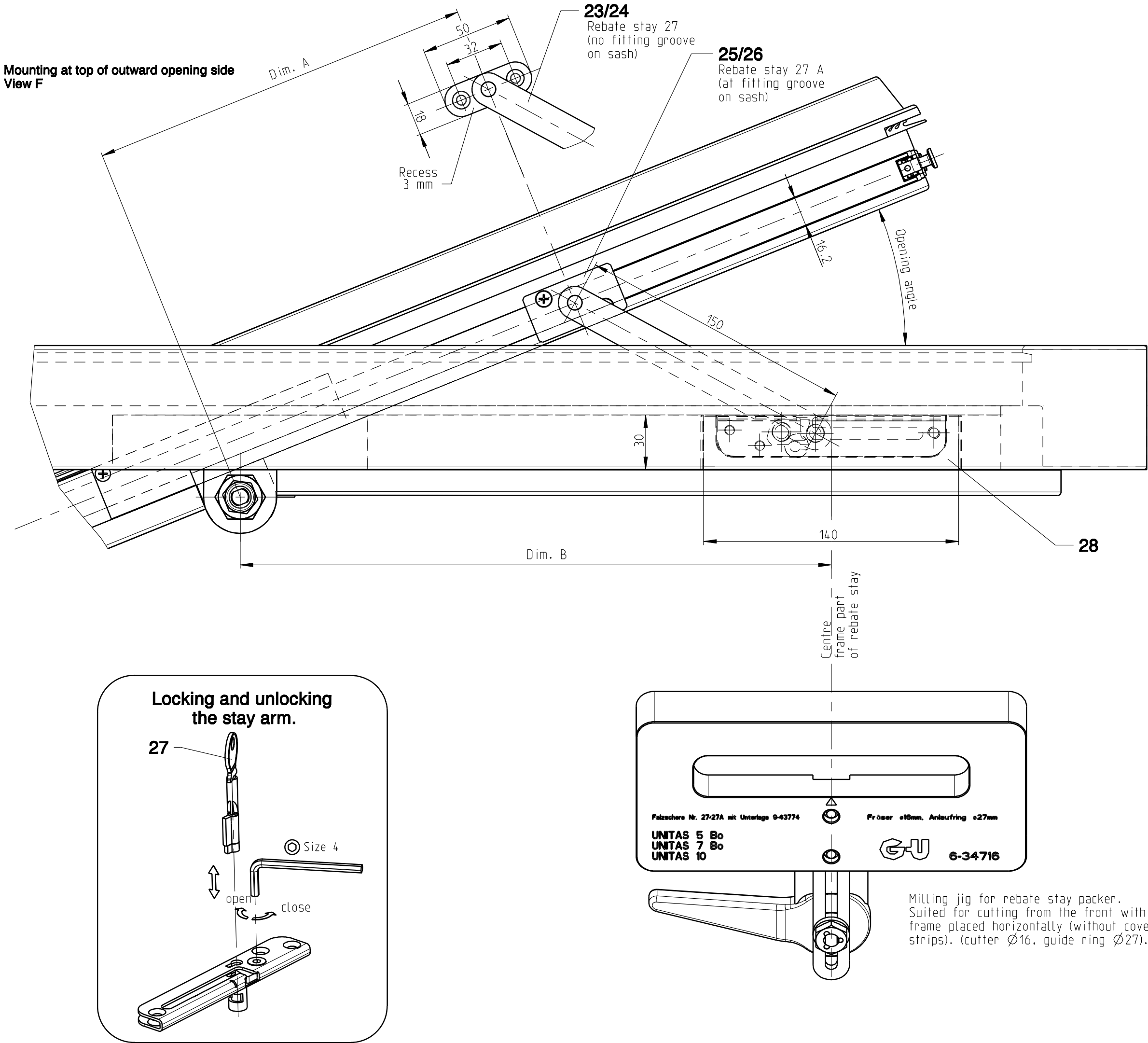
For other opening angles or smaller SRW dimensions, dimensions A and B must be changed accordingly.

Mounting position	Opening angle	Dim. A	Dim. B	min. SRW centre pivot
inward opening side, bottom	15°	265	410	1000
	22°	270	385	950
outward opening side, top	15°	290	415	1100
	22°	210	325	900

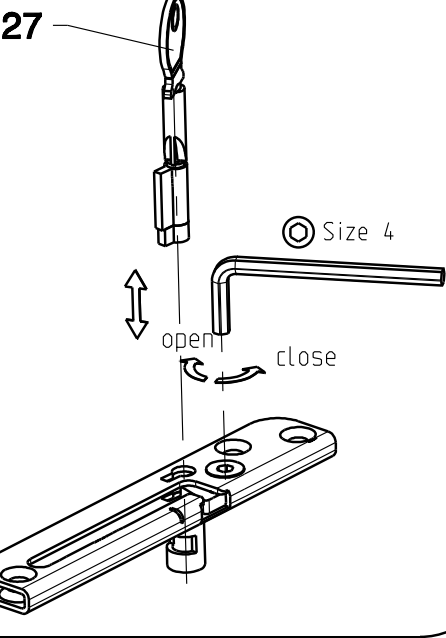
Mounting inward opening side, bottom
Section E-E



Rebate stay 27 / 27 A

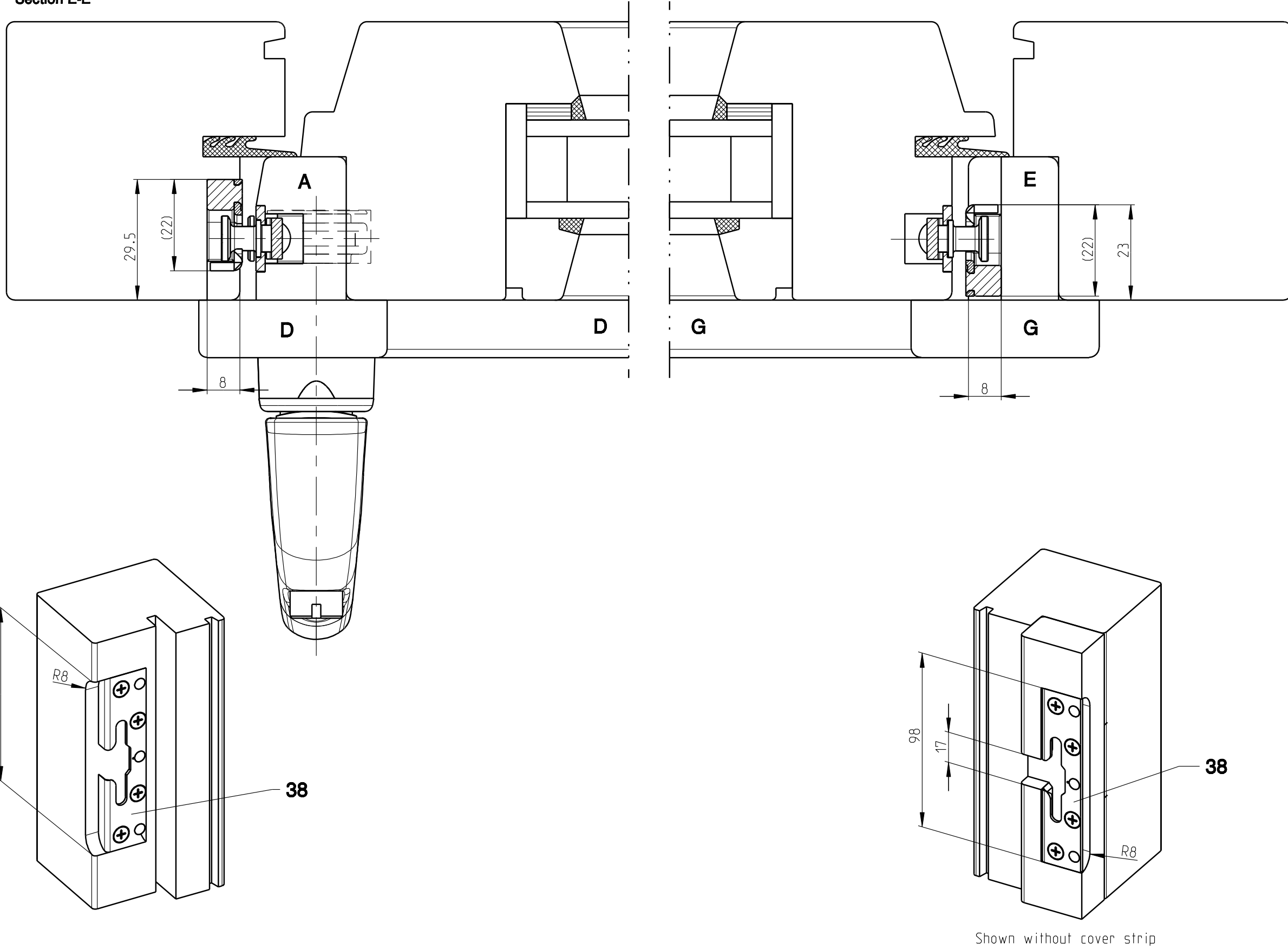


Locking and unlocking
the stay arm.

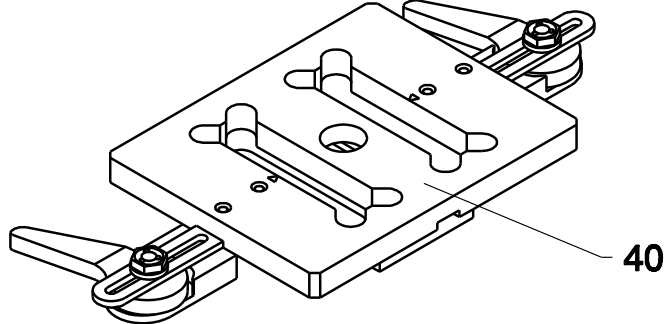


Variant Se

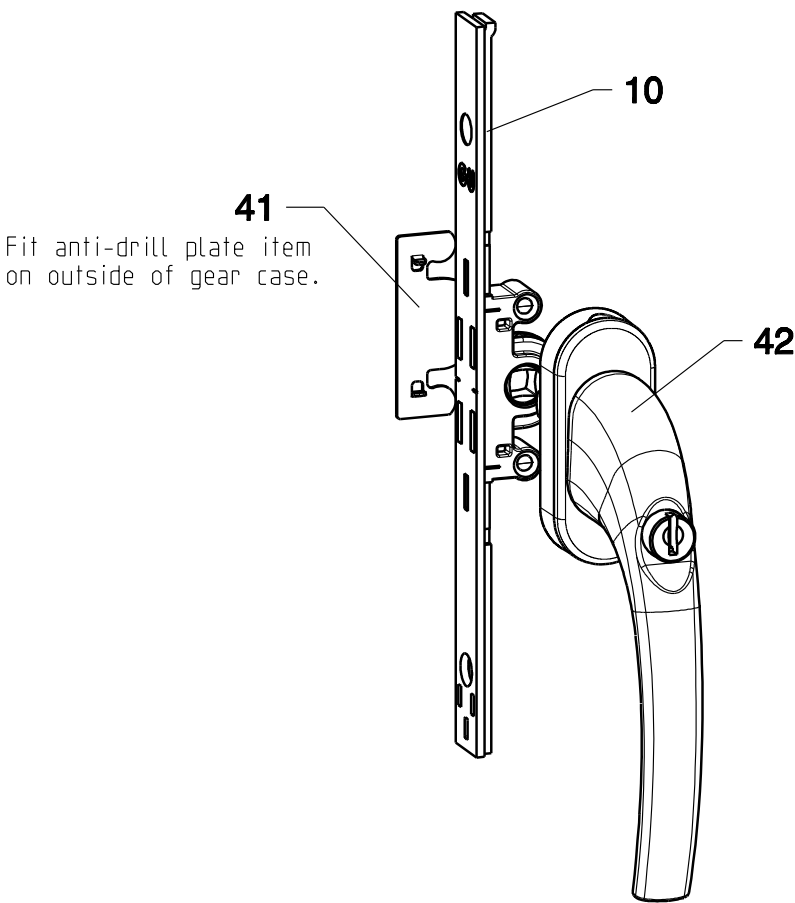
Milling dimensions for locking plates Se
Section E-E



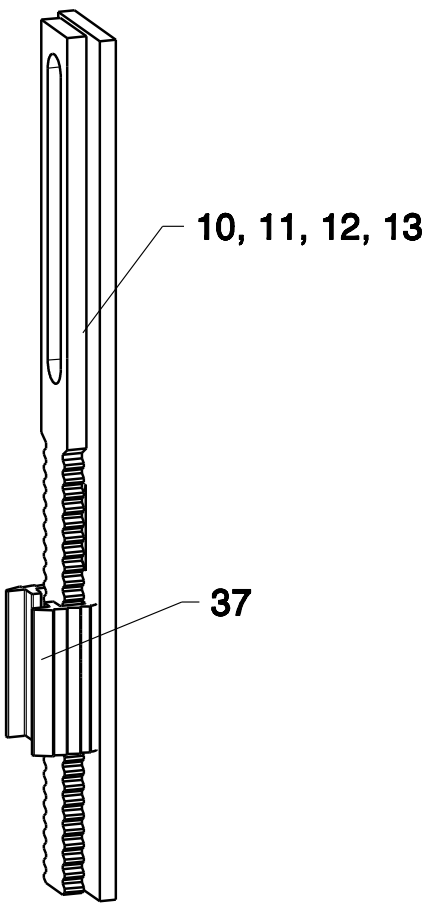
Milling jig for locking plate Se
Suited for cutting from the front with
frame jamb placed horizontally
without cover strip
(Milling cutter Ø16, copying ring Ø27).



Anti-drill plate and handle
100 Nm lockable

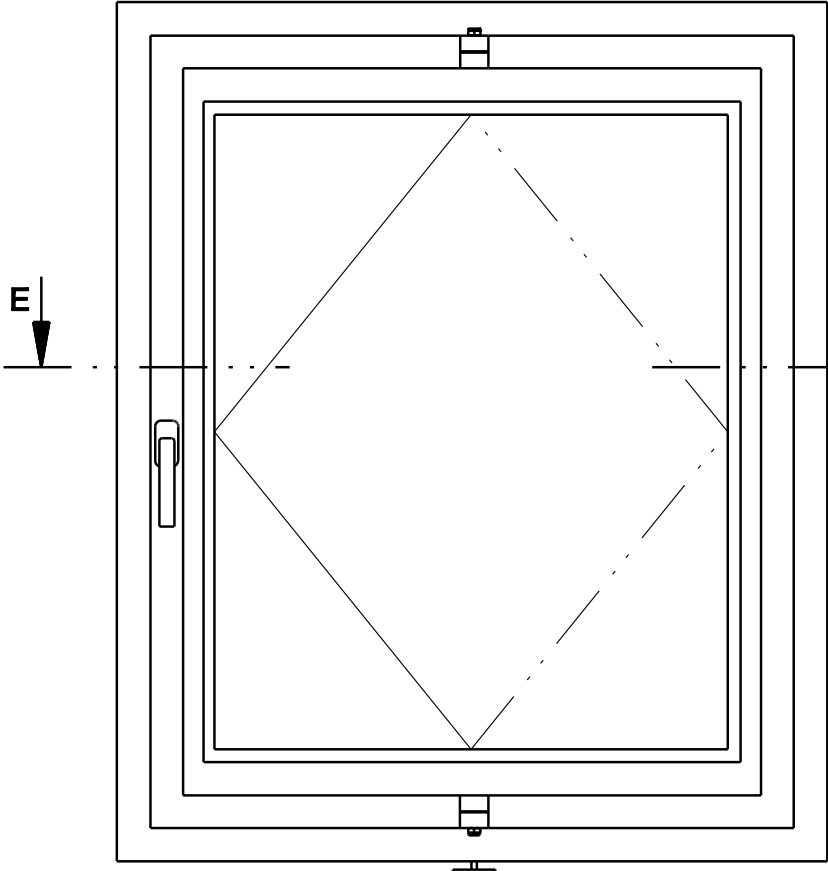


Rod guide



Applied with standard locking system.
Provides better guidance of driving rod
in case of long toothing sections. Guide
is slid to centre of toothing section.

View F



Description

Vertical pivot fittings UNITAS 93 Bo
Central locking mechanism type D

Release No.	Level	Released	Scale	Modification	Size
1	Ver.	--	Mz	3	1
Mod. No.	Draft	13.03.2015	Es	Drawing No.	Sheet
Replacement for --				0-42020-AH-0-EN	3/3

Design + Performance

Versatility with Unmatched Fabrication Flexibility



Geisinger Professional Building
Jenkins Township, Pennsylvania
ARCHITECT
Mericle Commercial Real Estate Services
Wilkes-Barre, Pennsylvania
GLAZING CONTRACTOR
Sterling Glass, Inc., Scranton, Pennsylvania
PHOTOGRAPHER
© Perzel Photography Group

Trifab® VersaGlaze® is built on the proven and successful Trifab® platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner, architect and installer. The 4.5" depth Trifab® VersaGlaze® Framing System family is available with non-thermal, thermal and ultra-thermal performance levels. The ultra-thermal Trifab® 451UT Framing System, is designed for the most demanding thermal performance and employs a dual Isolock® thermal break.

AESTHETICS

Trifab® VersaGlaze® Framing Systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone

glazing (SSG) and weatherseal glazing options further expand designers' choices, allowing for a greater range of possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth; Trifab® VersaGlaze® 450 has 1-3/4" sightlines, while Trifab® VersaGlaze® 451/451T and Trifab® 451UT have 2" sightlines.

With seamless incorporation of Kawneer entrances or windows, including GLASSvent® visually frameless ventilators, Trifab® framing can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single-source supplier.

ECONOMY

Trifab® VersaGlaze® 450/451/451T/451UT Framing Systems offer a variety of fabrication choices to suit your project:

- **Screw Spline** – for economical continuous runs utilizing two-piece vertical members that provide the option to pre-assemble units with controlled shop labor costs and smaller field crews for handling and installation. (available for all systems)
- **Shear Block** – for punched openings or continuous runs using tubular moldings with shear block clips that provide tight joints for transporting large pre-assembled multi-lite units. (available for 450/451/451T systems)
- **Stick** – for fast, easy field fabrication. Field measurements and material cuts can be done when metal is on the jobsite. (available for 450/451/451T systems)
- **Pre-glazed** – The combination of screw spline construction with pre-glazing in the shop accelerates installation and reduces field labor time while minimizing disruption to the surrounding area or existing tenants. Making it an exceptional choice for new or retrofit applications, particularly in urban areas or where space is limited. (available for 451/451T/451UT framing)



Brighton Landing
Cambridge, Massachusetts
ARCHITECT
ADD Inc., Cambridge, Massachusetts
GLAZING CONTRACTOR
Ipswich Bay Glass Company, Inc., Rowley, Massachusetts
PHOTOGRAPHER
© Gordon Schenck, Jr.

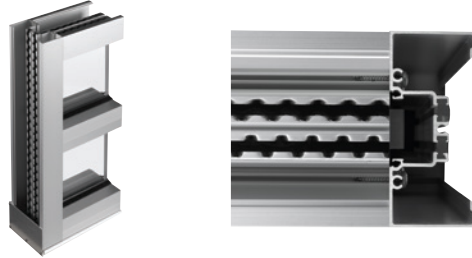
All systems can be flush glazed from either the inside or outside. The weatherseal option provides an alternative to SSG vertical mullions for Trifab® VersaGlaze® 450/451/451T. This ABS/ASA rigid polymer extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, high-performance flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum and painted finishes in fluoropolymer (AAMA 2605) and solvent-free powder coatings (AAMA 2604) offer a variety of color choices.

PERFORMANCE

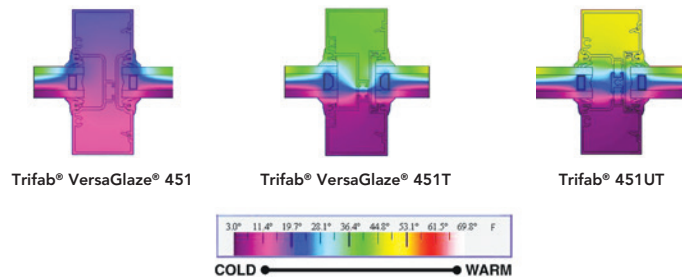
Kawneer's Isolock® thermal break technology creates a composite section, prevents dry shrinkage and is available on Trifab® VersaGlaze® 451T. For even greater thermal performance, a dual Isolock® thermal break is used on Trifab® 451UT.



Trifab® 451UT uses a dual Isolock® thermal break (right) and features a new high-performance sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

U-factor, CRF values and STC ratings for Trifab® framing systems vary depending upon the glass plane application. Project-specific U-factors can be determined for each individual project. (See the Kawneer Architectural Manual or Kawneer.com for additional information.)

Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.



PERFORMANCE TEST STANDARDS

Air Infiltration	ASTM E283
Water	AAMA 501, ASTM E331
Structural	ASTM E330
Thermal	AAMA 1503
Thermal Break	AAMA 505, AAMA TIR-A8
Acoustical	AAMA 1801, ASTM E1425

