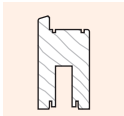
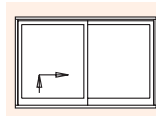


# HS-PORTAL 150

Lift and Slide fittings for timber doors  
with top guide rail KH0130-01



## ... with the decisive advantages:

- bogies are an integral part of the gear
- with built in night ventilation position
- support rail with integral thermal break
- easily replaceable, snap on running rail
- smooth operation

## Size Range Scheme A

Sash width	(mm)	650 to 2485
Sash height (sliding sash)	(mm)	1190 to 2690
Frame width	(mm)	1330 to 5000
Frame height	(mm)	1325 to 2825
Sash weight	(kg)	<b>max. 150</b>
Backset (drive gear)	(mm)	25
Sash thickness	(mm)	56, 66 or 68
Sash clearance	(mm)	10 <sup>1)</sup> or 28 (note. 30 only for FHD 66)
Handle position (window: FH 1190 - 1790)	(mm)	Standard 410 (either 510 or 810) <sup>2)</sup>
Handle position (door: FH 1790 - 2690)	(mm)	Standard 1010 (either 810, 910 or 1110) <sup>2)</sup>

1) only for sash section thickness 66 and 68 mm  
2) gearbox housing is moveable

The recommendations for profile section, timber quality and design contained in DIN 68 121 (Timber sections for windows and doors) are applicable to the SIEGENIA HS-PORTAL 150 fittings.

**Profile cross-sections** must be as specified on the following SIEGENIA drawings:

- HSde1007* HS-PORTAL with guide rail KH0130-01  
Sash thickness **68** mm bzw.
- HSde1019* HS-PORTAL with guide rail KH0130-01  
Sash thickness **66** mm
- HSgb1008* HS-PORTAL with guide rail KH0130-01  
Sash thickness **56** mm

For assembly of frame corner HH7642-04 please refer to installation instruction:

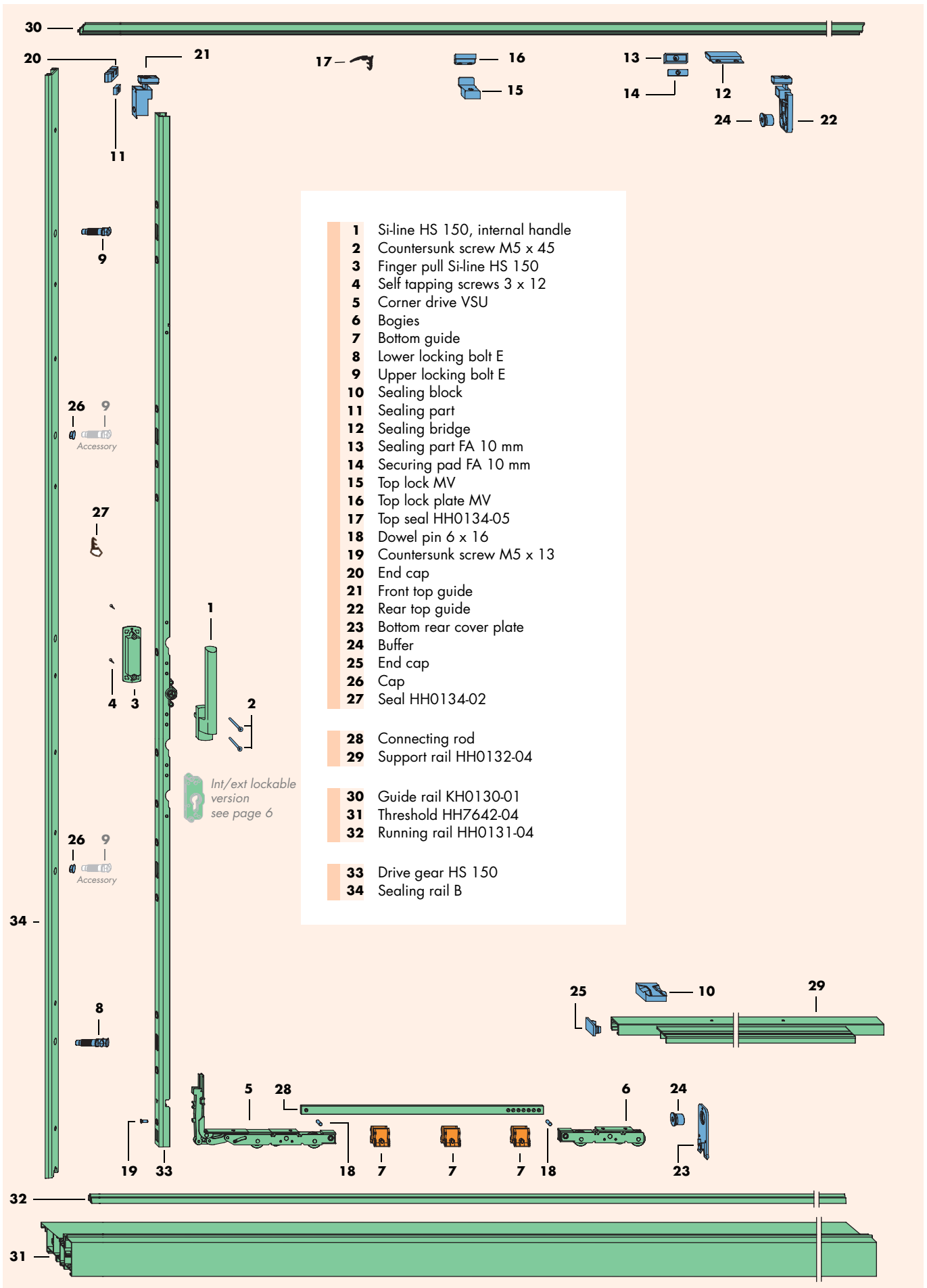
- HSgb1004* HS-/HSK-PORTAL threshold HH7642-04  
and corresponding frame corner connections

## Contents

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Fittings layout.....	Page 2	Horizontal cross section (I).....	Page 12
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Jigs.....	Page 5	Frame: Assembly of components (II).....	Page 15
Scheme options and accessories (I)....	Page 6	Vertical cross section, bottom.....	Page 16
Accessories (II).....	Page 7	Sash preparation (I).....	Page 17
Accessories (III).....	Page 8	Sash preparation (II).....	Page 18
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Important notes and abbreviations....	Page 10	Frame: Assembly of components (III), installation of the sashes ..	Page 20

Installation Instructions  
HSgb1034

# HS-PORTAL 150 Fittings layout



# HS-PORTAL 150 Parts list (I)

Pos.	Qty	Description	EAN 40 12453		
			white	black	brown
	<b>1</b>	<b>Si-line HS 150 Internal handle bag</b> consisting of:	please see handle options on the bottom of page 4		
1	1	Si-line HS 150, internal handle			
2	2	Countersunk screw M5 x 45		863329	
	<b>1</b>	<b>Si-line HS 150 Finger pull bag</b> consisting of:	please see handle options on the bottom of page 4		
3	1	Finger pull Si-line HS 150 short			
4	2	Self tapping screws 3 x 12			
	<b>1</b>	<b>Basic Carton HS 150-H</b> consisting of:	<b>261125</b>		
5	1	Corner drive VSU HS 150		874165	
6	1	Bogies HS 150		874196	
7	3	Bottom guide 80-1		833452	
	<b>1</b>	<b>Additional carton HS-H KH0130-01</b> consisting of:	<b>236536</b>	<b>236543</b>	<b>236550</b>
8	1	Lower locking bolt E		848395	
9	1	Upper locking bolt E		848388	
-1)		Countersunk screw M5 x 75		823095	
10	1	Sealing block		844984	
11	1	Sealing part top HSK		838037	
12	1	Sealing bridge FA 28 mm		821343	
13	1	Sealing part FA 10 mm		821329	
14	1	Securing pad FA 10 mm		841600	
15	1	Top lock MV		821497	
16	1	Top lock plate MV		821503	
17	1	Top seal HH0134-05 length 3,4 m		236666	
	1	Bag of small parts HS/HSK-250:			
18	2	Dowel pin 6 x 16		823132	
19	1	Countersunk screw M5 x 13		800850	
-1)		Cover cap grey		819708	
-1)		Cover cap brown		819869	
	1	Bag HSH KH0130-01:			
20	1	End cap	844991	845004	845332
21	1	Front top guide	832875	832882	as black
22	1	Rear top guide	832899	832905	832912
23	1	Bottom rear cover plate	843154	843161	843147
24	2	Buffer	843116	843123	845295
25	1	End cap	843277	843284	as black
26	3	Cap for sealing rail B (34)	843567	843574	as black
<b>27</b>	<b>1</b>	<b>Seal HH0134-02</b> length 17,5 m		<b>112977</b>	
		<b>Connecting rod</b>	size	length (in mm)	FB (in mm)
<b>28</b>	<b>1</b>		150	898	650 to 1350
			200	1398	1351 to 1850
			250	1898	1851 to 2350
			335	2748	2351 to 2485
		<b>Support rail HH0132-04</b>	size	length (in mm)	FB (in mm)
<b>29</b>	<b>1</b>		150	1500	650 to 1500
			200	2000	1501 to 2000
			250	2500	2001 to 2485
			<b>828403</b>	<b>828410</b>	<b>828427</b>
			<b>828434</b>		
			<b>842966</b>	<b>842973</b>	
			<b>843000</b>	<b>843017</b>	2)
			<b>843048</b>	<b>843055</b>	

1) actual requirement, carton may contain more

2) Use support rail HH0132-04 in black.

# HS-PORTAL 150 Parts list (I)

Pos.	Qty.	Description	EAN 40 12453						
			EV 1 silver	C 34 dark brown	C 33 brown				
RAB dependant	30	Guide rail KH0130-01 for FHD 56 mm and 68 mm	Size	length (in mm)	RAB (in mm)				
			300	2900	1330 to 3000	130865	130872	155202	
			350	3400	3001 to 3500	130889	130896	155219	
			400	3900	3501 to 4000	130902	130919	155226	
			450	4400	4001 to 4500	130926	130933	155233	
		500	4900	4501 to 5000	130940	130957	155240		
		1	Threshold bag HH7642-04	Size	length (in mm)	RAB (in mm)			
				300		1330 to 3000	235126	235140	235133
				350		3001 to 3500	235157	235171	235164
				400		3501 to 4000	235188	235201	235195
				450		4001 to 4500	235218	235232	235225
		500		4501 to 5000	235249	235263	235256		
	31	1	Threshold HH7642-04	300	3000		843291	843314	843307
				350	3500		843321	843345	843338
				400	4000		843352	843376	843369
450				4500		843383	843406	843390	
500				5000		843413	843437	843420	
32	1	Running rail HH0131-04	300	3005		842751	842775	842768	
			350	3505		842782	842805	842799	
			400	4005		842812	842836	842829	
			450	4505		842843	842867	842850	
			500	5005		842874	842898	842881	

Pos.	Qty.	Description	EAN 40 12453					
			EV 1 silver	C 34 dark brown	C 33 brown			
FH dependant	33	Drive gear HS 150	Size	FH (in mm)	Handle pos(in mm)			
			170	1190 to 1790	410	873519	873526	
			200	1791 to 2215	1010	873533	873540	1)
			230	2090 to 2390	1010	873557	873564	
			260	2391 to 2690	1010	873571	873588	
34	1	Sealing rail B	Size	FH (in mm)		white 2)	black	
			230	1190 to 2390		843512	843529	3)
			260	2390 to 2690		843536	843543	

1) Use drive gear HS 150 in EV 1 or C 34 .

2) Or black.

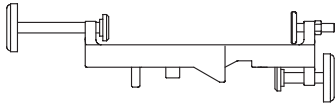
3) Use black sealing rail B.

Alternatively use timber rail B (see page 9).

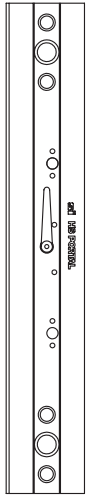
## Handle options

Pos.	Qty.	Description	EAN 40 12453				
			EV 1 silver	EV 2 new silver	white	dark brown	C 33 brown
1	1	Internal Si-line HS 150 Handle	861479	861486	861493	861509	861516
		consists of:					
2	2	Internal Si-line HS 150 handle					
		Countersunk screws M5 x 45			863329		
3	1	Bag. Finger pull HS 150	Si-silver	Si-new silver			Sibrown
		consists of:	873922	873939	873946	873953	873960
4	2	Si-line HS 150 Finger pull short					
		Self tapping screws 3 x 12					

# HS-PORTAL 150 Jigs



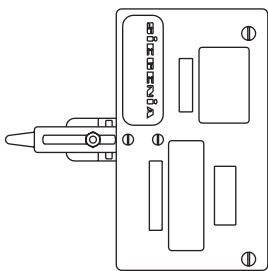
Description	Equipment	EAN 4012453
<b>Jig EB 633-1/04</b> for corner connections HH 7642-04	Drill bit: Ø 6,5 mm	155059



<b>Jig HS 150 PZ-25</b> for profile cylinder hole preparation	Drill bit: Ø 12 mm Ø 20 mm	157381
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<b>Jig</b> for inserting and pre drilling for the locking bolts	Drill bit: Ø 10 mm	155066
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<b>Template</b> for routing finger pull and centre lock	Cutter: Ø 20 mm Cutter guide: Ø 27 mm Drill bit: Ø 7 mm	141373
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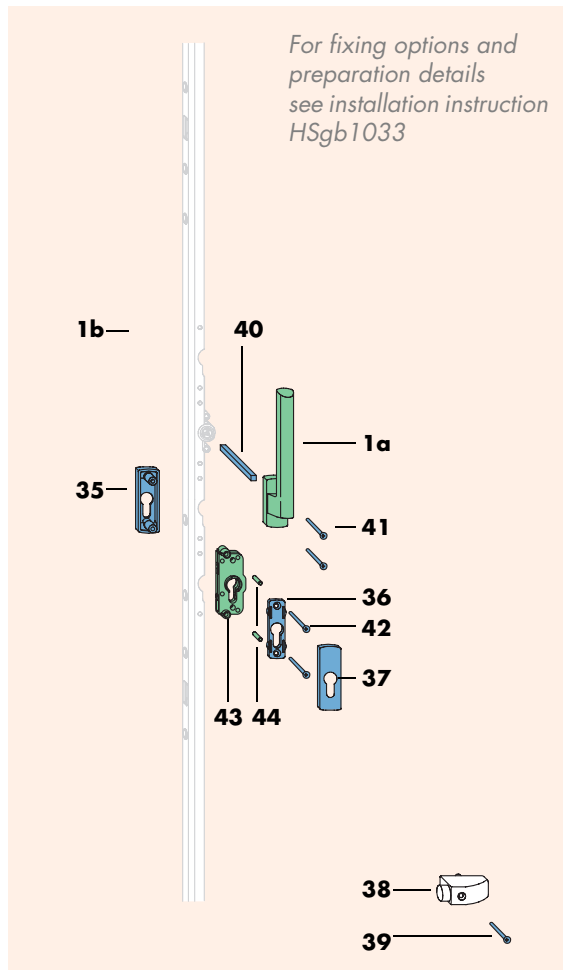
If using timber rail B, additionally required :



<b>Centrepunch</b> for positioning the locking bolts in the timber rail B		141519
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# HS-PORTAL 150 Scheme options and accessories (I)

## Accessory HS 150 PZ int. and ext.



DIN left or DIN right

### Scheme A



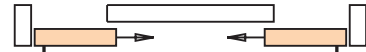
### Scheme G



### Scheme C



### Scheme K

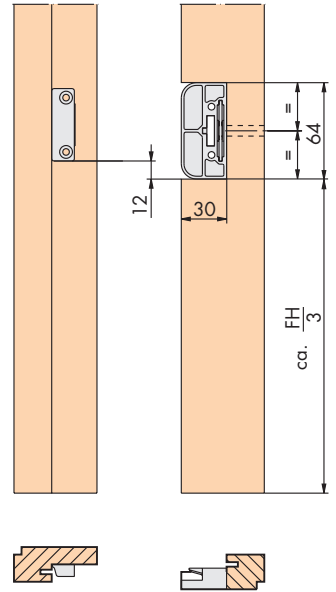
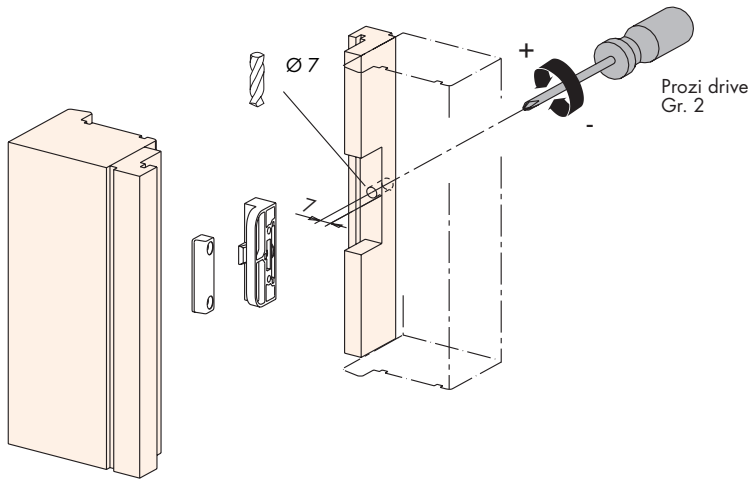
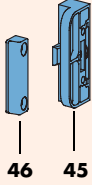


If using internal/external locking please replace items 1, 2 and 3 on page 3 with the following parts.

Pos.	Qty.	Description	EAN 40 12453					
			EV 1 silver	EV 2 new silver	white	black	dark brown	C 33 brown
	<b>1</b>	<b>Internal/external locking Si Line HS 150 PZ handles</b> <i>consists of:</i>	<b>261071</b>	<b>261088</b>	<b>261095</b>	-	<b>261101</b>	<b>261118</b>
1a	1	Internal Si-line HS 150 handle 0/0 - 12/8 without spindle	874202	874219	874226	-	874233	874240
1b	1	External flat Si-line PSK handle 0/0 - 12/8	874257	874264	874271	-	874288	874295
35	1	External Si-line PZ escutcheon	870679	870709	870723	-	870730	874301
	1	Bag cover caps Si-line PZ	871447	871478	871492	-	871508	871515
36	1	Internal Si-line PZ escutcheon						
37	1	Internal Si-line PZ cover cap						
	<b>1</b>	<b>Bag Stop</b> <i>consists of:</i>	grey <b>860649</b>	dark brown <b>821244</b>	white <b>821237</b>	black <b>831922</b>	dark brown <b>821244</b>	brown <b>827901</b>
38	1	Stop						
39	1	Self tapping screws 4,5 x 70						
	<b>1</b>	<b>Accessories FAV. TL/PZ</b> <i>consists of:</i>	<b>internal and external locking</b>					
			profile thickness 55 - 64 mm		<b>257982</b>			
			profile thickness 65 - 74 mm		<b>257975</b>			
40	1	7 mm Spindle	115 mm long	125 mm long	800256	800263		
41	2	Countersunk screw M5 x ..	65 mm long	75 mm long	801055	823095		
42	2	Countersunk screw M5 x ..	60 mm long	70 mm long	800454	800461		
	<b>1</b>	<b>Bag Profile cylinder housing</b> <i>consists of:</i>	25 mm		<b>874158</b>			
43	1	Profile cylinder housing	25 mm					
44	2	clamping pegs 5 x 22	DIN 7343					

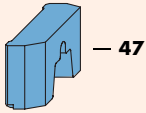
# HS-PORTAL 150 Accessories (II)

## Adjustable centre lock



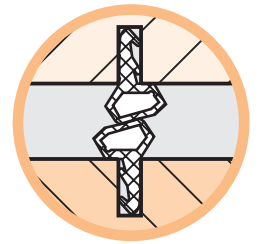
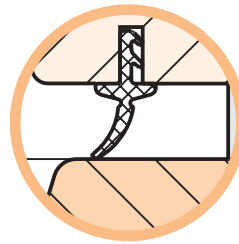
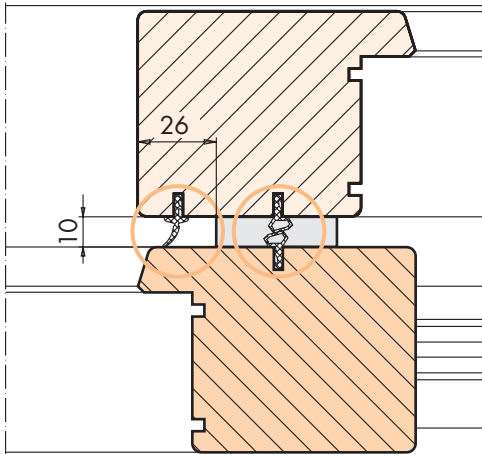
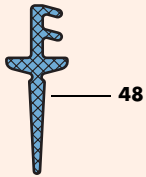
It is possible to fit more than one centre lock.

## Bottom end cap



when fitting the timber rail B, butt up against the sealing rail B (34).

## Seal HH0134-04 for 10 mm sash clearance (only for sash thicknesses 66 and 68 mm)

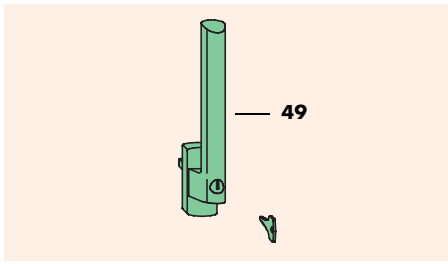


Seal HH0134-04

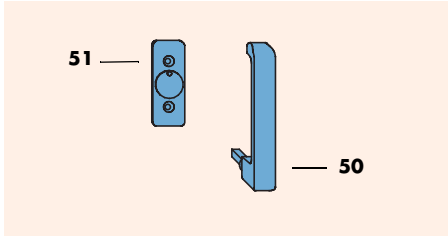
Please note installation of the standard seal HH0134-02.

	Pos.	Qty.	Description	EAN 40 12453		
				white	black	brown
Accessories		1	<b>Bag center lock</b> <i>consists of:</i>			
	45	1	Lock MV			824047
	46	1	Lock plate MV			821473
	47	1	<b>Bottom end cap</b>			821480
	48	1	<b>Sash seal HH0134-04</b> <i>for 10 mm sash clearance length 2,7 m length 50 m</i>			845509
				-		127100
						127148

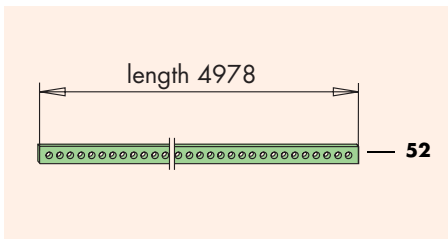
## HS-PORTAL 150 Accessories (III)



Internal locking Si-line HS 150 handle  
with key 2W 145

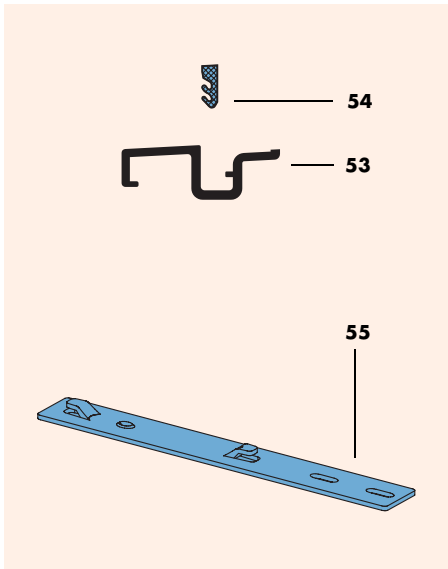


Removable handle

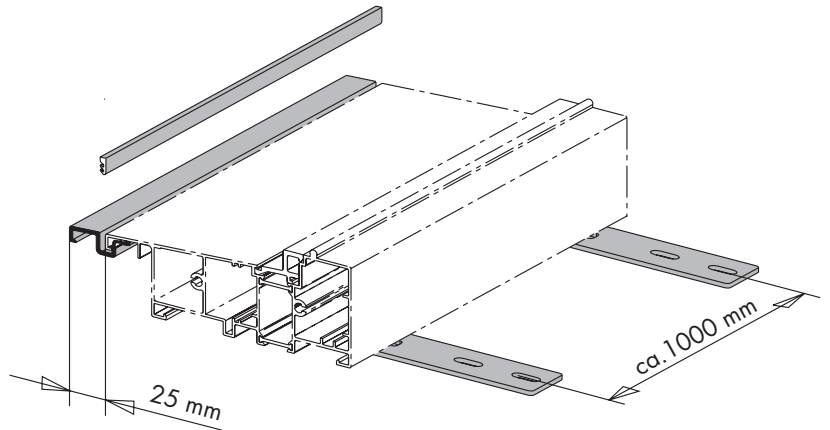


Connecting rod size 500

Stock lengths of size 500 are available.



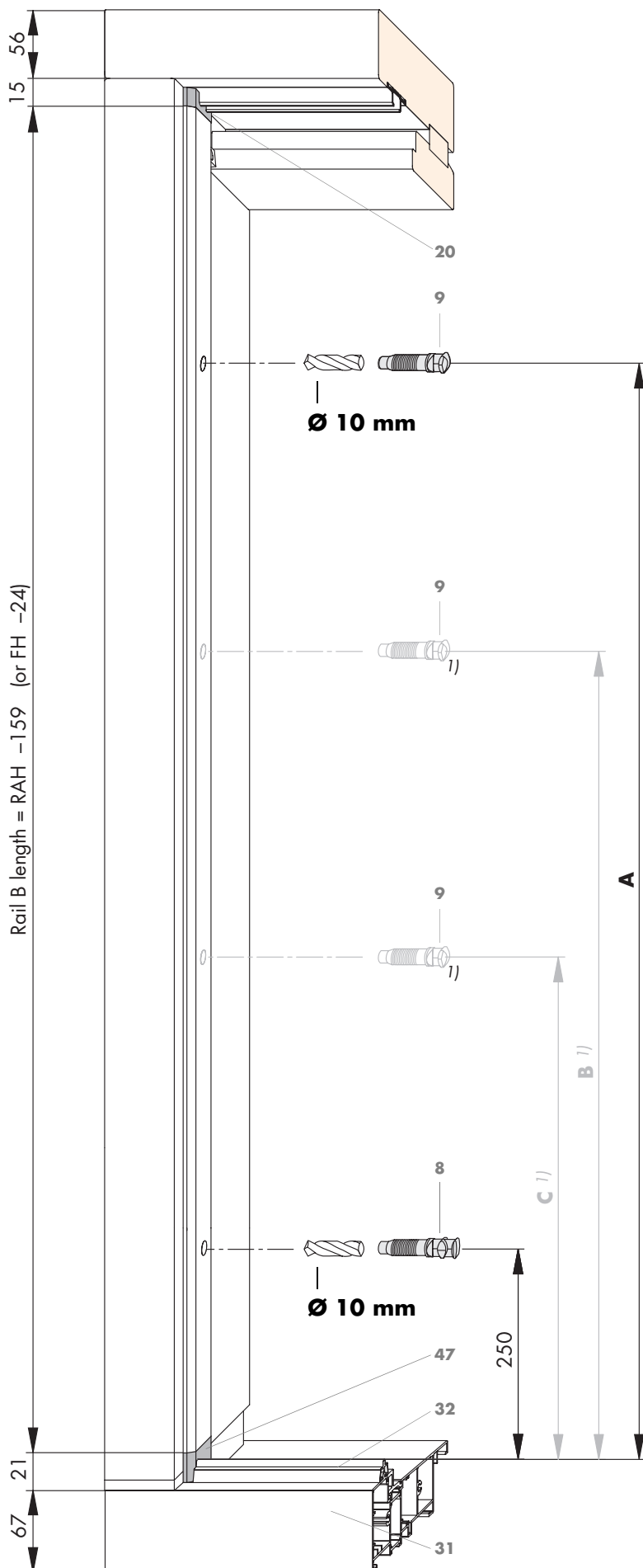
Extension rail HH7646 and fixing cleats  
for HH7642-04



Pos.	Qty.	Description	EAN 40 12453					
			EV 1 silver	EV 2 new silver	white	black	dark brown	C 33 brown
Accessories	1	<b>Internal locking Si-line HS 150 handle .</b> <i>consists of:</i>	<b>861523</b>	<b>861530</b>	<b>861547</b>	-	<b>861554</b>	<b>861561</b>
	49	Internal locking Si-line HS 150 handle with key 2W 145						
	1	Key 2W 145						
	2	Countersunk screw M5 x 45						
	<b>50</b>	<b>Removable handle</b>	<b>800249</b>	-	-	-	-	-
	<b>51</b>	<b>Rosette PSK-PORTAL</b>	-	-	<b>800362</b>	-	<b>800379</b>	<b>855553</b>
	<b>52</b>	<b>Connecting rod</b> size 500 length 4978	<b>828441</b>					
	<b>53</b>	<b>Extension rail HH7646</b> size 500 size 670	<b>128329</b>	-	-	-	<b>128336</b>	-
			<b>128343</b>	-	-	-	<b>128350</b>	<b>136829</b>
	<b>55</b>	<b>Cleat</b> 1/lfdm	<b>633.7633.5.008.A0</b>					
		<b>844977</b>						

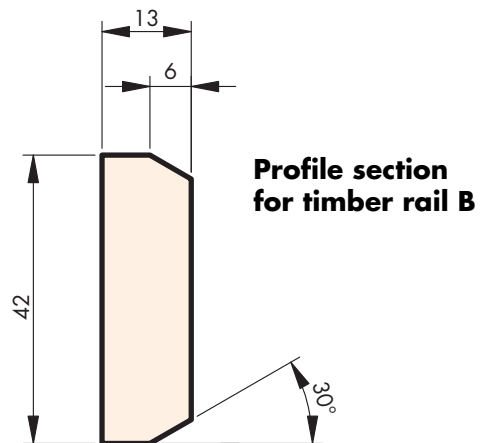


## HS-PORTAL 150 Timber rail B



- A** Fitting the timber rail B:
- Cut rail B to length.
  - Position rail B with bottom end cap (47) and screw on.
  - Fit top end cap (20).

- B** Fixing the locking bolt (8 and 9):
- Mark the positions for the locking bolts (8 and 9) using the centre punch.
  - Pre drill locking bolt holes (8 and 9) using a Ø 10 mm drill bit.
  - Screw on the locking bolts (8 and 9) using the proper tool (see pages 5 and 12).



Drive gear	Dim. A	Dim. B <sup>1)</sup>	Dim. C <sup>1)</sup>
Gr. 170	1000	600	-
Gr. 200	1600	1200	650
Gr. 230	1900	1200	650
Gr. 260	2200	1200	650

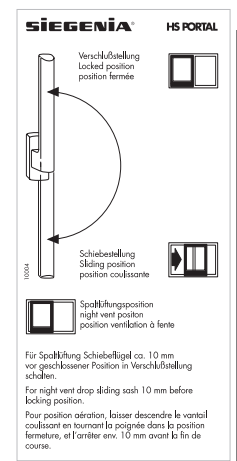
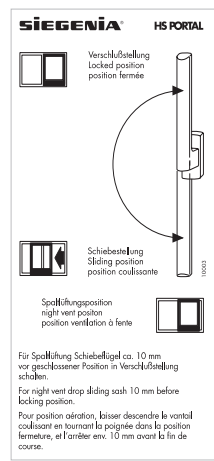
1) If desired two additional locking bolts (9) can be fitted as centre locking points.  
In this case, the locking point holes on the drive gear HS 150 (33) must be opened.

# HS-PORTAL 150 Important notes and abbreviations

## Important notes

- The recommendations for profile section, timber quality and design contained in DIN 68 121 (Timber profiles for windows and doors) are applicable to the SIEGENIA- HS-PORTAL 150 fittings.
- The **profile cross-section** must correspond to the specifications on the following SIEGENIA construction drawings:
 

<i>HSde1007</i>	HS-PORTAL with guide rail KH0130-01	Sash thickness 68 mm bzw.
<i>HSde1019</i>	HS-PORTAL with guide rail KH0130-01	Sash thickness 66 mm
<i>HSgb1008</i>	HS-PORTAL with guide rail KH0130-01	Sash thickness 56 mm
- The steel hardware components described in these instructions have been zinc plated and yellow chromated to DIN 50 961. They must not be installed for use in aggressive, corrosion promoting air conditions, or on wood containing aggressive additives.
- Use **only** SIEGENIA fittings with SIEGENIA fittings, otherwise we can accept no liability in respect of damages or defects arising where the assembly incorporates other hardware.
- Assemble the hardware components correctly as described on pages 11 to 20 .
- Surface treatment of the sliding elements must be performed prior to the attachment of the hardware. Post treatment could adversely affect the function of the fittings. In this case we can accept no liability.
- Please follow the standard techniques for glazing and wedging of glass sealed units within the sash and frame.
- Do not use acid based sealing agents as this can lead to corrosion of the fittings.
- Keep the running rail HH0131-04 free from dirt and debris, in particular from cement and cleaning agent residues. Avoid direct contact of the fittings with water or detergent.
- Affix a clearly visible copy of the operating sticker to one of the lift and sliding sashes (left or right hand). The sticker can be found in the basic „HS 150-H“ carton



## Liability exclusion

We accept no liability in respect of any damages or malfunctions caused by the hardware or the lift and sliding doors fitted with them, as a result of incorrect and inappropriate specifications, failure to follow these instructions, wilful damage or negligence or misuse or alteration or repair, or of exertion of excessive force to the hardware by the end user or customer.

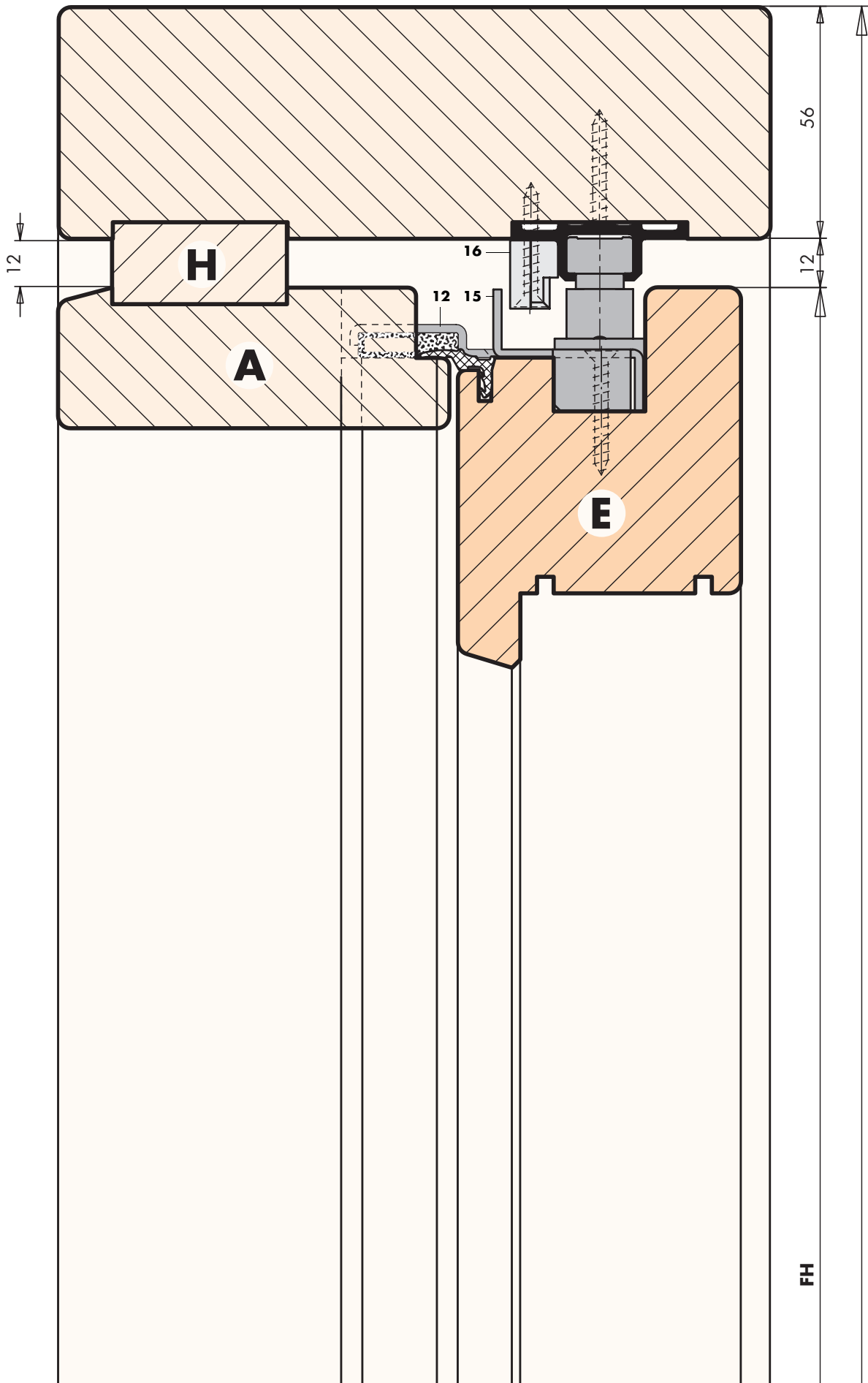
## Abbreviation

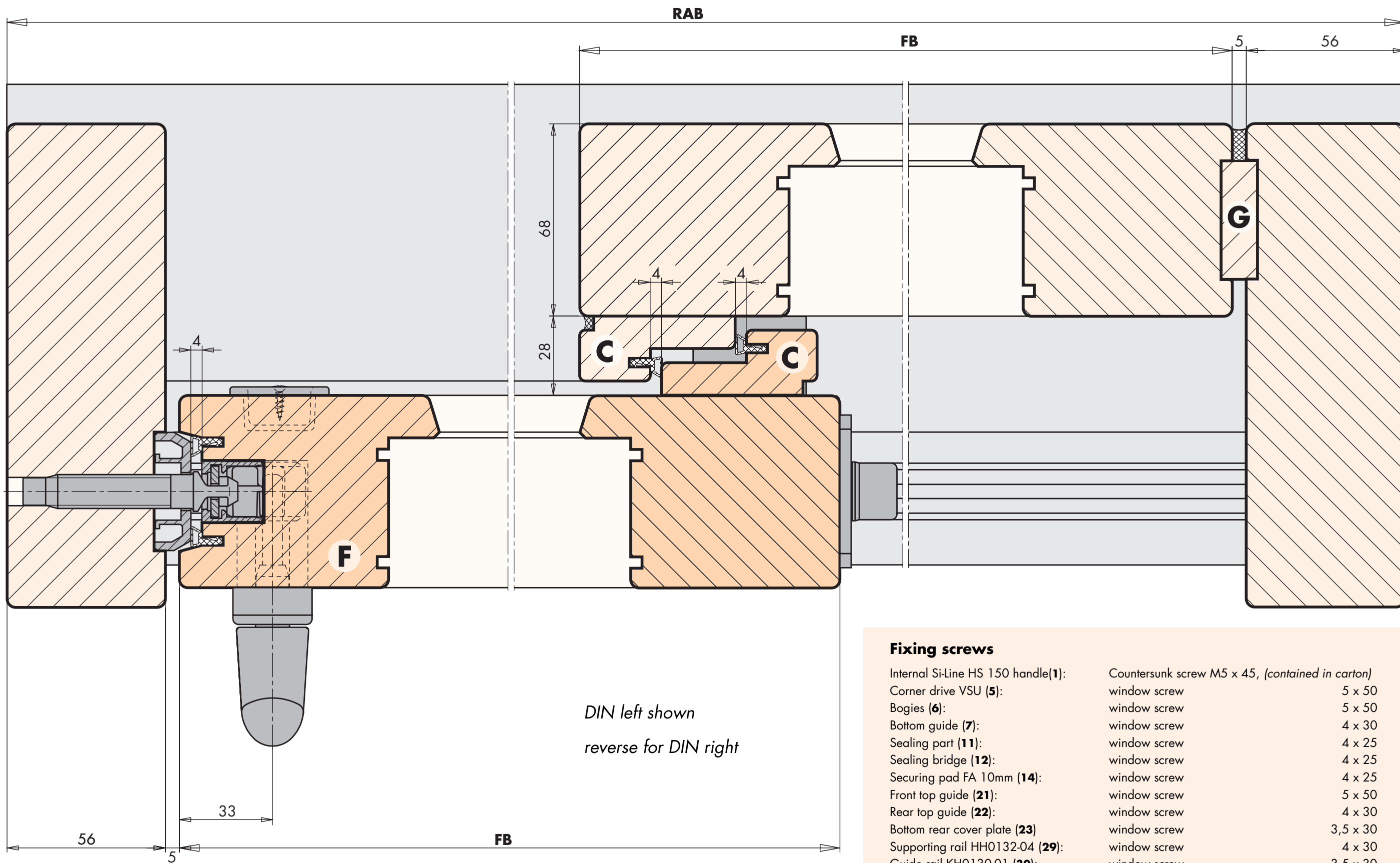
The following abbreviations are used in this document:

Btl.	Bag	FHD	Sash thickness	RAB	Frame width
EB	Drill jig	HH	Lift and slide timber	RAH	Frame height
FA	sash clearance	MV	Centre lock	VSU	Locking side bottom
FB	Sash width	OKFF	Finished floor level		
FH	Sash height	PZ	Profile cylinder		

# HS-PORTAL 150 Vertical cross section, top

**Note:** Drawings on pages 11 - 13 and 16 are **not** to scale.





DIN left shown  
reverse for DIN right

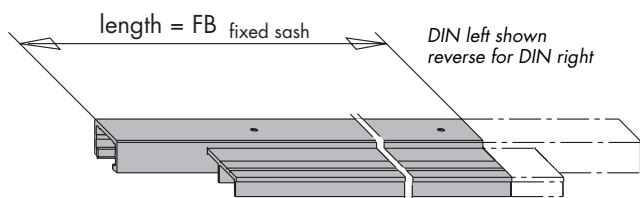
**Fixing screws**

Internal Si-Line HS 150 handle(1):	Countersunk screw M5 x 45, (contained in carton)
Corner drive VSU (5):	window screw 5 x 50
Bogies (6):	window screw 5 x 50
Bottom guide (7):	window screw 4 x 30
Sealing part (11):	window screw 4 x 25
Sealing bridge (12):	window screw 4 x 25
Securing pad FA 10mm (14):	window screw 4 x 25
Front top guide (21):	window screw 5 x 50
Rear top guide (22):	window screw 4 x 30
Bottom rear cover plate (23)	window screw 3,5 x 30
Supporting rail HH0132-04 (29):	window screw 4 x 30
Guide rail KH0130-01 (30):	window screw 3,5 x 30
Drive gear HS 150 (33):	window screw 5 x 50
Sealing rail B (34):	window screw 4 x 30

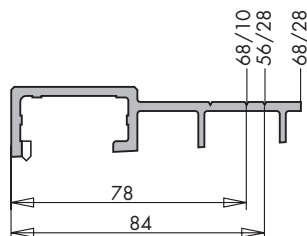
Galvanised and bichromated window screws for timber windows (not supplied).

**Sash thickness 68 mm / Sash clearance 28 mm**  
(Other sizes possible given on SIEGENIA construction drawings. See page 1.)

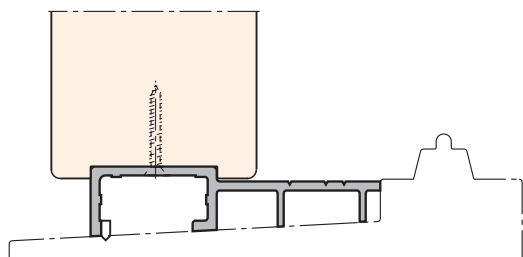
# HS-PORTAL 150 Assembly of components (I)



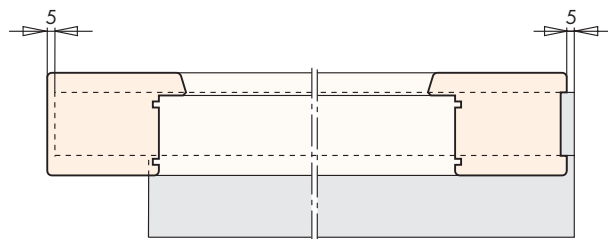
Diag. 1



Diag. 2



Diag. 3



Diag. 4

## Assembly sequence

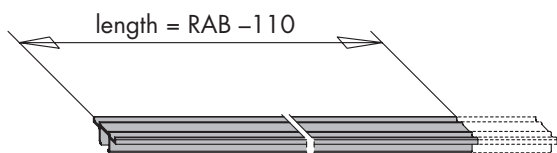
- A** Fixing the support rail HH0132-04 (29) to the fixed sash.
- Cut the support rail HH0132-04 (29) to length according to the sliding direction DIN left or DIN right (Diag. 1).
  - Dependant on sash thickness/sash clearance 56/28 or 68/10 the support rail must be cut to width along the corresponding notch (Diag. 2).
  - Screw on the support rail HH0132-04 (29) (Diag. 3 and 4).

**B** Installing the fixed sash in the frame (without diag.).

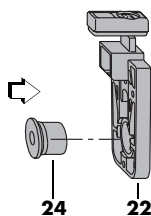
- Fit the sash into the frame with strips „G” and „H” and screw on (see pages 11 - 13 and page 16).
- Press the end cap (25) into the support rail HH0132-04 (29) and seal.

**C** Installing the guide rail KH0130-01 (30).

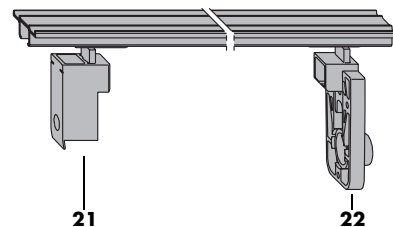
- Cut the guide rail KH0130-01 (30) to length (Diag. 5).
- Press the buffer (24) into the top rear guide (22) (Diag. 6).
- Insert top front (21) and top rear guides (22) into the guide rail KH0130-01 (30) (Diag. 7) and screw on (see page 11).



Diag. 5

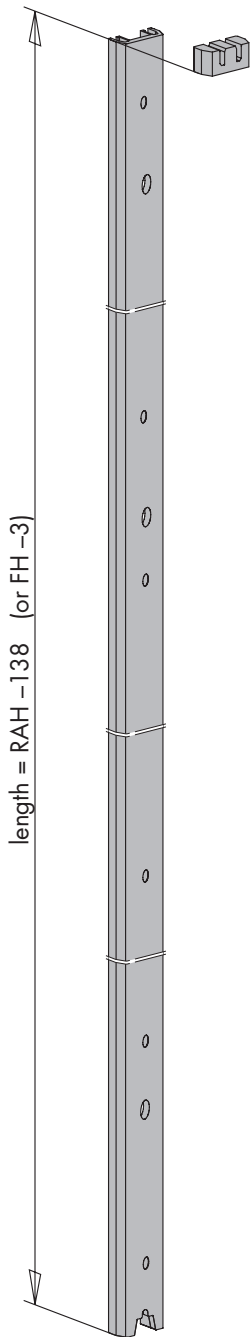


Diag. 6



Diag. 7

## HS-PORTAL 150 Frame: Assembly of components (II)



Diag. 8

### D

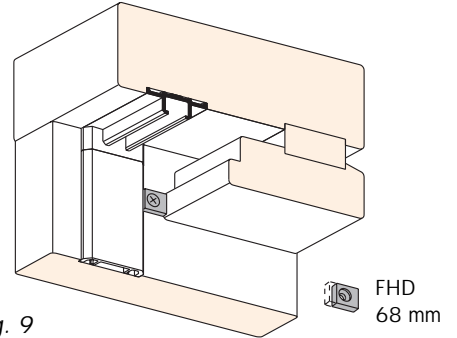
Fitting the sealing rail B (34).

- Cut sealing rail B (34) to length (Diag. 8).
- Position sealing rail B (34) (see page 12) and screw on.
- Insert top end cap (20) (Diag. 8).

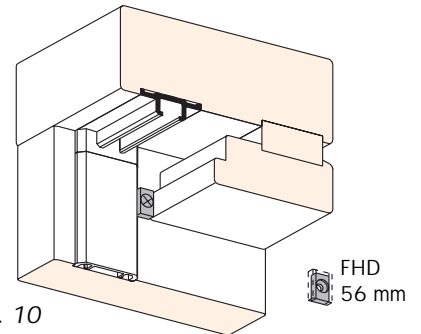
### E

Fitting the top seal part (11).

- Screw on the seal part, (11) with the correct orientation according to sash thickness 68mm (Diag. 9) or 56 mm (Diag. 10).



Diag. 9

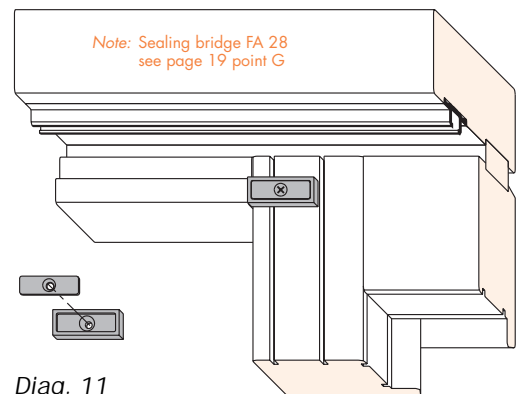


Diag. 10

### F

Fitting the sealing part FA 10 mm (13).

- For 10 mm sash clearance position sealing part FA 10 mm (13) with securing pad FA 10 mm (14) and fix in place (diag 11).



Diag. 11

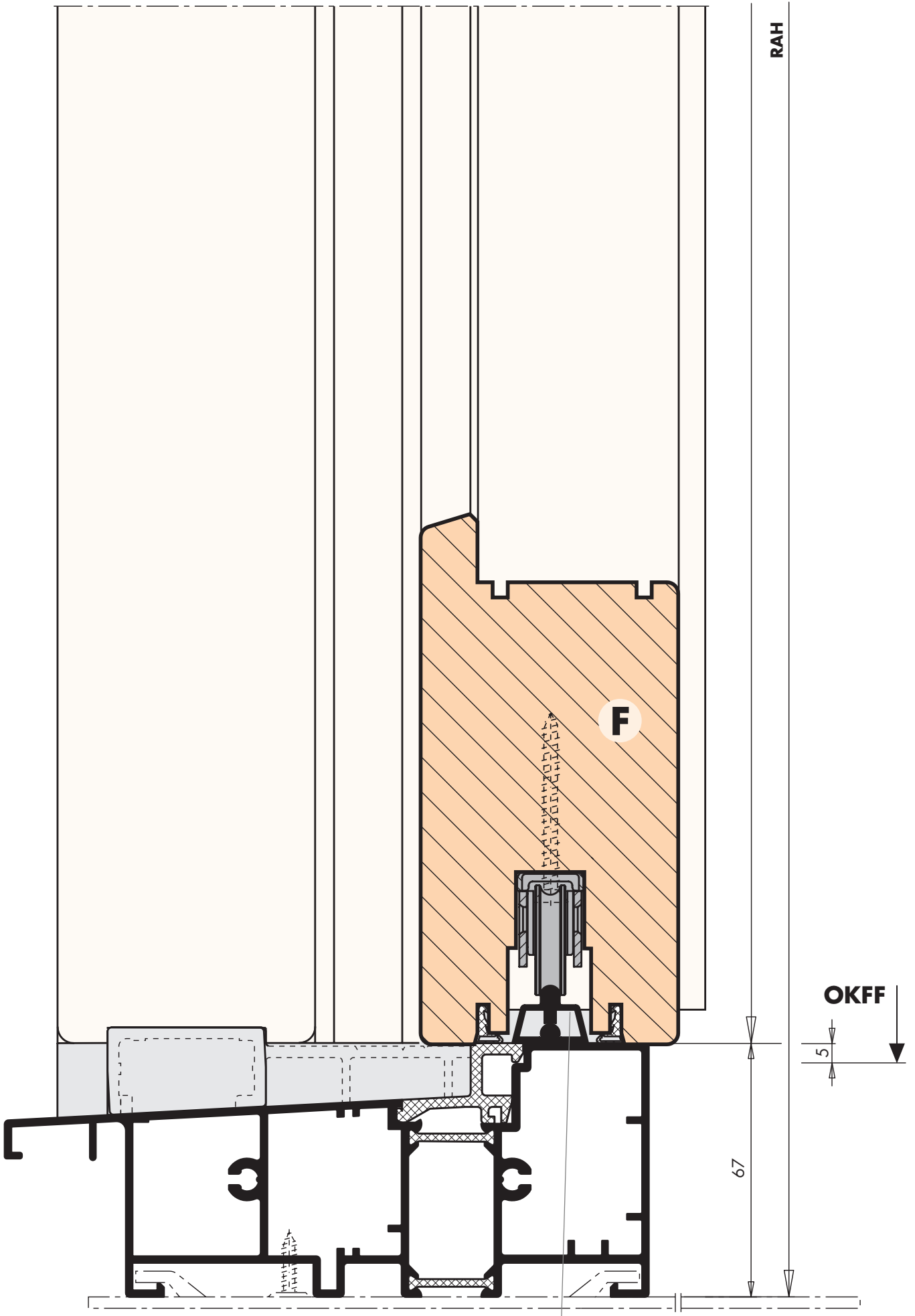
### G

Fitting the sealing block (10).

- Cut the sealing block (10) to size according to the sash thickness /sash clearance utilised 56/10, 56/28 or 68/10 (Diag. 12).
- Position the sealing block (10) and seal or stick on.

Diag. 12

RAH



Note: Install without running rail HH0131-04 see Installation instruction HSgb1004 page 6

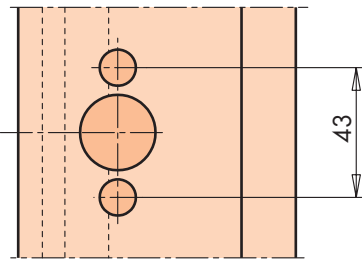
# HS-PORTAL 150 Sash preparation (I)


## All dimensions (in mm) and specifications for :

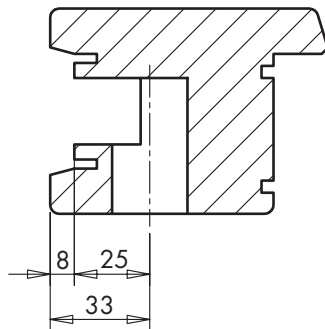
Timber elements manufactured to SIEGENIA construction drawings

<i>HSde1007</i>	HS-PORTAL with guide rail KH0130-01 sash thickness 68 mm bzw.
<i>HSde1019</i>	HS-PORTAL with guide rail KHH0130-01 sash thickness 66 mm
<i>HSgb1008</i>	HS-PORTAL with guide rail KH0130-01 sash thickness 56 mm

## Drive gear preparation



  $\varnothing 12$  mm  
 $\varnothing 25$  mm



For more information regarding fitting options  
for the drive gear see *HSgb1033*

410 (510 o. 810) Drive gear Size 170

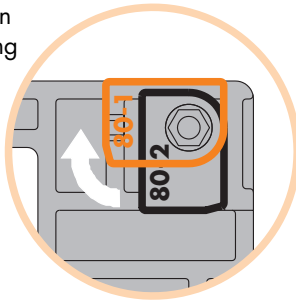
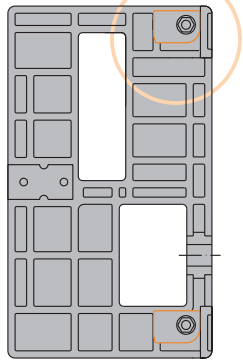
1010 (810, 910 o. 1110) Drive gear Size 200, 230 and 260

Gearbox housing movable

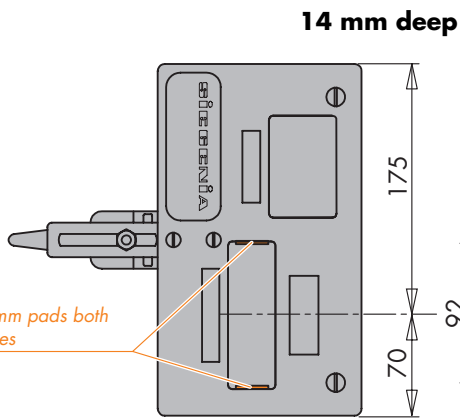


# HS-PORTAL 150 Sash preparation (II)

**Important:** For the finger pull and MV turn the stop on the template to fitting type 80-1 position.



**External view of the sash**



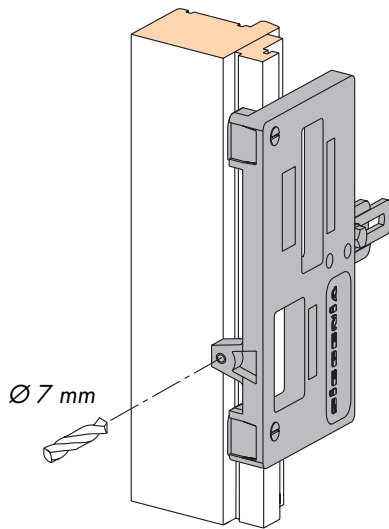
2 mm pads both sides

**Milling template**

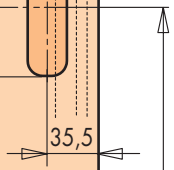
for finger pull and MV

cutter:  $\varnothing 20$  mm

cutter guide:  $\varnothing 27$  mm

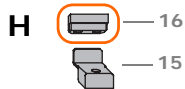


When using the centre lock bag Pos. (45) and Pos. (46) pre drill  $\varnothing 7$  mm (see also page 7).



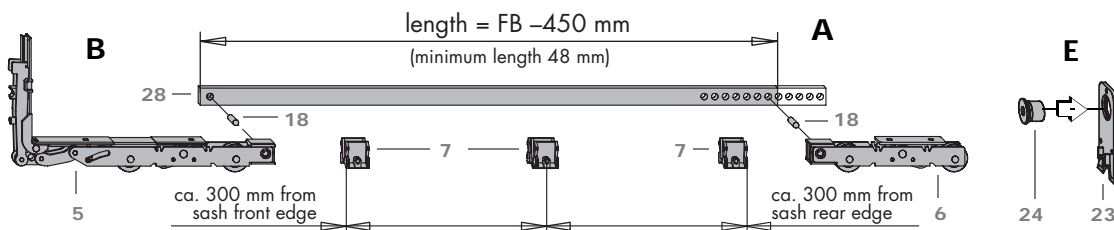
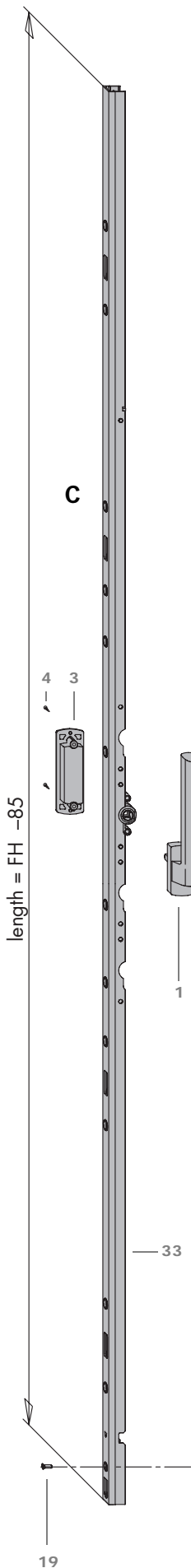
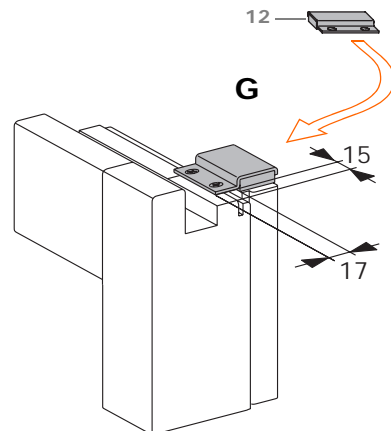
410 (510 o. 810) Drive gear Size 170  
 1010 (810, 910 o. 1110) Drive gear Size 200, 230 and 260  
 Gearbox housing movable

# HS-PORTAL 150 Sash: Assembly of components



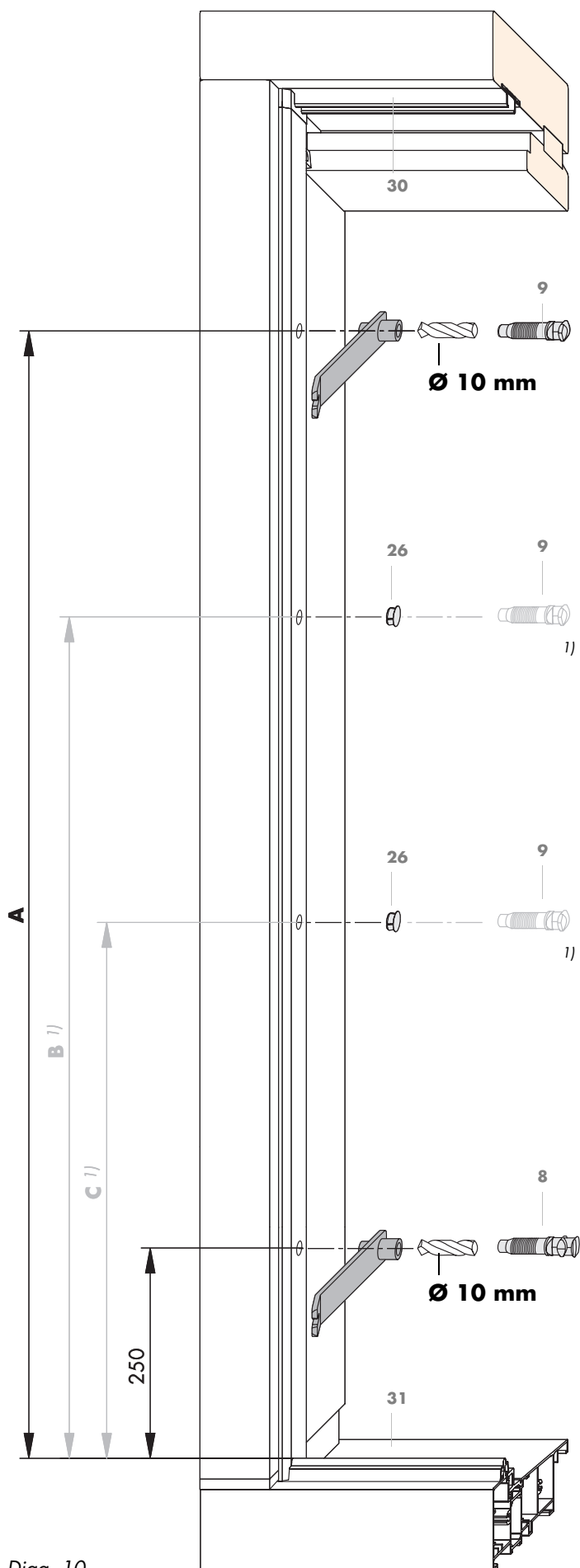
## Assembly sequence

- A** Connecting the corner drive HS (5) and bogies HS (6):
- First cut the connecting rod (28) to length and connect to the corner drive HS (5) with the dowel pin 6 x 16 (18).
  - Join the connecting rod (28) to the bogies HS (6) using a dowel pin 6 x 16 (18).
- B** Fitting the complete bogie assembly to the sash:
- Screw on the corner drives HS (5) and bogies HS (6).
  - Screw on the bottom guides (7).
- C** Fitting the drive gear (33):
- Insert the cut to length drive gear (33) in the sash and connect to the corner drive HS (5).
  - Fix the lower end of the drive gear (33) to the corner drive HS (5) using the countersunk screw M5 x 13 (19). Other fixings should be made with window screws.
- D** Fitting of the handle (1) and the finger pull (3):
- Insert the handle (1) in the locked position (Handle upwards) and by turning sharply through 180° break the centre fixings of the corner drive (5), bogies (6) and drive gear (33).
  - Fix the handle (1) with countersunk screws M5 x 45 (2). Max. torque 2,5 Nm!
  - Fix on the finger pull (3) with self tapping screws 3 x 12 (4).
- E** Fitting the bottom rear cover plate (23):
- Press the stop (24) into the cover plate (23).
  - Screw the cover plate (23) onto the sash.
- F** Inserting the seals (not shown):
- Cut the seals HH0134-02 (27) and HH0134-05 (17) and insert. See pages 11 to 13 and 16.
- G** Attaching the sealing bridge FA 28 mm (12):
- For 28 mm sash clearance screw the sealing bridge FA 28 mm (12) on to the sash.
- H** Installing the top horizontal centre lock:
- Screw the top lock MV (15) on to the middle of the sash (see also page 11).
  - **After first inserting** the sliding sash, screw the top lock plate MV (16) on to the guide rail (30) (see also page 11).



*Note:* Dimensions for window screws are given on page 13.

## HS-PORTAL 150 Frame: Assembly of components (III), installation of the sashes



Diag. 10

- H** Fitting the locking bolts (**8** and **9**).
- Pre drill the holes for the bolts (**8** and **9**) using a  $\varnothing$  10 mm drill bit. Use locking bolt jig (Diag. 13).
  - Screw in the locking bolts (**8** and **9**) using the same jig. (see also page 12).
  - Insert cover caps (**26**) into the unused locking bolt holes. (Diag. 13).

Drive gear	Dim A	Dim B <sup>1)</sup>	Dim C <sup>1)</sup>
Gr. 170	1000	600	-
Gr. 200	1600	1200	650
Gr. 230	1900	1200	650
Gr. 260	2200	1200	650

- 1) If required, two additional locking bolts (**9**) can be fitted as centre locking points.  
In this case, the locking point hole in the drive gear HS 150 (**33**) must be opened up.

### Fitting the sliding sashes

- A** Insert the sashes in the frame and screw on the top front (**21**) and rear (**22**) guides.
- B** Bring the top lock plate MV (**16**) to the top lock MV (**15**) and screw on to the guide rail (**30**) (see also pages 11 and 19).

### Adjustments

If required, the sealing pressure on the vertical style can be adjusted by turning the locking bolts (**8** and **9**).