

# HINGE SYSTEMS FOR TIMBER ENTRANCE DOORS

For safe and architecturally sophisticated entrance situations



# INDEX

## Hinge systems for timber entrance doors

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### **BAKA® – the hinge system for timber entrance doors**

- 7 **BAKA Protect 2000** up to 120 kg with 2D adjustment for rebated timber doors
  - 8 **BAKA Protect 4000** up to 160 kg with 3D comfortable eccentric adjustment for rebated timber doors
- 

### **TECTUS® – the concealed hinge solution for rebated timber entrance doors**

- 9 **TE 640 3D** up to 200 kg for unrebated high performance heavy-duty doors
  - 10 **TE 680 3D FD** up to 160 kg for rebated timber entrance doors
- 

### **VARIANT® VX – the knuckle hinge for timber entrance doors**

- 11 **VX 7729/160-4 HA Set** up to 160 kg for unrebated, outward opening timber/aluminium entrance doors
  - 12 **VX 7939/160-4 FD 18/5** up to 300 kg for rebated timber entrance doors with overlap seals and 5 mm clearance
  - 13 **VX 7939/160-4 FD 18/12** up to 300 kg for rebated exterior doors with overlap seals and 12 mm clearance
  - 14 **VX 7859/160-4 FD 18/12** up to 120 kg for rebated flush exterior doors with acoustic seal and 12 mm clearance
- 

- 15 Service
-

# GUARANTEED SAFETY AND HIGH QUALITY AESTHETICS

## **BAKA PROTECT –**

### **THE PROVEN HINGE SYSTEM FOR TIMBER ENTRANCE DOORS**

The newly developed door hinge systems of the BAKA Protect 2000 series (2D adjustable) and the BAKA Protect 4000 series (3D adjustable) are optimally adapted to the highest requirements in terms of technology and functionality. The high load capacities, various sealing systems and differently shaped and adapted overlap areas as parts of the rebate geometries, make this hinge system compatible for all conditions around the timber entrance door. Even high glass weights, which are associated with the given market requirements, are held securely. This hinge system is rounded off by the usual extensive choice of finishes and the necessary application technology for functional and efficient installation.



### **TECTUS – CONCEALED AND FLUSH**

With a load capacity of up to 200 kg, the TE 640 3D hinge system enables flush installation of unrebated, high performance heavy-duty doors. The TE 680 3D FD model version offers a solution for conventional, rebated timber entrance doors. House entrance situations can therefore be designed in a minimalist and modern way without having to forego safety factors.

### **VARIANT VX – THE HINGE SYSTEM FOR TIMBER ENTRANCE DOORS**

With the VX 7939/160-4 FD 18/5, VX 7939/160-4 FD 18/12 and VX 7859/160-4 FD 18/12 model versions, the VARIANT VX hinge system provides solutions for rebated and rebated-flush timber entrance doors. In addition, the hinge system VX 7729/160 HA in a set provides the solution for unrebated timber/aluminium entrance doors opening outwards and enables a prestigious house entrance area thanks to this material combination.



# INNOVATIVE HARDWARE FOR OUTSTANDING STABILITY AND SAFETY



## **BAKA® Protect 2010 2D**

with 2D adjustment for  
timber entrance doors

Load capacities up to 120 kg



## **BAKA® Protect 4010 3D**

with 3D comfortable eccentric ad-  
justment for timber entrance doors

Load capacities up to 160 kg



## **TECTUS® TE 640 3D**

the concealed hinge system for  
unrebated timber entrance doors

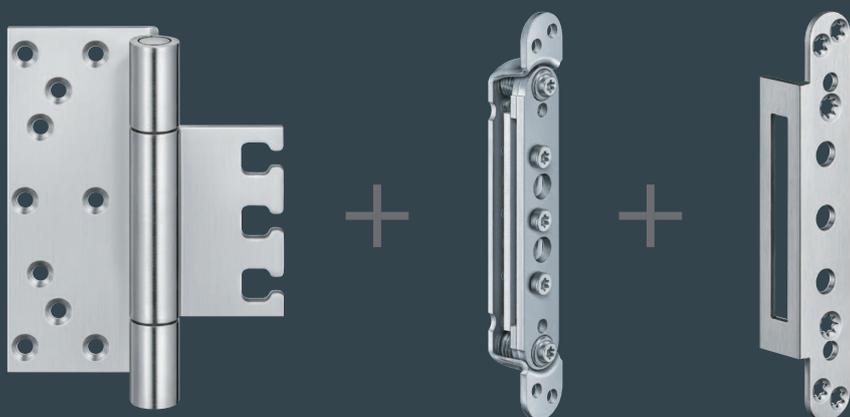
Load capacities up to 200 kg



## **TECTUS® TE 680 3D FD**

the concealed hinge system for  
rebated timber entrance doors

Load capacities up to 160 kg



**VARIANT® VX 7729/160-4 HA Set**

for unrebated, outward opening timber/aluminium doors consisting of knuckle hinge, receiver and cover angle

Load capacities up to 160 kg



**VARIANT® VX 7939/160-4 FD 18/5**

for rebated timber entrance doors with overlap seals and 5 mm clearance

Load capacities up to 300 kg



**VARIANT® VX 7939/160-4 FD 18/12**

for rebated exterior doors with overlap seals and 12 mm clearance

Load capacities up to 300 kg



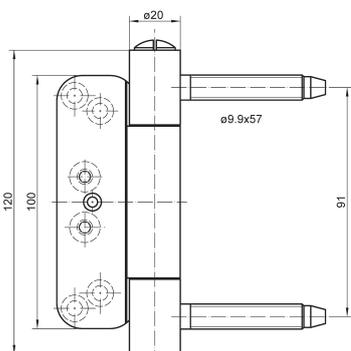
**VARIANT® VX 7859/160-4 FD 18/12**

for rebated flush exterior doors with acoustic seal and 12 mm clearance

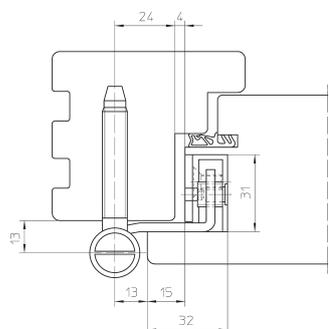
Load capacities up to 120 kg



e.g. BAKA Protect 2010 2D



e.g. BAKA Protect 2010 2D



e.g. BAKA Protect 2010 2D  
15 mm overlap without overlap seal

## BAKA Protect 2000

with 2D adjustment for rebated timber entrance doors

entrance door hinge	2D adjustable	up to 120 kg
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### Product features

- for rebated timber entrance doors
- concealed receiver in the door leaf
- 2D adjustment (side +/- 3.0 mm, compression +/- 3.0 mm)
- minimized routing work
- maintenance-free slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	120.0 kg
Knuckle length		120.0 mm
Knuckle diameter		20.0 mm
Pin diameter		10.0 mm
Cutter diameter		20.0 mm

### Finishes

Topzinc (110), RAL 9016 Traffic White (070), Satin Stainless Steel (040), other finishes available upon request

### Combination

accessories	decorative sleeve No. 11
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### Installation tools

jig	drilling jig BAKA Protect 2000 frame
	ball catch location routing jig BAKA Protect 2000 frame
	routing jig BAKA Protect 2000 door
	ball catch location routing jig BAKA Protect 2000 door

### Functional areas

soundproof

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also available with security pin (MSTS).

### Classification key

2	7	3	0	1	—*1	0	10*2
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\*1 depending on the finish

\*2 test cycles in continuous operation with 120 kg

Variants	Load capacity	Overlap	Gasket projection
BAKA Protect 2010 2D	up to 120 kg	15/18 mm	-
BAKA Protect 2010 2D FD	up to 120 kg	15/18 mm	15/18 mm
BAKA Protect 2030 2D FD	up to 120 kg	18/20 mm	10 mm
BAKA Protect 2040 2D FD	up to 120 kg	18/20 mm	12 mm
BAKA Protect 2030 2D-15 FD MSTS	up to 80 kg	18 mm	10 mm
BAKA Protect 2040 2D-15 FD MSTS	up to 80 kg	18 mm	12 mm

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)

# BAKA®

## BAKA Protect 4000

with 3D comfortable eccentric adjustment for rebated timber entrance doors

entrance door hinge	3D adjustable	up to 160 kg
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### Product features

- for rebated timber entrance doors, concealed receiver in the door leaf und frame
- with comfortable eccentric adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- usable for system testing in accordance with DIN EN 1627 ff.
- internal pin, maintenance-free slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	160.0 kg
Knuckle length		140.0 mm
Knuckle diameter		20.0 mm
Pin diameter		10.0 mm
Cutter diameter		20.0 mm

### Finishes

Topzinc (110), Satin Nickel Look (F2) (125), polished gilded (032), RAL 9016 Traffic White (070), H9 Brown (071), Satin Stainless Steel (040), RAL 9005 Matte Black (107), other finishes available upon request

### Combination

accessories	cover cap BAKA Protect 4000 decorative sleeve No. 12
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### Installation tools

jig	retrofit kit BAKA Protect 4000 frame drilling jig BAKA Protect 4000 frame drilling/routing jig BAKA Protect 4000 frame ball catch location routing jig BAKA Protect 4000 frame routing jig BAKA Protect 4000 door ball catch location routing jig BAKA Protect 4000 door
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### Functional areas

fire resistance, soundproof, burglar resistance

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Set consists of 3 hinges (1 hinge = height and side adjustment, 2 hinges = compression and side adjustment). If necessary, a 4th hinge has to be ordered separately. Also available with security pin (MSTS).

### Classification key

2	7	3	1*1	1	—*2	0	10*3
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\*1 Test evidence for functional doors to be achieved with full door sets and assemblies.

\*2 depending on the finish

\*3 test cycles in continuous operation with 160 kg

Variants	Load capacity	Overlap	Gasket projection
BAKA Protect 4010 3D	up to 160 kg	15/18 mm	-
BAKA Protect 4010 3D FD	up to 160 kg	15/18 mm	15/18 mm
BAKA Protect 4020 3D	up to 160 kg	20 mm	-
BAKA Protect 4020 3D FD	up to 160 kg	20 mm	18 mm
BAKA Protect 4030 3D FD	up to 160 kg	18/20 mm	10 mm
BAKA Protect 4040 3D FD	up to 160 kg	18/20 mm	12 mm
BAKA Protect 4060 3D FD	up to 160 kg	18/20 mm	6 mm
BAKA Protect 4048 3D K	up to 120 kg	rebated flush	
BAKA Protect 4049 3D	up to 120 kg	unrebated flush	

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)

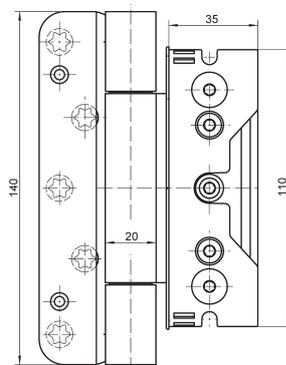
QUALITY MARKS



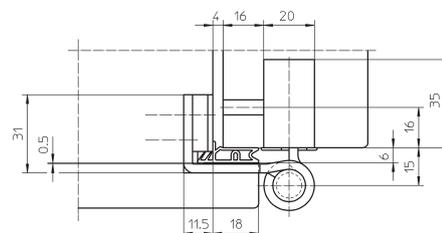
FUNCTIONAL AREAS



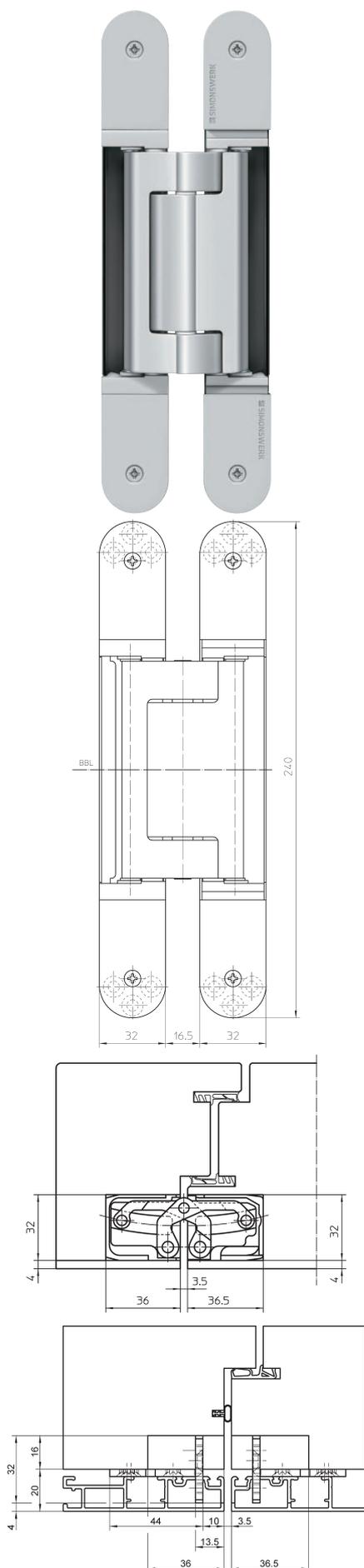
e.g. BAKA Protect 4010 3D FD



e.g. BAKA Protect 4010 3D FD



e.g. BAKA Protect 4010 3D FD  
18 mm overlap with overlap seal



e.g. TE 640 3D with fixing angle TE 640 3D BW/16

## TE 640 3D

for unrebated high performance heavy-duty doors

hinge		up to 200 kg
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### Product features

- completely concealed hinge system
- for timber, steel or aluminium frames
- for unrebated high performance heavy-duty doors
- sideways closed hinge body for a homogeneous mortise appearance
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- maintenance-free slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	200.0 kg
Overall length		240.0 mm
Width (frame part)		32.0 mm
Width (door part)		32.0 mm
Cutter diameter		24.0 mm
Opening angle		180°

### Finishes

Satin Chrome Look (F1) (124), Satin Nickel Look (F2) (125), Stainless Steel Look (SSL) (126), polished brass (030), polished nickelled (038), Bronze Finish (174), Bronze Finish Light (175), Bronze Finish Dark (176), RAL 9005 Matte Black (107), coloured (079), other finishes available upon request

### Combination

receiver	block frame	TE 640 3D BW
	casing frame	TE 640 3D FZ
	steel frame	TE 640 3D SZ
	steel door	TE 640 3D ST

### Installation tools

jig		universal milling frame
step 1	template	No. 5 250659 5
step 2	template	No. 5 250689 5

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)

### Functional areas

fire resistance, smoke resistance, soundproof, burglar resistance

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

With an opening position of 180° the door may have to be fixed additionally.

### Classification key

4	7	6	1*1	1	—*2	1	14
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\*1 Test evidence for functional doors to be achieved with full door sets and assemblies.

\*2 depending on the finish

### QUALITY MARKS



### FUNCTIONAL AREAS



# TECTUS®

## TE 680 3D FD

for rebated timber entrance doors

hinge up to 160 kg

### Product features

- concealed hinge system
- for rebated timber entrance doors
- sideways closed hinge body for a homogeneous mortise appearance
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.5 mm)
- continuous sealing system
- 18 mm overlap width
- maintenance-free slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	160.0 kg
Width (frame part)		30.0 mm
Width (door part)		40.5 mm
Length (frame part)		250.0 mm
Length (door part)		140.0 mm
Cutter diameter		20.0 mm
Opening angle		180°

### Finishes

Satin Chrome Look (F1) (124), RAL 9005 Matte Black (107), other finishes available upon request

### Combination

hinge		TE 680 3D FD Energy
receiver	slim blind frame	TE 680 3D BZ
accessories	gasket	DS 7435

### Installation tools

jig		routing jig TE 680 3D FD
		ball catch location routing jig TE 680 3D FD
door	Overlap 21, 22 mm	template No. 5 251109 5
	Overlap 23 mm	template No. 5 251110 5
	Overlap 24, 25, 26, 27 mm	template No. 5 251111 5
frame	Overlap 21 mm	template No. 5 251112 5
	Overlap 22, 23 mm	template No. 5 251113 5
	Overlap 24, 25 mm	template No. 5 251114 5
	Overlap 26 mm	template No. 5 251115 5
	Overlap 27 mm	template No. 5 251116 5

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)

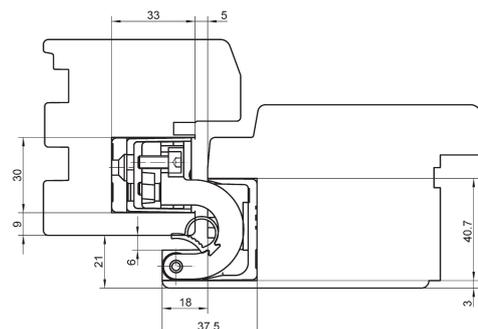
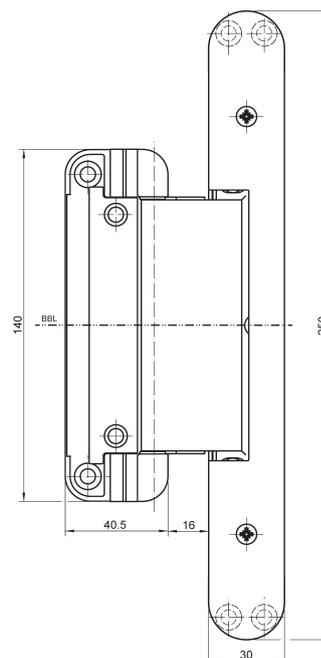
### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). With an opening position of 180° the door may have to be fixed additionally. A version with permanent energy transfer, TE 680 3D FD Energy, is available.

### Classification key

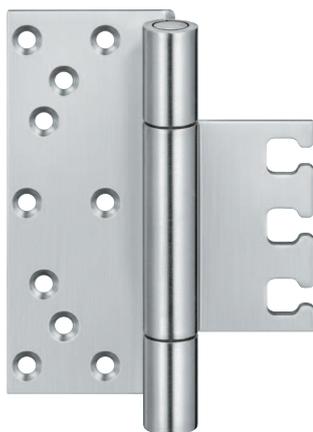
4	7	7	0	1	—*1	1	14
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\*1 depending on the finish



for overlap widths from 21 - 27 mm  
e.g. overlap width 21 mm

# VARIANT® VX



## VX 7729/160-4 HA Set

for unrebated, outward opening timber/aluminium doors

hinge	unrebated	up to 160 kg
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### Product features

- consisting of knuckle hinge, receiver and cover angle
- with welded hinge knuckle
- with security pin
- for unrebated, outward opening timber/aluminium doors
- for 3D adjustable receivers VARIANT VX 7531 3D and VX 7535 3D
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	160.0 kg
Knuckle length		160.0 mm
Knuckle diameter		22.5 mm
Pin diameter		10.0 mm
Material thickness		4.0 mm
Screws		6.0x50.0 mm

### Finishes

Satin Stainless Steel (040), other finishes available upon request

### Combination

receiver	block frame	VX 7531 3D
	blind frame	VX 7535 3D

### Installation tools

jig drilling jig VARIANT VX 7729/160-4 HA  
Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)



e.g. receiver VX 7531 3D



e.g. cover angle  
VX 7561 KK

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

### Scope of supply

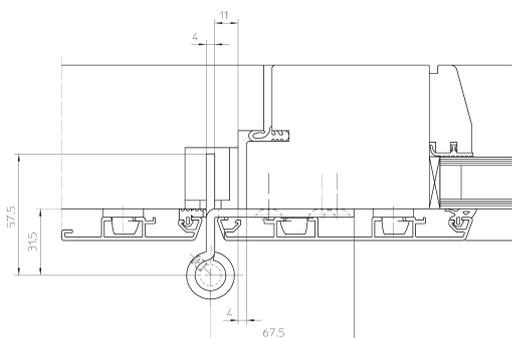
Set 1 (cover angle KK)	hinge	VX 7729/160-4 HA MSTs
	receiver	VX 7531 3D
	cover angle	VX 7561 KK
Set 2 (cover angle KR)	hinge	VX 7729/160-4 HA MSTs
	receiver	VX 7531 3D
	cover angle	VX 7561 KR

Further combinations available upon request

### Classification key

3	7	4	0	1	—*1	0	11
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\*1 depending on the finish



# VARIANT® VX

## VX 7939/160-4 FD 18/5

for rebated timber entrance doors with overlap seals and 5 mm clearance

hinge	rebated	up to 300 kg
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### Product features

- for 18 mm overlap and 5 mm clearance
- for rebated timber entrance doors
- with groove for continuous acoustic seal
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	300.0 kg
Knuckle length		160.0 mm
Knuckle diameter		22.5 mm
Pin diameter		10.0 mm
Material thickness		4.0 mm
Cutter diameter		24.0 mm
Screws		6.0x50.0 mm
Screws for cover plate		3.0x25.0 mm

### Finishes

Satin Stainless Steel (040), other finishes available upon request

### Combination

receiver	block frame	VX 7531 3D
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### Installation tools

jig	universal milling frame
template	No. 5 250572 5

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)

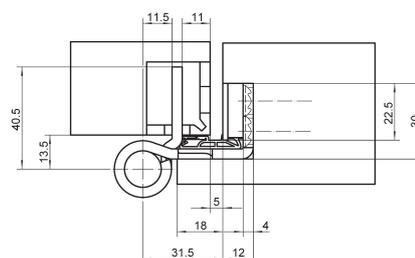
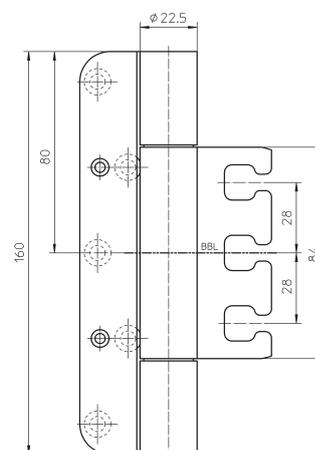
### Functional areas

fire resistance, smoke resistance, soundproof

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

Also available with security pin (MSTS).



# VARIANT® VX



## VX 7939/160-4 FD 18/12

for rebated exterior doors with overlap seals and 12 mm clearance

hinge	rebated	up to 300 kg
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### Product features

- for 18 mm and 20 mm overlap and 12 mm clearance
- for rebated timber entrance doors
- with groove for continuous acoustic seal
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	300.0 kg
Knuckle length		160.0 mm
Knuckle diameter		22.5 mm
Pin diameter		10.0 mm
Material thickness		4.0 mm
Cutter diameter		24.0 mm
Screws		6.0x50.0 mm
Screws for cover plate		3.0x25.0 mm

### Finishes

Satin Stainless Steel (040), other finishes available upon request

### Combination

receiver	block frame	VX 7531 3D
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### Installation tools

jig	universal milling frame
template	No. 5 250700 5

### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

Also available with security pin (MSTS).

### Classification key

4	7	7	1*1	1	—*2	1	14
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\*1 Test evidence for functional doors to be achieved with full door sets and assemblies.

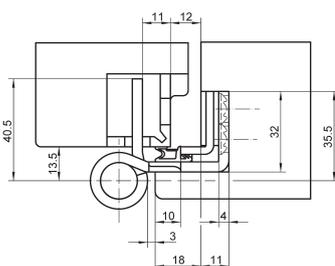
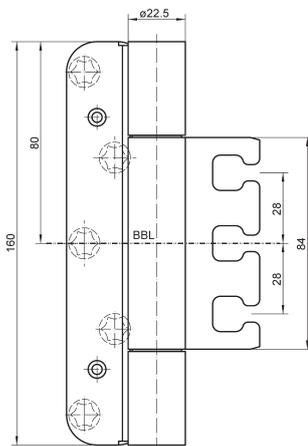
\*2 depending on the finish

### Overlap

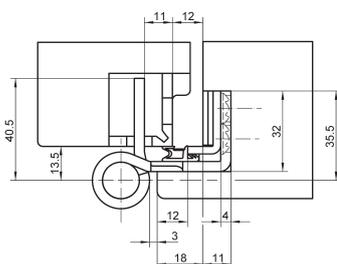
18 mm	10 mm
18 mm	12 mm
20 mm	12 mm
20 mm	10 mm

### Gasket projection

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)



e.g. Overlap 18 mm  
(projection 10)



e.g. Overlap 18 mm  
(projection 12)

# VARIANT® VX

## VX 7859/160-4 FD 18/12

for rebated flush exterior doors with acoustic seal and 12 mm clearance

hinge	rebated-flush	up to 120 kg
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### Product features

- for 18 mm and 20 mm overlap and 12 mm clearance
- for rebated flush exterior doors
- with groove for continuous acoustic seal
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

### Technical details

Load capacity	<b>i</b> two hinges per door leaf (1x2m)	120.0 kg
Knuckle length		160.0 mm
Knuckle diameter		22.5 mm
Pin diameter		10.0 mm
Material thickness		4.0 mm
Cutter diameter		24.0 mm
Screws		6.0x50.0 mm
Screws for cover plate		3.0x25.0 mm

### Finishes

Satin Stainless Steel (040), other finishes available upon request

### Combination

receiver	block frame	VX 7531 3D
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### Note

**i** The load capacity mentioned above refers to the use of 2 hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.  
Also available with security pin (MSTS).

### Classification key

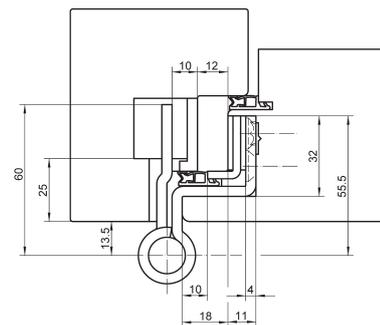
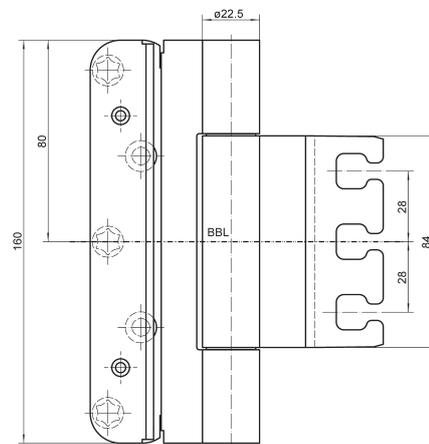
4	7	7	1*1	1	—*2	1	14
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\*1 Test evidence for functional doors to be achieved with full door sets and assemblies.

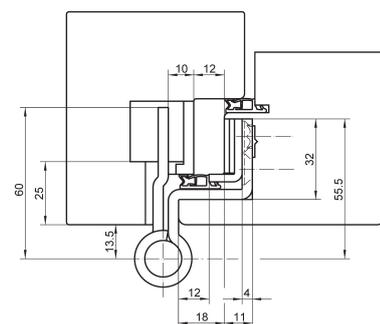
\*2 depending on the finish

Overlap	Gasket projection
18 mm	10 mm
18 mm	12 mm
20 mm	12 mm
20 mm	10 mm

Detailed information in our PRODUCTSELECTOR at [www.simonswerk.com](http://www.simonswerk.com)



e.g. Overlap 18 mm  
(projection 10)



e.g. Overlap 18 mm  
(projection 12)



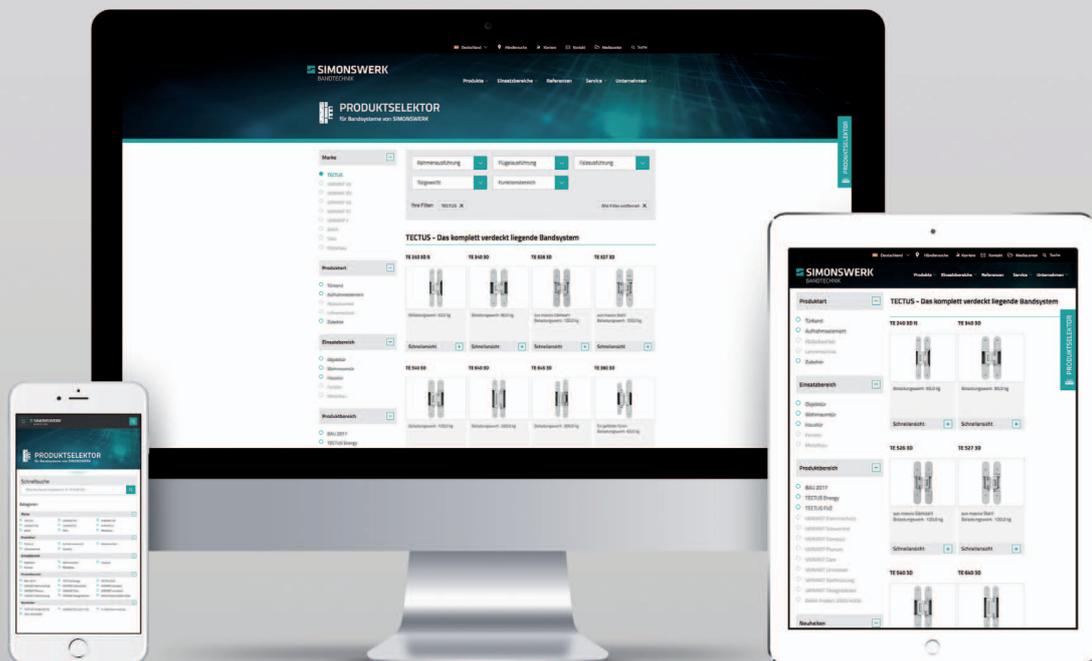
# SERVICE – COMPREHENSIVE EXPERTISE FOR YOUR DAILY WORK

We are happy to provide you with all the documentation you need to calculate which is the most suitable hinge system for your requirements. Please contact us: we would be delighted to work with you to choose the best solution – from high-quality standard sets right up to the most complex solutions.

Please visit our home page for any information not included in this brochure. You will find it easy to navigate through our user-friendly website to arrive at the detailed, comprehensive solutions.

## VISIT OUR PRODUCTSELECTOR

Whether you are a manufacturer, trade partner or designer, at [www.simonswerk.com](http://www.simonswerk.com) you can find precise, detailed product descriptions that will help you to choose the most suitable hinge systems.



## CONTAINS

BAKA Protect 2000	VX 7729/160-4 HA Set
BAKA Protect 4000	VX 7939/160-4 FD 18/5
TE 640 3D	VX 7939/160-4 FD 18/12
TE 680 3D FD	VX 7859/160-4 FD 18/12

PLEASE VISIT THE PRODUCTSELECTOR AT  
[www.simonswerk.com](http://www.simonswerk.com)

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