

The adjustable hinge system for heavy-duty doors



INDEX

VARIANT VX® – THE ADJUSTABLE HINGE SYSTEM FOR HEAVY-DUTY DOORS

	IAN I VX° – THE ADJUSTABLE HIN	
12 13 14 15 16 17 18	VX 7939/100 VX 7939/120 VX 7939/160 Planum VX 7939/160 VX 7939/160 S WK MSTS VX 7939/160-4 VX 7939/160-4 VBRplus	rebated
19 20 21 22 23	VX 7728/100 VX 7728/120 VX 7859/120 VX 7728/160 VX 7859/160	rebated-flush
24 25 26 27 28 29 30	VX 7729/100 VX 7729/120 VX 7729/160 Planum VX 7729/160-4 HA Set VX 7729/160 VX 7729/160-4 VX 7729/160-4 VBRplus	unrebated
31	VX 7749/160-4 Care	for health care facilities
VAR	IANT VX® – RECEIVERS	
32 33 34	VX 2501 3D N VX 7501 3D VX 7531 3D	block frame
35 36 37	VX 2502 3D N VX 7502 3D VX 7532 3D	casing frame
38 39 40	VX 2505 3D N VX 7505 3D VX 7535 3D	blind frame
41 42	VX 2511 3D VX 7511/7512 3D + Cover Plate	steel frame
	VX75213D	aluminium frame

INDEX

VARIANT VX® – COVER PLATES

44 45 46 47	Series VX 2560 N Series VX 2570 N VX 2580 N VX 2590 N	cover plates VX 25 N series
47	VA 2550 N	
48	Series VX 7560	cover plates VX 75 series
49	VX 7561 KK	'
50	Series VX 7570	
51	VX 7571 KK	
52	VX 7580	
53	VX 7581	
54	VX 7590	
55	VX7591	
56	Pin VX 160 MSTS RC	accessories
 58	Load capacities	
60	Options	
62	Testing, approval, quality	
67	Service	

VARIANT® VX – THE UNIVERSAL HINGE SYSTEM FOR HEAVY-DUTY DOORS

Universal applicability and an elegant appearance combined with a high technical standard are the outstanding features of the hinge system VARIANT VX. The hinge system has been developed for extremely high usage in heavy-duty applications and is characterised by high load capacities of up to 400 kg. In addition to maintenance-free slide bearing technology, VARIANT VX door hinges also offer the facility for three-dimensional adjustment on a permanently fixed door

The large number of receiver elements from the VARIANT VX product range enables an extremely variable usage range with exceptionally simple adjustment options. Hinges from the VARIANT VX range are suitable for unrestricted use on fire doors.

The integral unit comprising hinge, receiver and cover provides the right type for each application, with approved safety. All VARIANT VX hinges are available as square cornered versions on request.

THE ADVANTAGES AT A GLANCE

-) for unrebated and rebated doors
-) for timber, steel and aluminium frames
-) 3D adjustable
-) with load capacities up to 400 kg



VARIANT® VX – HINGE SYSTEMS



VARIANT® VX

for rebated, unrebated and rebated-flush heavy-duty doors load capacities from 80 up to 400 kg



VARIANT® Planum

with reduced, elegant knuckle load capacities up to 160 kg



VARIANT® Heavy-Duty

for high performance heavy-duty doors load capacities up to 400 kg



VARIANT® Timber/Alu

for timber/aluminium doors load capacities up to 160 kg



Receivers VARIANT® VX

for block, casing, blind, steel and aluminium frames

VARIANT® VX - RECEIVER

The **VARIANT VX 25.. 3D N** series sets itself apart first and foremost through its pioneering 3D adjustability. Thanks to its innovative adjusting mechanisms, the door is fixed permanently in place throughout the adjustment process and can be moved into the correct position without sagging. Bolted to a base plate, the cover is guaranteed to support extremely heavy doors of up to 200 kg.

The receivers in the **VARIANT VX 75.. 3D** series come complete with a tried-and-tested adjusting mechanism. What's more, they can also accommodate load capacities of up to 200 kg thanks to the improved fixings within the receiver as well as on the frame.

The **VARIANT VX 753.. 3D** receiver series has been designed for particularly heavy loads. In conjunction with a suitable hinge and the appropriate cover plate, it can support load capacities of up to 400 kg on rebated and unrebated heavy-duty and functional doors with blind frames. Its three-dimensional, continuous adjustment options also make it an ideal choice for handling maximum load capacities.

Receiver



VX 2501 3D



VX 7502 3D



VX 7532 3D

VARIANT® VX - COVER PLATES

Cover plates

Even our range of cover plates leaves nothing to be desired. In addition to the well-known cover angles, which are now also available in a more widespread version for extreme load capacities, we now offer both designs as cover plates that are only visible from the frame side.

Cover angles

The cover angles are available in both angular and round designs in terms of both their angulation and ends. The designations for the cover angles are defined based on the following system: The first letter denotes the angulation, which is either angular (K) or rounded (R), (R5). The second letter describes the end of the cover angle. This can also be either angular (K) or rounded (R), (R6).



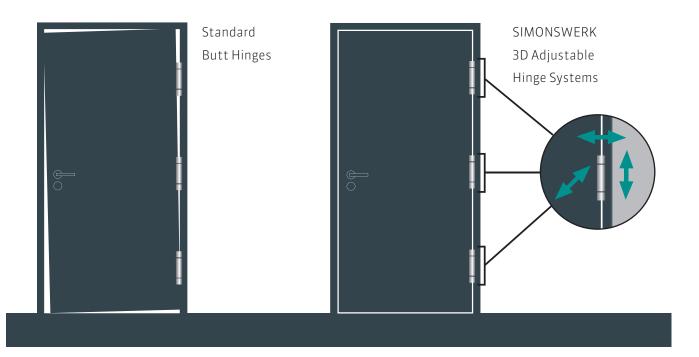




VARIANT® VX - HINGE ADJUSTABILITY

SIMONSWERK offers a complete series of 3D adjustable hinges for high frequency institutional, commercial and industrial applications such as office buildings, schools, hospitals and airports.

The VARIANT series has been developed for wide, heavy-duty doors that require a robust and stable hinge. High load capacities up to 400 kg distinguish this hinge system, as well as the maintenance-free slide bearing technology. The VARIANT series hinge systems offer a simple 3D adjustability feature allowing the installer to meet precise installation and maintenance requirements with the turn of an Allen key.





12 | VARIANT® VX **SIMONSWERK**

VARIANT® VX

VX 7939/100

for rebated heavy-duty doors

Hinge	rebated	up to 100 kg
rilige	Tebateu	up to 100 kg

Product features

- for rebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance -free axial-radial slide bearing

	1 4 91
Technical	details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250563 5

Functional areas

fire resistance, smoke resistance

The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

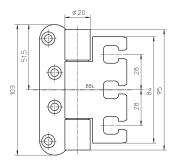
Also available with security pin (MSTS).

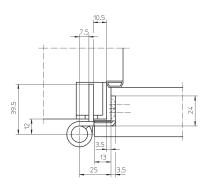
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

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4	7	5	1	1	*	1	12

^{*} depending on the finish









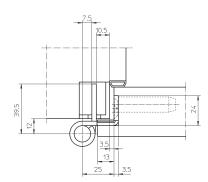








128



VARIANT® VX

VX 7939/120

for rebated heavy-duty doors

up to 120 kg

Product features

- for rebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, powder-coated, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250564 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	6	1	1	*	1	13

^{*} depending on the finish







VX 7939/160 Planum

for rebated heavy-duty doors with reduced, elegant knuckle

Hinge	rebated	up to 160 kg
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Product features

- for rebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal hinge-pin
- concealed, maintenance-free axial-radial slide bearing
- with reduced, elegant knuckle
- integral security pin



load capacity i	2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		15.0 mm
material thickness		3.0 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

satin chromed (F1), polished brassed, satin stainless steel, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N, VX 7501 3D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance

Note

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

A reinforcing dowel 12×50 mm per hinge is recommended when the door is subject to heavy usage.

Adapted for the application on doors within the high-class sector the elegant, diameter-reduced hinge knuckle is ideal for slim, recessed frame facings.

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4 7 5 1 1 1 *1 1 12*2

^{*1} depending on the finish

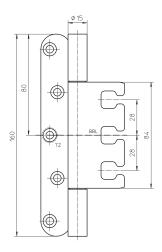
^{*2} test cycles in continuous operation with 160 kg

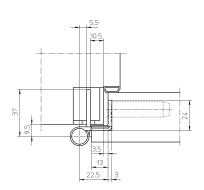




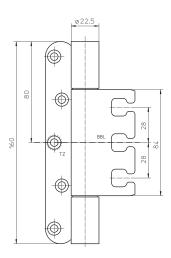


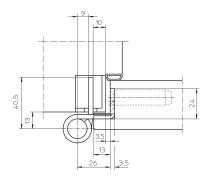












VX 7939/160

for rebated heavy-duty doors

up to 200 kg

Product features

- for rebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, coloured bronze, mid coloured bronze, dark coloured bronze, powder-coated, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance

Note

The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	7	1	1	*1	1	14*2

^{*1} depending on the finish







^{*2} test cycles in continuous operation with 200 kg

VX 7939/160 S WK MSTS

for rebated, burglar resistant heavy-duty doors

Hinge	rebated	up to 200 kg
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Product features

- for rebated, burglar resistant heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing
- with security pin and 2 welded security dowels

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		3.5 mm
cutterØ		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

satin nickelled (F2), satin stainless steel, other finishes available upon request

Combination

receiver	block frame	VX 7501 3D
	casing frame	VX 7502 3D
	blind frame	VX 7505 3D
	steel frame	VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
	drilling jig VARIANT S-dowel
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance, burglar resistance

Note

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

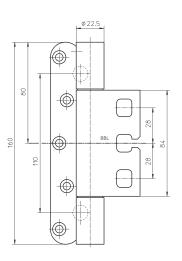
Security pin (MSTS) standard.

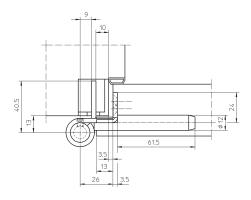
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

	,						
4	7	7	1	1	*1	1	14*2

^{*1} depending on the finish













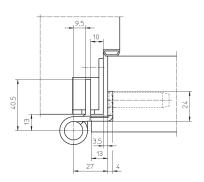




^{*2} test cycles in continuous operation with 200 kg



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VX 7939/160-4

for rebated high performance heavy-duty doors

up to 300 kg

Product features

- for rebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance -free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	300.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		4.0 mm
cutter Ø		24.0 mm
recommended screws		6.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 75313D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance

Note

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

The maximum load capacity of 300 kg can be achieved with the stated receivers for block frames only in combination with cover angle VX 7571 or plate VX 7591. Depending on the material and the load placed on the doors, we recommend using a reinforcing dowel 12×60 mm per hinge.

Also available with security pin (MSTS).

4	7	7	1	1	*1	1	14*2

^{*1} depending on the finish





^{*2} test cycles in continuous operation with 300 kg

VX 7939/160-4 VBRplus

with welded hinge knuckle for rebated, high performance heavy-duty doors

Hinge	rebated	up to 400 kg
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Product features

- with welded hinge knuckle
- for rebated, extreme high performance heavy duty doors
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	400.0 kg
knuckle length			160.0 mm
knuckle diameter			22.5 mm
material thickness			4.0 mm
cutterØ			24.0 mm
recommended screws			6.0x50.0 mm

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel, other finishes available upon request

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D

Installation tools

jig	universal milling frame
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance

Note

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

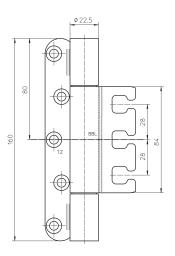
A reinforcing dowel 12 x 60 mm per hinge is recommended when the door is subject to heavy usage.

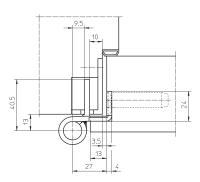
Also available with security pin (MSTS).

4 7 7 1 1 1 14

^{*1} depending on the finish









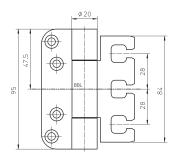


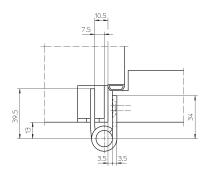


^{*2} test cycles in continuous operation with 400 kg









VX 7728/100

for rebated-flush heavy-duty doors

Hinge	rebated-flush	up to 80 kg
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Product features

- for rebated-flush heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	80.0	kg
knuckle length			95.0 m	ım
knuckle diameter			20.0 m	ım
material thickness			3.5 m	ım
cutter Ø			24.0 m	ım
recommended screws			5.0x50.0 m	ım

Finishes

satin nickelled (F2), satin stainless steel, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250566 5

Functional areas

fire resistance, smoke resistance

Note

 \blacksquare The load capacity mentioned above refers to two 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).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Ciassilicae								
4	7	5	1	1	*	1	12	

^{*} depending on the finish





20 | VARIANT® VX ■ SIMONSWERK

VARIANT® VX

VX 7728/120

for rebated-flush heavy-duty doors

Hinge	rebated-flush	up to 100 kg
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Product features

- for rebated-flush heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	100.0 kg
knuckle length			120.0 mm
knuckle diameter			20.0 mm
material thickness			3.5 mm
cutter Ø			24.0 mm
recommended screws			5.0x50.0 mm

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250562 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12×50 mm per hinge is recommended when the door is subject to heavy usage.

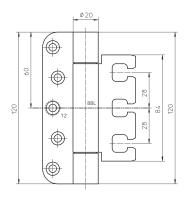
Also available with security pin (MSTS).

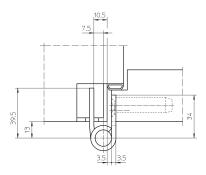
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

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^{*} depending on the finish







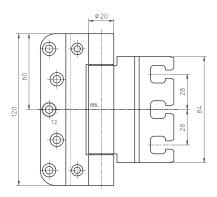


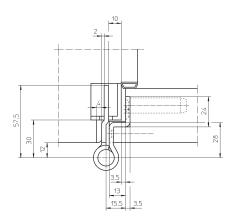












VX 7859/120

for rebated-flush heavy-duty doors

Hinge	rebated-flush	up to 100 kg

Product features

- for rebated-flush heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm
screws for overlap		4.5x30.0 mm

Finishes

satin stainless steel, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N
		VX 7501 3D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250575 6

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	6	1	1	*	1	13

^{*} depending on the finish









VARIANT® VX

VX 7728/160

for rebated-flush heavy-duty doors

Hinge rebated-flush u	p to 120 kg
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Product features

- for rebated-flush heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i	2 hinges per door leaf (1x2m)		120.0 kg
knuckle length				160.0 mm
knuckle diameter				22.5 mm
material thickness				3.5 mm
cutterØ				24.0 mm
recommended screws			5.0	x50.0 mm

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250561 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12×50 mm per hinge is recommended when the door is subject to heavy usage.

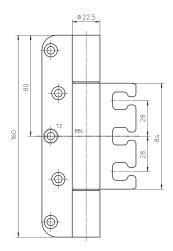
Also available with security pin (MSTS).

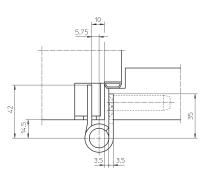
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	7	1	1	*	1	13

^{*} depending on the finish











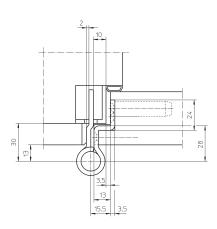








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VX 7859/160

for rebated-flush heavy-duty doors

Hinge	rebated-flush	up to 120 kg
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Product features

- for rebated-flush heavy-duty doors
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm
screws for overlap		4.5x30.0 mm

Finishes

satin nickelled (F2), satin stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D

Installation tools

jig	universal milling frame
template	No. 5 250577 6

Functional areas

fire resistance, smoke resistance

Note

 \blacksquare The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

	,						
4	7	7	1	1	*	1	14

^{*} depending on the finish



24 | VARIANT® VX **SIMONSWERK**

VARIANT® VX

VX 7729/100

for unrebated heavy-duty doors

Hinge	unrebated	up to 100 kg
Hinge	unrebated	up to 100 kg

Product features

- for unrebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance -free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm



galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250565 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

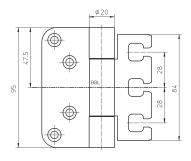
Also available with security pin (MSTS).

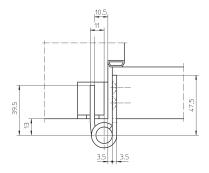
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	5	1	1	*	1	12

^{*} depending on the finish











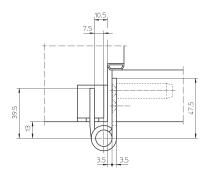








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VX 7729/120

for unrebated heavy-duty doors

up to 120 kg

Product features

- for unrebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, powder-coated, other finishes available upon request

Combination

block frame	VX 2501 3D N
	VX 7501 3D
casing frame	VX 2502 3D N
	VX 7502 3D
blind frame	VX 2505 3D N
	VX 7505 3D
steel frame	VX 2511 3D
	VX 7511 3D
	VX 7512 3D
aluminium frame	VX 7521 3D
	casing frame blind frame steel frame

Installation tools

jig	universal milling frame
template	No. 5 250354 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two 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).

Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4 7 6 1 1	*	1	12

^{*} depending on the finish







VX 7729/160 Planum

with reduced, elegant knuckle for unrebated heavy-duty doors

ge	2	unrebated	up to 160 k
ge	2	unrebated	up to 10

Product features

- for unrebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal hinge-pin
- concealed, maintenance-free axial-radial slide bearing
- with reduced, elegant knuckle
- integral security pin

Technical details

load capacity i	2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		15.0 mm
material thickness		3.0 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

satin chromed (F1), satin stainless steel, other finishes available upon request

Combination

receiver	block frame	VX 2501 3D N, VX 7501 3D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12×50 mm per hinge is recommended when the door is subject to heavy usage.

Adapted for the application on doors within the high-class sector the elegant, diameter-reduced hinge knuckle is ideal for slim, recessed frame facings.

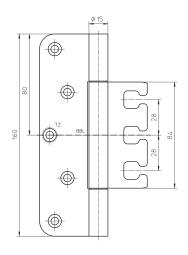
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

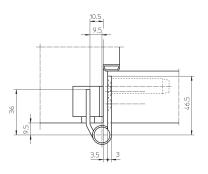
Classification key

4	7	5	1	1	*1	1	12*2

^{*1} depending on the finish









ft





^{*2} test cycles in continuous operation with 160 kg



consists of knuckle hinge, receiver and cover angle

Hinge	unrebated	up to 160 kg
8-		

Product features

- for timber/aluminium doors
- for 3D adjustable receivers VX 7531 3D and VX 7535 3D
- with security pin
- with welded hinge knuckle
- internal torsion-proof pin
- concealed, maintenance -free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		4.0 mm
recommended screws		6.0x50.0 mm

Finishes

satin stainless steel, other finishes available upon request $% \left(1\right) =\left(1\right) \left(1\right)$

Combination

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

Note

The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

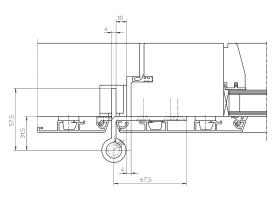
Scope of supply

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

Further combinations available upon request







VX 7729/160

for unrebated heavy-duty doors

Hinge	unrebated	up to 200 kg

Product features

- for unrebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity i	2 hinges per door leaf (1x2m)	200.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		3.5 mm
cutter Ø		24.0 mm
recommended screws		5.0x50.0 mm

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, coloured bronze, mid coloured bronze, dark coloured bronze, powder-coated, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 2501 3D N
		VX 75013D
	casing frame	VX 2502 3D N
		VX 7502 3D
	blind frame	VX 2505 3D N
		VX 7505 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

A reinforcing dowel 12×50 mm per hinge is recommended when the door is subject to heavy usage.

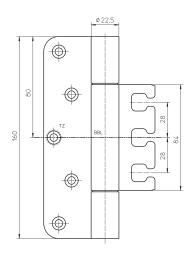
Also available with security pin (MSTS).

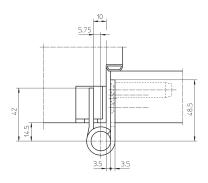
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

4	7	7	1	1	*1	1	14*2

^{*1} depending on the finish

















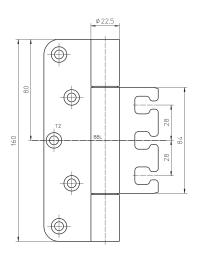


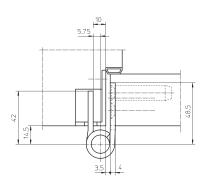


^{*2} test cycles in continuous operation with 200 kg









VX 7729/160-4

for unrebated high performance heavy-duty doors

Hinge	unrebated	up to 300 kg
=		-

Product features

- for unrebated heavy-duty doors
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance -free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	300.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		4.0 mm
cutter Ø		24.0 mm
recommended screws		6.0x50.0 mm

Finishes

satin nickelled (F2), satin stainless steel, powder-coated, other finishes available upon request

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D
	steel frame	VX 2511 3D
		VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig	universal milling frame
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

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

The maximum load capacity of 300 kg can be achieved with the stated receivers for block frames only in combination with cover angle VX 7570 or plate VX 7590. A reinforcing dowel 12×60 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

4	7	7	1	1	*1	1	14*2

^{*1} depending on the finish













^{*2} test cycles in continuous operation with 300 kg

VX 7729/160-4 VBRplus

with welded hinge knuckle for unrebated, high performance heavy-duty doors

Hinge	unrebated	up to 400 kg
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Product features

- with welded hinge knuckle
- for unrebated, extreme high performance heavy duty doors
- for timber frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity i	2 hinges per door leaf (1x2m)	400.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		4.0 mm
cutter Ø		24.0 mm
recommended screws		6.0x50.0 mm

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel, other finishes available upon request

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D

Installation tools

jig	universal milling frame
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

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

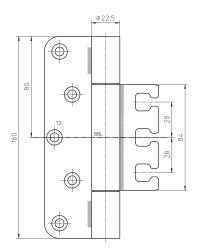
A reinforcing dowel 12 x 60 mm per hinge is recommended when the door is subject to heavy usage.

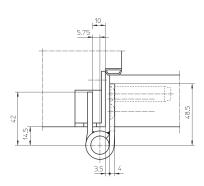
Also available with security pin (MSTS).

4 7 7 1 1 1 14

^{*1} depending on the finish









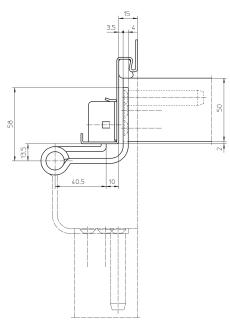




^{*2} test cycles in continuous operation with 400 kg



E.g. VX 7749/160-4/50 Care door thickness 50 mm



E.g. VX 7749/160-4/50 Care door thickness 50 mm

VX 7749/160-4 Care

for unrebated heavy-duty doors in health care facilities

Hinge	unrebated	up to 100 kg
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Product features

- for unrebated heavy-duty doors in health care facilities
- free accessibility thanks to full frame opening
- for timber, steel or aluminium frames
- for 3D adjustable VARIANT VX receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearing

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
material thickness		4.0 mm
cutter Ø		24.0 mm
recommended screws		6.0x50.0 mm
opening angle		180°

Finishos

satin stainless steel, other finishes available upon request

Combination

Combination		
receiver	block frame	VX 75313D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D
	steel frame	VX 7511 3D
		VX 7512 3D
	aluminium frame	VX 7521 3D

Installation tools

jig		universal milling frame
template	No. 5 250353 5	VX 7749/160-4/40 Care
		VX 7749/160-4/65 Care
	No. 5 251094 5	VX 7749/160-4/45 Care
		VX 7749/160-4/50 Care
		VX 7749/160-4/70 Care

Note

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

Furthermore, the different door thicknesses of 40 mm, 45 mm, 50 mm, 65 mm and 70 mm have to be taken into account. Please indicate exact hinge type when ordering. A reinforcing dowel 12×60 mm per hinge is recommended when the door is subject to heavy usage.

Also available with security pin (MSTS).

Model variants		
VX 7749/160-4/40 Care	door thickness 40 mm	load capacity up to 100 kg
VX 7749/160-4/45 Care	door thickness 45 mm	load capacity up to 100 kg
VX 7749/160-4/50 Care	door thickness 50 mm	load capacity up to 100 kg
VX 7749/160-4/65 Care	door thickness 65 mm	load capacity up to 100 kg
VX 7749/160-4/70 Care	door thickness 70 mm	load capacity up to 100 kg



VX 2501 3D N

for rebated and unrebated doors with block frames

block frame

Product features

- for rebated and unrebated doors
- for block frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- adjustment with permanently fixed door

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	200.0 kg
cutterØ			24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 2560 N
		Series VX 2570 N
	cover plate	VX 2580 N
		VX 2590 N

Installation tools

motanation tools		
jig		universal milling frame
receiver	VX 2501 3D N	template No. 5 251 086 5
cover angle	VX 2560 N	template No. 5 250 570 5
		template No. 5 251 087 5
	VX 2570 N	template No. 5 250 570 5
		template No. 5 251 089 5
cover plate	VX 2580 N	template No. 5 250 658 5
		template No. 5 251 087 5
	VX 2590 N	template No. 5 250 658 5
		template No. 5 251 089 5

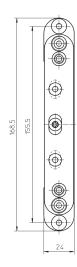
Note

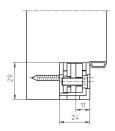
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

For fixing the cover angle we recommend using wood screws minimum size 5.0×50.0 mm

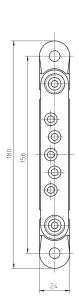
Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

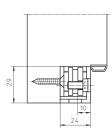












VX 7501 3D

for rebated and unrebated doors with block frames

blockframe

Product features

- for rebated and unrebated doors
- for block frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø		24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 7560
		Series VX 7570
	cover plate	VX 7580
		VX 7590

Installation tools

jig		universal milling frame
receiver	VX 7501 3D	template No. 5 250 568 5
		template No. 5 250 569 5
cover angle	VX 7560	template No. 5 250 570 5
	VX 7570	template No. 5 250 570 5
		template No. 5 250 657 5
cover plate	VX 7580	template No. 5 250 658 5
	VX 7590	template No. 5 250 657 5
		template No. 5 250 658 5

Note

 \blacksquare The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

For fixing the cover angle chipboard screws of at least 6,0 x 50,0 mm are recommended

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

VX 7531 3D

for rebated and unrebated doors with block frames

block frame

Product features

- for extreme heavy rebated and unrebated heavy-duty doors
- for block frames
- for heavy-duty hinges VARIANT VX
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	2 hinges per door leaf (1x2m)	400.0 kg
cutter Ø		24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
	cover angle	Series VX 7561
		Series VX 7571
	cover plate	VX 7581
		VX 7591

Installation tools

IIIStaliation tools		
jig		universal milling frame
receiver	VX 7531 3D	template No. 5 250 568 5
		template No. 5 250 569 5
cover angle	VX 7561	template No. 5 251 088 5
	VX 7571	template No. 5 251 088 5
		template No. 5 250 657 5
cover plate	VX 7581	template No. 5 250 658 5
	VX 7591	template No. 5 250 657 5
		template No. 5 250 658 5

Note

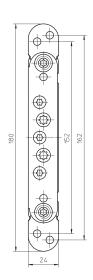
The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

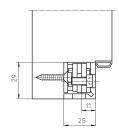
Also the load capacities of the respective combined receiver have to be taken into consideration.

For fixing the cover angle we recommend using wood screws minimum size $5.0 \times 50.0 \, \text{mm}$.

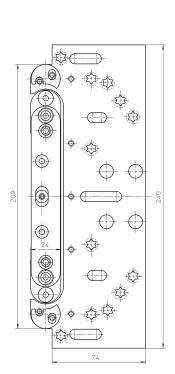
Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

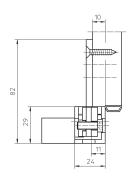












VX 2502 3D N

for rebated and unrebated doors with casing frames

casing frame

Product features

- for rebated and unrebated doors
- for casing frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- adjustment with permanently fixed door

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø		24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 2560 N
		Series VX 2570 N
	cover plate	VX 2580 N
		VX 2590 N

Installation tools

jig		universal milling frame
receiver	VX 2502 3D N	template No. 5 251 087 5
cover angle	VX 2560 N	template No. 5 250 570 5
	VX 2570 N	template No. 5 250 570 5
		template No. 5 251 089 5
cover plate	VX 2580 N	template No. 5 250 658 5
	VX 2590 N	template No. 5 250 658 5
		template No. 5 251 089 5

Note

 \blacksquare The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

Delivery includes packers for casing thicknesses of 22-28 mm.

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

In order to obtain the maximum load capacity, a sufficient fixing of frame and fixing plate/receiver in the masonry resp. partition wall frame is imperative.

VX 7502 3D

for rebated and unrebated doors with casing frames

casing frame

Product features

- for rebated and unrebated doors
- for casing frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø			24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 7560
	cover plate	VX 7580

Installation tools

jig		universal milling frame
receiver	VX 7502 3D	template No. 5 250 568 5
cover angle	VX 7560	template No. 5 250 570 5
cover plate	VX 7580	template No. 5 250 658 5

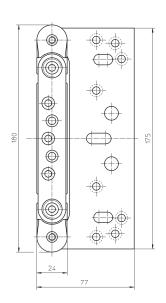
Note

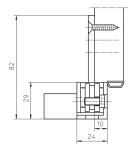
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

Delivery includes packers for casing thicknesses of 22-28 mm.

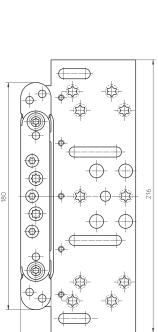
Cover angle/plate form a unit together with the receiver. They have to be ordered separately. In order to obtain the maximum load capacity, a sufficient fixing of frame and fixing plate/receiver in the masonry resp. partition wall frame is imperative.

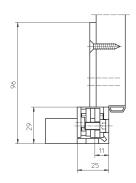












VX 7532 3D

for rebated and unrebated doors with casing frames

casing frame

Product features

- for rebated and unrebated heavy-duty doors
- for casing frames
- for heavy-duty hinges VARIANT VX
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø		24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
	cover angle	Series VX 7561
		Series VX 7571
	cover plate	VX 7581
		VX 7591

Installation tools

jig		universal milling frame
receiver	VX 7532 3D	template No. 5 250 568 5
cover angle	VX 7561	template No. 5 251 088 5
	VX 7571	template No. 5 251 088 5
		template No. 5 250 657 5
cover plate	VX 7581	template No. 5 250 658 5
	VX 7591	template No. 5 250 658 5
		template No. 5 250 657 5

Note

 \blacksquare The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m).

Also the load capacities of the respective combined receiver have to be taken into consideration.

Delivery includes packers for casing thicknesses of 22-28 mm.

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

In order to obtain the maximum load capacity, a sufficient fixing of frame and fixing plate/receiver in the masonry resp. partition wall frame is imperative.

VX 2505 3D N

for rebated and unrebated doors with blind frames

blind frame	

Product features

- for rebated and unrebated doors
- for blind frame
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- adjustment with permanently fixed door

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	200.0 kg
cutterØ			24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 2560 N
	cover plate	VX 2580 N

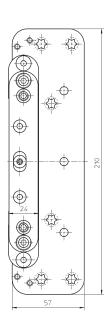
Installation tools

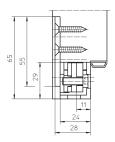
motanation tools		
jig		universal milling frame
receiver	VX 2505 3D N	template No. 5 251 086 5
		template No. 5 251 090 5
cover angle	VX 2560 N	template No. 5 250 570 5
		template No. 5 251 087 5
cover plate	VX 2580 N	template No. 5 250 658 5
		template No. 5 251 087 5

Note

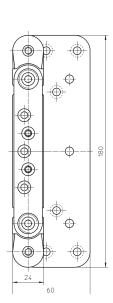
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

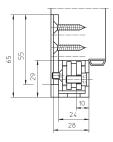












VX 7505 3D

for rebated and unrebated doors with blind frames

blind frame

Product features

- for rebated and unrebated doors
- for blind frame
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø		24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
		VARIANT VXG
	cover angle	Series VX 7560
	cover plate	VX 7580

Installation tools

jig		universal milling frame
receiver	VX 7505 3D	template No. 5 250 568 5
		template No. 5 250 569 5
		template No. 5 250 592 5
cover angle	VX 7560	template No. 5 250 570 5
cover plate	VX 7580	template No. 5 250 658 5

Note

 $\begin{tabular}{ll} \hline \end{tabular} \begin{tabular}{ll} \hline \end{tabular} The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). \\ \hline \end{tabular}$

Also the load capacities of the respective combined receiver have to be taken into consideration.

VX 7535 3D

for rebated and unrebated doors with blind frame

blind frame

Product features

- for rebated and unrebated heavy-duty doors
- for blind frame
- for heavy-duty hinges VARIANT VX
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity	i	2 hinges per door leaf (1x2m)	200.0 kg
cutter Ø			24.0 mm

Finishes

galvanised

Combination

hinge		VARIANT VX
	cover angle	Series VX 7561
	cover plate	VX 7581

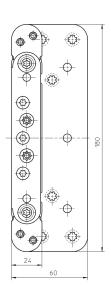
Installation tools

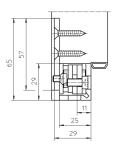
jig		universal milling frame
receiver	VX 7535 3D	template No. 5 250 568 5
		template No. 5 250 569 5
		template No. 5 251 091 5
cover angle	VX 7561	template No. 5 251 088 5
cover plate	VX 7581	template No. 5 250 658 5

Note

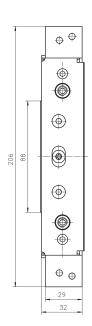
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also the load capacities of the respective combined receiver have to be taken into consideration.

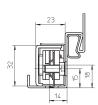


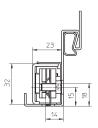












VX 2511 3D

for rebated and unrebated doors with steel frames

steel frames

Product features

- for rebated and unrebated doors
- for steel frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- with weld nuts

Technical details

load capacity i 2 hinges per door leaf (1x2m) 200.0 kg

Finishes

galvanised

Combination

hinge VARIANT VX VARIANT VXG

Note

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

NEW

VARIANT® VX

VX 7511 3D / VX 7512 3D

for rebated and unrebated doors with steel frames

steel frames

Product features

- for rebated and unrebated doors
- for steel frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)
- with or without welding dimples

Technical details

load capacity i 2 hinges per door leaf (1x2m) 200.0 kg

Finishes

galvanised, stainless steel

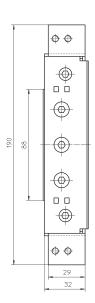
Combination

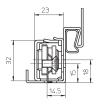
hinge VARIANT VX VARIANT VXG

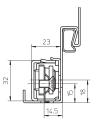
Note

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

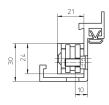


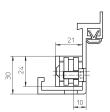












VX 7521 3D

for rebated and unrebated doors with aluminium frames

aluminium frames

Product features

- for rebated and unrebated doors
- for aluminium frames
- for heavy-duty hinges VARIANT VX and VARIANT VXG
- continuous 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 3.0 mm)

Technical details

load capacity i 2 hinges per door leaf (1x2m) 160.0 kg

Finishes

galvanised

Combination

hinge VARIANT VX VARIANT VXG

Note

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

Series VX 2560 N

for VARIANT VX 25.. 3D receiver series

cover angle		
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Product features

• for VARIANT VX 25.. 3D receiver series

Finishes

satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, powder-coated

Combination

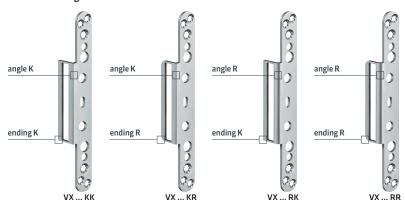
receiver	block frame	VX 2501 3D N
	casing frame	VX 2502 3D N
	blind frame	VX 2505 3D N

Note

Cover angle/plate form a unit together with the receiver.

They have to be ordered separately.

Alternative angle

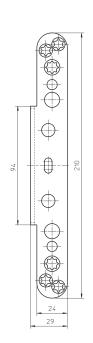


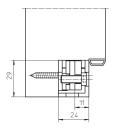
angle K = angular ending K = angular angle R = R5 ending R = R6

Model variants		
VX 2560 KK N		
VX 2560 KR N		
VX 2560 RK N		
VX 2560 RR N		

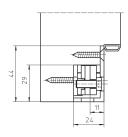
Detailed information available in our PRODUCTSELECTOR at www.simonswerk.com











Series VX 2570 N

for receivers VX 2501 3D N and VX 2502 3D N

cover angle

Product features

for receivers VX 2501 3D N and VX 2502 3D N

Finishes

satin nickelled (F2), satin stainless steel

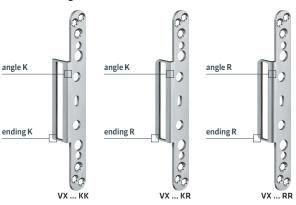
Combination

receiver	block frame	VX 2501 3D N
	casing frame	VX 2502 3D N

Note

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

Alternative angle



angle K = angular ending K = angular angle R = ending R =

Model variants VX 2570 KK N VX 2570 KR N VX 2570 RR N

Detailed information available in our PRODUCTSELECTOR at www.simonswerk.com

VX 2580 N

for receivers VX 2501 3D N and VX 2502 3D N $\,$

cover plate		
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Product features

• for receivers VX 2501 3D N and VX 2502 3D

Finishes

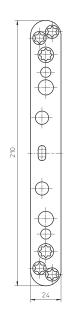
satin nickelled (F2), satin chromed (F1), satin stainless steel

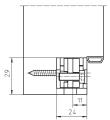
Combination

receiver	block frame	VX 2501 3D N
	casing frame	VX 2502 3D N
	blind frame	VX 2505 3D N

Note











VX 2590 N

for receivers VX 2501 3D N and VX 2502 3D N $\,$

cover plate

Product features

• for receivers VX 2501 3D N and VX 2502 3D N

Finishes

satin stainless steel

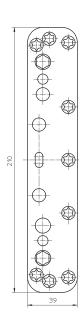
Combination

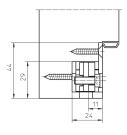
receiver	block frame	VX 2501 3D N
	casing frame	VX 2502 3D N

Note

Cover angle/plate form a unit together with the receiver.

They have to be ordered separately.





Series VX 7560

for VARIANT VX 75.. 3D receiver series

cover angle

Product features

• for VARIANT VX 75.. 3D receiver series

Finishes

galvanised, satin nickelled (F2), satin chromed (F1), polished brassed, satin stainless steel, polished stainless steel, coloured bronze, mid coloured bronze, dark coloured bronze, powder-coated

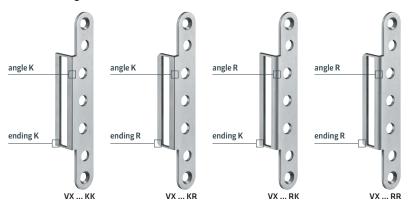
Combination

receiver	block frame	VX 7501 3D
	casing frame	VX 7502 3D
	blind frame	VX 7505 3D

Note

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

Alternative angle

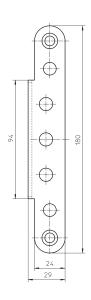


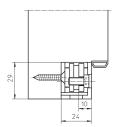
 $\begin{array}{lll} \text{angle K =} & \text{angular} & \text{ending K = angular} \\ \text{angle R =} & \text{RS} & \text{ending R =} & \text{R6} \end{array}$

Model variants	
VX 7560 KK	
VX 7560 KR	
VX 7560 RK	
VX 7560 RR	

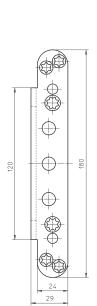
Detailed information available in our PRODUCTSELECTOR at www.simonswerk.com

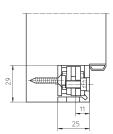












VX 7561 KK

for receivers VX 7531 3D, VX 7532 3D and VX 7535 3D

cover angle

Product features

• for receivers VX 7531 3D, VX 7532 3D and VX 7535 3D

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D

Note

Series VX 7570

for receiver VX 7501 3D

cover angle

Product features

• for receiver VX 7501 3D

Finishes

satin nickelled (F2), satin stainless steel

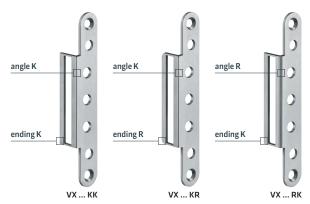
Combination

receiver block frame VX 7501 3D

Note

Cover angle/plate form a unit together with the receiver. They have to be ordered separately.

Alternative angle

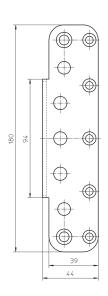


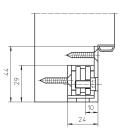
 $\begin{array}{lll} \text{angle K =} & \text{angular} & \text{ending K = angular} \\ \text{angle R =} & \text{RS} & \text{ending R =} & \text{R6} \end{array}$

Model variants	
VX 7570 KK	
VX 7570 KR	
VX 7570 RK	

Detailed information available in our PRODUCTSELECTOR at www.simonswerk.com

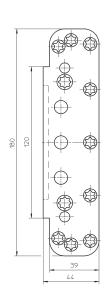


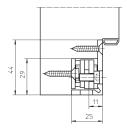












VX 7571 KK

for receivers VX 7531 3D and VX 7532 3D

cover angle

Product features

• for receivers VX 7531 3D and VX 7532 3D

Finishes

satin nickelled (F2), satin chromed (F1), satin stainless steel

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D

Note

Cover angle/plate form a unit together with the receiver.

They have to be ordered separately.

VX 7580

for VX 75.. 3D receiver series

cover plate	

Product features

• for VX 75.. 3D receiver series

Finishes

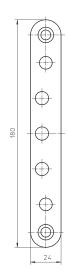
satin nickelled (F2), polished brassed, satin stainless steel

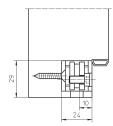
Combination

receiver	block frame	VX 7501 3D
	casing frame	VX 7502 3D
	blind frame	VX 7505 3D

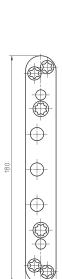
Note

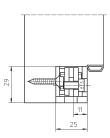












VX 7581

for receivers VX 7531 3D, VX 7532 3D and VX 7535 3D

cover plate

Product features

• for receivers VX 7531 3D, VX 7532 3D and VX 7535 3D

Finishes

satin nickelled (F2), satin stainless steel

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D
	blind frame	VX 7535 3D

Note

Cover angle/plate form a unit together with the receiver.

They have to be ordered separately.

VX 7590

for receiver VX 7501 3D

cover plate

Product features

• for receiver VX 7501 3D

Finishes

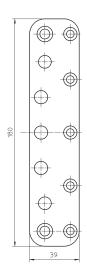
satin nickelled (F2), satin stainless steel

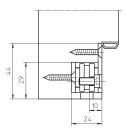
Combination

receiver block frame VX 7501 3D

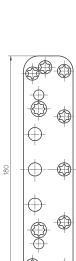
Note

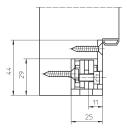












VX 7591

for receivers VX 7531 3D and VX 7532 3D

cover plate

Product features

• for receivers VX 7531 3D and VX 7532 3D

Finishes

satin stainless steel

Combination

receiver	block frame	VX 7531 3D
	casing frame	VX 7532 3D

Note

Cover angle/plate form a unit together with the receiver.

They have to be ordered separately.

Pin VX 160 MSTS RC

Hardened pin for added protection against hacksaw attack.

accessories hinge pin

Finishes

galvanised with stainless steel head

Combination

hinge	VX 160 mm
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LOAD CAPACITIES

When selecting a hinge the load capacity is often equated with the door weight. However, the load capacity of the hinge can be influenced by many different factors which need to be taken into consideration when calculating the overall door weight.

Even under consideration of these different criteria an additional reserve should always be calculated when selecting the hinge. Especially in public buildings where special loads occur due to not always calculable closing frequencies and usage (kindergarten, hospitals etc.), sufficiently dimensioned hinges should be used even if this would be unnecessary based purely on the door weight.

References

The load specifications for SIMONSWERK hinges refer to a maximum door weight under consideration of the mentioned factors that influence the load of the hinges.

All indications are based on following references:

Door leaf dimensions	1000 x 2000 mm
Use of	2 hinges
Hinge distance	1435 mm

The following criteria shall stringently be considered when selecting a hinge in order to prevent consequential damage:

Installation site (residential building, public building, school, administration, barracks, kindergarten etc.)

Type of material of the element

Frequency of operation

Door dimensions (e.g. excess widths)

Positioning of hinges

Assembly of hinges

Outward opening doors (porch)

Doorstop

Door closer

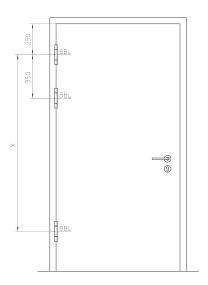
Wall soffits

Swing-door operator

Closing sequence control systems, etc.

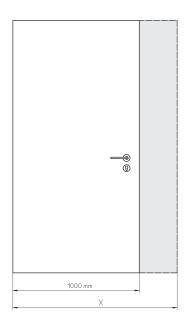
Third hinge

In addition to the factors mentioned above the use of a third hinge can have an significant impact on the load capacity. In practice often a third hinge is located in the middle of the door in order to meet the optical demands and to minimise warping in the centre of the door. Under certain circumstances however it may be useful or even necessary to additionally support the upper hinge which takes most of the major tractive forces - this could be true, for instance, in the case of extrawide doors (>1000 mm), where additional forces occur due to the lever action. For these applications the third hinge has to be located in the upper third since only then the load capacity of the hinge is positively influenced. The door regulations stipulate the use of a third 350 mm hinge (please note: new measurement) below the upper one (with reference to the upper HRL). In the case of unregulated units (e.g. exterior doors), SIMONSWERK recommends reducing this size to as far as 250 mm, depending on the knuckle length.

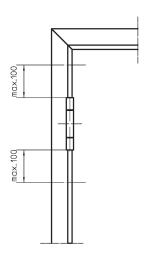


Doors with excess widths

SIMONSWERK heavy-duty hinges have generally been designed for the indicated load capacities. Please take into account that for doors wider than 100 cm and the hinge spacing remaining constant the load capacities are reduced in percentages by the same ratio as the standard door width of 100 cm is exceeded (e.g. door width 125 cm = load capacity ./. 25 %). An accurate, professional fitting in accordance with the SIMONSWERK installation instructions is always a prerequisite.



LOAD CAPACITIES



Frame fixing

To achieve a max load capacity of a door hinge a proper and appropriate assembly of all components is compulsory. Special emphasis shall be given to the fixing of the door element to the wall. Especially closed frames, whether made of steel, aluminium or derived timber boards, often show a higher instability, therefore it is necessary to pay attention to a secure fixing to the brickwork or framework. Foaming alone in this area is not recommended for door weights >60 kg. Here, a force-fitted connection must be created via a screw or plug connection through the receiver, or max. 100 mm from the outer edge of the hinges.

Door closers

When door closers are used, SIMONSWERK recommends the use of a third hinge in the upper third of the door. The correct adjustment of the closer is a fundamental requirement for a long-lasting, problem-free functioning.

Door drives

When a swing-door operator is used, SIMONSWERK recommends using a total of four hinges, placed in two pairs at the top and the bottom. The internal distance between a pair of hinges should not exceed 350 mm (please note: new measurement).

Closing sequence control systems

When closing sequence control systems are used with double-leaf doors, it is important to ensure that a cushioned locking device is used for the active leaf, so that the forces are not transmitted to the hinges 1:1. In this case, SIMONSWERK recommends using a third hinge in the upper third of the door.

Wall openings, door stoppers

Factors such as door stoppers, projecting wall openings or similar cannot be measured or estimated and need to be considered individually, due to the lever action and forces that may occur if the door is opened too far resp. beyond a defined level. As a result of the doors' masses/weights, this can quickly lead to damage to the fastening, the hinges or similar. If it is necessary to use a door stopper, this should either be mounted on the wall or, instead, on the floor placed at 75% of the door's width away from the hinge axis in the direction of the lock.

Miscellaneous

The points given here are simply guidelines. In practice, it may very well make sense, depending on the door's composition, usage levels, location, etc., to take the above factors into account even for door widths <= 1000 mm. This needs to be decided on a case-by-case basis. In any case, care must be taken to ensure that the hinges are of a sufficient size to be able to cover the extraneous factors.

OPTIONS

Screws

The countersunk screw holes on SIMONSWERK heavy-duty hinges are designed for current German wood and chipboard screws (e.g. Spax). For use in practice we recommend screws according to DIN 7997 with a diameter of 4.5–5.0 mm. The countersunk holes of hinges made of 4 mm thick material are designed for a 6 mm screw diameter. The outer fastening screws for the covers of the VARIANT VX series should be at least 6×40 mm.

In general we recommend that screw holes are predrilled to ensure an optimum hold and thereby guarantee the stated load capacities. When SIMONSWERK hinges are used on acetylated, acidic or otherwise modified timbers, care must be taken to select the corresponding fixing tools / fastening screws.

Material Gauge	Countersink
2.5 mm	Ø 10.5×90°
3.0 mm	Ø10.5×90°
3.5 mm	Ø10.5×90°
4.0 mm	Ø12.3×90°

Security Pin (MSTS)

For the use on outward opening doors all SIMONSWERK hinges with continuous hinge pin are available with non removable pin. Depending on the hinge range, different techniques are applied to either secure the hinge pin or the pin screws against knocking-out or unscrewing (see image).







OPTIONS



Reinforcing dowel (TZ)

Depending on the application area, design and door usage, the use of reinforcing dowels may be recommended to stabilise the hinge leaves. Reinforcing dowels relieve the load on the fastening screws and stabilise the hinge leaves in the door leaf hole. Hinges with a height of $160 \, \text{mm}$ or $120 \, \text{mm}$ can be fitted with an additional reinforcing dowel in the centre screw hole. The reinforcing dowel is to be ordered separately. With a material thickness of $3.0 \, \text{mm}$ or $3.5 \, \text{mm}$, the reinforcing dowel will need to be $12 \times 50 \, \text{mm}$ (M $5 \, \text{screw}$). With a material thickness of $4.0 \, \text{mm}$, use a reinforcing dowel of $12 \times 60 \, \text{mm}$ (M $6 \, \text{screw}$).



S-dowel (S)

SIMONSWERK hinges are suitable for the use on burglar resistant doors. On several occasions respective evidence was provided on various door elements. Especially for applications according to DIN EN 1627 ff resistance class 3 and higher the use of hinges with S-dowels is recommended. Unlike reinforcing dowels, these dowels are welded to the hinge and care for a stabilization of the hinge and are capable to aborbe forces evolving from lever tools.



Overlap seal

For soundproof doors SIMONSWERK hinges are available as FD version (acoustic seal). These hinges are equipped with a groove for the continuous acoustic seal which does not need to be notched in the area of the hinge.

Plaster proof receivers

The plaster proof receivers are designed in a way that penetration of mortar is prevented. When using thin fluid backfill material, an additional insulation, e.g. with self-adhesive tape, is highly recommended.

Custom-made designs

If you have special designs and none of the hinges featured on this website is suitable, please send us a dimensioned cross sectional drawing of the component design, if possible on a 1:1 scale – ideally in CAD format, e.g. DXF. SIMONSWERK will quickly check whether any of our hinges can be modified to suit your requirements.

62 | VARIANT® VX ■ SIMONSWERK

TESTING, APPROVAL & QUALITY

CE mark

The CE mark forms the basis for a free movement of goods within the European Union. This applies now to hinges for doors and windows as well. By means of mandate 101 released by the European Committee for Standardization (CEN) and by adoption of DIN EN 1935 into the Building Regulation List B by the German Institute for Building Technologies, this is obligatory for hinges on fire and smoke resistant doors and on doors to escape and rescue routes. After comprehensive tests based on above standards "single-axis hinges on doors and windows" the ift Rosenheim has issued the EU conformity certificate for all relevant SIMONSWERK hinge types.

Tests to DIN EN 1935 are generally conducted with one supporting hinge only. SIMONSWERK hinges are generally tested acc. to the standard with the largest possible number of closing operations - 200,000 cycles. Furthermore many hinges were tested with a load value significantly higher than prescribed according to the rules. The consistent product quality is now guaranteed by an inhouse production control system and by the annual audit done by ift Rosenheim.

All CE-certified products have a classification key. This 8-digit code contains all essential information about properties, load capacity and application field of the hinge.

In practice it is expected that tenders will mainly refer to the first digit of this code, the so-called application class. Almost all SIMONSWERK hinges have been tested and certified to the highest application class - very heavy usage. With the CE mark SIMONSWERK has a further quality label, now valid throughout Europe, which underlines once more the high quality of SIMONSWERK products.

On 01/07/13, the new Construction Products' Regulation came into effect. In addition to the product identification, the provision of so-called Declarations of Performance is a key requirement. SIMONSWERK provides these Declarations of Performance - divided into six different groups - at www.simonswerk.de/dop.

International testings

Safety of use, even under extreme conditions, is our concern. In order to achieve this we have our products tested not only in Germany but also worldwide by International institutes. Thoroughness, elaborateness and experience of institutes such as Underwriters Laboratories having made decisive contributions to improvements regarding fire protection in the USA since 1894, and Exova Warringtonfire, the largest and most modern independent fire test laboratory located in Europe, Asia and Australia, comply with the test criteria related to SIMONSWERK door hinges.

Any product that leaves SIMONSWERK and is certified by any of these institutes, can unhesitatingly be used in international building projects in accordance with the respective regulations. Such compatibility convinces architects and planners as well as door manufacturers.

Our longtime experience, combined with the expertise of these well-reputed testing institutes, creates optimally designed functional elements. We look forward to receiving your call in order to specify the ideal hinge for your individual application.











TESTING, APPROVAL & QUALITY



ANSI/BHMA A156.1 Butts and Hinges

This Standard establishes requirements for lightweight, standard weight, heavy weight and detention hinges. Cycle tests, lateral and vertical wear tests, friction tests, strength tests, finish tests, and material and dimensional requirements are included. Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.

Classification code

Classification of hinges to EN 1935

The European standard EN 1935 determines the test methods and requirements of single axis screw-on hinges and hinges with fixed pins for entrance doors and windows and classifies them referring to an 8-digit designation system. Classification key according to EN 1935

Description of hinges according to CUAP 04.05/12

CUAP 04.05/12 specifies test procedures and requirements for multi-axis hinges and classifies them with an 8-digit coding system.

Classification key according to CUAP 04.05/12

SIMONSWERK – THE ORIGINAL HINGE SYSTEMS

SIMONSWERK is a leading manufacturer of heavy-duty, high performance hinge systems, producing premium hinges for over 125 years. As an industry pioneer for adjustable concealed door hinge systems, SIMONSWERK has built an impressive and extensive product offering including a wide range of architectural finishes for high-traffic and heavy-use doors.

With a hinge system for nearly every application, SIMONSWERK constantly strives to meet the demand for innovative design solutions, utilizing functional tools to ensure a simple and smooth installation process. In addition, SIMONSWERK makes every effort to offer an outstanding customer service experience.

Behörde für Stadtentwicklung und Umwelt, Hamburg ARCHITECTS: Sauerbruch Hutton, Berlin SIMONSWERK: VARIANT® VX



QUALITY AND INNOVATION

The SIMONSWERK brand stands for innovation and high standards of quality and service. These cornerstones date back as far as 1889, with customized solutions leading to the development of new products every year.

SIMONSWERK's quality requirements begin with the products, specifically in the selection of raw materials. Using high-quality materials allows for the largest possible freedom of design, providing diverse options for surface refinement and protection against corrosion.

State-of-the-art resources, including the latest manufacturing techniques and highly flexible automated production processes, make SIMONSWERK a competent partner for all aspects of door hinge technology. To meet the technical, safety and design requirements of modern architecture, SIMONSWERK hinge systems feature precise functioning, often exceeding demands and expectations.

A company's innovative strength is expressed through its competence and its responsibility to its customers in the marketplace. Longevity, top-quality products, and creative thinking give SIMONSWERK the ability to open new markets with new ideas.



SIMONSWERK – THE COMPANY FACTS

SIMONSWERK, headquartered in Rheda-Wiedenbrück, Germany, is a leading manufacturer of sophisticated hinges and hinge systems for more than 125 years. Today with some 550 employees, SIMONSWERK currently ranks amongst the leading suppliers of hinges and hinge systems in Europe.

With the strategic focus as a full-service provider, SIMONSWERK offers a wide product range of hinges and hinge systems for residential, commercial and entrance doors. For the various designs of doors in timber, steel, aluminum, PVC and glass, over 1,700 models are used in nearly 5,000 versions. All products are invariably "Made in Germany". With this range SIMONSWERK is the absolute market leader in Germany.

At present the company is active in over 70 international markets, 35 of those are served consistently by independent subsidiaries, by representatives or own staff members



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.

All our brochures and data sheets can be requested in a printed version, or you can simply download them on the spot – and the same applies to our fitting instructions and milling data.

www.simonswerk.com

VISIT OUR PRODUCTSELECTOR

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





CONTAINS

VX 7939/100 VX 2502 3D N VX 7939/120 VX 7502 3D VX 7939/160 Planum VX 7532 3D VX 2505 3D N VX 7939/160 VX 7939/160 S WK MSTS VX 7505 3D VX 7939/160-4 VX 7535 3D VX 7939/160-4 VBRplus VX 2511 3D VX 7511/7512 3D VX 7728/100 VX 7521 3D VX 7859/120 Series VX 2560 N Series VX 2570 N VX 7728/160 VX 7859/160 VX 2580 N VX 7729/100 VX 2590 N VX 7729/120 Series VX 7560 VX 7729/160 Planum VX 7561 KK Series VX 7570 VX 7729/160-4 HA Set VX 7571 KK VX 7729/160 VX 7580 VX 7729/160-4 VX 7581 VX 7729/160-4 VBRplus VX 7590 VX 7749/160-4 Care VX 2501 3D N VX 7591

PLEASE VISIT THE PRODUCTSELECTOR AT www.simonswerk.com

Pin VX 160 MSTS RC



VX 7501 3D

VX 7531 3D

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