

VARIANT® VN

The proven hinge system for heavy-duty doors



INDEX

VARIANT® VN — THE PROVEN HINGE SYSTEM FOR HEAVY-DUTY DOORS

10 **VN 1939/100** rebated

11 **VN 1937/120 Compact Planum**

12 **VN 3939/100**

13 **VN 1939/120**

14 **VN 1937/160 Compact Planum**

15 **VN 1939/160**

16 **VN 3838/160**

17 **VN 2828/100** rebated-flush

18 **VN 2828/120**

19 **VN 5959/120**

20 **VN 2828/160**

21 **VN 5959/160**

22 **VN 2929/100** unrebated

23 **VN 3949/100**

24 **VN 8849/100 M**

25 **VN 2927/120 Compact**

26 **VN 2927/120 Compact Planum**

27 **VN 2929/120**

28 **VN 3848/160**

29 **VN 2927/160 Compact**

30 **VN 2927/160 Compact Planum**

31 **VN 2929/160**

32 **VN 2929/160 Planum**

33 **VN 3748/160**

34 **MULTI 2D VN 5046**

35 **Pin VN 160 MSTs RC**

35 **Blind rivet nut M 10**

VARIANT® VN — RECEIVERS

36 **Series V 3604** block frame
37 **V 3605**

38 **Series V 3600** casing frame
39 **Sereis V 3610**
40 **Series V 3630**
41 **Series V 3690**
42 **Series V 4600**

43 **Series V 8600** steel frame
44 **Series V 8610**

45 **Cover cap 10 mm** accessories
45 **Cover cap V 3605**

46 **Load capacities**

48 **Options**

50 **Testing, approval, quality**

55 Service

VARIANT® VN – THE PROVEN HINGE SYSTEM FOR HEAVY-DUTY DOORS

The demands on hinges for heavy-duty use are often very diverse and particular. The VARIANT VN hinge system has been developed for use in the heavy-duty sector and is characterised by the versatility of its application options.

In addition to maintenance-free slide bearing technology, it can be combined with the large number of receivers from the VARIANT product range to produce the most varied of applications, such as accommodating the receiver in the door leaf for example. Hinges from the VARIANT VN range are suitable for unrestricted use on fire doors. Many of the hinge types are now successfully certified in accordance with the CE directive.

For years, the extensive VARIANT VN range of hinges has provided a multitude of tailored hinge solutions for an almost limitless number of applications.

THE ADVANTAGES AT A GLANCE

- › for unrebated and rebated doors
 - › for timber, steel and aluminium frames
 - › 3D adjustable
 - › load capacities up to 200 kg
-



VARIANT® VN – PRODUCT OVERVIEW



VARIANT VN

for heavy-duty doors with casing,
block and steel frames
load capacities from 80 up to 200 kg



VARIANT Compact

with adjustment in the door leaf
load capacities from 120 up to 200 kg



VARIANT Planum

with reduced elegant knuckle
load capacities up to 160 kg



MULTI-HINGES

2D and 3D adjustable butt hinges
load capacities up to 100 kg

VARIANT® COMPACT – ADJUSTABLE HINGE SOLUTIONS FOR ELEGANT FRAME FACINGS

The VARIANT Compact hinge system offers an adjustable solution for narrow frame elevations. As a result of the trend to reduce everything to the essential within the architectural space, the focus is increasingly directed at the elements that define the space, such as the door, frame and hinges.

With its 3D receiver installed in the sash, VARIANT Compact offers a perfect solution for narrow frame elevations. It is also ideal for modern door refurbishments where the existing steel frames are reused and the door set is fitted with an up-to-date hinge system.

The exceptional slenderness of the VARIANT Compact Planum version completes the straight-lined, elegant all-over appearance of door and frame in narrow frame elevations.



VN 2927/160 COMPACT PLANUM

with receiver in the door leaf
with reduced elegant knuckle
with comfortable 3D adjustment

VARIANT® COMPACT – WITH 3D ADJUSTABLE RECEIVER IN THE DOOR LEAF

Thanks to the adjustable 3D receiver of the VARIANT Compact being installed in the sash, narrower frame elevations can be used. The compact, robust hinge-and-receiver unit can withstand high load values of up to 200 kg and is suitable for use with heavy-duty doors in the field of fire and smoke protection. An elegant cover on the receiver in the sash provides the finishing touch to this innovative hinge solution.

WELL PROPORTIONED: VARIANT COMPACT

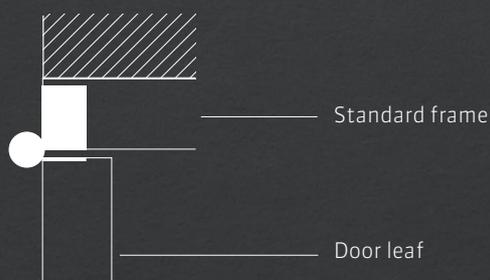
The VARIANT Compact hinge system, with its maximum knuckle diameter of 22.5 mm, creates an overall effect of elegant delicateness when combined with a narrow frame elevation.

Its proportions within the door composition as a whole are elegant and perfectly sized. As a result, these low-key, minimalistic elements blend into the background while ensuring that doors continue to open and close smoothly.

COMPARISON

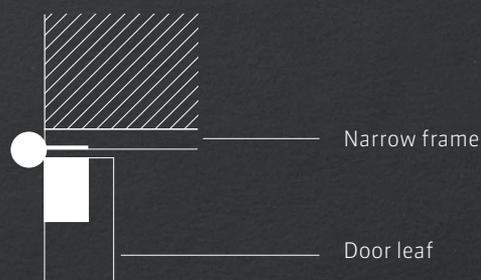
Standard design

Receiver in the frame



VARIANT® Compact

Receiver in door leaf for narrow frame elevations and readjustment







VARIANT® VN

VN 1939/100

for rebated heavy-duty doors with block frames and blind frames

block frame	rebated	up to 100 kg
-------------	---------	--------------

Product features

- for rebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig		universal milling frame
frame	template	No. 5 250579 6
door	template	No. 5 250563 5

Functional areas

fire resistance, smoke resistance

Note

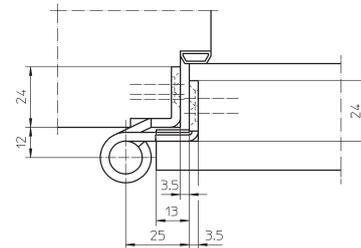
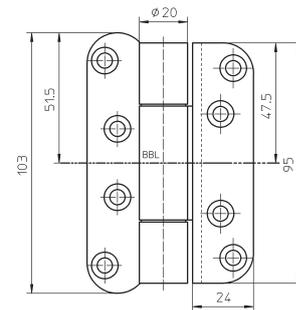
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

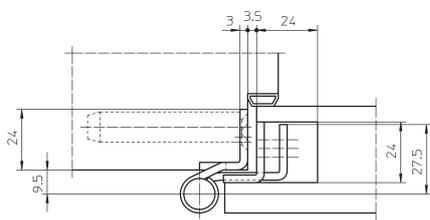
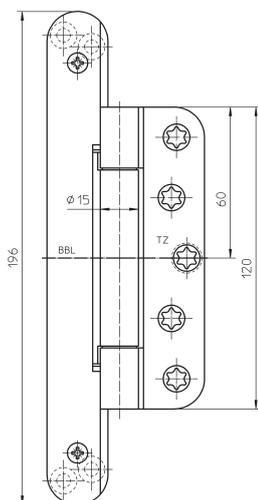
4	7	5	1*1	1	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 1937/120 Compact Planum

with reduced, elegant knuckle for rebated heavy-duty doors with thin block frames and blind frames

block frame	rebated	up to 120 kg
-------------	---------	--------------

Product features

- with reduced, elegant knuckle
- integral security pin
- for rebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		15.0 mm
material thickness		3.0 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	VN 2900/160
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250574 6
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 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). A reinforcing dowel 12 x 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	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

QUALITY MARKS



FUNCTIONAL AREAS



VARIANT® VN

VN 3939/100

for rebated heavy-duty doors with block and casing frames

casing frame	rebated	up to 100 kg
--------------	---------	--------------

Product features

- for rebated heavy-duty doors
- for block and casing frame
- for VARIANT V receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	Series V 3604
		V 3605 V 3607
casing frame		Series V 3600
		Series V 3610
		Series V 3630
		Series V 3690

Installation tools

jig	universal milling frame
template	No. 5 250563 5

Functional areas

fire resistance, smoke resistance

Note

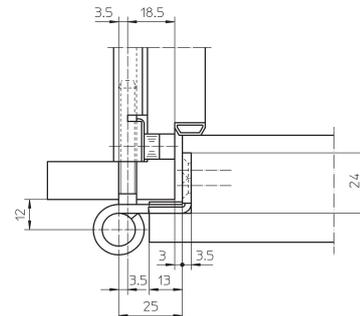
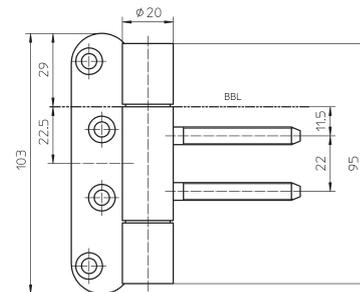
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	5	1*1	1	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 1939/120

for rebated heavy-duty doors with block frames and blind frames

block frame	rebated	up to 120 kg
--------------------	----------------	---------------------

Product features

- for rebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig		universal milling frame
frame	template	No. 5 250574 6
door	template	No. 5 250564 5

Functional areas

fire resistance, smoke resistance

Note

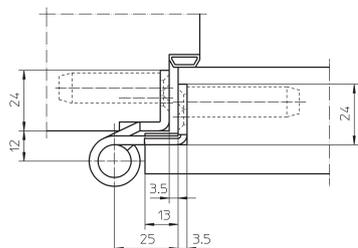
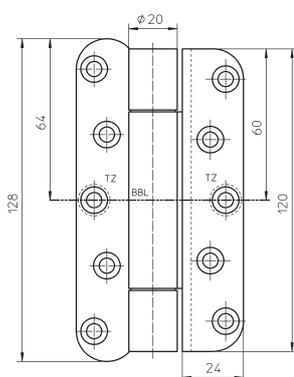
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 1937/160 Compact Planum

with reduced, elegant knuckle for rebated heavy-duty doors with thin block frames and blind frames

block frame	rebated	up to 160 kg
-------------	---------	--------------

Product features

- with reduced, elegant knuckle
- integral security pin
- for rebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

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 diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	VN 2900/160
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250559 6
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 5

Functional areas

fire resistance, smoke resistance

Note

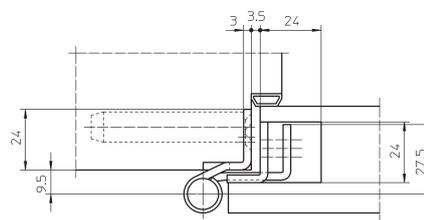
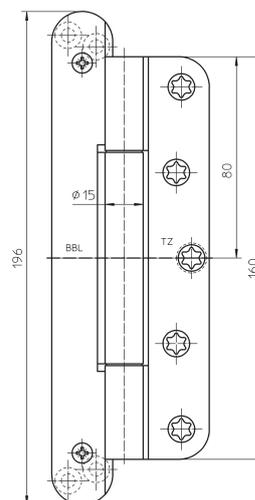
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage. Adapted for the application on doors within the high-class sector the elegant, diameter-reduced hinge knuckle is ideal for 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	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 1939/160

for rebated heavy-duty doors with block frames and blind frames

block frame	rebated	up to 160 kg
-------------	---------	--------------

Product features

- for rebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), polished brassed (030), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig		universal milling frame
frame	template	No. 5 250559 6
door	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 available with security pin (MSTS).

Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge.

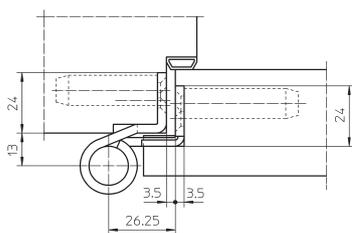
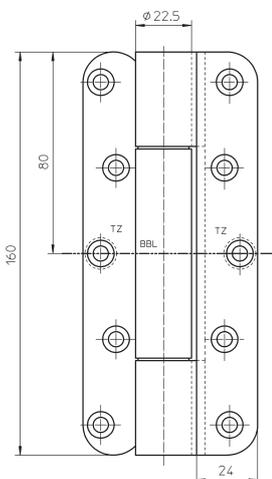
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 3838/160

for rebated heavy-duty doors with block and blind frames

block frame	rebated	up to 160 kg
-------------	---------	--------------

Product features

- for rebated heavy-duty doors
- for block frames and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Installation tools

jig	universal milling frame plug-on drilling VARIANT VN 3800/160
template	No. 5 250560 5

Functional areas

fire resistance, smoke resistance

Note

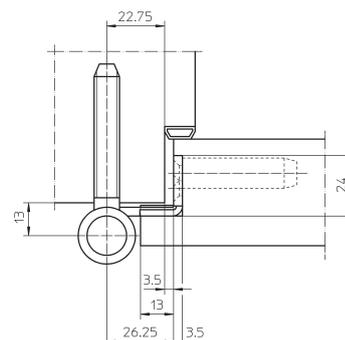
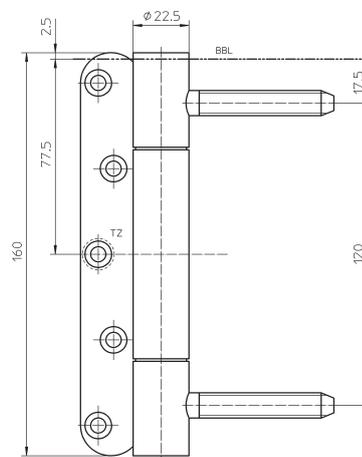
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

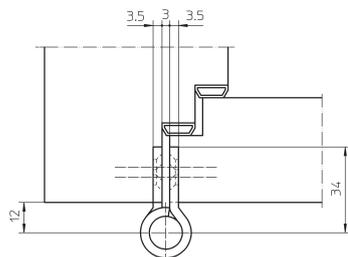
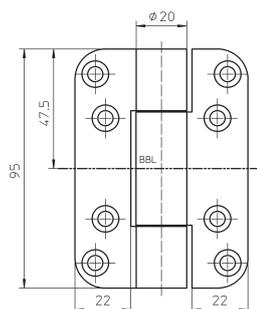
4	7	7	1* ¹	1	—* ²	1	14
---	---	---	-----------------	---	-----------------	---	----

*¹ Test evidence for functional doors to be achieved with full door sets.

*² depending on the finish



VARIANT® VN



VN 2828/100

for rebated flush heavy-duty doors with block frames and blind frames

block frame	rebated-flush	up to 80 kg
-------------	---------------	-------------

Product features

- for rebated flush heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	80.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	universal milling frame
template	No. 5 250566 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 available with security pin (MSTS). 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	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

VARIANT® VN

VN 2828/120

for rebated flush heavy-duty doors with block frames and blind frames

block frame	rebated-flush	up to 100 kg
-------------	---------------	--------------

Product features

- for rebated flush heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	universal milling frame
template	No. 5 250562 5

Functional areas

fire resistance, smoke resistance

Note

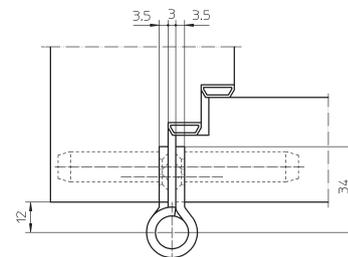
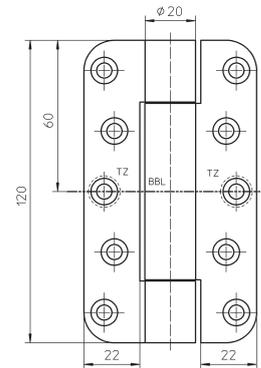
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	6	1* ¹	1	—* ²	1	13
---	---	---	-----------------	---	-----------------	---	----

*¹ Test evidence for functional doors to be achieved with full door sets.

*² depending on the finish



VARIANT® VN



VN 5959/120

for rebated flush heavy-duty doors for block and blind frames

block frame	rebated-flush	up to 100 kg
-------------	---------------	--------------

Product features

- for rebated flush heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Installation tools

jig		universal milling frame
frame	template	No. 5 250576 6
door	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 available with security pin (MSTS).

Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge.

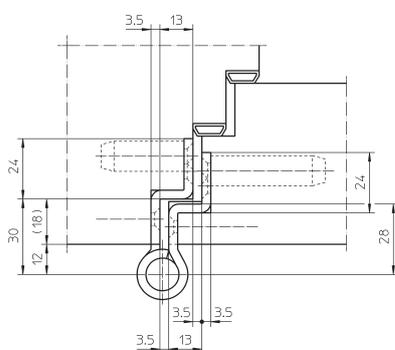
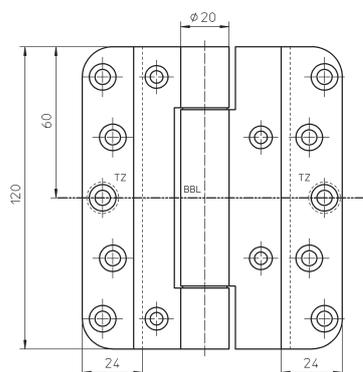
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 2828/160

for rebated flush heavy-duty doors with block frames and blind frames

block frame	rebated-flush	up to 120 kg
-------------	---------------	--------------

Product features

- for rebated flush heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	universal milling frame
template	No. 5 250561 5

Functional areas

fire resistance, smoke resistance

Note

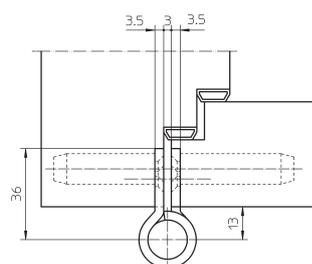
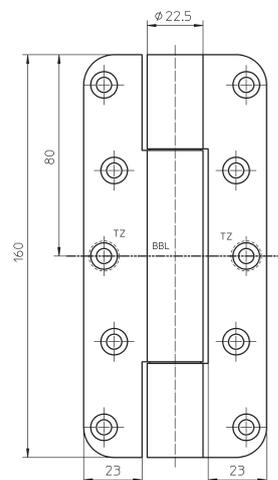
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 5959/160

for rebated flush heavy-duty doors with block frames and blind frames

block frame	rebated-flush	up to 120 kg
--------------------	----------------------	---------------------

Product features

- for rebated flush heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Installation tools

jig		universal milling frame
frame	template	No. 5 250578 6
door	template	No. 5 250577 6

Functional areas

fire resistance, smoke resistance

Note

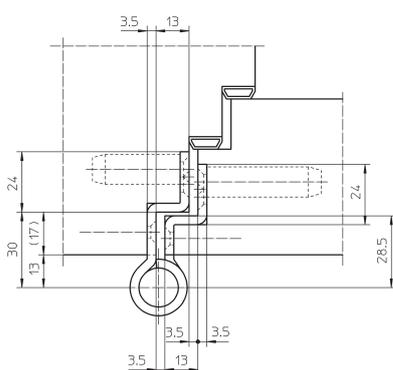
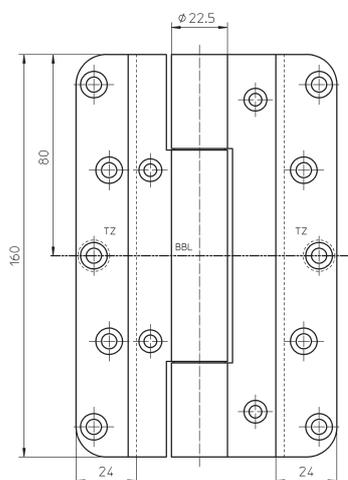
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 2929/100

for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 100 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

blue galvanized (010), satin nickelled/F2 (018), satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	universal milling frame
template	No. 5 250565 5

Functional areas

fire resistance, smoke resistance

Note

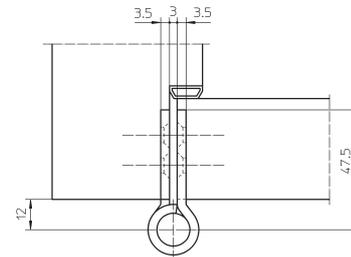
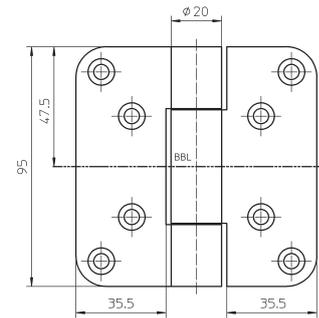
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

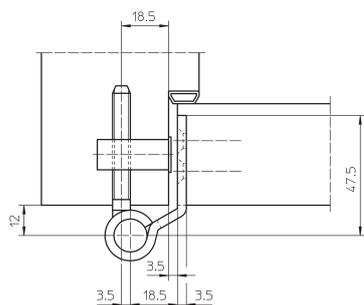
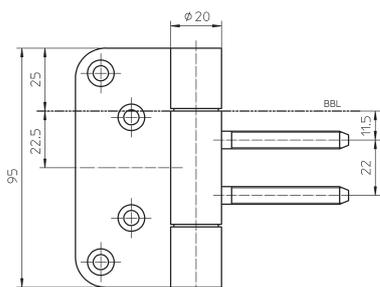
4	7	1	1* ¹	1	—* ²	1	12
---	---	---	-----------------	---	-----------------	---	----

*¹ Test evidence for functional doors to be achieved with full door sets.

*² depending on the finish



VARIANT® VN



VN 3949/100

for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 100 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- for VARIANT V receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Combination

receiver	block frame	Series V 3604 V 3605
----------	-------------	-------------------------

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 available with security pin (MSTS). 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	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 8849/100 M

for unrebated heavy-duty doors with steel frames

steel frame	unrebated	up to 100 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for steel frames
- for VARIANT V receivers
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		95.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Combination

receiver	steel frame	V 8600
		V 8610

Installation tools

jig	universal milling frame
template	No. 5 250565 5

Functional areas

fire resistance, smoke resistance

Note

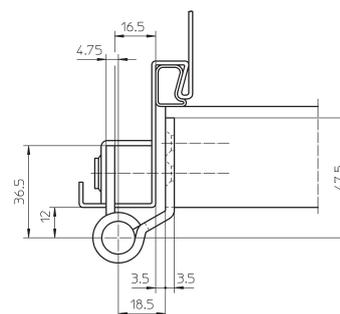
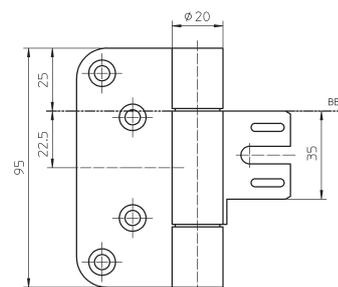
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

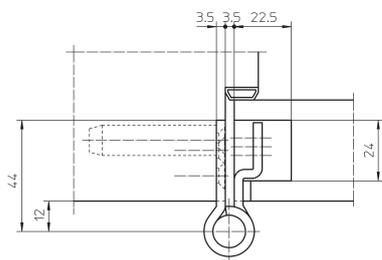
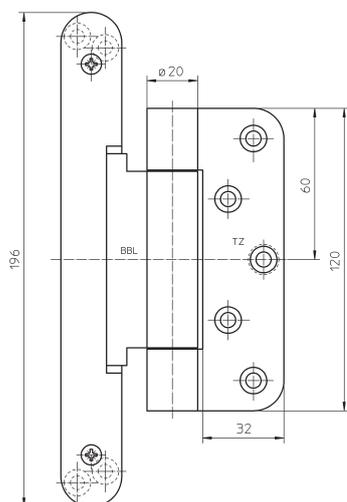
4	7	5	1*1	1	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 2927/120 Compact

for unrebated heavy-duty doors with thin block frames and blind frames

block frame	unrebated	up to 120 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	VN 2900/120
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250354 5
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 5
door, step 3	template	No. 5 250699 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 available with security pin (MSTS).

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

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

Classification key

4	7	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

VARIANT® VN

VN 2927/120 Compact Planum

with reduced, elegant knuckle for unrebated heavy-duty doors with thin block frames and blind frames

block frame	unrebated	up to 120 kg
-------------	-----------	--------------

Product features

- with reduced, elegant knuckle
- integral security pin
- for unrebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		15.0 mm
material thickness		3.0 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	VN 2900/120
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250354 5
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 5
door, step 3	template	No. 5 250699 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). A reinforcing dowel 12 x 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.

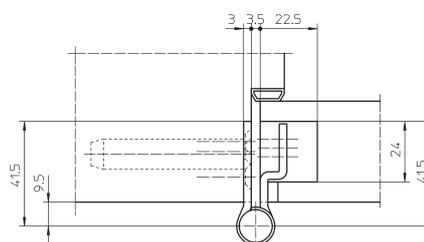
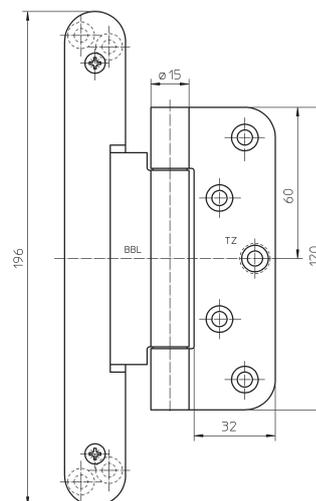
Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

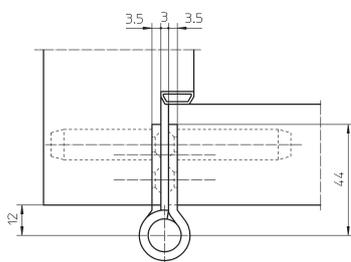
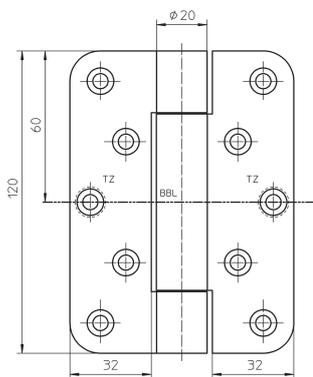
4	7	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 2929/120

for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 120 kg
--------------------	------------------	---------------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		120.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), polished brassed (030), satin chromed/F1 (037), Satin Stainless Steel (040), pol. Stainless Steel (042), other finishes available upon request

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 available with security pin (MSTS). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	6	1*1	1	—*2	1	13
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN

VN 3848/160

for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 120 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	120.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Installation tools

jig	universal milling frame plug-on drilling VARIANT VN 3800/160
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

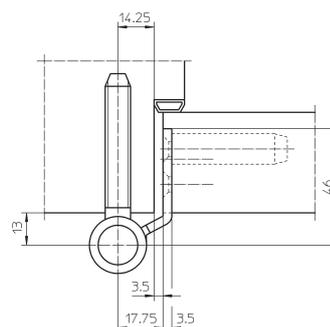
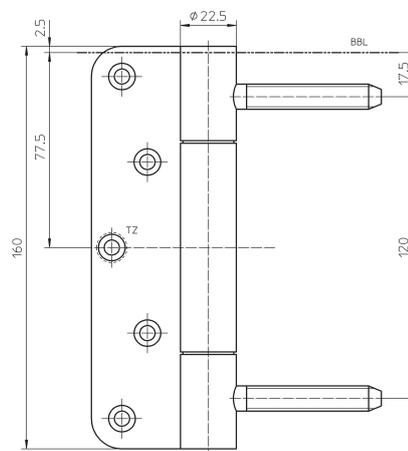
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS). A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 2927/160 Compact

for unrebated heavy-duty doors with thin block frames and blind frames

block frame	unrebated	up to 200 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	200.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Combination

receiver	block frame	VN 2900/120
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250353 5
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 5
door, step 3	template	No. 5 250699 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 available with security pin (MSTS). A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

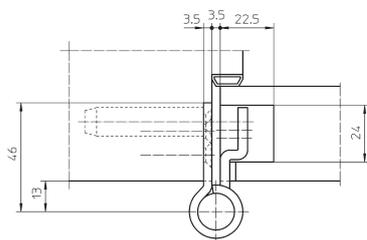
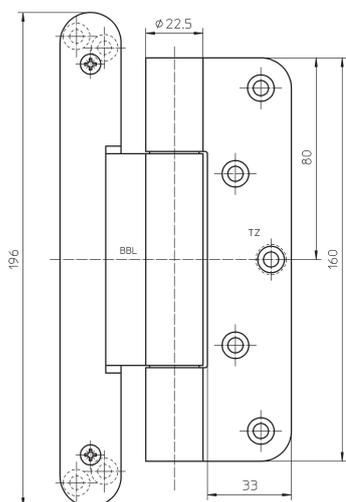
Classification key

4	7	7	1*1	1	—*2	1	14*3
---	---	---	-----	---	-----	---	------

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

*3 test cycles in continuous operation with 200 kg



VARIANT® VN

VN 2927/160 Compact Planum

with reduced, elegant knuckle for unrebated heavy-duty doors with thin block frames and blind frames

block frame	unrebated	up to 160 kg
-------------	-----------	--------------

Product features

- with reduced, elegant knuckle
- integral security pin
- for unrebated heavy-duty doors
- for block and blind frames
- with receiver in the door leaf
- comfortable 3D adjustment (side +/- 3.0 mm, height +/- 3.0 mm, compression +/- 1.0 mm)
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

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 diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), pol. Stainless Steel (042), other finishes available upon request

Combination

receiver	block frame	VN 2900/160
----------	-------------	-------------

Installation tools

jig		universal milling frame
frame	template	No. 5 250353 5
door, step 1	template	No. 5 250697 5
door, step 2	template	No. 5 250698 5
door, step 3	template	No. 5 250699 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). A reinforcing dowel 12 x 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.

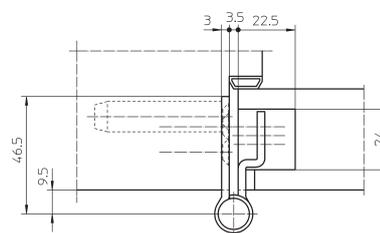
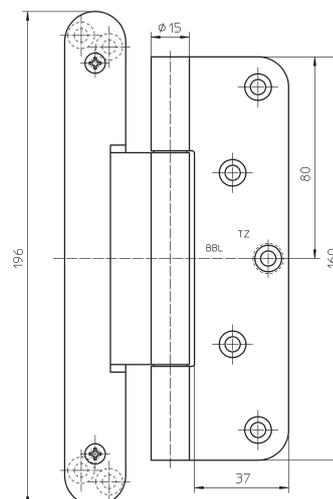
Classification key

4	7	5	1* ¹	1	—* ²	1	12* ³
---	---	---	-----------------	---	-----------------	---	------------------

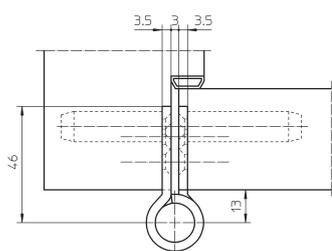
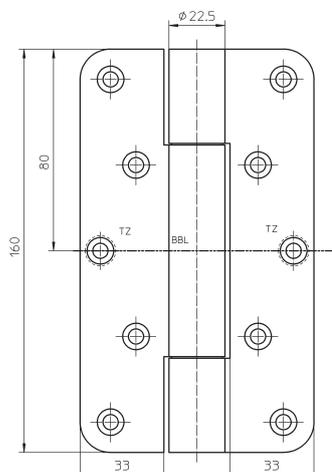
*¹ Test evidence for functional doors to be achieved with full door sets.

*² depending on the finish

*³ test cycles in continuous operation with 160 kg



VARIANT® VN



VN 2929/160

for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 160 kg
-------------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for block and blind frames
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin nickelled/F2 (018), polished brassed (030), satin chromed/F1 (037), Satin Stainless Steel (040), pol. Stainless Steel (042), other finishes available upon request

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 available with security pin (MSTS).

Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge.

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

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

VARIANT® VN

VN 2929/160 Planum

with reduced, elegant knuckle for unrebated heavy-duty doors with block frames and blind frames

block frame	unrebated	up to 160 kg
-------------	-----------	--------------

Product features

- with reduced, elegant knuckle
- integral security pin
- for unrebated heavy-duty doors
- for block and blind frames
- internal hinge-pin
- concealed, maintenance-free axial-radial slide bearings

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 diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

satin chromed/F1 (037), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	universal milling frame
template	No. 5 250353 5

Functional areas

fire resistance, smoke resistance

Note

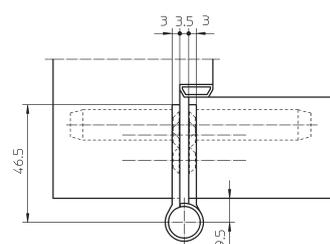
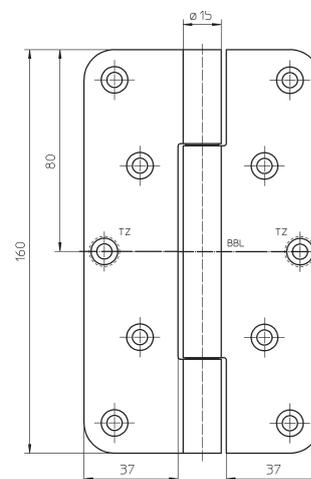
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Depending on the the material and the load placed on the doors, we recommend using a reinforcing dowel 12 x 50 mm per hinge. Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

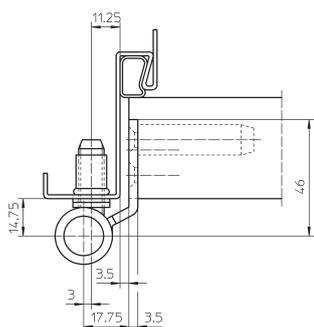
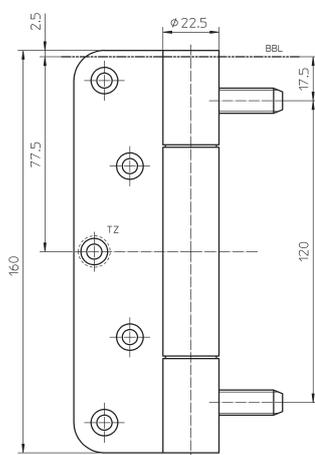
4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



VN 3748/160

for unrebated heavy-duty doors and as retrofit hinge with steel frames

retrofit	unrebated	up to 160 kg
----------	-----------	--------------

Product features

- for unrebated heavy-duty doors
- for steel frames
- for blind rivet nut M 10
- internal torsion-proof pin
- concealed, maintenance-free axial-radial slide bearings

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	160.0 kg
knuckle length		160.0 mm
knuckle diameter		22.5 mm
pin diameter		10.0 mm
material thickness		3.5 mm
cutter diameter		24.0 mm
screws		5.0x50.0 mm

Finishes

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

Combination

accessories	steel frame	blind rivet nut M 10
-------------	-------------	----------------------

Installation tools

jig	universal milling frame plug-on drilling VARIANT VN 3700/160 serial drilling VARIANT VN 3700/160
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). For the installation the blind rivet nut M 10 and iron washers with 10 mm diameter have to be ordered separately.
- Also available with security pin (MSTS).
- A reinforcing dowel 12 x 50 mm per hinge is recommended when the door is subject to heavy usage.
- Screws 4.5 x 50.0 mm can also be used as an alternative for lowering the depth.

Classification key

4	7	7	1*1	1	—*2	1	14
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish

VARIANT® VN

MULTI 2D VN 5046

for flush aluminium and steel doors

MULTI hinge	aluminium / steel	2D adjustment
-------------	-------------------	---------------

Product features

- for flush aluminium and steel doors
- continuous 2D adjustment (side +/- 3.0 mm, height +/- 4.0 mm)

Technical details

load capacity	i 2 hinges per door leaf (1x2m)	100.0 kg
knuckle length		100.0 mm
knuckle diameter		20.0 mm
pin diameter		10.0 mm

Finishes

blue galvanized (010), Satin Stainless Steel (040), other finishes available upon request

Installation tools

jig	drilling jig VARIANT MULTI 2D VN 5046
-----	---------------------------------------

Note

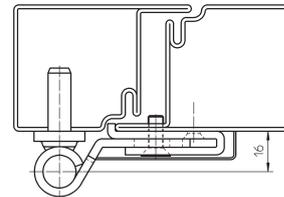
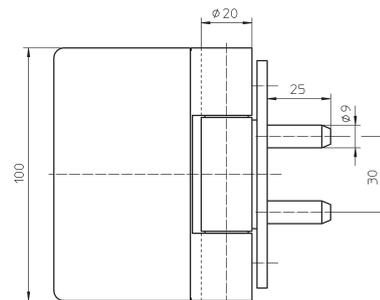
i The load capacity mentioned above refers to two hinges per door leaf (1 x 2 m). Also available with security pin (MSTS).

Classification key

4	7	5	1*1	1	—*2	1	12
---	---	---	-----	---	-----	---	----

*1 Test evidence for functional doors to be achieved with full door sets.

*2 depending on the finish



VARIANT® VN



Pin VN 160 MSTS RC

Hardened pin for added protection against hacksaw attack

accessories		hinge pin
-------------	--	-----------

Finishes

blue galvanized with stainless steel head

Combination

hinge		VN 160 mm
-------	--	-----------



Blind rivet nut M 10

for steel frames for retrofitting

accessories		
-------------	--	--

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 3737/160 Compact VN 3738/160 VN 3738/160 FD VN 3738/160 FD S VN 3747/160 Compact VN 8937/160 U Compact VN 8938/160 U VN 8938/160 U FD VN 8947/160 U Compact VN 3748/160
	VARIANT VG	VG 8000 U
	VARIANT V	V 8000 WF U V 8100 WF U

Installation tools

blind rivet tongs M 10

VARIANT® VN

Series V 3604

clamping block for block frames and blind frames

receiver		block frame
----------	--	-------------

Technical details

cutter diameter	12.0 mm
-----------------	---------

Finishes

blue galvanized (010), yellow galvanized (011), RAL 9016 Traffic White (070), H9 Brown (071), RAL 1011 Brown Beige (083)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
	VARIANT VG	VN 3949/100
		VN 3938/160
		VN 3948/160
		VG 3990
	VARIANT V	VG 3990 K
		VG 4400 UB
		V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
		designer hinge V 4426 WF
		designer hinge V 4437 WF
		V 3400 WF HV Stop
		V 4400 WF FV
		V 5450

Installation tools

jig	drilling/routing jig VARIANT V 3604
	serial jig VARIANT V 3604

Note

The clamping system matches with the VARIANT frame parts by exactly coordinated dovetailing. Only this combination guarantees a high clamping effect and pull-out strength.

Please indicate exact type when ordering.

Please specify frame-line width when ordering jigs.

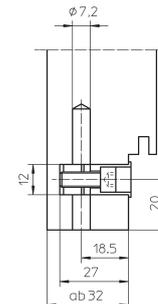
Model variants

V 3604/18.5

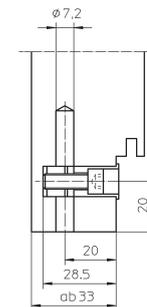
V 3604/20.0

V 3604/21.5

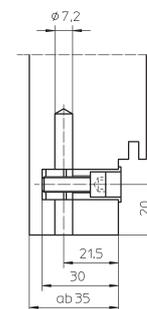
Detailed information available in our PRODUCTSELECTOR at www.simonswerk.com



V 3604/18.5

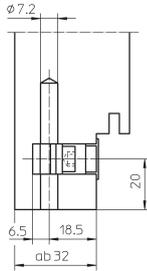


V 3604/20.0



V 3604/21.5

VARIANT® VN



V 3605

clamp for block frames and blind frames

receiver	block frame
----------	-------------

Technical details

cutter diameter	12.0 mm
-----------------	---------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
		VN 3949/100
		VN 3938/160
		VN 3948/160
	VARIANT VG	VG 3990
		VG 3990 K
		VG 4400 UB
	VARIANT V	V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
		designer hinge V 4426 WF
accessories	designer hinge V 4437 WF	
	V 3400 WF HV Stop	
	V 4400 WF FV	
	V 5450	
	cover cap V 3605	

Installation tools

jig	drilling jig VARIANT V
	routing jig VARIANT V 3605
	serial drilling VARIANT V 3600 / V 3610

VARIANT® VN

Series V 3600

hinge pocket for timber frames

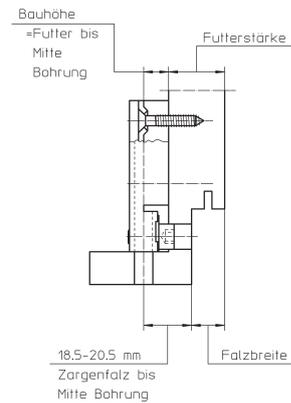
receiver		casing frame
----------	--	--------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
		VN 3938/160
	VARIANT VG	VG 3990
		VG 3990 K
		VG 4400 UF
	VARIANT V	V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
		designer hinge V 4426 WF
		designer hinge V 4437 WF
	accessories	V 3400 WF HV Stop
		V 4400 WF FV
		V 5450
		cover cap 10 mm



Installation tools

jig	drilling jig VARIANT V
	drilling jig VARIANT V 3600 / V 3610 rebate opening
	serial drilling VARIANT V 3600 / V 3610

Note

The clamping system matches with the frame parts VARIANT by exactly coordinated dovetailing. Only this combination guarantees a high clamping effect and pull-out strength.

Please indicate exact type when ordering.

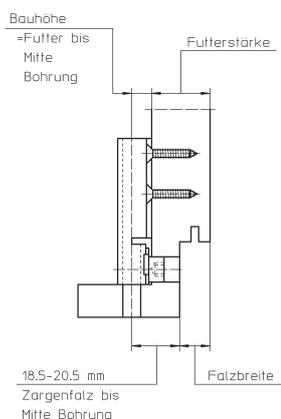
Please specify frame-line width when ordering jigs.

Model variants

V 3600/9.8	reference height 9.8 mm
V 3601/5.8	reference height 5.8 mm

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

VARIANT® VN



Series V 3610

hinge pocket for timber frames

receiver		casing frame
----------	--	--------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
		VN 3938/160
	VARIANT VG	VG 3990
		VG 3990 K
		VG 4400 UF
	VARIANT V	V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
		designer hinge V 4426 WF
		designer hinge V 4437 WF
accessories	V 3400 WF HV Stop	
	V 4400 WF FV	
	V 5450	
	reinforcing plate V 3610	
	cover cap 10 mm	

Installation tools

jig	drilling jig VARIANT V
	drilling jig VARIANT V 3600 / V 3610 rebate opening
	serial drilling VARIANT V 3600 / V 3610

Note

The clamping system matches with the VARIANT frame parts by exactly coordinated dovetailing. Only this combination guarantees a high clamping effect and pull-out strength.

Please indicate exact type when ordering.

Please specify frame-line width when ordering jigs.

Model variants

V 3611/5.8	reference height 5.8 mm
V 3612/7.8	reference height 7.8 mm
V 3613/8.8	reference height 8.8 mm
V 3614/9.8	reference height 9.8 mm

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

VARIANT® VN

Series V 3630

hinge pocket for timber frames

receiver		casing frame
----------	--	--------------

Finishes

RAL 9005 Jet Black (073)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
		VN 3938/160
	VARIANT VG	VG 3990
		VG 3990 K
		VG 4400 UF
	VARIANT V	V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
		designer hinge V 4426 WF
		designer hinge V 4437 WF
		V 3400 WF HV Stop
	V 4400 WF FV	
	V 5450	
accessories		cover cap 10 mm

Installation tools

jig	drilling jig VARIANT V
	drilling jig VARIANT V 3600 / V 3610 rebate opening
	serial drilling VARIANT V 3630 / V 3650

Note

The clamping system matches with the frame parts VARIANT by exactly coordinated dovetailing. Only this combination guarantees a high clamping effect and pull-out strength.

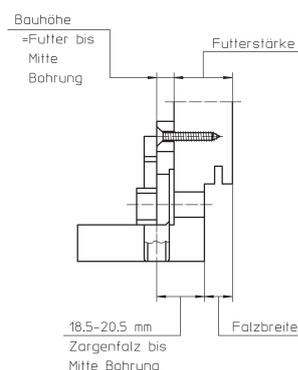
Please indicate exact type when ordering.

Please specify frame-line width when ordering jigs.

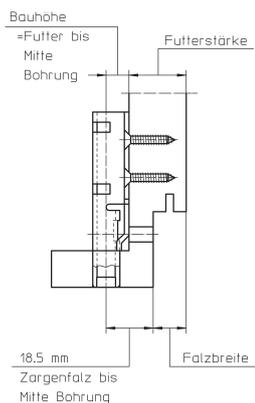
Model variants

V 3630/5.0-14.5	reference height 5.0 mm, tube lengths 14.5 mm
V 3631/5.8-14.5	reference height 5.8 mm, tube lengths 14.5 mm
V 3632/6.8-14.5	reference height 6.8 mm, tube lengths 14.5 mm
V 3633/7.8-14.5	reference height 7.8 mm, tube lengths 14.5 mm

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



VARIANT® VN



Series V 3690

hinge pocket for timber frames

receiver		casing frame
----------	--	--------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 3939/100
		VN 3939/100 FD
		VN 3938/160
	VARIANT VG	VG 3990
		VG 3990 K
		VG 4400 UF
	VARIANT V	V 3400 WF
		V 3400 WF RK
		V 4400 WF
		designer hinge V 3420 WF
designer hinge V 4426 WF		
designer hinge V 4437 WF		
V 3400 WF HV Stop		
V 4400 WF FV		
	V 5450	
accessories		reinforcing plate V 3690
		cover cap 10 mm

Installation tools

jig	upon request
-----	--------------

Note

The clamping system matches with the frame parts VARIANT by exactly coordinated dovetailing. Only this combination guarantees a high clamping effect and pull-out strength.

Hinge pockets are individually specified according to reference height and tube lengths, upon request.

Please indicate exact type when ordering.

Please specify frame-line width when ordering jigs.

Model variants

V 3692/7.8-14.5	reference height 7.8 mm, tube lengths 14.5 mm
V 3693/9.0-16.5	reference height 9.0 mm, tube lengths 16.5 mm

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

VARIANT® VN

Series V 4600

receiver for casing frames

receiver		casing frame
----------	--	--------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VN	VN 4739/100
	VARIANT VG	VG 4790
	VARIANT V	V 4700 WF V 4700 WF FV

Installation tools

jig	serial drilling VARIANT V 4600
-----	--------------------------------

Note

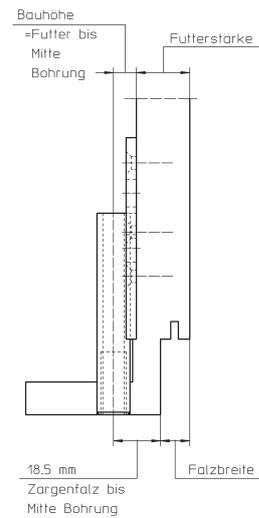
Please indicate exact type when ordering.

Please specify frame-line width when ordering jigs.

Model variants

V 4600/7	reference height 7.0 mm
V 4600/9	reference height 9.0 mm

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



VARIANT® VN



V 8600

weld-in pocket for steel frames

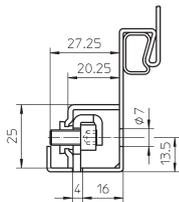
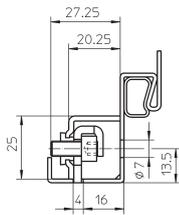
receiver		steel frame
----------	--	-------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VX	VX 8939/160
	VARIANT VN	VN 8939/100 M VN 8939/100 FD M VN 8938/160 VN 8938/160 FD VN 8849/100 M VN 8948/160 VN 8937/160 U Compact VN 8938/160 U VN 8938/160 U FD VN 8947/160 U Compact
	VARIANT VG	VG 8790 VG 8790 K VG 8000 U
	VARIANT V	V 8100 WF V 8100 WF RK V 8000/4 WF NOV/NUV V 8000/30 WF V 8100 WF HV Stop V 8000 WF FV V 8550 V 8535



Note

Plaster-proof design, with a retractable clamping- and centre piece.

VARIANT® VN

V 8610

plaster-proof weld-in pocket for steel frames

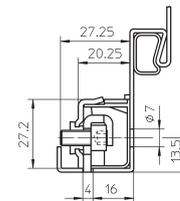
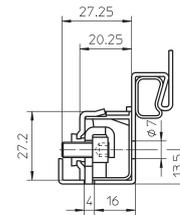
receiver		steel frame
----------	--	-------------

Finishes

blue galvanized (010)

Combination

hinge	VARIANT VX	VX 8939/160
	VARIANT VN	VN 8939/100 M VN 8939/100 FD M VN 8938/160 VN 8938/160 FD VN 8849/100 M VN 8948/160 VN 8937/160 U Compact VN 8938/160 U VN 8938/160 U FD VN 8947/160 U Compact
	VARIANT VG	VG 8790 VG 8790 K VG 8000 U
	VARIANT V	V 8100 WF V 8100 WF RK V 8000/4 WF NOV/NUV V 8000/30 WF V 8100 WF HV Stop V 8000 WF FV V 8550 V 8535



Note

Version as plaster proof receiver with retractable clamping and centering piece.

VARIANT® VN



Cover cap 10 mm

for rebate opening with hinge pocket VARIANT V

accessories

Finishes

RAL 9016 Traffic White (070), RAL 9005 Jet Black (073), RAL 1011 Brown Beige (083), RAL 1014 Ivory (085)

Combination

receiver	casing frame	Series V 3600
		Series V 3610
		Series V 3630
		Series V 3690



Cover cap V 3605

for rebate opening with clamp VARIANT V 3605

accessories

Finishes

RAL 9016 Traffic White (070), RAL 1011 Brown Beige (083)

Combination

receiver	block frame	V 3605
----------	-------------	--------

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 and therefore lie by a multiple over the 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, barracks 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)

Door stop

Door closer

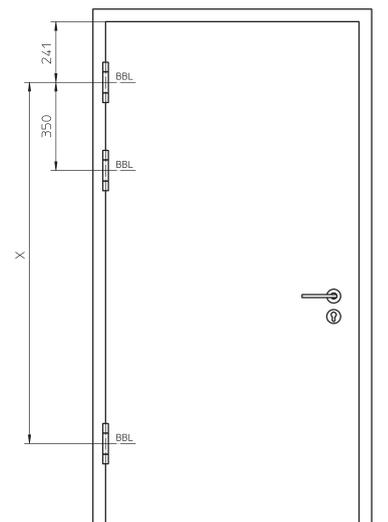
Wall soffits

Swing-door operator

Closing sequence control systems, etc.

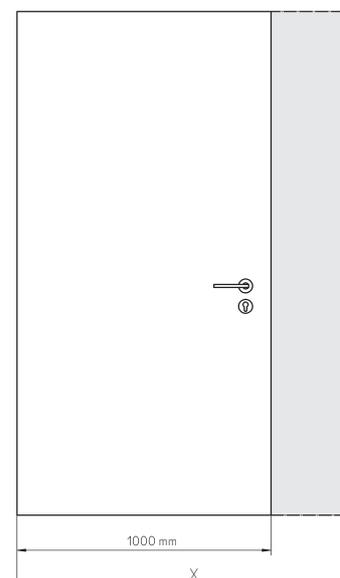
Third hinge

In addition to the factors mentioned above the use of a third hinge can have a 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 extra-wide 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.

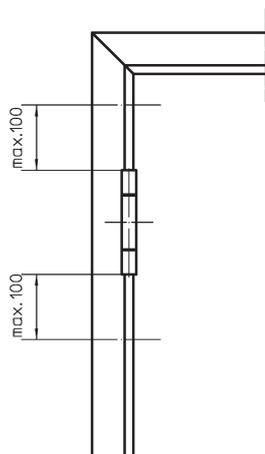


Doors with excess widths

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 \cdot 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

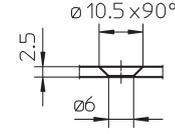
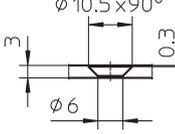
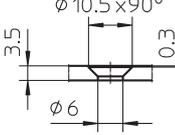
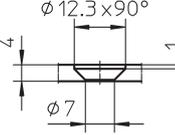
The points given here are simply guidelines. In practice, it may very well make sense, depending on the door's composition, usage levels, location, etc., to take the above factors into account even for door widths ≤ 1000 mm. This needs to be decided on a case-by-case basis. In any case, care must be 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 x 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 thickness	Senkung
2.5 mm	
3.0 mm	
3.5 mm	
4.0 mm	

Non removable 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 mm or 120 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 mm or 3.5 mm, the reinforcing dowel will need to be 12 x 50 mm (M 5 screw). With a material thickness of 4.0 mm, use a reinforcing dowel of 12 x 60 mm (M 6 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 absorb 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.

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 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.

Classification code

Classification of hinges to DIN 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 DIN 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



warringtonfire



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.

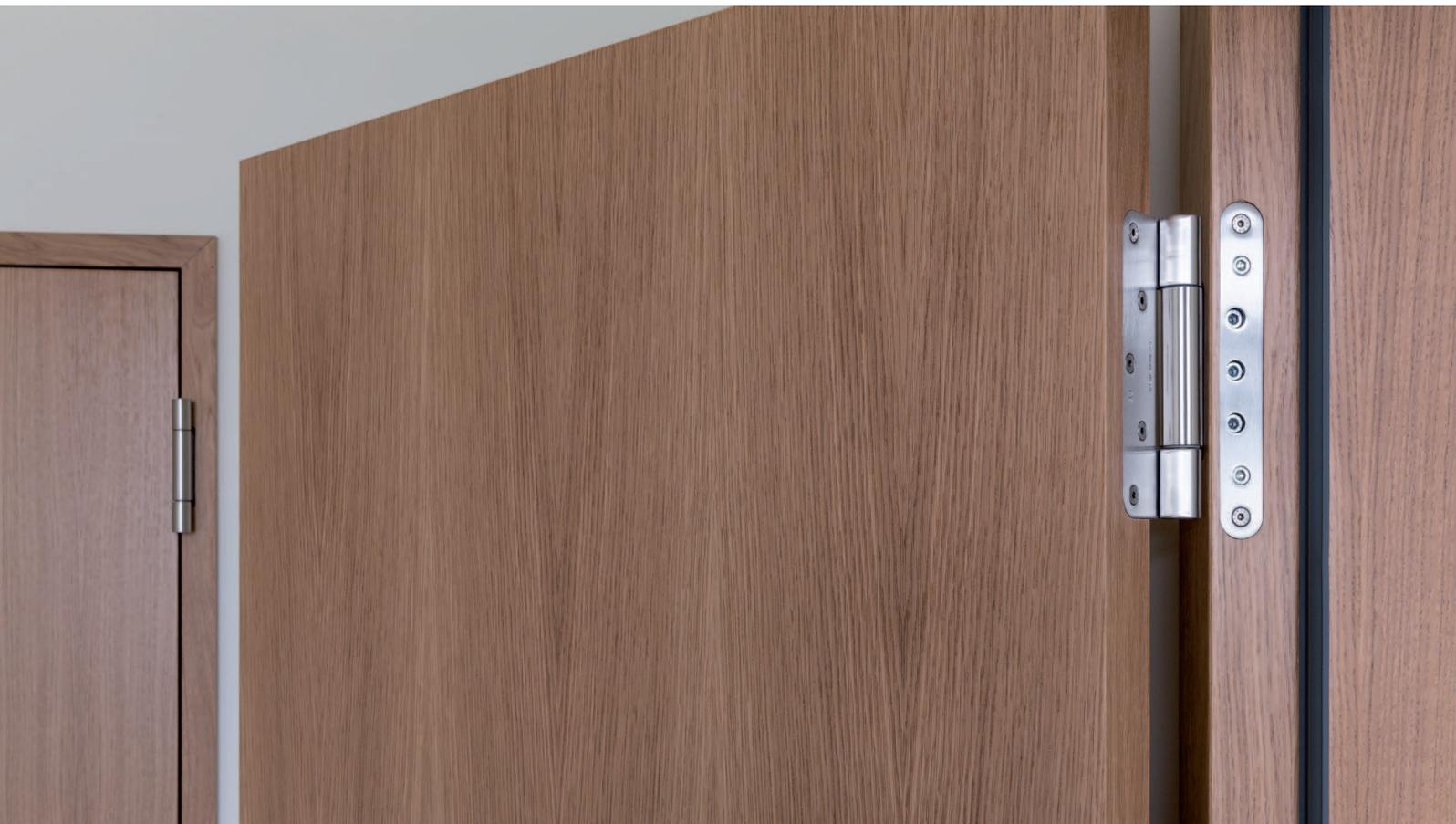
Classification key according to CUAP 04.05/12

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
ARCHITEKTEN: Sauerbruch Hutton, Berlin
SIMONSWERK: VARIANT® VX



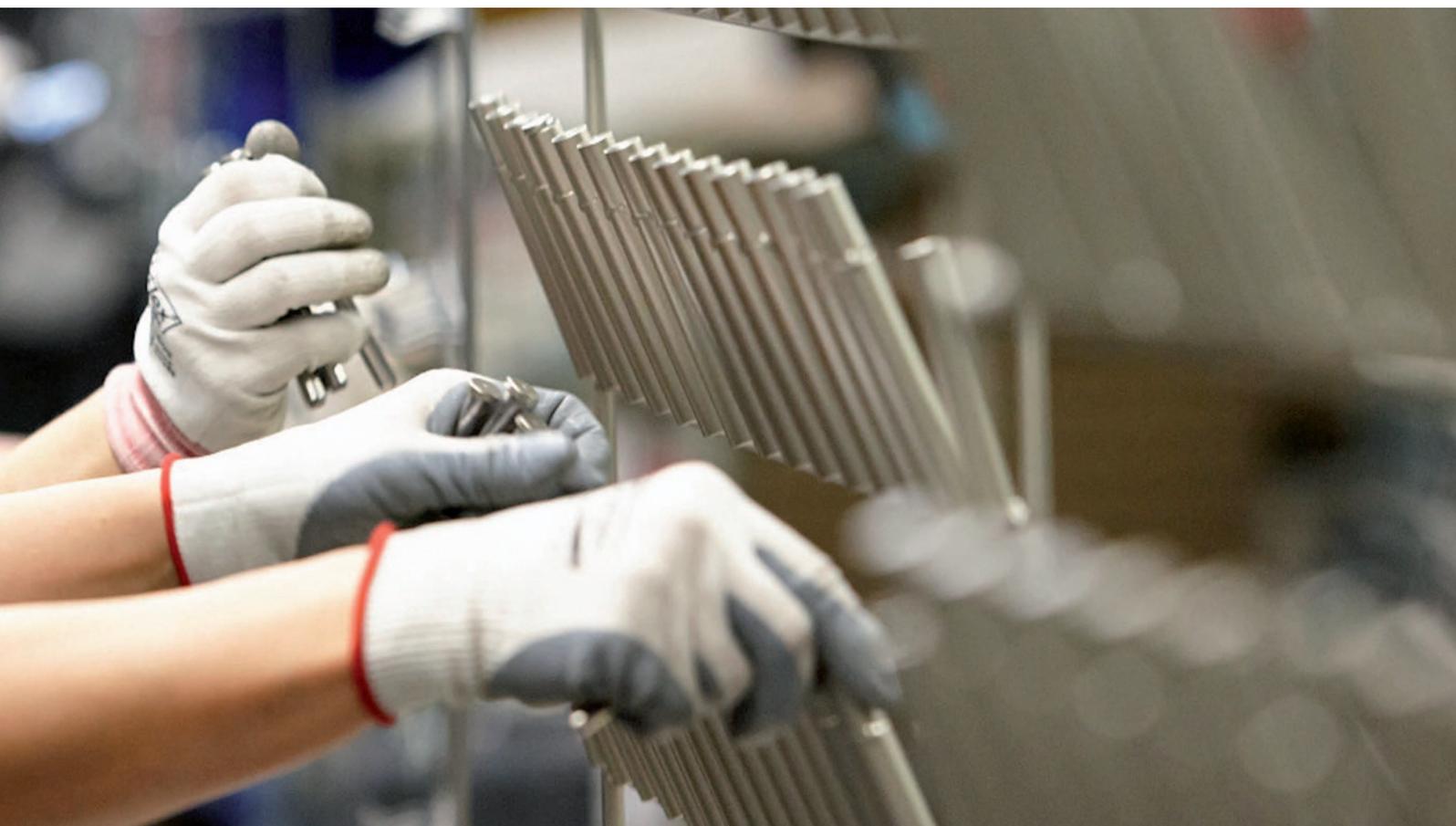
QUALITY AND INNOVATION

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.

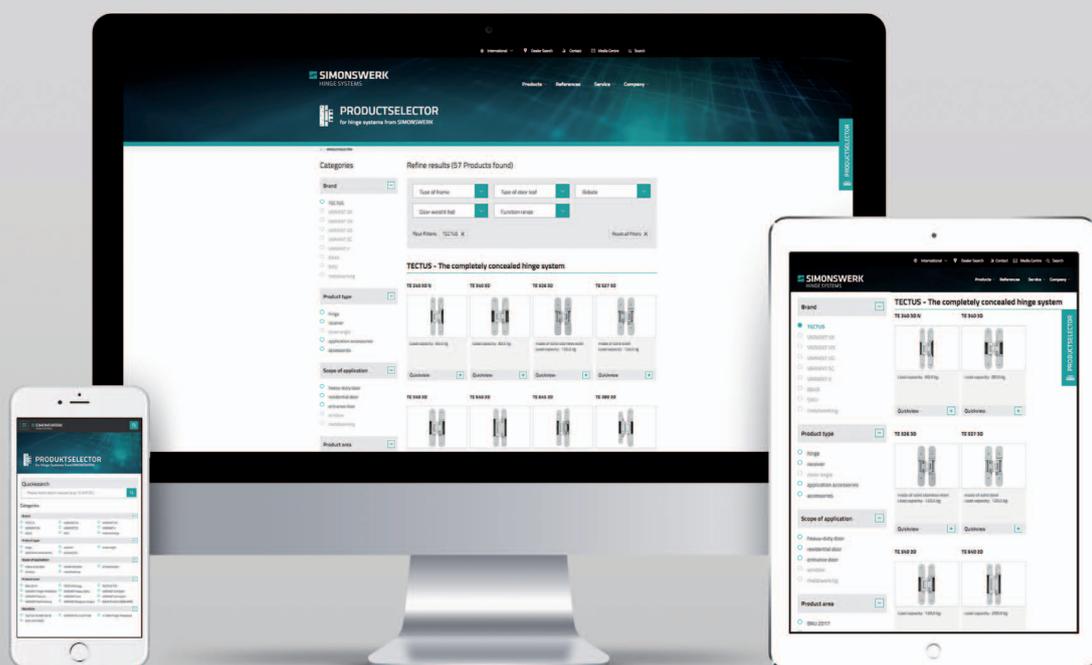
Please visit our home page for any information not included in this brochure. You will find it easy to navigate through our user-friendly website to arrive at the detailed, comprehensive solutions.

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

VN 1939/100	VN 2927/160 Compact
VN 1937/120 Compact Planum	VN 2927/160 Compact Planum
VN 3939/100	VN 2929/160
VN 1939/120	VN 2929/160 Planum
VN 1937/160 Compact Planum	VN 3748/160
VN 1939/160	MULTI 2D VN 5046
VN 3838/160	Pin VN 160 MST5 RC
VN 2828/100	Blind rivet nut M 10
VN 2828/120	Series V 3604
VN 5959/120	V 3605
VN 2828/160	Series V 3600
VN 5959/160	Series V 3610
VN 2929/100	Series V 3630
VN 3949/100	Series V 3690
VN 8849/100 M	Series V 4600
VN 2927/120 Compact	Series V 8600
VN 2927/120 Compact Planum	Series V 8610
VN 2929/120	Cover cap 10 mm
VN 3848/160	Cover cap V 3605

PLEASE VISIT THE PRODUCTSELECTOR AT
www.simonswerk.com

SIMONSWERK GmbH

Bosfelder Weg 5
33378 Rheda-Wiedenbrück
Germany

+49 5242/413-0

+49 5242/413-260

sales@simonswerk.de
www.simonswerk.com

