

**Classification of Fire
 Resistance Performance,
 Smoke Control and
 Self-closing Characteristics
 in accordance with
 EN 13501-2:2016**

K-5051-DMT-DO

Customer	Kegro Deuren B.V. Industrieweg 25 6562 AP Groesbeek The Netherlands
Compiled by	DMT GmbH & Co. KG DMT Test Laboratory for Fire Protection, Test Body for Fire Protection Hermann-Kemper-Straße 12a 49762 Lathen Germany
Number of notified body	2509
Product	Single and double leaved wooden composite pivoted doorset as smoke control doorset with or without glazing, with or without side and/or transom panels, in various supporting constructions
Product designation	KegaBase, KegaComfort, KegaPro
Nr. of the classification report	K-5051-DMT-DO
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1 Introduction

This classification report of smoke control defines the classification assigned to a smoke control doorset with designation „KegaBase, KegaComfort, KegaPro“ in accordance with the procedures given in EN 13501-2:2016.

2 Details of classified product

2.1 General

The building component „KegaBase, KegaComfort, KegaPro“ belongs to the product type smoke protection doorset according to EN 16034.

The building component „KegaBase, KegaComfort, KegaPro“ is provided for the appropriation as single- and double-leaved smoke control doorset. It fulfils the criterion of smoke leakage S (section 5.2.7 of EN 13501-2) and thereby reduces or excludes the leakage of gas or smoke from one side to the other, at ambient temperature (S_a).

The building component „KegaComfort, KegaPro“ is provided for the appropriation as single- and double-leaved smoke control doorset. It fulfils the criterion of smoke leakage S (section 5.2.7 of EN 13501-2) and thereby reduces or excludes the leakage of gas or smoke from one side to the other, both at ambient temperature (S_a) as also with a temperature of 200 °C (S_{200}).

Single leave doorsets and the active leaf of a double leaved doorset of the product „KegaBase, KegaComfort, KegaPro“ fulfils the requirements of the self-closing characteristics C (section 5.2.6) with the ability to close completely out of the opened position.

An exposed side is not defined, the exposed side can either be the opening side as also the closing side.

2.2 Detailed product description

The product „KegaBase, KegaComfort, KegaPro“ is a single and double leaved optionally glazed wooden composite doorset optional with side and/or transom panel. The building component is described completely in the test reports and the report of extended application, which are referred to in section 3.1 for verification of classification, as also the annexes 1.0 to 6.3 of this classification report.

3 Test reports / reports of extended classification and test results for verification of classification

3.1 Test reports

3.1.1 Test reports according to EN 1634-3

No.	Name of Laboratory No. of Notified Body	Name of sponsor	Test report no. dated	Test method
S1	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-428 31.08.2021	EN 1634-3:2004
S2	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-430 31.08.2021	EN 1634-3:2004
S3	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-437 23.07.2021	EN 1634-3:2004
S4	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-438 20.07.2021	EN 1634-3:2004
S5	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-439 20.07.2021	EN 1634-3:2004
S6	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-441 21.09.2021	EN 1634-3:2004
S7	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-442 20.07.2021	EN 1634-3:2004
S8	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-443 20.07.2021	EN 1634-3:2004
S9	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-449-R1 29.07.2021	EN 1634-3:2004
S10	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-450-R1 04.05.2021	EN 1634-3:2004
S11	DMT GmbH & Co. KG NB 2509	Kegro Deuren B.V.	DMT-DO-52-451-R1 29.07.2021	EN 1634-3:2004

3.1.2 Test results of test reports according to EN 1634-3

Test report number Brief description of the test specimen	Parameter	results
(S1) DMT-DO-50-428 Double-leaved glazed wooden composite door-set in wooden block frame with a thickness of 39 mm, with an open clearance (W x H) of 2112 mm x 2397 mm and frame outside dimensions (W x H) of 2224 mm x 2451 mm, with the designation "KegaComfort VS". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,67 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	24,60 m ³ /h
(S2) DMT-DO-50-430 Single-leaved glazed wooden composite doorset in wooden block frame with a thickness of 54 mm, with side and transom panel, with an open clearance (W x H) of 1043 mm x 2397 mm and frame outside dimensions (W x H) of 1667 mm x 2997 mm, with the designation "KegaPro BW60". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,43 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	19,29 m ³ /h
(S3) DMT-DO-50-437 Single-leaved wooden composite doorset in wooden block frame with a thickness of 39 mm, with an open clearance (W x H) of 1049 mm x 2400 mm and frame outside dimensions (W x H) of 1161 mm x 2454 mm, with the designation "KegaBase TS". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,55 m ³ /m/h
(S4) DMT-DO-50-438 Single-leaved wooden composite doorset in wooden block frame with a thickness of 38 mm, with an open clearance (W x H) of 1049 mm x 2400 mm and frame outside dimensions (W x H) of 1161 mm x 2454 mm, with the designation "KegaPro MV". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,70 m ³ /m/h
(S5) DMT-DO-50-439 Single-leaved wooden composite doorset in wooden block frame with a thickness of 39 mm,	S _a – Smoke control at ambient temperature	0,19 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	7,30 m ³ /h

with side and transom panel, with an open clearance (W x H) of 1043 mm x 2385 mm and frame outside dimensions (W x H) of 1667 mm x 2997 mm, with the designation "KegaComfort VS". Tested from the opening and closing side		
(S6) DMT-DO-50-441 Single-leaved glazed wooden composite doorset in wooden block frame with a thickness of 54 mm, with an open clearance (W x H) of 1025 mm x 2376 mm and frame outside dimensions (W x H) of 1161 mm x 2454 mm, with the designation "KegaPro MV Excellent". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,67 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	18,65 m ³ /h
(S7) DMT-DO-50-442 Double-leaved wooden composite doorset in wooden block frame with a thickness of 39 mm, with an open clearance (W x H) of 2112 mm x 2397 mm and frame outside dimensions (W x H) of 2224 mm x 2453 mm, with the designation "KegaBase dB". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,40 m ³ /m/h
(S8) DMT-DO-50-443 Double-leaved wooden composite doorset in wooden block frame with a thickness of 54 mm, with an open clearance (W x H) of 2112 mm x 2385 mm and frame outside dimensions (W x H) of 2224 mm x 2453 mm, with the designation "KegaPro MV Excellent". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,45 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	7,52 m ³ /h
(S9) DMT-DO-50-449-R1 Single-leaved wooden composite doorset in wooden block frame with a thickness of 39 mm, with an open clearance (W x H) of 1049 mm x 2400 mm and frame outside dimensions (W x H) of 1161 mm x 2454 mm, with the designation "KegaComfort dB". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,29 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	3,71 m ³ /h
(S10) DMT-DO-50-450-R1 Double-leaved wooden composite doorset in wooden block frame with a thickness of 39 mm, with an open clearance (W x H) of 2112 mm x	S _a – Smoke control at ambient temperature	0,32 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	14,12 m ³ /h

2397 mm and frame outside dimensions (W x H) of 2224 mm x 2451 mm, with the designation "KegaComfort VS". Tested from the opening and closing side		
(S11) DMT-DO-50-451-R1 Single-leaved wooden composite doorset in wooden block frame with a thickness of 38 mm, with an open clearance (W x H) of 1049 mm x 2400 mm and frame outside dimensions (W x H) of 1161 mm x 2454 mm, with the designation "KegaPro MV finer". Tested from the opening and closing side	S _a – Smoke control at ambient temperature	0,62 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	9,12 m ³ /h

The smoke protection tests of the reports S1 to S11 were tested according to the current standard EN 1634-3 edition 2004 and can therefore be used without restrictions.

3.2 Reports of extended application

Nr.	Test report no. dated	Name of Test Body Notified Body	Name of sponsor	Standard of extended application
E1	E-5040-DMT-DO 09.12.2021	DMT GmbH & Co. KG 2509	Kegro Deuren B.V.	EN 15269-20:2020

4 Classification and field of application

4.1 Reference of classification

This classification was carried out in accordance with EN 13501-2:2016, section 7.5.6.

4.2 Classification

The building component „KegaBase, KegaComfort, KegaPro“ of Kegro Deuren B.V., may be classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
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Fire resistance classification:

S_a, S₂₀₀, C

S₂₀₀: Only for the building component KegaComfort and KegaPro

C: only for single leave doorsets and the active leaf of double leafed doorsets

4.3 Field of application

This classification is valid for the following practical application (final application):

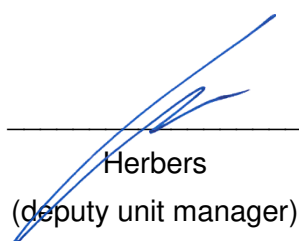
EN 16034

The scope of the classified component with direct and extended field of application is given in the test reports, the reports of extended application and the annexes 1.0 to 6.3 of this classification report.

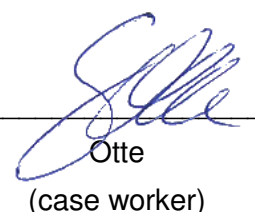
5 Limitations

This classification document does not represent type approval or certification of the product.

Lathen, 09.12.2021


Herbers
(deputy unit manager)




Otte
(case worker)

Annotations

Documents without stamp and sign have no validity. The cover page and the sign page of this document are signed with the stamp.

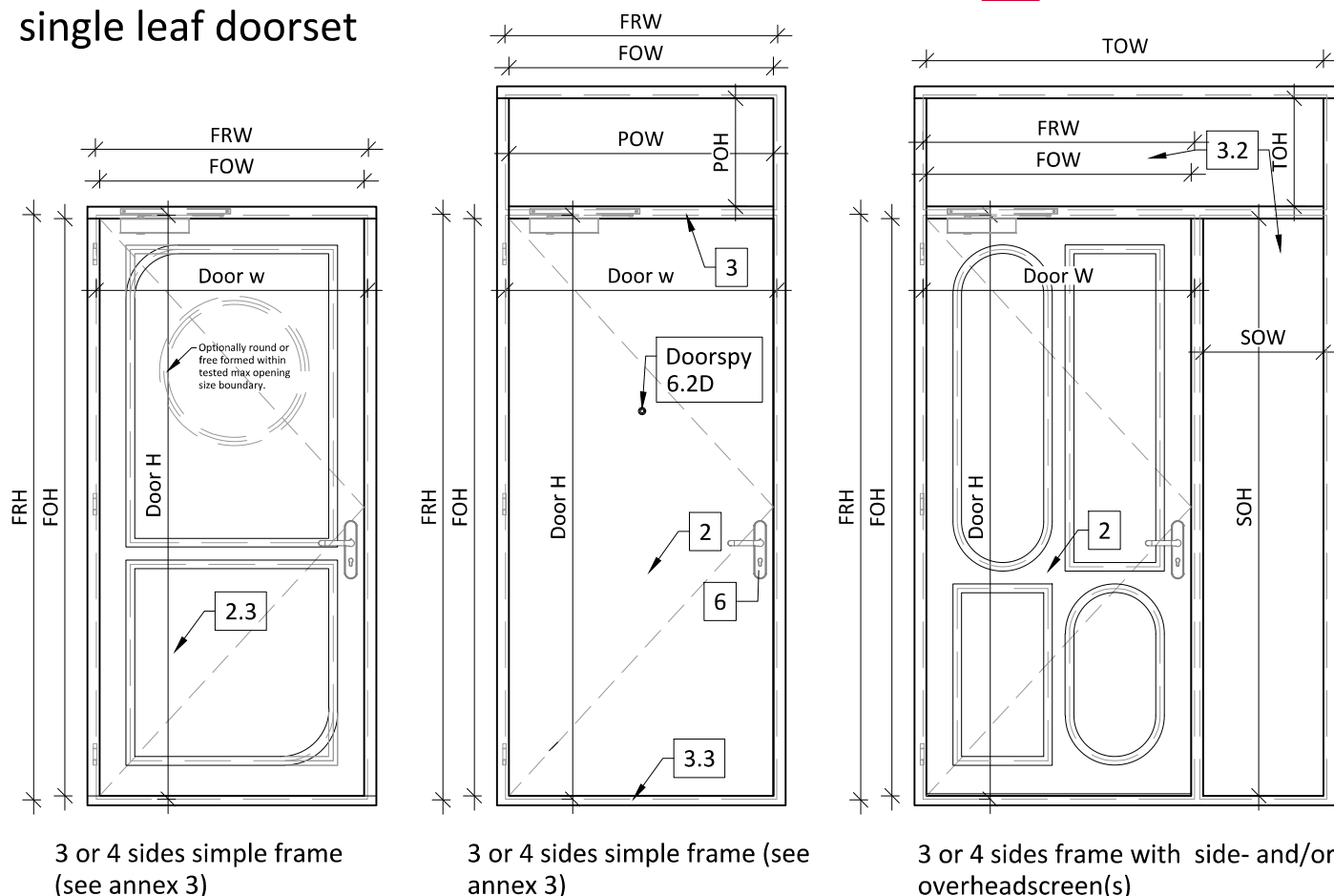
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Translations of this classification report have to include the annotation „Translation of the german original version not proven by DMT GmbH & Co. KG, Test Body for Fire Protection“. In cases of doubt the german original version of the report is valid.

1.0 Overview of doorset configuration and sizes single leaf doorset



Additional configurations,
sizes accordingly

Fabricated by:
KEGRO IDEUREN

Allowable size for single door sets

	Width (mm)	Height (mm)	Area (m2)
Doorleaf S_a / S_{200}	≤ 1067	≤ 2405	≤ 2.57
Frame opening size S_a / S_{200}	≤ 1049	≤ 2400	≤ 2.52
Frame rebate size S_a / S_{200}	≤ 1073	≤ 2412	≤ 2.59
Toplight opening size S_a	≤ 3118	≤ 900	
Toplight opening size S_{200}	≤ 2559	≤ 900	
Sidescreen opening size S_a / S_{200}	≤ 900	≤ 3382	

Doorleaf size depending on doorleaf frame type, core and glass opening sizes. See annex 2 for doorleaf specific rules.

Doorleaf types for single doorsets thickness $\geq 38\text{mm}$:

S_a only: KegaBase TS / .. VS / .. dB

$S_a + S_{200}$: KegaComfort VS / .. dB / .. BW60

KegaPro VS / .. dB / .. MV / .. BW30 / .. BW60

FRH: Frame rebate height
FOH: Frame opening height
TOH: Top light opening height
SOH: Sidescreen opening height
FRW: Frame rebate width
FOW: Frame opening width
TOW: Top light opening width
SOW: Sidescreen opening width

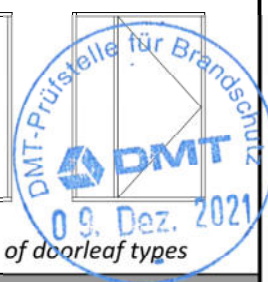
See annex 2.0 for explanation of doorleaf types

Overview single doorset

annex 1.0

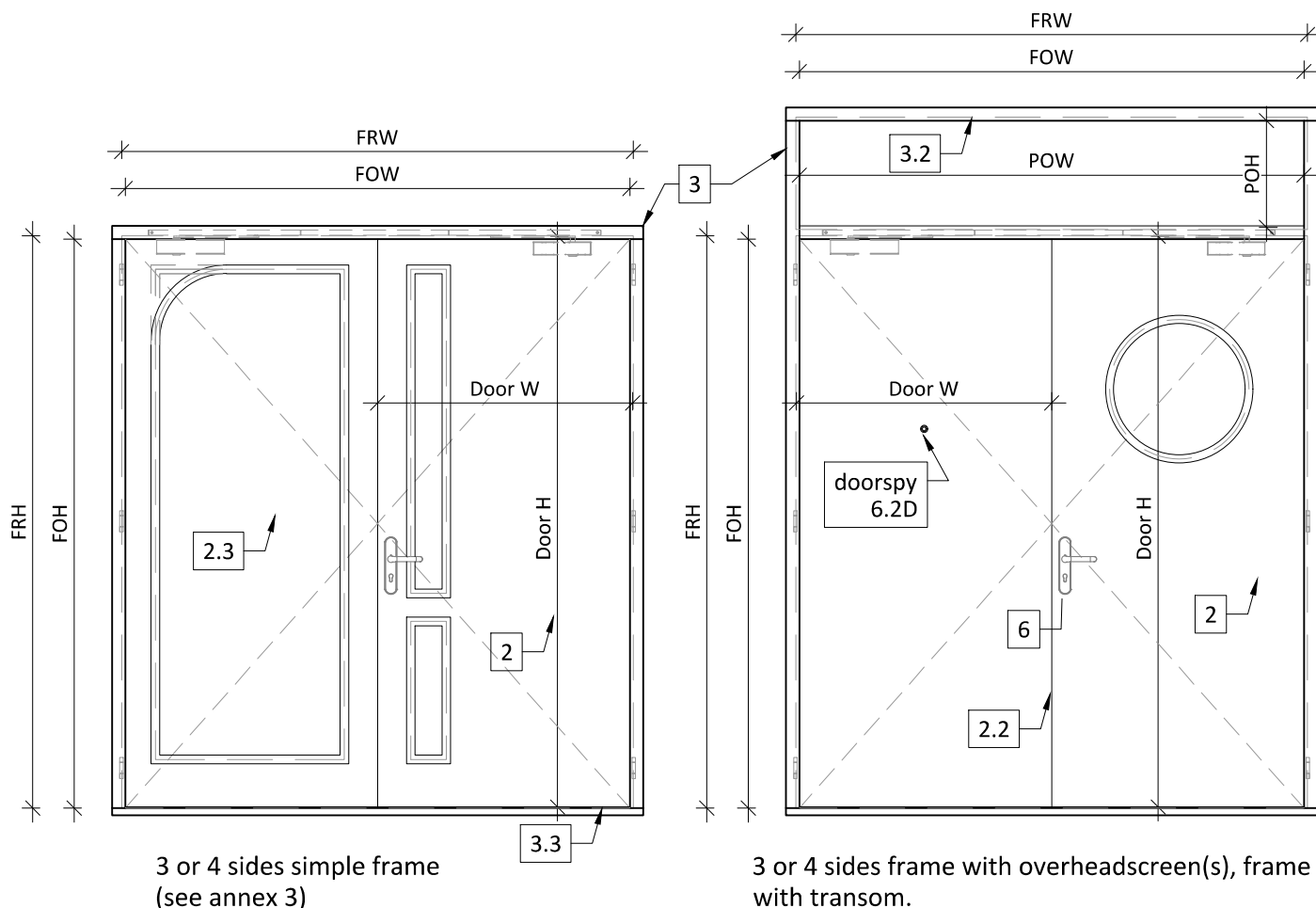
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test report no.
K-5051-DMT-DO



1.1 Overview of doorset configuration and sizes

Double leaf doorset



Allowable size for double doorsets

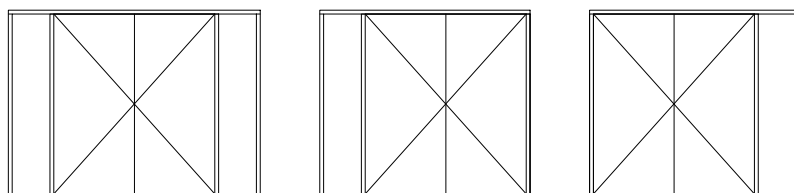
	Width (mm)	Height (mm)	Area (m2)
Active doorleaf S_a / S_{200}	≤ 1067	≤ 2405	≤ 2.57
Passive doorleaf S_a / S_{200}	≤ 1082	≤ 2405	≤ 2.60
Frame opening size S_a / S_{200}	≤ 2118	≤ 2400	≤ 5.08
Frame rebate size S_a / S_{200}	≤ 2142	≤ 2412	≤ 5.17
Toplight opening size S_a / S_{200}	≤ 2118	≤ 900	
Side screen opening size S_a / S_{200}	≤ 900	≤ 2400	

Doorleaf size depending on doorleaf frame type, core and glass opening sizes. See annex 2 for doorleaf specific rules.

Doorleaf types for double doorsets
thickness $\geq 38\text{mm}$:

S_a : KegaBase TS / .. VS / .. dB
 $S_a + S_{200}$: KegaComfort VS / .. dB / .. BW60
 KegaPro VS / .. dB / .. MV / .. BW30
 / .. BW60

See annex 2.0 for explanation of doorleaf types



FRH: Frame rebate height
 FOH: Frame opening height
 TOH: Top light opening height
 SOH: Sidescreen opening height
 FRW: Frame rebate width
 FOW: Frame opening width
 TOW: Top light opening width
 SOW: Sidescreen opening width

Additional configurations,
sizes accordingly

Fabricated by:

KEGRO **DEUT** **DMT**



Double doorset overview

DMT GmbH & Co. KG
 Plant for Product Safety
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annex 1.1

test report no.
K-5051-DMT-DO

1.2 Basic principle option horizontal sections of single doorsets with or without sidescreen



Details see Annex:

2. Doorleaf construction

- 2.1. Edge profiles and rebates
- 2.2. Meeting edge double doors
- 2.3. Glass/panel fitting
- 2.4. Mouldings
- 2.5. Kick plates

3. Frame construction

- 3.1. Rebates
- 3.2. Side and overhead panels
- 3.3. 3.3 Thresholds

4. Wall-Frame meeting edge and fixation

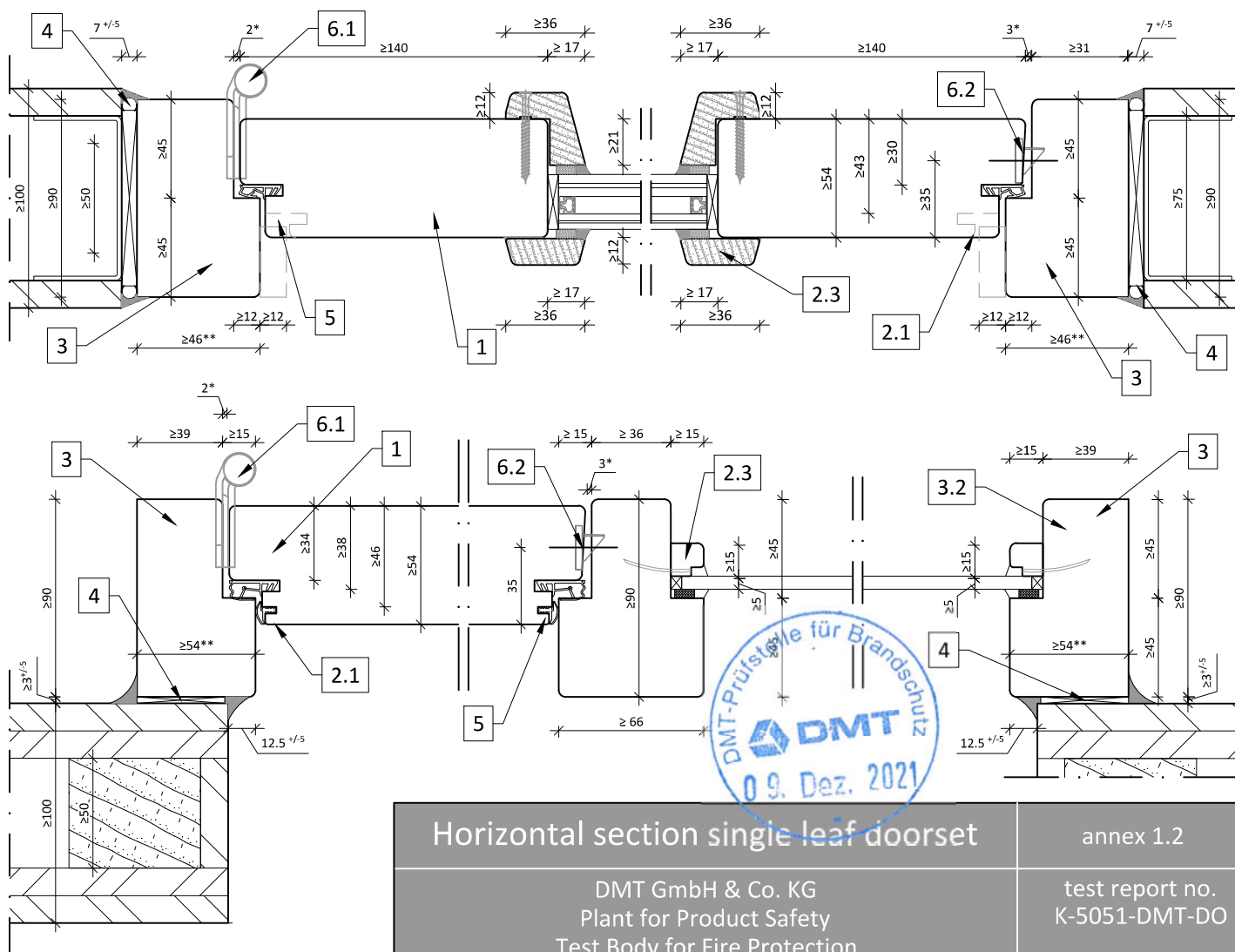
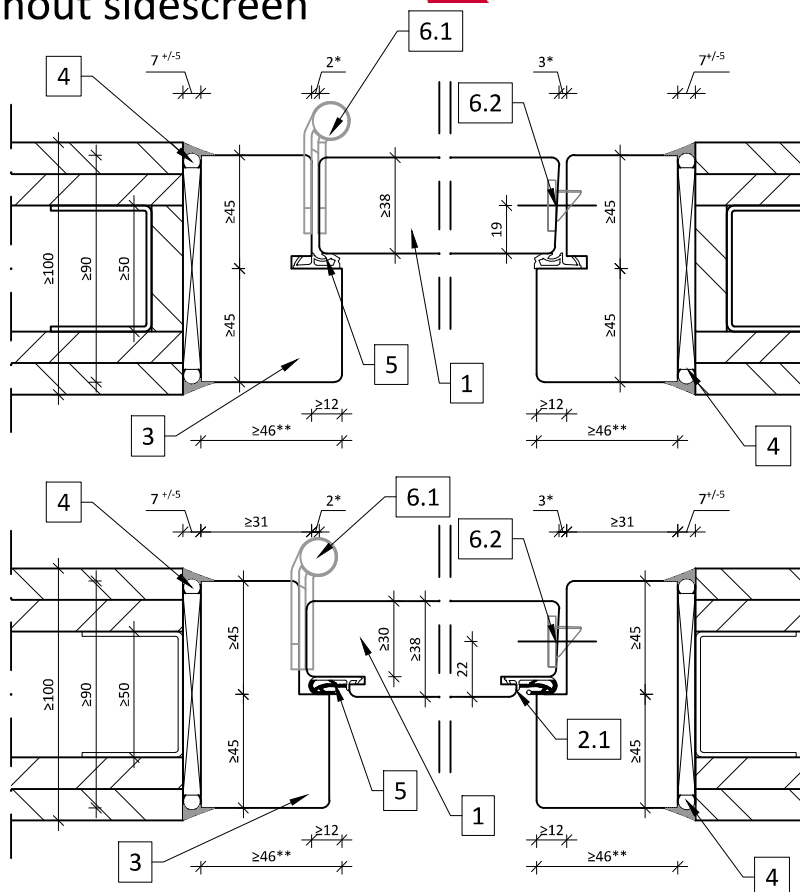
5. Seals

6. Door hardware

- 6.1. Hinges
- 6.2. Locks
- 6.3. Doorclosers

*Gap size	Nominal (mm)	Max (mm)
Hinge side edge	2	≤ 4
Lock side edge	3	≤ 5

** : Blockframe width max 300mm



Horizontal section single leaf doorset

annex 1.2

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Plant for Product Safety
Test Body for Fire Protection

test report no.
K-5051-DMT-DO

1.3 Basic principle option horizontal sections of double doorsets with or without sidescreen



Details see Annex:

2. Doorleaf construction

- 2.1. Edge profiles and rebates
- 2.2. Meeting edge double doors
- 2.3. Glass/panel fitting
- 2.4. Mouldings
- 2.5. Kick plates

3. Frame construction

- 3.1. Rebates
- 3.2. Side and overhead panels
- 3.3. Tresholds

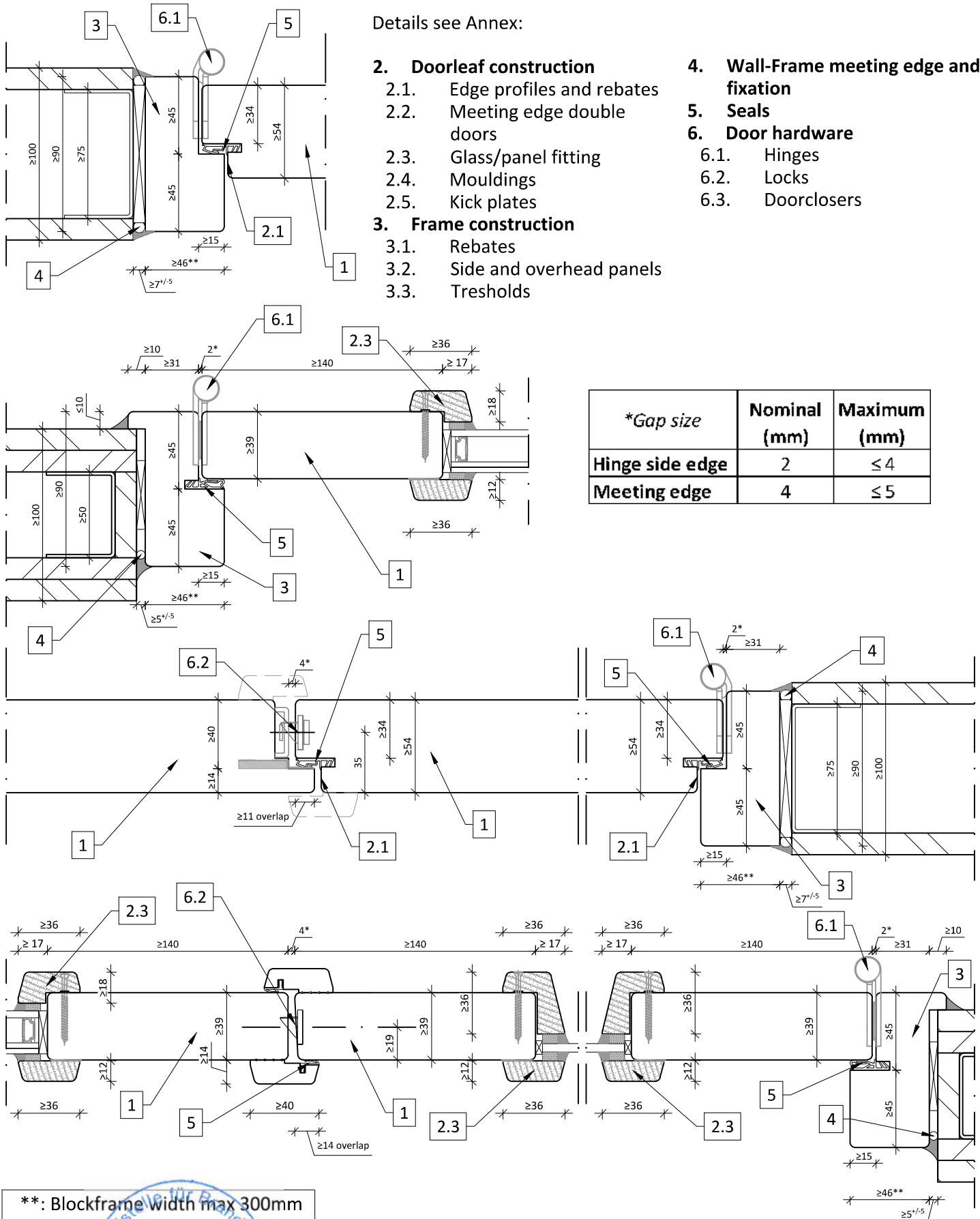
4. Wall-Frame meeting edge and fixation

5. Seals

6. Door hardware

- 6.1. Hinges
- 6.2. Locks
- 6.3. Doorclosers

*Gap size	Nominal (mm)	Maximum (mm)
Hinge side edge	2	≤ 4
Meeting edge	4	≤ 5



** : Blockframe width max 300mm



Horizontal section double leaf doorset

annex 1.3

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Plant for Product Safety
Test Body for Fire Protection

test report no.
K-5051-DMT-DO

1.4 Basic principle vertical sections of doorsets with or without topscreen

Details see Annex:

2. Doorleaf construction

- 2.1. Edge profiles and rebates
- 2.2. Meeting edge double doors
- 2.3. Glass/panel fitting
- 2.4. Mouldings
- 2.5. Kick plates

3. Frame construction

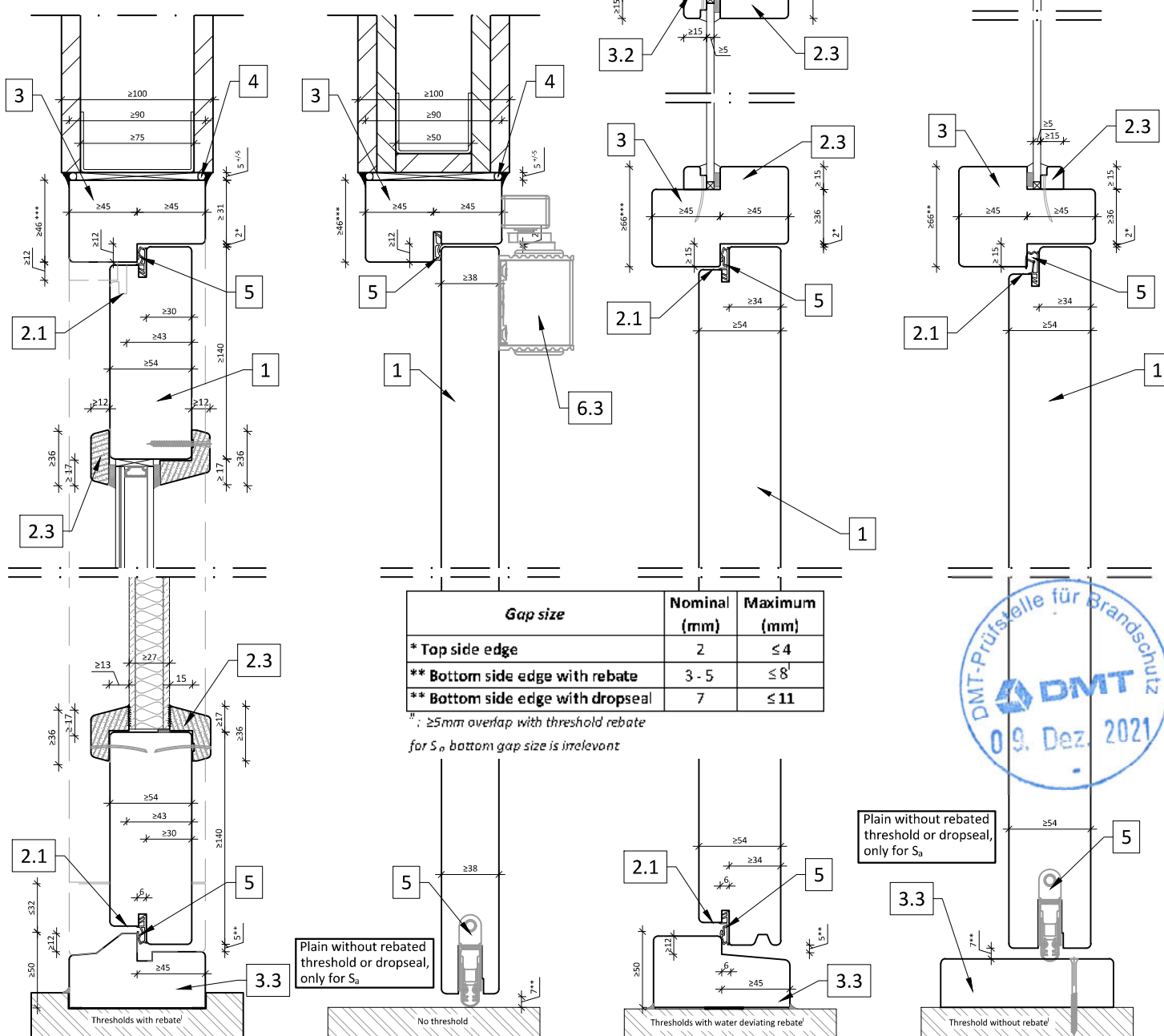
- 3.1. Rebates
- 3.2. Side and overhead panels
- 3.3. Thresholds

4. Wall-Frame meeting edge and fixation

5. Seals

6. Door hardware

- 6.1. Hinges
- 6.2. Locks
- 6.3. Doorclosers



*** : Block frame max 300mm wide.

l: Fixing technique threshold: screwed, glued an/or enclosed.

Vertical section single leaf doorset

annex 1.4

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test report no.
K-5051-DMT-DO

1.5 Basic principle vertical sections of sidescreens with or without transom

Details see Annex:

2. Doorleaf construction

- 2.1. Edge profiles and rebates
- 2.2. Meeting edge double doors
- 2.3. Glass/panel fitting
- 2.4. Mouldings
- 2.5. Kick plates

3. Frame construction

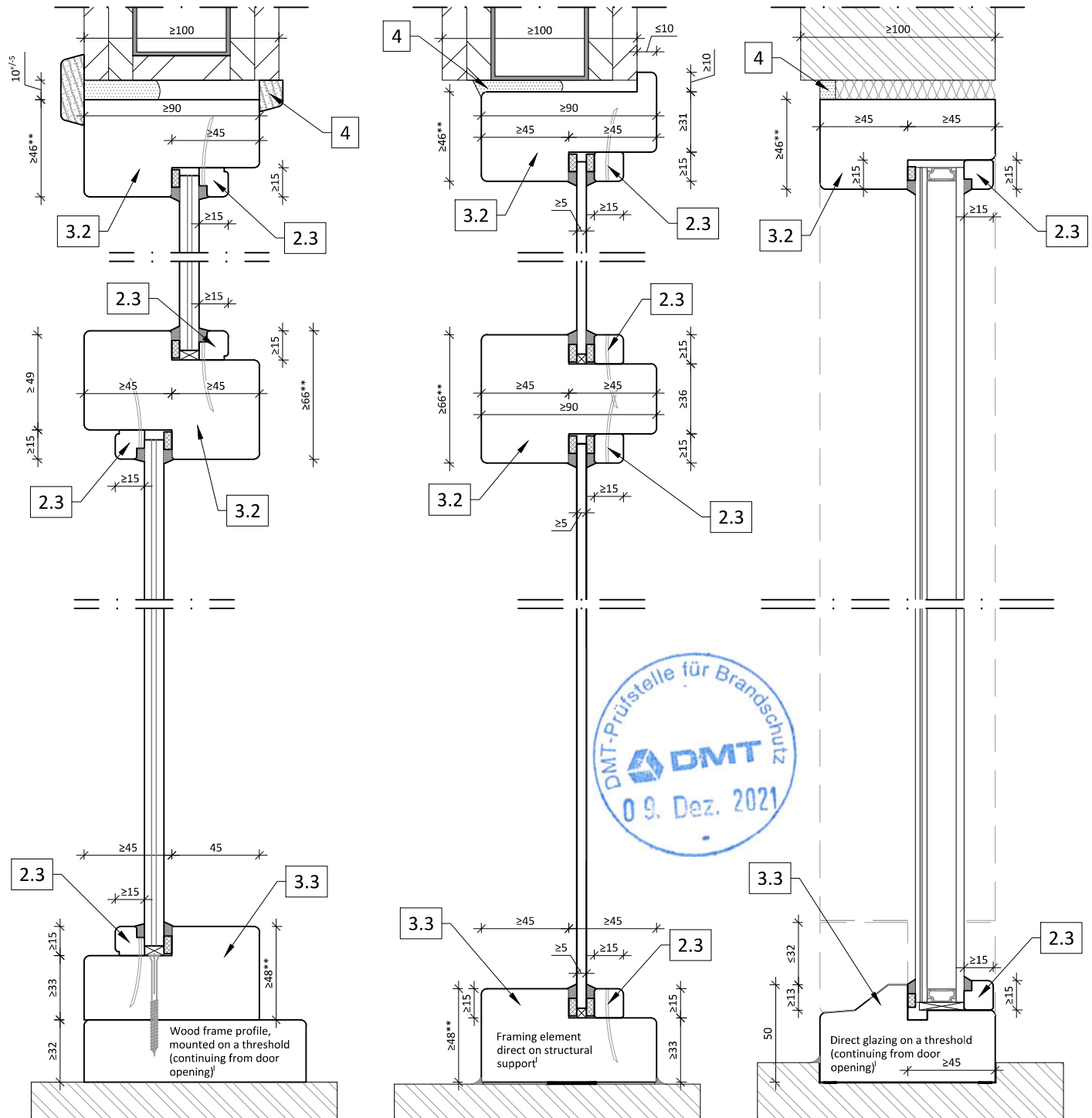
- 3.1. Rebates
- 3.2. Side and overhead panels
- 3.3. Thresholds

4. Wall-Frame meeting edge and fixation

5. Seals

6. Door hardware

- 6.1. Hinges
- 6.2. Locks
- 6.3. Doorclosers



** : Block frame max 300mm wide.

¹: Fixing technique threshold: screwed, glued an/or enclosed.

Vertical section sidescreens

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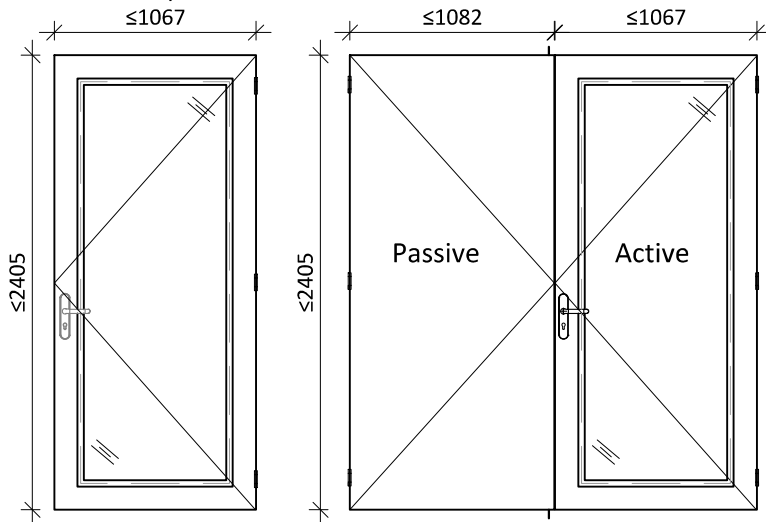
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test report no.
K-5051-DMT-DO

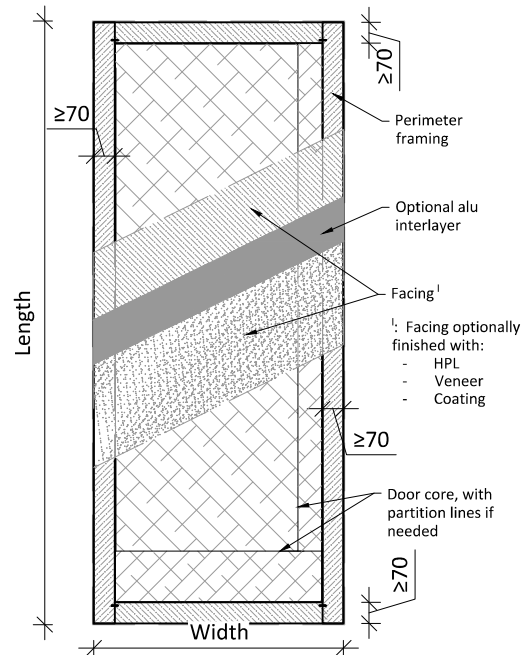
2.0a - Doorleaf construction S₂₀₀

Details see Annex:

- 2.1 Edge profiles and rebates
- 2.2 Double door meeting edge
- 2.3 Glass fitting
- 2.4 Decorative mouldings
- 2.5 Kickplates

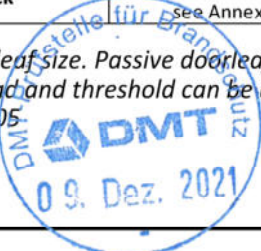


Doorleaf construction principle



Doorleaf types	Group 1	Group 2	Group 3	Group 4	Group 5
Doorleaf types	KegaComfort VS	KegaComfort dB / KegaPro dB (54)	KegaPro MV / KegaPro BW30	KegaPro VS	KegaComfort BW60 KegaPro BW60
Perimeter framing	Hardwood >7cm	Hardwood >7cm	Hardwood >7cm	Hardwood >7cm	Hardwood >7cm
Doorcore	Partical board	Multilayer sound insulating core	Woodpanel core	Partical board	Special 60min fire multilayer core
Facing options	HDF, HPL, Veneer	HDF, HPL, Veneer	Tricoya, HDF, HPL, Veneer	Tricoya, HDF, HPL, Veneer	Tricoya, HDF, HPL, Veneer
finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish
aluminium inlay in facing	no	optional (facing th. ≥6)	Yes	Yes	optional
thickness facing	≥3 mm	≥3 mm	≥7 mm	≥7 mm	≥7 mm
Minimum thickness door	39 mm	39 mm	38 mm	54 mm	54 mm
Maximum doorleaf size*	1067 x 2405 mm*	1067 x 2405 mm*	1067 x 2405 mm*	1067 x 2405 mm*	1067 x 2405 mm*
Edge profile	Plain or plain with rebate see Annex 2.1	Plain or plain with single or double rebate see Annex 2.1	Plain or plain with single or double rebate see Annex 2.1	Plain or plain with single or double rebate see Annex 2.1	Plain or plain with single or double rebate see Annex 2.1
meeting profile double doors	See annex 2.2	See annex 2.2	See annex 2.2	See annex 2.2	See annex 2.2
Glass	Option, see annex 2.3	Not possible	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3
Opaque panels	Option, see annex 2.3	Not possible	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3
Louvres	Not possible	Not possible	Not possible	Not possible	Not possible
Decorative mouldings	Grooves if facing ≥6 mm. Face fixed panels and beads, See Annex 2.4	Grooves if facing ≥6 mm. Face fixed panels and beads, See Annex 2.4	Grooves max 3 deep, Face fixed panels and beads, See Annex 2.4	Grooves max 3 deep, Face fixed panels and beads, See Annex 2.4	Grooves max 3 deep, Face fixed panels and beads, See Annex 2.4
kickplates	max 250mm Optional see Annex 2.5	max 250mm Optional see Annex 2.5	max 250mm Optional see Annex 2.5	max 250mm Optional see Annex 2.5	max 250mm Optional see Annex 2.5
Lock	≥1 latch point see Annex 6	≥1 latch point see Annex 6	for door th. < 54 a 3 latch point lock see Annex 6.2	≥1 latch point see Annex 6	≥1 latch point see Annex 6

*Active doorleaf size. Passive doorleaf bolted to head and threshold can be up to 1082 x 2405



Doorleaf construction S₂₀₀

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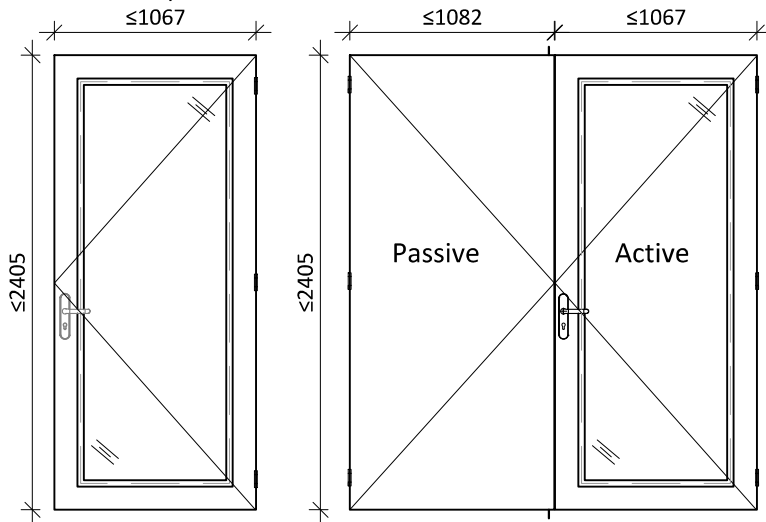
annex 2.0a

test report no.
K-5051-DMT-DO

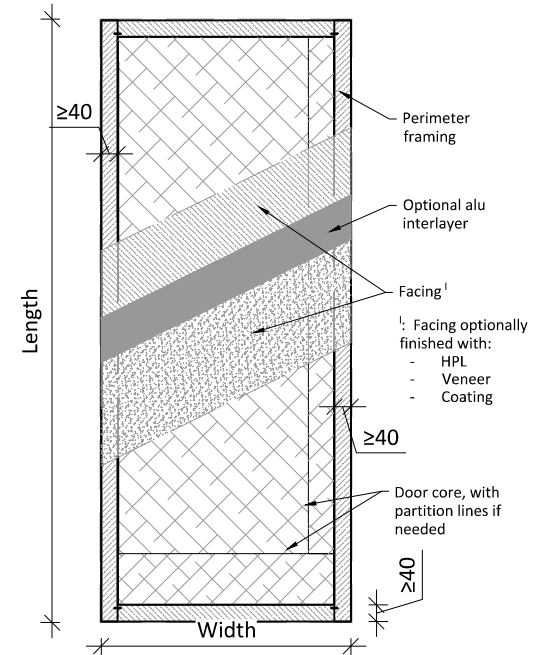
2.0b - Doorleaf construction S_a

Details see Annex:

- 2.1 Edge profiles and rebates
- 2.2 Double door meeting edge
- 2.3 Glass fitting
- 2.4 Decorative mouldings
- 2.5 Kickplates



Doorleaf construction principle



	Group 6	Group 7	Group 8	Group 9
Doorleaf types	KegaBase TS	KegaBase VS	KegaBase dB	KegaPro MV / KegaPro BW30
Perimeter framing	Hardwood >4cm	Hardwood >4cm	Hardwood >4cm	Hardwood >7cm
Doorcore	Tubular partical board	Partical board	Multilayer sound insulating core	Woodpanel core
Facing options	HDF, HPL, Veneer	HDF, HPL, Veneer	HDF, HPL, Veneer	Tricoya, HDF, HPL, Veneer
finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish	Opaque or translucent coating; HPL finish
aluminium inlay in facing	optional	optional	optional	Yes
thickness facing	≥3 mm	≥3 mm	≥3 mm	≥7 mm
Minimum thickness door	39 mm	39 mm	39 mm	38 mm
Maximum doorleaf size*	1067 x 2405 mm	1067 x 2405 mm	1067 x 2405 mm	1067 x 2405 mm
Edge profile	Plain or plain with single rebate see Annex 2.1	Plain or plain with single rebate see Annex 2.1	Plain or plain with single rebate see Annex 2.1	Plain or plain with single rebate see Annex 2.1
meeting profile double doors	See annex 2.2	See annex 2.2	See annex 2.2	See annex 2.2
Glass	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3
Opaque panels	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3	Option, see annex 2.3
Louvres	Not possible	Not possible	Not possible	Not possible
Decorative mouldings	Face fixed panels and beads, See Annex 2.4	Face fixed panels and beads, See Annex 2.4	Face fixed panels and beads, See Annex 2.4	Grooves max 3 deep, Face fixed panels and beads, See Annex 2.4
kickplates	Optional no limits. see Annex 2.5	Optional no limits. see Annex 2.5	Optional no limits. see Annex 2.5	Optional no limits. see Annex 2.5
Lock	≥1 latch point see Annex 6	≥1 latch point see Annex 6	≥1 latch point see Annex 6	≥1 latch point see Annex 6

*Active doorleaf size. Passive doorleaf bolted to head and threshold can be up to 1082 x 2405

Doorleaf construction S_a

annex 2.0b

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Test Body for Fire Protection

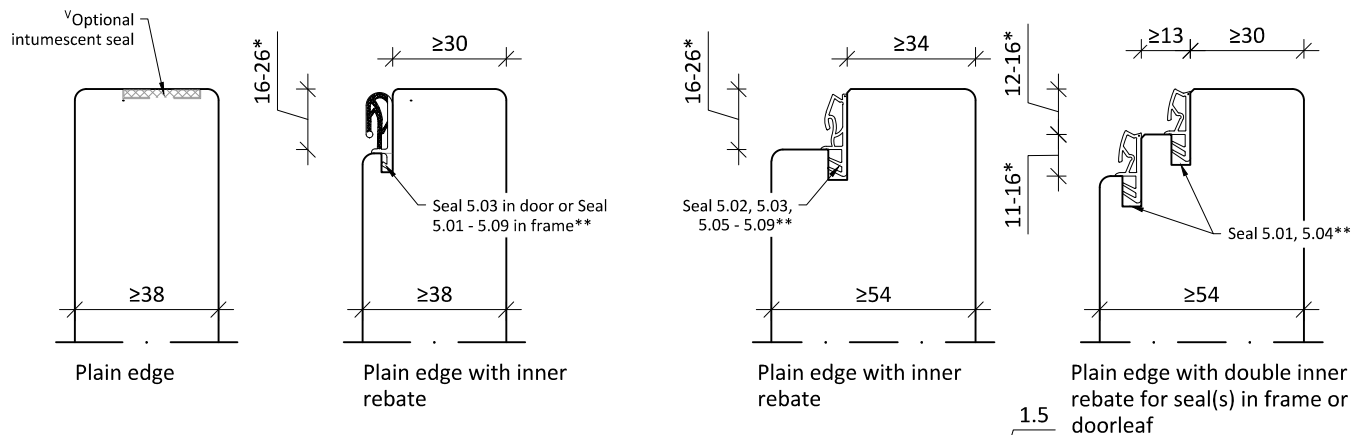
test report no.
K-5051-DMT-DO



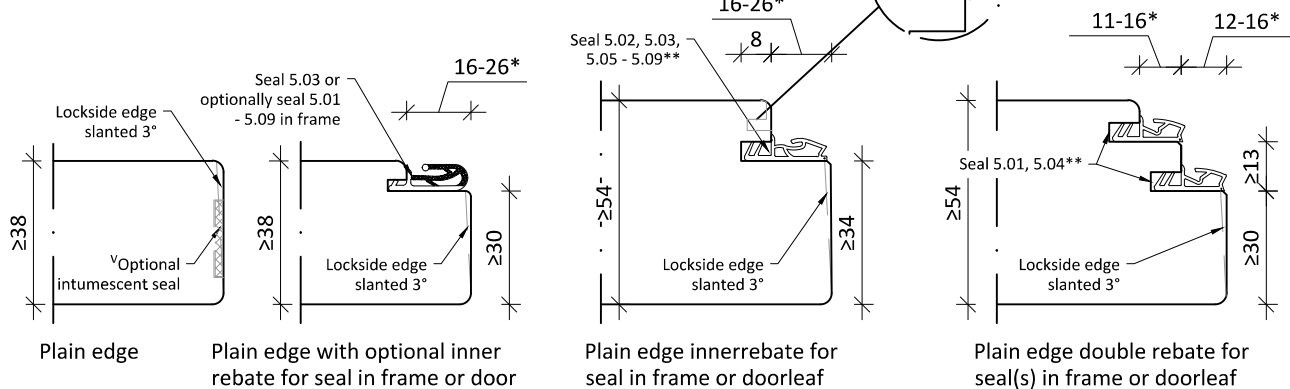
2.1 Profiles for door-Frame meeting edge rebate



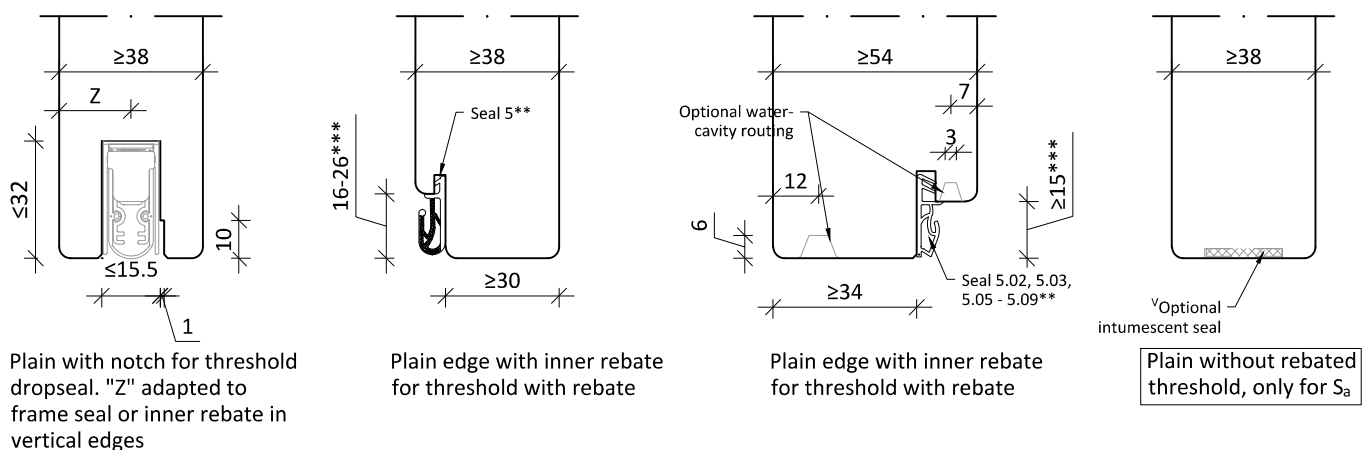
Head of door



Vertical edges



Bottom edges



*: width of rebate to be in relation to frame rebate. Frame rebate +1mm is door rebate.

** : Seal optionally in frame. Notch for seal in door optionally omitted in such a case.

***: width of rebate underside of door to be in relation to threshold rebate. Threshold rebate - door rebate = ≤ 3

^v : All edges can optionally contain an exposed or concealed intumescent seal (fire door situation)



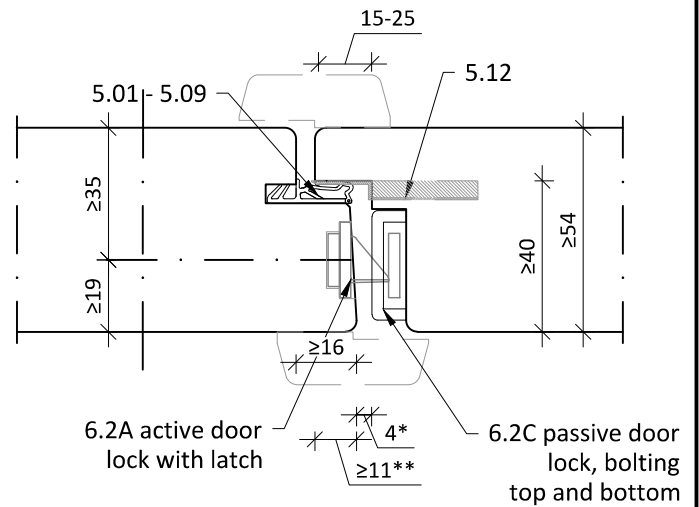
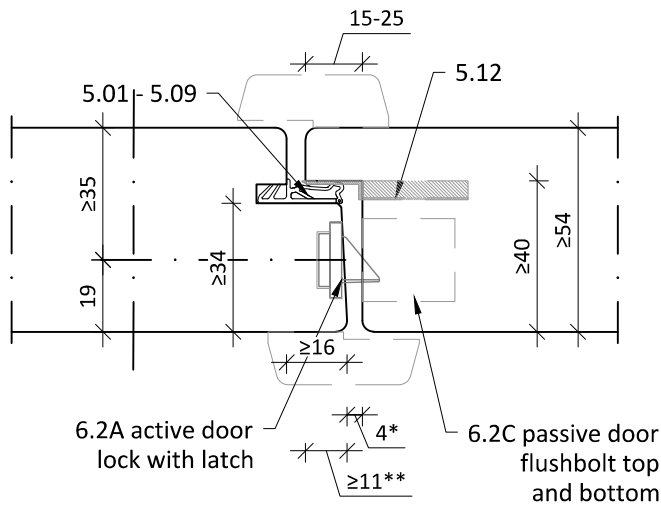
Edge profiles and rebates doorleaf

annex 2.1

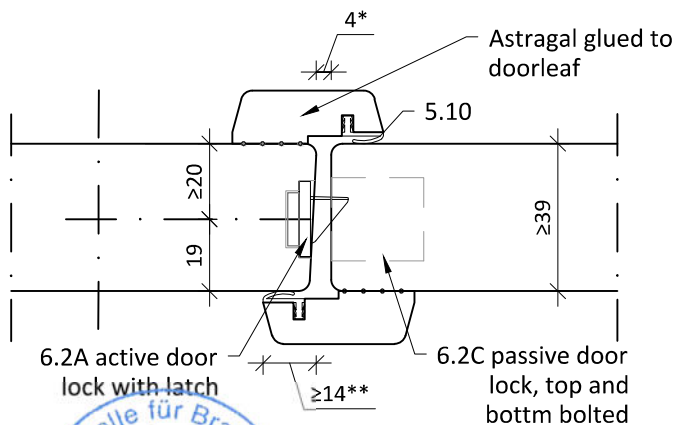
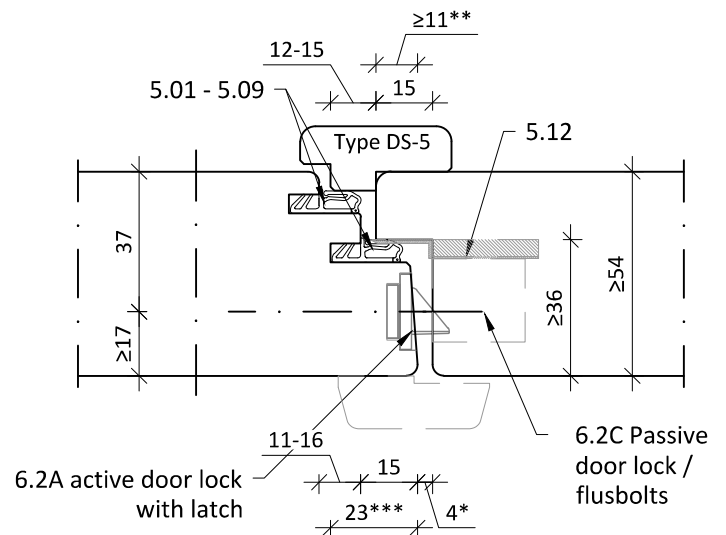
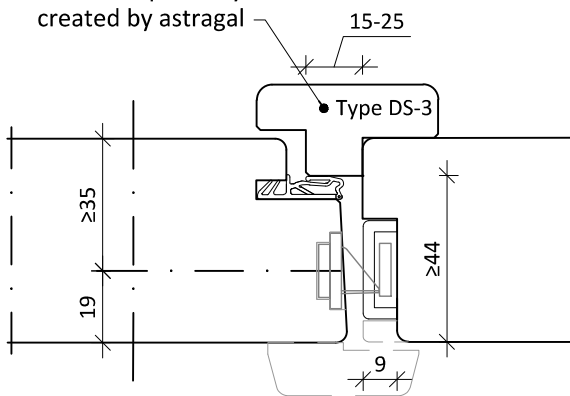
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test report no.
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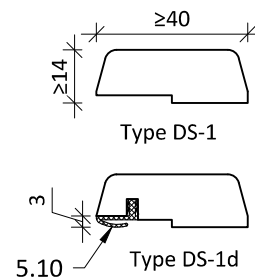
2.2 Profiles for double doorset meeting edge



Rebate or additional rebate optionally created by astragal



All ≥54 mm situations optionally with additional astragal. Material: wood ≥500kg. Astragal optionally with integrated seal



*: Nominal gap deviation: +2,5 / -2 mm
 **: Effective overlap active on passive leaf
 ***: Total overlap active on passive leaf

Double door meeting edges

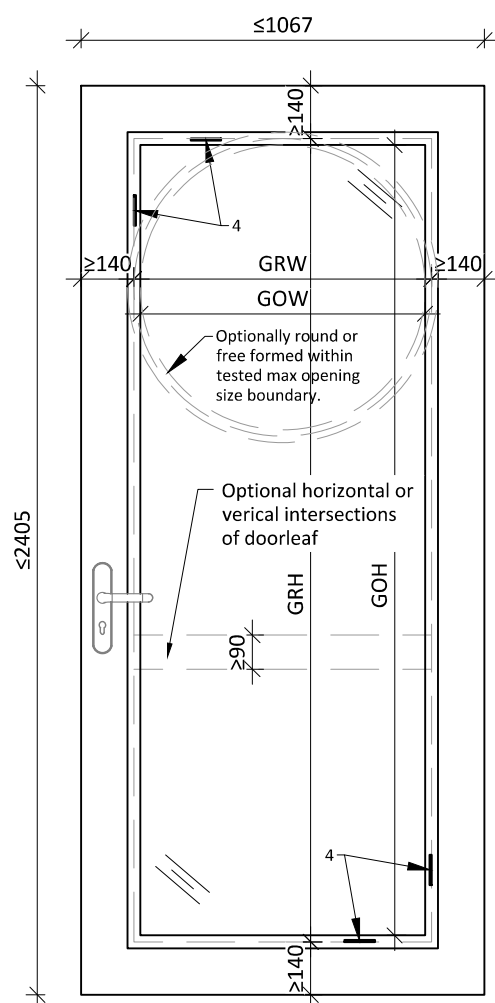
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annex 2.2

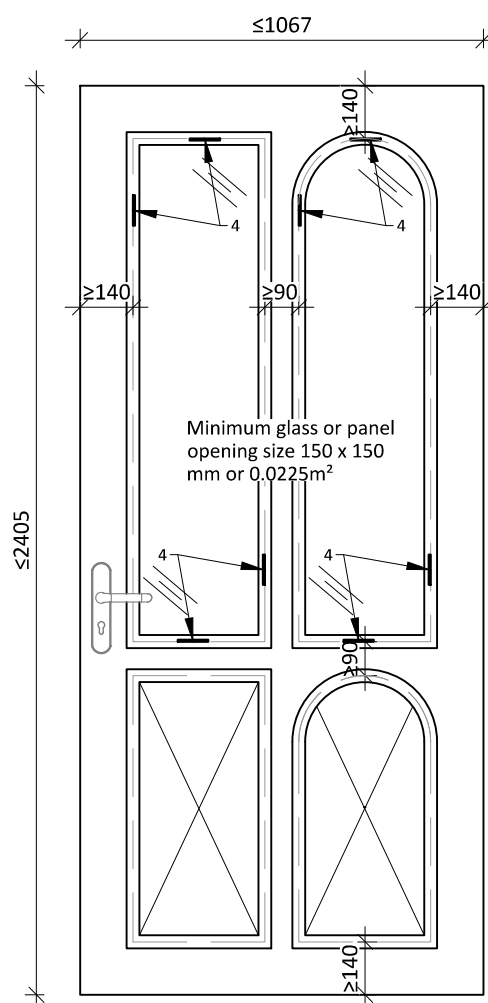
test report no.
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2.3 Glazing and opaque panel fitting

Doorleaf construction according annex 2.0 with core type A-1; A-2 and C-1 only



Large glass/panel opening doors



Doors with (multiple) glass/panel openings

Single glass opening or multiple glazings fitted possible.
Maximum sizes and glass types see table below
Minimum size 150 x 150 mm or 0.0225m² area
Glass fitting detail see annex 2.3a

Glastype*	Thickness (mm)	Width (mm)	Height (mm)	Area (m ²)
Tempered	≥ 5	≤ 779	≤ 2057	≤ 1.60
Laminated	≥ 6	≤ 779	≤ 2057	≤ 1.60
IGU-1 float**	≥ 18	≤ 779	≤ 480	≤ 0,38
IGU safety***	≥ 18	≤ 779	≤ 2057	≤ 1.60
Panel****	≥ 26.5	≤ 779	≤ 2057	≤ 1.60

Index:

GRW: glazing rebate width (leaf cutout size)
GOW: glazing opening width
GRH: glazing rebate height (leaf cutout size)
GOH: glazing opening height

4. Glazing setting block position, see 2.3a

- * Fire rated glass or glass that will not fracture at temperatures up to 200 °C are also possible
- ** Insulated glass unit, double or triple, with at least 1 sided tempered and/or laminated glass
- *** Insulated glass unit, double or triple, with 2 sided tempered and/or laminated glass.
- **** MDF or Triocya insulated sandwich panel or moulded panel



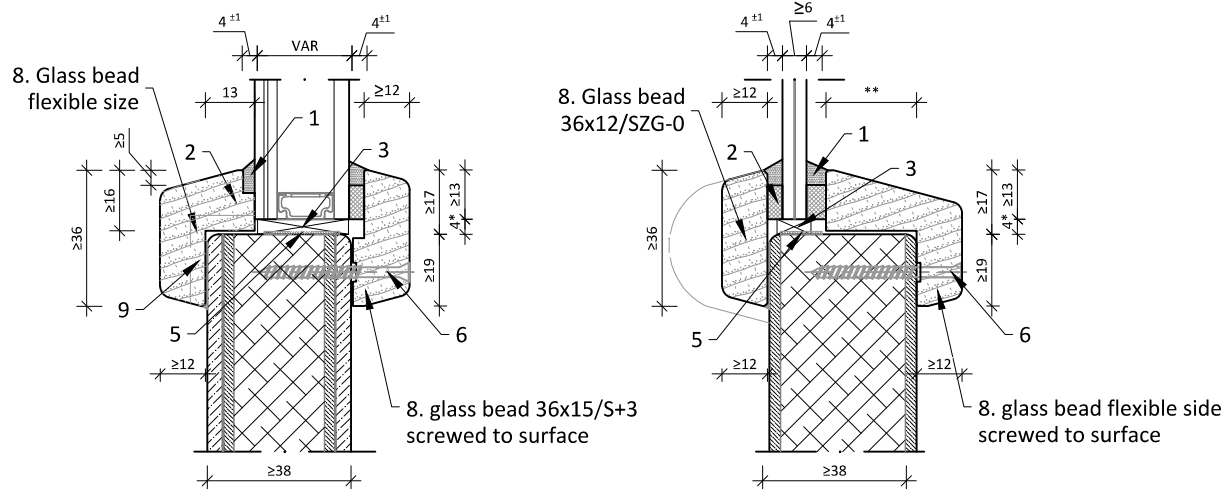
Doorleaf glazing overview

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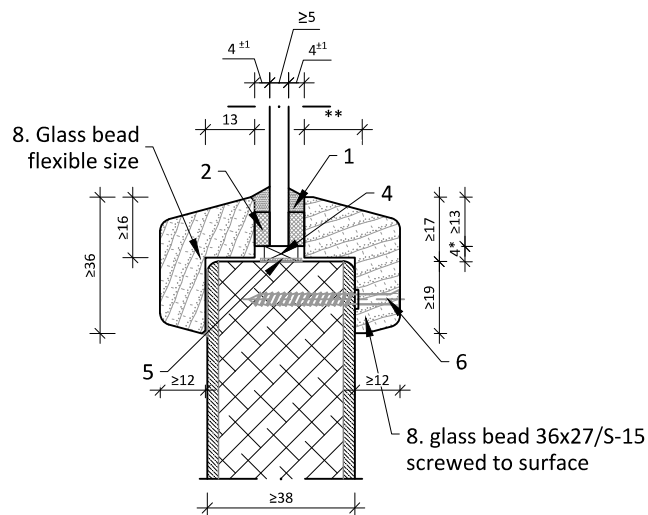
annex 2.3

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2.3a Glass fitting in doorleaf



Glued-on glass bead optionally as enlarged timber moulding

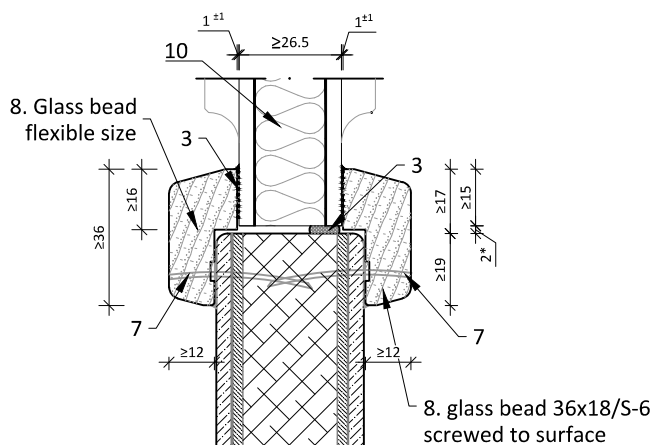


Materials:

1. Glazing sealant silicon based o.e.
2. PE foam backing or Ceramic backing size $4^{+/-1} \times \geq 9$ mm
3. MS-polymer Glue (Opti-Joint XP), glued and sealed
4. Setting blocks, PVC or Fitherm SB (fire doors)
5. Optional: Fitherm GB Intumescent 0.8×10 mm or 0.8×20 mm
6. Glass bead screw $\varnothing 3.5 \times 40$ mm, distance 50^{+25} mm from corner and ≤ 250 mm apart
7. Steel nail 1.2×30 mm distance 50 mm from corner and ≤ 150 mm apart.
8. Glass bead hardwood $\geq 550\text{kg/m}^3$
9. Optionally ventilation ducts $\varnothing 40 \times 5\text{mm}$, 60mm from glass corner
10. Opaque panel, insulated sandwich construction with HDF or Tricoya facing. Optionally with moulded edge profile

* Glass/panel edge to door rebate gap, resulting effective rebate depth ≥ 12 mm for glass and ≥ 15 mm for panels

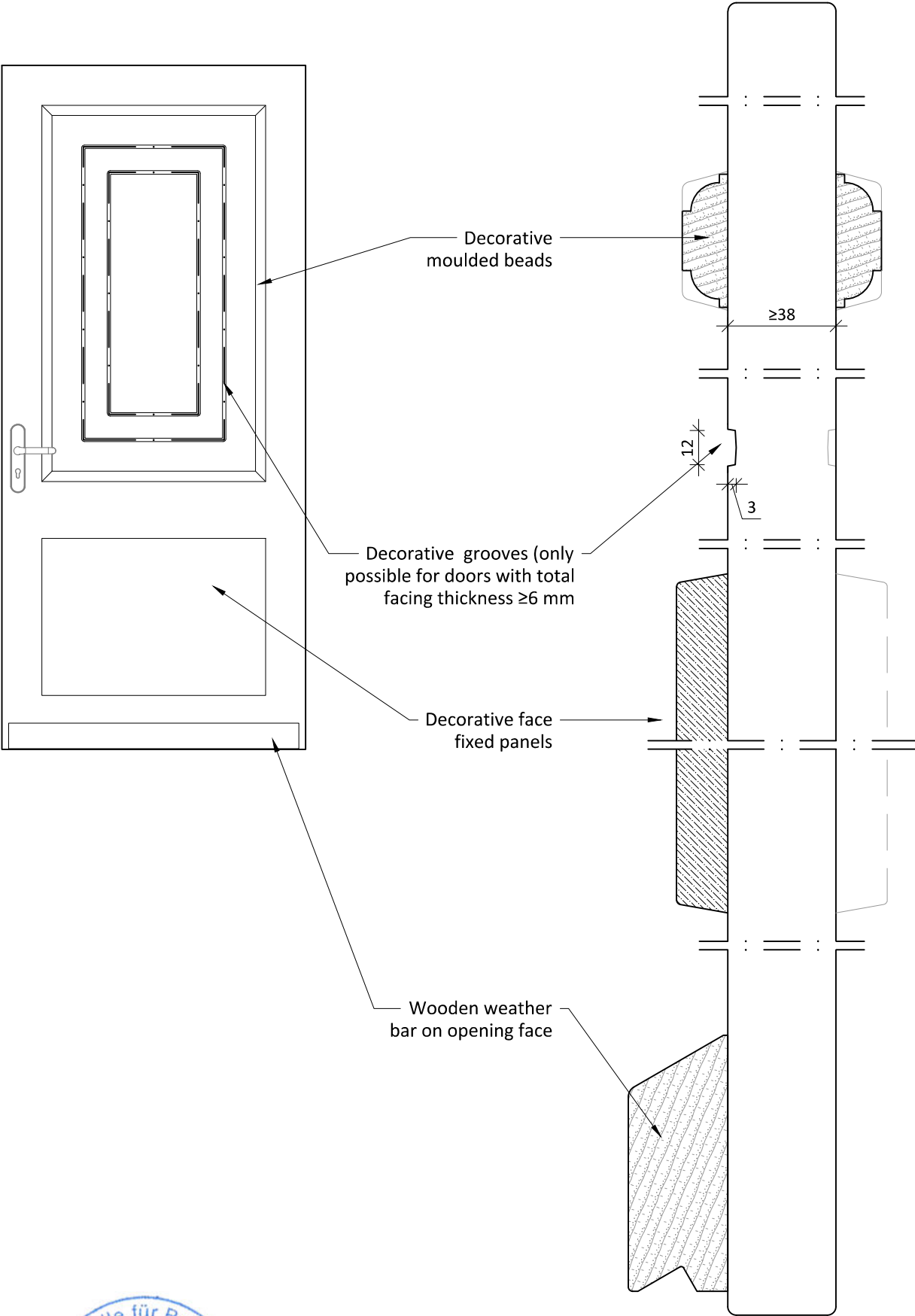
** Effectice depth of glass bead is the result of the glass- and door thickness



Opaque panel, optionally with edge mouldings

Optionally glasbead screw fixed on both sides.

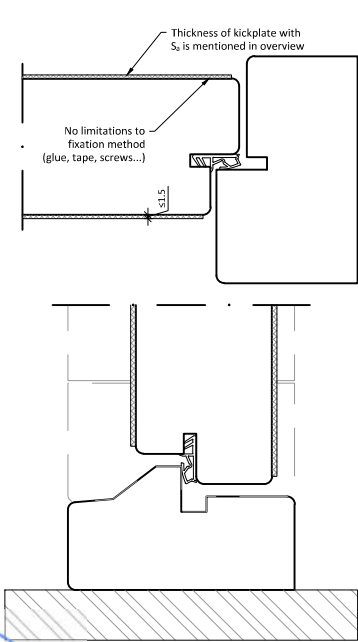
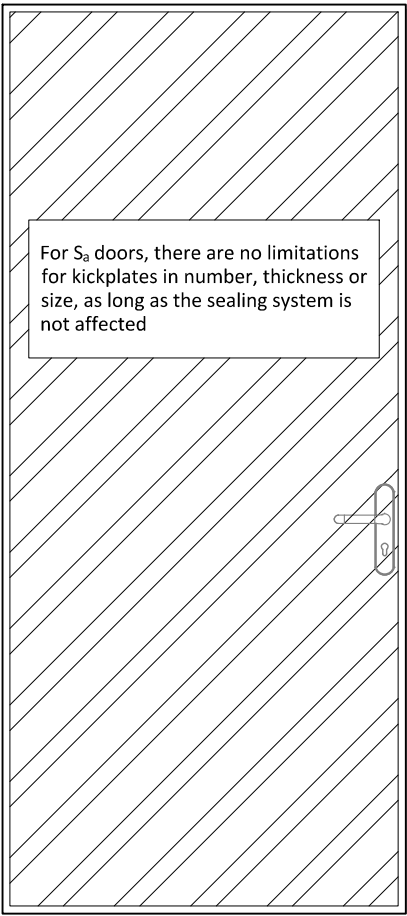
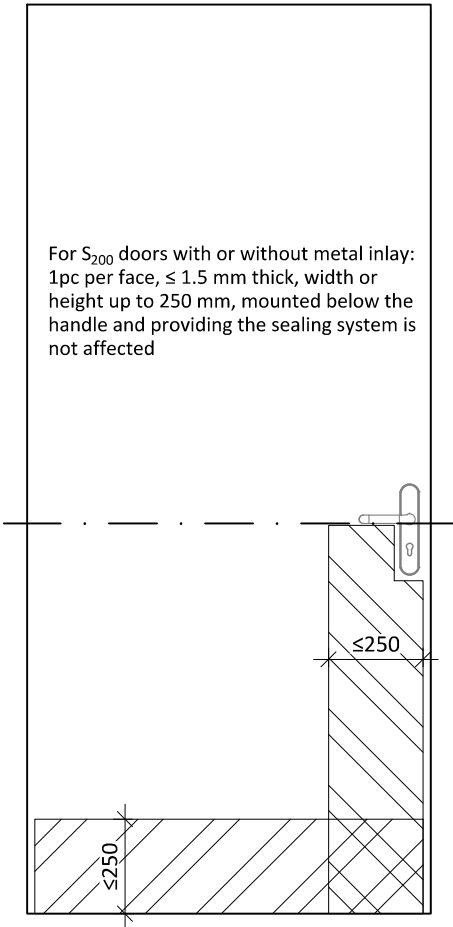
2.5 doorleaf decorative mouldings



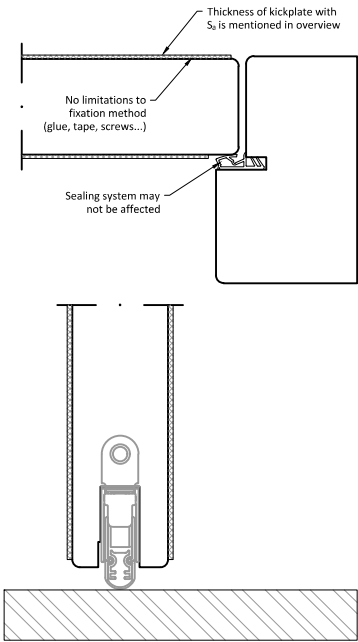
Doorleaf mouldings	annex 2.4
DMT GmbH & Co. KG Plant for Product Safety Test Body for Fire Protection	report no. K-5051-DMT-DO

2.6 Kickplates on doorleaf

Limitations regarding face fixed protective elements (kickplates)



Plain edge, with inner rebate, seal in doorleaf.



Plain edge, seal in frame
Dropseal at the bottom



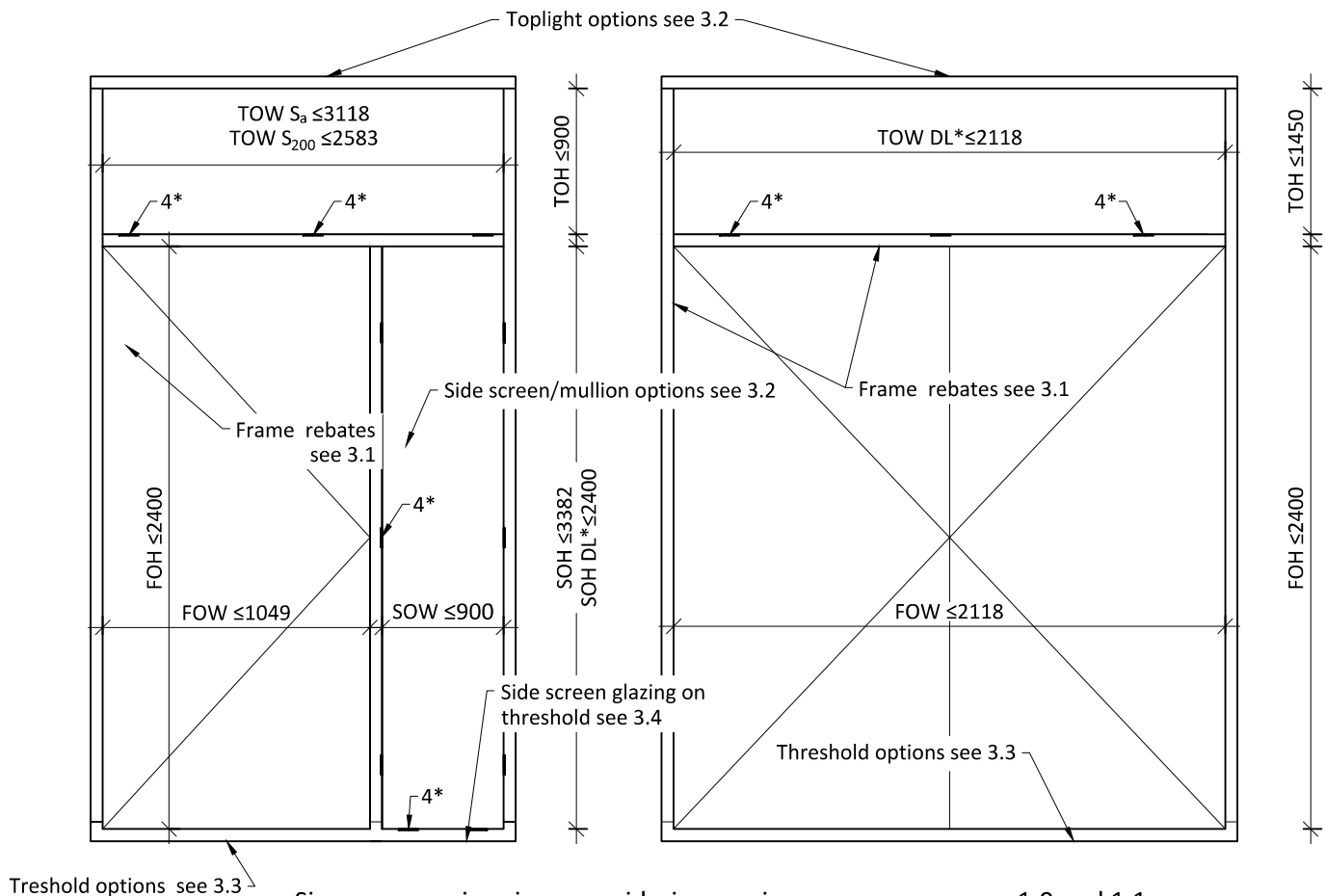
Protective plates

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Test Body for Fire Protection

annex 2.5

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3 Frame construction



Sizes are opening sizes, considering maximum area see annex 1.0 and 1.1

Side and overhead glazing panels see annex 3.2 for details of fixing and rebates.

Overhead top light glazing type and allowed clear opening sizes

Glastype**	Th. (mm)	Width (mm)	Height (mm)
SGU Tempered	≥5	$S_a \leq 3118$ $S_{200} \leq 2583$ $DL^* \leq 2118$	$S_a \leq 900$ $S_{200} \leq 900$
SGU laminated, ≥1 PVB layer	≥6		
SGU fire, such as: Pyrodur plus 30-106, Pyrodur 30-203 Pyrobelite 7/10/12	≥7		

Wooden timber frames

- wood species soft- or hardwood $\geq 500 \text{ kg/m}^3$

Corner joint connections:

- Butt jointed with $\geq 2 \text{ pc}$ dowels hardwood $\geq \varnothing 14 \times 80$
- Mortise and tenon
- Glued with "0819 kozijnlijm" o.e.

Meeting edge with support construction and fixation see annex 4

4*: position of setting blocks glazing. See annex 3.2. Vertical setting blocks generally in area of lock points and hinges.

FRH: Frame opening height
TOH: Top light opening height
SOH: Sidescreen opening height
FRW: Frame opening width
TOW: Top light opening width
SOW: Sidescreen opening width



Sidescreen glazing type and allowed clear opening sizes

Glastype**	Th. (mm)	Width (mm)	Height (mm)
SGU Tempered	≥5	$S_a \leq 900$ $S_{200} \leq 900$	$S_a \leq 3382$ $S_{200} \leq 3382$ $DL^* \leq 2400$
SGU laminated, ≥1 PVB layer	≥6		
SGU fire, such as: Pyrodur plus 30-106, Pyrodur 30-203 Pyrobelite 7/10/12	≥7		

* DL size S_{200} or S_a in case of double leaf door,

** DGU or TGU ISO-glass configurations with at least 1 glass pane as listed above

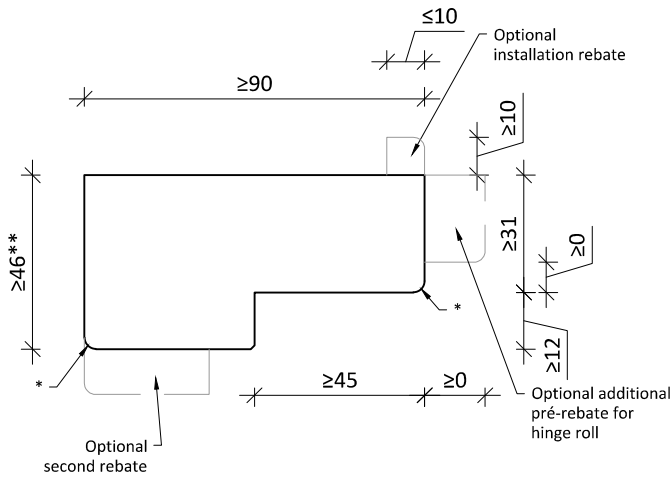
Frame construction and sizes overview

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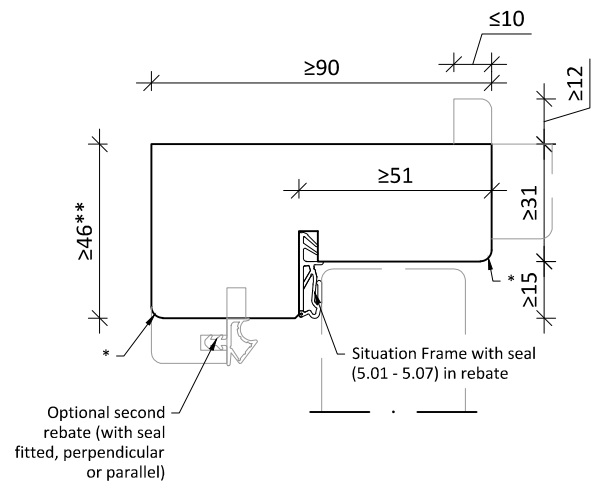
annex 3.0

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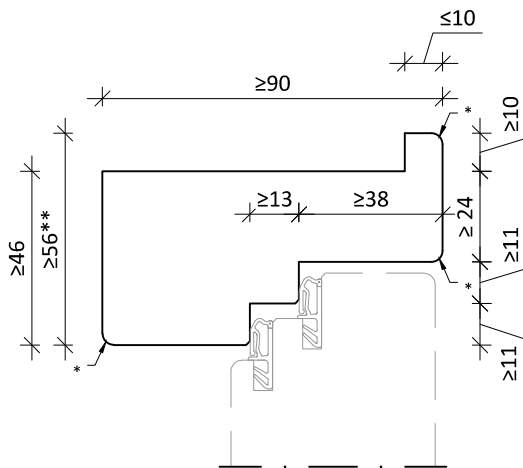
3.1 Doorframe rebates



Door frame situation for doorleaf with draught seal incorporated in doorleaf or side/overhead glazing

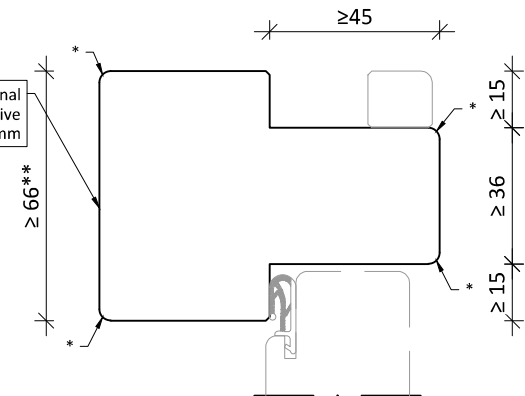


Door frame situation for doorleaf with rebate without draught seal in doorleaf.

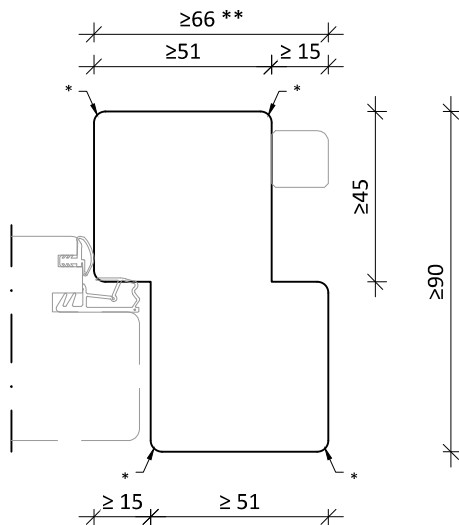


Door frame situation for doorleaf with double draught seal incorporated in doorleaf.

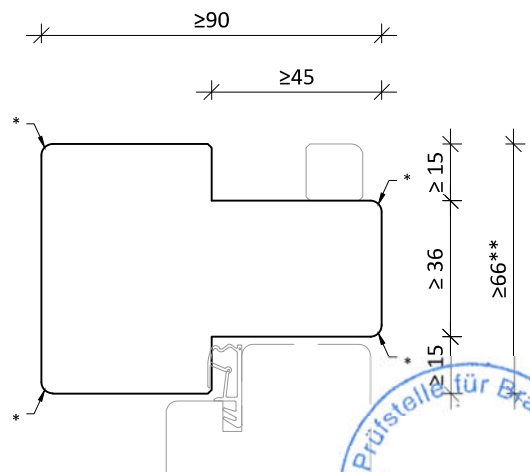
frame surface optional covered with with decorative veneer ≤ 3mm or HPL ≤ 1mm



Door frame transom overhead screen situation.



Door frame transom sidescreen situation, rebate opposite side.



Door frame transom overhead situation, rebate same side.

*: all edges chamfered ≤ 3 , Radius ≤ 5 , or square.
 **: block frame width max 300mm

Doorframe rebates

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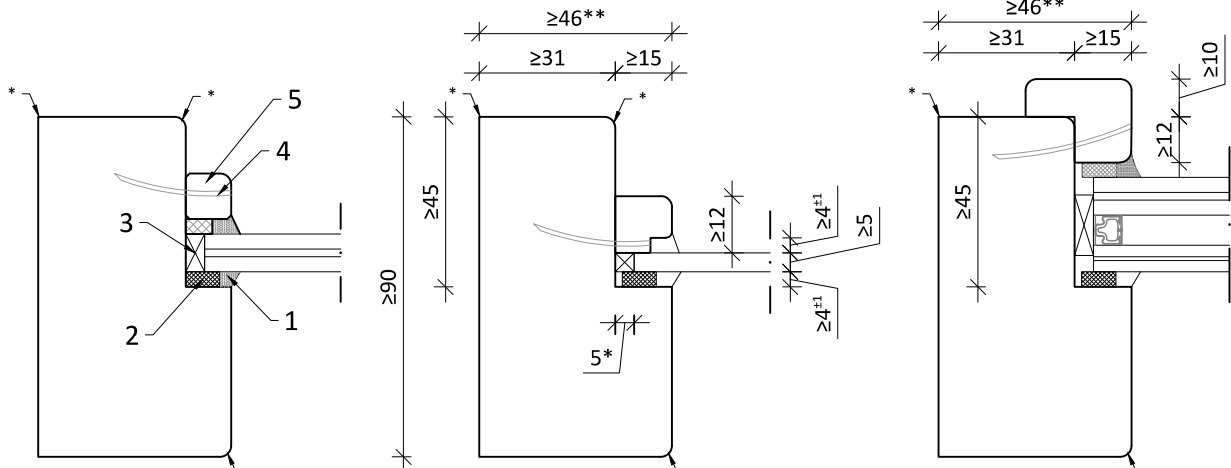
annex 3.1

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3.2 Doorframe glazing

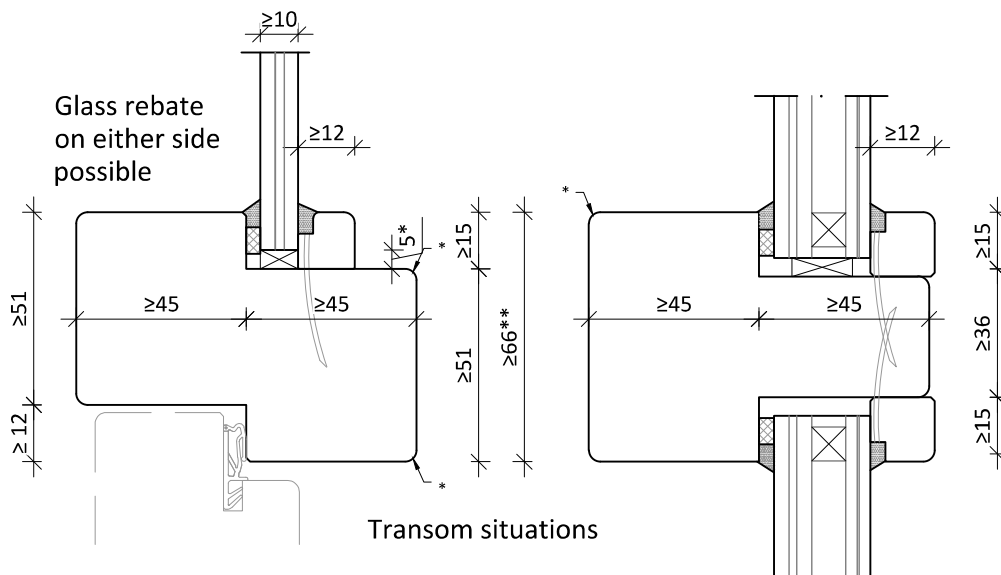
Glass with frame rebate overlap to be $12^{+/-1}$ mm in sidescreens and $10^{+/-1}$ mm in toplight



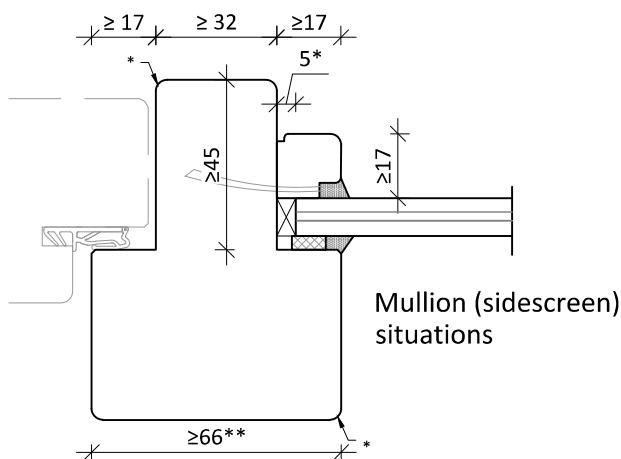
Timber frame glass bead
2-sided backing

Timber frame glass bead
nailed concealed, 1-sided
backing

Timber frame with rebated
glass bead 1, or 2-sided backing



Transom situations



Mullion (sidescreen)
situations

Glass type and allowed sizes
see annex 3.0

Materials:

1. Glazing sealant silicon based o.e.
2. Ceramic backing size $4^{+/-1} \times \geq 9$ mm
3. Setting blocks Fitherm SB o.e.
4. Steel nail 1.2x30mm or screw $\varnothing 3.5 \times 40$ distance $50^{+/-10}$ mm from corner and ≤ 200 mm apart.
5. Glass bead soft or hardwood ≥ 500 kg/m³

Fitherm GB Intumescent 0.8x10 (single glass) or 0.8x20 (for insulated glass), optionally fitted in glass rebate

*: all edges chamfered ≤ 3 , Radius ≤ 5 , or square.

** : block frame width max 300mm

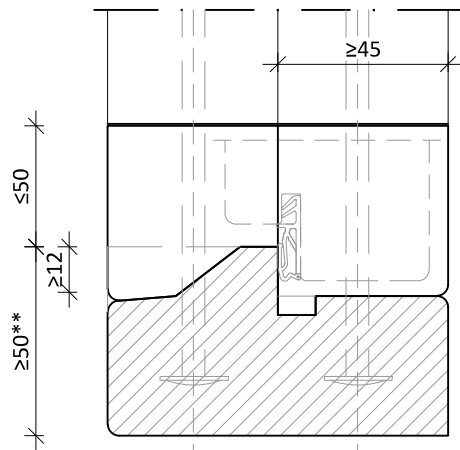
Doorframe glazing

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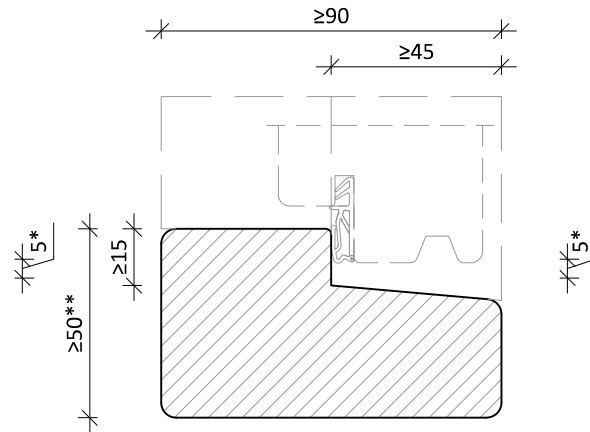
annex 3.2

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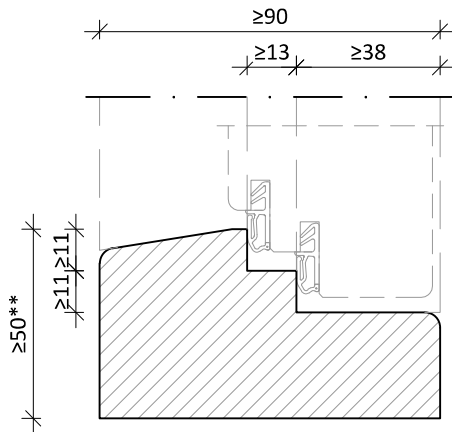
3.3 Doorframe thresholds



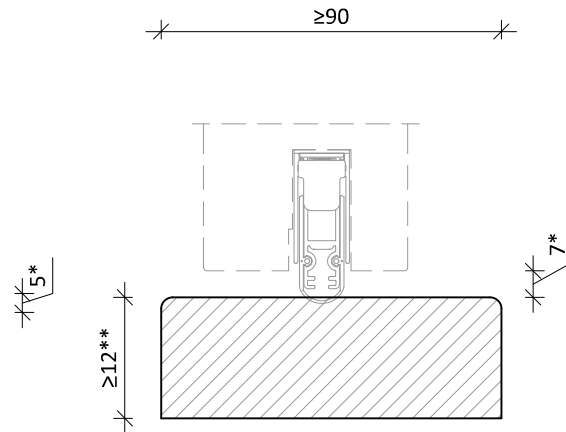
Solid material with 1 rebate with skirting blocks



Solid material with 1 rebate slanted, optionally with skirting blocks

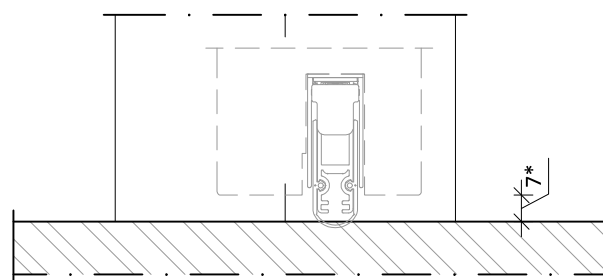


Solid material with double rebate, with skirting blocks



Solid material unrebated.

Fixation of threshold to frame, including skirting blocks if relevant, with PVC dowels and screw ca 8x120mm according manufacturers instruction



No threshold in door rebate. For S200, dropseal required. For Sa, no (drop)seal needed.



*: Gap size according Annex 1.4
 **: block frame width max 300mm

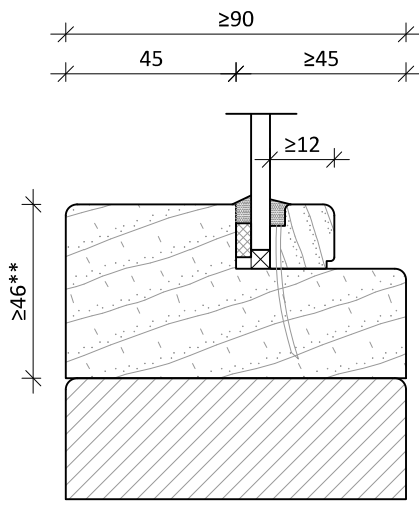
Doorframe thresholds

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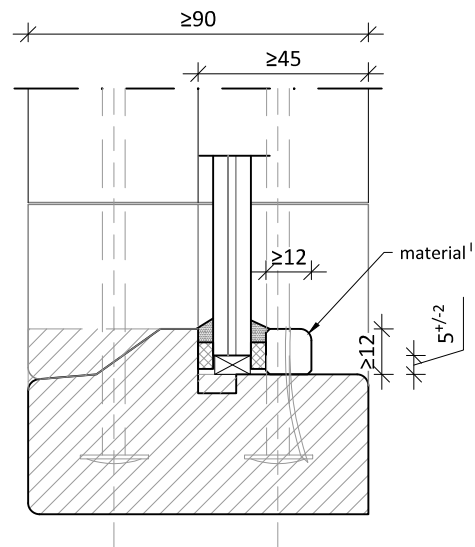
annex 3.3

report no.
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3.4 Sidescreen thresholds



Wood frame profile, optionally mounted on a threshold solid material (continuing from door opening)



Direct glazing on a threshold solid material (continuing from door opening) optionally with skirting blocks

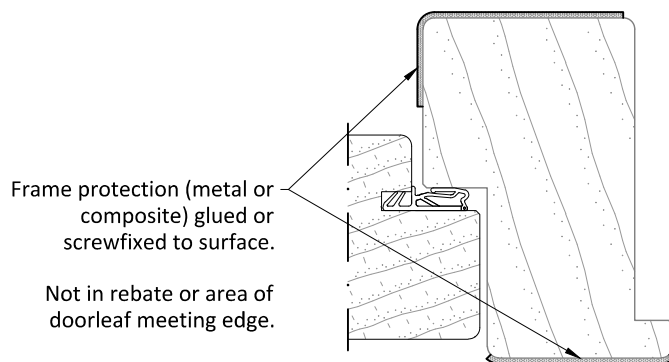
Glazing rules and materials see annex 3.2

** : block frame width max 300mm

Fixation of threshold to frame, including skirting blocks if relevant, with PVC dowels and screw ca 8x120mm or otherwise according manufacturers instruction

3.4 A: Frame protection

adding surface fixed frame protection possible



Materials:

1. Glazing sealant silicon based o.e.
2. Ceramic backing size $4^{+/-1} \times \geq 9\text{mm}$
3. Setting blocks Fitherm SB o.e.
4. Steel nail 1.2x30mm or screw $\varnothing 3.5 \times 40$ distance $50^{+/-10}\text{mm}$ from corner and $\leq 200\text{mm}$ apart.
5. Glass bead soft or hardwood $\geq 500\text{kg/m}^3$

Fitherm GB Intumescent 0.8x10 (single glass) or 0.8x20 (for insulated glass) optionally fitted in glass rebate.



Sidescreen thresholds

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annex 3.4

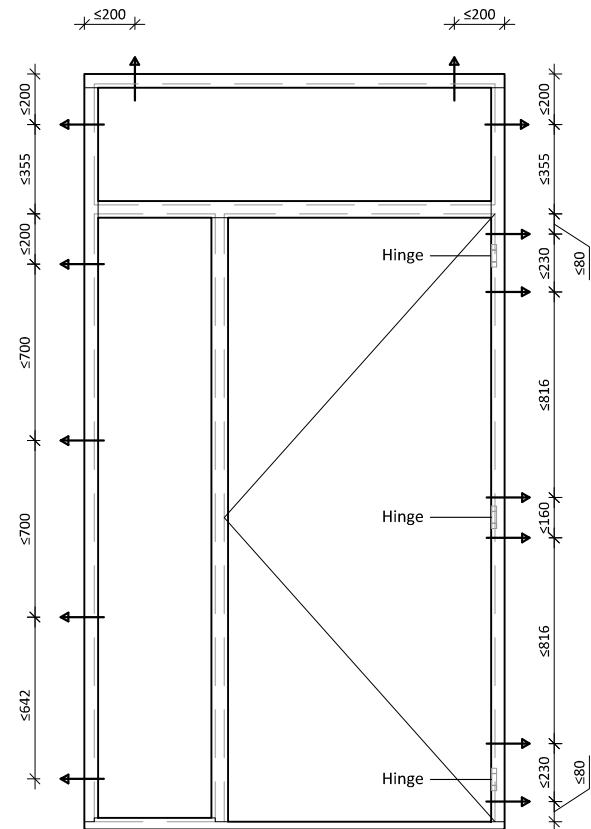
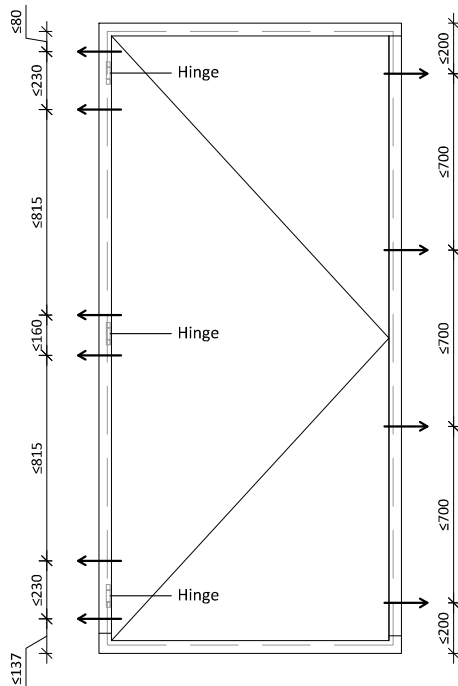
report no.
K-5051-DMT-DO

4 Frame fixation to support construction



Fixation points of timber doorframes in support construction.
Details of wall-to frame meeting edge and fixation see annex 4.1

Positioning in wall opening only



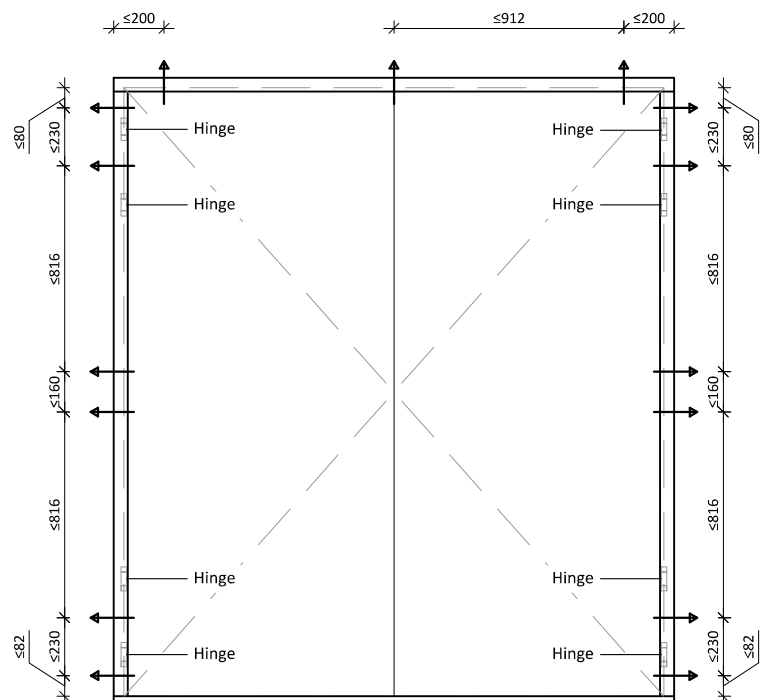
Support construction:

Rigid $\geq 100\text{mm}$ density $\geq 550\text{kg/m}^3$

- Aerated concrete
- Concrete
- Masonary bricked wall
- limestone

Flexible partition $\geq 100\text{mm}$

- To support door weight, prescription metal-stud wall: $\geq 2\text{mm}$ U-profile $\geq 40 \times \geq 50 \text{ mm}$ around doorframe fixated to structural floor and ceiling construction single or double $\geq 12.5 \text{ mm}$ gypsum
- Or wooden-studs wall: $\geq 60 \times \geq 50 \text{ mm}$ around doorframe, fixated to structural floor and ceiling construction single or double $\geq 12.5 \text{ mm}$ gypsism board



Frame fixation to support construction

annex 4.0

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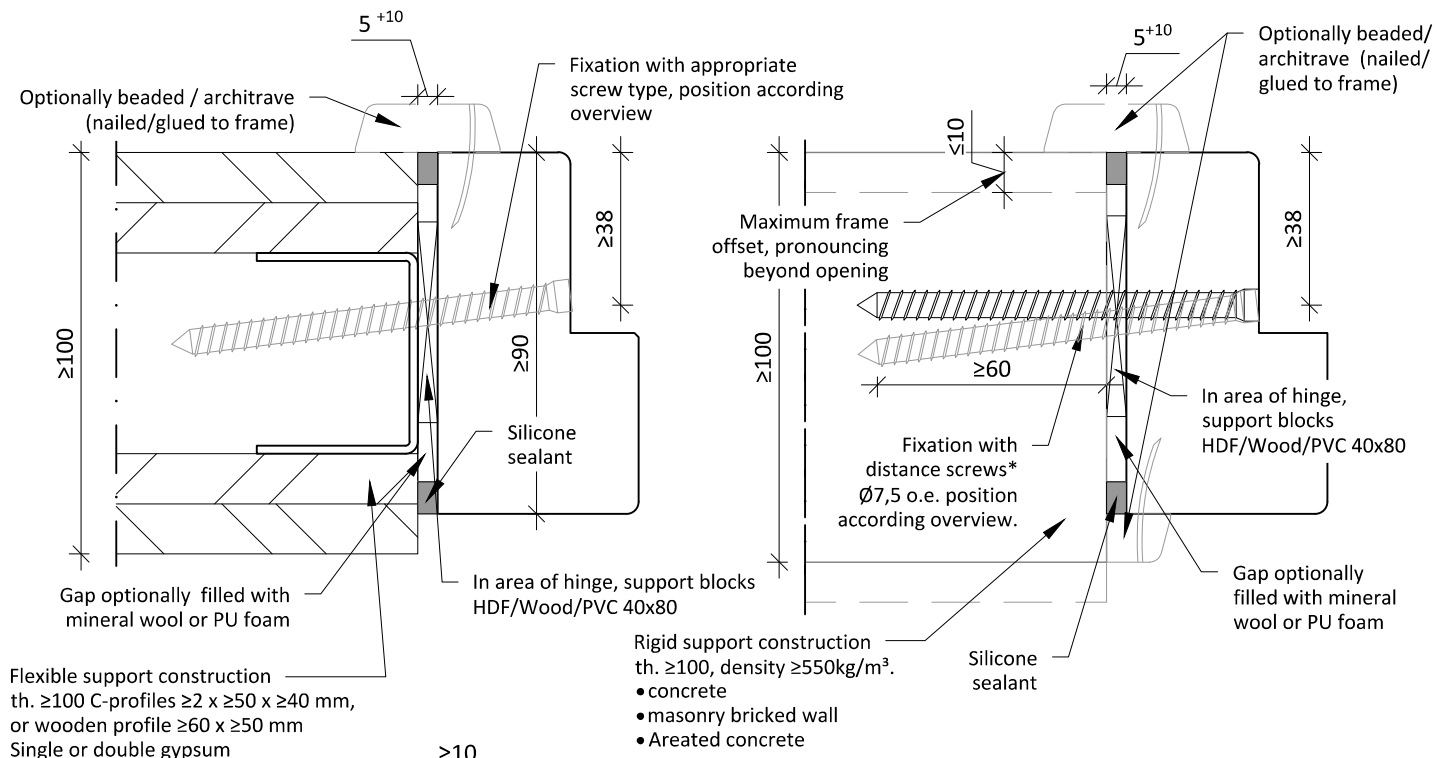
report no.
K-5051-DMT-DO

4.1 Meeting edge with and fixation to support co

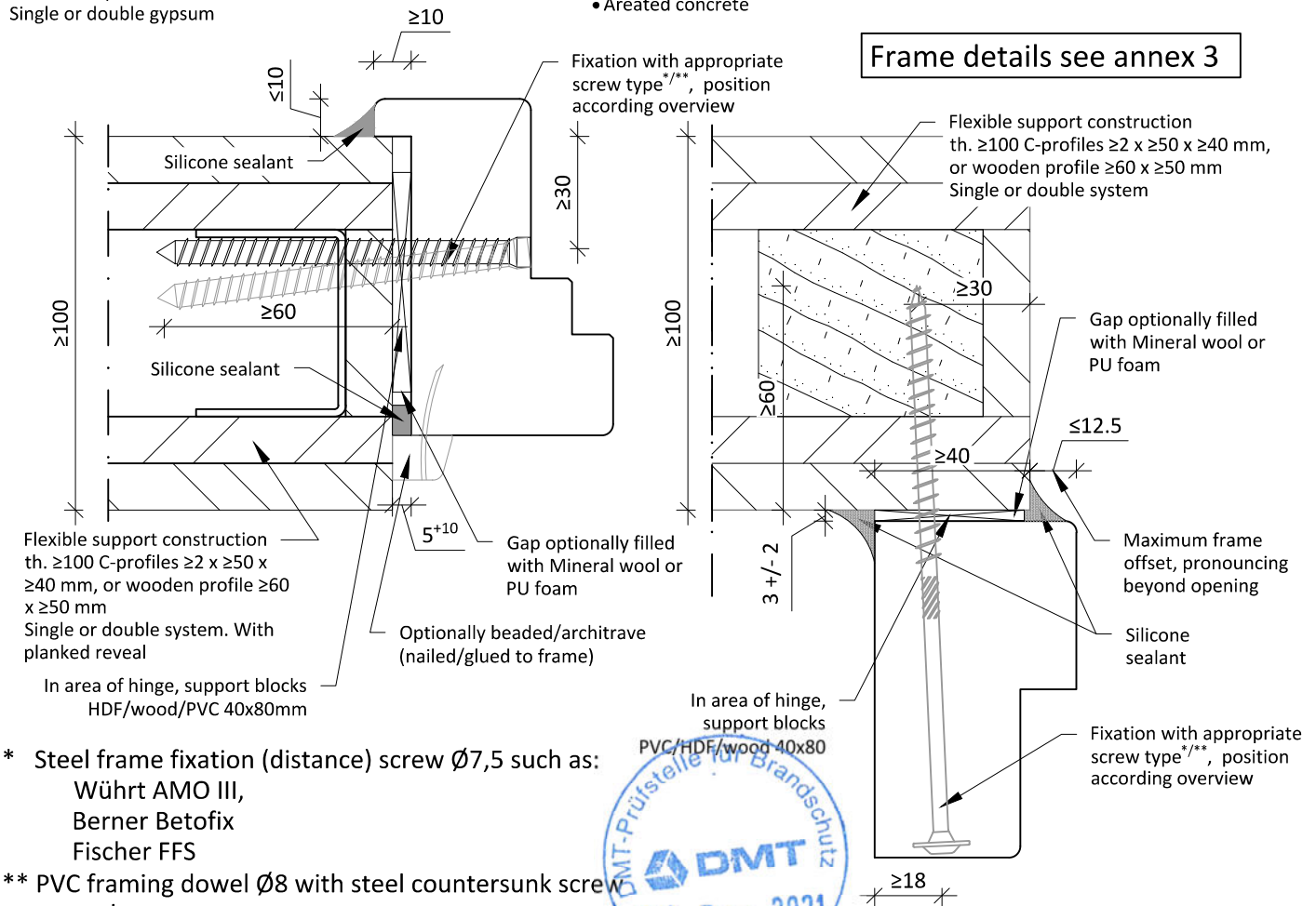


Fixation points of timber doorframes in support construction see Annex 4.0

Examples of fixation and meeting to support construction, all are interchangeable



Frame details see annex 3



* Steel frame fixation (distance) screw $\varnothing 7,5$ such as:
Wühr AMO III,
Berner Betofix
Fischer FFS

** PVC framing dowel $\varnothing 8$ with steel countersunk screw
such as:
Fisher FXR
Wühr W-UR
Berner BXRfix

Other fixation to supporting
construction possible if it is appropriate
to the situation

Meeting edge frame to support constr.

annex 4.1

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Non-intumescent smoke, draught, acoustic seals

Nr.	Seal	Material	Height (mm)	Thickness (mm)	Gapsize (mm)	Position
5.01	SPV-12	TPE	11,5	9	6	Door- or frame rebate
5.02	SPV-15	TPE	14,5	10	6	Door- or frame rebate
5.03	SP-5739	TPE-2K	14,5	13	7	Door- or frame rebate
5.04	KD 1201	Silicone	12	10,5	6	Door- or frame rebate
5.05	KD 1501	Silicone	15	10,5	6	Door- or frame rebate
5.06	KD 1505	Silicone	15	10,5	6	Door- or frame rebate
5.07	KD 1515	Silicone	15	15	8	Door- or frame rebate
5.08	KD 1801	Silicone	18	10,5	6	Door- or frame rebate
5.09						
5.10	KDA.01	Silicone	11	6	2	Meeting edge doorset rebate
5.11	K.003.3	TPE	7,5	10,5	-	Door rebate (additional)
5.12	Sash-barrier	HDPE	12/15	1	6	Meeting edge top and bottom corner of double door with integrated seal 5.01 - 5.06 or 5.10 - 5.11

Automatic drop seals

Nr	Seal	Material	Height	Thickness	Position
5.20	Ellen Matic Soundproof	Aluminium profile with silicone rubber and plastic composite parts	30	15	At the bottom of the doorleaf in cutout
5.21	Ellen Matic Slimline		30	10	

Maximum gap under doorleaf with an automatic dropseal: 11 mm



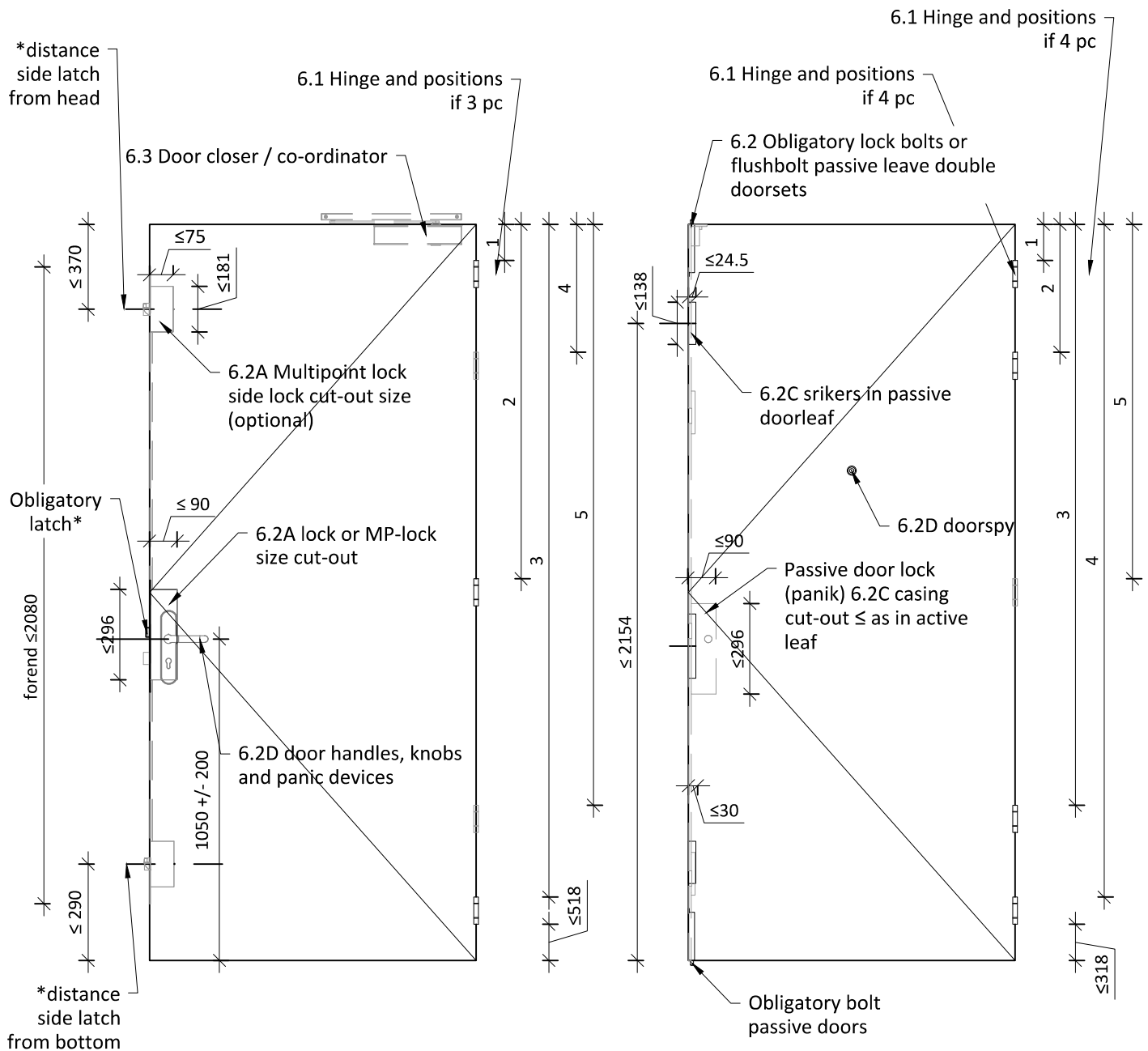
Seals

annex 5

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6. Hardware positions and index



* For S₂₀₀: 38 mm Thick doorleaves with aluminium interlayer sheet are only aloud in combination with a multipoint lock, with a minimum of 3 latches.

- 6.1 Hinges and position
- 6.2 A: Locks
B: Strikers in frame and meeting edge passive door
C: Flushbolts and strikers
D: Doorfurniture
- 6.3 Door closers and co-ordinators



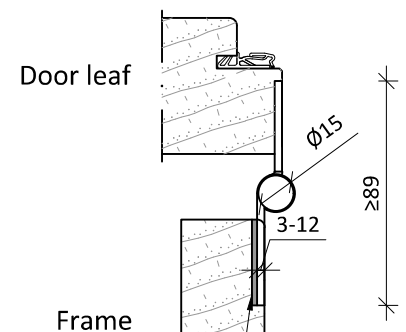
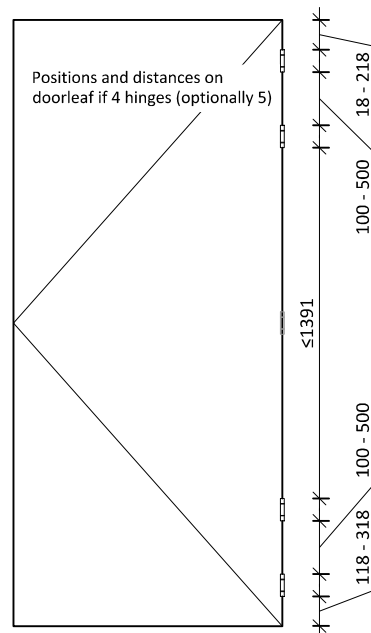
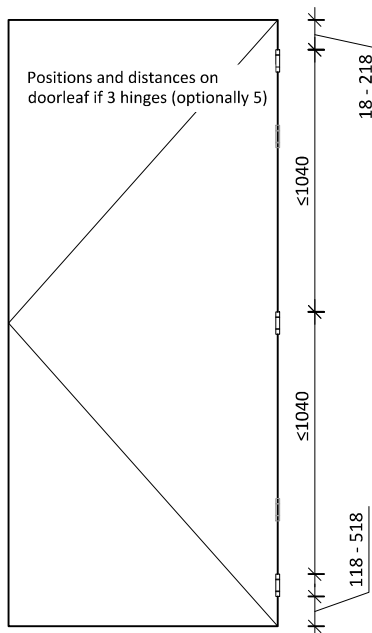
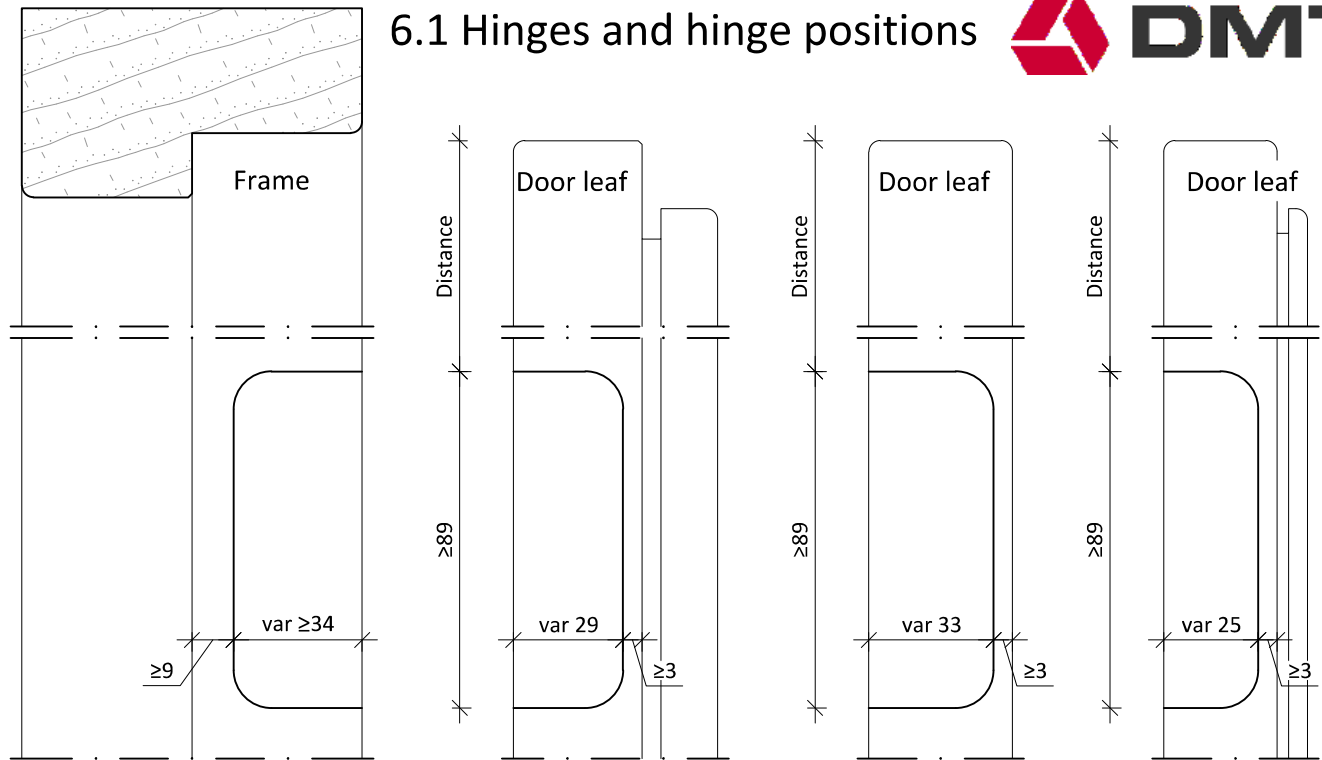
Hardware positions and index

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6.1 Hinges and hinge positions



Optionally backing ≤2mm behind leave to adjust depth. HPL/Wood/Composites/PVC

Product	Producer	Knot diameter	Height	Width	In-frame thickness	In-leaf thickness	Description
S2 Ultimax	Themans BV	15	89	89	3	3	Galvanised butt hinge with integrated security and composite bushings
S2 6504 HMR 089	Themans BV	15	89	89	3	3	Galvanised steel butt hinge with composite bushings
Atlas Inside	Buva BV	15	89	89	3	3	Galvanised butt hinge with integrated security and composite bushings
Atlas Control	Buva BV	15	89	89	3	12	Galvanised butt hinge with integrated security and adjustable depth

All steel-/stainless steel butt hinges according to EN1935 with test evidence in similar timber doorset construction, with equal or greater dimensions, can be used.

Hinges and hinge positions

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6.2 Locks and furniture system index



A : Locks

	Product	Producer	type	cutout size main lock (w x d x h)	cutout size sidelock (w x d x h)	Forend size	Lever height	Top lockcase height in doorleaf
A.1	H542 Easy2Safe	Kegro/ Themans BV	MP-lock with 1 latch	85x16x296	55x15x146	3x20x1988	1050 (+/- 200)	2009
A.2	Ergo Block	Buva BV	MP-lock with 1 latch	77x16x190	75x16x170	3x20x2090	1050 (+/- 200)	2115
A.3	KFV AS 3600 B0003	KFV GmbH & Co. KG	MP-lock with 3 latches	85x16x226	55x16x181	3x20x2004	1050 (+/- 200)	2029
A.4	S2 PSU 943	Kegro/ Themans BV	Mortise latch lock	91x16x182	-	3x20x235	1050 (+/- 200)	-

- Other locks allowed if \leq cut out size, it has at least 1 metal latch ($\geq 500^{\circ}\text{C}$ melting point) .
- For S₂₀₀: <54 mm thick doorleaves with aluminium interlayer sheet are only allowed in combination with a 3-latch multipoint lock, as A.3 or equal.

B : Strikers in frame or passive doorleaf meeting edge

	Product	Producer	cutout size (wxdxh)	Type	Material
B.1	S2 Flexikom hoofdkom	Themans BV	24 x 23 x 190	Box type main striker	Steel box, plastic composite latchstrike
B.2	S2 Flexikom	Themans BV	24 x 21 x 130	Box type additional striker	Steel + plastic composite box
B.3	Striker 881-083 + Latch striker 402-031	KFV GmbH & Co. KG	22 x 24,5 x 210	Box type main striker	Steel with Zaamc Latchplate
B.4	KFV 881-082	KFV GmbH & Co. KG	22 x 24.5 x 138.5	Box type additional striker	Steel + Zamac
B.5	Buvalux 6025+	Buva BV	25.5 x 24 x 186	Box type main striker	Stainless steel + Zamac box
B.6	Inline+	Buva BV	25.5 x 24 x 110	Box type additional striker	Steel + plastic composite box

- Other strikers allowed if \leq cut out size and is out of (stainless) steel.

C : Passive doorleaf lock systems double doorsets

	Product	Producer	Leaf-cutout size (w x d x h)	Type	Material	Max. height position in doorframe
C.1	Dulimex T862	Dulimex BV	15.5 x 15 x 250	Flush bolt	Stainless steel	Top/bottom doorleaf
C.2	S2 V0207 CEU29-8	Themans BV	Forend: 29 x 8 Lever casing: 21 x 56 x 140	Forend passive doorlock with integrated strikers "Contra-espagnolet"	Steel	Full length of door

- Other strikers allowed if \leq cut out size and is made out of material with melting point $>300^{\circ}\text{C}$.

D : Door furniture

	Product	Producer	Type	Material
D.1	S2 402121	Themans BV	Security leverset SKG**	Aluminium
D.2	S2 CIL S6 45/30 S2 CIL S6 30/30	Themans BV	Euro profile cylinder SKG**	Brass
D.3	DRS 2140B	Dulimex BV	Door viewer	brass case / plastic lens



- Other door furniture and cylinders possible if suitable for door thickness and furniture fully covers and seals the cutouts in the doorleaf.

Locks and furniture system index

annex 6.2

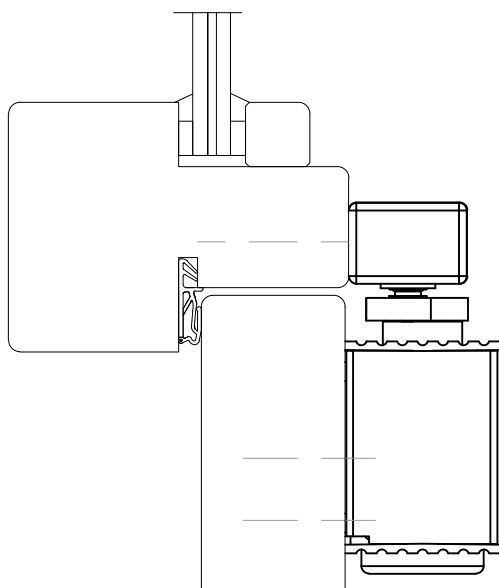
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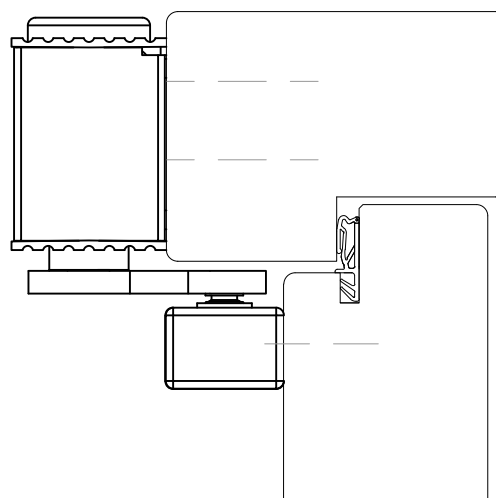
6.3 Door closers and coordinators

Type	Product	Producer	Rail or arm	EN 1154 size	Installation
Closer	ECO TS 41	ECO Schulte GmbH	Rail GS-B	EN 1-4	Doorleaf of frame on hinge or hinge opposite face
Closer	ECO TS 62	ECO Schulte GmbH	Rail GS-B	EN 2-5	
Closer	TS3000	GEZE	Rail	EN 1-4	
Closer	TS5000	GEZE	Rail	EN 2-6	
Closing coordinator	ECO SR III / SR III BG	ECO Schulte GmbH	Rail GS integrated	-	Face fixed on frame
Closing coordinator	ISM / ISM-BG	GEZE	Rail GS integrated	-	

- All closers with EN 1154 and EN 1634-1 test evidence are allowed, considering size \leq above, equal position and fixation
- Face fixed on doorleaf or frame, on both opening and closing face possible



Normal installation closing face
(hinge side)



Installation opening face
(non-hinge side)

