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VARIOTEC

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There for you for over 35 years ...

VARIOTEC Compact

- ✓ **Exterior, special and function doors**
  customer-oriented • conforming to standards • practice-oriented
- ✓ **Vacuum insulation panels (VIP) and QASA components**
  simple • safe • insulation

www.variotec.de

Dated: February 2020

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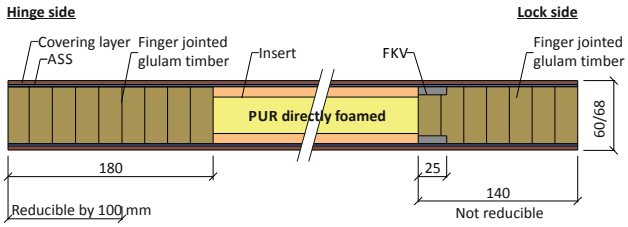
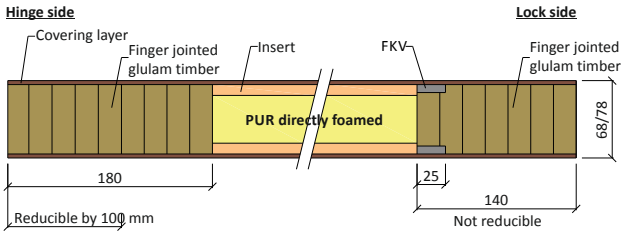
VARIOTEC overview of blank types

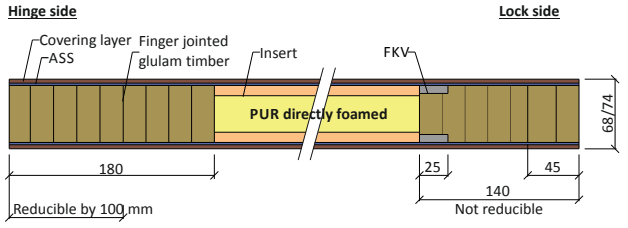
VARIO PUR opaque/brushable



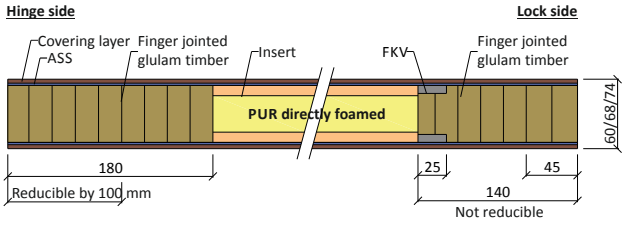
VARIO PUR *Smart* for covering coating



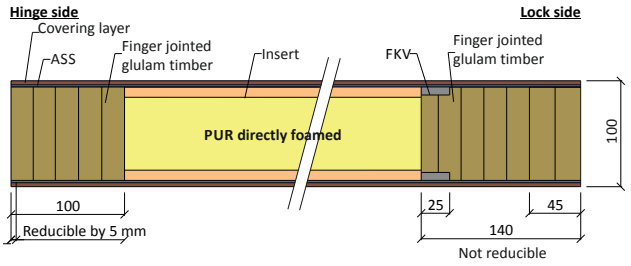
Allwetter large sizes up to 3080 x 1240 mm



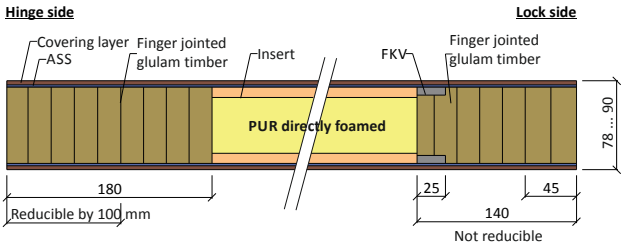
Allround F2 Translucent ink and sound insulation



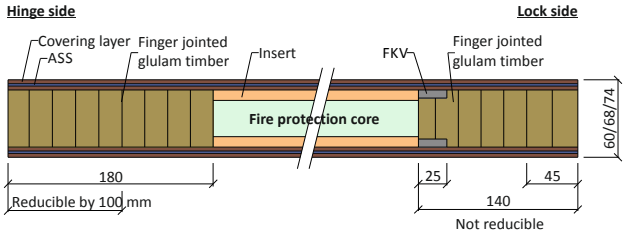
Thermosafe100 certified passive house door



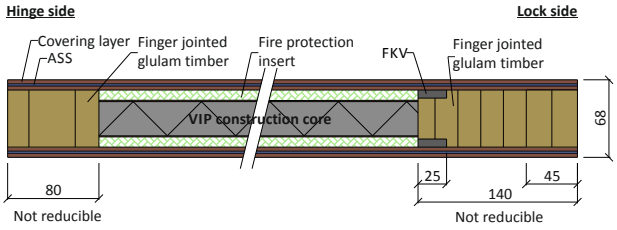
Ultrahaus-Effizienzhaus KfW 55-135



Integral L EI_2 30-C resp. T30 fire protection

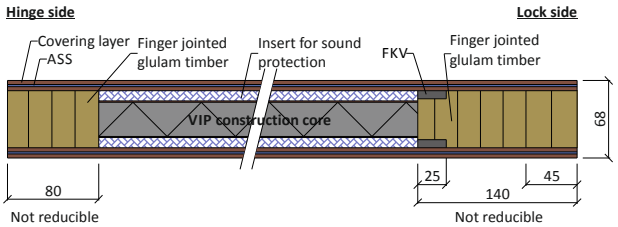


Integral L VIP Fire protection function/Passive house suitable

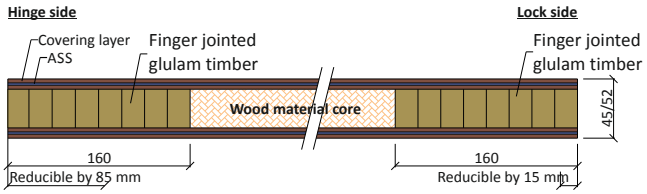


Vario-VIP Multifunktion

Sound insulation function/Passive house suitable



Integral Q Flat entrance door, fire, sound and burglar protection



Types overview VARIOTEC door blanks

VARIOTEC

No. 511 EN

VARIOTEC Blank types	Heights up to (mm)				Width up to (mm)				Thickness (mm)																Surface		Up values (panel value)					Sound insulation RwP (laboratory value)			
	2150	2250	2470	> 2470	950	1050	1150	1240	45	52	60	68	74	78	79	80	81	82	83	84	85	86	87	88	89	90-100	Covering coating	Translucent ink	≤ 0,99	≤ 0,85	≤ 0,80	≤ 0,70	≤ 0,60	30 dB	37 dB	42 dB	45 dB
Integral Q	✓	✓			✓	✓	✓		✓	✓																	✓	✓						✓	✓		
VARIO PUR	✓	✓			✓	✓	✓				✓	✓															✓		✓					✓			
VARIO PUR *Smart*	✓	✓			✓	✓	✓					✓		✓													✓		✓	✓				✓			
Allround F2	✓	✓			✓	✓	✓	✓				✓	✓														✓	✓	✓					✓	✓	✓	
Allwetter	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓														✓	✓	✓					✓	✓	✓	
Ultrahaus-Effizienzhaus	✓	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓	✓	on request!
VARIO VIP	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓													✓	✓		✓	✓	✓	✓	✓	✓	✓	on request!
Integral L	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓													✓	✓	✓					✓	✓	✓	
Integral L VIP	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓													✓	✓		✓	✓	✓		✓	✓		
Thermosafe100	✓	✓	✓	✓	✓	✓	✓	✓																		✓	✓	✓		✓	✓	✓	✓	✓			

Dated: February 2020

VARIOTEC weight table of the blank types (specifications in approx. kg)

VARIOTEC

No. 512 EN

	VARIOTEC blank types	Thickness in mm	Sizes															
			2150 x 950	2150 x 1050	2150 x 1150	2150 x 1240	2250 x 950	2250 x 1050	2250 x 1150	2250 x 1240	2400 x 950	2400 x 1050	2400 x 1150	2400 x 1240	2500 x 950	2500 x 1050	2500 x 1150	2500 x 1240
45	Integral Q coniferous wood	45	47	52	57	61	49	54	60	64	-	-	-	-	-	-	-	-
	Integral Q hardwood	45	55	60	65	69	57	63	68	73	-	-	-	-	-	-	-	-
52	Integral Q coniferous wood	52	54	60	65	70	57	62	68	74	-	-	-	-	-	-	-	-
	Integral Q hardwood	52	63	69	75	80	66	73	78	84	-	-	-	-	-	-	-	-
60	VARIO PUR coniferous wood	60	47	51	57	-	49	53	59	-	-	-	-	-	-	-	-	-
	VARIO PUR hardwood	60	58	63	68	-	61	66	71	-	-	-	-	-	-	-	-	-
68	VARIO PUR coniferous wood	68	51	55	61	-	53	58	64	-	-	-	-	-	-	-	-	-
	VARIO PUR hardwood	68	64	69	75	-	67	72	78	-	-	-	-	-	-	-	-	-
	Allround F2 coniferous wood	68	51	55	61	65	53	58	64	68	-	-	-	-	-	-	-	-
	Allround F2 hardwood	68	64	69	75	79	67	72	78	82	-	-	-	-	-	-	-	-
	Allround F2 coniferous wood sound 1	68	70	77	85	91	73	81	89	95	-	-	-	-	-	-	-	-
	Allround F2 hardwood sound 2	68	83	91	98	105	87	95	103	110	-	-	-	-	-	-	-	-
	Allwetter coniferous wood	68	51	55	61	65	53	58	64	68	58	63	68	72	60	65	70	75
	Allwetter hardwood	68	64	69	75	79	67	72	78	82	72	77	83	87	74	80	86	91
	Allwetter coniferous wood sound 1	68	70	77	85	91	73	81	89	95	78	86	95	102	81	90	98	106
	Allwetter hardwood sound 2	68	83	91	98	105	87	95	103	110	92	101	109	117	96	105	114	122
78	Ultrahaus-Effizienzhaus coniferous wood	78	56	61	66	71	58	63	69	74	63	68	74	78	66	71	76	81
	Ultrahaus-Effizienzhaus hardwood	78	72	77	83	87	75	80	86	91	80	85	91	96	83	89	95	100
	Ultrahaus-Effizienzhaus coniferous wood sound 1	78	80	88	97	104	84	92	101	109	89	99	108	116	93	103	112	121
	Ultrahaus-Effizienzhaus hardwood sound 2	78	95	104	113	121	100	109	118	126	106	116	126	134	110	120	131	140
85	Ultrahaus-Effizienzhaus coniferous wood	85	59	64	70	75	62	67	73	78	67	72	78	83	70	75	81	86
	Ultrahaus-Effizienzhaus hardwood	85	77	82	88	93	80	85	92	97	85	91	97	103	89	95	101	106
	Ultrahaus-Effizienzhaus coniferous wood sound 1	85	87	96	105	113	91	100	110	119	97	107	117	126	101	112	122	132
	Ultrahaus-Effizienzhaus hardwood sound 2	85	104	114	123	132	109	119	129	138	115	126	137	147	120	131	142	152
90	Ultrahaus-Effizienzhaus coniferous wood (6 mm)	90	65	70	76	81	68	73	79	84	72	78	84	89	75	81	87	93
	Ultrahaus-Effizienzhaus hardwood (6 mm)	90	82	88	94	99	86	92	98	103	91	97	104	110	94	101	108	114
	Ultrahaus-Effizienzhaus coniferous wood sound 1 (6 mm)	90	92	102	111	120	96	106	116	125	103	113	124	134	107	118	129	139
	Ultrahaus-Effizienzhaus hardwood sound 2 (6 mm)	90	109	119	130	139	114	125	135	145	121	133	144	154	126	138	150	160
100	Thermosafe100 coniferous wood	100	60	65	71	76	63	68	74	79	68	73	79	84	71	76	82	87
	Thermosafe100 hardwood	100	75	81	87	92	79	84	91	96	84	90	96	101	88	94	100	105

Blank with 3 mm MDF top layer +10 kg / blank with 6 mm MDF top layer +20 kg / further sizes on request!

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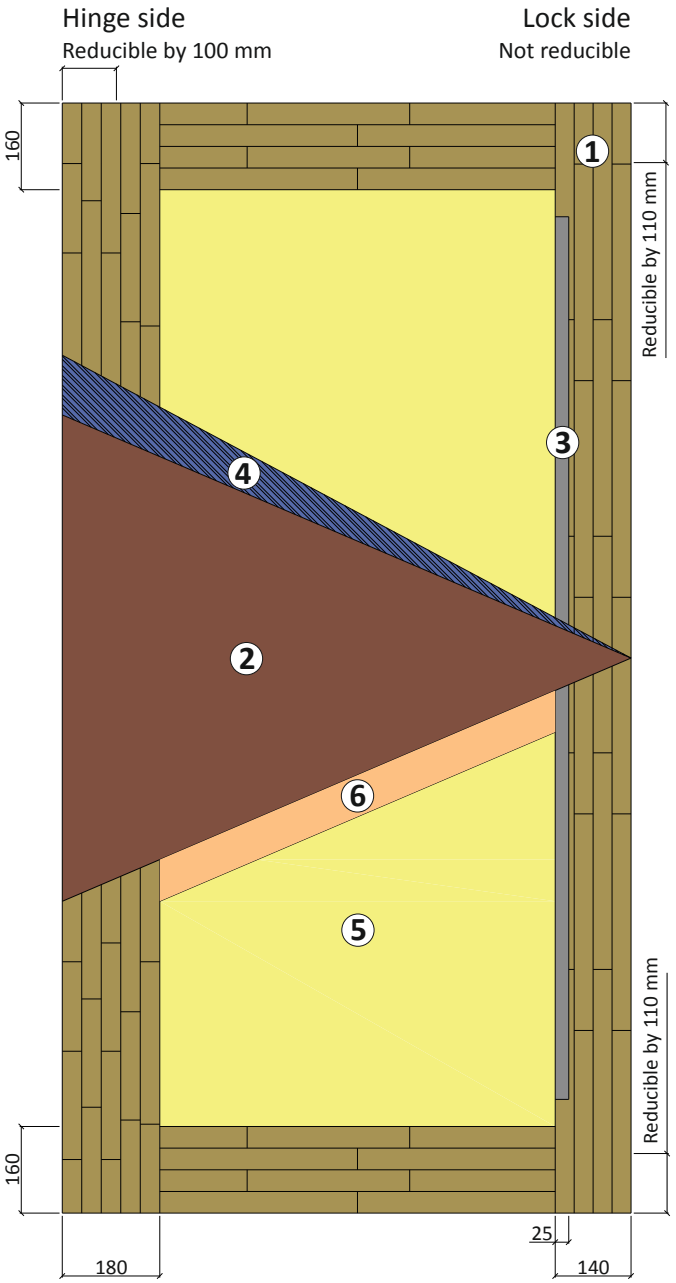
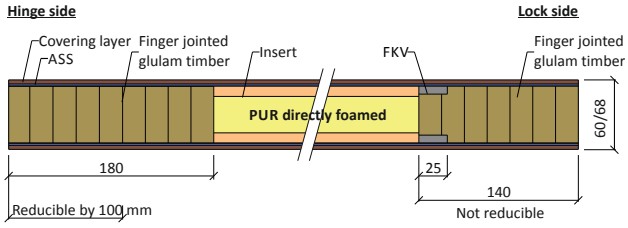
VARIO PUR in the thicknesses: 60, 68 mm

CE EN 14351-1

- for covering coating

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Standard sizes: **Reducible to:**
2150 / 2250 x 950 mm 1930 / 2030 x 850
2150 / 2250 x 1050 mm 1930 / 2030 x 950
2150 / 2250 x 1150 mm 1930 / 2030 x 1050

1. Wing frame
Pine or red wood glulam timber frame, finger jointed, acc. to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Thermal insulation PUR construction core, free of CFC.

Door thickness in mm	**60**	**68**
Sound insulation R_w in dB „standard design“	30	30
U_p-value in W/(m²K)	1,09	0,96
U_p-values for size 2250 x 1050 mm		

Additional sound insulation only possible with type Allround F2, Allwetter, Integral.

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 100 mm only on the **hinge side**. Please take into account ground seal + rabbet design before reducing.

Internal measurements for cutouts/10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm
with width 1150 : 810 mm

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

Dated: February 2020

VARIOTEC

No. 513 EN

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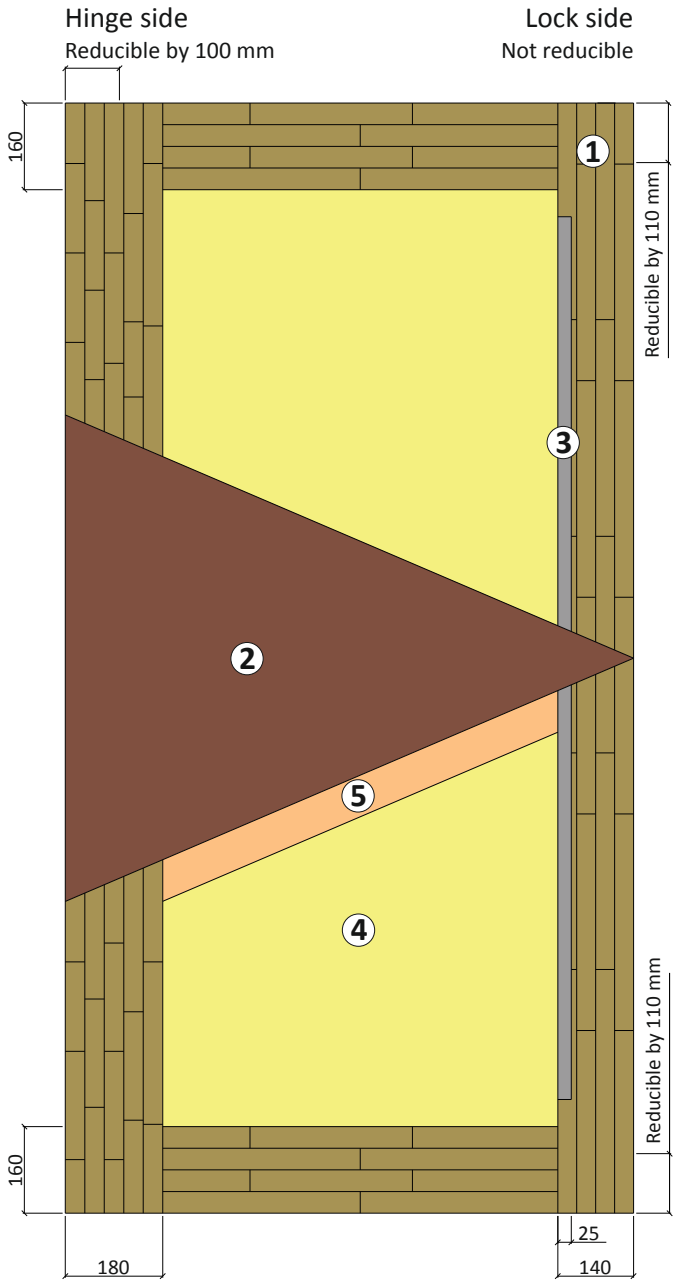
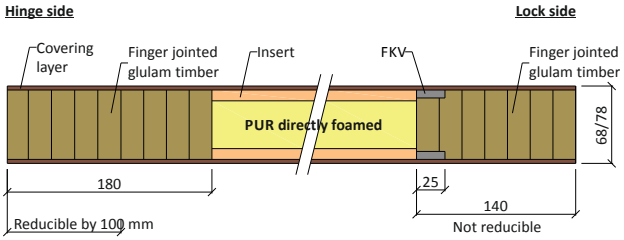
VARIO PUR *Smart* in the thicknesses: 68, 78 mm

CE EN 14351-1

- for covering coatings
- with MDF melamine exterior board

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





- ✓ **thinner top coats, thus elegant optic of edges**
- ✓ **thicker door body = higher stability**
- ✓ **excellent vapour barrier function (WKI tested)**
- ✓ **hard, resistant surfaces similar to HPL can be realised**

Standard sizes:	**Reducible to:**
2150 / 2250 x 950 mm	1930 / 2030 x 850
2150 / 2250 x 1050 mm	1930 / 2030 x 950
2150 / 2250 x 1150 mm	1930 / 2030 x 1050

1. Wing frame
Pine or redwood finger jointed glulam frame, according to factory´s choice.

2. Covering layers
MDF melamine exterior board

3. FKV technology (fibre-plastic composite)
as a metal-free reinforcement.

Thermal insulation PUR construction core, free of CFC.

Door thickness in mm	**68**	**78**
Sound insulation R_w in dB „standard design“	30	30
U_D-value in W/(m²K)	0,92	0,81
U_D-values for size 2250 x 1050 mm		

Additional sound insulation only possible for type Allround F2, Allwetter, Integral.

4. Core insulation
PUR construction core, free of CFC, construction-biologically tested, recyclable, jointless and non-positive directly foamed and thus **without thermal bridges**.

5. Internal reinforcement (Insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 100 mm only on the **hinge side**. Please take into account ground seal + rabbet design before reducing.

Internal dimensions for cutouts/10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm
with width 1150 : 810 mm

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996.
The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

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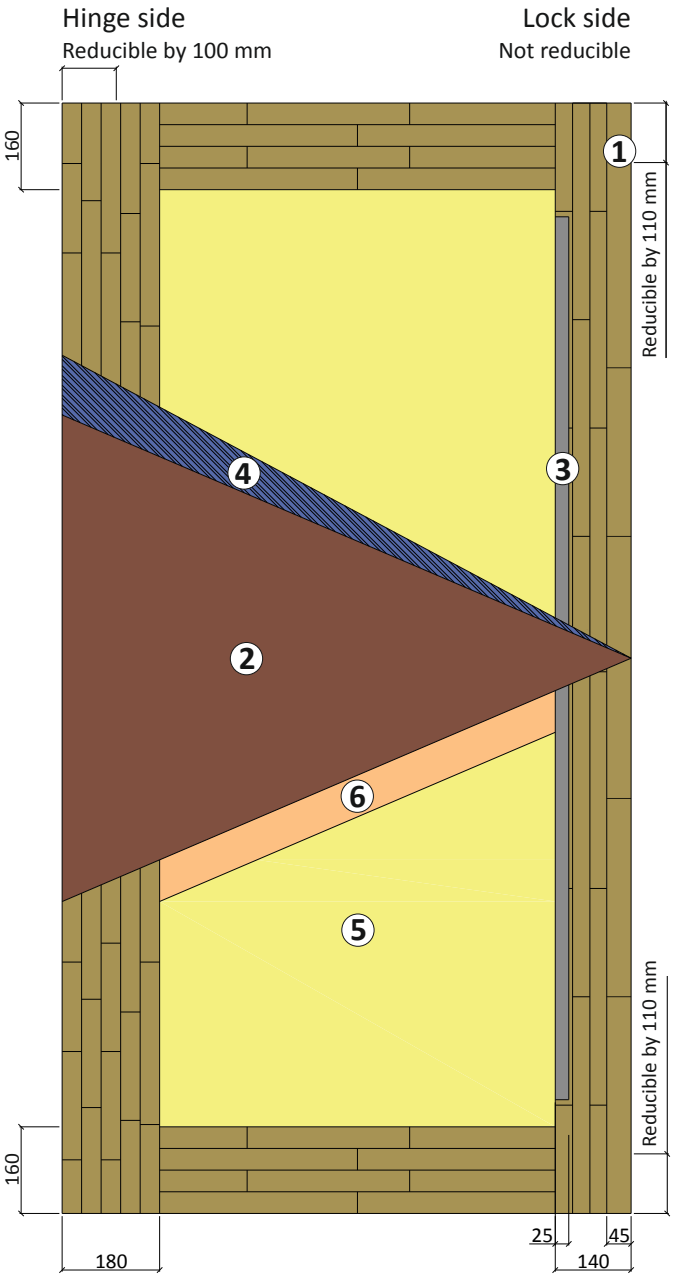
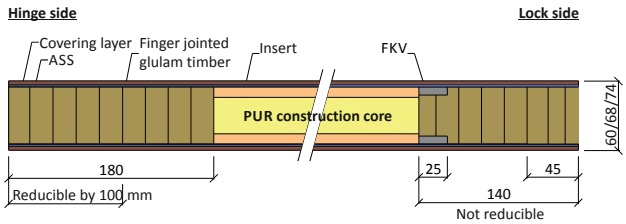
Allround F2 in the thicknesses: 60, 68, 74 mm

CE EN 14351-1

- translucent surfaces in many types of wood
- HPL surfaces
- millable covering layers
- sound insulation

Tested accord. to DIN EN 1121
Test climate c, d, e and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Standard sizes:	Reducible to:
2150 / 2250 x 950 mm	1930 / 2030 x 850
2150 / 2250 x 1050 mm	1930 / 2030 x 950
2150 / 2250 x 1150 mm	1930 / 2030 x 1050

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, finger jointed as reduction area, type of wood as lock side
- Above: 160 mm flawless glulam timber concealed edge band as reduction area, type of wood as lock side
- Below: 160 mm glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515) Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Thermal insulation PUR construction core, free of CFC.

Door thickness in mm	60	68	74
Sound insulation R_w in dB „standard design“	30	30	34
U_p-value in W/(m²K)	1,09	0,96	0,91
Sound insulation 1 R_w in dB „increased	35	37	38
sound insulation“ U_p-value in W/(m²K)	1,15	1,00	0,95
Sound insulation 2 R_w in dB „pergola“	40	42	44
U_p-value in W/(m²K)	1,3	1,2	1,1
U_p-values for size 2250 x 1050 mm			

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 100 mm only on the **hinge side**. Please take into account ground seal + rabbet design before reducing.

Internal measurements for cutouts/10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm
with width 1150 : 810 mm

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996.
The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

Schadstoff-geprüft
Emissions-geprüft
www.tuv.com
ID 0000046432

VARIOTEC

No. 1 EN

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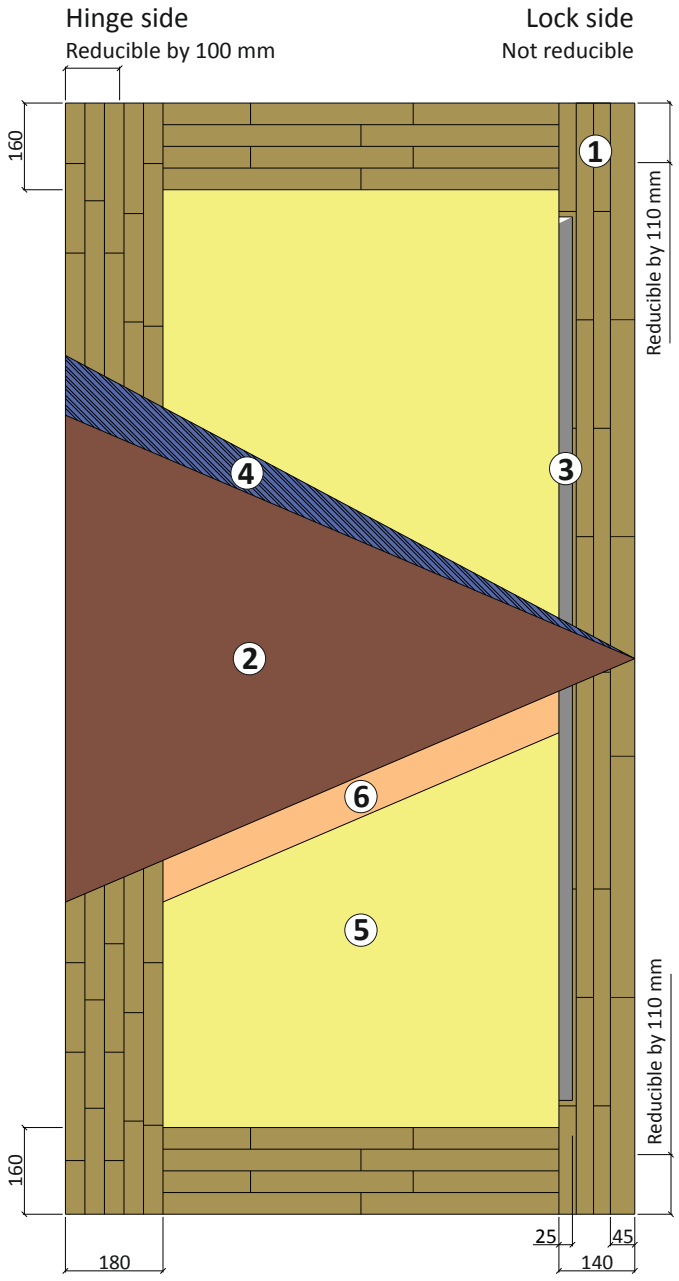
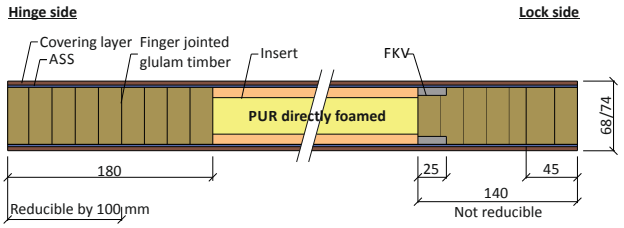
Allwetter in the thicknesses: 68, 74 mm

CE EN 14351-1

- for covering coating
- translucent surfaces in many types of wood
- oversize formats
- sound insulation

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Standard sizes:	**Reducible to:**	**- size up to 3080 x 1240 mm**
2470 x 950 mm	2250 x 850	**on request**
2470 x 1050 mm	2250 x 950	**- max. tested size:**
2470 x 1150 mm	2250 x 1050	**2800 x 1240 mm**

1. Wing frame
- Lock side: (special scantling) lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, finger jointed as reduction area, type of wood as lock side
- Above: 160 mm flawless glulam timber concealed edge band as reduction area, type of wood as lock side
- Below: 160 mm glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515) Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.** HPL wating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Thermal insulation PUR construction core, free of CFC.

Door thickness in mm	**68**	**74**
Sound insulation R_w in dB „standard design“	30	34
U_p-value in W/(m²K)	0,96	0,91
Sound insulation 1 R_w in dB „increased	37	38
sound insulation“ U_p-value in W/(m²K)	1,00	0,95
Sound insulation 2 R_w in dB „pergola“	42	44
U_p-value in W/(m²K)	1,2	1,1
U_p-values for size 2250 x 1050 mm		

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 100 mm only on the **hinge side**. Please take into account ground seal + rabbet design before reducing.

Internal measurements for cutouts/10 mm reserve per side
with width 1050 : 710 mm
with width 1150 : 810 mm
with width 1240 : 910 mm

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

Dated: February 2020

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VARIOTEC

No. 494 EN

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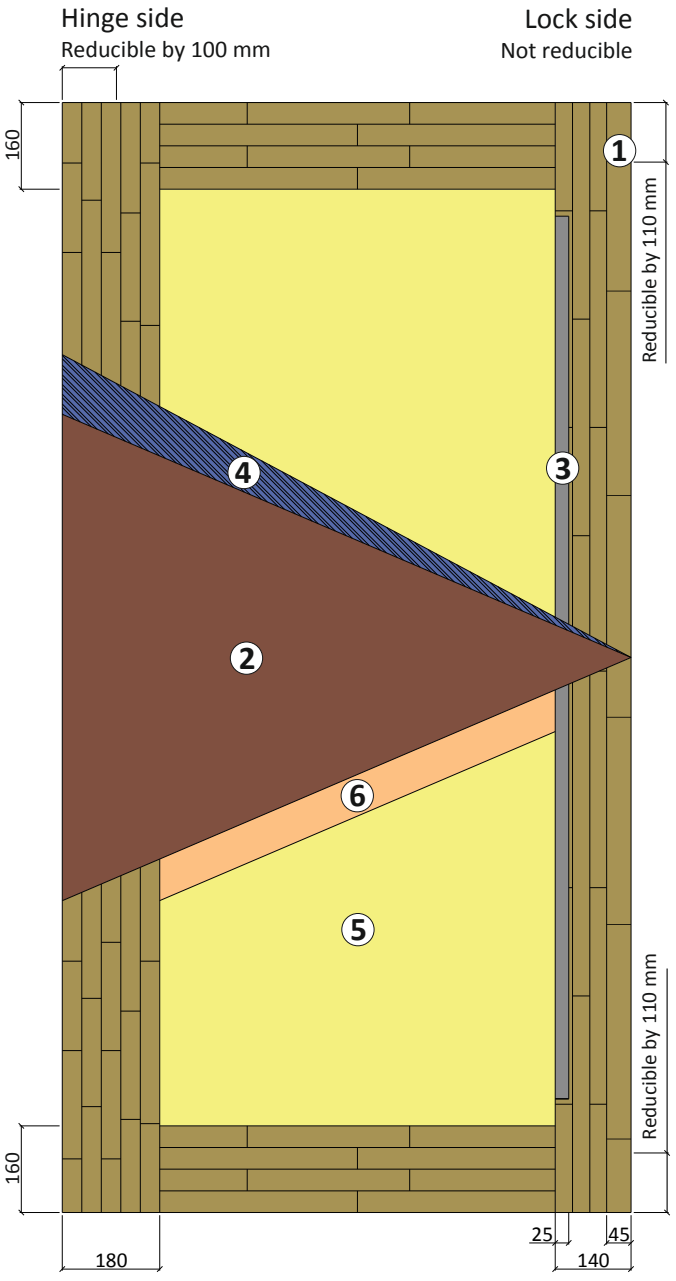
Ultrahaus-Effizienzhaus

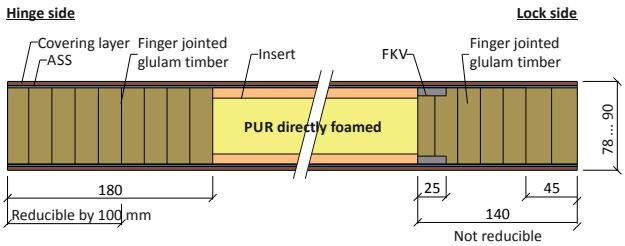
CE EN 14351-1

KfW 55-135 in the thicknesses: 78-90 mm

- for covering coating
- translucent surfaces in plenty types of wood
- sound insulation

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Standard sizes: / **Reducible to:**

2150 / 2250 x 950 mm	1930 / 2030 x 850
2150 / 2250 x 1050 mm	1930 / 2030 x 950
2150 / 2250 x 1150 mm	1930 / 2030 x 1050

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, finger jointed as reduction area, type of wood as lock side
- Above: 160 mm flawless glulam timber concealed edge band as reduction area, type of wood as lock side
- Below: 160 mm glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515) Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Thermal insulation PUR construction core, free of CFC.

Door thicknesses in mm	U_p-W/(m²K)	Wood types
78	0,84 W/(m²K)	pine, spruce, larch, oak, meranti
85	0,77 W/(m²K)	
90	0,73 W/(m²K)	
U_p-values for size 2250 x 1050 mm		
Sound R_w „standard version“ 30 dB*		

*Sound expansion up to 45 dB

Technical modifications excepted!

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 100 mm only on the **hinge side**. Please take into account ground seal + rabbet design before reducing.

Internal measurements for cutouts/10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm
with width 1150 : 810 mm

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Dated: February 2020

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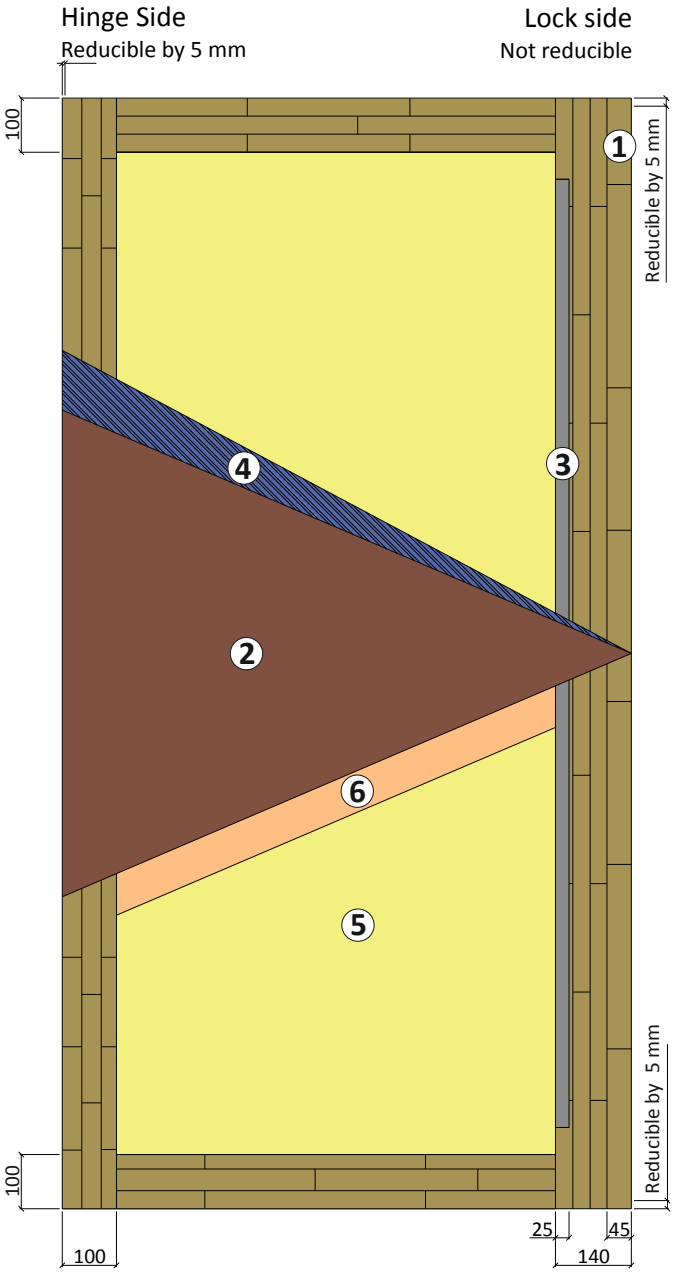
Thermosafe100

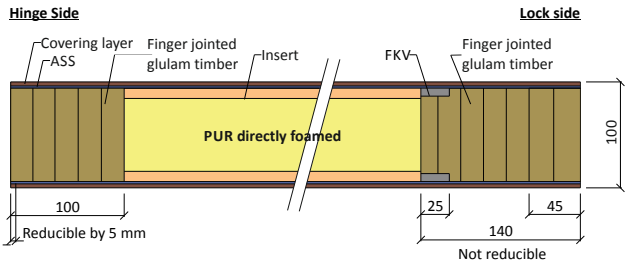
Certified passive house door

- for covering coating
- translucent surfaces in many types of wood

CE EN 14351-1

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** from 68 mm class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Custom-made

1. Wing frame
- Lock side: lamellas in type of wood / colour matching the covering layer, width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber convealed edge band, finger jointed, type of wood as lock sideHolzart wie Schlossseite
- Above: 100 mm flawless glulam timber concealed edge band, type of wood as lock side
- Below: 100 mm glulam timber concealed edge band acc. to factory´s choice

2. Covering layers (see page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued acc. to DIN EN 314-class 3, MDF-Exterior with thicknesses of 3 und 6 mm. **Water-repellent treatment of the MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL-coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Thermal insulation PURconstruction core, free of CFC.

Door thickness in mm	**100**
Element value U_D in W/(m²K)*	0,62
Panel value U_P in W/(m²K)**	0,59
Sound insulation R_W „standard design“	30

* 2200 x 1100 mm (without cutouts)

** 2138 x 992 mm (without cutouts)

4. ASS stabilization layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

PUR gluing of the whole construction.

Passive house certified elements:

Size of blind frame:	2200 x 1100 mm (approved size)
Thickness of the door blank:	100 mm
Wood type of the frame:	pine, spruce, larch, oak
Blind frame:	95 x 95 mm massive wood
Air tightness:	V ≤ 1,3 m³/(hm) ≤ 2,25 m³/(hm) at 100 Pa

Any glazing with an U_g value of 0,70 W/(m²K) must not exceed a size of 0,25 m².

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

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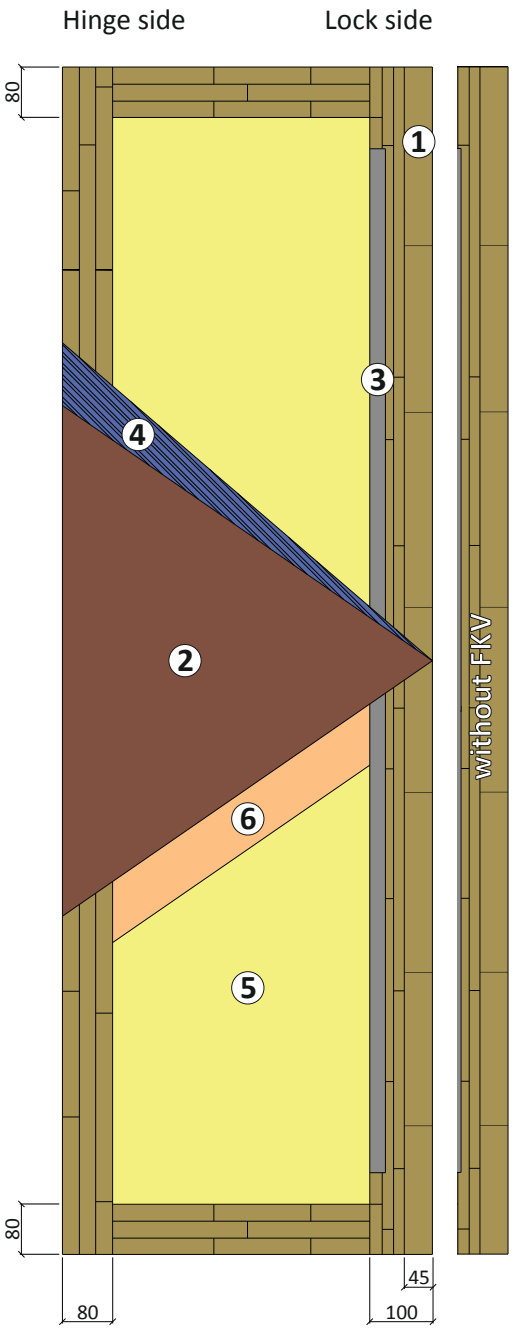
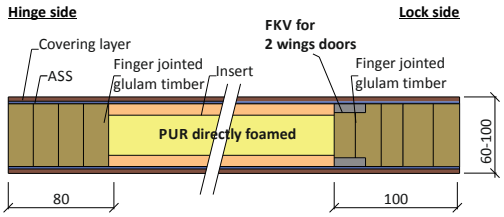
Insulated side part blank **(without FKV)** in the thicknesses: 60-100 mm

For fixed side parts with FKV for 2-wing doors

CE EN 14351-1





Custom-made

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, type of wood as lock side
- Above: flawless glulam timber concealed edge band, type of wood as lock side, finger jointed
- Below: 80 mm glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement. **For 2 wing doors**.

4. . ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
PUR construction core, free of CFC, construction-biologically tested, recyclable, jointless and non-positive directly foamed and thus **without thermal bridges.**

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of
wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained..

Technical modifications excepted!

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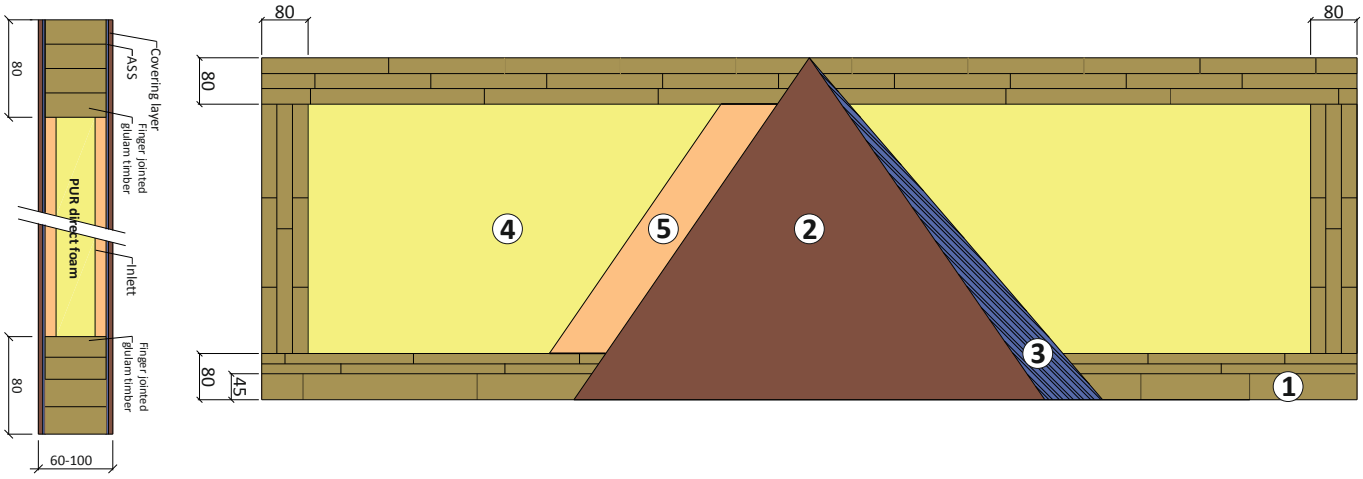
Insulated top panel blank in the thicknesses: 60-100 mm

CE EN 14351-1



Technical modifications excepted!

Custom-made

1. Frame construction
4-sided glulam timber frame, type of wood acc. to covering layer, all-round 80 mm glulam timber.

2. Covering layers (see page 22 “Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued acc. to DIN EN 314-class 3, MDF-Exterior with a thickness of 3 and 6 mm.
Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471. HPL coating acc. to Exterior collection.

3. ASS
Stabilisation layers on both sides, as a vapour barrier, gluing is stiff against shearing and tension.

4. Core insulation
PUR construction core, free of CFC, construction-biologically tested, recyclable, jointless and non-positive directly foamed and thus **without thermal bridges.**

5. Internal reinforcement (Insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides. Option: insert in **plywood** or **MDF** for glazing beads on one side.

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

VARIOTEC

No. 501 EN

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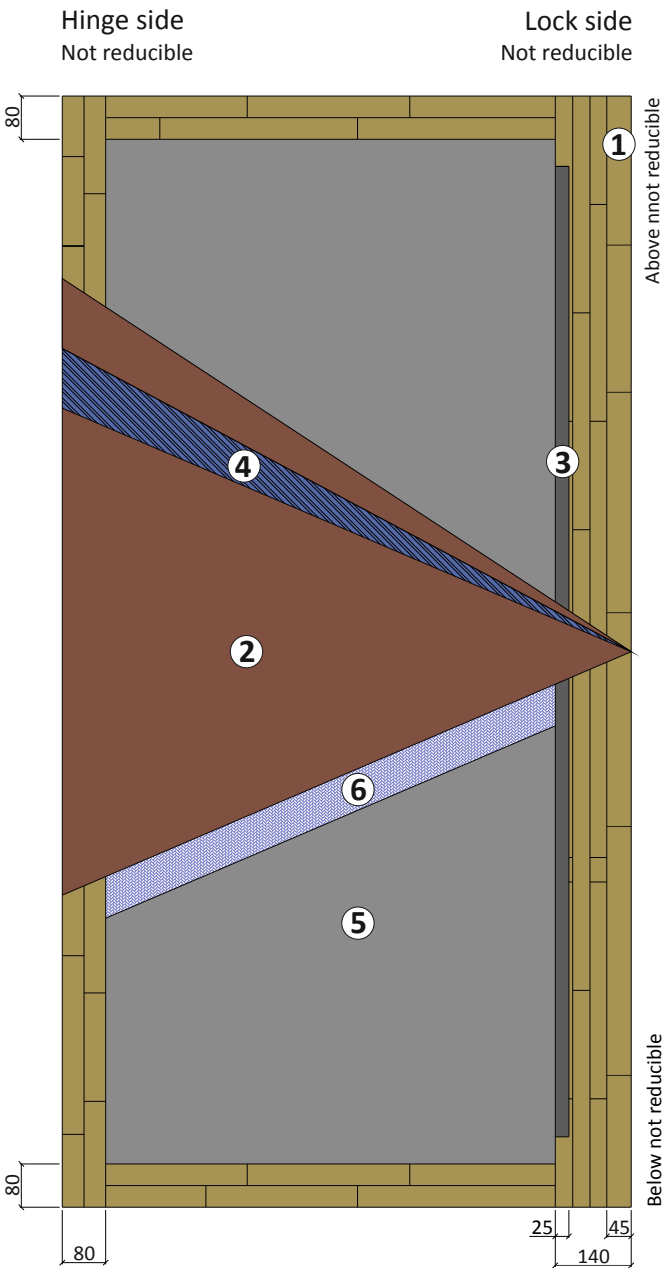
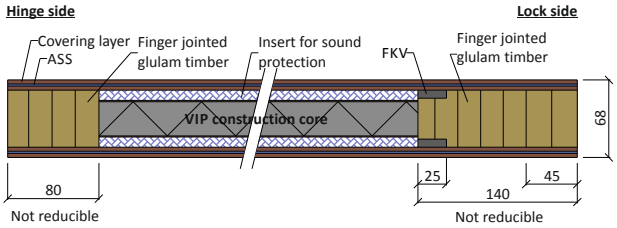
Vario-VIP Multifunktion in the thickness: 68 mm CE EN 14351-1

(Sound protection in combination with thermal insulation)

Tested acc. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Custom-made
- Sound protection and thermal insulation individually realisable

1. Wing frame
- Lock side: lamellas in type of wood / colour matching the covering layer, width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, type of wood as lock side
- Above: flawless glulam timber concealed edge band, type of wood as lock side
- Below: 80 mm glulam timber concealed edge band acc. to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515) Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.** HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement. FKV stabilizer: Advantage for the total weight of the blank.

Sound protection	U_p value	VIP thickness
42 dB	0,72 W/(m²K)	15 mm
37 dB	0,61 W/(m²K)	25 mm
30 dB	0,56 W/(m²K)	35 mm
U_p values for size 2250 x 1050 mm		

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
VIP construction core (VIP=vacuum insulation panel), construction-biologically tested, recycable, not suitable for subsequent cut-outs/boreholes **(do not drill!)**

6. Insert of sound protection

PUR gluing of the whole construction.

Note: no subsequent light cut-out possible!

Note: do not drill into the blank or frame wood!

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained

Technical modifications excepted!

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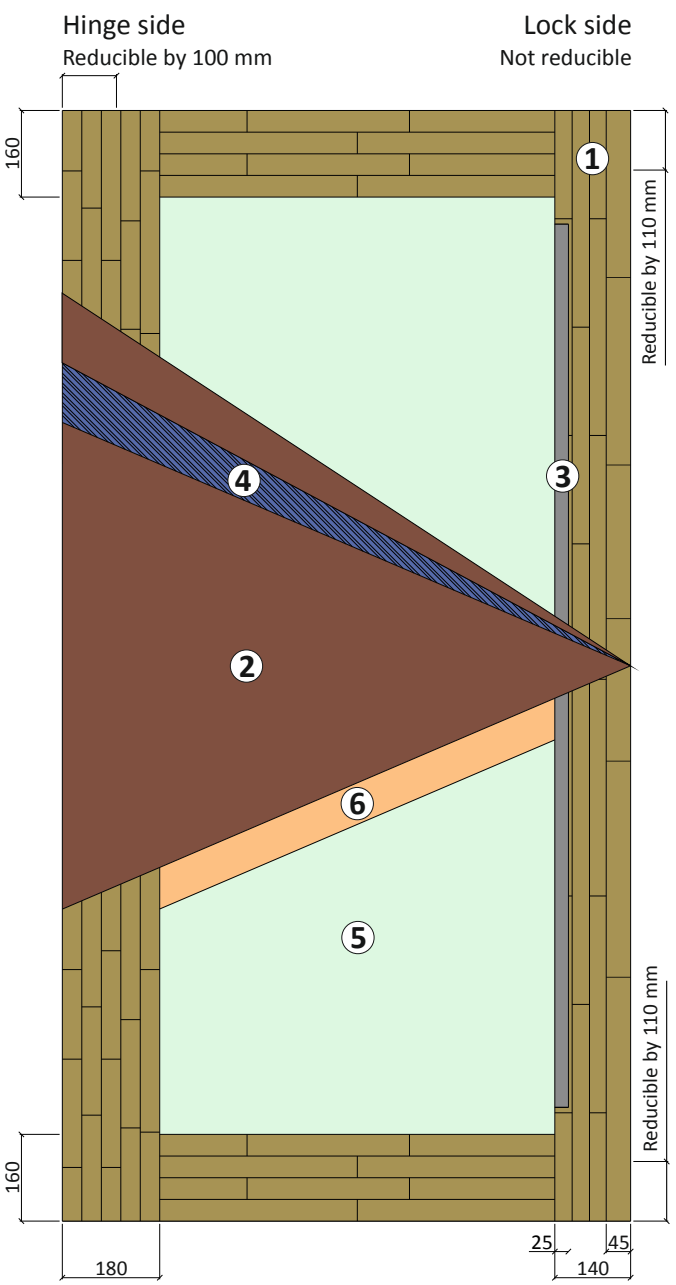
CE EN 14351-1

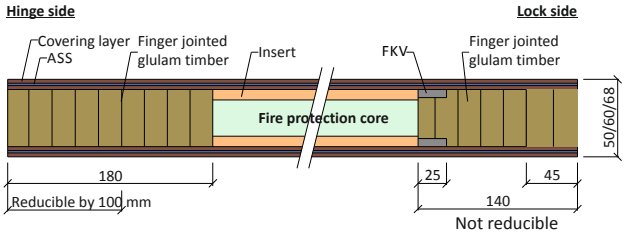
Integral L in the thicknesses: 50 to 100 mm (special thicknesses possible)

Fire protection EI_2 30-C5-S_{200} acc. to EN 16034

Tested special construction: door blank for **apartments,** outside and special areas

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** from 68 mm class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3





Standard sizes:	**Reducible to:**
2470 x 950 mm	2250 x 850
2470 x 1050 mm	2250 x 950
2470 x 1150 mm	2250 x 1050

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, finger jointed as reduction area, type of wood as lock side
- Above: 160 mm flawless glulam timber concealed edge band as reduction area, type of wood as lock side
- Below: 160 mm glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

Door thickness in mm	**50**	**60**	**68**
Sound insulation R_w in dB „standard desig	32	33	34
U_p-value in W/(m²K)	1,58	1,34	1,20
Sound insulation 2 R_w in dB „pergola“	-	40	42
U_p-value in W/(m²K)	-	1,75	1,6
U_p-values for size 2250 x 1050 mm			

4. . ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
Fire protection core (Kappa), noise insulating, non-toxic, recyclable.

6. Internal reinforcement (insert)
Standard: **MFP** (multifunction panel) as a reinforcement for cutouts or as a basis for glazing beads, false edges and glazing beads on both sides.
Option: Insert in **plywood** or **MDF** for glazing beads on one side.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 60 mm), from case to case reducible in width by 100 mm only on the **hinge side**.
Please take into account ground seal + rabbet design before reducing.

Internal measurements for cutouts/10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm
with width 1150 : 810 mm

PUR gluing of the whole construction.

Note: Do not drill into the blank or frame wood!

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained..

Technical modifications excepted!

Dated: February 2020

VARIOTEC GmbH & Co. KG | Weißmarterstr. 3-5 | D-92318 Neumarkt i.d.OPf. | Tel.: +49 9181 6946-0 | Fax: +49 9181 6946-50 | info@variotec.de | www.variotec.de

Integral L VIP in the thickness: 68 mm (special thicknesses possible)

Fire protection EI_2 30-C5-S_{200} acc. to EN 16034

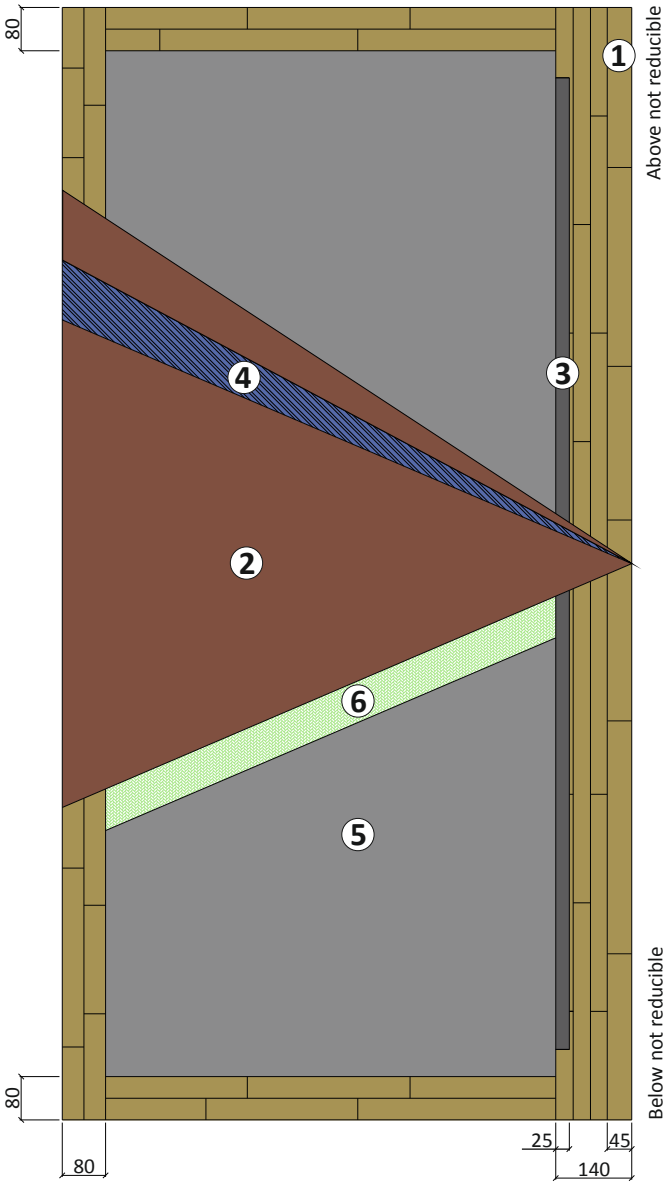
CE EN 14351-1

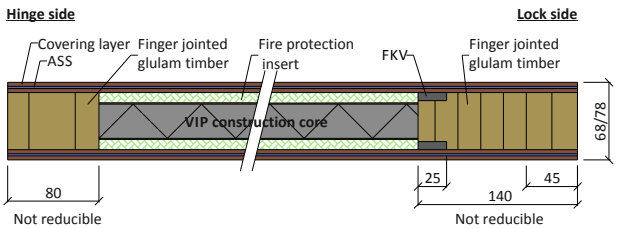
Proved special construction: door blank for **apartment doors**, external and special areas

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** from 68 mm class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3

Hinge side
Not reducible

Lock side
Not reducible





Custom-made
- Sound protection and thermal insulation individually realisable

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer. Width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edge band, type of wood as lock side
- Above: flawless glulam timber concealed edge band, type of wood as lock side
- Below: glulam timber concealed edge band as lock side

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.
FKV stabilizer: Advantage for the total weight of the blank.

Design example:

Sound protection	U_p value	VIP thickness
42 dB	0,72 W/(m²K)	15 mm
37 dB	0,61 W/(m²K)	25 mm
30 dB	0,56 W/(m²K)	35 mm
U_p values for size 2250 x 1050 mm		

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

5. Core insulation
VIP construction core (VIP=vacuum insulation panel), construction-biologically tested, recyclable, not suitable for subsequent cut-outs/boreholes **(do not drill!)**.

6. Fire protection insert

PUR gluing of the whole construction.

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained.

Technical modifications excepted!

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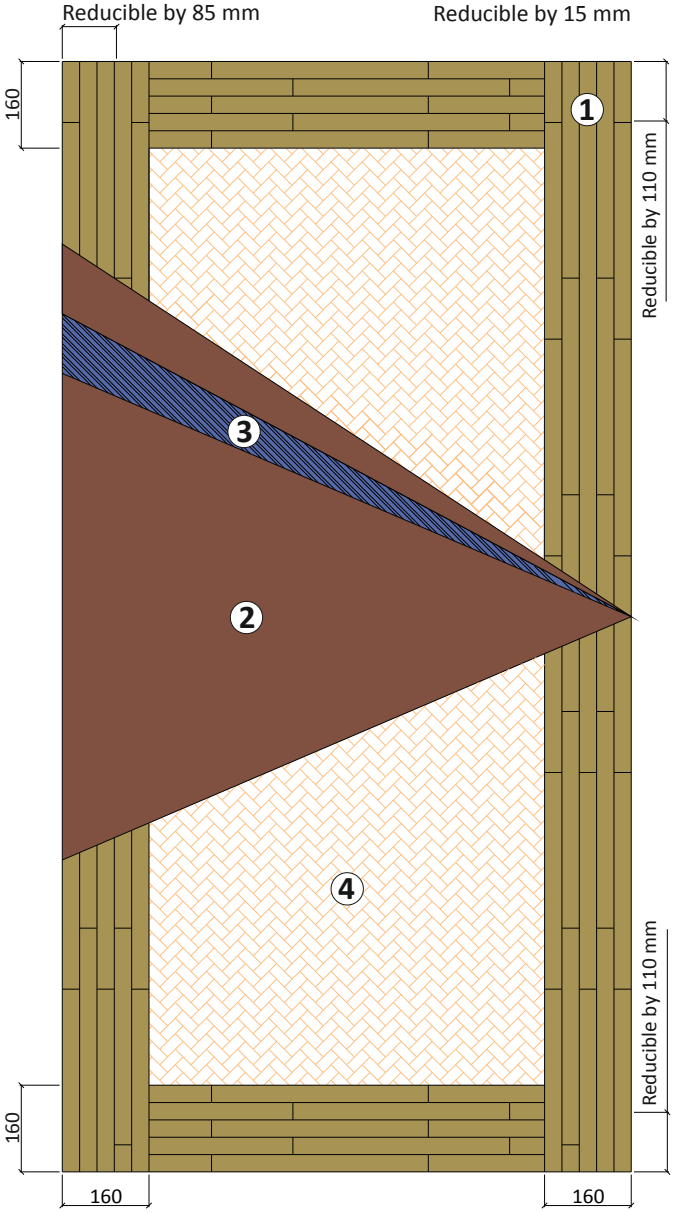
CE EN 14351-1

Integral Q in the thicknesses: 45, 52 mm (special thicknesses possible)

Fire protection EI_2 30-C5-S_{200} acc. to EN 16034

Proved special construction: door blank for **flat entrance doors** tested acc. to DIN EN 1634-1

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** class 2 (c), 2 (d), 2 (e)
acc. to DIN EN 12219:2000-06 (classified).
Burglar resistance Rc2 (flat entrance door)



Standard sizes: **Reducible to:**
2150 / 2250 x 950 mm 1930 / 2030 x 850
2150 / 2250 x 1050 mm 1930 / 2030 x 950

Integral Q, EI_2 30-C5-S_{200} with test badge in line with the VARIOTEC license contract.

Sound insulation values R_w
(Laboratory value) in dB
Standard Sound
45 mm ⇨ 33 dB 45 mm ⇨ 40 dB*
52 mm ⇨ 34 dB 52 mm ⇨ 41 dB*

1. Wing frame
4-sided redwood or oak, finger jointed glulam timber frame.
Basically flawless.

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515)
Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

Thermal insulation (U_p value W/(m²K))
45 mm **(calculated value)** U_p = approx. 1,98.

3. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

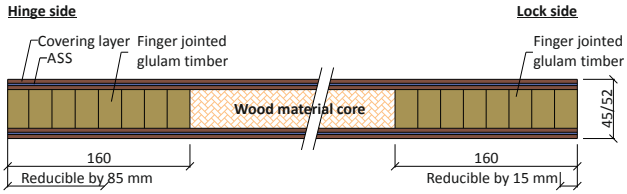
4. Core insert
Core of wooden composite acc. to DIN EN 68764, with sound, severalfold cramped.

Reducible in height by 220 mm (minimum width of the glulam timber concealed edge band 50 mm), from case to case reducible in width by 85 mm on the hinge side, max. 15 mm on the lock side.
Please take into account ground seal and rabbet design before reducing.

Internal dimensions for cutouts/ 10 mm reserve per side
with width 950 : 610 mm
with width 1050 : 710 mm

PUR gluing of the whole construction.

Technical modifications excepted!



Lock side

The functionality, withstand capability, weathering qualities of the surfaces, and all the other characteristics which can be expected of an entry door, depend on the adherence of technical guidelines, coatings on dimensionally stable external parts made of wood, especially on windows and outside doors. Leaflet no. 18 and VOB (German Construction Contract Procedures) part A 10.3 as well as the RAL quality and test requirements for the construction of wooden entry doors RAL GZ 996. The application recommendations for external building elements from the ift-Rosenheim and VFF-Frankfurt am Main, as well as the guidlines of the EN 14351-1:2006+A1:2010 have imperatively to be maintained

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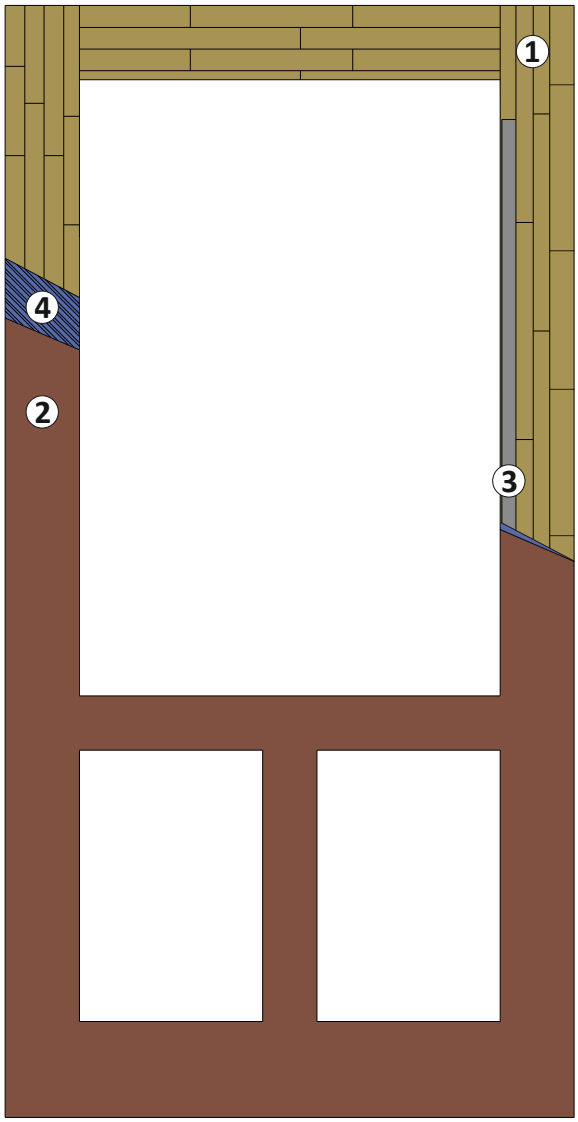
Blanks for frame doors

in the thicknesses: 60-100 mm

CE EN 14351-1

Tested accord. to DIN EN 1121
Test climate **c**, **d**, **e** and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3



Custom-made

1. Wing frame
- Lock side: lamellas in type of wood/colour matching the covering layer.
- Hinge side: glulam timber concealed edge band, finger jointed, type of wood as lock side
- Above: glulam timber concealed edge band, type of wood as lock side
- Below: glulam timber concealed edge band according to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515). Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.** HPL coating acc. to Exterior collection.

3. FKV technology **(Fibre-plastic composite)** as a metal-free reinforcement.

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

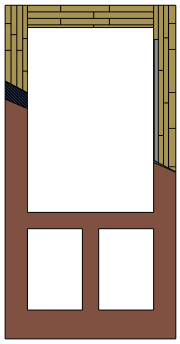
- Jointless surfaces based on the **6-7 mm full surface climate layer** proved in practice from the VARIOTEC panel door construction

- **FKV stabilizer** on the lock side
FKV stabilizer: Advantage with the total weight of the blank

- CNC-machined acc. to drawing up to „ready-to-assemble“

- In all designs and sizes up to **2800 x 1240 mm**

Technical modifications excepted!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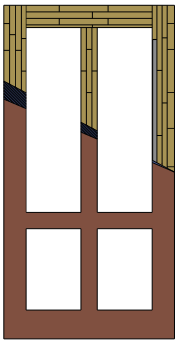
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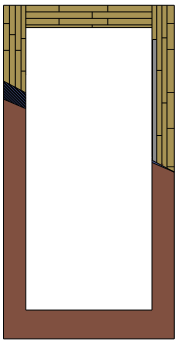
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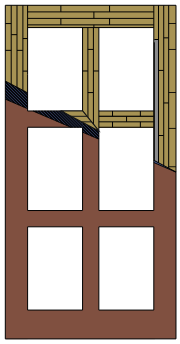
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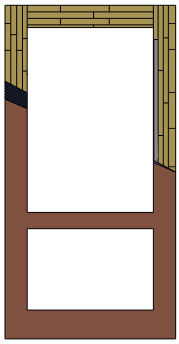
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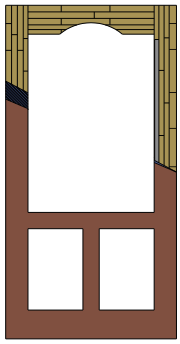
Typ: R6

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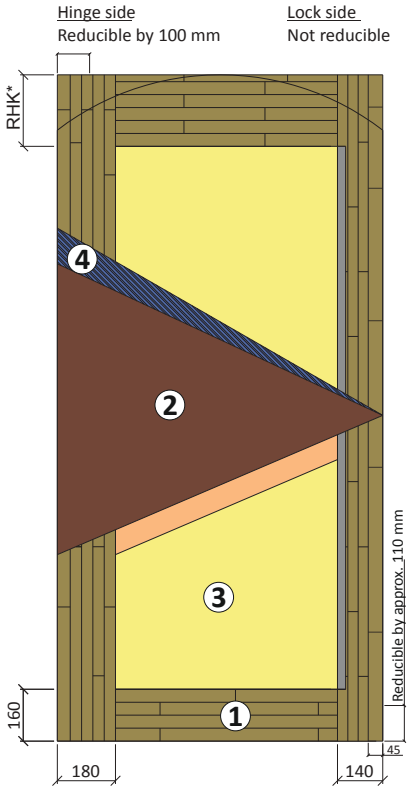
Blank with round arch in the thicknesses: 68-100 mm CE EN 14351-1

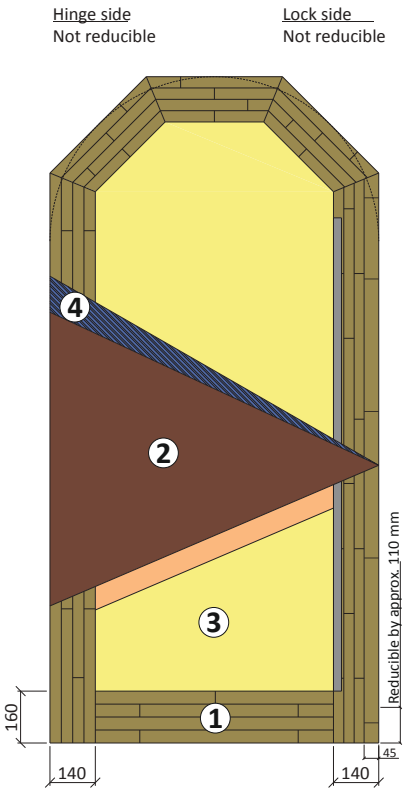
Tested accord. to DIN EN 1121
Test climate c, d, e and class 3 (c), 3 (d), 3 (e)
acc. to DIN EN 12219:2000-06. Burglar resistance RC2/RC3

Door panel with segmental arch

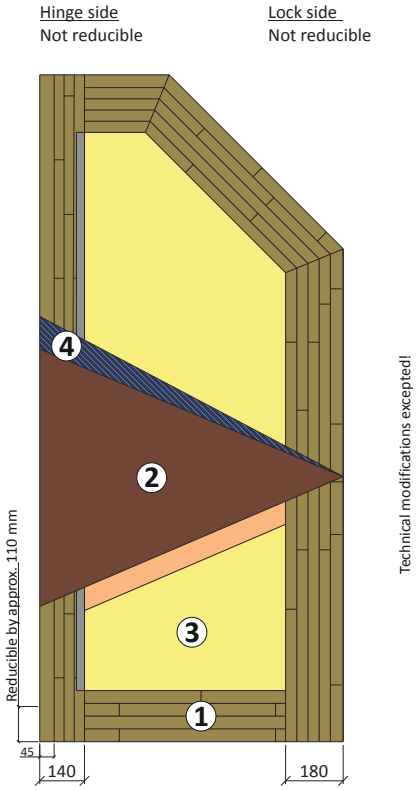


RhK*: Frame wood breadpiece
(wider frame piece at the top)
rise + 50 mm (but min. 160 mm)

Arched door panel



Arched door panel with 2-wings



Technical modifications excepted!

1. Wing frame
- Lock side: lamellas in type of wood / colour matching the covering layer, width approx. 45 mm, glued to inner frame
- Hinge side: flawless glulam timber concealed edgge band, finger jointed as reduction area, type of wood as lock side
- Above: 160 mm flawless glulam timber conceald edge band as reduction area, type of wood as lock side
-Below: 160 mm glulam timber concealed edge band acc. to factory´s choice

2. Covering layers (see at page 22 „Plywood covering layers“ data sheet no. 515) Plywood Exterior glued according to DIN EN 314, class 3, MDF-Exterior with a thickness of 3 and 6 mm. **Water-repellent treatment of MDF with VARIOTEC Protekt, data sheet no. 471.**
HPL coating acc. to Exterior collection.

3. Core insulation
PUR construction core, free of CFC, construction-biologically tested, recyclable. Jointless and non-positive directly foamed and thus **without thermal bridges.**

4. ASS Stabilisation layers on both sides, as vapour barrier, gluing is stiff against shearing and tension.

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Plywood top layers

Oak sliced veneer

Meranti FL

Larch FL

Larch MF

Redwood FL (for covering coating)

Spruce FL

Pine FL

Weitere Sperrholzdeckschichten: Fichte MF und Kiefer MF

MDF* (for covering coating) *see page 30-31

Okoume sliced veneer

Sapeli sliced veneer

Colour divergences to the original are possible due to typographical conditions.

Limited top layers in stock: maple, beech, hemlock, Ilomba, Niangon, Siberian larch, silver fir!

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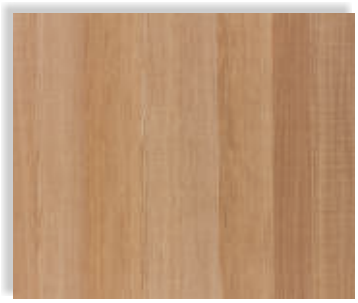
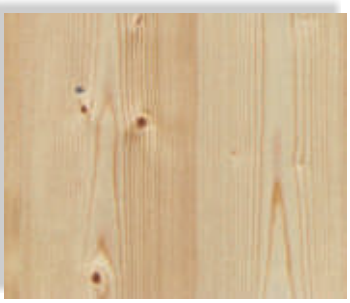
Rustic veneer surfaces

Description: Rustic veneer surfaces correspond to the current trend. When slicing the veneers the branches can break and uncover the middle layer what cannot be avoided. In this case the defects have to be primed according to the respective colour system and shade.

Size: up to door panel size 2490 x 1240 mm



Oak rough sawn longitudinal



Spruce knotty longitudinal

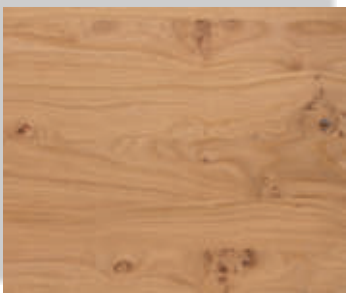
Spruce knotty horizontal

Larch knotty longitudinal

Larch knotty horizontal

Larch rough sawn longitudinal

Oak knotty longitudinal

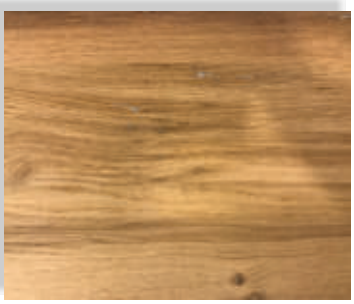


Oak knotty horizontal

Oak vintage longitudinal

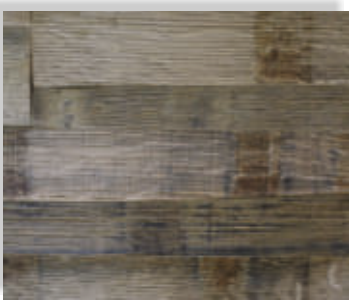
Oak Vintage horizontal

Coastal oak horizontal



Oak antique horizontal

Wild oak horizontal



Oak Barrique horizontal*

PHOTO SELECTION OF THE DIFFERENT ORIGINAL TOP LAYERS CAN BE REQUESTED AT ANY TIME!

Colour divergences to the original are possible due to typographical conditions.

*available from Scheba GmbH, 85283 Eschelbach (info@scheba.net)

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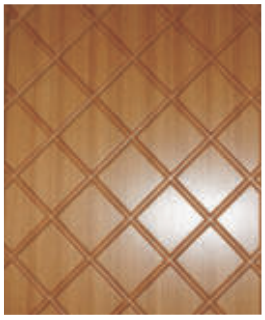
Design guarantee plywood

Combination of technique and design with door programme and sandwich elements.
Design plywood for the outdoor area acc. to DIN EN 314-2, class 3.

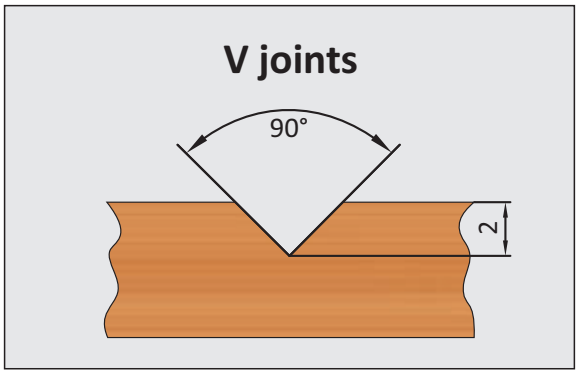
Design variants

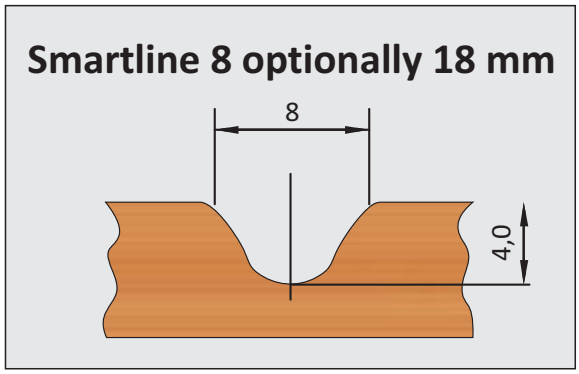


Type of wood: oak, pine, meranti, spruce, larch... also as CI in 9/16 mm.

Fineline cI: 9 mm = CI bottom grove 4 mm / 16 mm = CI bottom grove 12 mm.

Sizes: 2500 x 1250 mm / 2500 x 1700 mm (not grooved). Veneer direction vertical.
Picture veneer on request.





With bottom grove “Fineline CI” for optimal grooves and flattening
(CI means the same colour groove base matched to the surface)

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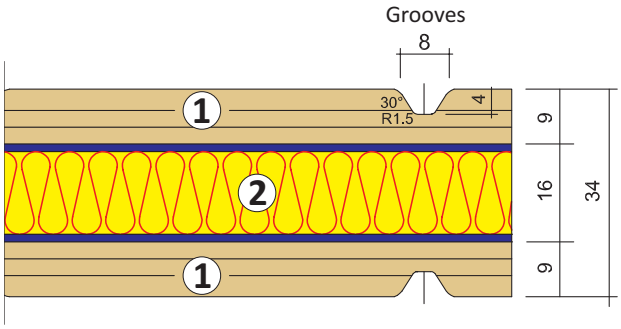
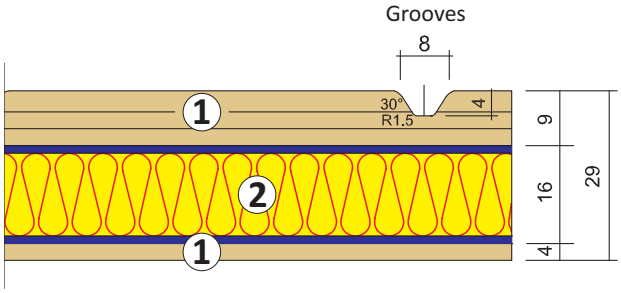
Sandwich elements

- Insulation core + design guarantee plywood
  *also possible with VIP as core layer for slimmer construction and higher insulation value
- 9,0 / 16,0 mm design guarantee plywood with same **coloured special groove bottom**
  Special grooved floor „Fineline CI“, covering veener layer of approx. 0,8 mm
- Size 2500 x 1250 / 2500 x 1700 or on request
- Individual thickness on request (up to 76 mm possible)

Exemplary designs

1. Veneered plywood
2. PUR core





* 4 mm plywood
20 mm VIP
2 mm plywood
= U_p 0,324 W/(m²K)

	Sandwich	U-value W/(m²K)
2500 x 1700 mm	24 mm (4/16/4)	1,15
	29 mm (4/16/9)	1,10
	34 mm (9/16/9)	1,05
	26 mm (4/18/4)	1,05
	31 mm (4/18/9)	1,01
	36 mm (9/18/9)	0,97
	28 mm (4/20/4)	0,97
	33 mm (4/20/9)	0,93
	38 mm (9/20/9)	0,90
2500 x 1250 mm	40 mm (12/16/12)	1,01
	44 mm (12/16/16)	0,98
	48 mm (16/16/16)	0,95
	42 mm (12/18/12)	0,93
	46 mm (12/18/16)	0,90
	50 mm (16/18/16)	0,88
	44 mm (12/20/12)	0,87
	48 mm (12/20/16)	0,84
	52 mm (16/20/16)	0,82

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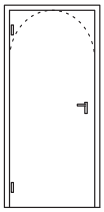
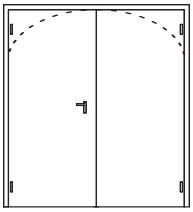
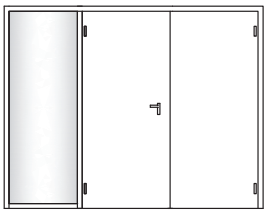
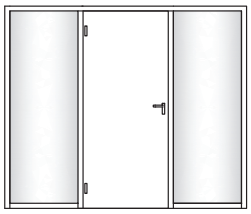
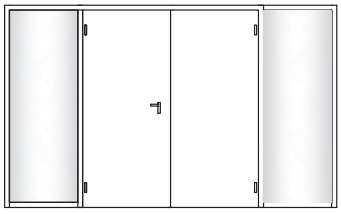
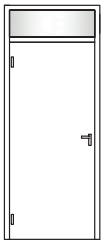
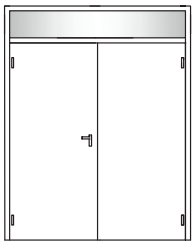
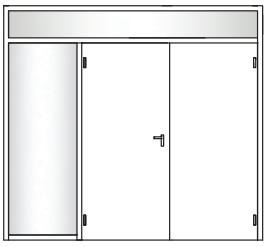
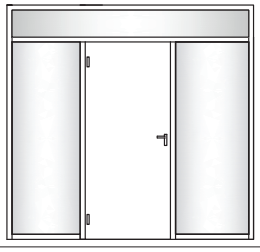
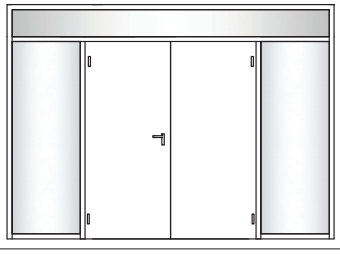
Tested and approved variants for fire and smoke protection doors (license system fire and smoke protection) & escape and rescue routes combined with the „ability to release“
+ RC 2/3
+ sound insulation Rw30 - 47 dB

Overview of the construction variants acc. to EN 16034

System thicknesses from 45 mm optionally available with aluminium covering shell

Further information in our brochure: "Interior and exterior doors with fire protection properties

EI_2 30-C5-S200	1-leaf	2-leaf
Simple door element		
Door element with side part (side part fixed glazed or as panel)		
Door element with two side parts (side part fixed glazed or panel)		
Door element with fanlight (fanlight fixed glazed or as a panel)		
Door element with fanlight and side part (fanlight / side part fixed glass or as a panel)		
Door element with fanlight and two side parts (fanlight / side part fixed glazed or as a panel)		

Technical changes reserved!

Summary: Further processing of VARIOTEC door blanks

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1. Surface check of laminated wood doors:
   before the beginning of every time-consuming door processing procedure or in the case of special designs **the presence of furring, gluing errors in the finishing veneer, or tunnels in the central position must be checked for by damping the veneer cover layers on both sides of the doors.** The supplier of the door blank will not be liable for subsequent costs incurred due to the neglect of this obligatory test.

2. As a natural product, wood is subject to inconsistencies in texture, colour, and porosity, etc. Any such differences do not represent a defect.

3. The thickness of the blank must be checked before further processing. Thickness tolerances of +/- 1 mm are permissible. When applying the veneer the use of glue strings is to be avoided as, due to the low press temperature, melting is not guaranteed.

4. **When applying veneer to house doors a veneer humidity of approx 8% must be adhered to** and the uniformity of the veneer thickness checked as gluing errors can arise otherwise.

5. **The temperature of the veneer press can be up to approx. 80 °C. With hot grouting a moisture-conserving layer (8-10 mm) must be grouted to absorb the resultant vapour pressure humidity - reflected by the aluminium (MDF etc.). You can thus avoid furring!**

6. **The pressing pressure should not rise above 3.5 kg/cm².** Not to be processed in throughput presses with high temperatures and short pressing times.

7. The glues or adhesives used must be at least water- and weather-resistant as per EN 204/D 4. In the case of greater requirements (thermal/humidity) polyurethane, melamine, or EPI glues should be used. Please get in touch with your relevant glue supplier in relation to this.

8. **HPL/CPL laminated plastics:** To eliminate any tension, absolutely identical laminated plastic characteristics are to be observed on both sides. This means, identical HPL/CPL thickness, the same direction of travel (grinding direction), same production age, same manufacturer, and same board type, particularly in the case of different decorations, the same material temperature, and the same amount of adhesive. Do not make any square vision panels (risk of tearing).

9. It must be ensured that the door leaf in the locked press can cool accordingly and be air-conditioned 1 - 2 days before further processing. This is best carried out through the covering on both sides of a completely even base at a room temperature of approx. 18 - 20°C for a period of 1 - 1 1/2 days.

10. **Surface coating:** Careful waterprooging/hydrophobising/priming must be carried out in particular in the area of corners, nuts and shiplaps. A surface concept has been specially developed for the surface treatment of HDF/MDF exteriors, and is distributed as a water-proofing treatment under the brand name "MDF-Protekt" from VARIOTEC. Processing guidelines and product description can be found on VARIOTEC Data Sheet No. 471.

11. Before beginning the further treatment of the VARIOTEC blanks please observe the labels for cutting options (stamps on house doors or data sheets).

11.1 The **identification plate** with the VARIOTEC serial number provided with the delivery must be attached to the finished door or documented in ist order documentation. Without this possibility for identification VARIOTEC can not handle any defects complaints.

12. Storage: VARIOTEC blanks must be stored in dry, air-conditioned spaces with normal air humidity on a completely level base (min. 3 equally-thick distancing spacers with complete covering). In any case, inclined positions against damp walls or on damp flooring without protection from below must be avoided.

13. Skylights must be designed so that water permeation is impossible (e.g. aluminium sealing tape for PU corners). Sealing compounds, rebate heights, etc. must be selected as per the guidelines. Reinforcements should generally be of symmetrical construction. Technically secure solutions are to be ensured via reinforcements using a clip system and concealed silicon joint. These smoothly applied facing formworks can then be worked on independently of the door leaf. Recommendation: Friedrich Knapp GmbH / Timber Connectors Clips Duo 30 / VARIOTEC Data Sheet No. 27.

14. Skylights, reinforcements, shortening cuts, as well as processing instructions can be found on our Technical Data Sheet No. 146 (see "Compact Doors" brochure). Please request before processing if not already present.

15. Bases for guarantee
    The serial number is mandatory for the identification of the door blank (see 11.1). The functionality, endurance, weathering capabilities of the surface, and all other features expected of a house door or pergola door, depend on compliance with the technical guidelines as per VFF information leaflet HO.01/A1 "Classification of coatings for wooden windows and house doors" 4/04, VFF information leaflet HO.03 "Requirements for coating systems for wooden windows and house doors" 4/04, VFF information leaflet HO.08 "Measures for the protection of windows and outer doors during the cons truction phase" 7/01. Furthermore the construction humidity must be tested before installation, for, as per VOB (German Construction Tendering and Contract Regulations) 18355, the installation of doors at a construction humidity above 65% is not permissible. The guarantee period is 2 years from handover. Non-compliance with these rules renders the guarantee invalid.

16. You will also receive sandwich elements with design milling in laminated wood and/or MDF exterior, and all blanks pre-prepared ready for use. Prepared as per VARIOTEC checklist "Door Processing". **New service:** All doors in the "all-inclusive" package with blind frames and all those with suitable test certificates; metal fittings and sealing components can also be provided.

Summary: Door friezes

1. Before beginning processing a humidity test must be carried out. To minimise subsequent tear formation the cover layer material is overdried and brought for delivery with approx. 8%. Through storage and transport inflows an increase to 10 - 15% is possible. The product may not be processed at levels above this. This is the only way to exclude the risk of subsequent delayed damage or loss.
2. If the product is packed in film please remove this and provide equal ventilation and/or light protection for both sides.
   Generally, door storage as in Point 12.
3. Please also check your door frieze before further processing for thickness tolerance in order to avoid looping through at impact points.
4. The glues used must be at least water- and weather-resistant as per EN 204/D 4. Please get in touch with your relevant glue supplier in relation to this.

Dated: February 2020

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Form stability tests for exterior, special and function doors

Old test climate

	Cat. III DIN EN 79		Cat. IV = VARIOTEC acc. to ISO 8273-1985	
	Temperature	Rel. air humidity	Temperature	Rel. air humidity
Warm	23 °C	30 %	23 °C	80 %
Cold	3 °C	80 %	-20 °C	24 Std.

VARIOTEC Test climates:

c d e

1. New testing norm: DIN EN 1121:2000-09

Test climate	Interior of the door		Exterior of the door	
	Air temp.	Rel. humidity	Air temp.	Rel. humidity
a	23 °C	30 %	18 °C	50 %
b	23 °C	30 %	13 °C	65 %
c	23 °C	30 %	3 °C	85 %
d	23 °C	30 %	- 15 °C	-------
e	20 - 30 °C	-------	+ ca. 80 °C for 24 hours	-------

2. Evaluation of the measurement points

Duration of test:

Test climate a, b, and c	28 days each
Test climate d	7 days
Test climate e	24 hours

3. Quality statement: tolerance classes DIN EN 12219

Test climate a, b, c, d, e DIN EN 1121:2000-09 **Tolerance class DIN EN 12219:2000-06**	**Twist** in mm	**Bending** Longitudinal bending in mm	**Bending** Transverse bending in mm	**Surfaces** Local evenness in mm
1	**8**	**8**	**4**	**0,40**
2	**4**	**4**	**2**	**0,30**
3 (VARIOTEC with test climate e)	**2**	**2**	**1**	**0,20**

Climate tests only define the test process = no quality statement!

VARIOTEC ALL-INCLUSIVE

House door construction sets in the format desired by the customer, single to double-leaf or multi-part door elements in the current surfaces: MDF exterior, fineline for covering, Fineline in meranti, pine, spruce, and larch, as well as sapelli sliced veneer and oak sliced veneer. System thicknesses 68, 78, 85 and 100 mm with individual fitting package in wood or wood/aluminium. NEW: larch + oak, available knotted or roughsawn, lengthways/horizontally. (See data sheet no. 510, please request!)

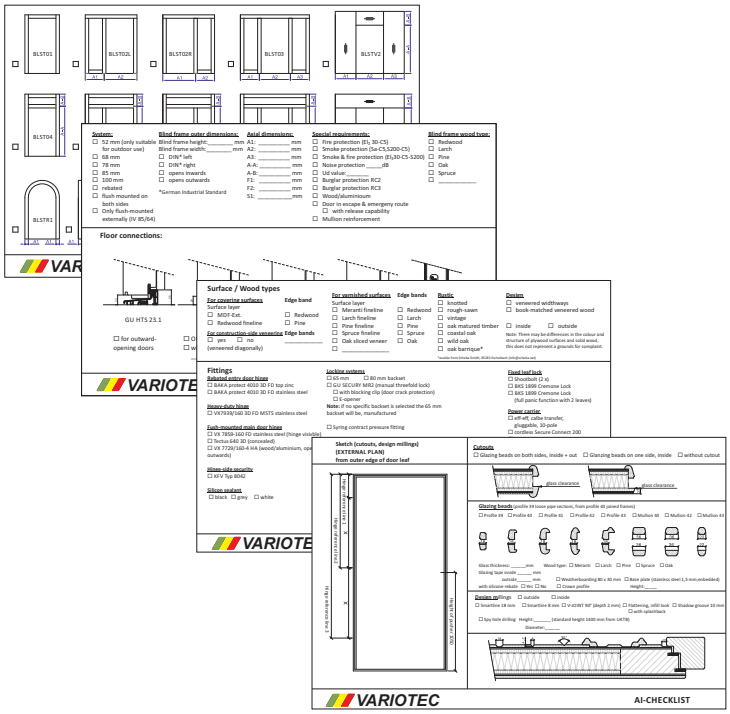
Blind frame with CNC finishing, cutout, design millings in door leaf as per customer selection.

Different fitting packages are available for selection, incl. different fittings and accessories:

- ✓ **Burglar protection RC2/RC3 (WK2/WK3)**
- ✓ **Noise protection up to 45 dB**
- ✓ **Fire and smoke protection EI_2 30-C5-S_{200}**

- ✓ **Emergency escape and exit doors as per DIN EN 179 & DIN EN 1125**
- ✓ **Available with bead frames**
- ✓ **Optional finger scan systems**
- ✓ **Code keypad**

Please send your completed checklist to verkauf@variotec.de or by fax: +49 9181 6946-50!



You can find the all-inclusive leaflet at:
www.variotec.de ⇨ Downloads ⇨Doors ⇨ Infos/Checklists etc.⇨ 02. All-inclusive construction set

CE

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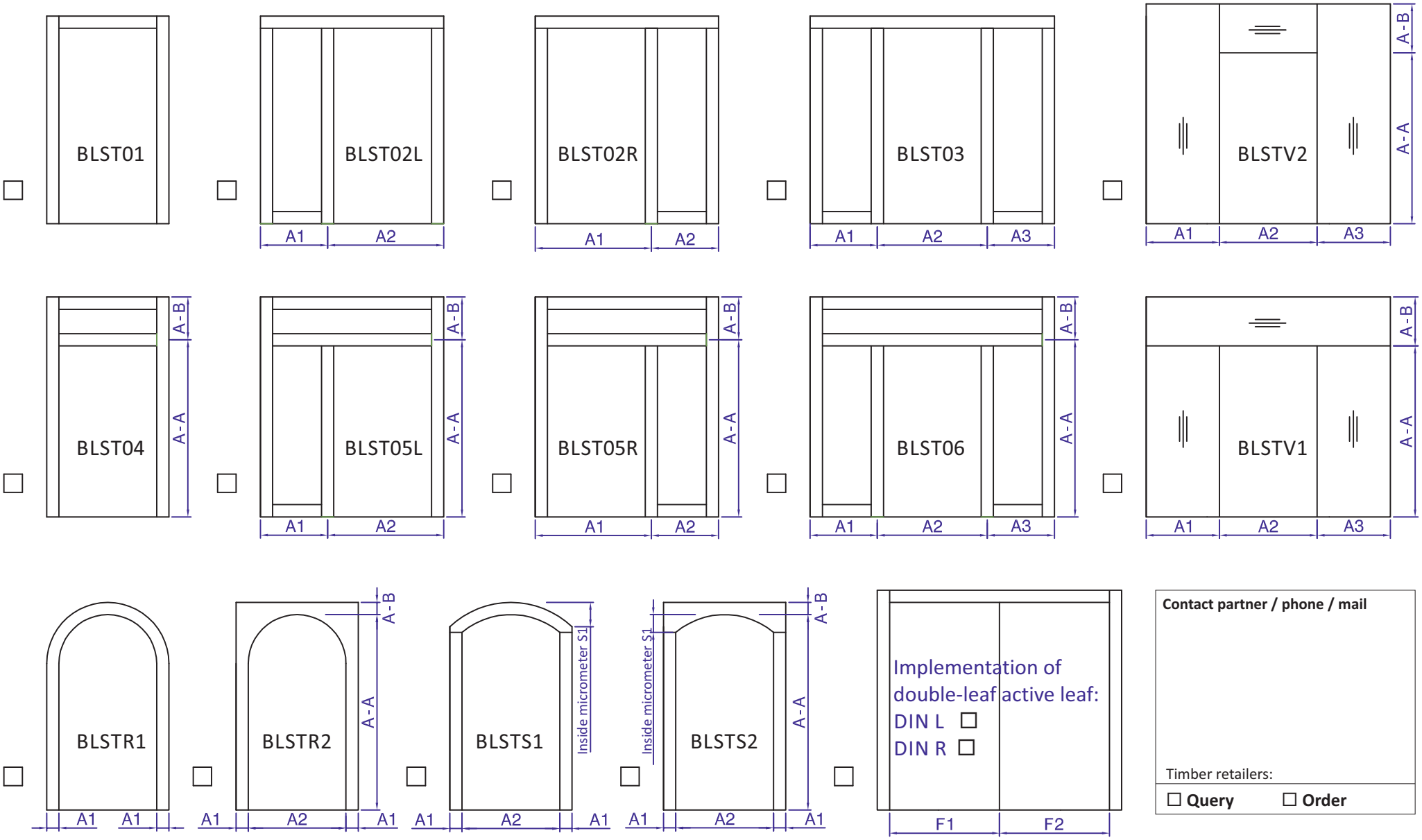
Dated: March 2020



Contact partner / phone / mail

Timber retailers:

☐ **Query** ☐ **Order**

VARIOTEC

AI-CHECKLIST

Dated: March 2020

System:

- ☐ 52 mm (only suitable for outdoor use)
- ☐ 68 mm
- ☐ 78 mm
- ☐ 85 mm
- ☐ 100 mm
- ☐ rebated
- ☐ flush mounted on both sides
- ☐ Only flush-mounted externally (IV 85/64)

Blind frame outer dimensions:

Blind frame height:_____ mm
Blind frame width:_____ mm

- ☐ DIN* left
- ☐ DIN* right
- ☐ opens inwards
- ☐ opens outwards

*German Industrial Standard

Axial dimensions:

A1: _____ mm
A2: _____ mm
A3: _____ mm
A-A: _____ mm
A-B: _____ mm
F1: _____ mm
F2: _____ mm
S1: _____mm

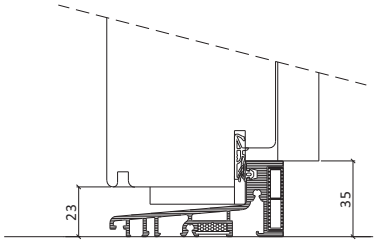
Special requirements:

- ☐ Fire protection (El_2 30-C5)
- ☐ Smoke protection (Sa-C5,S200-C5)
- ☐ Smoke & fire protection ($El_2$30-C5-S200)
- ☐ Noise protection _____dB
- ☐ Ud value:_____
- ☐ Burglar protection RC2
- ☐ Burglar protection RC3
- ☐ Wood/aluminioum
- ☐ Door in escape & emergeny route
  - ☐ with release capability
- ☐ Mullion reinforcement

Blind frame wood type:

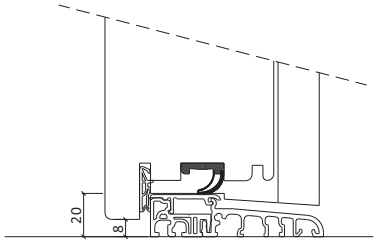
- ☐ Redwood
- ☐ Larch
- ☐ Pine
- ☐ Oak
- ☐ Spruce
- ☐ _____

Floor connections:



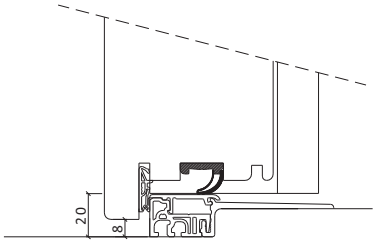
GU HTS 23.1

☐ for outward-opening doors



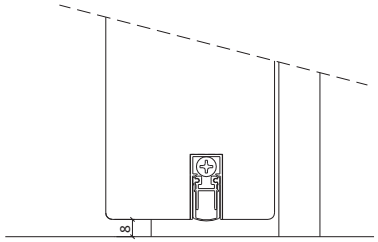
BKV 70/80T

☐ OKFF throughout
☐ with floor recess
_____ mm



BKV 85 RS

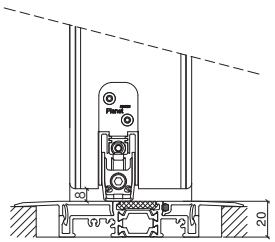
☐ BKV restoration threshold



SchallEx L-15/30 WS
Stadi L-20/20 WS

☐ Drop-down sealing[1]

[1] Warning: does not meet the requirements for driving rain impermeability for external doors!



Planet X3 & WESER ZERO

☐ Drop-down sealing[2]

[2] Only in combination with GU SECURY Automatic!

VARIOTEC

AI-CHECKLIST

Dated: March 2020

Surface / Wood types

For covering surfaces
Surface layer
☐ MDF-Ext.
☐ Redwood fineline

Edge band
☐ Redwood
☐ Pine

For construction-side veneering
☐ yes ☐ no
(veneered diagonally)

Edge bands
_____

For varnished surfaces
Surface layer
☐ Meranti fineline
☐ Larch fineline
☐ Pine fineline
☐ Spruce fineline
☐ Oak sliced veneer
☐ _____

Edge bands
☐ Redwood
☐ Larch
☐ Pine
☐ Spruce
☐ Oak

Rustic
☐ knotted
☐ rough-sawn
☐ vintage
☐ oak matured timber
☐ coastal oak
☐ wild oak
☐ oak barrique*

Design
☐ veneered widthways
☐ book-matched veneered wood

☐ inside ☐ outside

Note: There may be differences in the colour and structure of plywood surfaces and solid wood, this does not represent a grounds for complaint.

*avaible from Scheba GmbH, 85283 Eschelbach (info@scheba.net)

Fittings

Rebated entry door hinge
☐ BAKA protect 4010 3D FD top zinc
☐ BAKA protect 4010 3D FD stainless steel

Heavy-duty hinge
☐ VX7939/160 3D FD MSTS stainless steel

Fush-mounted main door hinge
☐ VX 7859-160 FD stainless steel (hinge visivble)
☐ Tectus 640 3D (concealed)
☐ VX 7729/160-4 HA (wood/aluminium, opens outwards)

Hinge-side security
☐ KFV Typ 8042

Silicon sealant
☐ black ☐ grey ☐ white

Locking systems
☐ 65 mm ☐ 80 mm backset
☐ GU SECURY MR2 (manual threefold lock)
☐ with blocking clip (door crack protection)
☐ E-opener
Note: if no specific backset is selected the 65 mm backset will be, manufactured

☐ Syring contract pressure fitting

☐ GU SECURY Automatic (automatic/mechanical locking)
☐ A-opener (motorised unlocking)
☐ Door release with daytime release system + electric door opener roller latch no. 5 with triangular latches

☐ Locking systems for door in escape and emergency routes as per German Industrial Standards DIN EN 179 and 1125
☐ Panic function E
☐ Panic function B

Latchkey hole drilling: ☐ only inside ☐ throughout

Upper door closer: ☐ provided with slide rail ☐ integrated

Fixed leaf lock
☐ Shootbolt (2 x)
☐ BKS 1899 Cremone Lock
☐ BKS 1899 Cremone Lock
(full panic function with 2 leaves)

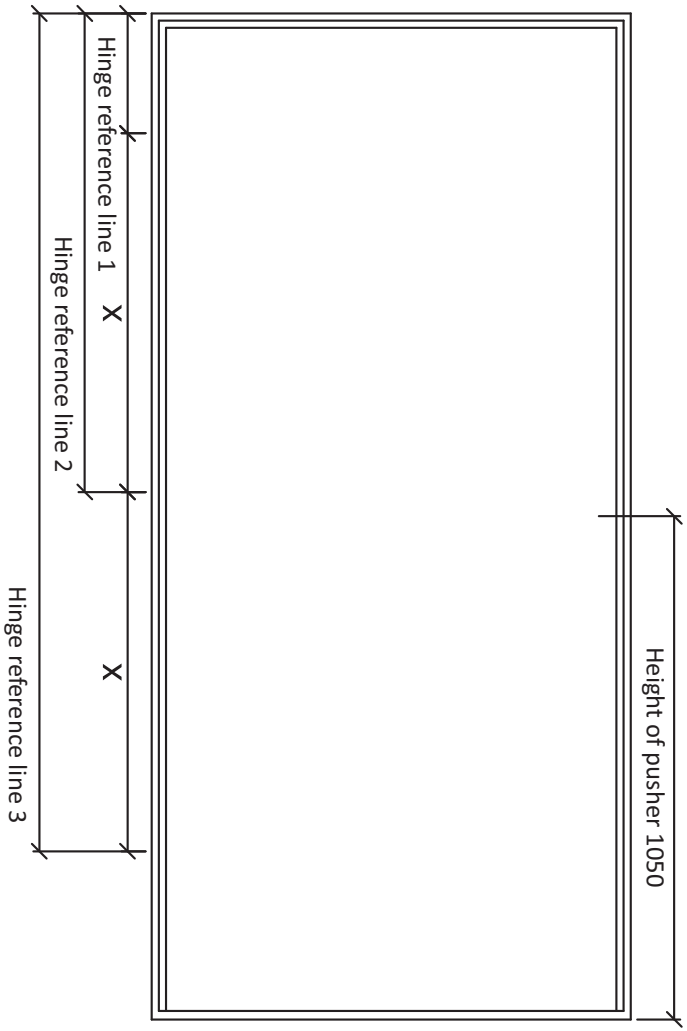
Power carrier
☐ eff-eff, calbe transfer, gluggable, 10-pole
☐ cordless Secure Connect 200
☐ cordless Secure Connect 50

☐ **ekey set fingerprint**
ekey Set scanner + cable transfer
incl. integr. control unit (1 relay)
for installation in the door leaf

☐ **ekey set**
combi „GU+ekey“

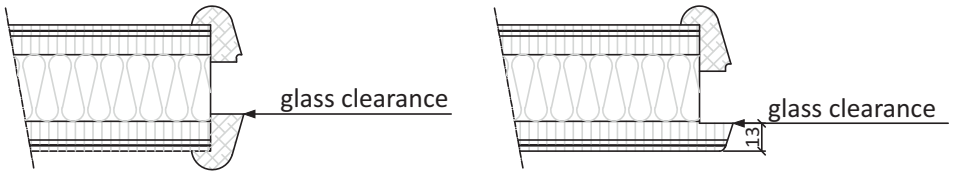
☐ **GU SECURY Automatic A-opener**
cordless secure connect 200
fingerprint or code keyboard (ekey)

Sketch (cutouts, design millings)
(EXTERNAL PLAN)
from outer edge of door leaf



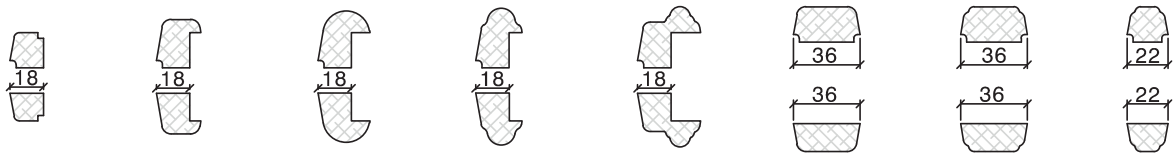
Cutouts

☐ Glazing beads on both sides, inside + out ☐ Glanzing beads on one side, inside ☐ without cutout



Glazing beads (profile 39 loose pipe sections, from profile 40 joined frames)

☐ Profile 39 ☐ Profile 40 ☐ Profile 41 ☐ Profile 42 ☐ Profile 43 ☐ Mullion 40 ☐ Mullion 42 ☐ Mullion 43



Glass thickness: _____mm Wood type: ☐ Meranti ☐ Larch ☐ Pine ☐ Spruce ☐ Oak

Glazing tape inside _____ mm

outside_____ mm ☐ Weatherboarding 80 x 30 mm ☐ Base plate (stainless steel 1,5 mm;enbedded)

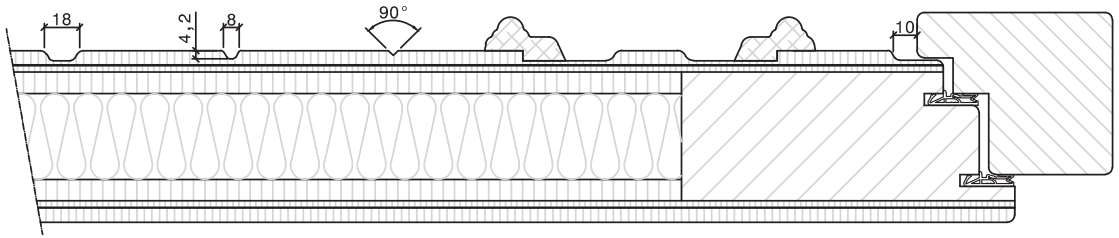
with silicone rebate ☐ Yes ☐ No ☐ Crown profile Height:_____

Design millings ☐ outside ☐ inside

☐ Smartline 18 mm ☐ Smartline 8 mm ☐ V-JOINT 90° (depth 2 mm) ☐ Flattening, infill look ☐ Shadow groove 10 mm ☐ with splashback

☐ Spy hole drilling Height:_____ (standard height 1400 mm from UKTB)

Diameter:_____



VARIOTEC

AI-CHECKLIST

All-inclusive construction set

VARIOTEC

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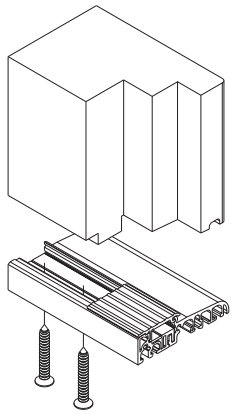
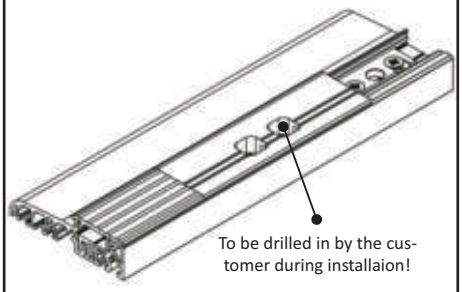
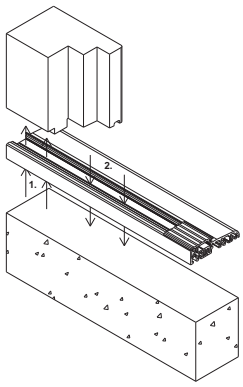


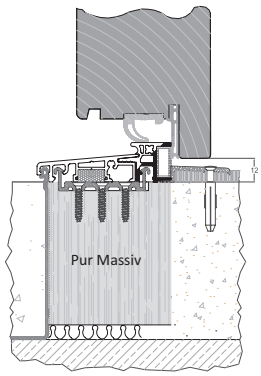
Thermally-separated ground sill.



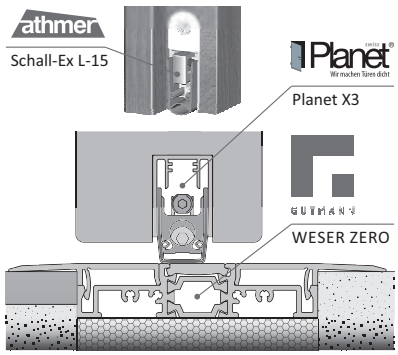
Thermally-separated ground sill (BKV) with cover bridge for 2-leaf elements.



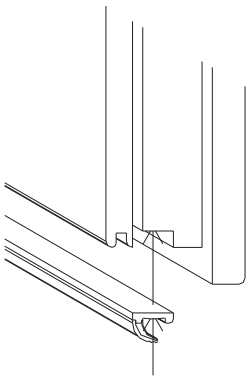
Floor recess installaion (BKV), then clip cover back in.



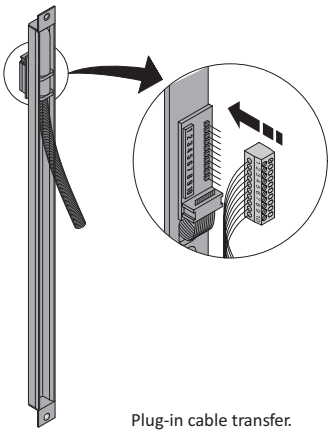
Floor recess installaion (GU), then clip cover back in.



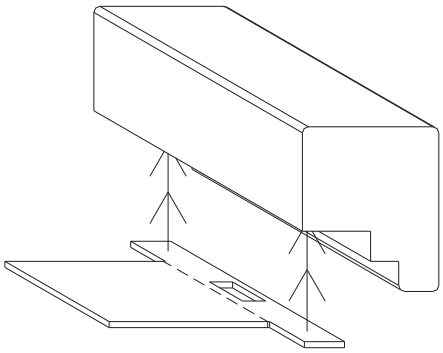
Installaion of the drop-down seals with the ixing accessories provided.



Installaion of the horizontal seals (HZD) in the pre-milled rebate below.

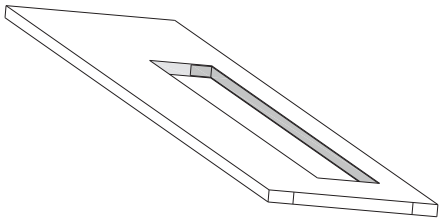


Plug-in cable transfer.



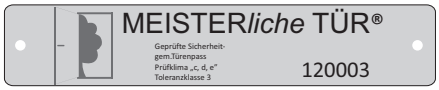
For 2-leaf doors, the customer must shorten and install the upper locking plate him-/herself. (Customer must drill blind frame him-/herself)

The lock cases, seal grooves, and all drill holes (for example for handlebars) must be varnished!

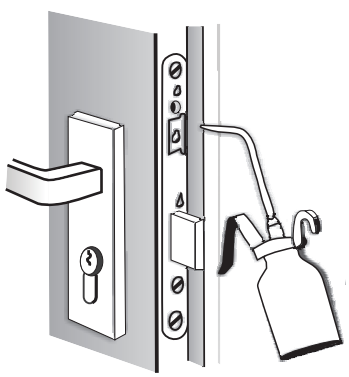


Mask cutouts with an aluminium vapour barrier.

-



identification plate MEISTER*liche* DOOR the rebate during installaion!



Keep the locking technology in good condiion Oil annually!

Date: February 2020

All-inclusive construction set

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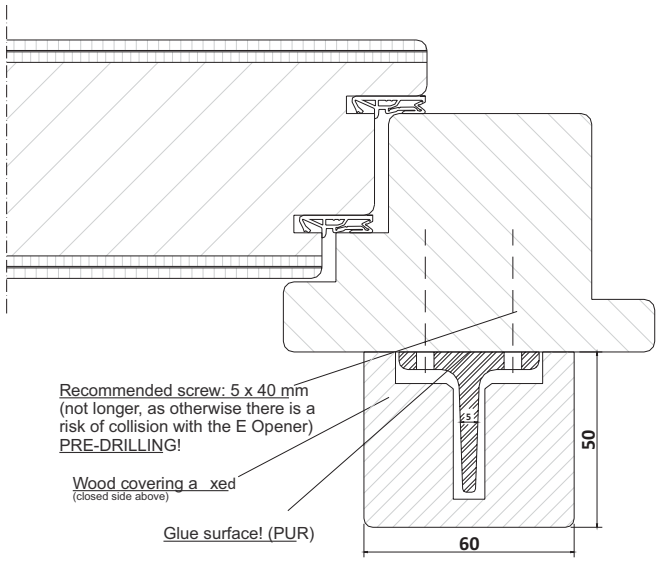
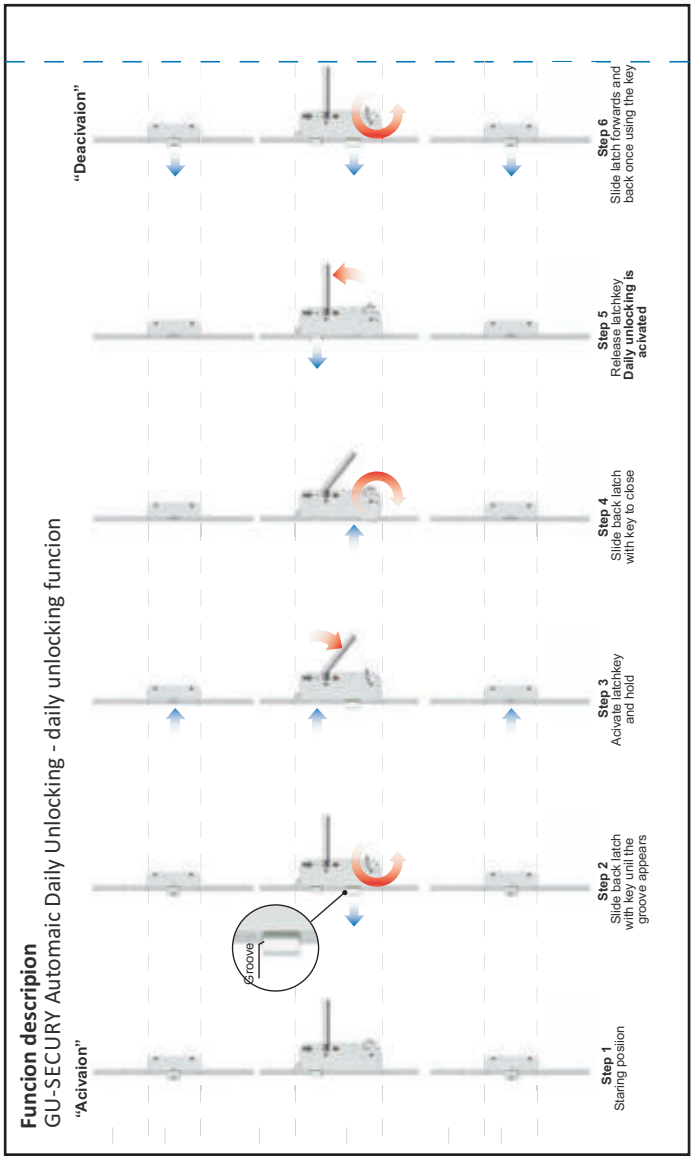
Processing of the sealing and compatibility:
1. The sealant may not be overstretched during installaion under any circumstances!
2. Coaing compaibility: the sealant is made from silicone. Compaible with all environmentally-friendly coaings. You must take note of the drying imes sipulated by the coaing manufacturers!

Assembly instrucions:
1. Begin the assembly in the middle of the upper horizontal planes, press the sealant into the groove in a clockwise direcion. The sealant must not be pressed into the groove in the area of approx. 20 cm before the corner area!
2. a) Place the bevel pliers with the stop on the fold ing corner.
b) Cut the bevel with the bevel pliers at 90°.
The cut can only be made up to the kink point (start of the sealing lip). The upper sealing zone (sealing lip) must not be damaged.
c) Set the sealant sharp-edged around the corner and do the same with all corners.
3. The end cut is again made straight. In doing so, please give a 5 mm length allowance.



Middle post reinforcement



Date: February 2020

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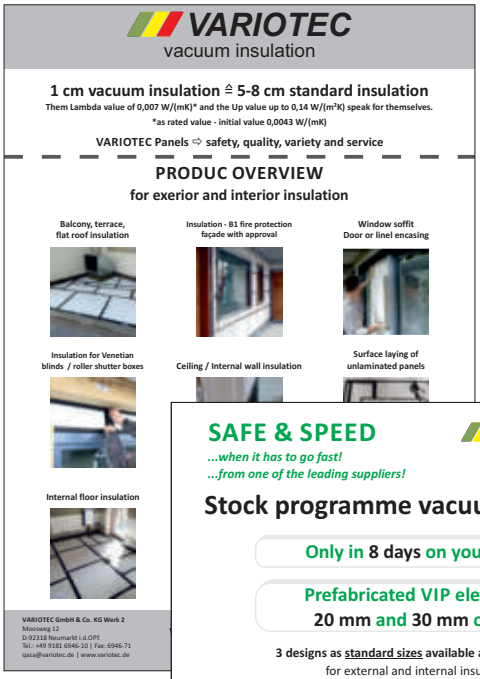
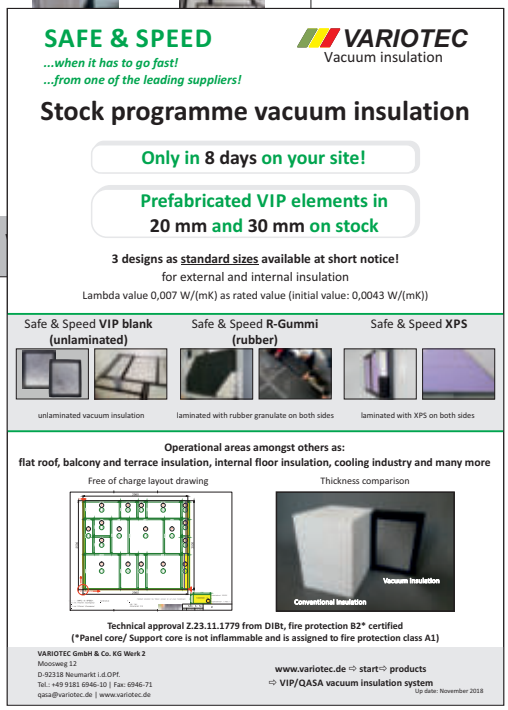
1 cm vacuum insulation ≙ 5-8 cm standard insulation

High thermal insulation VIP Lambda 0,007 W/(mK)

A brief overview of the main application areas:

- ✓ Internal floor insulation (also for underfloor heating)
- ✓ Floor panels for impact sound indoors / outdoors
- ✓ Ceiling and inernal wall insulation
- ✓ Balkony, terrace and flat roof insulation
- ✓ Dormer and bay insulation
- ✓ Insulation fo roller shutter boxes and Venetian blinds
- ✓ Window and door soffits
- ✓ B1 fire protection façade with approval
- ✓ Ventilated façade / Façade insulation
- ✓ Post and beam façade
- ✓ Fillings of all type
- ✓ **Unlaminated VIP panels (versatile)**





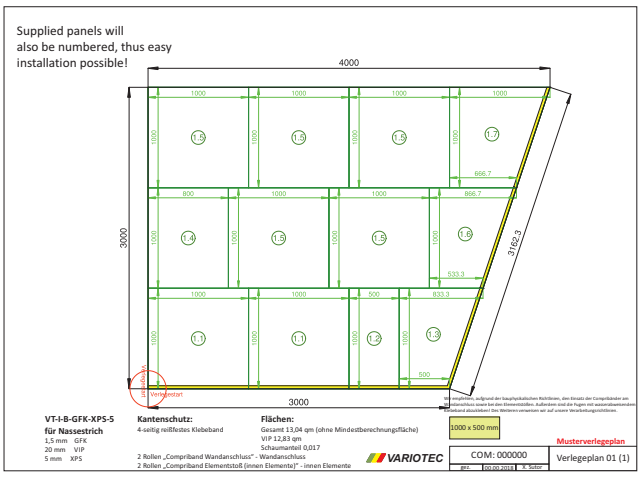
Already **developed assemblies** for the above-mentioned. You will find areas of application in our **product overview VIP/QASA.**

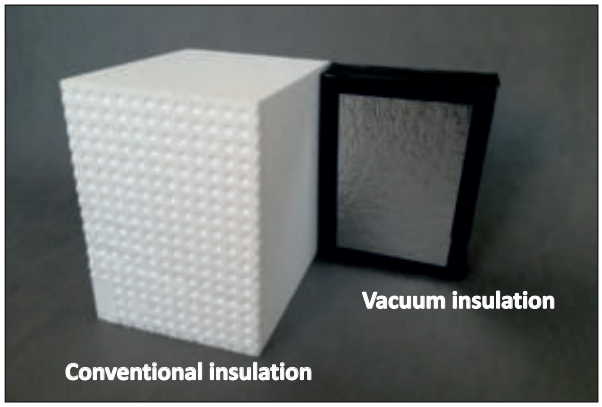
www.variotec.de ⇨ Downloads ⇨ VIP/QASA vacuum insulation
⇨ info brochures/request and order form ⇨ product overview VIP/QASA

Detailed proposals and tender texts
can be found in our VIP advisor (details) under:

www.variotec.de ⇨ Downloads ⇨
VIP/QASA vacuum insulation VIP ⇨ advisor (details)

A 5 cm thin VIP insulation achieves an U value of 0,14 W/(m²K)!





Low construction heights ⇔ high insulation effect

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Notes

If the reserved goods are connected, combined or mixed with other goods acc. to Sections 947, 948 of German Civil Code, then we become co-owners according to legal regulations. If our client gains ownership for him alone through connecting or mixing, then he transfers co-ownership to us already at the moment, acc. to correlation of value of the reserved goods to the value of the other goods at the time of connection, mixing or combining. In this case our client shall store the goods free of charge for which we have title of ownership or co-ownership and which are also considered as ownership-reserved goods with reserved title acc. to above mentioned conditions.
If reserved goods are resold (separately or together with other goods), the client already now assigns to us - prior to anybody other - receivables resulted from the resale to the amount of the value of title-reserved goods incl. all marginal rights. We accept the assignment. The value of the reserved goods is our client's invoice amount. However, the latter will not be estimated, if any rights of the third party stand against it. If the client is a co-owner of the resold reserved goods, the assignment of receivables applies to the amount of our share in the co-ownership.
If reserved goods are integrated as an essential component into a real property (premises) by our client, then the client already now assigns to us - prior to anybody other - assignable reimbursement rights against the third party or another involved person to the amount of the value of reserved goods with all marginal rights incl. rights to give a security mortgage; we accept the assignment. If reserved goods are integrated as an essential component into a real property (premises) by our client, then the client already now assigns to us - prior to anybody other - receivables resulting from sale of premises or other premises rights to the amount of the value of title-reserved goods with all marginal rights; we accept the assignment.

Our client is entitled and authorised to resale, use or integrate the reserved goods only in a usual, legal and proper business order and only under the condition that the receivables described in Sec. 7 par. 4–6 will in fact pass to us. The client is not entitled to other disposal on reserved goods, e.g. pawnage or chattel mortgage Reserving the right to revoke, we entitle the buyer to collect the receivables assigned acc. to conditions mentioned above. We will not utilise our own collection right, as long our client fulfils his payment obligations, also against the third parties. Upon our request, the client shall give names of debtors of assigned receivable and to notify the assignment to them; then we are authorised to notify the assignment to the debtor ourselves. In case of juridical executions from the third parties involving reserved goods of assigned rights, the client shall immediately inform us about the case and provide us documents which are necessary for making an objection. The right to resale, use or mounting of reserved goods or authorisation to collect the assigned receivables expires in case of discontinued payment and/or petition to open insolvency proceedings; in case of a cheque or draft protest, the collection right expire as well. However that does not apply to the rights of an official receiver.

If the value of provided securities exceeds the debts more than 20 %, we are obliged to re-transfer or release - depending of our choice. By repayment of all our receivables from the business relation, the ownership rights on reserved goods and assigned receivables passes to our client. 8. In terms of Sec. 434 of German Civil Code, we are liable for defects and faults only as follows: Our client shall immediately examine the received goods on their quantity and consistence. If he finds obvious faults, he shall give us a notice of those faults within 14 days, in written form. In case of mutual business between merchants, Sections 377 and 378 of German Commercial Code remain unaffected.

If the buyer finds any faults in the goods, he is not allowed to dispose on them, i.e. he is not allowed to divide, resale or treat them until an agreement about the treatment of complaints is achieved or proceedings for the preservation of evidence are made by a judge authorised by the Chamber of Industry and Commerce in Regensburg. If complaints are legitimate, we have the right to determine the kind of after-performance (substitution delivery, correction or reparation), considering type of fault and legitimate interest of the client If a guarantee case appears at users, our client shall inform us about that case as soon as possible. Material fault claims become time-barried after 12 months. However, that is not applicable, if the law prescribes longer periods in term of Section 438 Par. 1 No. 2, Section 479 Par 1, Section 634a Par. 1 No. 2 of German Civil Code.
9. Damages or losses compensation claims of our clients (hereinafter called damage claims), regardless legal ground,
especially ones based on tort or due to violation of obligations from debtor relations, are excepted. However, that is not applicable in case of giving guarantee or assumption of procurement risk. Furthermore, that is not applicable in case of mandatory liability, e.g. according to the Product Liability Law or in case of rough negligence or intent, injury of life, body or health, or violation of important contract obligations. Damage claims due to violation of important contract obligations are however limited to predictable damages/losses which are typical for the contract, unless there was rough guilt or intention or it shall be taken liability for injury of life, body or health. It does.

VARIOTEC Sandwichelemente GmbH & Co. KG
Weißmarterstrasse 3, D-92318 Neumarkt
Updated 02 / 2004

Terms and Conditions of Sale of the VARIOTEC GmbH & Co. KG

(Last update: 06/2012)

1. The present Terms and Conditions of Sale (hereinafter called TCS) apply for the whole business relation, also if it is not mentioned or referred to in contracts conditions. The TCS exclude business terms and conditions of our contract partners, as far the latter contradict to the ours. Conditions deviating from the TCS, especially purchase conditions of the buyer are herewith considered as explicitly contradicting. Within the framework of a regular business relation between merchants, the TCS remain part of the contract, also in that case if we do not refer to the applicability of the TCS explicitly.

2. Our offers, catalogue data and information in sales documents are always exemptible and not binding. Orders become effective or accepted (or given) only after our confirmation in written. That especially applies for additional agreements or promises of authorised persons or representatives. Documents belonging to our offers remain our property in any case; it is not permitted to make them accessible to the third party or to use them for not-intended purpose; those documents shall be returned back to us upon our request. Technical and other data given in documents indicate only an object of the contract and do not assure any quality or feature. Samples are basically not binding and mean an approximate value - it is also because of the fact that raw materials may turn out to be not unequal. We always
remain owners of the corresponding patents.

3. Our contract partners are hereby informed that personsrelated data acquired within the framework of the business relation are processed by us in accordance with regulations of Data Protection Law of Germany.

4. Our prices for our clients always remain not-binding. Those prices are to be understood as ex works from our plant or dispatch warehouse, plus packaging and freight costs and VAT. If not agreed otherwise, the valid price is the price which is valid on the day of delivery and the prices in the order confirmation are not binding in this respect.

5. Our invoices/receivables are payable within 2 weeks after invoice date. Cash discounts are not allowed. If our invoice is not paid within 14 days after invoice date, we have the right to claim for default interests amounting to 8% more than basic rate from the 15th day, or higher, if the losses caused by payment delay may increase. Draft and discount charges are basically shall be paid by our contract partner; we accept drafts basically only after explicit agreement within our terms of payment. Also if our client pays against special receivables, we have the right to set off the payment against his debt of our choice. In case doubt on the client's solvency, especially in case of violation of a credit term, we have the right to assert a payment of all open debts and to supply goods in the future only after pre-payment and/or provision of security for debts. Offsetting is allowed only against legally deduced debts, recognised by us. In case of a defect, fault or other reason for complaint, no refusal or retention of payment is permitted, if our client knew the fault, defect or other reason at the time of signing the contract. That is applied also if he did not know that fault because of rough negligence, unless we fraudulently concealed that fault or other complaint reason or provided a guarantee of consistence. In other cases of faults or other reasons of complaints, payment can be kept back only to an appropriate extent. In case of dispute concerning the amount, the decision shall be made by a judge named by the Chamber of Industry and Commerce in Regensburg. The judge shall also decide about allocation of costs of his involvement, according to his reasonably exercised discretion. An assignment of a claim against us to a third party is not permitted.

6. The risk connected with our supply is taken over by the client, as soon as the supplied goods are handed over in our plant or warehouse to the carrier's person regardless who chose that person. We have always the right to carry out partial deliveries. Our delivery dates/periods are always approximate and not binding. If our raw materials provision is impeded (regardless reasons for that), as well as in case of strike or other labour disturbances and due to force majeure, we have the right to postpone outstanding deliveries for the time of obstacles duration, or to terminate the contract fully or partially.

7. Until the purchase price of the supplied goods is not paid completely, the goods remain our property. For goods purchased by our clients within the framework of continuous business relation, the goods remain our property until all our receivables against our client resulting from the business relation incl. receivables resulting in the future - also from simultaneously or later signed contracts - are paid. That is also applicable if some or all our receivables are written down in a current invoice and the balance is shown and accepted. If in connection with payment of purchase price, our client constitutes a draft obligation, then our retention of ownership will not expire before the client redeems the draft as drawee. In case of the client's payment delay, we have the right to take the goods back after a legal notice and our client is obliged to give them back. If the goods with the reserved title are processed to new movable things by our client, then that processing/finishing/treatment is done for us, without making us obliged for that, and the new movablethings becomes our property. In case of processing goods together with ones of other suppliers, we acquire coownership on the new things acc. to correlation of value of the reserved goods to the value of the new goods at the time of processing/treatment.

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VARIOTEC

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