DOORS & PANELS

Guidelines

O.H door blanks and panels

Introduction

Content:

Dear Customer,

Thank you for choosing O.H. Industri A/S as your supplier of door blanks.

These Guidelines have been prepared by us as assistance and guidance to you regarding the handling, application, surface treatment and use of our door blank products in connection to your manufacture and sale of external doors.

These Guidelines are based on our general experience regarding the manufacture of doors by the use of our door blank products. However, your use of our products shall always take into consideration the specific application in your doors. **Therefore, O.H. Industri A/S does not accept any liability that these Guidelines are complete or is directly applicable for your specific application**.

The mentioning in these Guidelines of specific materials or components from specific suppliers (such as paint, screws, glue etc.) are examples only. **You as purchaser of our products have the responsibility to diligently check whether the use of the mentioned materials/components for your doors is feasible, including whether such materials/components legally can be used in the countries where you intend to manufacture or sell your doors**.

We hope that you find these Guidelines helpful. If we can be of further assistance, please do not hesitate to contact us or visit our website: **www.oh-industri.com.** Downloads available on website includes; product data sheets, technical drawings and video guidelines

O.H. Industri A/S

Guidelines **Door blanks**

Storage and handling of door blanks

Inspect the pallets and doors for visible defects

- Upon receipt of delivery of door blanks, inspect the pallets and each door for any visible defects.
- Visible defects must at once be informed to O.H. Industry and be added to the consignment note.

Storage and handling

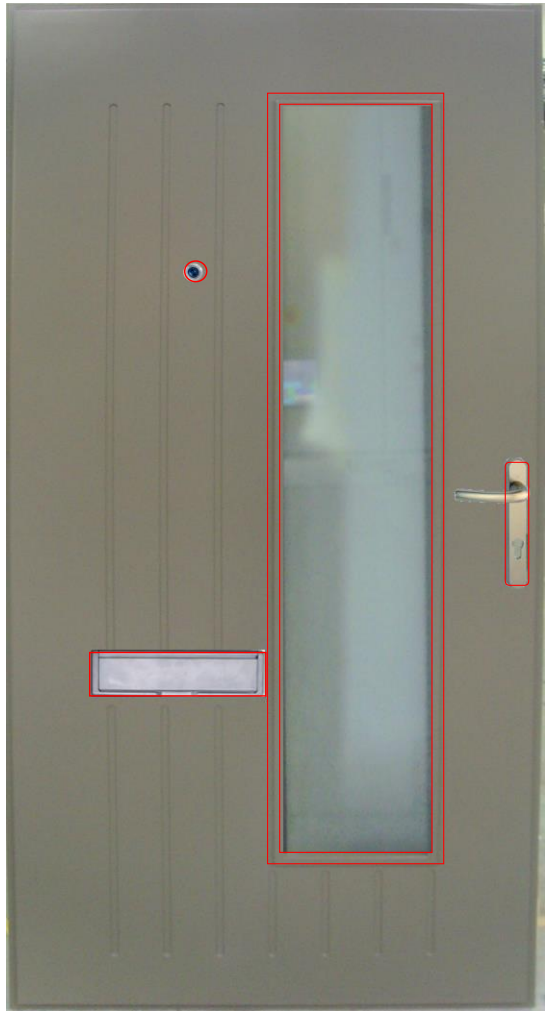
- Door blanks should be stored on a flat and level surface in a dry, well-ventilated building.
- Cover to keep clean and keep out sunlight, but allow air circulation.
- Handle with clean gloves and do not drag door blanks across one another or across other surfaces.
- Door blanks should not be subject to: abnormal heat, extreme dryness, humid conditions or sudden changes therein. They should be conditioned to average prevailing relative humidity of the locality before processing and hanging.

Sealing of cut outs

- It is very important to seal all cut outs in a door with a sealer to avoid water to get into the construction.
- Seal the inside and outside of the construction with e.g. a water based acryllic sealer.

Examples;

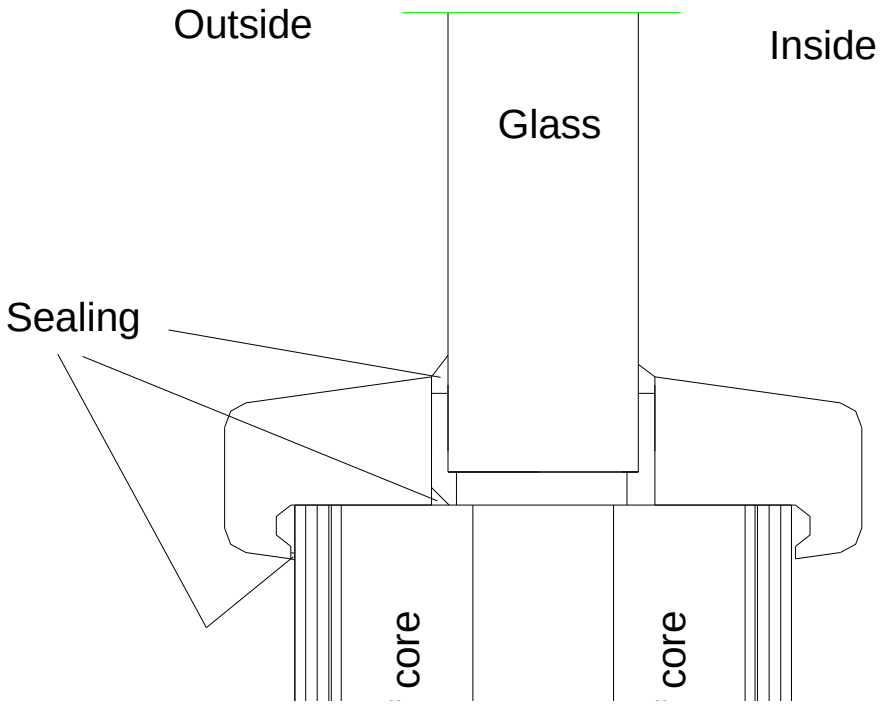
- Door knocker
- Letter slot
- Kicking plate
- Spy hole
- Nail/screw holes



Sealing of cut outs – Installation of glass or panel

- Use alu tape or similar in bottom of cut out to avoid moisture to get into the core.
- After the installation of the glass or panel the glazing cassettes shall be sealed on the external side as well as sealed inside the construction.
- In connection to the sealing it is important that the drain holes in the bottom glass cassettes are not sealed.

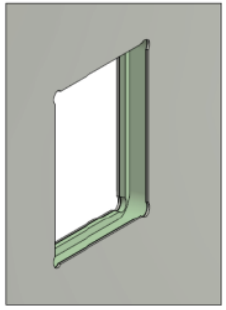
- **Type of sealer**;
- Outside; e.g. Dana Lim 509 Acrylic Clear; single component rubbery acryllic dispersion, fully transparent
- coatable
- treated against mould.
- Inside; e.g. Dana Lim 524 Sealant; elastic adhesive glue

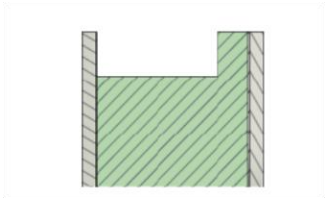


Installation of glass or panel - with timber block

Step 1

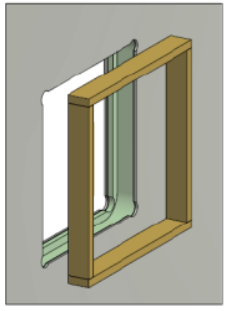
- Cut out in the door
- Remove insulation

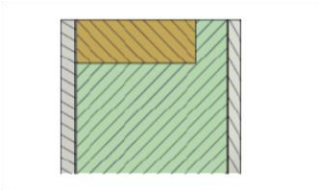




Step 2

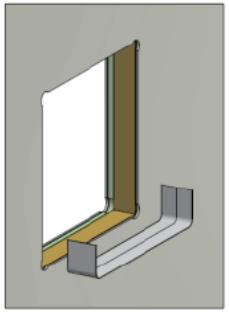
- Install timber frame around the cut out
- Use glue for fixing the timber frame

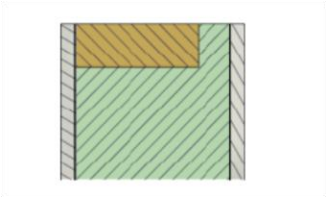




Step 3

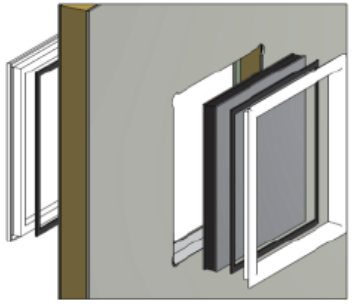
- Put aluminium tape or similar in the bottom of the cut out to avoid moisture to get into the core.

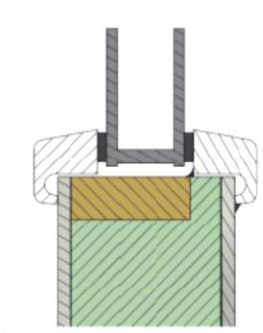




Step 4

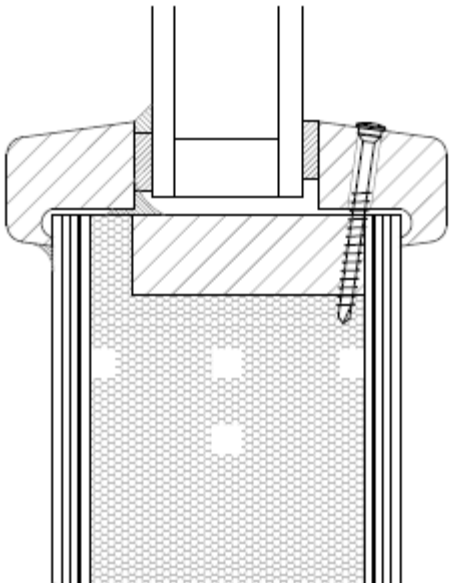
- The glazing cassettes shall be sealed on the external side as well as sealed inside the construction.



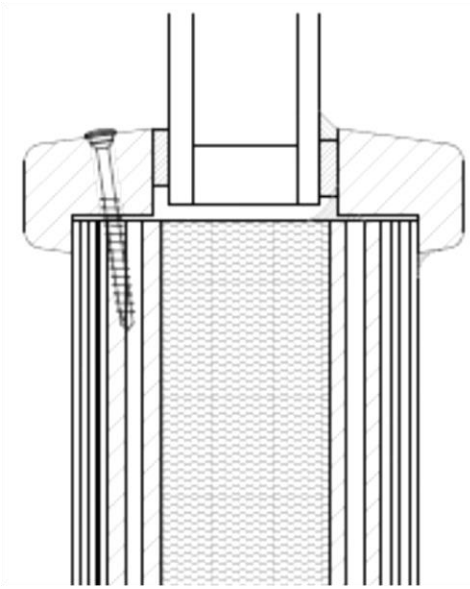


Installation of glass or panel

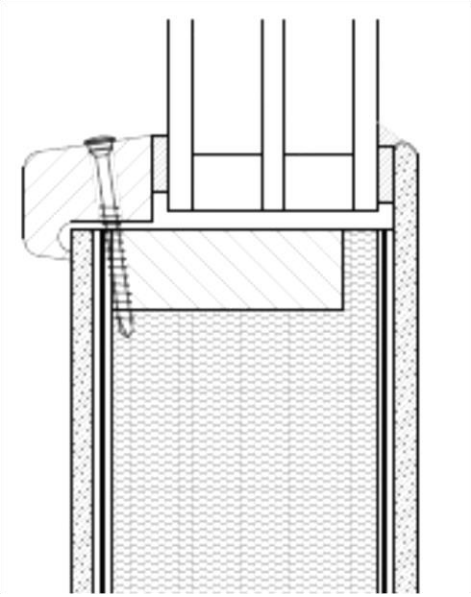
Option 1
Timber block



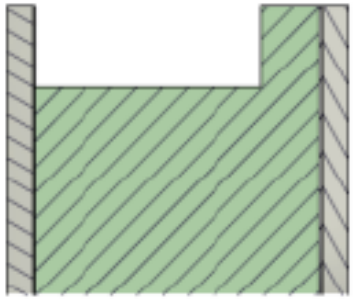
Option 2
Ply inlay 9 mm



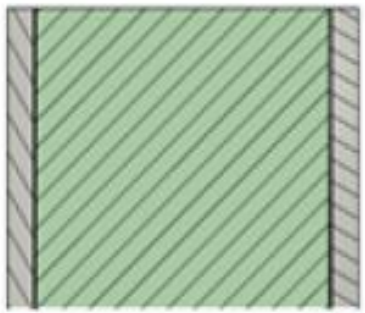
Option 3
(Only HPL door)



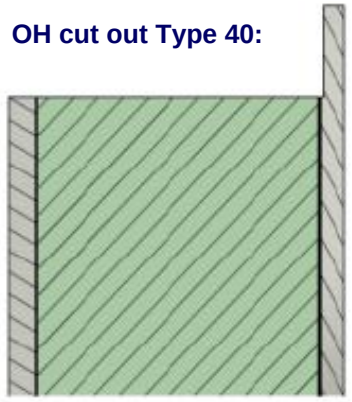
OH cut out Type 20:



OH cut out Type 30:



OH cut out Type 40:

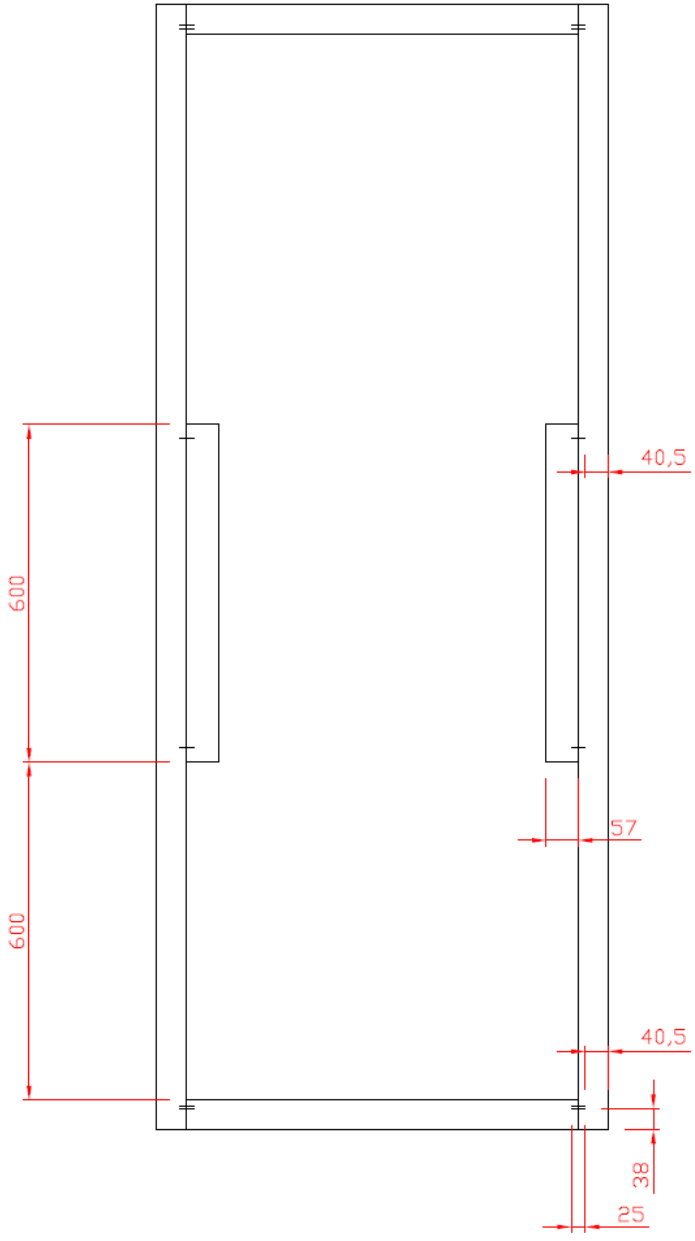


Door blank – Standard with timber lock block

- Timber lock block both sides
- Long timber lock block in full door length is an option

- Steel nails in the corner
- Be aware of steel nails when machining / profiling doors

- The steel nails in the corners is for fixing the stiles and rails in the production process before gluing the facing on the door frame.
- The stability in the door comes from the timber frame, the glue joints and the cross banded veneer facing with aluminium.

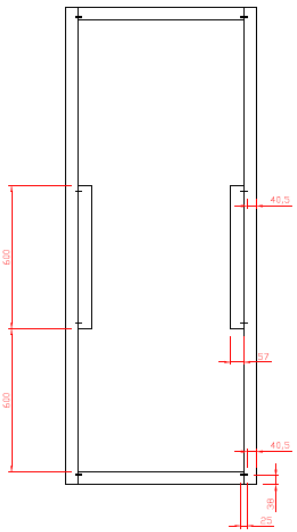


Stiles/Rails - Standard options stiles/rails and timber lock block

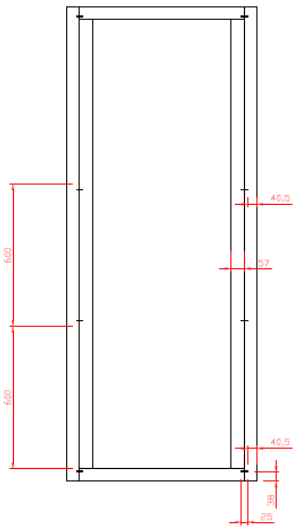
- Long timber lock block in full door length is an option
- 110 mm stiles/rails is an option on all door types.

- Stiles/Rails is finger joint A-quality pine timber.
- Timber lock block is knotted D-quality pine timber.

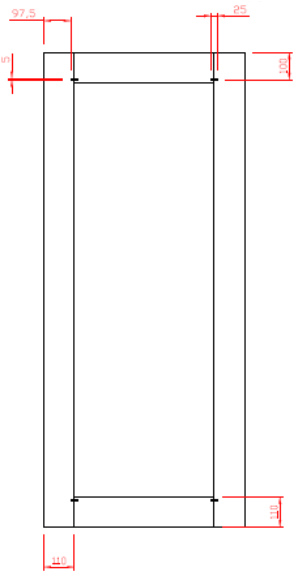
55 mm stiles/rails
Std lock block



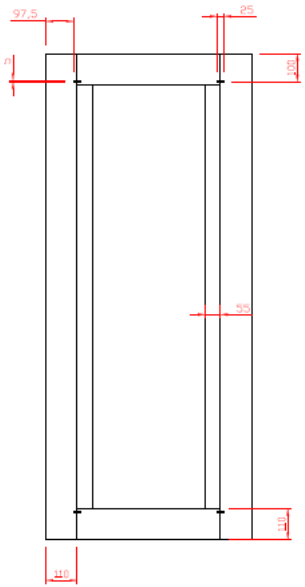
55 mm stiles/rails
Long lock block



110 mm stiles/rails
No lock block



110 mm stiles/rails
Long lock block



Doors with 110 mm stiles/rails can be trimmed 60 mm on all sides and top/bottom.

Stiles/Rails - Timber quality specification in finger joint glued timber

Specification Quality A:

- Nots, cracks, resin pockets and blue stain are not allowed

Specification Quality D:

- Nots, cracks, resin pockets are allowed
- Blue stain are not allowed.

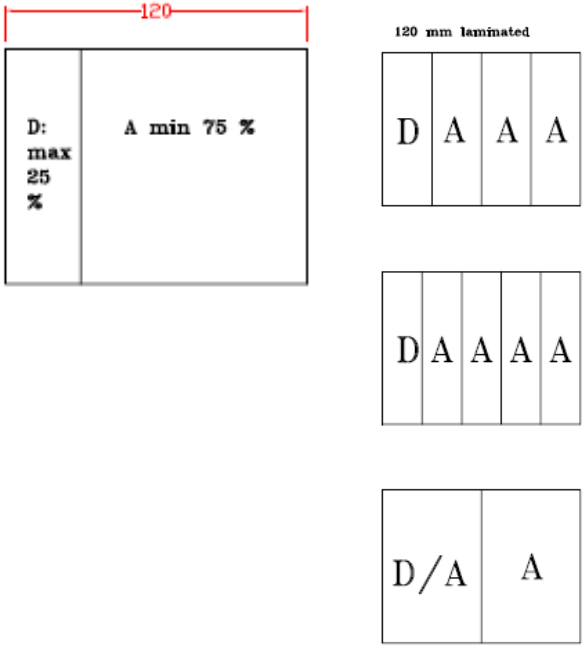
Machining timber stiles/rails:

- When machining the timber stiles/rails hidden quality errors can be visible and must be repaired with e.g. plastic wood or glue.

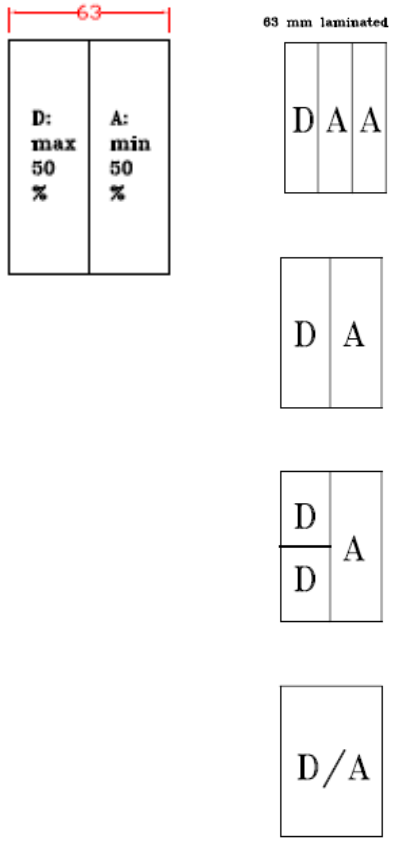
Hidden quality errors in pine finger joint glued timber to be repaired (not accepted as a claim) includes:

- wind cracks (max. length 100 mm)
- resin pockets (max. length 50 mm)
- black nots (max. Ø15 mm)
- fresh nots (max. Ø25 mm)
- pith (max. length 100 mm).

Door blanks
110 mm stiles/rails



Door blanks
55 mm stiles/rails

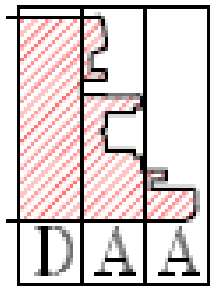


Stiles/Rails – Profiling/Rebating

- **Important**: When trimming the door blank the stiles/rails must be minimum 50 mm to have full stability in the door.
- When machining/profiling the door be aware of the depth of the profile/rebate.
- It is recommended to have minimum 25 mm timber in the bottom of the profile.

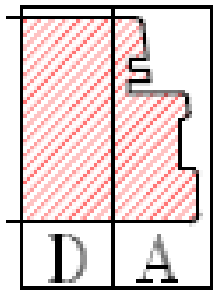
Profil type 1

Use a door blank with 110 mm stiles/rails



Profil type 2

Use a door blank with 55 mm stiles/rails

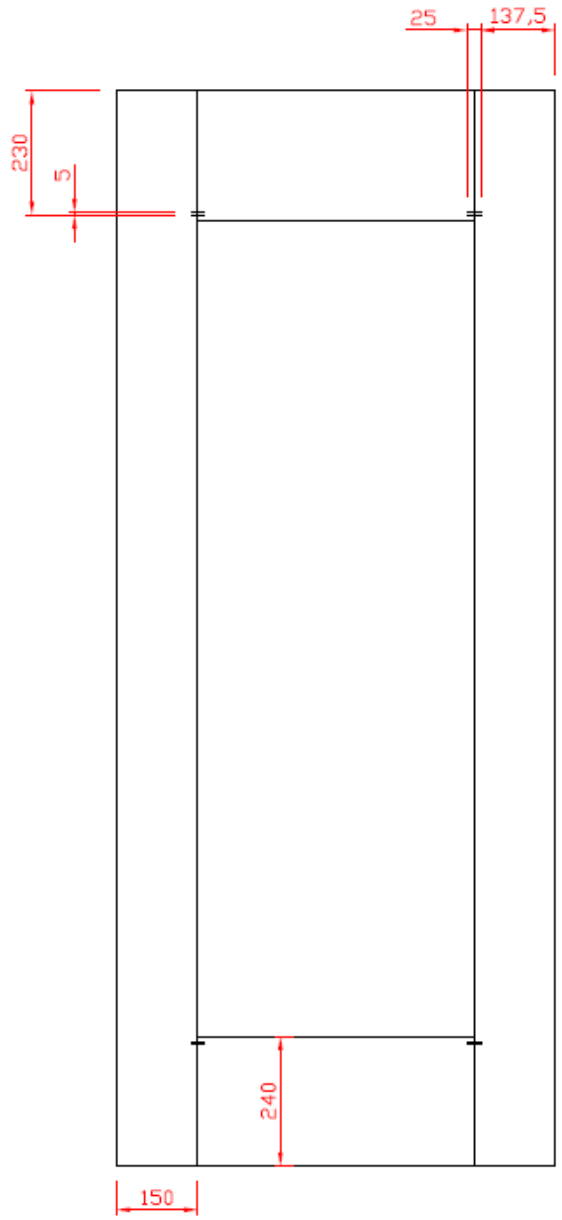


Door blank – Special with extra stiles/rails

- Available as 44 mm door and 58 mm
- Only available in standard door sizes.

- 150 mm stiles knotted pine
- 240 mm rails knotted pine
- Can be trimmed 100 mm each side and 200 mm in top/bottom

- Steel nails in the corner

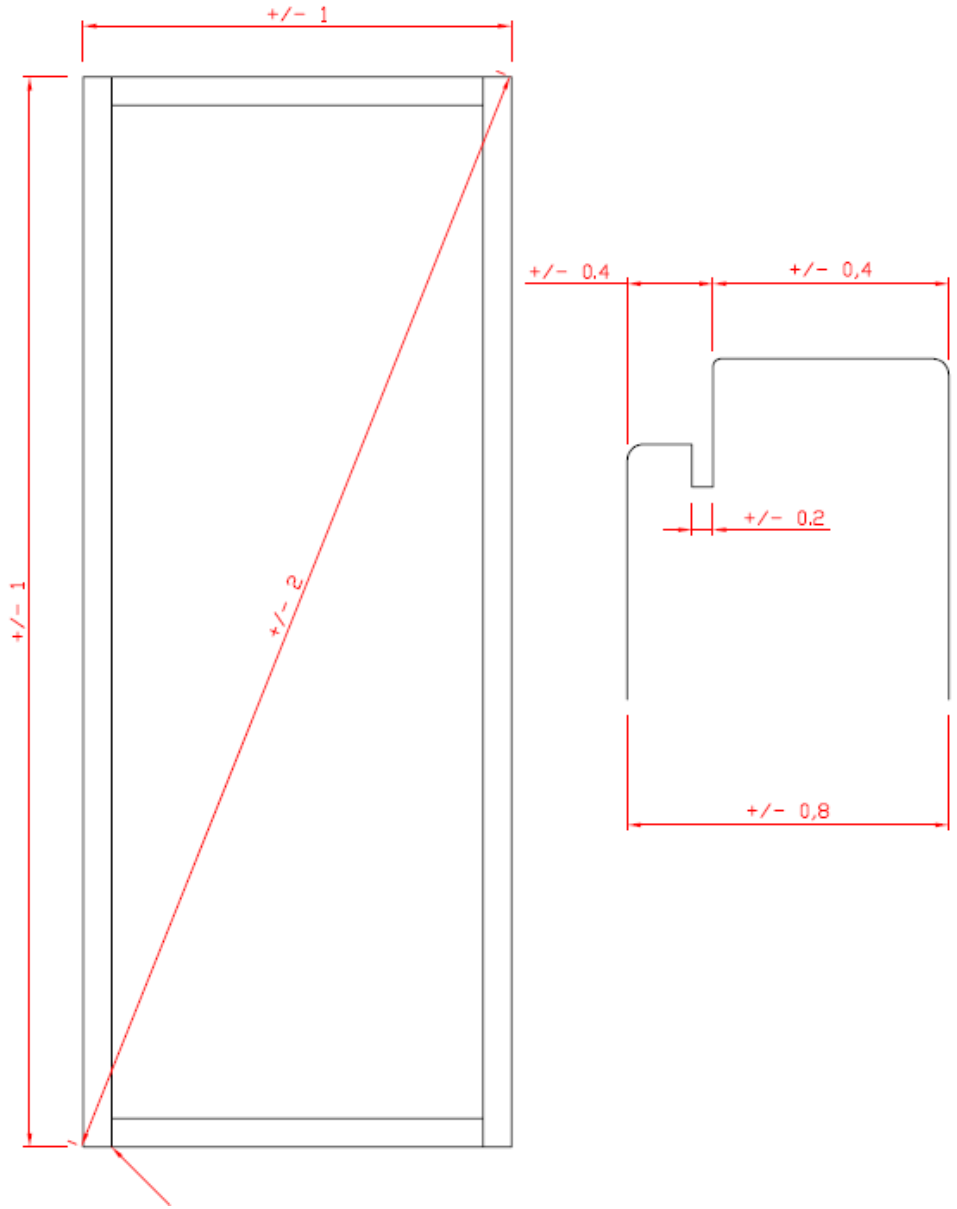


Door blank – Tolerances

Tolerances door blank;

- Thickness: +/- 0,8 mm
- Diagonal: +/- 2,0 mm
- Length/Width: +/- 1,0 mm

- The standard OH door blank with 55 mm stiles and rails is climate tested at the IFT Rosenheim laboratory in Germany and meets the highest climate class (class 3: bowing less than 2 mm on door length).



Type of veneer facing on door blank

- **When ordering door blanks be aware of quality and type of veneer facing:**
- For paint colours
- For stain colours
- For grooves

Veneer facing for paint colours:

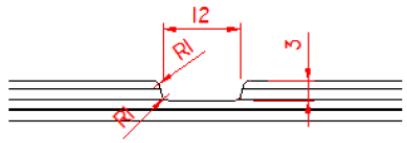
- Quarter cut sliced veneer and slip matched joined
- Typical properties of the wood with less regular structure and with colour nuances
- Larger nots in veneer surface and small dark knots is allowed
- Repair with wood filler in veneer surface is allowed

Veneer facing for stain/transluscent colours:

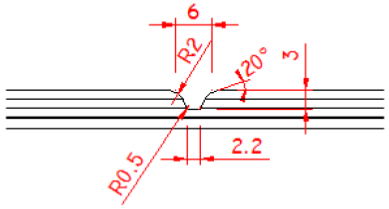
- Quarter cut sliced veneer and slip matched joined
- Pure wood veneer with regular structure and slight colour variations
- Small nots in veneer surface, but no dark knots is allowed
- Small errors in veneer surface is repaired

Veneer facing for grooves (paint or stain):

- With high quality veneer also in 3rd layer



Option to select high quality veneer in 3rd layer for better finish in the bottom of the groove



No need to select high quality veneer in 3rd layer due to the profile in the bottom of the groove

Type of veneer facing on door blank

- **OH are using ChenChen veneer facing on doors for paint and stain colours**
- ChenChen veneer is a durable material for exterior doors, which has been proven over many years in the Nordic countries.

ChenChen veneer:

- Origin: Africa (grows throughout the high forest zones of West, Central and East Africa)
- Latin name: Antiaris toxicaria (of the Family Moracease)
- Other names: Chen Chen, Blonde Sapele, White sapele, Ako, kyenkyen, quen, bark cloth tree, ako, mkuzu, mlulu, oro, ogiovu, kirundo, mumuka, upus, adoum, bonkonko, false iroko
- Eco labels: limited availability of FSC
- Density: 250-540 kg/m3 (lightweight hardwood)

Properties of ChenChen veneer:

- Chen Chen is also referred to as white sapele because it has a nice ribbony-grain pattern similar to the ribbon stripe in sapele. Chen Chen is a cleaner wood than Sapele, because it doesn't have the pin knots that sapele can have.
- Light-colored wood, ranging from a white yellow to yellow brown with no distinction between its sapwood and heartwood
- Can be stained and finished well. It is easy to go from dark to light. Visible wooden structure when painted. Can be stained with a veneer-like appearance of oak, mahogany, etc.
- Is a durable material for exterior doors, which has been proven over many years in the Nordic countries.

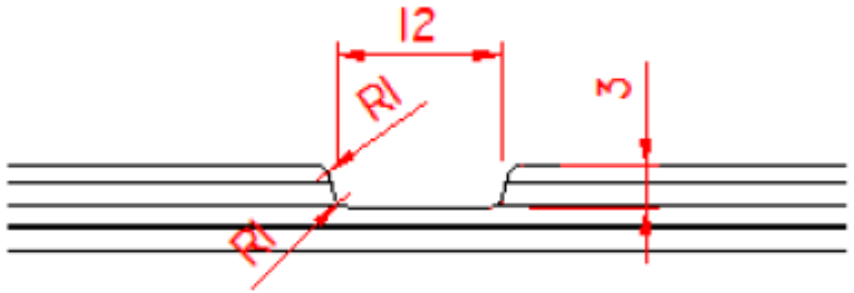
Quality on OH ChenChen door:

- Quarter cut sliced veneer and slip matched joined
- Typical properties of the wood with less regular structure and with colour nuances
- Larger nots in veneer surface and small dark knots is allowed
- Repair with wood filler in veneer surface is allowed

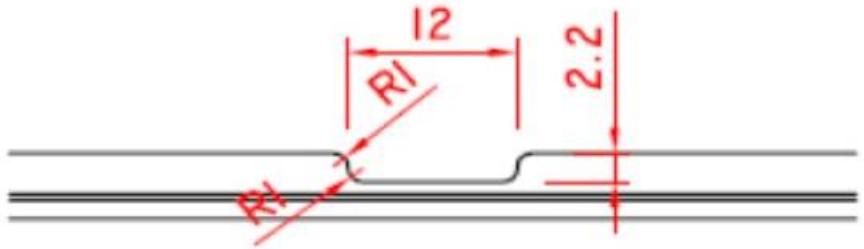
Machining – Maximum groove depth

- **Maximum groove depth**;
- Veneer door: 3,0 mm
- HDF door: 2,2 mm
- HPL door: 2,2 mm

4 layers of veneer



HDF and HPL



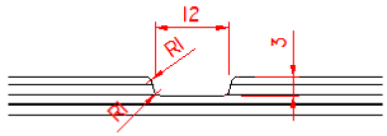
Machining – OH standard grooves doors

- **Maximum groove depth**;
- Veneer door: 3,0 mm
- HDF door: 2,2 mm
- HPL door: 2,2 mm

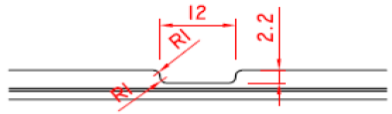
To achieve the best quality in the groove we recommend;

- Radius on the edges of the groove and in the bottom of the groove
- No vertical groove sides, but small slope on groove sides
- Optimise tool specification and tool speed (rpm) for the specific CNC machine type

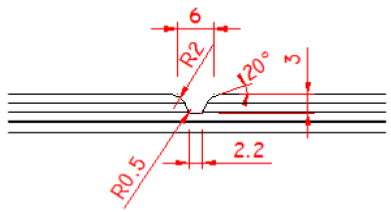
Type 20 (12 x 3 mm)
4 layers of veneer



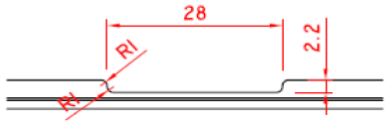
Type 20 (12 x 2,2 mm) - (12 x 1,5 mm)
HDF and HPL



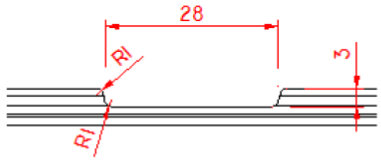
Type 40 (6 x 3,0 mm)
4 layers of veneer



Type 50 (28 x 2,2 mm) - (12 x 1,5 mm)
HDF (2,2 mm) and HPL (1,5 mm)



Type 50 (28 x 3 mm)
4 layers of veneer



How to repair veneer doors

Openings in veneer surface

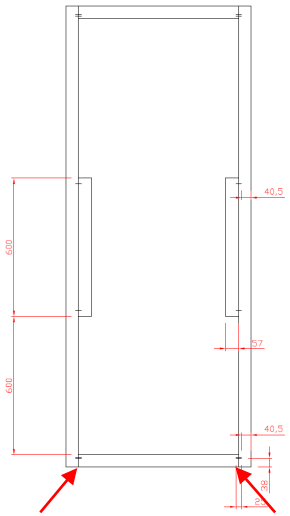
- If damage is < 1 mm; use e.g. water based leight weight filler
- (e.g. Dana Lim 628 Light weight filler)

- If damage is > 1 mm; use e.g. two component wood filler

Damages on stiles/rails

- Use e.g. two component woodfiller

- **Important**: Never close openings between stiles and rails in the bottom of the door. It's important to allow humidity to get out of the construction !



Surface treatment

Before finishing

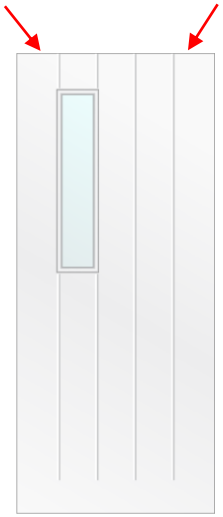
- Before finishing, remove handling marks or effects of exposure to moisture with a thorough final sanding over all surfaces of the door
- Always sand in the direction of the grain. Use sandpaper grain 150-180 (P150-P180).
- The door has been presanded in factory with grain 150-180 (P150-P180).
- For the best finish sand the surface with grain 180 between primer and topcoat when using waterbased paint system.
- **Important**: **Make sure the door has room temperature when applying the paint !**
- Painting a cold veneer door increase the risk of air bubbles in the paint surface, due to cold air from the veneer structure will go out when the door temperature increase going through the flash off zone and drying zone in the paint line.
- Also, a very high temperature and very low relative humidity in the drying zone can result in bubbles due to the drying proces does not allow humidity to get out before the paint film has hardened.

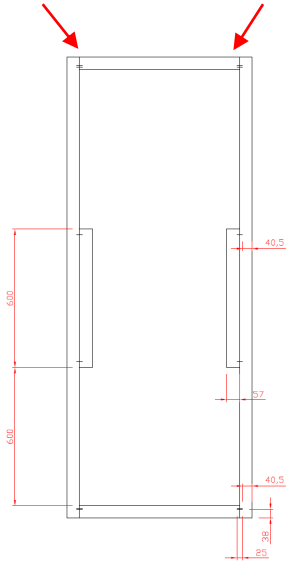
Paint system

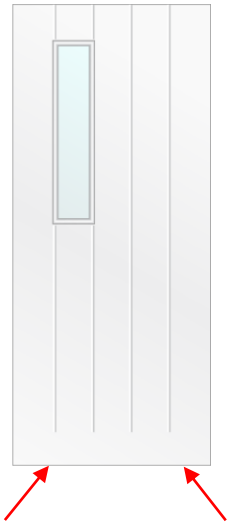
- Before installation of the door, use a suitable paint system for external use. Never install an untreated door.
- For improved durability and finish in the grooves, prime the grooves with e.g. a paint brush before priming the full door.
- It is recommended to use a paint system with fungicides in both primer and topcoat.
- **Contact your paint supplier for more guidance on paint systems !**

Sealing of the top of the door

- After painting the door, close the joining between stiles and rails in the top of the door with a sealer to avoid water to get into the construction.
- Use a flexible sealer that can absorb the movement in the timber over time to maintain the long term durability of the door.
- Use the sealer after painting to allow the fungicides in the painting system to be absorbed in the timber joining.







- **Important**: Never close openings in the joining between stiles and rails in the bottom of the door. It's important to allow humidity to get out of the construction !

Maintenance of painted veneer doors

Maintenance a few times a year extends the lifetime of your doors !

Inspection

- Inspect regularly to see if there are cracks emerging in the exterior coating and for damages on the door edge/corners.
- This applies particularly on the southern and western elevations, bay-parties, etc. where the sun's UV rays are hard on all woodwork. Also houses without eaves are exposed. Doors painted in dark colours, placed in coast areas or in direct sun is more exposed. Just one crack in the paint exposes the timber to moisture, and the decomposition of the timber has begun.
- Pay extra attention to the glazing beads on doors with glass appertures and on the lower part of the door which is extra exposed.

Maintenance and cleaning

- The doors must be reviewed once a year with a brush to make repairs to the surface wherever it is needed. For post-treatment we recommended the use of a paint with great covering power either water or oil based in the appropriate colour.
- Furthermore it is a good idea to wash the door a few times a year. It removes dirt and other contamination, which ultimately degrades the surface. Use water with a mild detergent.
- When the timber surface is to be cleaned, it is a good idea also to have a look for any small cracks and crevices in the paint surface. Generally, when the weather begins to discolour the paint on your doors, it is time for maintenance.

Maintenance of painted veneer doors – Colour Class 1, 2 and 3

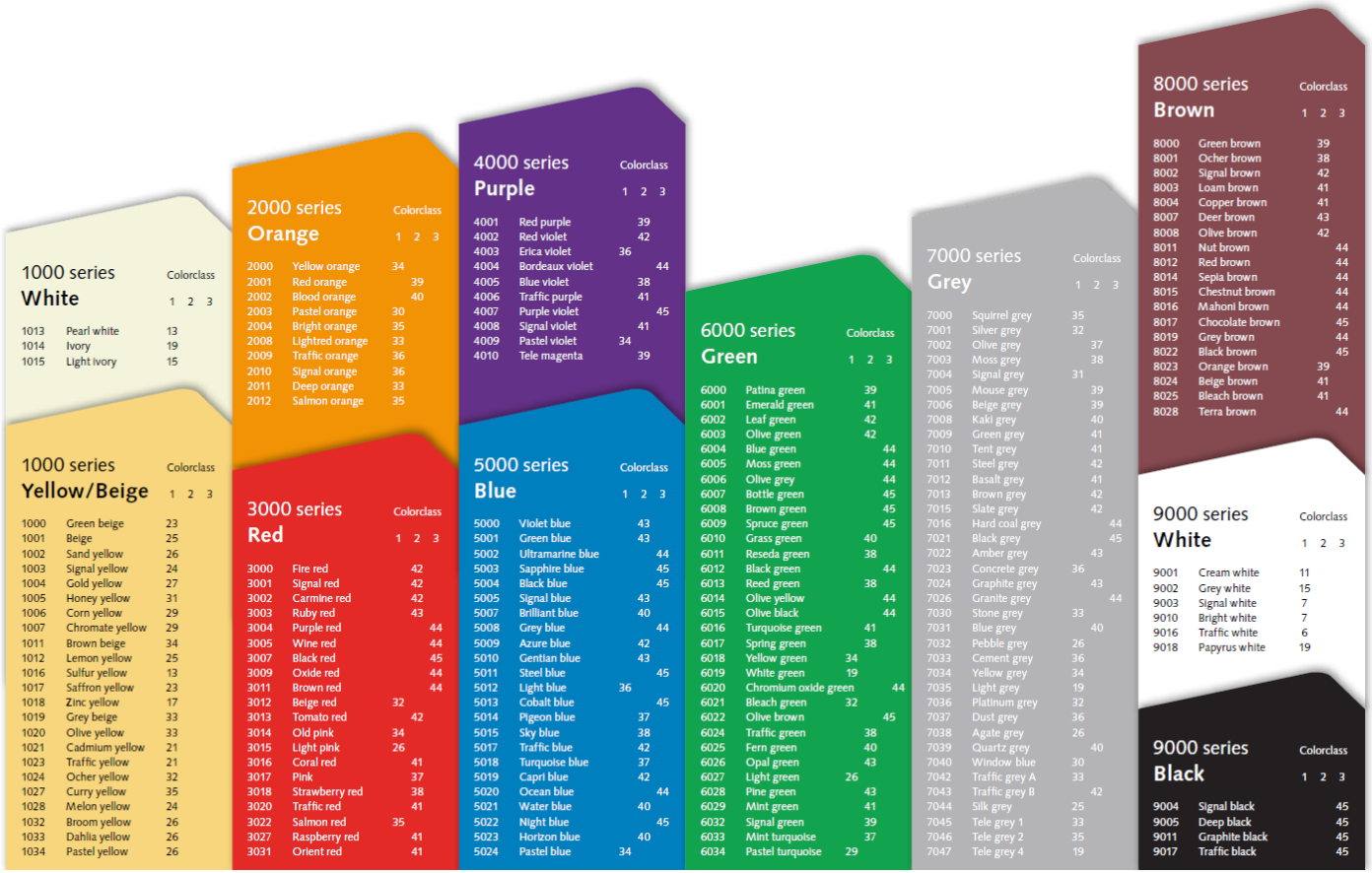
- **Important:** Dark colours will become significantly warmer than light colours and this makes maintenance more frequent necessary.
- Dark colours take up a lot of heat from the sunlight and it will affect the stability of the veneers. The paint will become less flexible during time. It will become brittle and eventually the paint will burst.
- Cracks in paint and cracks in the veneer on doors, painted with colours in class 3 are not accepted as claims.

Recommended maintenance schedule:

- Colour class 1 and 2: Inspect yearly and repaint after 5 years.
- Colour class 3: Inspect yearly and repaint after 2 years if exposed to direct sun or extreme conditions.

RAL Colours

Colour Class Classification



1000 series White

		Colorclass 1	2	3
1013	Pearl white			13
1014	Ivory			19
1015	Light ivory			15

1000 series Yellow/Beige

		Colorclass 1	2	3
1000	Green beige			23
1001	Beige			25
1002	Sand yellow			26
1003	Signal yellow			24
1004	Gold yellow			27
1005	Honey yellow			31
1006	Corn yellow			29
1007	Chromate yellow			29
1011	Brown beige			34
1012	Lemon yellow			25
1016	Sulfur yellow			13
1017	Saffron yellow			23
1018	Zinc yellow			17
1019	Grey beige			33
1020	Olive yellow			33
1021	Cadmium yellow			21
1023	Traffic yellow			21
1024	Ocher yellow			32
1027	Curry yellow			35
1028	Melon yellow			24
1032	Broom yellow			26
1033	Dahlia yellow			26
1034	Pastel yellow			26

2000 series Orange

		Colorclass 1	2	3
2000	Yellow orange			34
2001	Red orange			39
2002	Blood orange			40
2003	Pastel orange			30
2004	Bright orange			35
2008	Lightred orange			33
2009	Traffic orange			36
2010	Signal orange			36
2011	Deep orange			33
2012	Salmon orange			35

3000 series Red

		Colorclass 1	2	3
3000	Fire red			42
3001	Signal red			42
3002	Carmine red			42
3003	Ruby red			43
3004	Purple red			44
3005	Wine red			44
3007	Black red			45
3009	Oxide red			44
3011	Brown red			44
3012	Beige red			32
3013	Tomato red			42
3014	Old pink			34
3015	Light pink			26
3016	Coral red			41
3017	Pink			37
3018	Strawberry red			38
3020	Traffic red			41
3022	Salmon red			35
3027	Raspberry red			41
3031	Orient red			41

4000 series Purple

		Colorclass 1	2	3
4001	Red purple			39
4002	Red violet			42
4003	Erica violet			36
4004	Bordeaux violet			44
4005	Blue violet			38
4006	Traffic purple			41
4007	Purple violet			45
4008	Signal violet			41
4009	Pastel violet			34
4010	Tele magenta			39

5000 series Blue

		Colorclass 1	2	3
5000	Violet blue			43
5001	Green blue			43
5002	Ultramarine blue			44
5003	Sapphire blue			45
5004	Black blue			45
5005	Signal blue			43
5007	Brilliant blue			40
5008	Grey blue			44
5009	Azure blue			42
5010	Gentian blue			43
5011	Steel blue			45
5012	Light blue			36
5013	Cobalt blue			45
5014	Pigeon blue			37
5015	Sky blue			38
5017	Traffic blue			42
5018	Turquoise blue			37
5019	Capri blue			42
5020	Ocean blue			44
5021	Water blue			40
5022	Night blue			45
5023	Horizon blue			40
5024	Pastel blue			34

6000 series Green

		Colorclass 1	2	3
6000	Patina green			39
6001	Emerald green			41
6002	Leaf green			42
6003	Olive green			42
6004	Blue green			44
6005	Moss green			44
6006	Olive grey			44
6007	Bottle green			45
6008	Brown green			45
6009	Spruce green			45
6010	Grass green			40
6011	Reseda green			38
6012	Black green			44
6013	Reed green			38
6014	Olive yellow			44
6015	Olive black			44
6016	Turquoise green			41
6017	Spring green			38
6018	Yellow green		34	
6019	White green		19	
6020	Chromium oxide green			44
6021	Bleach green		32	
6022	Olive brown			45
6024	Traffic green			38
6025	Fern green			40
6026	Opal green			43
6027	Light green		26	
6028	Pine green			43
6029	Mint green			41
6032	Signal green			39
6033	Mint turquoise			37
6034	Pastel turquoise		29	

7000 series Grey

		Colorclass 1	2	3
7000	Squirrel grey		35	
7001	Silver grey		32	
7002	Olive grey			37
7003	Moss grey			38
7004	Signal grey		31	
7005	Mouse grey			39
7006	Beige grey			39
7008	Kaki grey			40
7009	Green grey			41
7010	Tent grey			41
7011	Steel grey			42
7012	Basalt grey			41
7013	Brown grey			42
7015	Slate grey			42
7016	Hard coal grey			44
7021	Black grey			45
7022	Amber grey			43
7023	Concrete grey		36	
7024	Graphite grey			43
7026	Granite grey			44
7030	Stone grey		33	
7031	Blue grey			40
7032	Pebble grey		26	
7033	Cement grey		36	
7034	Yellow grey		34	
7035	Light grey		19	
7036	Platinum grey		32	
7037	Dust grey		36	
7038	Agate grey		26	
7039	Quartz grey			40
7040	Window blue		30	
7042	Traffic grey A		33	
7043	Traffic grey B			42
7044	Silk grey		25	
7045	Tele grey 1		33	
7046	Tele grey 2		35	
7047	Tele grey 4		19	

8000 series Brown

		Colorclass 1	2	3
8000	Green brown			39
8001	Ocher brown			38
8002	Signal brown			42
8003	Loam brown			41
8004	Copper brown			41
8007	Deer brown			43
8008	Olive brown			42
8011	Nut brown			44
8012	Red brown			44
8014	Sepia brown			44
8015	Chestnut brown			44
8016	Mahoni brown			44
8017	Chocolate brown			45
8019	Grey brown			44
8022	Black brown			45
8023	Orange brown			39
8024	Beige brown			41
8025	Bleach brown			41
8028	Terra brown			44

9000 series White

		Colorclass 1	2	3
9001	Cream white			11
9002	Grey white			15
9003	Signal white			7
9010	Bright white			7
9016	Traffic white			6
9018	Papyrus white			19

9000 series Black

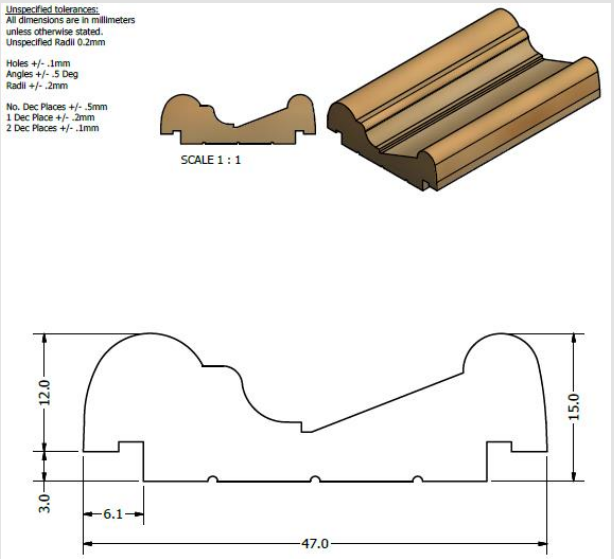
		Colorclass 1	2	3
9004	Signal black			45
9005	Deep black			45
9011	Graphite black			45
9017	Traffic black			45

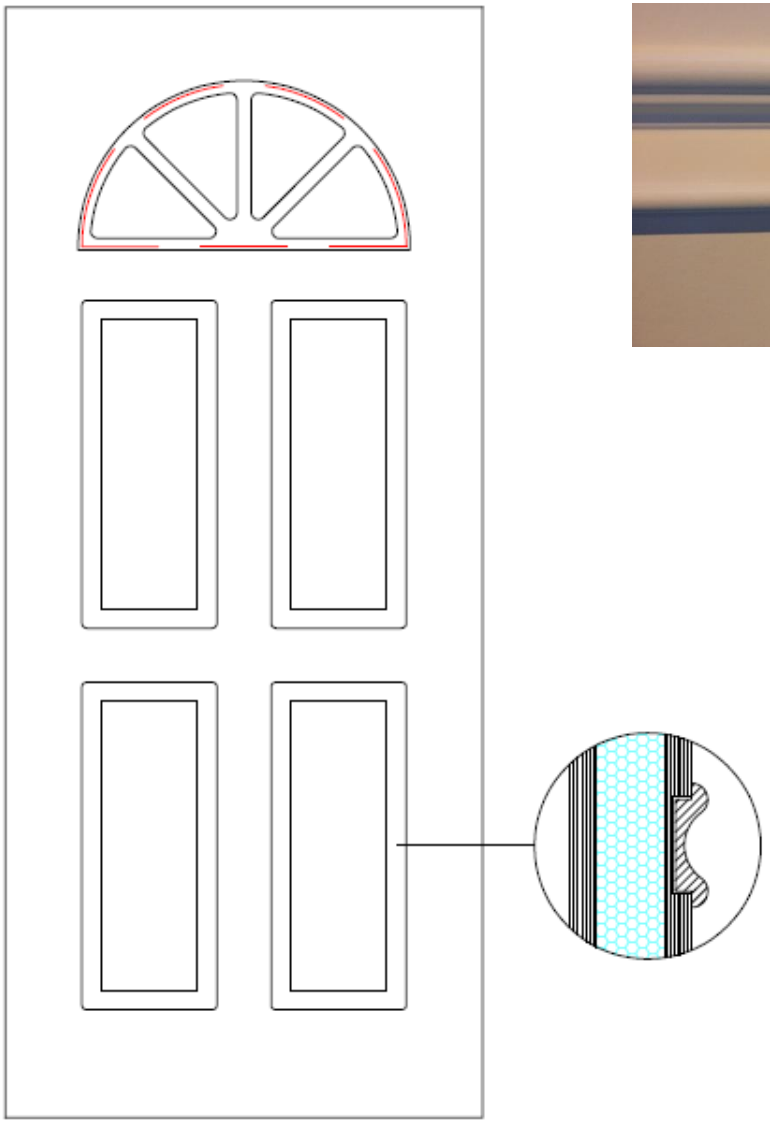
Installation of Q-Wood composite profiles “Bolection Mould” - to create in-depth design

- Use Q-Wood composite profiles “Bolection Mould” to make a traditional door style
- Available as standard profile

Advantages:

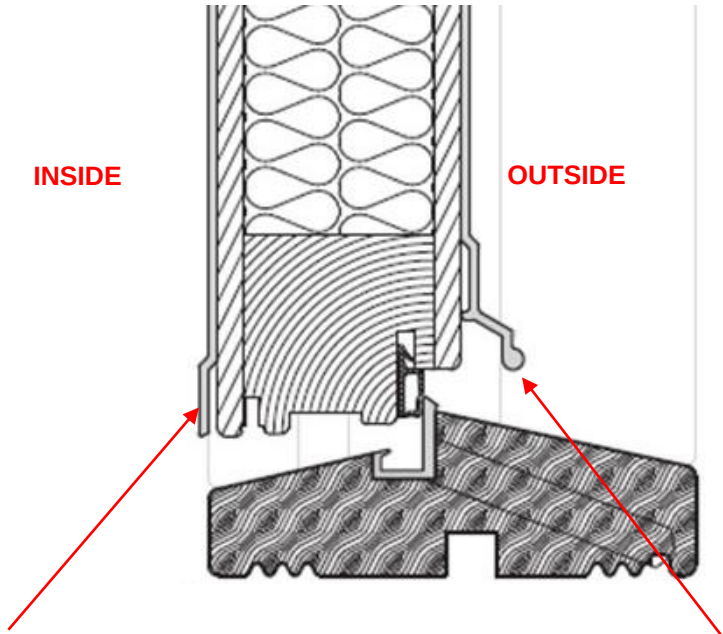
- Cost effective compared to Raised&Fielded panels
- High thermal efficiency





Rain Deflector

- Select a Rain Deflector that effectively leads the water away from the bottom of the door
- Minimum 5 mm air between the door facing and the Rain Deflector is required to allow water drops to fall off.
- When mounting a kicking plate or rain deflector seal the top and all nail/screw holes with a sealer to avoid water to get into the construction.



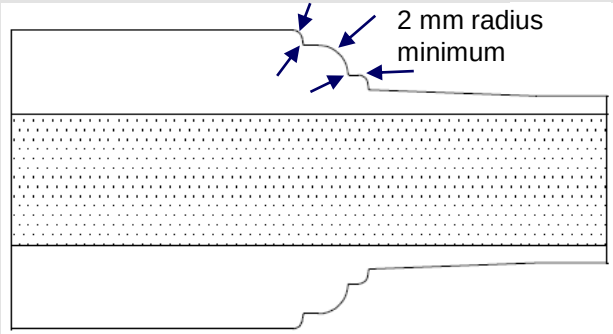
This type of kicking plate is only suitable for internal use, because the distance between the door facing and the alu plate is less than 5 mm.

This type of rain deflector is suitable on the external side of the door. The distance between the door facing and the alu plate is more than 5 mm.

Guidelines **Panels**

Surface treatment and installation of MDF panels

Surface treatment of MDF panels



- Mdf panels must be fully sealed on all surfaces and edges with an exterior grade system to insure that the material does not absorb moisture. The recommended method of painting for both faces and edges is to seal (diffusion closed), prime and topcoat.
- The base coat should be done in several stages. The first layer of primer and sealer is applied to close the surface. Follow up with a pre-sanding (grain 240-320) to remove rough fibres in the surface without sanding through the sealer (be careful when sanding the edges and corners). The second layer of base coat is done to ensure uniform priming.
- On raised and fielded Mdf panels, it is important that prior to finishing of edges, the corners must be slightly rounded (2 mm radius minimum). Edges that are slightly rounded, rather than square and sharp, will hold paint better.

Installation of MDF panels

- Mdf panels shall be handled with caution. If the edges are damaged, either before or after the surface treatment, the panel should be scraped, because the gluing and binding of the fibres in the mdf panels often are destroyed further into the core of panel.
- Installation of mdf panels shall be carried out in such a way that the edges of the panels is not damaged and ensure ventilation and effective draining of moisture.
- Markings on the edge of the mdf panel with labels, tape or similar should be either on the side or top; never on the bottom.
- Installation of a door knocker, letter slot, decoration etc. where the painted surface will be opened, the nail/screw holes shall be sealed to prevent moisture entering.

Laminated solid timber panels - Expansion of laminated solid timber

- Installation of laminated solid timber panels in pine, oak and mahogany shall be carried out in such a way that it take in to account the expansion of the timber when moisture content and temperature changes.
- Ensure ventilation and sufficient air between the panel and the seam/sash on all four sides that can absorb the expansion of the laminated solid timber.
- Laminated solid timber panels in pine, oak and mahogany are recommended to be maximum 400 mm in the width when installed to avoid warping and bending.
- The laminated timber must be treated with an exterior grade system to insure that the material does not absorb moisture. Absorbtion of to much moisture will result in expansion of the laminated timber and result in delamination of the lamellas. Drying out of the laminated timber will also result in delamination of the lamellas.

Expansion in laminated solid timber: (pine, oak, mahogany)

Width: Changes in cross measure along growth rings is up to 0.3 %.

Height: Changes in length measure in fiber direction is limited to 0.01 %.

Calculation is based on:
Moisture content in laminated timber = 8 %
Expansion in pct per mm = 0.3 %

Width	Moisture content		
	10%	15%	18%
200 mm	1.2 mm	4.2 mm	6.0 mm
300 mm	1.8 mm	6.3 mm	9.0 mm
400 mm	2.4 mm	8.4 mm	12.0 mm
500 mm	3.0 mm	10.5 mm	15.0 mm

Laminated solid timber panels - Storage and handling

Storage and handling

- Laminated solid timber panels should be stored on a flat and level surface in a dry, well-ventilated building.
- Cover to keep clean and keep out sunlight, but allow air circulation.
- Handle with clean gloves and do not drag door blanks across one another or across other surfaces.
- Panels should not be subject to: abnormal heat, extreme dryness, humid conditions or sudden changes therein. They should be conditioned to average prevailing relative humidity of the locality before processing and hanging.
- For the best control of humidity to avoid warping and bending the laminated solid timber panels must always be wrapped in plastic. When the panel is unpacked always stack the panel on wood beddings or similar to secure ventilation around the panel.

Surface treatment

- Laminated solid timber panels must be treated with an exterior grade system to insure that the material does not absorb moisture. Absorbtion of to much moisture will result in expansion of the laminated timber and result in delamination of the lamellas.
- The recommended method of painting is to apply a uniform layer of paint on both sides in the same process to control the moisture content and to avoid warping and bending.
- To avoid black discoloration on oak only use acid proof stainless screws/nails. Installation of a door knocker, letter slot, decoration etc. where the painted surface will be opened, the nail/screw holes shall be sealed to prevent moisture entering.

How to use MDF panels and Laminated solid timber panels

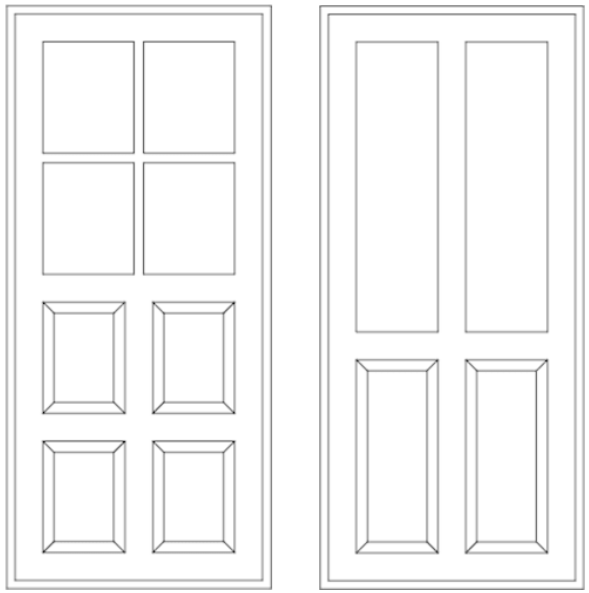
Laminated solid timber panels

Laminated solid timber panels in pine, oak and mahogany are recommended to be maximum 400 mm in the width when installed to avoid warping and bending

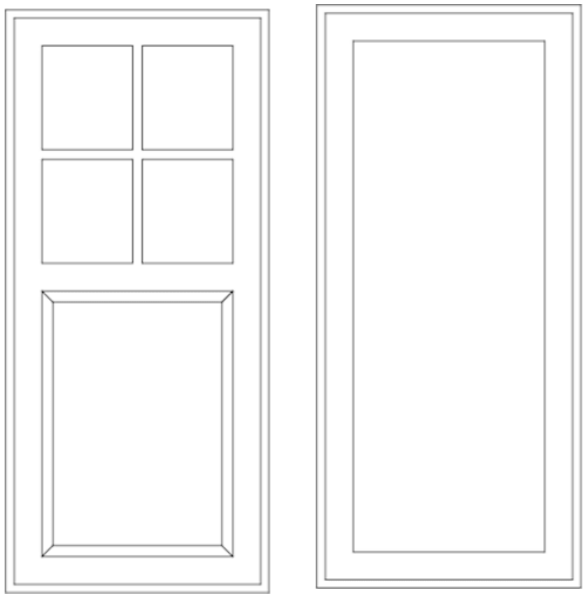
MDF panels

Panels in MDF are suitable for most types and sizes of doors and are recommended to be used where larger panels are required. The stability of MDF panels are very much depended on correct installation and the overall construction of the door.

- Laminated solid timber panels are suitable
- MDF panels are suitable

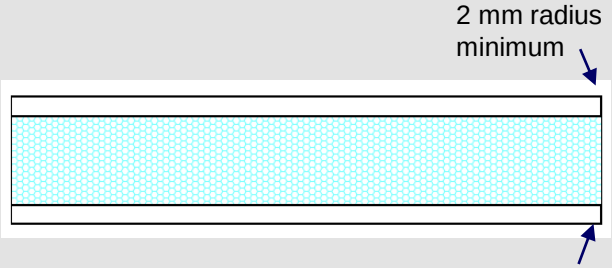


- Laminated solid timber panels are **not suitable**
- MDF panels are suitable



Surface treatment and installation of HDF panels

Surface treatment of MDF panels



- Hdf panels must be fully sealed on all surfaces and edges with an exterior grade system to insure that the material does not absorb moisture. The recommended method of painting for both faces and edges is to seal (diffusion closed), prime and topcoat.
- The base coat should be done in several stages. The first layer of primer is applied to close the surface. Follow up with a pre-sanding (grain 240-320) to remove rough fibres in the surface. The second layer of base coat is done to ensure uniform priming.
- On hdf panels, it is important that prior to finishing of edges, the corners must be slightly rounded (2 mm radius minimum). Edges that are slightly rounded, rather than square and sharp, will hold paint better.

Installation of HDF panels

- Installation of hdf panels shall be carried out in such a way that the edges of the panels is not damaged and ensure ventilation and effective draining of moisture.
- Markings on the edge of the hdf panel with labels, tape or similar should be either on the side or top; never on the bottom.
- Installation of a door knocker, letter slot, decoration etc. where the painted surface will be opened, the nail/screw holes shall be sealed to prevent moisture entering.