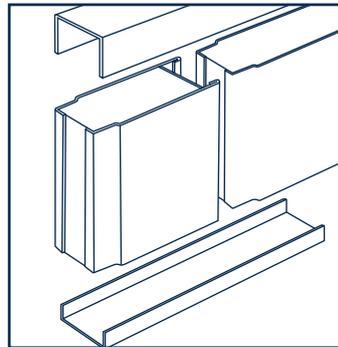


MODULAR



ARCHITECTURAL



SYSTEMS

PRODUCT CATALOGUE



Photo by Kjetil Alsvik – Statoil

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ENGINEERING DESIGN & SUPPLY OF MODULAR ARCHITECTURAL SYSTEMS DELIVERING PASSIVE FIRE PROTECTION, ACOUSTIC & SECURITY SOLUTIONS

Established in 1977, BD Systems is a leading UK manufacturer & supplier of Fire Rated Composite Walls, Doors, Floors & Ceilings to the Offshore, Marine and Construction industries.

Working in close partnership with the Norwegian manufacturer Norac AS, BD Systems can offer a total package of high quality, affordable Fire Protection systems.

Complying with the latest European rules and regulations on Fire Protection products, Norac's thorough quality process ensures that BD Systems products are manufactured to the highest possible standards.

WALL SYSTEMS

Designed to meet the clients demands for quality products that provide flexibility and speed of installation, lightweight construction, fire performance, safety & security.

Tested to fire standards B15 to H120 and EI 60 to EI 120 all products meet the new requirements for improved Acoustic performance and sound reduction. Individual products have achieved a measured performance in excess of 53 dB RW.

CEILING SYSTEMS

A wide range of ceiling systems are manufactured for the Offshore, Marine & Construction Industries sold under the BD, Danacoustic and Norac trademarks. These Fire and Acoustic rated systems are well known throughout industry and cover every aspect of installation and appearance that is required from an architectural ceiling system. These products are available in the following formats - square and rectangular clip in tile system, 100 - 600mm wide planks supplied in suspended grid or as a self supporting system.

DOORS

BD Systems & Norac's modern & efficient manufacturing process allows for the supply of quality, robust & decorative fire doors. The range covers all requirements for land and marine application and products can be specified with up to 2 hours fire integrity & can be designed to withstand significant blast over pressure.

EXTERNAL CLADDING & DECKING

BD Systems specialise in the design and manufacture of lightweight wall cladding and decking panels affording 1 and 2 hour fire protection.

Wall and Deck panels can be used independently as load bearing structures but when combined to form a complete enclosure the system allows for significant cost and weight savings over traditional methods of construction.

WINDOWS

Norac have developed a full range of fire rated internal and external windows. With classification from B30 to H120 manufactured in sizes to suit the specific contract, our solutions offer optimum safety, security and acoustic performance achieving on site measured sound reductions of 60 dB. Our extensive range covers internal glazed partitions and doors with internal & external fire, safety & security windows.

TOILET/WET UNITS

Building on decades of experience and specialist manufacture BD & Norac can offer fully fitted wet units to the Construction, Offshore & Marine industries. Standard and Custom built units are available using either GRP or Composite construction technology.

FLOATING FLOORS

BD & Norac manufacture & supply a floating floor system designed for durability, ease of installation and acoustic performance. Constructed from 3 mm thick galvanised steel cassettes the floor system can be easily adapted to suit a range of applications.

BLAST WALL

Born over 30 years experience in composite technology BD are pleased to introduce "Clearspan" their latest product dealing with severe blast loads.

FASTCLAD

Used extensively by outfitting and refurbishment contractors FASTCLAD is an extremely fast and effective method of creating a new, bright and clean atmosphere within a somewhat aging and dull environment.

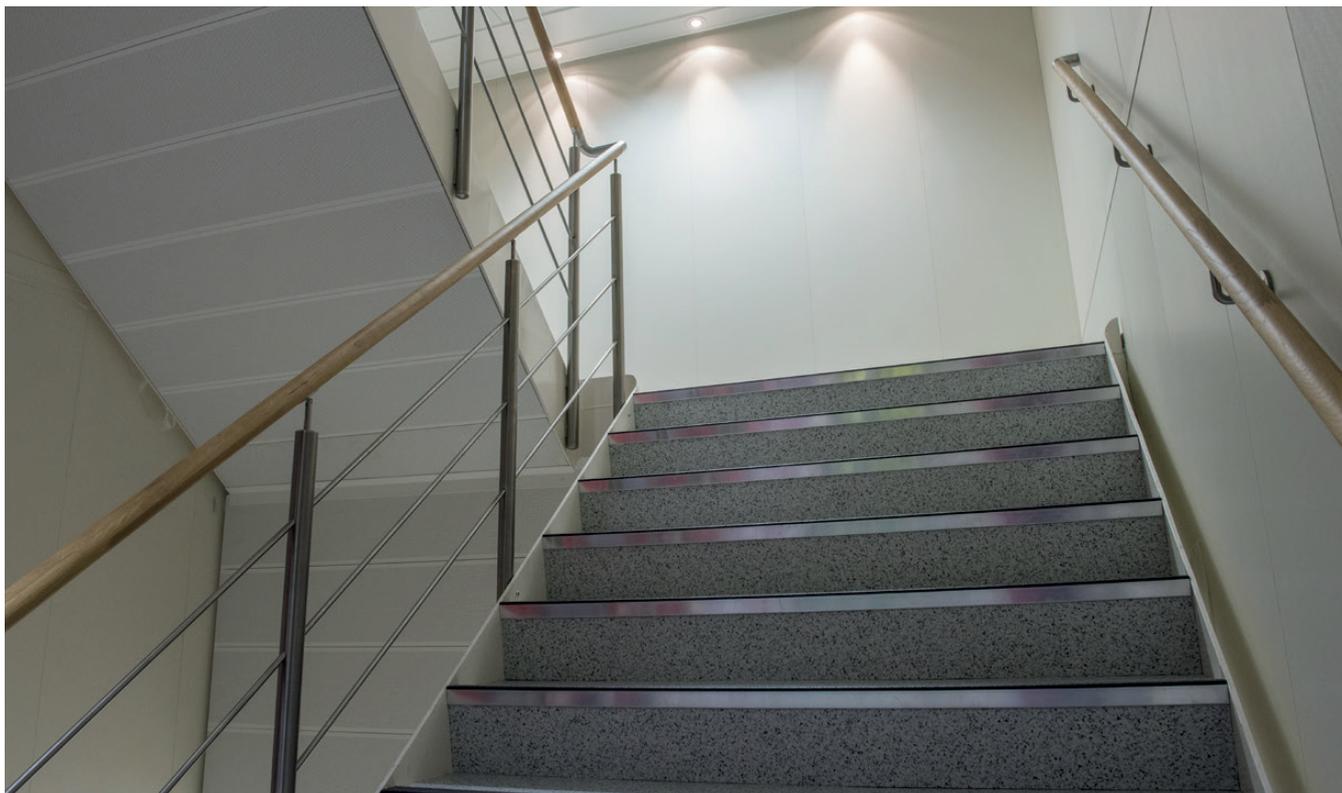


Photo by Apply Leirvik Norway

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K-600

K-600 is designed with integrated joint profiles for rapid installation, leaving a flush surface with single seam joints. Available in standard or modular system.

K-panels are also available in aluminium construction in B-15 with considerable weight savings.

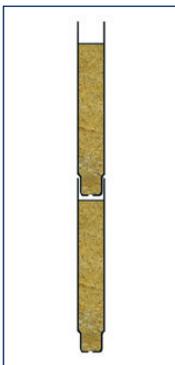
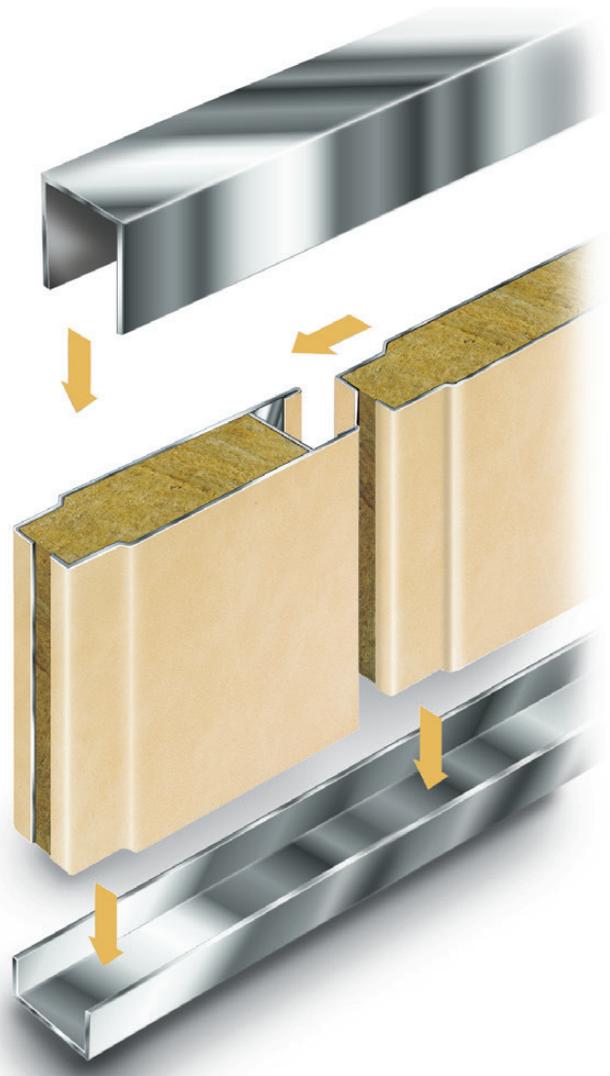
See technical description below.

WEIGHT:

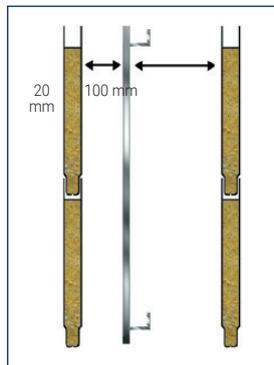
All weights are based on system weight, including all profiles.

Approved B-15 with cable penetrations available for several wall types.

The K-panels (25 and 50 mm) have been shock tested. More information available on request.



K-600/25mm/B-15
K-600/50mm/B-15
A-585/50mm/B-15
A-585/25mm/B-15



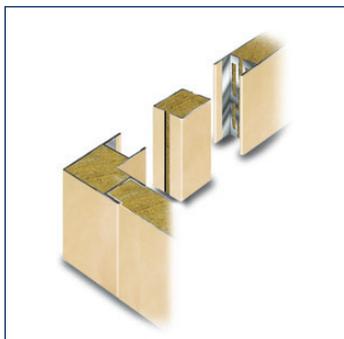
K-600/2x25mm/A-60

DESCRIPTION	K-600/50	K-600/100	K-600/25	A-585/50 **	A-585/25 *
Fire Class	B-15	B-30	B-15	B-15	B-15
Standard width	600 mm	600 mm	600 mm	585 mm	585 mm
Panel height	up to 3000 mm	up to 2500 mm			
Module width	100–800 mm	100–800 mm	100–800 mm	100–800 mm	100-800 mm
Thickness	50 mm	100 mm	25 mm	50 mm	25 mm
Weight	19.2 kg/m ²	25.2 kg/m ²	13.8 kg/m ²	12.3 kg/m ²	12.7 kg/m ²
Sound reduction	Rw=32 dB	Rw=32 dB	Rw=26 dB	Rw=24 dB	–
Thermal Insulation	U=0.65 W/m ² K	U=0.34 W/m ² K	U=1.16 W/m ² K	U=0.65 W/m ² K	U=1.16 W/m ² K
Application	Partition and Lining	Partition	Partition and Lining	Partition and Lining	Lining

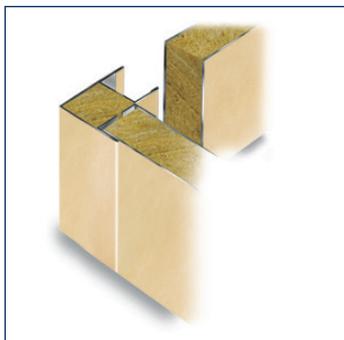
* Alu/Steel **Alu/Alu

K-WALL CONNECTING DETAILS

STANDARD



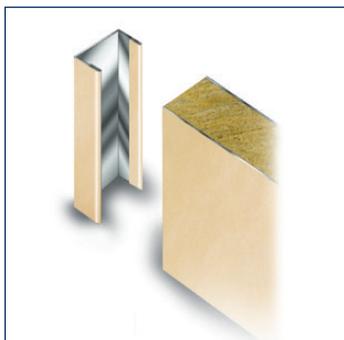
Complete corner element for flush finish



Complete corner element for cut finish

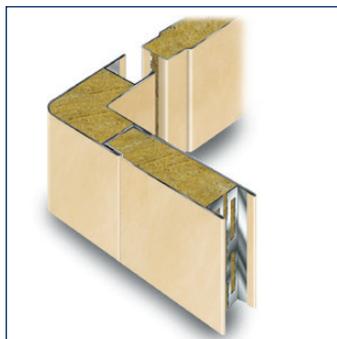


Standard U-profile for flush finish

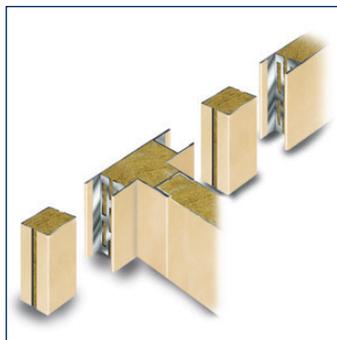


Standard U-profile for cut panel

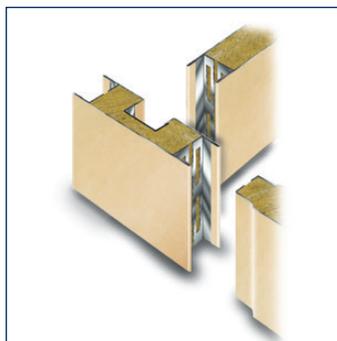
MODULAR



Rounded corners



T-connection



Recess connection for improved flexibility

NOTE:
Norac systems are delivered with a wide variety of connecting elements/profiles to obtain the best solutions.
Corners may also be delivered in stainless steel finish.

Q-600/CF-600

Q-600 is an acoustic wall system of sandwich construction with an excellent sound reduction quality.

Q-600 is a rigid system with integrated joint profiles and allows for easy and rapid installation.

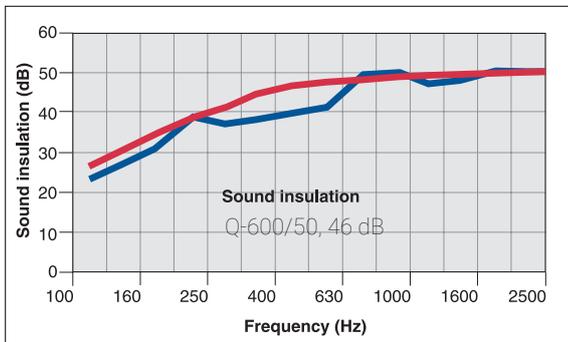
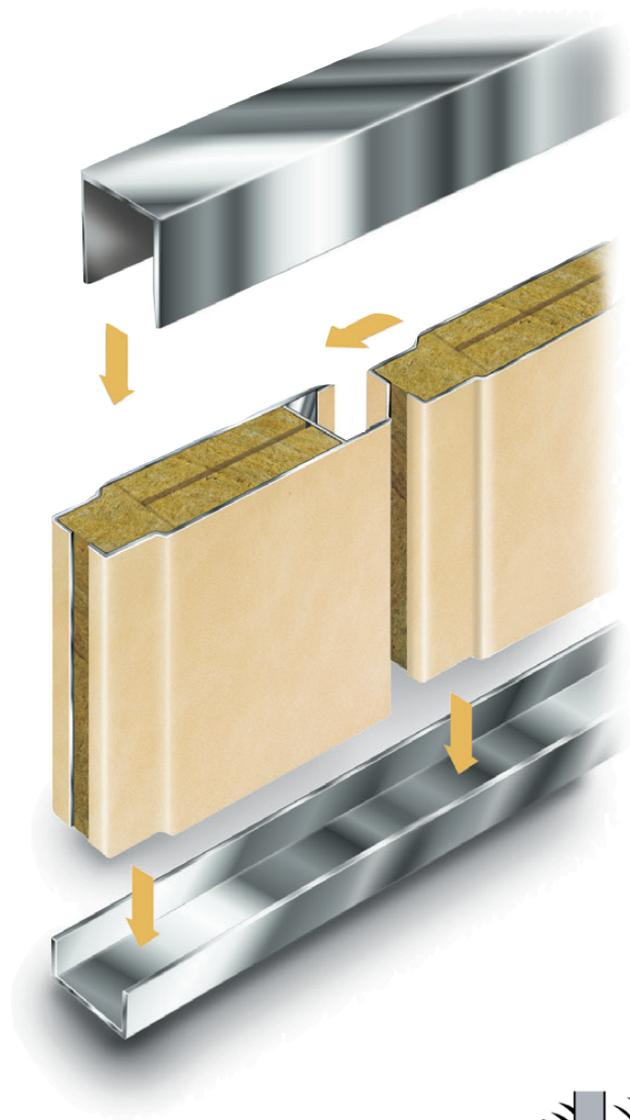
Flush surface with single seam joints. Available as a modular system.

WEIGHT:

All weights are based on system weight, including all profiles.

50 mm panels available with vertical cable ducts in B-15.

70 mm panels have the possibility to draw cables horizontal and vertical.



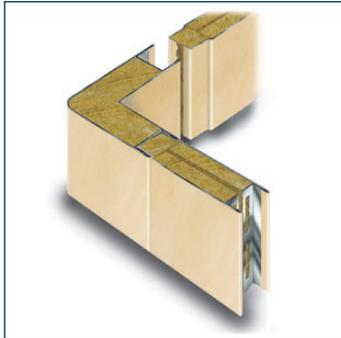
— Adjusted References — Sound Reduction Index (Laboratory measurement)



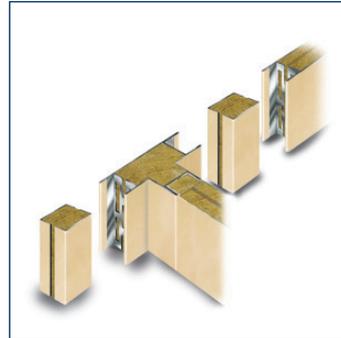
43-49 dB

DESCRIPTION	Q-600/50, 43 DB	Q-600/50, 46 DB	Q-600/70	CF-600/50	CF-600/70
Fire Class	B-15/B-30	B-15/B-30	B-15/B-30	B-15/B-30	B-15/B-30
Standard width	600 mm				
Module length	up to 3000 mm				
Module width	100-700 mm				
Thickness	50 mm	50 mm	70 mm	50 mm	70 mm
Weight	19.8 kg/m ²	21.4 kg/m ²	19.9 kg/m ²	25.8 kg/m	26.2 kg/m ²
Sound reduction	R _w = 43 dB	R _w = 46 dB	R _w = 45 dB	R _w = 47 dB	R _w = 49 dB
Thermal Insulation	U = 0.64 W/m ² K	U = 0.64 W/m ² K	U = 0.62 W/m ² K	U = 0.64 W/m ² K	U = 0.62 W/m ² K
Application	Partition	Partition	Partition	Partition	Partition

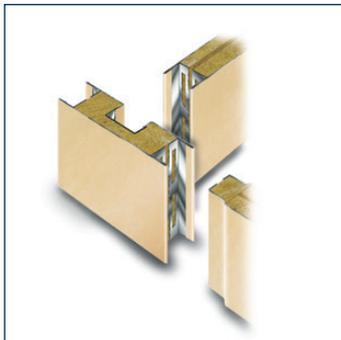
Q / CF-WALLS CONNECTING DETAILS



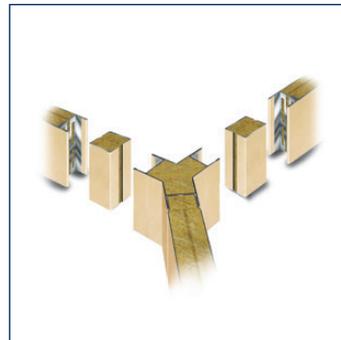
Rounded corners



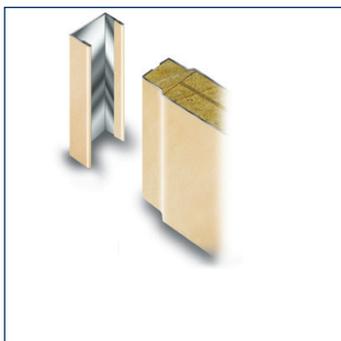
T-element



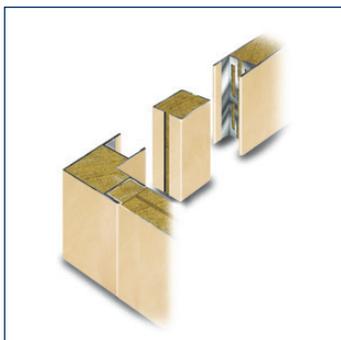
Recess connection for improved flexibility



Special solutions available



Standard profile for flush finish



Corner element

NOTE:
Norac systems are delivered with a wide variety of connecting elements/profiles to obtain the best solutions.
Corners may also be delivered in stainless steel finish.

C-600 / CS-600

C-600 is an acoustic double wall system with two independent wall elements installed in the same profile system.

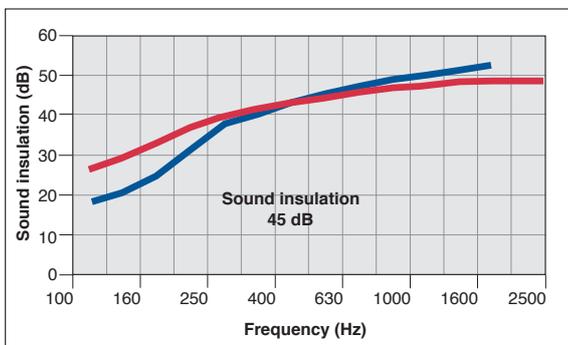
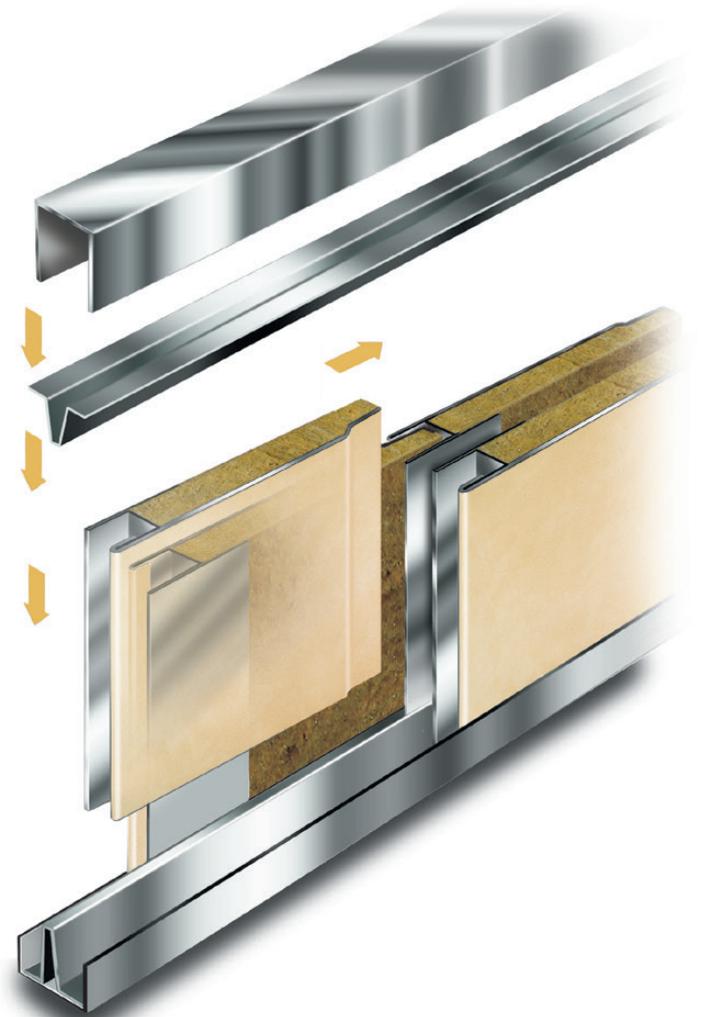
Available as standard or modular system.

Allows installation of electrical cables before completing assembly (in 70 mm version).

The wall elements are special stiffened and approved according to High Speed Code (HSC) for 30 minutes non-load bearing.

WEIGHT:

All weights are based on system weight, including all profiles.



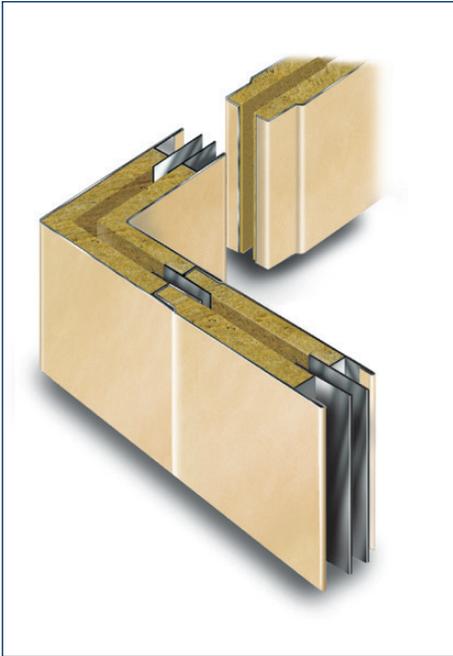
— Adjusted References — Sound Reduction Index (Laboratory measurement)



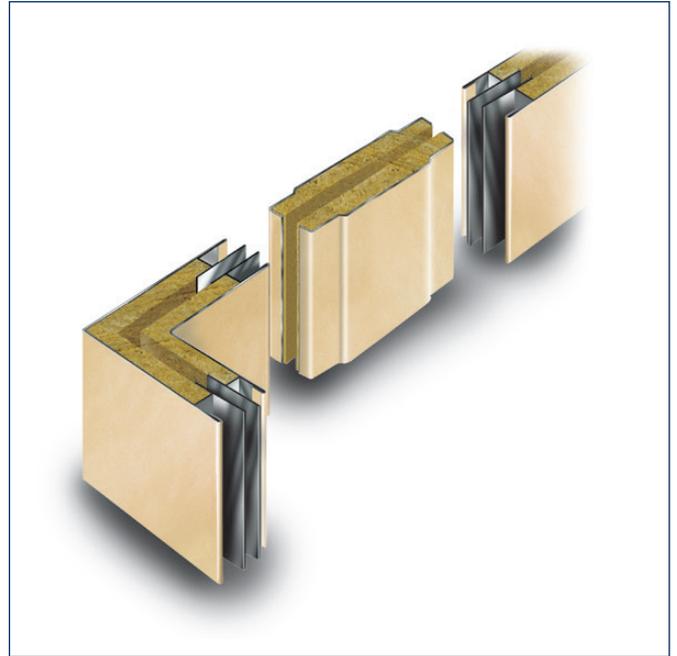
45-49 dB

DESCRIPTION	C-600/50	C-600/20	C-600/70	CS-600/50	CS-600/70
Fire Class	B-15/B-30	C-class	B-15/B-30	B-15/B-30	B-15/B-30
Standard width	600 mm				
Module length	up to 3000 mm				
Module width	100-700 mm				
Thickness	50 mm	20 mm	70 mm	50 mm	70 mm
Weight	27 kg/m ²	14.1 kg/m ²	27.2 kg/m ²	33.2 kg/m ²	33.4 kg/m ²
Sound reduction	Rw = 45 dB	–	Rw = 46 dB	Rw = 48 dB	Rw = 49 dB
Thermal Insulation	U = 0.59 W/m ² K	U = 1.18 W/m ² K	U = 0.69 W/m ² K	U = 0.72 W/m ² K	U = 0.69 W/m ² K
Application	Double wall	Lining	Double wall	Double wall	Double wall

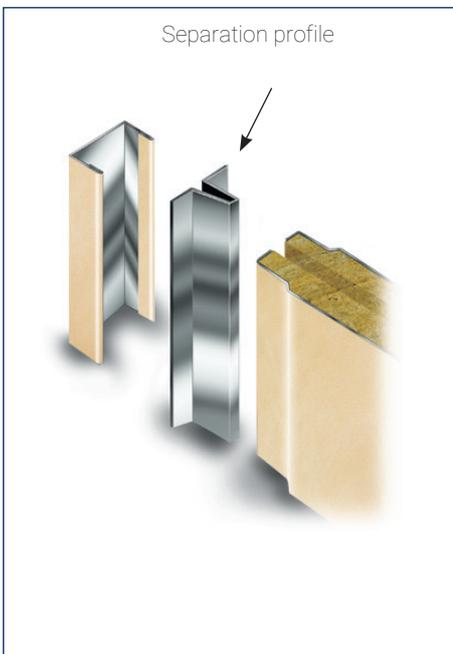
C-WALL CONNECTING DETAILS



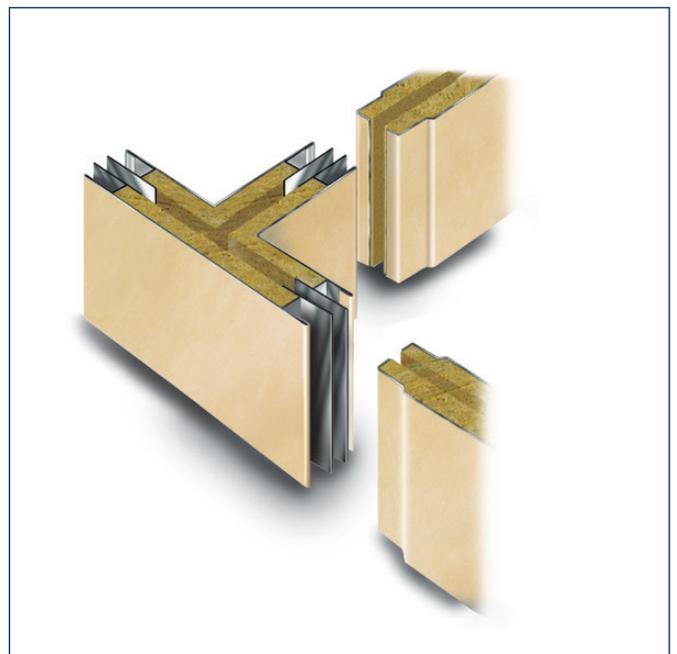
Standard corner solution



Detail for changing direction of installation



End profile for flush finish



Standard T-connection

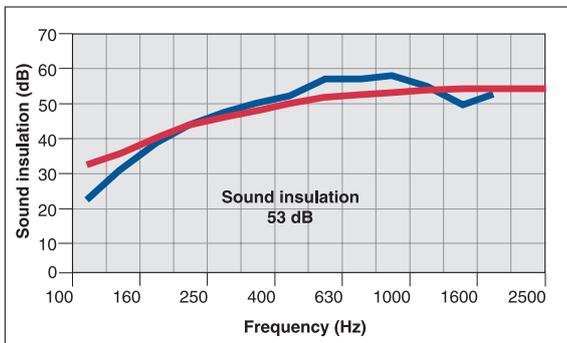
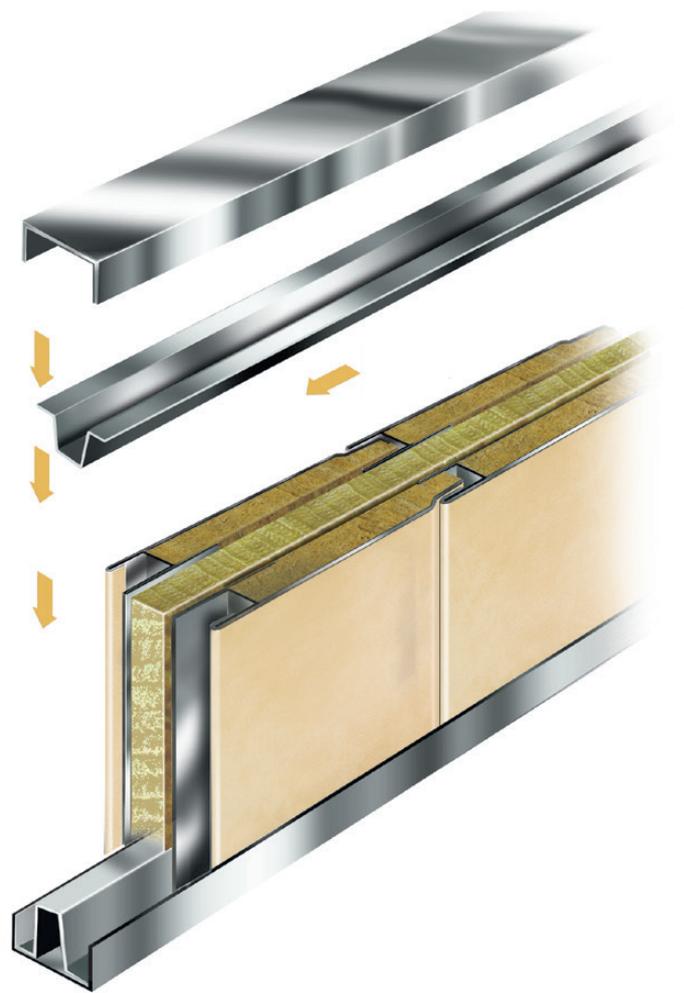
CSG-600/70

The use of additional insulation between the two panels of a CS-600/70 wall improves the sound reduction by an amazing 4dB compared to CS system on page 10.

Note that building thickness is not more than 70 mm.

WEIGHT:

All weights are based on system weight, including all profiles.



— Adjusted References — Sound Reduction Index (Laboratory measurement)



53 dB

DESCRIPTION	CSG-600/70
Fire Class	B-15/B-30
Standard width	600 mm
Module length	up to 3000 mm
Module width	100–700 mm
Thickness	70 mm
Weight	34.4 kg/m ²
Sound reduction	Rw=53 dB
Thermal Insulation	U=0.47 W/m ² K
Application	Partition



Load Out at Bi-Fab Yard in Methil Scotland of The Cygnus LQ Platform

C.I.S WALL PANELS

INTERNAL ACOUSTIC WALLS

C.I.S PANELS

Standing for "Clip In System". It is the ease and speed with which the CIS panel systems are installed and demounted that makes this system the most popular and widely used system in the market place today. All panels within the CIS range are rigid in strength and extremely flexible in cutting and installing. Available as a standard or fully modular system.

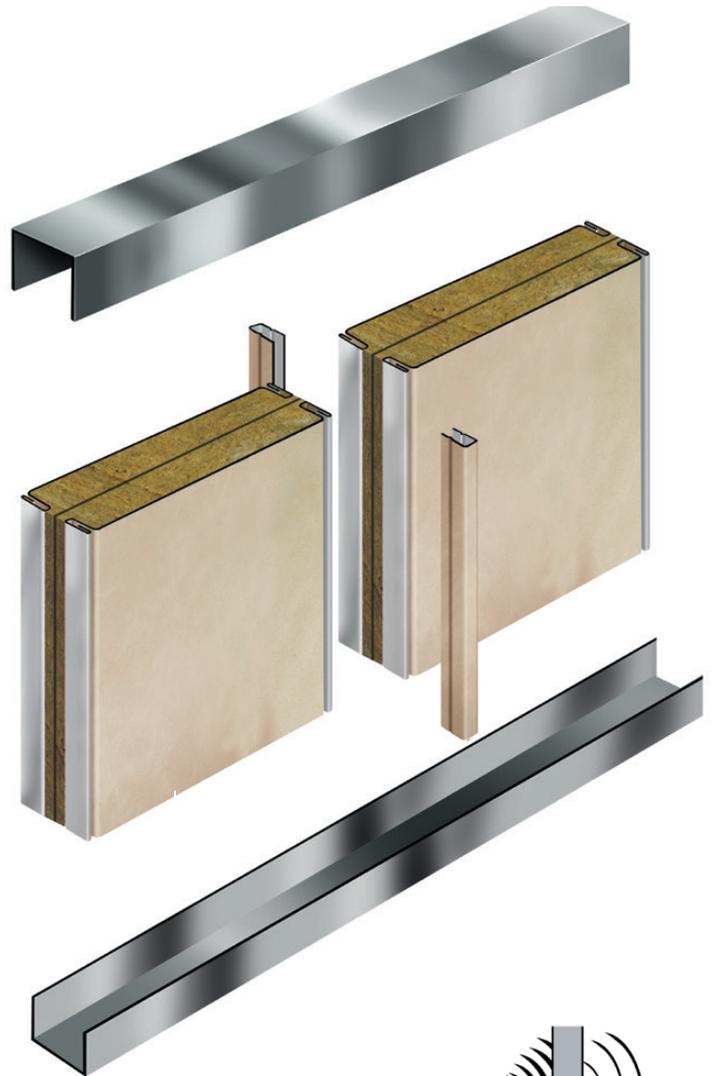
DETAILS

Non-load bearing composite firewalls for the offshore and marine industries.

The A60 CIS-100A wall doubles as the BD special acoustic partition system giving a good sound reduction of 46 dB and a good acoustic absorption factor of 1.03 at 500 Hz. The system is certified for use with perforated steel to either one or both panel faces.

All weights shown are for the fully installed system and include all profiles.

Standard Conduit Raceways size 20 x 30mm



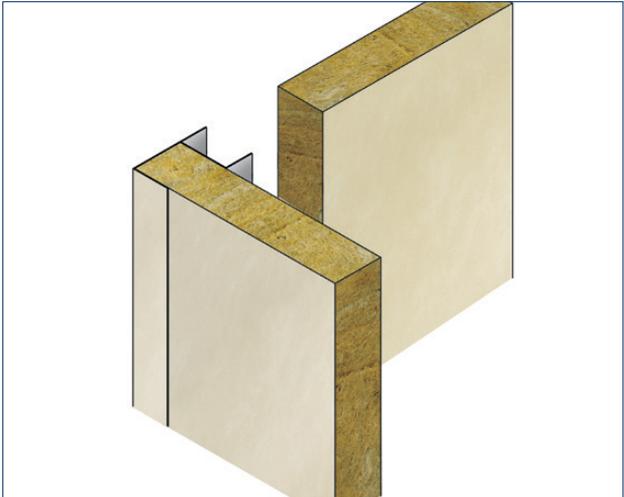
DESCRIPTION	CIS-25	CIS-A30	CIS-100	CIS-100A
Fire class	Non Combustible	A0 - A30 / 1 hour	A60 / 1 hour	A60 / 1 hour
Standard width	575	575	575	575
Panel height	up to 3000 mm	up to 4500 mm	up to 6000 mm	up to 6000 mm
Thickness	27 mm	52 mm	102 mm	102 mm
Weight	14.42 Kg/m ²	19.35 Kg/m ² **	26.20 Kg/m ²	30.62 Kg/m ²
Sound reduction	Rw= 28 dB	Rw= 32dB	35dB Lab Test	Rw= 46 dB
Thermal insulation	U = 1.12 W/m ² K	U = 0.61 W/m ² K	U = 0.32 W/m ² K	U = 0.32 W/m ² K
Application	Lining Panel	Partition Panel **	Partition Panel	Partition Panel

** Available with light weight insulation core.

C.I.S 1 HOUR CONNECTION DETAILS



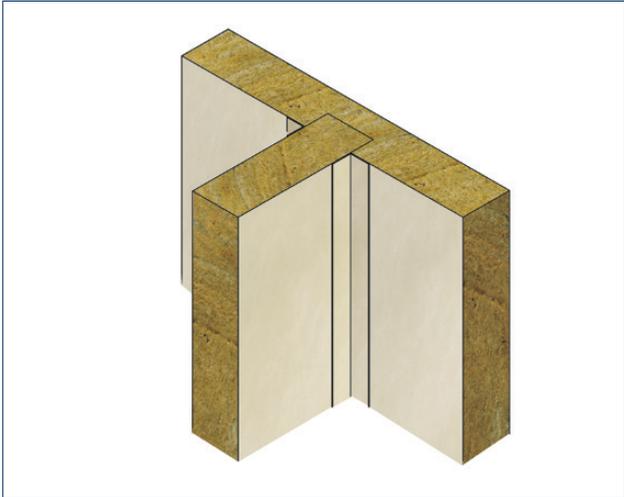
STANDARD END



STANDARD CORNER (B30) (A30)



STANDARD CORNER (A60)



STANDARD T-JOINT (A60)



STANDARD RADIUS CORNER

Note:
BD Systems Panels are supplied with all the connecting profiles designed to meet project specific requirements.

OMEGA WALL PANELS

INTERNAL WALLS

LIGHT WEIGHT OMEGA

Early developments in composite firewalls by BD Systems utilised the “Omega” type joining profile. This series of panels is always popular where space saving and flexibility of installation are important considerations.

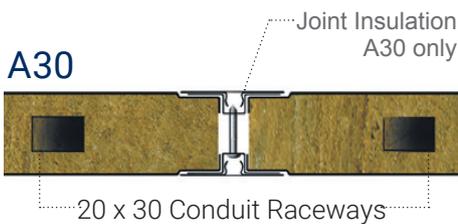
Significant loads can be secured to the walls when fixing directly into the “Omega” joints. Available as a standard or fully modular system.

DETAILS

Non-load bearing lightweight A Class wall lining and partition panels for the offshore industry.

All weights shown are for the fully installed system and include all profiles.

Optional extras include – Conduit raceways (2 - 20 x 30), penetration kits and reinforcement posts and plates.

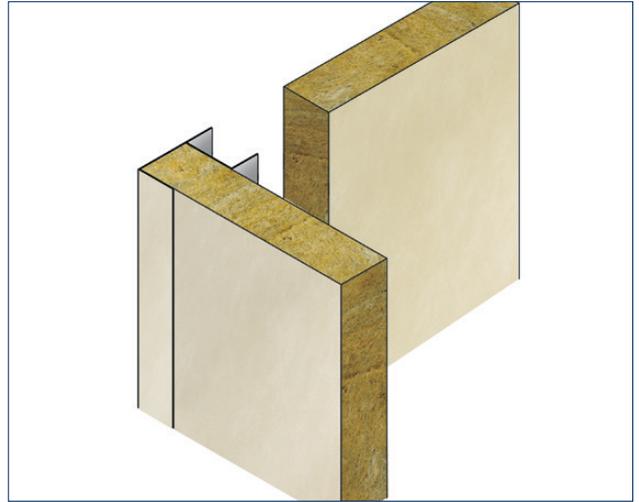


DESCRIPTION	FO-25	FO-50
Fire class	Non Combustible	A0 - A30 / 1 hour
Standard width	600 nominal	600 nominal
Panel height	up to 3000 mm	up to 4500 mm
Thickness	27 mm	52 mm
Weight	16.6 Kg/m ²	22.03 Kg/m ²
Sound reduction	Rw= 26 dB	Rw= 32 dB
Thermal insulation	U = 1.12 W/m ² K	U = 0.61 W/m ² K
Application	Lining Panel	Partition Panel

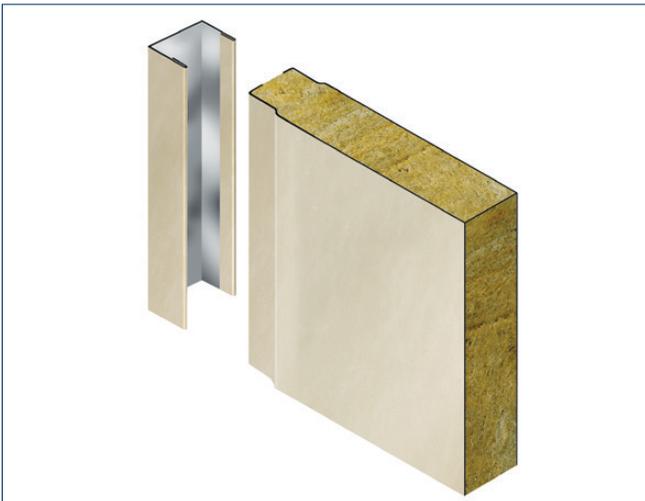
OMEGA WALL PANELS CONNECTION DETAILS



STANDARD END



STANDARD CORNER (A0)



FLUSH END



STANDARD T-JOINT



STANDARD CORNER

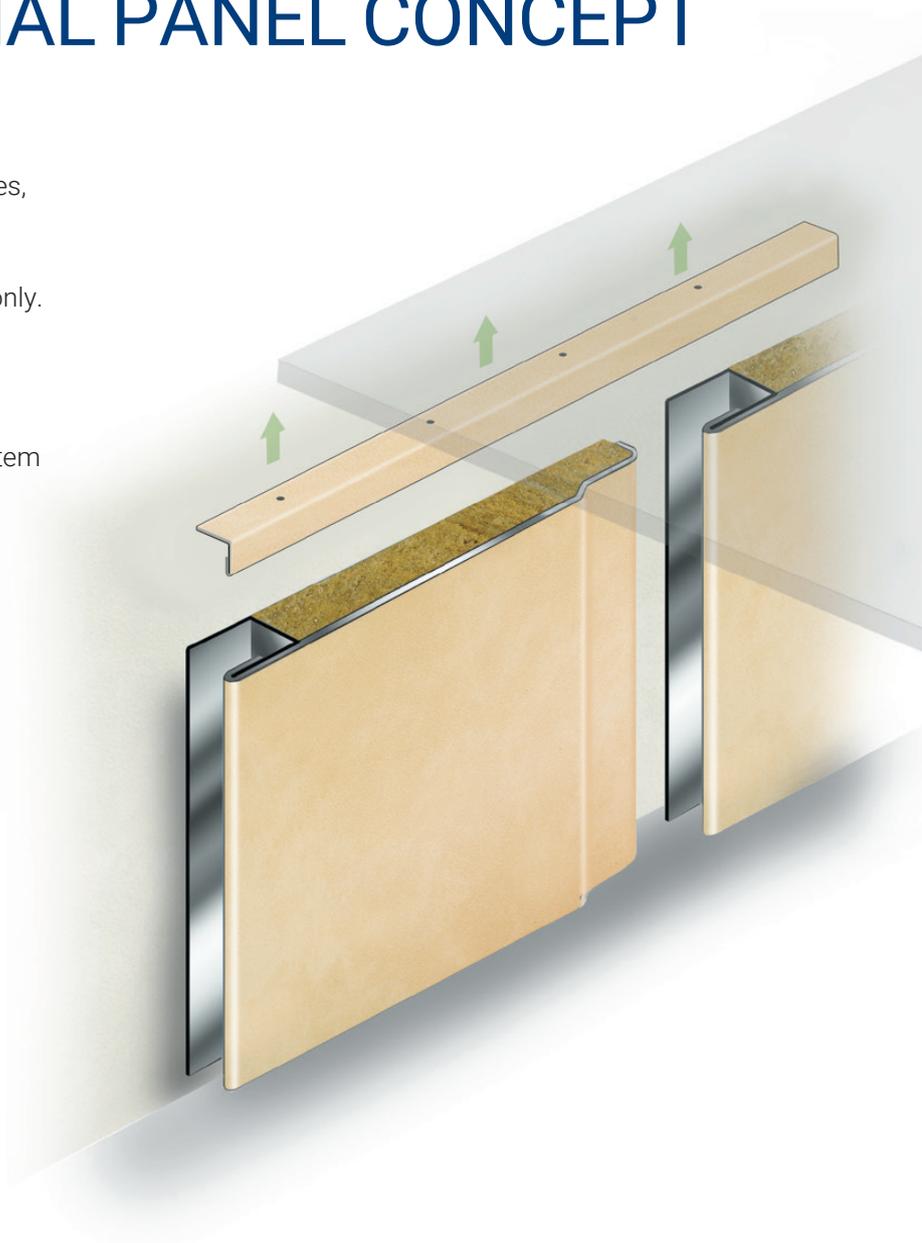
Note:
BD Systems Panels are supplied with all the connecting profiles designed to meet project specific requirements.

ADDITIONAL PANEL CONCEPT

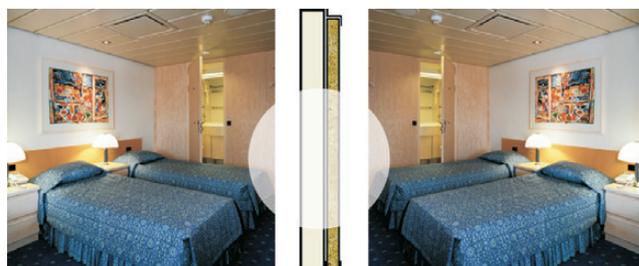
Additional panel concept for installation on existing walls. Ideal for refurbishing purposes, and where a better sound reduction between cabins is required. Thickness 20 mm only.

WEIGHT:

All weights are based on system weight, including all profiles.



DESCRIPTION	C-600/20
Fire Class	C-class
Standard width	600 mm
Module length	up to 3000 mm
Module width	100–1100 mm
Thickness	20 mm
Weight	12.4 kg/m ²
Sound reduction*	42 up to 51 dB
Thermal Insulation**	
Application	Lining



Upgrading of existing cabins

* Achieved as additional insulation on 28 dB wall.

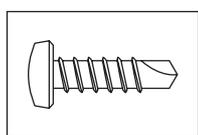
** Depend on existing wall.

REMOVABLE PANELS

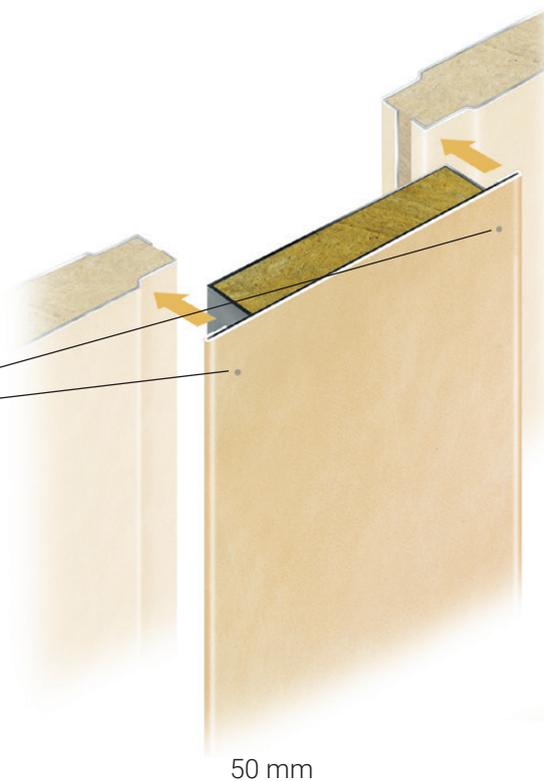
To be used where access or demountable panels are required.

NOTE:

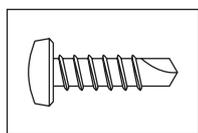
Removable panels are non rated and only suitable for flush Omega and K System panels.



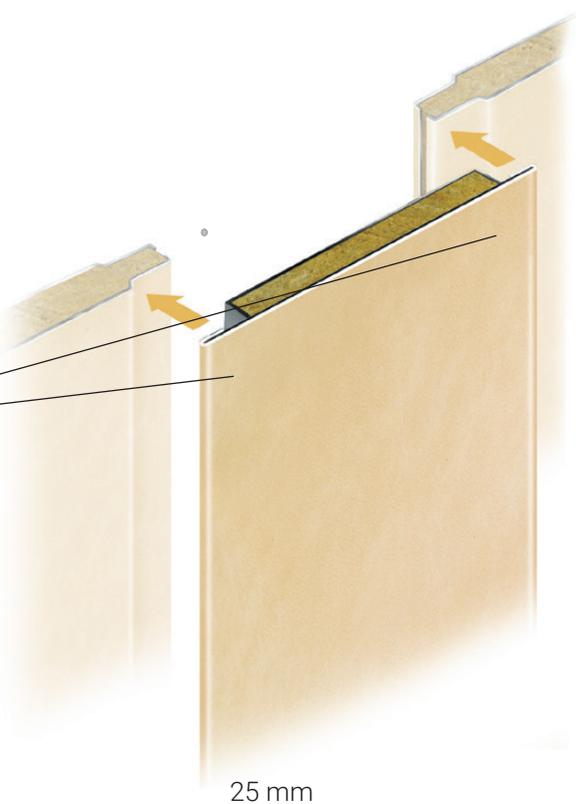
Self tapping screw
4.2 x 19 mm



50 mm



Self tapping screw
4.2 x 19 mm



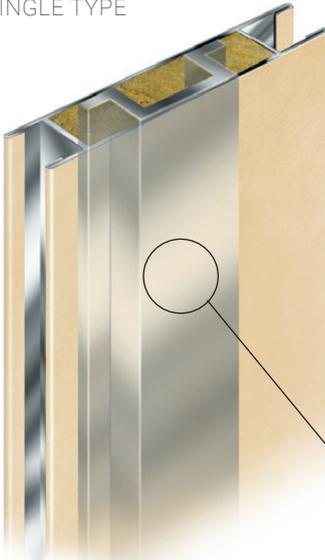
25 mm

REINFORCEMENT

Built in reinforcements to accommodate heavy wall hung equipment, such as wash basins, TV-brackets, pullman beds etc. can be delivered upon request.

Various solutions available.

SINGLE TYPE



Full height sections 3mm thick

DOUBLE TYPE



Special reinforcement for pullman beds – single or double.



3mm Plate bonded to inside of panel - Full Panel width - Standard height 500mm.

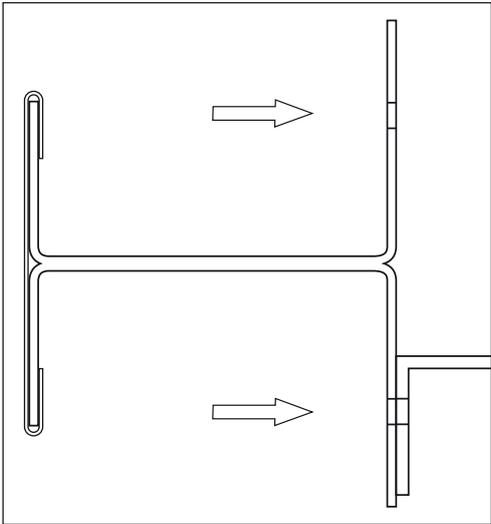
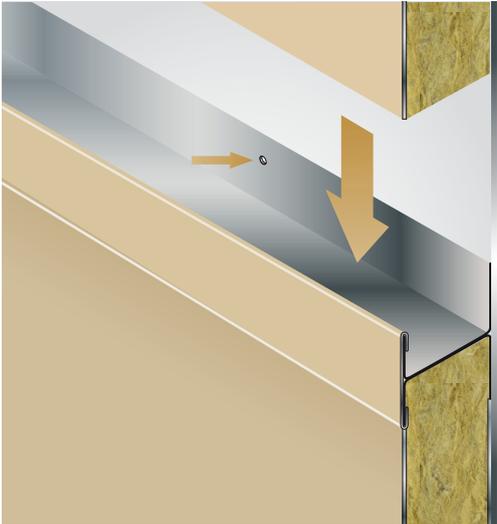
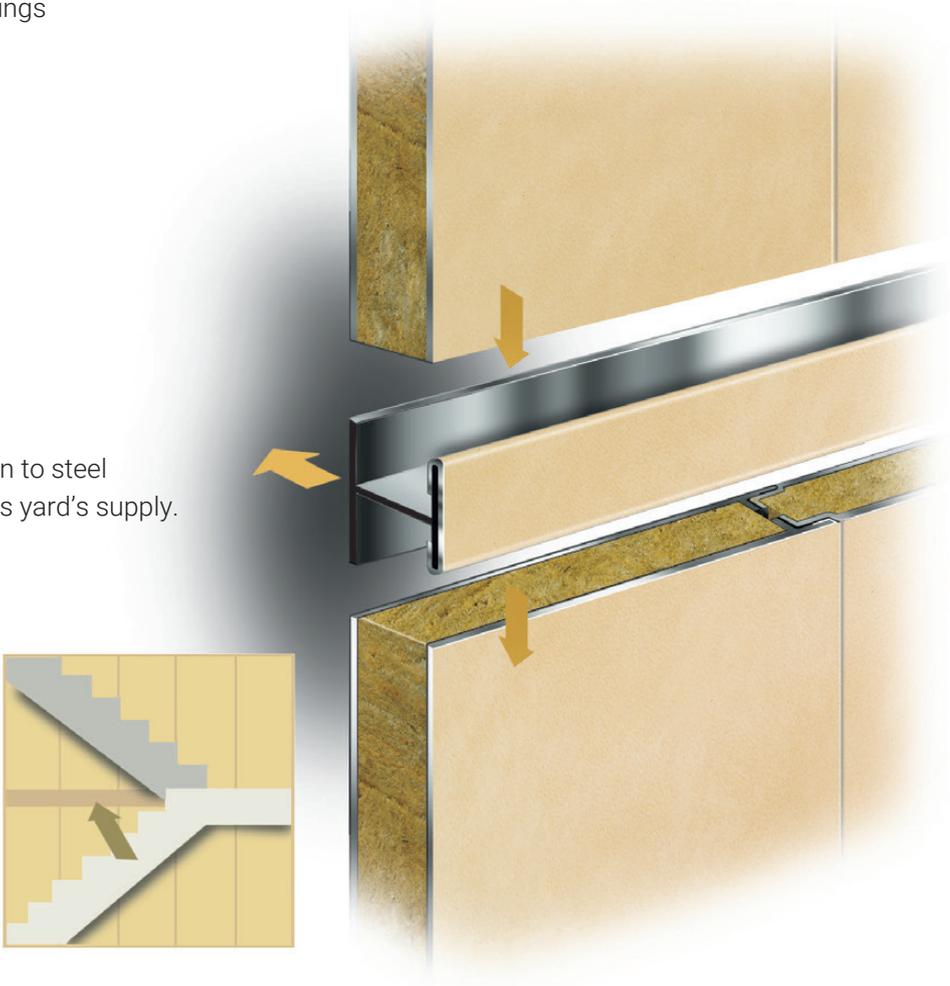


Standard reinforcement for other wall hung equipment.

HORIZONTAL JOINT

For areas where ceiling height exceeds 3000 mm. Used for linings only.

Connection to steel bulkhead is yard's supply.



LOADBEARING CAPACITY

STRENGTH OF HAND RAILS ATTACHED TO WALL PANELS:

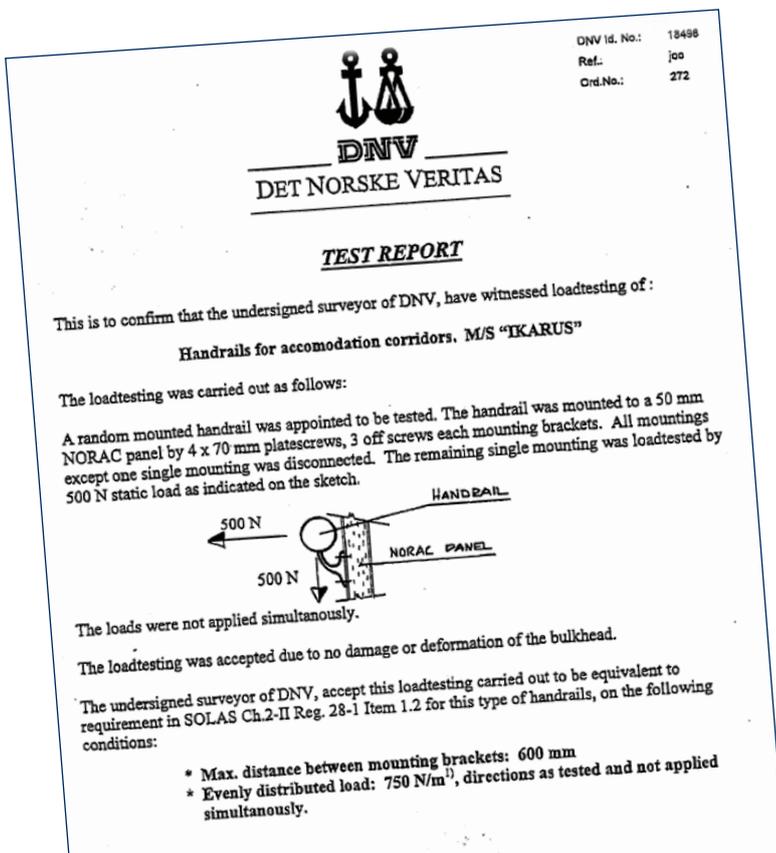
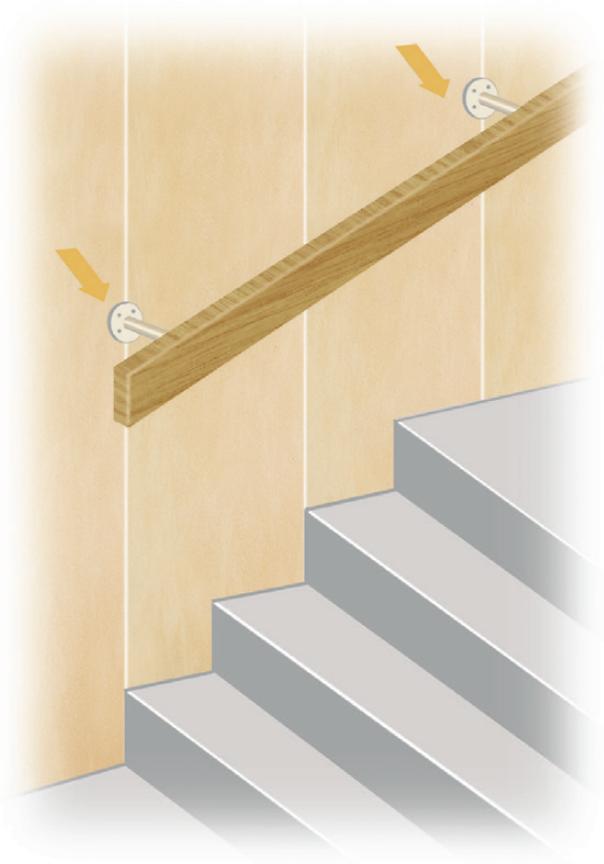
The tongue and groove system allows fixing of heavy objects to the wall without special reinforcement. The joint is already reinforced! In the middle of the panel, Fisher-dowels in plastic does the job; simple and cheap.

Both K-600/25, K-600/50 and Flush Omega panels are qualified according to the SOLAS regulation: "Strength test for B-class panels to which handrails are attached on RO-RO passenger ships".

The result can be transferred to other Norac panel types with some exceptions. The full report is available on request.

GENERAL STRENGTH PROPERTIES:

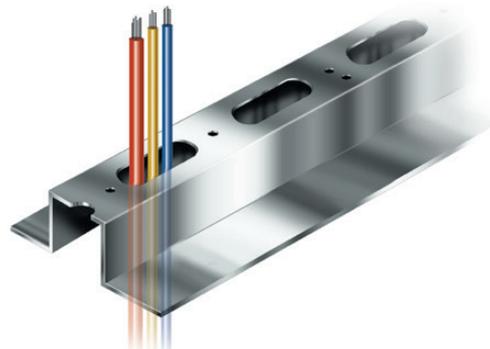
BD Norac have also performed several other tests on panel strength properties, and we are now capable of providing more advice with respect to load bearing capabilities. More information is available on request.



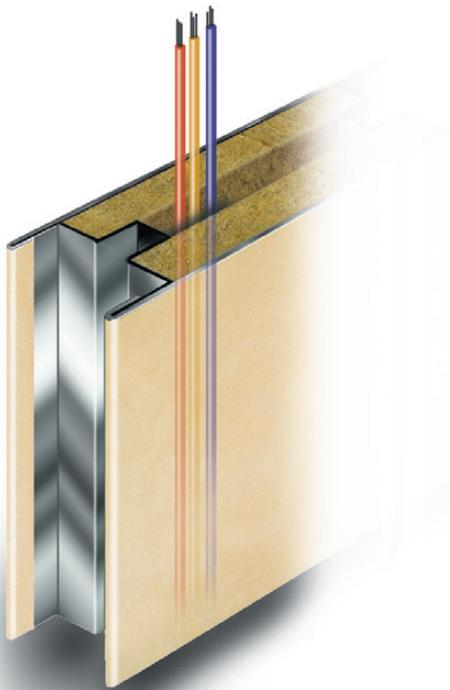
CABLE DUCTING

Pre-arranged duct for cables and sockets can be delivered upon request. Tested with up to 10 ducts per 600 mm panel as B-15.

Standard size of conduit:
 Single 20x30 mm
 Double 20x60 mm



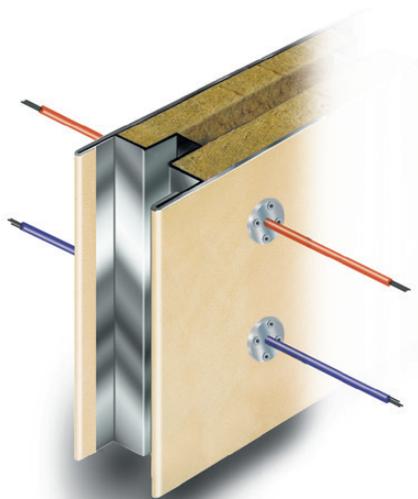
Perforated top profile option.



Air gap for installation of cables.



Pre-cut hole if required.

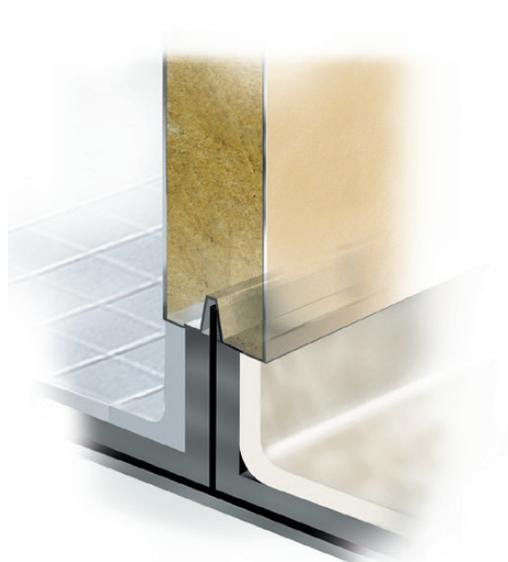


Cable penetrations, tested and approved

PANELS FOR WET SPACES



Detail for wet room - 25 mm lining only.

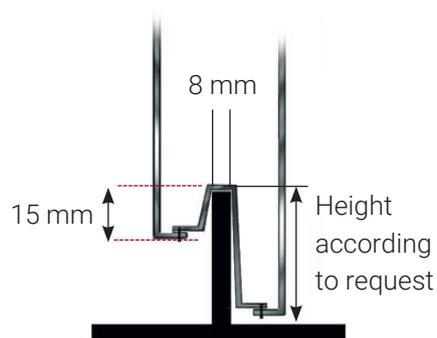


50 mm panels wet both sides.



50 mm panels dry one side, wet the other.

Wet base detail available for all solid build panels only. Not suitable for any cavity panel systems.



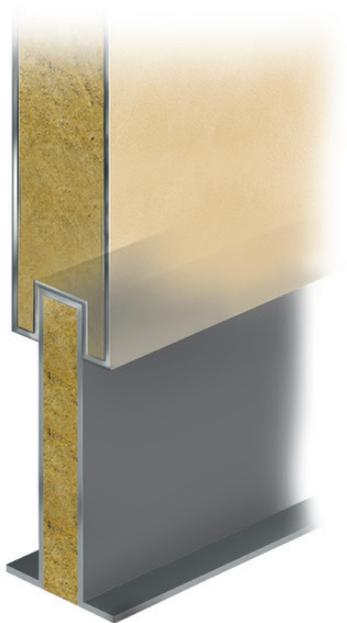
Standard thickness of flat bar 8 mm, others are available. Flatbar is normally part of the yard's delivery.

WET COAMING

A specially designed wet coaming used on top of floating floors in wet areas. The coaming is a fully insulated galvanised steel profile. It is secured to the floor with self tapping screws or rivets using a sealant. Height of coaming according to request.



Coaming for 25 mm wet panel



Coaming for 50 mm panels
wet / wet

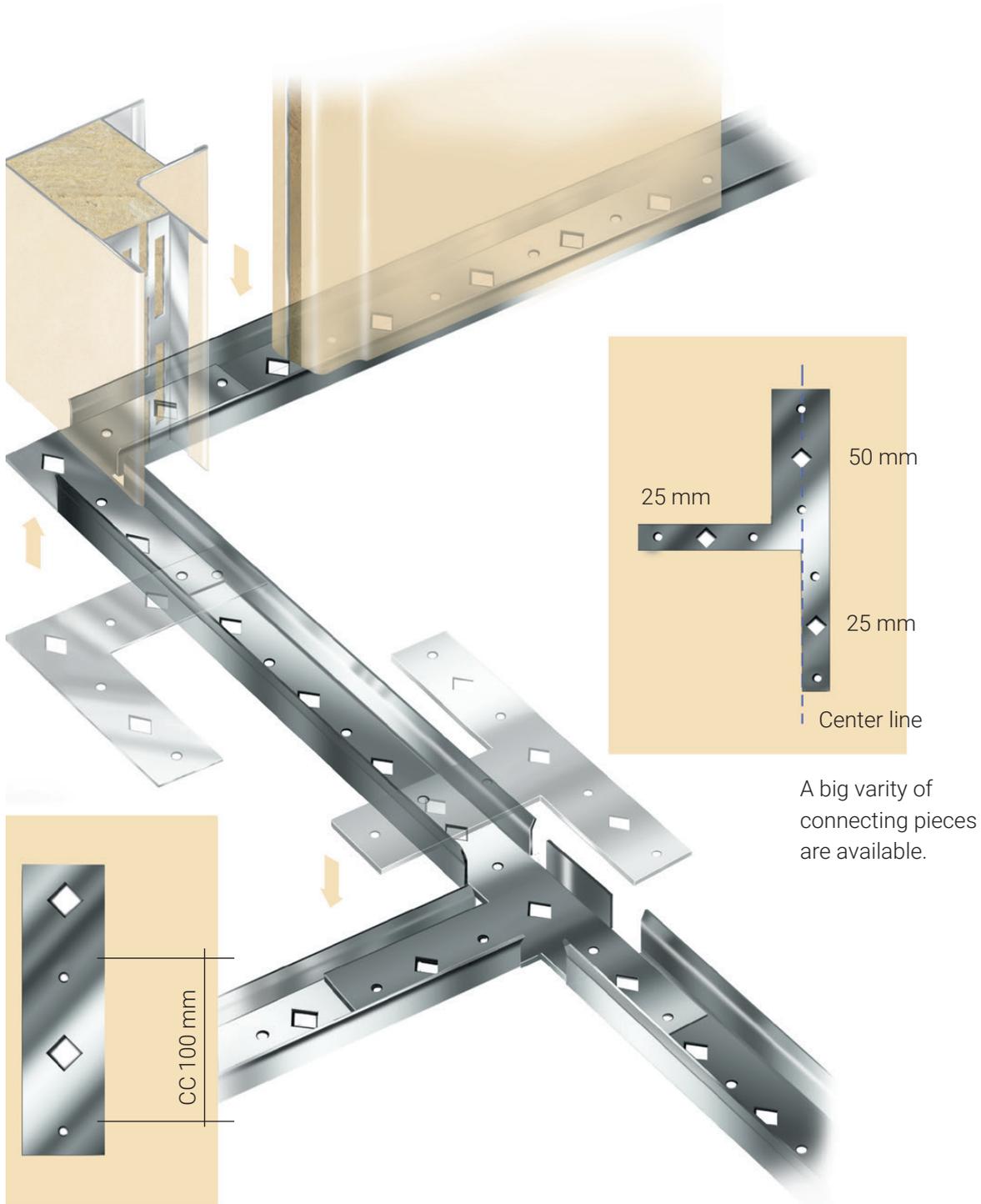


Coaming for 50 mm panels
wet / dry

MODULAR PROFILE SYSTEM

Based on a 100 or 50 mm modular system. All profiles and connecting pieces are prearranged and ready to fit.

No cutting necessary. After installation of the profiles the system ensures an accurate and rapid installation of the tailormade wall panels. Very cost effective!



INSPECTION DOORS AND HATCHES

For quick access to technical spaces such as valves, pipe connections and electrical boxes.

The surface finish is normally the same as the wall and gives a discreet finish.

Square key operation is standard. Flush squash handle is optional.



Inspection Hatch. Max Size: 520 x 1485



Inspection Door.

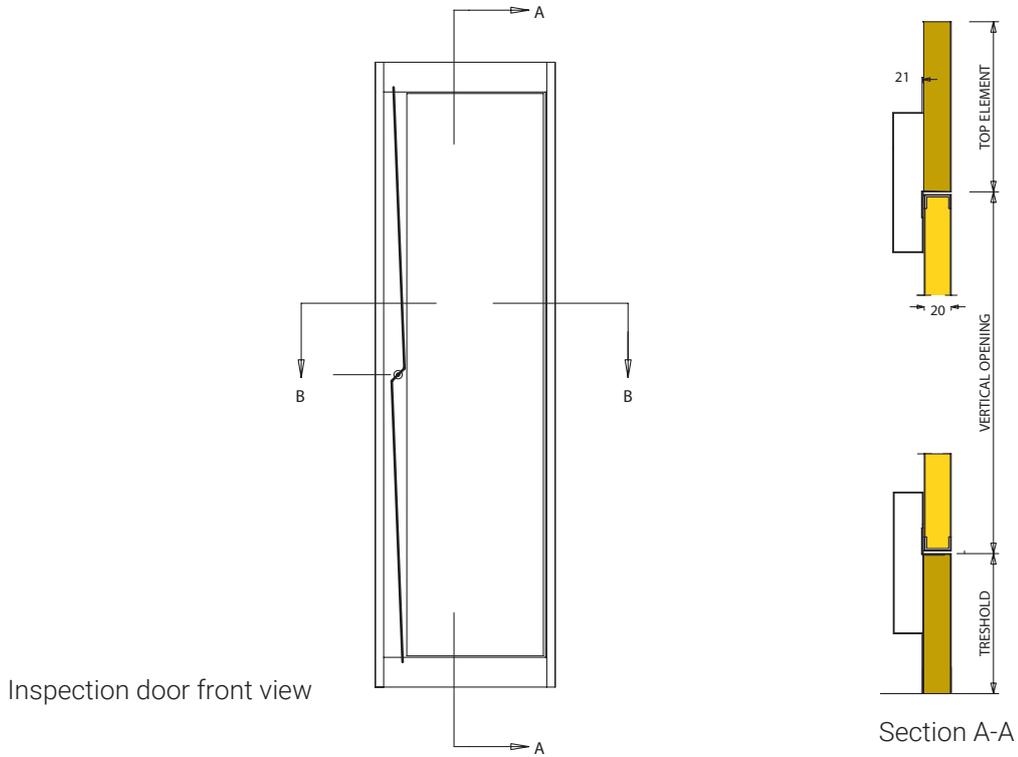
Max size 900x 1850 mm for B-15-class.



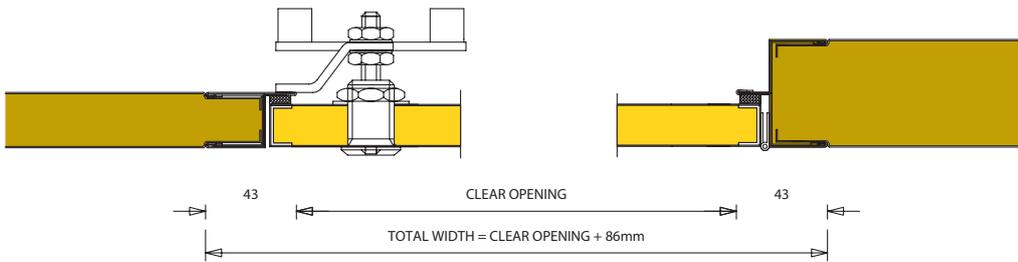
Split inspection door. Delivered as one piece

DESCRIPTION	INSPECTION DOORS & HATCHES
Fire Class	B-15
Surface	0.6 mm steel sheet
Core material	Rockwool 250 kgs/m ³
Standard c.o	514 mm
Thickness	20 mm
Weight	19 kg/m ² approx
Lock	3-point square lock

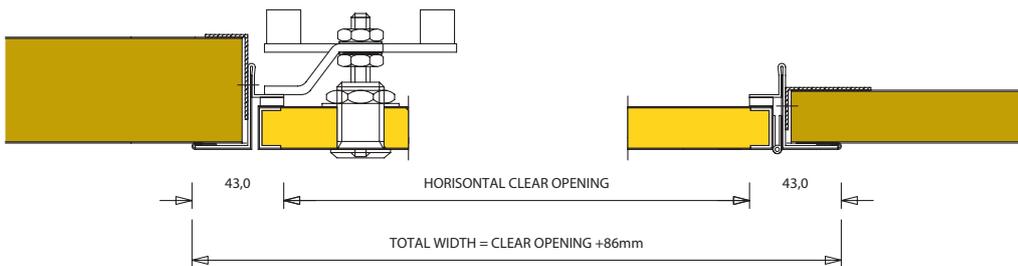
INSPECTION DOOR TECHNICAL DETAILS



Section B-B – Flush mounted / Modular edition

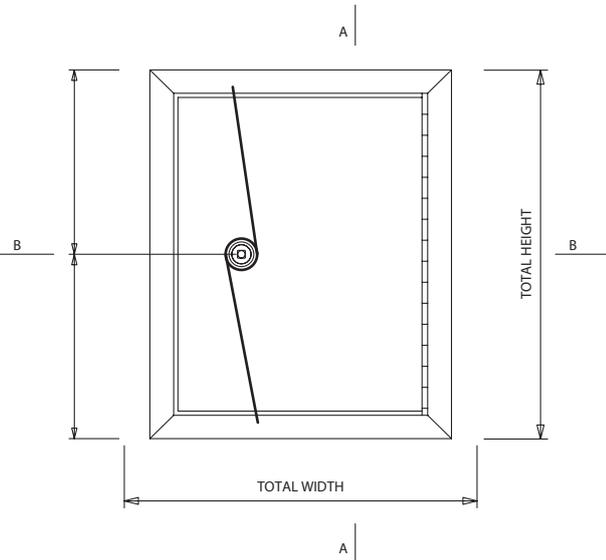


Section B-B – Cut edition

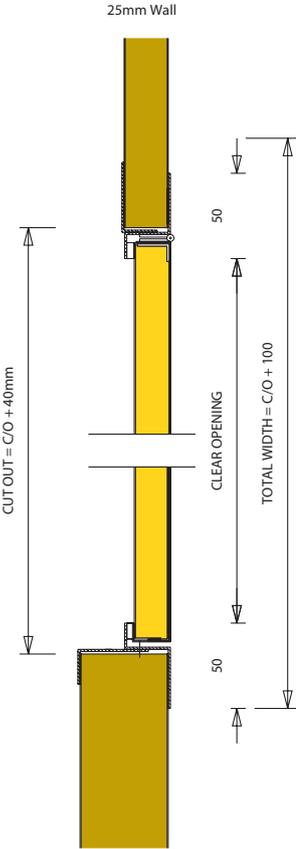


INSPECTION HATCH TECHNICAL DETAILS

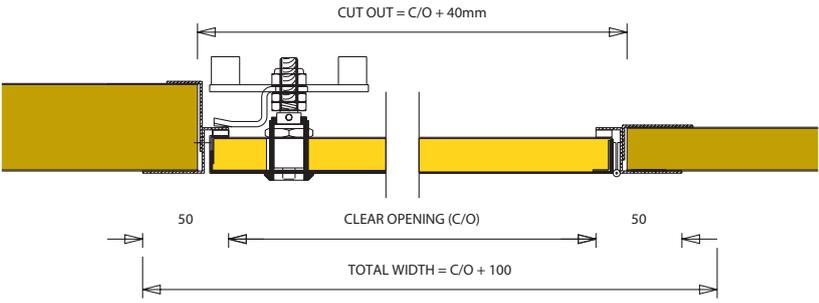
Inspection hatch front view



Section A-A



Section B-B – Wall hatch

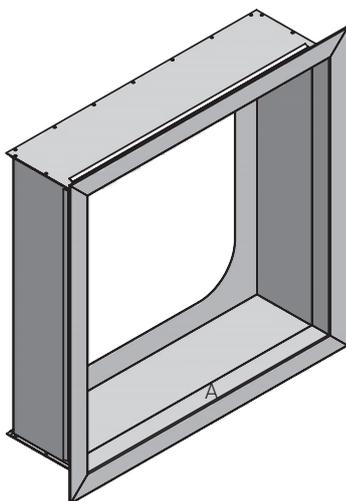


WINDOW-BOXES

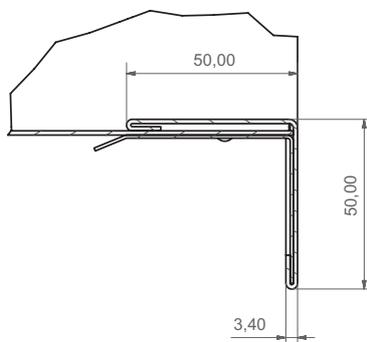
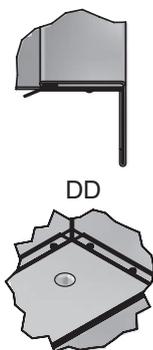
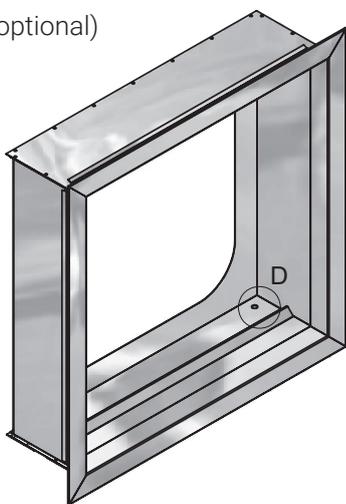
Window boxes are made from 1.25 mm galvanised steel plates and painted in required colour. Dimensions according to customers demand. Other solutions can be made according to customers specification.



Type 1: Standard windowbox



Type 2: Windowbox with trap condensator collector (optional)

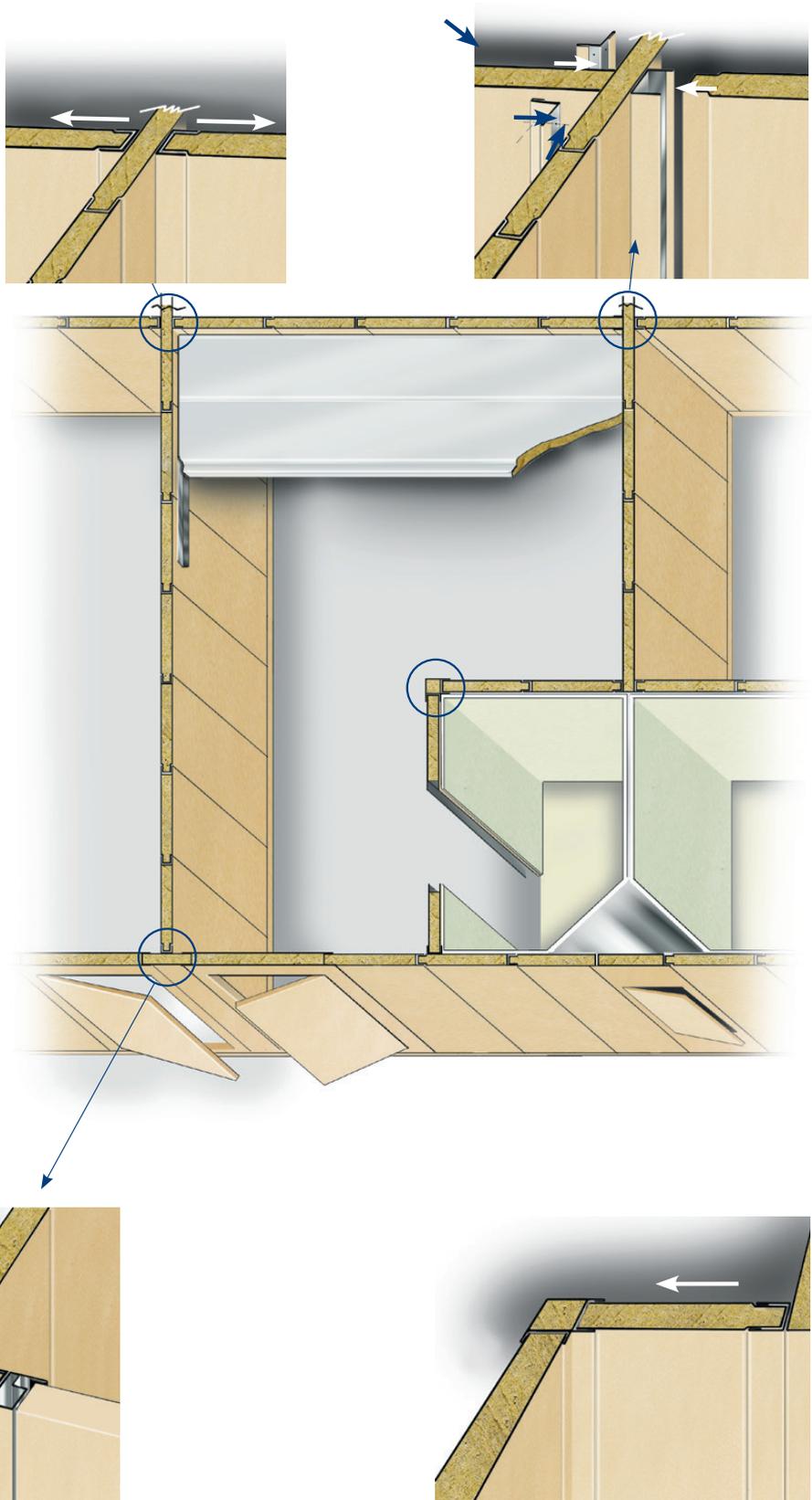


EXAMPLE OF STANDARD SYSTEM

A standard system is a flexible system allowing adjustments onboard the vessel during construction. The panels are delivered in one standard size and are cut to fit according to the on site measurements with use of standard profiles.

Profiles are designed to leave as few visible screws/rivets as possible.

Standard profiles, see page 33-36.



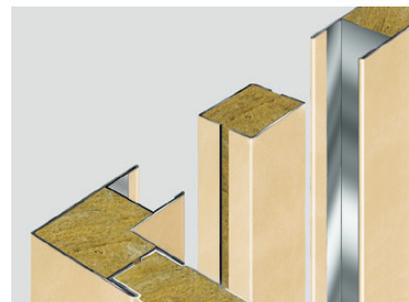
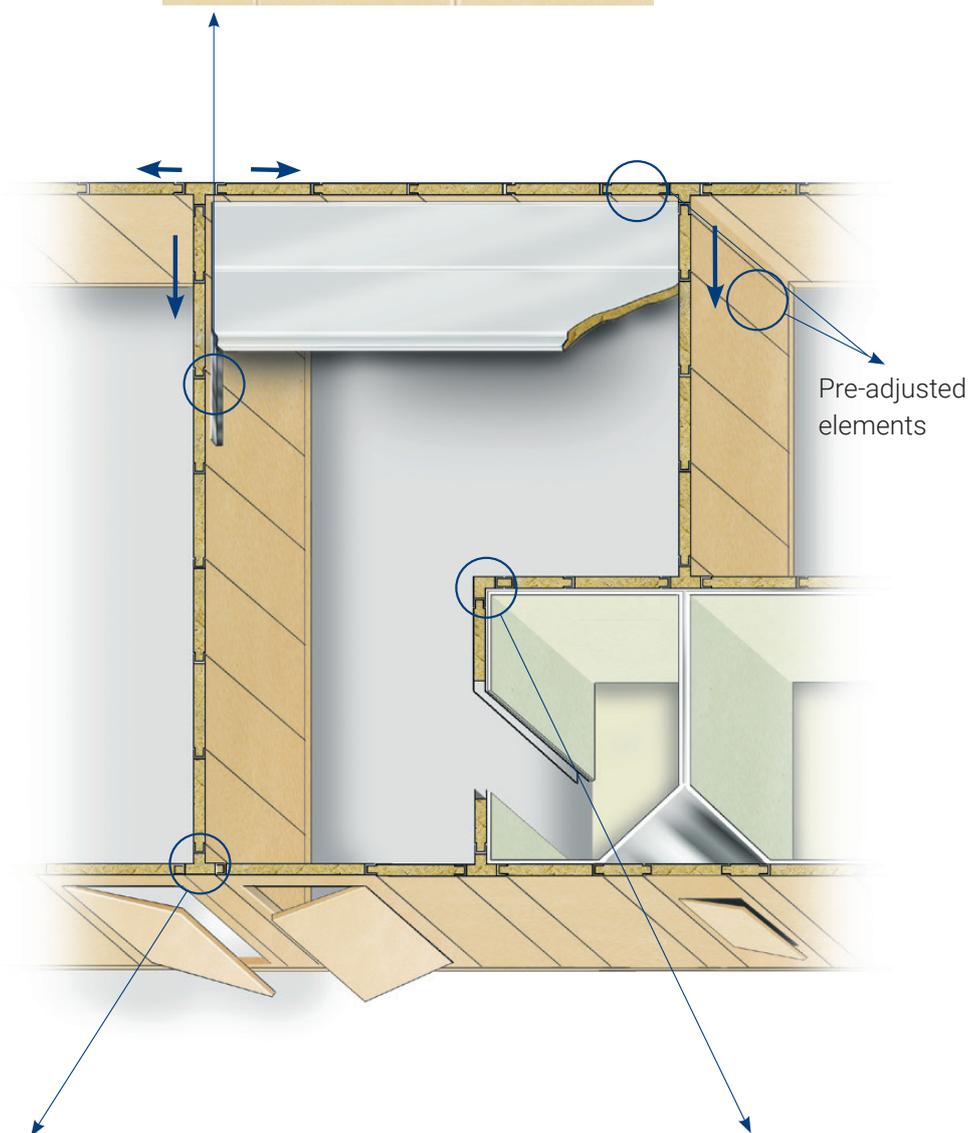
EXAMPLE OF MODULAR SYSTEM

A modular system

is a fully tailor-made system to avoid adjustments and cutting onboard vessels. These systems reduce the installation time for the yard and more importantly reduces costs.

A modular system leaves a smooth finish with no external profiles, no visible screws/ rivets.

It is appreciated just as much for commercial vessels and offshore rigs as it is for cruise vessels.

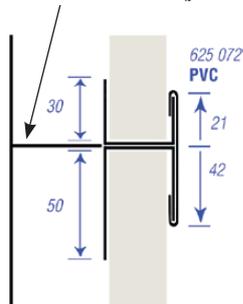


PROFILES

Horizontal Joint

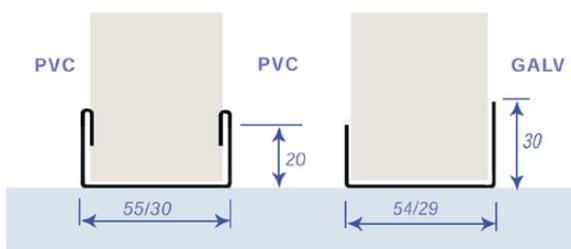
For areas where ceiling height exceeds 3000 mm.
Used for linings only.

Connection to steel bulkhead (yard supply)



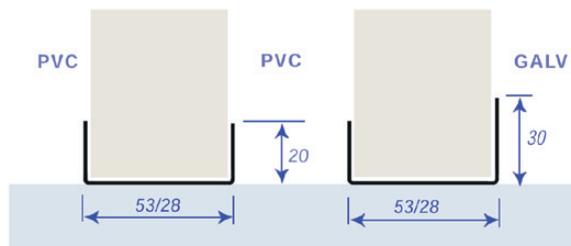
No: 650401/650411

Floor profile for visible use.
PVC coated galv. steel sheet.
For 25 mm panel:
625411 (or: 625401).



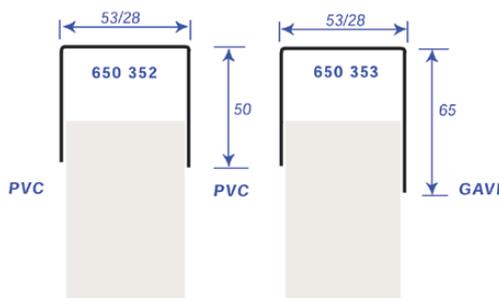
No: 650300/650310 Standard top profile and 650400/650410 Standard floor profile

galvanised profiles in 0.9 mm galv. steel sheet.
For 25 mm panel: Top 625300/625310 and floor 625410 (or: 625400).



No: 650352/650353

Standard galvanised top profile for suspension. Also available with brackets for welding.
For 25 mm panel: 625353(or: 625352).
Note! Max length of profiles = 3000 mm.



No: 650010

Adjustment-profile for flush start.
PVC coated galv. steel sheet.
For 25 mm: 625010.

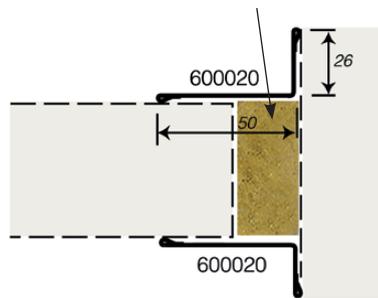


PROFILES

No: 020

Finish with two profiles against crossing wall. Also used as start with two-coloured wall.
PVC coated galv. steel sheet.

Stuffed with loose insulation (yard supply)



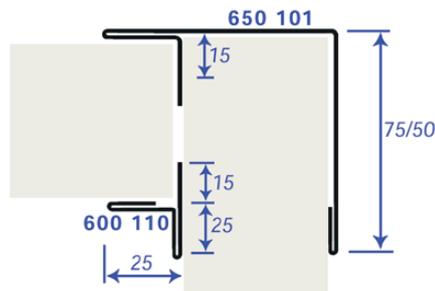
No: 650032

Adjustment profile for start/stop.
PVC coated galv. steel sheet.
For 25 mm panel: 625032.



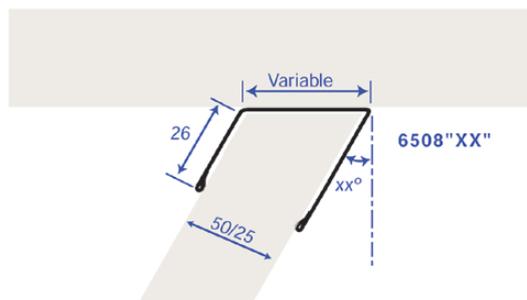
No: 650101/110

Corner connection with two profiles for concealed blind rivets/screws.
PVC-coated galv. steel sheet.
For 25 mm panel: 625101 and 600110.



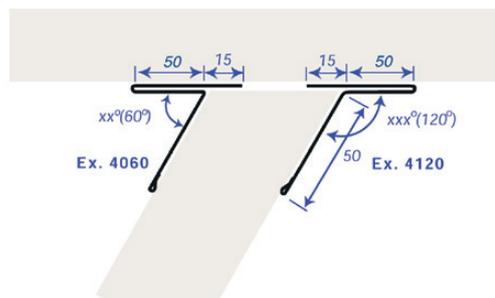
No: 8"xx"

Ex: xx = 45° = 650845
Bent adjustment starting profile.
Remove full stop each 5 degrees from 5 to 60°.
For 25 mm: 6258"xx".



No: 4"xxx"

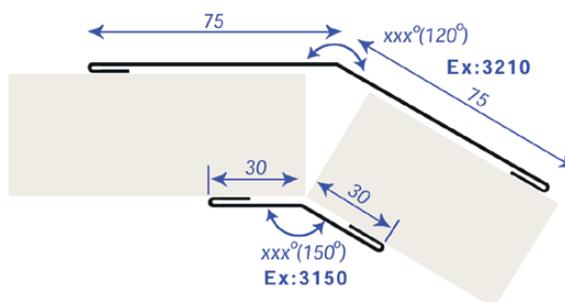
Bent T-connection with two prof. for stop against crossing wall. Also used as start with two-coloured wall.
Remove full stop each 5 degrees from 5 up to 135°.



PROFILES

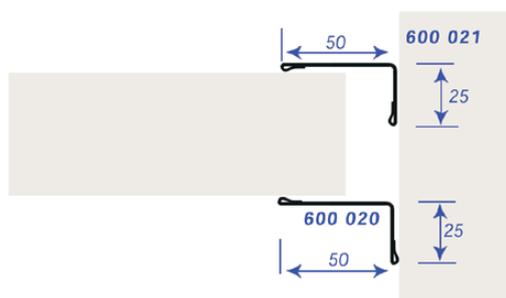
No: 3"xxx"

Bent profiles for changing of wall direction.
Remove full stop each 5 degrees from 30 to 305°.



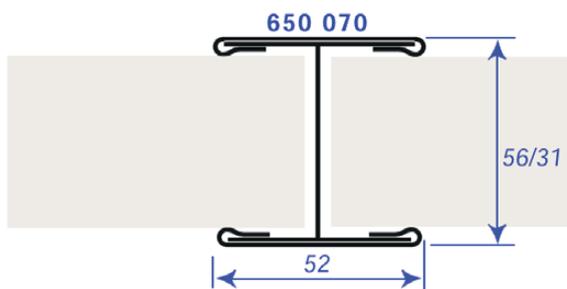
No: 021/020

Two coloured partition wall.
Alternative profiles for start and stop between crossing wall. Only one profile will have visible screws.



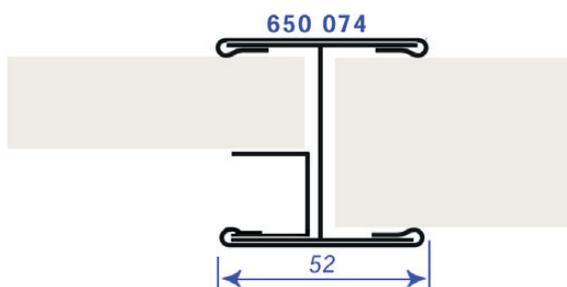
No: 650070

Wide joint-profile for connection of cut element.
For 25 mm panel: 625070.



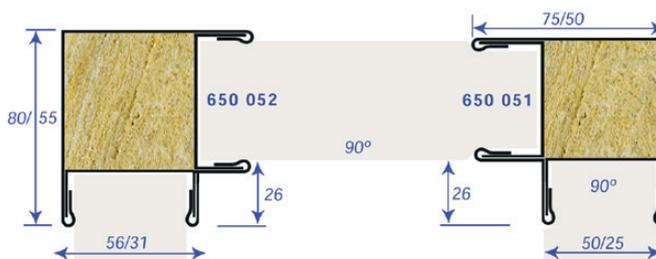
No: 650074

Wide joint-profile for change from 50 mm to 25 mm panel. Delivered with separate channel for fastening during installation.



No: 650051/650052

Corner connection for flush or cut panels. For 25 mm panel: 625051/625052.
Curved corners.
061/062 (R=23mm)



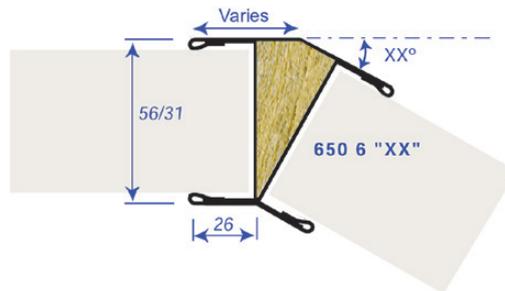
PROFILES

No: 6506"xx"

Ex: xx = 45° = 650645.

Bent joint profile for connection of cut panels, when wall direction changes. Remove full stop each 5 degrees from 5 to 85°.

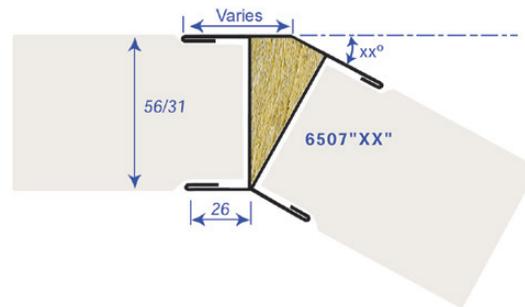
For 25 mm panel: 6256"xx".



No: 6507"xx"

Ex: xx = 45° = 650745.

Same as above, but for flush surface finish.





External Blast Wall Cladding



H120 External Cladding to Mini Modules

Omega Wall Panels	2.2
Omega Roof & Deck Panels	2.4

A60 HEAVY DUTY WALL SYSTEM

A totally new and revolutionary concept in composite panel manufacturing.

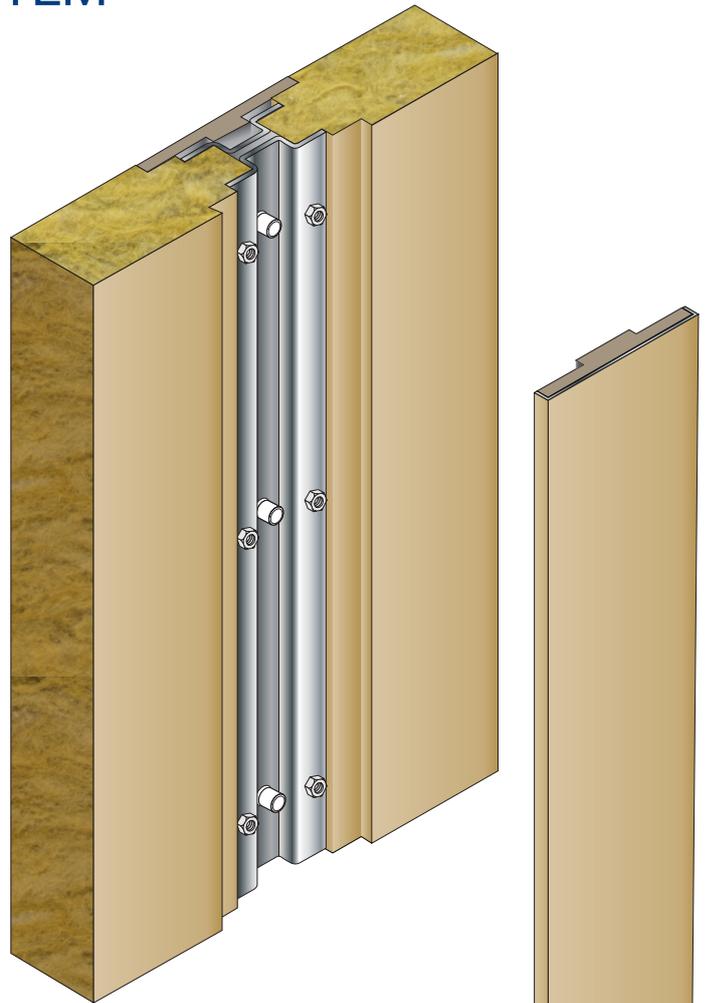
- A fully mechanically fixed system.
- Lightweight construction.
- Wind and blast resistant.

EXTERNAL

Non load-bearing stainless steel panels will replace conventional heavy steel plate cladding. No need for added insulation or decorative liners.

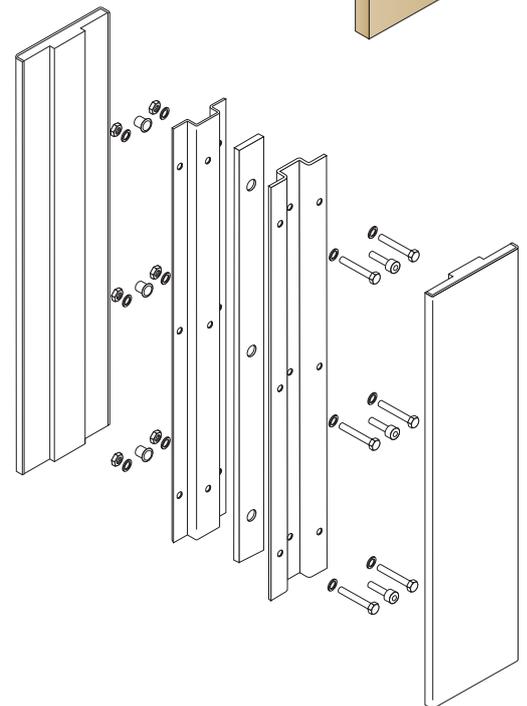
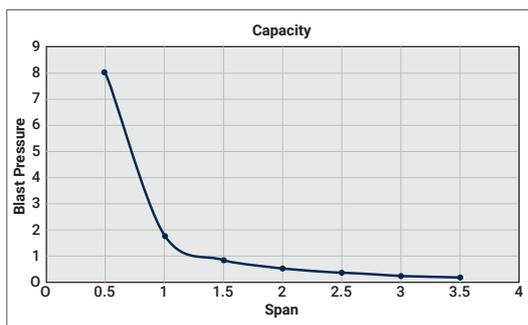
INTERNAL

Non load-bearing decorative panels will replace conventional steel plate bulkheads with added insulation and decorative liners. Typically for use around Galley's, Laundry's and Plant Rooms.

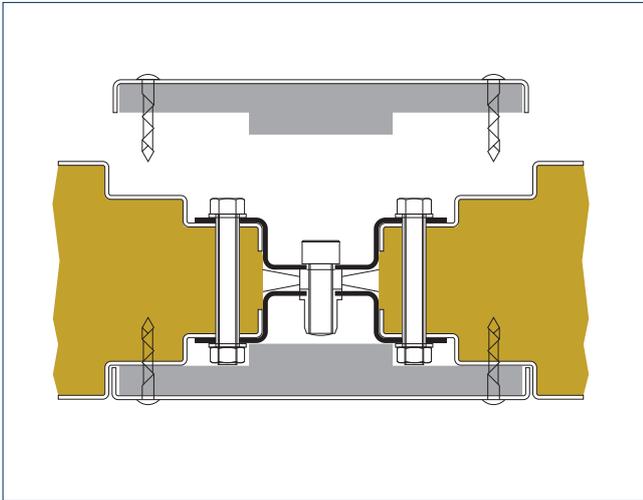


DESCRIPTION	BD HD100
Fire class	A60
Standard width	1200
Module length	Up to 6000mm
Module width	300 to 1200mm
Thickness	100mm
Weight	32kg/m ²
Sound reduction	Rw 40dB
Thermal insulation	U = 0.32 W/m ² K
Application	Cladding / Partition

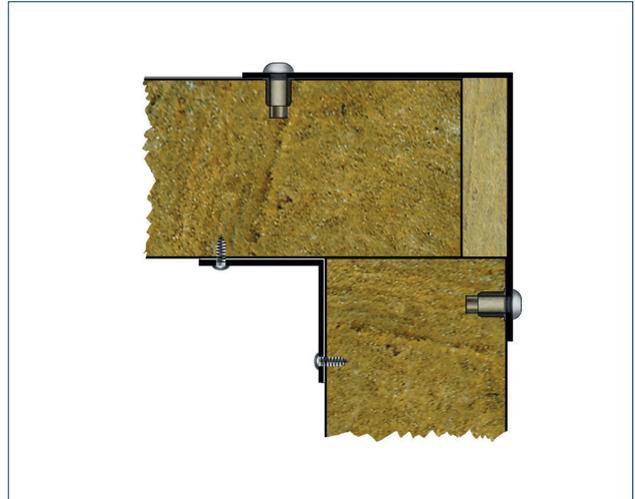
SPAN (m)	BLAST CAPACITY (bar)
3.5	0.189
3.0	0.257
2.5	0.367
2.0	0.531
1.5	0.869
1.0	1.79
0.5	8.03



TYPICAL CONNECTION DETAILS



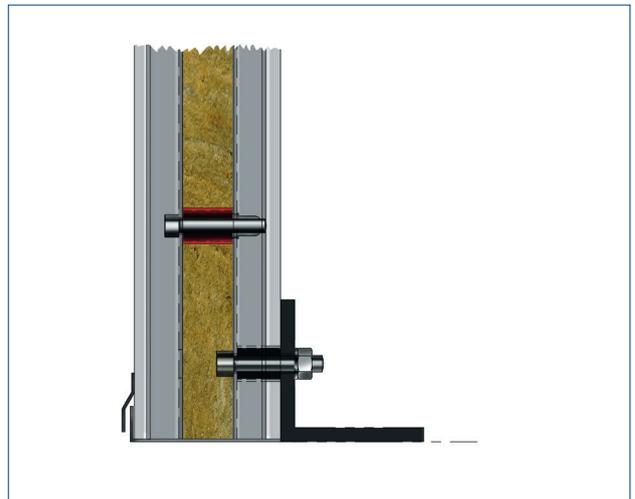
PANEL JOINT DETAIL



STD CORNER DETAIL



EXTERNAL HEAD DETAIL



EXTERNAL BASE DETAIL

Note:
BD Systems Panels are supplied with all the connecting profiles designed to meet project specific requirements.

H120 HEAVY DUTY WALL SYSTEM

A totally new and revolutionary concept in composite panel manufacturing.

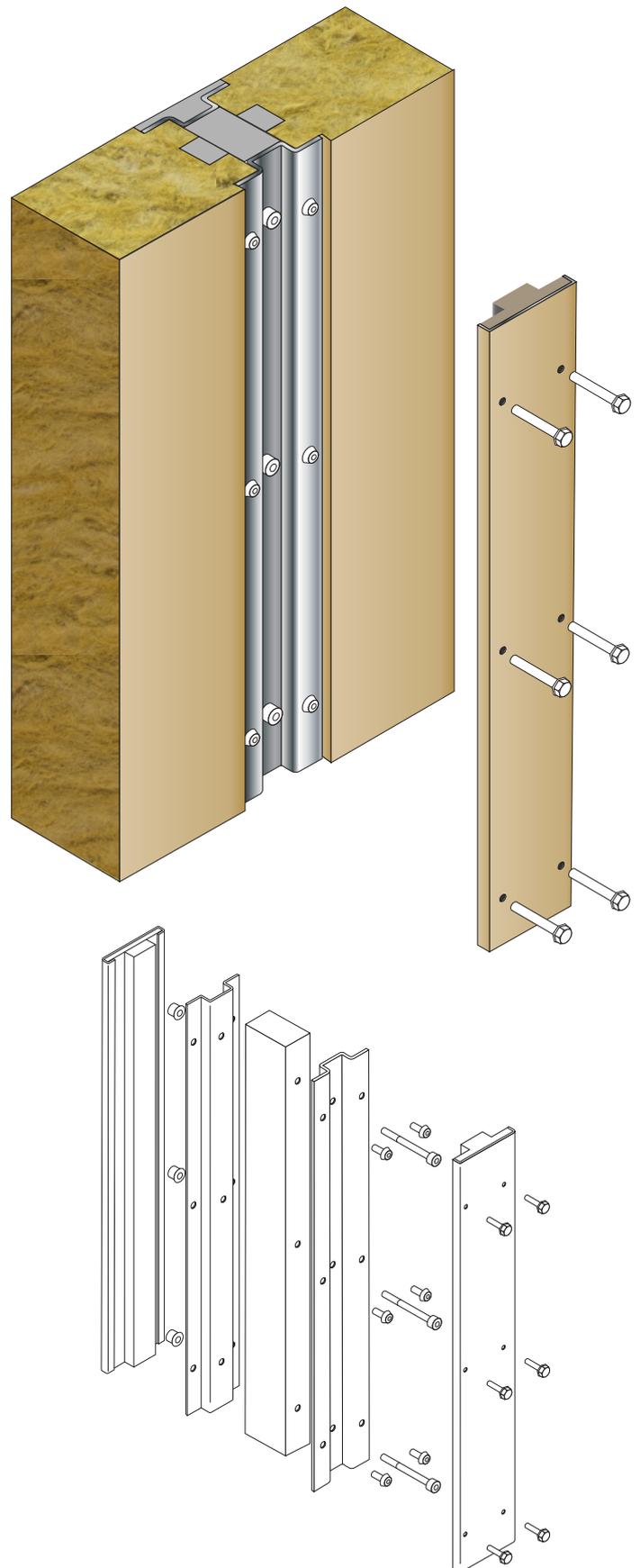
- A fully mechanically fixed system.
- Lightweight construction.
- Wind and blast resistant.

EXTERNAL

Non loadbearing stainless steel panels will replace conventional heavy steel plate cladding. No need for added insulation or decorative liners.

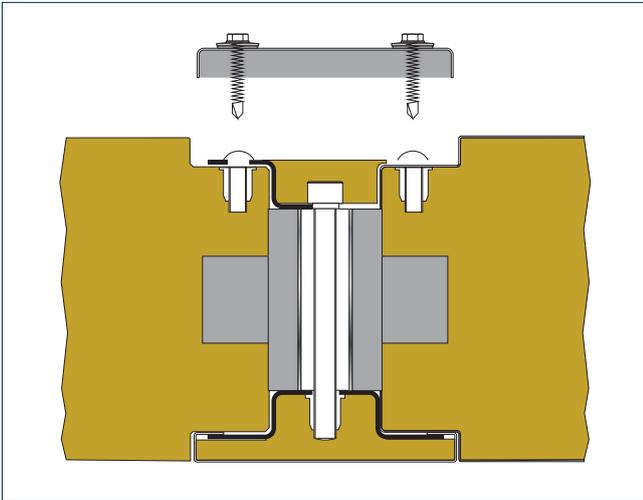
INTERNAL

Non loadbearing decorative panels will replace conventional steel plate bulkheads with added insulation and decorative liners. Typically for use within areas having a high risk of Hydrocarbon fires.

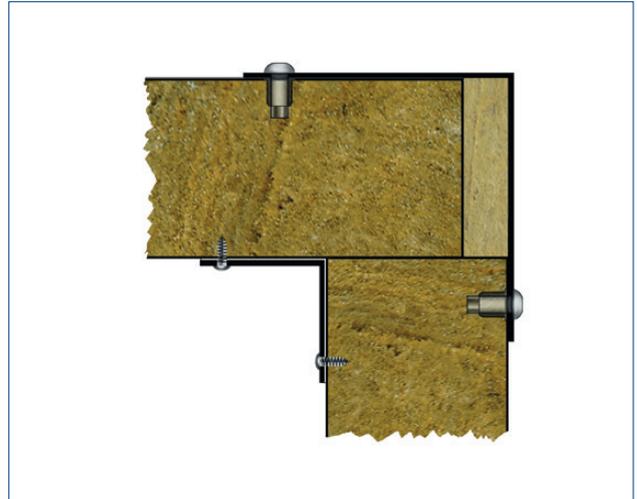


DESCRIPTION	BD.HD2-150
Fire class	H120 / 2 hour
Standard width	1180
Panel height	up to 6000 mm
Thickness	150 mm
Weight	61.5 Kg/m ²
Sound reduction	R _w = 50 dB
Thermal insulation	U = 0.22 W/m ² K
Application	Cladding / Partition

TYPICAL CONNECTION DETAILS



H120 - 2 HOURS

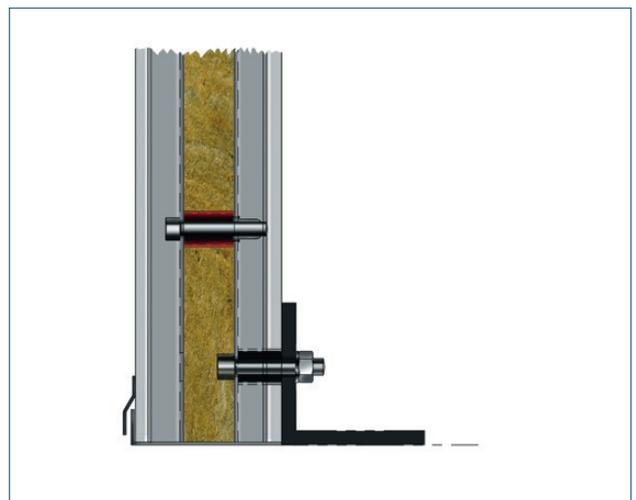


STD CORNER DETAIL



EXTERNAL HEAD DETAIL

Note:
BD Systems Panels are supplied with all the connecting profiles designed to meet project specific requirements.



EXTERNAL BASE DETAIL

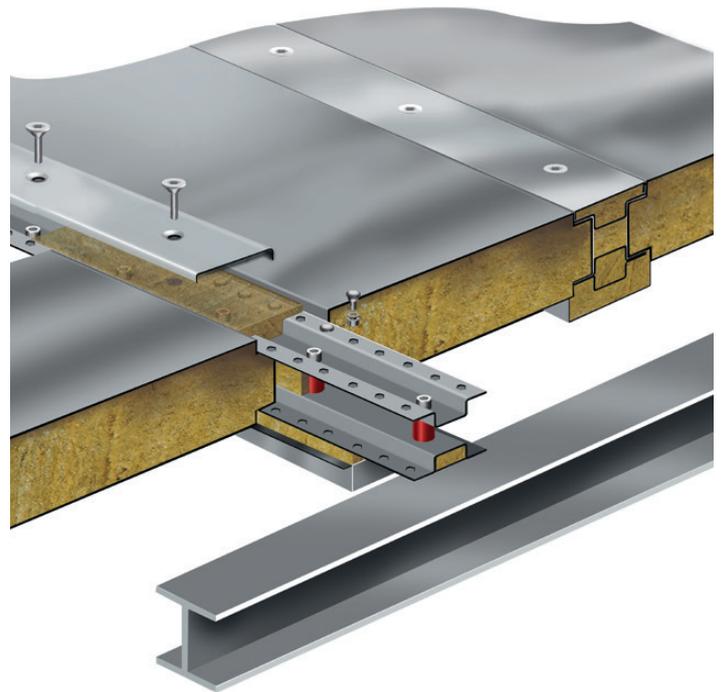
HD OMEGA PANELS INTERNAL / EXTERNAL

ROOF AND DECK PANELS

Further development of the “Omega” concept by BD has culminated in the certification of the HD (Heavy Duty) range of products. A range that covers all A and H Class firewall requirements for both Internal and External use.

The HD Deck panel system is used as an “External Roof Deck System” and as an “Internal Deck System”. The range available is from A0 to A60.

Although classified as a non-load bearing system the very nature of a deck requires structural loading within everyday use and within a fire situation. The BD A60 rated deck system was fire tested under load conditions. From these test results we are able to design the secondary steel support structure necessary to achieve project specific load conditions.



DETAILS

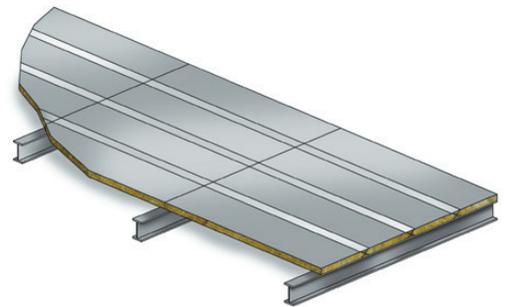
Encapsulated insulation and completely flat surface eliminates the need for floor-levelling screeds.

Up to a 30% weight saving can be achieved over conventional steel deck construction.

Up to 35% saving can be achieved over conventional deck fabrication and installation times.

Fully detailed design drawings and structural calculations are available from BD Systems Ltd.

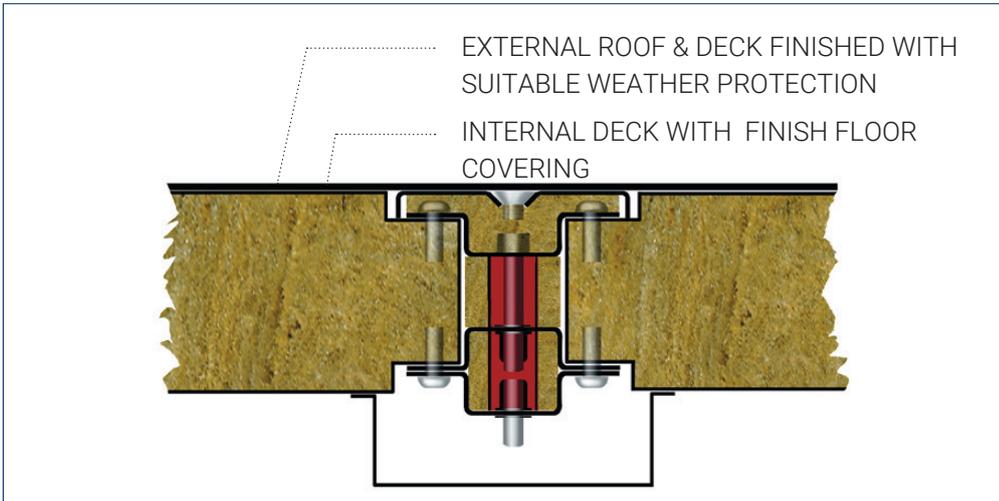
All weights shown are for the fully installed system and include all profiles.



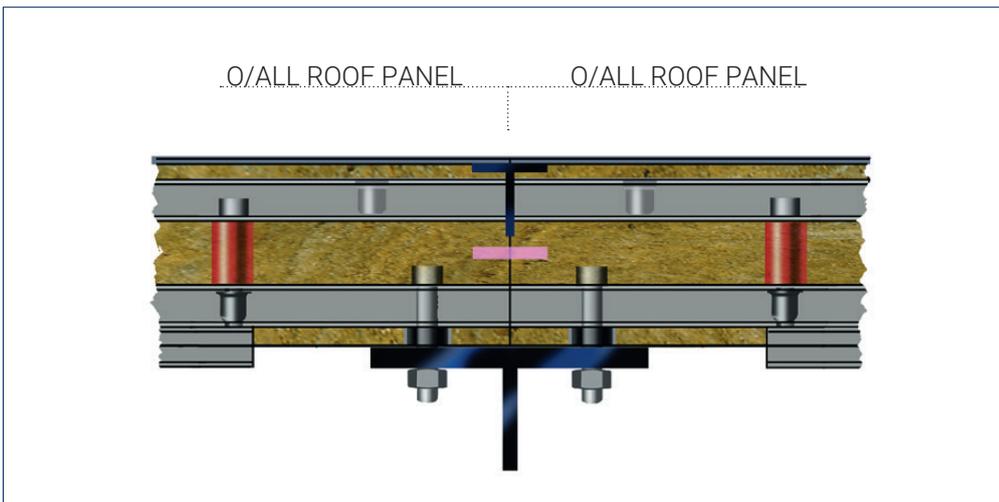
System tested under a load of 5 Kn / m2 at maximum of 2200mm Span.

DESCRIPTION	BD.DECK-100	BD.DECK1-100	BD.DECK2-100
Fire class	A0- / 1 hour	A60 / 1 hour	A60 / 1 hour
Standard width	600	600	600
Panel height	up to 6000 mm	up to 6000 mm	up to 6000 mm
Thickness	100 mm	100 mm	100 mm
Weight	48.35 Kg/m2	50.02 Kg/m2	50.02 Kg/m2
Sound reduction	Rw= 48 dB	Rw= 48 dB	Rw= 48 dB
Thermal insulation	U = 0.32 W/m2K	U = 0.32 W/m2K	U = 0.32 W/m2K
Application	Internal Decking	Internal Decking	External Roof Decking

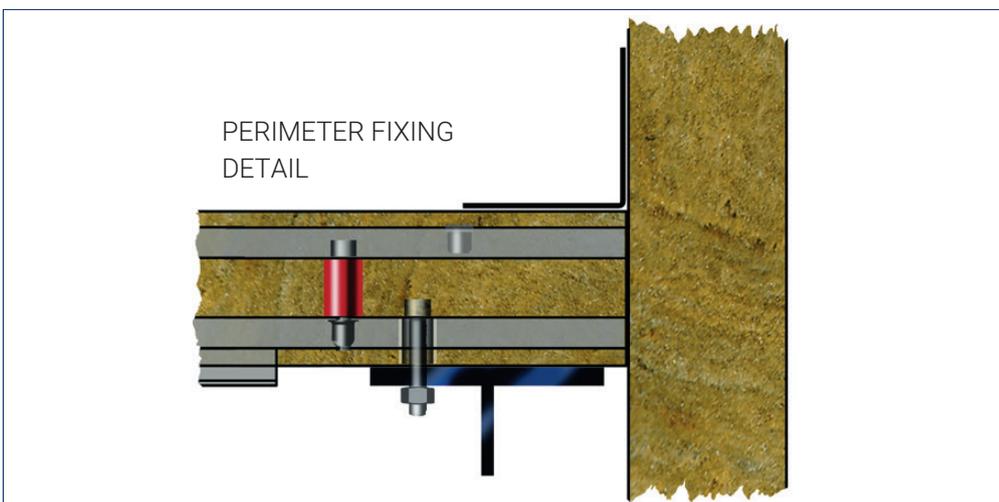
HD OMEGA PANELS CONNECTION DETAILS



A60 JOINT DETAIL (1 hour)



PANEL BUTT JOINT



DECK TO WALL (perimeter fixing)



Mearsk Gallant Additional Accommodation



Blast Wall Installation

CLEARSPAN Blast Wall3.2

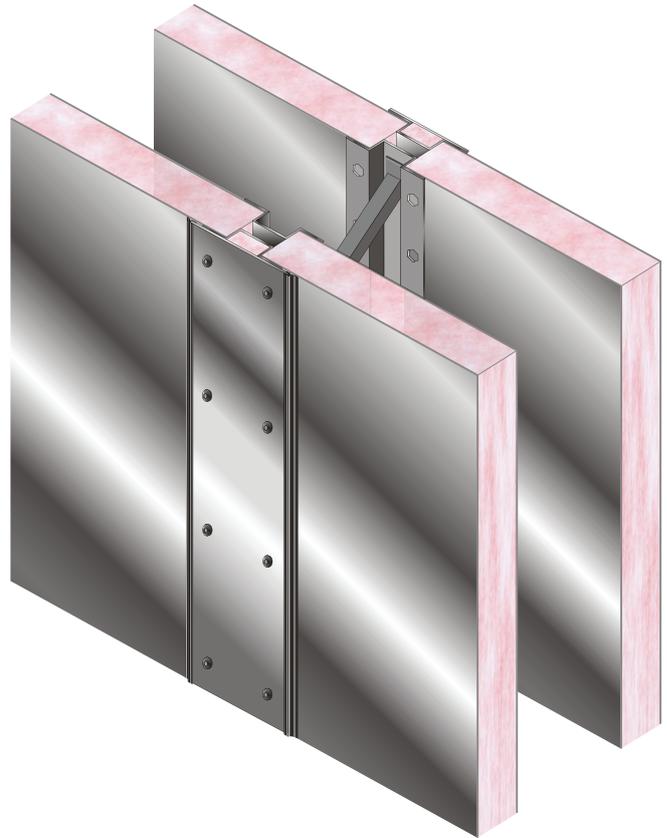
CLEARSPAN™ H60

As a fully mechanically fixed structure CLEARSPAN™ is a unique Lightweight Blast & Fire Wall System.

Manufactured from 2 x 50mm thick composite panels.

The unique design enables the inner and outer panels to be held in place with a structural panel joint.

The cavity structure is so designed that in the event of an explosion, the steel supports between the joint system will collapse in a controlled manner reducing the energy imported to the supporting structure whilst at the same time maintaining structural integrity in the face of a Hydrocarbon fire.

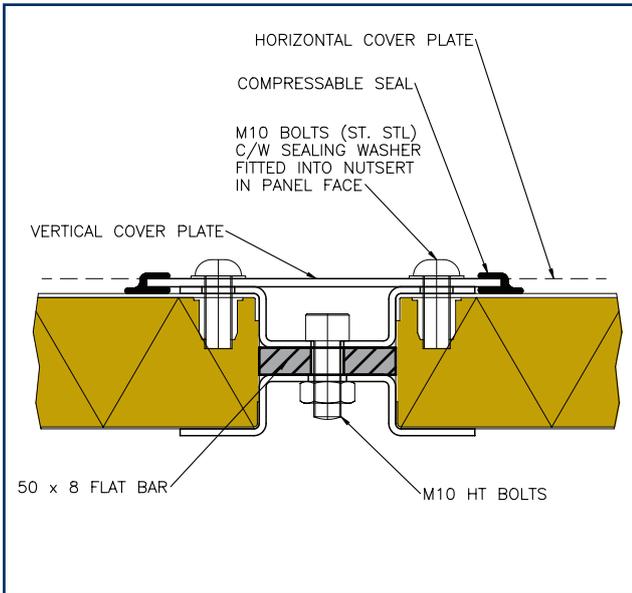


DETAILS:

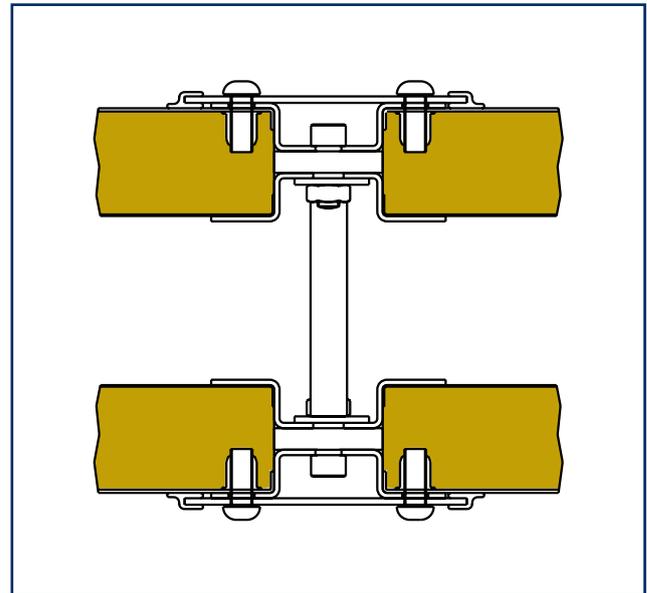
- Fully mechanically fixed
- Lightweight
- Significant Blast Loadings can be achieved without the need for additional support structures.
- Cavity depth and panel thickness can be adjusted to meet elevated Blast requirements.
- Designed to incorporate BD Blast doors, windows and penetrations.

DESCRIPTION	CLSP - H60
Fire Class	H60 / 2 hour
Standard Panel width	1.2 mtrs
Panel Height	up to 12 mtrs
Thickness	300mm (overall)
Weight	90 kg/m ² (average)
Sound reduction	R _w = 54dB
Thermal Insulation	U = 0.22 W/m ² K
Blast Design subject to project requirements	Illustrated design rated to 1.35 Bar and 4.35 mtr Span and 250mm Cavity

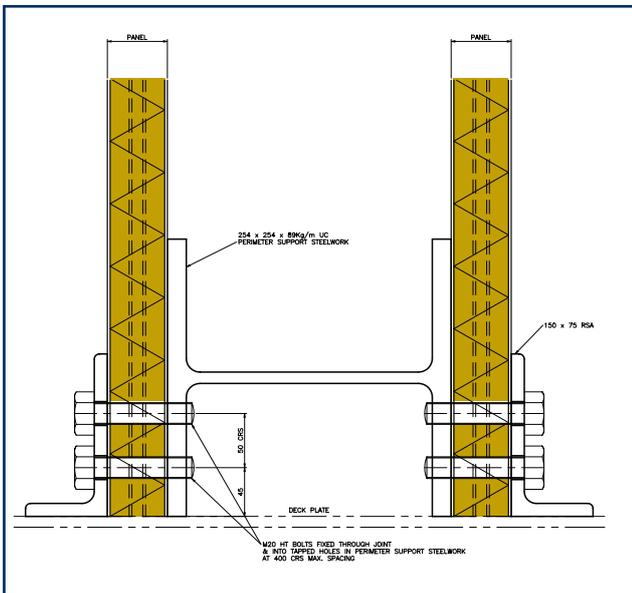
CLEARSPAN™ H60 CONNECTING DETAILS



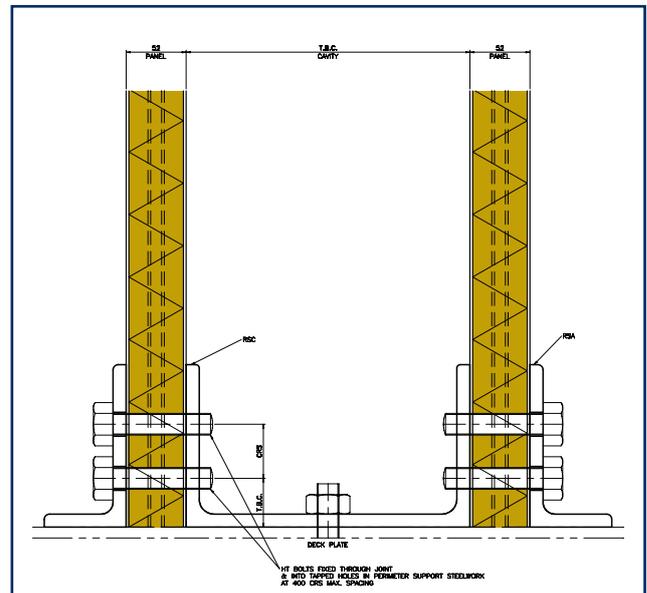
Typical Joint Detail



Horizontal Joint Detail

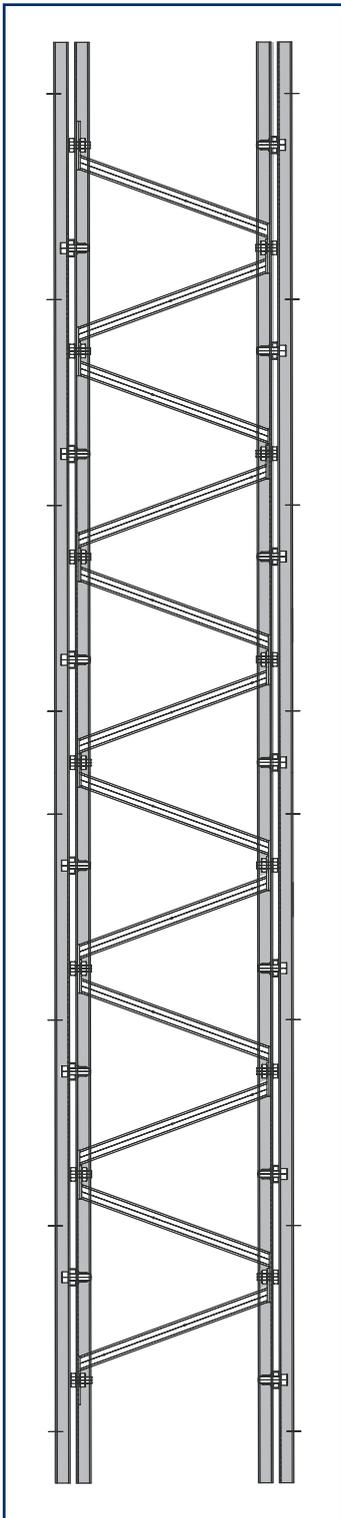


Typical periphery fixing detail

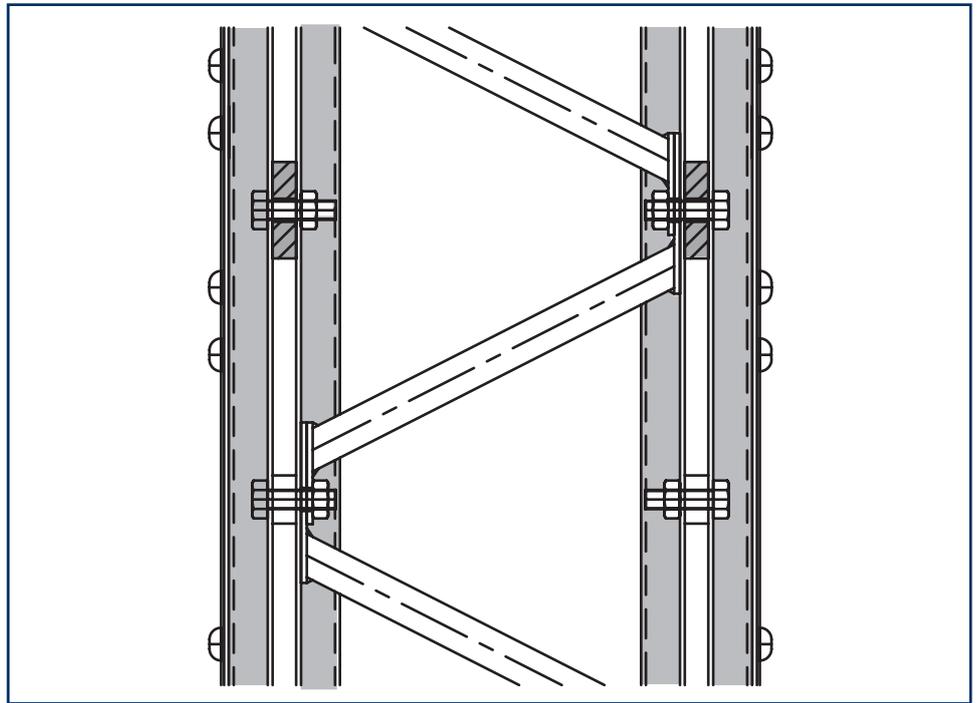


Typical periphery fixing detail

BLAST WALLS



Detail of Lattice Joint



Detail of Joint

FASTCLAD



Photos by Apply Leirvik, Norway

FASTCLAD

FastClad is an extremely fast, clean, easy and very cost effective means by which to refurbish existing slightly old and tired looking wall panel systems on board cruise ships or inside offshore accommodation modules.

The area to be refurbished is quickly enhanced when the FastClad sheets are adhered directly on top of the existing wall lining and partition panels using a specific IMO approved fire retardant adhesive system.

FastClad cover sheets are supplied as standard at 600mm width but are cut to project required length and with a crush fold bend to both long edges ensure a close, tight and seamless fit between each sheet applied.

Preformed internal and external angle trims are used when cut edges need to be obscured.

BD Systems (Europe) Ltd only use approved contractors for all such installations and we will be happy to recommend such companies to you upon request.

DESCRIPTION	FASTCLAD
Fire Class	BS476 / Class 1 or better
Standard Width	600
Module Length	up to 3000
Module Width	100 – 1200 mm
Thickness	0.7 mm
Weight	4.5Kg/m ²
Sound Reduction	+2 dB on existing
Thermal Insulation	None
Application	Decorative Covering

www.bdsystems.co.uk



B-CLASS:

- MS/MC Acoustic Type Door5.2
- G007 B15 Single & Double Doors.....5.4
- HB-SB Single & Double Sliding Doors....5.6

A-CLASS:

- HB-H (A30) Single Door5.8
- HB-H (A60) Single & Double Doors5.10
- HB-S Type Single & Double Sliding Doors ...5.12
- HB-5000 External Type Single &
Double Doors.....5.18
- HB-5000H External Escape Hatch5.20
- HB-5000 G Glazed External Escape Hatch.. 5.21

H-CLASS:

- H-120H External Single & Double Doors..5.22
- H-120S External Single Sliding Door.....5.24

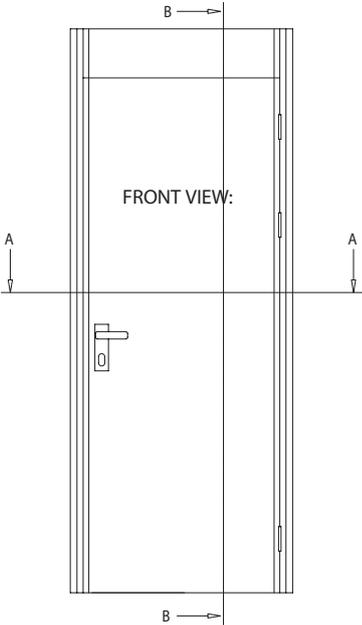
MS/MC ACOUSTIC TYPE DOOR B-RATED DOOR (B-0/B-15/B-30)

The doors are supplied complete with top element, frame, counter frame, door leaf, stainless steel threshold and hardware. Built-in reinforcement for door closer in top of door leaf as standard.

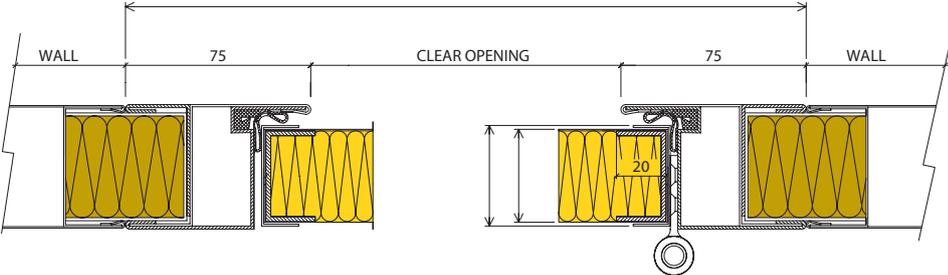


DESCRIPTION	MS	MC
Fire Class	B-15	B-30
Surface doorleaf	0.6 mm steel sheets	
Frame (and top element)	Painted, RAL colours	
Thickness doorleaf	38 mm	
Weight (c.o. 750 mm)	57 kgs	75 kgs
Core material	Rockwool 150 kg/m ³	
Clear light opening	Width: Standard up to 800 mm Height: Standard up to 2000 mm	
Element height	Up to 3000 mm	
Sound reduction	Rw=30 dB	Rw=41 dB
Standard specification	Door leaf PVC/PVC, 3 hinges, frame, counterframe, overpanel, lockcase with handle, escutcheon and stainless steel threshold.	

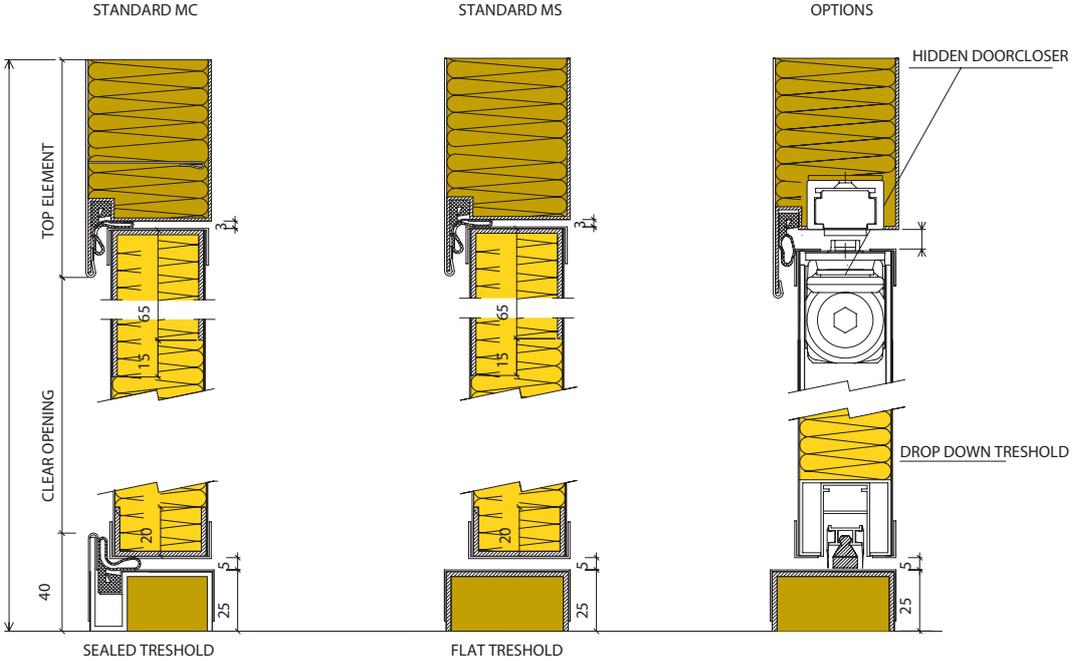
MS/MC ACOUSTIC TYPE DOOR TECHNICAL DETAILS



HORIZONTAL SECTION, FLUSH MOUNTED:



VERTICAL SECTION:

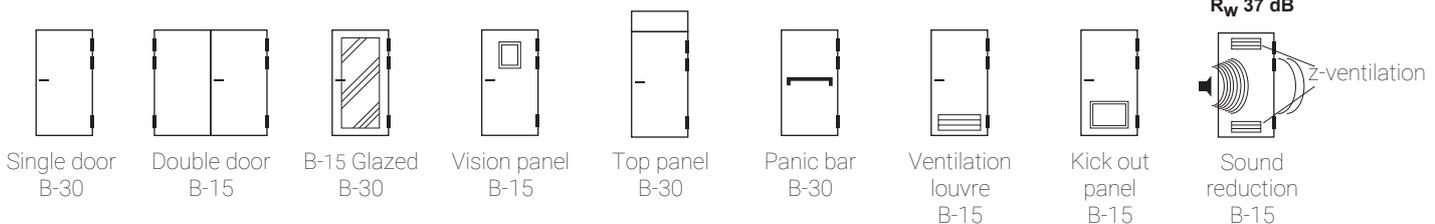


G007 B-RATED SINGLE & DOUBLE DOORS

G007 is a flexible and light interior door that gives good fire protection.

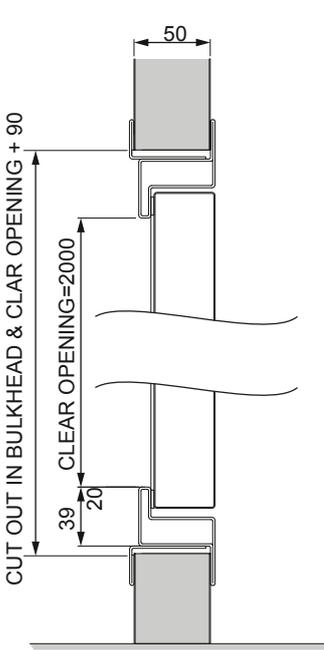
These doors are delivered as standard or with sound reduction quality up to 37 dB with a soft insulation core.

Colours and patterns according to available and approved PVC marine designs as well as painted surfaces.

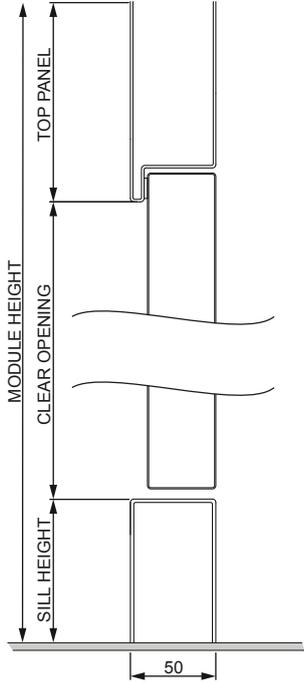
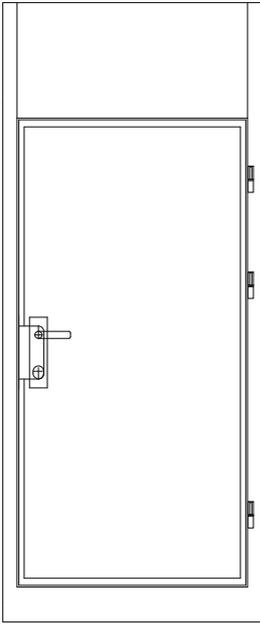


DESCRIPTION	G007	G007L32	G007L37	G007LS37
Fire Class	B-15/B-30	B-15/B-30	B-15	B-15/B-30
Doorleaf	PVC coated or painted steel sheets			
Frame	1.5 mm painted mild steel			
Thickness of doorleaf	40 mm	40 mm	40 mm	40 mm
Hinges	3ea stainless steel	3ea stainless steel	3ea stainless steel	3ea stainless steel
Weight (800x2000 mm)	45 kg	45 kg	50 kg	55 kg
Core material	Rockwool	Rockwool	Rockwool	Rockwool
Sound reduction	NA	32 dB	37 dB	37 dB
Air and gas tightness	NA	NA	NA	NA
Application	Interior doors	Interior doors	Interior doors	Interior doors
Comments				Ventilation louvre

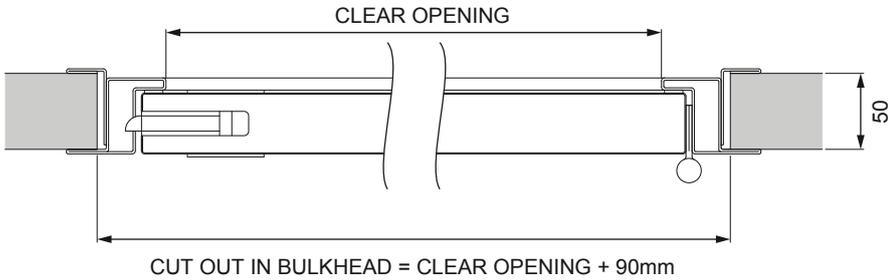
G007 DETAILS



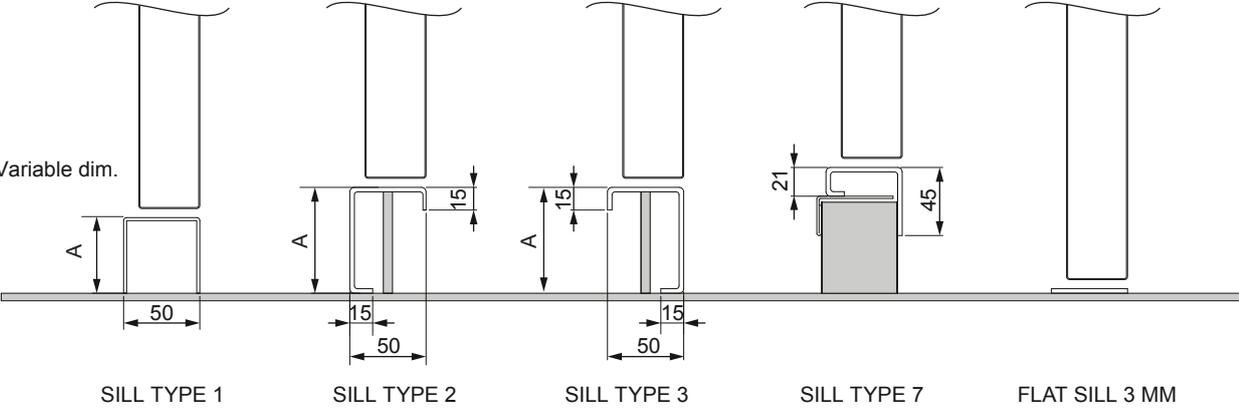
SILL TYPE 4



Door with integrated top panel and sill type 1



A = Variable dim.



SILL TYPE 1

SILL TYPE 2

SILL TYPE 3

SILL TYPE 7

FLAT SILL 3 MM

HB-SB SINGLE & DOUBLE SLIDING DOORS B-RATED

HB-SB is a light but solid sliding door with high fire rating.

Interior B-class sliding door.

The door can be delivered as a manual operated door or with electric operated door drive system.

DOORLEAF:

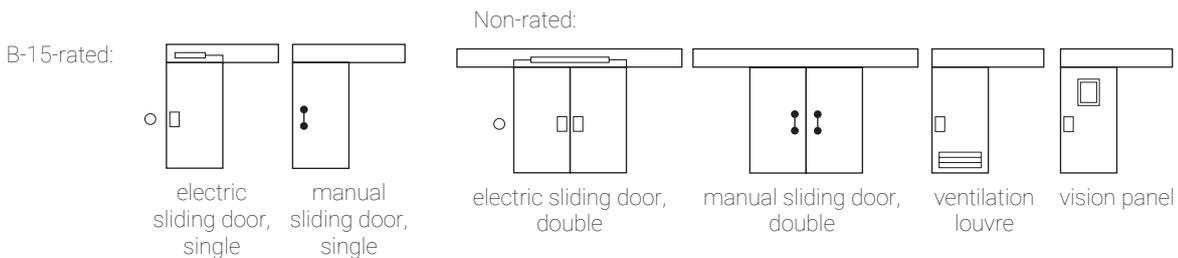
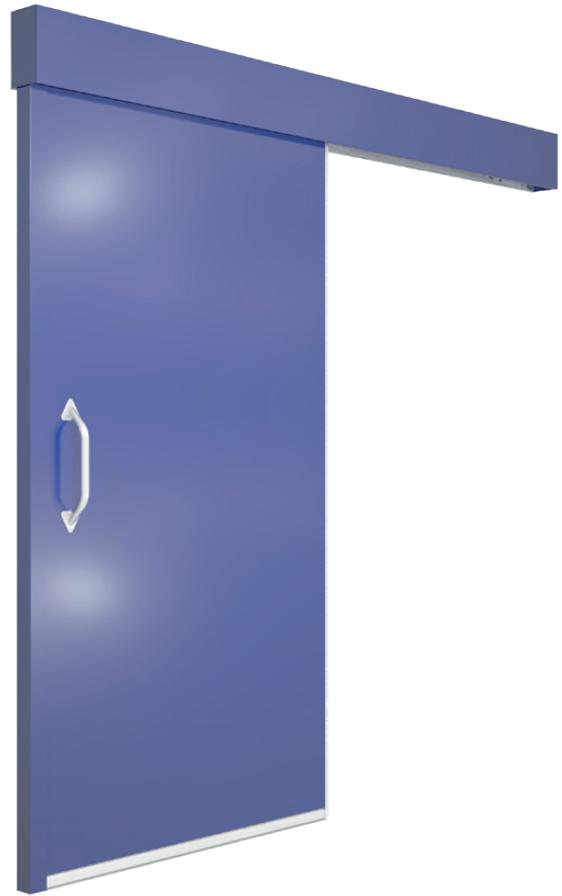
Made of 1mm PVC foiled steel plate from Dobel, with mineral wool core.

This door can also be delivered with painted mild-steel or stainless steel surface.

DOOR FRAME:

Clamping frame is standard. Delivery Bolting frame is an option.

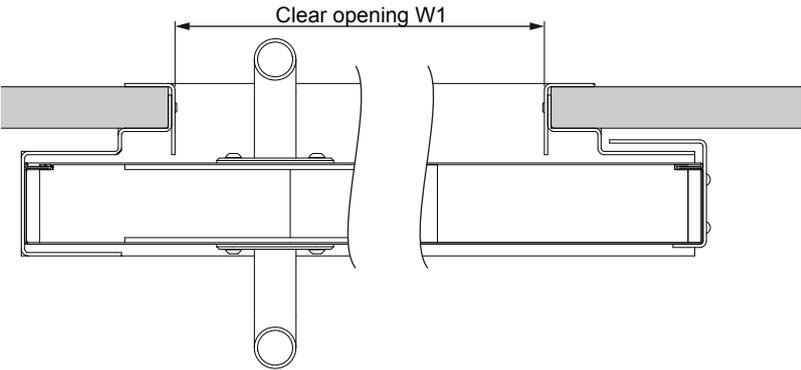
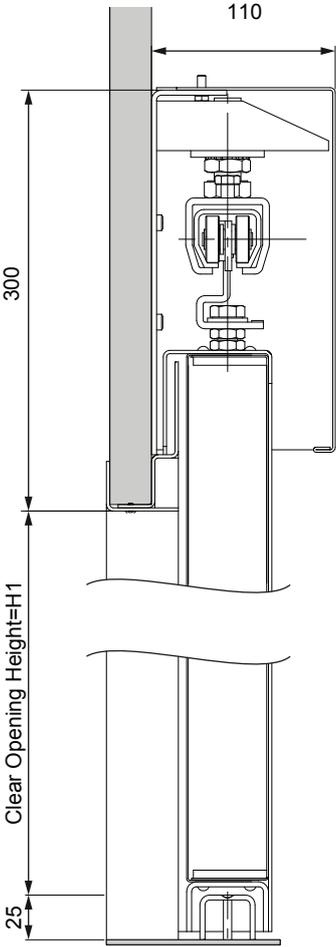
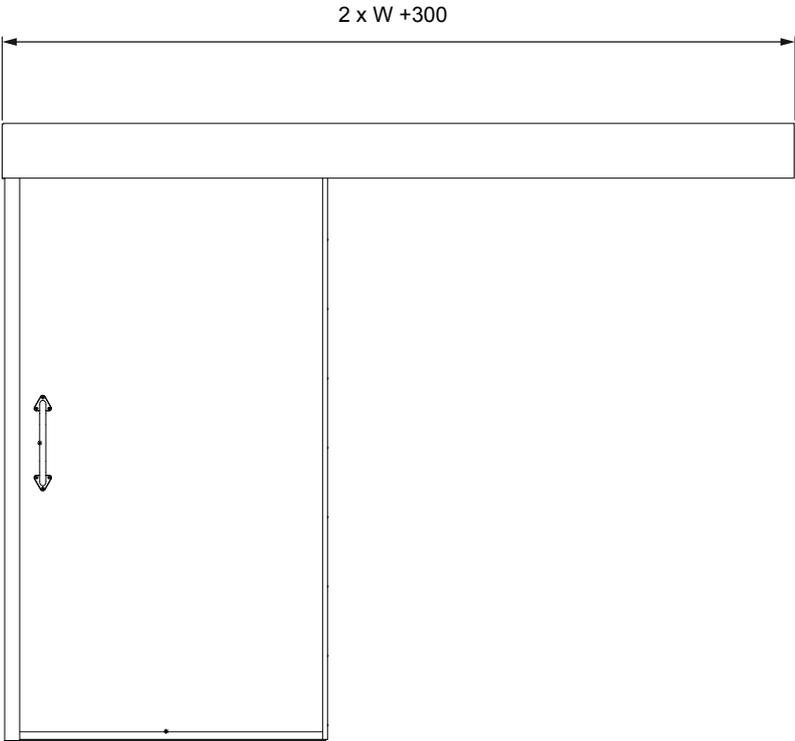
Surface with primed, painted or stainless steel surface.



DESCRIPTION	HB-SB
Fire Class	B-15
Doorleaf	PVC coated, painted or stainless steel surface
Frame	2 mm painted mild steel or stainless steel.
Thickness of doorleaf	46 mm
Weight (800x2000 mm)	85 kg
Core material	Rockwool
Sound reduction	NA
Air and gas tightness	NA
Application	Interior

HB-SB SINGLE & DOUBLE SLIDING DOORS

TECHNICAL DETAILS



HB-H A30 A-RATED INTERIOR DOOR

HB-H A-30 is a lightweight door with a high fire rating, excellent for used in combination with our door type G007.

DOORLEAF:

Made of 1mm PVC foiled steel plate with mineral wool core. This door can also be delivered with painted mild-steel or stainless steel surface.

DOOR FRAME:

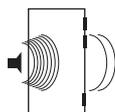
HB-H A-30 has many flexible installation solutions. Door frame with Z-profile for welding is standard. As an option the doors can be delivered with bolting or with counter frame.



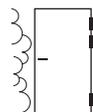
40 dB



single door



sound reduction



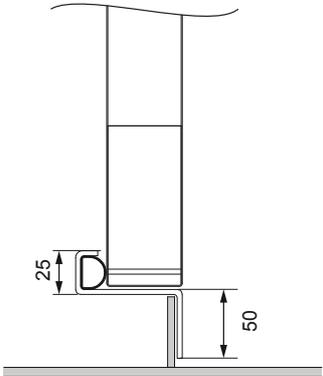
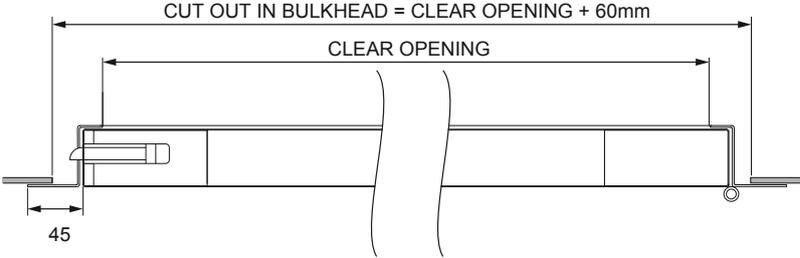
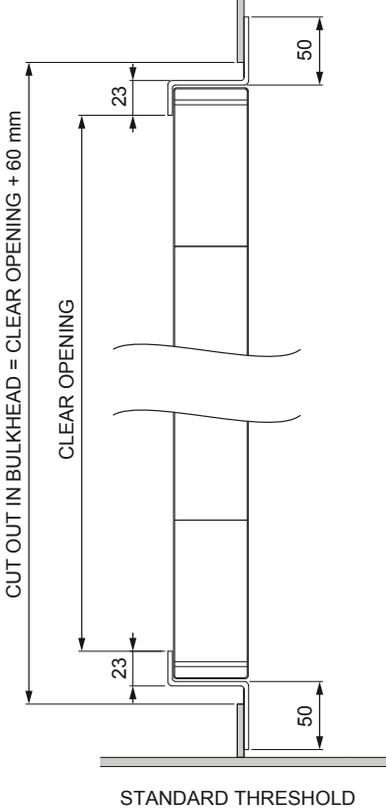
gas-tight



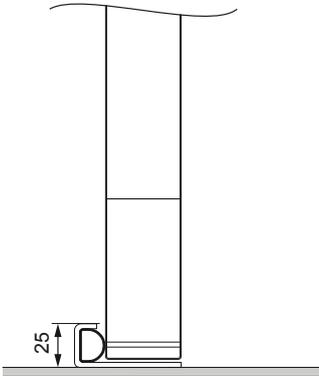
panic bar

DESCRIPTION	HB-H FIRE CLASS
Fire class	A-0 / A-30
Doorleaf	PVC coated or painted steel sheet
Frame	3 mm painted mild steel
Thickness of doorleaf	48 mm
Hinges	3 ea. stainless steel
Weight (800 x 2000 mm)	57 kg
Core material	Rockwool
Sound reduction	RW = 40 dB (with gasket)
Air and gas tightness	Yes (with gasket)
Application	Internal

HB-H A30 TECHNICAL DETAILS



THRESHOLD WITH GASKET



FLAT THRESHOLD WITH GASKET

HB A60 A RATED SINGLE & DOUBLE DOORS

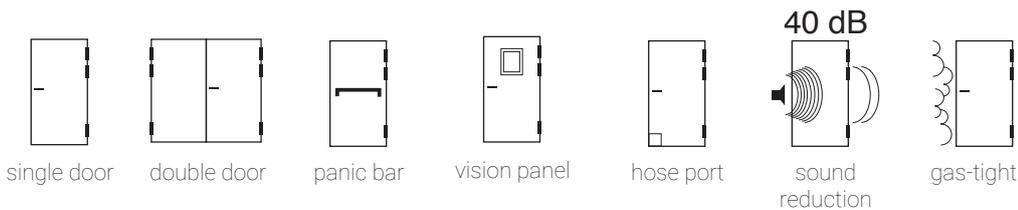
A solid door for internal or external use

DOORLEAF:

2mm stainless steel surface. Mineral wool core, or with ceramic fibre. Reinforcement plates for hinges, door closer and panic device are welded on inside of the door leaf.

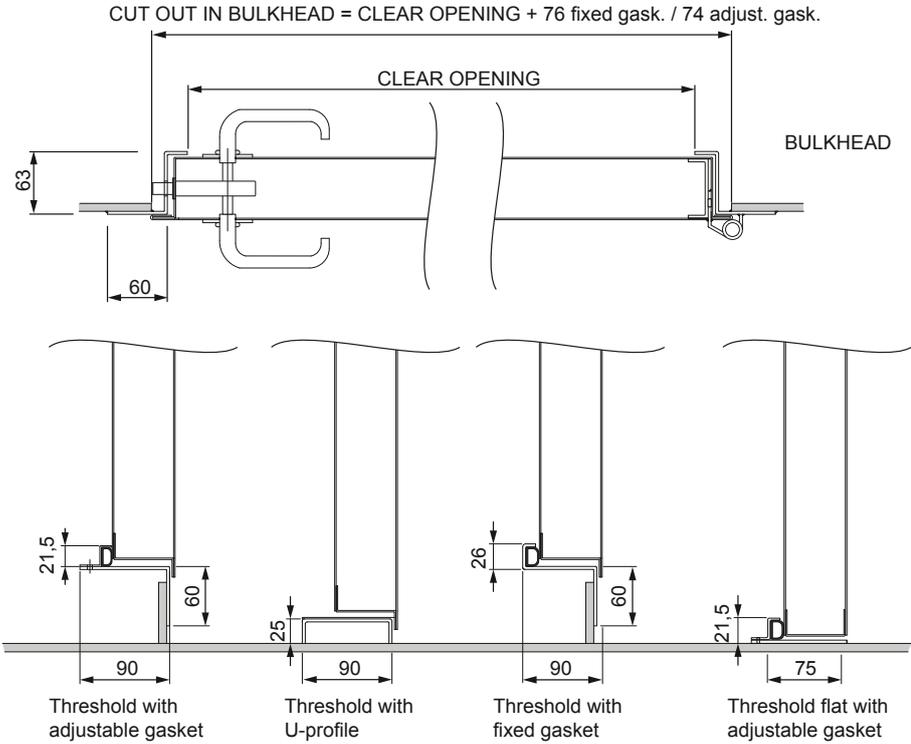
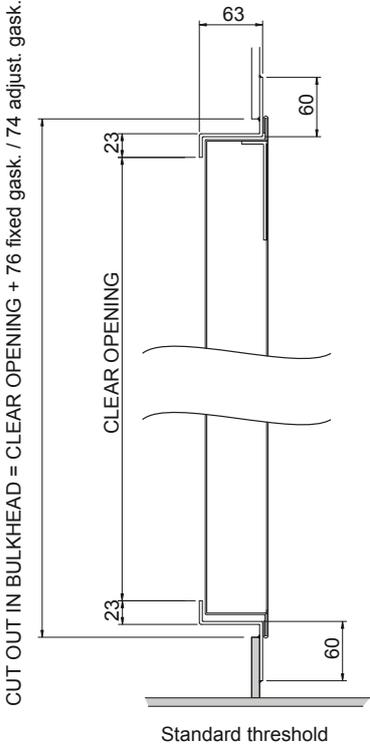
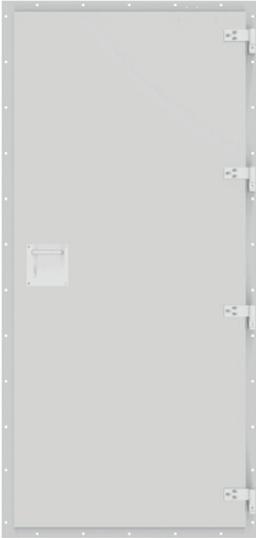
DOORFRAME:

3mm stainless steel surface. The frame fixing to the bulkhead is welded or bolted. Adjustable gasket for gas tightness or sound reduction.



DESCRIPTION	HB-H (SINGLE)	HB-HH (DOUBLE)
Class	A-0/A-30/A-60	A-0/A-30/A-60
Doorleaf	1.5 mm mild steel or stainless steel.	1.5 mm mild steel or stainless steel.
Frame	3 mm painted mild steel or stainless steel.	3 mm painted mild steel or stainless steel.
Thickness of doorleaf	63 mm	63 mm
Hinges	3ea special design with grease nipples	3ea special design with grease nipples
Weight (800x2000 mm)	75 kg	Weight depends on size
Core material	A-60 ceramic fibre	A-60 ceramic fibre
Sound reduction	RW = 40 dB (with gasket)	RW = 40 dB (with gasket)
Air and gas tightness	0.2 m3/hm2 at 50 Pa	0.2 m3/hm2 at 50 Pa
Application	Internal/external	Internal/external

HB-H A60 TECHNICAL DETAILS



HB-S A-RATED SLIDING DOOR

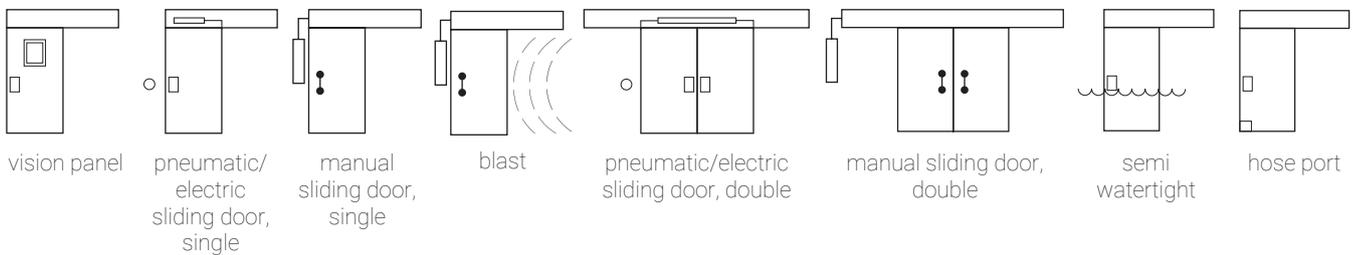
Internal or External A-Rated sliding door; A-0 to A-60.

The door can be delivered as a manual operated door or with electrical/ pneumatic operated door drive system.

Door-leaf is made of mild steel painted or in stainless steel finish.

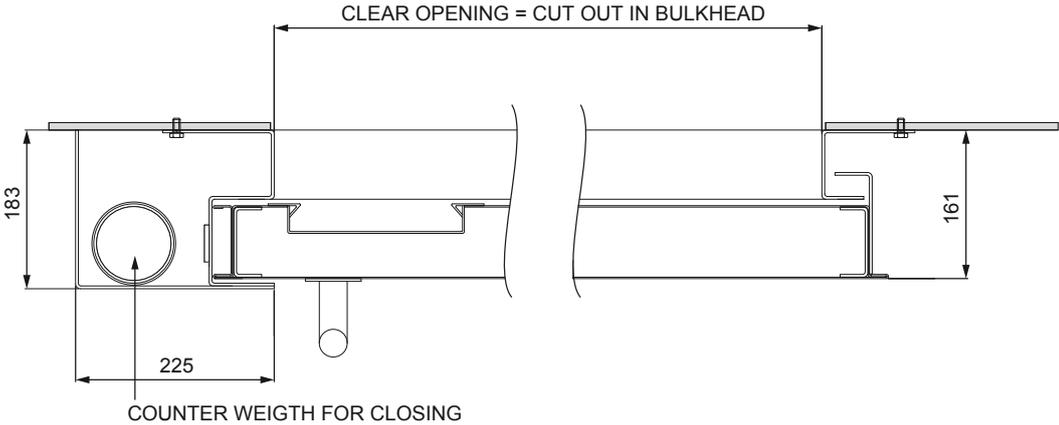
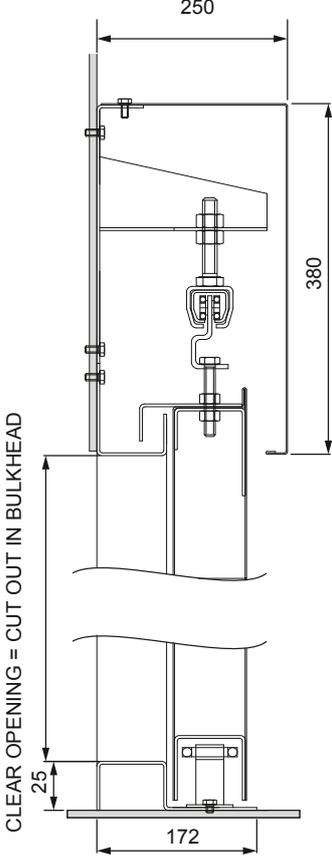
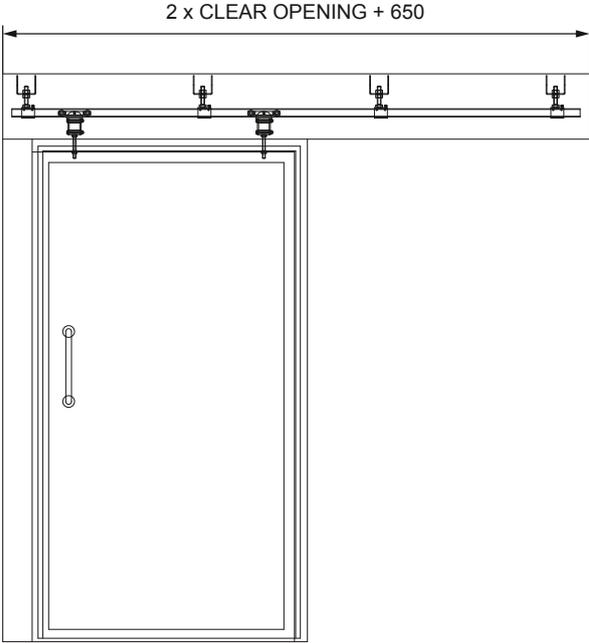
Frame made of 3mm mild steel or stainless steel with bolting holes or with a frame for welding.

The door can be delivered as "Semi watertight" from outside. Water pressure 2m up to 4.5m.

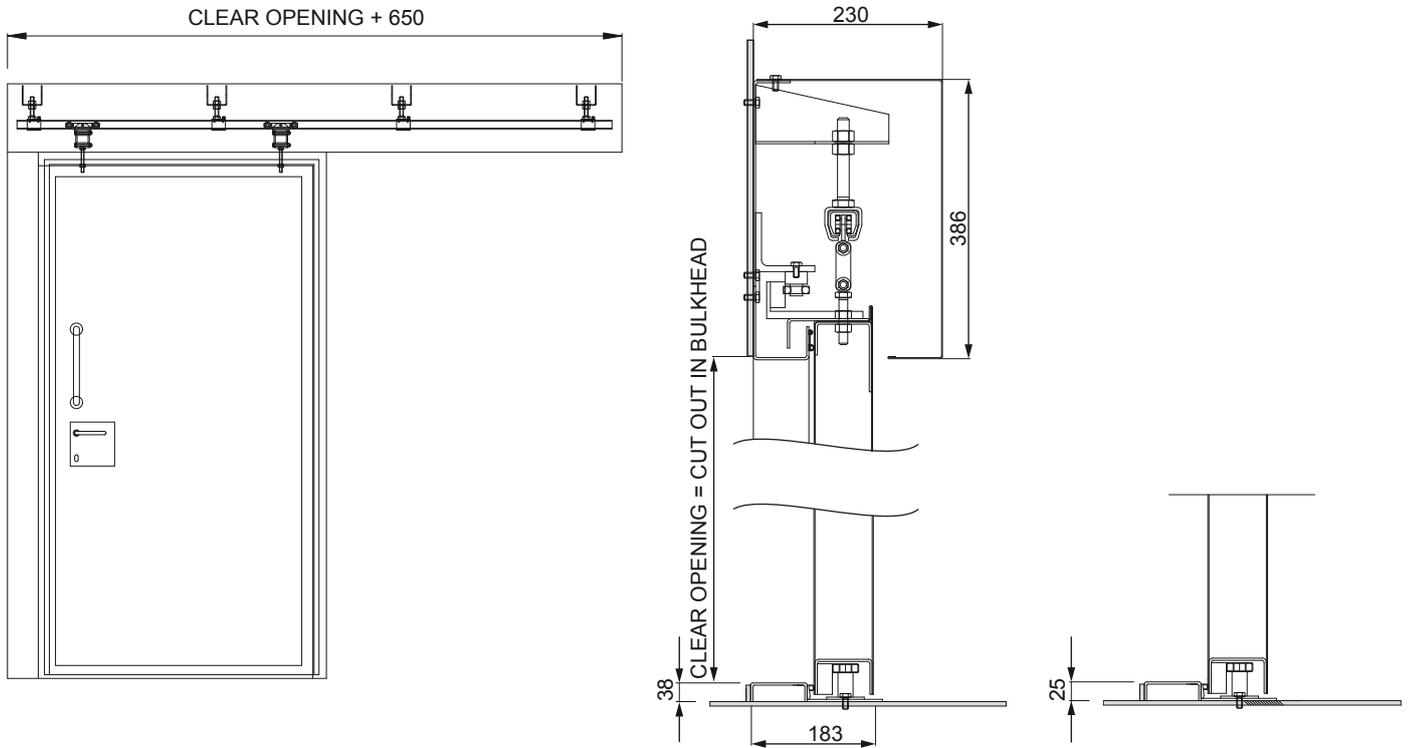


DESCRIPTION	HB-S	HB-SP	HB-SW	HB-SWP	HB-S-EL
Fire Class	A-60	A-60	A-60	A-60	A-60
Operation	Manual	Pneumatic	Manual	Pneumatic	Electrical
Doorleaf	1.5–3 mm painted mild Steel or Stainless Steel surface	1.5–3 mm painted mild Steel or Stainless Steel surface	1.5–3 mm painted mild Steel or Stainless Steel surface	1.5–3 mm painted mild Steel or Stainless Steel surface	1.5–3 mm painted mild Steel or Stainless Steel surface
Frame	3 mm painted mild steel or Stainless Steel	3 mm painted mild steel or Stainless Steel	3 mm painted mild steel or Stainless Steel	3 mm painted mild steel or Stainless Steel	3 mm painted mild steel or Stainless Steel
Thickness of doorleaf	79 mm				
Water Pressure			2 m std. 4.5m with reinforcement	2 m std. 4.5m with reinforcement	
Weight (800 x 2000mm)	250 kg	350 kg	250 kg	350 kg	250 kg
Core material	Ceramic fibre				
Sound reduction	NA	NA	Rw 43 db	Rw 43 db	NA
Air and gas tight	NA	NA	0,1 m3/hm2 at 50 PA	0,1 m3/hm2 at 50 PA	NA
Application	Internal/External	Internal/External	Internal/External	Internal/External	Internal/External

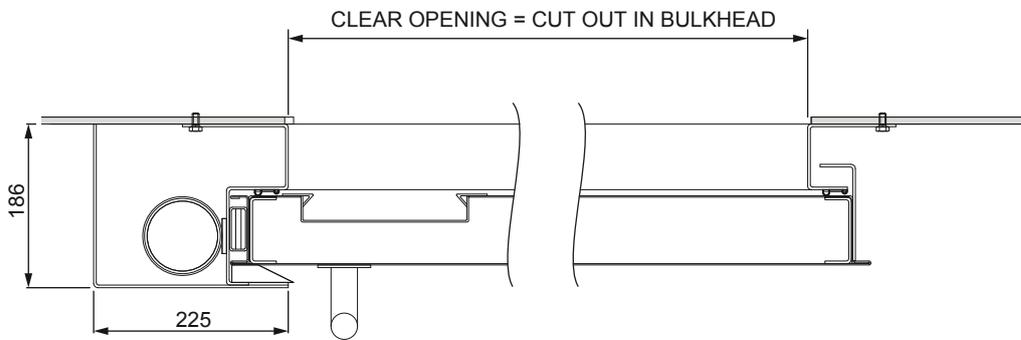
HB-S MANUAL OPERATION TECHNICAL DETAILS, INTERNAL



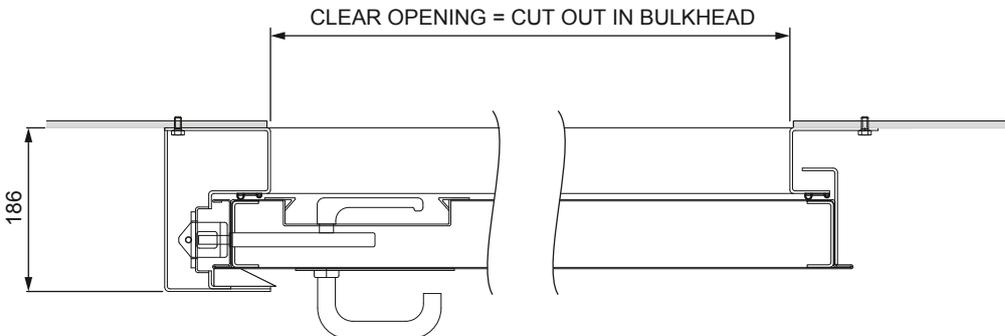
HB-SWP MANUAL OPERATION TECHNICAL DETAILS, EXTERNAL



HB-SW (with counter weight)

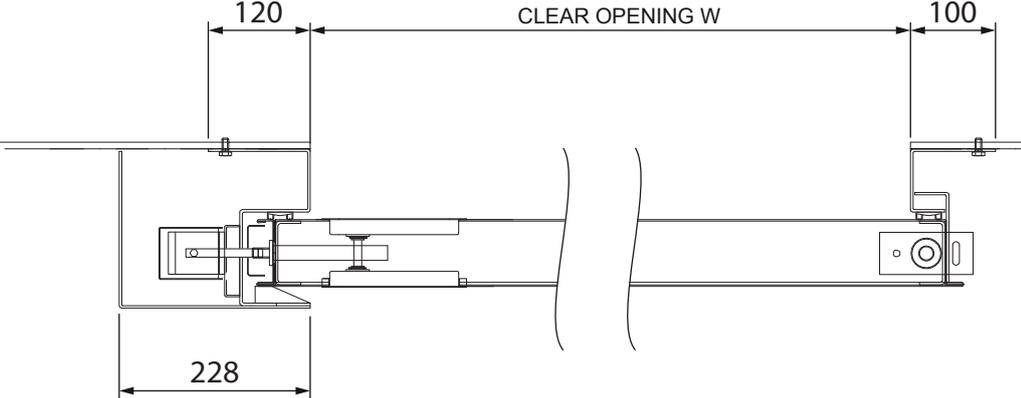
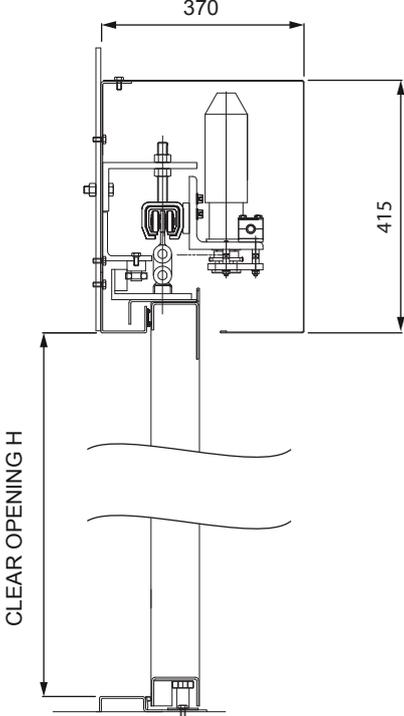
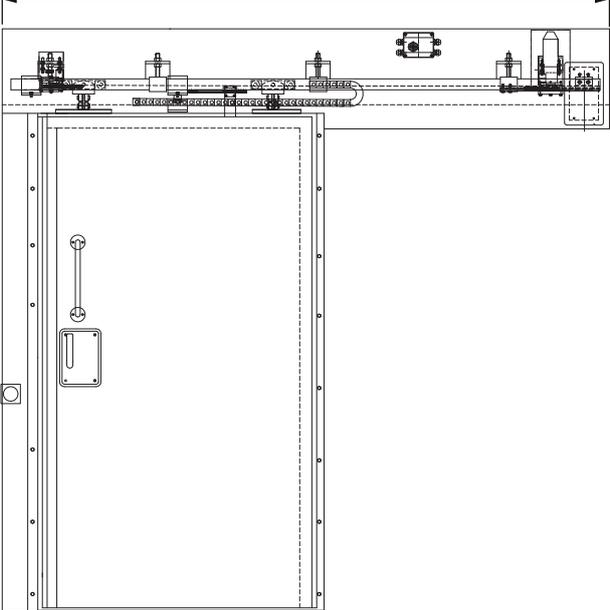


HB-SW (with sloping track)

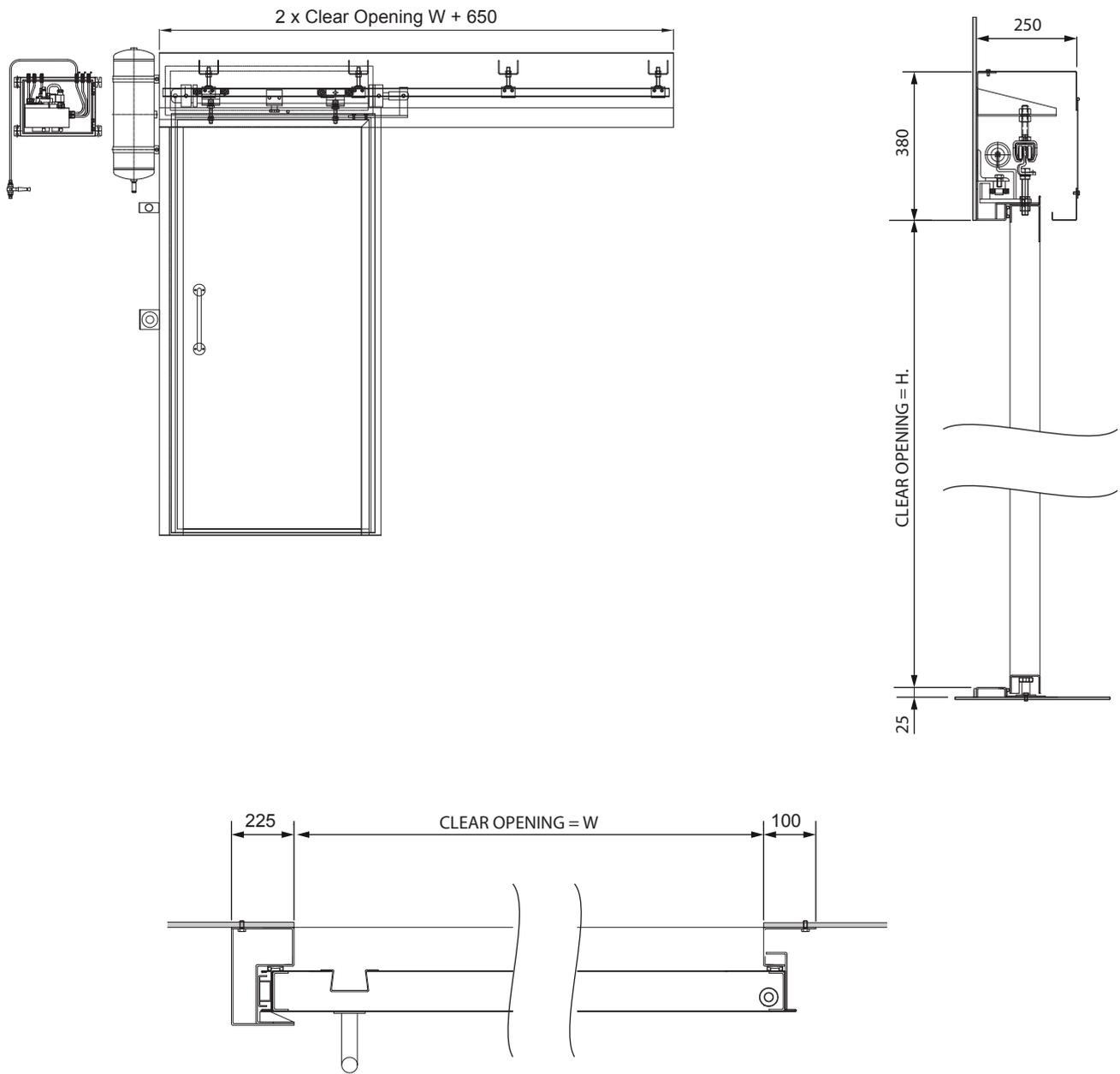


HB-SWP ELECTRICAL OPERATION TECHNICAL DETAILS, INTERNAL & EXTERNAL

2 x Clear Opening + 500 (External EL oper. Clear Opening + 900)



HB-SWP PNEUMATIC OPERATION TECHNICAL DETAILS, EXTERNAL



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HB-5000 A-RATED HEAVY DUTY EXTERNAL SINGLE & DOUBLE DOOR

DOOR LEAF:

Reinforcement plates for hinges, door closer and panic device are provided and welded on the inside of the door leaf.

DOOR FRAME:

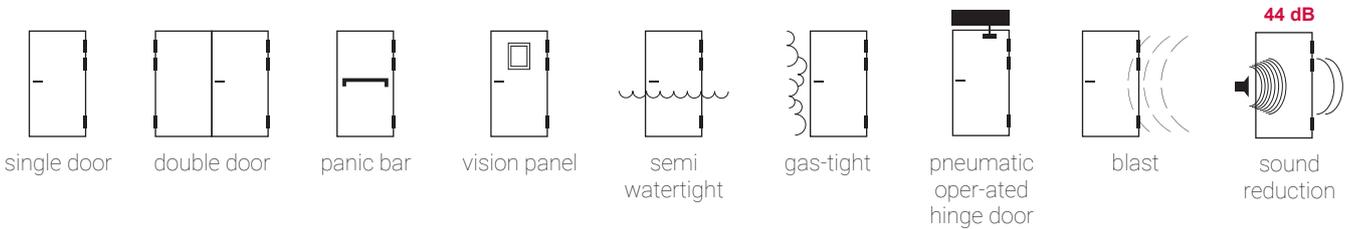
The profile of the frame is L-shaped mild or stainless steel with adjustable frame for gasket. The door frame is delivered suitable for bolting or welding.

HINGES:

The bottom part of the hinges is welded to the frame and the top part is screwed to the door leaf with 3 screws on each hinge. The hinges are provided with stainless steel washers between the top and bottom parts to reduce friction.

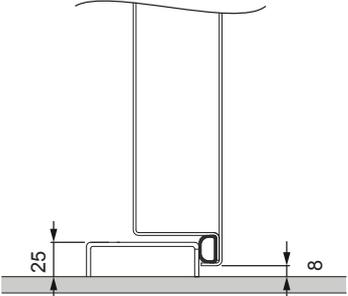
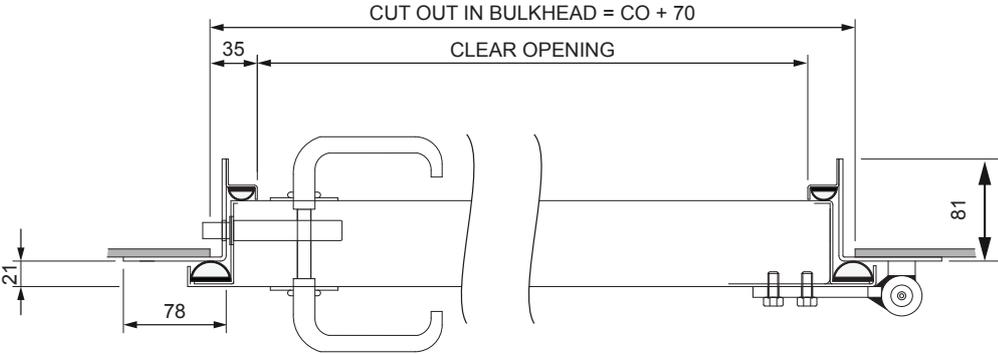
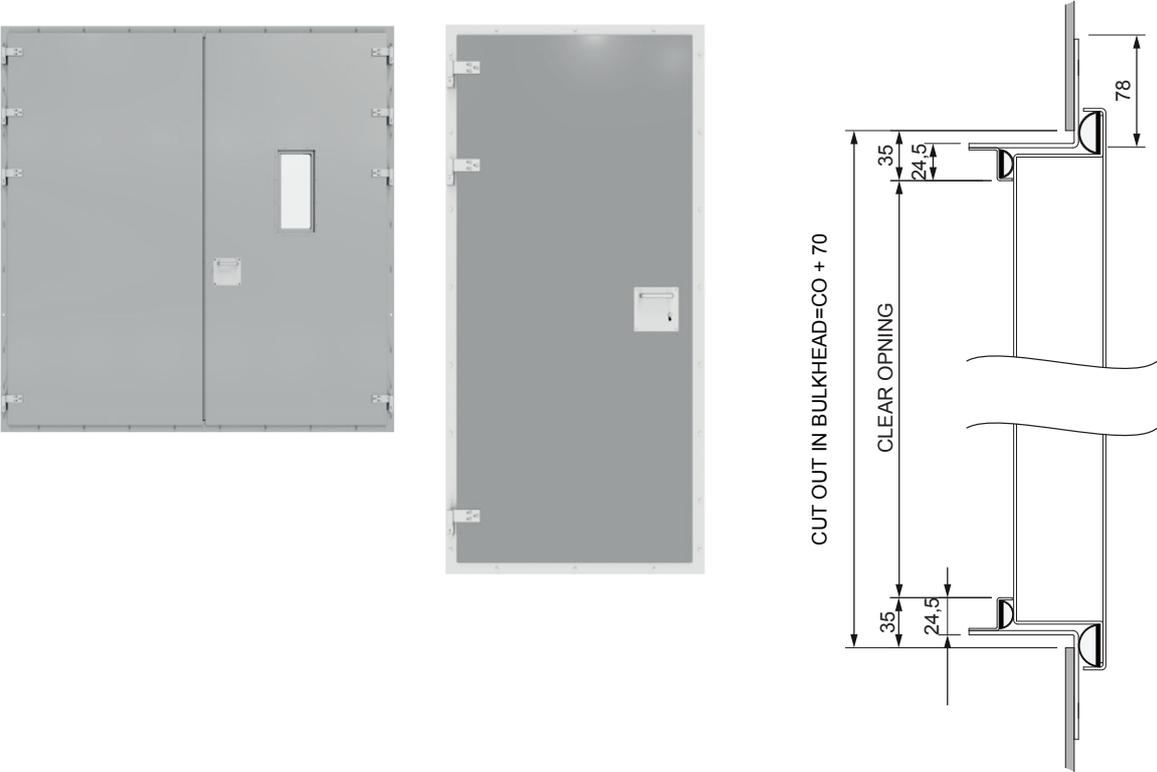


Panic Bar



DESCRIPTION	HB-5000
Fire Class	A-60
Doorleaf	2mm (alt. 3 mm) painted steel or stainless steel
Frame	3mm (alt. 4 or 5mm) L-shaped painted steel or stainless steel
Thickness of doorleaf	64 mm
Hinges	3ea special design stainless steel with grease nipples
Core material	ceramic fibre
Weight (800x2000 mm)	120 kg
Sound reduction	44 dB
Air and gas tightness	0.4 m ³ /hm ² at 50 Pa
Water column from hinge side	2 m without reinforcement 4.5 m with reinforcement
Application	Internal/External A-doors
Options	Heating cable, pirate lock, horisontal or vertical panic bar. Automatic 3 point lock for passive leaf (double door)

HB-5000 TECHNICAL DETAILS



HB-5000H ESCAPE HATCH A-60-RATED

HATCH LEAF:

Door frame in stainless steel.

Fire rated glass with extra pressure-glass.

HATCH FRAME:

3mm frame in stainless steel with fixed gasket.

OPTIONS:

Panic bar.



DESCRIPTION	HB-5000H ESCAPE HATCH
Fire Class	A-60
Door leaf	3 mm stainless steel
Frame	3 mm stainless steel
Handle	Recessed Handle
Hinges	2 x HB-5000
Weight (800x800 mm)	90 kg
Sound reduction	RW = 44 dB
Air and gas tightness	0,4 m3/nm2 at 50 Pa
Application	External
Options:	Panic bar, Protection grid

HB-5000H GLAZED ESCAPE HATCH A-60-RATED

HATCH LEAF:

Door frame in stainless steel.

Fire rated glass with extra pressure-glass.

HATCH FRAME:

3mm frame in stainless steel with fixed gasket.

OPTIONS:

Panic bar.

Protection grid.

Baggerød now offers a combined fire rated window and escape hatch. We foresee a demand within offshore living quarters and container modules installed offshore, which require both a fire rated window and a means of emergency escape.

Our new A-60 Glazed Escape Hatch gives both in one solution!

The installation will of course be more cost effective than a conventional installation using a fire-rated window and a separate escape hatch or door.



DESCRIPTION	HB-5000H GLAZED ESCAPE HATCH
Fire Class	A-60
Door leaf	3 mm stainless steel
Frame	3 mm stainless steel
Thickness of glass	40 mm
Hinges	2 x HB-5000
Weight (800x800 mm)	90 kg
Sound reduction	38 dB
Air and gas tightness	Yes
Application	External
Options:	Panic bar, Protection grid

H-120 H-RATED DOOR SINGLE & DOUBLE DOORS

External hinged doors applied for offshore constructions as protection against hydrocarbon fires and explosions. Approved for jet fire.

DOOR LEAF:

Reinforcement plates for hinges and door closer is provided and welded on the inside of the door leaf.

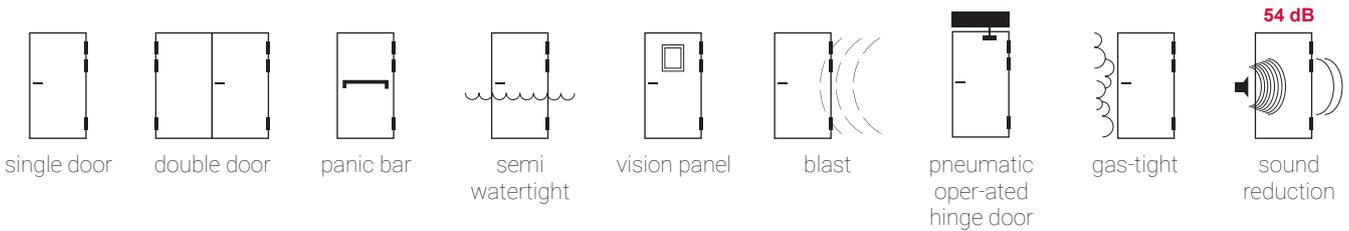
DOOR FRAME:

The profile of the frame is shaped to give maximum tightness, with 3 separate areas of impact. The frame is delivered for bolting or welding.

HINGES:

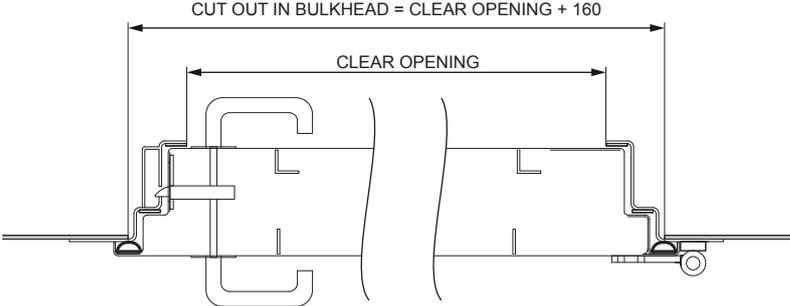
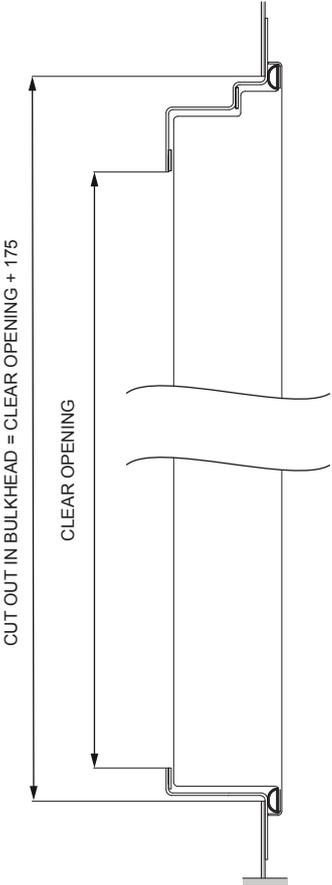
The hinges are bolted to the door leaf and welded to the door frame.

The hinges are provided with washers between the top and bottom parts to reduce friction.



DESCRIPTION	H-120H SINGLE HINGED	H-120HH DOUBLE HINGED
Fire Class	H-120	H-120
Doorleaf	2 mm (alt 3) painted mild or stainless steel	2 mm (alt 3) painted mild or stainless steel
Frame	3 mm (alt 4 or 5 mm) painted mild or stainless steel	3 mm (alt 4 or 5 mm) painted mild or stainless steel
Thickness of doorleaf	129 mm	129 mm
Hinges	4ea special design stainless	4ea special design stainless
Core material	ceramic fibre	ceramic fibre
Weight (800x2000 mm)	220 kg	410 kg
Sound reduction	Rw=54 dB	Rw=54 dB
Lock-case	3ea operated with one Center mounted handle	3ea operated with one Center mounted handle
Air and gas tightness	0.4 m3/hm2 at 50 Pa	
Application	Offshore platforms	Offshore platforms

H-120H TECHNICAL DETAILS



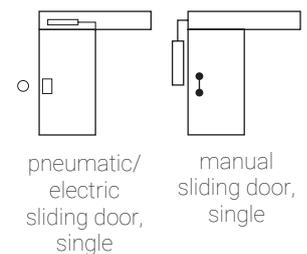
H-120S H-RATED DOOR OFFSHORE (H-120)

External sliding doors applied for offshore constructions as protection against hydrocarbon fires and explosions.

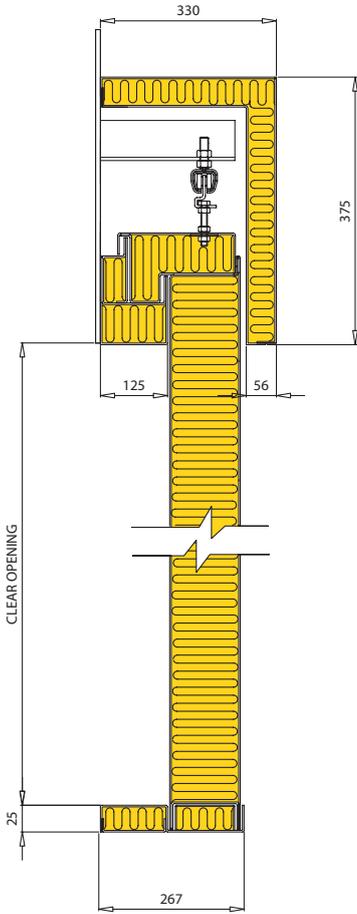
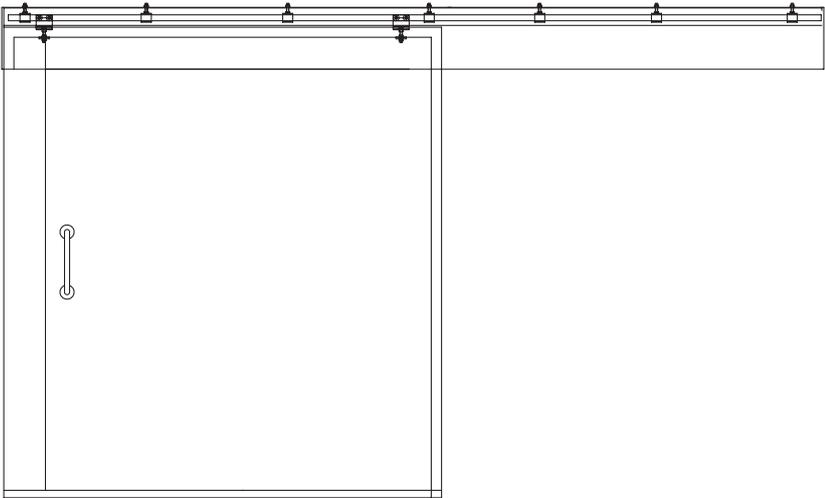
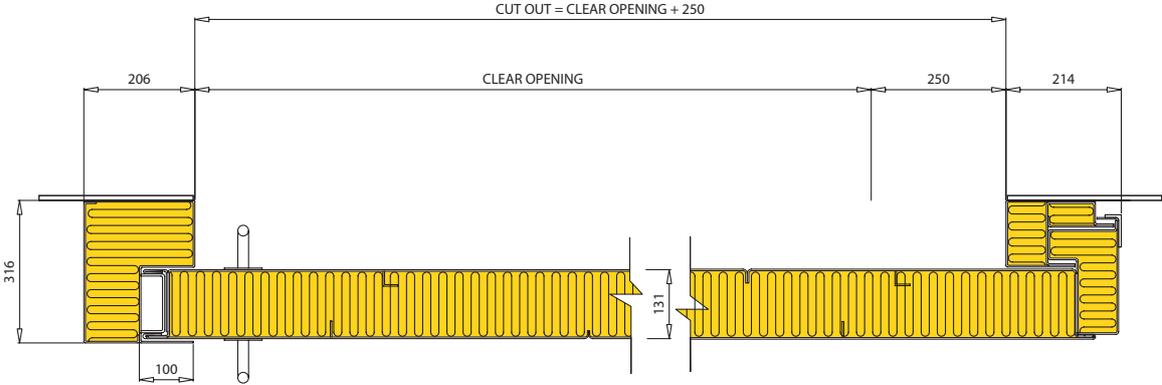
The doors are delivered manually operated or with pneumatic/electric operation.



DESCRIPTION	H-120S
Fire Class	H-120
Doorleaf	2 mm (alt 3) painted mild or stainless steel
Frame	3 or 4 mm painted mild or stainless steel
Thickness of doorleaf	131 mm
Hinges	NA
Core material	ceramic fibre
Weight (800x2100 mm)	300 kg
Sound reduction	Rw=37 dB
Air and gas tightness	0.1 m3/hm2
Application	Offshore platform



H-120S TECHNICAL DETAILS



www.bdsystems.co.uk



C-CLASS:

AF62 External Sliding Patio Type Door 6.2

B-CLASS

B15/AF50 Internal Fixed Frame Type Window/Partition 6.4
 B15/AF85 Internal Butt Joint Type Partition..... 6.6
 B15/AF85 Internal Fixed frame Window/Partition 6.8
 B15/AF50 Internal Single Hinged Door 6.10
 B15/AF50 Glazed Internal Double Hinged Door..... 6.12
 B15/AF85 Internal Single Hinged Door 6.14
 B15/AF85 Internal Single Sliding Door..... 6.16

A-CLASS:

A60/AF70 Internal Butt Joint Partition..... 6.18
 A60/AF70 Internal Fixed Frame Window/Partition 6.20
 A60/AF85 Internal Fixed Frame Window/Partition 6.22
 A60/AF85 External Fixed frame Partition..... 6.24
 A60/AF70 Internal Single Hinged Door 6.26
 A60/AF85 Internal Single Hinged Door 6.28
 A60/AF85 Internal Double Hinged Door 6.30
 A60/AF85 External Single Hinged Door 6.32
 A60/AF85 External Double Hinged Door 6.34
 A60/AF75 Internal Single sliding Door 6.36
 A60/AF85 Internal Single sliding Door 6.38
 A60/AF85 Internal Double sliding Door 6.40
 A60/AF75 External Single sliding Patio Type Door..... 6.42
 A60/AF85 External Double sliding Patio Type Door 6.44

AF62 EXTERNAL SLIDING PATIO TYPE DOOR

Aluflam Marine C-class glazed products provide evident protection against wind and water infiltration with outstanding thermal and sound insulation. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 67/50mm and 42/50mm insulated aluminium profiles offering now a higher and wider window size like ever before.

As standard delivered in powder coated RAL/ NCS colors or anodized in natural shades.

All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories.

Narrow stile stainless steel mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

MECHANICS

Our sliding doors for exterior are supplied with aluminium linear sliding systems, especially made for marine environments. Unlike standard lift and slide systems made of galvanized steel, they provide a fixed and stable connection with the framing ensuring easy maintenance and reliability in all conditions.

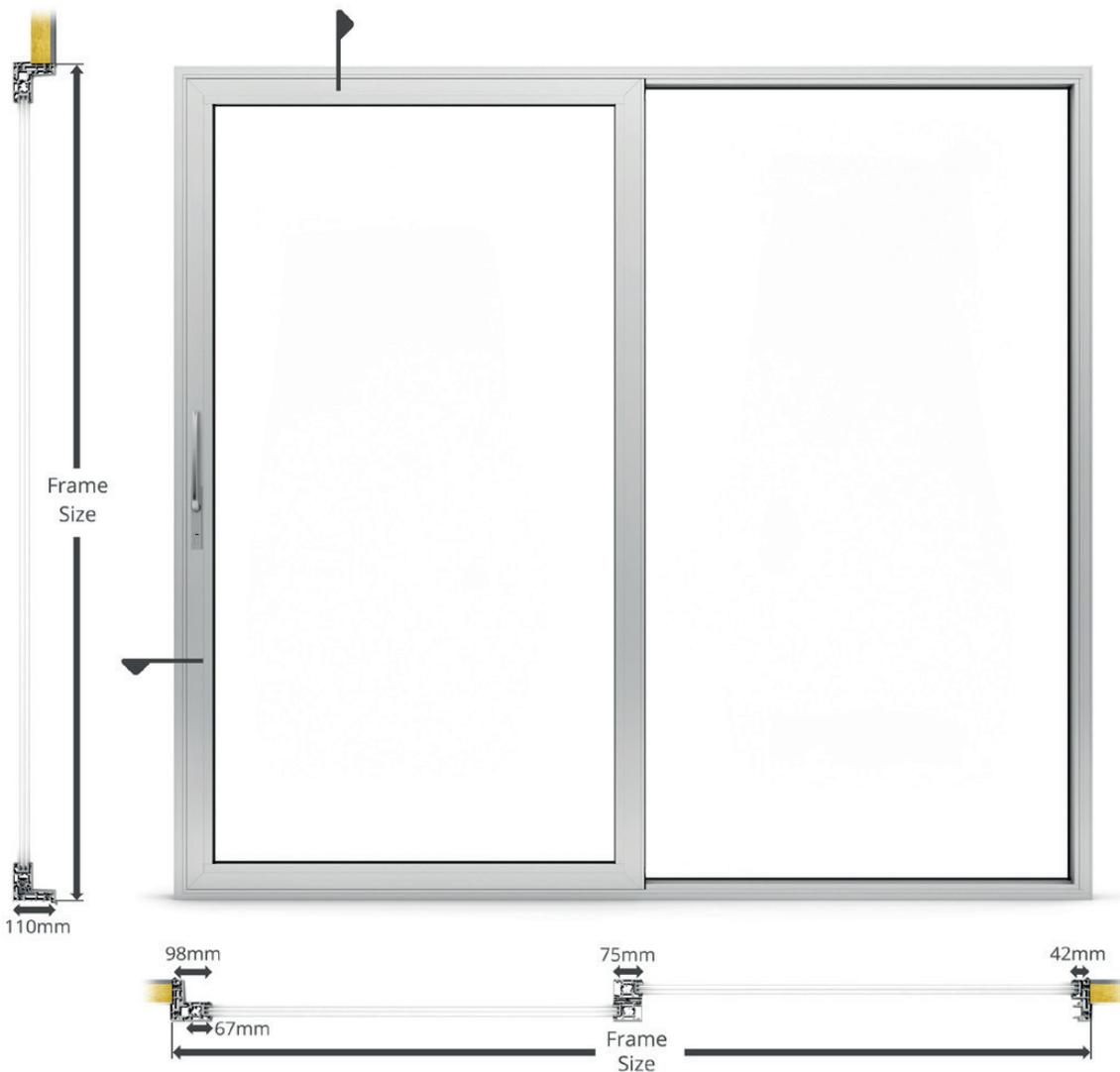
Options:

- Concealed hold/stop function with handle.
- Electromagnetic or mechanical lock system with cylinder or thumb turn.

DESCRIPTION	GLAZED SLIDING PATIO TYPE DOOR
Fire Class	C
Type	Manual
Max Size	7500 x 3500mm
Sound reduction	38-40 dB

AF62 EXTERNAL SLIDING PATIO TYPE DOOR

DETAILS



B15/AF50 INTERNAL FIXED FRAME TYPE WINDOW/PARTITION

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



FRAME SYSTEM

Made from 61/50mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades.

All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

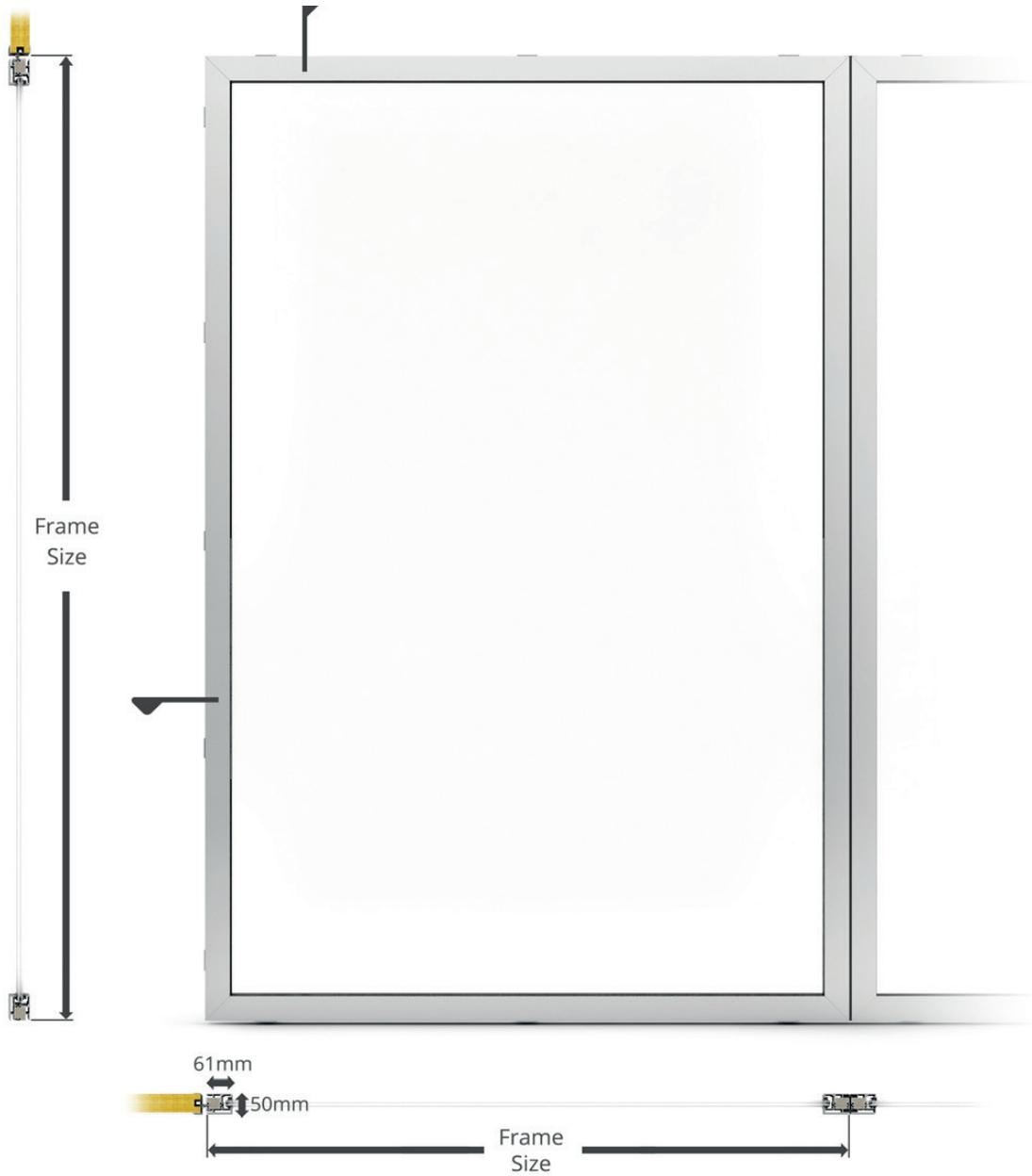
Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.



DESCRIPTION	B15/AF50 FIXED FRAME TYPE WINDOW/PARTITION
Fire Class	B15
Certified	BV MED - B+D
Max Width	1592mm
Max Height	2400mm
Sound reduction	Up to 39-41 dB

B15/AF50 INTERNAL FIXED FRAME TYPE WINDOW/PARTITION DETAILS

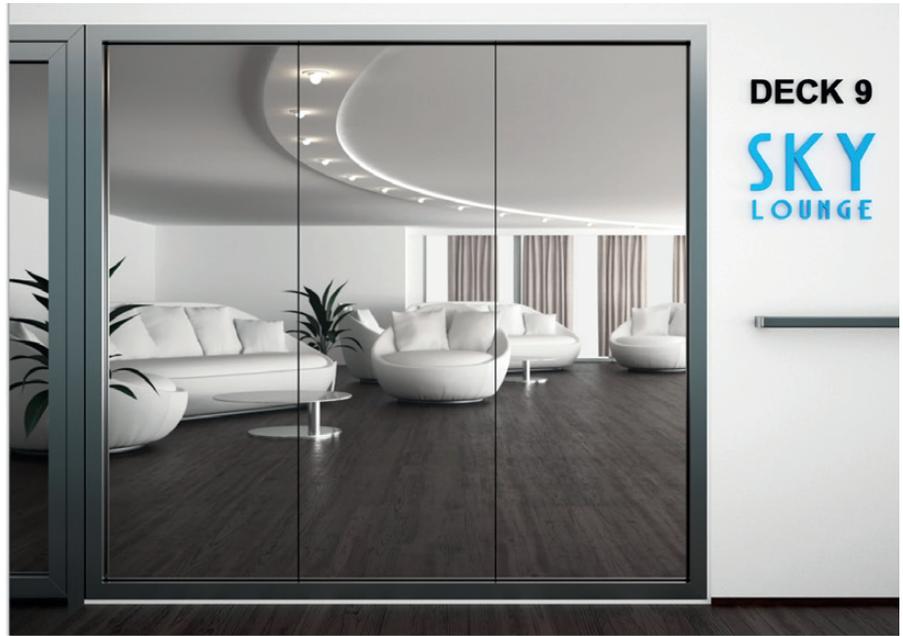


B15/AF85 INTERNAL BUTT JOINT TYPE PARTITION

Alufam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



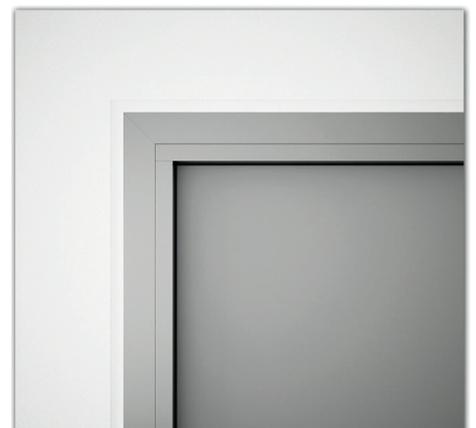
FRAME SYSTEM

Made from 62/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades.

All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

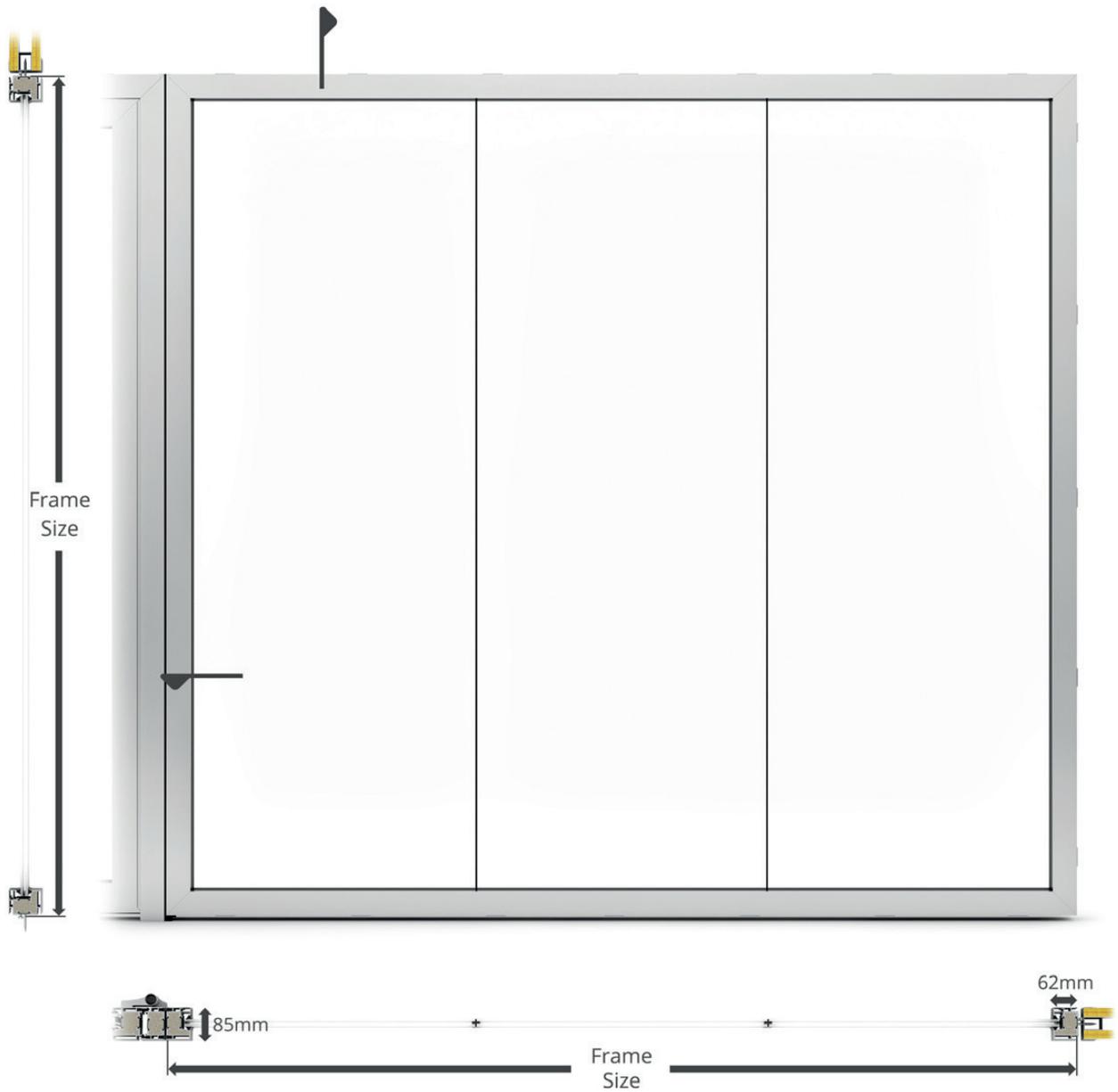
- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.



DESCRIPTION	B15/AF70 BUTT JOINT TYPE PARTITION
Fire Class	B15/30
Certified	BV MED - B+D
Max Width	3160mm
Max Height	3160mm
Sound reduction	Up to 40-42 dB

B15/AF85 INTERNAL BUTT JOINT TYPE PARTITION

DETAILS



AF85 INTERNAL FIXED FRAME WINDOW/PARTITION

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.

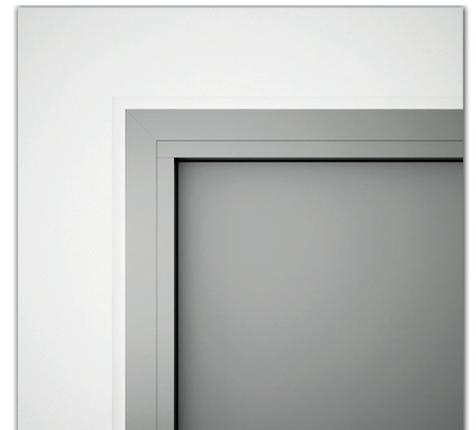


DOOR FRAME & LEAF

Made from 62/90mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

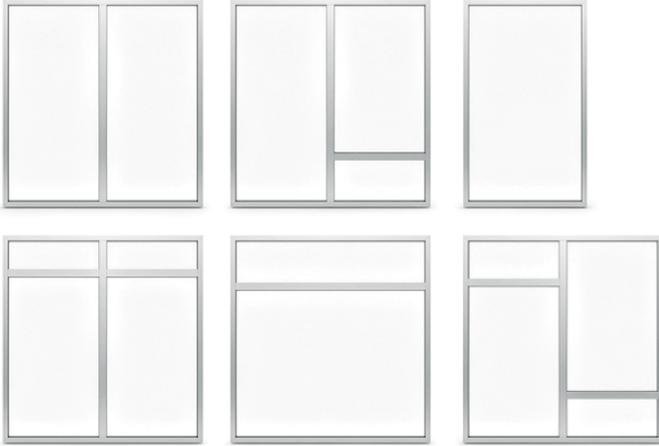


DESCRIPTION	AF85 INTERNAL FIXED FRAME (WINDOW/PARTITION)
Fire Class	B15/30
Certified	BV MED-B
Max Width	2400mm
Max Height	2500mm
Sound reduction	Up to 43-45 dB

AF85 INTERNAL FIXED FRAME WINDOW/PARTITION

DETAILS

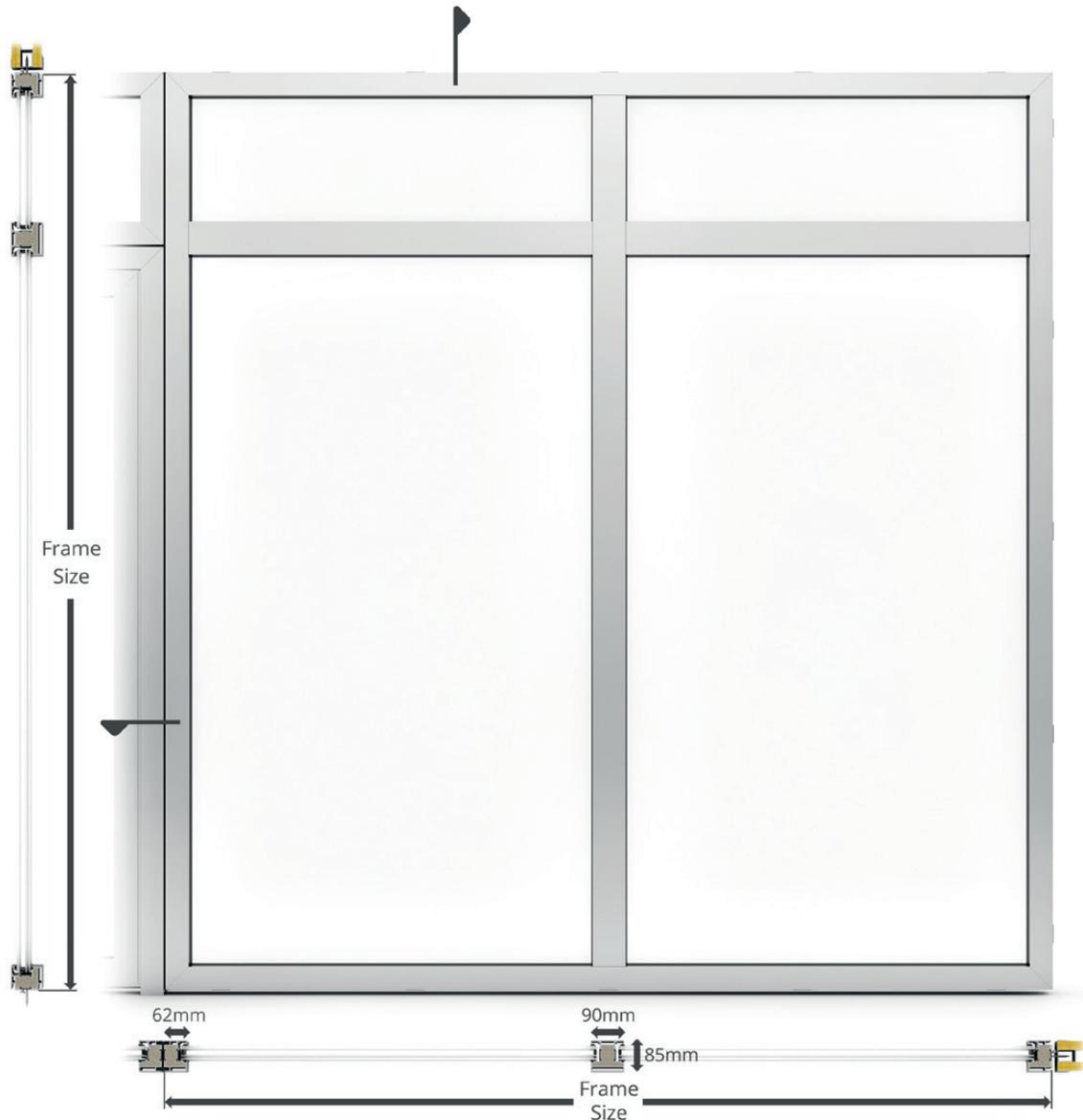
DESIGN OPTIONS



SIZE OPTIONS

Single glass: 1220 x 2500mm

Transom/Mullion: 2400 x 2500mm



AF50 INTERNAL SINGLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 61/50mm and 67/50mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	AF50 INTERNAL (SINGLE HINGED DOOR)
Fire Class	B15
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	1200 x 2400mm
Max Glass Size	971 x 2205mm
Sound reduction	Up to 36-38 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

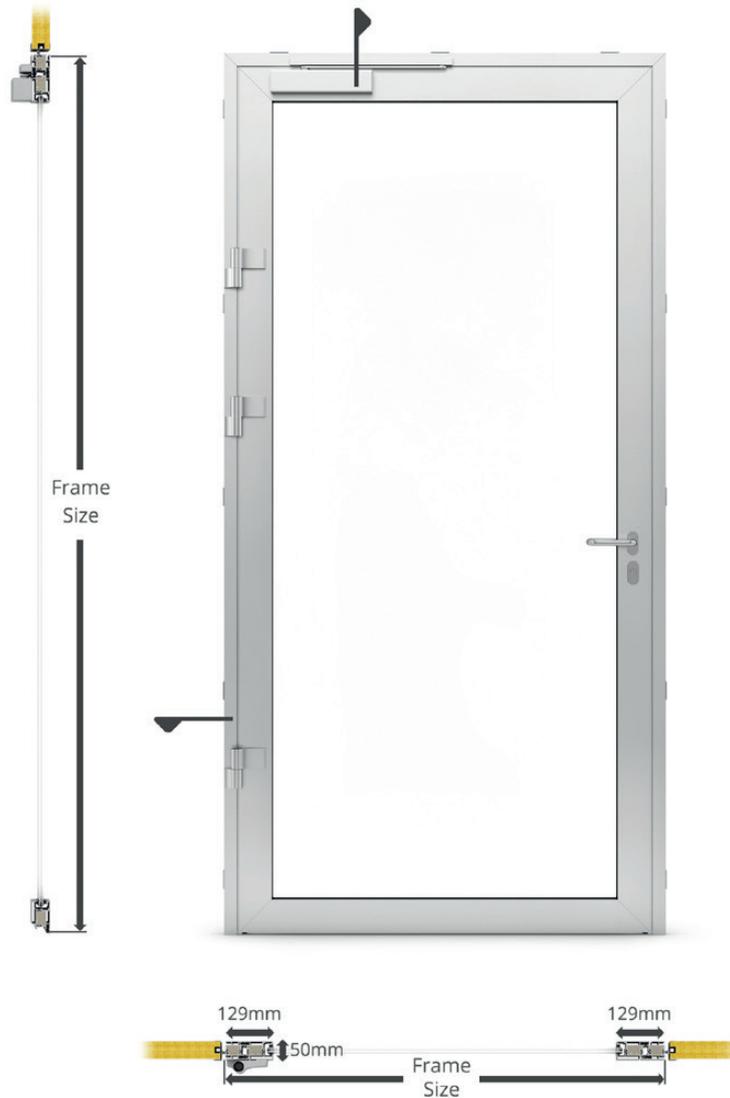
Our fully automatic doors are supplied with electric drive systems, certified and especially made for marine environments.

As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers with various finishes.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

AF50 INTERNAL SINGLE HINGED DOOR DETAILS

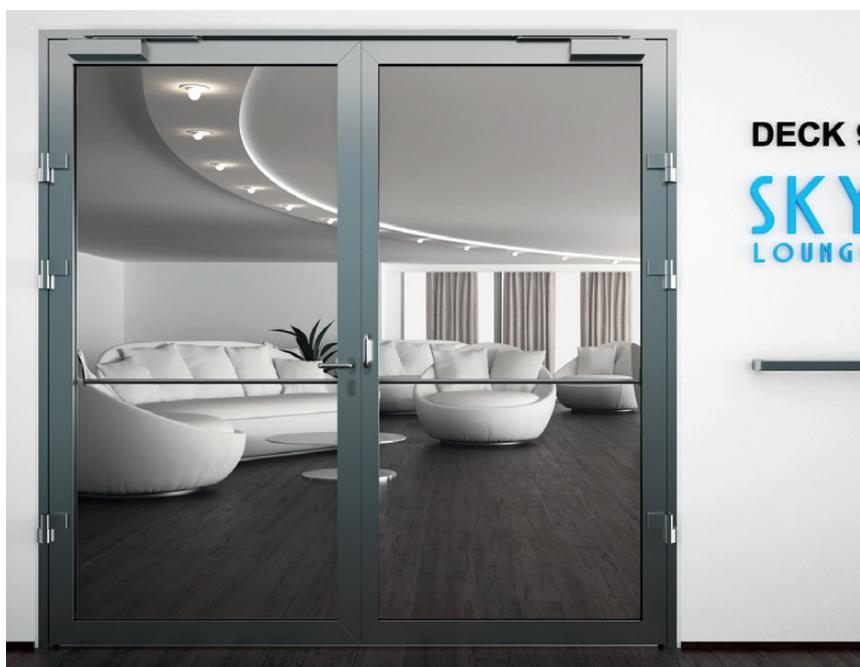


AF50 GLAZED INTERNAL DOUBLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 61/50mm and 67/50mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	AF50 GLAZED INTERNAL DOUBLE HINGED DOOR
Fire Class	B15
Type	Manual or Automatic
Certified	BV MED - B+D
Max Frame Size	2340 x 2400mm
Max Glass Size	993 x 2205mm
Sound reduction	Up to 36-38 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments.

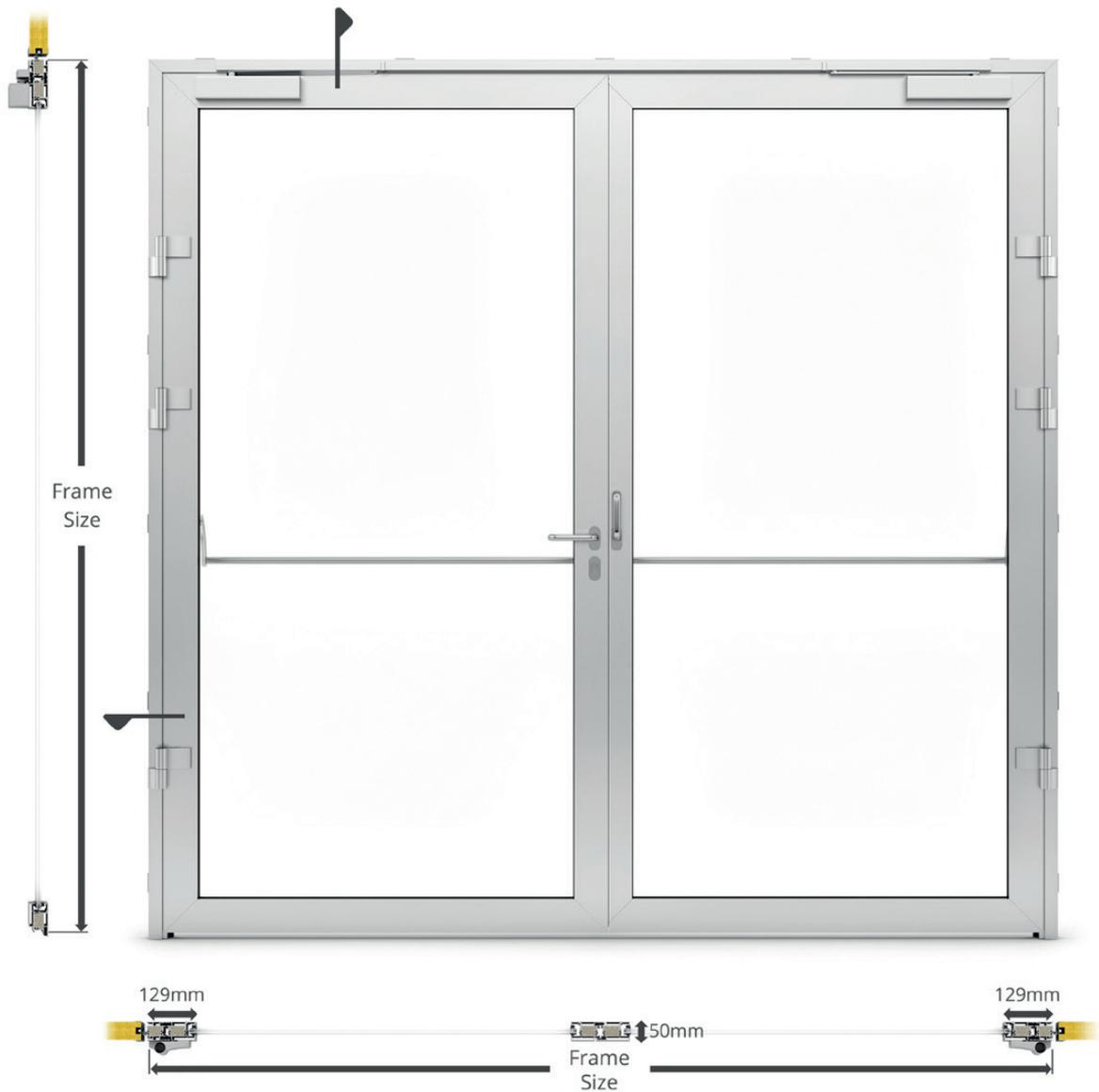
As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

AF50 GLAZED INTERNAL DOUBLE HINGED DOOR

DETAILS



AF85 INTERNAL SINGLE HINGED DOOR

Alufam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm and 68/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	AF85 INTERNAL (SINGLE HINGED DOOR)
Fire Class	B15/30
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	1430 x 2640mm
Max Leaf Size	1342 x 2572mm
Sound reduction	Up to 43-45 dB

HARDWARE

Alufam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric drive systems, certified and especially made for marine environments.

As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers with various finishes.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

AF85 INTERNAL SINGLE HINGED DOOR DETAILS



AF85 INTERNAL SINGLE SLIDING DOOR

Alufam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	AF85 INTERNAL (SINGLE SLIDING DOOR)
Fire Class	B15
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Size C.O.	1342 x 2420mm
Sound reduction	Up to 38-40 dB

HARDWARE

Alufam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric drive systems, certified and especially made for marine environments.

Manual and semi-automatic doors, also called self-closing doors are equipped with Alufam Marine's aluminium rail system with stainless steel bearings and accessories.

Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

AF85 INTERNAL SINGLE SLIDING DOOR DETAILS



A60/AF70 INTERNAL BUTT JOINT PARTITION

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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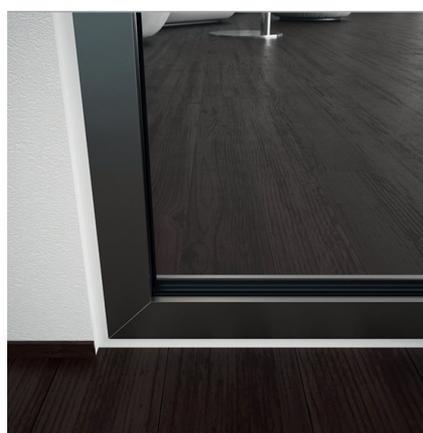
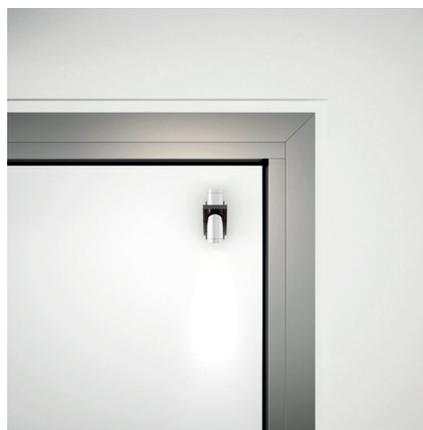


FRAME SYSTEM

Made from 61/70mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

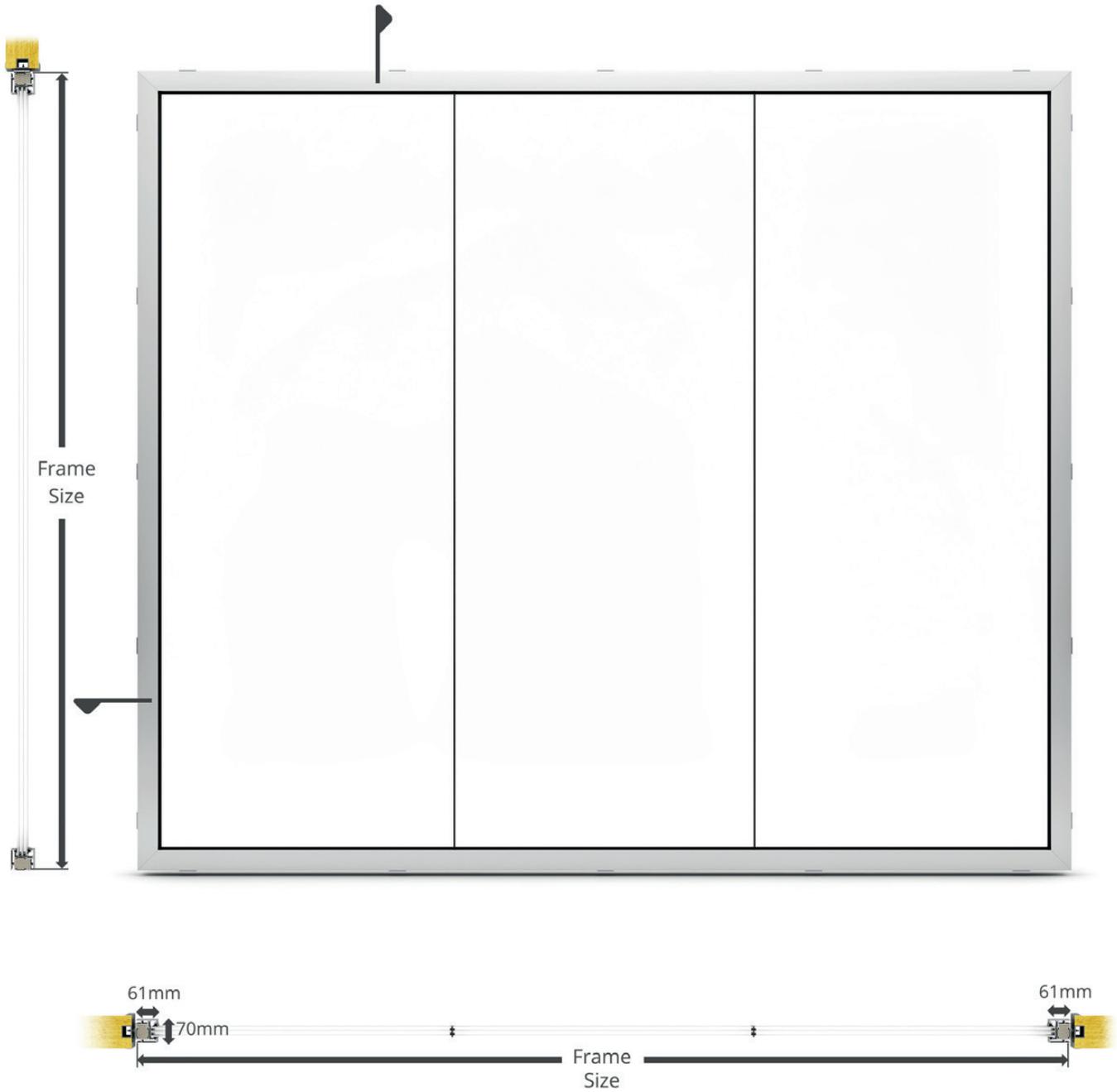
- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.



DESCRIPTION	A60/AF70 INTERNAL BUTT JOINT PARTITION
Fire Class	A60
Certified	BV, MED - D
Max Width	2800mm
Max Height	2400mm
Sound reduction	Up to 40-42 dB

A60/AF70 INTERNAL BUTT JOINT PARTITION

DETAILS

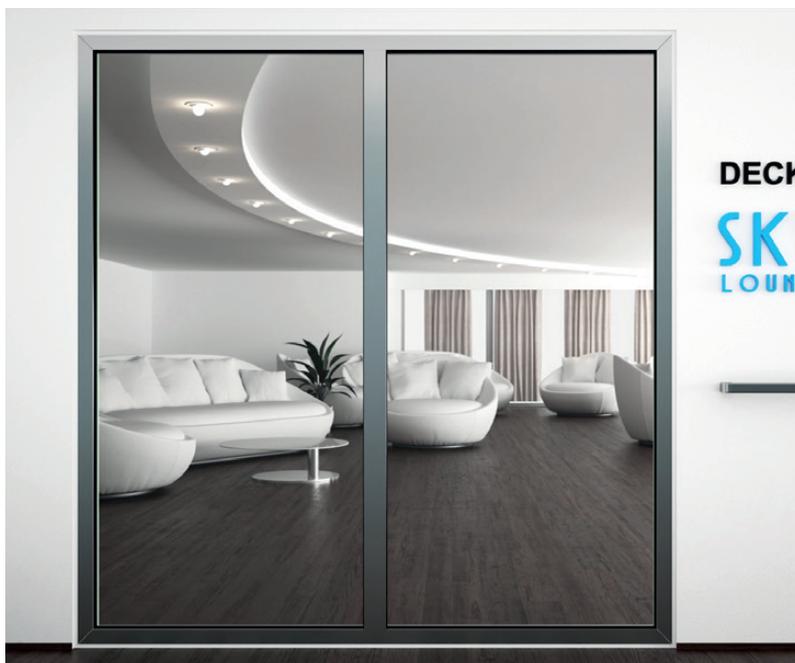


A60/AF70 INTERNAL FIXED FRAME WINDOW/PARTITION

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



FRAME SYSTEM

Made from 61/70mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades.

All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

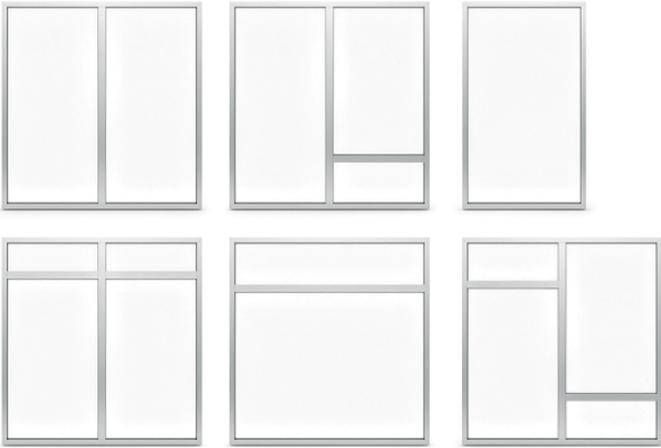


DESCRIPTION	GLAZED FIXED FRAME-AF70
Fire Class	A60
Certified	BV MED-D
Max Width	2400mm
Max Height	2500mm
Sound reduction	Up to 40-42 dB

A60/AF70 INTERNAL FIXED FRAME WINDOW/PARTITION

DESIGN OPTIONS

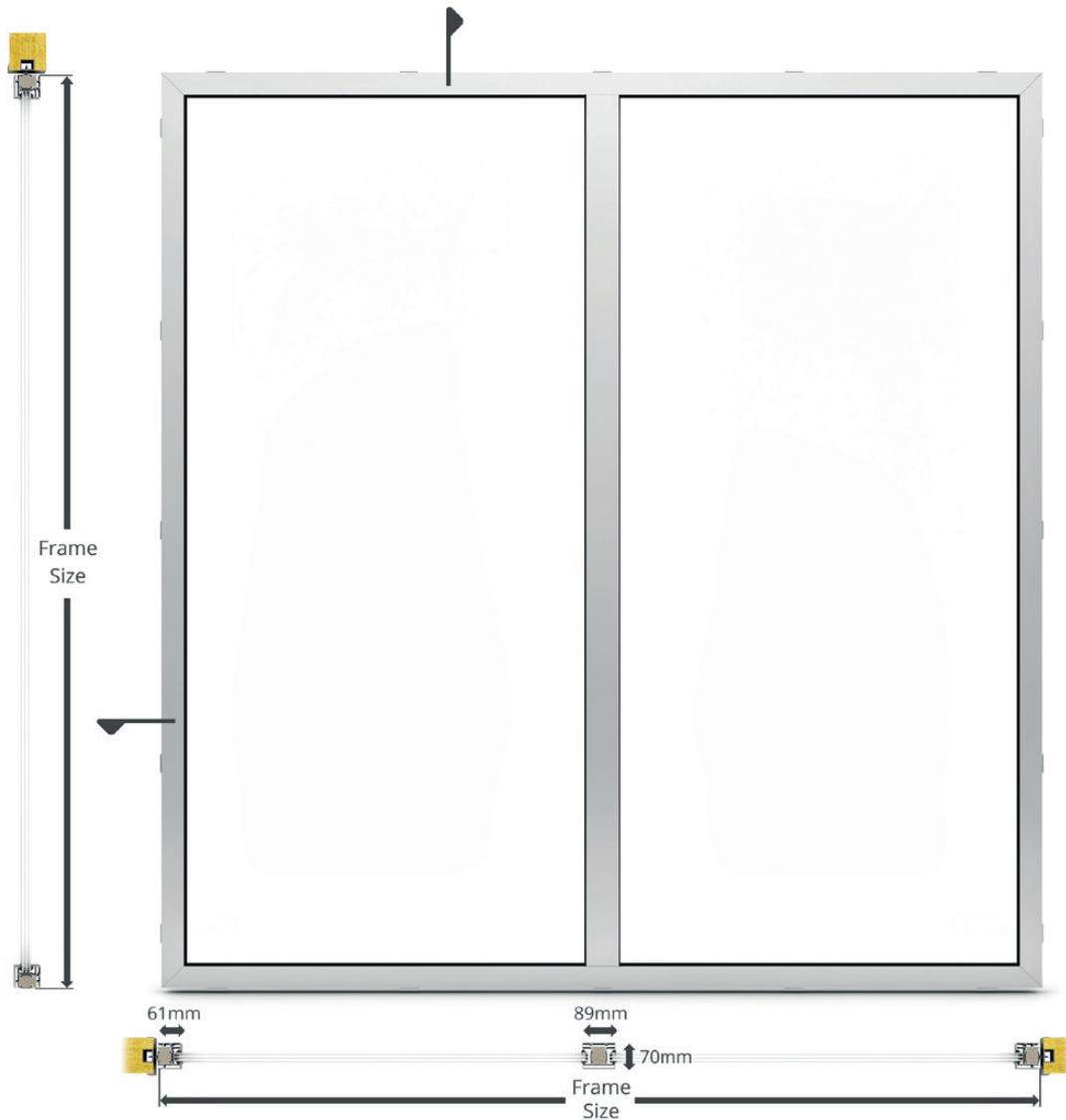
DETAILS



SIZE OPTIONS

Single glass: 1220*2500mm

Transom/Mullion: 2400*2500mm

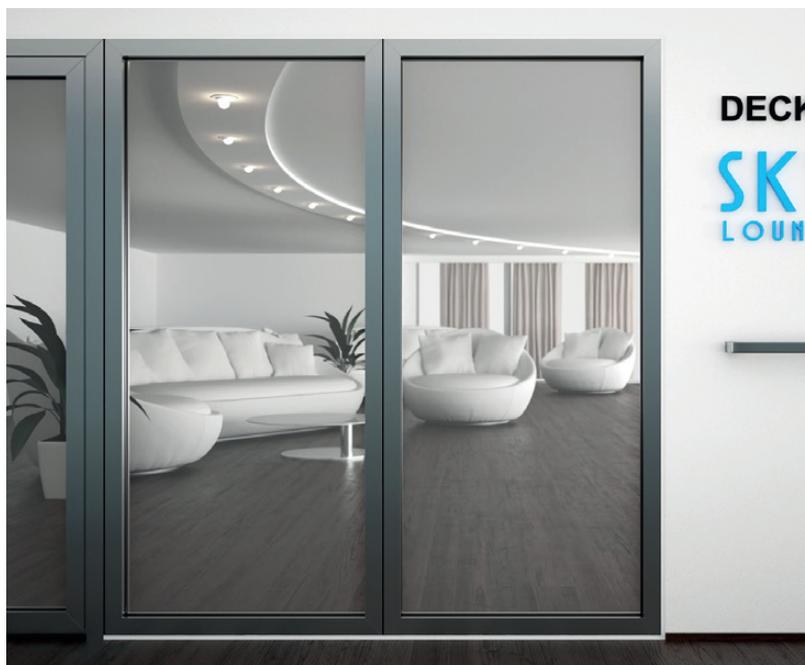


A60/AF85 INTERNAL FIXED FRAME WINDOW/PARTITION

Alufam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



FRAME SYSTEM

Made from 62/90mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

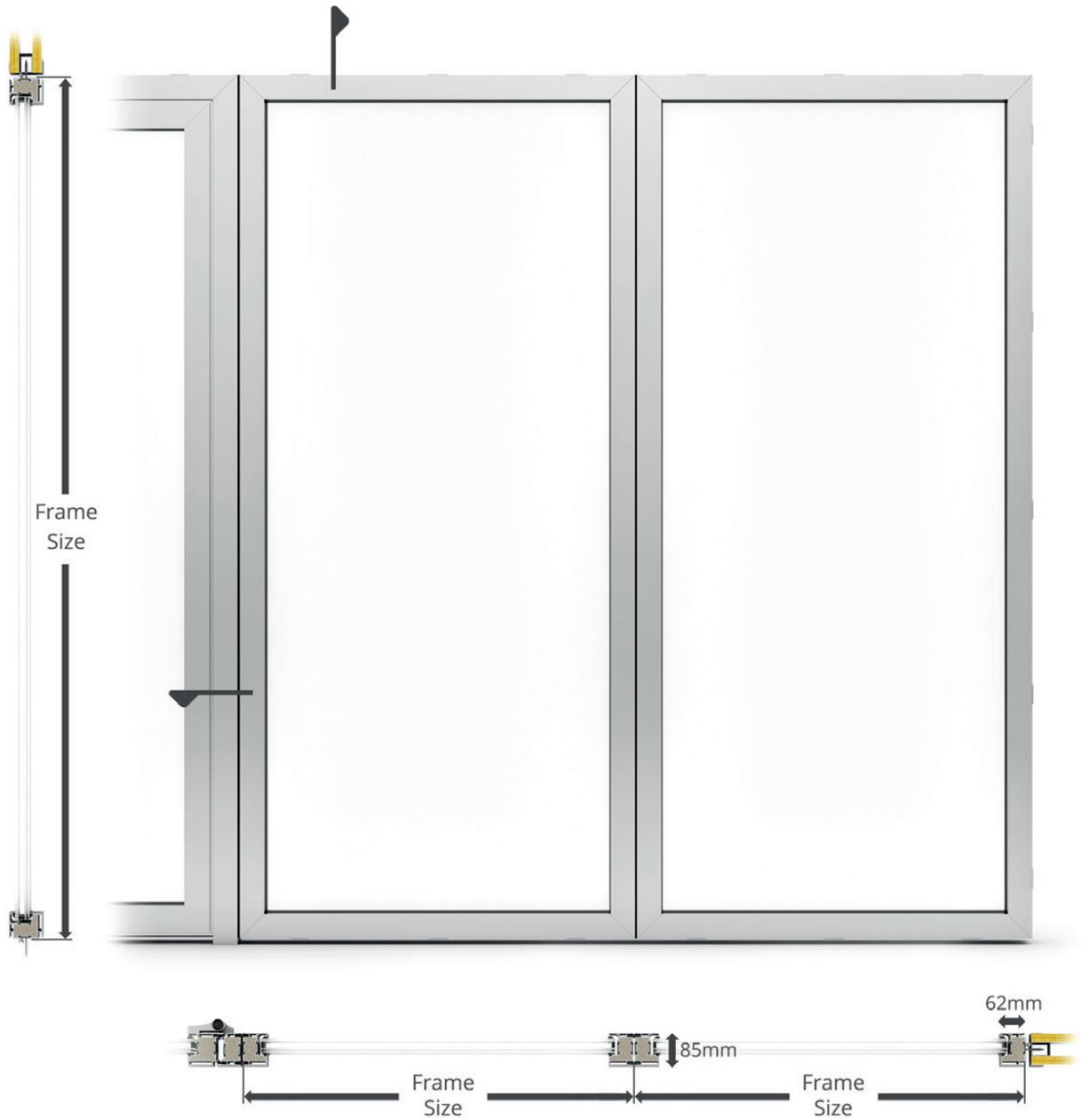
Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.



DESCRIPTION	A60/AF85 INTERNAL FIXED FRAME WINDOW/PARTITION
Fire Class	A60
Certified	BV MED - B
Max Width	1000mm
Max Height	2200mm
Sound reduction	Up to 43-45dB

A60/AF85 INTERNAL FIXED FRAME WINDOW/PARTITION DETAILS



A60/AF85 EXTERNAL FIXED FRAME PARTITION

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



FRAME SYSTEM

Made from 62/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

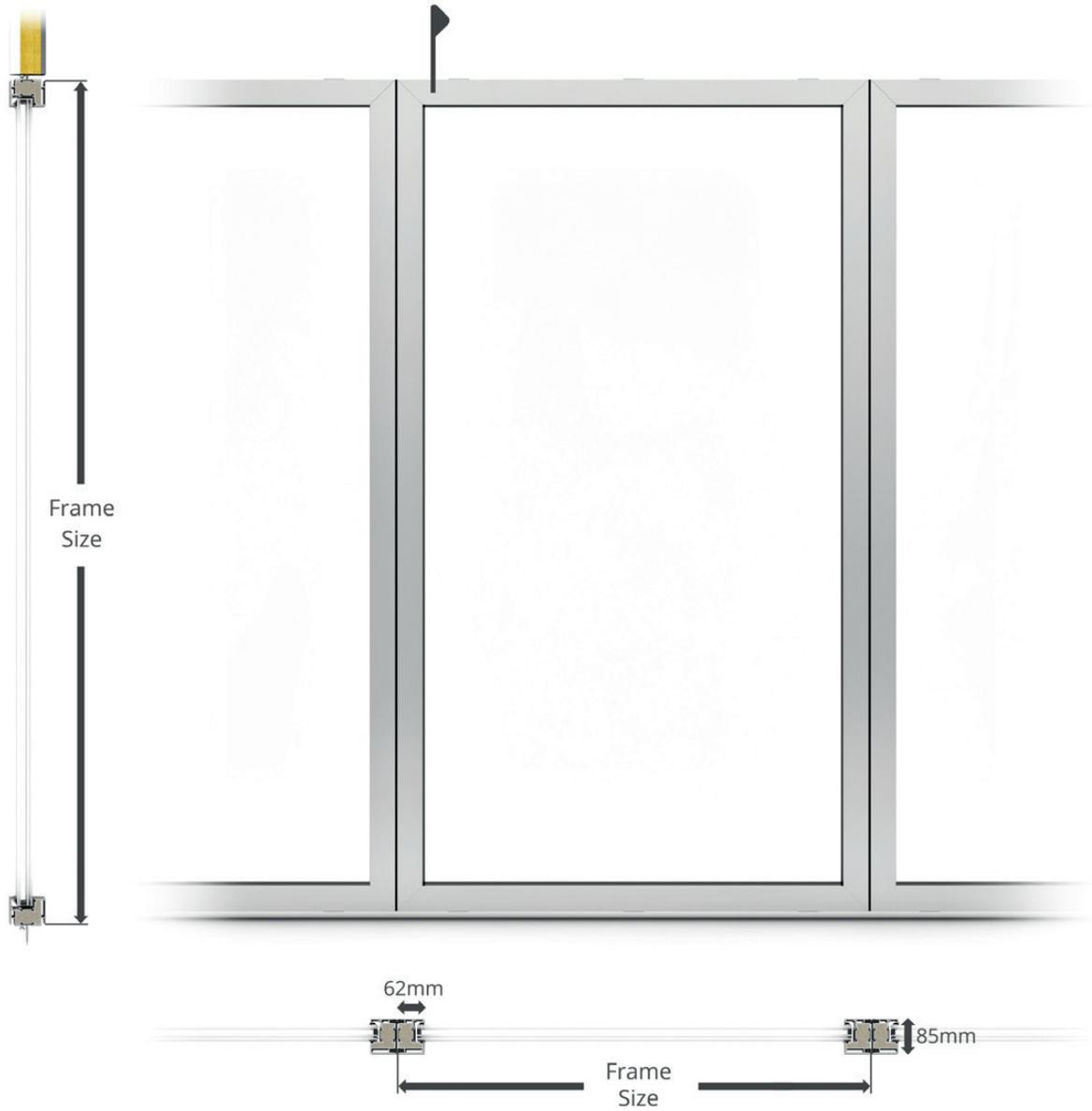
- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.



DESCRIPTION	A60/AF85 EXTERNAL FIXED FRAME PARTITION
Fire Class	A60
Certified	BV MED - B+D
Max Width	1150mm
Max Height	2030mm
Sound reduction	Up to 43-45 dB

A60/AF85 EXTERNAL FIXED FRAME PARTITION

DETAILS



A60/AF70 INTERNAL SINGLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 61/70mm and 67/70mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF70 INTERNAL (SINGLE HINGED DOOR)
Fire Class	B15
Type	Manual or Automatic
Certified	BV, MED - D
Max Frame Size	1300 x 2400mm
Max Leaf Size	1212 x 2332mm
Sound reduction	Up to 40-42 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

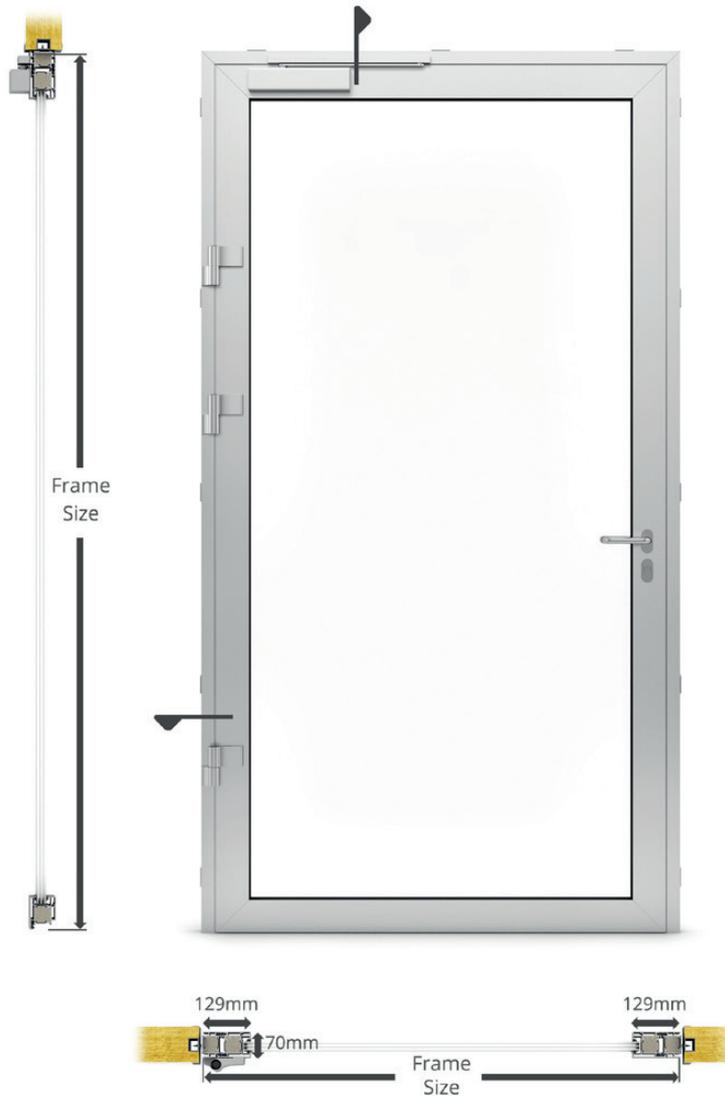
Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments. As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

A60/AF70 INTERNAL SINGLE HINGED DOOR

DETAILS



A60/AF85 INTERNAL SINGLE HINGED DOOR

Alufam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm and 68/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 INTERNAL (SINGLE HINGED DOOR)
Fire Class	A60
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	1000 x 2200mm
Max Leaf Size	912 x 2132mm
Sound reduction	Up to 43-45 dB

HARDWARE

Alufam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments. As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

A60/AF85 INTERNAL SINGLE HINGED DOOR

DETAILS



A60/AF85 INTERNAL DOUBLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

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Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm and 68/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 INTERNAL (DOUBLE HINGED DOOR)
Fire Class	A60
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	2122 x 2250mm
Max Leaf Size	1026 x 2201mm
Sound reduction	Up to 43-45 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

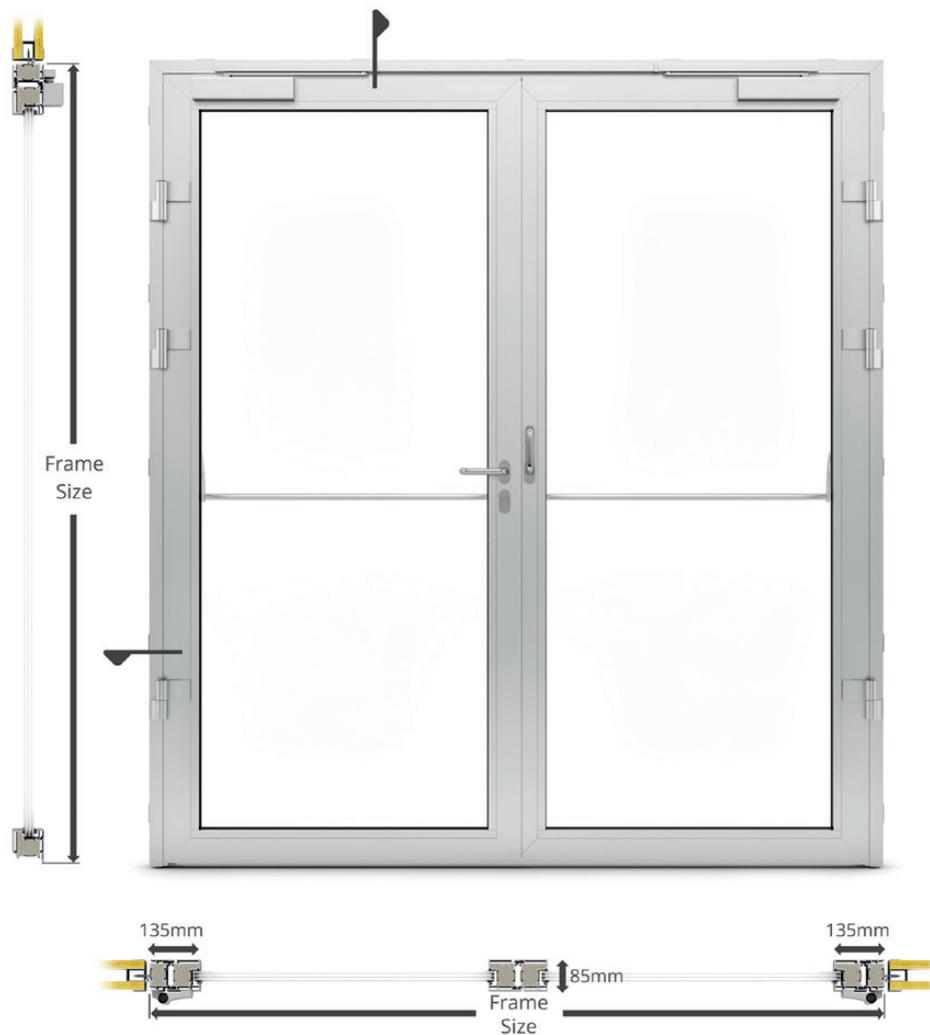
Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments. As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

A60/AF85 INTERNAL DOUBLE HINGED DOOR

DETAILS



A60/AF85 EXTERNAL SINGLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm and 68/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 EXTERNAL (SINGLE HINGED DOOR)
Fire Class	A60
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	1000 x 2200mm
Max Leaf Size	912 x 2132mm
Sound reduction	Up to 43-45 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments. As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

A60/AF85 EXTERNAL SINGLE HINGED DOOR

DETAILS



A60/AF85 EXTERNAL DOUBLE HINGED DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm and 68/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 EXTERNAL (DOUBLE HINGED DOOR)
Fire Class	A60
Type	Manual or Automatic
Certified	BV, MED - B+D
Max Frame Size	2122 x 2250mm
Max Leaf Size	1026 x 2201mm
Sound reduction	Up to 43-45 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, various type of handles and eschutcheons, as well as oval cylinders are among the standard choice.

AUTOMATIC

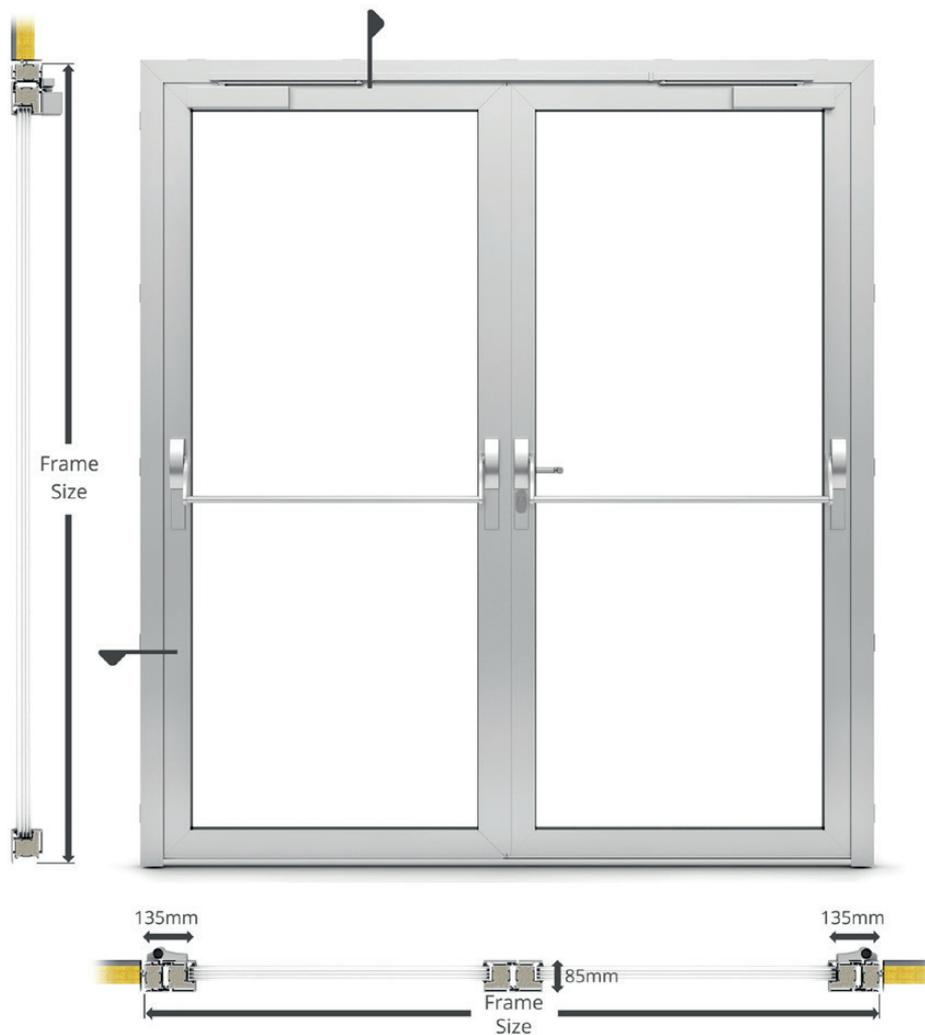
Our fully automatic doors are supplied with electric and hydraulic drive systems, especially made for marine environments. As standard our manual doors, also called self-closing doors, are equipped with hydraulic surface applied door closers, but upon request can be also concealed in the door frame.

Options:

- Hold open function with or without integral smoke detector.
- Push side installed door closer; concealed or surface wiring.

A60/AF85 EXTERNAL DOUBLE HINGED DOOR

DETAILS



A60/AF75 INTERNAL SINGLE SLIDING DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 75/75mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF75 INTERNAL (SINGLE SLIDING DOOR)
Fire Class	A60
Type	Semi or Fully Automatic
Certified	BV MED-D
Max Size C.O.	1102 x 2100mm
Sound reduction	Up to 38-40 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

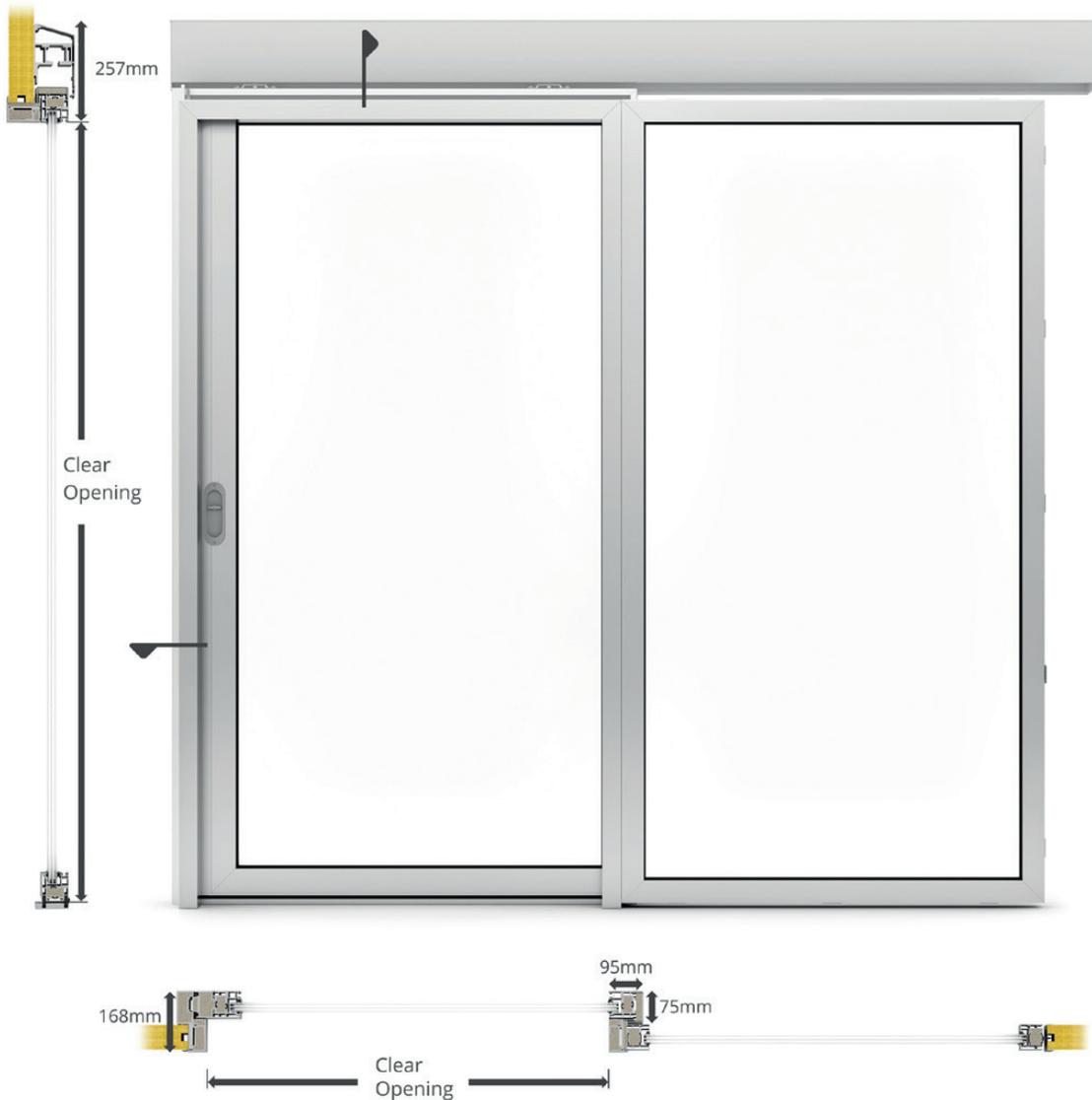
Our fully automatic doors are supplied with electric and hydraulic drive systems, certified and especially made for marine environments. Manual and semi-automatic doors, also called self-closing doors are equipped with Aluflam Marine's aluminium rail system with stainless steel bearings and accessories.

Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

A60/AF75 INTERNAL SINGLE SLIDING DOOR

DETAILS



A60/AF85 INTERNAL SINGLE SLIDING DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 75/75mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 INTERNAL (SINGLE SLIDING DOOR)
Fire Class	A60
Type	Manual or Automatic
Certified	BV, MED - D
Max Size	1284 x 2212mm
Sound reduction	Up to 38-40 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

Our fully automatic doors are supplied with electric and hydraulic drive systems, certified and especially made for marine environments. Manual and semi-automatic doors, also called self-closing doors are equipped with Aluflam Marine's aluminium rail system with stainless steel bearings and accessories.

Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

A60/AF85 INTERNAL SINGLE SLIDING DOOR

DETAILS

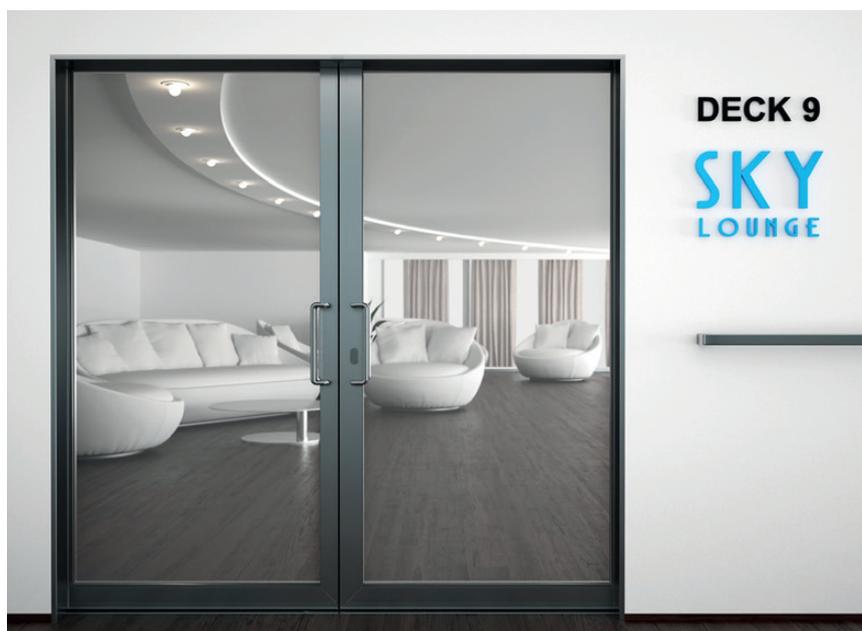


A60/AF85 INTERNAL DOUBLE SLIDING DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF85 INTERNAL (DOUBLE SLIDING DOOR)
Fire Class	A60
Type	Semi or Fully Automatic
Certified	BV MED-B
Max Size	2097 x 2165mm
Sound reduction	Up to 38-40 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

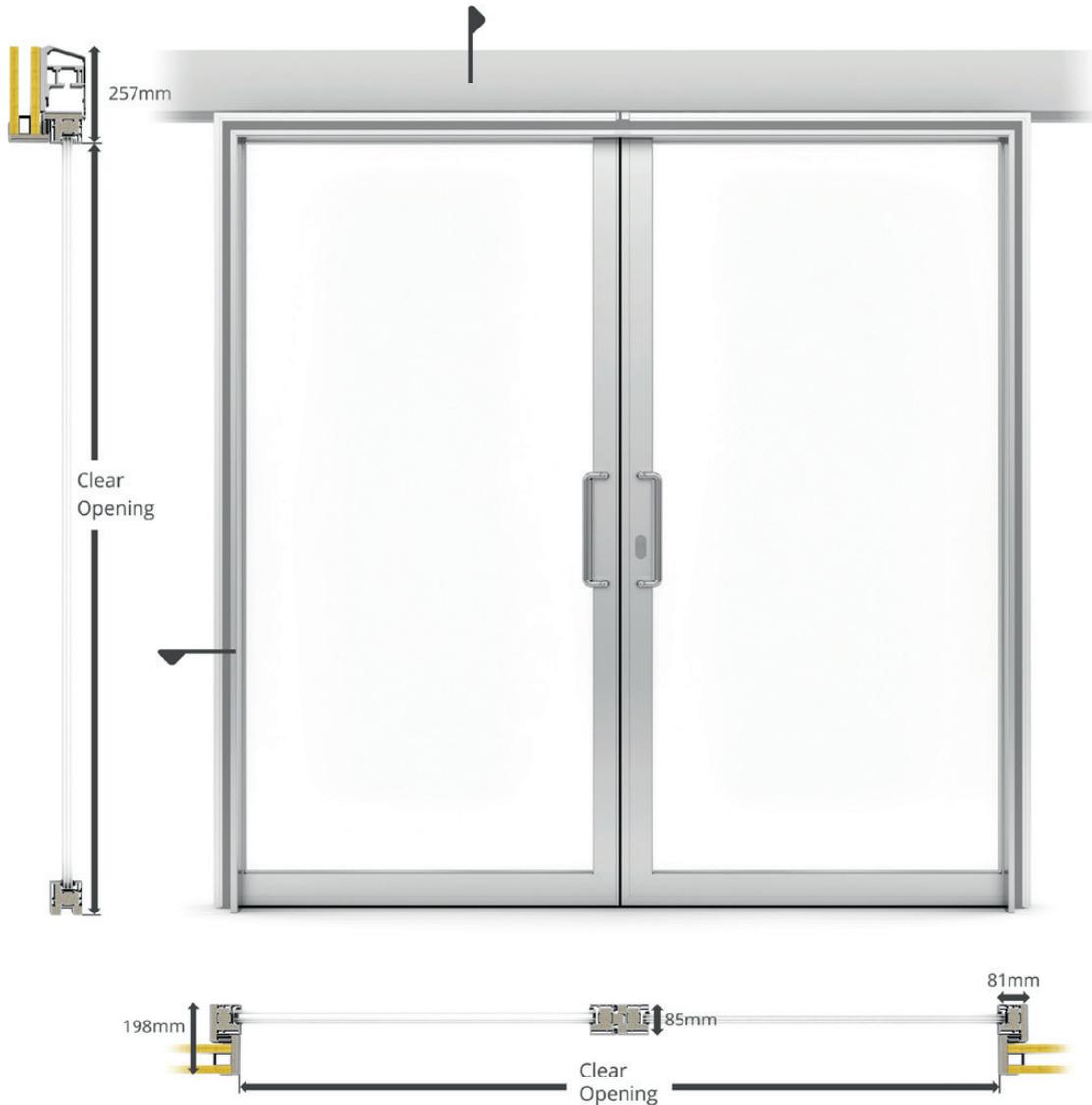
Our fully automatic doors are supplied with electric and hydraulic drive systems, certified and especially made for marine environments. Manual and semi-automatic doors, also called self-closing doors are equipped with Aluflam Marine's aluminium rail system with stainless steel bearings and accessories.

Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

A60/AF85 INTERNAL DOUBLE SLIDING DOOR

DETAILS



A60/AF75 EXTERNAL SINGLE SLIDING PATIO TYPE DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 75/75mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

DESCRIPTION	A60/AF75 EXTERNAL (SINGLE SLIDING DOOR)
Fire Class	A60
Type	Semi or Fully Automatic
Certified	BV MED-D
Max Size C.O.	1050 x 2165mm
Sound reduction	Up to 38-40 dB

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

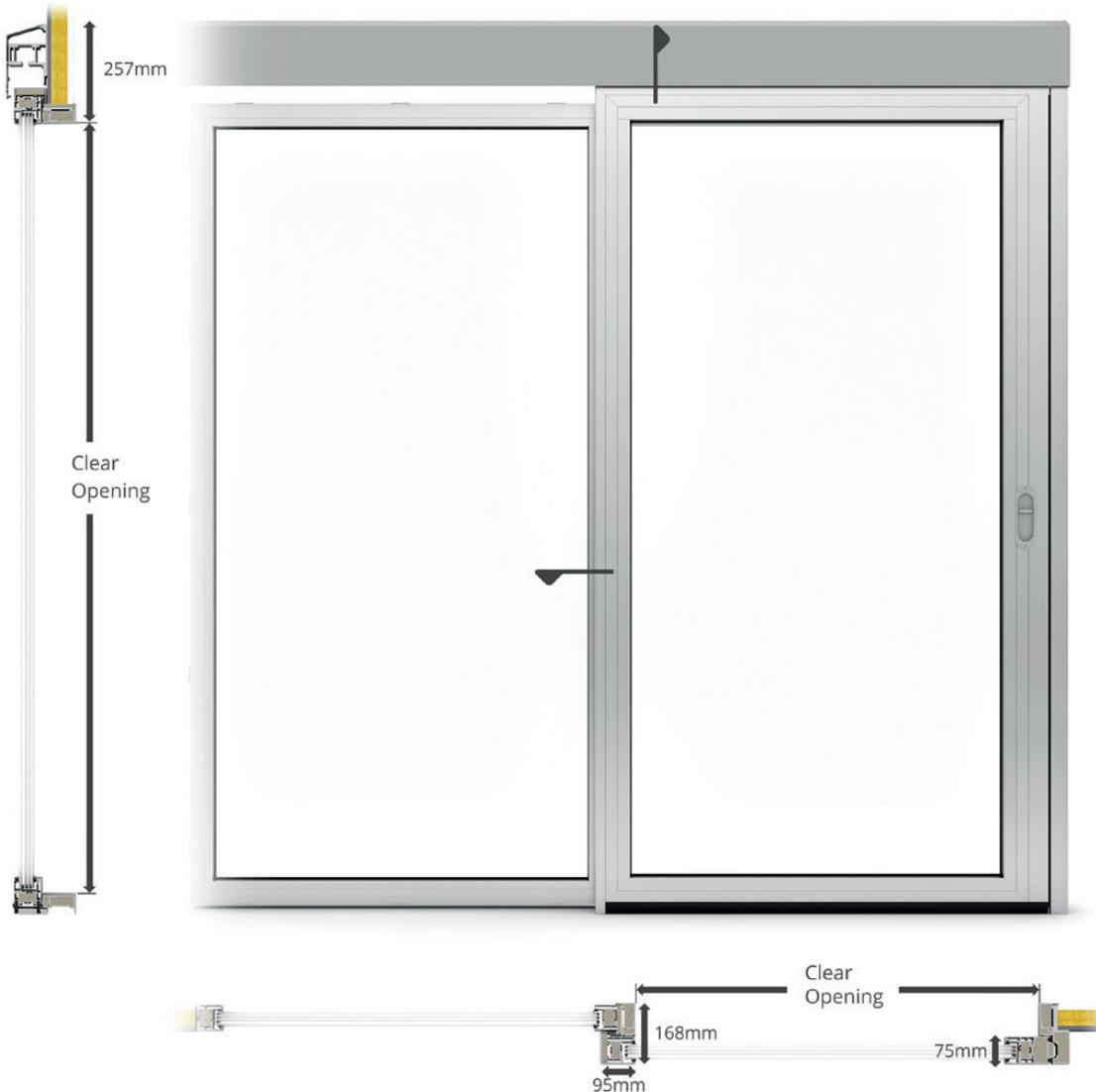
Our fully automatic doors are supplied with electric and hydraulic drive systems, certified and especially made for marine environments. Manual and semi-automatic doors, also called self-closing doors are equipped with Aluflam Marine's aluminium rail system with stainless steel bearings and accessories.

Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

A60/AF75 EXTERNAL SINGLE SLIDING PATIO TYPE DOOR

DETAILS



A60/AF85 EXTERNAL DOUBLE SLIDING PATIO TYPE DOOR

Aluflam Marine glazed products provide evident fire protection against radiant and conductive heat transfer. Furthermore the high strength aluminium framing gives the ultimate durability and flexibility with various anodizing and powder coating options available.

All products are certified by Bureau Veritas and made to be used in coastal and marine environments.

Our marine series are custom made and hand-crafted in Denmark, Scandinavia.



DOOR FRAME & LEAF

Made from 62/85mm insulated aluminium profiles. As standard delivered in powder coated RAL/NCS colors or anodized in natural shades. All framings are prepared with predrilled holes for easy fitting. Installation materials such as bolts and screws can be delivered upon request.

Options:

- Special finish for instance brushed or polished stainless steel look or gold/silver anodized.
- Glass with print, manifestation or silk printed.

HARDWARE

Aluflam Marine doors are designed with high quality selected hardware and accessories. Narrow stile mortise lock systems, pull and recessed type of handles, as well as oval cylinders are among the standard choice.

AUTOMATIC

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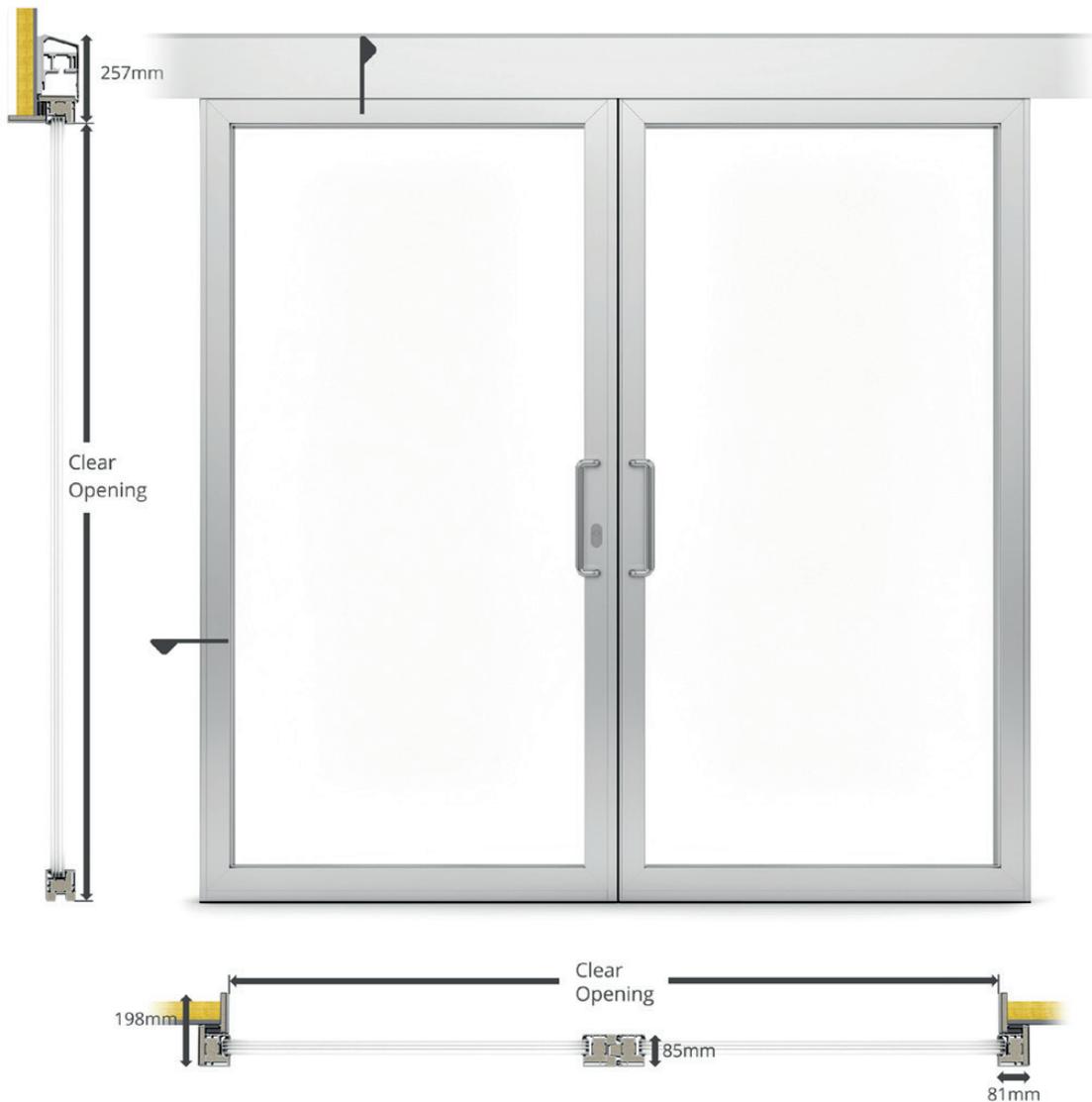
Options:

- Hold open function, various activation controls, emergency power unit and automatic threshold.

DESCRIPTION	A60/AF85 EXTERNAL DOUBLE SLIDING DOOR PATIO TYPE
Fire Class	A60
Type	Semi or Fully Automatic
Certified	BV MED-D
Max Size	2097 x 2165mm
Sound reduction	Up to 38-40 dB

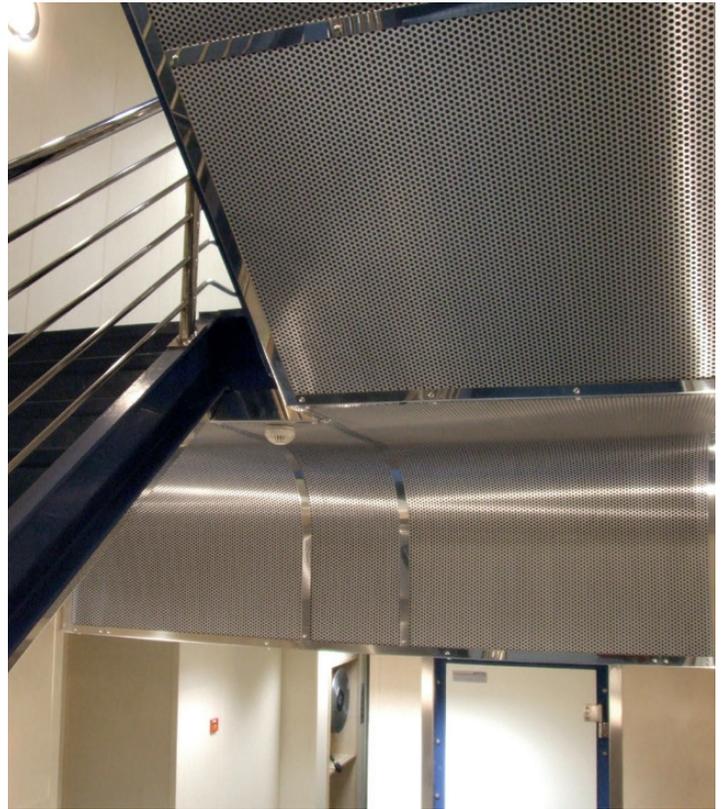
A60/AF85 EXTERNAL DOUBLE SLIDING PATIO TYPE DOOR

DETAILS



www.bdsystems.co.uk

CEILING



Specialist Ceilings by BD Systems

Burgess B-15 Clip-In.....	7.2
Burgess Clip-in Security	7.3
Burgess Access Panel.....	7.4
Burgess Grille Tile.....	7.5
Burgess Components.....	7.7
B-500/52.....	7.9
B-600/40.....	7.10
T-600/40.....	7.11
Inspection Hatch for B-500 Ceilings	7.12
Meta/Danacoustic Tiles P-52	7.13
Meta/Danacoustic M.....	7.14
Meta/Danacoustic Component List	7.16
Light boxes	7.20
Access Hatch	7.21

BURGESS B-15 CLIP-IN

Developed by Burgess, this tried and tested system is the most widely used metal tile ceiling system. The tiles, manufactured to fine press tool tolerances are clipped into a concealed Tee Bar grid. Tiles are automatically levelled in the grid by special 'Pip & Stop' registers, which are pressed into the side flanges of the tiles during manufacture.

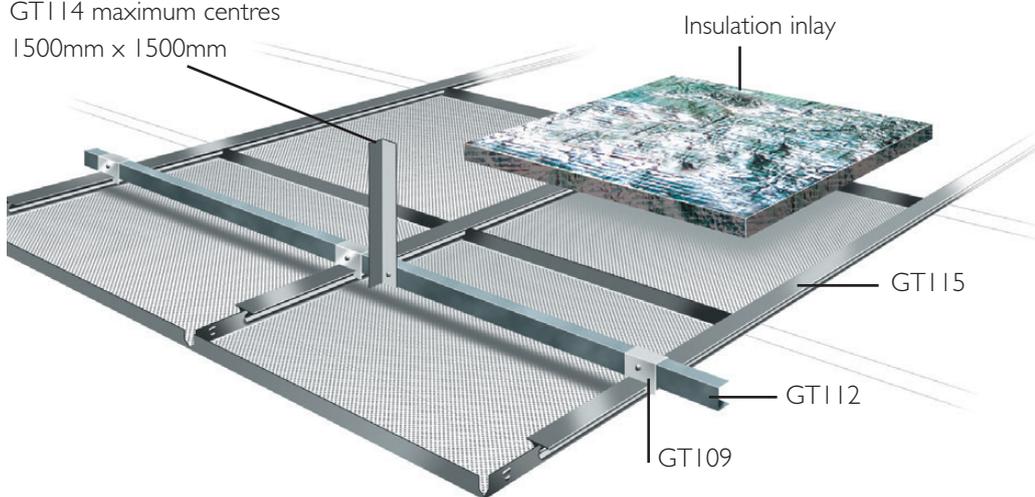


The robust grid system is easily installed and tiles can be removed and replaced for access to services. Modular or circular light fitting and grilles can be integrated within the Clip-In System, and various acoustic criteria can be met with the inclusion of acoustic inlays.

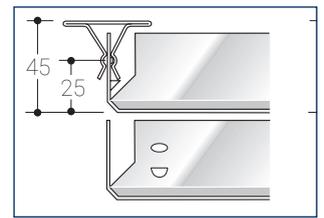
The Clip-In System incorporates many features to provide an economic solution to most ceiling requirements. Comprehensive ranges of the most popular sizes and perforation patterns are held in stock, together with the necessary grid components and perimeter details.

Insulation supplied encapsulated in aluminium foil as standard.

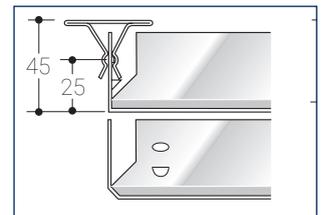
GT114 maximum centres
1500mm x 1500mm



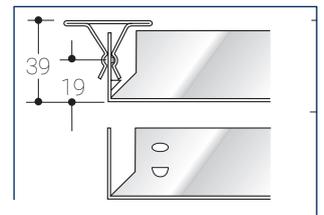
Grid components details
on pages 95 & 96



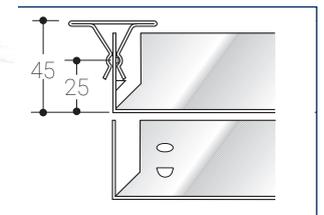
TYPE 'A' TILE
5mm Bevel edges to all sides.



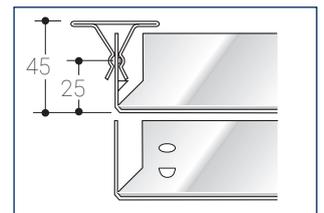
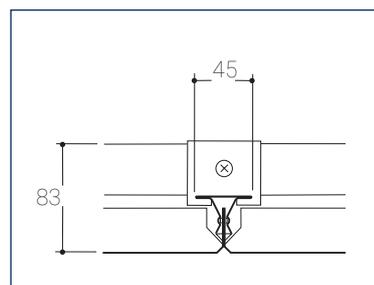
TYPE 'B' TILE
Bevel edges longitudinally,
square edges on end.



TYPE 'C' TILE
Square edges to all sides.



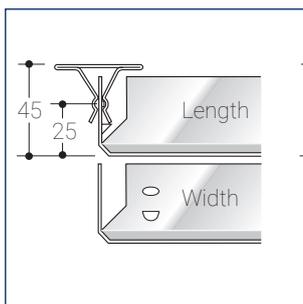
TYPE 'D' TILE
Square edges to all sides.



TYPE 'F' TILE
2mm Bevel edges to all sides.

BURGESS CLIP-IN SECURITY

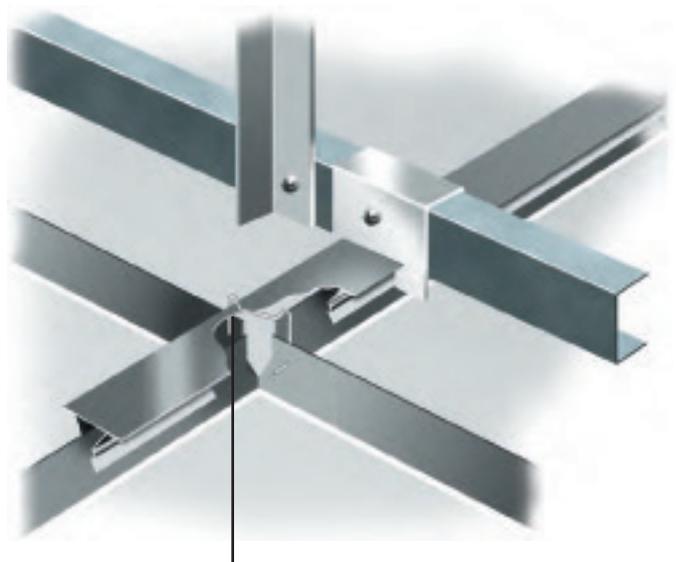
This is a standard internal quality Burgess Clip-in ceiling, with the addition of security locking features to prevent unauthorised access to the ceiling void. The system is normally specified in Prisons, Airport search areas or other high security locations. Panels are retained in the Tee Bar in the normal manner and an additional security clip is introduced to prevent unauthorised removal. Access to the void is normally obtained through hinged lockable access panels and from here, all panels can be removed.



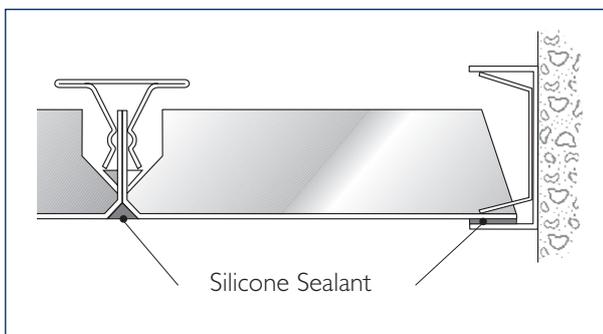
TYPE 'A' TILE

5mm Bevel edges to all sides.

Grid details as Clip-In exterior ceilings



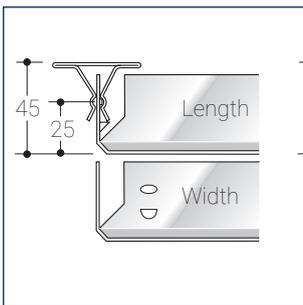
Security clip GT1071 hooks into the four adjoining tiles at corner locations and secures tiles to grid over the tee bars GT115



SECTION SHOWING AIR AND DUST TIGHT CEILING

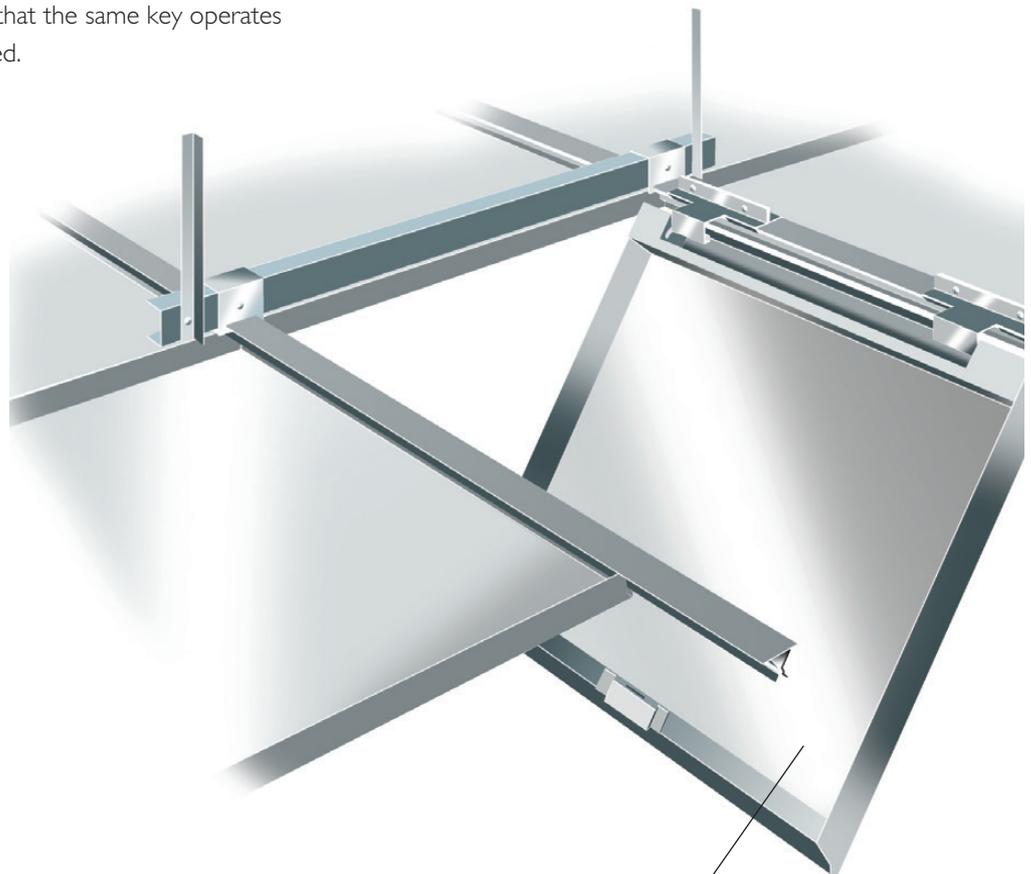
BURGESS ACCESS PANEL

Access panels are manufactured to resemble the main ceiling panels both in respect to size and edge detail. They are used in locations where security tiles are employed or where regular access to the ceiling void is necessary for electrical or mechanical services or devices. The panels are manufactured with reinforced frames that provide rigidity to the panel whilst permitting the panel to hinge down for access to the ceiling plenum. Access panels are fitted with locking devices to retain the panel in the ceiling and prevent unauthorised access. Locks can be operated with a square shanked key (budget locks) or, in particularly sensitive areas such as police stations or prisons, the locks can be key operated (Yale Type). Where Yale type locks are specified and there are numerous access panels required in a ceiling the keys can be "suited" such that the same key operates all of the panels if that is desired.



TYPE 'A' TILE
5mm Bevel edges to all sides.

Tiles can pivot on either 1200mm or 600mm edge



Access panel

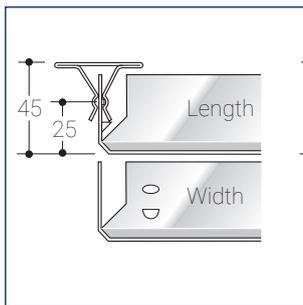
BURGESS GRILLE TILE

The Clip-In Burgess Grille Tile has been developed for use in ventilated ceilings for the supply or extraction of large volumes of air where standard perforated tiles are inadequate.

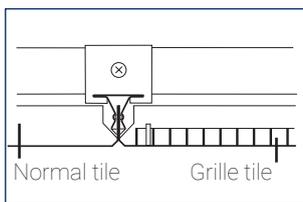
Grille Tiles are available in a range of module sizes and colours. The tiles have a standard border of 53mm and contain a central 13mm cell louvre retained in position by fixing tabs.

PERFORMANCE

The tables opposite give air-flow performance for a standard 600mm square Grille Tile as independently tested by Sound Research Laboratories Ltd. – Test report C/5252/405. For full test report details please contact the Burgess Technical Department.



TYPE 'A' TILE
5mm Bevel edges to all sides.

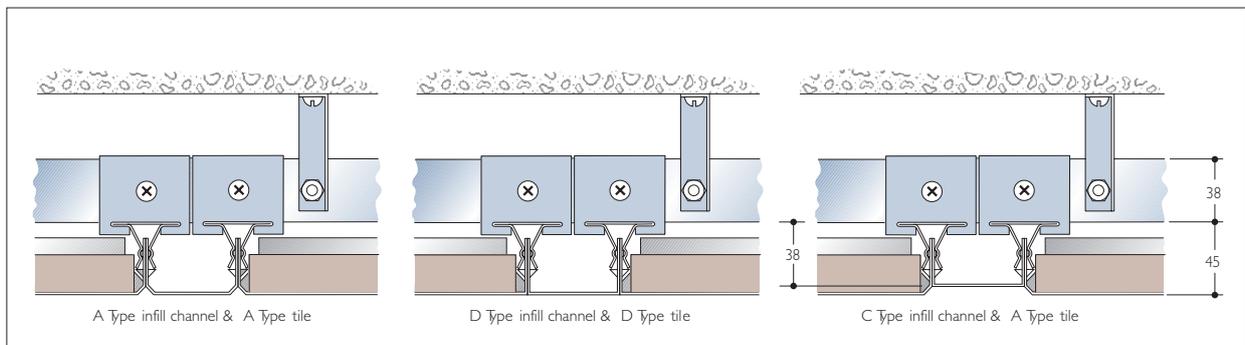
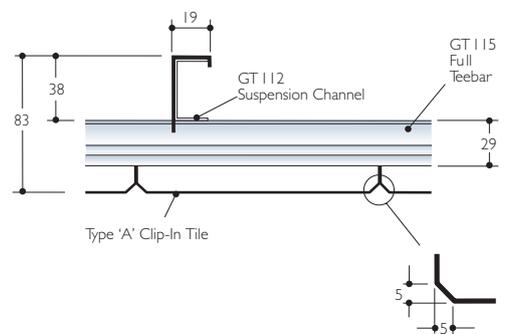
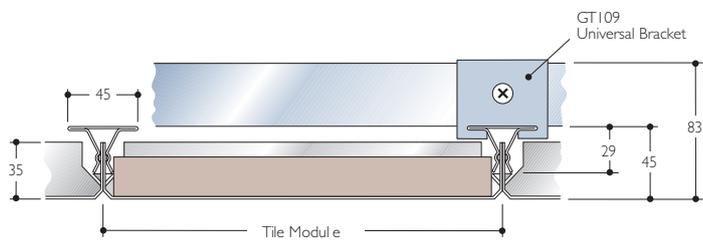
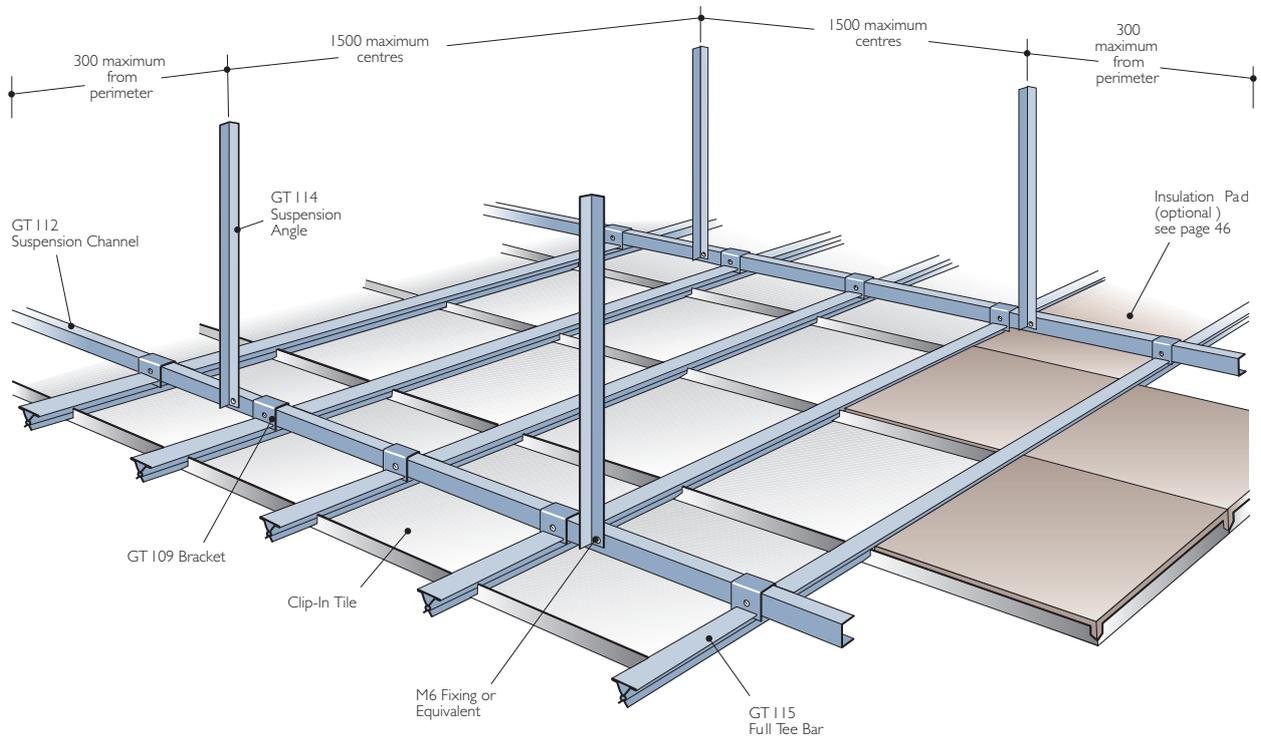


Grid components details on pages 95 & 96

AIR FLOW PERFORMANCE	
PRESSURE N/M ²	AIR FLOW RATE M ³ /S PER M ²
2.5	1.7
5.0	2.6
10.0	3.7
15.0	4.6
20.0	5.3

VELOCITY MEASUREMENT M/S			
PRESSURE N/M ²	300mm	600mm	1000mm
2.5	1.4	1.25	1.0
5.0	2.1	1.8	1.4
10.0	2.8	2.5	1.9
15.0	3.3	2.9	2.5
20.0	3.8	3.3	2.7

CEILINGS



We only recommend the use of Burgess Tee Bar for this system. Each piece of Burgess Tee Bar is identified as such on the rear face.

BURGESS COMPONENTS



**Product No.
GT 102**

Description:
Type T1 bottom fixing clip with pre-punched 7mm dia. clearance hole for use with 19 x 19mm suspension angle. Size 57 x 28.5 x 1.6mm galvanised mild steel.
Unit Weight: 0.02kg



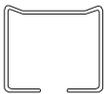
**Product No.
GT 108**

Description:
Type G2 channel / tee bar clip for use with 38 x 19 x 1.6mm channel. 2mm galvanised mild steel, supplied with two M5 x 65mm long round head cadmium plated setscrews, nuts and washers.
Unit Weight: 0.09kg



**Product No.
GT 113**

Description:
Suspension channel coupler. 152mm long pre-drilled with two 7mm dia. clearance holes. 35 x 16 x 1.2mm galvanised mild steel.
Unit Weight: 0.1kg



**Product No.
GT 107**

Description:
Type G1 channel / tee bar clip. 2.5mm spring steel wire, galvanised. For use with 38 x 19 x 1.6mm channel.
Unit Weight: 0.01kg



**Product No.
GT 109**

Description:
Universal tee bar / channel bracket. 1.2mm galvanised mild steel 68mm wide x 46mm high x 37mm deep to suit 38 x 19mm channel.
Unit Weight: 0.05kg



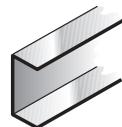
**Product No.
GT 114**

Description:
3000mm long suspension angle. 19 x 19 x 0.8mm galvanised mild steel.
Unit Weight: 0.55kg



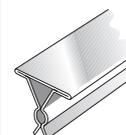
**Product No.
GT 1071**

Description:
External soffit / security clip. 2.5mm spring steel wire galvanised.
Unit Weight: 0.01kg



**Product No.
GT 112**

Description:
3000mm long suspension channel. 38 x 19 x 1.6mm galvanised mild steel.
Unit Weight: 2.5kg



**Product No.
GT 115**

Description:
3000mm long full tee bar. 45mm wide x 29mm deep x 0.8mm galvanised mild steel.
Unit Weight: 2.0kg

COMPONENTS



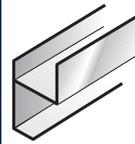
**Product No.
GGT 116**

Description:
Full tee bar coupler,
128mm long 46mm
wide x 0.6mm
galvanised mild steel.
Unit Weight: 0.03kg



**Product No.
GT 120**

Description:
Channel trim wedge,
255mm long, 41 x 15 x
0.5mm zinc coated mild
steel.
Unit Weight: 0.06kg



**Product No.
GT 123**

Description:
2400mm corner
section. 64 x 19
aluminium. Painted to
suit requirements.
Unit Weight: 3.25kg



**Product No.
GT 118**

Description:
3000mm long half
tee bar 23mm wide x
34.5mm deep x 0.7mm
galvanised mild steel
finished to
suit customers
requirements.
Unit Weight: 1.5kg



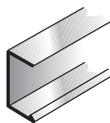
**Product No.
GT 121**

Description:
2400mm long odd leg
channel trim. 32 x 44 x
19 x 0.5mm zinc coated
mild steel. Painted to
suit requirements.
Unit Weight: 1.0kg



**Product No.
GT 137**

Description:
Extractor tool type 3.
Spring steel blade with
wooden handle.
Unit Weight:



**Product No.
GT 119**

Description:
2400mm long channel
trim. 38mm x 19mm x
0.5mm galvanised mild
steel painted to suit
requirements.
Unit Weight: 0.75kg



**Product No.
GT 122**

Description:
Odd leg channel trim
wedge, 275mm long,
47 x 14 x 0.5mm zinc
coated mild steel.
Unit Weight: 0.07kg



**Product No.
GT 133**

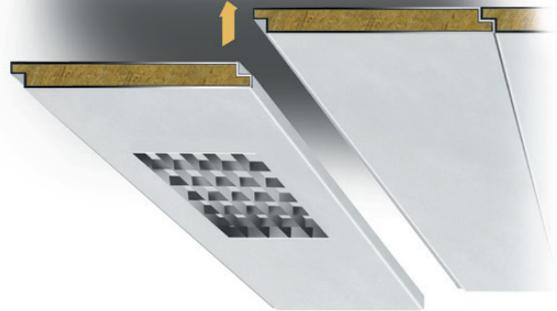
Description:
2400mm long closure
angle. 100 x 25 x
0.9mm zinc coated mild
steel. Painted white
on one exposed face.
Other sizes available
to suit customers
requirements
Unit Weight: 2.0kg

B-500/52

B-500/52 is a self suspended ceiling of sandwich construction and designed for easy and rapid installation with no connecting profiles.
 No additional (loose) insulation required to maintain fire class.
 Self suspended up to 3000 mm.

WEIGHT:

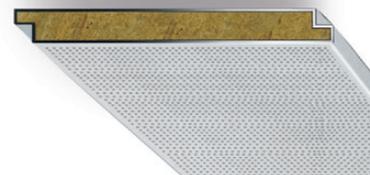
All weights are based on system weight, including all profiles.



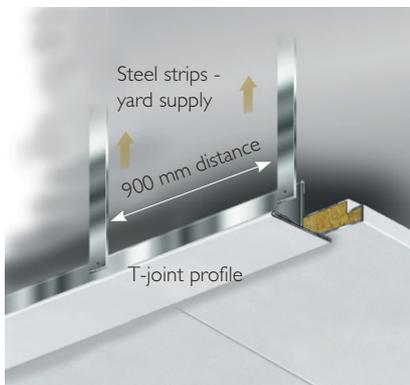
Approved with light fittings. The ceiling has been shock tested. More information on request.



Clip-on profile to conceal rivets upon request

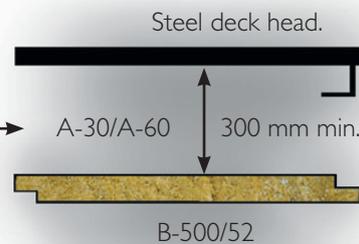


Approved B-15 with perforated surface



For rooms exceeding 3000 mm. (Also B-15)

A-30/A-60 Barrier achieved only when surrounding Bulkhead Panels span Deck-Deck



DESCRIPTION	B-500/52	B-500/52
Fire Class	B-15/A-30	B-30/A-60
Panel length	up to 3000 mm	up to 2400 mm
Std. module width	500 mm	500 mm
Special module width	100-700 mm	100-700 mm
Thickness	52 mm	52 mm
Weight	19.2 kg/m ²	21.7 kg/m ²
Sound reduction	Rw=50 dB	Rw=50 dB
Thermal Insulation	U=0.64 W/m ² K	U=0.64 W/m ² K
Application	Self suspended ceiling	



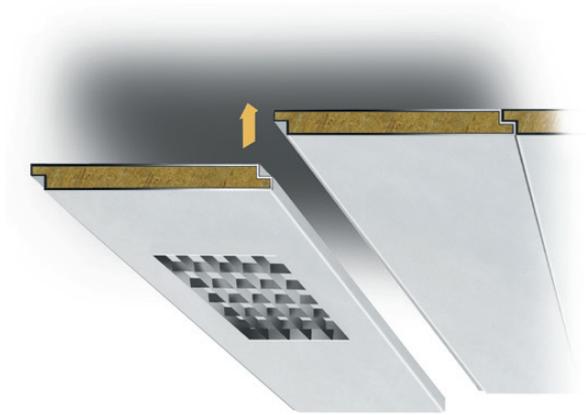
Start/Stop element.

B-600/40

B-600/40 is a self suspended ceiling of sandwich construction and designed for easy and rapid installation with no connecting profiles.
Self suspended up to 2700 mm.

WEIGHT:

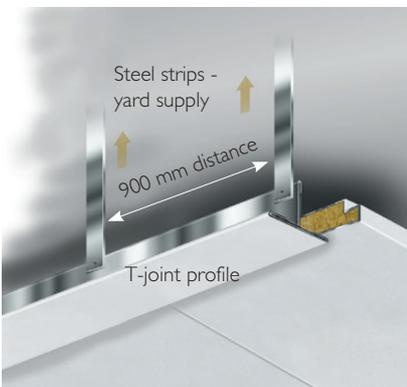
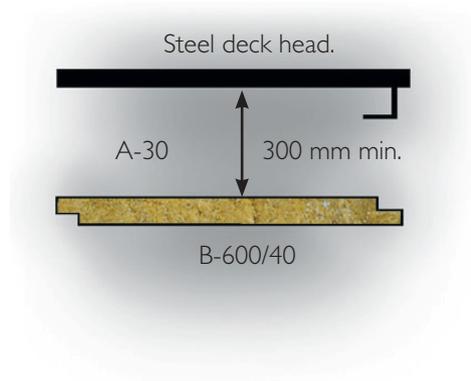
All weights are based on system weight, including all profiles.



Installation.



Clip-on profile to conceal rivets upon request



For rooms exceeding 3000 mm. (Also B-15)



Start/Stop element.

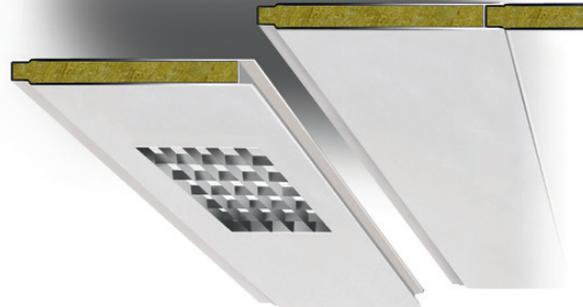
DESCRIPTION	B-600/40
Fire Class	B-15/A-30
Panel length	up to 2700 mm
Std. module width	300/600 mm
Special module width	100-700 mm
Thickness	40 mm
Weight	21.2 kg/m ²
Sound reduction	Rw=50 dB
Thermal Insulation	U=0.66 W/m ² K
Application	Self suspended ceiling

T-600/40

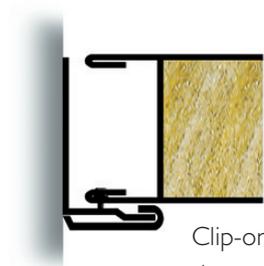
T-600/40 is a self suspended ceiling of sandwich construction and designed for easy and rapid installation with no connecting profiles.
Self suspended up to 3000 mm.

WEIGHT:

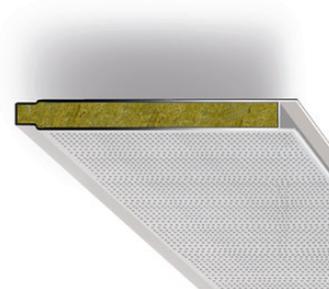
All weights are based on system weight, including all profiles.



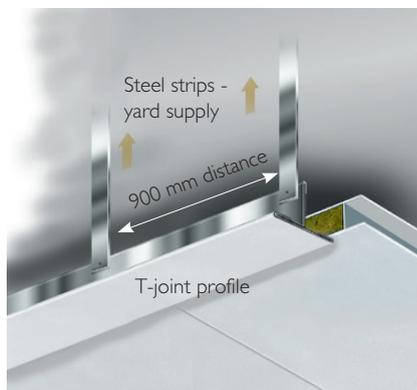
Installation.



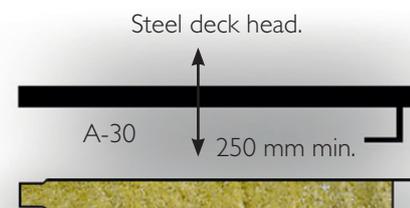
Clip-on profile to conceal rivets upon request.



Approved B-15 with perforated surface



For rooms exceeding 3000 mm. (Also B-15)



T-600/40

DESCRIPTION	T-600/40	T-600/40 PERF.
Fire Class	B-15/A-30	B-15/A-30
Panel length	up to 3000 mm	up to 3000 mm
Std. module width	600 mm	600 mm
Special module width	100–700 mm	100–700 mm
Thickness	40 mm	40 mm
Weight	18.1 kg/m ²	17.2 kg/m ²
Sound reduction*	Rw=29 dB	Rw=32 dB
Thermal Insulation	U=0.66 W/m ² K	U=0.66 W/m ² K
Application	Self suspended ceiling	Self suspended ceiling

*Sound reduction between cabins.

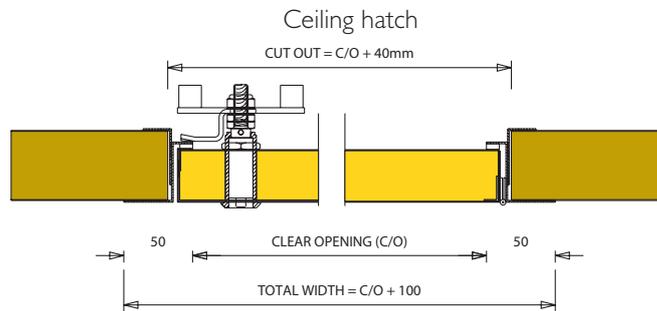
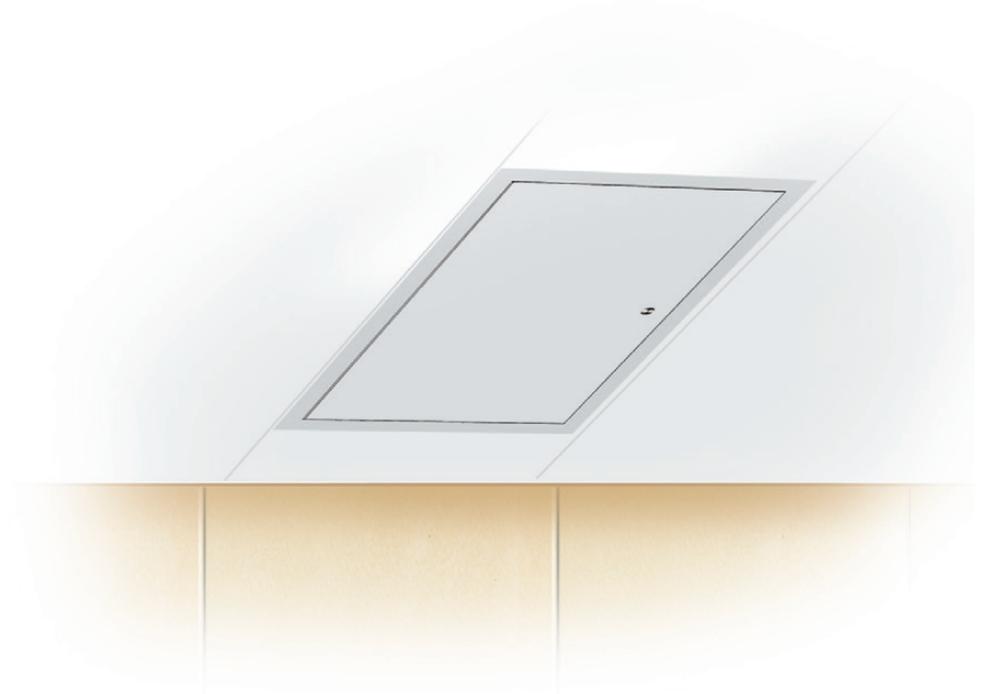


Start/Stop element.

INSPECTION HATCH FOR B500 CEILING SYSTEM

For quick access to technical spaces above the ceiling such as ventilation, electrical wiring etc. Surface is normally the same as the ceiling to make a discreet finish.

The hatch is supplied with frame / counter frame for cut out, 3-point espagnolet lock and piano hinge.



DESCRIPTION	INSPECTION HATCH FOR CEILING
Fire Class	B-15 up to B-30
Surface Leaf	0.6 mm steel sheets
Frame	Painted or stainless steel
Core Material	Rockwool 250 kgs/m3
Thickness	39 mm
Weight	Approx 18 kg
Lock	3-point espagnolet
Clear opening:	Width: 120 – 800 mm

Note:

- B-30 required optional insulation
- If the width of the frame exceeds the width of the ceiling panel, extra ceiling supports (steel strips) are needed.

META/DANACOUSTIC TILES P-52

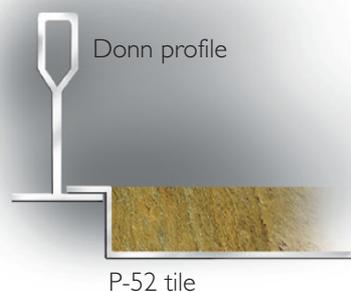
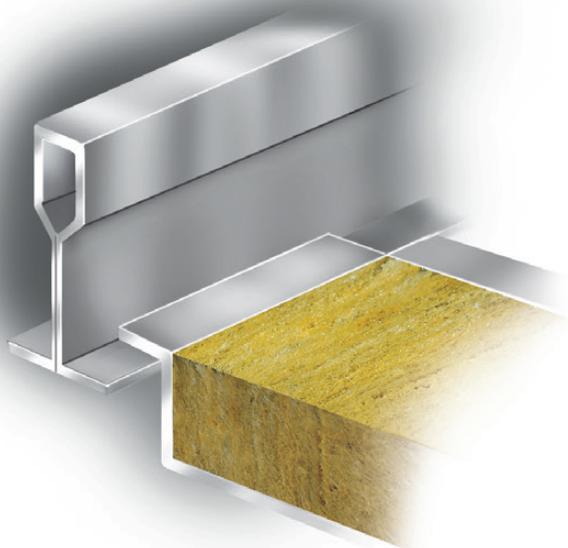
There are certain situations where only a tile has the visual and functional qualities required. In these circumstances Meta Dancooustic marine tiles can be specified with confidence, having been approved for use on oil and gas platforms where ratings up to B-0 or B-15 are required.

Our marine tiles have been chosen for larger areas such as dining rooms, lounges etc. They have excellent acoustic properties and can be supplied with a plain or perforated face depending on the sound requirements. Both styles are fully certified.

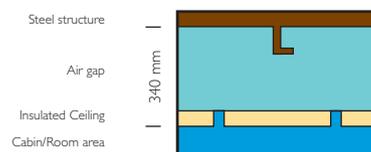
MARINE TILES - COLOURS

Colour is obviously an essential element in interior design, so although standard panels are white, we can work with your designers to meet almost any colour specification.

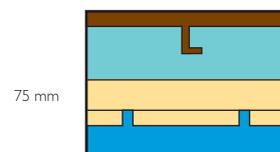
Recessed light fittings are available.



P-53 plain tile
Non-combustible only



B-0 / A-15



B-15 / A-30

DESCRIPTION	TILES	
Fire Class (P-52 only)	B-0 / A-15	B-15 / A-30
Module width	300 x 300 / 600 x 300 / 600 x 600 mm	300 x 300 / 600 x 300 600 x 600 mm
Insulation	Rockwool	Rockwool
Thickness	25 mm	25 x 75 mm
Density	31-35 kg/m3	31-35 + 45 kg/m3
Weight	5.7 - 6.9 kg/m2	9.1 - 10.3 kg/m2

META/DANACOUSTIC M 200 – M 300

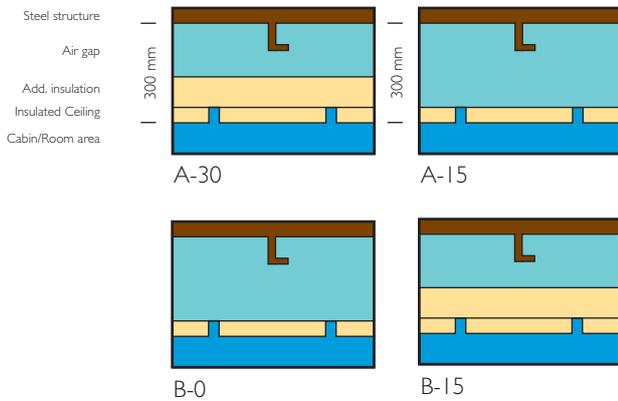
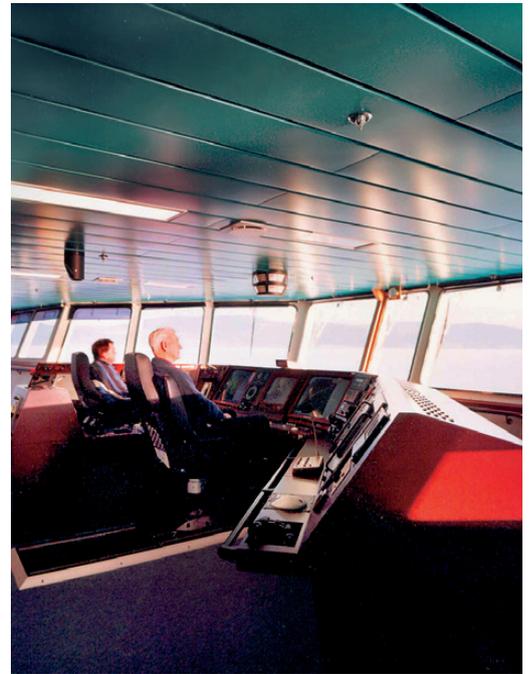
Meta Dancoustic M can be fitted - and refitted as necessary - swiftly and easily with the panels clipping into a carrier system and then secured in place by screws. Again, to facilitate access, each individual panel can be easily removed.

The system fully satisfies all current fire regulations and, although very light, has very good sound control properties. It has been used with success on marine vessels, oil rigs and other offshore installations.

The flexibility of the Meta Dancoustic M system can easily cope with a variety of lighting and ventilation systems.

META DANCOUSTIC M - COLOURS

Colour is obviously an essential element in interior design, so although standard panels are white, we can work with your designers to meet almost any colour specification.

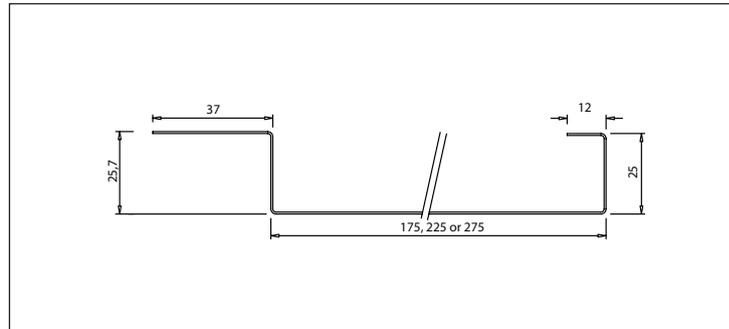


DESCRIPTION	M200 - M250 - M300	
Fire Class	B-0/A-15	B-15/A-30
Module width*	200-250-300 mm	200-250-300 mm
Length	50-5000 mm	50-5000 mm
Insulation	Rockwool	Rockwool
Thickness	25 mm	25+50 mm
Density	31-35 kg/m ³	31+40 kg/m ³
Weight	9-8.7-8.5 kg/m ²	11-10.7-10.5 kg/m ²
Sound reduction	D ≤ 42 dB	D ≤ 50 dB
Thermal Properties	U=1.16 W/m ² K	U=0.42 W/m ² K

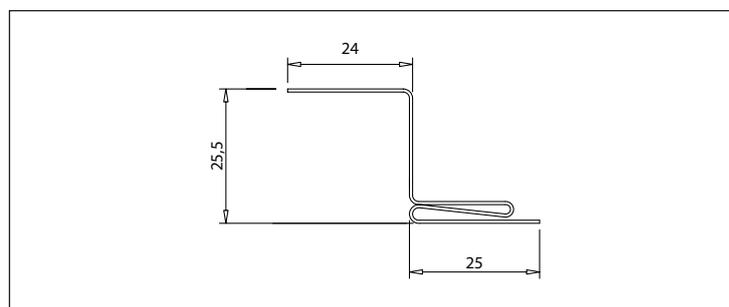
* Other modules can be delivered (depending on quality)

META DANCOUSTIC COMPONENT LIST

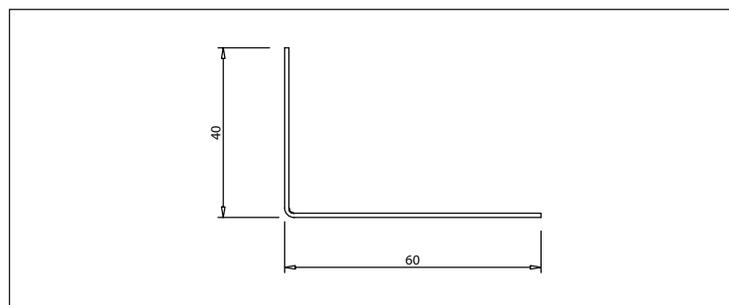
Name M1/MMC 300
 System Marine panel
 DMC M300 and DMC S300
 Application Fire rated continuous ceiling
 Material 0.6 mm galvanised steel,
 polyester painted
 Length 75 – 6000 mm
 Weight Unperforated 6.6 kg/m²
 Perforated 6.1 kg/m²
 (both including Rockwool)



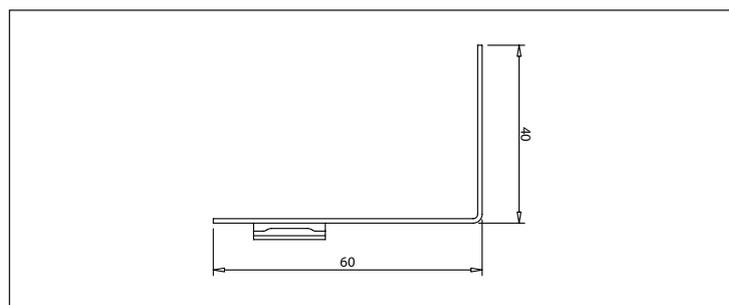
Name M-2a
 System Edge trim
 DMC M300 and S300
 Application Edge trim for longitudinally
 cut in panels
 Material 0.6 mm galvanised steel,
 polyester painted
 Length 2500 mm
 Weight 0.51 kg/m



Name M-3
 System Angle trim
 DMC M300 and S300
 Application Edge trim for panels
 with closed ends.
 Material 1 mm galvanised steel,
 polyester painted
 Length 3000 mm
 Weight 0.77 kg/m

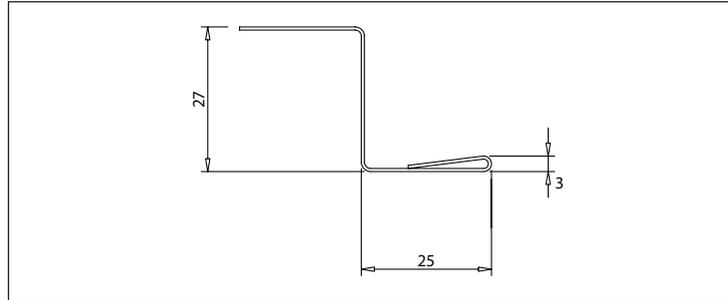


Name P-90
 System Suspension angle
 DMC M/M-T & RM/RM-T & S
 Application Carrying ceiling panels
 along the edge
 (longitudinally)
 Material 1 mm galvanised steel,
 polyester painted
 Length 3000 mm
 Weight 0.77 kg/m

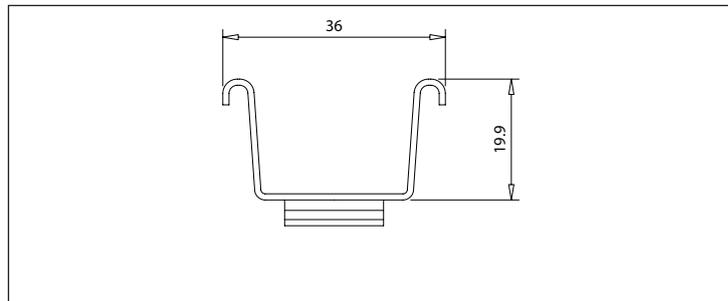


META DANCOUSTIC COMPONENT LIST

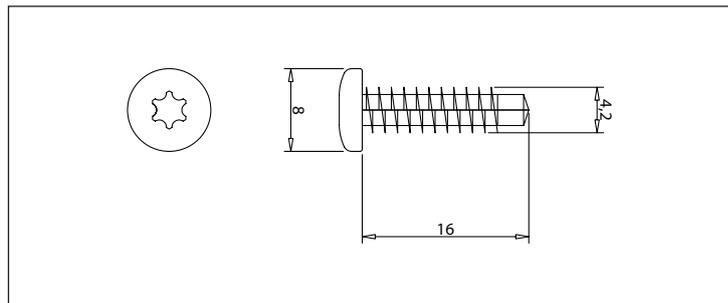
Name M-4
 System End edge trim
 Application DMC M300 and S300
 Edge trim for closing open ended or cut panels
 Material 0.6 mm galvanised steel, polyester painted
 Length 2500 mm
 Weight 0.42 kg/m



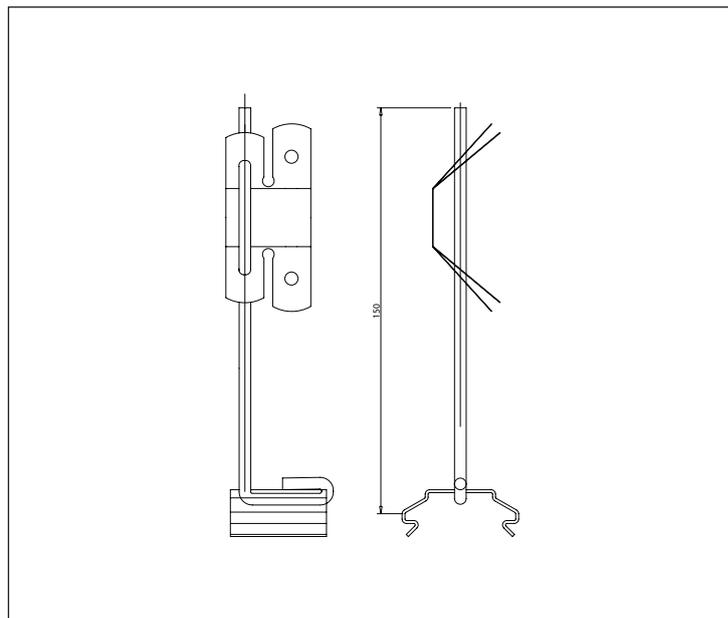
Name M-7
 System U-profile w/lugs
 Application DMC M/M-T & RM/RM-T
 Carrying ceiling panels
 Material 1 mm galvanised steel, polyester painted
 Length 4500 mm
 Weight 0.55 kg/m



Name M6
 System Self-tapping panel screw
 Application Fastening of panels to edges and u-profiles
 Material Hardened steel, polyester painted
 Length 18 mm
 Weight 1.2 kg/1000 pieces

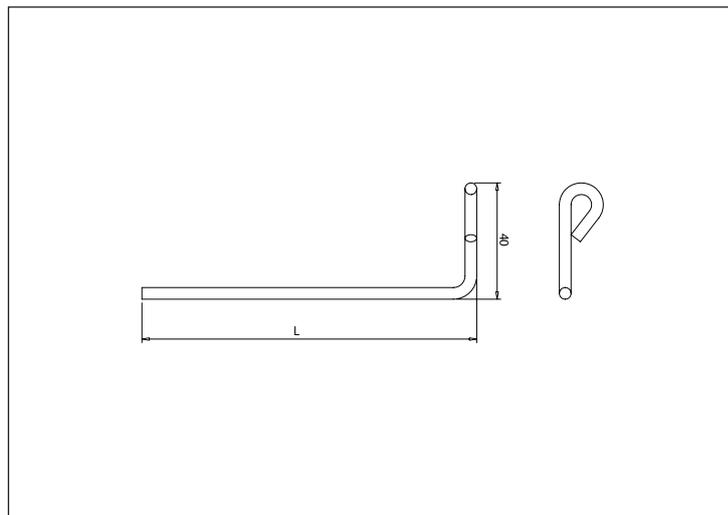


Name P-3
 System Butterfly clip
 Application DMC Panels and Tiles
 To clip onto U-profile galvanised steel,
 Material 150 mm
 Length 0.035 kg/piece

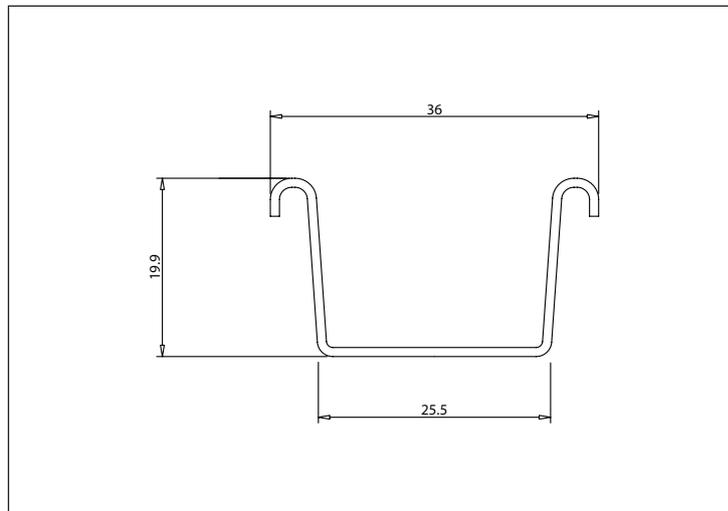


COMPONENT LIST

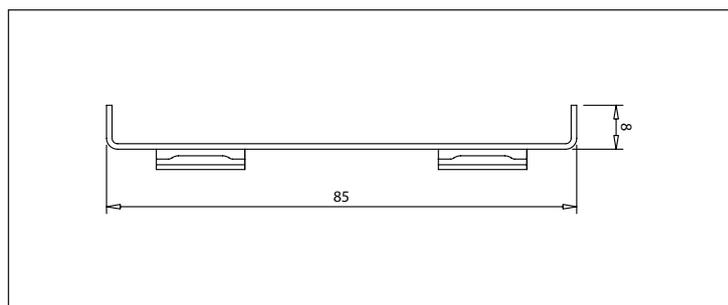
Name P-3a
 System Hanging rod
 DMC Panels and Tiles
 Application For suspension from deck
 Material 4 mm diam.
 galvanised steel
 Length 250, 500, 750, 1000, 1250,
 1500, 2000 mm
 Weight 0.025, 0.050, 0.075, 0.100,
 0.125, 0.150, 0.200 kg/piece



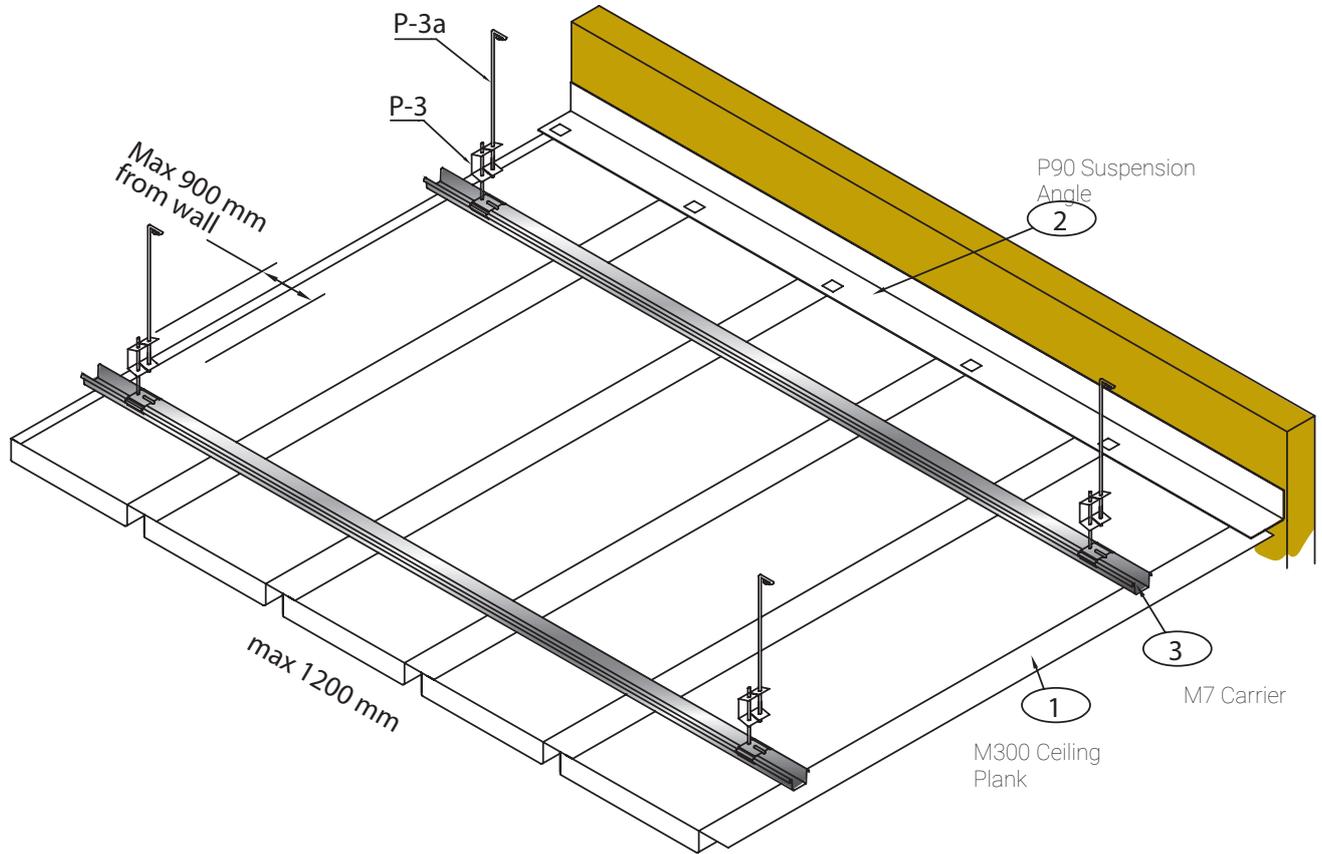
Name P-32
 System U-profile
 DMC DP and Tiles
 Application Carrying ceiling tiles
 Material 1 mm galvanised steel,
 polyester painted
 Length 4500 mm
 Weight 0.55 kg/m



Name P-106
 System Joint profile
 DMCM-300
 Application For butt-jointing panels
 Material 1.0 mm galvanised steel,
 polyester painted
 Length 3000 mm
 Weight 0.77 kg/m



TYPICAL ARRANGEMENT FOR M TYPE CEILING INSTALLATION

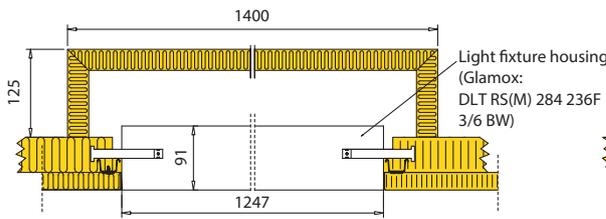


LIGHT BOXES

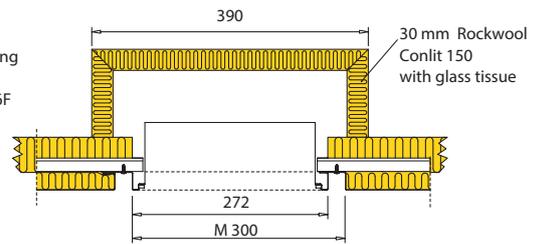
Meta Dancoustic ceilings are designed for integration of light fixtures.

The M ceiling is tested and approved in compliance with IMO 754, class B-15.

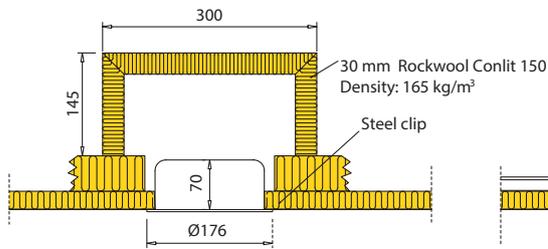
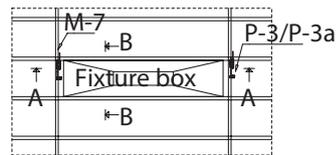
All cut outs for lighting can be prefabricated in our factory.



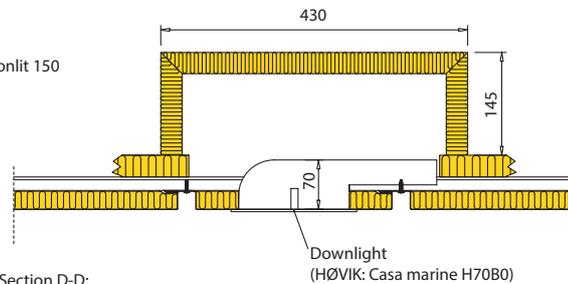
Section A-A:



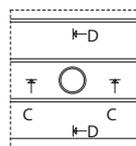
Section B-B:



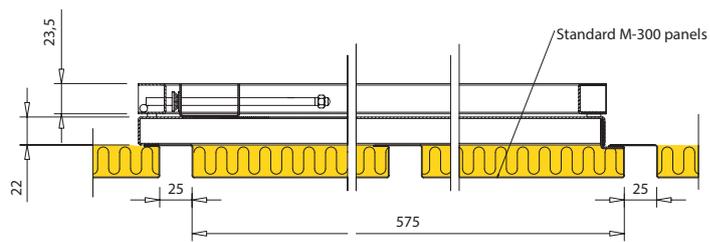
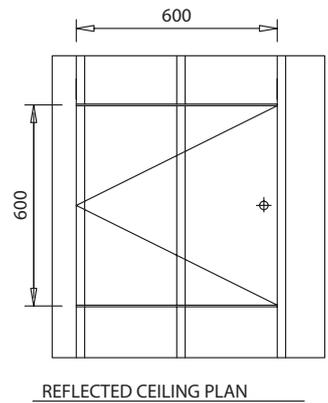
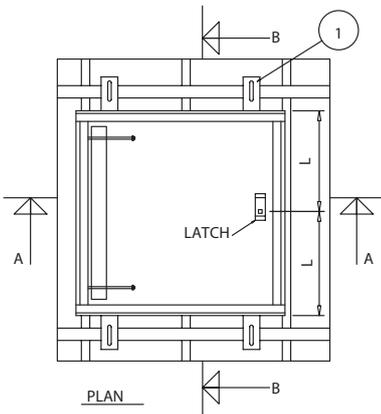
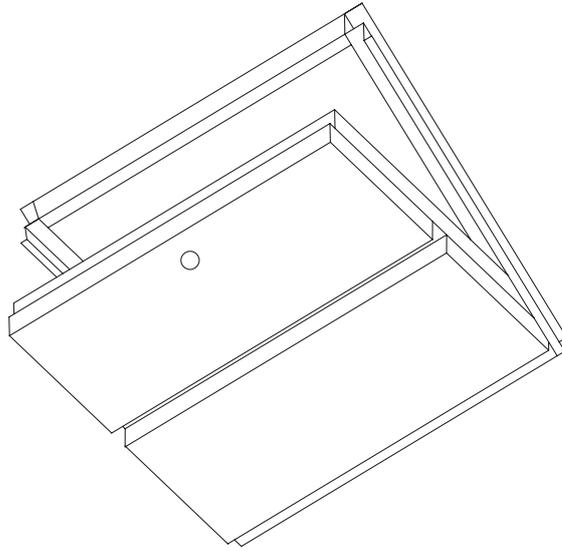
Section C-C:



Section D-D:

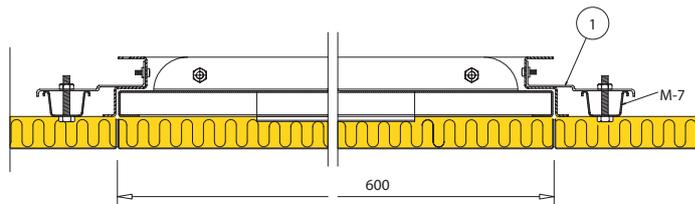


ACCESS HATCH



SECTION A-A, INSULATED FOR B-0 RATING.

For B-15 rating:
An addition layer of insulation has been added.

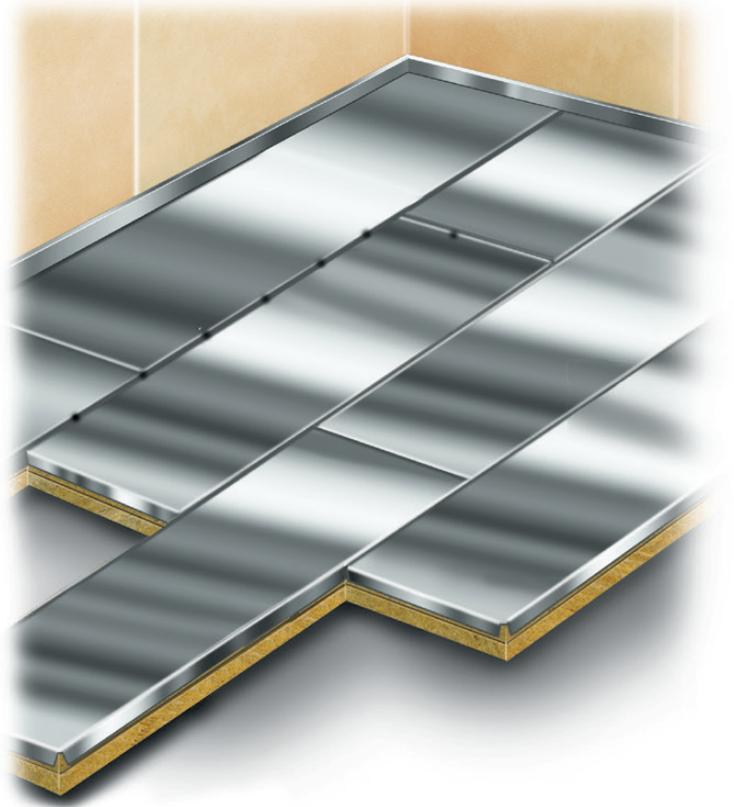


SECTION B-B, INSULATED FOR B-0 RATING.

F-300

Galvanized steel cassettes of 3 mm thickness.

All 4 edges are bent for maximum strength.



A-60 class, 63 mm thick.

A-0 without bottom layer of insulation, 33 mm thick.

DESCRIPTION	FLOATING FLOOR
Fire Class	A-0 / A-60
Dimensions	Width 300 mm Length 1970 mm
Weight	A-0: 33 kg/m ² 30 mm insulation A-60: 39 kg/m ² 60 mm
Steel	3 mm galvanized



Sound test data available.

www.bdsystems.co.uk



Photo by Apply Leirvik Norway



Prefabricated Wet Units9.2
Typical Design9.3
Installation9.7
Standard Equipment & Accessories9.8

PREFABRICATED WET UNITS

With many years of experience and specialized competence, Norac AS offer fully fitted wet units. The Norac modular wet units are ideal for marine accommodations, from cruise ships to offshore installations.

The Norac wet units, whether standard or custom made, are manufactured according to the strictest rules and regulations and are fabricated from only first class materials.

In our design the emphasis is on using durable solutions to ensure maximum quality, comfort and well-being of our customers, whether being a ship owner, ship yard or end user.

The units are manufactured with great deal of consideration given to the ease of handling and installation.

Throughout the production process the units are subjected to strict quality control to ensure that all of our supplies conform to our policy of supplying only first class quality.



ALUMINIUM CONSTRUCTION

Prefabricated modular wet units for all types of marine accommodations also available in light weight, non-corrosive aluminium - B15 class. Weight reduction as much as 20-25%.



TYPICAL DESIGN

Wet units can, upon request, be delivered in "knock down" execution.

A = Toilet module B = Shower module C = Bath module



TYPE 1
(1120 X 1240 mm)
A-Module



TYPE 2
(1420 X 1720 mm)
B-Module



TYPE 3
(1720 X 2020 mm)
C-Module



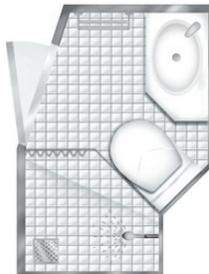
TYPE 4
(1200 X 2000 mm)
B-Module



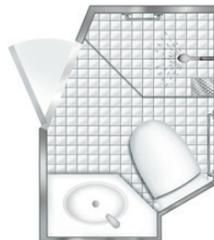
TYPE 5
(1500 X 1600 mm)
B-Module



TYPE 6
(1600 X 1085 mm)
A-Module



TYPE 7
(1650 X 1180 mm)
B-Module



TYPE 8
(1660 X 1250 mm)
B-Module

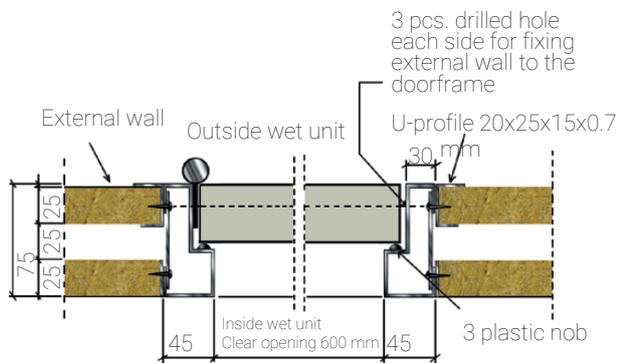
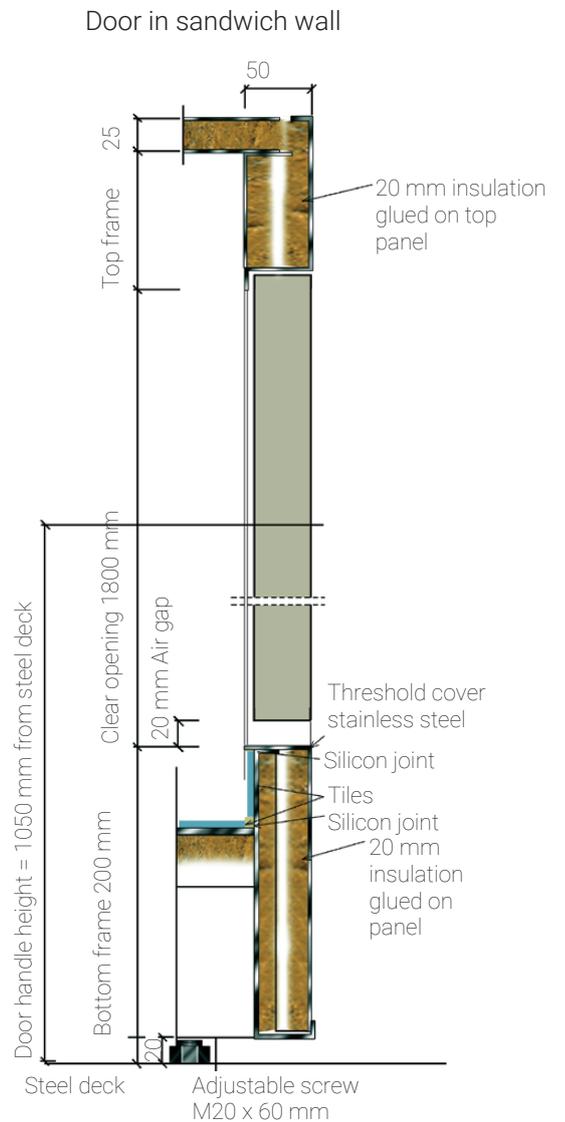
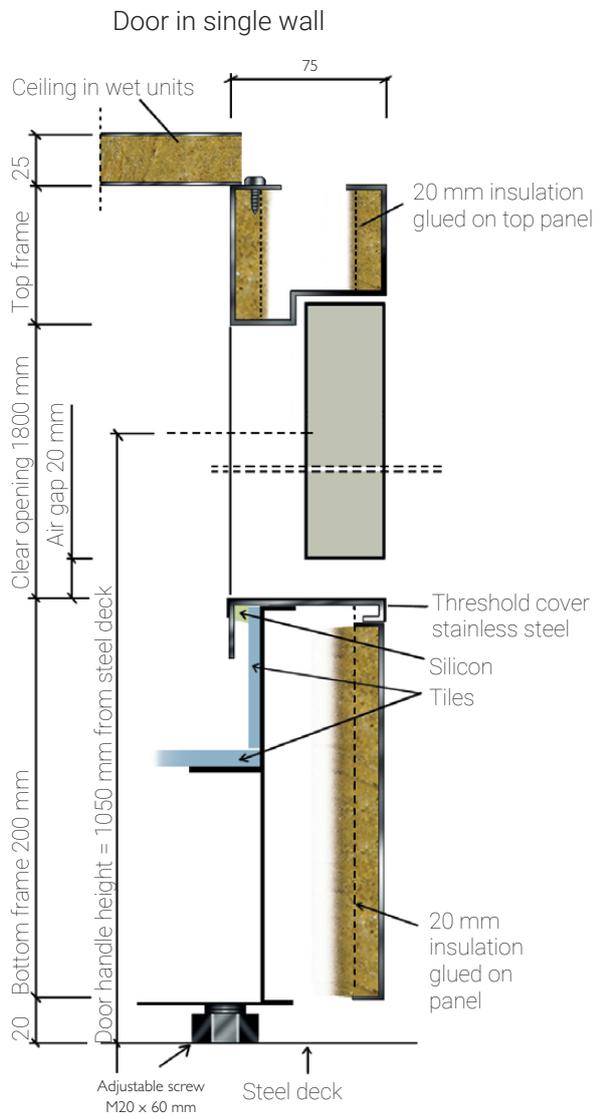


TYPE 9
(1925 X 1125 mm)
B-Module

TYPICAL STANDARD DETAILS	
Scupper	Steel with grate of stainless steel
Outlet greywater	Plastic pipe (PEH-HT,) 50 mm
Fresh water pipe	Insulatet cu-pipe prisol 12 mm
Connection	B.S.P. 1/2"
Electrical cable	3 x 1.5 mm ²
Conduit pipe	Flexible
Door hinges	Stainless steel

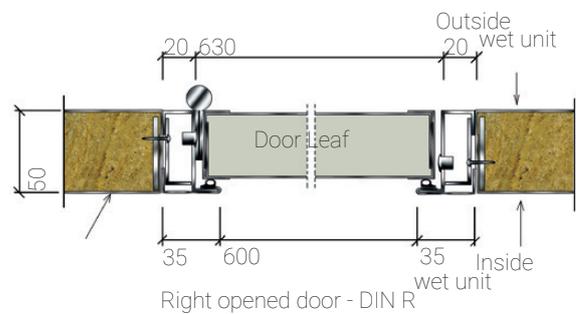
These units are for guidance only. We deliver units according to customer specification and design.

DETAILS



As standard the external linings slide into the door frames.

Details outwards opened door - Wet Unit



Norac wet units can be supplied with the cabin side having a finished surface as shown above.

DETAILS

Norac wet units can be delivered with different draining systems according to our customer's specification.

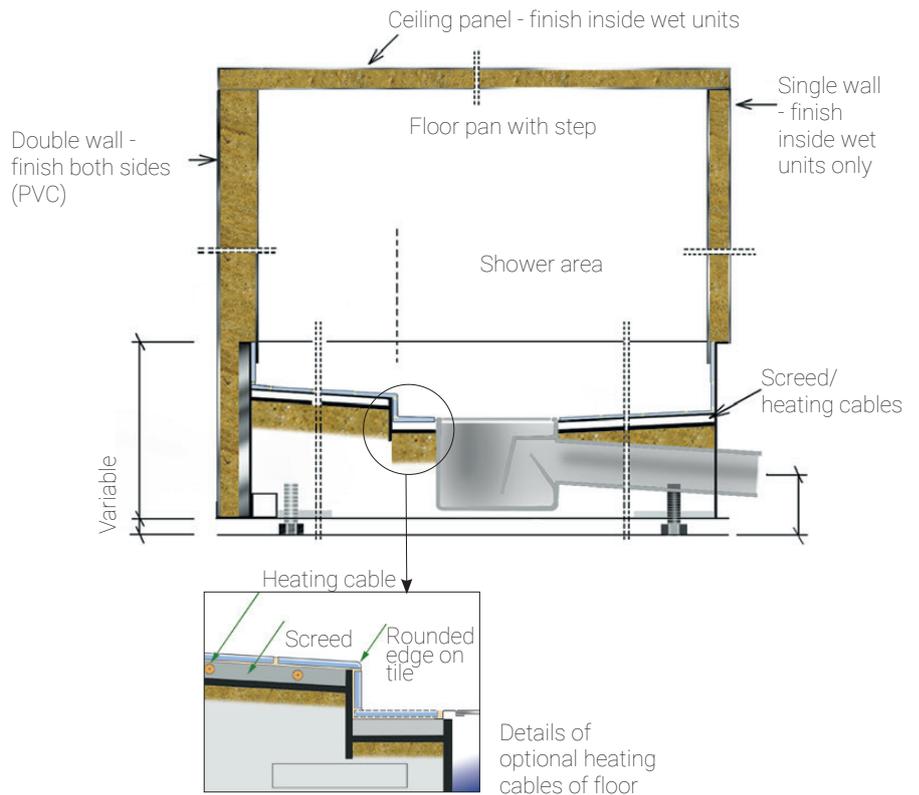
Norac wet units are delivered with walls and ceilings manufactured in a sandwich construction with no open/visible insulation.



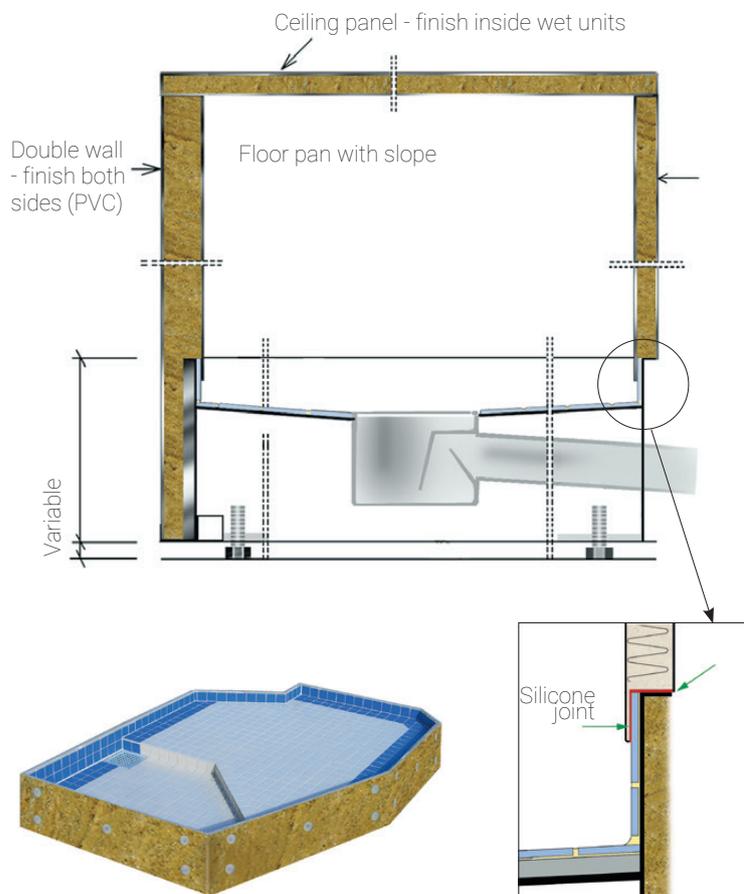
B-15 class in both steel and aluminium constructions.

The floor pan is fully tested water tight, blasted and primed before application of finish

Solution for heating cable and/or step



Standard solution for tiled floor



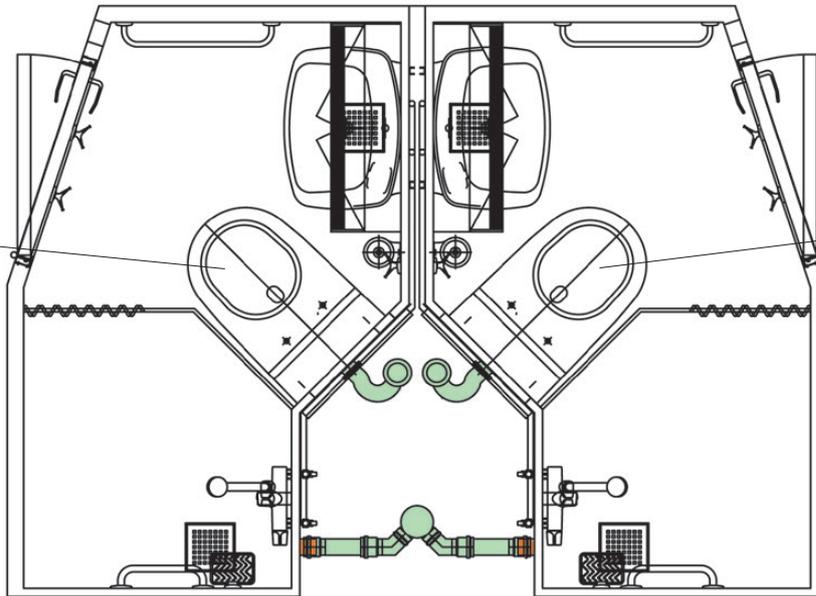
DETAILS

Standard Norac Responsibility:

Standard Yard supply:

If gravity toilet, normal Norac supply

If vacuum toilet, normal yard supply



Penetration frame

Electrical cable

EL-Junction box (The connection can also be done in the junctionbox beside door)

Ventilation duct

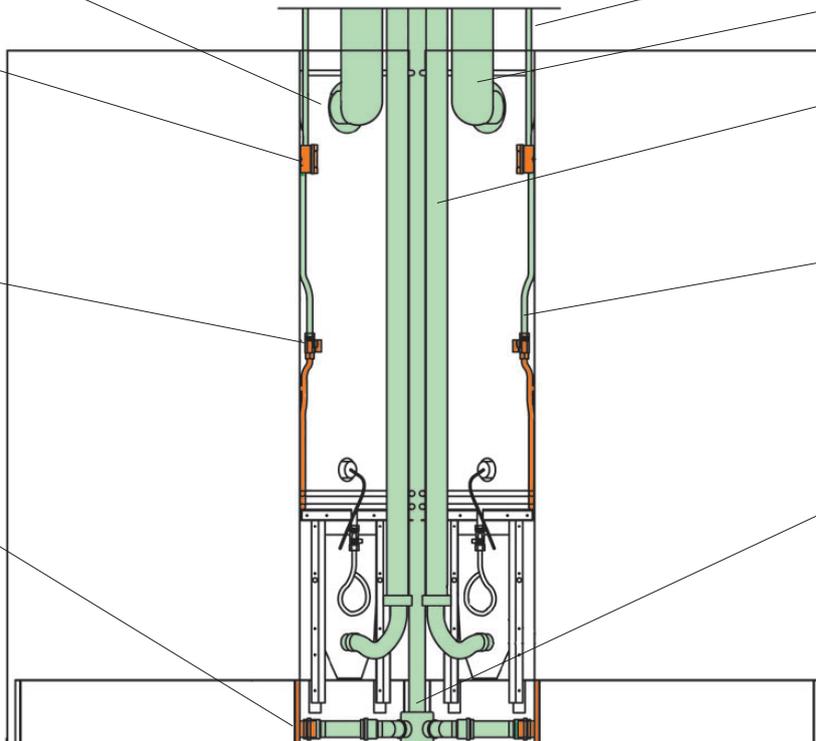
Shut down value connection male 1/2"

Black water (toilet)

Cold and hot water pipe

Grey water connection 50 mm

Grey water (shower and sink)



Interface responsibility

Green = Yard supply
Orange = Norac supply

INSTALLATION

The standard units are delivered each with four square tubes for easy lifting and locating on board. A specially designed lifting frame is used for hoisting by crane.

After lifting on board, transportation wheels are fitted into the tubes. The units are then jacked up and transported to their final position.

All units are delivered with one adjustable leg at each corner to allow for levelling.

Norac wet units are so complete when delivered that after fixing them to the deck you only need connect the water, drainage and electricity to use them.

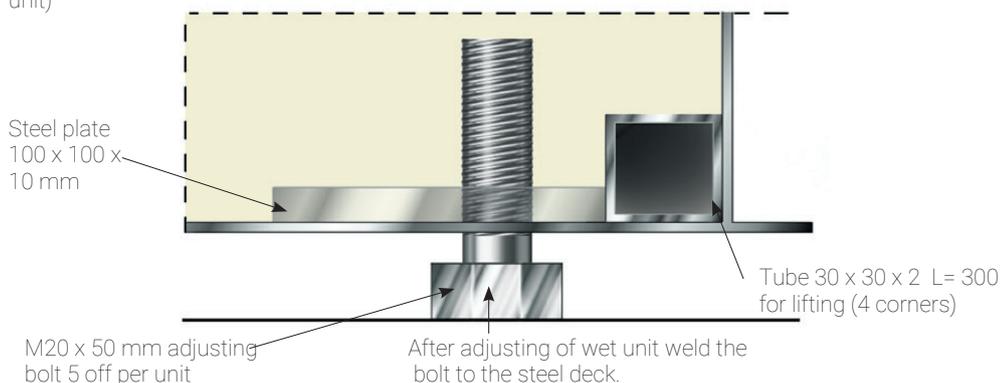
Norac wet units have been successfully installed on numerous vessels throughout the world, whether they are on a luxury cruise liner, commercial vessel or offshore platform.



Norac wet units are easy to handle and locate on board

Adjusting height of bathroom unit – option

1 pc placed on the corner of bathroom unit (normally 5 pcs on each unit)



STANDARD EQUIPMENT & ACCESSORIES



Wash-basin, white china
Dim.: 500 x 355
Dim.: 600 x 450



Operator, Geberit Rumba



Cistern, Geberit 110.892.00.1
(Especially made for ships)



Toilet bowl



Shower set, Oras 320-11,
white



Shower mixer, Oras Oramix



Shower mixer, Oras Optima
180000, chrome



Mixing tap,
Oras Classica 1010



Folding seat, Inda 331/M

STANDARD EQUIPMENT & ACCESSORIES



Soap holder, Inda 2249



Hook, Inda 2220



Double hook, Inda 2221



Tumbler holder, Inda 2217 +
glass, India C360



Tumbler holder, Inda 2210 +
glass, India C360



Ashtray, Inda 530



Spare paper holder,
Inda 2228



Toilet paper holder,
Inda 2226



Toilet brush and holder,
Inda 514

STANDARD EQUIPMENT & ACCESSORIES



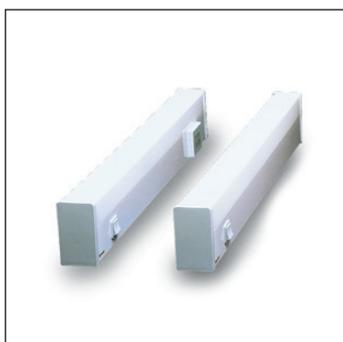
Toilet cabinet



Grab rail,
Inda 590/M



Towel rail, Inda 2290, 2218
and 2219
(All in length 30-45-60 cm)



Light fitting,
1x18W with razor socket
110/220 V IP44



Shower mixer.
Paffoni Equo - Eqsl 168 C



Shower set.
Paffoni Roma ZSAL 009CR



Mixing tap
Paffoni Saturno ST071 CR6

NORAC MARINE FURNITURE (NMF)



“Norac Marine Furniture” supplies high quality furniture and fittings for merchant shipping and offshore installations.

“Norac Marine Furniture” was established, with NORAC as the major shareholder, to market and sell standard and bespoke furniture and furnishing solutions to the international shipping and offshore market.

Furniture from “Norac Marine Furniture” is manufactured by the renowned T & H Furnishing Industries Inc. in the Philippines, which have long traditions of production of furnishing for ships, as well as hotels and office buildings.

“Norac Marine Furniture” is acknowledged for its excellent design and quality at competitive prices. Furniture and interiors are supplied as standard products or are customised to the customers’ specifications. Our furniture is made from various materials and features surfaces constructed for a long lifetime of practical use in crew cabins, dayrooms, meeting rooms, offices and on the bridge deck.

Please contact us for more details.

www.bdsystems.co.uk

BD SYSTEMS BS EN ISO 9001:2008



BUREAU VERITAS
Certification



Certification Awarded to

BD SYSTEMS (EUROPE) LTD
INTEG HOUSE, WOODLANDS BUSINESS PARK
ROUGHAM, BURY ST EDMUNDS
SUFFOLK IP30 9ND

Bureau Veritas Certification certify that the management system of the above organisation has been assessed and found to be in accordance with the requirements of the standards detailed below.

STANDARD

BS EN ISO 9001:2008

SCOPE OF SUPPLY

THE MANUFACTURE AND PROJECT MANAGEMENT OF ACOUSTIC, FIRE AND BLAST RESISTING PANELS, DOORS AND CEILINGS FOR THE OFFSHORE AND MARINE INDUSTRY

Original approval date: **15 JANUARY 1995**

Subject to the continual satisfactory operation of the organisation's management system, this certificate is valid until:

To check this certificate validity please call 020 7661 0700

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation



For Bureau Veritas Certification UK Ltd
Brandon House
180 Borough High Street
London, SE1 1LB

Laurent Dahmani
Managing Director

Certificate number: **9159**
Date issued: **20/02/12**

MANAGING OFFICE: Bureau Veritas Certification Brandon House, 180 Borough High Street, London, SE1 1LB
ISSUING OFFICE: Bureau Veritas Certification Brandon House, 180 Borough High Street, London, SE1 1LB



FIRE CLASSES & CERTIFICATES

Fire Certificates/descriptions:

All products contained in this catalogue have been tested according to the latest international regulations and test procedures, and are approved by the worlds main certification bodies.

The energy generated from the test fire in the heating chamber follows a standardised temperature-time curve. B15 fire class proves that the temperature at the cold side does not exceed the standardised limits for a period of 15 minutes. The procedure for other fire classes follows the same procedure.

- B-class

Systems* are exposed to the fire for 30 minutes and must comply with stability and integrity requirements within this time.

- A-class

Systems* are exposed to the fire for 60 minutes and must comply with stability and integrity requirements within this time.

- H-class

Systems* are exposed to a hydro carbon fire for 2 hours. The test procedure is similar to the A-class test, but the rate of temperature rise is far more rapid and to higher temperature level.

*All systems shall be constructed of approved non-combustible materials

The following authorities, among others, have approved our products:

- MED (Europe)
- DNV
- Lloyds Register of Shipping
- Germanischer Lloyd
- Bureau Vertitas
- US Coast Guard
- American Bureau of Shipping
- Transport Canada
- MCA
- Australian Maritime Safety Authority
- Russia
- China

Validity of certificates is continously updated.

TRACK RECORD

MARINE

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
Disney Cruises	Disney magic	Internal partitions and doors fit out.
Cunard	QE2	Cabin refurbishment + A class wall upgrade.
Cunard	Vistafjord	New A60 partitions and doors.
Geco	American Champion	Full internal fit out .
P&O	Superseacats	Lightweight A60 partitions.
Air Tours	Sun dream	New cabin refurbishment.
Private Owner	Jezebel	Full internal fit out.
Private Owner	Al Salam	Full internal fit out.
Private Owner	Lana	New a class wall upgrade.
Saga Holidays	Saga Ruby	New cabin upgrade.
Saga Shipping	Saga Rose	New cabin upgrade.
Thompson Holidays	Celebration	Public areas upgrade.
P&O	Jubilee Sun	Accommodation upgrade.
P&O Ferries	Various	Accommodation upgrade.
Fred Olson	Balmoral	Accommodation upgrade
Moss Marine	Mv Tokai	Cabin upgrade
P&O Cruise	Oriana	Cabin upgrade
P&O Cruise	Arcadia	Cabin upgrade
P&O Cruise	Queen Mary 2	Cabin upgrade

MINISTRY OF DEFENCE

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
MoD	RFA Wave Knight	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	RFA Wave Ruler	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	HMS Albion	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	HMS Bulwark	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	HMS Ocean	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	RFA Sir Bedivere	Full internal fit out A60 and B15 walls, doors and wet units.
MoD	RFA Agrus	New B class door systems
MoD	RFA Bay Class	New B class door systems

OFFSHORE INTERNAL SYSTEMS

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
Statoil	Kvitebjorn	A60 internal prefabricated fire walls
Statoil	Kristin	A60 internal prefabricated fire walls
Pemex	Cantarel Field. Total Of 6 Living Quarters	Full internal fit out A60 and B15 walls, doors and wet units.
Nobel Driling	Homer Farrington	Full internal fit out A60 and B15 walls, doors and wet units.
Nobel Drilling	Tvl Living Quarters	Full internal fit out A60 and B15 walls, doors and wet units.
Nexen	Buzzard Living Quarters	Specialist ceiling systems and glassed screens
Norsk Hydro	Oseberg South Top Sides	A60 internal prefabricated fire walls.
Norsk Hydro	Oseberg South Bentec Drilling	A60 internal prefabricated fire walls.
Statoil	Troll A	A60 internal prefabricated fire walls
Conoco/Phillips	Britannia Living Quarters	Full internal fit out A60 and B15 walls doors and ceilings.
Shell	Cormorant	Full internal fit out A60 and B15 walls doors ceilings and glassed screens
Statoil	Gjoa	A60 internal prefabricated fire walls.
BP	Shah Deniz	A60 internal prefabricated fire walls.
BP	Valhall LQ	Full internal fit out A60 and B30 walls doors ceilings and glassed screens.
BP	Valhall Utility Modules	Internal A60 and H120 class partitioning to LER HV and PFS modules
BP	Valhall	A and B class walls, ceilings doors and glassed screens.
Booth Industries	Chirac	A class walls and penetrations
Apache North Sea Ltd	Forties Alpha	A and B class walls, ceilings and doors
Conoco Phillips	Jasmine	A and B class walls, ceilings and doors
Conoco Phillips	Judy Platform	A and B class walls, ceilings and doors
Statoil	Ekofisk	A class walls and penetrations
Lamprell	Nabors 657	A and B class ceilings
Arcadian	Forties Bravo	Cabin upgrade
Shell	North Cormorant	Cabin upgrade
Specialist Services	Bongkot	A and b class ceilings
Statoil	Troll A	A class walls and penetrations
Kaefer C&D	Cygnus AUQ	Full Internal Fit Out A & B Class

OFFSHORE EXTERNAL SYSTEMS

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
ADMA OPCO	Uhm Shaif	A60 wall cladding and roof deck
BP	Ulla	Blast wall
BP	Shah Deniz	A60 wall cladding to main control room
Shell	Teal	H120 cladding to control room and laboratories.
Mearsk	Gallant Living Quarters	A60 wall cladding to additional living quarters
Mearsk	Dan Fc	A60 wall cladding to additional living quarters
LNG Peru	Jetty Station	H120 wall cladding and doors with blast and seismic over pressure
Statoil	Ecofisk	New paint store to withstand fire and blast conditions.
Amec Foster Wheeler	Clair Ridge	LQ Blast Skirt

FASTCLAD PROJECTS

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
Vecta Offshore	Caledonian Vision	Cabin refurbishment
Vecta Offshore	Vanguard	Cabin refurbishment
Bluemarine	Mv Delft Seaways	Cabin refurbishment
Ice	Judy Platform	Public area refurbishment
Sodexo	Dunlin	Cabin refurbishment
Sodexo	Ocean Princess	Cabin refurbishment
Bluemarine	North Cormorant	Cabin refurbishment

WIND FARM PROJECTS

OPERATOR/CLIENT	PROJECT	MATERIAL SUPPLY
Sembmarine SLP / Siemens	Dudgeon	Internal & External Doors
Barrier / Siemens	Dudgeon	B15 Internal Panels & Doors and A60 External Doors
C & D Industrial Services	Sheringham Shoal	A60 Internal Panels & Doors
C & D Industrial Services	Galloper	Internal Panels & Doors
Harland & Wolf	Gwynt Y Mor	Wet Units, B15 Internal Panels & Ceilings
C & D Industrial Services	Centrica	A60 Internal Panels & B15 Suspended Ceiling
C & D Industrial Services	Greater Gabbard	Inspection Hatches

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