

# STACO

Total solution of Marine / Offshore / Building Accommodation

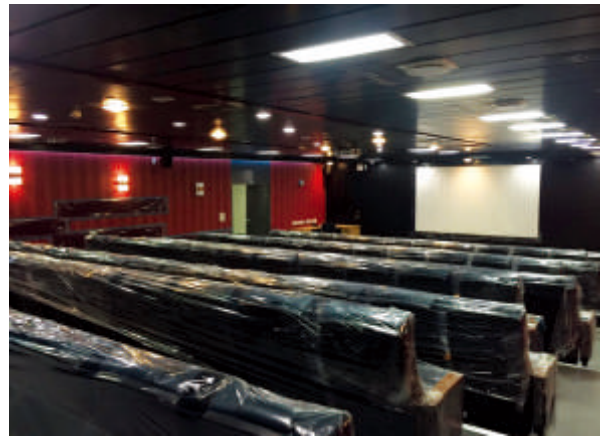


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Panorama of STACO Factory



# STACO INTRODUCTION

## **STACO is Global leader in Marine / Offshore / Building Accommodations**

Since its establishment in 1992, STACO has been leading the development in marine accommodation interiors. STACO is a specialist manufacturer of Unit Cabins, Unit Toilets, Wall & Ceiling Panels, Floors, Doors, Unit Cabins, Unit Toilets (Wet Units), Marine Furniture (Metal & Wooden) & Modular Houses. STACO also provides Total Architectural solutions on turnkey basis for high quality Marine Accommodation interiors for all types of ships, offshore living quarters and onshore applications for owners and builders in the marine, offshore and civil construction industries around the world.

## **STACO's Technological innovation is achieved by passion without pause**

STACO has its own R&D center and has been pursuing technological advancement and innovation rapidly and continuously to provide better and more comfortable products in this ever changing modern world. STACO has won many awards from the Korea Ministry of Knowledge and Economy for its path breaking achievements.

We have the capability to take on large projects, while maintaining personalized and efficient customer service. We offer a variety of options to satisfy any accommodation needs. Our excellent customer service, innovative design and efficient response time provide our clients everything they need to move forward with their projects.

## **STACO's Quality reliability, care for design and ability to create total solutions**

Quality products and unparalleled service are what separate us from the rest. We believe this philosophy along with our staff's experience, our commitment to customers, and our desire to provide exceptional, honest service has resulted in STACO taking the lead in supplying products to the entire satisfaction of its customers.

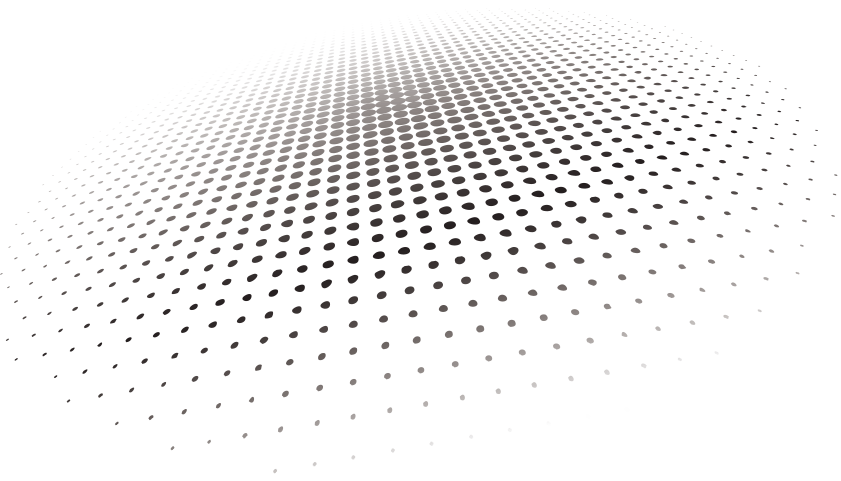
The teamwork, professionalism, and commitment to conscientious work ethics of our people are the attributes which set our company apart. We take great pride and care in the manufacturing of our products while maintaining the highest standards of safety.



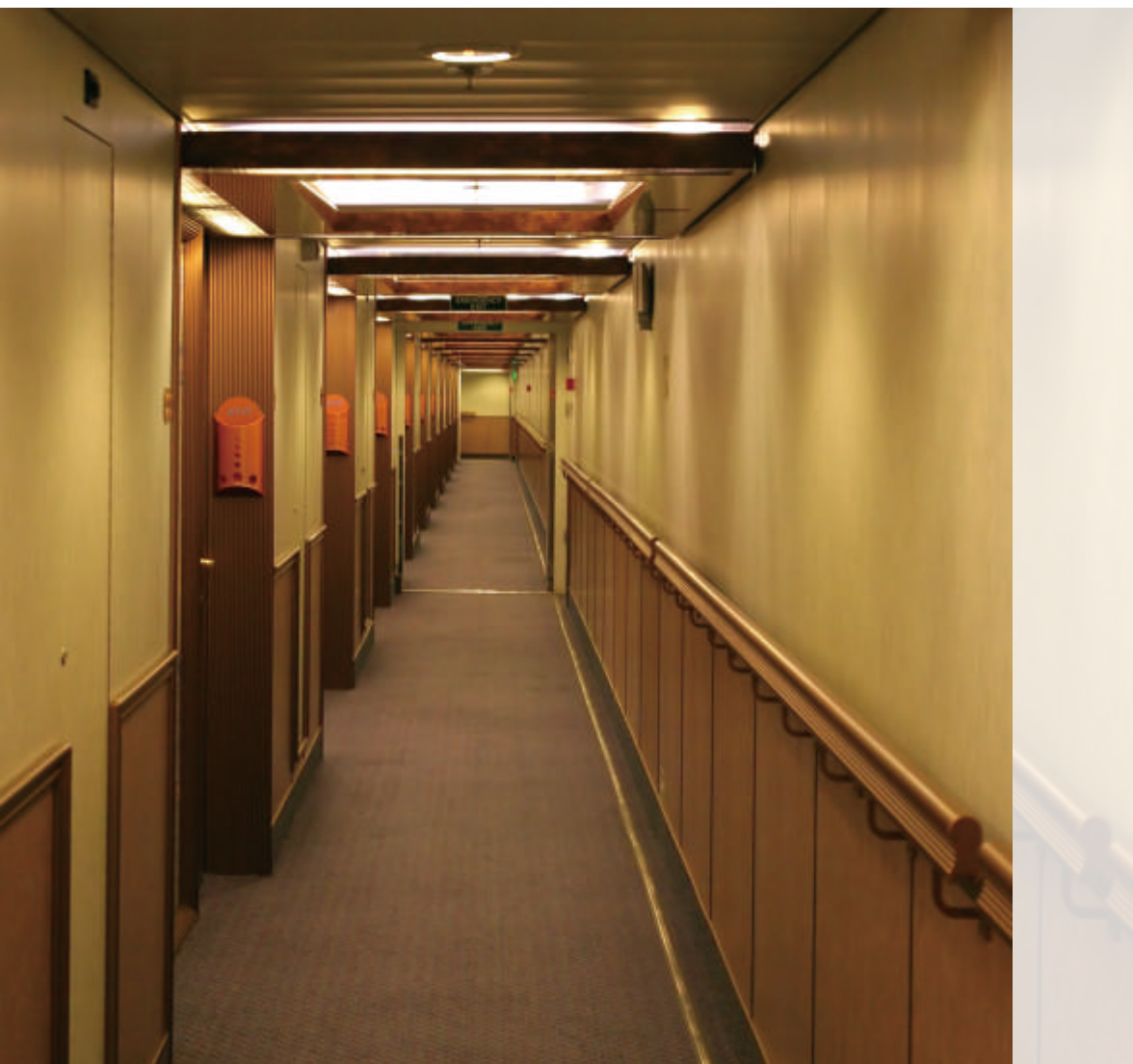
# HISTORY

2016 Dec.	Korean World-class Product Award (Marine Door)
2016 May.	Establishment of Busan New Port hinterland factory
2016 Apr.	Wins Transparent management prize (Korea International Accounting Association)
2015 Dec.	Acquisition of World-Class Korean product certificate (product : UNIT CABIN) by Ministry of Trade, Industry and Energy of Korea
2015 Dec.	Gold Tower Order of Industrial Service Merit Award
2015 Dec.	WINS \$100 Mil. Export Tower Award
2014 Mar.	Ground Breaking Ceremony for Busan New Port hinterland factory
2013 Aug.	Establishment of STA-Marine Co.,Ltd.
2011 Feb.	Establishment of STACO-CHALMERS CO.,LTD.
2010 Dec.	Korean World-class Product Award(Ceiling, Unit Toilet)
2010 Sep.	Acquisition of Cruise Housing System(CHS) Certificate
2009 Nov.	Wins \$70 Mil. Export Tower Award
2008 Dec.	Establishment of STACO Ulsan Factory.
2008 Oct.	Establishment of STACO NEW TECH MATERIAL(DALIAN)CO.,LTD.
2007 Nov.	Wins \$50 Mil. Export Tower Award
2006 Nov.	Wins \$30 Mil. Export Tower Award
2006 Feb.	Establishment of STACO NEW TECH MATERIAL(ZHANGJIAGANG)CO.,LTD
2005 May.	New name of STACO Co.,Ltd.
2004 Nov.	Wins \$20 Mil. Export Tower Award
2004 Oct.	Designated as a INNO-BIZ(Innovation Business) Company
2003 Dec.	Establishment of STACO R&D Center
2003 May.	Korean World-class Product Award(Wall)
2001 Nov.	Wins \$10 Mil. Export Tower Award
1999 Apr.	Acquisition of C.E. Mark
1998 Nov.	Wins \$5 Mil. Export Tower Award
1998 Nov.	Acquisition of ISO 9001 Certificate
1996 Nov.	Wins \$1 Mil. Export Tower Award
1992 Jan.	Establishment of ShinSung Eng. & Archi.Co.,Ltd





# WALL PANELS



## Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

Unit Cabins

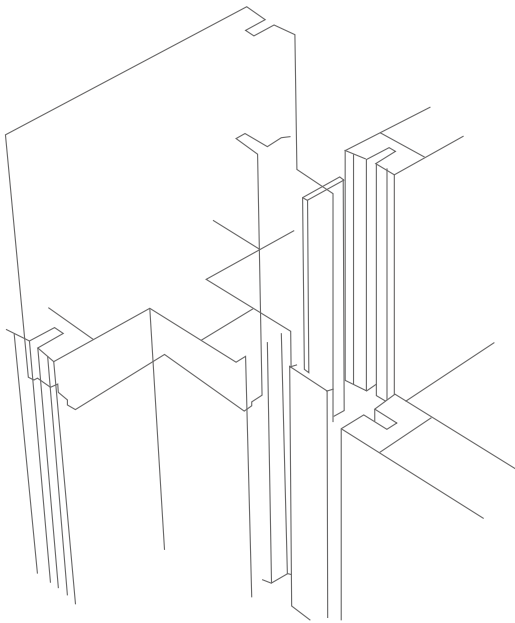
Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants





The STACO Wall Panels offer total flexibility and the shortest installation times for standard panels in standard thickness of 25, 50, 75 & 100 mm, standard widths of 550, 580 & 600 mm and with standard lengths of 2400 & 3600 mm. with long term durability and option of choosing from a large variety of colors and shades.

STACO also offers customized Modular Panels to assist designers for virtually any type of requirements. In addition to STACO Modular Panels, STACO also offers the following types of Panels of high quality, advanced design meeting the functionality requirements.

**STANDARD PANEL**

**LIGHT WEIGHT PANEL**

**CONDUIT PANEL**

**HIGH NOISE REDUCTION PANEL**

**CLIP JOINT PANEL**

**MALE & FEMALE JOINT PANEL**

**WET ROOM PANEL**

# W-C25

Standard Panel

## Technical Data

Fire Class : B-15

Weight : 14.3kg/m<sup>2</sup>

Sound Reduction Index : Rw 31dB

Thermal Transmittance : 1.06kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

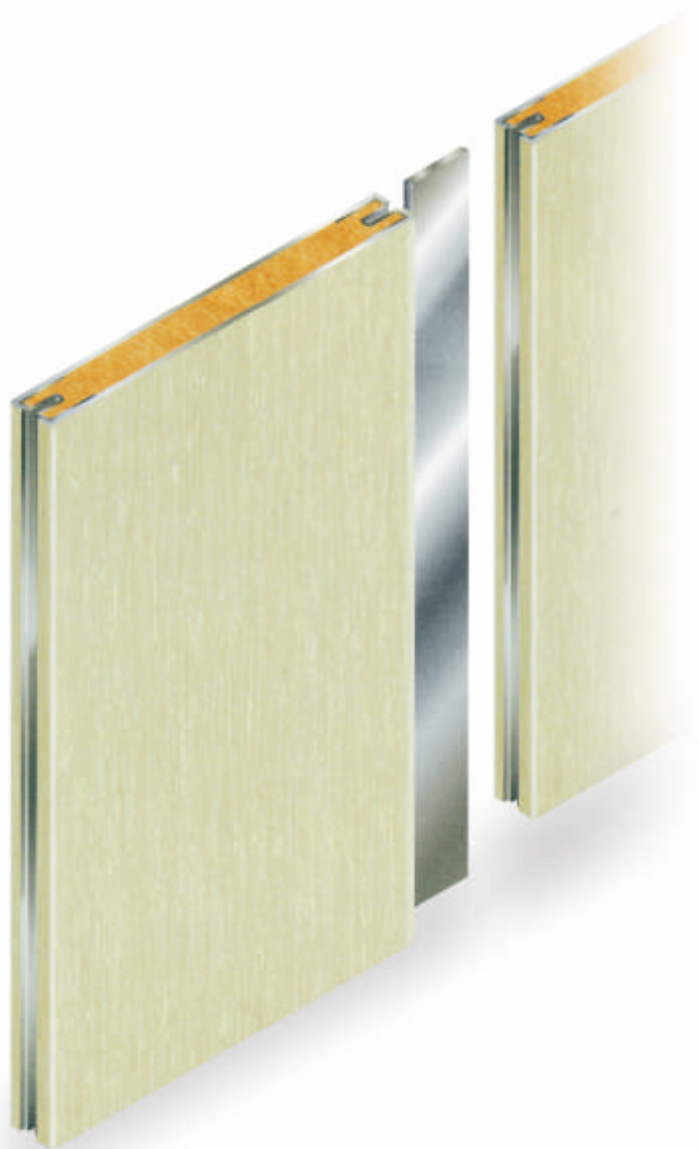
Surface Material : 0.6mm Thk. Galv' d  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 25mm ±0.5mm

Width : 600mm(Standard) ±0.5mm



## Standard Joint



## Joining Method





# W-C50

Standard Panel

## Technical Data

Fire Class : B-15

Weight : Normal – 18.7kg/m<sup>2</sup>  
Special – 18.7kg/m<sup>2</sup>

Sound Reduction Index : Normal – Rw 32dB  
Special – Rw 36dB

Thermal Transmittance : 0.56kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

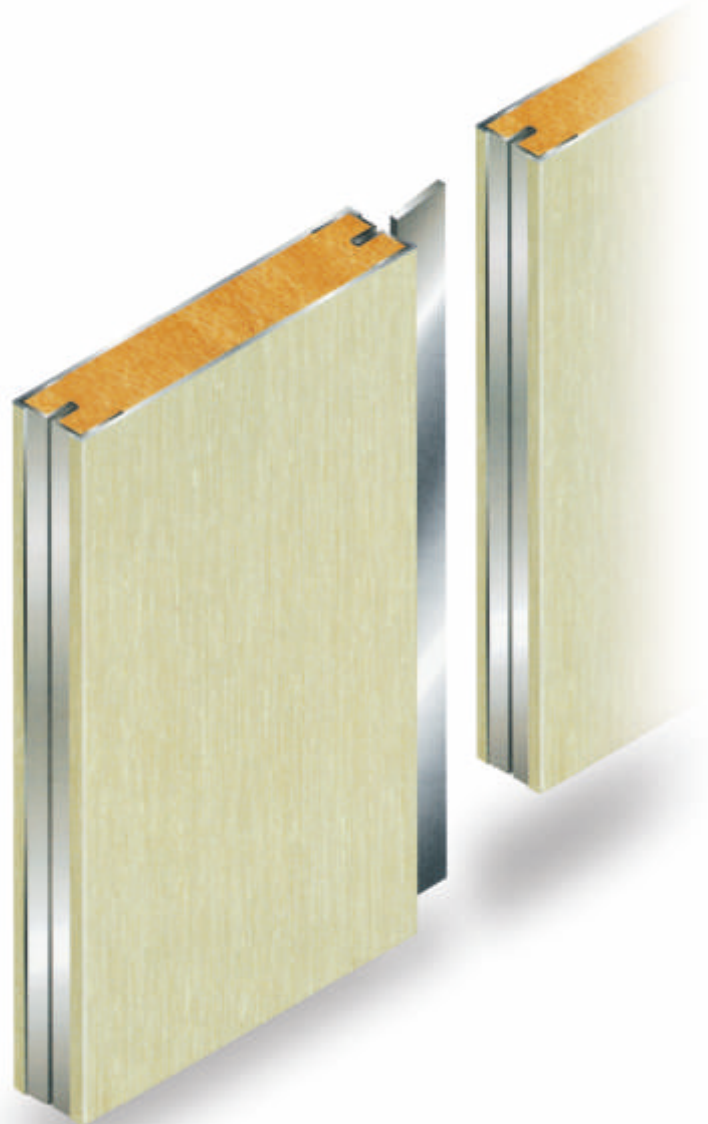
Surface Material : 0.6mm Thk. Galv' d  
steel Plate

Finish : 150µm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 50mm ±0.5mm

Width : 600mm(Standard) ±0.5mm



## Standard Joint



## Joining Method



# W-C50D

High Noise Reduction Panel

## Technical Data

Fire Class : B-15

Weight : Normal – 26.9kg/m<sup>2</sup>

Sound Reduction Index : Rw 45dB

Thermal Transmittance : 0.53kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Glav'd  
steel Plate

Finish : 150 $\mu$ m Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 50mm  $\pm 0.5$ mm

Width : 600mm(Standard)  $\pm 0.5$ mm



## Standard Joint



## Joining Method





# W-C25 Double Panel

High Noise Reduction Panel

## Technical Data

Fire Class : B-15

Weight : 26.2kg/m<sup>2</sup>

Sound Reduction Index : Rw 45dB

Thermal Transmittance : 0.35kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

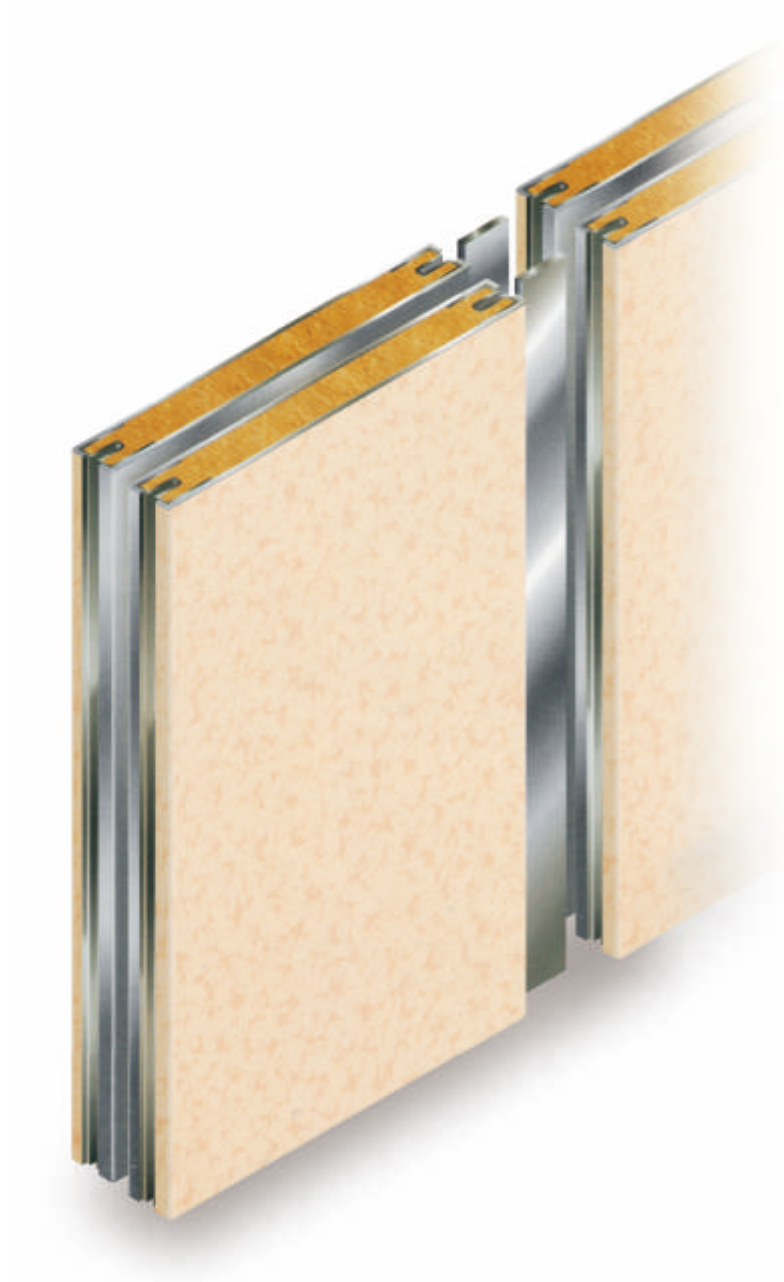
Surface Material : 0.6mm Thk. Glav'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 75mm ±0.5mm

Width : 600mm(Standard) ±0.5mm



## Standard Joint



## Joining Method



# W-B25

Clip Joint Panel

## Technical Data

Fire Class : B-0, B-15

Weight : 14.0kg/m<sup>2</sup>

Sound Reduction Index : Rw 32dB

Thermal Transmittance : 1.06kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 25mm ±0.5mm

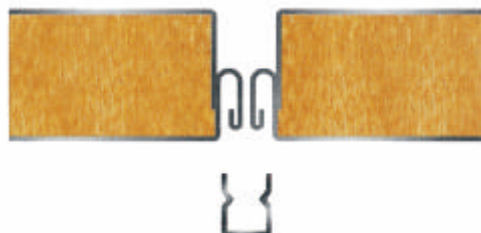
Width : 550mm(Standard) ±0.5mm



## Standard Joint



## Joining Method





# W-B50

Clip Joint Panel

## Technical Data

Fire Class : B-15

Weight : 17.9kg/m<sup>2</sup>

Sound Reduction Index : Rw 31dB

Thermal Transmittance : 0.56kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

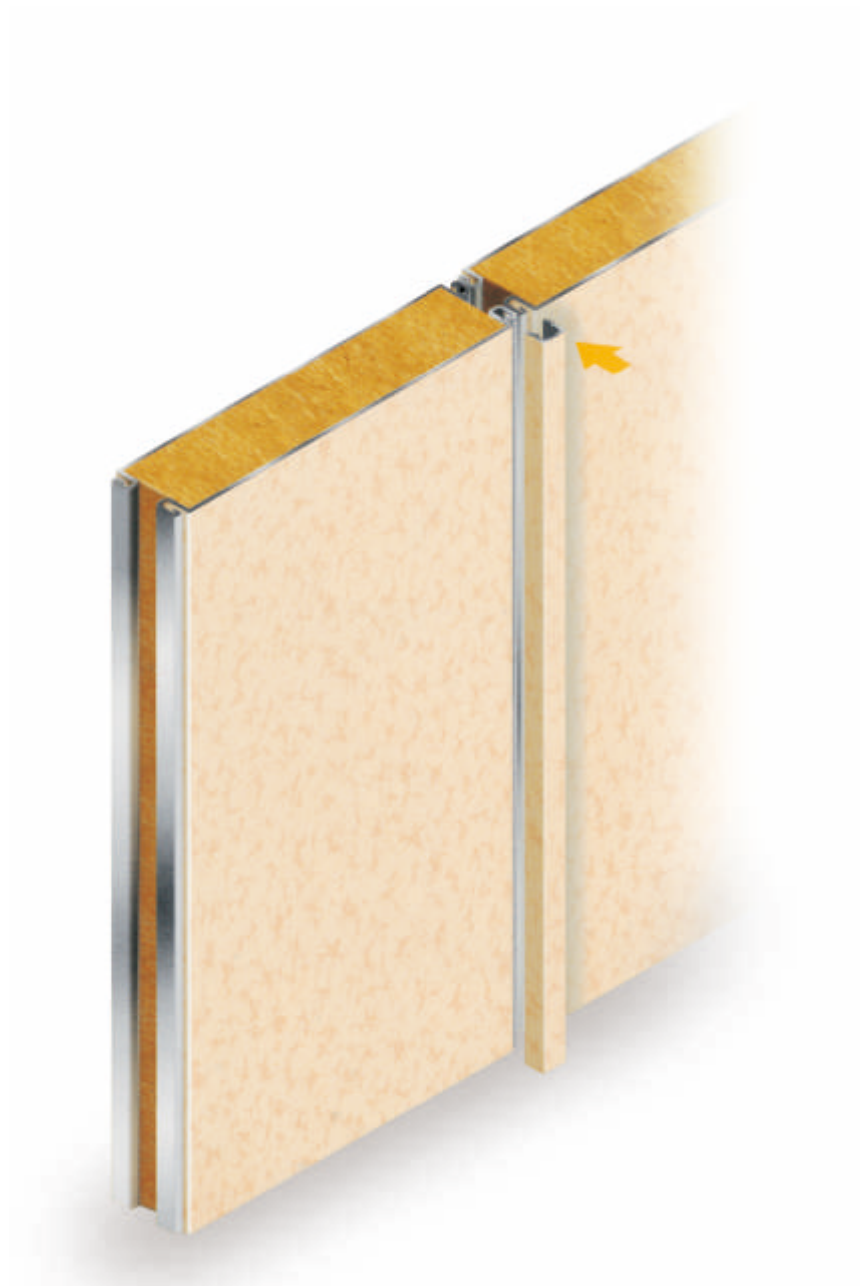
Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 50mm ±0.5mm

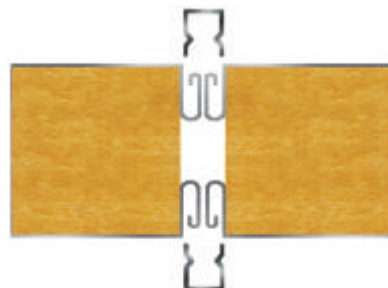
Width : 550mm(Standard) ±0.5mm



## Standard Joint



## Joining Method



# W-B50D

High Noise Reduction Panel

## Technical Data

Fire Class : B-15

Weight : 21.7kg/m<sup>2</sup>

Sound Reduction Index : Rw 41dB

Thermal Transmittance : 0.54kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

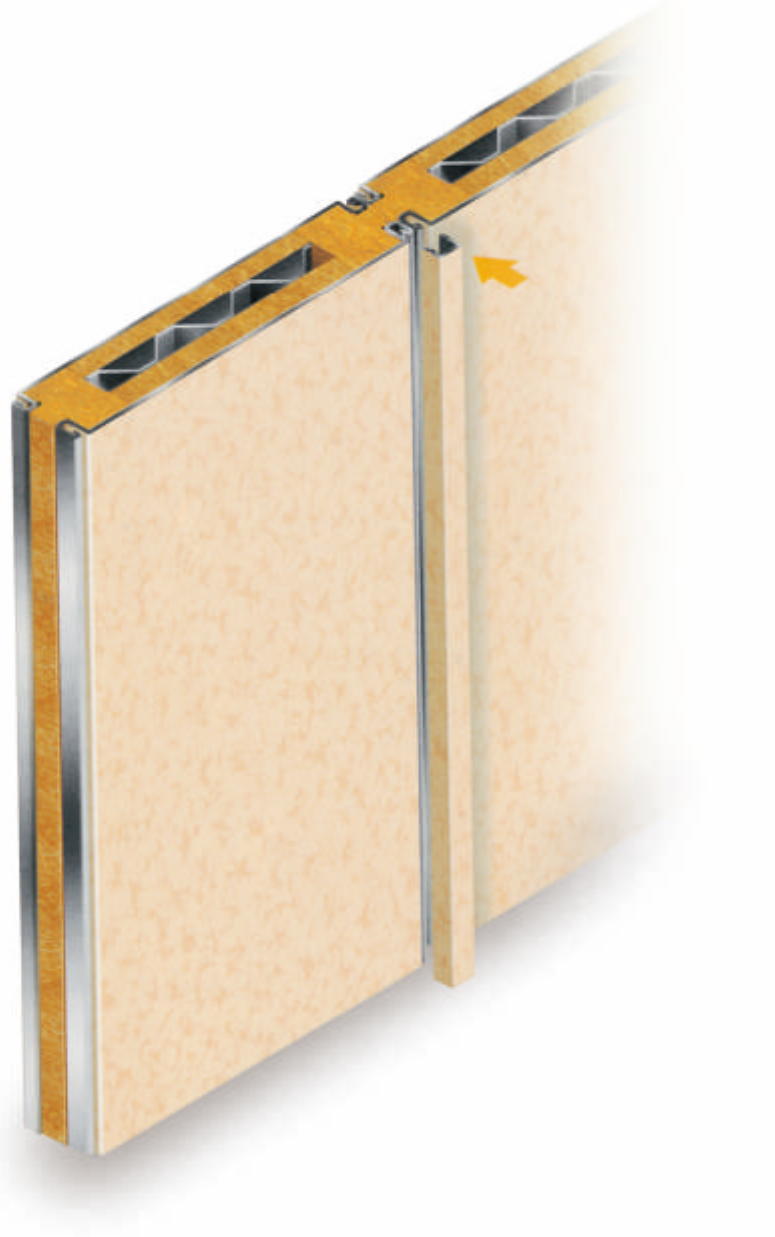
Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

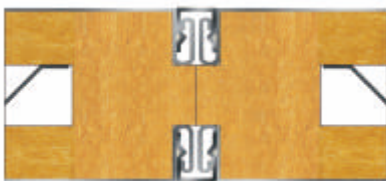
## Dimensions

Thickness : 50mm ±0.5mm

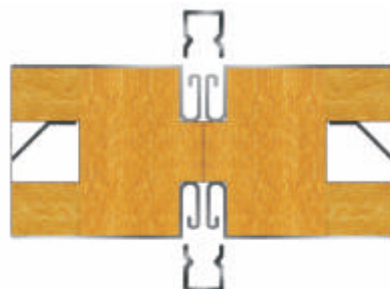
Width : 550mm(Standard) ±0.5mm



## Standard Joint



## Joining Method



# W-C50R

The Highest Rate High Noise Reduction Panel

## Technical Data

Fire Class : B-15

Weight : 16.7kg/m<sup>2</sup>

Sound Reduction Index : Rw 46dB

Thermal Transmittance : 0.53kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Glav'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 50mm ±0.5mm

Width : 600mm(Standard) ±0.5mm



※ Air gap for installation of cables in High Sound Reduction Panel System.

## Standard Joint



## Jointing Method





# W-B50R

The Highest Noise Reduction Panel

## Technical Data

Fire Class : B-15

Weight : 16.1kg/m<sup>2</sup>

Sound Reduction Index : Rw 44dB

Thermal Transmittance : 0.53kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 50mm ±0.5mm

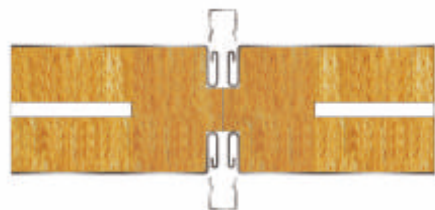
Width : 550mm(Standard) ±0.5mm



## Standard Joint



## Joining Method



# W-E25

## Male & Female Joint Panel

### Technical Data

Fire Class : B-0

Weight : 14.52kg/m<sup>2</sup>

Sound Reduction Index : Rw 32dB

Thermal Transmittance : 1.06kcal/m<sup>2</sup>h°C

### Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

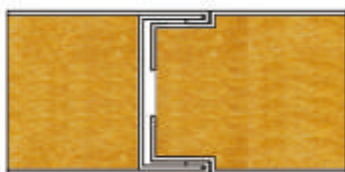
### Dimensions

Thickness : 25mm ±0.5mm

Width : 580mm(Standard) ±0.5mm



### Standard Joint



### Jointing Method



### Technical Data

Fire Class : B-15

Weight : 18.07kg/m<sup>2</sup>

Sound Reduction Index : Rw 32dB

Thermal Transmittance : 0.58kcal/m<sup>2</sup>h°C

### Construction

Core Material : Mineral Wool

Surface Material : 0.6mm Thk. Glav'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

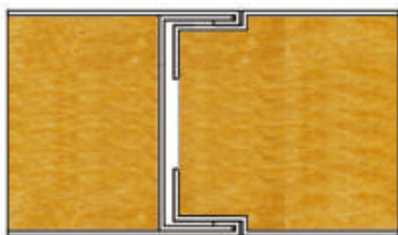
### Dimensions

Thickness : 50mm ±0.5mm

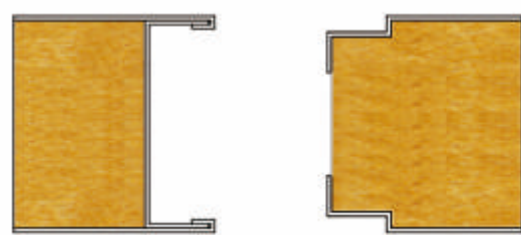
Width : 580mm(Standard) ±0.5mm



### Standard Joint



### Joining Method





### Technical Data

Fire Class : A-60

Weight : 25.8kg/m<sup>2</sup>

Sound Reduction Index : Rw 33dB

Thermal Transmittance : 0.29kcal/m<sup>2</sup>h°C

### Construction

Core Material : Mineral Wool

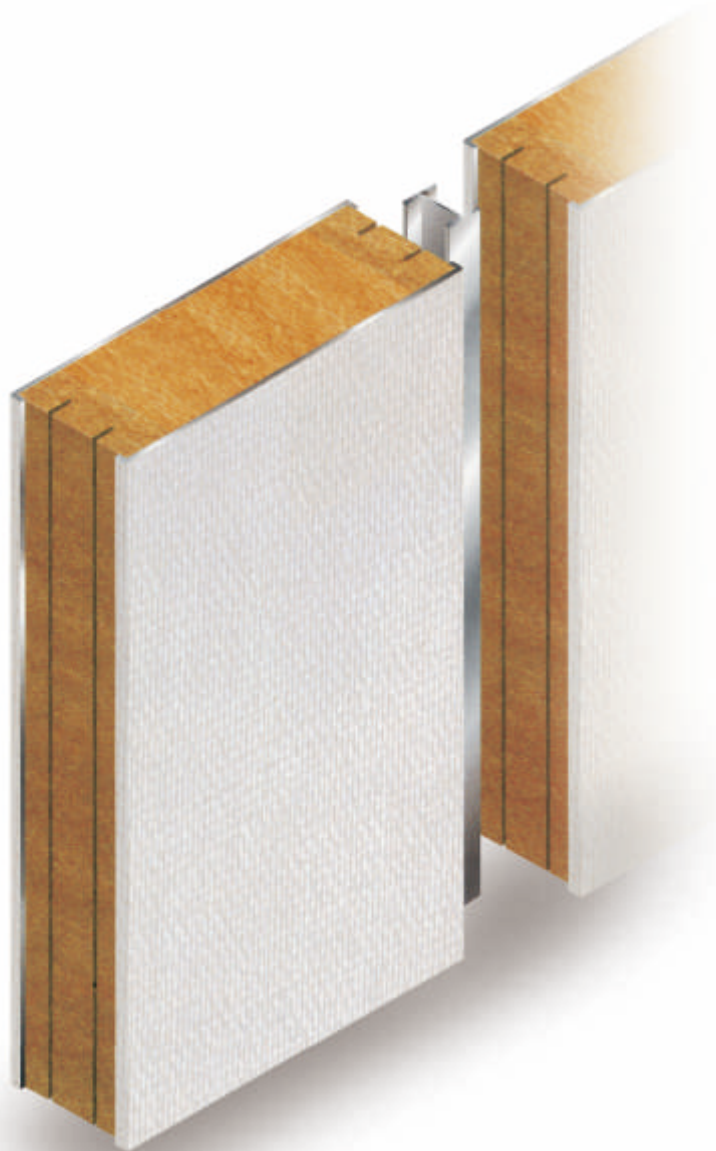
Surface Material : 0.6mm Thk. Galv'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

### Dimensions

Thickness : 100mm ±0.5mm

Width : 595mm(Standard) ±0.5mm



### Standard Joint



### Joining Method



# W-B100

A-60 Fire Class Clip Joint Panel

## Technical Data

Fire Class : A-60

Weight : 25.8kg/m<sup>2</sup>

Sound Reduction Index : Rw 33dB

Thermal Transmittance : 0.29kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

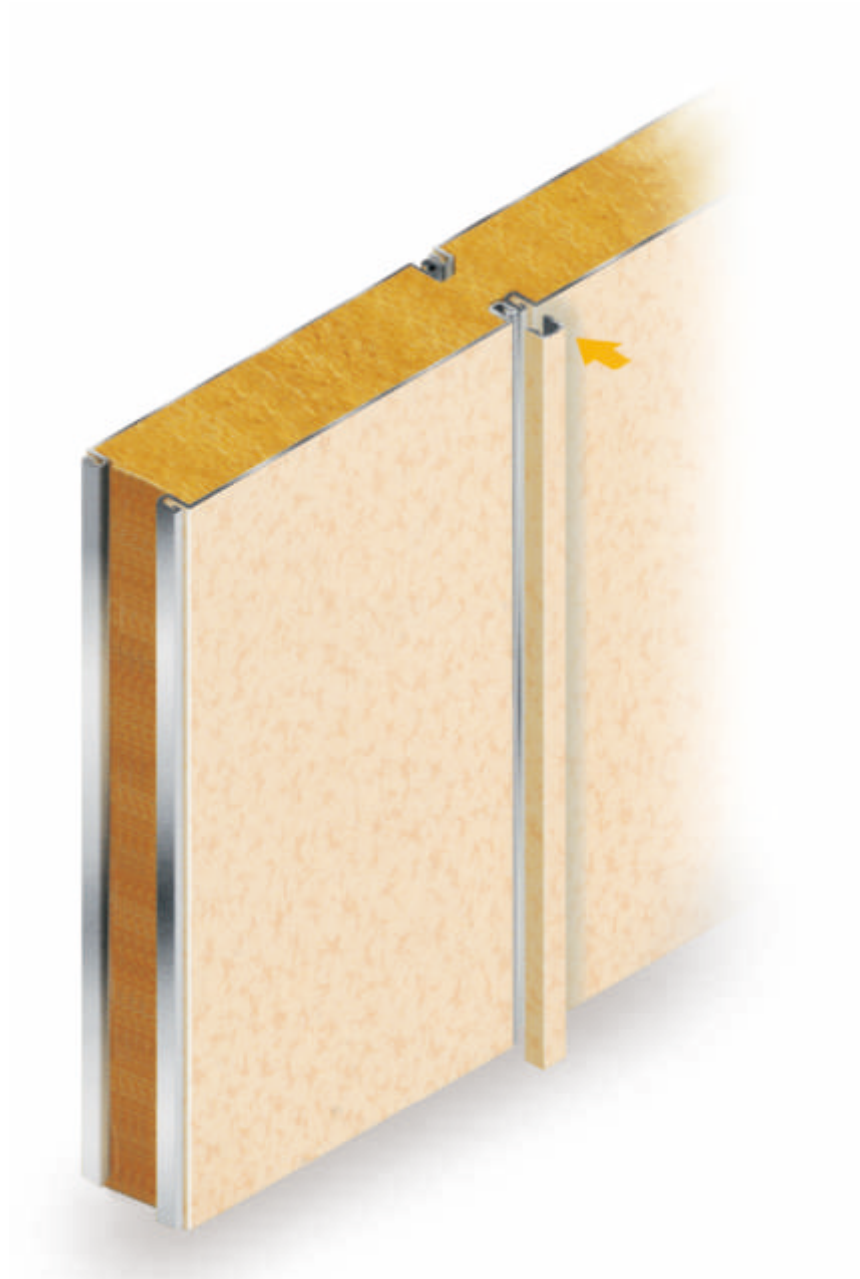
Surface Material : 0.6mm Thk. Glav'd  
steel Plate

Finish : 150μm Thk.PVC film  
with Protective Foil

## Dimensions

Thickness : 100mm ±0.5mm

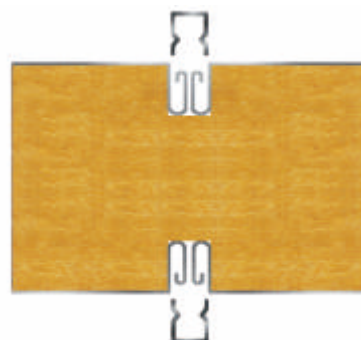
Width : 550mm(Standard) ±0.5mm



## Standard Joint



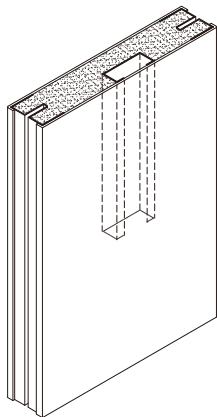
## Joining Method



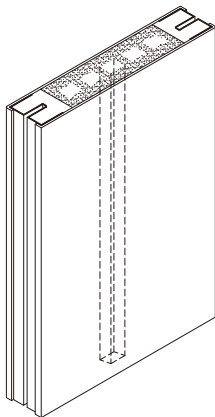
# Cable conduit Panel

Conduit Panel

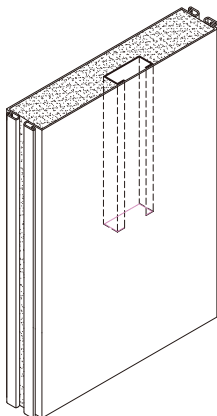
W-C50 (Cable Conduit Type)



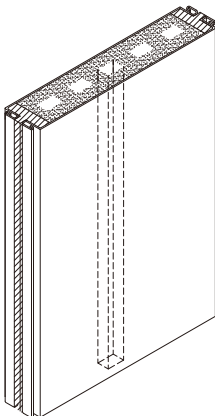
W-C50R (Cable Hole Type)



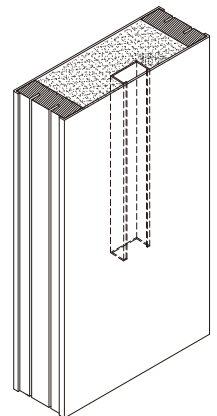
W-B50 (Cable Conduit Type)



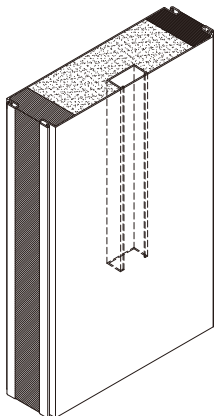
W-B50R (Cable Hole Type)



W-100 (Cable Conduit Type)



W-B100 (Cable Conduit Type)

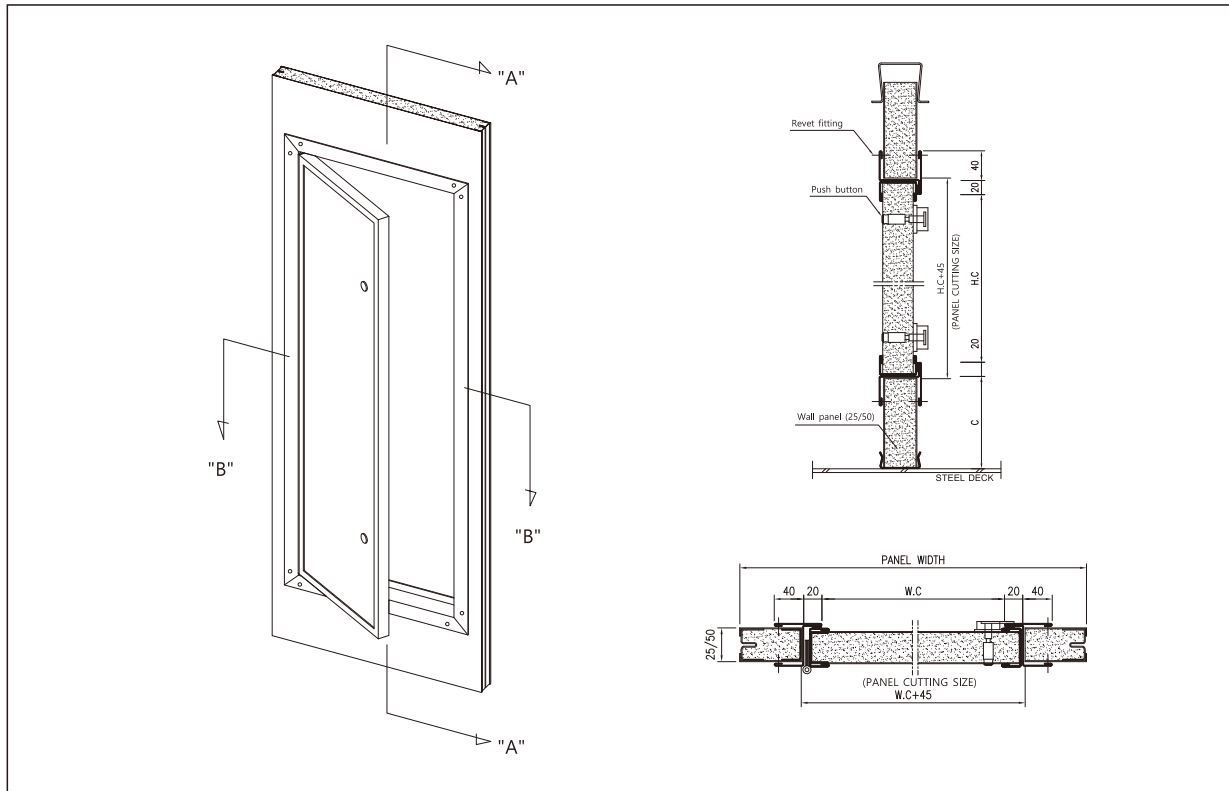




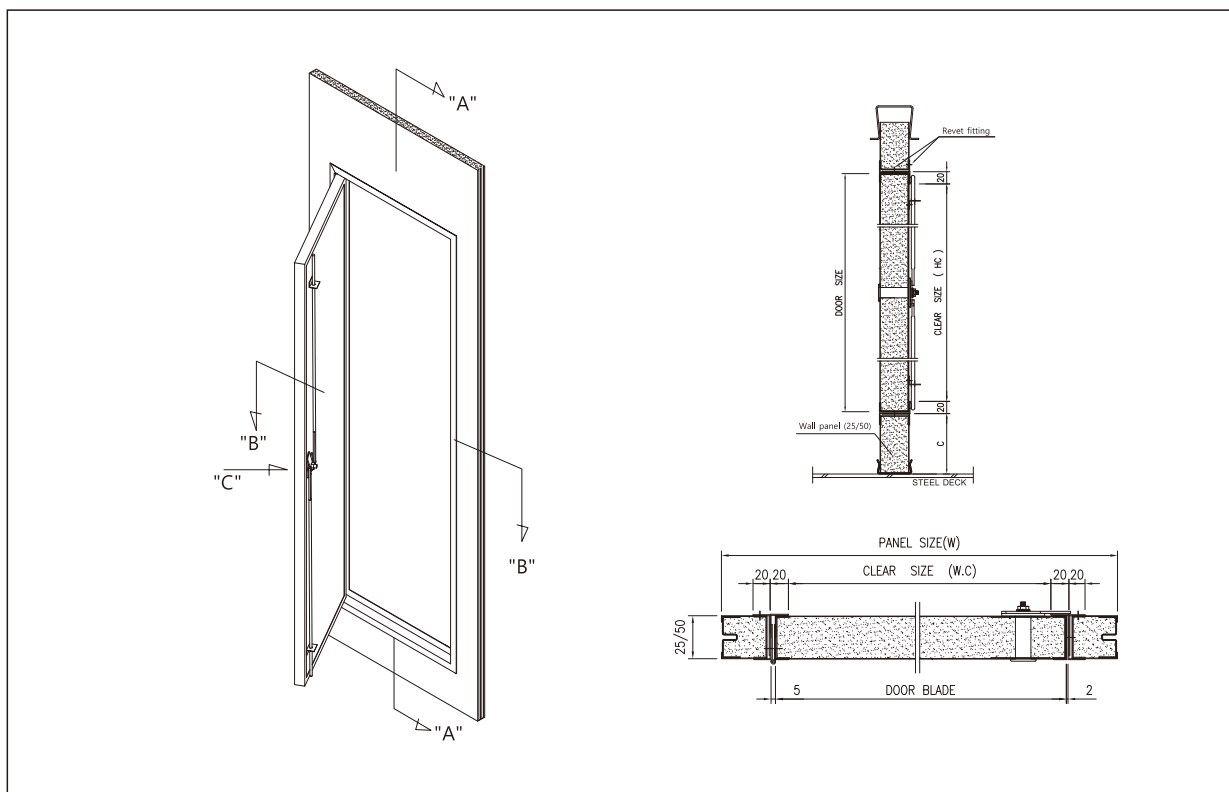
# Inspection Door

Inspection Door & Hatch

## AP-25 / AP-50 C CLASS



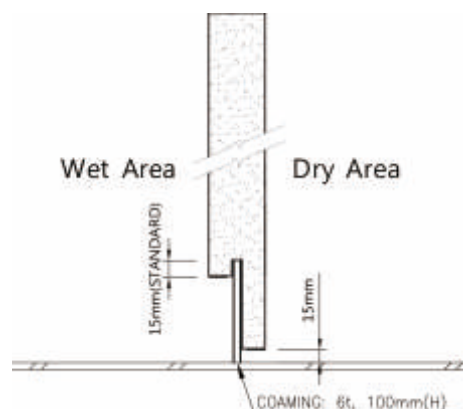
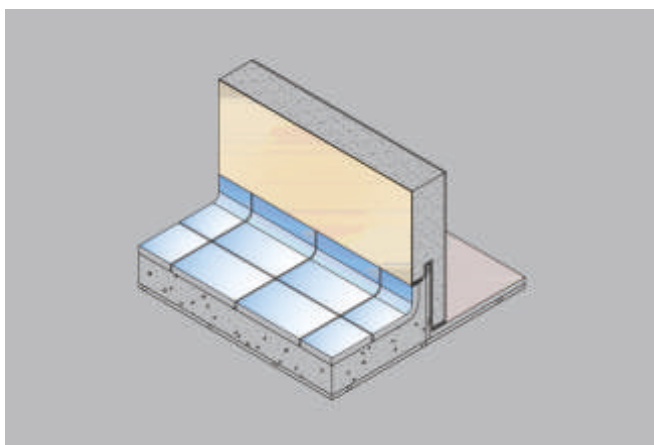
## AD-25Z / AD-50Z B-15 CLASS



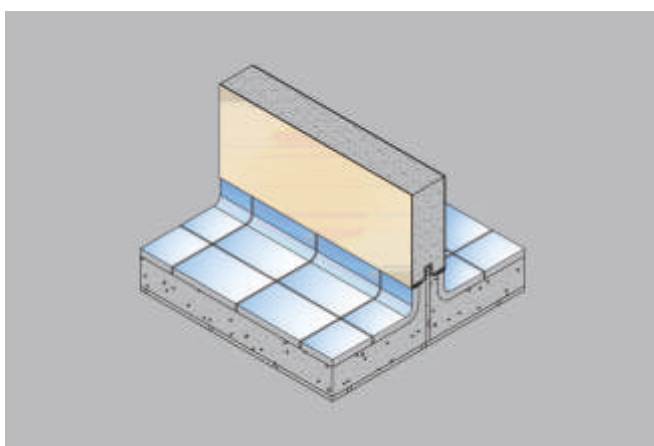
# Wet Room Panel

STACO Wet Room Panels with floor supports are designed such that they can be utilized with any architectural scheme.

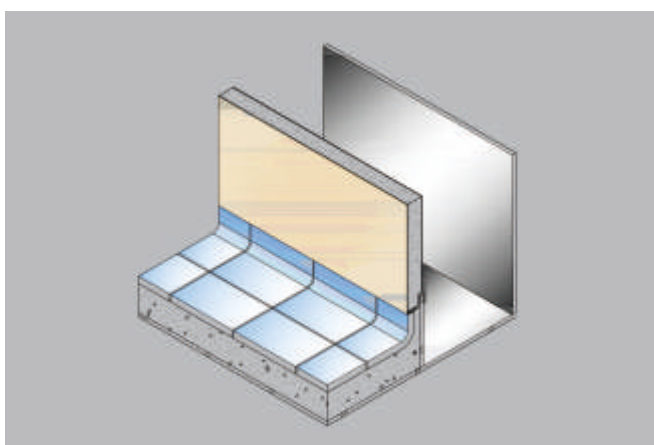
These Wet Panels are recommended for installation in accommodation rooms that are exposed to water or high humidity.



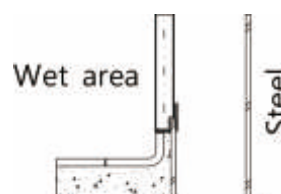
## WET-A



## WET-B



## WET-C



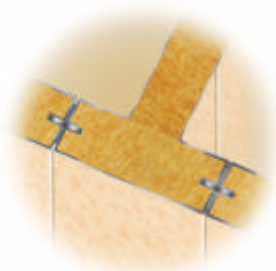
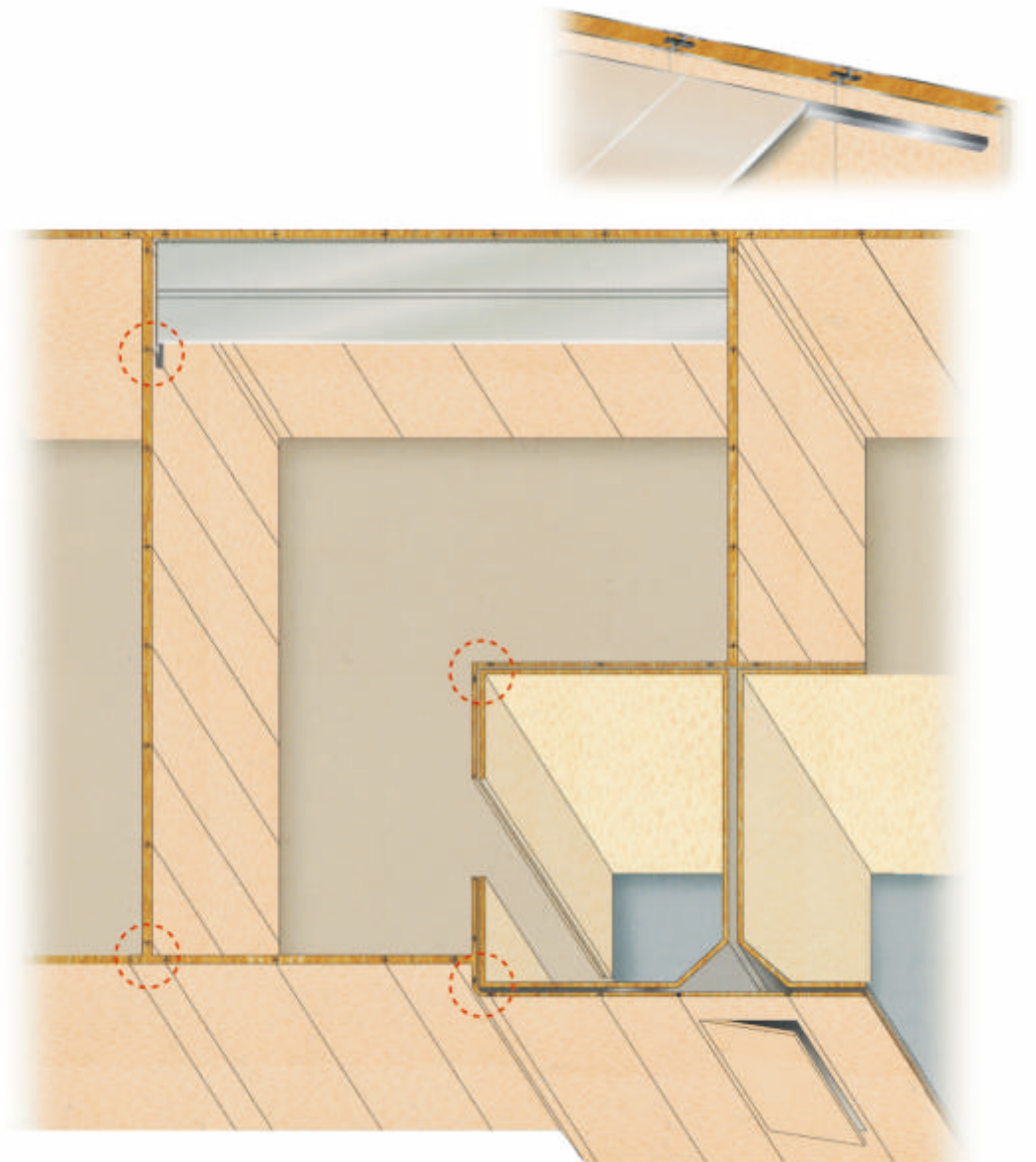
※ When deciding the type of wet panel, shall be standards of STACO product

# Modular Panel

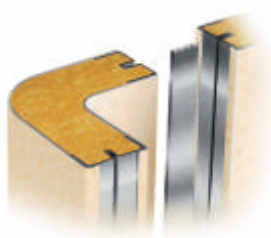
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We produce a wide range of unique products to assist designers in adding distinctive lines, details, and highlights to a marine accommodation's walls and ceilings.

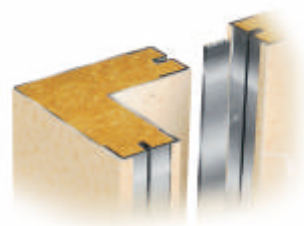
STACO can design customized Modular Panels with Curved, Round, T or L shapes wrapped around columns or beams or any other structures for virtually any requirement of customers.



T-shape



Round Shape



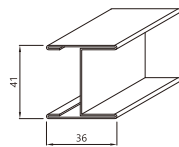
L-Shape



# Wall Profiles

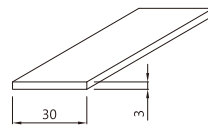
- a. Material
- b. Finish
- c. Weight
- d. Length
- △ DECO

**H-PROFILE (P-101)**



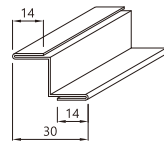
- a. 0.6mm steel
- b. Galvanized
- c. 0.79kg/m
- d. P.H-10mm

**SPLINE (P-104)**



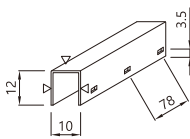
- a. 3.0mm steel
- b. Galvanized
- c. 0.71kg/m
- d. P.H-20mm

**JOINT PROFILE (P-105)**



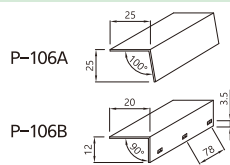
- a. 0.6mm steel
- b. Galvanized
- c. 0.33kg/m
- d. P.H-10mm

**JOINT CLIP (P-106)**



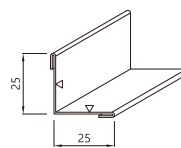
- a. 0.6mm steel
- b. PVC Coated
- c. 0.17kg/m
- d. P.H-50mm

**JOINT BACK CLIP (P-106A/106B)**



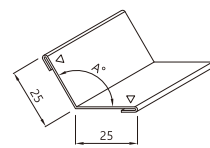
- a. 0.6mm steel
- b. Galvanized
- c. 0.24kg/m(A)/0.15kg/m(B)
- d. P.H-50mm

**INCOENER PROFILE (P-111)**



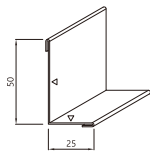
- a. 0.6mm steel
- b. PVC Coated
- c. 0.32kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-115)**



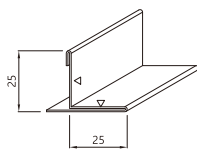
- a. 0.6mm steel
- b. PVC Coated
- c. 0.32kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-112)**



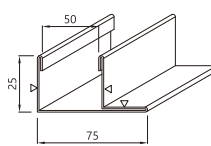
- a. 0.6mm steel
- b. PVC Coated
- c. 0.46kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-113)**



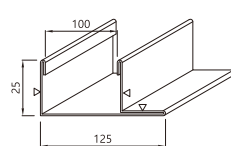
- a. 0.6mm steel
- b. PVC Coated
- c. 0.46kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-114)**



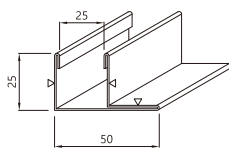
- a. 0.6mm steel
- b. PVC Coated
- c. 0.83kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-114A)**



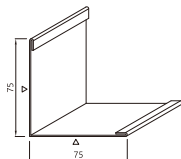
- a. 0.6mm steel
- b. PVC Coated
- c. 0.95kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-115)**



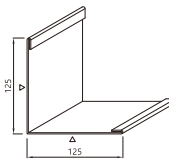
- a. 0.6mm steel
- b. PVC Coated
- c. 0.71kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-116)**



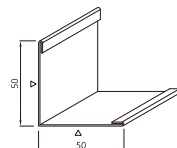
- a. 0.6mm steel
- b. PVC Coated
- c. 0.84kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-116A)**



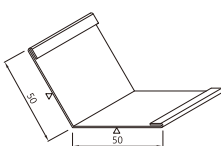
- a. 0.6mm steel
- b. PVC Coated
- c. 1.31kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-117)**



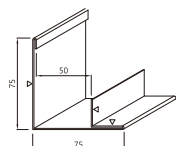
- a. 0.6mm steel
- b. PVC Coated
- c. 0.59kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-117S)**



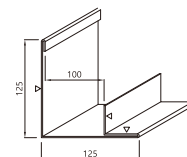
- a. 0.6mm steel
- b. PVC Coated
- c. 0.57kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-118)**



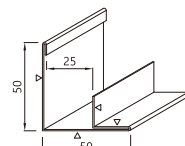
- a. 0.6mm steel
- b. PVC Coated
- c. 0.98kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-118A)**



- a. 0.6mm steel
- b. PVC Coated
- c. 1.43kg/m
- d. P.H-50mm

**OUTCORNER PROFILE (P-119)**

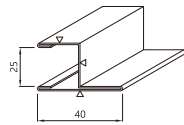


- a. 0.6mm steel
- b. PVC Coated
- c. 0.74kg/m
- d. P.H-50mm

# Wall Profiles

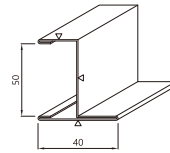
- a. Material
- b. Finish
- c. Weight
- d. Length
- △ DECO

**JOINT PROFILE (P-120)**



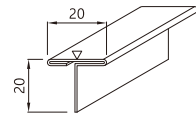
- a. 0.6mm steel
- b. PVC Coated
- c. 0.63kg/m
- d. P.H-50mm

**JOINT PROFILE (P-121)**



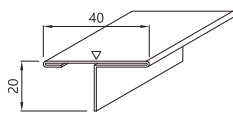
- a. 0.6mm steel
- b. PVC Coated
- c. 0.77kg/m
- d. P.H-50mm

**SPECIAL PROFILE (P-122)**



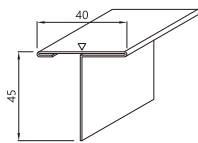
- a. 0.6mm steel
- b. PVC Coated
- c. 0.29kg/m
- d. P.H-50mm

**SPECIAL PROFILE (P-124)**



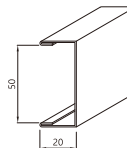
- a. 0.6mm steel
- b. PVC Coated
- c. 0.44kg/m
- d. P.H-40mm

**SPECIAL PROFILE (P-125)**



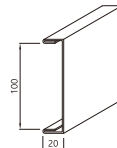
- a. 0.6mm steel
- b. PVC Coated
- c. 0.56kg/m
- d. P.H-40mm

**END PROFILE (P-131)**



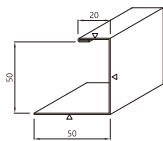
- a. 0.6mm steel
- b. PVC Coated
- c. 0.52kg/m
- d. P.H-50mm

**END PROFILE (P-131A)**



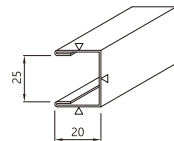
- a. 0.6mm steel
- b. PVC Coated
- c. 0.79kg/m
- d. P.H-50mm

**END PROFILE (P-131S)**



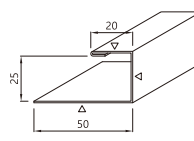
- a. 0.6mm steel
- b. PVC Coated
- c. 0.65kg/m
- d. P.H-50mm

**END PROFILE (P-132)**



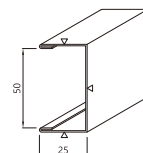
- a. 0.6mm steel
- b. PVC Coated
- c. 0.39kg/m
- d. P.H-50mm

**END PROFILE (P-132S)**



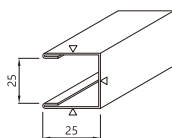
- a. 0.6mm steel
- b. PVC Coated
- c. 0.52kg/m
- d. P.H-50mm

**END PROFILE (P-133)**



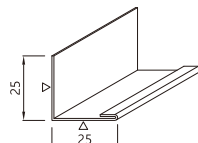
- a. 0.6mm steel
- b. PVC Coated
- c. 0.61kg/m
- d. P.H-50mm

**END PROFILE (P-134)**



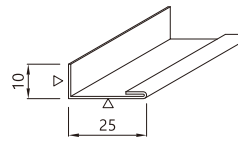
- a. 0.6mm steel
- b. PVC Coated
- c. 0.48kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-135)**



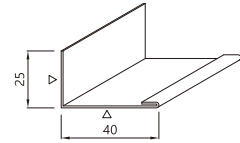
- a. 0.6mm steel
- b. PVC Coated
- c. 0.33kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-136)**



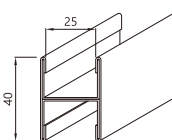
- a. 0.6mm steel
- b. PVC Coated
- c. 0.21kg/m
- d. P.H-50mm

**INCORNER PROFILE (P-137)**



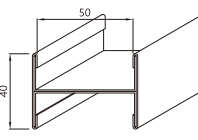
- a. 0.6mm steel
- b. PVC Coated
- c. 0.42kg/m
- d. P.H-50mm

**JOINT PROFILE (P-141)**



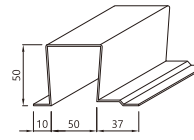
- a. 0.6mm steel
- b. PVC Coated
- c. 1.17kg/m
- d. P.H-50mm

**JOINT PROFILE (P-142)**



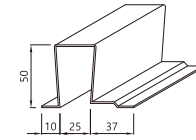
- a. 0.6mm steel
- b. PVC Coated
- c. 1.43kg/m
- d. P.H-50mm

**TOP PROFILE (P-171)**



- a. 1.0mm steel
- b. Galvanized
- c. 1.49kg/m
- d. 3600mm

**TOP PROFILE (P-172)**

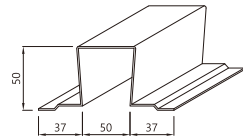


- a. 1.0mm steel
- b. Galvanized
- c. 1.29kg/m
- d. 3600mm

# Wall Profiles

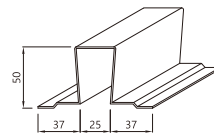
- a. Material
- b. Finish
- c. Weight
- d. Length
- △ DECO

TOP PROFILE (P-173)



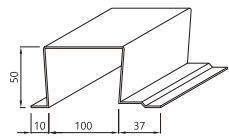
- a. 1.0mm steel
- b. Galvanized
- c. 1.66kg/m
- d. 3600mm

TOP PROFILE (P-174)



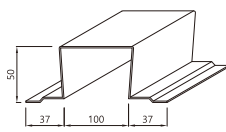
- a. 1.0mm steel
- b. Galvanized
- c. 1.46kg/m
- d. 3600mm

TOP PROFILE (P-176)



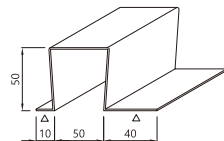
- a. 1.0mm steel
- b. Galvanized
- c. 1.95kg/m
- d. 3600mm

TOP PROFILE (P-177)



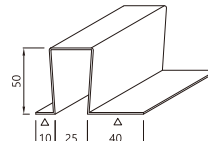
- a. 1.0mm steel
- b. Galvanized
- c. 1.95kg/m
- d. 3600mm

TOP PROFILE (P-171S)



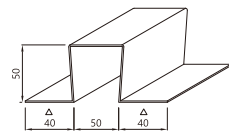
- a. 1.0mm steel
- b. Painted
- c. 1.57kg/m
- d. 3600mm

TOP PROFILE (P-172S)



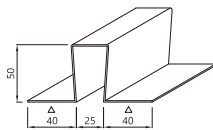
- a. 1.0mm steel
- b. Painted
- c. 1.37kg/m
- d. 3600mm

TOP PROFILE (P-173S)



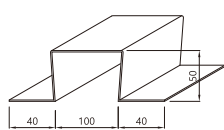
- a. 1.0mm steel
- b. Painted
- c. 1.79kg/m
- d. 3600mm

TOP PROFILE (P-174S)



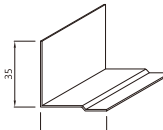
- a. 1.0mm steel
- b. Painted
- c. 1.58kg/m
- d. 3600mm

TOP PROFILE (P-177S)



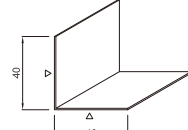
- a. 1.0mm steel
- b. Galvanized
- c. 1.95kg/m
- d. 3600mm

TOP PROFILE (P-175)



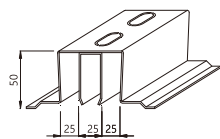
- a. 1.0mm steel
- b. Galvanized
- c. 0.59kg/m
- d. 3600mm

TOP PROFILE (P-175S)



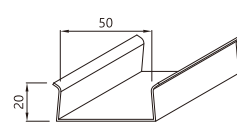
- a. 1.0mm steel
- b. Painted
- c. 0.67kg/m
- d. 3600mm

TOP PROFILE (P-172D)



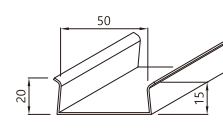
- a. 1.0mm steel
- b. Galvanized
- c. 2.40kg/m
- d. 3600mm

BOTTOM PROFILE (P-181)



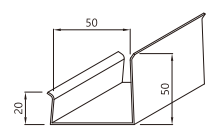
- a. 1.0mm steel
- b. Galvanized
- c. 0.72kg/m
- d. 3600mm

BOTTOM PROFILE (P-181U)



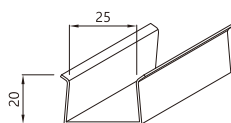
- a. 1.0mm steel
- b. Galvanized
- c. 0.67kg/m
- d. 3600mm

BOTTOM PROFILE (P-181S)



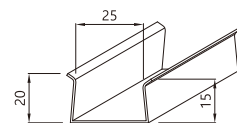
- a. 1.0mm steel
- b. Galvanized
- c. 0.96kg/m
- d. 3600mm

BOTTOM PROFILE (P-182)



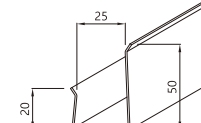
- a. 1.0mm steel
- b. Galvanized
- c. 0.53kg/m
- d. 3600mm

BOTTOM PROFILE (P-182U)



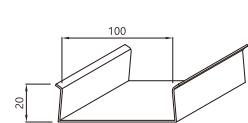
- a. 1.0mm steel
- b. Galvanized
- c. 0.49kg/m
- d. 3600mm

BOTTOM PROFILE (P-182S)



- a. 1.0mm steel
- b. Galvanized
- c. 0.76kg/m
- d. 3600mm

BOTTOM PROFILE (P-183)



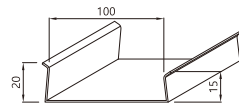
- a. 1.0mm steel
- b. Galvanized
- c. 1.12kg/m
- d. 3600mm

# Wall Profiles

- a. Material
- b. Finish
- c. Weight
- d. Length

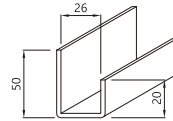
△ DECO

**BOTTOM PROFILE (P-183U)**



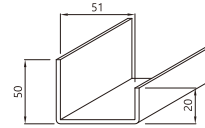
- a. 1.0mm steel
- b. Galvanized
- c. 1.04kg/m
- d. 3600mm

**BOTTOM PROFILE (P-184)**



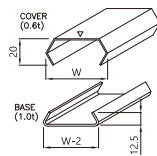
- a. 3.2mm steel
- b. Galvanized
- c. 2.36kg/m
- d. 2400mm

**BOTTOM PROFILE (P-185)**



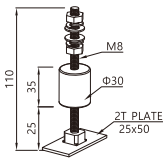
- a. 3.2mm steel
- b. Galvanized
- c. 2.99kg/m
- d. 2400mm

**CABLE COVER SET (P-192)**



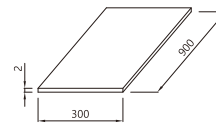
- a. 0.6mm / 1mm
- b. PVC or PCM
- c. 0.44kg/m
- d. -

**ANTI VIBRATION TOP MOUNT (AV-01)**



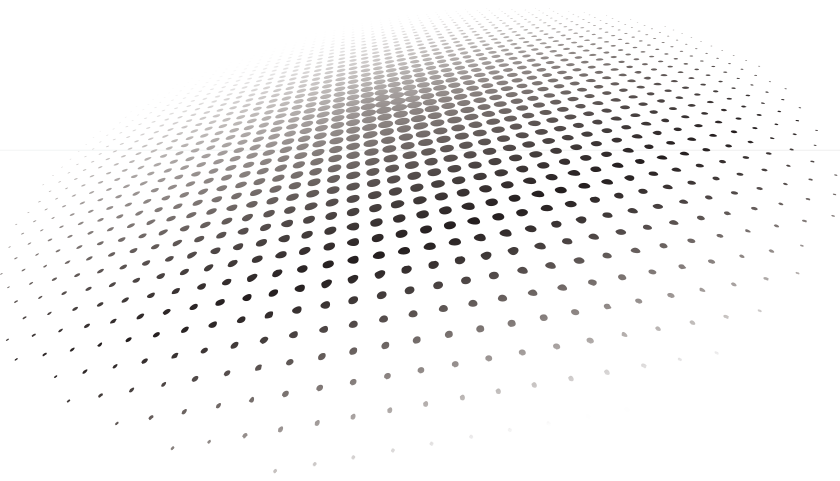
- a. -
- b. -
- c. 0.12kg/ea
- d. -

**ANTI VIBRATION PAD (AV-02)**



- a. -
- b. -
- c. 0.9kg/ea
- d. -





# CEILING PANELS



Wall Panels

**Ceiling Panels**

Unit Toilets

Marine Doors

Floating Floors

Furniture

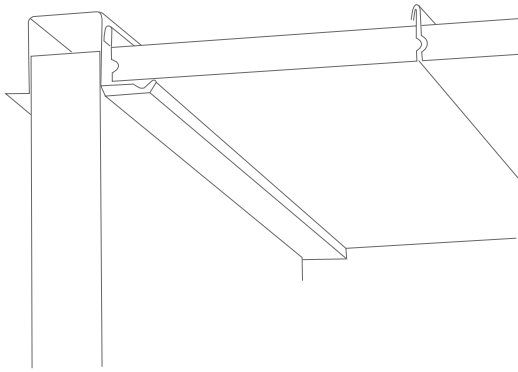
Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants



STACO ceiling panel system pursues beauty and safety with stable profile body and panel finishing. They are designed to endure high pressures in order to keep structural safety, and the interval, the end, the length or the profiles is flexibly designed to meet customer demands. Finishing panels with paint colors and PVC films with various patterns, STACO makes every space to have the best atmosphere optimally. STACO guarantees the high level of safety through continuous R&D, and will lead ship interior market.

#### **REMOVABLE CEILING**

#### **SLIDE-IN CEILING**

#### **GAP CEILING**

#### **LAY-IN CEILING**

#### **CASSETTE CEILING**

C-D25

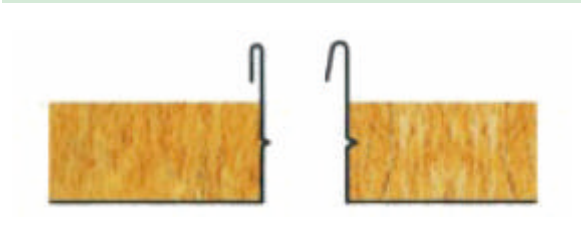
Removable Ceiling



Standard Joint



Jointing Method

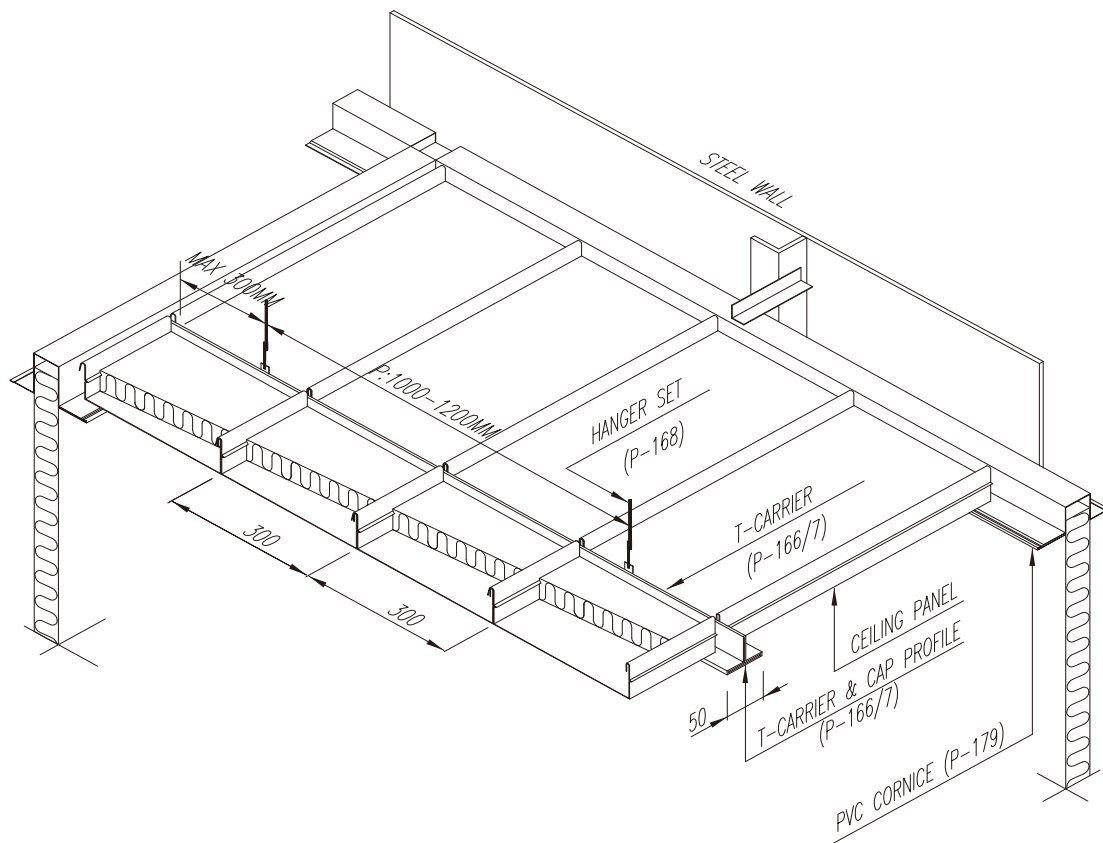


Technical Data
Fire Class : Continuous B-0
Weight : 8.2kg/m²
Sound Reduction Index : $D_{n,c,w}$ 50dB (Cabin to Cabin)
Thermal Transmittance : 1.01kcal/m²h°C

Construction
Core Material : Mineral Wool
Surface Material : 0.6mm Thickness Galv'd Steel Plate
Finish Material : Baked Enamel Paint With Protective Foil

Dimensions		
Thickness	: 25mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 2400mm(Recommended maximum Length)	

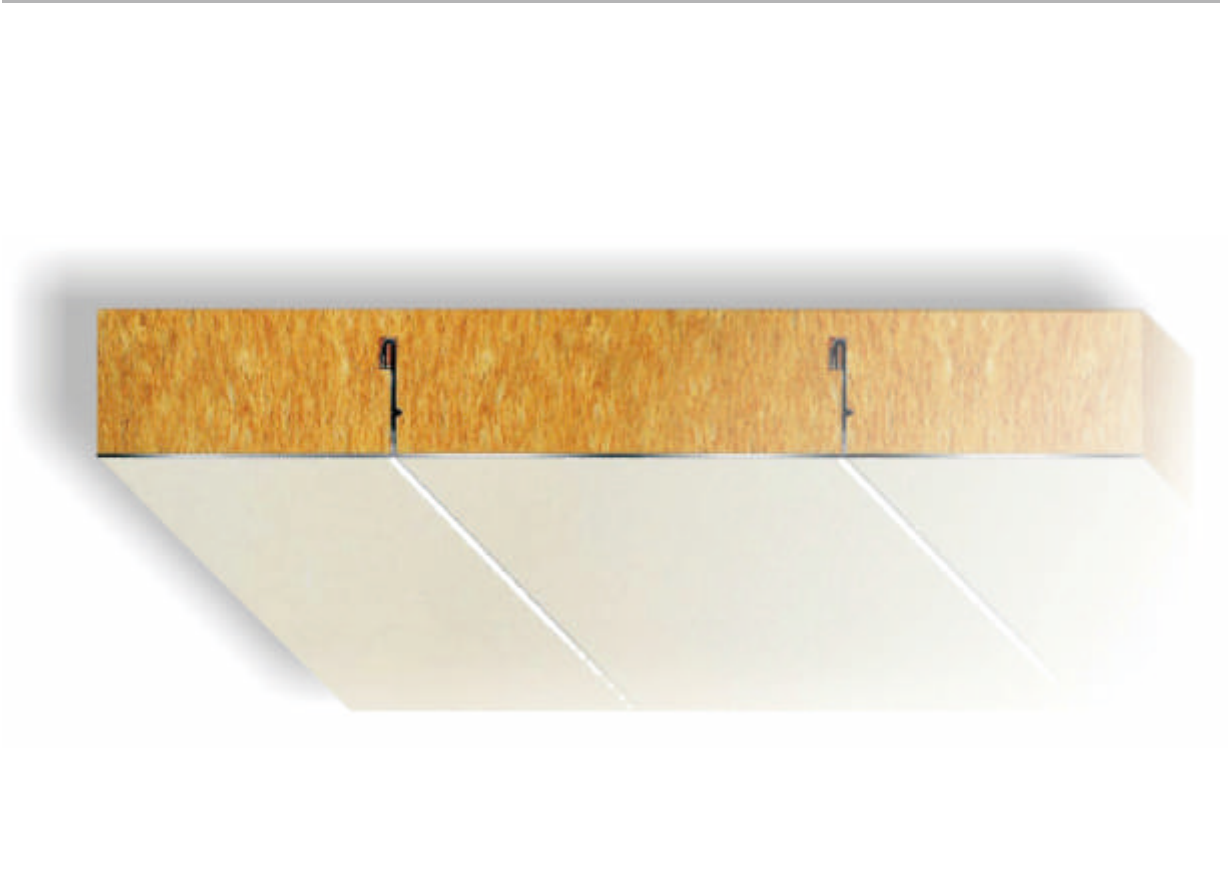
## Installation – B0 Fire Class





# C-D50

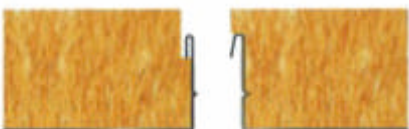
Removable Ceiling



Standard Joint



Jointing Method



## Technical Data

Fire Class : Continuous B-15  
 Weight : 10.7kg/m<sup>2</sup>  
 Sound Reduction Index :  $D_{n,c,w}$  51dB  
 (Cabin to Cabin)  
 Thermal Transmittance : 0.55kcal/m<sup>2</sup>h°C

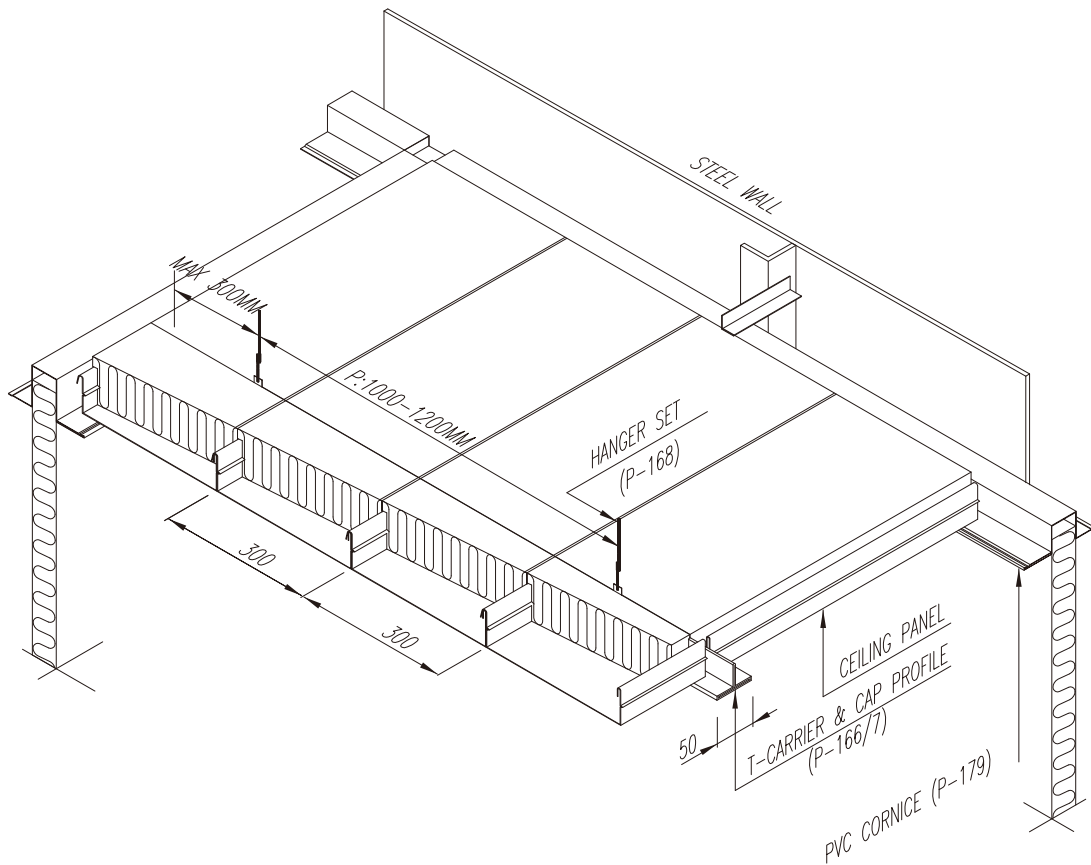
## Construction

Core Material : Mineral Wool  
 Surface Material : 0.6mm Thickness  
 Galv'd Steel Plate  
 Finish Material : Baked Enamel Paint  
 With Protective Foil

## Dimensions

Thickness	: 50mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 2400mm(Recommended maximum Length)	

## Installation – B15 Fire Class



C-N25

Slide-in Ceiling



Standard Joint



Joining Method



Technical Data

Fire Class : Continuous B-0

Weight : 8.2kg/m²

Sound Reduction Index :  $D_{n,c,w}$  50dB  
(Cabin to Cabin)

Thermal Transmittance : 1.01kcal/m²h°C

Construction

Core Material : Mineral Wool

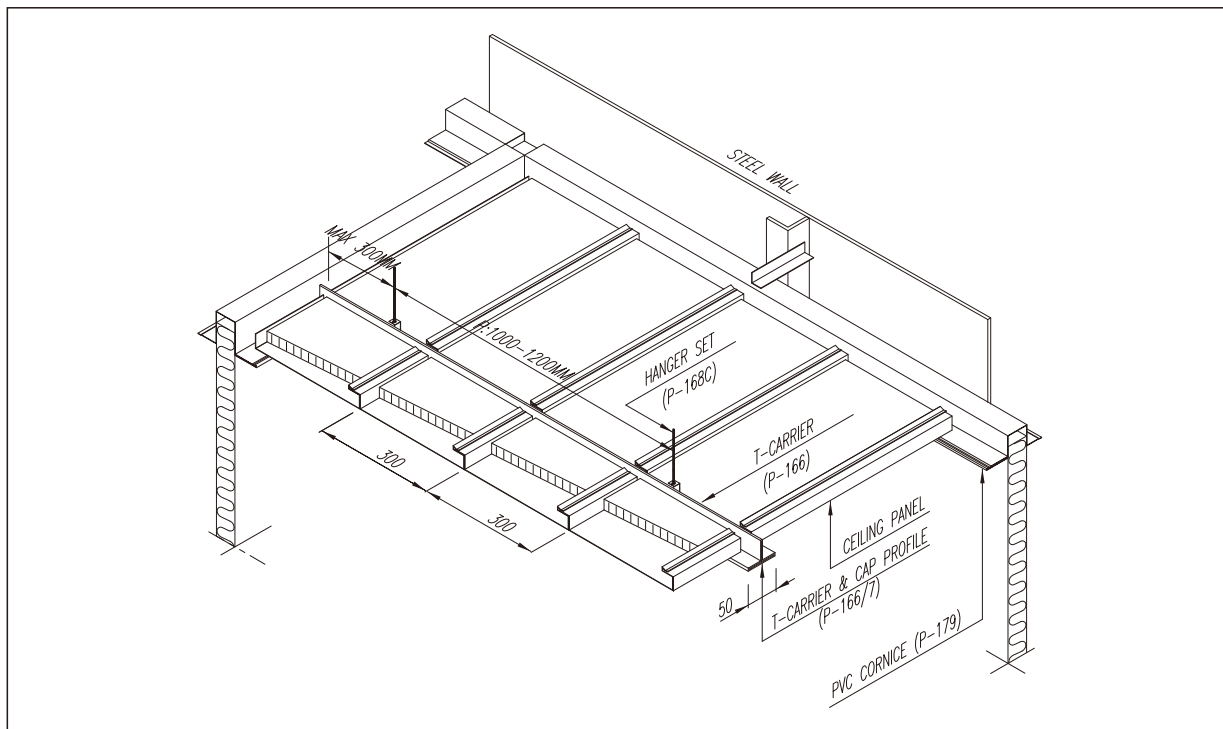
Surface Material : 0.6mm Thickness  
Galv'd Steel Plate

Finish Material : PVC or Backed Enamel Paint  
With Protective Foil

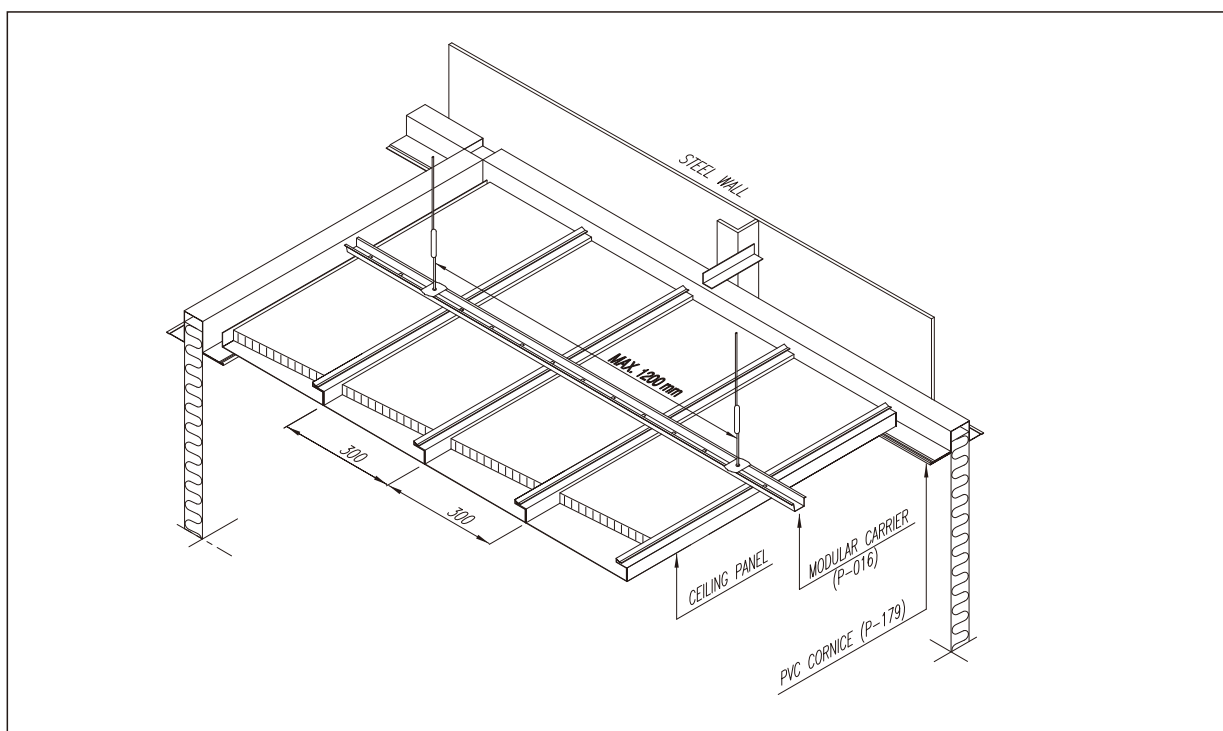
Dimensions

Thickness	: 25mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 2400mm(Recommended maximum Length)	

## Installation – B0 Fire Class



## Temporary Joint Method





# C-N50

Slide-in Ceiling



Standard Joint



Jointing Method



## Technical Data

Fire Class : Continuous B-15  
 Weight : 10.7kg/m<sup>2</sup>  
 Sound Reduction Index :  $D_{n,c,w}$  51dB  
 (Cabin to Cabin)  
 Thermal Transmittance : 0.55kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool  
 Surface Material : 0.6mm Thickness  
 Galv'd Steel Plate  
 Finish Material : PVC or Backed Enamel Paint  
 With Protective Foil

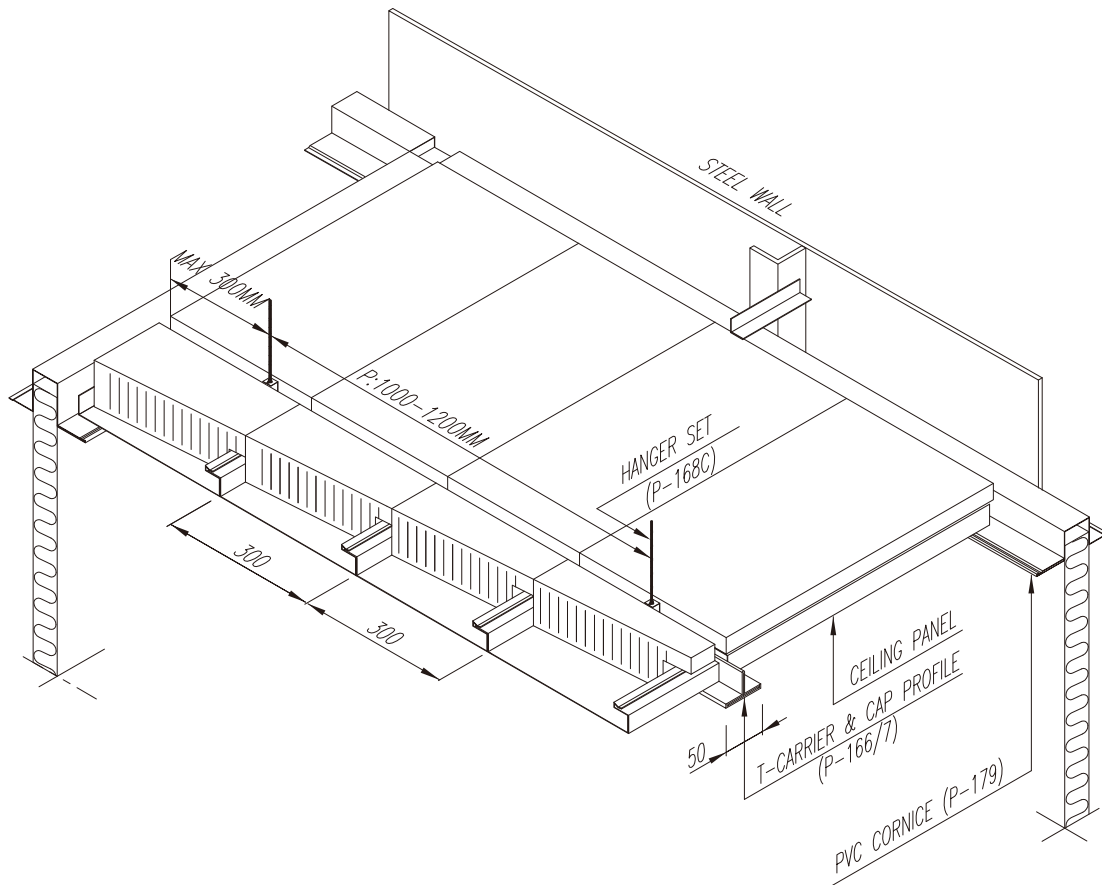
## Dimensions

Thickness	: 50mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 2400mm(Recommended maximum Length)	

# C-N50

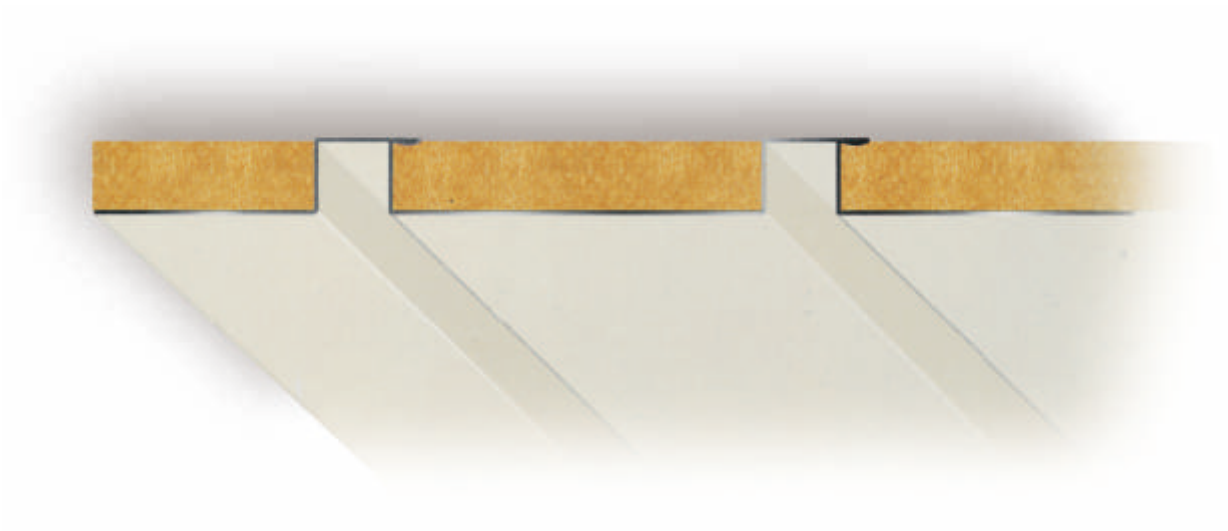
Slide-in Ceiling

## Installation – B15 Fire Class

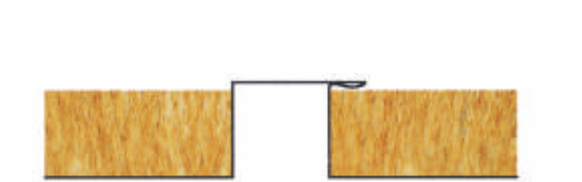


C-B25

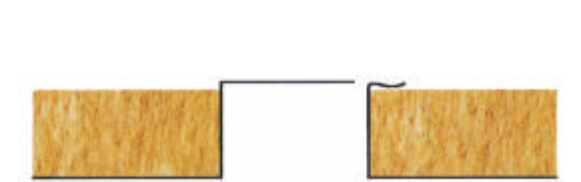
Gap Ceiling



Standard Joint



Joining Method



Technical Data
Fire Class : Continuous B-0
Weight : 8.2kg/m²
Sound Reduction Index : $D_{n,c,w}$ 43dB (Cabin to Cabin)
Thermal Transmittance : 1.01kcal/m²h°C

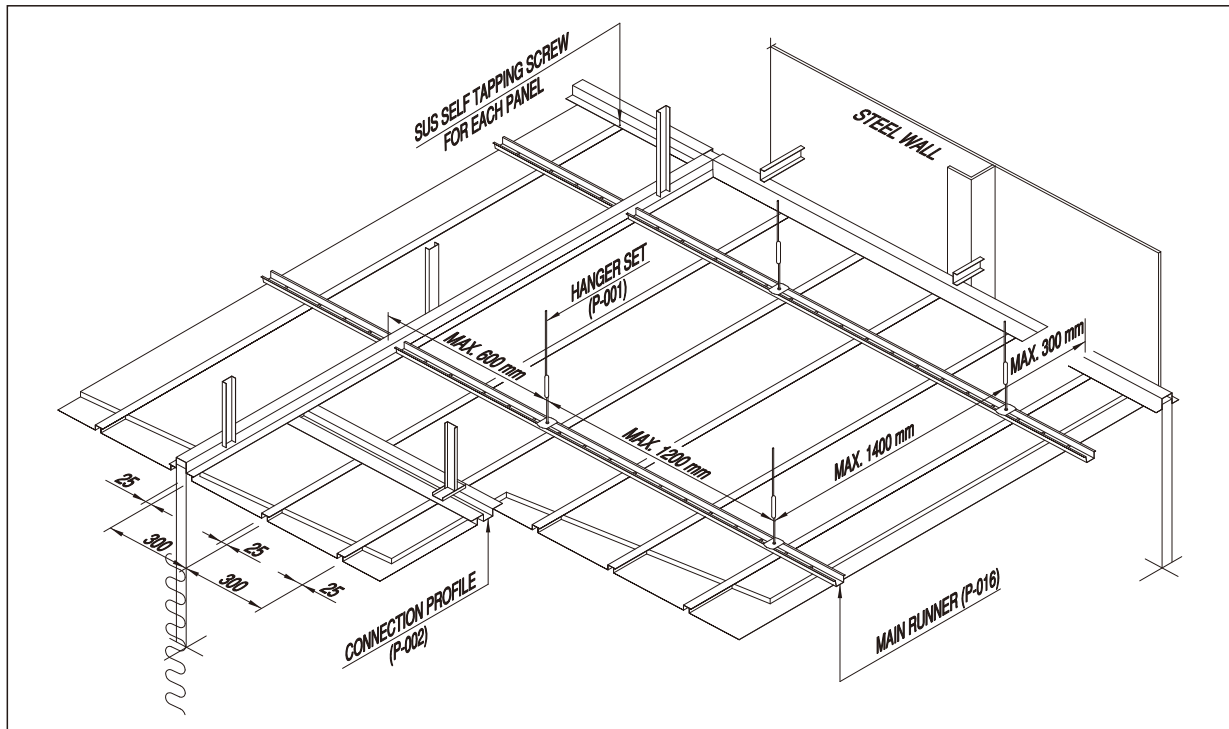
Construction
Core Material : Mineral Wool
Surface Material : 0.6mm Thickness Galv'd Steel Plate
Finish Material : Baked Enamel Paint With Protective Foil

Dimensions		
Thickness	: 25mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 5000mm(Recommended maximum Length)	

# C-B25 Gap Ceiling

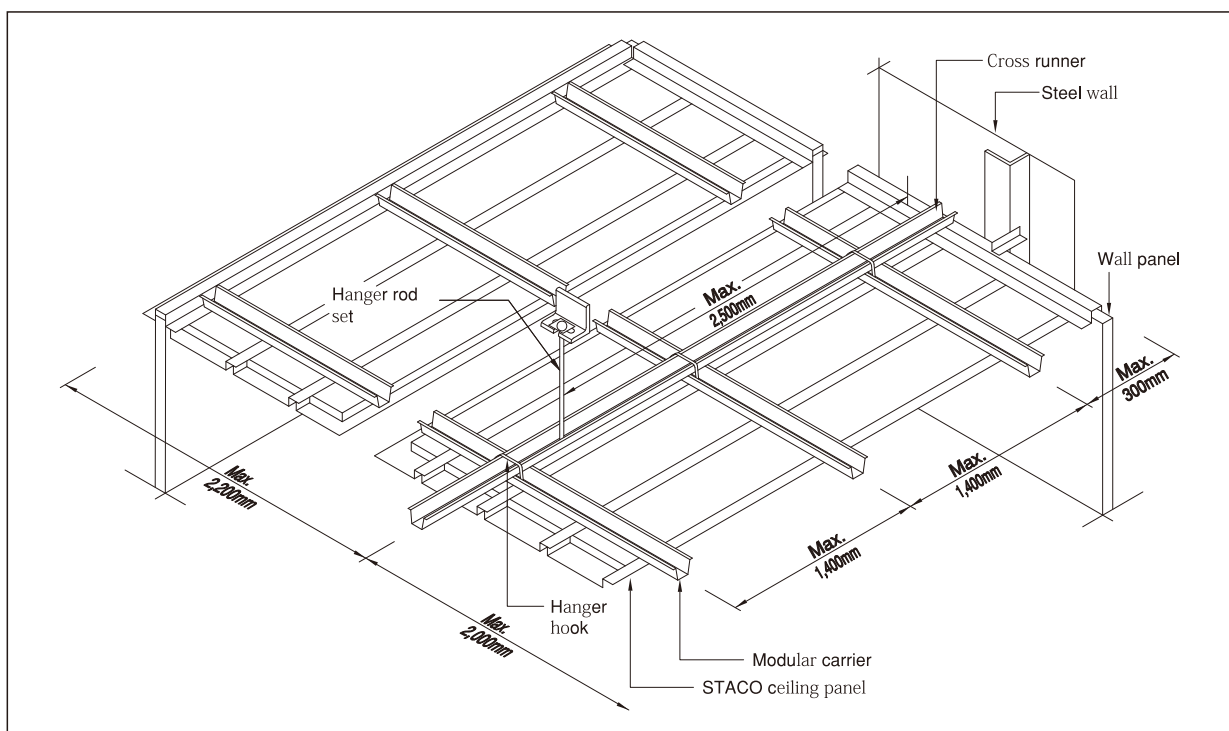
## Installation – B0 Fire Class

### HANGER TYPE



## Installation – B0 Fire Class

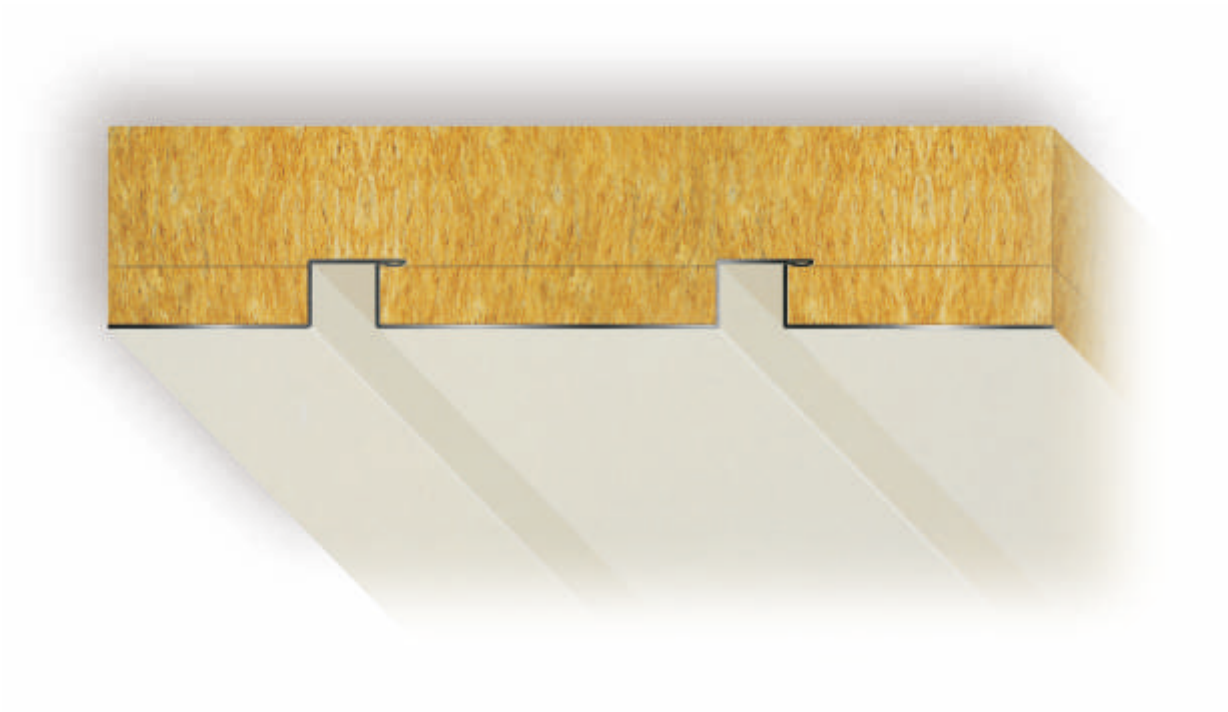
### NO HANGER TYPE





C-B75

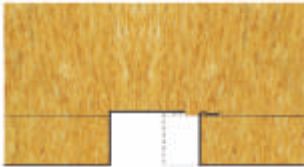
Gap Ceiling



Standard Joint



Jointing Method



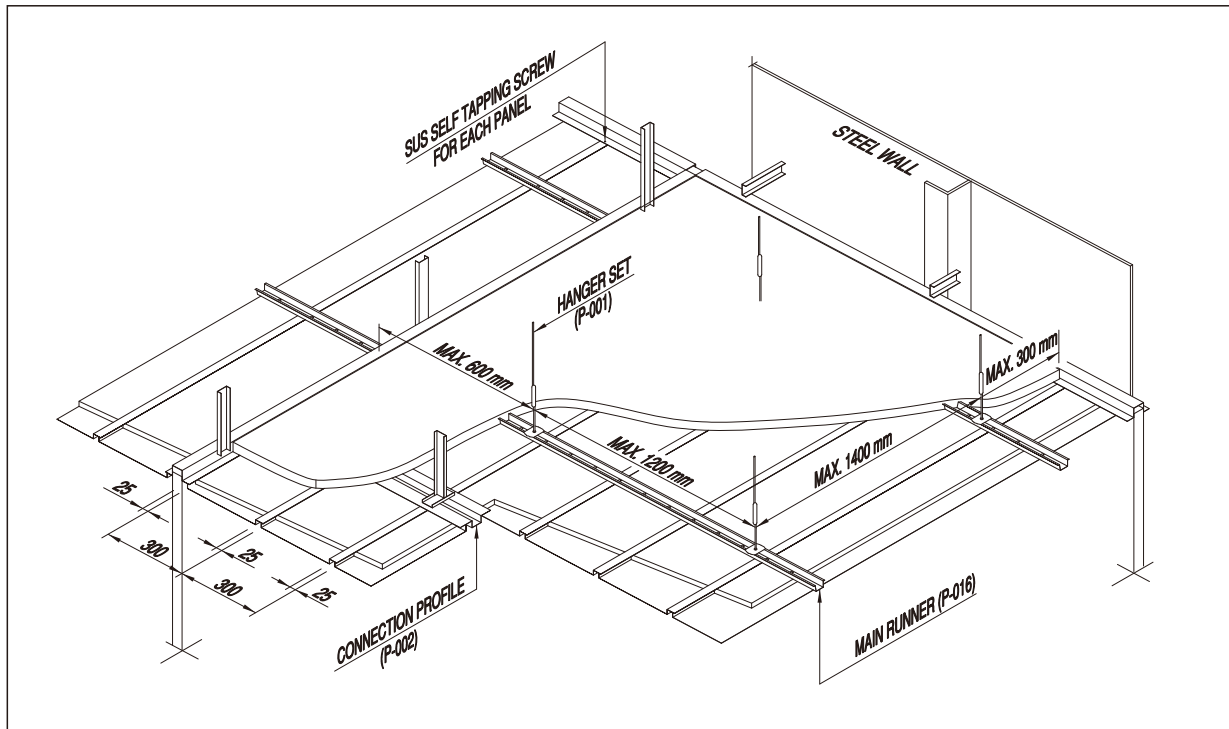
Technical Data
Fire Class : Continuous B-15
Weight : 12.2kg/m²
Sound Reduction Index : $D_{n,c,w}$ 50dB (Cabin to Cabin)
Thermal Transmittance : 0.38kcal/m²h°C

Construction
Core Material : Mineral Wool
Surface Material : 0.6mm Thickness Galv'd Steel Plate
Finish Material : Baked Enamel Paint With Protective Foil

Dimensions		
Thickness	: 75mm	±0.5mm
Width	: 300mm(Standard)	±0.5mm
Length	: 5000mm(Recommended maximum Length)	

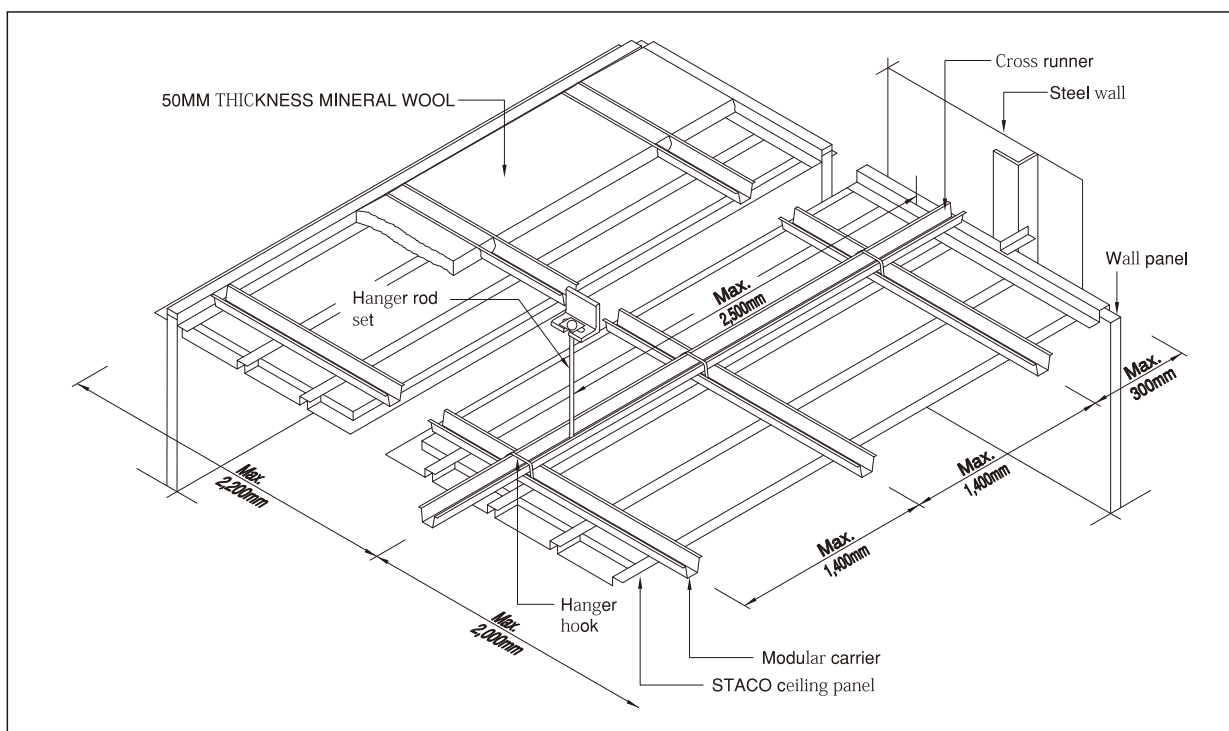
## Installation – B15 Fire Class

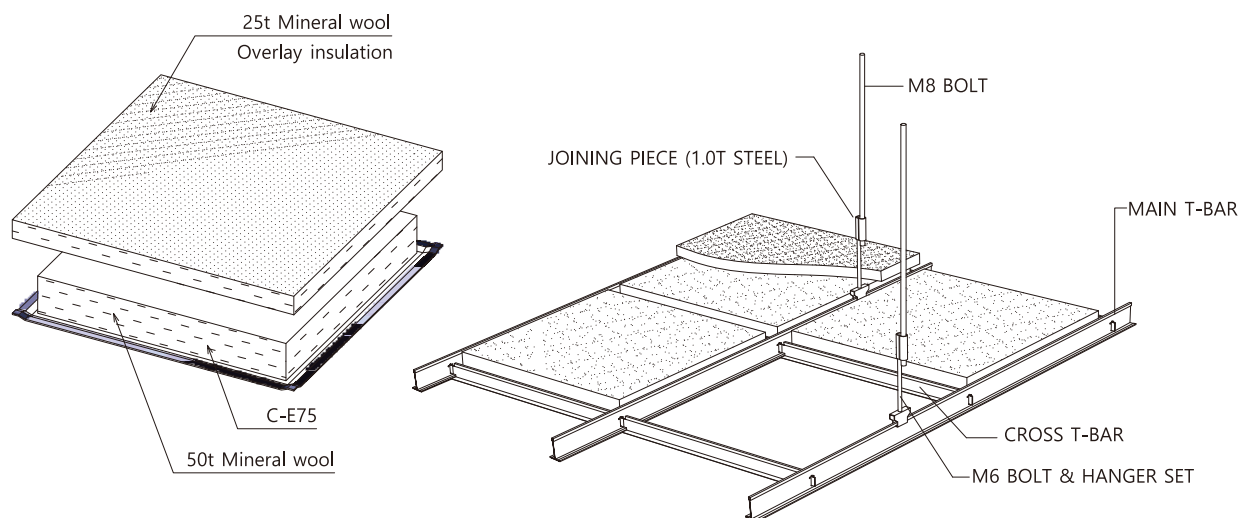
### HANGER TYPE



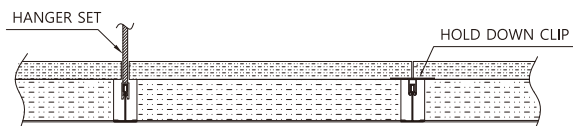
## Installation – B15 Fire Class

### NO HANGER TYPE

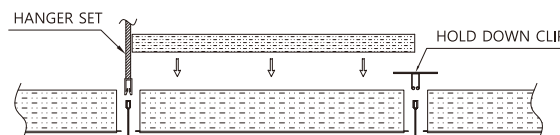




## Standard Joint



## Joining Method



## Technical Data

Fire Class : Continuous B-15

Weight : 12.8kg/m<sup>2</sup>

Sound Reduction Index :  $D_{n,c,w}$  54dB

Thermal Transmittance : 0.38kcal/m<sup>2</sup>h°C

## Construction

Core Material : Mineral Wool

Surface Material : 0.8mm Thickness  
Galv'd Steel Plate

Finish Material : Backed Enamel Paint  
With Protective Foil

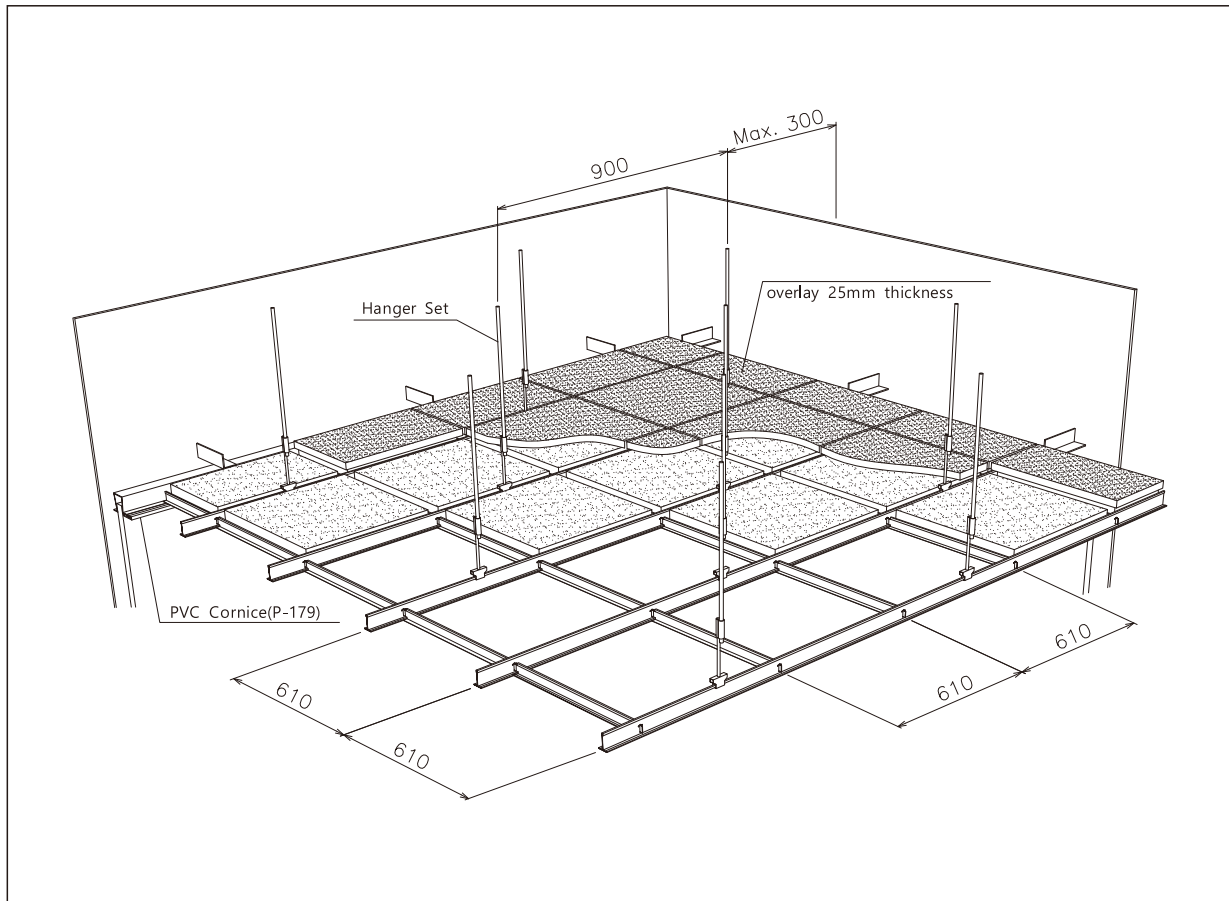
## Dimensions

Thickness : 75mm

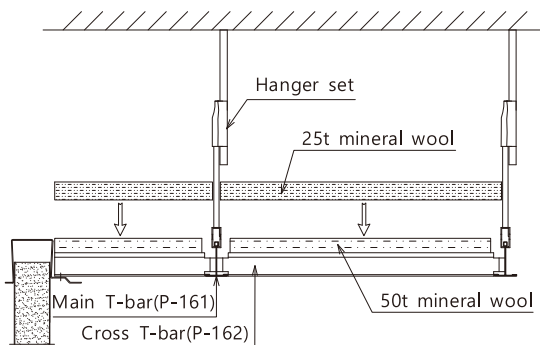
±0.5mm

Width X Length : 600X600mm

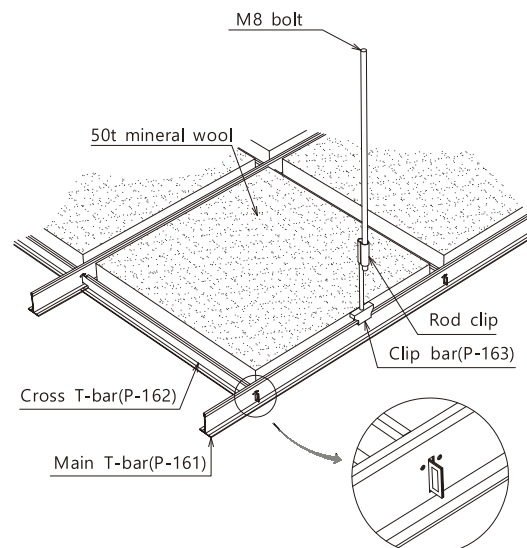
## Installation – B15 Fire Class



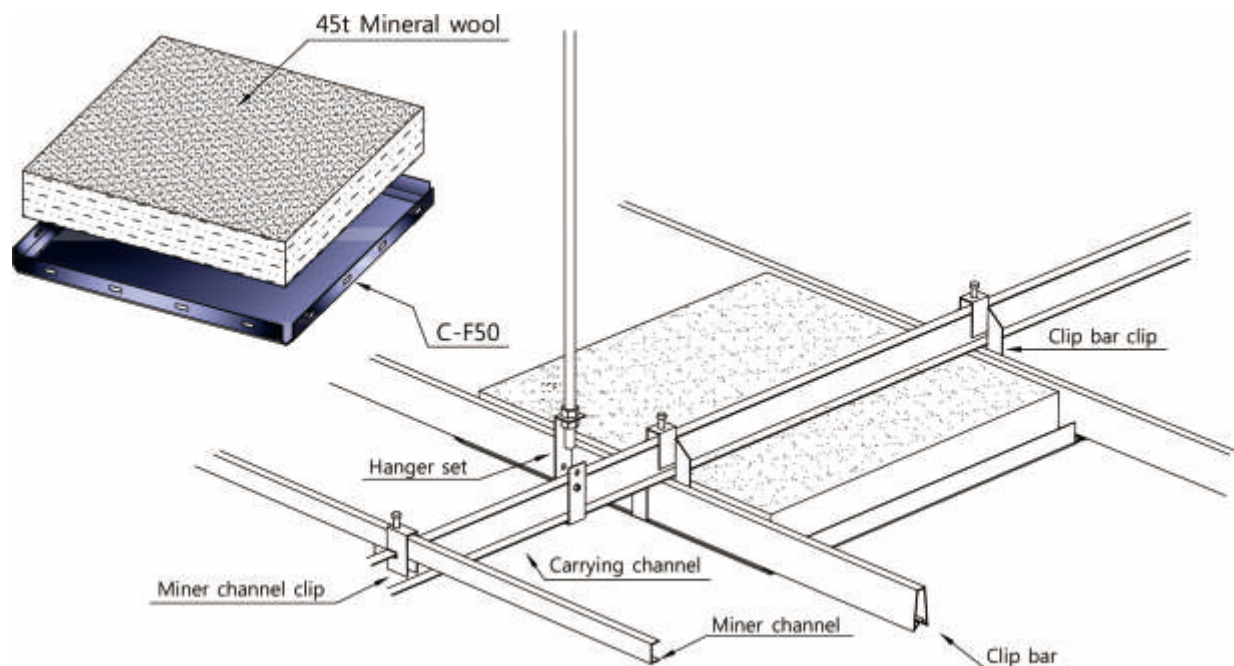
### Hanger Installation Detail



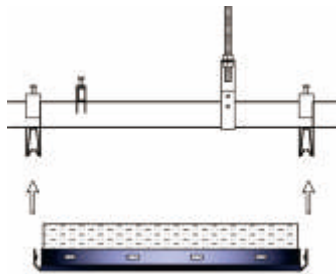
### Installation View



# C-F50 Cassette Ceiling



## Standard Joint



### Technical Data

Fire Class : Continuous B-15  
 Weight : 10.0kg/m<sup>2</sup>  
 Sound Reduction Index :  $D_{n,c,w}$  53dB  
 (Cabin to Cabin)  
 Thermal Transmittance : 0.60kcal/m<sup>2</sup>h°C

### Construction

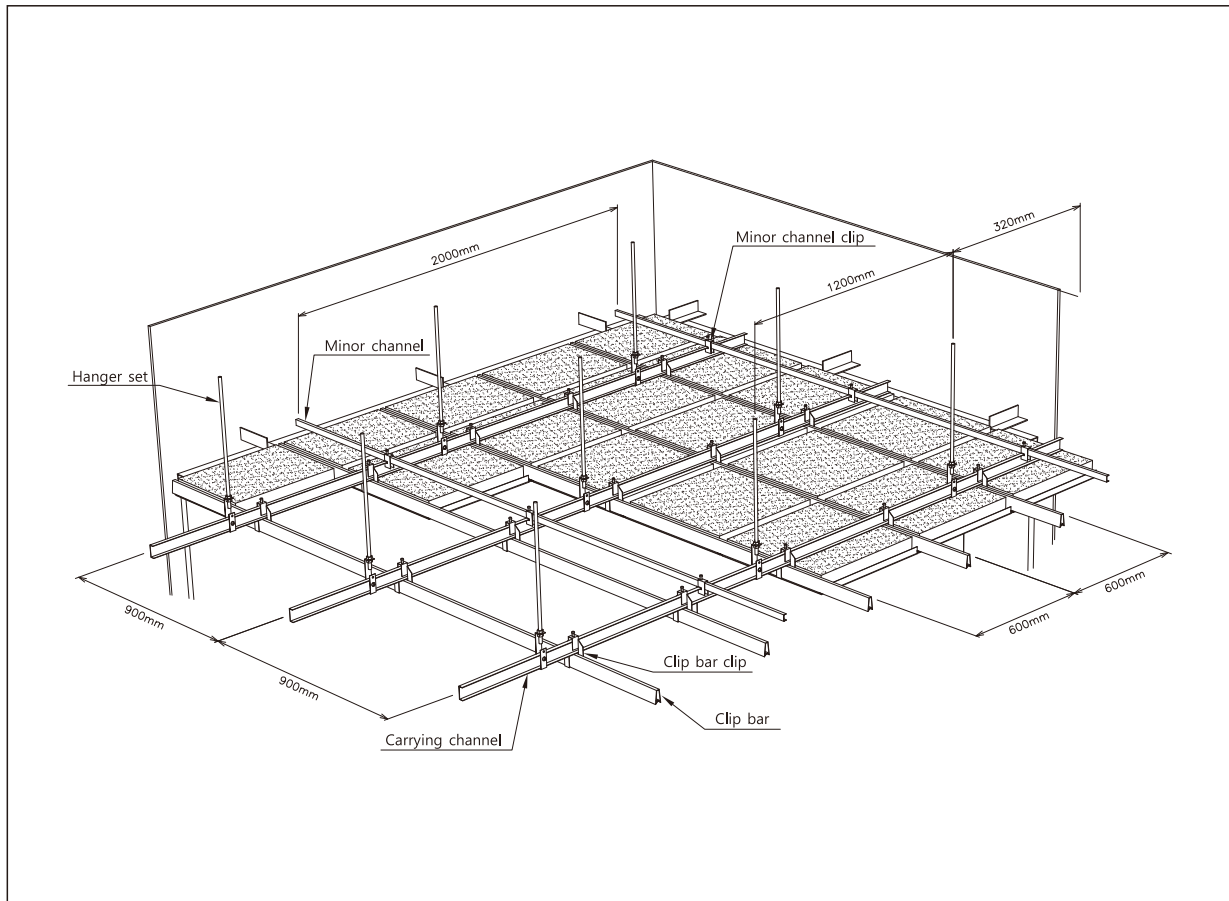
Core Material : Mineral Wool  
 Surface Material : 0.7mm Thickness  
 Galv'd Steel Plate  
 Finish Material : Backed Enamel Paint  
 With Protective Foil

### Dimensions

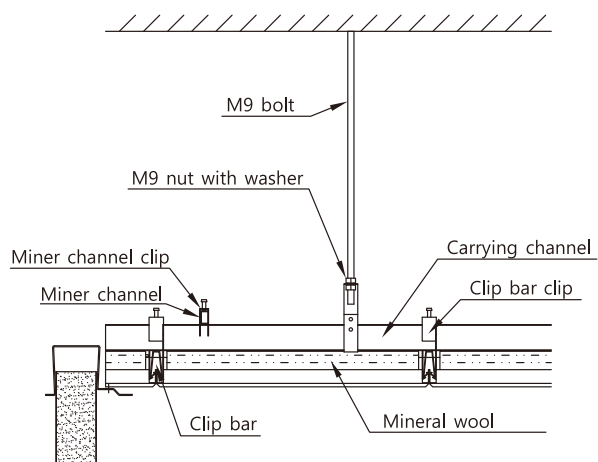
Thickness : 45mm ±0.5mm  
 Width X Length : 600X600mm



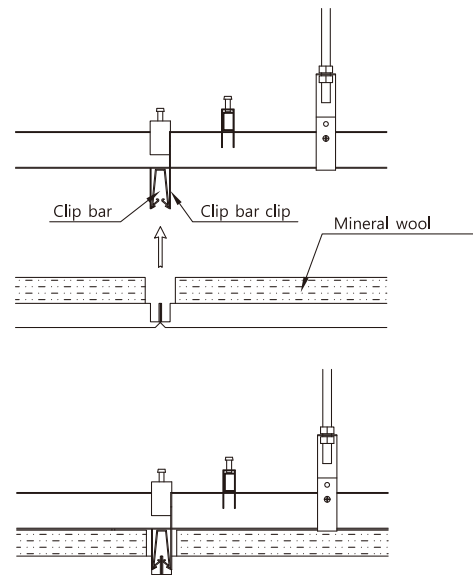
## Installation – B15 Fire Class



### Hanger Installation Detail

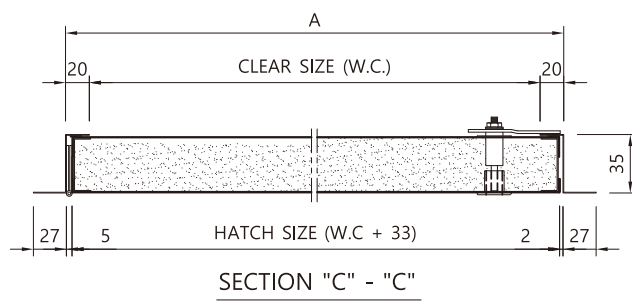
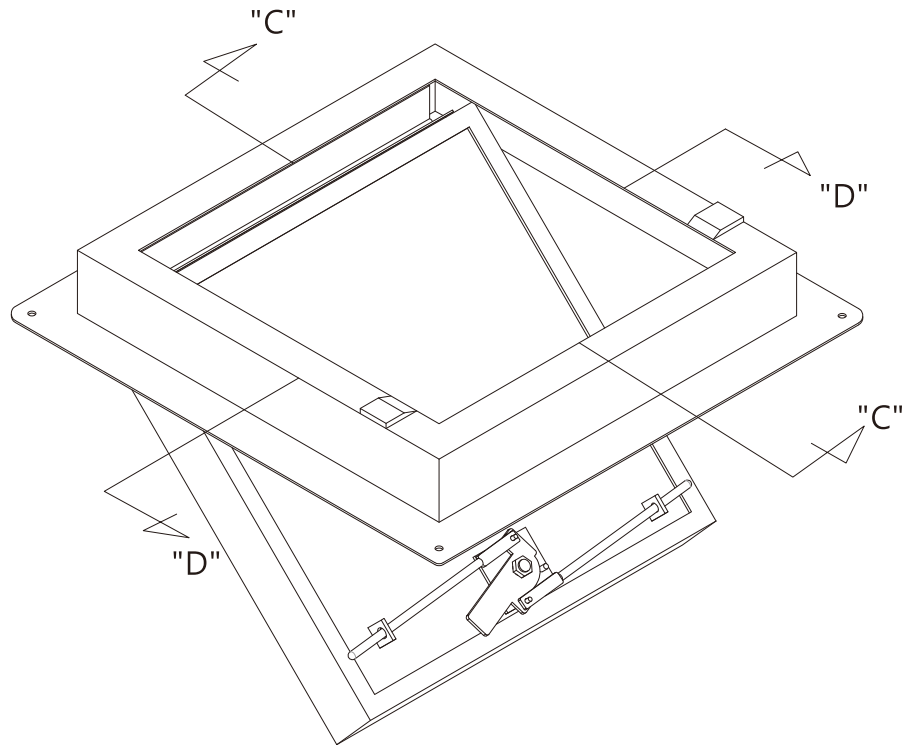


### Installation Procedure

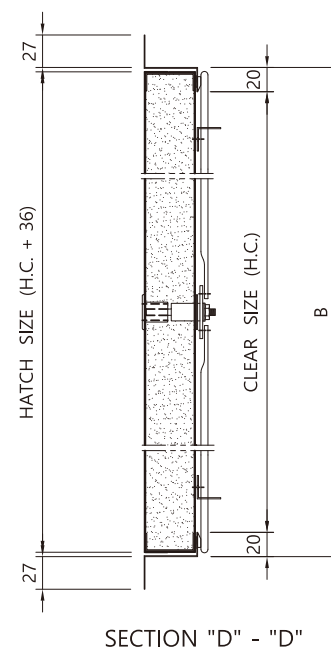


# Ceiling Hatch

C-A50IH / B-15 Class



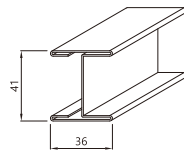
※ Handle has 2 types such as hexagon wrench and knob type.



# Ceiling Profiles (C-D, C-N TYPE)

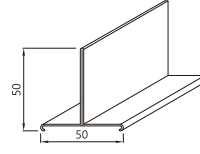
- a. Material
- b. Finish
- c. Weight
- d. Length
- △ DECO

**H-PROFILE (P-101)**



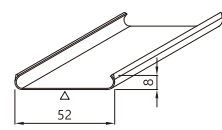
- a. 0.6mm steel
- b. Galvanized
- c. 0.79kg/m
- d. P.H-5mm

**T-CARRIER (P-166)**



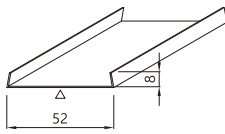
- a. 1.0mm steel
- b. Galvanized
- c. 1.25kg/m
- d. 2400mm

**CAP PROFILE (P-167F)**



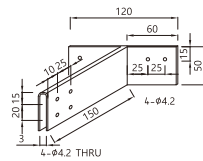
- a. 1.0mm steel
- b. Similar as ceiling panel
- c. 0.17kg/m
- d. 3600mm

**CAP PROFILE (P-167B)**



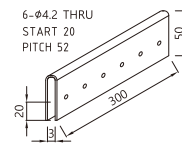
- a. 1.0mm steel
- b. SUS / PCM
- c. 0.32kg/m
- d. 2400mm

**T-CARRIER JOINT (P-169A)**



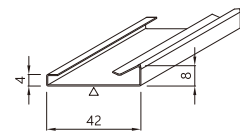
- a. 1.0mm steel
- b. Galvanized
- c. 0.17kg/m
- d. -

**T-CARRIER JOINT (P-169B)**



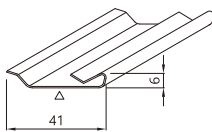
- a. 1.0mm steel
- b. Galvanized
- c. 0.24kg/m
- d. -

**CORNICE (P-179F)**



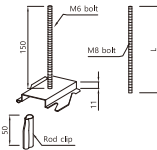
- a. 1.0mm PVC
- b. PVC
- c. 0.14kg/m
- d. 3600mm

**CORNICE (P-179S)**



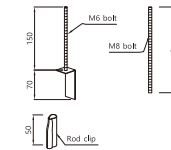
- a. 1.0mm steel
- b. SUS / PCM
- c. 0.29kg/m
- d. 2400mm

**HANGER SET (P-168A)**



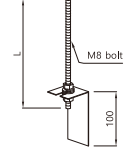
- a. M6 Bolt
- b. Galvanized
- c. 0.06kg/set
- (※ M8 BOLT : 0.3kg/m)

**HANGER SET (P-168B)**



- a. M6 Bolt
- b. Galvanized
- c. 0.07kg/set
- (※ M8 BOLT : 0.3kg/m)

**HANGER SET (P-168C)**

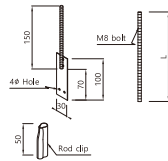


- a. M6 Bolt
- b. Galvanized
- c. 0.03kg/set
- (※ M8 BOLT : 0.3kg/m)

# Ceiling Profiles (C-B TYPE)

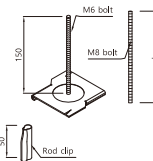
- a. Material
  - b. Finish
  - c. Weight
  - d. Length
- △ DECO

## HANGER SET (P-168BS)



- a. M6 Bolt
- b. Galvanized
- c. 0.07kg/set
- d. (※ M8 BOLT : 0.3kg/m)

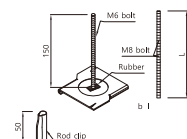
## SUSPENSION (P-001)



- a. M6 Bolt & 1.0mm steel
- b. Galvanized
- c. 0.69kg/set
- d. (※ M8 BOLT : 0.3kg/m)

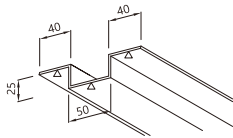
## SUSPENSION (P-001S)

(P-001 WITH RUBBER ABSORBER)



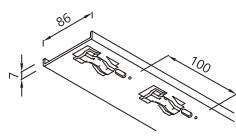
- a. M6 bolt & 1.0mm steel
- b. Galvanized
- c. 0.07kg/set
- d. (※ M8 BOLT : 0.3kg/m)

## JOINING PROFILE (P-002)



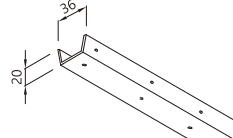
- a. 0.6mm steel
- b. Painted
- c. 1.00kg/m
- d. 3000mm

## SIDE RUNNER (P-003)



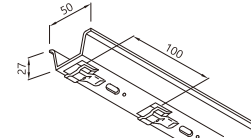
- a. 1.0mm steel
- b. Galvanized
- c. 0.73kg/m
- d. 3000mm

## RUNNER SPLICE (P-012)



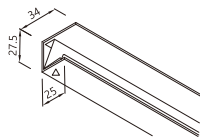
- a. 1.0mm steel
- b. Galvanized
- c. 0.165kg/m
- d. 321mm

## MODULAR CARRIER (P-016)



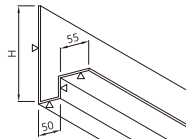
- a. 1.0mm steel
- b. Galvanized
- c. 0.69kg/m
- d. 5000mm

## EDGE TRIM (P-026)



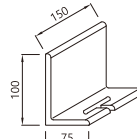
- a. 0.6mm steel
- b. Gal'd and painted
- c. 0.55kg/m
- d. 3000mm

## SPECIAL PROFILE (P-030)



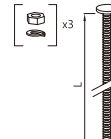
- a. 1.0mm steel
- b. Gal'd and painted
- c. -
- d. 2400mm

## HANGER SOCKET (P-004N)



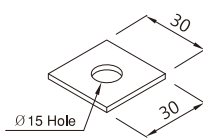
- a. 7.0mm
- b. Galvanized
- c. 1.86kg/m
- d. 150mm

## HANGER ROD (P-014N)



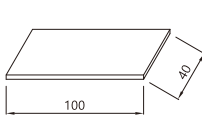
- a. M14 bolt
- b. -
- c. 0.17kg/m
- d. -

## NEOPLANE PACKING (P-008N)



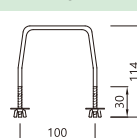
- a. 3.0mm
- b. Neoplane
- c. -
- d. -

## NEOPLANE PACKING (P-007N)



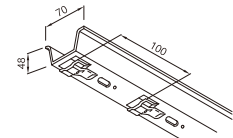
- a. 3.0mm
- b. Neoplane
- c. -
- d. -

## HANGER HOOK (P006N) With butterfly nut & washer



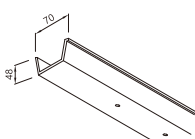
- a. M6 Bolt
- b. Galvanized
- c. 0.05kg/set
- d. -

## MODULAR CARRIER (P-016N)



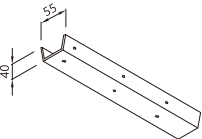
- a. 1.6mm steel
- b. Galvanized
- c. 1.75kg/m
- d. 5000mm

## CROSS RUNNER (P-018N)



- a. 1.6mm steel
- b. Galvanized
- c. 1.75kg/m
- d. 5000mm

## RUNNER SPLICE (P-019N)

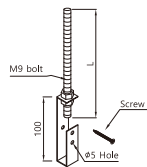


- a. 1.6mm steel
- b. Galvanized
- c. 0.8667kg/m
- d. 600mm

# Ceiling Profiles (C-F TYPE)

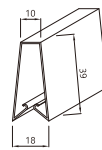
- a. Material  
b. Finish  
c. Weight  
d. Length
- △ DECO

HANGER SET (P-156)



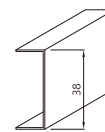
- a. 2.0mm  
b. Zinc coated steel  
c. 0.07kg/set  
d. 4000mm  
(※ M9 BOLT : 0.3kg/m)

CLIP BAR (P-151)



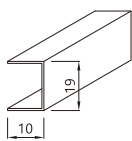
- a. 0.6mm steel  
b. Zinc coated steel  
c. 0.47kg/m  
d. 4000mm

CARRYING CHANNEL (P-152)



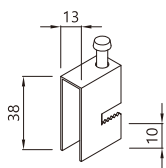
- a. 1.2mm  
b. Zinc coated steel  
c. 0.57kg/m  
d. 2400mm

MINOR CHANNEL (P-153)



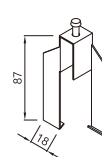
- a. 1.2mm  
b. Zinc coated steel  
c. 0.36kg/m  
d. 4000mm

MINOR CHANNEL CLIP (P-154)



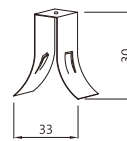
- a. 1.0mm  
b. Zinc coated steel  
c. 0.017kg/m  
d. Not applicable

CLIP BAR CLIP (P-155)



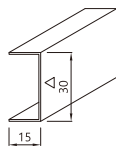
- a. 1.0mm  
b. Zinc coated steel  
c. 0.35kg/m  
d. Not applicable

HOLD DOWN CLIP (P-157)



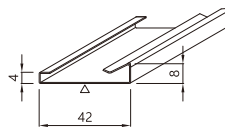
- a. -  
b. Galvanized  
c. -  
d. -

MOLDING CHANNEL (P-158)



- a. 1.0mm  
b. Backed enamel paint  
c. 0.36kg/m  
d. 4000mm

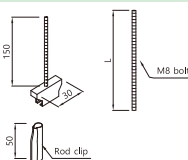
CORNICE (P-179F)



- a. 1.0mm  
b. PVC  
c. 0.33kg/m  
d. 3600mm

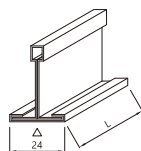
## (C-E TYPE)

CLIP BAR SET (P-163)



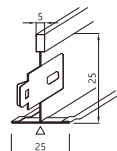
- a. 0.6mm steel  
b. Galvanized  
c. -  
d. -

MAIN T-BAR (P-161)



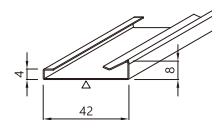
- a. 0.4mm steel  
b. Backed enamel paint  
c. 1.47kg/m  
d. 3660mm

CROSS T-BAR (P-162)



- a. 0.4mm  
b. Backed enamel paint  
c. 0.19kg/m  
d. 610mm

CORNICE (P-179F)



- a. 1.0mm  
b. PVC  
c. 0.33kg/m  
d. 3600mm



# UNIT TOILETS



Wall Panels

Ceiling Panels

**Unit Toilets**

Marine Doors

Floating Floors

Furniture

Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants



Construction of toilets can be very expensive and time consuming for Shipyards and Owners considering the infrastructure requirements (Dry-docks, Slipways etc.) and the high labor costs coupled with low productivity.

STACO Unit Toilets can overcome these problems as these Unit Toilets can be delivered in different sizes and designs according to customer specifications. The STACO Toilet Units are manufactured with special focus on design details to ensure maximum space utilization, proper functioning and long durability so that they do not become worn out or rotten in a few years after delivery.



With many years of experience and specialized competence, STACO Unit toilet is ideal for marine accommodations, from cruise ships to offshore installations. STACO Unit toilet, whether standard or custom made, is 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 supplies conform to our policy of supplying only first class quality.

Bottom may also be made of GRP material.

STACO manufactures four basic types of Toilet Unit Models.

These are Shower Unit, Bath Unit and Shared Unit and public unit.

The 'Shower Type' contains a toilet bowl, a wash-basin and a shower cabin, the 'Bath Type' has a bath tub instead of a shower cabin and the typical 'Shared Type' is for two cabins and has a toilet bowl, a wash-basin and a shower cabin and

the 'Public Type' has a toilet bowl and a wash basin but no shower cabin. In addition all units have equipment and

accessories like mixing taps, shower mixers, cabinets paper holders, soap holders, towel and grab rails, etc.

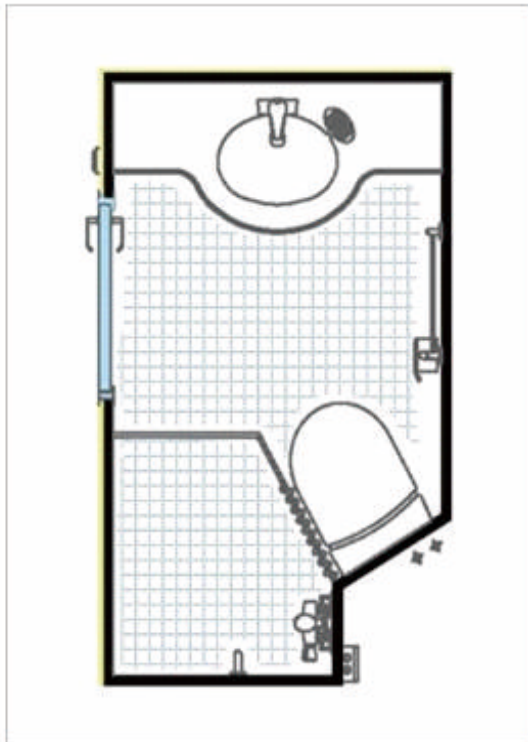
See sketches attached on next page.



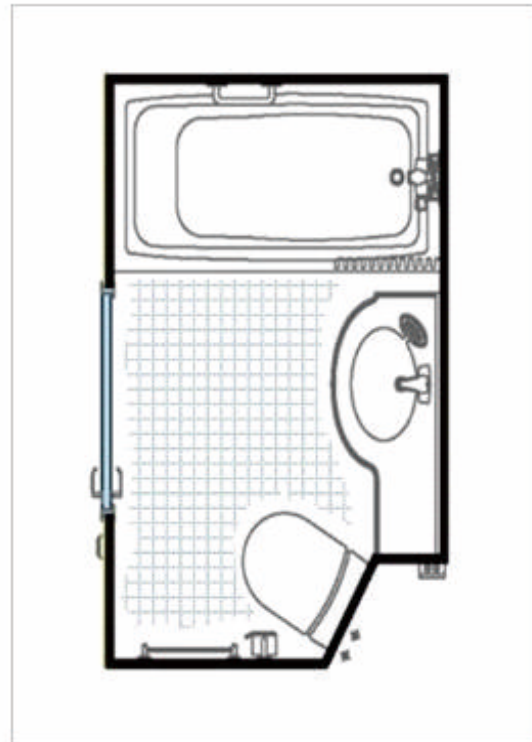


# Typical Design

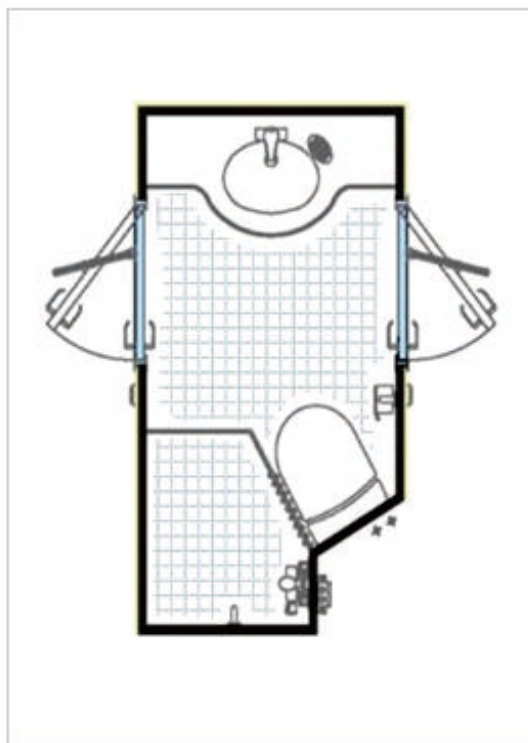
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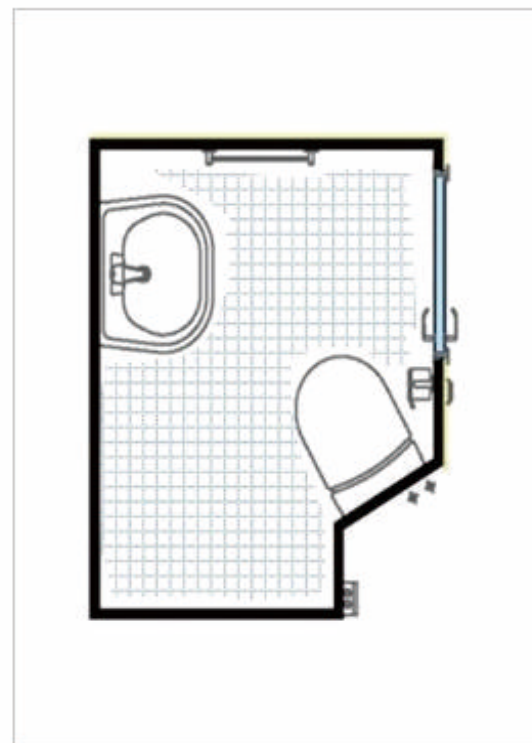
**SHOWER** TYPE



**BATH** TYPE



**SHARED** TYPE



**PUBLIC** TYPE

# Details



WASH BASIN, WATER COSET, SHOWER AREA VIEW



SHOWER UNIT



# Accessories

---



SOAP DISH



TUMBLER HOLDER



TOWEL BAR



PAPER HOLDER



SPARE PAPER HOLDER



TOILET BRUSH & HOLDER



COAT & HAT HOOK



GRABRAIL



CORNER SHELF



GLASS SHELF



# Installation

Each standard unit is delivered with four square tubes for easy lifting and locating on board.

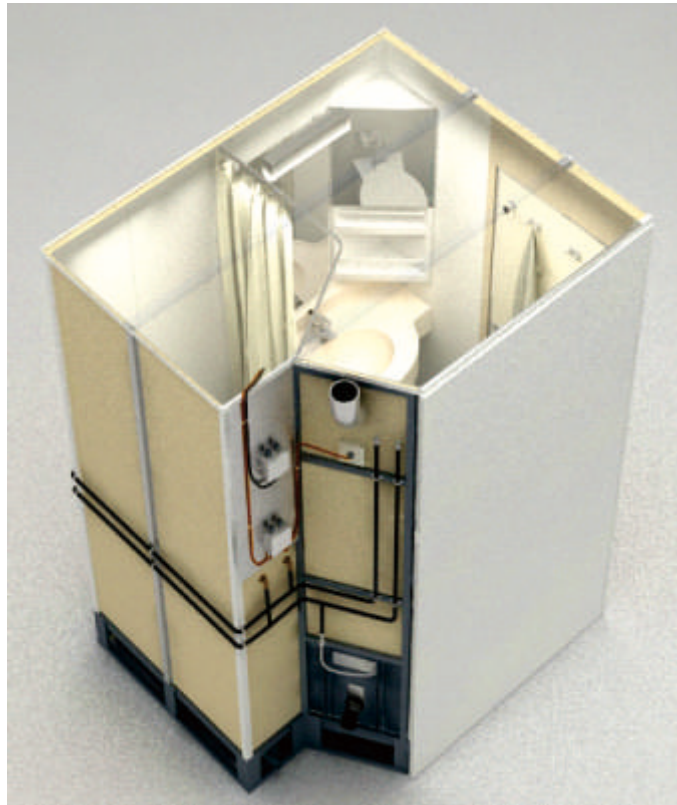
A specially designed lifting frame is used for hosting by crane.

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

Each unit is delivered with one adjustable leg at each corner to allow for leveling.

STACO unit toilet is complete when delivered, so after fixing them to the deck you only need connect the water, drainage and electricity to work them.

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



## ■ ON-BOARD CONNECTION POINT



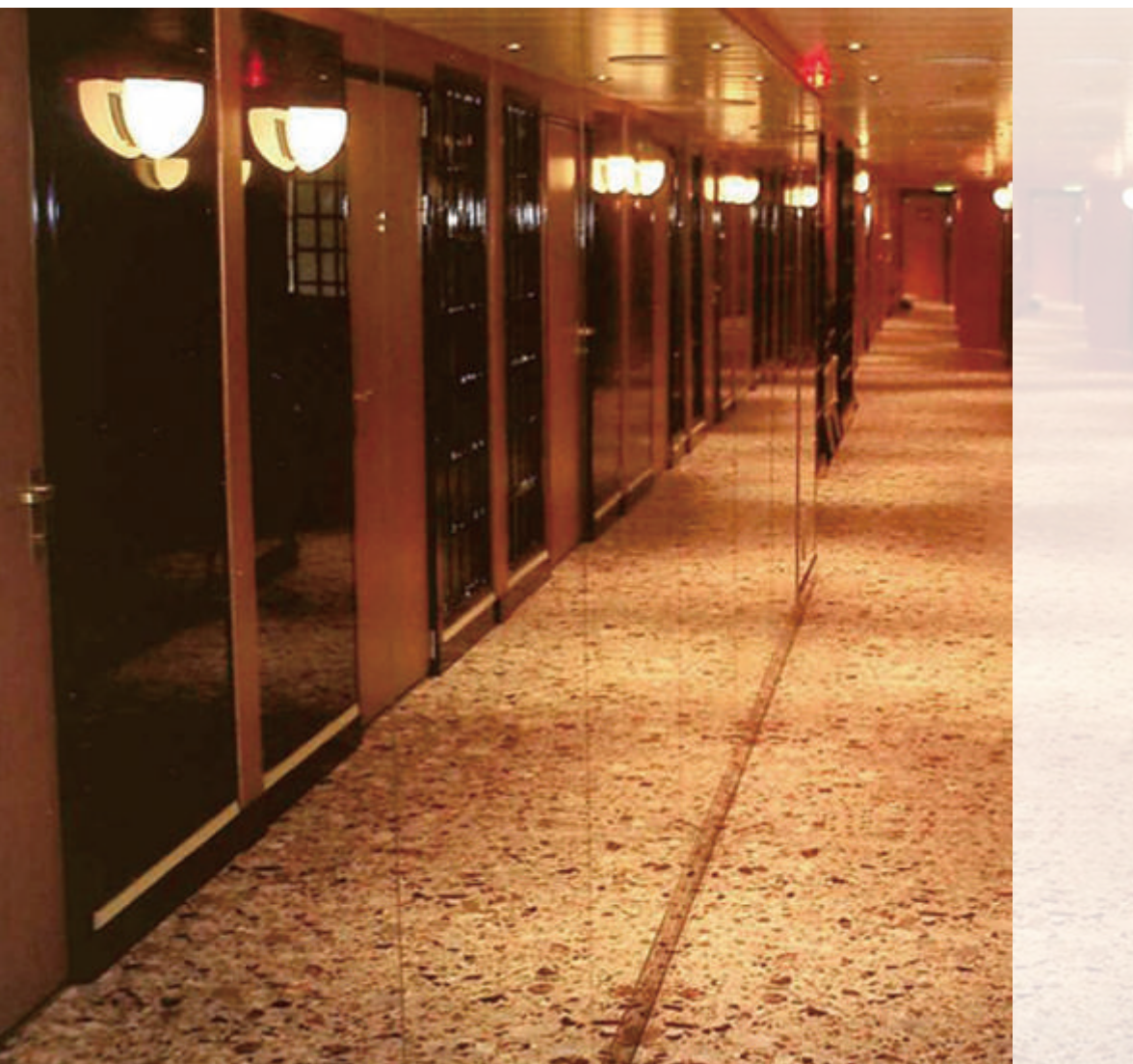
**ELECTRIC CONNECTION**



**PIPING CONNECTION**



# MARINE DOORS



Wall Panels

Ceiling Panels

Unit Toilets

**Marine Doors**

Floating Floors

Furniture

Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants



# MARINE DOORS



STACO provides doors in fire classification “B” for use in cabins, and doors in fire classification “A” for use in areas with higher fire protection requirements.

Doors are constructed not only to be strong and durable but also to provide the ideal door for each situation. STACO makes the door to each customer’s specification. STACO also supplies a complete range of accessories such as lock cases, cylinder key and keycard systems, handles, closers, etc. Doors are delivered with different surfaces for the ambiance created by the individual marine interior.

## Standard doors:

- Single Leaf doors (A-0, B-15, A-60)
- Double Leaf doors (A-0, B-15, A-60)
- High Noise Reduction doors (B-15)
- Sliding Leaf doors (A-60)
- External doors - Single or Double Leaf

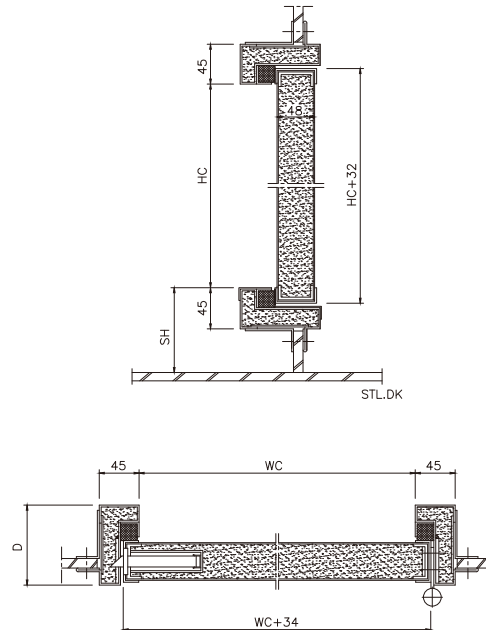
Surface finish: The door leaf can be coated with baked enamel powder coat, PVC Laminate sheet or made from stainless steel. The frame can be baked enamel powder coat or stainless steel.

## Optional hardware features

- Lockset
- Ventilation louver
- Kick-out panel
- Panic device Door closer (normal or integrated)
- Accessories (Door catcher / Hook / Cushion/ Adjuster / Closer)
- Door Bars (Cross Bar, Square Bar)
- Window
- Door handle set in various designs

The doors can be equipped with all the relevant accessories and include the right surface coating that matches the design

# A-60 Single Leaf Door (STACO-A60-1)



## Technical specifications

### Door leaf

48mm thick, made of galvanized steel plate Reinforcement plate for hinges, locks and closer. Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat PVC Laminate sheet, Stainless steel

### Frame

1.6t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

### Lever handle

Marine grade Stainless steel

### Accessories

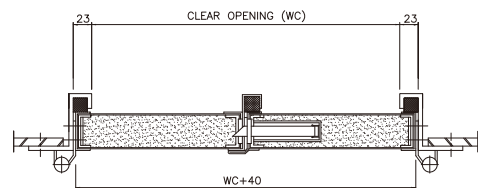
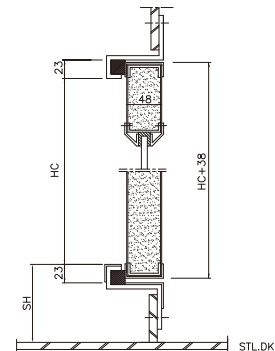
Lock case, handles, recessed handle, cylinder, door closer

### Sound Rating

40dB (with gasket)



# A-60 Double Leaf Door (STACO-A60D-2)



## Technical specifications

### Door leaf

48mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet, Stainless steel

### Frame

4mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

### Lever handle

Marine grade Stainless steel

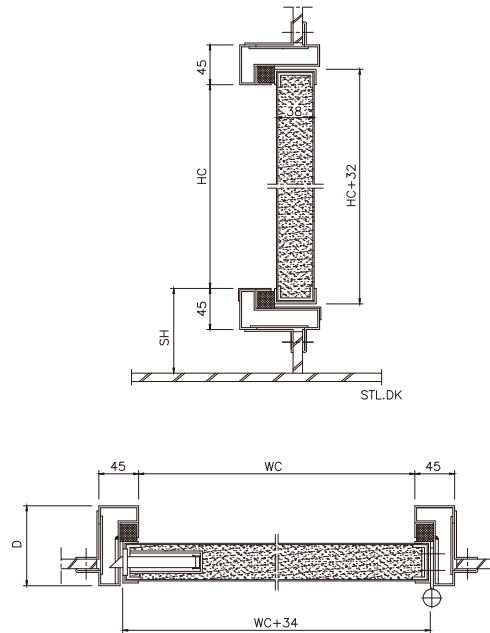
### Accessories

Lock case, handles, recessed handle, cylinder, door closer

### Sound Rating

43dB (with gasket)

# A-0 Single Leaf Door (STACO-A0-1)



## Technical specifications

### Door leaf

48mm thick, made of galvanized steel plate Reinforcement plate for hinges, locks and closer. Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat PVC Laminate sheet, Stainless steel

### Frame

1.6t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

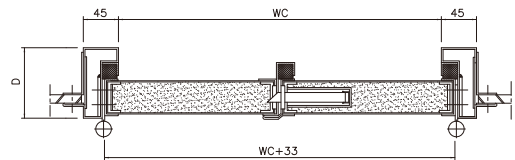
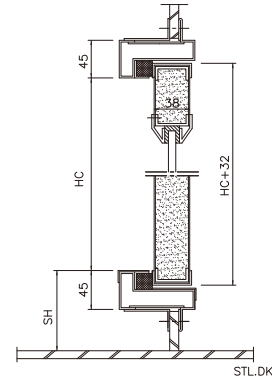
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer

# A-0 Double Leaf Door (STACO-A0D-1)



## Technical specifications

### Door leaf

38mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet, Stainless steel

### Frame

+1.6mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

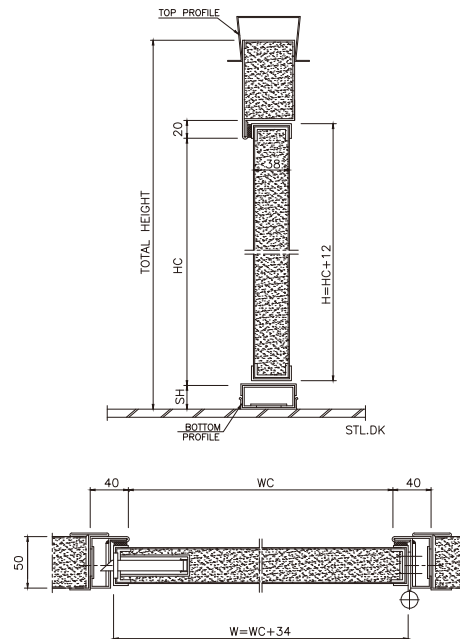
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer

# B-15 Single Leaf Door (STACO-B15-2)



## Technical specifications

### Door leaf

38mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet,  
Stainless steel

### Frame

+1.6mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

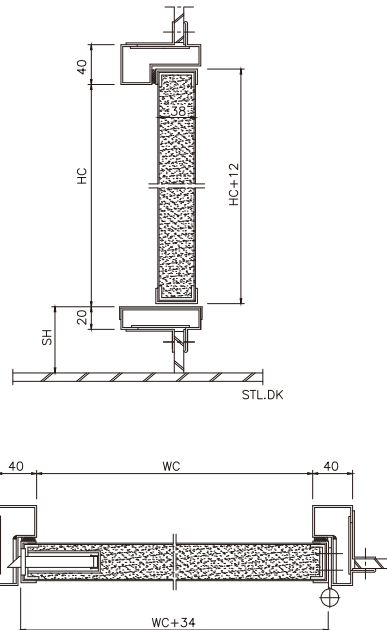
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder,  
door closer

# B-15 Single Leaf Door (STACO-B15-1)



## Technical specifications

### Door leaf

38mm thick, made of galvanized steel plate Reinforcement plate for hinges, locks and closer. Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat PVC Laminate sheet, Stainless steel

### Frame

+1.6mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

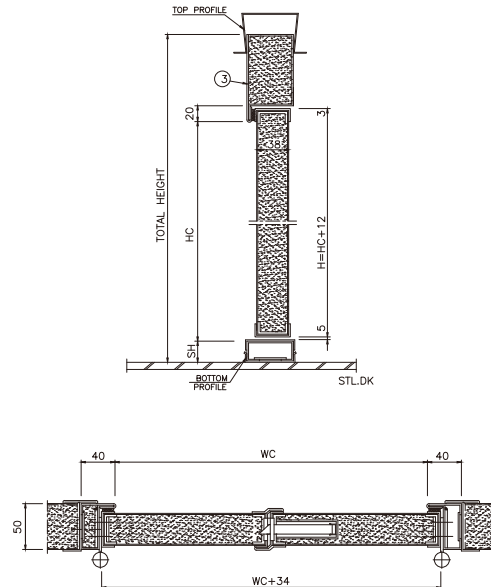
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer

# B-15 Double Leaf Door (STACO-B15D-2)



## Technical specifications

### Door leaf

38mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet, Stainless steel

### Frame

+1.6t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

### Lever handle

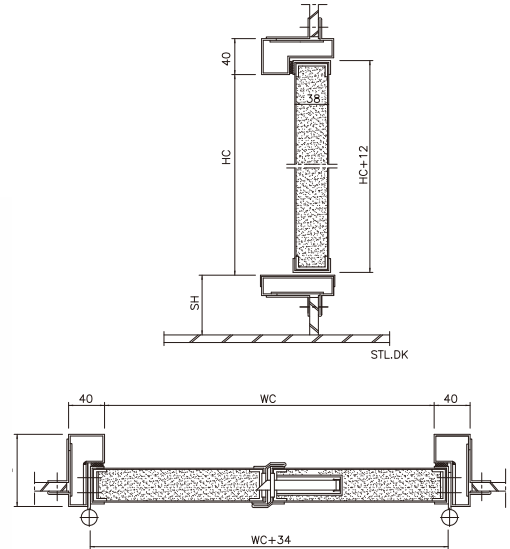
Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer



# B-15 Double Leaf Door (STACO-B15D-1)



## Technical specifications

### Door leaf

38mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer. Prepared for lock cases, handles and possible cylinder Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat PVC Laminate sheet, Stainless steel

### Frame

+1.6t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

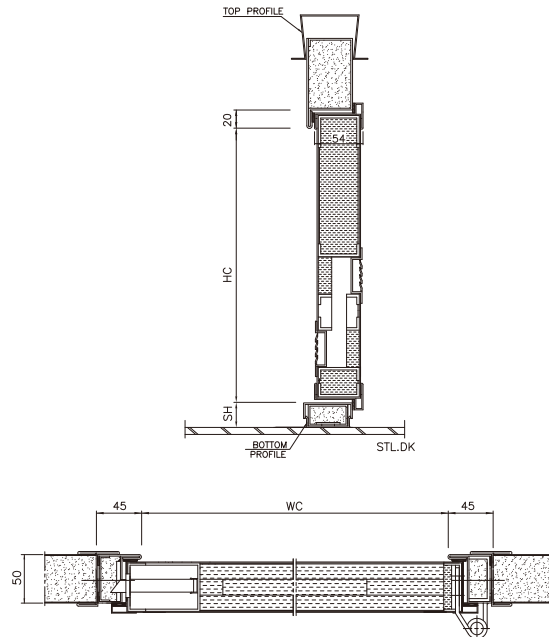
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer

# B-15 High Noise Reduction Door (STACO-B30V-2)



## Technical specifications

### Door leaf

54mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet,  
Stainless steel

### Frame

+2.0t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder,  
door closer

### Sound Rating

39dB (Max 45dB)

# A-60 Sliding Leaf Door (STACO-A60WSL)



## Technical specifications

### Door leaf

55mm thick, made of galvanized steel plate  
Reinforcement plate for hinges,  
locks and closer. Prepared for lock cases,  
handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

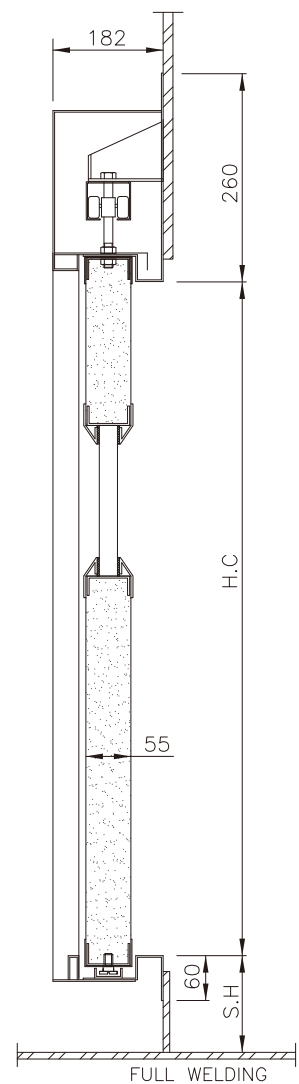
Baked enamel powder coat

### Frame

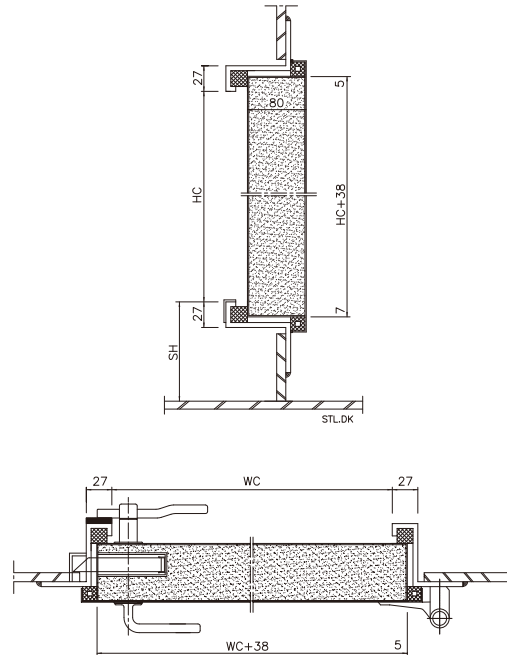
+4.0t thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel



# A-60 Weathertight & Gastight Single Leaf Door (STACO-A60WE-2)



## Technical specifications

### Door leaf

80mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet,  
Stainless steel

### Frame

5mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

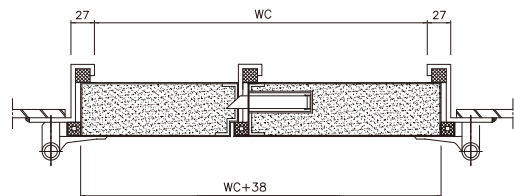
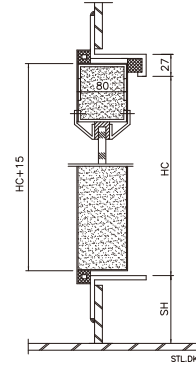
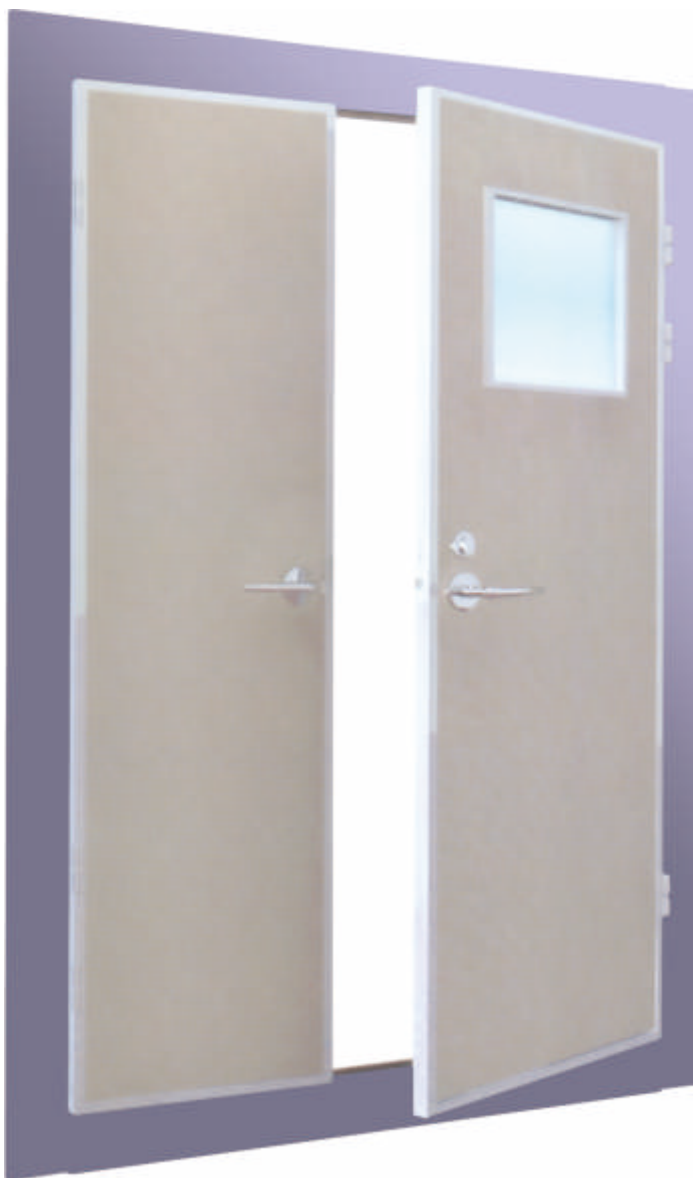
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder,  
door closer, dog clip

# A-60 Weathertight & Gastight Double Leaf Door (STACO-A60WED-2)



## Technical specifications

### Door leaf

80mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet, Stainless steel

### Frame

4mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

Marine grade Stainless steel "U" profile

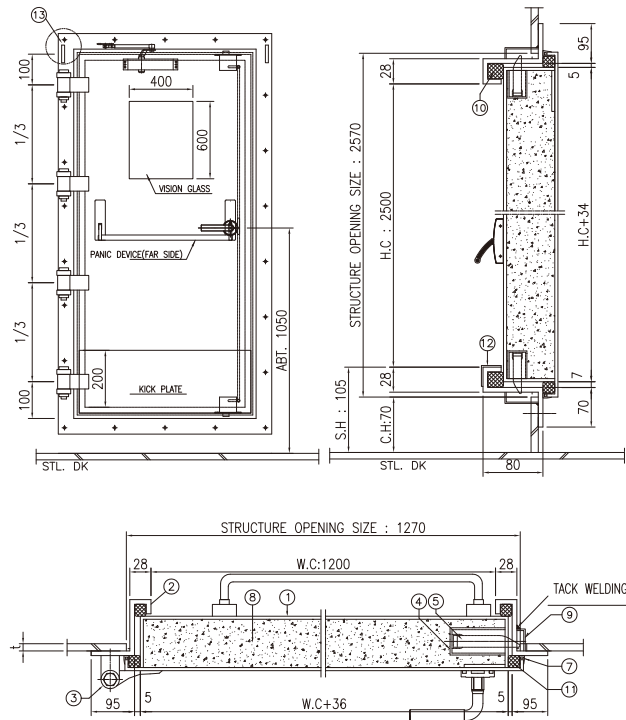
### Lever handle

Marine grade Stainless steel

### Accessories

Lock case, handles, recessed handle, cylinder, door closer, dog clip

# H-120 External Single Leaf Door



## Technical specifications

### Door leaf

120mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet,  
Stainless steel

### Frame

5mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

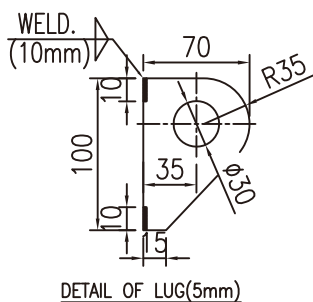
Marine grade Stainless steel "U" profile

### Lever handle

Marine grade Stainless steel

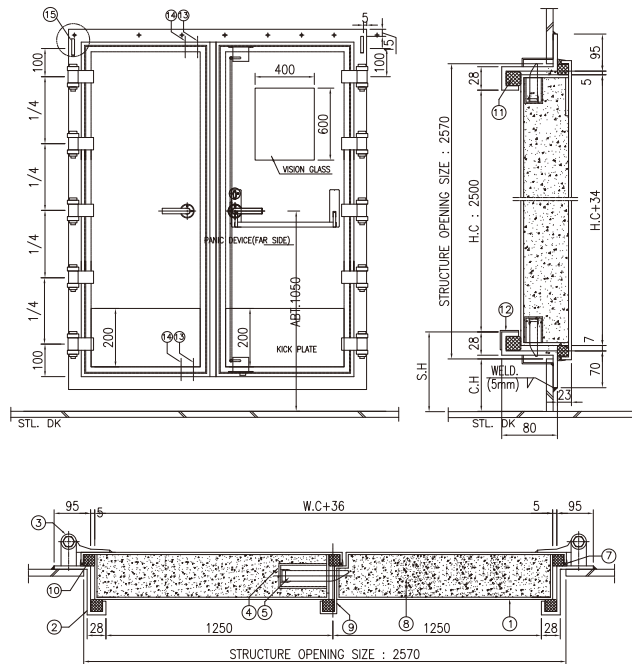
### Accessories

Lock case, handles, recessed handle, cylinder,  
door closer, dog clip





# H-120 External Double Leaf Door



## Technical specifications

### Door leaf

120mm thick, made of galvanized steel plate  
Reinforcement plate for hinges, locks and closer  
Prepared for lock cases, handles and possible cylinder  
Insulation used is Mineral Wool

### Door leaf finish

Baked enamel powder coat, PVC Laminate sheet,  
Stainless steel

### Frame

5mm thick Steel, Stainless steel

### Door Frame finish

Baked enamel powder coat, Stainless steel

### Hinge

Marine grade Stainless steel

### Sill

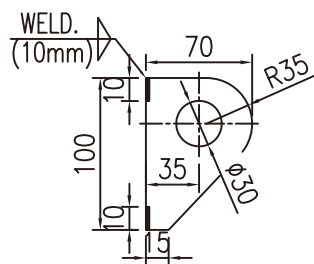
Marine grade Stainless steel "U" profile

### Lever handle

Marine grade Stainless steel

### Accessories

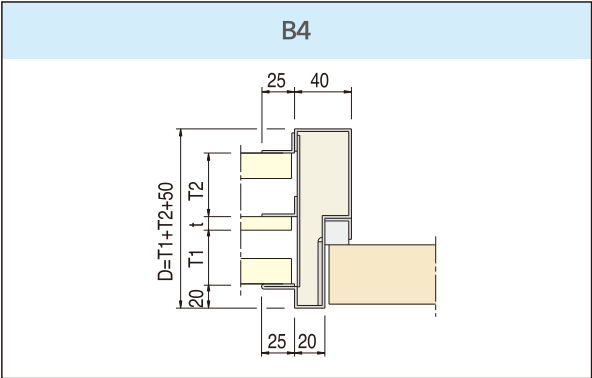
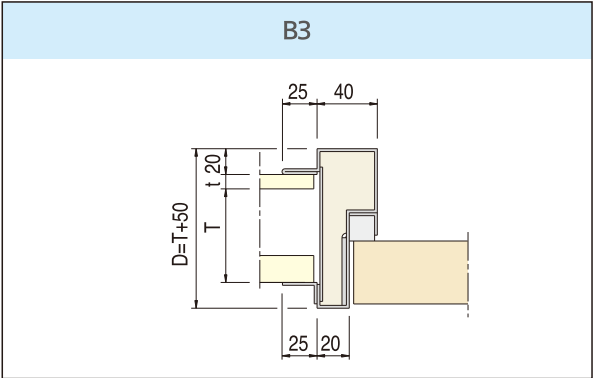
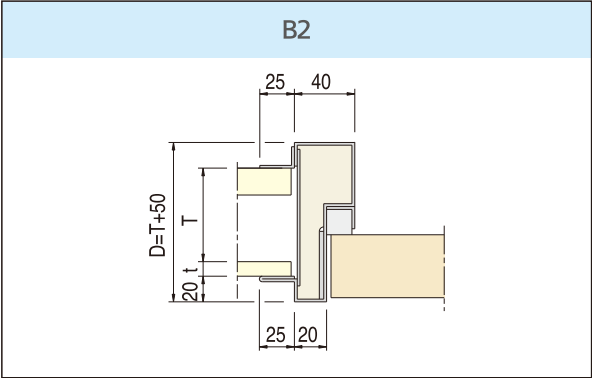
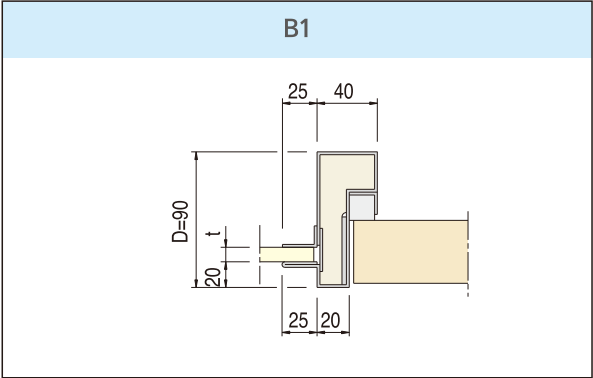
Lock case, handles, recessed handle, cylinder,  
door closer, dog clip



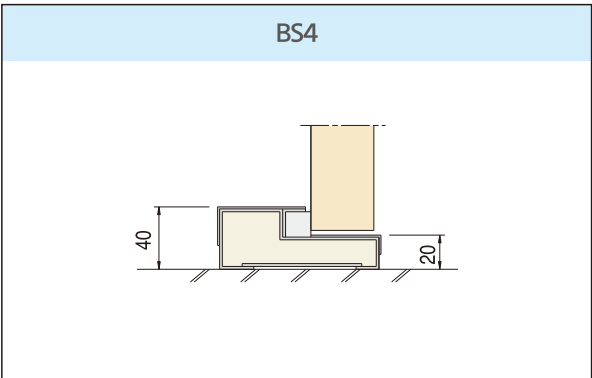
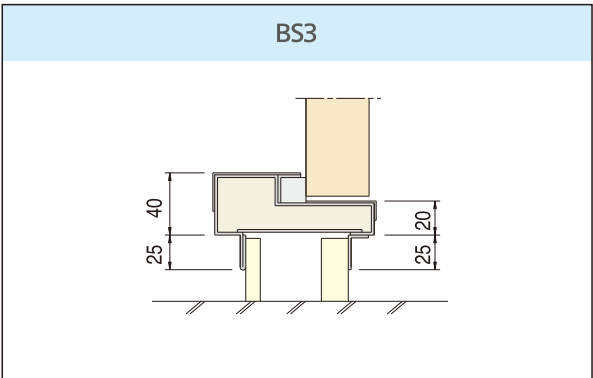
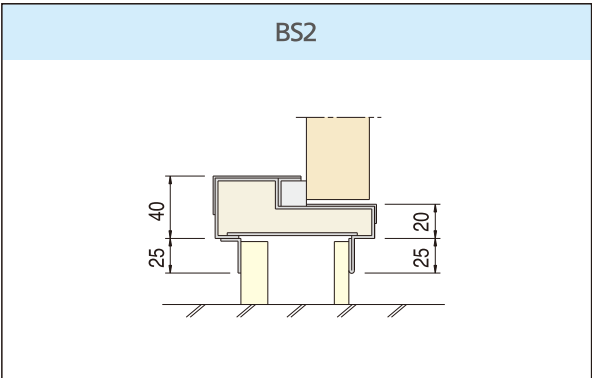
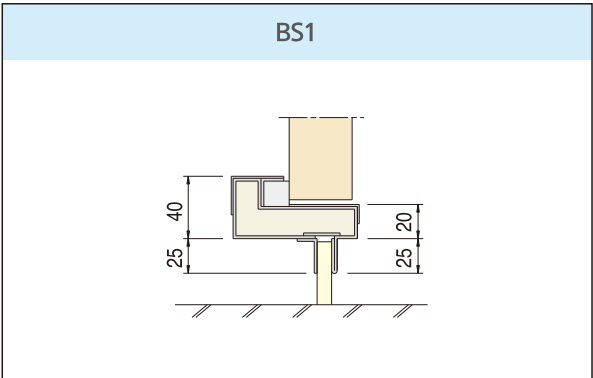
DETAIL OF LUG(5mm)

# Standard A Door

## Joiner frame sections – Box type

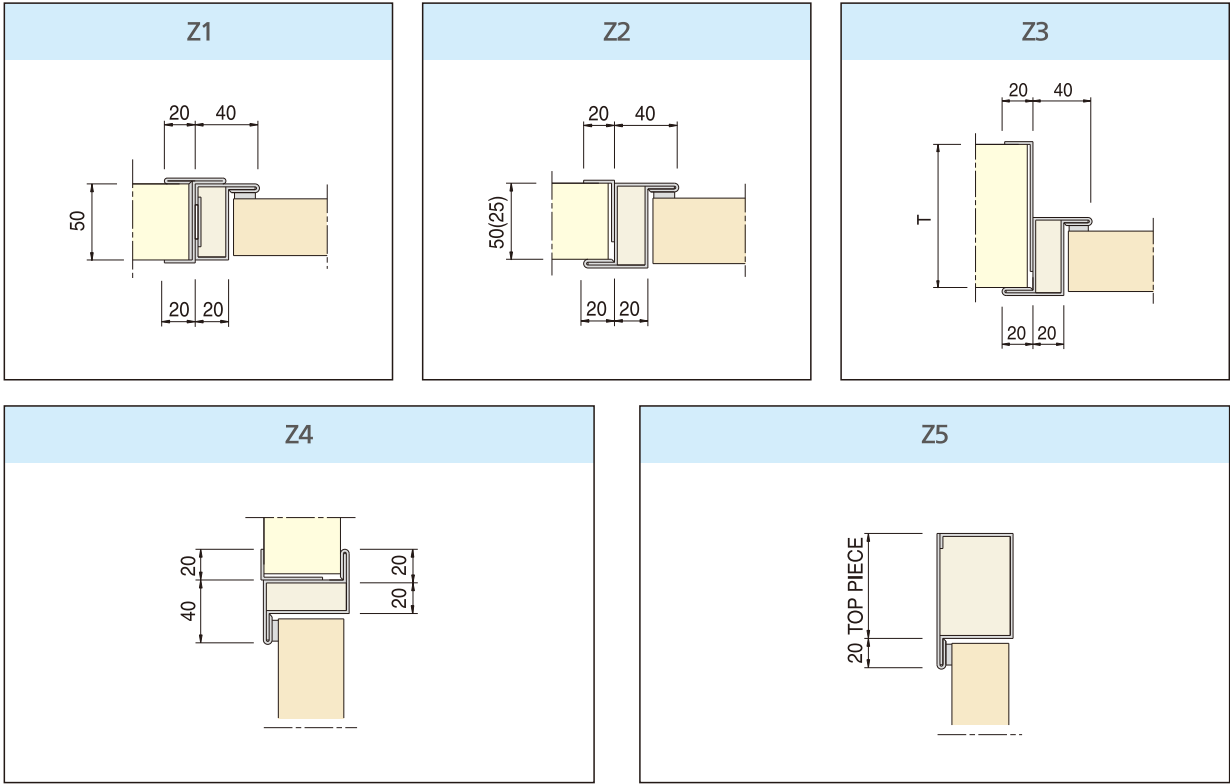


## Joiner frame sill sections – Box type

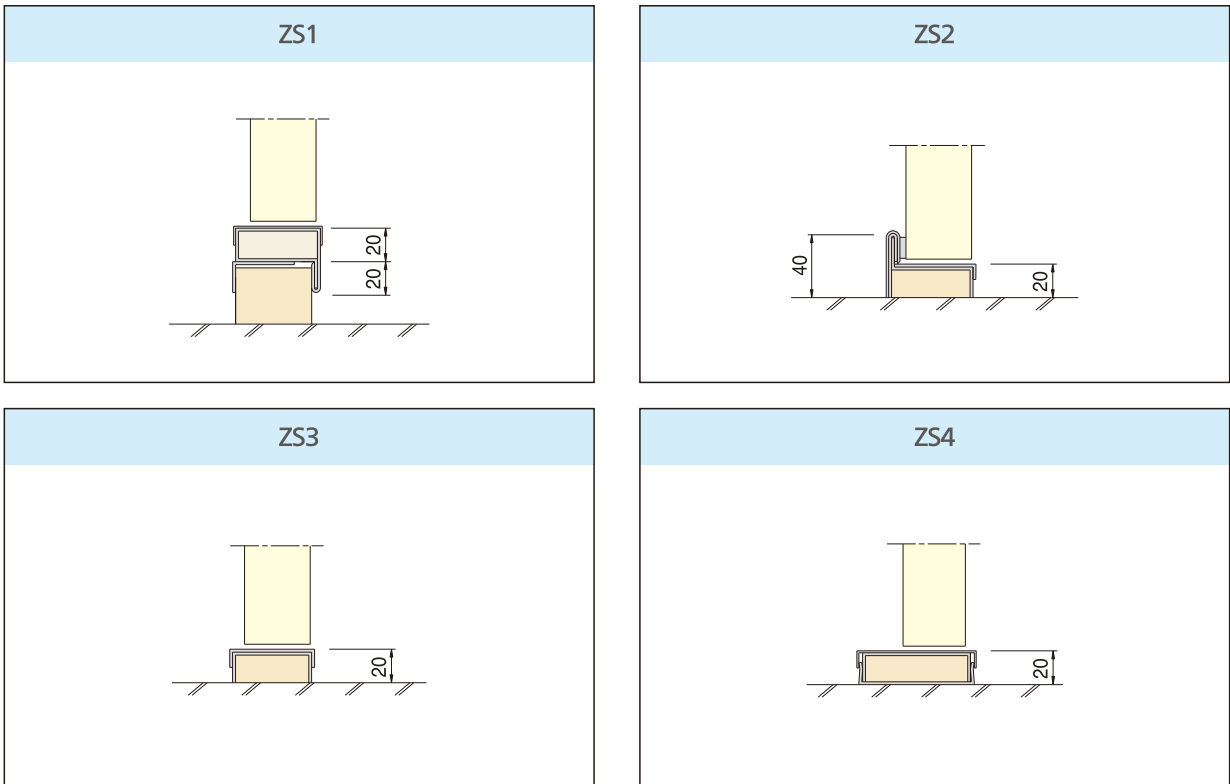


# Standard A Door

## Joiner frame sections – Z type

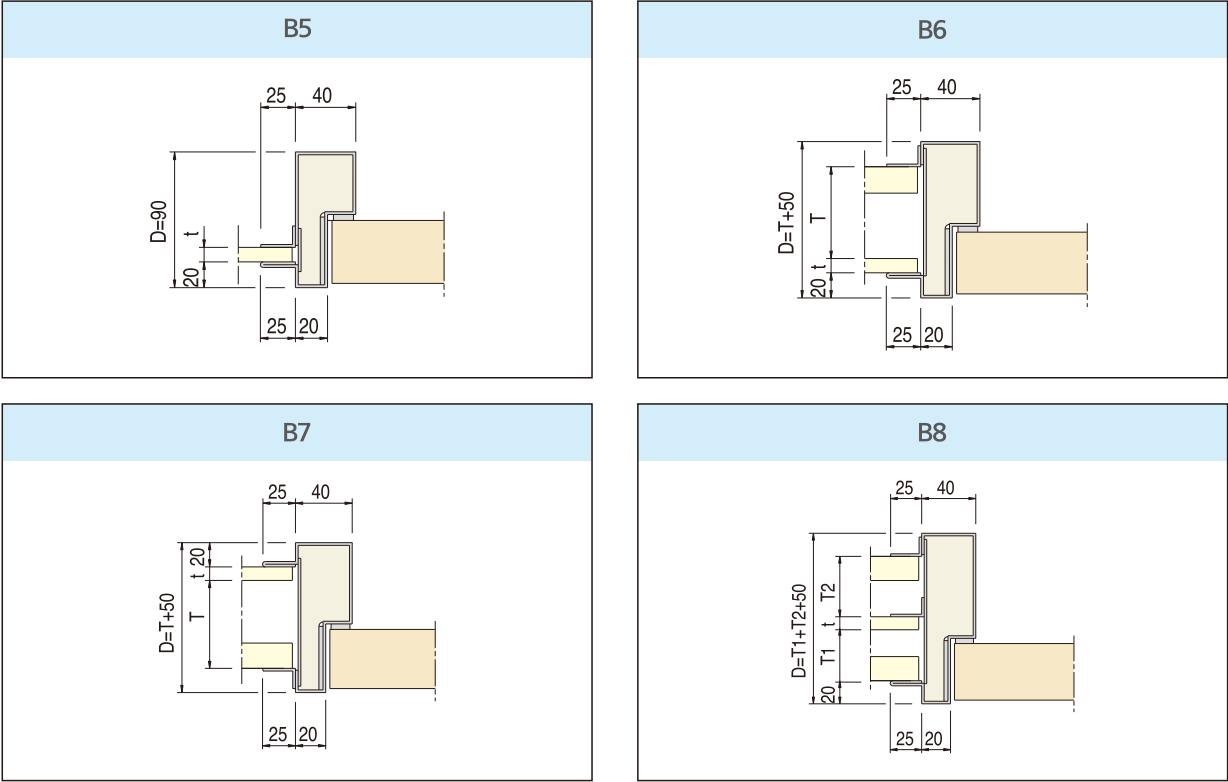


## Joiner frame sill sections – Z type

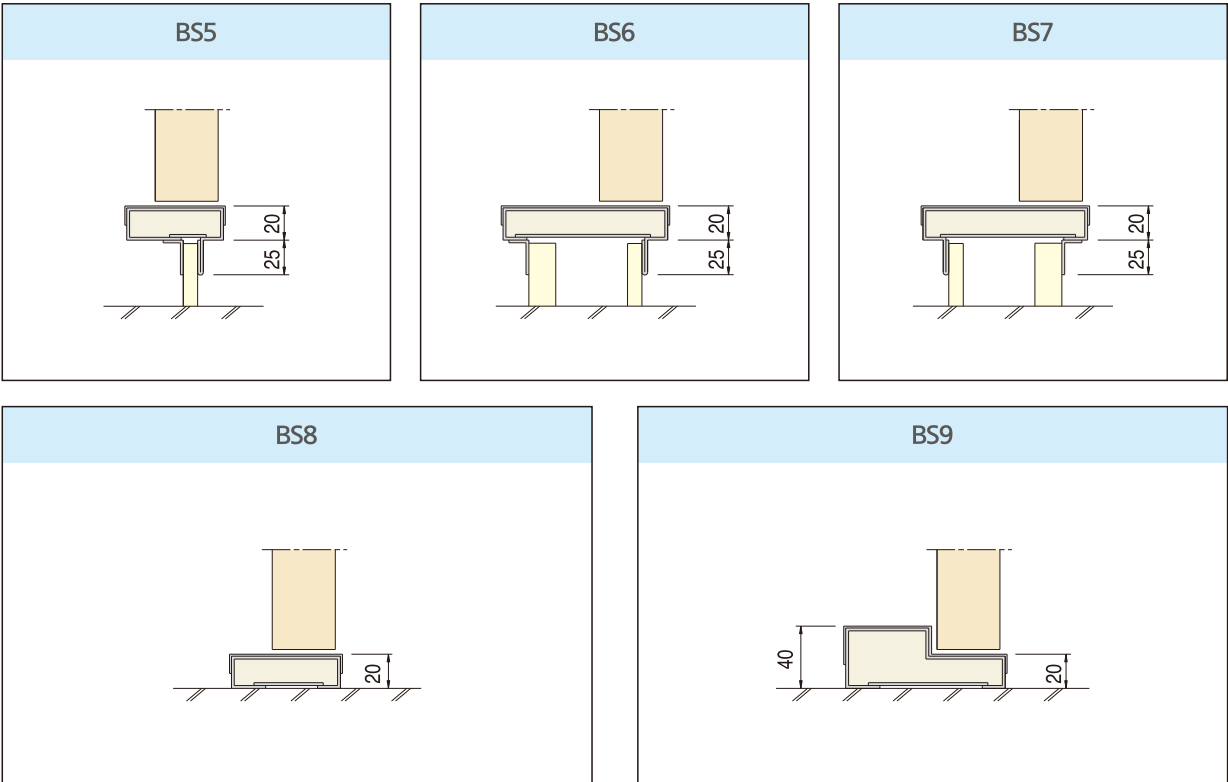


# Standard B Door

## Joiner frame sections – Box type

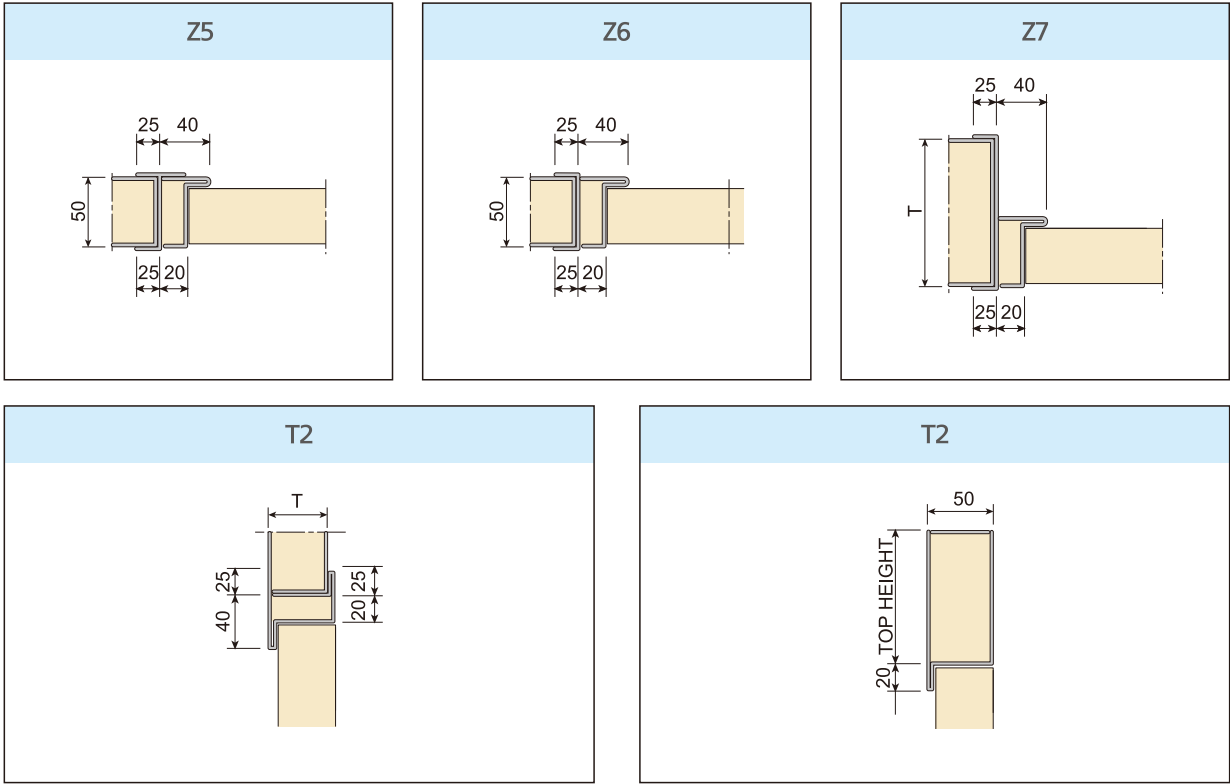


## Joiner frame sill sections – Box type

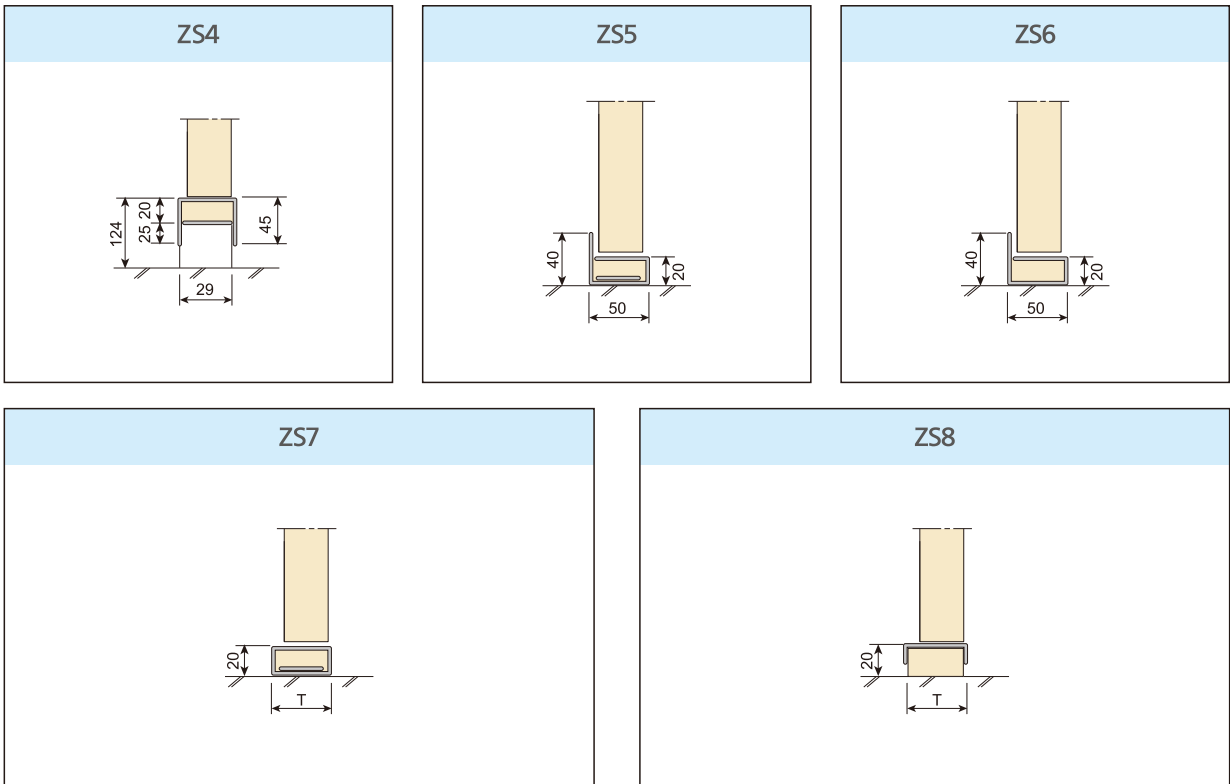


# Standard B Door

## Joiner frame sections – Z type



## Joiner frame sill sections – Z type





# Hardware



SLS 7000

SLS 7001

SLS 7003

SLS 7007

## Lockset

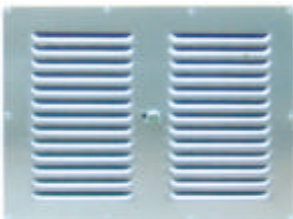
Part no.	Item	Description	Mark
SLS 7000	Cylinder mortise lock	Outside cylinder / Inside thumbturn	CV / KN
SLS 7001	Indicator Mortise Latch	Outside Indicator / Inside thumbturn	IN / KN
SLS 7003	mortise latch	Lever handle only	H
SLS 7007	Cylinder mortise latch	Outside cylinder / Inside thumbturn	IN / KN

## Panic device



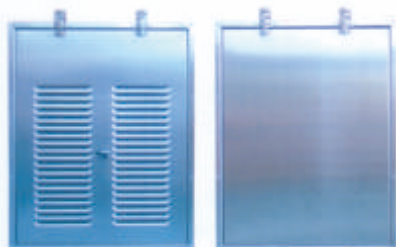
Description	Model no.	Material
Panic bar	L-Type	stainless steel

## Ventilation louver



Part no.	Vent area (m²)	Sizes (W X H)
SVL A	0.02	410X300
SVL B	0.031	410X300
SVL C	0.045	410X450

## Kick out panel



Part no.	Vent area (m²)	Sizes (W X H)
SKP A	0.02	420X520
SKP B	0.031	420X520
SKP C	0.045	420X520
SKP D	No vent grill	420X520

# Hardware

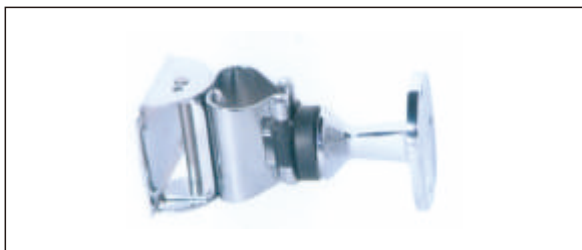
## Door swing

Stand in front the closed door  
on the side where you can  
see the hinge

(in side) Thumbturn side  
(outside) Keyside



## Door catcher (cs 7152)



## Door hook (cs 7350)



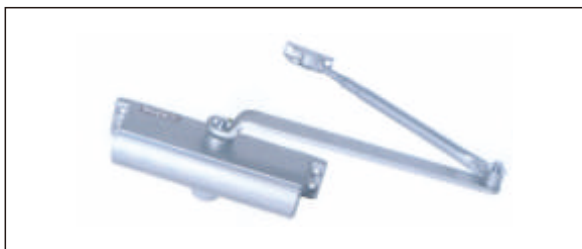
## Door cushion (cs 7460)



## Door Adjuster (cs 7083-1)



## Door closer (k 850)



## Door closer (k 907)



Description	Model no.	Material	Weight
Door catcher	CS-7152	Chrome plated brass & Rubber	250g
Door hook	CS-7350	Stainless steel & Chrome plated brass	60g
Door cushion	CS-7460	Stainless steel & Rubber (White)	20g
Door adjuster	CS-7083-1	Stainless steel & Chrome plated brass	500g

Description	Model no.	Application
Door closer	K-850	Door weight 80~120kg
Door closer	K-907	Door weight 200kg

# FLOATING FLOORS



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

**Floating Floors**

Furniture

Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants

# FLOATING FLOORS

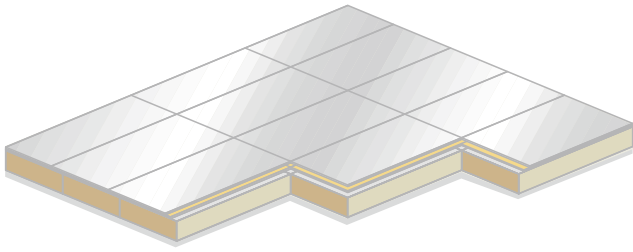
A high level of noise and vibration is generated in ship operation areas.

Hence sound-absorbing flooring is generally required in Ships.

STACO Floating Floor systems are the best solutions for noise & vibration absorption and are designed for universal applications on ships and offshore installations..

STACO provides A-60 floating floors having a high fire protection classification and excellent acoustic insulation. The different STACO standard A-60 fire class floating floors are classified as FF-50VL, FF-50A & FF-70A as per technical details shown in subsequent pages with different thicknesses of Core Materials, Surface Materials & Finish materials leading to different Sound reduction levels.

The Floors can also be provided with different types of Deck compositions of various thicknesses with various paint coatings without A-60 classification. The A-60 Fire Class Floating Floors with Screed (Sandwich steel plates with deck composition, mineral wool layer and with (or without) viscoelastic layer) can also be provided. The technical details of the Deck compositions & A-60 Fire Class Floating Floors with Screed are also shown in subsequent pages.



## FLOATING FLOOR SYSTEM

A major point of differences between Air-borne and Structure-borne sound is that while air-borne sound decreases markedly with distance, structure-borne sound (vibration) can travel through the structure with very little decrease along its path. For instance, we can hear an approaching train, although unable to see the train.

This is because of the lack of damping in steel rails.

The only way to attenuate structure-borne sound transmission along its path is to provide a discontinuity or break in the structure.

Impact and vibration are the two most common sources of structure-borne sounds.

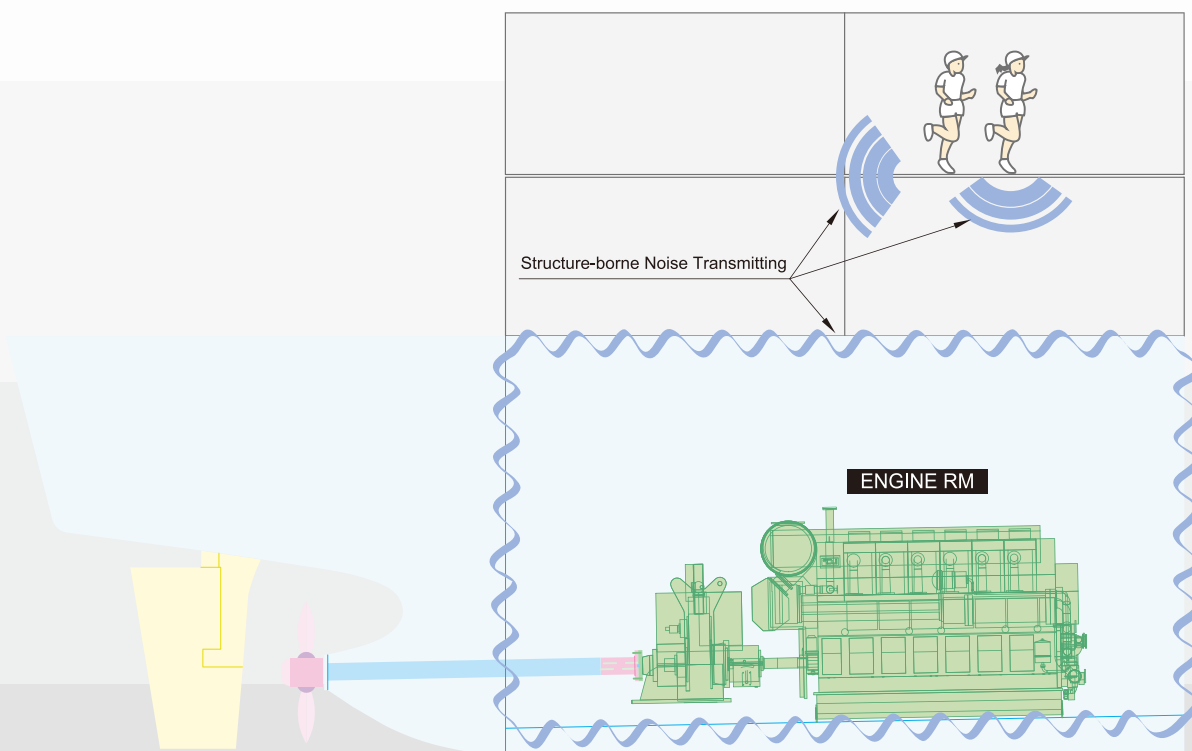
Walking, jogging and dancing are obvious examples of impact sound, which occurs for a short duration. Vibration, on the other hand, is periodic and continuous.

In order to deal with structure-borne noise, especially caused by foot-traffic and other human activities in ship, STACO Floating Floor system is the best solution.

Impact sound insulation is primarily required of floor, because most impact-producing sources rest on floors.

STACO Floating Floor improves the structure-borne sound insulation of a deck floor.

STACO Floating Floor system is applicable to the cabins located beneath areas where impact noise can be generated and the cabins located above where structure-borne noise is dominating





The structure-borne sound insulation of a floor-ceiling assembly is measured in a two-cabin mock-up, one room above the other.

A standard tapping machine is placed on the test assembly to produce impact at a constant rate.

The tapping machine noise transmitted to the lower receiving room is measured in sixteen one-third-octave bands, from 100Hz to 3,150Hz per ISO 140-7.

" $L_n$ " shown in the graph describes the impact sound pressure level in the receiving room below the deck.

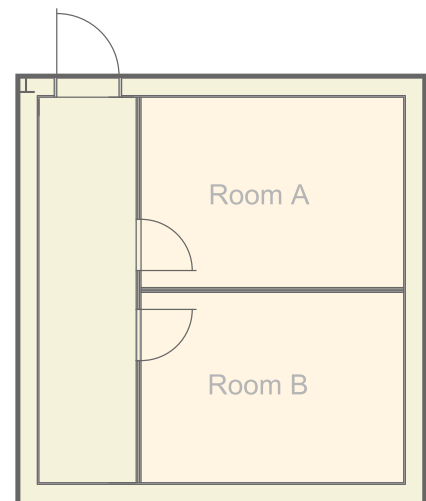
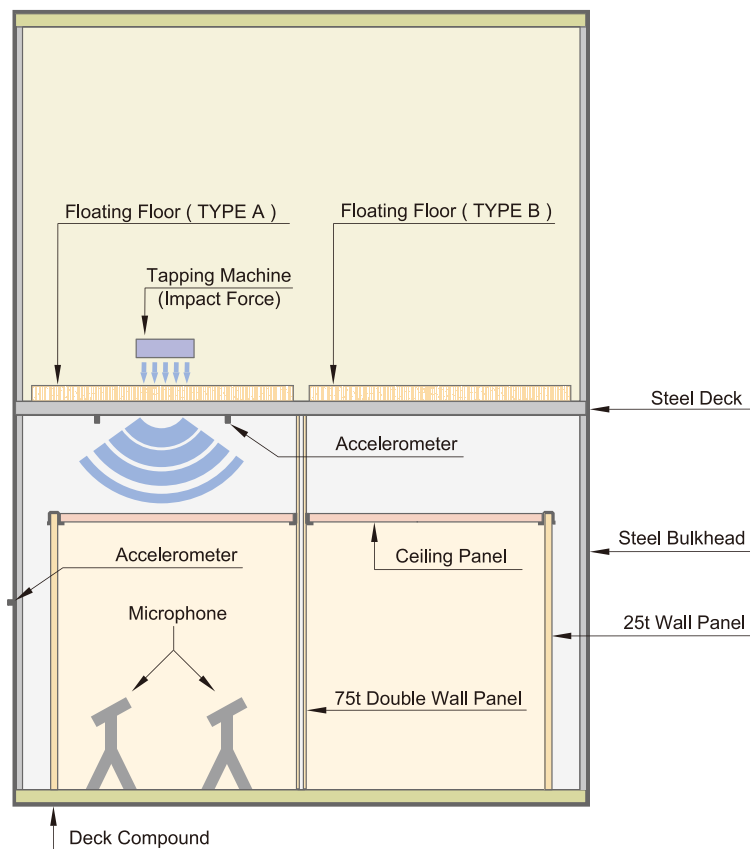
Using the measured sound level data, a single number rating of impact sound insulation is obtained by comparing it with a reference contour per ISO 717-2.

The rating so obtained is called "the weighted normalized impact sound pressure level,  $L_{n,w}$ ".

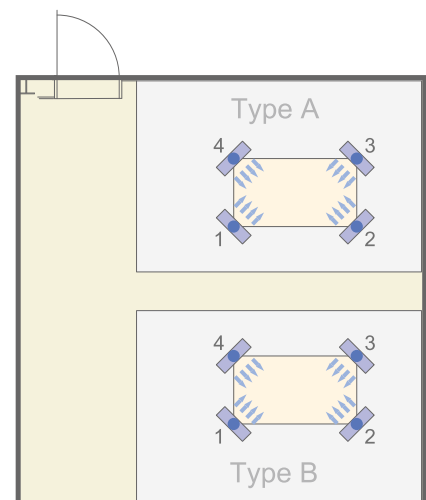
In addition to the measure of impact sound. Structure-Borne Noise by vibration is also measured with accelerometers on the deck surface above ceiling and steel wall outside.

STACO A-60 Fire Class Floating Floor systems FF-50VL, FF-50A & FF-70A are designed for universal applications on ships and offshore installations. The STACO floating floor systems have the core material as Mineral Wool insulation material surfaced by a 4.9 or 3.2 mm thick galvanized steel plate and finished with Carpet or Vinyl Flooring.

### ■ Typical section



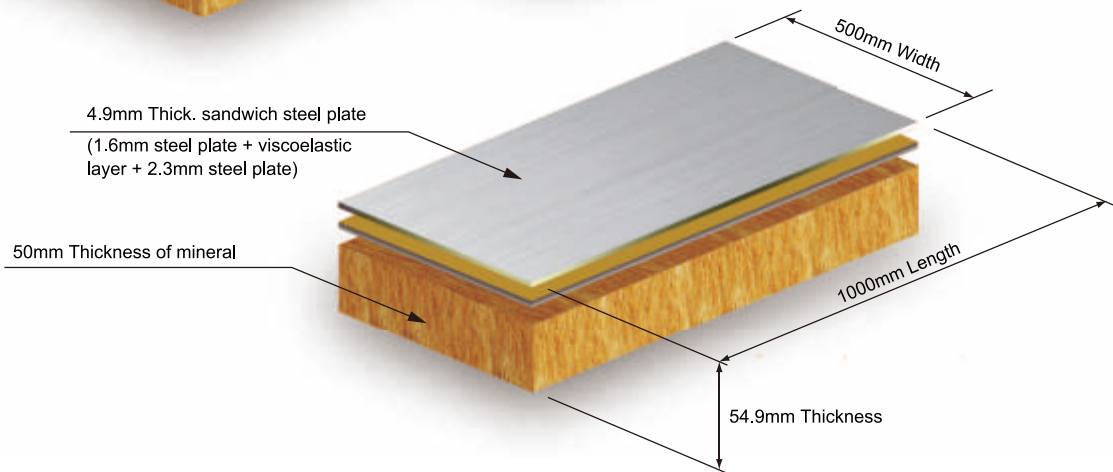
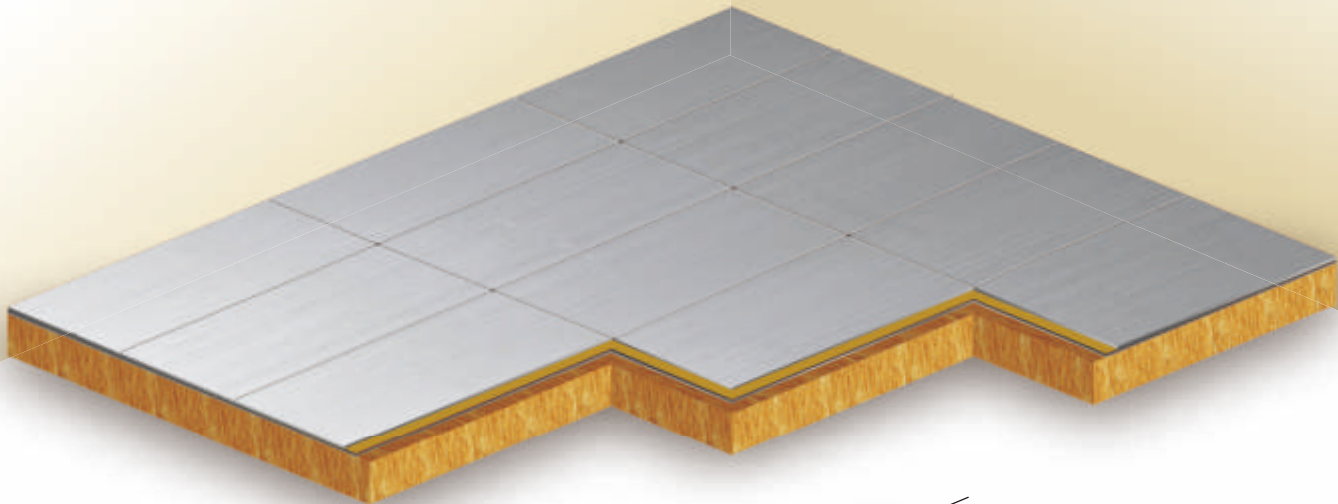
■ Floor impact deck plan



■ Receiving room plan

# FF-50VL

A-60 Fire Class Floating Floor

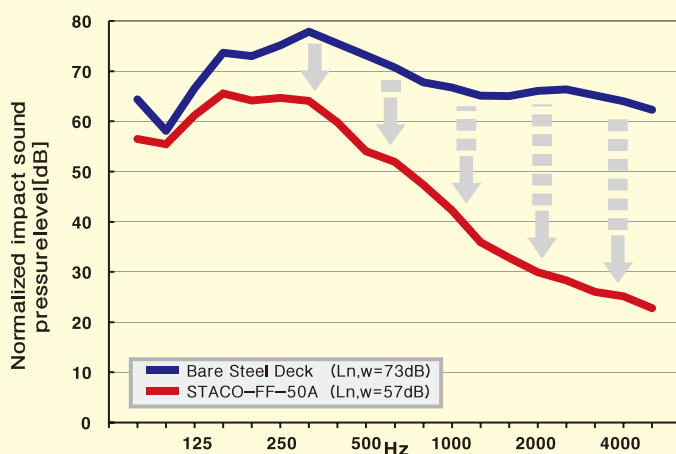
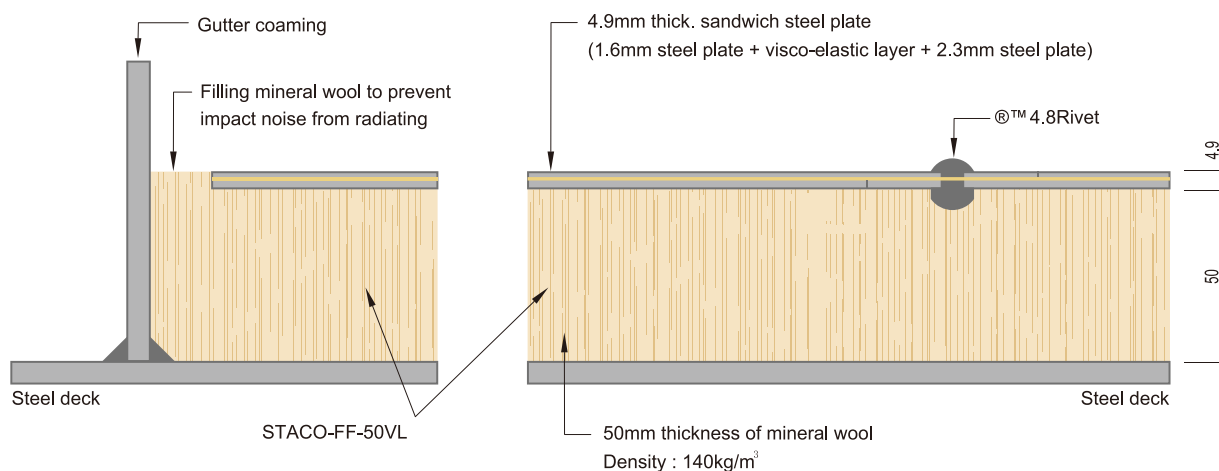


Technical Data
Fire Class : A-60
Weight : 38.78kg/m <sup>2</sup>
Sound Reduction Index : L <sub>n,w</sub> 42dB
Thermal Transmittance : 0.55kcal/m <sup>2</sup> h°C

Construction
Core Material : Mineral Wool
Surface Material : 4.9mm Thk. Sandwich Steel Plate
Finish Material : Carpet or Vinyl Flooring

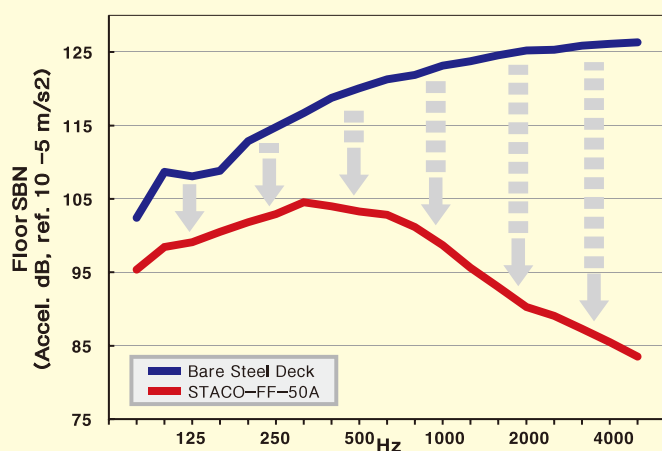
Dimensions		
Thickness	: 54.9mm	±1mm
Width	: 500mm(Standard)	±1mm
Length	: 1000mm(Standard)	±3mm

# FF-50VL A-60 Fire Class Floating Floor



Each curve above shows Ln, the impact noise level of 6mm steel deck and the deck with STACO-FF-50VL.

Hz	Type	Bare steel	FF-50VL
80		64.3	56.3
100		58.1	50.6
125		66.6	50.9
160		73.7	53.1
200		73.0	49.8
250		75.1	46.5
315		77.8	42.2
400		75.5	36.6
500		73.1	29.4
630		70.7	25.3
800		67.8	21.7
1000		66.7	18.3
1250		65.1	15.6
1600		65.1	14.1
2000		66.1	14.3
2500		66.4	13.3
3150		65.2	10.4
4000		64.0	8.7
5000		62.3	8.5
Ln,w		73 dB	42 dB

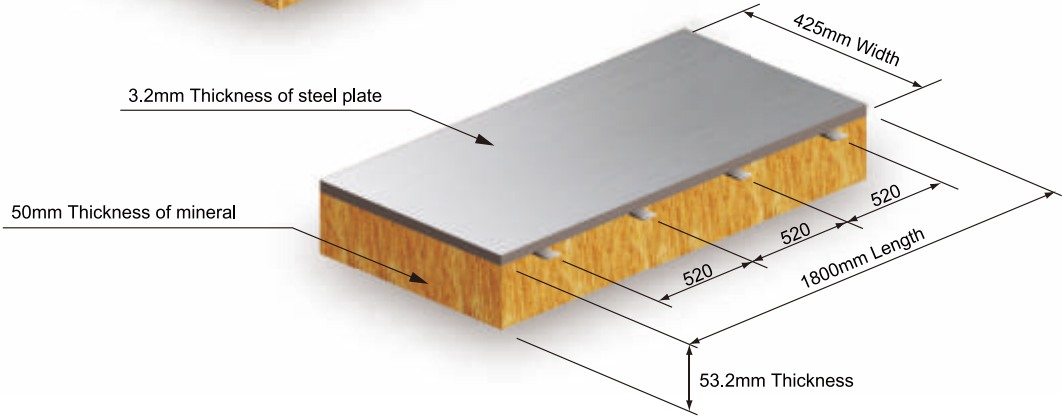
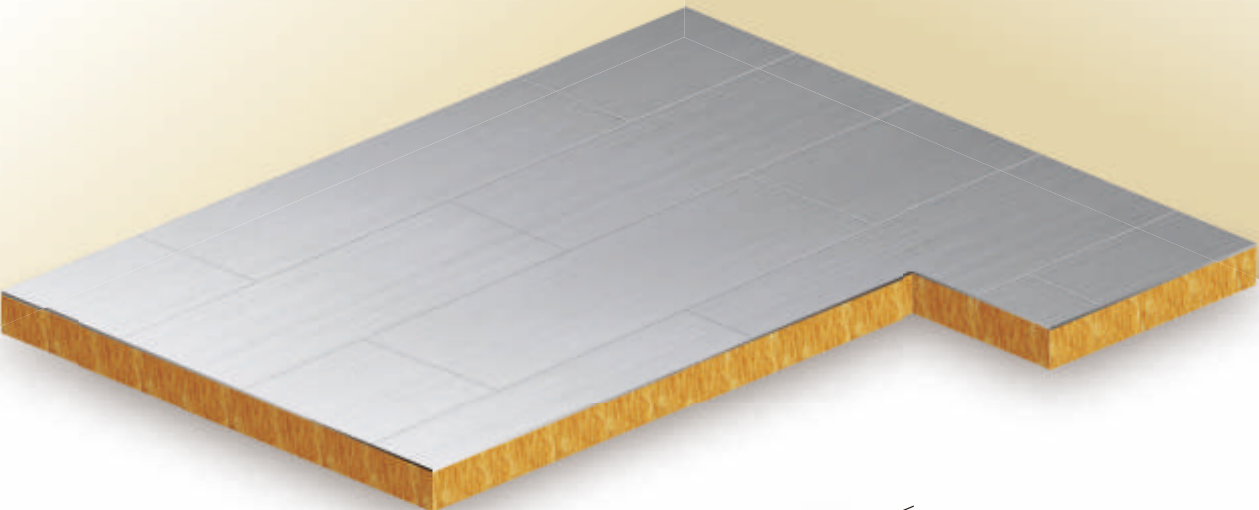


The above curves show reduction of Structure-Borne Noise when structural impact is applied on STACO-FF-50VL.

Hz	Type	Bare steel	FF-50VL
80		102.4	95.5
100		108.7	93.4
125		108.1	89.7
160		108.8	88.1
200		112.9	85.5
250		114.8	87.0
315		116.9	83.2
400		118.8	78.7
500		120.1	74.8
630		121.3	73.1
800		121.9	72.5
1000		123.1	67.7
1250		123.7	66.4
1600		124.6	63.7
2000		125.2	63.4
2500		125.3	62.9
3150		125.9	61.4
4000		126.1	62.7
5000		126.3	63.5

FF-50A

A-60 Fire Class Floating Floor

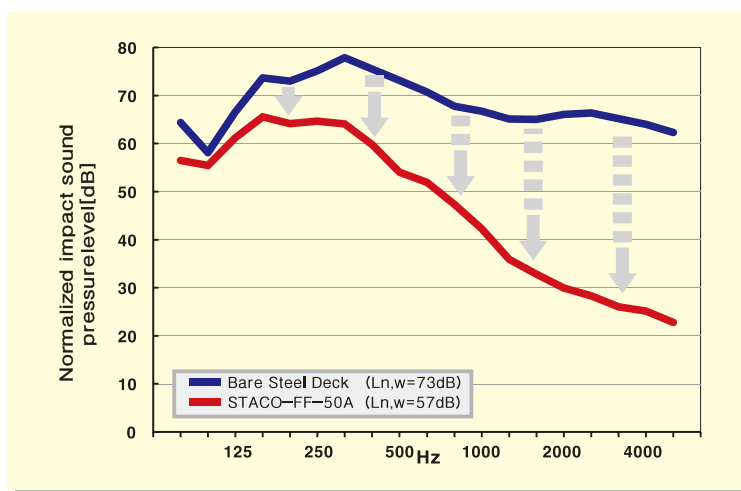
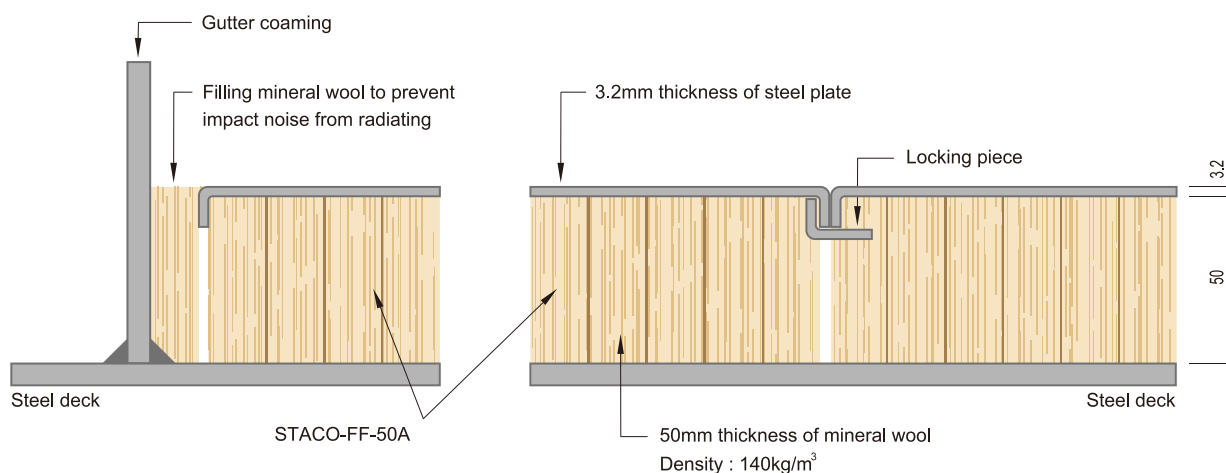


Technical Data
Fire Class : A-60
Weight : 35.04kg/m²
Sound Reduction Index : L <sub>n,w</sub> 57dB
Thermal Transmittance : 0.55kcal/m²h°C

Construction
Core Material : Mineral Wool
Surface Material : 3.2mm Thickness Galv'd Steel Plate
Finish Material : Carpet or Vinyl Flooring

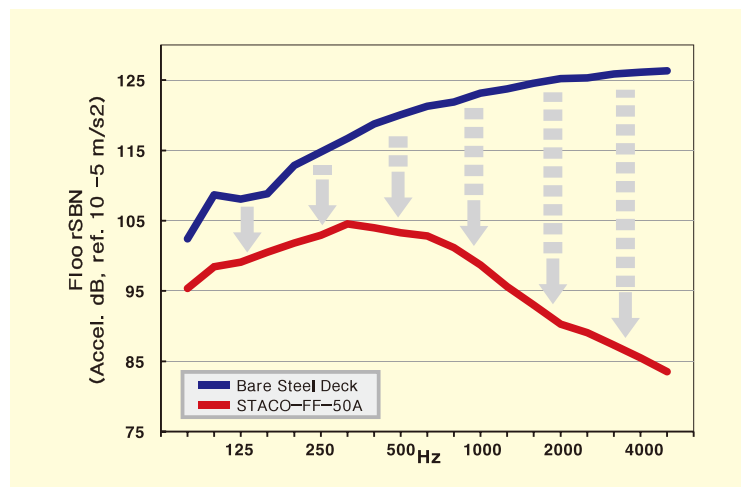
Dimensions		
Thickness	: 53mm	±1mm
Width	: 425mm(Standard)	±1mm
Length	: 1800mm(Standard)	±3mm

# FF-50A A-60 Fire Class Floating Floor



Each curve above shows Ln, the impact noise level of 6mm steel deck and the deck with STACO-FF-50A.

Hz	Type	Bare steel	FF-50A
80		64.3	56.4
100		58.1	55.5
125		66.6	61.2
160		73.7	65.5
200		73.0	64.1
250		75.1	64.6
315		77.8	64.1
400		75.5	59.8
500		73.1	54.0
630		70.7	51.9
800		67.8	47.3
1000		66.7	42.2
1250		65.1	35.9
1600		65.1	32.8
2000		66.1	29.9
2500		66.4	28.3
3150		65.2	26.0
4000		64.0	25.2
5000		62.3	22.8
Ln,w		73 dB	57 dB



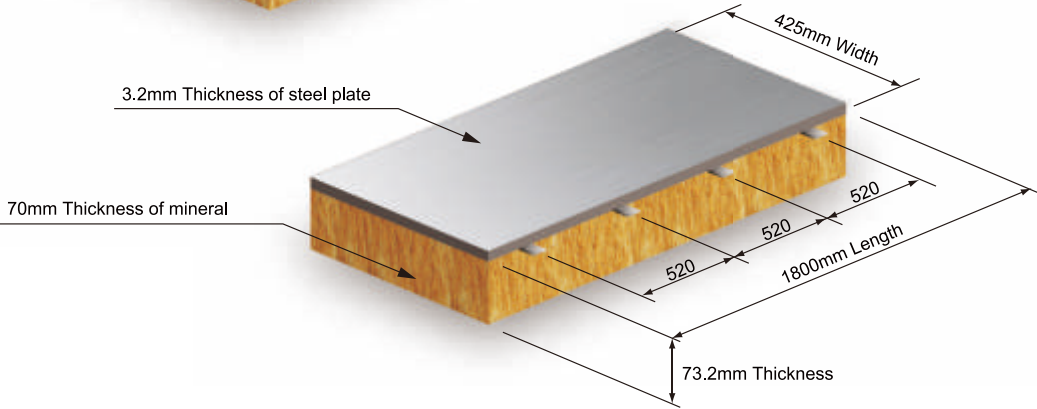
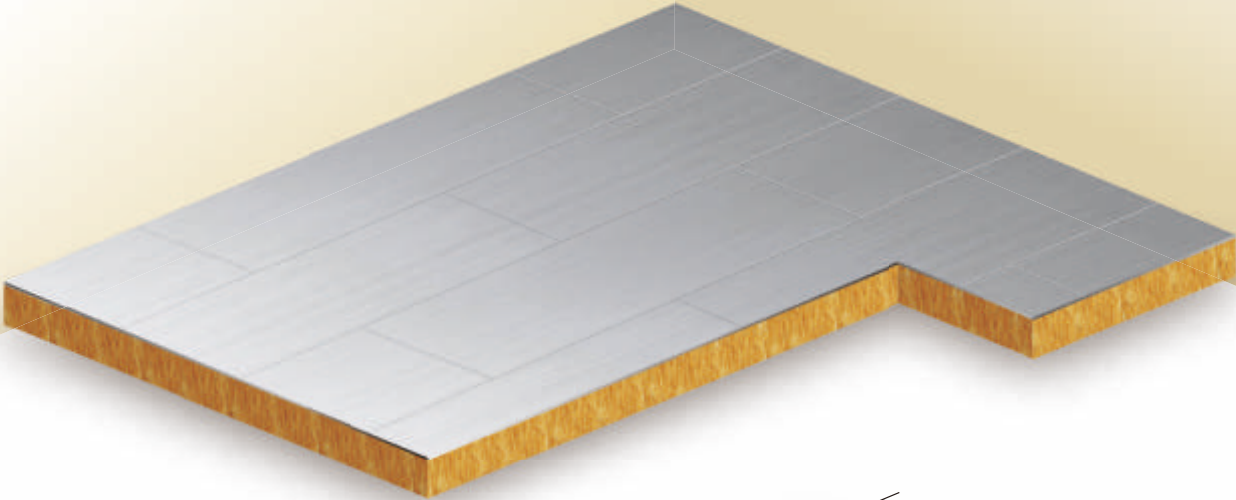
The above curves show reduction of Structure-Borne Noise when structural impact is applied on STACO-FF-50A.

Hz	Type	Bare steel	FF-50A
80		102.4	95.4
100		108.7	98.5
125		108.1	99.1
160		108.8	100.5
200		112.9	101.8
250		114.8	102.9
315		116.9	104.6
400		118.8	104.0
500		120.1	103.3
630		121.3	102.8
800		121.9	101.2
1000		123.1	98.7
1250		123.7	95.6
1600		124.6	93.0
2000		125.2	90.3
2500		125.3	89.1
3150		125.9	87.3
4000		126.1	85.5
5000		126.3	83.5



FF-70A

A-60 Fire Class Floating Floor

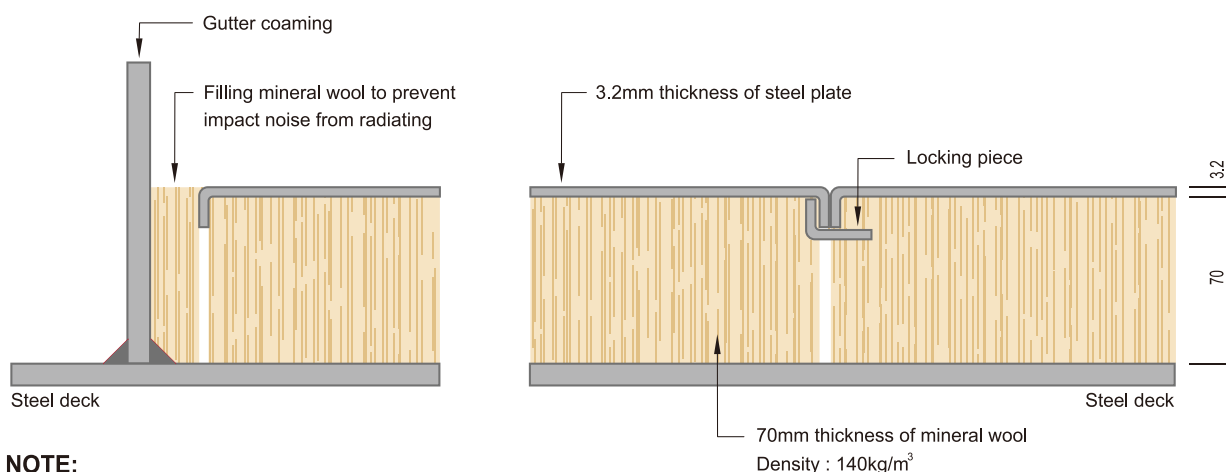


Technical Data
Fire Class : A-60
Weight : 37.84kg/m <sup>2</sup>
Sound Reduction Index : L <sub>n,w</sub> 55dB (Estimation)
Thermal Transmittance : 0.40kcal/m <sup>2</sup> h°C

Construction
Core Material : Mineral Wool
Surface Material : 3.2mm Thickness Galv'd Steel Plate
Finish Material : Carpet or Vinyl Flooring

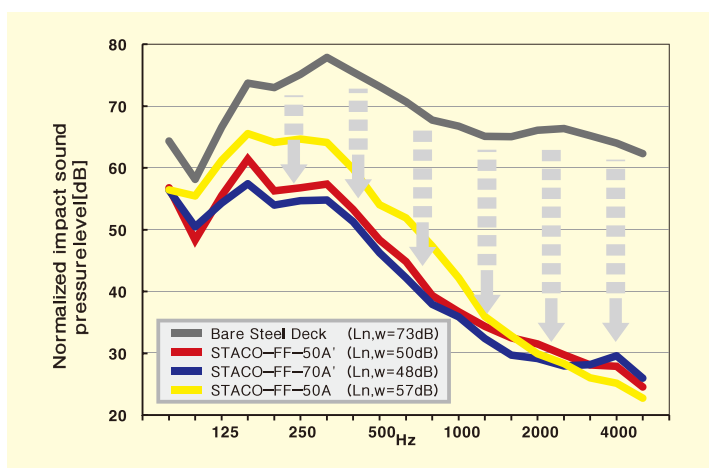
Dimensions		
Thickness	: 73mm	±1mm
Width	: 425mm(Standard)	±1mm
Length	: 1800mm(Standard)	±3mm

# FF-70A A-60 Fire Class Floating Floor

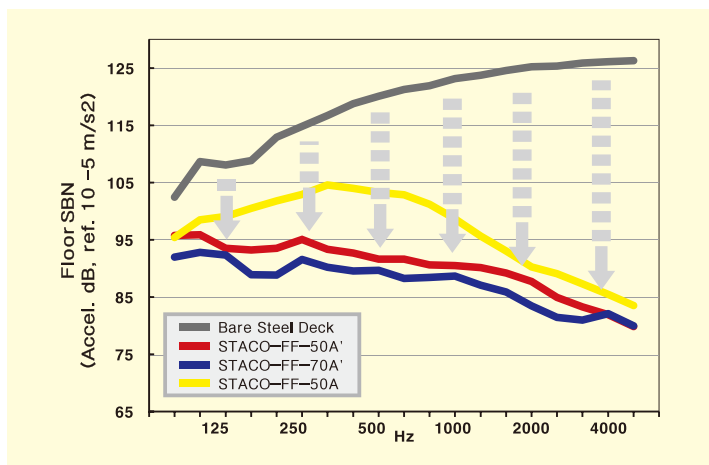


## NOTE:

STACO-FF-70A' curve among the below curves results from floor panels which are not joint-welded each other. Therefore, an actual  $L_{n,w}$  value of STACO-FF-70A will be a little higher than test values of STACO-FF-70A'.



Each curve above shows  $L_n$ , the impact noise level of floors.  $L_{n,w}$  of FF-70A can be assumed by comparing FF-70A' curve with other curves.



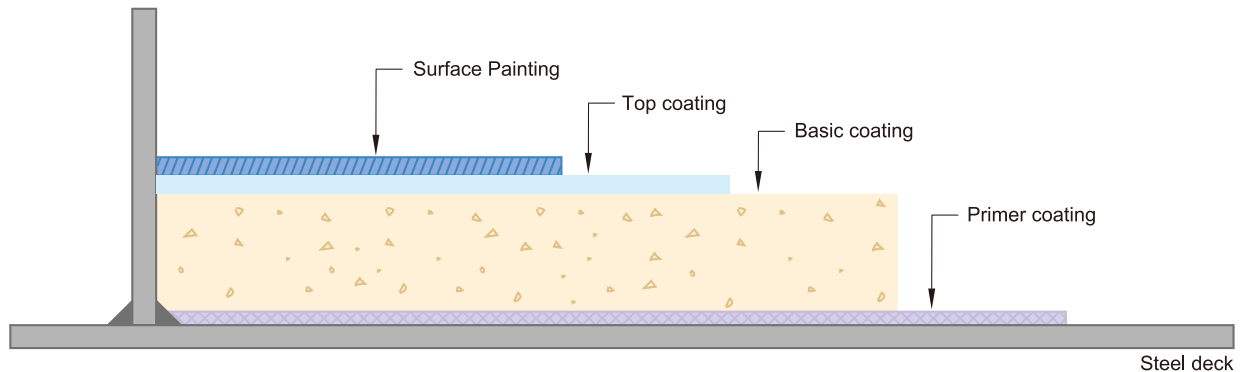
The above curves show the damping capacity against vibration by impact. It can be presumed a damping capacity of FF-70A better than of FF-50A.

Hz	Type	Bare steel	FF-50A'	FF-70A'
80		64.3	56.8	56.4
100		58.1	48.3	50.5
125		66.6	55.5	54.3
160		73.7	61.4	57.4
200		73.0	56.3	54.0
250		75.1	56.8	54.7
315		77.8	57.4	54.8
400		75.5	53.3	51.3
500		73.1	48.3	46.3
630		70.7	44.8	42.2
800		67.8	39.3	37.9
1000		66.7	36.7	35.9
1250		65.1	34.4	32.4
1600		65.1	32.5	29.7
2000		66.1	31.5	29.1
2500		66.4	29.8	27.9
3150		65.2	28.1	28.2
4000		64.0	27.9	29.6
5000		62.3	24.5	26.0
$L_{n,w}$		73 dB	50 dB	48 dB

Hz	Type	Bare steel	FF-50A'	FF-70A'
80		102.4	95.8	92.0
100		108.7	95.9	92.8
125		108.1	93.5	92.3
160		108.8	93.2	88.9
200		112.9	93.5	88.9
250		114.8	95.1	91.6
315		116.9	93.3	90.2
400		118.8	92.7	89.5
500		120.1	91.6	89.7
630		121.3	91.6	88.2
800		121.9	90.6	88.4
1000		123.1	90.5	88.7
1250		123.7	90.1	87.0
1600		124.6	89.2	85.9
2000		125.2	87.7	83.4
2500		125.3	84.9	81.5
3150		125.9	83.3	80.9
4000		126.1	81.9	82.1
5000		126.3	79.8	79.9

# Deck Covering

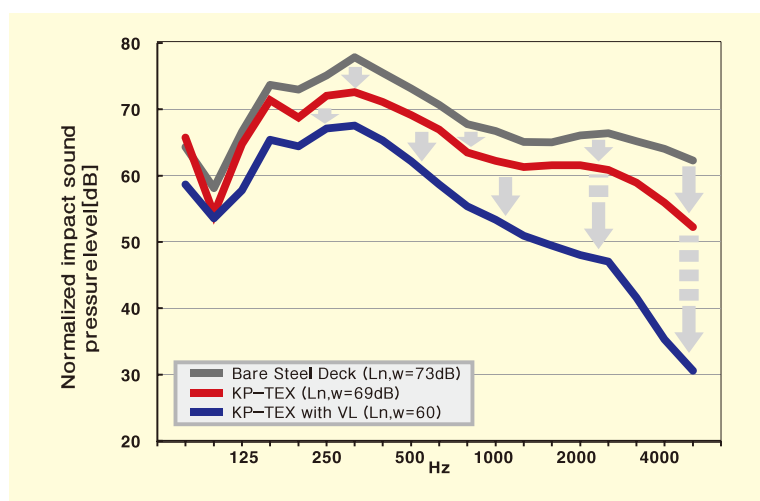
## General Deck Composition



### Technical Specification

Technical Data	Construction
Fire Class : Noncombustible	1. Primer coating Thk. 0.5mm (liquid 0.5kg/m + solid 1.0kg/m)
Weight : 18kg/m <sup>2</sup>	2. Basic coating Thk. 6.6mm (liquid 1kg/m + solid 12kg/m)
Normalized Impact Sound Level : $L_{n,w}$ 69dB	3. Top coating Thk. 0.6mm (liquid 0.5kg/m + solid 1.0kg/m)
Thermal Transmittance : 0.40kcal/m <sup>2</sup> h°C	4. Surface Painting Thk. 0.3mm (liquid 0.4kg/m)

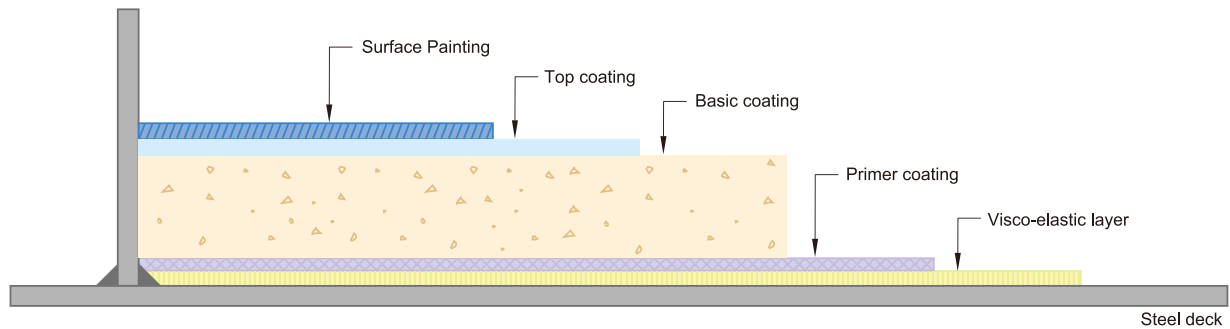
Dimensions
Thickness : Min. 8mm
+0, -1 mm



Each curve above shows  $L_n$ , the impact noise level of general deckcovering and deck covering with visco elastic layer.

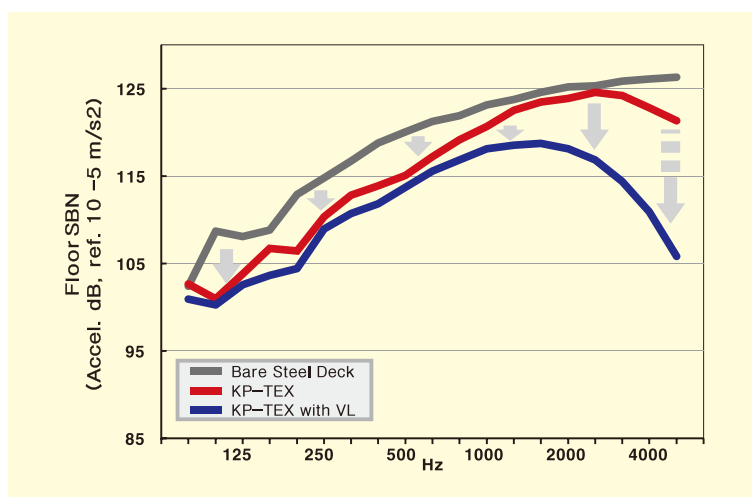
Hz	Type	KP-TEX	KP-TEX (with Viscoelastic)
80		65.8	58.7
100		54.2	53.6
125		64.8	57.8
160		71.4	65.4
200		68.7	64.4
250		72.1	67.1
315		72.6	67.6
400		71.1	65.3
500		69.2	62.2
630		67.0	58.7
800		63.5	55.4
1000		62.2	53.4
1250		61.3	50.9
1600		61.6	49.4
2000		61.6	48.0
2500		60.8	47.0
3150		59.0	41.6
4000		55.9	35.3
5000		52.3	30.6
$L_{n,w}$		69 dB	60 dB

# High Impact sound Reduction Deck Composition



## Technical Specification

Technical Data	Construction
Fire Class : Noncombustible	1. Viscoelastic Thk. 1.0mm
Weight : 19.17kg/m <sup>2</sup>	2. Primer coating Thk. 0.5mm (liquid 0.5kg/m + solid 1.0kg/m)
Normalized Impact Sound Level : $L_{n,w}$ 60dB	3. Basic coating Thk. 6.6mm (liquid 1kg/m + solid 12kg/m)
Thermal Transmittance : 0.40kcal/m <sup>2</sup> h°C	4. Top coating Thk. 0.6mm (liquid 0.5kg/m + solid 1.0kg/m)
	5. Surface Painting Thk. 0.3mm (liquid 0.4kg/m)
Dimensions	
Thickness	: Min. 9mm +0, -1 mm

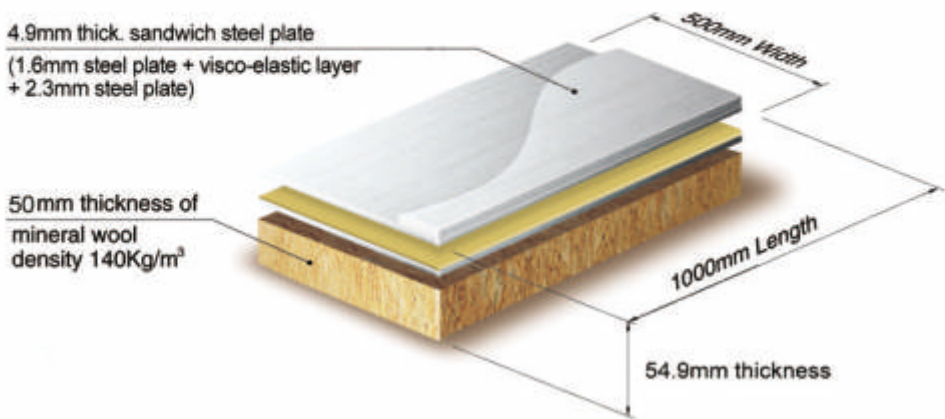
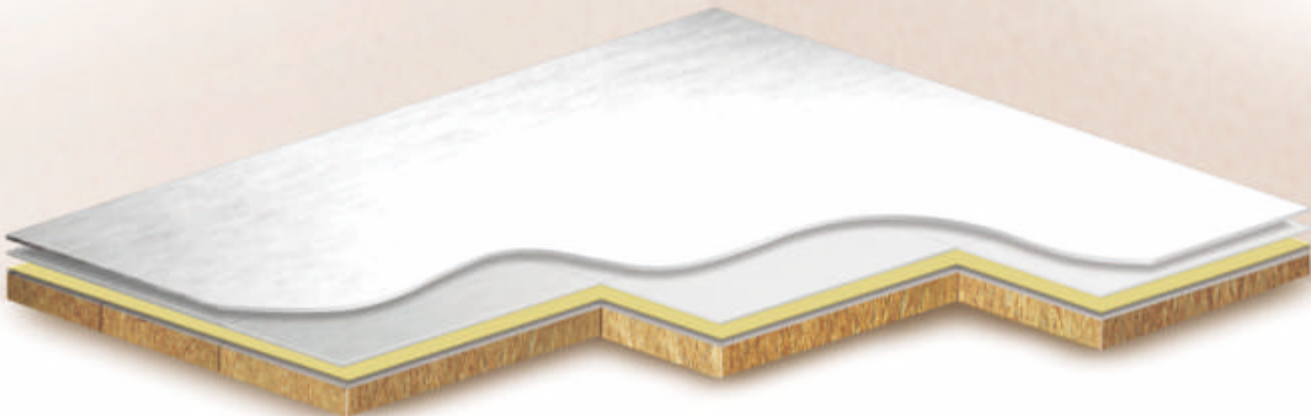


The above curves show reduction of Structure-Borne Noise when structural impact is applied on respectively.

Hz	Type	KP-TEX	KP-TEX (with Viscoelastic)
80		102.6	100.9
100		101.0	100.3
125		103.8	102.6
160		106.7	103.6
200		106.4	104.4
250		110.4	109.0
315		112.8	110.7
400		113.9	111.8
500		115.1	113.7
630		117.2	115.6
800		119.2	116.8
1000		120.6	118.2
1250		122.5	118.5
1600		123.4	118.7
2000		123.9	118.1
2500		124.6	116.8
3150		124.2	114.4
4000		122.8	110.9
5000		121.3	105.8

# Floating Floor with Screed

A-60 Fire Class Floating Floor

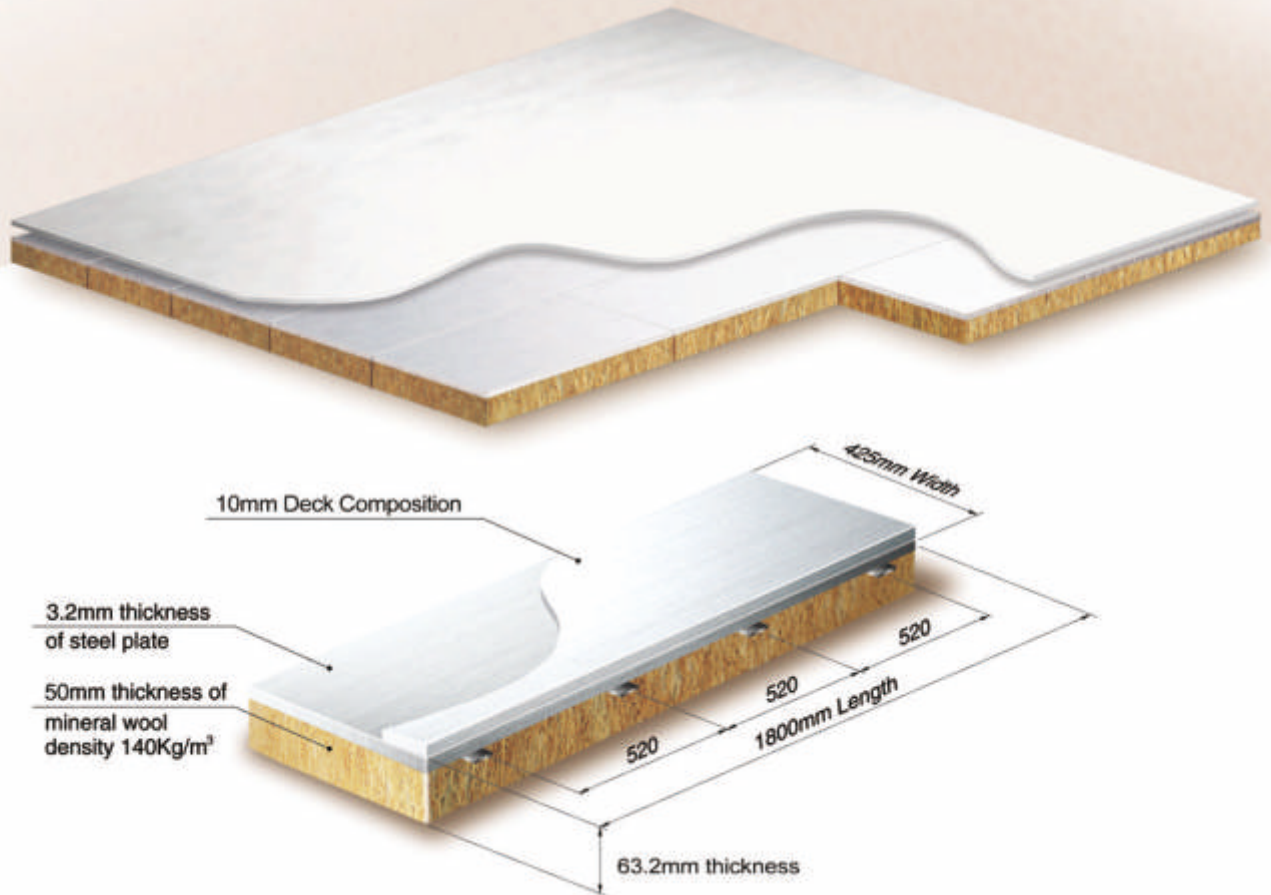


## Technical Specification

Technical Data	Construction
Fire Class : A-60 Deck	Core Material : Mineral Wool Density 140kg/m³
Weight : 56.78kg/m²	Surface Material : 4.9mm Thick. sandwich steel plate (1.6mm steel plate + viscoelastic)
Normalized Impact Sound Level : $L_{n,w}$ 37dB	Finish Material : Deck Composition
Thermal Transmittance : 0.55kcal/m²h°C	

Dimensions		
Thickness	: 64.9mm	±0, -1mm
Width	: 500mm(Standard)	±0, -1mm
Length	: 1000mm(Standard)	±3mm

# A-60 Fire Class Floating Floor



## Technical Specification

Technical Data	
Fire Class : A-60 Deck	
Weight : 54.04kg/m²	
Normalized Impact Sound Level : L <sub>n,w</sub> 52dB (Estimation)	
Thermal Transmittance : 0.40kcal/m²h°C	

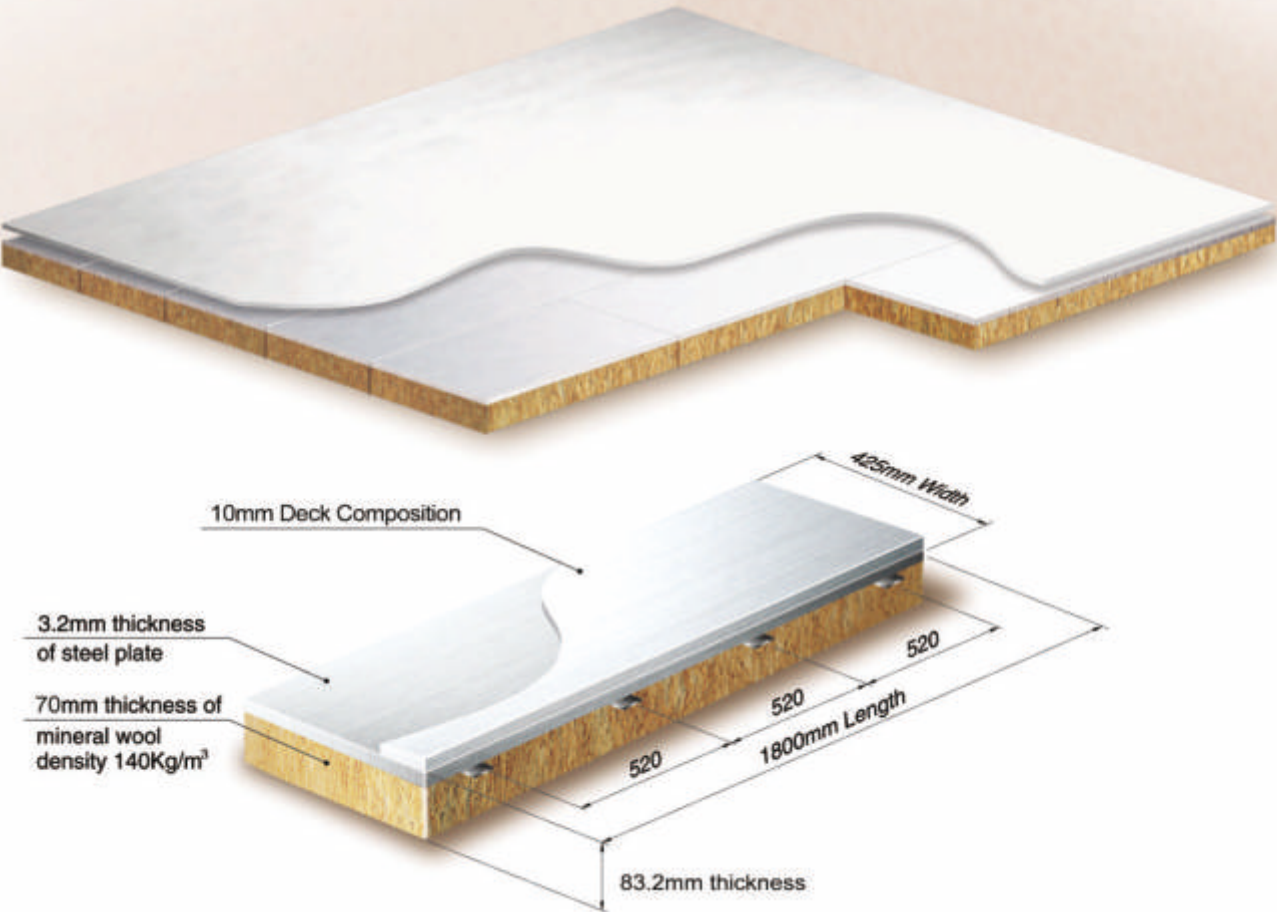
Construction	
Core Material : Mineral Wool Density 140kg/m³	
Surface Material : 3.2mm Thickness Galv'd Steel Plate	
Finish Material : Carpet or Vinyl Flooring	

Dimensions		
Thickness	: 63.2mm	±0, -1mm
Width	: 425mm(Standard)	±0, -1mm
Length	: 1800mm(Standard)	±3mm



# Floating Floor with Screed

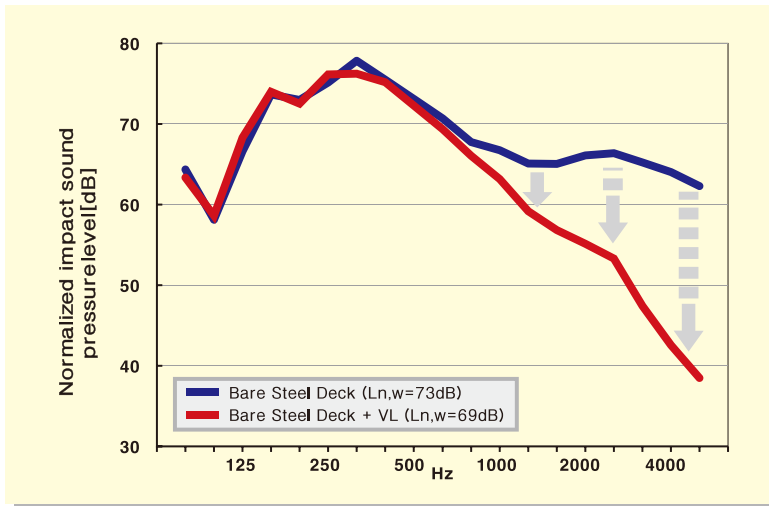
A-60 Fire Class Floating Floor



## Technical Specification

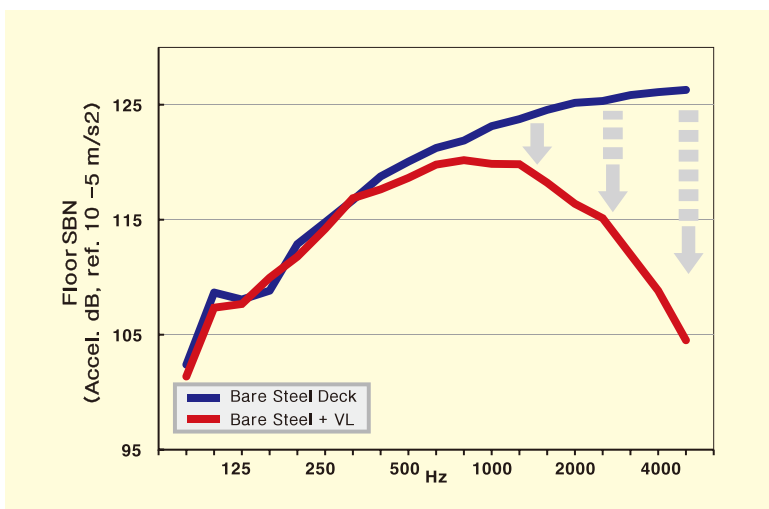
Technical Data	Construction
Fire Class : A-60 Deck Weight : 55.84kg/m² Normalized Impact Sound Level : $L_{n,w}$ 50dB Thermal Transmittance : 0.40kcal/m²h°C	Core Material : Mineral Wool Density 140kg/m³ Surface Material : 3.2mm Thickness Galv'd Steel Plate Finish Material : Deck Composition
Dimensions	
Thickness	83.2mm ±0, -1mm
Width	425mm(Standard) ±0, -1mm
Length	1800mm(Standard) ±3mm

# Bare Steel & Bare Steel with Visco elastic



Each curve above shows  $L_n$ , the impact sound insulation of a 6mm steel deck and the deck with visco-elastic layer.

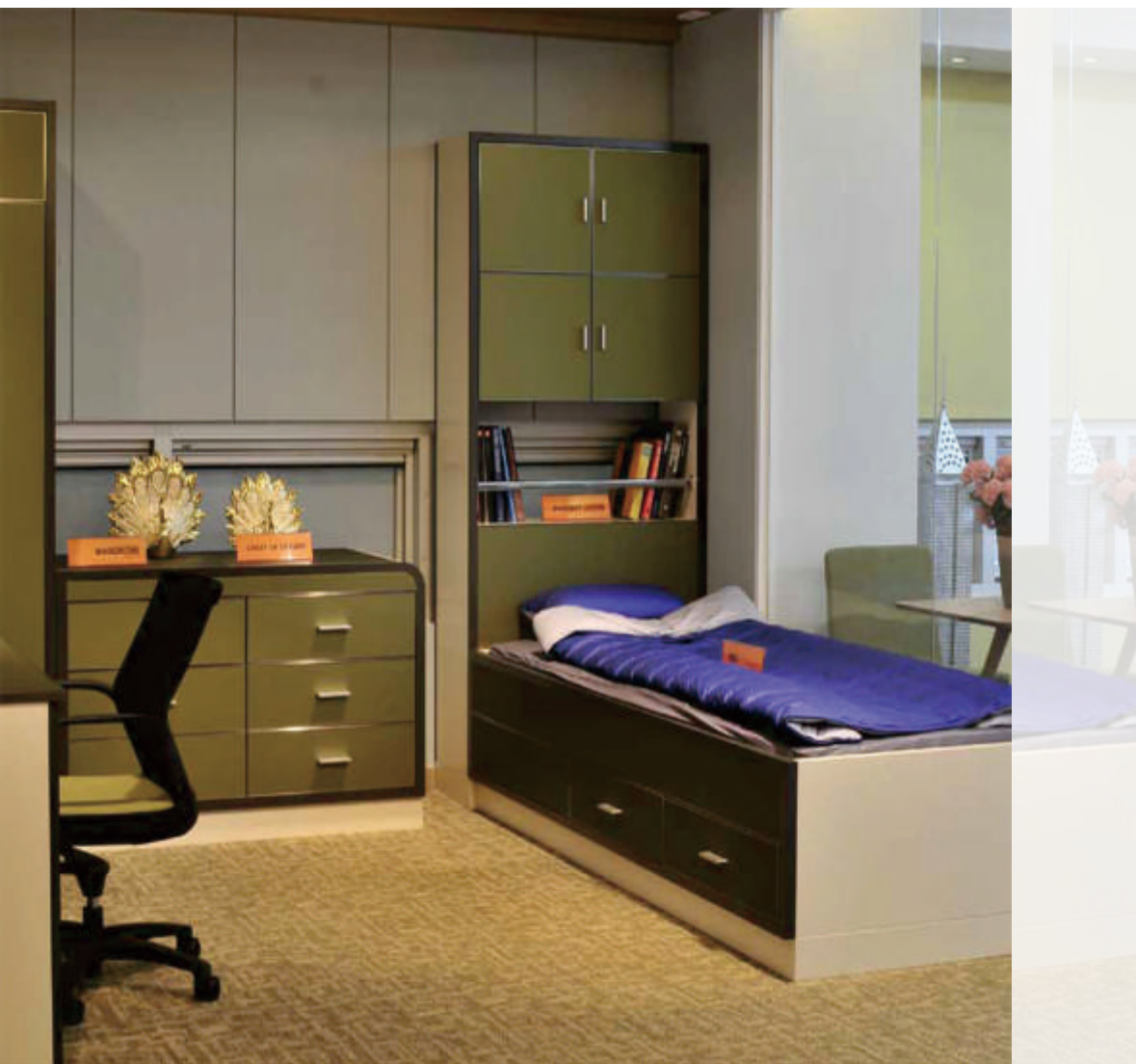
Hz	Type	Bare steel	Bare steel (with Viscoelastic)
80		64.3	63.3
100		58.1	58.6
125		66.6	68.3
160		73.7	74.0
200		73.0	72.5
250		75.1	76.2
315		77.8	76.3
400		75.5	75.2
500		73.1	72.3
630		70.7	69.4
800		67.8	66.1
1000		66.7	63.2
1250		65.1	59.2
1600		65.1	56.8
2000		66.1	55.2
2500		66.4	53.3
3150		65.2	47.5
4000		64.0	42.6
5000		62.3	38.5
$L_{n,w}$		73 dB	69 dB



The above curves show reduction of Structure-Borne Noise visco-elastic layer when vibration occurs by impact.

Hz	Type	Bare steel	Bare steel (with Viscoelastic)
80		102.4	56.4
100		108.7	55.5
125		108.1	61.2
160		108.8	65.5
200		112.9	64.1
250		114.8	64.6
315		116.9	64.1
400		118.8	59.8
500		120.1	54.0
630		121.3	51.9
800		121.9	47.3
1000		123.1	42.2
1250		123.7	35.9
1600		124.6	32.8
2000		125.2	29.9
2500		125.3	28.3
3150		125.9	26.0
4000		126.1	25.2
5000		126.3	22.8

# FURNITURE



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

**Furniture**

Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants



*“ We always make our best efforts to ensure the highest quality and delivery standard ”*

# PRODUCTS





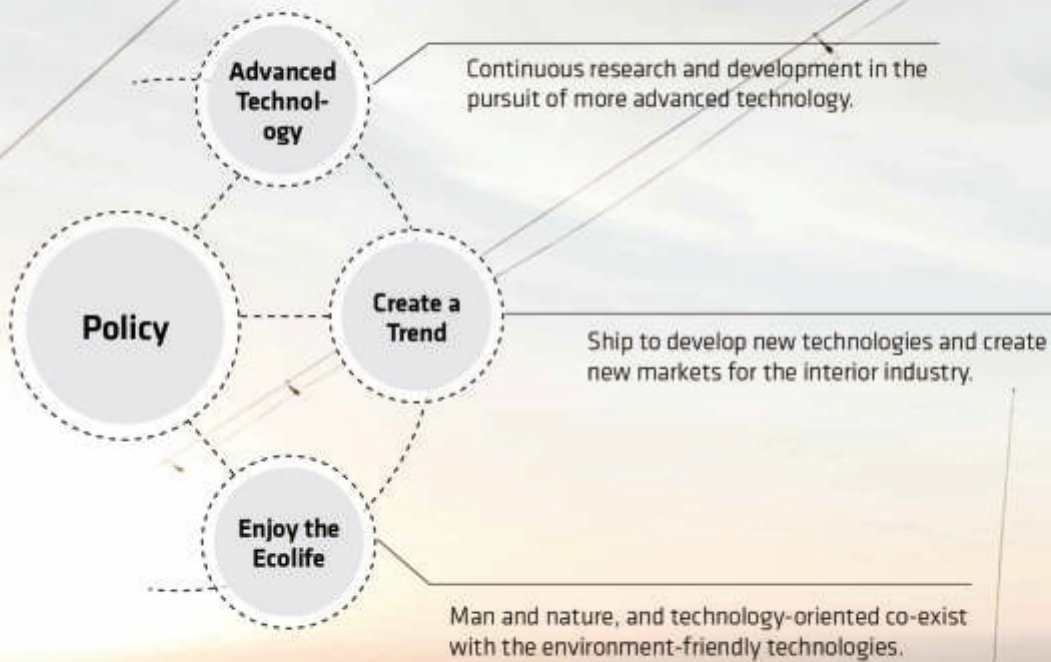


01	02
03	04
05	06
07	

- 01 Metal Furniture
- 02 HIZEN
- 03 Wooden Furniture / Sofa & Chair
- 04 B-15 Glazed Glass Wall
- 05 Fabric
- 06 Pilot Chair
- 07 Unit Strut

*We promise to do our best to develop the technique for the better items and material*

## Research & Development





# Certification

ONE IDENTITY(SHIMO & WASKOREA) FOR ONE OBJECTIVE



01 02  
03 04

01.CHEST OF DRAWER  
01.WARDROBE  
01.2TIER BED  
01.DESK

## Metal Furniture

## HINEO-C COMBINATION TYPE, STEEL + AL.H.C

**SINGLE BED**



**2-TIER BED**



**WRITING DESK**



**WARDROBE**



- **BODY** STEEL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

## Metal Furniture

## HINEO-C COMBINATION TYPE, STEEL + AL.H.C

**BOOK CASE W/ SHELF**



**LOCKER**



**BOOK SHELF**



**FILE CABINET**



- **BODY** STEEL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER



## Metal Furniture

## HINEO-W HINEO-C + WOODEN MOLDING

**SINGLE BED**



**WRITING DESK (WALL MOUNT)**



**BACK SEAT LOCKER**



**WARDROBE**



- **BODY** STEEL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **EDGE** HARDWOOD W/ FIREPROOF LOCQUER
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

## Metal Furniture

## **HINEO-W** HINEO-C + WOODEN MOLDING

**DESK**



**SIDE BOARD**



**FILE CABINET**



**BOOK RACK**



- **BODY** STEEL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **EDGE** HARDWOOD W/ FIREPROOF LOCQUER
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER



## Metal Furniture

### HINEO-F HINEO-C + AL. FRAME

**SINGLE BED**



**WRITING DESK**



**BOOK SHELF**



**LUGGAGE  
LOCKER**



**BACK SEAT  
LOCKER**



**WARDROBE**



- **FRAME** AL. FRAME 30x30, 30x20 W/ DRY POWDER COATING
- **BODY** STEEL PLATE W/ DRY POWDER COATING
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

## Metal Furniture

## **HINEO-F** HINEO-C + AL. FRAME





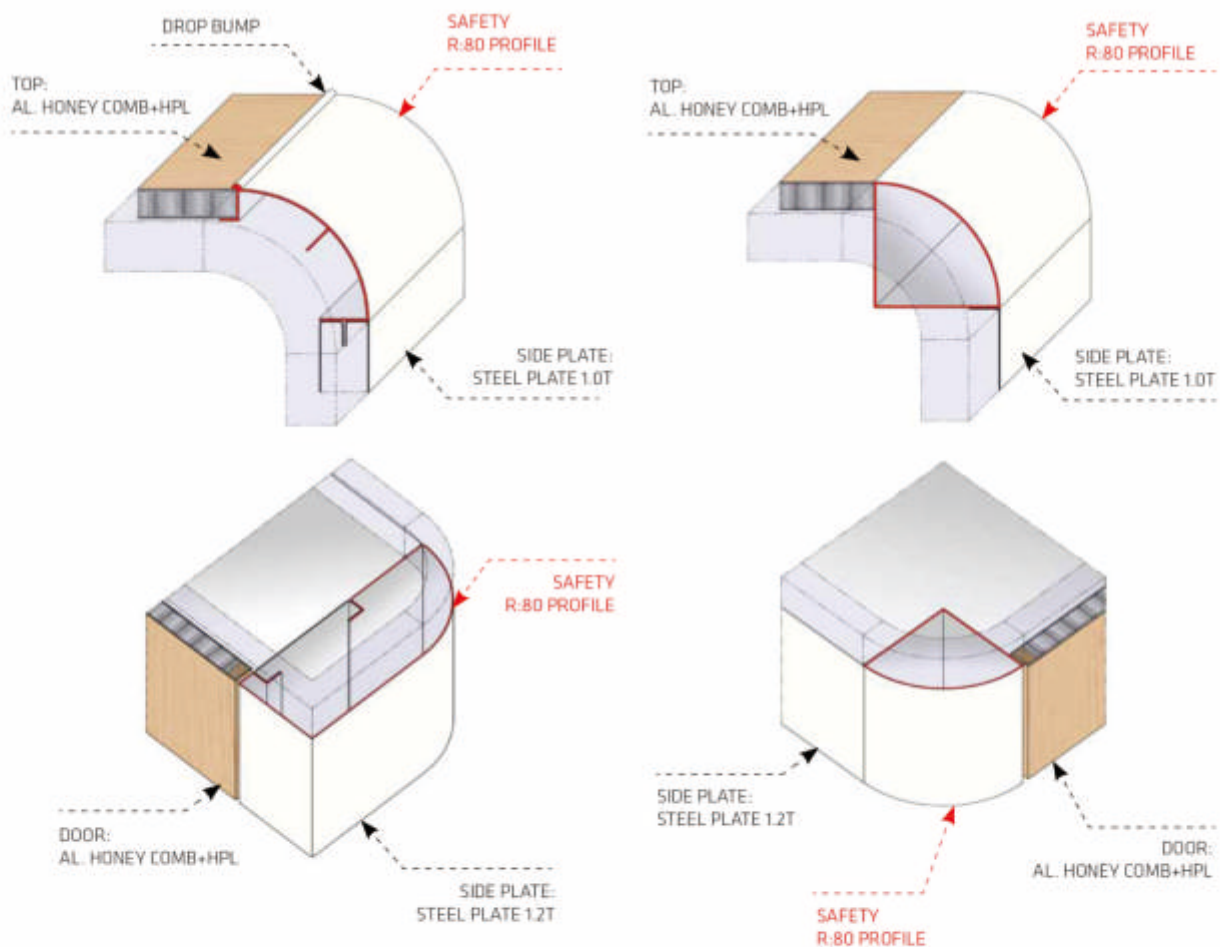
## Metal Furniture

## HINEO-F HINEO-F + AL.FRAME

### SPEC

- **New Aesthetic Design .**  
Different material and color scheme makes better aesthetic design.
- **KNOCK-DOWN**  
Separable Frame, Body – Free Assembly and disassembly piece by piece
- **Light weight**  
20% Lighter down with All steel welding type for using Aluminum material
- **Design with safety technology**  
No exposed sharp edge on furniture for using round edged material (Die casting, Al. Extrusion profile)

### PROFILE DETAIL



## Metal Furniture

## HINEO-F HINEO-F + AL.FRAME

FILE CABINET



GAME TABLE



BOOK CASE  
W/SHELF



TV LOCKER



SIDE BOARD



DESK

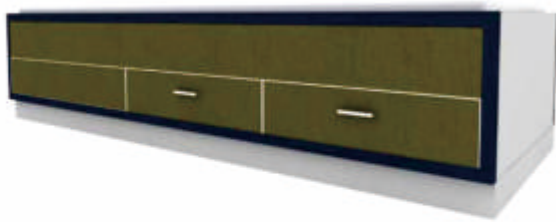


- **FRAME** AL. FRAME 30x30, 30x20 W/ DRY POWDER COATING
- **BODY** STEEL PLATE W/ DRY POWDER COATING
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

## Metal Furniture

**HINEO-A**  
HINEO-F + ARTIFICIAL LEATHER

**SINGLE BED**



## WRITING DESK



## WARDROBE

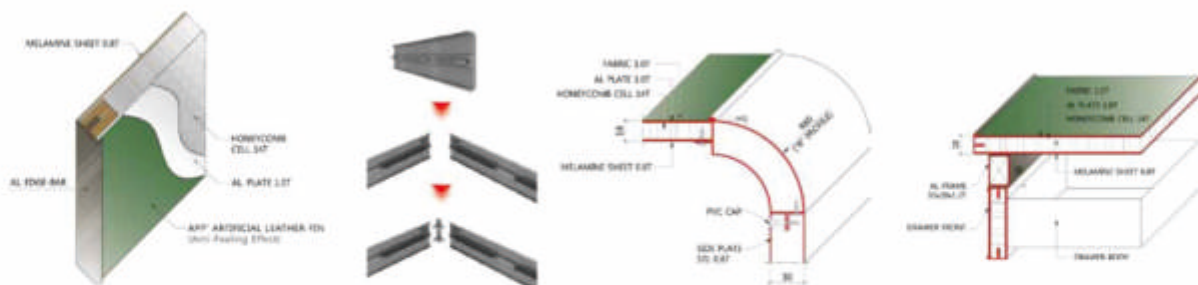


### CHEST OF DRAWER



- **FRAME** AL. FRAME 30x30, 30x20 W/ DRY POWDER COATING
- **BODY** STEEL PLATE W/ DRY POWDER COATING
- **TOP/FRONT** AL. HONEY COMB BOARD W/ARTIFICIAL LEATHER
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

## PROFILE DETAIL





## Metal Furniture

## HINEO-A HINEO-F + ARTIFICIAL LEATHER



### SPEC

- **Fire retardant and Antibacterial surfacing material**  
Applying certificated ARTIFICIAL LEATHER, FABRIC and Al. EDGE-BARD
- **soil-resistant finish (strong to dirt)**  
good to be applying front door and top of desk
- **Design with safety technology**  
No exposed sharp edge on corner for using round edged material  
(Al. Extrusion profile = edge bar)
- **Supplementation cold image of Metal furniture.**  
Metal furniture's restrictive surfacing to be more aesthetic for using artificial leather and fabric material.  
(apply to front door and top of desk with various textile)
- **applying various color scheme**  
applying the merits of various color scheme, pattern and texture of artificial and fabric's

## Metal Furniture

### HINEO-H1 ALL HONEY COMB TYPE 1

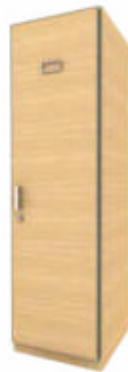
#### 2-TIER BED



#### SINGLE BED



#### WARDROBE



#### WRITING DESK / SIDE BOARD



- **FRAME** AL. PROFILE
- **BODY** STEEL PLATE W/ DRY POWDER COATING+AL. HONEY COMB BOARD W/HPL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **EDGE** AL. EDGE BAR
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

#### PROFILE DETAIL





## Metal Furniture

## HINEO-H1 ALL HONEY COMB TYPE 1



### SPEC

- **apply for fire retardant material (AL. HONEYCOMB. BOARD)**  
(suitable for military project and offshore project in NORSOK regulation)
- **Light weight**  
40% Lighter down with All steel welding type for using Al. Honeycomb board and Al. profile.
- **Design with safety technology**  
No exposed sharp edge on corner for using round edged material  
(Al. Extrusion profile = edge bar)
- **Supplementation cold image of Metal furniture.**  
Coast guard type of metal furniture's restrictive surfacing to be more aesthetic for using various pattern and color of surfacing material.  
(apply Al. Extrusion edge bar to be nikel-plating and H.P.L. with texture)
- **reduction of noise.**  
Resolving of steel body furniture's vibration and noise for using ALL AL. HONEY COMB BOARD.

## Metal Furniture

### HINEO-H2 ALL HONEY COMB TYPE 2

#### SINGLE BED



#### WRITING DESK



#### SIDE BOARD

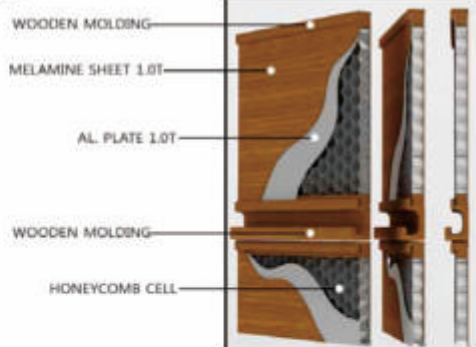


#### WARDROBE



- **BODY** AL. HONEY COMB BOARD W/HPL
- **TOP/FRONT** AL. HONEY COMB BOARD W/HPL
- **EDGE, HANDLE** HARDWOOD W/ FIREPROOF PAINT
- **SIZE, COLOR/PATTERN** ACCORDING TO ORDER

#### PROFILE DETAIL





## Metal Furniture

## HINEO-H2 ALL HONEY COMB TYPE 2



### SPEC

- **Design with safety technology**  
No exposed sharp edge on furniture for using HARDWOOD MOLDING EDGE  
No protrude hardware.
- **Gentrified Items for designing various surfacing and finishing**
- **Light weight**  
30% Lighter down with All steel welding type for using AL. Honeycomb board.
- **Supplementation cold image of Metal furniture.**  
old type of metal furniture's restrictive surfacing to be more aesthetic for using various pattern and color of surfacing material H.P.L.
- **reduction of noise.**  
Resolving of steel body furniture's vibration and noise for using ALL AL. HONEY COMB BOARD.



## Metal Furniture

## NAVY WARSHIP TYPE ALL ALUMINIUM

**MODULAR 2-TIER BED**



**MODULAR 2-TIER BED**



**FIXED 2-TIER BED**



**FIXED SINGLE BED**



## Metal Furniture

## NAVY WARSHIP TYPE ALL ALUMINIUM

**BOOK RACK**



**WARDROBE C.P.O**



**DESK 1-PEDESTAL**



**DRAWER FOR  
ENTERTAIN UNIT**



## Metal Furniture

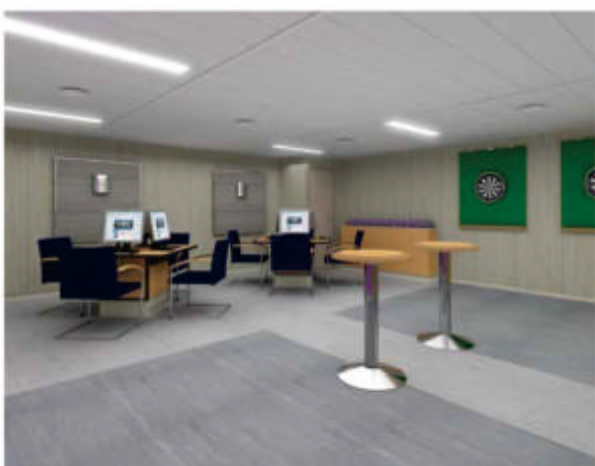
## REFERENCE

No	H.No	Ship's Type	Owner	Q'ty	Shipbuilding
1	H.2030	F.L.N.G.	SHELL	1	SAMSUNG
2	H.1951	F.P.S.O.	TEEKAY	1	SAMSUNG
3	H.1911	DRILLSHIP	SEADRILL	1	SAMSUNG
4	H.2018	DRILLSHIP	MAERSK	1	SAMSUNG
5	H.2019	DRILLSHIP	MAERSK	1	SAMSUNG
6	H.2029	DRILLSHIP	MAERSK	1	SAMSUNG
7	Q.517	F.P.S.O. (USAN)	TOTAL	1	HYUNDAI
8	H.5907'S	F.P.S.O. (PAZFLOR)	TOTAL	2	D.S.M.E.
9	H.6049	F.P.S.O. (CLOV)	TOTAL	1	D.S.M.E.
10	H.7509'S	PASSENGER FERRY	BLUE STAR	2	D.S.M.E.
11	F.1004	DRILLSHIP	NOBLE	1	STX
12	F.1005	DRILLSHIP	NOBLE	1	STX
13	H.7511	RORO PASSENGER FERRY	COTNAV	1	D.S.M.E.
14	P.2030'S	PPL JACK-UP RIG		6	SEMBAWANG
15	LQ - FX	OFFSHORE PLATFORM	IOOC	1	DRAGON OFFSHORE
16	LQ - FY	OFFSHORE PLATFORM	IOOC	1	DRAGON OFFSHORE
17	S.092	PKX	KOREA NAVY	1	HANJIN
18	Y & K	PCC (ANYANG)	COLOMBIA NAVY	1	KOREA NAVY
19	S.083	300TON PATROL SHIP	KOREA NAVY	3	HANJIN
20	S.086	300TON PATROL SHIP	KOREA NAVY	3	HANJIN
21	S.092	PKX	KOREA NAVY	1	HANJIN



## Metal Furniture

## REFERENCE



## Metal Furniture

## REFERENCE





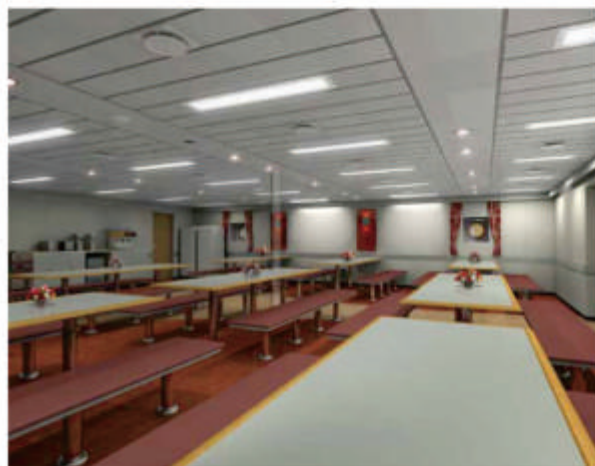
## Metal Furniture

## REFERENCE



## Metal Furniture

## REFERENCE





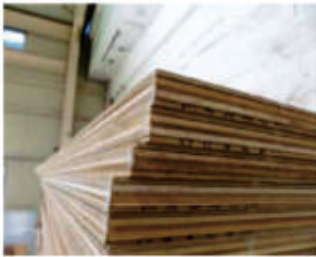
## Metal Furniture

## REFERENCE



## Wooden furniture

## MATERIAL



### **Ply Wood**

MATERIAL AS SOLID WOOD.

- 1) BENEFIT : BEST SOLIDITY, NON-DISTORTED, STRONG AGAINST WATER
- 2) WEAKNESS : UNAVAILABLE SURFACING WITH L.P.M.
- 3) USED : BODY, TOP AND PLINTH OF FURNITURE.
- 4) WEIGHT : 35~40kg



### **M.D.F.**

MATERIAL OF UTILIZED CHIPS OF WOOD

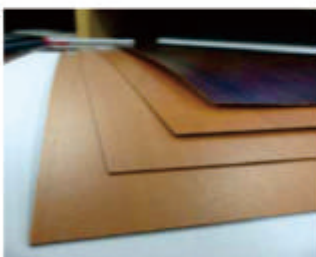
- 1) BENEFIT : FREE FIGURATION, ACCURATE SIZE PRODUCING VARIOUS SURFACING (H.P.M, L.P.M.)
- 2) WEAKNESS : WEAK AGAINST WATER
- 3) USED : DOOR, FRONT OF FURNITURE.
- 4) WEIGHT : 35~38kg



### **PARTICLE BOARD**

MATERIAL OF UTILIZED CHIPS OF WOOD

- 1) BENEFIT : GOOD WITH INSULATION, ANTI-NOISE, VARIOUS SURFACING (H.P.M, L.P.M.)
- 2) WEAKNESS : WEAK AGAINST WATER AND SOLIDITY
- 3) USED : DOOR, FRONT OF FURNITURE.
- 4) WEIGHT : 33~38kg



### **H.P.M.**

HIGH PRESSURE MELAMINE LAMINATE.

- 1) BENEFIT : BEST SURFACING DURABILITY, STRONG AGAINST WATER
- 2) USED : TOP BOARD OF FURNITURE.
- 3) THICKNESS : 0.8T



### **L.P.M.**

LOW Pressure Melamine Laminate

- 1) BENEFIT : ADHESIVING WITHOUT GLUE, ECO-ENVIRONMENT MATERIAL
- 2) USED : BODY, DOOR AND DRAWER OF FURNITURE.
- 3) THICKNESS : 0.1T



### **EDGE FILM**

P.V.C. / URETHANE FILM

- 1) BENEFIT : GOOD AESTHETIC POINT OF VIEW
- 2) USED : EVERY EDGE PART OF FURNITURE.
- 3) THICKNESS : 0.45 / 0.6 / 1 T



## Wooden furniture

## PROCESS

### MFG Process



### Factory Capacity

	2nf Factory
Building Area	3000 m <sup>2</sup>
Employees	16 Persons
Annual MFG Capacity	60 Ships a Year





## Wooden furniture

## PRODUCT

### BED W/2-DRAWER

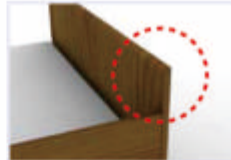
- Material & Components**
- BAORD : PLYWOOD W/HPM
  - CYLINDER LOCKR : BRASS
  - BRACKET : ZINC ALLOY
  - MATTRESS : COTTON COVER
  - WEIGHT : 59KG

- Dimension (W-D-H)**
- 2050X1050X760

#### Furniture



FOOT BOARD :  
ROUNDED EDGE FINSH



HEAD BOARD :  
L-FORMING



### 2-T BED W/2-DRAWER

- Material & Components**
- BAORD : PLYWOOD W/HPM
  - CYLINDER LOCKR : BRASS
  - BRACKET : ZINC ALLOY
  - MATTRESS : COTTON COVER
  - WEIGHT : 127KG

- Dimension (W-D-H)**
- 2050X1050X1600

#### Furniture



LADDER (BEACH WOOD)



### WARDROBE (2-DOOR)

- Material & Components**
- BAORD : CHIPBOARD W/H,LPM
  - CYLINDER LOCKR : BRASS
  - BRACKET : ZINC ALLOY
  - GRIP : ALUMINIUM
  - WEIGHT : 68KG

- Dimension (W-D-H)**
- 1000X600X1970

#### Furniture



TOP PLATE :  
L-FORMING



NAME PLATE



## Wooden furniture

## PRODUCT

### 2-P DESK

#### Material & Components

- BAORD : CHIPBOARD W/H,LPM
- CYLINDER LOCKR : BRASS
- DRAWER RAIL : STEEL
- BRACKET : ZINC ALLOY
- WEIGHT : 61KG

#### Dimension (W-D-H)

- 1550X750X760

#### Furniture



TOP PLATE :  
ROUNDED FORMING



### CHEST OF DRAWER W/MIRROR

#### Material & Components

- BAORD : CHIPBOARD W/H,LPM
- CYLINDER LOCKR : BRASS
- BRACKET : ZINC ALLOY
- GRIP : ALUMINIUM
- WEIGHT : 34KG

#### Dimension (W-D-H)

- 1000X600X760

#### Furniture



MIRROR



TOP PLATE :  
ROUNDED FORMING



### BOOK CASE W/BOOK SHELF

#### Material & Components

- BAORD : CHIPBOARD W/H,LPM
- BRACKET : ZINC ALLOY
- ROLLING BAR : PLYWOOD
- GRIP : ALUMINIUM
- WEIGHT : 94KG

#### Dimension (W-D-H)

- 1200X600X1970

#### Furniture



TOP PLATE :  
ROUNDED FORMING



BOOK SHELF



## Wooden furniture

## PRODUCT

### BOOK SHELF

- Material & Components**
- BAORD : CHIPBOARD W/H,LPM
  - BRACKET : ZINC ALLOY
  - ROLLING BAR : PLYWOOD
  - WEIGHT : 67KG

**Dimension (W-D-H)**  
• 1200X400X1970

#### Furniture



TOP PLATE :  
L -FORMING



ROLLING BAR



### SIDE BOARD UNIT W/BOOK CASE

- Material & Components**
- BAORD : CHIPBOARD W/H,LPM
  - BRACKET : ZINC ALLOY
  - ROLLING BAR : PLYWOOD
  - GRIP : ALUMINIUM
  - WEIGHT : 185KG

**Dimension (W-D-H)**  
• 2400X600X1970

#### Furniture



BROWN COLORED GLASS



UPPER SHELF DOOR



### COMPUTER TABLE

- Material & Components**
- BAORD : CHIPBOARD W/H,LPM
  - BRACKET : ZINC ALLOY
  - DRAWER RAIL : STEEL
  - WEIGHT : 29KG

**Dimension (W-D-H)**  
• 1200X600X760

#### Furniture



TOP PLATE :  
ROUNDED FORMING





## Wooden furniture

## PRODUCT

### MESS TABLE

#### Material & Components

- BAORD : PLYWOOD W/HPM
- TABLE LEG : STEEL PIPE
- LEG COVER : HARDWOOD
- WEIGHT : 53KG

#### Dimension (W-D-H)

- 1400X900X720

#### Furniture



TOP PLATE :  
WOODEN MOLDING FINISH



### RECEPTION TABLE

#### Material & Components

- BAORD : PLYWOOD W/HPM
- CORNER : HARDWOOD
- WEIGHT : 20KG

#### Dimension (W-D-H)

- 1000X600X450

#### Furniture



CORNER LINE :  
WOODEN MOLDING FINISH



### SIDE TABLE

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- BRACKET : ZINC ALLOY
- DRAWER RAIL : STEEL
- WEIGHT : 18KG

#### Dimension (W-D-H)

- 450X450X450

#### Furniture



TOP PLATE  
ROUNDED FORMING





## Wooden furniture

## PRODUCT

### SIDE BOARD W/SINK

#### Material & Components

- BAORD : CHIPBOARD  
W/H, LPM
- GRIP : ALUMINIUM
- SINK : SUS BOWL
- WEIGHT : 34KG

#### Dimension (W-D-H)

- 1200X600X900

#### Furniture



TOP PLATE :  
ROUNDED FORMING



SINK SUS BOWL



### FLAG LOCKER

#### Material & Components

- BAORD : CHIPBOARD  
W/H, LPM
- GRIP : ALUMINIUM
- WEIGHT : 55KG

#### Dimension (W-D-H)

- 1200X600X760

#### Furniture



TOP PLATE :  
ROUNDED FORMING



FLAG RACK



### REF. BOX

#### Material & Components

- BAORD : CHIPBOARD  
W/H, LPM
- VENT HOLE : HARDWOOD
- WEIGHT : 35KG

#### Dimension (W-D-H)

- 700X600X1100

#### Furniture



TOP PLATE :  
ROUNDED FORMING



AIR-VENT HOLE



## Wooden furniture

## PRODUCT

### FLOWER STAND

#### Furniture



SUS BOWL

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- FLOWER BOX : SUS BOWL
- WEIGHT : 40KG

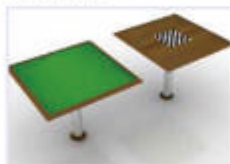
#### Material & Components

- 1200X350X760



### CARD TABLE

#### Furniture



GREEN FELT

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- TABLE LEG : STEEL PIPE
- LEG COVER : HARDWOOD
- WEIGHT : 45KG

#### Material & Components

- 900X900X760



### CUP BOARD UNIT

#### Furniture



WIRE BASKET

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- WIRE BASKET : SUS304
- WEIGHT : 70KG

#### Material & Components

- 1200X600X900



## Wooden furniture

## PRODUCT

### ROUND MESS TABLE

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- TABLE LEG : STEEL PIPE
- LEG COVER : HARDWOOD
- WEIGHT : 65KG

#### Furniture



WOODEN COVERED  
TABLE LEG

#### Dimension (W-D-H)

- Ø1200X720



### MEDICINE LOCKER

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- WEIGHT : 99KG

#### Dimension (W-D-H)

- 1300X600X1970

#### Furniture



POISON BOX



### ROUND MESS TABLE 확인요망

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- BRACKET : ZINC ALLOY
- ROLLING BAR : PLYWOOD
- GRIP : ALUMINIUM
- WEIGHT : 110KG

#### Furniture



BROWN COLORED GLASS





## Wooden furniture

## PRODUCT

### WOODEN BENCH

#### Material & Components

- BAORD : HARDWOOD
- WEIGHT : 13KG

#### Dimension (W-D-H)

- 1500X400X450

#### Furniture



SECTION VIEW



### BOOK SHELF

#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- WEIGHT : 25KG

#### Dimension (W-D-H)

- 1200X600X760

#### Furniture



SHELF / ROLLING BAR



### BOOK RACK

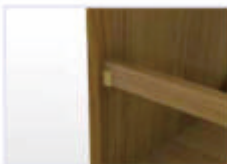
#### Material & Components

- BAORD : CHIPBOARD W/H, LPM
- WEIGHT : 25KG

#### Dimension (W-D-H)

- 600X350X330

#### Furniture



ROLLING BAR HOOK





## Wooden furniture

## REFERENCE

H.NO	H.1807/08 (RORO) 2 SHIPS
SHIP OWNER	STENA
SHIPYARD	SAMSUNG
TYPE	WOODEN



## Wooden furniture

## REFERENCE

H.NO	H.7509/10 (FERRY) 2 SHIPS
SHIP OWNER	BLUE STAR FERRIES
SHIPYARD	D.S.M.E.
TYPE	WOODEN





## Wooden furniture

## REFERENCE

H.NO	H.7511(FERRY)
SHIP OWNER	COTNAVFERRIES
SHIPYARD	D.S.M.E.
TYPE	WOODEN



## Wooden furniture

## REFERENCE

H.NO	H.3403/04(PLSV)
SHIP OWNER	BLUE STAR FERRIES
SHIPYARD	D.S.M.E.
TYPE	WOODEN





## Wooden furniture

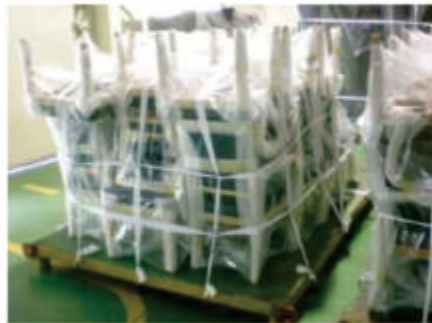
## REFERENCE

### MFG Process



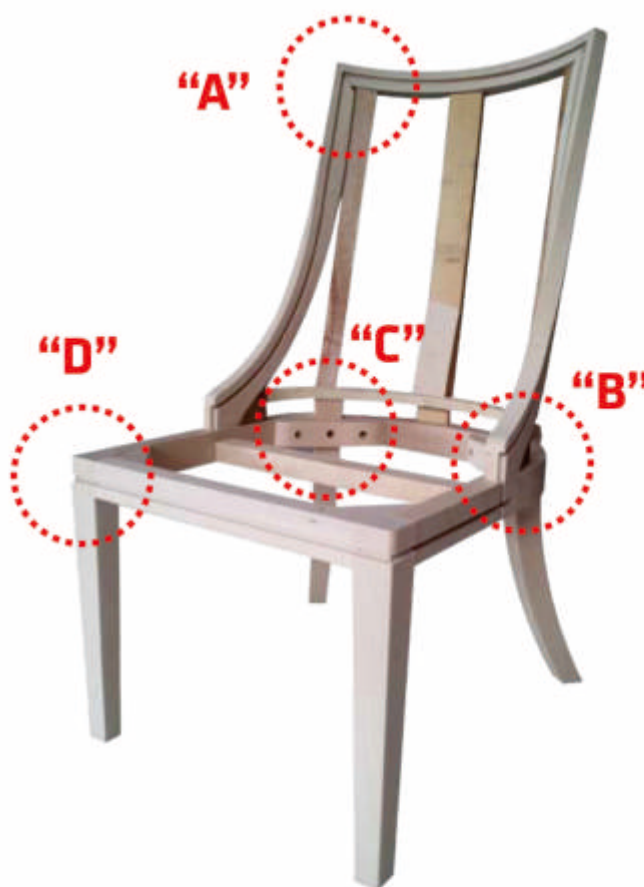
### Factory Capacity

	3 rd Factory
Building Area	3700 m <sup>2</sup>
Employees	16 Persons
Annual MFG Capacity	60 Ships a Year



## Sofa & Chair

## PROCESS





## Sofa & Chair

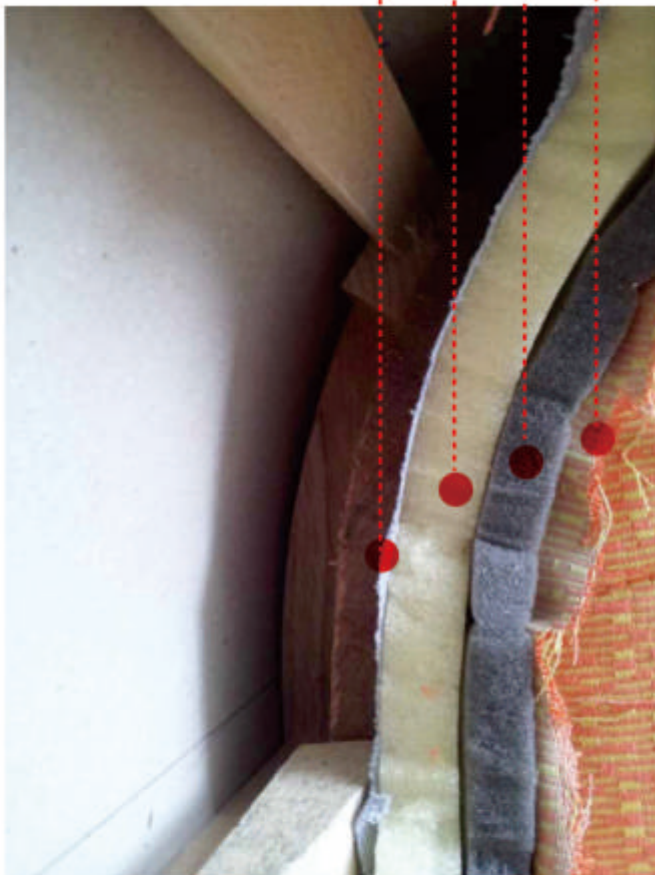
## PROCESS

UPHOLSTERY

SPONGE(HR)

SPONGE(WH)

FABRIC



## Sofa & Chair

## PRODUCT



**MESS CHAIR**

• SIZE : 580 X 585 X 1055H



**MESS CHAIR**

• SIZE : 500 X 600 X 910H



**MESS CHAIR**

• SIZE : 580 X 585 X 1055H



**EASY CHAIR**

• SIZE : 750 X 770 X 760H



**EASY CHAIR**

• SIZE : 700 X 700 X 800H



**EASY CHAIR**

• SIZE : 820 X 750 X 750H



## Sofa & Chair

## PRODUCT

UPHOLSTERY : LEATHER / FABRIC



**COMMON CHAIR**

• SIZE : 470 X 547 X 860H



**COMMON CHAIR**

• SIZE : 490 X 550 X 790H



**COMMON CHAIR**

• SIZE : 470 X 547 X 860H



**ARM CHAIR**

• SIZE : 570 X 650 X 920H



**ARM CHAIR**

• SIZE : 550 X 550 X 790H



**ARM CHAIR**

• SIZE : 580 X 600 X 860H

## Sofa & Chair

## PRODUCT

UPHOLSTERY : LEATHER / FABRIC



### STOOL

- SIZE : 400 X 400 X 440H



### REVOLVING ARM CHAIR

- SIZE : 650 X 700 X 1020H



### REVOLVING ARM CHAIR

- SIZE : 580 X 585 X 1055H



### REVOLVING ARM CHAIR

- SIZE : 635 X 530 X 1070H



### REVOLVING ARM CHAIR

- SIZE : 600 X 600 X 830H



### REVOLVING ARM CHAIR

- SIZE : 690X 615 X 1190H

## Sofa & Chair

## PRODUCT

UPHOLSTERY : LEATHER / FABRIC



**SOFA(1-PERSON)Z**

• SIZE : 830 X 850 X 850H



**CORNER SOFA**

• SIZE : 650 X 700 X (1020-1070)H



**SOFA(2-PERSON)**

• SIZE : 1440 X 810 X 820H



**SOFA(3-PERSON)**

• SIZE : 1850 X 810 X 800H



## Sofa & Chair

## PRODUCT

UPHOLSTERY : LEATHER / FABRIC



**EASY CHAIR**

• SIZE : 780 X 780 X 750H

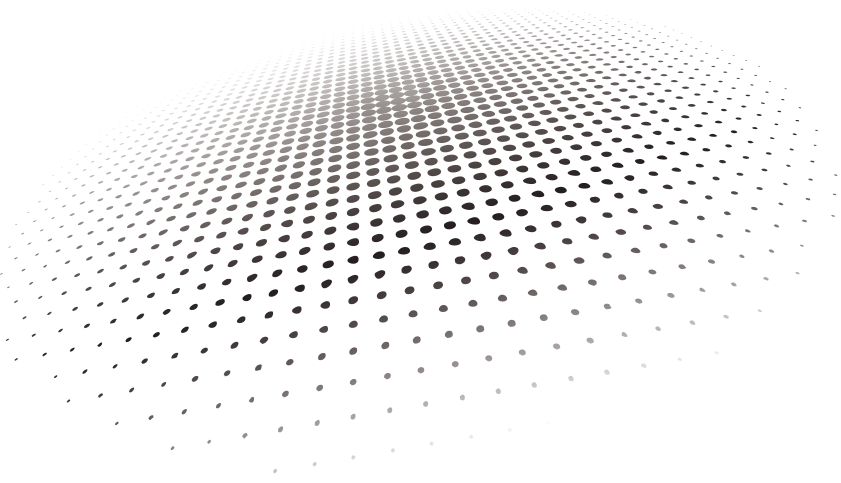


**SOFA(3-PERSON)**

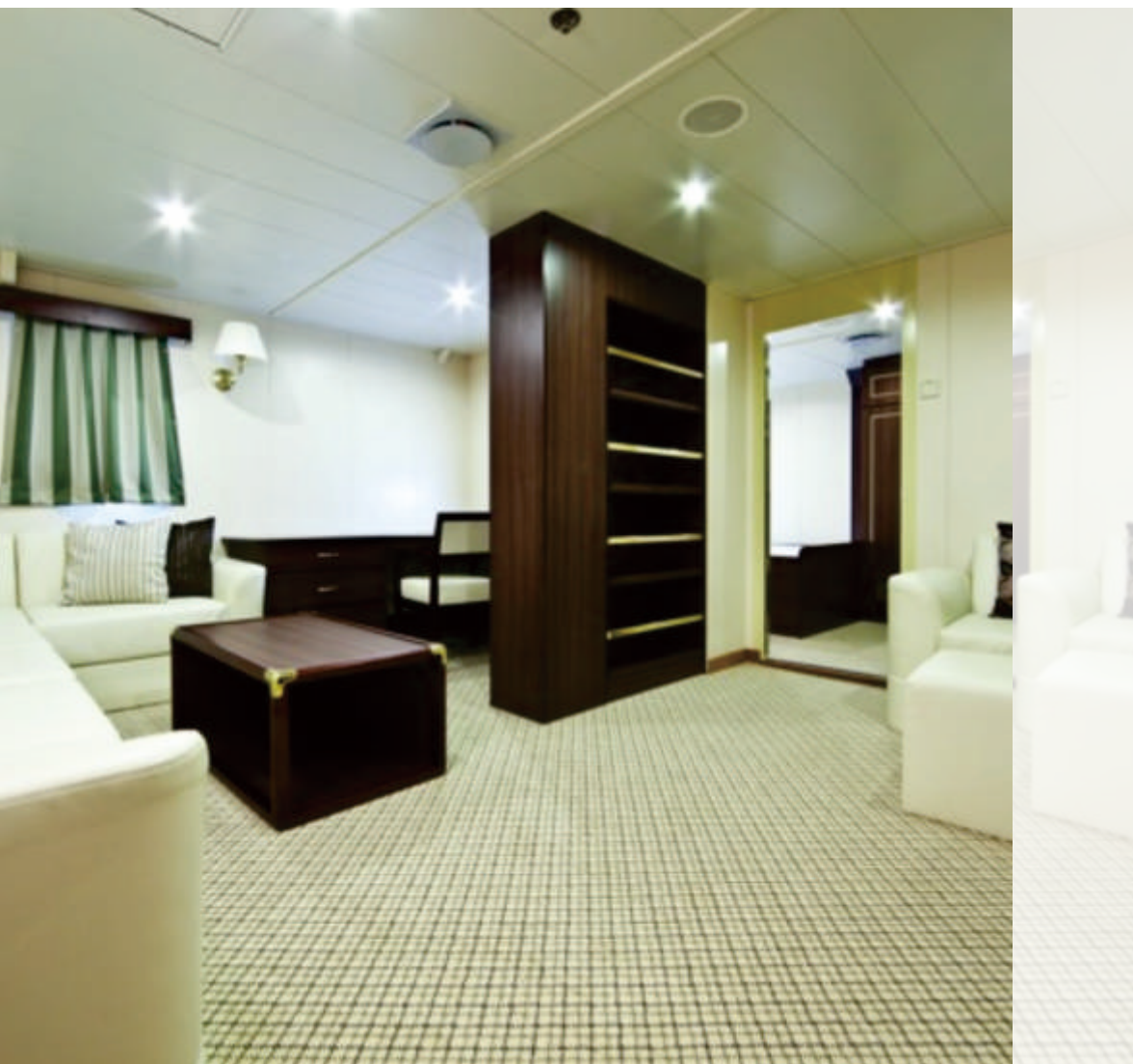
• SIZE : 2000 X 780 X 750H







# UNIT CABINS



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

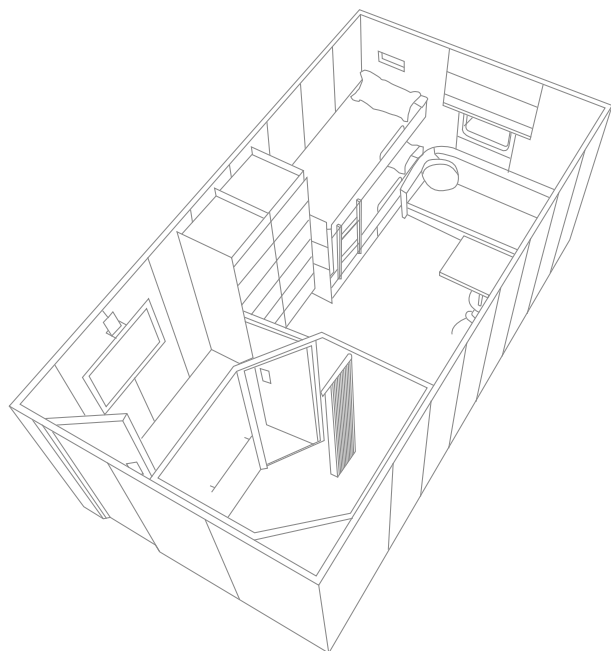
**Unit Cabins**

Interior Furnishings

Modular Systems

Marine Engineering

Onshore Plants



# UNIT CABINS





STACO Unit Cabins are designed as factory fabrication units which can be easily transported and installed at any sites worldwide. STACO has extensive experience in designing and supplying Unit Cabins to many satisfied customers.

The Unit Cabin system is an ideal solution for Passenger Ships and wherever there is additional Unit cabin/s requirement specifically at offshore and on land.

Construction of a Unit Cabin in a factory under a clean and controlled environment has several advantages such as speedier building process, higher quality, design flexibility (customization) and a more economical product when compared to the stick-built construction in difficult site conditions.

The Unit Cabin is a frame construction. The walls, ceilings and doors of the unit cabins are made of galvanized steel covered with decorative PVC foil or lacquer coating and insulated with mineral wool.

The primary aim is to produce unit cabins in large quantities and delivered just in time when they are required at site as these can be assembled for usage at site within a very short period. Most of the works related to steel work, painting, electrical, piping, HVAC, Interiors etc. are completed in the factory leaving small works such as Cabin to Cabin insulation, connections and tests etc. to be completed at site.



STACO unit cabin system is designed as factory fabrication basis, and can be readily transported to sites worldwide.

Packaging in factory gives you the benefits of factory quality control; clean, conditioned assembly of construction; economics of factory labor; functional testing; and a product with predictable, guaranteed performance.

#### UNIT CABIN

#### CONVENTIONAL CABIN





# CABIN







## Passenger Ship Offshore L.Q.

Yard's Preparation for Prefabricated Cabin



# UNIT CABIN

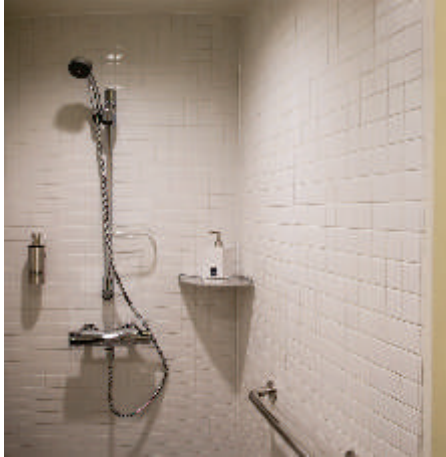
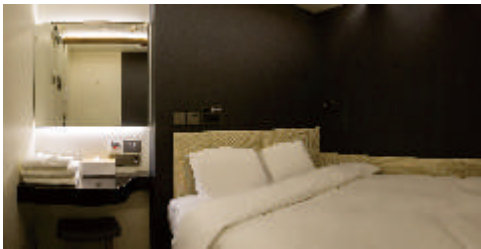
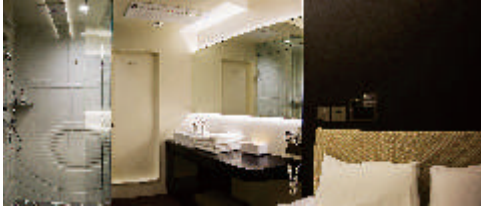








# UNIT CABIN





UNIT CABIN  
CONVENTIONAL CABIN

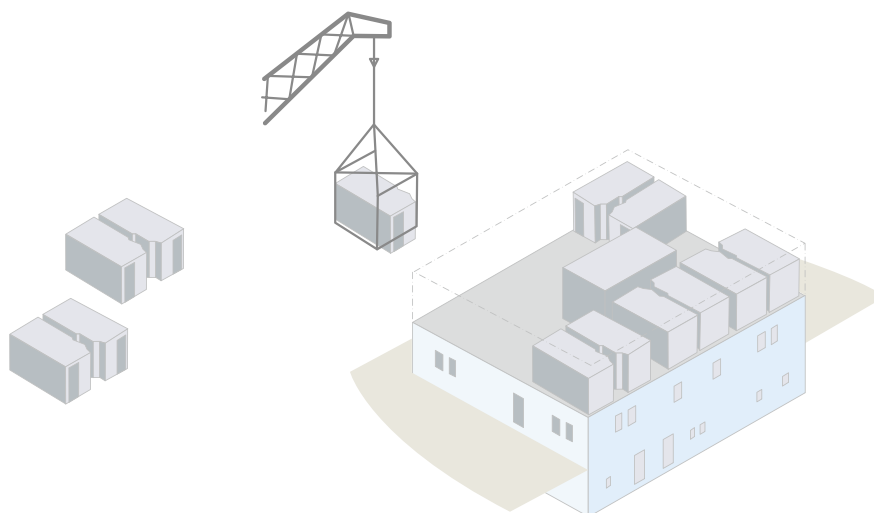


UNIT CABIN  
CONVENTIONAL CABIN



## Advanced Prefabricated System

The consistency of its expertise is one of STACO's major assets. Boasting a well-known capacity to adapt to each case, however different and ever changing, in the most varied sectors imaginable, the group has succeeded in making optimum use of its skills and resources to propose highly innovative solutions. STACO can, therefore, answer the growing need from companies for flexibility, and offer imaginative solutions in the trend towards the outsourcing of non-strategic functions with in their business activity.



## Custom-Engineered Prefabricated Cabin Systems

STACO's skilled team of engineering and design professionals thoroughly evaluates each custom enclosure request. A Prefabricated Cabin System is designed and a preliminary dimensional drawing is generated. Our Designers often work directly with the Shipyard and Owner of the ship being enclosed to ensure all aspects of our design meet their requirements. In this field, STACO supports its client's idea with solutions, which are tailored, flexible and based upon the modular concept and flexibility.



## Optimum Space Use

Much space can be saved with our modular systems. Our Prefabricated Cabin System, for instance, needs only one junction box required by conventional system. The individual components can be adapted flexibly to the particular functions and working conditions. In this way, working procedures can be easily and cost-efficiently linked and simplified. Space, Time, Cost are a company resource just like human and technological resources.

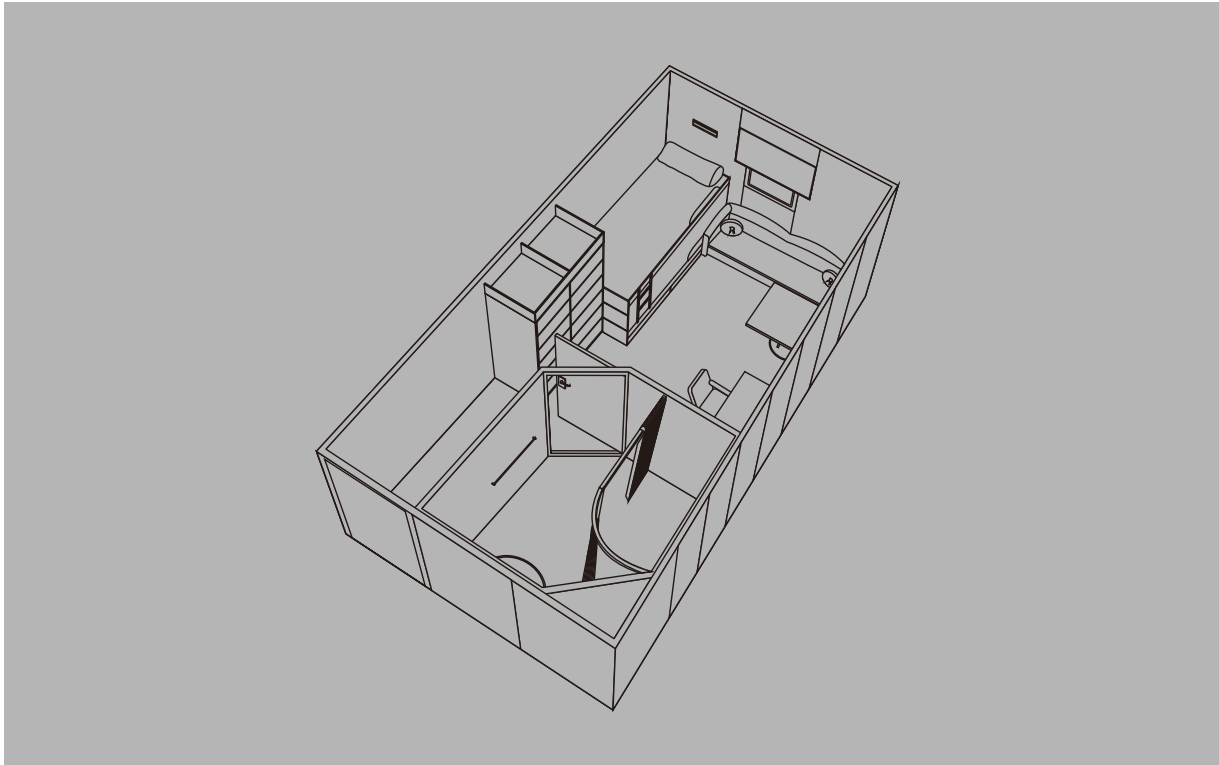
Over and above simply making a building available, STACO offers its clients a total service including design, production, maintenance, and associated services.



## Installation

### Description:

Prefabricated Cabin Units are factory-built staterooms in which panels – whole walls with windows, doors, wiring, and outside siding – are transported to the site and assembled. Panels are made from mineral wool with PVC laminated steel plate and structural membrane. The panels are lightweight and already filled with insulation when they arrive on the site. The Prefabricated Cabin Units must meet the World of Marine Classification Rules of where they are fabricated.



### Advantages :

Prefabricated Cabin Units are built by skilled carpenters, plumbers, and electricians in an ideal work environment, enhanced by state-of-the-art equipment. This results in a speedier building process, higher precision, customization and design flexibility, and reduction of building materials to be exposed to the elements. The combination of these factors results in faster on-site completion than stick-built method.

Another advantage in using any of the degrees of prefabrication is that builders have all the components for a new cabin delivered to the site on truckloads, which eliminated having to order long list of materials, store and keep inventory of numerous deliveries from number of suppliers. The time required for ordering, storing and securing the materials is greatly reduced. Cleanup time and waste-hauling as also substantially reduced. Additionally, the quality and suitability of materials and design of the cabin are assured in easily controlled at the factory before working on the stateroom has begun.





# INTERIOR FURNISHINGS



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

Unit Cabins

**Interior Furnishings**

Modular Systems

Marine Engineering

Onshore Plants





# INTERIOR FURNISHING

Interiors on turnkey basis can be designed by our holding Company, SHINHWA Intec on specific requests to STACO from Clients.

SHINHWA Intec has already designed and executed Interiors on turnkey basis for many shipbuilding projects.

SHINHWA Intec is also producing and supplying through STACO a large range of products such as Furniture in various materials such as metal, wooden, aluminum & combinations of wood & metal, Curtains & Roller Blinds (with or without Hizen), Upholstery,

Windows and Scuttles, Fabrics with various patterns, pop arts & pictures, Glazed Wall Corridors, special items such as specially made Pilot Chairs etc. All the products are lightweight and are fire rated with class approvals as required.



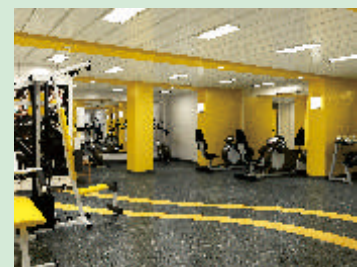
Wooden Furniture  
Aluminum Furniture  
Metal Furniture  
Combination; Wood and Metal  
Catering Furniture: Stainless Steel Furniture

Window  
Aluminum/steel/Stainless steel  
Window & Scuttle  
A60/A0/B15 class fire rated window  
Curtain  
Cloth Curtain/Roller Blind/Upholstery  
Fire rated Class approval





# Interior









# Galley & Laundry



STACO has many years of in-house experience in designing, supplying and commissioning high-quality Galleys and Laundries. Lay-out and training is also part of our services.

STACO provides complete turnkey services to shipyards and owners who are building Galleys and Laundries, The pre-fabrication provides many benefits such as reduced workloads & installation times, quality control and testing on site.

Our typical products in Galley may include: all food processing and cooking equipment, Wash ware machineries, Refrigerators, Stainless steel furniture, Bar counters, Buffet counters, Hoods and canopies, Stainless steel panel system etc.







# MODULAR SYSTEMS



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

Unit Cabins

Interior Furnishings

**Modular Systems**

Marine Engineering

Onshore Plants

# MODULAR SYSTEM

## Prefabricated Building System

**CHS system:** – CHS system is a comparatively new method to construct a building. This technique has been certified by the Ministry of Land, Airport & Maritime Affairs, Korea as an “Industrialized Housing System” which is fully pre-fabricated in STACO factory and then installed at site through an “Infill method” as a one room, two room, three room, office room, studio apartment or a dormitory as per the Client requirements..

**Modular Housing System:** Each type of module is produced in the STACO factory before they are dispatched to site. These prefabricated modules would then be stacked up and assembled at site. This helps in reducing construction time for a building while tremendously reducing the project costs.

**Bathroom Units:** Bathroom Units are innovatively designed while being practical for long term usage. The standard STACO bathroom units are the SSU-1515 (A&B); Unit SSU-1218 & Unit SSU-1219 but can also be customized as per the Client requirements. These high quality bathroom units can be installed conveniently at site.

**Capsule Type Modular System::** The capsule is an independent completed unit. It reduces the construction time while maintaining highest quality and testing processes. This system is generally applied in Hotels, Guest Houses, Pensions or similar constructions for maximizing commercial gains through mass production of such capsule type modules

**Container Type Modular System:** A specially designed Modular Unit is the Container Living Quarters solution where a standard Container of 20 ft. is converted into a house for 1 ~ 4 persons.

**Outdoor Type Modular System:** These are especially for tourists who are looking for recreational and exciting travels in isolated places without much infrastructure. The outdoor constructed modules provide these tourists a comfortable accommodation in Forest Parks, Beach Parks, countryside Pensions etc.

**Prefabricated Houses:** It is a simple housing system without using any concrete or beams, the house stands with pre-reinforced and cut panels with cuts made in advance for assembly. This construction is suitable in areas where there is no infrastructure such as on mountains, mine areas and country sides. STACO always suggests optimized designs and methods of utilizing the available land spaces by the above products which are certified by credible third parties for quality while offering the most reasonable and competitive pricing to our Clients. The established STACO R&D Center is fully involved at the start of each project up-to its successful completion providing useful advice and practical guidance to overcome any technical problems that may arise during the development and execution of the challenging projects.



# PREFABRICATED BUILDING SYSTEM

Dormitories, hotels, urban house, etc..

The residential housing that needs fire resistance, thermal insulation, equipment and securing excellent performance such as to meet electricity, safety eco friendly space and comfort. Possibility of variability living space and standardization with factory production of refractory, insulation wall and kitchen, furniture, bathroom. Technology and shortening the construction period through the integrated structure of a composite construction method, it is possible to maintain uniform quality and cost savings realized.

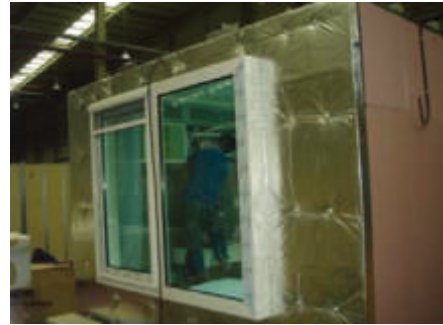






# Assembling Process

## Prefabrication



## Transportation



## Loading



## Setting





STACO is now aiming for the global leader in interior industry based on all its employee's efforts and accumulated technologies with the philosophy of reliance, creation and responsibility.

STACO also keeps the ethical management and trying environment preservation for the next generation. STACO, We have been and will devote our human resources and technologies to supply high quality products and services for customers world wide. Thereby it contributes to making a better global society.





# Construction Process

Working for Base structure



Working for Unit Toilet



Working for Wall panel



Working for Floor



Working for Windows



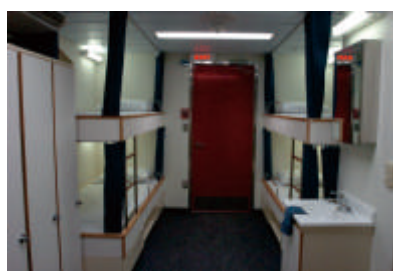
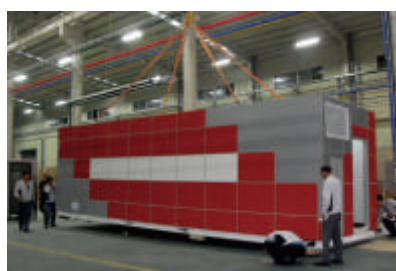
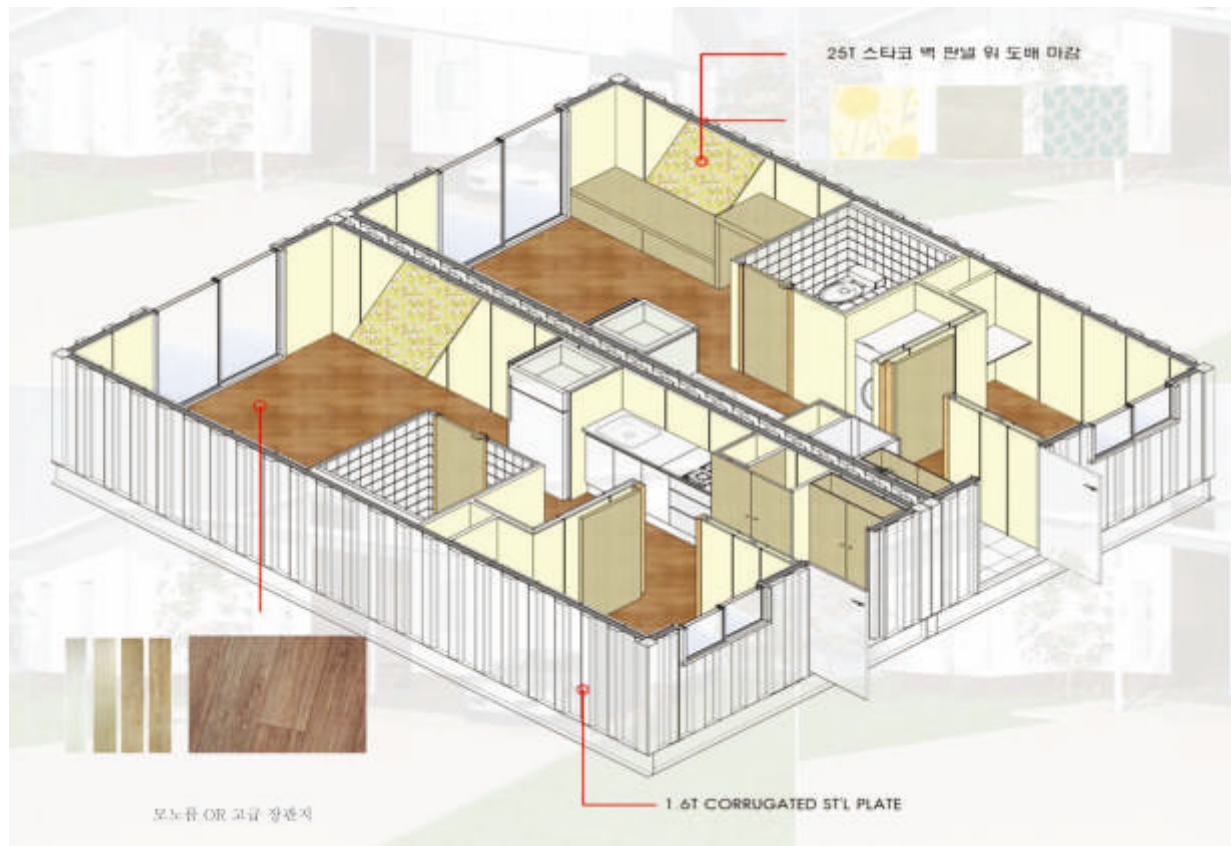
Working for Roof



## Exterior



# Container Module







# MARINE ENGINEERING



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

Unit Cabins

Interior Furnishings

Modular Systems

**Marine Engineering**

Onshore Plants

# MARINE ENGINEERINGS



## Service

- Joinery
- Interior Furnishing
- HVAC
- Plumbing
- Steel outfitting for accommodation
- Electrical and electronic Systems
- Machinery and systems



All members of STACO's engineering team are working to achieve customer satisfaction and deep impression with excellent technology and execution. STACO, a reliable partner, will be a new solution for our customer's more abundant future.



New creative technology on the ocean, Excellent technology and know-how which are the assets of STACO are rapidly progressing is carried out according to related rules and customer requests basically, and each drawing work is performed by specialist. All design is carried out systematically according to the approved drawings, and every project is completed with perfect teamwork to create a comfortable space from installation to finish.

# ONSHORE PLANTS



Wall Panels

Ceiling Panels

Unit Toilets

Marine Doors

Floating Floors

Furniture

Unit Cabins

Interior Furnishings

Modular Systems

Marine Engineering

**Onshore Plants**

Glasswool Panel  
Mineralwool Panel  
Urethane Panel  
E.P.S Panel

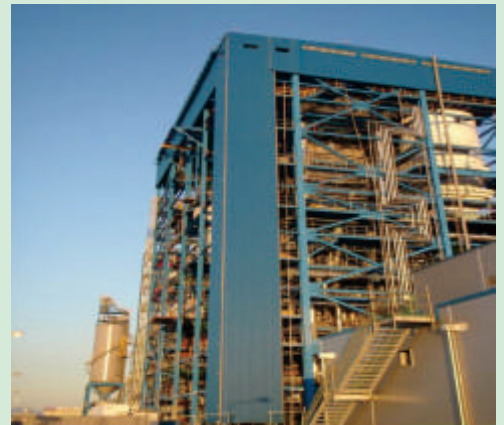
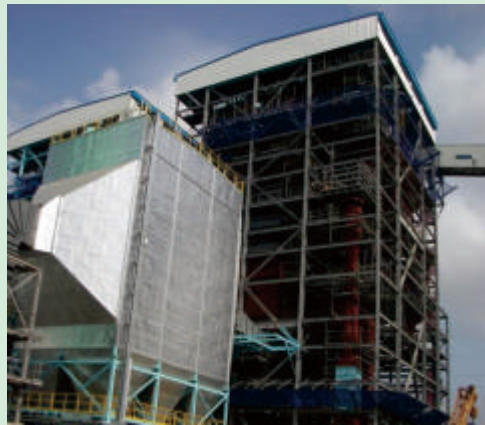


# ONSHORE PANELS

The purpose of Onshore Plants Enclosure Panels is to improve the quality of life using the highest quality advanced building materials through development of new technology.

These Enclosures Panels are precisely manufactured using optimum quality materials with the help of ultra-modern machines.





These are appreciated among clients for attributes like low maintenance, long service life and superior finish. Owing to their good insulation properties and high strength to weight ratio, these panels are very useful. STACO gives assurance of accuracy, durable finish and high quality of these Enclosure Panels which can be widely used for indoor and outdoor installation.





### Headquater

6, Sinhang 7-ro, Jinhae-gu, Changwon-si, Gyeongsangnam-do, Korea.

Tel. +82-70-4221-3180

Fax. +82-55-544-8778

E-mail. [global@staco.co.kr](mailto:global@staco.co.kr)

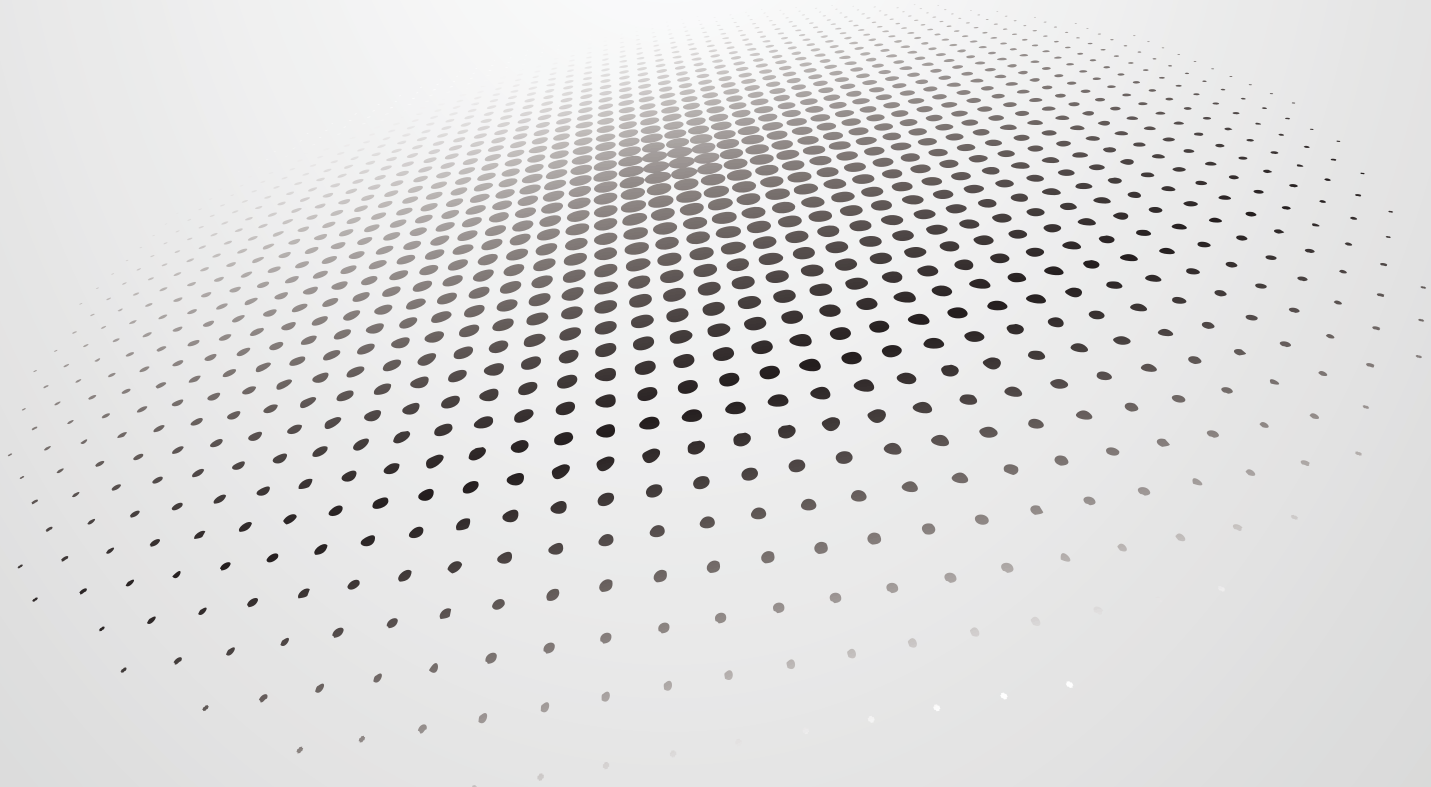
Website. [www.staco.co.kr](http://www.staco.co.kr)

### Noksan Factory

25, Noksansandan 289-ro, Gangseo-gu, Busan, Korea.

Tel. +82-51-831-7000

Fax. +82-81-831-7001





[www.staco.co.kr](http://www.staco.co.kr)