Meta Marine Ceiling system MMC-300

Fire rated. Approved to B-0 and B-15 class.

www.meta.no
Picture showing the mounted ceiling in our standard white color and a bay / room surrounding made with frame panels in special color.
General information Meta Marine Ceilings

Meta Marine Ceiling, **MMC-300**, is a panel ceiling with plank looks.

It is fire rated to **B-0** or **B-15 fire rating classification**. As standard delivered with fire insulation for B-0 class. Added insulation to B-15 fire classification by order.

This product have certificates and approvals for the marine and offshore segments, for example: **DNV: MED-B-5301** and **USCG: 164.110/EC0575/5301**.

The panels are delivered in lengths up to L=5000 mm by your order to fit each room with minimal on-site cutting. Panel lengths of 3150 mm or shorter is preferred.

The ceiling module is 300 mm and the panel width is 275 mm, with a sealed gap of 25 mm between each panel.

The ceiling panels can be delivered unperforated (standard), or perforated, for great acoustic performance. If perforation is needed we normally also glue in our super thin acoustic sheet inlay in every panel for even better acoustic performance.

The ceiling and all visible trims and accessories are made of galvanized, primed and polyester painted steel, or acid proof steel, AISI 3042B.

The non-visible trims and accessories are made of galvanized steel (some of them primed and painted black).

The system could be painted in any RAL or NCS color by your wish, the color is by default our **standard white color**, (RAL 9010).

We have a complete suspension and accessories sortiment and this is included in the ceiling package.

If you need any special profiles, trims, recess boxes or other products made of sheet metal, we custom make this for you, and we will do our best to satisfy all your demands and wishes.

Meta can assist you with the engineering and drawings needed for finishing your project.

We can make all the cut-outs for lighting, sensors, sprinklers and other technical equipment pre punched from the factory, at the correct location for easy and convenient mounting and recessing of this equipment.

Complete mounted system weighs about 8,75 kg / m² based on an entire ship (each room weight/m² will vary by shape and size).
Picture of mounted ceiling in dark grey special color on a bridge deck.

Picture of mounted ceiling, and a special frame solution.
Component list 1

**M604325 CEILING PANEL -UNPERFORATED**

- Fire rated to class B0 or B15.
- 0,55 mm polyester painted galvanized steel or acid proof.
- L=500-5000 mm by order.
- Width=275, module=300 mm.
- Weight: approx 6,1 kg/m².

**M604325 CEILING PANEL -PERFORATED**

- Perforated w. acoustic sheet.
- Fire rated to class B0 or B15.
- 0,55 mm polyester painted galvanized steel or acid proof.
- L=500-5000 mm by order.
- Width=275, module=300 mm.
- Weight: approx 5,6 kg/m².

**M604300 CEILING PANEL -NO GAP**

- Fire rated to class B0 or B15.
- 0,55 mm polyester painted galvanized steel or acid proof.
- L=500-5000 mm by order.
- Width=300, module=300 mm.
- Weight: approx 6,1 kg/m².

**M607325 CEILING PANEL -FRAME PANEL**

- Fire rated to B0 or B15.
- 0,55 mm Polyester painted galvanized steel or acid proof.
- L=500-5000 mm by order.
- Width=275, module=300 mm.
- Weight: approx 6,4 kg/m².
MMC 300

Component list 2

M601040 FIRST AND LAST WALL TRIM

- Carries ceiling on walls parallel with panel length and on all askew walls.
- 0.9 mm polyester painted galvanized steel or acid proof.
- Length=2400 mm.
- Weight: approx 0.76 kg/m.

M608430 WALL CARRIER TRIM

- Carries ceiling on walls perpendicular to panels.
- 0.9 mm polyester painted galvanized steel or acid proof.
- Carrying nabs c/c 300 mm in both directions.
- Length=2400 mm.
- Weight: approx 0.76 kg/m.

M601044 LAST COVER PROFILE

- Covers up all width-cutted ceiling panels.
- 0.7 mm polyester painted galvanized steel or acid proof.
- Length=2500 mm.
- Weight: approx 0.59 kg/m.

M604042 END AND SIDE COVER PROFILE

- Covers short ends of ceiling panels (with or without cut), covers on first wall, covers panel cuts on askew walls.
- 0.7 mm polyester painted galvanized steel or acid proof.
- Length=2500 mm.
- Weight: approx 0.44 kg/m.
## Component list 3

### M607030 JUNCTION CARRIER

- Carry and equalize ceiling weight to the deckhead.
- Suspended from deckhead.
- 0,9 mm galvanized steel.
- Carrying nabs c/c 300 mm.
- Length=2395 mm.
- Weight: approx 0,54 kg/m.

### M607035 JUNCTION CARRIER CONNECTION

- Connects two junction carriers making a straight carrier line and maintains the module of the nabs.
- 0,9 mm galvanized steel.
- Length=180 mm.
- Weight: approx 0,11 kg/pcs.

### M607031 PANEL END TO END CONNECTING PROFILE

- Carries and joins short ends of panels (with butt or gap joint).
- 0,9 mm polyester painted galvanized steel or acid proof.
- Carrying nabs c/c 300 mm.
- Length=2400 mm.
- Weight: approx 1,75 kg/m.

### M604302 PANEL END TO END COVER PROFILE

- Covers gap between short ends of jointed ceiling panels (gap joint).
- 0,7 mm polyester painted galvanized steel or acid proof.
- Length=2500 mm.
- Weight: approx 0,75 kg/m.
## MMC 300

### M604032 / -33 / -34
**ADJUSTABLE HANGER**

-Suspends the ceiling to the deckhead.
-Clips on to M607030 og M607031.
-Shooted or welded to the deckhead.
-Ø4 mm galvanized steel rod.
-Length= (adjusts) 340-480/ 500-640/ 960-1080 mm.
-Weight: approx 0,074 / 0,094 / 0,142 kg/pcs.

### M606001 / -02 / -03
**SELF TAPPING SCREW**

-Secures each panel and mounts cover profiles etc.
-M606001-painted, pan head.
-M606002-painted, torx head.
-M606003-stainless, pan head.
-Length=15, Ø=4,2 mm.
-Weight: ca 0,002 kg / pcs.

### M6103030 / M6106060
**INSPECTION HATCH / SERVICE HATCH**

-Inspection / service hatch, recesses into ceiling panels from above.
-Cut-outs in ceiling panels can be made on site or ready from factory.
-Polyester painted galvanized steel or acid proof.
-Length x width= 300x300 / 600x600 mm.
-Delivered with key locks for security.
-Weight: approx 2,2 / 5,4 kg/pcs.
Illustration of mounted ceiling seen from below with our standard trims and cover profiles. Also one closed hatch with the dimensions 600x600 mm is visible on the illustration.

Picture of mounted ceiling following all contours of the room shape.
MOUNTING DIRECTIVES (Suspension and wall trims)

1. Decide panel mounting direction, ceiling starting wall and ceiling height.

2. Mount M601040 in level, on starting and opposite (last) wall, 25 mm above ceiling height. The 38 mm edge should be horizontal to create the right gap.

3. Click the nabs of M608430 over the edge of M601040 on the starting wall and mount along both side walls, aim the line towards M601040 on last wall. You may use M608430 only, with no M607030 to carry the ceiling weight in corridors and rooms with a less than 1250 mm width.

4. Click also the nabs of M607030 over the first wall M601040 edge (see Cut 1), distance from wall should be max 1200 mm and c/c max 1200 mm, use hangers M604032/33/34 max 300 mm from all walls and c/c max 1200 mm, add M607035 for joining two M607030 together. Use M607031 to join two panels side by side when needed, at room width >5000 mm (or at room width >3150 mm preferred).
Mounting advising step 2 of 3

Panel mounting

MOUNTING DIRECTIVES (Ceiling panels)

1. Start mounting the ceiling panels on the ceiling starting wall, see below cut for mounting procedure. Make sure you mount with at least 25 mm gap to every wall for possibility of expansion in case of fire.

2. When you have mounted your way to the last wall; measure and width-cut the last panel to fit to the room, also here with a gap of at least 25 mm to wall.

3. Secure all panels with at least two screws in the gap between the panels. Make sure you hit into the junction carriers or the wall carriers with the screws.

4. If walls are pitched or the room have different compartments, then cut the panels as well to follow the room shape and bend up the edges of the cutted panels to cover the cut (here you can use our optional end-bend tool).
MOUNTING DIRECTIVES (cover profiles)
1. Mount M604042 between the panels and the walls on first wall and side walls (this is not necessary if the panels are not cut or if you have made your own endbends on cutted panels). Some customers only use this profile when walls are pitched or the panels have been cutted, our standard is to always mount these profiles for a nice uniform look. All cover profiles is to be screwed from below.

2. Mount M601044 on the last wall and in all compartments where the panels have been with-cutted.

3. Mount M604302 below M607031 if you join panels with gap. The M604302 profile is not used if you butt-join the panels.

4. See Cut 1-6 on side 10 in this brochure for better understanding.

Picture of mounted ceiling in galley.
Hatch mounting and general guidance

HATCH MOUNTING DIRECTIVES
1. Choose the hatch size you need 300x300 or 600x600 mm. Dimension 200x200 mm or special dimensions upon request. Hatch can be integrated from the start or after mounted where needed.

2. The ceiling panels holding the hatch can be delivered ready cut from the factory for perfect fit or it could be cut on site. If you cut on site leave some material for end bending of the cutted edges upwards. Cut on the end that point towards wall, not the more visible edge towards the hatch.

3. Mount the shortened / cutted panels on one side of the hatch first to have the possibility to get the hatch above the ceiling.

4. Mount the hatch with its mounting nabs over the ceiling panels.

5. Mount two extra pieces of M607030 over the hatch, by screwing them from below (cut away the nabs of the junction carrier before screwing) and add four pcs of adjustable hangers to the deckhead.

6. Mount the panels on the other side of the hatch and secure the hatch and recently mounted ceiling panels with screws.

7. If the hatch is to be placed where the ceiling carrying M607030 is running, just cut the carrier on each side of where the hatch should be placed and add extra hangers in the ends of the junction carriers on both sides.

GENERAL GUIDANCE
1. The weight of only the suspension system is about 2,45 kg / m², the weight of the complete mounted ceiling is about 8,75 kg / m².

2. The adjustable support hangers is to be welded or shooted to the deckhead. If shooted use for ex. Hilti tools such as: “HILTI DX 460” and plug ”X-EM6H-11-9-FP8” or ”HILTI DX 450” and plug ”X-EM-6-11-12-P12”, see www.hilti.com

3. When cutting ceiling panels, use a sheet metal nibble cutter for a nice cutted edge. When cutting the trims and profiles it is often enough with plate shears.

4. For best result when cutting the length of the trims and cover profiles always cut corners in mitre for a seamless look.

5. Panel end-bending tool can be delivered upon request.

6. Always maintain a gap of at least 25 mm to each wall for the possibility for ceiling to expand in case of fire.

7. Use clean white cotton gloves when mounting the ceiling panels to avoid spots, stains and finger-marks.

8. This ceiling system should always be mounted by highly skilled marine ceiling professionals doing their best workmanship for the perfect result.

9. Contact Meta if you have any questions regarding the product or mounting.
MMC 300

Picture of ceiling produced of acid proof steel in a galley area.

Picture of our standard white ceiling.
Sound absorption

The graph represents the possible room to room airborne sound reduction through the ceiling, tested according to ISO/DIS 140/9.

The graph represents the possible sound absorption coefficient for perforated ceilings, tested according to ISO R 354.

Fire class:

**B-0:** Meta marine ceiling system composing of panels with 20 mm insulation on the inside is approved for use as a B-0 fire rating classification.

**B-15:** Meta marine ceiling system composing of panels with 20 mm insulation on the inside and 50 mm above the the panel is approved as B-15 fire rating classification.

**A-30:** When the ceiling is suspended at least 280 mm below the structural deck, the whole construction may be regarded as fire retarding division of class A-30.
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