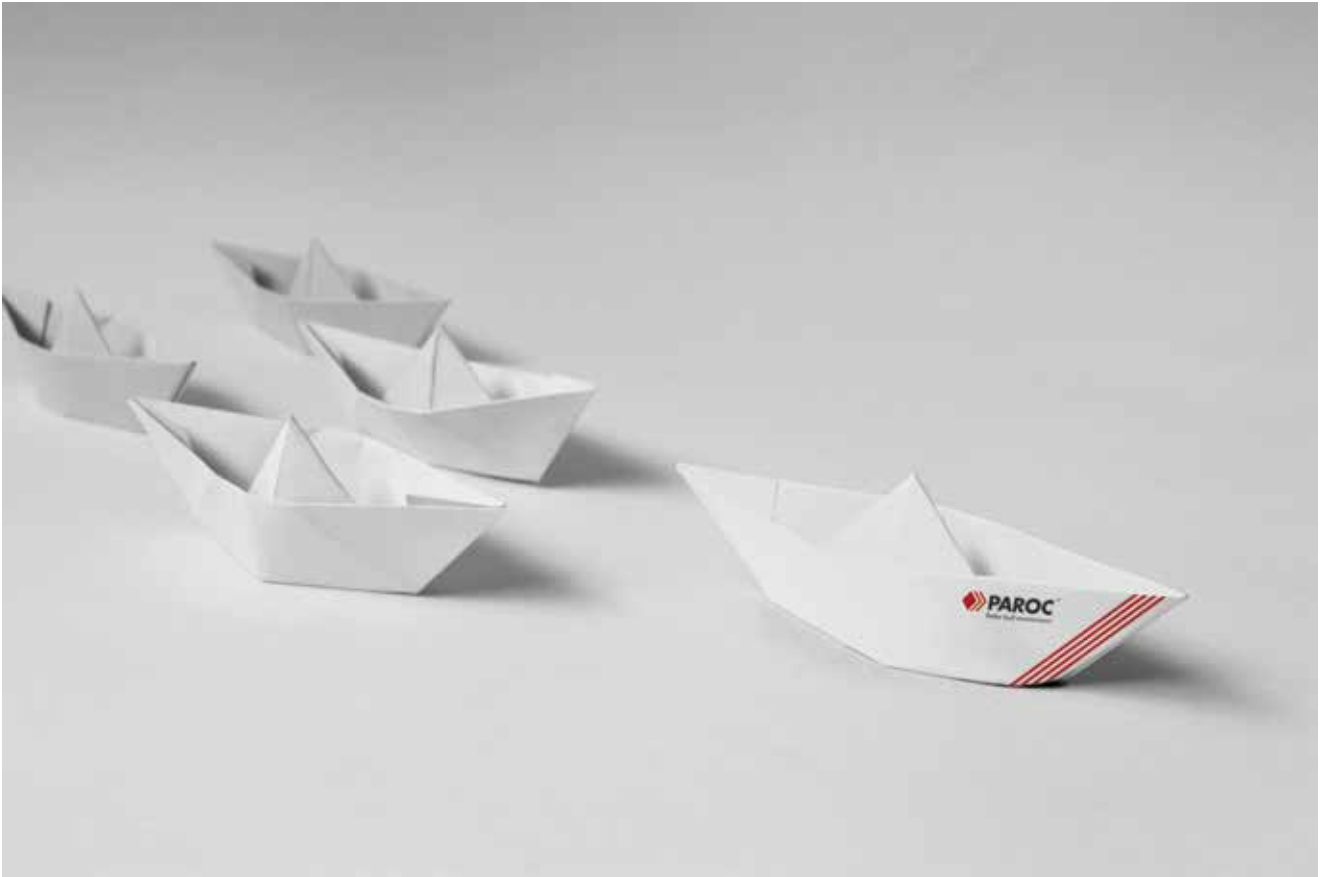




**NEW**  
**PAROC<sup>®</sup> MARINE**  
**LIGHTWEIGHT SOLUTIONS**



# LOW ENERGY CONSUMPTION WITH NEW LIGHTWEIGHT SOLUTIONS

Requirements on the shipbuilding and offshore industry are becoming increasingly stringent worldwide, both from economic and ecological perspectives. Ship owners, shipbuilders, naval architects and marine engineers have all prioritized a sustainable approach, including a focus on environmental protection, operational efficiency, resource conservation, safety and comfort. Paroc Light Marine solutions are suited for all marine and offshore projects.

## NEW FAMILY OF LIGHTWEIGHT SOLUTIONS

Paroc Light Marine are the new lightweight solutions for fire insulated decks and bulkheads in aluminium and steel constructions. The solutions weigh less, yet provides high fire protection, as well as good thermal and sound insulation properties.

## PAROC STONEWOOL

PAROC® Stonewool™ is sustainable, high-quality insulation with superior product properties and meets demands from the marine and offshore industry in terms of sustainability, fire safety and comfort.



0809

## BENEFITS

- Financial benefits
- Lower operating costs
- Reduced weight
- Increased speed
- Lower fuel consumption
- Decrease in emissions

# A-CLASS STEEL DECKS AND BULKHEADS

Paroc's lightweight solutions for A-class steel decks and bulkheads can be done with one product or combining slabs and mats. The density and the thickness is always the same, no matter which products are used. The new solutions are easiest to design and install on market.

## EASY DESIGN

Designing and installing A-class steel solutions with PAROC Marine Navis products is very easy. The new solutions offer designers a full set of products to choose from. **PAROC Marine Navis Slab 60**, **PAROC Marine Navis Mat 60** and **PAROC Marine Navis Wired Mat 60** are all approved for A-class steel solutions. The density and thickness of the products is always the same no matter which product is used in the construction.

With a weight reduction of up to 40% this solution creates new opportunities for the specifiers in terms of lightship and deadweight tonnage.

**40%**  
**LIGHTER STEEL SOLUTIONS**

## ADVANTAGES LIGHT MARINE A-CLASS STEEL SOLUTIONS

- Up to 40% weight reduction
- Only 1 density - several installation possibilities
- Easy design
- Efficient logistics
- Always the same thickness on stiffeners
- Flexible installation

## MULTIPLE COMBINATIONS

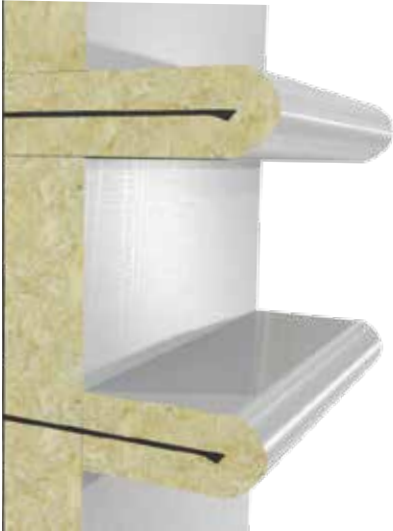
All below mentioned products are approved for A-class steel decks and bulkheads. Products can be used in different combinations, also combining slabs and mats in same application.

- **PAROC Marine Navis Slab 60** (can be covered with facings: AluCoat, G1, G2, G3, G4, G7 and LF1)
- **PAROC Marine Navis Mat 60** (facings: AluCoat)
- **PAROC Marine Navis Wired Mat 60** (facings: AluCoat, G1, G2, G4, G7 and LF1)

IMO 2010 FTPC				
Class	Nominal density kg/m <sup>3</sup>	level / stiffener		Sound reduction Rw (C, Ctr), dB
		Insulating thickness, mm	Weight, kg/m <sup>2</sup>	
<b>STEEL DECKS - NAVIS SLABS OR MATS</b>				
A60	60	50/30	3,0/1,8	47 (-1, -6)
A30	60	30/30	1,8/1,8	46 (-2, -6)
<b>STEEL BULKHEADS - NAVIS SLABS OR MATS</b>				
A60	60	70/30	4,2/1,8	47 (-1, -6)
A30	60	40/30	2,4/1,8	47 (-2, -6)

**ONLY ONE DENSITY - SEVERAL INSTALLATION POSSIBILITIES**

Mats and slabs can be used in the same installation in various combinations. The density and the thickness is always the same, no matter which products are used. Below are just a few examples.



Mat on stiffeners, slabs between stiffeners

**ONLY 1  
DENSITY NEEDED**



Slab installation



Wired mat installation



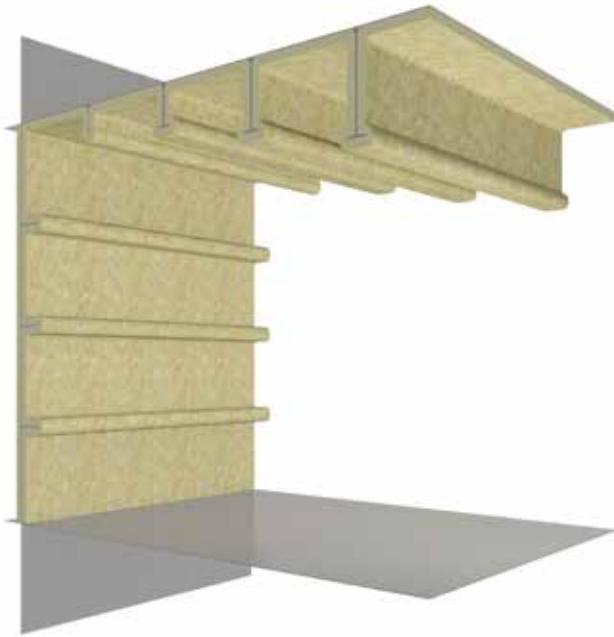
Alternative stiffener installation



Continuous wired mat installation

# A60 ALUMINIUM DECKS AND BULKHEADS

Paroc Marine lightweight A60 solutions are tested and approved for 4 mm and 6 mm thick aluminium decks and bulkheads.



# 40%

**LIGHTER ALUMINIUM SOLUTIONS**

## ADVANTAGES LIGHT MARINE A60 ALUMINIUM SOLUTIONS

- 40% lighter solutions
- Solutions for 4 mm and 6 mm aluminium constructions
- All one-layer solutions
- Also for restricted bulkheads
- Easy design
- Efficient logistics
- Flexible installation

## REMARKABLE WEIGHT AND COST SAVINGS

Paroc lightweight solutions for A60 aluminium constructions enable significant weight and cost reductions in the ship building industry. The total weight of the construction decreases significantly, which brings huge savings in running costs. Taking into account the price of the aluminium the total cost savings are remarkable.

PAROC Light Marine A60 aluminium solutions are tested and approved for 4 mm and 6 mm thick aluminium constructions. There is a solution also for restricted bulkheads.

The products approved for A60 aluminium decks and bulkheads are:

For 6 mm aluminium constructions:

- **PAROC Marine Navis Mat 60** (facing: AluCoat)
- **PAROC Marine Navis Wired Mat 60** (facings: AluCoat, G1, G2, G4, G7 and LF1)

For 4 mm aluminium constructions:

- **PAROC Marine Navis Mat 90** (facing: AluCoat)
- **PAROC Marine Navis Wired Mat 90** (facings: AluCoat, G1, G2, G4, G7 and LF1)

**ONLY ONE DENSITY, ONE THICKNESS AND ONE INSULATION LAYER NEEDED**

Paroc lightweight solutions for 6 mm thick A60 aluminium constructions are based on only product **PAROC Marine Navis Mat 60**. Insulating thickness on both decks and stiffeners is 60 mm which makes the design less complex. The installation work is easier with a lighter product and only one insulation layer is needed for all constructions. This solution is available also for restricted bulkheads.

**ONLY 1 DENSITY, THICKNESS, LAYER**



<b>A60 ALUMINIUM BULKHEAD / BULKHEAD RESTRICTED</b>	
Insulating thickness on level and on stiffener (mm)	60
Weight kg / m <sup>2</sup>	7,2 / 3,6

<b>A60 ALUMINIUM DECK</b>	
Insulating thickness on level and on stiffener (mm)	60
Weight kg / m <sup>2</sup>	3,6

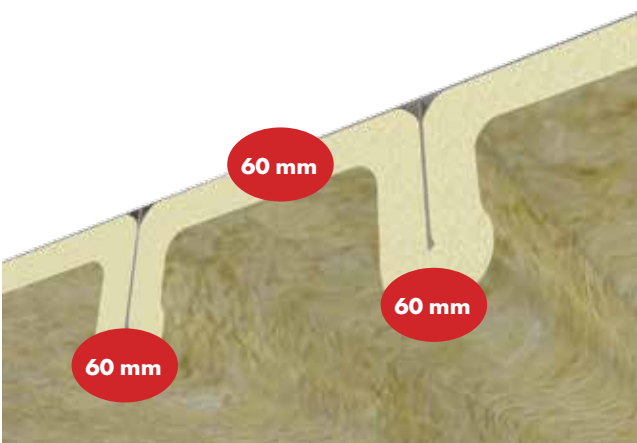
**A60 ALUMINIUM SOLUTIONS FOR 4 MM ALUMINIUM CONSTRUCTIONS**

Paroc lightweight solutions for 4 mm thick A60 aluminium constructions are based on only one product **PAROC Marine Navis Mat 90** in two thicknesses; 60 mm on decks and 70 mm on bulkheads.

<b>A60 ALUMINIUM DECK</b>	
Insulating thickness on level and on stiffener (mm)	60
Weight kg / m <sup>2</sup>	5,4

<b>A60 ALUMINIUM BULKHEAD</b>	
Insulating thickness on level and on stiffener (mm)	70*
Weight kg / m <sup>2</sup>	6,3

\*on both sides



# B15 EXTENDED WALL

The new 40% lighter solution for B15 wall extension is based on one single product; PAROC Marine Navis Slab 110 AluCoat, 30 mm.

## EASY DESIGN

The target in the development work of the new lightweight wall extension solution was to make it as easy as possible to design and also quick to install. The new solution is independent of the wall support profiles. The product used for the solution, **PAROC Marine Navis Slab 110 AluCoat** is rigid enough to make a perfect wall extension. However, it is only 30 mm thick, which means that penetrations can be done easily.

## QUICK INSTALLATION

Installation is quick because only one product in one thickness is needed for the wall extension construction. Also, for B15 wall extension same pins and washers can be used as for other solutions and that makes installation convenient.



Paroc is one of Europe's leading manufacturers of energy-efficient and fire-proof insulation solutions. Throughout our 80-year history, we have earned a reputation for high product performance, technical expertise and sustainability among builders of single-family homes, architects, contractors, dealers and industrial builders.

The cornerstones of our operations are customer and personnel orientation, constant innovation, profitable growth and sustainable development. Paroc products include building insulation, technical insulation, marine and offshore insulation, and acoustic products. The products are manufactured in Finland, Sweden, Lithuania, Poland and Russia. Paroc has sales and representative offices in 14 European countries.



Building Insulation offers a wide range of products and solutions for all traditional building insulation. The building insulation products are mainly used for the thermal, fire and sound insulation of exterior walls, roofs, floors and basements, intermediate floors and partitions.



Sound absorbing ceilings and wall panels for interior acoustic control, as well as industrial noise control products, are available in the range.



Technical Insulation products are used for thermal, fire and sound insulation in HVAC systems, industrial processes and pipe work, industrial equipment as well as shipbuilding and offshore industry.



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**PAROC OY AB**  
Technical Insulation  
P.O. Box 240, FI-00181 Helsinki, Finland  
Tel. +358 46 876 8000  
technical.insulation@paroc.com  
www.paroc.com

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