







## QUALITY BASED ON EXPERIENCE

THE CRAMM HLS HELIGRID IS AN ANCHORING SYSTEM FOR HELICOPTERS THAT ENABLES PILOTS TO LAND SAFELY IN ALL CONDITIONS.



Meeting the most stringent NATO requirements the system can be used for various types of helicopters, including defense and rescue helicopters. It prevents movement of the helicopter on the flight deck under the influence of large waves and strong side winds, and allows the helicopter to land and take-off safely while sailing at sea.

Cramm HLS offers authority on all matters relating to the safe and

compliant operation of helicopter landing areas - onshore, offshore and afloat. We use all our expertise, know-how and high-quality materials to meet the demands of our clients to the fullest extent and satisfaction.

Our motivated employees and highly qualified technical staff play a key role in delivering the superior products and optimal service for which Cramm HLS is renowned.

#### Market leader

Heligrid is produced by Cramm HLS, sister company of Cramm Yachting Systems, the global market leader in the design, development and construction of mechanical products and hydraulic equipment for the mega yacht industry. Cramm HLS makes life very easy for clients by realizing the complete trajectory from design and production to installation and commissioning.





### MARKETS

CRAMM HLS' HELICOPTER LANDING GRID (HELIGRID) ALLOWS ANY HELICOPTER OR ANY UAV FITTED WITH A HARPOON TO LAND OR TAKE-OFF FROM A HELIDECK IN FULLY SAFE CONDITIONS, WITHOUT ANY ASSISTANCE, EVEN IN ROUGH SEAS AND BAD WEATHER.







The advantages of Heligrid which are so important for the offshore, maritime and naval industry, are applicable for land based grids as well. It can be installed on almost every existing building or newbuilding. Being practically maintenance free, Heligrid offers low costs of ownership. Cramm HLS offers with Heligrid a turnkey solution, custom made to meet any requirements of our clients, either safety wise or architectural wise regardless if it's on sea or on land.



# **HOW IT WORKS**

THE HELIGRID IN COMBINATION WITH A "HARPOON RAPID SECURING SYSTEM" IS A SYSTEM WITH THE AIM SECURING A HELICOPTER TO THE FLIGHT DECK IMMEDIATELY AFTER TOUCHDOWN BY ENGAGING AND LOCKING OF THE HELICOPTER HARPOON ONTO A LANDING GRID IN THE FLIGHT DECK.







### MEETING THE HIGHEST STANDARDS

The pilot can land on the Heligrid the same way as on land. While landing, the harpoon automatically latches onto the helicopter landing grid. The helicopter is then pulled toward and fixed onto the helicopter deck. In this fixed position, the helicopter follows the movement of the vessel without the risk of sliding or toppling. The pilot can now safely shut down and leave the helicopter together with all passengers.

### Lift-off

While the harpoon is still latched onto the grid, the pilot can start up.

The pilot will then ensure the helicopter has sufficient take-off power to create tension between the helicopter and the landing grid. At the last moment, the pilot disconnects the harpoon from the Heligrid, which is controlled from the cockpit. This allows the pilot to immediately reach a safe distance from the vessel. This makes a major contribution to safety, especially in rough weather conditions.

#### No assistance on deck needed

A major benefit of the Heligrid is that no additional crew is needed on deck during landing or take-off. The pilot can land and take-off safely without assistance or losing time.

#### In-house production

All types of Heligrid by Cramm HLS are entirely produced in-house. With our advanced technical know-how, materials and expert personnel we offer a first-class service approach.





## TECHNICAL DESIGN



THE HELIGRID CONSTRUCTION IS BASED ON THE SUPPLEMENTARY REQUIREMENTS OF STANAG 1276. NEXT TO STANAG 1276, THE COMPLETE DESIGN AND CONSTRUCTION WORK WILL MEET THE SPECIFIC REQUIREMENTS AND NEEDS OF THE MARKET. BY IMPROVING CONTINUOUSLY WE ARE ABLE TO MEET THE HIGHEST STANDARDS EVERY DAY.

### **STANAG 1276**

The design of the Heligrid landing grid is meeting the NATO standards, in accordance with STANAG 1276. The aim of the STANAG 1276 agreement is to enhance the safety of interoperations between NATO helicopters and ships using the harpoon/grid type of the rapid securing system and to prevent the unnecessary development of future systems which would not be interoperable with the existing rapid securing systems.



# THE GRID

OUR DESIGN IS BASED ON THE CHARACTERISTICS OF STANAG 1276, WITH ADJUSTMENTS TO SPECIFIC REQUIREMENTS. SAFETY IS THE MOST IMPORTANT VALUE IN THE DESIGN AND CONSTRUCTION OF THE HELIGRID.

### **Grid design**

The grid is constructed of:

- Top plate dimensions and technical specifications are based on STANAG 1276.
- Foundation differ by type of grid. The design depends on:
  - MTOW (Maximum Take-Off Weight)
  - FOS (Factor of Safety)
  - Scope in use
  - Experience and results of the past
  - Available (new) materials
  - Available (new) production technics

The design is approved for movements of 30 degrees and static usage to windforce: 50 knots - 65 knots without usage of chains.

### Assembly

The assembly of the Heligrid is based on:

- Top plate a thick round grid plate made of stainless steel with a high tensile strength.
- Foundation each type of Heligrid has its own foundation design.

The top plate and the foundation of the Heligrid are linked to each other by the mounting of bolts. The bolts are mounted at the outside of the grid top plate. Spacers to ensure the correct distance between the top plate and foundation (correct space for deck lock system), are placed in the middle of the grid top plate. The required amount of spacers, depends on the Heligrid type.

Mounting - the complete Heligrid (top plate and foundation) will be mounted into the helideck.

### **Delivery condition**

Packed in crates, including lifting brackets, fasteners, installation drawings and manual. Cover plates are optional (various specifications).









Heligrid can be used in almost all (weather) conditions. Even extremely high waves, vessel movements of up to 30 degrees and storm force winds do not affect the functioning and safety of the helicopter.

### **Types**

Through experiences and developments from the past and requirements from today, we have developed different types of Heligrid:

- HLS 3 (MTOW: 3,000 kg)
- HLS 6 (MTOW: 6,000 kg)
- HLS 10 (MTOW: 10,000 kg)
- HLS-HD (Heavy Duty)
- Drones
- Specials

Specials consists of different sizes and shapes, such as small grids for testing facilities and different forms/ shapes associated with limitations in the various flight deck constructions. Depending on the take-off weight of the helicopter, the maximum desired tensile strength and propelling force, you can determine which Heligrid is best suited to your vessel.







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