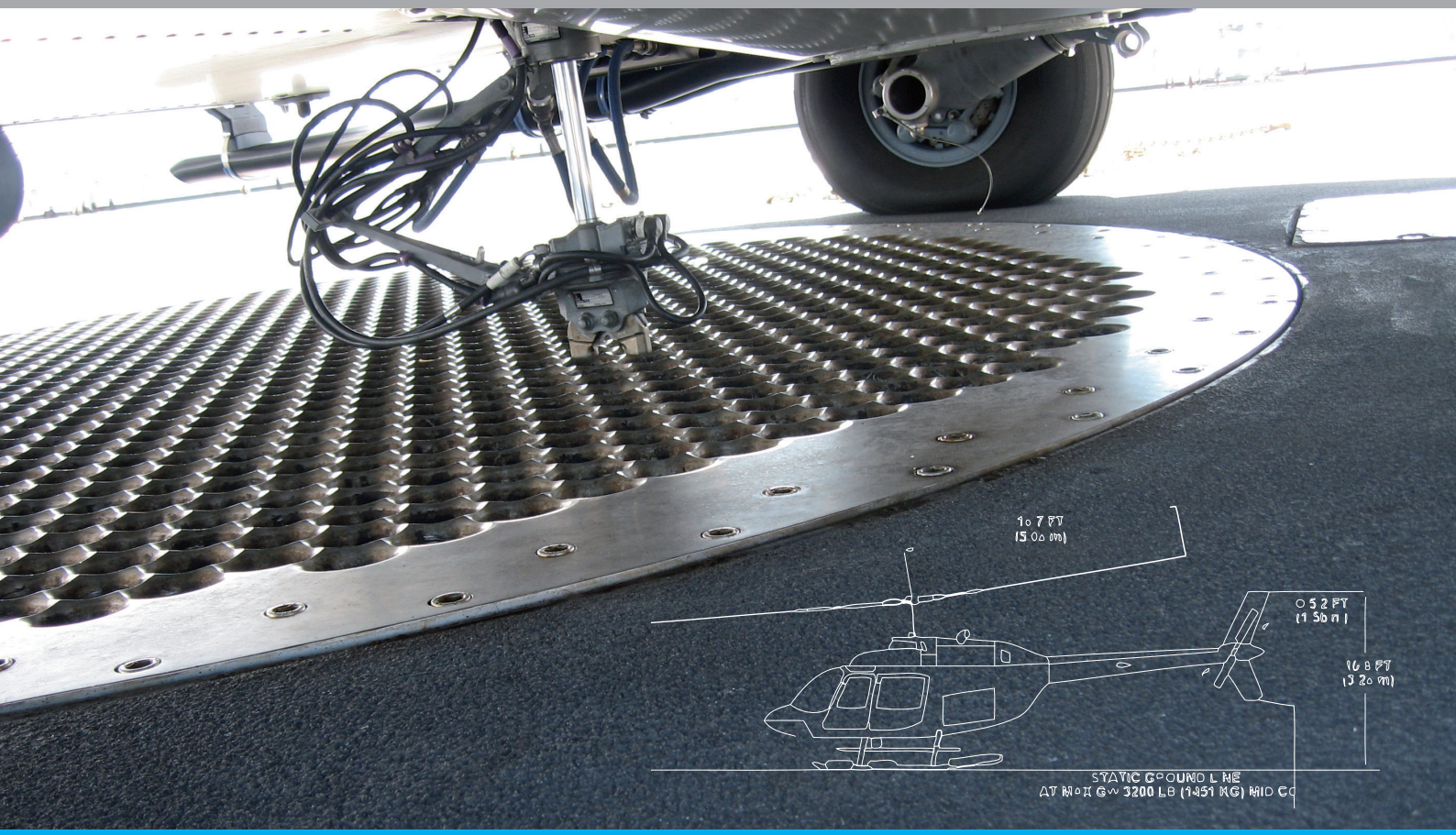
Cramm® HLS



heligrid© HELICOPTER LANDING GRID

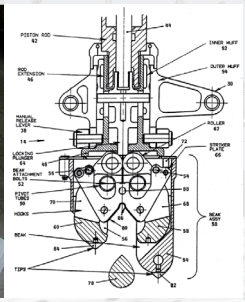
Heligrid

The purpose of the landing grid is to secure a helicopter to the deck of a vessel, using a harpoon or decklock.
During landing the helicopter connects a harpoon into the grid and pulls itself to the deck. In rough sea the helicopter remains stable and fixed to the deck.

Design and construction

The grid plate is designed to have at least the strength to take the upwards force equal to the breaking force of the harpoon or decklock plus a 10 percent safety margin. The harpoon or decklock system has a max pull of 80 kN which keeps operational within the following limits.

Ship movement			Relative wind		
Conditions	roll	pitch	ahead	abeam	astern
Static (Harpoon)	**30 degree.**	**-**	**50 knots** Heavy wind-force [10] 89-102 kilometer/hour @ 10 minutes	**50 knots**	**50 knots**
Static (Harpoon + Chain lashings)	**30 degree.**	**-**	**65 knots** Hurricane wind-force [12] > 117 kilometer/hour @ 10 minutes	**65 knots**	**65 knots**



Outstanding safety by heavy weather and rough seas

Supplementary requirements (STANAG 1276)

Seawater conditions

Maximum temperature:	29 degrees Celsius
Minimum temperature:	- 2 degrees Celsius

Air conditions

Outside:

Maximum temperature:	+ 32 degrees Celsius
Minimum temperature:	- 12 degrees Celsius
Relative humidity:	80 percent @ 32 degrees Celsius

Delivery condition

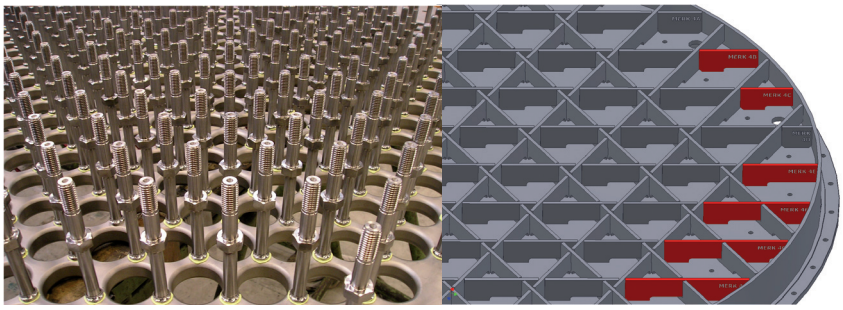
* grid plate of high tensile stainless steel and according NATO requirements
* Substructure for support grid plate included all attachment parts
* Interface information for mounting substructure on ship deck
* Cover plates (optional, various opportunities)
* Included head assembly drawing, calculations, manual

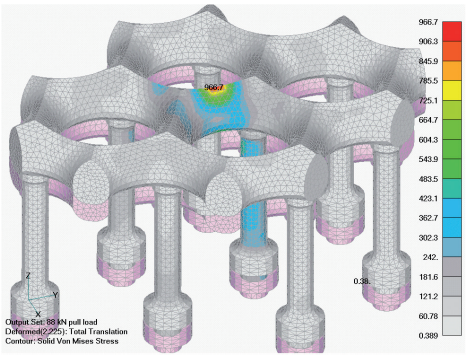
Design

* Design of the landing grid in accordance with STANAG 1276
* NATO standard grid plate

Application

* Compatible with harpoon, deck lock systems. The landing grid is designed
* for various helicopter suitable for NH90, Bell 206 / 407, Eurocopter EC-120 / 145

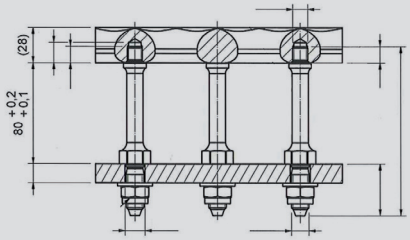




Type	HLS 3	HLS 6	HLS 10	HLS HD
Diameter [mm]	2750	2750	2750	On Request
Weight [ton]	1,6	1,8	2,0	
MTOW [Kg]	3000	6000	10000	
Factor of safety (FOS)	3	3	2	
Helicopter	Bell 206 B3 / L4 Bell 407/427 Eurocopter EC120/ EC135/AS350/ AS355 Agusta AW109/AW119	Agusta Grand Bell 430 Eurocopter AS 365/ AS 565	Agusta Apache Eurocopter Superpuma Sirkorsky Sea King Agusta NH 90 (industrie)	

MTOW = Maximum Take Off Weight (own emtpy weight + passenger & baggage + cargo + total fuel)

Cruise ships | Explorer ships | Oilplatforms | Superyachts | Supply Off shore



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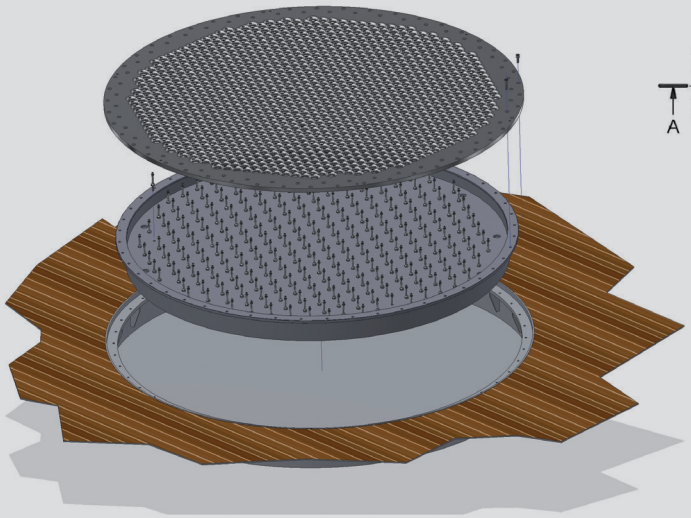

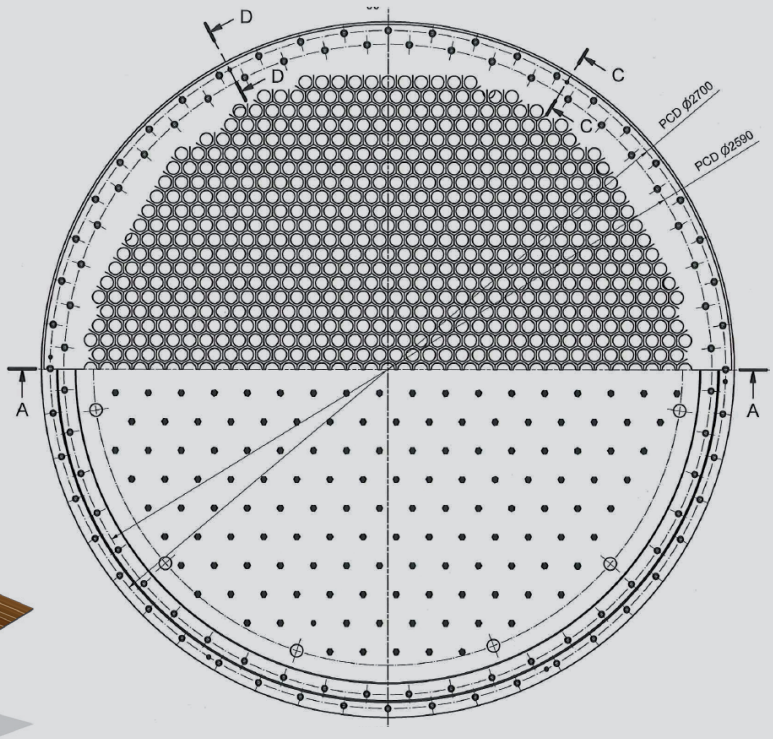

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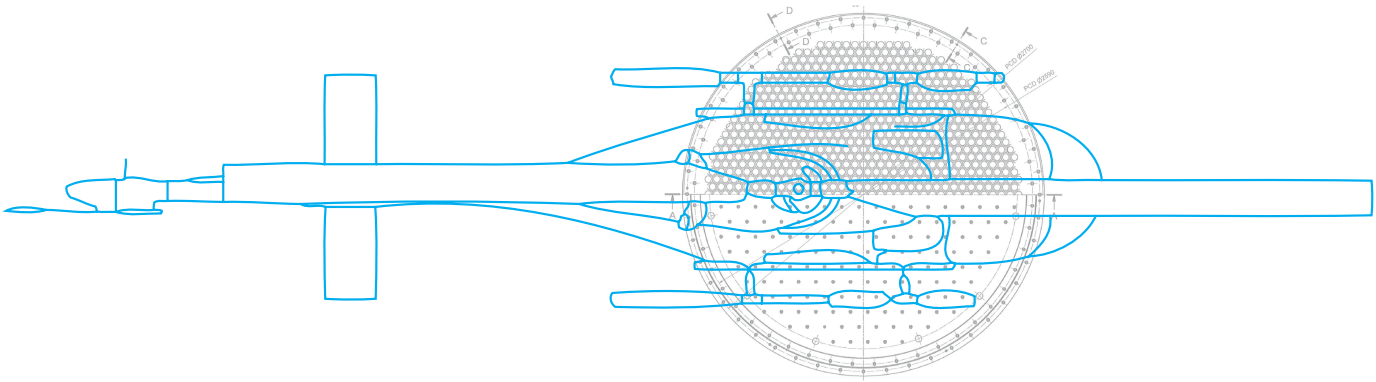

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