

# Helicopter Visual Landing Aid Systems (HVLAS)

Exploring naval lighting solutions





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## Empowering naval excellence with Glamox lighting solutions

Glamox has been a leading and trusted supplier of lighting to the marine and offshore industries. With our long history in the maritime defence and security sector, Glamox is your trusted partner for naval shipyards, system integrators and end users across the globe. We offer unparalleled lighting solutions tailored to a diverse range of naval vessels: from frigates and aircraft carriers to support vessels, patrol boats, and submarines.

Our quality brands within the Navy and Coast Guard segment:



### Experience and expertise

With decades of experience in the maritime defence and security sector, Glamox possesses unique knowledge and expertise essential for meeting the demanding requirements of naval projects. Our solutions are tailored to address the specific challenges faced on naval vessels, ensuring optimal performance in the harshest environments.

### Reliability and compliance

The Glamox product lighting range is built for reliability and adherence to the most stringent EMC, shock and vibration standards for naval applications. Our products are also designed to support night vision goggle operations, enhancing the operational capabilities of naval crews.

### Sustainability and efficiency

In addition to reliability, Glamox prioritises sustainability and energy efficiency in our lighting solutions. By selecting energy-efficient technologies and components with long lifetimes, our lighting systems contribute to reducing energy consumption and operational costs for naval vessels.

## Helicopter Visual Landing Aid System (HVLAS)

### A turnkey LED solution

The Helicopter Visual Landing Aid System (HVLAS) is a flexible modular design meant to provide the best illumination, optical references, and signal indication during helicopter operations on flight decks. The system can be customised to match all helicopter deck requirements, helicopter types and operating modes (NVG Stage III, HIFR, VERTREP, etc.), including Glide Path Indicators, Horizon Reference Systems, Floodlights as well as Flight Deck Lighting.

The HVLA System is designed to meet the highest military standards for flight safety in maritime environments for naval use:

- / A modular system made up of state-of-the-art components, which enables various configurations for different requests on naval and civil vessels
- / The latest technology with high-tech engineering allows us to deliver high-end components
- / Designed and manufactured according to the latest military standards in terms of shock, vibration, electromagnetic compatibility, night vision goggle-compatibility as well as international cross-operation standards
- / Extremely robust and reliable, with low maintenance
- / Glare-free illumination of the flight deck, all lighting fixtures are dimmable
- / An ARCTIC version with heating is also available.



# Our product range for HVLAS

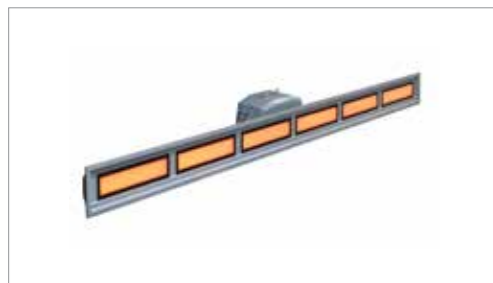
Explore the world of our LINKSrechts-branded products, offering state-of-the-art Helicopter Visual Landing Aid Systems (HVLAS) designed for precision and reliability. The diverse product range offers a variety of colour combinations to suit your needs, and all are Night Vision Goggle (NVG)-compatible, ensuring optimal performance in various lighting conditions.



## HIGPI – Glide Path Indicator

An optical signalling device for the visualisation of the correct glide path during the landing approach of a helicopter onto the ship

- roll-/pitch-compensation +/-30°
- adjustable azimuth angle 90°-270°



## HIHRS – Horizon Reference System

Provides a true horizon reference by driving the roll bar in the direction opposite to the ship's roll

- laterally fixed reference lights
- visualises the roll angle of the ship – +/-35° swivel range horizon bar
- Oil-free gear box which prevents potential oil spills onto the deck



## Flight Deck Module

- **HIDD** – With an integrated Perimeter Light for wide horizontal illumination of the flight deck
- **HIDS** – with a service light for the illumination of the helicopter during boarding or service activities
- **HIDL/HILD** – Projecting a line of light for the illumination of the pilot's eye line without direct installation in the helideck
- **ARCTIC** version also available



## HIA – Stop/Go Status Light

Indication of the flight deck's status to the vessel's crew as well as to the helicopter pilot



## HIB – Edge Light

Marking of the edge of the flight deck and the extent of the landing area for the pilots and crew

- **ARCTIC** version also available



## HIL – Line-Up Light

Marking of the centre-line or pilot-eye line for pilots of approaching helicopters

- different beam angles available
- housing material: stainless steel
- flush mounting installation



## HIH – Flash Light

For use as a homing beacon or wave-off light due to the use of high-performance LEDs

- operation of two Flash Lights possible with a Sync Junction Box
- configurable with single or double flashes in different flash frequencies



## HIH-D – Flash Light

For use as a homing beacon or wave-off light due to the use of high-performance LEDs

- synchronous operation of up to four Flash Lights possible
- internal (independent) or external (PLC) flash trigger
- dimmable



## HIM – Standard Light

A multi-purpose luminaire available in various colours

- obstruction light
- HIFR light (Helicopter-In-Flight Refuelling)



#### HIR – Reference light

Marking of the superstructure and hangar outlines of the vessel

- also suitable for use as a reference light in combination with a horizon bar.



#### HISM – Floodlight

A luminaire with an extraordinarily high illuminance for concentrated spotlighting of individual areas

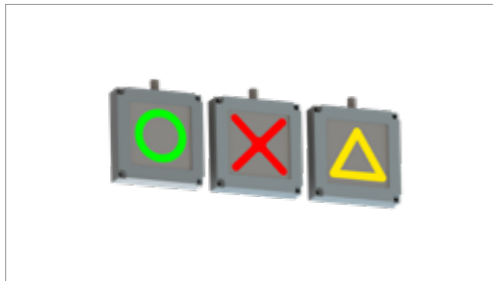
- two separate light circuits
- 30° beam angle
- dimmable



#### HIPBT – Control Panel

A custom-made push-button control panel with a modular design and an additional touch panel computer for further functions like e.g. weather data

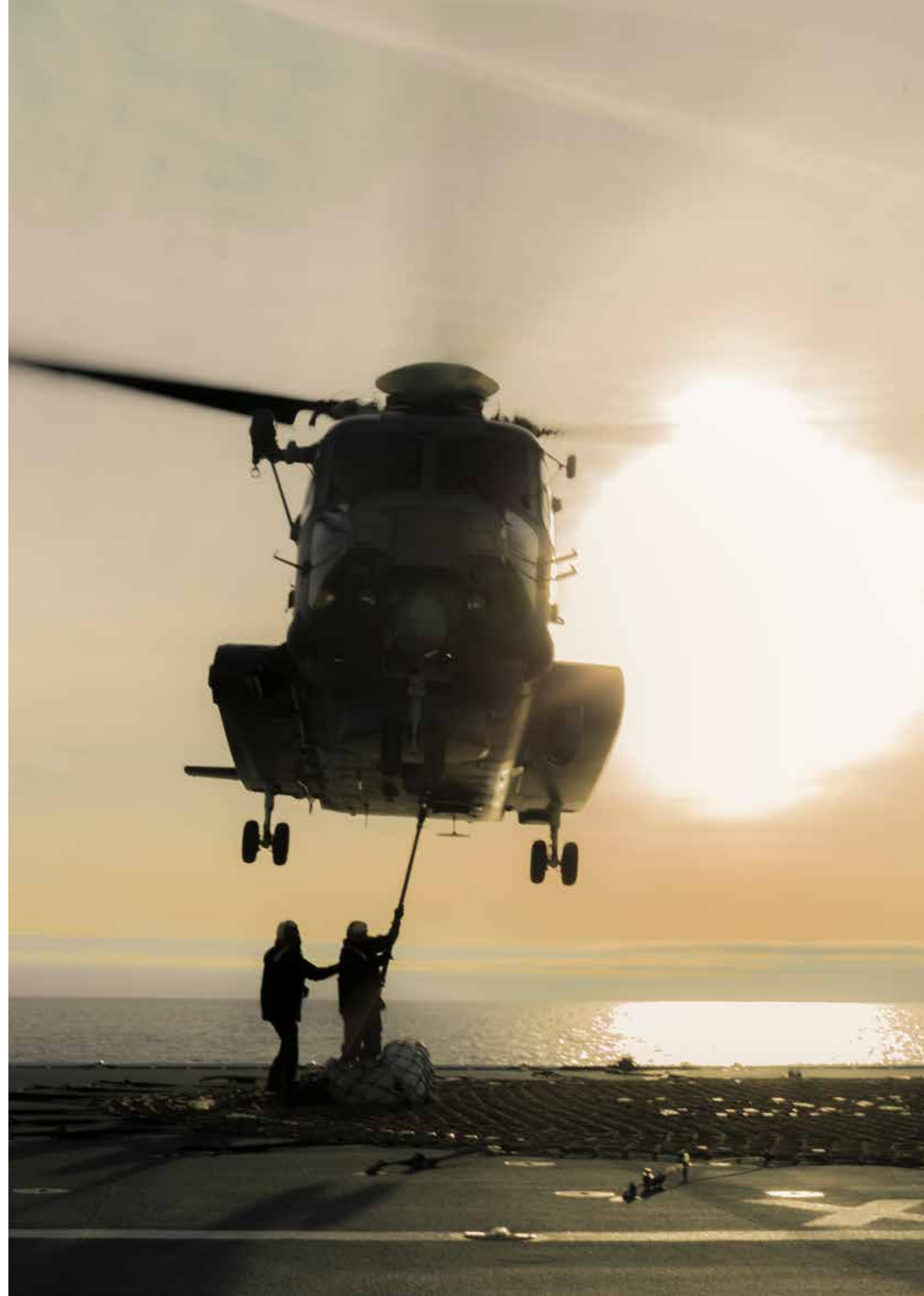
- **HIPBX** - a custom-made push-button control panel with a modular design
- **HIPXT** - touch panel computer control including further functions like e.g. weather data

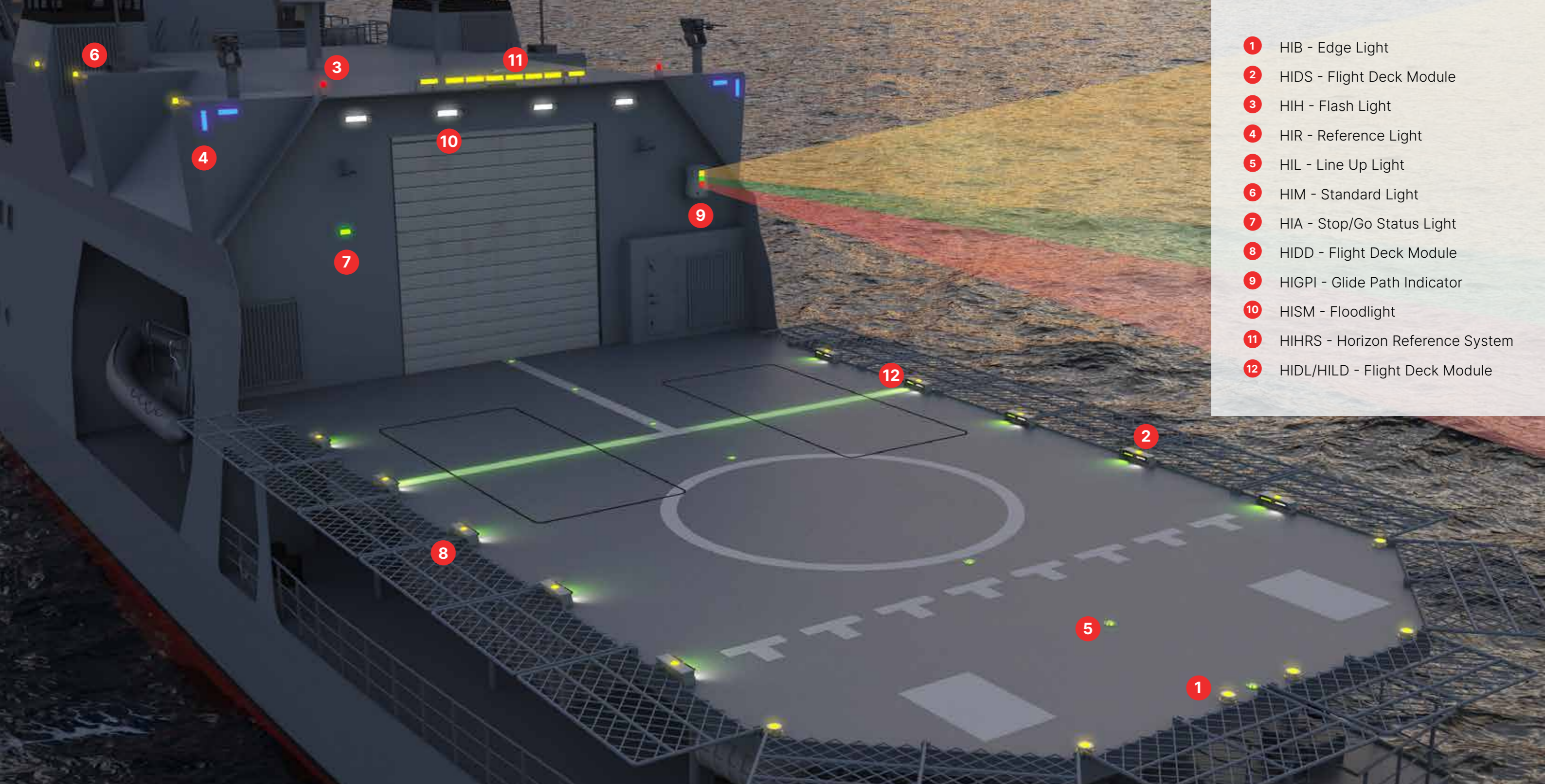


#### HSD – Helideck Status Display

A three-colour traffic light display in separate units

- can be arranged vertically, one on top of the other
- dimmable
- design acc. to STANAG 1472





- 1 HIB - Edge Light
- 2 HIDS - Flight Deck Module
- 3 HIH - Flash Light
- 4 HIR - Reference Light
- 5 HIL - Line Up Light
- 6 HIM - Standard Light
- 7 HIA - Stop/Go Status Light
- 8 HIDD - Flight Deck Module
- 9 HIGPI - Glide Path Indicator
- 10 HISM - Floodlight
- 11 HIHRS - Horizon Reference System
- 12 HIDL/HILD - Flight Deck Module



- HVLAS Control Panel  
(HIPBT, HIPXT, HIF, HIPBX)

## Visual Landing Aid Systems overview

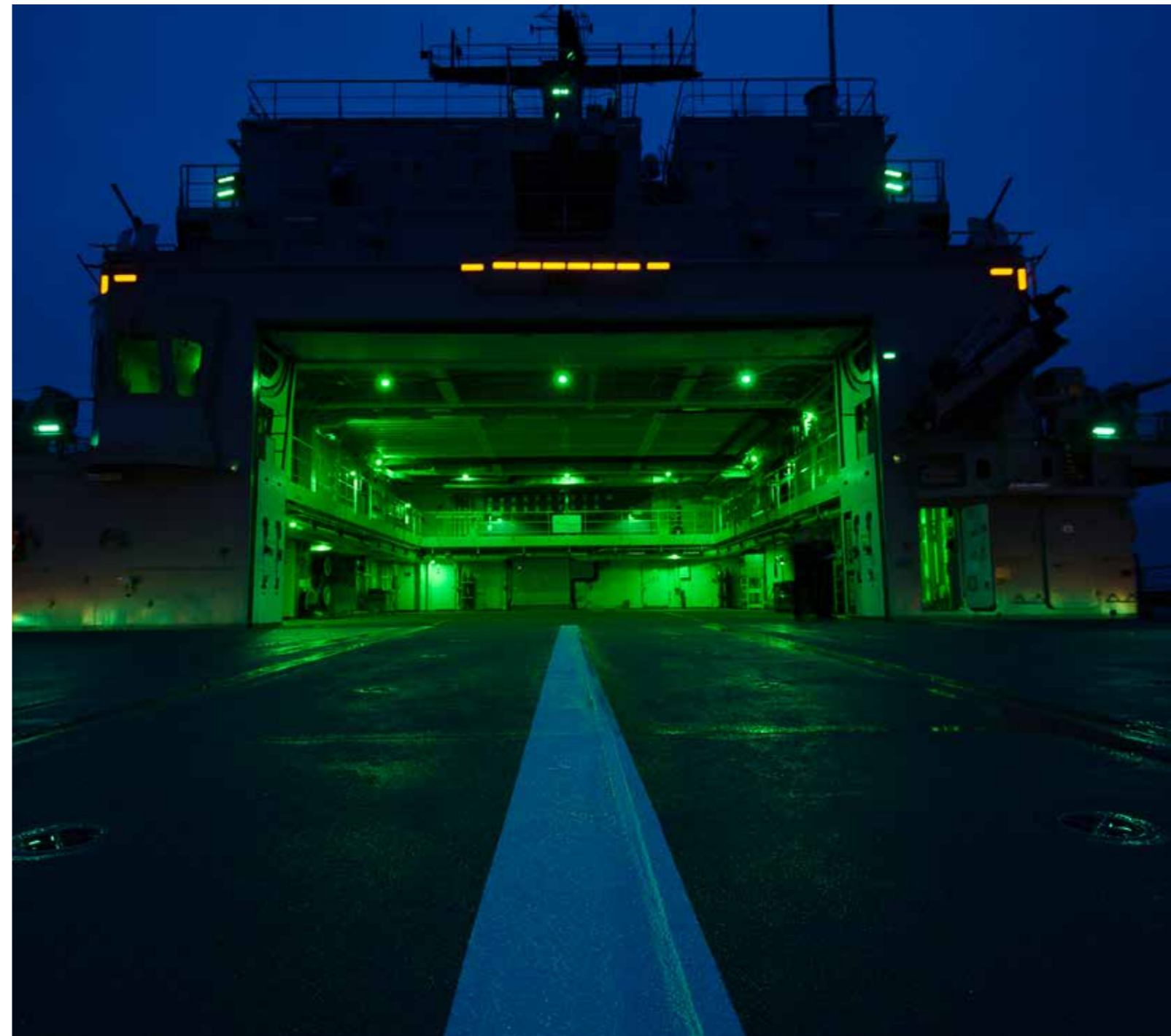
## NVG, night adaptation, IR and dimming

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Depending on the product and the intended application, Glamox can offer lighting solutions that are both NVG-friendly and NVG-compatible. In addition, we offer Night adaptation lights, products with UV/IR filters, an integrated IR thermal camera or dimming. The products we recommend to you will be based on the operation the lighting should support or the specified end user requirements.

### Relevant Glamox products for this application:

- / Naval navigation light systems with NVG and dimming function
- / Searchlights with a UV/IR filter and an integrated IR thermal camera
- / Lights for open deck areas
- / Interior lights
- / Light management systems for naval applications





## Selected references for HVLA Systems

Glamox has already delivered a significant number of lighting solutions ordered by navies worldwide. The following references will give an overview of some of our delivered HVLA Systems.

Country	Ship Class	Country	Ship Class
<b>Algeria</b>	Frigate	<b>Finland</b>	Offshore Patrol Vessel Corvette
<b>Argentina</b>	Ice Breaker OPV - Patrol Vessel	<b>France</b>	Diving Support Vessel New Frigate Offshore Patrol Vessel Navy Training Vessel Frigate Offshore Supply Vessel Frigate
<b>Australia</b>	Alternative Landing Ship Logistic (ALSL) Antarctic Icebreaking Research and Supply Vessel	<b>Germany</b>	Corvette Replenishment Ship Frigate New Frigate Coast Guard Reconnaissance Vessel
<b>Brunei</b>	Offshore Patrol Vessel	<b>Greece</b>	New Frigate
<b>Canada</b>	Auxiliary Replenishment Vessel	<b>India</b>	New Frigate
<b>Colombia</b>	Frigate Offshore Patrol Vessel Offshore Scientific Research Vessel	<b>Indonesia</b>	Landing Ship Tank BHO Indonesia
<b>Egypt</b>	Corvette Frigate		

Country	Ship Class	Country	Ship Class
<b>Israel</b>	Offshore Patrol Vessel	<b>Pakistan</b>	Offshore Patrol Vessel
<b>South Korea</b>	Surveying Ship Salvage and Rescue Ship Korean Destroyer eXperimental Landing Platform eXperimental Amphibious Landing Ship Mine Layer Ship Destroyer Frigate New Frigate Submarine Rescue Ship New Destroyer Export Corvette Coast Guard	<b>Peru</b>	Oceanographic Research Vessel
<b>Malaysia</b>	Offshore Patrol Vessel Training Ship Littoral Combat Ship	<b>Philippines</b>	Offshore Patrol Vessel Coast Guard
<b>Netherlands</b>	JSS Joint Support	<b>South Africa</b>	Frigate
<b>Norway</b>	Frigate	<b>Thailand</b>	Offshore Patrol Helicopter Carrier Offshore Patrol Vessel Multipurpose Frigate
		<b>Turkey</b>	Seismic Ship
		<b>UAE</b>	Corvette
		<b>United Kingdom</b>	Logistic Landing Ship Offshore Patrol Vessel



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## The Glamox Group

Glamox is a Norwegian industrial group that develops, manufactures and distributes professional lighting solutions for the global market. Our mission is to provide sustainable lighting solutions that improve the performance and wellbeing of people.

### **High performance and ease of use**

Our solutions are designed to combine high performance and sustainability with simplicity and ease of use, offering a superior customer experience. We make smart use of the latest technology and supply it with generations of experience and true care for our customers and their people.

### **Quality brands and dedicated support**

We offer our solutions through a range of quality lighting brands. Regardless of brand, the close follow-up of each customer is at the heart of our offering. Whether in a production facility, a fishing vessel or an office building, our ambition is to provide lighting that contributes to a better life for the businesses we serve and those who work there.