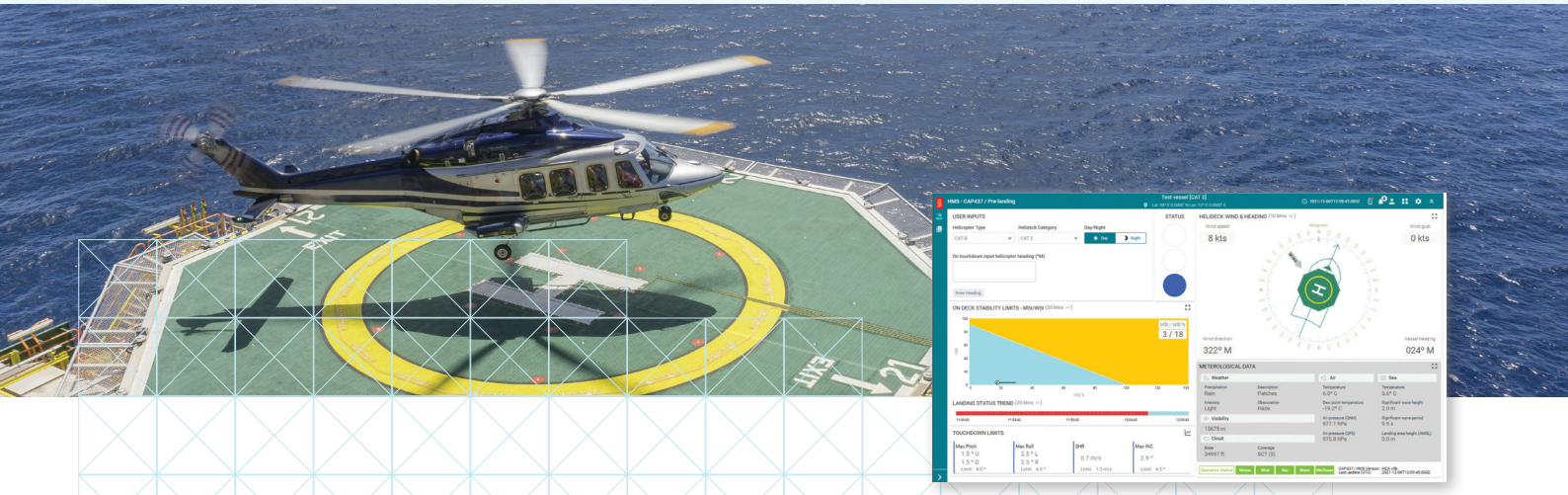
HMS 300

KONGSBERG



HELIDECK MONITORING SYSTEM

Offshore helicopter operations are carried out in hostile environments. The HMS 300 is designed to measure helideck motion during helicopter pre-landing and on-deck operations to improve flight and passenger safety in these conditions. The system monitors the helidecks acceleration, heave velocity, inclination, roll and pitch together with meteorological data in real-time.

The HMS 300 is fully compliant with the prevailing recommendations and guidelines issued by the Civil Aviation Authorities in UK, Norway and Brazil. The HMS 300 is compliant with the CAP 437 from September 2018 and accompanying Helideck Certification Agency (HCA) document revision 9b. This imply that the helideck must be equipped with repeater lights connected to the HMS 300 system to indicate to the pilot whether the on-deck or pre-landing conditions are within the landing limits or not. The HMS 300 is compliant to NOROG ver. 9.2 for the Norwegian sector and NORMAM-27 for the Brazilian sector.

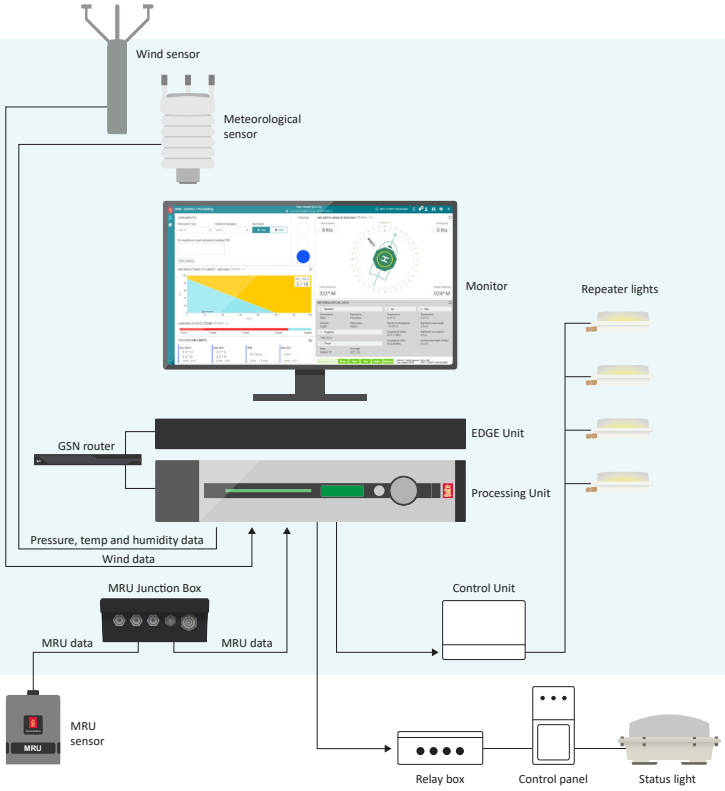
Data monitoring and presentation
The HMS 300 will calculate and present the Motion Severity Index (MSI) and Wind Severity Index (WSI) data together with significant heave rate (SHR), inclination, roll and pitch of the helideck in real-time. The system utilizes the KONGSBERG MRU models (E, H, 5 or 5+) or the MGC models (R2 or R3) to precisely monitor vessel motion and accelerations in the helideck center. These data are transferred to the HMS Processing Unit that processes helideck motion data together with MSI and WSI figures to determine whether the helicopter operation is safe or not.

Web access
Live vessel data can be made available from the HMS 300 installation when connected through the KONGSBERG Kognifai cloud based digital platform (optional). The Web access will be available to customers through a paid service. The Web service is developed to assist helicopter operators to plan the flight prior to take-off from the heliport.

Both onboard and onshore personnel can monitor helideck movements and meteorological data in real-time and see the same operational picture in order to increase operational awareness. Cyber security is an important part of the system. With this cloud-based service, storage of helideck data for months is included.

FEATURES

- Real-time presentation of roll, pitch, heave amplitude, heave rate and inclination
- Comply to latest CAP 437 and HCA requirements
- Comply to NOROG ver. 9.2 and NORMAM-27
- Meteorological data acquisition and presentation in real-time
- Selectable motion sensor input from MRU or MGC
- Measurements of 3-axes linear acceleration in the helideck center
- Live vessel data available through K-IMS or Kognifai through a paid service
- Control of repeater lights mounted on helideck in pre-landing and on-deck mode
- More than 30 days's storage of HMS data
- Wave and air gap sensor interface included
- Control of helideck status light to show red light when motions are out of limits (helideck not available)



TECHNICAL SPECIFICATIONS

HMS 300

ROLL AND PITCH OUTPUT

Dynamic accuracy (MRU H or E)	0.05° RMS (for a ±5° amplitude)

ACCELERATION OUTPUT

Acceleration range (all axes)	± 30 m/s²
Acceleration noise	0.002 m/s² RMS
Acceleration accuracy	0.01 m/s² RMS

HEAVE OUTPUT

Output range	± 50 m, adjustable
Periods	0 to 25 s
Dynamic accuracy (RMS)	5 cm or 5 % whichever is highest

METEOROLOGICAL PARAMETERS

The weather sensor feature solid-state designs with no moving parts.

Sensor type

Wind speed and direction	Ultrasonic anemometer
Air temperature	Capacitive measurement
Humidity	Capacitive measurement
Barometric pressure	Capacitive measurement
Cloud height	Ceilometer
Visibility	Forward-scatter measurement
Present weather	RAINCAP® sensor element
Wave and air gap	Vertical radar

Sensor range

Wind speed	0 to 60 m/s
Wind direction	0 to 359°
Air temperature	-40 °C to +60 °C
Humidity	0 to 100 %
Barometric pressure	800 to 1100 hPa
Cloud height	0 to 25000 feet
Visibility	10 to 20000 m
Wave and air gap	2 to 95 m

WEIGHTS AND DIMENSIONS

Processing Unit	5.4 kg, 89 x 485 x 357 mm
HMI Unit	7.5 kg, 44 x 485 x 477 mm
MRU	2.4 kg, 140 x Ø105 mm

POWER

Processing Unit	100 to 240 V AC, 75 W (max)
HMI Unit	100 to 240 V AC, 120 W (max)
MRU	24 V DC from Processing Unit

ENVIRONMENTAL SPECIFICATION

Operating temperature

Processing and HMI Unit	-15 to +55 °C
MRU	-5 to +55 °C

Humidity (enclosure protection)

Processing and HMI Unit	10 to 95 % rel. non condensing (IP 21)
MRU	IP 66

Mechanical

Vibration	IEC 60945/EN 60945

Electromagnetic compatibility

Compliance to EMCD, immunity/emission	IEC 60945/EN 60945

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Specifications subject to change without any further notice.

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