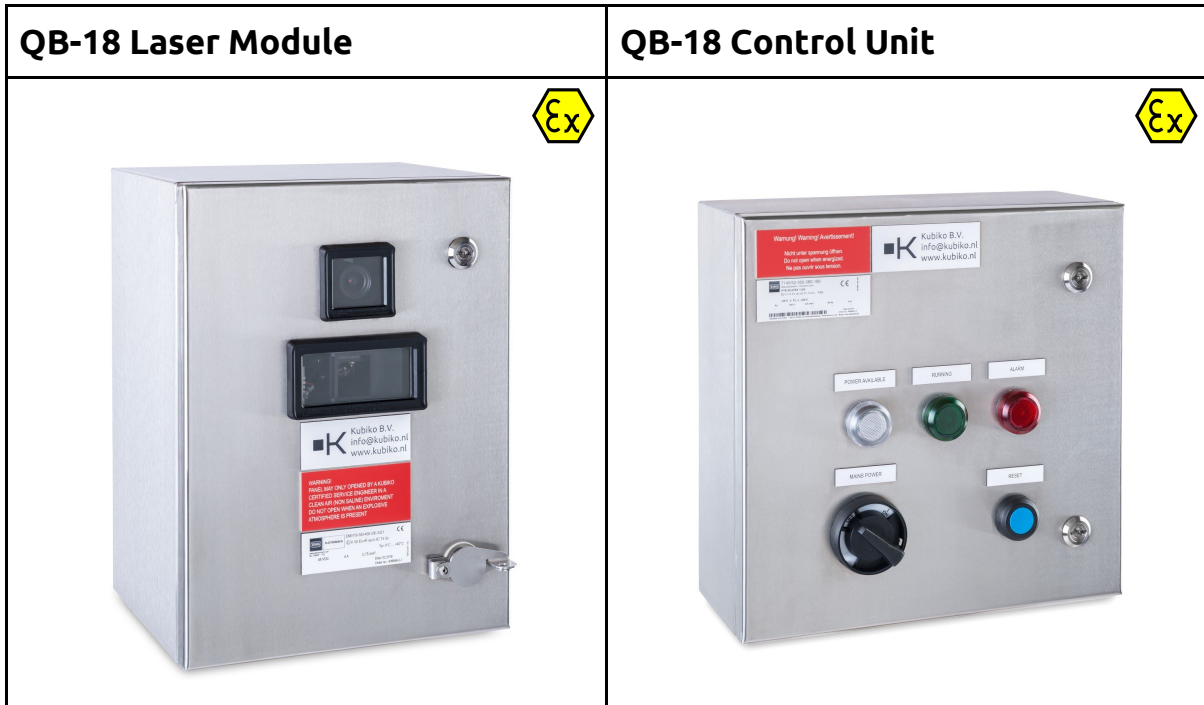


Kubiko QB-18 | Specifications & Installation



This document describes the Kubiko QB-18 bird deterrent system. The system consists of two separate Ex nR | 316L units: a laser module and a control unit. The laser module contains a laser, camera and computers and is mounted facing the helideck area. The laser module is connected to the control unit, containing the power, reset function and light indicators.



QB-18 System View

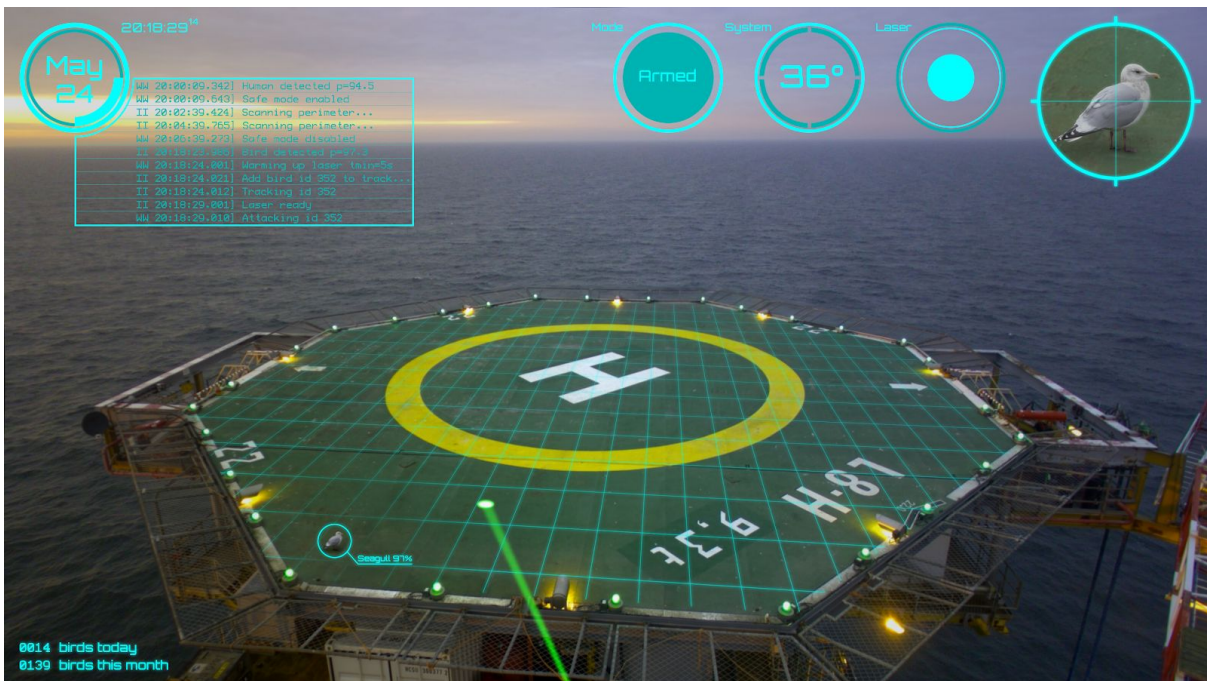
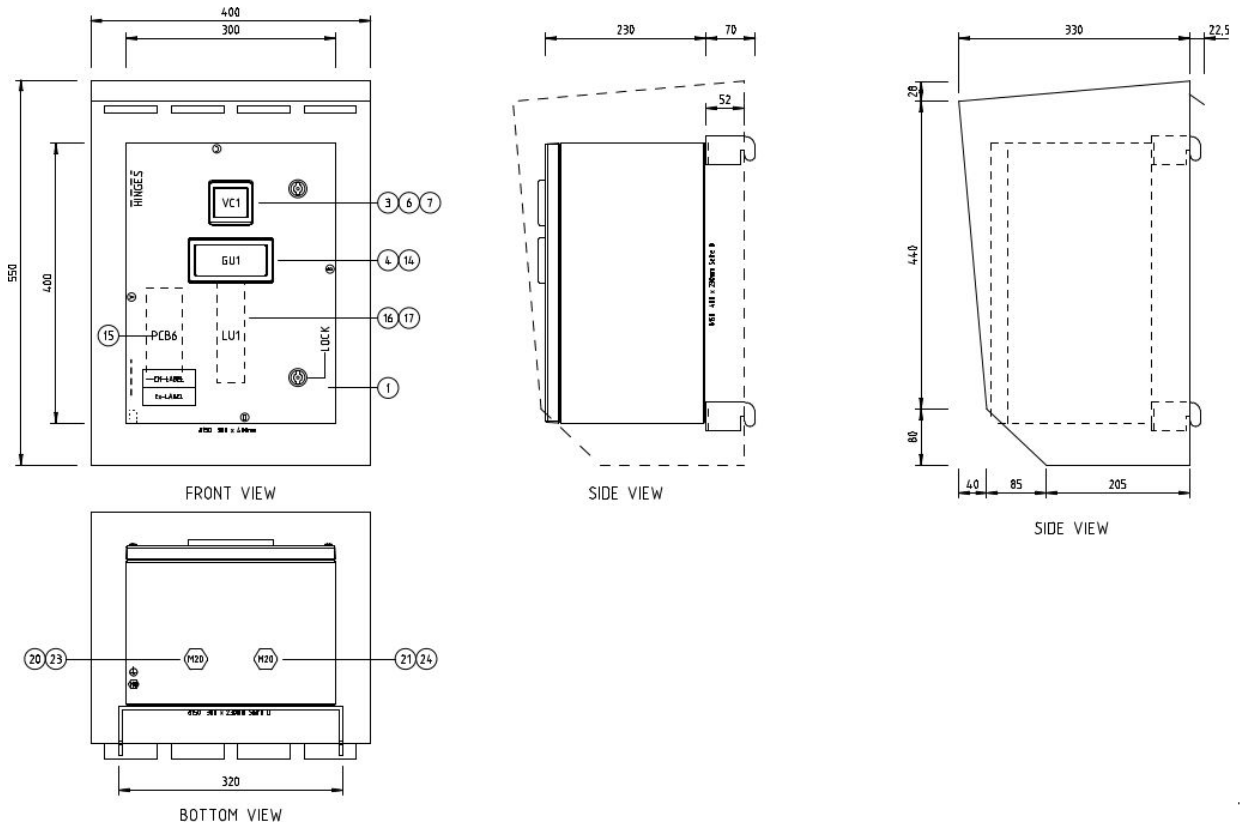


Image from a Kubiko system in the Dutch North Sea | in cooperation with development partner Wintershall

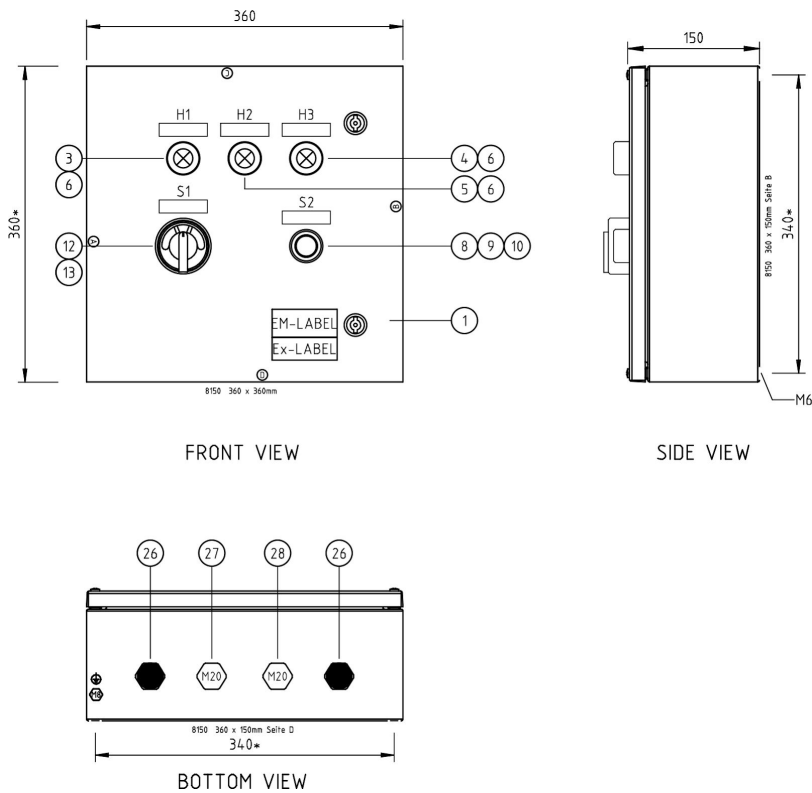
19-07-2018



Laser Module dimensions



Control Unit dimensions





QB-18 Technical Specifications

Power

Input	100 V - 230 V AC
Average usage	20 W
Peak usage	100 W

Dimensions

Laser Module	300 x 400 x 230 mm / 12 kg
Control Unit	360 x 360 x 150 mm / 15 kg
Sunhood	400 x 550 x 330 mm / 12 kg
Mounting material	~ 10kg
ATEX	Ex nR ATEX Zone 2 certified

Operation

Effective range	5 - 50 meters
Ambient illumination	10 - 50.000 LUX
Night vision	Optional, using infrared light

Laser

Class	3B
Color	Green
Wave length	532 nm
Power	250 mW
Beam diameter	4 mm at aperture, 10 - 200 mm at surface

Software

Installation	Plug and Play
Calibration	Fully Automatic
Main detection algorithms	Artificial Intelligence / Deep Learning
Detected objects	Birds, humans and helicopters

QB-18 Installation procedure

Installation offshore is executed by a trained and qualified engineer provided by the client. Initial installation is supervised by a trained and qualified Kubiko engineer. Additional on-site preparations, tests and adjustments will be performed by the Kubiko engineer to ensure the systems smooth operation. For the on-site installation, Kubiko charges a standard fee of € 2.500. If, due to circumstances out of our influence, the engineer is kept offshore longer than two days, Kubiko charges an additional day-rate of € 1.250.

Laser module installation

- The laser module remains locked while offshore, because of the delicate electronics
- Two cables from the laser module are connected inside the control unit
- The module is mounted at an angle of 10 to 20 degrees
- The unit can be mounted using 4 M6 screws (see fig. 1)
- Kubiko can provide mounting brackets (see fig. 2)
- An optional sun hood is available at request (see fig. 3)

Control unit installation

- The control unit operates on 230V AC and a network connection
- Both can be connected to terminals inside the unit
- The unit can be mounted using 4 M6 screws (see fig. 1)
- Kubiko can provide mounting brackets

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