

OMS 100 Optronic Mast System



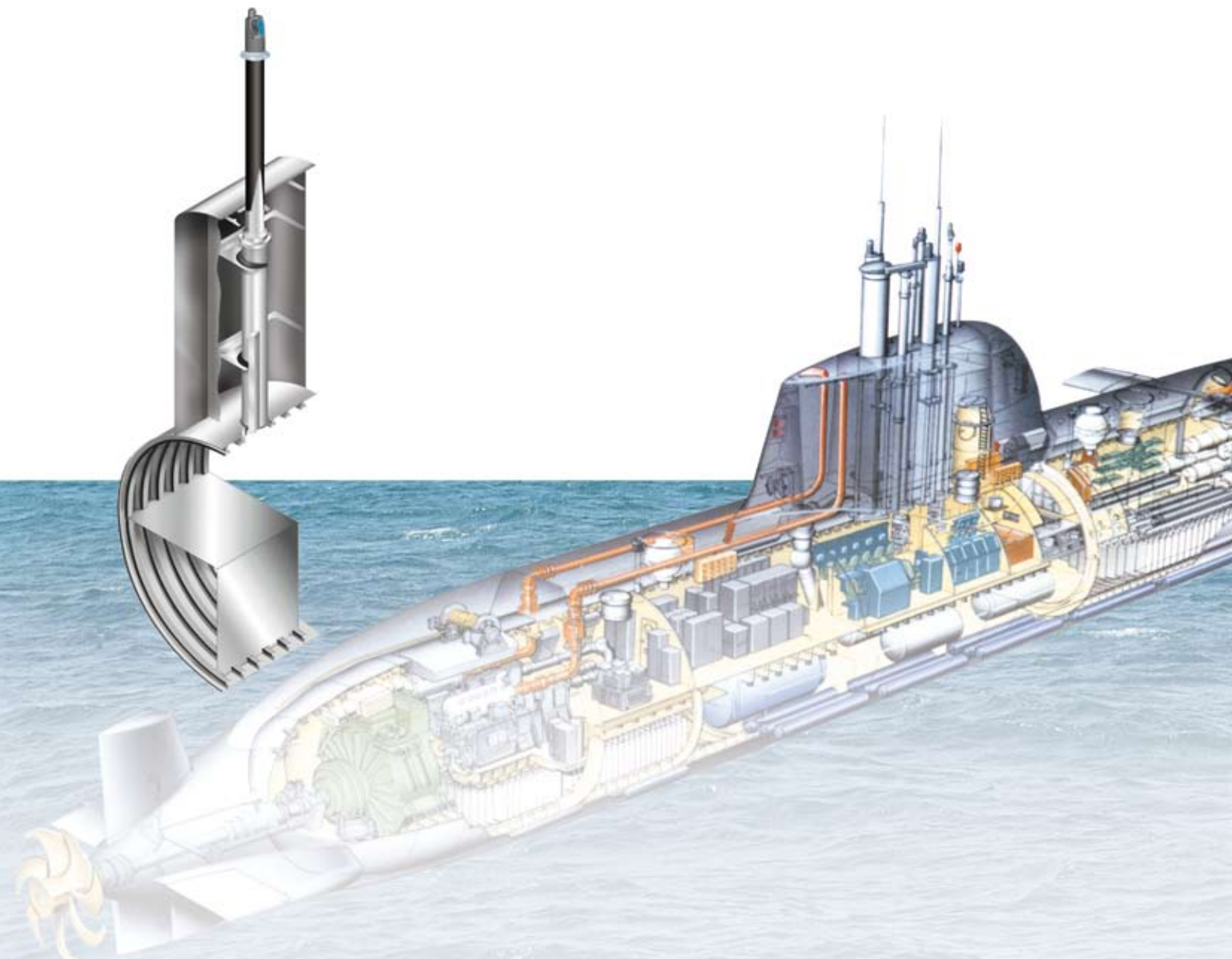
We make it visible.

OMS 100 -

The latest generation of submarine opto-electronic observation systems

The OMS 100 completes the line of successful submarine periscope systems designed and produced by Carl Zeiss Optronics GmbH. The rotatable sensor head of the OMS 100 can be raised above the bridge fin of the submarine using a hoistable mast with a streamlined shape. The OMS 100 with its serial interfaces can be remote-controlled via a multi-functional combat system console. The OMS 100 is the ideal solution for either new build or retrofit applications. In combination with the newly designed SERO 400 periscope, the OMS 100 provides the ultimate in navigation and observation performance. The highly modular design features state-of-the-art technology which simplifies logistics and facilitates maintenance.

- Non-hull-penetrating
- Modular design
- Full combat system integration
- Two-axis line-of-sight stabilisation
- 3rd-generation thermal camera
- High-resolution TV camera (HDTV)
- Prepared for integration of an eyesafe laser rangefinder
- Antenna interface



Configuration

The OMS 100 optronic mast system comprises the following basic modules:

Head assembly with gyro-stabilised elevation axis, heatable window and interface to support an ESM-EW/ESM-DF/GPS antenna. The head assembly can be optionally covered with a RAM coating.

Sensor unit fitted with a 3rd-generation thermal camera, either in the 3-5 μm or 8-12 μm waveband, for night vision capability. The high-definition colour TV camera (HDTV) provides ideal observation conditions in daylight. The sensor unit is prepared for the integration of an eyesafe laser range-finder.

Azimuth unit with brushless DC motor and relative bearing indicator (resolver). The azimuth unit is fitted with a fiber optic channel to transfer the digital IR and TV image data from the cameras to the monitors.

The OMS 100 optronic mast system provides a variety of automatic functions (sector scan, quick look round, ...) for easy observation. Additionally, the TV and IR images can be recorded on video tapes or solid-state recorders.



Specification

OMS 100

TV Channel

Ruggedised high-definition colour

TV-camera (HDTV)

8x continuous zoom lens

■ Field of view (h x v) 23.6° x 13.4° to 3.0° x 1.7°

Detector elements (h x v) 1920 x 1080

IR Channel

3rd generation staring array thermal camera of the "ATTICA" family
CMT detector

■ Detector elements 320 x 240
(h x v)

■ Spectral band 3 to 5 µm
8 to 12 µm (alternative)

2-stage field of view changer (h x v)

■ WFOV 12.4° x 9.3°

■ NFOV 4.1° x 3.1°

Video output ITU-R BT 470-6 B/G or 8 bit digital

Laser Rangefinder (optional)

Eyesafe, wave length 1,543 nm CMT-detector

Range 400 yds to ≥ 10,000 yds

Line of Sight

Stabilisation 2-axis line-of-sight stabilisation
(azimuth and elevation)

Elevation range -15° to +60°

Azimuth range n x 360°

Mechanical Interface

Mass approx. 340 kg

Dimensions (l x w) approx. 2025 mm x 380 mm

Environmental Conditions

Operating temperature

■ Outboard equipment -35°C to +60°C

■ Inboard equipment 0°C to +55°C

Storage temperature -40°C to +70°C

Azimuth range n x 360°

Subject to changes in design and further technical development