

Radar Dome 10223-3 Ex(p)

II 2 G Ex db e ia [ia] mb pxb IIB T4 Gb

Overview

The Ex(p) Radar Dome is a self-regulating system designed for surveillance equipment needing an Ex(p)-protected enclosure for harsh weather conditions.



Benefits:

- Ideally suits housing sensitive equipment (radars, etc.) in potentially explosive atmospheres
- Allows radar use during gas leakages
- Protects equipment from harsh weather conditions
- Increases equipment lifetime and durability
- Does not affect electromagnetic equipment performance
- Allows remote monitoring of temperature, pressure and operational status of the system.

Areas of use:

- Oil platform, FPSO / FSO surveillance radar systems
- Ship surveillance radars
- Oil field surveillance vessels
- Harbour radar / radio surveillance
- Coastal zone radar surveillance
- VTMS - Vessel Traffic Management Systems

How the radome works

1. Initialization phase

When the power is turned on the Radome flushing / purging starts. This is used to expel gas that might have intruded the Radome if it has been without power or out of use. Air is normally purged at 1470 litres per minute.

2. Ready for turn on the equipment inside the Radome

Once the purging is finished the vent is closed and the radar equipment is powered on.

3. Operation phase

Feedback from pressure and temperature sensors controls a maintenance vent. This operates at no more than 37 litres per minute.

4. Shut down

Normal operating pressure is between 13mBar and 17mBar. Lower than 8mBar the power is cut to the equipment inside.

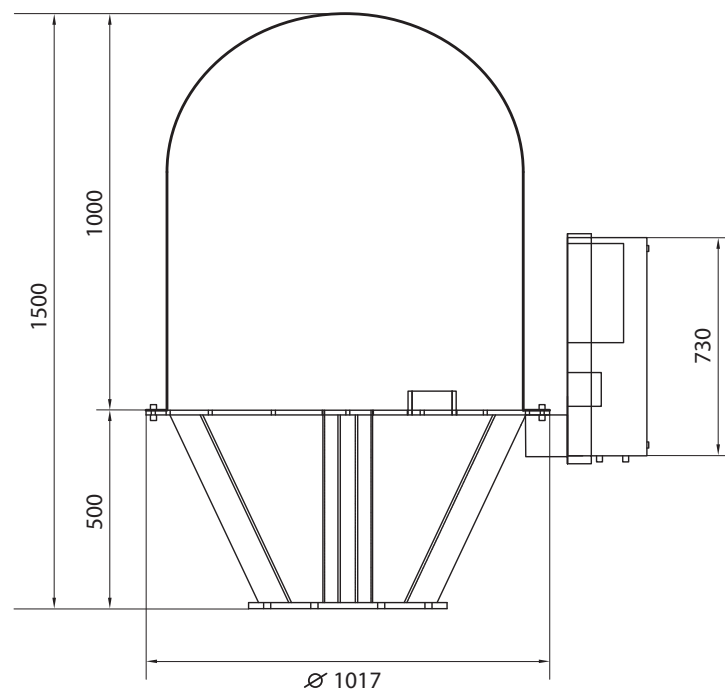
Remote monitoring system

Pressure, temperature and operational status parameters are logged in a database. The data is accessible through a web browser either locally or remotely. This performance history is available for 12 months.




Radars Dome specification

Sensor	on request, maximum 3 foot antenna
Volume	530 litres
Weight	100 kg
Material dome	gas and dust-proof fiberglass could be optimized for different frequencies
Material support frame	stainless steel
Mounting	20 bolts M35, standard 24" ANSI flange
Wind tolerance	designed for 350 km/hr (225mph)
Seal Tolerance (ATEX)	air tight
Interfaces	power: 230 VAC/10A supplied air: ½" pipe
Optional	internal ex-heaters microwave absorption kit shielding panel kit
Compressed air	dry air pressurized @ 6 Bar at radar dome released air 1470 lit/min (24.5 lit/sec) oil and particles class 2



Certificates and standards

EN 60079-0, -1, -2, -7, -11, -18
ATEX  II 2 G Ex db e ia [ia] mb pxb IIB T4 Gb
ISO 8573-1:2001(E)

Non-ex version of Radar Dome

Radome in non-ex version is used for protection of nearby personnel from being accidentally struck by quickly rotating antennas and for protection of equipment from harsh weather conditions: wind, ice, freezing rain, UV rays etc.