

Radar Dome 10223-12 Ex(p)

Ex II 2 G EEx p dem[ib] IIC T3

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 2600 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.

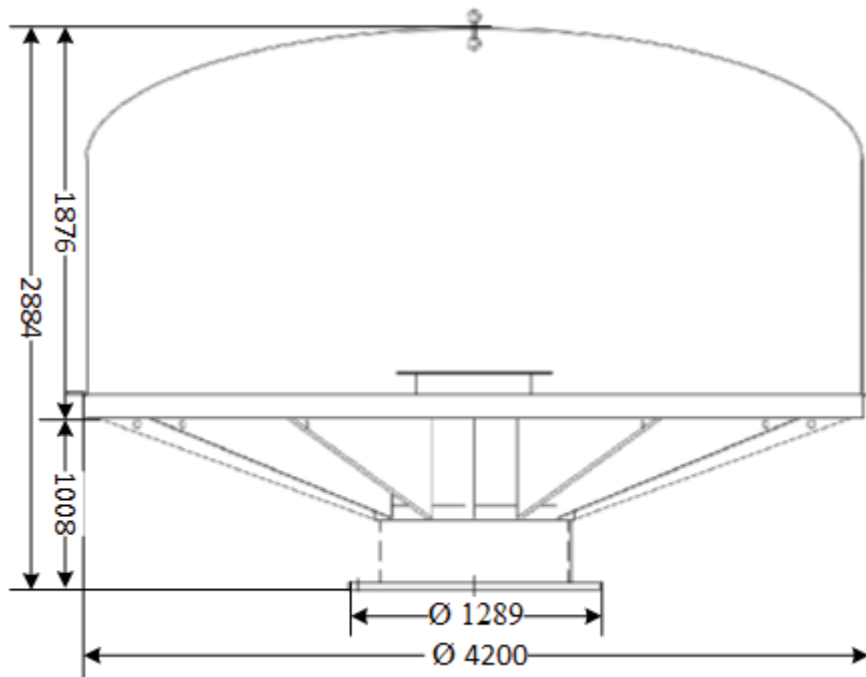
Remote monitoring system

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, antenna size 12 foot S or X band, parabolic antenna 4.1m
Volume	21000 litres
Weight	stainless still SS316L - 3850 kg, aluminum - 1950 kg.
Material dome	gas and dust-proof fiberglass could be optimized for different frequencies
Material support frame	stainless steel or aluminum
Mounting	36 holes Ø41 on PCD1201 according to ANSI 16.47B
Wind tolerance	designed for 350 km/hr (225mph)
Seal Tolerance (ATEX)	air tight
Interfaces	radar video: 75 Ohm coaxial cable radar pre-trig: 75 Ohm power: 230 VAC/10A radar control: 8×2×0.75 mm ² control cable supplied air: pressurized at 6 Bar, 2600 litres/minute ¾" pipe
Optional	internal ex-heaters microwave absorption kit shielding panel kit



Certificates and standards

EN 50014, EN 50016, EN 50018, EN 50019.
ATEX  II 2 G EEx pdem[ib] IIC T3

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.