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.
Radar Dome specification

<table>
<thead>
<tr>
<th>Sensor</th>
<th>on request, maximum 3 foot antenna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>530 litres</td>
</tr>
<tr>
<td>Weight</td>
<td>100 kg</td>
</tr>
<tr>
<td>Material dome</td>
<td>gas and dust-proof fiberglass could be optimized for different frequencies</td>
</tr>
<tr>
<td>Material support frame</td>
<td>stainless steel</td>
</tr>
<tr>
<td>Mounting</td>
<td>20 bolts M35, standard 24” ANSI flange</td>
</tr>
<tr>
<td>Wind tolerance</td>
<td>designed for 350 km/hr (225mph)</td>
</tr>
<tr>
<td>Seal Tolerance (ATEX)</td>
<td>air tight</td>
</tr>
<tr>
<td>Interfaces</td>
<td>power: 230 VAC/10A</td>
</tr>
<tr>
<td>Optional</td>
<td>internal ex-heaters</td>
</tr>
<tr>
<td>Compressed air</td>
<td>dry air pressurized @ 6 Bar at radar dome</td>
</tr>
</tbody>
</table>

Certificates and standards
EN 60079-0, -1, -2, -7, -11, -18
ATEX Ex II 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.