

Communication Systems Experience Overview

We are a nationally-known producer of Radomes, Reflectors, and Wave-Guides made from composites for over a decade. The communication systems' parts that we manufacture are designed to work in each medium – submerged, naval, ground, air and space.

The radomes we manufacture vary in size and shape – from 50mm diameter to 2M*3M*2.3M. We have also demonstrated the capability of manufacturing 3m to 5m long radomes.

Further, we have manufactured passive radomes, embedded polarizer radomes and radomes with internally structured Antenna bodies. Production technologies from wet lay-up, through prepreg lay-up and infusion, and specialised materials, such as polyurethane, maritime paints and special application anti-static/ rain-erosion/ anti-chafe/ conductive paints, are used to manufacture our communication applications.

Our primary platforms are RF communications or acoustics for sonar-based systems.

Our pedigree in developing and designing RF-sensitive radomes and antenna covers for strategic military and aerospace programs makes us the perfect partners for all your cutting-edge composite communication requirements.

Communication Systems Select Product Profile



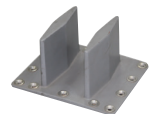
1.6m x 1.4m x 1.0m



Ø1m x 1.2m



Ø30 x12 (cm)



15x10x10 (cm)



25x15x12 (cm)

Naval Radomes

Raw Materials:

- Glassfibre/epoxy prepreg
- Rohacell foam & Nomex honeycomb cores
- Conductive paint, and polyurethane top coat

Production Process:

- Multi-stage layering process
- Core potting
- Inserts embedded during process
- Painting

Airborne Radomes

Raw Materials:

- Quartz/Cyanate-Ester prepreg
- Nomex honeycomb core
- Aluminum connection ring
- Anti-static & rain erosion paint
- Protective boot

Production Process:

- Multi-stage layering process
- Bonding of connection ring
- Painting
- Protective boot installation

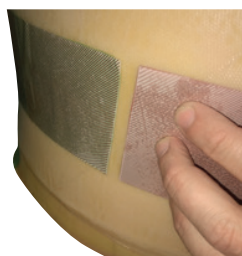
Submerged Radomes (RF)

Raw Materials:

- Quartz/Cyanate-Ester prepreg
- Polarizers

Production Process:

- Multi-stage layering process
- In-process bonding of polarizers
- Autoclave curing
- Marine paint
- Tested & proofed upto 60Bar external pressure



Embedded polarizers



Ø25 x40 (cm)



Ø18 x15 (cm)



Ø10 x12 (cm)

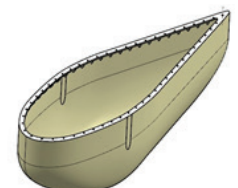
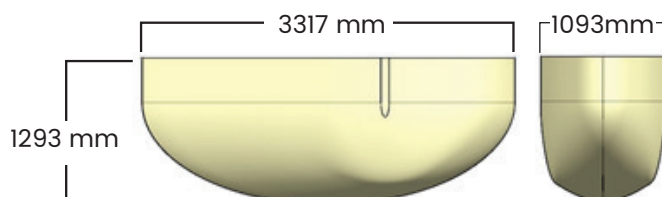
Submerged Sonar Dome

Raw Materials:

- Carbon/Epoxy
- Marine paint

Production Process:

- Dry fabric lay-up
- Resin infused under vacuum
- Painting



Sonar Dome – Demonstration Program

Additional Radomes



Ø40cm x 55cm



Ø30cm x 30cm



Ø30cm x 12cm



50cm x 30cm x 8cm



Ø80cm x 180cm

Wave Guide

Raw Materials:

- Carbon/Epoxy prepreg
- Aluminum fittings

Production Process:

- Layering
- Trimming
- Fittings' bonding



60cm x 12cm x 3cm

VHF Antenna – 110cm x 70cm x 30cm



HF Antenna –
47cm x 30cm x
30cm



Embedded Antennas

Airborne Systems

Raw Materials:

- Glass/Epoxy prepreg
- Antenna bodies & wiring
- Aluminum fittings

Production Process:

- Multi-stage layering process
- Autoclave curing
- Embedding of antennas
- Bonding
- Painting

Reflectors

Land & Naval Systems

Raw Materials:

- Carbon/Epoxy, Glass/Epoxy prepreps
- Nomex Honeycomb
- Aluminum fittings

Production Process:

- Layering
- Trimming
- Fittings' bonding
- Painting



110cm x 45cm x 12cm



Ø70cm x 25cm



115cm x 70cm x 20cm

Other Structures

Airborne, Land & Naval Systems

Raw Materials:

- Carbon/Epoxy, Glass/Epoxy prepreps
- Honeycomb / Foam Cores
- Aluminum fittings

Production Process:

- Layering
- Trimming
- Fittings' bonding & riveting
- Painting

Antenna Positioning System's Base, Airborne – 80cm x 45cm x 3cm



Communication System's Nacelle,
Airborne – 60cm x 15cm x 10cm



Communication System's Housing,
Naval – 1.6m x 1.0m x 0.55m