



**SVARN**  
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## SVARN ARFMS EMI-EMC SHELTER

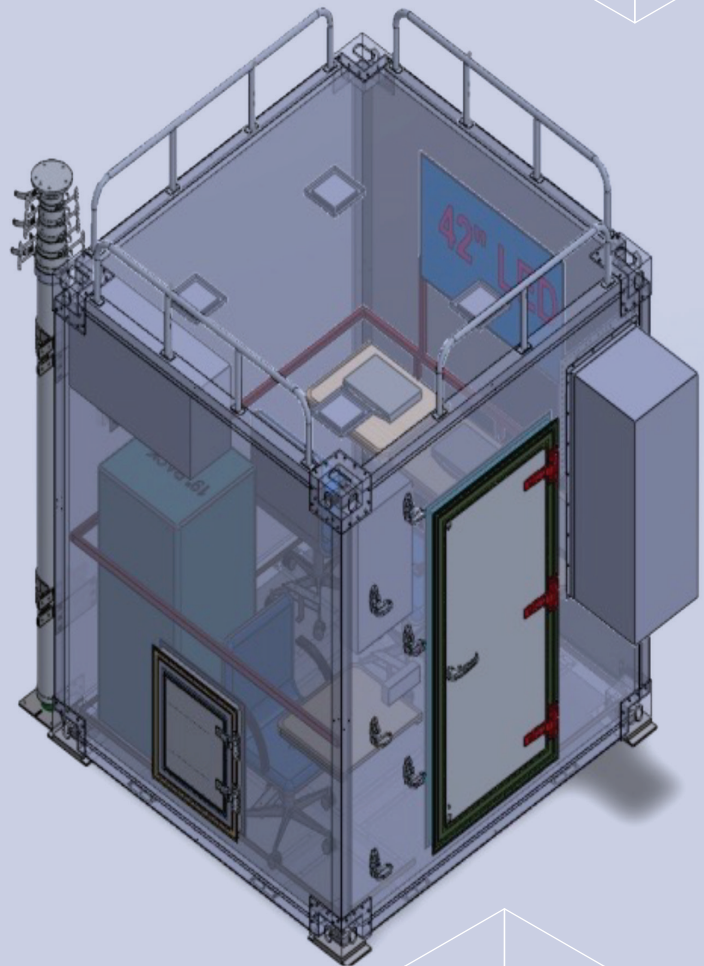


### General

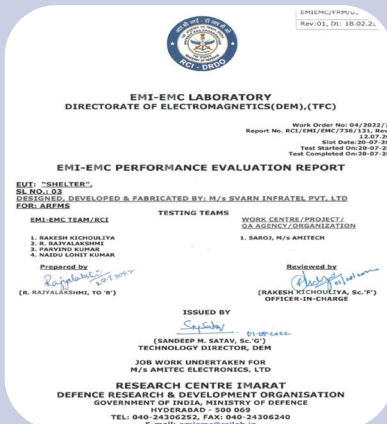
The Svarn Group has extensive experience in fabricating some of the most innovative, complex, durable and secure speciality structures in India. Our shelter designing, engineering and manufacturing capabilities include EMI-EMC Shelters, Marine Grade Containers, Mobile Communication Shelters, Static Non EMI-EMC Shelters, Canopy Shelters, Customised Article Carrying Shelters, Mobile Power Pack Containers, and similar products for specific mobile and static defence applications.

### Special Features

Svarn EMI-EMC Shelters are manufactured using hot bonded sandwich panels with PU foam core, aluminium skins and framework of welding aluminium alloy extrusions. They are fabricated using state-of-the-art technology, adhering to international/NATO standards, as specified for the defence industry. These Shelters can be moved on land, air or sea.



## EMI-EMC SHELTERS FOR DEFENCE APPLICATIONS ADVANCE RADIO FREQUENCY MONITORING SYSTEM



## STANDARD TECHNICAL SPECIFICATIONS FOR EMI-EMC SHELTERS

- MIL-STD-907: Engineering & design criteria for shelters.
- MIL-STD-285: Attenuation measurements for enclosures.
- MIL-STD-889: Dissimilar metals.
- MIL-STD-1472: Human engineering criteria for design and development of military systems, equipment and facilities.
- MIL-STD-461F Part-4: Requirements for the control of electromagnetic interference characteristics.
- MIL-STD- 461E: 299 IEEE specifications for EMI-EMC.
- MIL-HDBK-454: Military Handbook - General Guidelines for Electronic Equipment.
- All panels are of sandwich type construction, contain high density foam (70 kg/m<sup>3</sup>) polyurethane insulation with 1.6 mm thick aluminium alloy monolithic skins, conforming to Alloy ENAW-3003.
- Special framework of welding aluminium alloy extrusion Grade 63400, conforming to IS -733.
- All side panels are 60mm thick with hot bonding or foam injection.
- All panels can be fully welded or fully riveted.
- Our established panels conform to requirements of rugged off-road services at high altitudes and in temperatures between -40°C and +60°C temperatures.
- Aluminium ISO corner blocks of LM11 grade are bolted at the end corners, four on top and four at the bottom.
- Aluminium reinforced tubes form the support so as to comply with critical structure requirement for heavy payloads.



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## SVARN EMI-EMC SHELTERS ARE DESIGNED, MANUFACTURED AND TESTED AS PER ASTM-E-1925, MIL-S-44408 AND MIL-STD-907B STANDARDS

### Characteristics

- Roof panel load : 400 kg/m<sup>2</sup>
- Weight : 24 kg/m<sup>2</sup>
- Floor panel load : 500 kg/m<sup>2</sup>
- Wall panels load : 400 kg/m<sup>2</sup>
- Impact loading : Hailstones up to 30 mm diameter at wind speed up to 150 km/h
- Member loading : 500 kg wall, roof and floor tensile load followed by 100 inch-pounds torque load  
5/16-18UNC inserts
- Operating temperature : -40°C to +60°C
- Wind Speed : Operational 75 km/h, Survival 150 km/h
- Heat transfer : U-factor 0.40 BTU/hr/sq ft/°T
- EMI Shielding : 60 dB over 150 KHz to 10 GHz for electric and magnetic fields and plane wave measured as per IAW/MIL-STD-285



### ADDITIONAL EMI-EMC SHELTER FITMENTS/FEATURES

- MIL Grade Connectors
- NBC Filter
- Electro Mechanical Mast / Pneumatic Mast
- MIL Grade Air Conditioner (1.6 TR and 2.0 TR)
- AC Ducts
- EMI Gasket for door and all cut-out points
- High strength Foldable Footstep for roof access
- Honeycomb for air circulation
- EMI Line Filter for power supply with removable electrical ducts and cable entry I/O panel
- Mechanical Jack, Electro Mechanical Jack
- Compact 5 KVA to 10 KVA Generator
- Solar Roof Top
- Penthouse
- Antistatic Mat
- MIL grade and Marine grade PU paint



**MECHANICAL LEVELLING JACK  
CAPACITY 5 TON**



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## EMI-EMC INTEGRATED COMMUNICATION SHELTER FOR LCA TEJAS SHELTER SIZE 8000 (L) X 2438 (W) X 2438 (H)



### Construction/Specifications

- This Shelter has two compartments separated by means of partition panels (structural sandwich type), assembled by welding into the Shelter structure.

- The compartments are:-

(i) **Communication Compartment.** This compartment is the air-conditioned equipment zone, housing the communication equipment, AC indoor units, 19" racks, stabilizer, UPS and other fitments. This compartment is EMI shielded.

(ii) **Antenna Compartment.** This is the non-air-conditioned zone, housing the AC external units, the antennas and the power amplifier in the lower frequency range. The length of this compartment is adequate for storage of the antennas, with door access suitably dimensioned to allow for entry of personnel and the antennas.

- EMI shielding levels are more than 60 dB over 100 KHz to 1 GHz and 40 dB over 1 GHz to 18 GHz.



- **Power Line Filters.**

Insertion loss: 100dB over 150 KHz to 18 GHz Current: 4 x 60 A  
Frequency: 0-60 Hz

Max voltage: 277 V to ground, 480 V line to line

Direct installation on the wall of the shielded chamber.

The penetration hardware includes threaded conduit hub (of standard pipe thread), conduit nut, flat washer and RFI/EMI gasket material.

Circle: COIMBATUR Telephone: 980-2021-6800	<b>ADA</b> <b>AERONAUTICAL DEVELOPMENT AGENCY</b> Command B Directorate of Aeronautical Development Systems (Ministry of Defence, Govt. of India) Sarajendra Road, New Trichy Express Road, Bangalore - 76, India.	Tel. No.: 20248860 Fax No.: 20202973-77 Extn. 100
ADA/S/EMOS/EMI/EMC/04/23		11/04/2023
<b>"TO WHOMSOEVER IT MAY CONCERN"</b>		
This is to certify that the Trailer & EMI Shelter, manufactured at SVARN Infratel Private Limited (Unit 1), Haryana is being transported from Haryana to ADA, Bangalore for use to carryout radiated susceptibility test on LCA-Tejas.		
This is the sole property of Aeronautical Development Agency (Ministry of Defence, Government of India). These are not explosive in nature, non-hazardous and do not have any commercial value. The Trailer & Shelter are free from any taxes, customs and octroi what-so-ever.		
Thus it is requested that support be extended for easy transportation of the Trailer & Shelter without scrutiny.		
	 AUTHORISED SIGNATURE (PD/GD WITH RUBBER SEAL) <b>Prabhulla Chandran VK</b> Outstanding Scientist / Technology Director (vns/MS)	



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