



# Elevating Aerospace

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LMW Advanced Technology Centre (ATC) was established in 2010 to produce Metallic Aerospace systems, modules, assemblies, and components. To complement the existing metallic capabilities, Aerospace Composites facility was established in 2018 to cater to the growing demands in the Aerospace sector. ATC is a one-stop shop for Aerospace majors with world-class manufacturing facilities, its Quality Assurance standards are aligned with AS 9100D certification, and it has NADCAP accreditation for Special processes & Composites. Our Composites facility has processing and assembly capabilities of international standards to deliver a variety of composite and hybrid structures for space, aerospace and defence applications.

LMW ATC was founded to serve the aero-engine, aero-structure, and space-structure segment. Our capabilities include machining and sheet-metal facilities to produce structural products from 0.3 metres to 10 metres in length and 5-axis machines for manufacturing engine components out of hard metals like Titanium, Steel and Nickel alloys.

Special process facilities include Heat treatment of aluminium, Non Destructive Testing - FPI, MPI, Anodizing, Chemical Milling and Painting.

Our Composites facility has state of the art equipments such as

- CNC Pre-Preg cutting machine
- Larger Autoclave measuring 6m x 4m dia
- Smaller Autoclave measuring 2.4m x 1.3m dia
- 2 ISO Class 8 compliant clean rooms, measuring 6 and 12 metres in height, area 1000 Sqm in total
- Hot Air Oven of size 6.5m x 4m x 3.5m
- C-Scan with 10 axis dry and wet probes of size 7m x 2m x 3m.

We are also expanding from “built to print” to “built to specification” to meet all the composites requirements. We specialize in the manufacture of hybrid assemblies made from Composites & Metallic materials for aircraft, helicopters and advanced air mobility programs.

## MOVING UP THE VALUE CHAIN

MATURITY INTO LARGE MODULE ASSEMBLIES AND VERTICAL INTEGRATION

BUILD TO PRINT  
DETAIL PARTS

LARGE MODULE  
ASSEMBLIES AND  
VERTICAL  
INTEGRATION



TAMILNADU DEFENCE QUAD



## Aero Engine Systems

### CAPABILITY

- Engineering and production of complex aircraft engine parts.
- World-class facilities and machinery including CNC Turn Mill Centres, CNC Machining Centres with Multiple axis capability.
- High end CMM and metrology equipment to facilitate measurements.
- Highly skilled team to deliver world-class product and services.
- Centre of Excellence for Bleed Value Assembly (GP7000, PW1500)
- Inherent capability for rapid scale-up
- In-house Welding Capability for Titanium, Inconel and Aluminium





## Aerospace Structural Systems

### CAPABILITY

- Complex machining with the most sophisticated state-of-the-art 24,000 rpm 5 axis machining, vacuum bed capable for large structural parts upto 10m.
- Vertical machining centers with multi-pallet system for high production rates.
- 6 High end CMM to facilitate measurement of critical and large parts [Carl Zeiss (1.8m x 1.2m) and Hexagon (5m x 2m)].
- Superior in technology coupled with a team of highly skilled engineers.



**TAIL BOOM OF A HELICOPTOR**  
(4.8 X 0.7 X 0.8 m)

**BAY DOOR**  
(4 X 1.2 m)

**SPAR**  
(4 X 0.3 m)

**METALLIC DOME JIG AND ASSEMBLY**  
(6 X 6 m)

**WING SKIN**  
(5.5 X 1.5 m)

**AIR INTAKE**  
(1.5 X 0.6 X 0.8 m)

**PANEL**  
(6 X 1.1 m)

## Space Structures

**S2V JIG AND ASSEMBLY**  
(1.5 X 2 m)

**METALLIC INTERSTAGE STRUCTURE FOR SSLV - S3C1**  
(0.7 X 2 m)

**NOSE CONE ASSEMBLY**  
(1.4 X 1 m)

\*Jigs and Fixtures for all the hardwares are designed and fabricated by LMW



## SHEET METAL AND SPECIAL PROCESS CAPABILITIES



### SHEETMETAL AND WELDING CAPABILITIES

- Water Jet Cutting (5 Axis) : 4m Length x 2m Width
- CNC Router (3 Axis) : 4m Length x 2m Width
- CNC Press Brake (320 Ton) : 4m Length
- Hydraulic Rubber Press (1000 Ton) : 1.6m Length x 0.9m Width
- Hydraulic Deep Draw Press (200 Ton) : 1.2m Dia
- Punch Press (80 Ton) : 0.3m Dia
- Rolling Machine : 2m Length
- 8 Axis Robotic TIG Welding Facility : 2.6m Dia
- Manual TIG Welding
- Bench Assembly (Riveting & Sealant Application)



### SPECIAL PROCESS CAPABILITIES:

#### Heat Treatment

- Solution Treatment – Al
- Annealing
- Stress Relieving – Al & Ti
- Retarding of Age Hardening (Cold Storage)



#### Surface Treatment

- Chromic Acid Anodising (Upto 2.5m)
- Chemical Milling (Upto 2.5m)
- Sulphuric Acid Anodising (Upto 2.5m)
- Ti Etching / Cleaning (Upto 1m)
- Hard Anodising (Upto 2.5m)
- SS Passivation (Upto 0.20m)
- Boric Sulphuric Acid Anodising ( Upto 6m)
- Ultrasonic Cleaning (Upto 0.9m)
- Super Cleaning for Lubrication Hardware (Upto 0.75m)
- Temper Etch (Upto 0.25m)
- Chromate Conversion Coating (Upto 2.5m)

#### Painting Booth

- Primer Application
- Topcoat Application
- Teflon Coating
- Walkway Coating
- Dry Film Lubricant Application

#### Non-Destructive Testing (NDT)

- NAS 410 Level III Certified Inspector
- Fluorescent Penetrant Inspection – FPI (Upto 6m)
- Magnetic Particle Inspection – MPI (Upto 0.25m Dia – 2m Length)





## Synergy of Competence, Commitment and Consciousness for Quality



# Center of Excellence For Payload Fairings



5m Ø 10.7m Height  
Payload Fairing Assembly  
for GSLV Mk-III



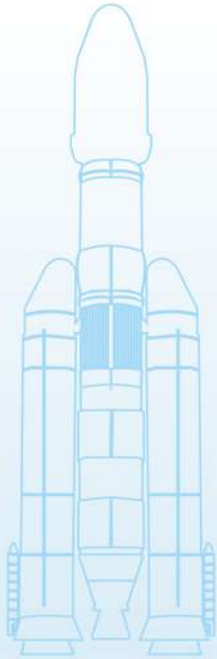
Payload Fairing for Defence



4m Dia Stiffened Structure  
for GSLV Mk-III



2m Ø Metallic  
Sandwich Structure  
for SSLV



Payload Adaptor



1.5 m Ø Composite  
Interstage Structure



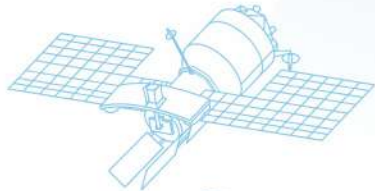
Cowling parts for ALH



Radome



Lens Assembly



2.2 m Ø Antenna Reflector



Inlet Duct Upper



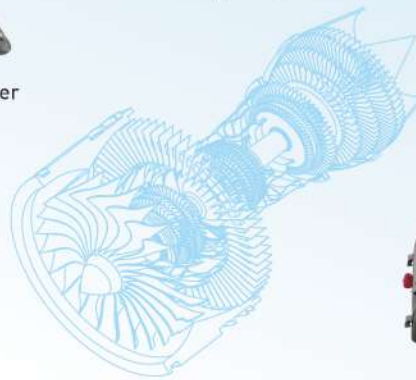
Door Access Cover



Fan Stator Vane



Fan Inlet Housing



Inlet Duct Lower



Composite Acoustic Door Panel



**LMW**<sup>®</sup>

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**LMW**<sup>®</sup>

**BROCHURE DOWNLOAD**



**Aerospace and  
Defence Systems**