

Advanced Composites Group Ltd (ACG) specialises in the manufacture of high performance composite preregs, tooling, components and assemblies. ACG provides a comprehensive design, prototyping, component production and materials service for all types of fibre reinforced composites, supported by the following facilities within a total manufacturing area in excess of 4,650 m².

Computer Aided Design

6 seats Catia V5
2 seats LUSAS
1 seat NX Nastran
1 seat Laminate Tools

Autoclaves

1.5m (4.9ft) diameter x 3.3m (10.8ft), up to 250°C (482°F)
3.05m (10ft) diameter x 6.1m (20ft), up to 135°C (275°F)
7 bar max pressure plus vacuum, fully integrated programmable temperature and pressure control.

Compression Moulding

Platen press areas up to 1.6m x 2.5m (5.2ft x 8.2ft), and oil heated presses up to 350tons to 400°C (752°F).

Curing Ovens

Four ovens, each one having a capacity to accommodate components up to 13m (943ft) (long) x 2.60m (8.5ft) (wide) x 1.8m (6ft) (high), and with fully programmable ramp and dwell temperature control to 275°C (527°F) maximum.

CNC Machining

5-axis CNC machining centre with 3.5m x 2.5m x 1.5m (11.5ft x 8.2ft x 5ft) bed, and fully integrated CAD/CMM capability.

Inspection

Poli Globo 1500 3-D CMM with a working envelope of 1.2m x 1.5m x 6.0m (3.9ft x 4.9ft x 19.6ft).

Leica Geosystem Absolute Tracker AT901-LR.

Portable CMM with a maximum measuring capability of 80m x 60m x 40m (262ft x 196ft x 64ft).

Prepreg Production

Hot-melt prepreg coating machines for fabric up to 1.5m (4.9ft) wide and uni-directional (UD) tape up to 1.2m (4ft) wide, incorporating integrated on-line beta gauge control.

Laboratories

Differential scanning calorimetry, microscopy and image analysis, thermo-mechanical analysis, electronically controlled thermal cycling and programming ovens, mechanical testing equipment and Brookfield viscometer.

Support Facilities

- Fully integrated pattern making shop
- Trimming, machining, fabrication facilities
- Walk-in cold storage rooms
- Wet lay-up areas
- Separate material preparation area
- Clicker press for die cutting prepreg
- Metal machining and fabrication shop
- Honeycomb and foam cutting/shaping equipment
- Extensive material and component storage
- Cold storage