

Manufacturing capabilities

In-house CNC machining, laser cutting, welding and large-format fixturing, supported by dimensional inspection.

CNC MILLING & TURNING

Toyoda WELE Stealth AA1165

Vertical CNC milling. Catalogue X/Y/Z travel: 1,100 × 650 × 600 mm (43.31 × 25.59 × 23.62 in). Table: 1,300 × 650 mm; catalogue load 1,100 kg, including workholding.

SYIL X7 with fourth axis

Compact milling with rotary positioning for multi-face features. Catalogue X/Y/Z travel: 400 × 300 × 380 mm (15.75 × 11.81 × 14.96 in). Table: 700 × 300 mm; catalogue load 150 kg including workholding.

Doosan PUMA SMX2600ST

Multitasking turning and milling with dual spindles, milling spindle and lower turret. Manufacturer maximum turning diameter: 660 mm (25.98 in); maximum turning length: 1,540 mm (60.63 in). Model chuck size: 10 in.

Leadwell LTC206

In-house CNC turning for rotational components. Part diameter, length, bar capacity and workholding suitability are confirmed during drawing review.

Part fit and tolerance review

Listed capacities are nominal manufacturer model references. Installed configuration, tooling, fixtures, geometry and inspection requirements determine usable capacity. Drawing tolerances are reviewed per job; machine travel is not a guaranteed finished-part envelope.

Laser cutting & fabrication

Sheet and tube processing, conventional and laser welding, and large-format fixture capacity.

HSG G3015H · sheet laser

Manufacturer nominal cutting area: 3,100 × 1,550 mm (122.05 × 61.02 in). Material and thickness limits are reviewed against installed laser power and required edge quality.

HSG TX3 PRO · tube laser

Manufacturer round-tube range: 40–360 mm diameter (1.57–14.17 in); square-tube range: 40 × 40 to 360 × 360 mm. Manufacturer single-tube mass limit: 1,600 kg. Section, wall thickness, length and chuck clearance require project review.

Welding processes

MIG / GMAW · TIG / GTAW · Stick / SMAW · Flux-cored / FCAW · Laser / LBW. Joint design, material, weld acceptance and applicable qualification requirements are reviewed with the drawing.

Everlast RedSabre 3000X · laser welding

Water-cooled fiber laser welding system with manufacturer maximum rated output of 3,000 W. Usable weld capacity depends on material, joint design and fit-up.

Large-format welding fixtures

Two Fireball HD Welding Fixture Table Duo assemblies: each 13 ft × 6.5 ft (156 × 78 in), with an 8-inch sidewall.

Custom fabricated fixture table: 40 ft (480 in / 12,192 mm) long, for large and complex setups.

Fixture dimensions describe available setup surfaces, not finished-assembly tolerances or load guarantees. Cut quality, weld requirements and assembly handling are confirmed for each project.

Inspection & verification

Temperature-controlled inspection, coordinate measurement, reference standards and dimensional/thread gaging.

Inspection environment · 68°F / 20°C

Inspection is performed in a temperature-controlled environment, supported by laboratory-traceable verification and certified Mitutoyo master gage blocks. Measurement methods are selected to suit the drawing requirements.

Coordinate & height measurement

KEYENCE XM-1000 handheld-probe CMM for three-dimensional dimensional inspection.
TESA-HITE 400 height gage and conventional height gages for height and comparative measurements.

Dimensional & reference tooling

Outside micrometers, blade micrometers, dial bore gages, height gages, gage pins, master and working gage blocks, dial indicators and test indicators.

Thread inspection

Thread micrometers, thread plug gages and thread ring gages. Required thread form, size, class and acceptance method are reviewed for the job.

Inspection scope

Part tolerances and reporting requirements are reviewed during quoting. Instrument resolution, catalogue accuracy and reference-standard certification are distinct from demonstrated part capability.

Send your drawing package

Include drawings/models, material, quantity, required delivery, critical tolerances and inspection/reporting needs. We will review the package and discuss scope and quoting.

Request a quote online · Evan@AscendedTechnology.com