

TOOLING

Kaman offers unique expertise and capability in design and manufacture of both hard and soft tooling. Kaman has invested heavily in providing the latest state-of-the-art facilities, Computer Aided Design (CAD), and manufacturing techniques and equipment, as well as combining the skills of time served craftsmen and engineers who can project manage, discuss and provide solutions to assist in producing full turnkey packages to customers, including installation. Kaman is gaining a well deserved reputation for tooling solutions that include automation, methodized tools incorporating Lean principles, and fully integrated tools for quality assurance acceptance of customer's products.



CORE COMPETENCIES

- Tooling & Aerostructures Manufacturing Automation
- Project & Program Management
- Turnkey Solutions/Installation
- Concurrent & Reverse Engineering
- Composite Panel Mold & Trim Tooling
- Patternmaking
- Fabrication & Fitting/Assembly
- Large 3- & 5-Axis CNC Machining
- Assembly Jigs Including Complex Mechanized Assembly Fixtures
- Ground Support Equipment, Including WSTGE
- Lifting & Handling Tools and Equipment
- Tool Try Out: Springback Testing, Process Validation
- Engineering Consultancy & Tooling Support Worldwide

IN-HOUSE DESIGN

- CATIA V4 – V5/Unigraphics
- STEP/IGES Translators
- Independent Secure Encrypted Servers
- Full Turnkey Solutions
- Real Time Machining
- Concurrent/Reverse Engineering
- Operator User Manuals
- CE Marking

SPECIALTY EQUIPMENT

Correanayak Versa M-215
5-Axis CNC Milling Machine
Cutting Envelope: Y: 21.5m X: 3.3m Z: 1.5m
Tolerance: 0.1mm/20m

DEA Delta Slant CMM
Operating in a Fully Adjustable
Climate-Controlled Environment
Machine Parameters: Y: 6.3m X: 3.0m Z: 2.0m
Software: PC-DMIS

FACILITY

64,000 sq/ft
Large Assembly Bays
Supported by 10t KONE Cranes (8m under hook) with
7m x 5m transportation access for substantially
increased tool manufacturing capability

KAMAN

Aerosystems

COMMERCIAL & DEFENSE | FIXED WING & ROTORCRAFT

TOOLING



DESIGN & MANUFACTURING LOCATIONS



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INSPECTION CAPABILITY

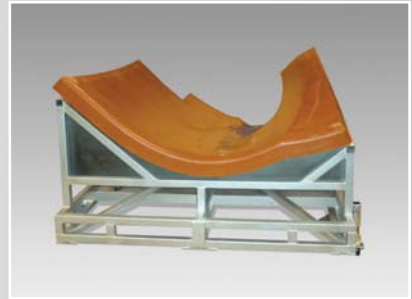
Climate-Controlled Environment
Renishaw Artifact Machine Calibration
5-Axis CMM x 2 (6.3m)/PC-DMIS
FARO & Leica Trackers & FARO Arms
First Article Inspection
Tool Try Out: Springback Testing

QUALITY APPROVALS

AS EN 9100 & BS EN 9001: REV C
ISO 14001
ISO 18001
BAE Systems Method 1 Approval
(Direct-to-Line Delivery)

PROGRAM EXPERIENCE

Airbus A320 NEO: Over Wing/Under Wing/Fairing Mold Tools
Airbus A350: FLE Automated Assembly Jigs & Integration Straps Mold Tools
Airbus A380: Wing Skin Shot Peen Fixtures (42m)
Airbus A400M: Mold Tools
Airbus Defence & Space: Satellite Assembly/Test Jigs/Fixtures
BAE Systems TARANIS UAV: Tooling
Bombardier LJ85: Cabin PAX & OWEE Door Tooling
Bombardier C-Series: Composite Wing Tooling
Bell AH-1Z: Canopy Assembly Jigs & Tools
Embraer KC390: Cargo Ramp Assembly Line
Lockheed Martin F-35: STOVL, CTOL & CV Tooling
Gulfstream G280: Winglet & Aileron Tooling
Rolls-Royce: A350 XWB Nacelle Handling



The Kaman Tooling Center of Excellence is designed and equipped to meet the increased size requirements of modern aircraft structures and tooling.

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Kaman Aerosystems is a division of the Kaman Aerospace Group of companies.