



General Introduction

Nova-Tech Engineering, with over 30 years of experience providing innovative solutions for our customers, we can support most any requirement. Our capabilities include design, analysis and fabrication of tooling, mechanical, electrical and automation projects. We have all the major CAD systems for 3-D solid modeling, and utilize Design for Manufacture (DFM) and Value Engineering (VE) methodologies. Our analysis capabilities include multiple FEA tools, and DELMIA Virtual Manufacturing software for both geometric and discrete event simulation. We also have the project management skills necessary to successfully deliver, install, and support these projects. These resources enable us to provide you with fast-to-market, cost-effective products and systems.

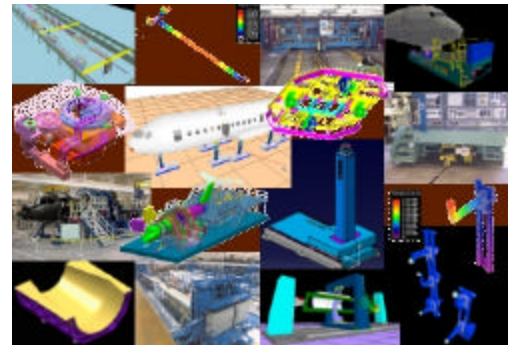


Products

- Conventional Aerospace Tooling:** Fabrication, assembly and installation tooling
- Automated Aerospace Tooling:** Automated drill and fasten systems, material handling
- Industrial Control Panels:** Equipment and test carts
- Laser Alignment and Positioning Systems:** Multi-axis positioners, multi-positioner control systems, laser alignment
- Transporters:** Equipment
- Powered Casters:** Equipment
- Flight Structures:** Monolithic structures, self-indexing parts

Capabilities

- Design and Analysis:** Solid modeling, structural analysis, spatial integration
- Virtual Manufacturing:** Kinematics, off-line programming, assembly simulation, virtual prototyping
- Automation and Controls:** PLC, CNC, Servo, hydraulic, pneumatic and hybrid control systems
- Software Development:** C/C++, Visual Basic, CATIA IUA, DELMIA customization



NOVA-TECH ENGINEERING, INC.

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Aerospace Tooling

Automated: Assembly automation, align & positioning systems, automated drilling & fastening, fixtures for automation, controls

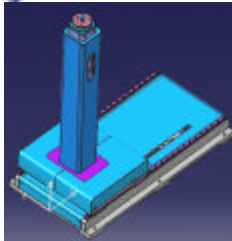
Conventional: Fabrication tools, assembly, installation & modification tools, safety and ergonomic tools

Industrial Control Panels

UL 508A Certified: General use industrial control panels

Capabilities: Design, fabrication, assembly, installation

Service: Field engineering support



Laser Alignment and Positioning Systems

Positioners: Quality positioners since 1989, modular, scalable, low profile, affordable, adaptable, reliable

Alignment Systems: Uses either laser tracker, or line-of-sight laser alignment

Controls: PLC controlled for highest level of industrial reliability

Transporters

Moving Assembly Lines: Guided and unguided tugs and transporters

Part Movement: Transport of parts, tools and containers, guided or unguided

Ground Support: Equipment and test carts



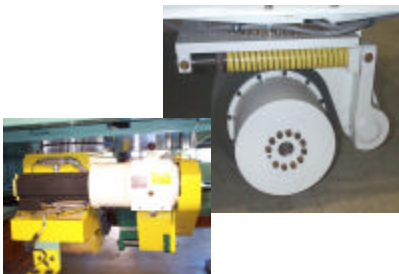
Powered Casters

Drives: Electric, hydraulic, pneumatic, disconnects for towing

Controls: Manual, tethered, RF, PLC controlled steering

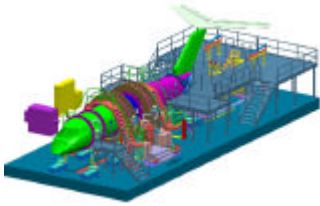
Guidance: Tape, wire, photogrammetry, laser, contact feeler

Suspension: Smooth or rough terrain, kneel-down



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Design and Analysis

Applications: Aerospace, commercial & industrial product development

Solid Modeling: CATIA V4.2.x, CATIA V5, Unigraphics 15

Structural Analysis: ALGOR, ANSYS, NASTRAN

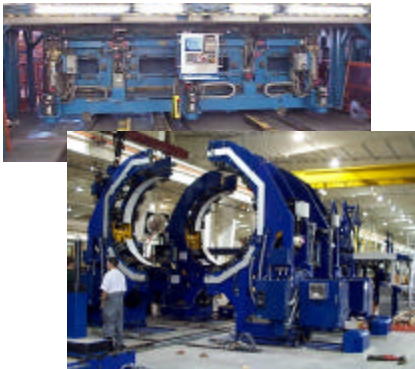
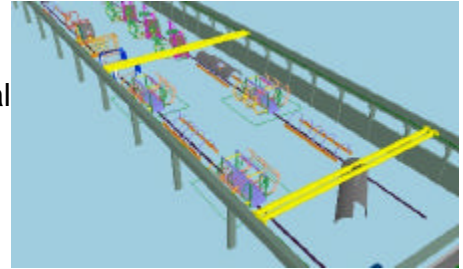
Virtual Manufacturing: DELMIA IGRIP and QUEST

Virtual Manufacturing

Assembly: Spatial integration, assembly sequencing, virtual prototyping, dynamic collision analysis

Kinematics: Machine development, off-line programming, reach & collision analysis

Factory: Workcell and factory layouts, factory flows, rate analysis, material handling systems



Automation and Controls

PLC: Allen-Bradley Rockwell, General Electric, Koyo, Mitsubishi Electric, Siemens, Square D

Motion Control: Fanuc, Galil, Siemens, SmartMotor, Yaskawa

Hydraulics & Pneumatics: Equipment design, controls design and PLC integration

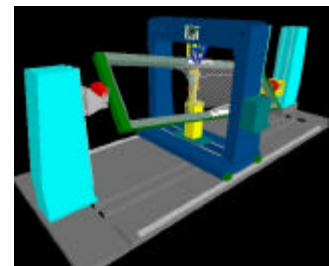
Software Development

Languages: C/C++, Visual Basic, CATIA IUA, DELMIA MACROS

Controls: PLC, CNC, Servos

Networks: DNC factory networks, RF, office, common bus protocols

System Administration: UNIX, NT, CAD, servers



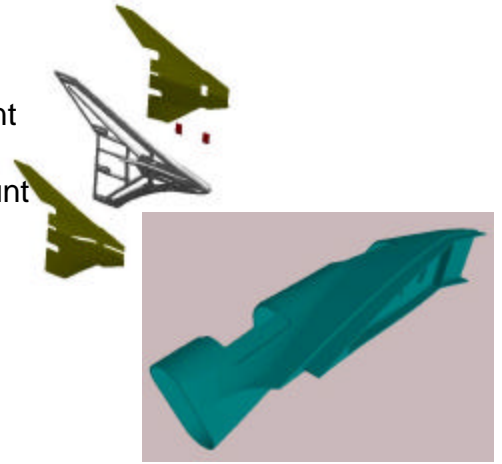
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Flight Structures

Application: Primary and secondary structures, equipment racks

DFM: Monolithic cast and sheet metal designs for part count reduction, self indexing parts for faster assembly



Resources

CAD: CATIA V4.2.x, Unigraphics 15, AutoCAD

Structural Analysis: ALGOR, ANSYS, NASTRAN

Virtual Manufacturing: DELMIA IGRIP and QUEST

PLC Programming: Allen-Bradley Rockwell , General Electric, Koyo, Mitsubishi Electric, Siemens, Square D

Motion Control: Fanuc, Galil, Siemens, SmartMotor, Yaskawa

Programming: C/C++, Visual Basic, CATIA IUA, DELMIA MACROS

Company Profile

- Nova-Tech Engineering is a privately held corporation.
- Aerospace tooling design and fabrication, flight structures design
- Automation and controls, industrial control panels, software development
- Alignment and positioning systems
- Design, structural analysis, virtual manufacturing
- Transporters and powered casters

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