



**AIT Canada** – Contract Design and Manufacturing

# Customized Precision. Superior Results.



**INDUSTRIAL AUTOMATION** Fabricated, installed, and maintained by AIT Canada.

**A**dvanced Integration Technology (AIT) Canada designs, engineers, and manufactures a broad range of custom equipment, machines, and finished materials used throughout the world.

In its 62,000-square-foot facilities in Aldergrove, British Columbia (just outside Vancouver), AIT Canada specializes in high-precision fabrication, machining, and assembly to serve emerging high-technology tooling needs. These include entire assembly systems, subassemblies, and individual components.

With on-site manufacturing and the highest aerospace industry standards, AIT Canada maintains strict quality and production control through the entire process, guaranteeing superior product quality and reliability. We are ISO 9001:2000 Certified.

Aerospace projects include fabrication of positioners for computer-controlled wing-to-body join systems, fuselage positioning systems, and vertical and horizontal stabilizer boring fixtures as well as automated fuselage assembly tooling.

**AIT CANADA FACILITIES** AIT Canada head office conveniently located close to Vancouver and the U.S. border





Range of Services

- Design and manufacture machines, equipment, and systems
- Manufacture prototypes for large production runs
- Develop custom replacements for obsolete equipment
- Modify, upgrade, retrofit, and reverse-engineer existing equipment
- Metrology services via laser tracker capabilities

Fabrication and Welding

- 30,000-square-foot facility for high-precision fabrication metal components and parts.
- Processes include SMAW, GMAW, FCAW, and GTAW
- Standards include AWS and CWB
- Materials include steel, aluminum, stainless steel, titanium, invar, and copper alloys

Machining

- Fully equipped 7,500-square-foot machine shop
- 5 CNC and 3 manual mills, plus 1 CNC and 1 manual lathe
- High-precision prototyping or production machining

Assembly and Testing

- Clean 16,000-square-foot environment for assembly and testing
- High-precision mechanical assembly
- Installation of high- and low-pressure hydraulic and pneumatic systems
- Optical alignment and inspection using laser technology
- Static and dynamic load testing
- Certificates of conformance for load testing, or as requested by customer for assemblies



MACHINE SHOP Comprehensive machining capabilities.



ON-SITE FABRICATION AND WELDING 787 mandrel handler manufactured to Aerospace industry standards.

Shop Equipment Specifications

Machine Shop

Equipment	Qty	Specifications
IKEGAI Horizontal CNC Boring and Milling Machine	1	63" x 87" Table 137" X-Axis, 98" Y-Axis, 63" Z-Axis, 27" W-Axis, 360° B-Axis
FEMCO Horizontal CNC Boring and Milling Machine	1	157" x 49" Table 167" X-Axis, 55" Y-Axis, 28" Z-Axis, 22" W-Axis, 360° B-Axis
KAO MING Double Column Vertical CNC Machining Center	1	57" x 63" Table 79" X-Axis, 71" Y-Axis, 67" Z-Axis
DAEWOO Vertical CNC Machining Center	2	55" x 25" Table 51" X-Axis, 26" Y-Axis, 26" Z-Axis
DAEWOO PUMA CNC Lathe	1	10" X-Axis, 27" Y-Axis, 360° C-Axis 23" Swing over Bed, 14" Turning Diameter, Live tooling
FORTWORTH Vertical Milling Machine with Digital Readout	1	58" X-Axis, 24" Y-Axis, 28" Z-Axis
FORTWORTH Universal Milling Machine with Digital Readout	2	41" X-Axis, 14" Y-Axis, 18" Z-Axis, Horizontal spindle
TRENS Lathe with Digital Readout	1	22" Swing (8" over saddle) x 120" between centers,
SHARP Radial Arm Drill	1	36" Swing x 36" High





**CNC MACHINING** Pulp Mill stainless steel heat exchanger.



**MAJOR FABRICATION** Replacement ramp for car ferry.

**Project Experience**

- Airbus** – A380 Section 19 Automated Assembly Tools and 5-Axis Hoop Driller
- Ballard Power Systems** – Skid assembly for 250KW power plant
- BC Ferries** – Ramp replacement for MV Kwuna
- The Boeing Company** – 787 Dreamliner positioning equipment
- The Boeing Company** – 747 FAIT Automated Fuselage Join tools
- The Boeing Company** – 737 Automated Fuselage/Wing-to-Body join tools; Automated Horizontal and Vertical Stabilizer Boring fixtures
- Learjet** – Automated Fuselage Join tools
- CHC Helicopter Corp.** – Portable working platforms and helicopter transportation systems
- The Drypers Corporation** – Poly mask and cut-N-space machines for disposable diaper inner liners
- Ellett Industries** – Stainless steel heat exchanger
- Fairchild Dornier** – 728 Automated Fuselage Join Tools and Work Platforms
- GKN Westland** – Refit tooling (helicopter)
- Highland Foundry** – Burner plates
- Lockheed Martin** – F-35 Joint Strike Fighter positioning equipment
- Raytheon Canada** – Spy-3 Radar Structures for U.S. Navy, Altar feed
- Vought Aircraft** – 787 Dreamliner positioning equipment.
- Universal Studios** – ET Adventure Ride bicycle vehicle assembly



**Fabrication Shop**

Equipment	Qty	Specifications
Messer Edgemaster Hi-Def Plasma Cutting Machine	1	120" x 314" Water table, 1 plasma, 2 oxy-fuel
Geka Hydracrop Ironworker	1	88 ton punching, 165 ton cutting
Cosen Horizontal Bandsaw	1	Max 13" Diameter, 11" x 18" Rectangle
Lincoln Multi-Process Power Wave Welder	6	
Miller TIG/Stick welder	1	
Miller MIG welder	3	
Lincoln Plasma	1	
Hypertherm Plasma	1	

**AUTOMATED ASSEMBLY LINE** Built in Canada installed in a German manufacturing plant

**Assembly Shop**

Equipment	Qty	Specifications
FARO Laser Tracker	1	2,760" Diameter range, 0.001" 3-D single-point accuracy

**Cranes**

Equipment	Qty	Specifications
Gantry Crane	1	2 Ton
Gantry Crane	1	5 Ton
Bridge Crane	3	5 Ton
Bridge Crane	2	16 Ton
Jib Cranes	8	1 & 2 Tons



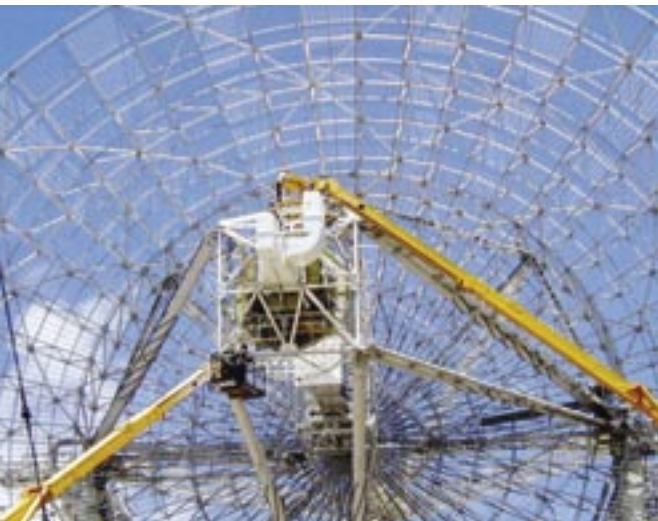
**VOUGHT FABRICATION CART** ⚡ Autonomous transportation systems for factory automation.

**Additional Customers:**

- AMEC Dynamic Structures Ltd. (formerly AGRA Coast Limited)
- Britco Mobile and Modular Buildings
- Helipro International
- Avcorp Industries Inc.
- Knelson Engineering & Manufacturing Division (KEM)
- BC Hydro



**A380 SECTION 19** ⚡ Fuselage Assembly Tools for Airbus in Spain.



**RAYTHEON RADAR STRUCTURE** ⚡ Radar structures for U.S. Navy.

**Certifications and Capabilities**

- Qualification and Certs:** Airbus Tooling Offload Certified  
 Boeing Tooling Offload Certification D6-56202  
 GKN Westland Tooling Offload Certification PSL00009  
 Raytheon Approved (Critical Supplier for N&MIS)  
 SMAW, GMAW, FCAW, and GTAW Process Certified  
 ISO 9001:2000 Certified
- Materials:** Aluminum, carbon fiber, stainless steel, invar, titanium, and other exotics
- CMS:** Laser Tracker, Optics, Surface Tables, Assorted Metrology Tools (Dials, Calipers, Height Gauges)
- CAD Equipment:** CATIA V4 and V5, AutoCad 2000, AutoCad Mechanical Desktop, SolidWorks, FEA, Algor STA Package, ProE



**Contact Us**

**Manufacturing and Assembly**  
3168 262nd Street  
Aldergrove, BC V4W 2Z6  
Canada  
Phone: 604-856-8939

**Fabrication**  
3252 262nd Street  
Aldergrove, BC V4W 2X2  
Canada

**About AIT Canada**

Advanced Integration Technology (AIT) Canada designs, engineers, and manufactures a broad range of custom equipment, machines, and finished materials used throughout the world. With on-site manufacturing and the highest aerospace industry standards, AIT Canada maintains strict quality and production control through the entire process, guaranteeing superior product quality and reliability. ISO 9001:2000 Certified. Learn more at [www.aint.com](http://www.aint.com)

