

Company Overview

aero-safe technologies inc. provides High Precision CNC Manufacturing of High Reliability components with complex geometry, extremely tight tolerances and surface finishes, providing manufacturing solutions to the Aerospace, Defence, Life Support, Satcom, Electronics and Optical Industries since 1981. Located in Fort Erie, Ontario Canada, aero-safe is a 25,000 SQ FT temperature controlled facility, which employs over 30 Skilled Trades, 3 Engineers and Management with an In-house Apprenticeship Training Program.



aero-safe technologies provides complete manufacturing services and solutions from prototype through production using the latest Solid Model VAT CAD/CAM programming, Tool and Fixture Design, CNC Milling and Turning, EDM, Microscopic Deburring, Precision CMM inspection, Assembly, Chemical Finishing, and Processing. Aero-safe's Quality Systems is ISO 9001-2000, AS9100 REV-C, and CGP / ITAR registered.

In a cycle of continuous improvement, **aero-safe technologies** has steadily increased its involvement with customer requirements to generate product design, research and development (PDR&D) with the aim of extending the market life of products.

Mission Statement

It is our mission at aero-safe technologies to be world class and recognized by our customers as their number one supplier. Our priority is to contribute to our customer's success and to offer quality in employment to all of our employees, at the same time being good corporate citizens serving our community.

Values

aero-safe technologies hosts a CO-OP program with Fort Erie Secondary School enabling teenagers in high school to experience the manufacturing sector by working alongside **aero-safe's** machinists. This program has proven to be a great asset as about half of the workforce has been sourced locally through this program. **aero-safe** strives to inspire the future of this country by becoming a source of mentorship within the community.



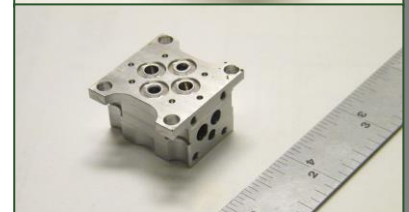
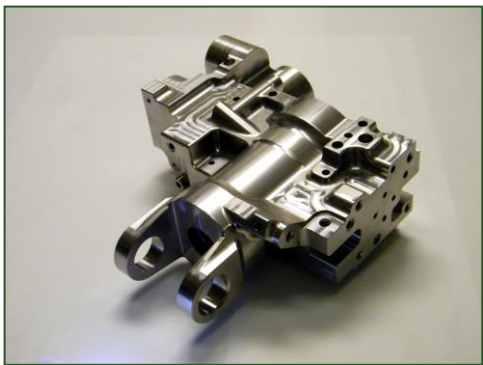
Products

aero-safe technologies has extensive experience in Ultra High Precision CNC Machining of various High Reliability Components. **aero-safe** has developed manufacturing processes that produce complex components with tight tolerances (+/- .0002") in various materials. A selection of various alloys is available in order to fulfil our customer's needs including:

- 2024, 6061, 7075
- Magnesium
- 1018, 1045, A2
- 4340
- 13-8, 15-5, 17-4
- Carpenter 455
- Hastalloy X
- Inconel
- Invar
- Various plastics

aero-safe technologies manufactures parts for a variety of customers with a variety of needs. **aero-safe** specializes in a variety of highly demanding sectors including:

- Life Support Oxygen Regulators
- Missile Pneumatic Actuators
- Manifolds
- Missile Deployment Systems
- Pressure Vessels
- Microwave Switch and Multiplexer Components
- Electronic Chassis
- Optical Components
- Aircraft Landing Gear

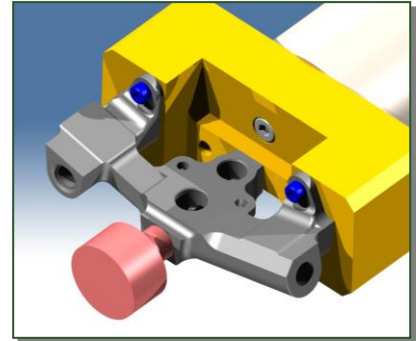


Capabilities

CAD/CAM Programming System

aero-safe technologies has developed advanced CAD/CAM systems to provide customers with Solid Model manufacturing technology to enable “Art To Part” concepts, which provides - reduce design cost, reduced lead time, and Design For Manufacturing.

aero-safe technologies is capable of manufacturing complex machined components from solid models without detailed engineering drawings. Customer may identify only critical features and aero-safe develops CAD/CAM programs directly from customer solid model.



QC Inspection performs independent verification of all features using the Solid Model via the CMM (Co-ordinate Measuring Machine).

aero-safe technologies has the ability to manipulate various native files such as Solid Works, Pro E, Catia, Parasolid/ASIC and virtually any other solid file.

- 5 CAD/CAM Workstations
 - Software
 - IronCAD 2014
 - Translator Module
 - EdgeCAM 2014 R2
 - Advanced Production
 - Ultimate Production
 - 5-Axis Simultaneous Milling
 - GibbsCAM 2013
 - 4-Axis Module
 - PEPS V8.0
 - 5-Axis Module
 - Hardware
 - Quad Core Intel Xeon Processors
 - Nvidia Quadro Graphics Cards
 - Dual 24” or 27” 2.5K Monitors
 - 3DConnection 3D Mice



Vertical 3 Axis Mills

Machine	QTY	X Travel	Y Travel	Z Travel
Matsuura RA-1F	3	20.0	15.7	18.1
Matsuura 1500X	1	60.0	24.0	24.0
Toyoda FV-1680	1	63.0	31.5	31.5



Vertical 4 Axis Mills

Machine	QTY	X Travel	Y Travel	Z Travel
Brother TC-22B-O	2	27.5	15.7	16.1
Matsuura 800 VGII	4	31.5	17.3	19.1
Matsuura V.Plus 800	2	31.5	21.6	19.7



Horizontal 4 Axis Mills (All Multi Pallet)

aero-safe technologies has the ability to use its horizontal machining centres as a high production asset for its customers. High speed machining, up to 30,000 RPM spindles and 1000 PSI through spindle coolant are a few features offered by aero-safe. The specialized Matsuura H.Max 500 uses a 5 pallet system with tombstones with a laser assisted, 270 tool changer to enable aero-safe to run lights out high production.

Machine	QTY	X Travel	Y Travel	Z Travel
Matsuura 610	1	24.0	17.7	21.6
Matsuura H.Plus 300	1	19.7	19.7	19.7
Matsuura H.Max 500	1	29.5	27.5	27.5



5 Axis Mills

aero-safe technologies has the ability to use 5 axis machining centres to their full potential with the Edgecam 5 axis simultaneous manufacturing module. This coupled with the manufacturing processes developed over 3 decades puts aero-safe ahead of its competitors.

Machine	QTY	X Travel	Y Travel	Z Travel
Matsuura MX-520	2	24.8	22.0	20.0
A Axis Range : -10° to 125° 20,000 RPM Spindle with 40 tool changer Probing and Laser Tool Pickup Intelligent Protection System Machine Simulation				



Lathes

Machine	QTY	Max Dia	Draw Tube Dia	Max Length
Nakamura TMC 20	2	8.66	1.69	11.80
Nakamura TMC 20 II	2	11.02	2.56	11.80
Nakamura TMC 30	1	12.99	2.56	21.65
Nakamura SC 300	3	13.77	2.83	23.62
Nakamura SC 450	1	18.31	3.15	30.91



Multi-tasking Mill/Turn

aero-safe technologies has the ability to use its mill/turn machining centres as a high production asset to our customers. These machines have the ability to be bar fed and have integrated parts catchers and conveyors in order to keep cycle time to a minimum.

Machine	QTY	Max Dia	Hole Thru Draw Tube	Max Length
Nakamura WT-150	2	7.48	2.00	20.27

EDMs

aero-safe technologies has the ability to produce complex geometry with its EDM processes. Complex taper and loft features can be easily produced using 1 of 3 machines in Canada capable of using a 0.001" diameter wire. Plunge EDM features can also be produced effectively with aero-safe's pallet system.



Machine	QTY	Technology
Agiecut Excellence 2	1	0.001" Min Wire Diameter 0.1 Micron Surface Finish 35 Degree Taper Cutting
Agiecut Classic	1	0.006" Min Wire Diameter 0.2 Micron Surface Finish 30 Degree Taper Cutting
Agietron Innovation	1	0.00001 mm Resolution 0.2 Micron Surface Finish
AgieDrill	1	

Quality Control

aero-safe technologies possesses a quality control inspection department consisting of a 875 SQ FT temperature controlled inspection area, which is fully equipped with a vast range of standard conventional mechanical inspection gauges and measuring equipment, and High Precision CNC CMM Co-ordinate Measuring Machines: +/-0.00002” (.0005mm) accuracy.

Machine	QTY
Zeiss Prismo Vast	1
Zeiss Contura G2	1
Zeiss DuraMax	1
Mitutoyo BHN 506	1
Starret Optical Comparitor	1



Assembly

aero-safe technologies has the ability to manufacture as well as assemble its customer’s parts. This includes installing bushings, thread inserts, dowel pins, serialization or engraving and more.

- Temperature Controlled Assembly Area (Approx 500 SQ FT)
- Laser /Dot Peen/ Chemical Engraving Equipment
- Helicoil Insert Equipment
- Bushing And Pin Press

Deburring

aero-safe technologies has developed advanced deburring techniques to ensure burr free components. Deburring is performed under 20-30X magnification using specialized scraping and deburring tools while visually inspecting under magnification.

- Temperature Controlled Deburring Area (Approx 500 SQ FT)
- Stereo Leica G26 Microscopes (40 X MAG Capable)
- Electro-Chemical Deburring Equipment
- Media blasting Equipment
- Vibratory Tumbling Deburring Equipment



aero-safe technologies has proven itself as one of the leaders in deburring techniques within the manufacturing sector. With special attention put to finishing and ultra-high precision deburring the risk of FOD, burrs, particulate, and surface imperfections all have been but eliminated.