

May 2007



BAZ Airborne Components & Assemblies



www.bazaircraft.com

Company's Profile

- **BAZ** is a leading Israeli manufacturer of airborne components and sub assemblies.
- Founded in 1977 by Jacob Helfman, owner and president.
- Employs 170 professional engineers , technicians and skilled workers
- Manufacturer of high quality metal components by machining & sheet metal fabrication .
- Perform of sub-assemblies & assemblies of airborne structures "Build to print" and "Build to spec"
- Certified for production by major aircraft manufacturers and standards associations.

Major Mile stones

1977 - Establishment

1987 – Joining first program with IAI

1994 - First International Aerospace approval By MacDonnell
Douglass

1996 - Joining IAI's Galaxy Program (Later G-200)

1999 - First Boeing approval

2003 - Joining IAI's conversion programs (737,767,747)

2005 – Relocation to new facility in Barlev Industrial Park

2006 - Joining new major international programs

- Joining First Nacelle program

- First NADCAP approval

2007 – Signing first “Build to Spec” contract

2008/9 – Expanding with new facility

Facilities

- Located in the Lower Galilee
- In the Bar-Lev Industrial Park
- Area:
 - 8500 Sq m (in 3 buildings)
 - Planned 1500 Sq m



Technologies

One stop shop for airborne structure components and assemblies:

- Design and production of tooling for machining, press working, jigs & fixtures for welding, forming and airborne structure assemblies jigs.
- Sheet metal forming by: rubber press, deep drawing, bending, roll bending and Stretching
- Welding, mostly by G.T.A.W (T.IG)
- Surface treatment: chromate conversion coating, chromic anodize, passivation and painting
- Heat treatment
- CNC machining
- Mechanical & electrical assemblies
- Kitting for Assembly lines

Sheet Metal Equipment

- 4 Welding power suppliers lathe and positioner
- 2 Bending Rolling machines
- 3 Hydraulic press, up to 200 metric ton and table size of up to 1500 * 800
- 1 Hydraulic Double Action press (500T)
- 1 Hydraulic Press (4000T)
- 2 Press- brake up to 40 metric ton and up to 2000mm long
- 1 CNC Press- Brake 170 metric ton, 4000 mm(13.12') long
- 2 CNC V26M-7620mm Extrusion Stretch Wrap Forming Machine
- Sheet Metal Stretch forming machine up to 2 M long parts (Planned)

Machining

- 14 CNC milling machines with 6000- 15,000 rpm and travel up to x=2600mm (102"), 3 , 4, 5 Axis
- 2 turning and milling combined machines, 300 mm diameter
- 5 Medium size supporting lathes and milling machines
- 2 CNC Router Machine – 60,000 RPM 3680 X1500
- 5 Axis CNC router – 24,000 RPM 3680 X1500
- 2 Extrusion Router Machine – 24,000 RPM up to long=8000mm (4 axes)
- 2 Coordinate Measuring Machines: up to 2000*1000*800.

Other Equipment

- 4 Solution & aging heat Treatment Furnaces, Up to 1.45X1.2X1.2m
- 1 Heat Treatment Drop Furnaces Up to 2.5 M
- Refrigerators, down to - 40 centigrade
- Surface treatment bathes and painting facilities
- Crack detection facility (dye penetrate)
- Various production support equipment
- Automatic warehouse

Materials

Mostly AMS quality

We machine, form, heat treat, surface treat and paint:

- Aluminum-Variou kinds from AA 2xxx up to 7xxx families
- Stainless Steels- Ferritic, austenitic, martensitic kinds and precipitation hardening -PH such as: 15-5 and 13-8 Mo
- Steel- SAE 4130 and SAE 4340
- Titanium- CP and 6AL-4V

Production

Parts made by sheet metal & Machining.

- About 750,000 ea yearly (2008)
- 1700 batch a month (2008)
- Around 20,000 Active Part number

Hydraulic Presses



Hydraulic Presses



Hydraulic Press double action 500 Tons

Stretch Form



CNC V26M-7620mm Profile Stretch Wrap Forming Machine

Machine of 5 axes



Machining

CNC Router Machine, Currently installed - 60000 RPM 3680 X 1250 mm.



Sheet Metal Router Machine

Machining

CNC Router Machine – 24000 RPM 3600 X1500



Sheet Metal Router Machine

Machining

Extruded Profile Router Machine - 24000 RPM up to long=8000mm (4 axis).



Profile Router Machine

Machining



Typical CNC Milling Machine

Machining



CNC Lathe Milling Combined Machine

Inspection



CMM

Heat Treatment

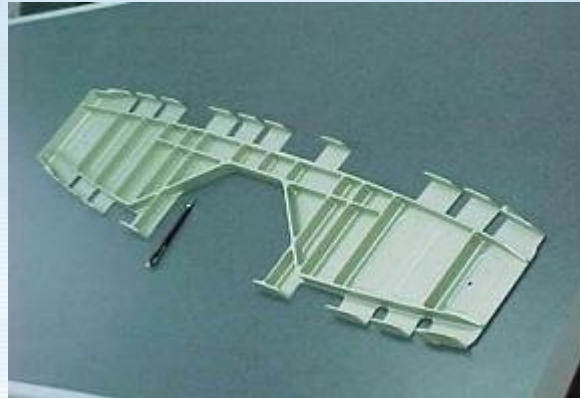


Aluminum Solution & Aging Furnaces

Surface Treatment



Machining



Typical parts

Machining



Typical parts

Forming Tools



Typical Part

Press Forming



Forming & Welding



Forming



Ti CP- Warm Formed

Deep Drawing



Duct parts



Cover- A.I.S.I 304 L

Forming



Forming with fixtures



Forming and welding



Forming and welding



Ti - Formed & Welded

Forming and welding



Duct

Forming and welding



AISI 321 – Formed & welded



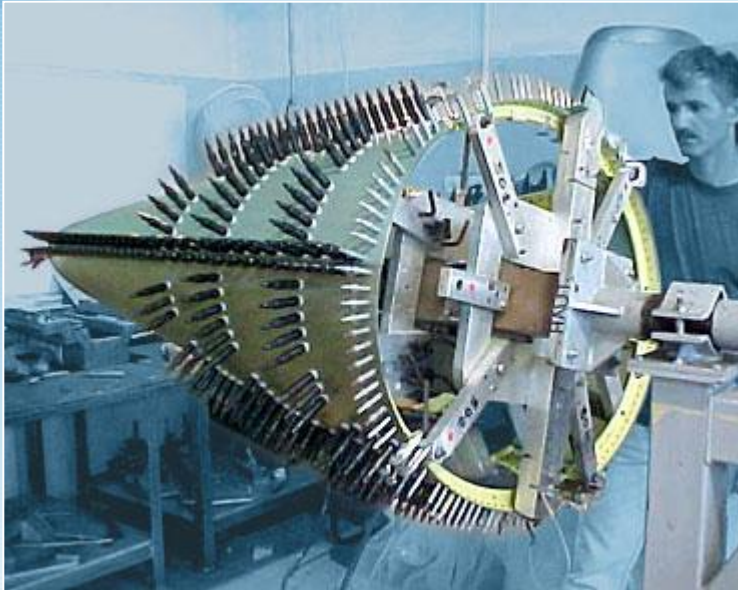
Welded SAE 4130

Assembly



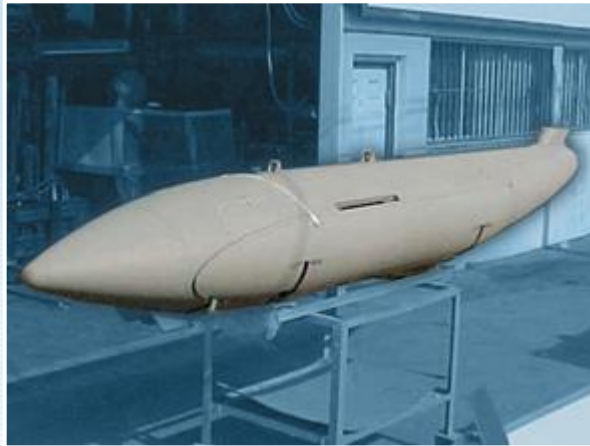
General View

Assembly



Tail Cone

Assembly



Camera Pod

Assembly



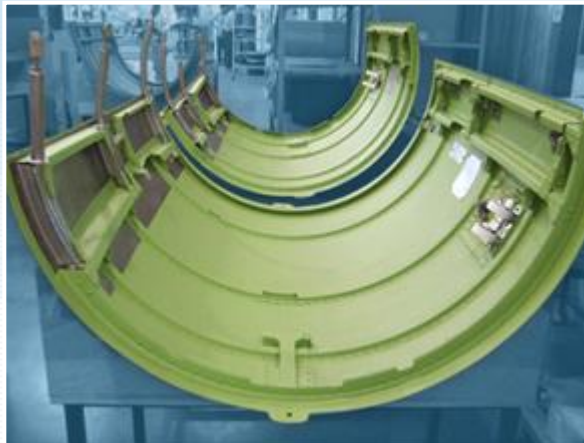
Camera Pod Jigs and Sub-Assembly

Assembly



Assembly Jigs

Assembly



Nacelle Sub-Assembly

Assembly



Nacelle Retrofit



Cockpit Canopy

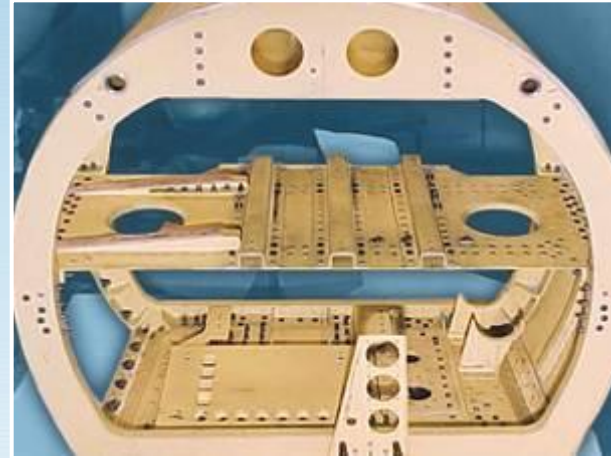
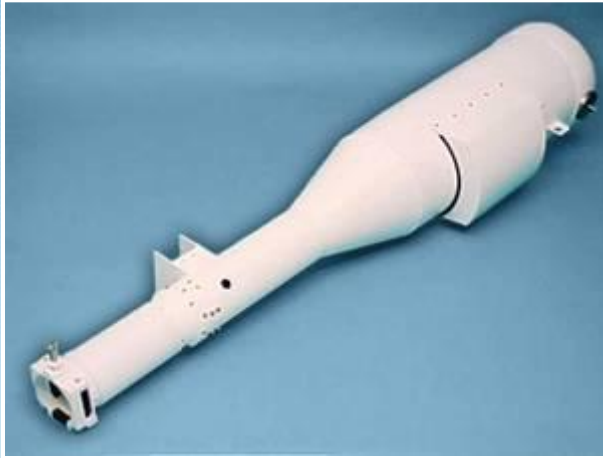
Assembly

Pulleys-Retrofit-Boeing 767 & 747



Cable Pulleys

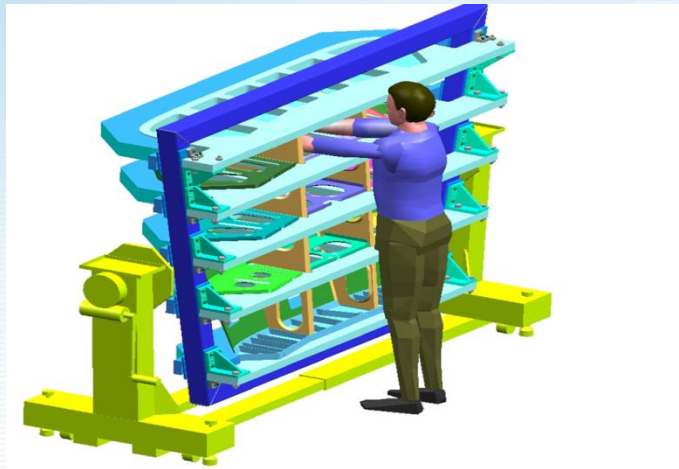
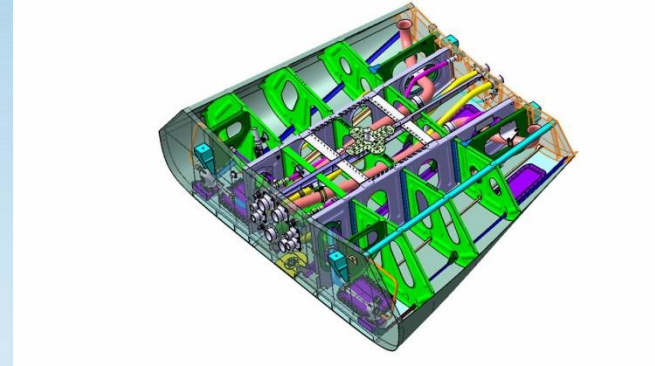
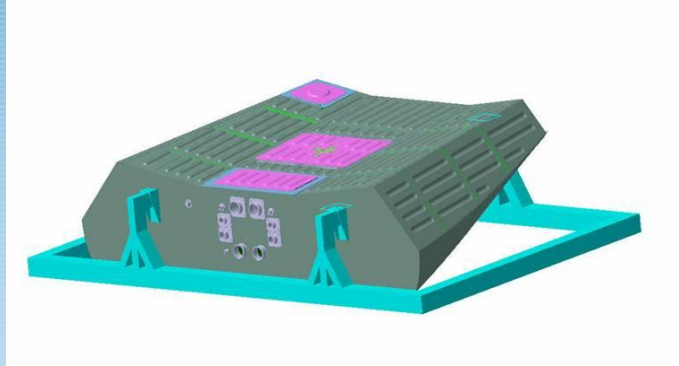
Assembly



Miscellaneous



Design & Assembly



Products - Kitting



Kit Layout

Customers



Major Program Participation

- G-200 – Detail parts, Kits and Assemblies
- G-150 – Detail Parts Kits and Assemblies
- Cargo Conversion Boeing 737,767,747
- G-250 – Detail parts and Fuel Tank
- Winglet Retrofit 737, 767 – Detail parts
- A400M Inlet – Detail Parts
- 737, 747, 767 – Detail parts
- C-130 – Detail parts kits
- AS907 – Detail parts kits
- CRJ – Detail parts kits

Qualifications

- Lockheed Martin
- Sikorsky
- Boeing
- Spirit Aero
- Israeli Aerospace Industry (I.A.I)
- Elbit / Cyclone
- GKN Aerospace
- Honeywell
- Hamilton Sundstrand
- AS9100
- Nadcap: Chemical Processing, Heat Treatment, NDT, Welding

Contact Information:

BAZ Airborne Components & Assemblies Ltd.

Bar-Lev Industrial Park, Mobile Post Misgav 20179, Israel

Tel: +972-4-9569000

E-Mail: sales@bazaircraft.com

Web Site: www.bazaircraft.com

Contacts:

General Manager Eytan Cohen-Munwes

+972-52-8992670

US Office Beni Dror

+1-248-3883488



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Thank You