The tube bending capabilities of the Stratoflex Products Division of Parker Hannifin are enhanced by our highly trained engineering and manufacturing personnel and the industry's most technologically advanced equipment and lean-manufacturing techniques.

Whether your tube requirements call for flexible sections made of hose of Teflon®, annular or helical convoluted metal hose, or compound, complex bent rigid assemblies, Stratoflex can fulfill your needs from design through production.

**ABOVE:** Engineer reviews customer design requirements to ensure design-for-manufacturability.

**BELOW:** Conventional tube bending machines capable of 1-D bends.

**ABOVE:** Computer-controlled, programmable orbital welders for stainless steel, Inconel and titanium tube assemblies.

**RIGHT:** CNC programmable tube bender for tubes with multiple bends and/or multiple radii.

Teflon is a registered trademark of E.I. du Pont Nemours and Company and is used under license by Stratoflex Products Division of Parker Hannifin Corporation.
LEFT: State-of-the-art, real-time radiography of tube assembly components.

LEFT: NADCAP-approved fluorescent penetrant inspection facility.

LEFT: NADCAP-approved X-ray facility.

BELOW: Lean tube bending cell and vector measuring table: a laser, non-contact system used to gather, analyze and program tube bending information.

Rigid tube assemblies made from aluminum, titanium and stainless steel materials.

Medium pressure hose of PTFE with titanium multiple bend tube for engine fuel application.

High pressure hose of PTFE with fire-protection in combination with rigid tubes.

Multiple bend tube/hose combination assemblies for engine fuel feed application.
### Basic Capabilities

**Sizes:**
- Elbows...........................................3/16" - 3"
- Multi Bends..................................3/16" - 1-1/2"

**Materials:**
- Steel Inconel
- Aluminum Titanium
- Stainless Steel

**Minimum Bend Radius:**
- Elbows:
  - 2:1 Titanium
  - 1:1 Inconel
  - 1:1 All Others
- Multi Bend:
  - 3:1 Titanium, 2:1 (Inquire)
  - 2:1 Inconel
  - 2:1 All Others

**Forming:**
- Single Flare per AS4330 (formerly MS33584)
- Double Flare per AS33583 (formerly MS33583)
- Beading per AS5131 (formerly MS33660)

**Welding:**
- Gas Tungsten Arc Welding (GTAW) Orital
  (machine) or manual per AMS-STD-2219
  (Welders qualified to AMS-STD-1595)

**Inspection:**
- Laser Coordinate Measuring Machine
- Fluorescent Penetrant per ASTM E1417
  (Formerly MIL-STD-6866)
- Radiography per ASTM E1742 (Formerly MIL-
  STD-453)

### Commonly Stocked Tubing

#### AMS 557/5570
Steel Tubing, Seamless or Welded, Corrosion and Heat Resistant (SAE30321).
*Primarily for parts requiring both corrosion and heat resistance, especially when such parts are welded during fabrication, and for required oxidation resistance up to 1500 degrees F, but useful at that temperature only when stresses are low. Very easy to bend or flare in the annealed condition.*

#### AMS 5581
Nickel Alloy Tubing, Seamless or Welded, Corrosion and Heat-Resistant. 62Ni - 21.5 Cr - 9.0Mo - 3.7 (Cb + Ta)
*Annealed Inconel Nickel-Chromium Alloy 625. Used for its high strength, excellent fabrication properties (including joining) and outstanding corrosion resistance.*

#### AMS 4943
*Offers excellent cold formability in combination with 20 to 50% higher tensile properties than the strongest unalloyed titanium grade at both room and elevated temperatures.*

#### AMS 4080 (6061)
Aluminum Alloy Tubing, Seamless, Drawn.
*Finished assemblies are provided in "T6" condition.*

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**Stratoflex**

**Certified ISO 9001**

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*ABOVE: CATIA CAD System assists Stratoflex engineers in producing complex engineering drawings and providing concurrent engineering capabilities.*

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