

Product Name:	Hand Bender: Fuel Tube Assembly	
Product Description:	A straight tube assembly is clamped in the fixture. Operator manually rotates the tooling in a specified sequence to bend the tube in 9 different locations.	
Overall Part Dimensions:	3/16" OD x .028 wall steel tubing with 9 bends	
Bending Tolerances:	± 1.5mm	
Engineering & Fabrication Process Applied:	Primary: Engineering/Design Fabrication CNC Milling Welding Grinding	Secondary: Priming Painting Assembly Heat Treating
Equipment Used to Manufacture Fixture:	CNC Mill Manual Mills Manual Drills Manual Grinders Automatic Grinders Manual Lathe	Hand Tools Gage Pins Gage Blocks Height Gages Micrometers Dial Caliper
Material Used:	Fixture Stand Angle Iron 2" x 2" x 3/16 wall	Hot Rolled Steel Base Plate Thickness: 5/8"
	Tooling: made from a combination of material Hot rolled steel 1018 steel A2 steel S7 Tool steel All tooling subject to wear is heat treated for longevity	
Material Finish:	Machine Base: Primed and Painted	
Inspections / In Process testing:	Dimensional Inspection, Gage Inspection, Functionality Tests	
Standards Met:	Customer Specifications, CAD Drawing	
Industry for Use:	Automotive Industry Appliance Industry Agricultural Industry	Aerospace Industry Medical Industry
Delivery Location:	New Albany, Indiana	