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STRESSVOYAGER®

ULTRASONIC NEEDLE FORMING & STRAIGHTENING

ULTRASONIC NEEDLE STRAIGHTENING WITH STRESSONIC® TECHNOLOGY

Ultrasonic Needle Forming or Straightening operation (UNS) consists in modifying the shape of a metallic sheet to progressively achieving a desired shape. It is a proven and reliable alternative of the peen hammer, with less impact for the operator.

Using our core technology - STRESSONIC® - impactors guided inside a peening head acquire velocity on a vibrating sonotrode and shock the metal to treat. A compressive stress layer is created on the surface. The difference of stresses between the surface and the core of the metal sheet result in a sheet curvature modification. By peening on the appropriate areas, one could adjust the part shape to its objectives (jigs).

STRESSVOYAGER® - OUR PORTATIVE ULTRASONIC NEEDLE FORMING SYSTEM

The generator inside the central unit produces an electrical sine wave at ultrasonic frequency. Continuous digital control of the process parameters.

Handheld peening head converts an electrical signal into mechanical energy to guide impactors toward the part to be treated.

Our system has been qualified by major OEMs :
AIRBUS, DASSAULT, GULSTREAM

CE

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STRESSVOYAGER® - ULTRASONIC NEEDLE FORMING

MAIN BENEFITS

- Plug and Play
- Better straightening and forming capacity
- Unprecedented comfort and safe usability
- Better control, no risk of damaging your parts

Performances

- Straightening intensity up to 30C
- Quick and efficient process
- Treatment of aluminum parts (thickness from 2 to 60mm) or on other metals

Functionality

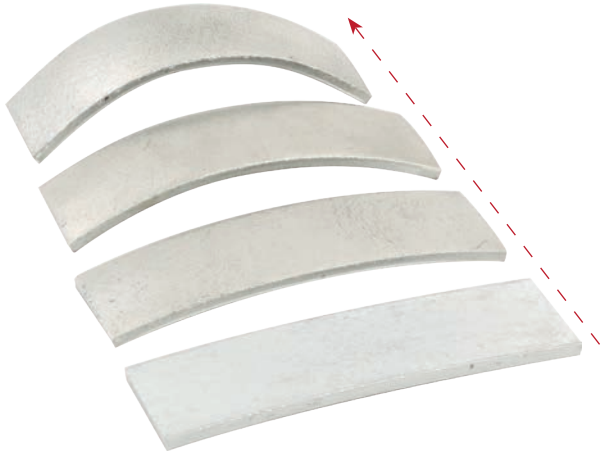
- No need for masking and bagging
- Straightening of the part directly on the jig
- Reduced need of surface finish operations
- Fast interchangeable and adaptable end-pieces
- Ergonomic design for a comfortable use
- Several designs of peening heads are available for the optimal treatment of hardly accessed geometries

Simplicity

- Minimum training required
- User friendly interface
- Handheld tool, compact, light and durable

Control

- Digital generator
- Real-time control of parameters
- No risk of damaging your parts



UNS effect on aluminum parts. Progressive bending when peening top surface

Peening head end-piece

MAINS SPECIFICATIONS

Generator	Technology	Digital
	Frequency	20kHz
Input Voltage	230V 115/230V 200/230V	50/60Hz
Maximum Power	1000W	
Nominal Standard Power	200W	
Cooling	Compressed Air	
Compressed Air	Pressure	6bar (90psi)
	Flow Rate	250-300 l/min (8.8-10.6 cfm)
Dimensions (LxWxH)	Central Unit	300x400x675 mm (11.8x15.8x26.6 in.)
	Peening Head	265-283x100x80 mm (10.4-11.1x3.9x3.1 in.)
Weight	Central Unit	24 to 28 kg (52.9 to 61.7 lbs) depending on the Power Supply version
	Peening Head	3 kg (6.61 lbs) - without umbilical
HMI	Touchscreen with ergonomic coloured interface	

SONATS - Innovative impact surface treatment solutions
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