

# PFAFF

## Seamsonic 8310-003

Ultrasonic welding machine for  
continuous welding of flexible thermo-  
plastic materials and nonwovens



**Seamsonic  
8310-003**

# Ultrasonic Roll seam - Welding Machine

*For the first time the Seamsonic ultrasonic welding machine uniquely combines all the physical advantages of ultrasonic welding with the whole range of technological sewing experience.*

- ✓ Most of thermo-plastic sheets, laminates, textiles and non-wovens are weldable
- ✓ High production speed
- ✓ Easy welding of small radii
- ✓ High wear comfort with lingerie items due to smooth Seam
- ✓ Smooth and even seams with standard or custom made anvil wheels
- ✓ No HF/RF-emissions or fumes with most materials
- ✓ No start/stop – marks
- ✓ Low energy consumption
- ✓ No consumables like needle and thread

## **Available arm modules:**

**Flat bed**



**Free arm**



**Feed off-the-arm for overlap seams**



**Post**

### **Features of the ultrasonic welding technology:**

When welding continuously by the ultrasonic method, the material to be welded will be subjected to rapid changing pressure vibrations. The heat develops because of molecular vibrations beneath the material surface, for thin materials within the immediate vicinity of the actual weld.

### **Merits of the Seamsonic:**

During the development of the *Seamsonic* the main focus was placed on the actual requirements of the factory floor, especially considering the needs of the conventional sewing industry.

On the *Seamsonic*, depending on the construction type, either the sonotrode or the anvil wheel is lowered. The product is placed between both wheels and welded continuously under pressure with the rotating sonotrode and the synchronous running anvil wheel. If required, puller wheels can be activated to support the material feed. The welding speed, amplitude and pressure adjustment are infinitely variable. The compact construction of the anvil wheel suspension makes it possible to easily interchange the different modules, eliminating the problem of having to change to a another machine when using different seams. Anvil wheels with all different kinds of seam profiles and widths can be easily interchanged.

### **Applications:**

Ultrasonic welding with the *Seamsonic* is a modern and economic production method and complementary to the conventional sewing technology. When laminates, clothing textiles with a large share of polymer and technical non-woven materials have to be processed, and when in particular watertight seams are required, the use of the *Seamsonic* is the first choice. One operation on the *Seamsonic* replaces two operations, sewing with subsequent seam sealing.

### **Technical data:**

- ✓ Digital PLC-control
- ✓ Functions operated through touch screen:
  - manual or automatic operation with speed regulation via foot pedal,
  - amplitude from 50 – 100 %, start delay for ultrasonic generator and motor, stop delay for speed, automatic reverse

Available optional: with free arm, feed-off-the-arm for overlap seams and tubes, as well as with post arms (modules can be interchanged) and as a flat bed version.

### **Ultrasound unit:**

SONOTRONIC Ultrasonic generator DN 35/400 M, 400 VA

- ✓ Inaudible operating frequency of 35 Khz
- ✓ Process linked automatic amplitude stabilization and frequency correction
- ✓ Automatic tuning of sonotrode before and during welding

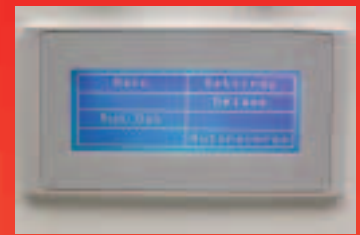
SONOTRONIC rotating horn, Ø 104 mm, aluminium-titanium hybrid converter DN 35/1200, horn cooling by ventilator

### **Optional accessories:**

Custom-made anvil wheels, milled or engraved, cutting wheels, guide aids for overlap and peeling seams, hemmers and binders.



Main menu Touchscreen



Submenu "Settings"



Submenu "Delays"



Exact adjustment of gap between sonotrode and anvil wheel



Selection of anvil wheels

## Technical Data:

**Welding speed:**

0.6 - 13.6 m/min., higher speeds possible

**Seam widths:**

2 – 10 mm

**Throat:**

400 mm

**Anvil wheel:**

dia. 65 mm, width and seam profile as per customer requirement

**Material thickness:**

above 50  $\mu$

**Gap adjustment:**

0 – 2 mm, fine adjustment  
1/50 mm by graduated hand wheel

**Welding pressure:**

0 – 800 N (5 bar)

**Puller wheels:**

activation separately left and right

**Power supply:**

230 V, 50/60 cycles, 16 Amp.

**Consumption:**

4 Amp., 800 VA

**Compressed air:**

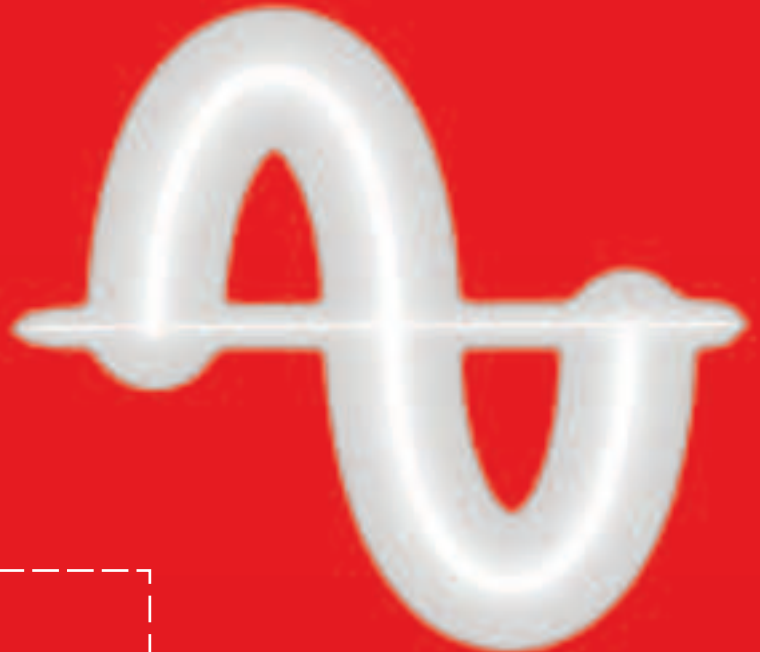
6 bar, 10 litres/min.

**Weight:**

gross 230 kg, net 182 kg

**Measures:**

121 x 67 x 135 cm packed  
depending on the version



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The right to alter the design, weight and dimensions is reserved.

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