

CONTINUOUS HEATERS

ProSoya's centrifugal steam injectors are capable of instantly heating any water-miscible liquid or slurry on a continuous straight through basis using a patented steam injector method. A low pressure drop across the steam injector means you need not operate steam boilers at high pressures, thus reducing the risk of boiler and steam related mishaps.

SPECIFICATIONS

▶ **Power Requirements:** 1.2 kW

▶ **Capacity:** up to 600 Kg steam

▶ **Construction:**

- ▶ S.S.304 fabrication with sanitary finish
- ▶ Easy to clean and sanitize
- ▶ Wash down duty
- ▶ Double mechanical water flushing seal

ProSoya has also developed **passive steam injectors** for heating water in tanks for such systems as **CIP**. These low cost device operate with very low noise levels compared to alternative devices and can be readily installed on most tanks.

ADVANTAGES:

- ▶ 100% transfer of heat energy
- ▶ Dynamic mechanical mixing
- ▶ S.S.304 product contact surfaces with sanitary finish
- ▶ Easy to clean and disassemble
- ▶ Operates without vibration or water hammer
- ▶ Cut fuel costs dramatically compared to indirect shell and tube or plate type heat exchangers

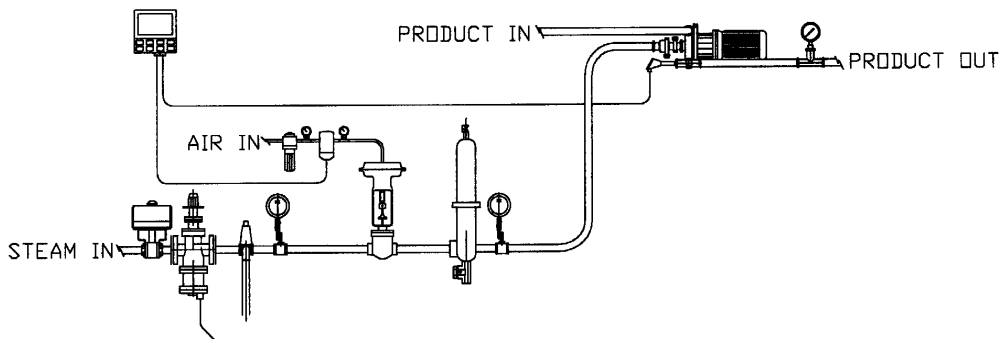


CONTINUOUS HEATERS

ProSoya's efficient direct steam injection system can be used for heating of up to 4000 kg/h of slurry. It can instantly heat any water miscible liquid or slurry to a uniform temperature without excessive noise or mechanical shocks and prevents hot and cold spots. This is achieved by mechanically dissipating the steam momentum and thermal energy into the product to be heated (patent pending). **ProSoya's Continuous Heaters** provide a 100% transfer of heat energy and cut fuel costs dramatically for any soymilk plant. You may also consider combining the heater with ProSoya's *Continuous Cooker*.

The *Continuous Heater* includes:

- ▶ Pressure Reducing Valve
- ▶ Culinary Filter
- ▶ Steam Trap
- ▶ Check Valve
- ▶ Strainer
- ▶ Controller
- ▶ Temperature Transmitter
- ▶ Control Valve
- ▶ Air Regulator
- ▶ I/P Transmitter



OPERATION

1. Liquid or slurry to be heated enters the inlet side of the heater.
2. Steam is injected in the center of the heater body and is dispersed mechanically to provide instant heating of the product without any water hammer.
3. Product temperature is measured at the outlet with a RTD or similar temperature transmitter and the rate of steam injection is controlled via a feedback loop and a steam control valve.
4. ProSoya's continuous heaters can easily maintain temperature in a range of $\pm 1^{\circ}\text{C}$ of the set point even under variable flow conditions.