

QFP 35L-600 High Pressure Food Processing System



Features and benefits

Compact lightweight system fits on a single skid for rapid installation

35 litre system is well suited to handle market introduction volumes and new product development

Avure's unique wire-wound pressure vessel and frame technology, and exclusive 7X intensifier pumping system ensure unmatched equipment reliability and safety

Availability of Avure's world-class food technologists helps food processors utilize HPP as a competitive advantage in their own marketplace

All Avure HPP systems are backed by our global team of specialists, ensuring secure safe and reliable system installation and operation

High pressure processing for food

The many advantages of using high pressure processing (HPP) in food production have been known for over a century. However, the technology and equipment required to efficiently and reliably generate the extreme pressures (up to 600 MPa/87,000 psi) used in HPP have only recently become commercially viable.

Avure's unique HPP technology benefits food processors around the world by improving food safety and extending shelf life through the inactivation of foodborne pathogens and spoilage organisms in packaged foods. High pressure treated products retain their fresh or just-prepared characteristics without sacrificing quality or causing changes in nutrition, color or texture. High pressure processing (HPP) also enables the introduction of new previously unrealizable products. Some of the successful HPP food applications include ready-to-eat meats, seafood, fruit chunks, salsa, nutraceuticals, pharmaceuticals and other heat-sensitive products.

Before it is high pressure processed, the product is packed in its final consumer package or a bulk package, and loaded into a cylindrical load basket. The basket is placed in a water-filled pressure vessel and the vessel is closed. The temperature and pressure are then controlled by pumping in filtered water at the preset temperature. After holding the pressure for a predetermined period of time, the vessel is decompressed, opened, and the load basket is removed. The process parameters (pressure, temperature and hold time) can be controlled precisely and recorded for each cycle – meeting or exceeding nearly all food processing safety requirements. Avure's team of world-class food technologists can work with you to determine the specific process parameters which are dependent on the product being processed and the desired results.



PRODUCT SPECIFICATION

QUINTUS® Type QFP 35L-600

Production rate/Cycle time

The 35L can process up to 25 kg per cycle, depending on product size and packaging. Cycle time to maximum pressure, excluding hold time, loading and unloading is approximately 5 minutes.

Maximum operating pressure

600 MPa (87,000 psi)

Maximum vessel temperature

50° C (122° F)

Pressure vessel volume

35 litre (9.25 gal)

Internal dimensions

Diameter: 190 mm (7.5")
Height: 1,220 mm (48")

Total vessel and frame weight on foundation

8,000 kg (17,600 lbs)

System dimension, LxWxH

3.5 x 3.4 x 3.5 m (137.8 x 133.9 x 137.8")

Height to hook (for loading/unloading of the basket)

3.9 m (12.8')

Recommended input water temperature range

4°-16° C (39°-60° F)

Cooling water supply

20 l/min (5.3 gal/min) at 16° C water temperature

Power requirements

80 kVA, 95 amp power supply for 3-phase, 480V, 60 Hz
80 kVA, 115 amp power supply for 3-phase, 400V, 50 Hz

Air supply

Minimum 5 bar (72 psi) oil-free air with capacity of 15m³/hr (550 ft³/hr)

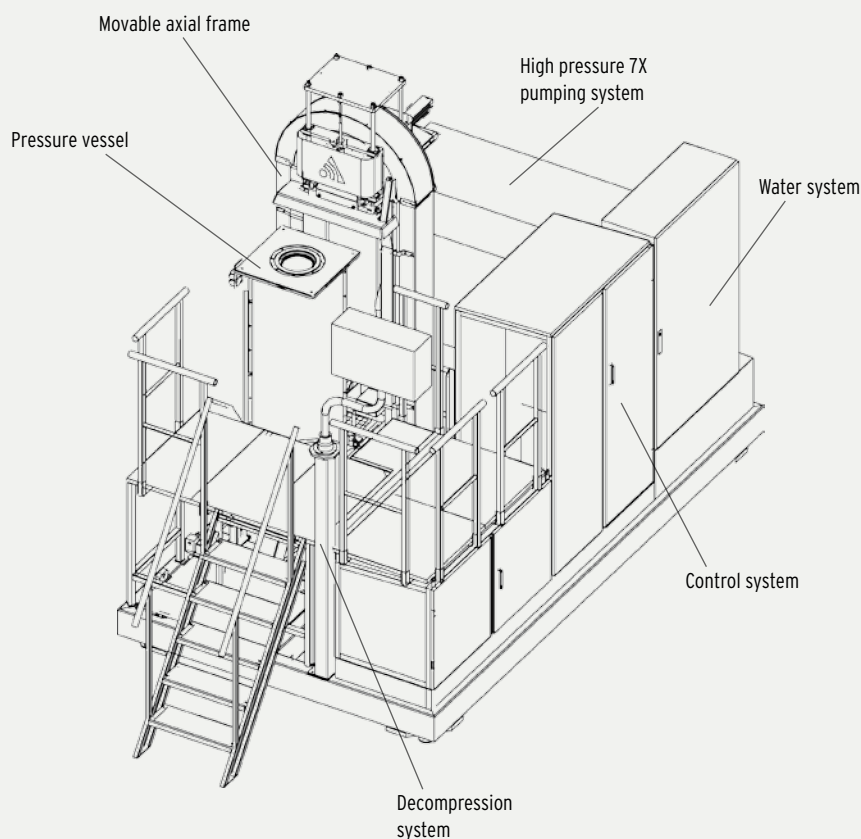
Designed, manufactured and tested in accordance with ASME Boiler and Pressure Vessel Code, Section VIII, Division 3.



Ready-to-eat meat



Guacamole salsa



Pressure vessel design advantage

The core of Avure's HPP 35L system is the Quintus pressure vessel, which consists of a wire-wound prestressed cylinder with removable end-closures supported by a wirewound pre-stressed frame. The end closures contain all the unit's water connections, plus the pressure and temperature sensors. The pressure vessel is opened and closed by automatic removal of the end closure along with translation of the axial frame. The pressure vessel has a number of patented features to provide safety and performance. For example a patented "leak before failure" mode for the vessel and intelligent sensors provide system safety and continuous monitoring of system health status on every cycle. Innovative large diameter closure seals handle the repeated stress and strain of continuous operation.

For more information please visit:
www.avure.com
Or email:
info@avure.com

Avure Technologies Inc
Americas Sales
22408 66th Avenue South
Kent, WA 98032, U.S.A.
Phone: +1 800 610 1798
Fax: +1 253 981 6229

Avure Technologies Inc
Americas Service
3721 Corporate Drive
Columbus, OH 43231, U.S.A.
Phone: +1 614 891 2732
Fax: +1 614 891 4568

Avure Technologies AB
Europe/Asia Sales and Service
Quintusvägen 2
SE 721 66 Västerås, Sweden
Phone: +46 21 327000
Fax: +46 21 141817

