HIPERBARIC S.A.
C/ Condado de Treviño 6, 09001 BURGOS – SPAIN
Tel.: +34 – 947 473 874 info@hiperbaric.com

CONTRACT

CUSTOMER:	**Lancashire Foodtek Ltd**
ADDRESS:	**United Kingdom**
REFERENCE:	**1712005R08**
DATE:	**Dic / 01 / 2017**

HIGH PRESSURE EQUIPMENT

HIPERBARIC 135 seminew

Note: The quoted equipment may be slightly different from the picture, due to Hiperbaric's constant improvement process

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1. Introduction

Hiperbaric in short

Hiperbaric is exclusively dedicated to the design, manufacture and marketing of High Pressure Processing (HPP) industrial equipment for food industries. Being the current World leading supplier of this technological solution, its machinery can be found nowadays operating in five continents (Europe, America, Asia, Africa and Oceania), in installations processing meat, dairy, fruit, vegetable, seafood, and pharmaceutical & cosmetic products. Hiperbaric focus on customer support and its continuous R&D effort have made the company the reference to follow in the Food High Pressure Processing world.

Location in Spain: Headquarter, Factory and Applications center.

HIPERBARIC S.A

Condado de Treviño 6, 09001 Burgos, España

Teléfono: +34 947 473 874
Fax: +34 947 473 531

Web: www.hiperbaric.com
Email: info@hiperbaric.com

Location in USA: Sales and Aftersales office, Applications centre.

HIPERBARIC USA CORPORATION

2250 NW 84th Ave #101, Miami, FL 33122

Phone: +1-305-639-9770

Web: www.hiperbaric.com
Email: info@hiperbaric.com

Location in Oceania: Sales and Aftersales office.

HIPERBARIC OCEANIA

4178 Hastings, Hawkes Bay, New Zealand

Web: www.hiperbaric.com
Email: info@hiperbaric.com

2. Hiperbaric range features

Hiperbaric offers its full range of HPP equipment, adapted to any production and volume demands. All equipment from the Hiperbaric range include: working pressure of 6,000 bar (600 MPa/87,000 psi), horizontal layout, wire wound technology for the processing vessel (chamber), and fully independent high pressure intensifiers.

Hiperbaric manufactures its equipment in compliance with the most demanding directives, rulings and standards. Its machinery can be installed in any country as it fulfils all the requirements of the "Pressure Equipment Directive 2014/68/UE" and those of the U3 "Certificate of authorization" according to the ASME (American Society of Mechanical Engineers) Code VIII. Div. 3 "Boiler & Pressure vessel Code". Hiperbaric is one of the few companies in the world capable to achieve both certifications.

Hiperbaric now offers all its equipment in a new, fully integrated design: compact and without external modules, for and important footprint reduction. The Hiperbaric integrated range provides the ultimate solution for saving space and simplifying installation.

Specially designed for Food Industry

Hiperbaric designs HPP equipment exclusively for the food processing industry. From its conception, each machine is designed to meet the needs of food industry.
The fluid used to transmit the pressure is plain water free of additives, a non-toxic fluid which dries off without leaving any waste on machine components or food packaging materials.
Every component is made of top quality materials optimized for high pressure conditions and a food industry environment. Particularly, all those materials in contact with processing water and products are made of top quality stainless steel, and so are the pressure intensifiers and machine enclosures.
Equipment cleaning is fast and simple with automated CIP cycle programmed into the control system.

Horizontal design

Horizontal design by Hiperbaric is the current benchmark in HPP industrial equipment and provides clear advantages: improves traceability as input and output of products is done through different sides of the equipment, being physically separated and avoiding the risk of mixture between processed and non-processed products; increases production as its ergonomics eases loading and unloading of products, speeding up the process and avoiding the unnecessary use of cranes inside the factory; reduces equipment height, facilitating installation; helps the equipment fit into any food production line; allows easier maintenance operations in any part of the equipment; and facilitates hygiene of the area.

Automatic Loading/ Unloading System

Automatic loading/unloading system allows complete automation of the HPP unit, and therefore the equipment can easily adapt into any production line. Additional investment in special equipment for handling of products is not necessary. After unloading, the return line for empty containers back to the loading point makes the process even easier.

Reliable and safe

Reliability and safety of the Hiperbaric range have been two important key parameters in technical design. A patented system of high and low pressure circuits minimizes the wear of main parts for closing, compared to traditional systems of oversized high pressure valves. The design of the "multiple wall" vessel ("wire-winding" technology) guarantees the reliability in equipment operation. This way, the "leak before burst" mode of failure is assumed for the vessel.
SCADA system registers every data (batches, process parameters, user ID, errors, maintenance data etc.) and thus maximizes the traceability, and meets the quality requirement of our clients.

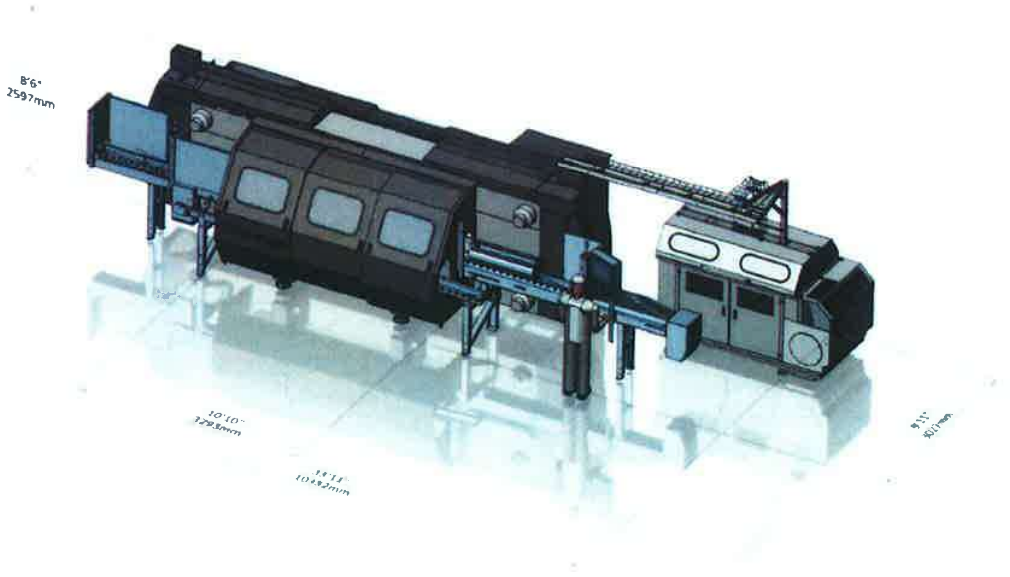
Quality

As global leading provider of high pressure processing solutions for the food industry, Hiperbaric is certificated according to the most requiring international codes and regulations, including:

- **CE Mark:** mandatory in all the European Community countries and internationally recognised
- **U3 Certificate of Authorization:** By the American Society of Mechanical Engineers (ASME) Establishes rules of safety governing the design, fabrication, and inspection of pressure vessels.
- **National Board "R" Certificate:** Inspection Code certificate for the in-service repair and alteration of pressure vessels.
- **National Board "NB" Certificate:** Mandatory in the United States and Canada.
- **UL Certificate.** Underwriter Laboratories granted our Industrial Control Panels according to the UL508A standard and the Compliance Review according to the UL2011 standard.
- **Gost-R:** Mandatory in Russia and other countries.

U3 DEP 2014/68/UE UNDERWRITERS LAB. GOST CERTIFICATION

3. Layout Hiperbaric 135



4. Scope of supply

Scope of supply HIPERBARIC 135 seminew	
Vessel Layout	Horizontal
Vessel internal diameter	300 mm (11.8 inches)
Vessel volume	135 liters (36.7 gallons)
Vessel length	2,200 mm (86.6 inches)
Equipment total length (loading and unloading included)	10,332 mm (406.8 inches)
Maximum working pressure	600 MPa (87,000 psi or 6,000 bars)
Pressure transmitting fluid	Water free of additives
Temperature for processing water	5ºC – 25ºC
Cycle time (holding time excluded)	Less than 5 minutes (at 50Hz)
Number of intensifiers	2 totally independent, you can do maintenance in one while the others keep on running
Electrical power	2 x 45 KW= 90 KW, Total power: 100 KW
Healthcare design	All parts design for easy cleaning in a food industry environment.
Pressure transducers	2 with a double check pressure reading system.
Automatic loading and unloading line	For baskets and product carriers.
Processing water	Heat exchanger for processing water cooling. Water filter (5 µm) Temperature probe for control of processing water through customer's fluid system.
Control cabinet	Tactile screen to operate in automatic and manual mode.
SCADA	System for control and recording of data
Remote-service	Internet communications system
Certificates	ASME or CE stamp according to European Directive for High Pressure Equipments 2014/68/UE
Carriers for loading the product	Four complete sets (8 baskets) of standard configuration (2 carriers per cycle).

5. Warranties

Hiperbaric 135 seminew Warranties	
Vessel warranty	Five years from the start-up of the machine or 100,000 cycles, whichever comes first.
Yoke warranty	Six years from the start-up of the machine, without limit in the number of cycles.
Warranty	12 months in spares and service. Wear parts not included. Warranty starts the date of start-up or 60 days after reception of the equipment at the customer facilities, whichever comes first.
Wear parts cost warranty	Hiperbaric warranties a maximum cost of wear parts per cycle depending on the number of cycles of work: -from 0 to 20,000 cycles: 1.26 €/cycle. -from 20,001 to 40,000 cycles: € 1.62 €/cycle. -from 40,001 to 60,000 cycles: € 1.90 €/cycle. -from 60,001 to 80,000 cycles: € 1.99 €/cycle -from 80,001 to 100,000 cycles: € 2.7 €/cycle -Maximum cost: 2.7 €/cycle If it is carried out an appropriate maintenance, Hiperbaric will provide free credit for future purchases of wear parts for value exceeding the cost per cycle indicated (this analysis will be done every 12 months).