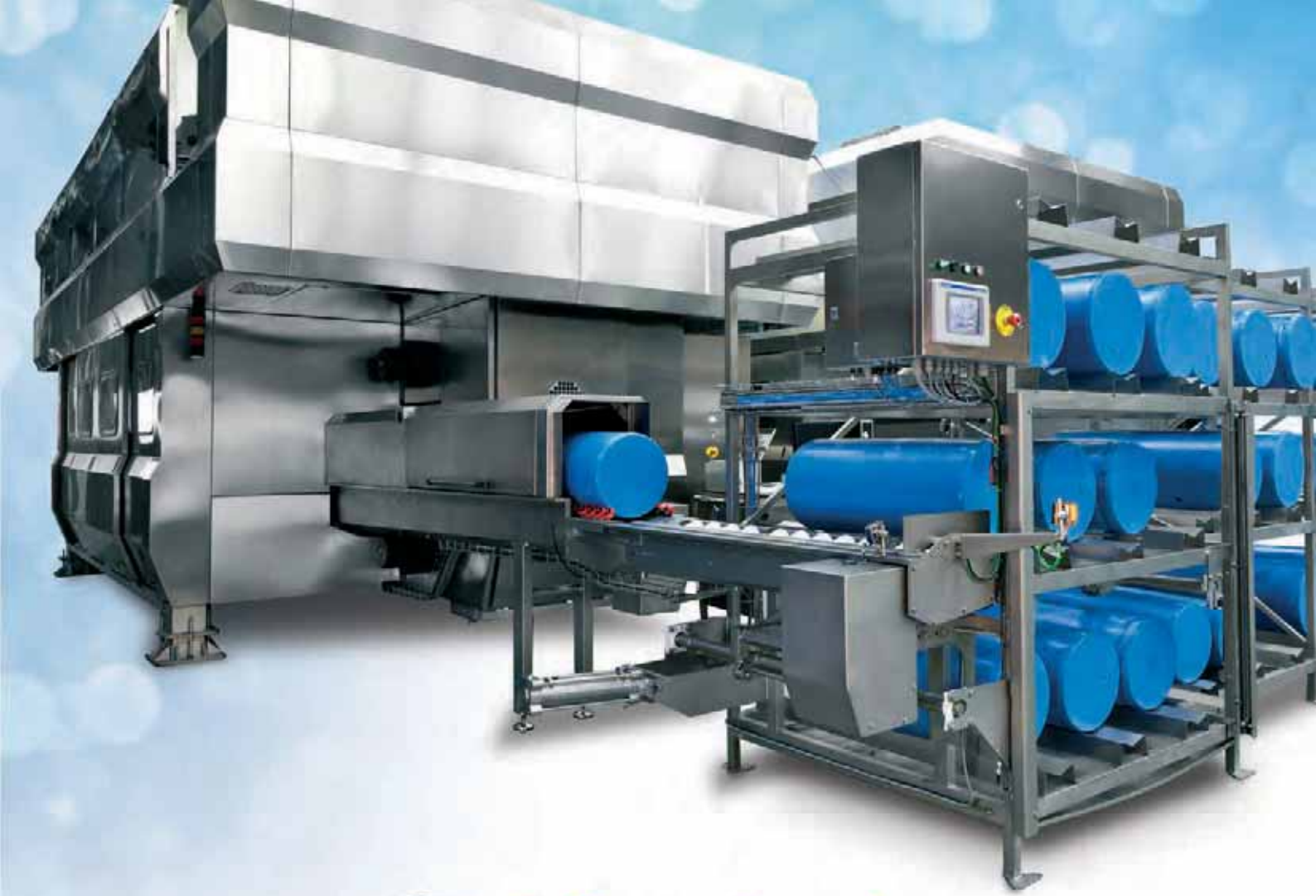


Hiperbaric
HIGH PRESSURE PROCESSING

# INDUSTRIAL HIGH PRESSURE PROCESSING EQUIPMENT

All **Hiperbaric** high pressure processing equipment are designed from conception with the word “industrial” foremost in mind. At **Hiperbaric** we take our mission and values extremely seriously as they are key to our success as the reference and benchmark supplier of HPP equipment.

In our over 10 years of history, **Hiperbaric** has sold more industrial HPP units than all of the other suppliers combined. We believe in partnerships and in customer managed relationships. Innovation, reliability, service and support have been key to our performance so far and to our current leadership position.

Our range of HPP equipment is the largest in the world, from installs adapted for start-ups and SME's, to the largest and most productive high pressure systems.

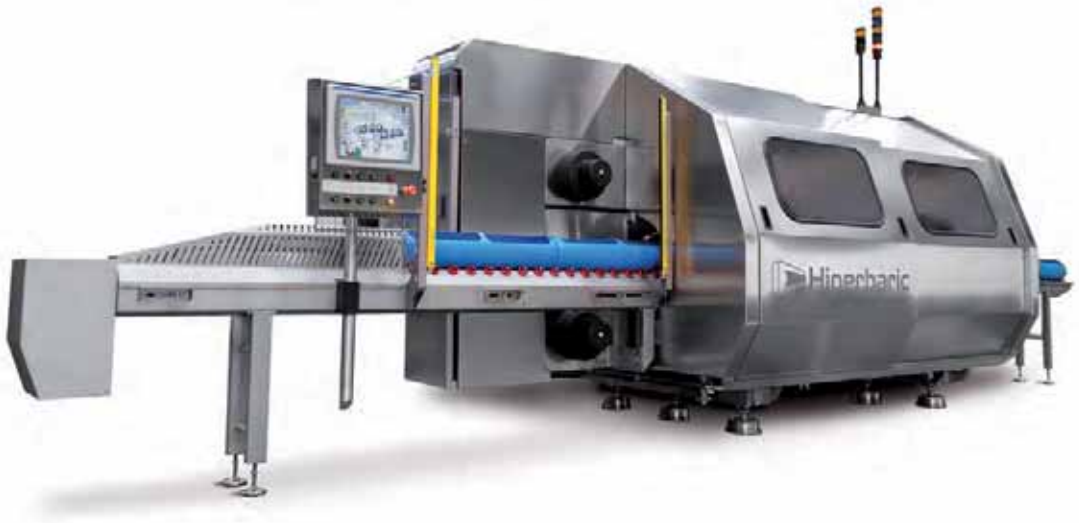
All **Hiperbaric** machine series can be fully integrated, such that there are no external modules or cabinets. The high pressure intensifiers [high pressure pumps] can be installed alongside the machine, in a service corridor, or on an integrated machine platform atop the **Hiperbaric** unit.

## HIPERBARIC | 55

The **Hiperbaric 55** is an ideal unit for small/medium production, product development and market tests. For instance, SME's with relatively low production environments, food companies servicing "niche" markets, seasonal production, or R&D centres willing to not only investigate High Pressure Processing, but to also provide real food concepts to the market and test them prior to scaling up production.

Its robust and compact design, with one integrated single intensifier, makes it easy and quick to install in almost any facility. It is a perfect fit for the first steps into High Pressure Processing.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 55 | **266 (586)** | 55 (14.5) | 200 (7.9") | 22 (237) |

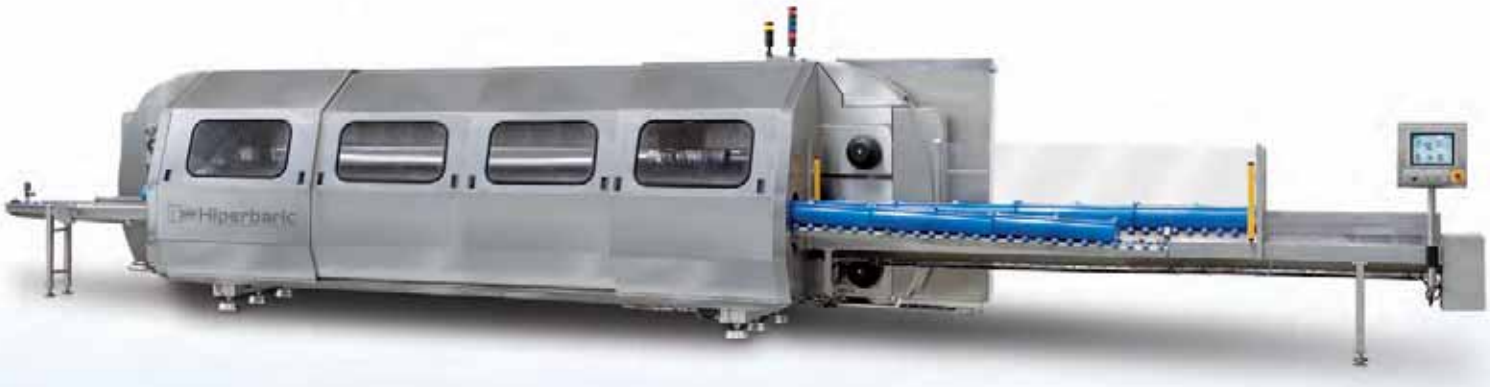



## HIPERBARIC | 120

The **Hiperbaric 120** is designed to service medium-sized industries in need of consistent production while minimizing the initial investment. Together with the **Hiperbaric 135**, it is part of our range of equipment solutions for food industries with medium-high production needs.

**Hiperbaric 120** was developed by integrating the most reliable components with the most advanced designs, to provide highly productive and profitable High Pressure Processing. This equipment is as contained and easy to install as its smaller sister **Hiperbaric 55**, but yet offers productivities in excess of half a Ton per hour.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 120 | **555 (1223)** | 120 (31.7) | 200 (7.9") | 37 (3989) |



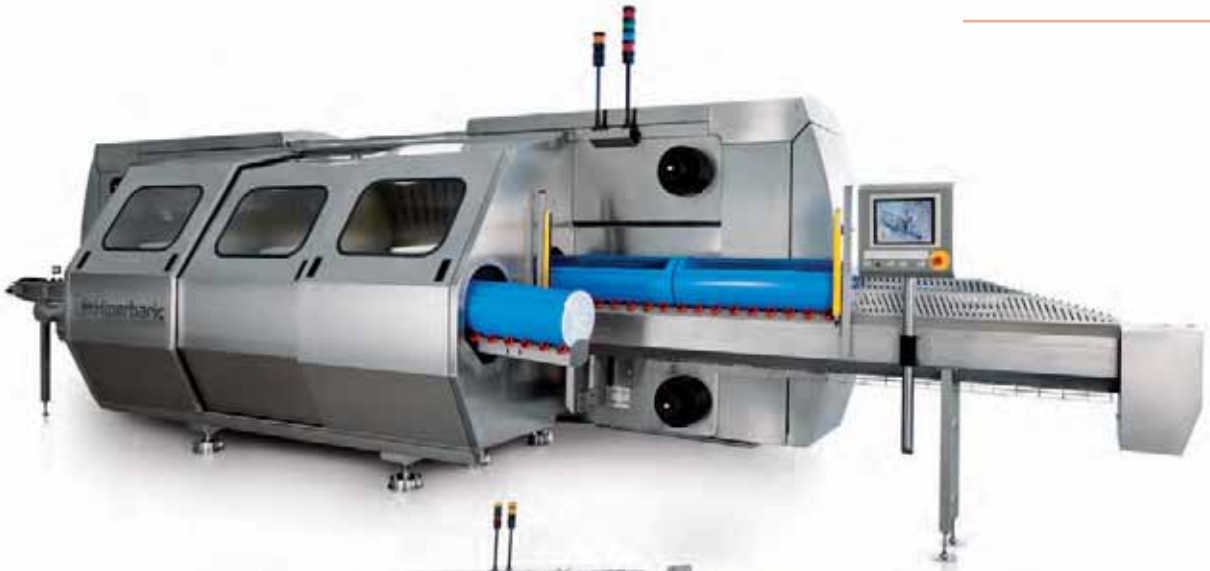
## HIPERBARIC | 135

**Hiperbaric 135** is targeted for medium-high food production environments. Its 135 litre capacity vessel together with its larger diameter, 300 mm, provide an improved filling ratio and allows the processing of large products (whole hams, large formats, etc.), enabling throughputs of more than 500 kg/h.

Its horizontal design and contained footprint make it very easy to install, operate ergonomically, and perform maintenance. The standard configuration includes two high pressure intensifiers which can work separately for optimized reliability and uptime, an exclusive characteristic of the Hiperbaric High Pressure Processing range.

A pioneer, this mid-sized industrial unit has been installed on five continents (Asia, Australia, Europe, North America and South America) and in a wide variety of sectors including meat, fruit and vegetable, juices, seafood and dairy. Many technological centres, international references in new and innovative food product development have this equipment as one of their primary R&D tools.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 135 | **650 (1500)** | 135 (36.7) | 300 (11.8”) | 39 (420) |



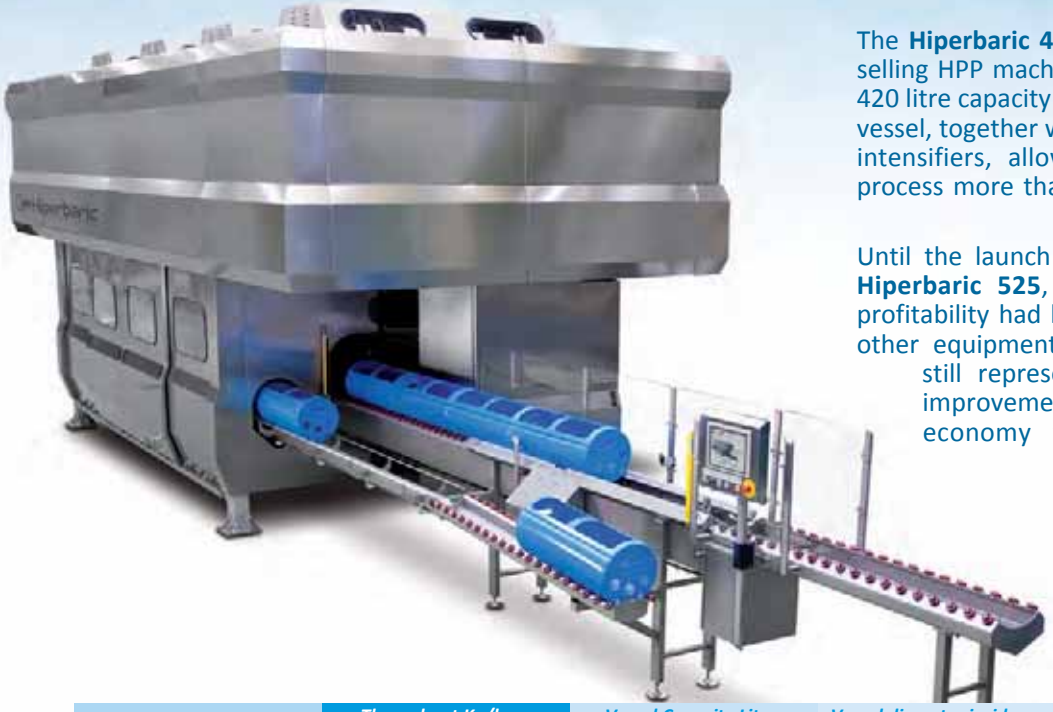
## HIPERBARIC | 300

Since its conception in 2002, **Hiperbaric 300** very rapidly became the benchmark in large **Hiperbaric** units. Its optimized vessel volume (300 l.) and diameter (300 mm) along with outstanding cycle times, make it the classic high production equipment.

Constant improvement of **Hiperbaric 300** by our Engineering Department has made it the fastest industrial HPP equipment in the world, in its 6 high pressure intensifier version, and provided it maximum reliability.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 300 | **1338 (2949)** | 300 (79.3) | 300 (11.8”) | 61 (657) |

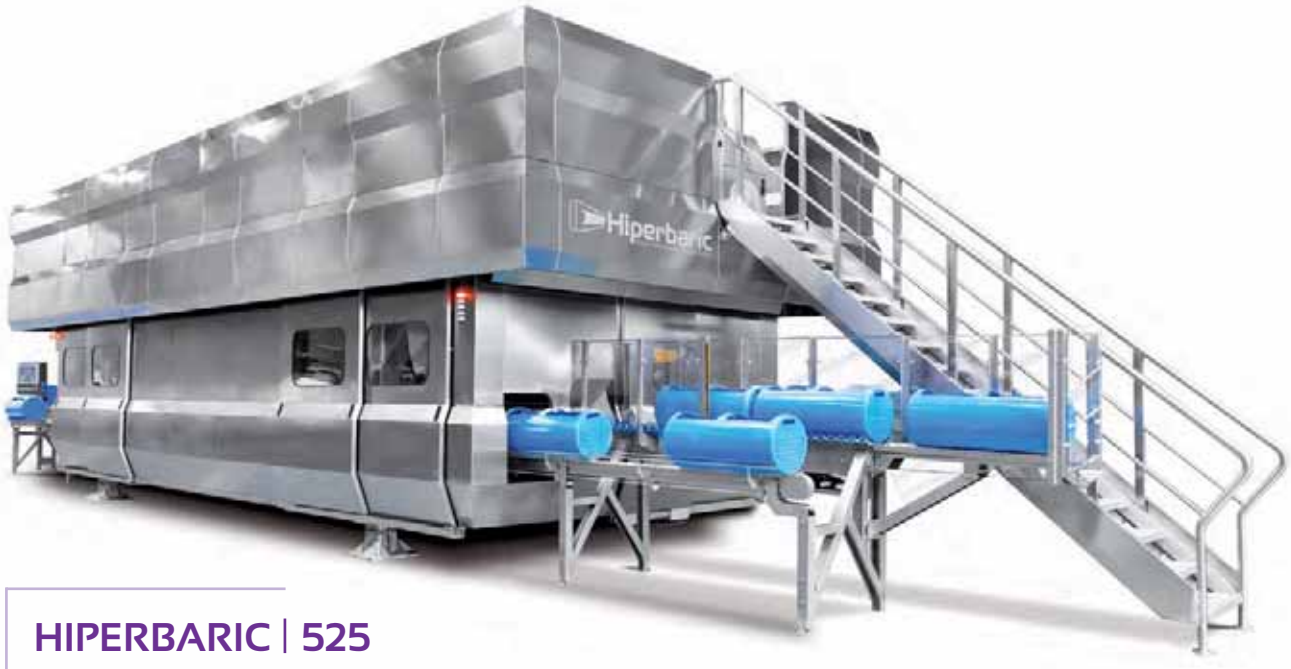
## HIPERBARIC | 420



The **Hiperbaric 420** is one of the best-selling HPP machines in the market. Its 420 litre capacity and 380 mm diameter vessel, together with its 8 high pressure intensifiers, allow this equipment to process more than 2 Tonnes per hour.

Until the launch of its bigger brother **Hiperbaric 525**, its productivity and profitability had been far ahead of any other equipment in the world and it still represents very meaningful improvements in efficiency and economy for food industries.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 420 | **2257 (4975)** | 420 (111) | 380 (15”) | 56 (601) |




## HIPERBARIC | 525

Our latest addition, following the demands of customers with the largest production environments. The biggest, and most productive, HPP system in the world.

With a 525 litre capacity and large 380 mm diameter, it delivers throughputs of over 3,000 kg of product per hour. Its capacity is unmatched, and the resulting costs per kg for processed product are the least expensive ever possible.

**Hiperbaric 525** includes all the new features and developments in components and material design from our R+D Department engineers, making it the most reliable and highly productive unit from a new generation of industrial high pressure processing equipment.

| *Equipment* | *Throughput Kg/hour (Pounds/hour)* | *Vessel Capacity Litres (US liq. Gallons)* | *Vessel diameter inside mm (inch)* | *Footprint m² (sq ft)* |
|---|---|---|---|---|
| Hiperbaric 525 | **2821 (6219)** | 525 (150) | 380 (15”) | 63 (679) |

## CYCLE TIMES AND OUTPUTS

| Equipment | Nº of intensifiers | Power kW | Total cycle time in minutes* | Number of cycles/hour | Vessel filling ratio | Output** Kg/hour (Pounds/hour) |
|---|---|---|---|---|---|---|
| **Hiperbaric 55** | **1** | **55** | **6.2** | **9.7** | 50% | **266 (586)** |
| **Hiperbaric 120** | **2** | **100** | **6.5** | **9.2** | 50% | **555 (1,223)** |
| **Hiperbaric 135** | **2** | **100** | **6.9** | **8.7** | 55% | **646 (1,424)** |
| | 4 | 190 | 5.6 | 10.8 | 55% | 803 (1,770) |
| **Hiperbaric 300** | **4** | **190** | **7.4** | **8.1** | 55% | **1,338 (2,949)** |
| | 6 | 280 | 5.9 | 10.2 | 55% | 1,678 (3,699) |
| **Hiperbaric 420** | 6 | 280 | 7.7 | 7.7 | 60% | 1,984 (4,373) |
| | **8** | **370** | **6.7** | **9.0** | 60% | **2,257 (4,975)** |
| **Hiperbaric 525** | 8 | 370 | 7.6 | 7.9 | 60% | 2,487 (5,482) |
| | **10** | **460** | **6.7** | **9.0** | 60% | **2,821 (6,219)** |

* Total cycle time: cycle time for vacuum-packed products including loading and unloading, raising of pressure, 3 minutes holding time at 600 MPa, release of pressure and the necessary time for machine movements and operations. Electrical supply 60Hz.

** Output: for vacuum-packed products processed at 600 MPa / 6,000 bar / 87,000 psi during 3 minutes.

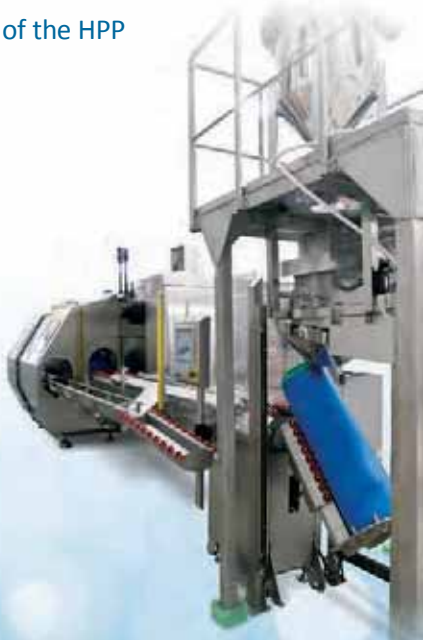
## AUTOMATIONS AND PERIPHERALS

Although all **Hiperbaric** High Pressure Processing industrial equipment include their own loading and unloading lines and systems, and can operate as a stand-alone, it is obvious that in many production environments HPP may require further automation solutions and integration with packaging lines and cartoning-palletizing installations.

**Hiperbaric** has extensive expertise in vertical integration of its HPP systems into any existing production environment:

- Automated product handling, and loading and unloading are often required by our customers worldwide.
- Ancillary equipment for our HPP units, and peripherals such as hoppers, HPP basket loading and unloading systems, and post-HPP product dryers etc., are within Hiperbaric's offering and expertise.
- Customized product containers and baskets for each food segment and sector.

Whether it's a fully automated turnkey solution or a relatively simple completion of the HPP line with an air drying system, **Hiperbaric** will design and offer the right solution.



## HIPERBARIC, QUALITY IN DESIGN

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, **Hiperbaric** certifies all its equipment according to Pressure Equipment Directive 97/23/EC.

### U3 Certificate of Authorization

**Hiperbaric** holds a U3 certificate issued by the American Society of Mechanical Engineers (ASME) that assures Code compliance of our pressure vessels.This ASME Code is internationally accepted and 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

This registration and certificate is mandatory in the United States and Canada.

### UL Certificate

Underwriter Laboratories granted **Hiperbaric** the use or the UL mark in our Industrial Control Panels according to the UL508A standard and the Compliance Review according to the UL2011 standard.

### Gost-R

Verification and certification seal mandatory in Russia and other countries.

## HIPERBARIC, QUALITY IN SERVICE

HiperCare Service & Support 24 hours a day, 7 days a week, helping you to maintain a healthy business:

- Expecting a reliable high output from your processes, we set the goal to help you reduce downtimes to a minimum.
- From installation and commissioning, scheduled overhauls, on-site repairs to spare parts, we are ready to serve you.
- With our diagnostic services, we can even identify faults before they become failures and with our remote monitoring & diagnostics capabilities, we can help you instantly.
- Our specialists and highly specialized field technicians around the world are devoted to providing reliable and continuing support. Anywhere, any time.
- Parts and spares: through advanced planning and the timely delivery of quality replacements and components. Minimize downtime, reduce overall associated costs, increase availability and reliability.
- Latest **Hiperbaric** technical and material upgrades and improvements made available through continuous R&D investment --> extended intervals between maintenance, cost savings due to extended service life.



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