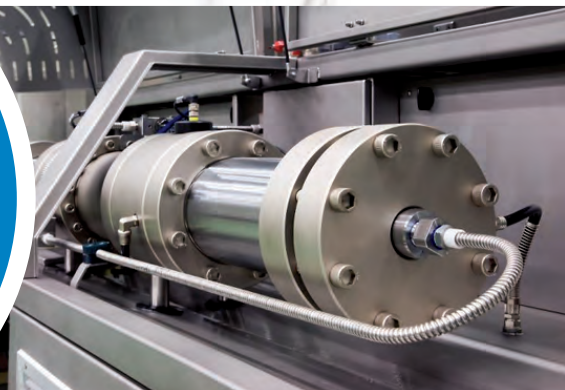




INDUSTRIAL
HIGH PRESSURE
PROCESSING
EQUIPMENT



Hiperbaric industrial high pressure processing (HPP) units are designed to be the most reliable equipment in the market. Customer Service along with innovation are the cornerstones of Hiperbaric, who has become the worldwide reference and the benchmark supplier of high pressure technology for food industry. Hiperbaric has the widest throughput range of industrial HPP machines, reaching up to 6,000 bar / 600 MPa / 87,000 psi meeting the requirements of start-ups, small-medium enterprises and large corporations.



The horizontal layout and ergonomic design of all Hiperbaric equipment simplifies installation and operations. Intensifiers (high pressure pumps) can be installed alongside the machine or in a service corridor. It is also possible to set up the Hiperbaric machines in an **integrated configuration**, where the intensifiers are installed in a platform on top of the vessel. This design reduces the footprint and facilitates its implementation in a food industrial environment.

CYCLE TIMES AND OUTPUTS

	Number of intensifiers	Power kW	Total cycle time in minutes	Number of cycles/hour	Throughput kg/hour [pounds/hour]*
HIPERBARIC 55	1	62	5.8	10.3	260 [560]
HIPERBARIC 135	2	120	6.6	9.1	620 [1,360]
	4	227	5.3	11.3	760 [1,680]
HIPERBARIC 300	4	227	6.7	9.0	1,350 [2,980]
	6	334	5.9	10.2	1,530 [3,380]
HIPERBARIC 420	6	335	6.8	8.9	2,240 [4,930]
	8	442	6.2	9.6	2,430 [5,360]
HIPERBARIC 525	8	442	6.6	9.0	2,850 [6,280]
	10	549	6.3	9.6	3,020 [6,660]

* Throughput varies ±20-35% depending on the vessel filling efficiency. Current throughputs calculated with the following filling efficiency: 45% (Hiperbaric 55), 50% (Hiperbaric 135 and 300), 60% Hiperbaric (420 and 525). HPP cycle includes product loading and unloading, pressure build up (600 MPa/87,000 psi), holding time (3 min), pressure release, and additional machine operations. Electric power supply 60 Hz.

HIPERBARIC 55



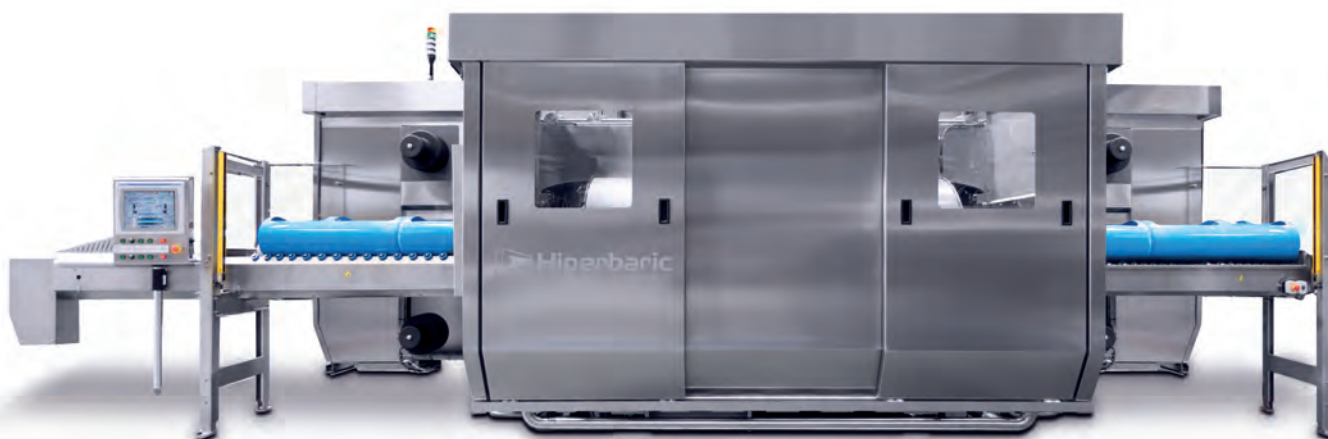
Throughput kg/hour
[pounds/hour]

260 [560]



Vessel Capacity Litres
[US liq. Gallons]

55 [14.5]



Vessel diameter inside mm
[inches]

200 [7.9]



Dimensions
meters [feet]

L: 8.0 [26.2]
W: 2.8 [6.8] H: 2.2 [7.2]

The **Hiperbaric 55** is the perfect first step into the HPP business with its 55 liter (14.5 gallons) vessel and a 200 mm (7.9 inch) diameter. With a throughput around 260 kg/h (560 lbs/h), **it is the ideal unit for SME's,**

food companies serving to niche markets, seasonal production, or R&D centers. Its robust and compact design, with one integrated single intensifier, makes it easy and quick to install in almost any facility.

HIPERBARIC 135



Throughput kg/hour
[pounds/hour]

620 [1,360]



Vessel Capacity Litres
[US liq. Gallons]

135 [36.7]



Vessel diameter inside mm
[inches]

300 [11.8]



Dimensions
meters [feet]

L: 10.2 [33.4]
W: 3.2 [10.6] H: 2.6 [8.55]

The **Hiperbaric 135** is targeted for medium food production. Its 135 Liter (36.7 gallons) vessel with a 300 mm (11.8 inch) diameter allows larger products and provides good filling efficiency, enabling throughputs

around 620 kg/h (1360 lbs/h). In its 4 high pressure intensifiers version, it is able to perform a cycle at 600 MPa / 87,000 psi in less than 2.5 min (without holding time). **The Hiperbaric 135 has become the fastest industrial HPP machine in the world.**

HIPERBARIC 300



Throughput kg/hour
[pounds/hour]

1,350 [2,980]



Vessel Capacity Litres
[US liq. Gallons]

300 [79.3]



Vessel diameter inside mm
[inches]

300 [11.8]



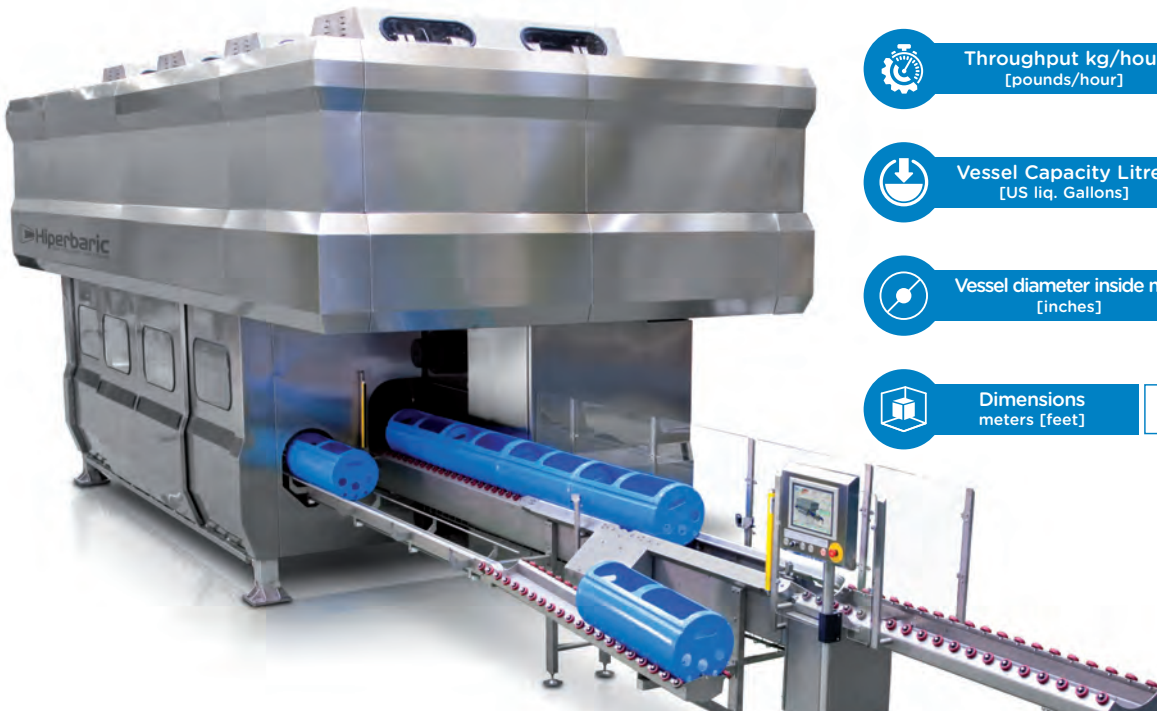
Dimensions
meters [feet]





L: 17.4 [57]
W: 4.4 [14.4] H: 4.3 [14]

The **Hiperbaric 300** has been historically the more suitable option for medium-high productions. Its 300 mm (11.8 inch) diameter results in an optimized vessel geometry that makes this equipment one of the more price competitive

of the range. **Its expandable configuration is a great option that allows achieving even higher productions by only adding more intensifiers**, as long as needed throughout the customer's market expansion process.

HIPERBARIC 420



- 
Throughput kg/hour
[pounds/hour]
2,430 [5,360]
- 
Vessel Capacity Litres
[US liq. Gallons]
420 [111]
- 
Vessel diameter inside mm
[inches]
380 [15]
- 
Dimensions
meters [feet]
L: 17.2 [56.4]
W: 4.4 [14.4] H: 4.3 [14]

The **Hiperbaric 420** is the best-selling HPP machines in the market. Its 420 liter (111 gallons) capacity and 300 mm (15 inch) diameter vessel together with its 8 high pressure intensifiers allow this equipment to process more than 2,430 kg/h (5,360 lbs/h). **This model is the first**

of our range with this diameter, which can accommodate larger products and process large pouches. This machine can be installed with 4 intensifiers and then production capacity can be expanded by increasing the number of intensifiers under customer requirements.

HIPERBARIC 525


Throughput kg/hour
[pounds/hour]
3,020 [6,660]


Vessel Capacity Litres
[US liq. Gallons]
525 [150]




Vessel diameter inside mm
[inches]
380 [15]


Dimensions
meters [feet]
L: 18.5 [60.6]
W: 4.4 [14.4] H: 4.3 [14]

The **Hiperbaric 525** is our largest in-pack equipment, following the demands of customers with the largest production environments. **It is the biggest and most productive HPP system in the world,**

with a 525 liter (150 gallons) capacity and large 300 mm (15 inch) diameter. It can deliver around 3,020 kg/h (6,660 lbs/h) at 600 MPa / 87,000 psi. **Its capacity and low processing cost are unmatched.**

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:



PRESSURE EQUIPMENT
DIRECTIVE 2014/68/UE



U3 CERTIFICATE OF
AUTHORIZATION



NATIONAL BOARD
"R" CERTIFICATE



NATIONAL BOARD
"NB" CERTIFICATE



UL CERTIFICATE



EAC CERTIFICATE



AUTOMATIONS AND PERIPHERALS

Hiperbaric has extensive expertise in vertical integration of the high pressure technology into any existing production environment. All **Hiperbaric** HPP industrial equipment are integrated with their own loading and unloading lines and systems, although in many production environments, HPP might require further automation solutions that **Hiperbaric** can also provide:

- Fully automated systems for product handling, loading and unloading.
- Ancillary equipment to our HPP units, peripherals such as hoppers, HPP basket loading and unloading systems, and post-HPP product dryers.
- Customized product baskets for each food segment and sector.
- Integration with customer MES (Manufacturing Execution System).

Whether it's a fully automated turnkey solution or a relatively simple completion of the HPP line, **Hiperbaric** can design and offer the right solution.



Hiperbaric's Application team is comprised of PhD's and MSc's specialists in food science, food safety and related areas who are process authorities and can provide industrial solutions concerning high pressure process, packaging and products.

> **FOOD SAFETY ASSESSMENT**

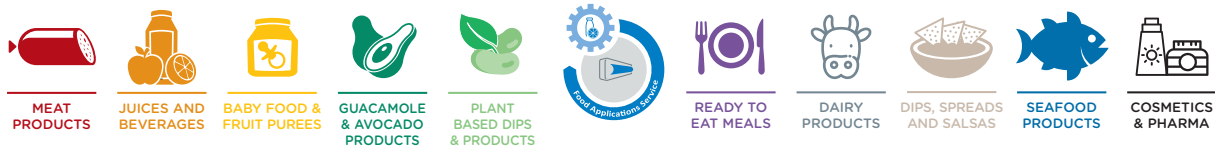
Helping you to achieve your food safety objectives by:

- Interpreting the most updated food safety regulations.
- Designing validation studies for cold pressurized products commercialization.
- Interacting with food safety authorities around the world.

> **NEW PRODUCT DEVELOPMENT**

Working together with you and your R&D team to create healthy and delicious foods:

- Performing tests in our pilot plants in Spain, North America or in Hiperbaric's customers R&D facilities.
- Recommending and testing suitable packaging.
- Optimizing processing parameters and formulation.



HIPERCARE SERVICE AND SUPPORT

HiperCare Service & Support 24 hours a day, 7 days a week, helping you to keep your HPP business running smoothly:



- Expecting a reliable high output from your processes, we set the goal to help you increase uptimes to a maximum.
- From installation and commissioning, scheduled overhauls, on-site repairs to spare parts, we are ready to serve you.
- Our highly specialized field technicians around the world are devoted to provide reliable and continuous support anywhere and anytime.
- With our diagnostic services and remote monitoring, we can identify faults before they become failures and help you immediately.
- We provide quality replacements and components through timely delivery.
- Hiperbaric after sales portal provides information and allows ordering spare parts online.



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