

Commercial HPP: Evolution, market overview Applications for sausages

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Hiperbaric

Hiperbaric (formerly NC Hyperbaric) designs, manufactures and markets industrial High Pressure Processing (HPP) equipments for food processing since 1999



Market leader with 132 HPP industrial machines installed in 26 countries and more than 80 companies for meat, vegetable, fruits, dairy, seafood, toll processing...

Where is Hiperbaric?

Hiperbaric Factory is located in Burgos - Spain



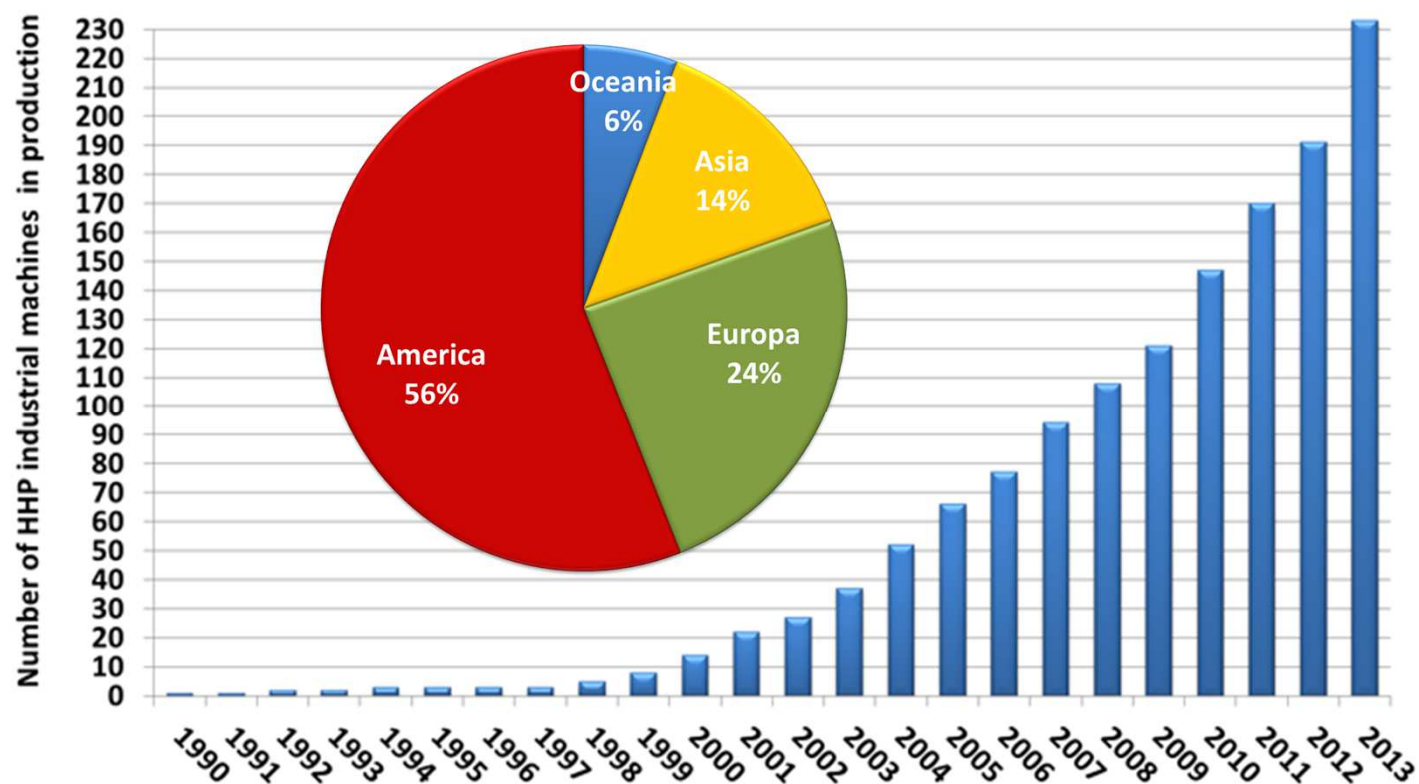
Hiperbaric©2013



Hiperbaric USA, is located in Miami, FL.



Evolution of total number of HPP industrial machines



Total machine number in production end 2013 : 235

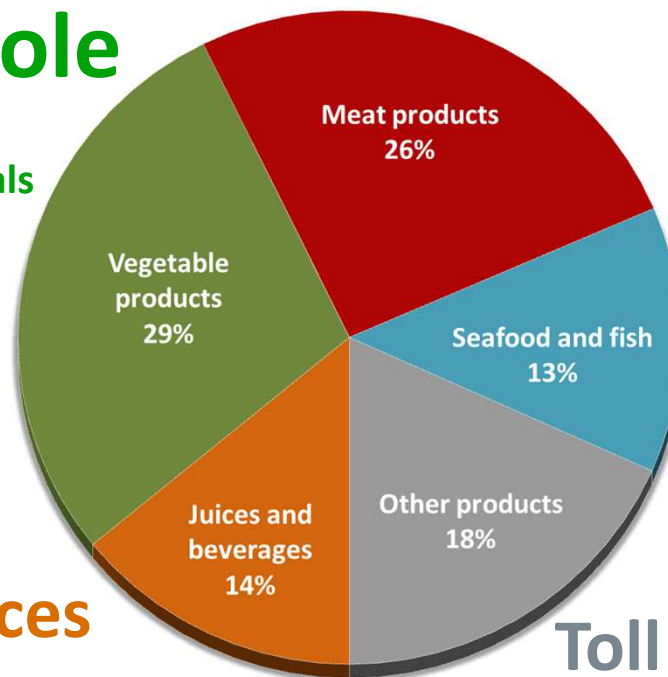
Not included : 15 dismantled machines (all installed before 2003)

Industrial HPP machines share by food sector (2013)

Guacamole

Wet salads
RTE vegetable meals

Fruit juices
Smoothies
Vegetable juices



Pathogen-free sliced cooked meats

Preservative-free deli meats

Listeria-free dry-cured products
Raw beef products
Preservative-free sausages

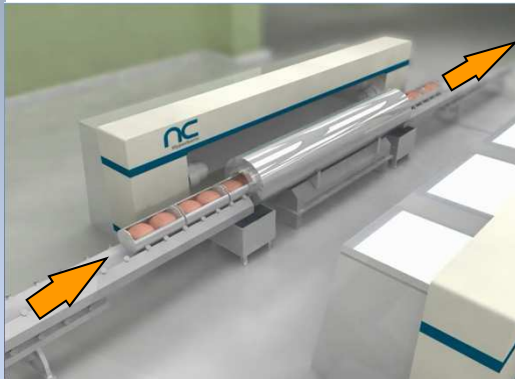
Oyster shucking
Lobster meat extraction
Clams & mussels shucking
RTE seafood meals

Toll processing
Cheese products

Global HPP food production in 2012 : 350,000,000+ Kg / 770,000,000+ lbs

Horizontal design

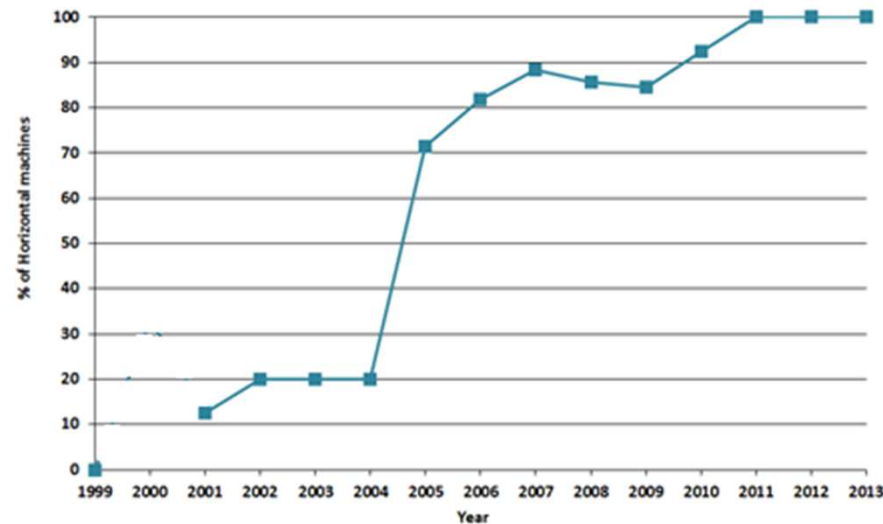
Improves product traceability



Easier to install



Evolution of % HPP horizontal equipment

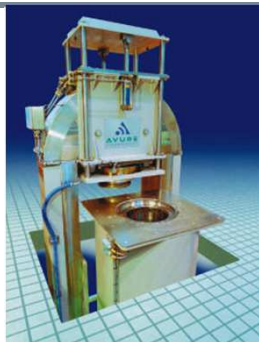


Facilitates loading , unloading, automation...



EVOLUTION: SIZE, VOLUME

2001



215 I



300 I

2004



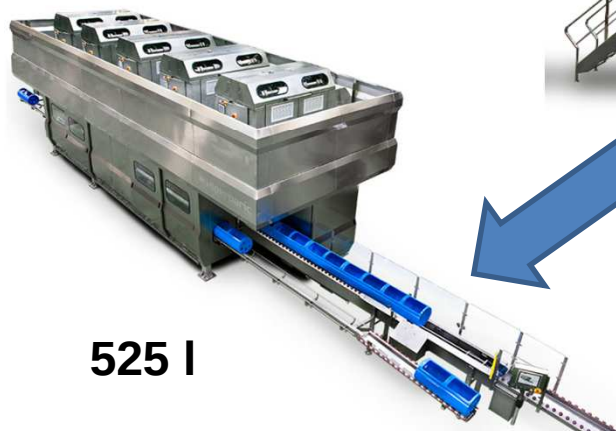
350 I

2008



420 I

2010



525 I

2013

EVOLUTION: SPEED

		Hiperbaric 300, 2004	Hiperbaric 300, 2007	300, 2010	Hiperbaric 300, 2013		420, 2010	Hiperbaric 420, 2013
CYCLE	Units							
Vessel filling ratio		0,5	0,5	0,5	0,5		0,6	0,6
Machine time *	min	3,4	2,9	1,45	1,33		2,05	1,72
Pressure come up time	min	6,5	5,3	3,1	2,79		2,35	1,95
Holding time	min	2	2	2	2		2	2
Total cycle duration	min	11,9	10,2	6,55	6,12		6,4	5,67
Hourly production	Kg	769	882	1374	1471		2363	2667
Hourly production	pounds	1696	1945	3030	3243		5209	5880
Daily production	tons	12,3	14,1	22,0	23,5		37,8	42,7
Yearly production	tons	3692	4235	6595	7059		11340	12800
COST PER LITRE OR KG		0,120	0,103	0,081	0,078		0,061	0,057

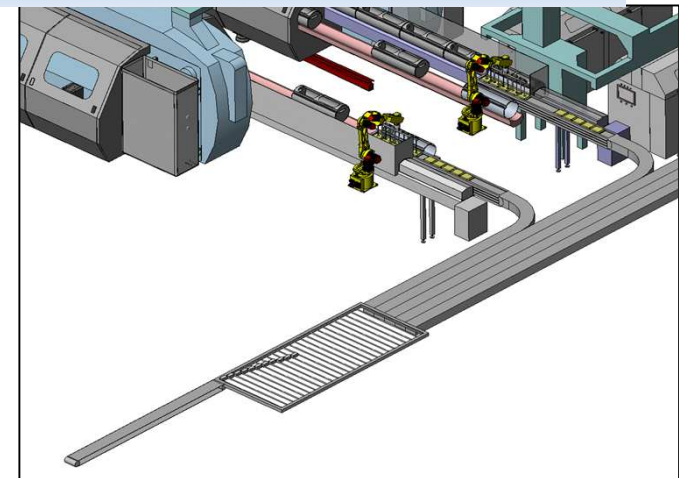
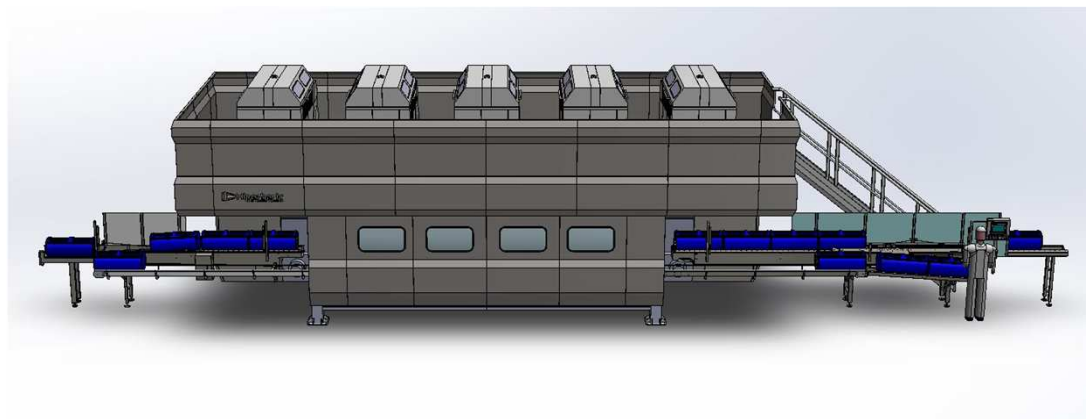
MARKET PENETRATION of the newer generation, horizontal HPP machines as of 2013

- Hiperbaric: 132 machines sold around the world.
- Competitors: around 60 machines.

	HIPERBARIC	COMPETITORS
EUROPE	45	17
ASIA	13	4
OCEANIA	8	4
NORTH AMERICA	59	35
SOUTH AMERICA	6	3

The standard in HPP industrial equipment

- ✓ Horizontal design for traceability and easy installation
- ✓ Special design for food industry (stainless steel, cleanable...)
- ✓ Automatic loading / unloading system
- ✓ Working pressure up to 600 MPa (6000 bar – 87 000 psi)
- ✓ From 200 kg up to more than 3 tons/hours



Our equipment on site

Zwanenberg (The Netherlands)

Hiperbaric 55 for steak tartar and spreadable sausages



Our equipment on site

Angst (Switzerland)

Hiperbaric 55 for sausages



<http://www.metzgerei-angst.ch/>



Our equipment on site

All Natural

MRM (Spain)

Hiperbaric 55 for preservative-free RTE meals and sausages



Hiperbaric©2013



Hiperbaric.com

Applegate (USA)

All Natural
Organic

Organic uncured sausages



COLUMBUS SALAME - US



Artisan Salumi



Classic Salame



Italian Delicacies



Naturals



Deli Meats



Other Deli Items

LOU FAMOUS - USA

All Natural

*All natural chicken sausages
Gluten free
Without artificial ingredients*



DELI 24 - UK

Hiperbaric 135 for *cheese & meat snacks*

*Shelf-life increase
Pathogen-free*



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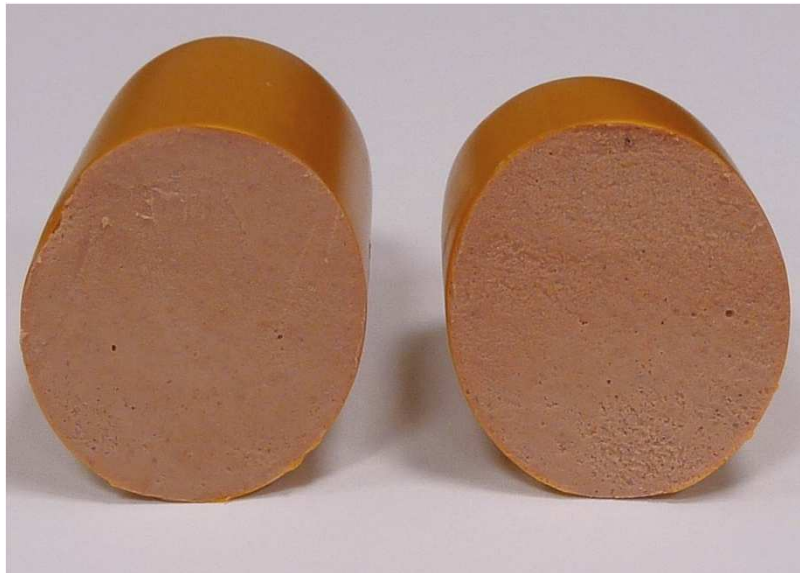
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DIL - Germany

New value propositions for total substitution of heat processes

Liver sausage



Leberwurst, HPP 6000 bar

Raw onion sausage



Sausage onion, HPP 6000 bar

ITOHAM - JAPON

Hiperbaric 150 for nitrate-free products



KAYEM FOODS - USA

All-natural chicken sausages



Ponnath die Meistermetzger- Germany



**Specially designed tray for HPP&MAP:
shape adapted to shape of the sausage**

You are welcome !

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Hiperbaric thanks

Thanks to all our clients in Europe, America, Asia and Oceania who made Hiperbaric the world market leader of HPP industrial food equipment, since 2005.



Thank you for your attention !