



GERSTENBERG POLARON SSHE

DESIGNED FOR PERFORMANCE AND FLEXIBILITY

The Polaron SSHE is engineered to handle demanding fat crystallisation processes with a working pressure of up to 120 bar depending on product type and capacity. Its versatile design makes it suitable for a wide range of applications, whether you are producing margarine, shortening, or other crystallised fats and butter products.

EFFICIENT COOLING WITH NATURAL AND TRADITIONAL REFRIGERANTS

The Polaron SSHE is specifically designed for direct cooling with CO₂ (R744): a natural, sustainable refrigerant gaining ground as the preferred choice in modern food production. By using CO₂, the system offers unmatched heat transfer efficiency, enabling faster, more precise temperature control and reducing overall energy consumption.

This advanced cooling method not only improves process stability and product consistency but also contributes to lower operational costs and a smaller environmental footprint. CO₂ is a non-ozone-depleting, low-GWP (Global Warming Potential) refrigerant, making it an ideal solution for future-proof, eco-conscious production facilities.

The efficient heat transfer and scraping action of the Polaron SSHE ensure consistent texture, structure, and product quality, whether you are producing standard recipes or specialised formulations.

The Polaron SSHE can also be supplied for NH₃ (R717) as refrigerant.

COMPLIANCE

The Polaron SSHE is constructed in conformity with the European Machinery Directive 2006/42/EC and with the European Regulation (ER) 1935/2004 on equipment, items and materials that are in contact with food. The pressure vessel is certified in accordance with the European Pressure Equipment Directive (PED) 2014/68/EU and ASME. Other certifications for unfired pressure vessels are available on request.

OPTIONS:

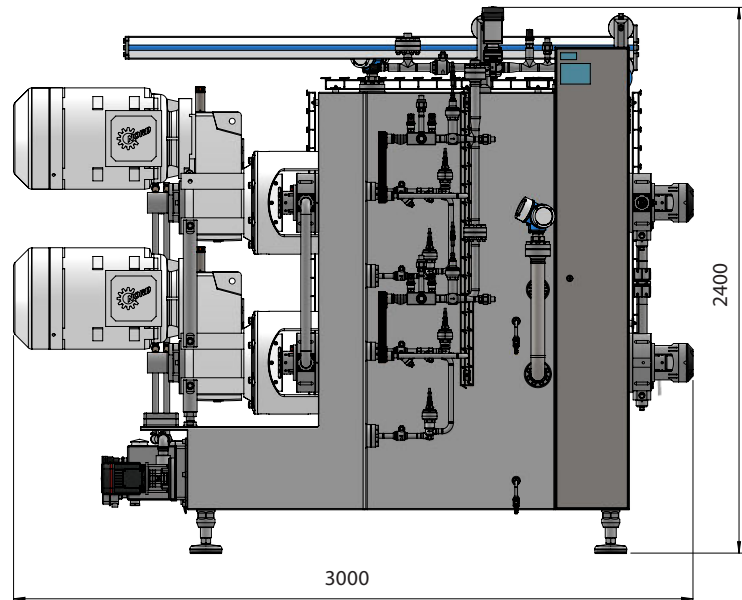
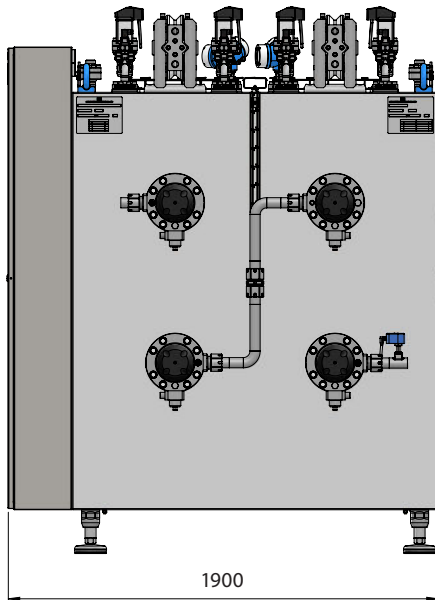
- Flushed seals
- Automatic drain valves
- SAF process cylinders
- Scrapers in PEEK, stainless steel or Stellite

EXAMPLES OF PRODUCTS

- Table margarine
- Puff pastry margarine
- Industrial margarine
- Shortening
- CBS (Cocoa Butter Substitute)
- Ghee
- AMF (Anhydrous Milk Fat)
- Low fat butter
- Texturised butter

GERSTENBERG POLARON SSHE

POLARON SSHE A+B+C+D FOR CO₂



Gerstenberg Polaron SSHE		A	A+B	A+B+C	A+B+C+D	A+B+C+D+E	A+B+C+D+E+F	
Puff pastry margarine at -20°C	CO ₂	kg/h	N/A	1,620	2,430	3,245	4,055	4,865
Table margarine at -20°C		kg/h	1,620	3,240	4,860	6,490	8,110	9,730
Shortening at -20°C		kg/h	2,430	4,860	7,290	9,735	12,165	14,595
Puff pastry margarine at -20°C	NH ₃	kg/h	N/A	1,140	1,710	2,280	2,850	3,430
Table margarine at -20°C		kg/h	1,140	2,280	3,430	4,570	5,710	6,860
Shortening at -20°C		kg/h	1,710	3,430	5,140	6,860	8,570	10,290
Heat exchange surface	m ²	0.61	1.22	1.83	2.44	3.05	3.66	
Annular space	mm	10						
Process cylinder diameter x length	mm	ø152 x 1396						
Product volume per cylinder	l.	5						
Product piping connections	mm	DN40 & DN50						
Max. working pressure, product side	bar	120						
Cooling requirements for table margarine, CO ₂ at -20°C	kW	63	125	188	250	312	375	
Cooling requirements for table margarine, NH ₃ at -20°C	kW	50	100	150	200	250	300	
Rotor speed at 50 Hz	rpm	390						
Gear motors for puff pastry margarine	kW	N/A	37+45	37+37+45	37+37+45+45	37+37+45+45+45	37+37+37+45+45+45	
Gear motors for table margarine	kW	37	30+37	30+30+37	30+30+37+37	30+30+37+37+37	30+30+30+37+37+37	
Gear motors for shortening	kW	22	22+22	22+22+30	22+22+30+30	22+22+30+30+30	22+22+22+30+30+30	
Water heater capacity/volume	kW/l.	15/60	2x15/60					
Motor for water heater pump	kW	0.37						

The above capacities are nominal values and may vary depending on product composition.