Geneglace
ICE TECHNOLOGY

Technical data sheet F200 Generator (SBF-ABF) R449A

EN_V1.00_2023-03-27

Physical limits of the F200 Generator(SBF-ABF)

Coolant type:	• According to the configuration of the F200 : R134a ,R404A, R407F, R449A, R717

For the other coolants: contact Geneglace

Maxi allowable pressures (PS) :	*"Permissible limits of pressure equipment" (below)*
Mini allowable temperature	
Ambient air temperature:	+ 10 to + 35°C (dry bulb)
Water quality	Fresh water for human consumption
Temperature of water to be frozen	+ 5 to + 25°C
Water supply pressure	1 to 2 bars
Supply water hardness	TH 15 to 20° français
Supply water acidity	PH 7/8
Sodium chloride content	100 g/m³
Protection index:	IP44
Electrical power supply:	Read information on maker's plate and comply with applicable standards.
Value airborne noise	>70 dB

Permissible limits of pressure equipment

Type	Volume		PS (Min/Max)	T° (Min/Max)
	(L)		(Bar)	(°C)
F200ABF*	82	BP	-1/+18,5	-30/+45
		HP	-1/+25	+5/+55
F200SBF**	35		-1/+18,5	-30/+45

* Generator equipped with a flood bottle for direct expansion / ** Generator without flood bottle for pump recirculation.

Type	Coolant	D.E.S.P. Category	Coolant group	Load (kg)	T. eq CO2
F200ABF*	R449A	III	2	40	56
F200SBF**	**Coolant**	**D.E.S.P. Category**	**Coolant group**	**Load (kg)**	**T. eq CO2**
	R449A	III	2	18	25

* Generator equipped with a flood bottle for direct expansion / ** Generator without flood bottle for pump recirculation.

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Supply limit F200 Generator SBF/ABF

Cylinder	• Double-walled cylinder: Machined steel, Genecoat® coating. • Thermal insulation of the cylinder: Expanded polyurethane injection.. • External cylinder coating: White lacquered aluminium sheet. • Oil purge
Base	• Lower base: Stainless steel • Thermal insulation of the base: polyurethane panels and PVC coating. • Base covers: PVC foam. • Water supply float valve . • Submersible water pump • Water tube between water pump discharge and distribution bowl.
Rotating part	• Central shaft: painted metallic steel • Lower central shaft bearing assembly: Stainless steel box. • Upper central shaft bearing assembly: Stainless steel box. • Lower water collection bowl: stainless steel. • Upper water distribution bowl: stainless steel. • Rear reamer deflector: stainless steel. • De-icing tube rotating part • Helical reamer: stainless steel. • Lower reamer bearing assembly: Stainless steel box. • Upper reamer bearing assembly: Stainless steel box • Reamer approach adjustment arrangement. • Scrapers for limiting the watering area : natural rubber.
Rotating part drive	• Geared motor with pulley-belt transmission.
Safety	• Motor and gearbox casing: stainless steel. • Safety by force limiter on electrical contact (manual reset) • Mushroom switch "Scraper stop" on electric contact (manual reset)
Refrigeration supply	• (F200 Generator ABF) Insulated "flood" supply bottle. • (F200 Generator ABF) Liquid level control device of the "flood" supply bottle. • (F200 Generator ABF) Liquid supply solenoid valve. • (F200 Generator ABF) Liquid supply regulator • (F200 Generator ABF) Oil return device with manual adjuster.
Addition of salt	• Refillable salt dosing tube + 25 kg of sodium chloride tablets

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Generator F200 ABF with refrigerant R449A

Characteristics	Units					
Water to be frozen	°C			15		
	°F			59		
Production	T /24h	4,5	5	6	7	7,5
	UST/24h	5	5.5	6.6	7.7	8.3
Cooling capacity	KW	22.5	25	30	35	37,5
	BTU/h	76815	85350	102420	119490	128025
Condensation temp. (ABF)						
Max.: (Liquid hammer)	°C	55	55	55	55	52
	°F	131	131	131	131	131
Min.: (Oil return)	°C	30	30	30	30	30
	°F	86	86	86	86	86
Frequency	**Hz**			**50**		
Speed of rotation	tr/h	61	74	93	93	112
Thickness of ice flakes	mm	2,2	2	1,9	2,2	2
	inch	0.08	0.08	0.07	0.08	0.07
Evaporation temperature at the generator	°C	-17	-17,7	-20,8	-25,3	-25,4
	°F	1.4	0.1	-5.4	-13.5	-13.7
Frequency	**Hz**			**60**		
Speed of rotation	tr/h	61	74	89	89	113
Thickness of ice flakes	mm	2,1	2	2	2,3	2
	inch	0.08	0.08	0.08	0.09	0.08
Evaporation temperature at the generator	°C	-16,7	-17,7	-21,2	-25,8	-25,3
	°F	1.9	0.1	-6.1	-14.4	-13.5

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Generator F200 SBF with refrigerant R449A

Characteristics	Units					
Water to be frozen	°C			15		
	°F			59		
Production	T /24h	4,5	5	6	7	7,5
	UST/24h	5	5.5	6.6	7.7	8.3
Cooling capacity	KW	22.5	25	30	35	37,5
	BTU/h	76815	85350	102420	119490	128025
Frequency	**Hz**			**50**		
Speed of rotation	tr/h	61	74	93	93	112
Thickness of ice flakes	mm	2,2	2	1,9	2,2	2
	inch	0.08	0.08	0.07	0.08	0.07
Evaporation temperature at the generator	°C	-17	-17,7	-20,8	-25,3	-25,4
	°F	1.4	0.1	-5.4	-13.5	-13.7
Frequency	**Hz**			**60**		
Speed of rotation	tr/h	61	74	89	89	113
Thickness of ice flakes	mm	2,1	2	2	2,3	2
	inch	0.08	0.08	0.08	0.09	0.08
Evaporation temperature at the generator	°C	-16,7	-17,7	-21,2	-25,8	-25,3
	°F	1.9	0.1	-6.1	-14.4	-13.5

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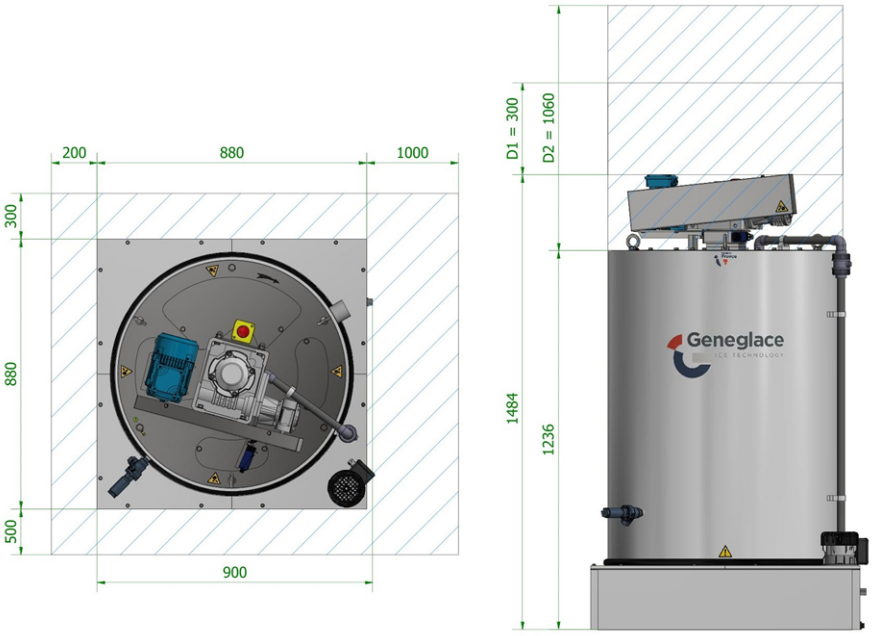
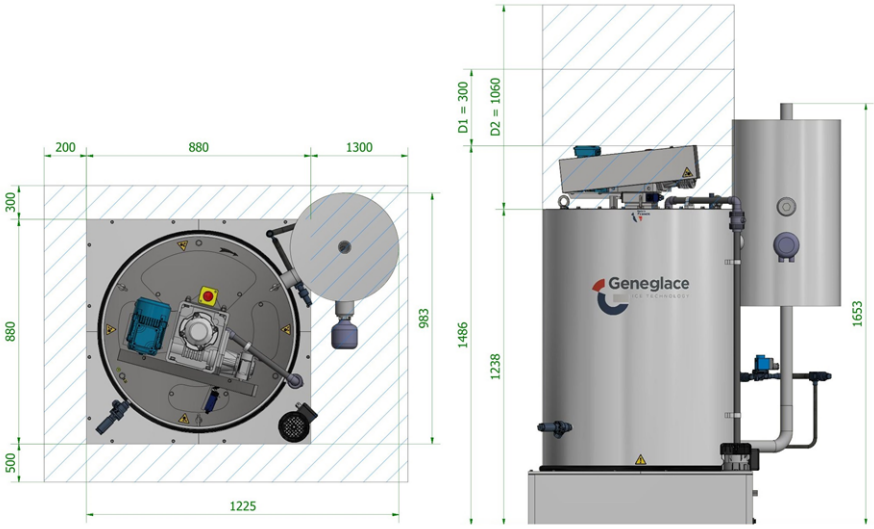
Dimensions

Generators SBF



Generators ABF



*Values in millimetres

D1 = Minimum space required to dismantle the gear reducer.

D2 = Minimum space for dismantling the reamer.

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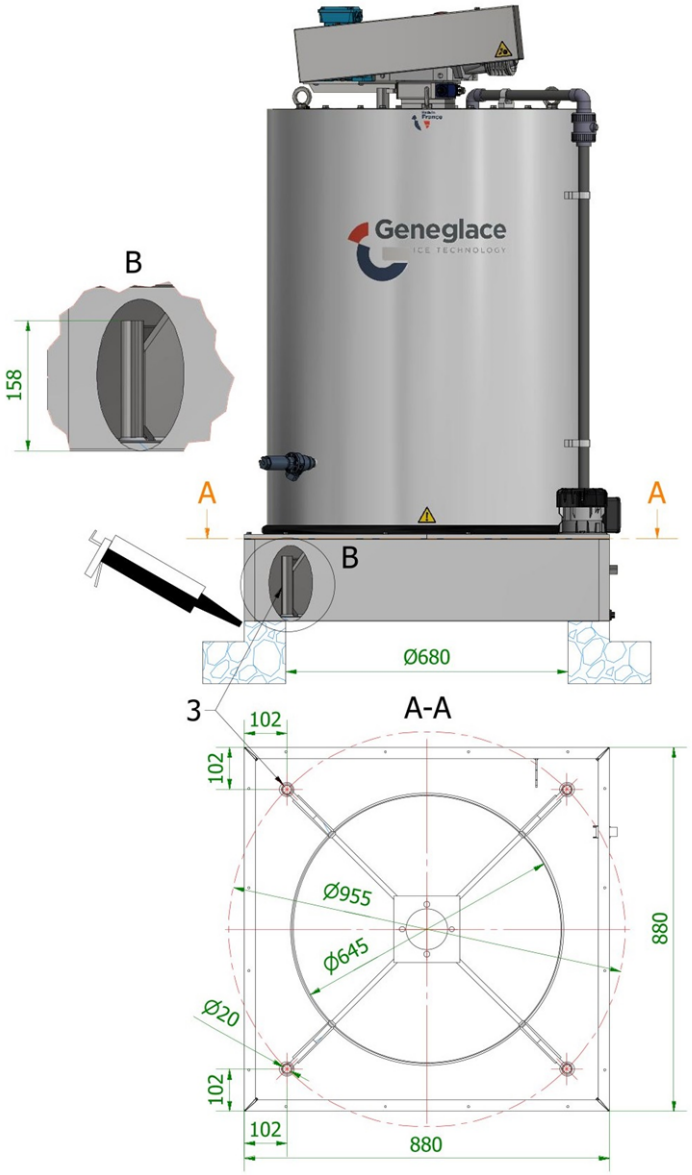
F200 attachments

Apply sealing compound all around the generator base to prevent water from leaking into the ice tank.



Ref. 1 = Seal around the hole.

Ref. 2 = Raised floor to avoid accidental ingress of water into the ice storage tank.

Ref 3 = Tubular fixing spacer. Qty 4.

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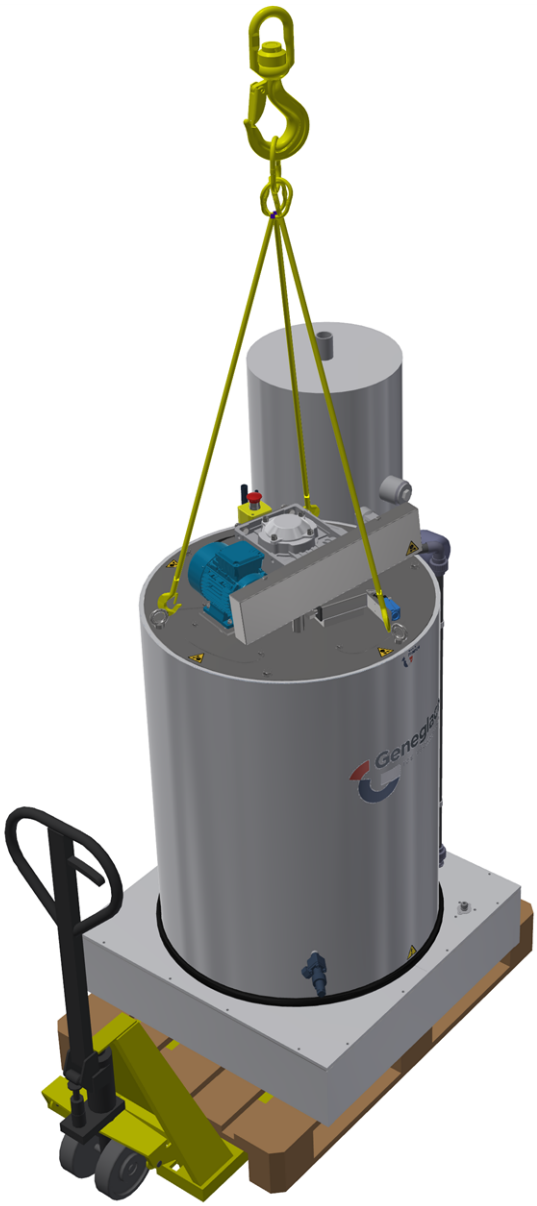
F200 Generator (SBF-ABF) Shipment



The packaging is hydrophobic and moisture resistant.

The packaging is used for air, sea and road shipments.

F200 Generator	SBF	ABF
Volume	3,2 m^3	3,2 m^3
Length	1430 mm (57 inches)	1430 mm (57 inches)
Width	1180 mm (47 inches)	1180 mm (47 inches)
Height	1920 mm (76 inches)	1920 mm (76 inches)
Net weight	500 Kg (1103 lbs)	527 Kg (1162 lbs)
Gross weights	550 Kg (1213 lbs)	616 Kg (1658 lbs)

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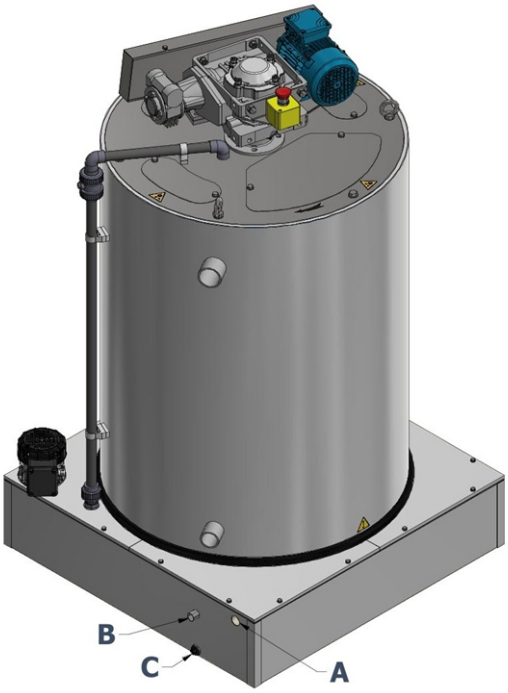
F200 Generator (SBF-ABF) Hydraulic characteristics

F200 Generator



Hydraulic connections

Ref.	Designation	Qty.	Connections		
			Dimensions	Type	Material
A	Water supply	1	1/2 " gaz	Threaded	
B	Overflow	1	22x1 mm	Smooth tube	Stainless steel
C	Draining	1	1/2 " gaz	Tapped	Stainless steel

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F200 Generator (SBF-ABF) Electrical characteristics

F200 GeneratorSBF

F200 GeneratorABF

Electrical connections

Ref.	Designation	Qty.	Electrical power supply	Nominal power	Nominal current	Contact
F1	Scraper motor	1	400V-3-50Hz	250 W	0,95 A	-
			460V-3-60Hz	370 W	1,3 A	-
			575V-3-60HZ	370 W	0,91 A	-
F2	Water pump	1	230V-1-50Hz	40 W	0,3 A	-
F3	Torque limiter	1	-	-	-	1 NC/1 NO
F4	Emergency stop for torque limiter	1	-	-	-	1 NC/1 NO
F5	Solenoid valve*	1	220-230V-1-50Hz	17 W	0,1 A	-
			220-230V-1-60Hz	14 W	0,1 A	-
			115V-1-60Hz	10 W	0,1 A	-
F6	Liquid level controller*	1	(dc) U= 20 - 60V	-	I< 6 mA	1 NC/1 NO
F7	Salt Dosing Pump (Option)	1	120-240V - 1 - 50/60HZ	15 W	0,1/0,2 A	-
PE	Equipotential earth bonding socket	1	-	-	-	-

*Delivered only in ABF version

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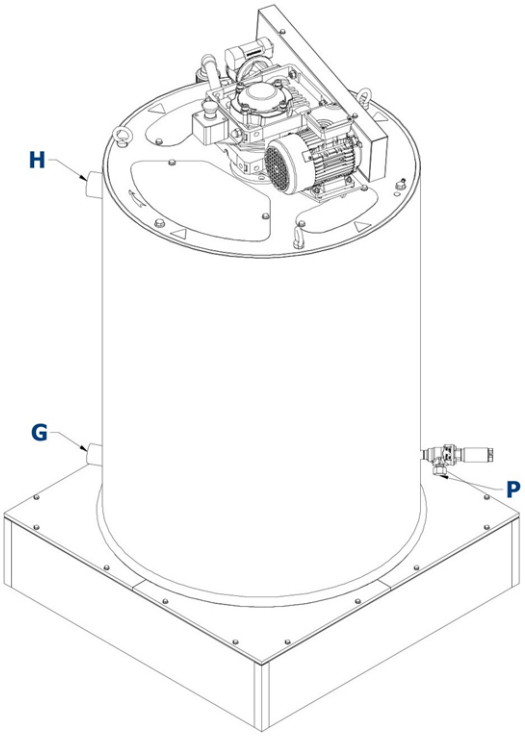
F200 Generator (SBF) Cooling characteristics

F200 Generator SBF



Cooling connections

Ref.	Designation	Qty.	Connections	
G	Liquid supply	1	Dimensions (mm)	48,3x3,7 mm
			Type	Smooth tube
			Material	Steel Gr1.1
H	Suction	1	Dimensions (mm)	60,3x3,9 mm
			Type	Smooth tube
			Material	Steel Gr1.1
P	Oil purge	1	Dimensions	1/2"
			Type	O.D.M.-G
			Material	Steel

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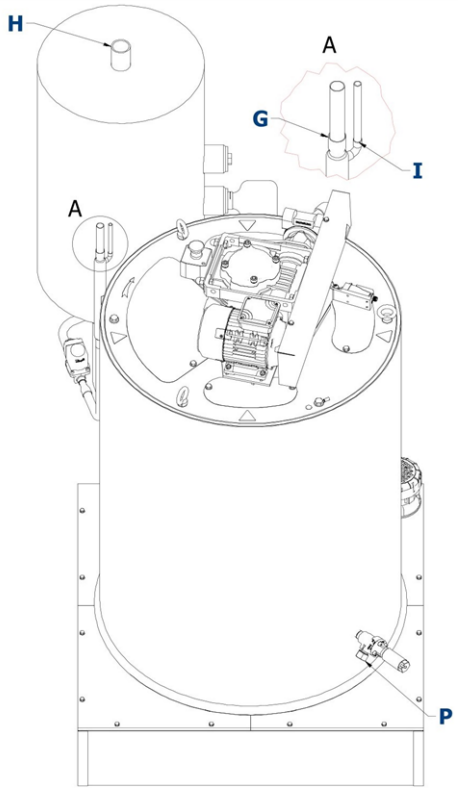
F200 Generator (ABF) Cooling characteristics

F200 GeneratorABF



Ref.	Designation	Qty.	Connections	
G	Liquid supply	1	Dimensions (mm)	7/8"
			Type	O.D.F
			Material	Copper R290
H	Suction	1	Dimensions (mm)	48,3x3,7 mm
			Type	Smooth tube
			Material	Steel Gr1.1
I	Oil return	1	Dimensions (mm)	3/8"
			Type	O.D.F
			Material	Copper R290
P	Oil purge	1	Dimensions	1/2"
			Type	O.D.M.-G
			Material	Steel

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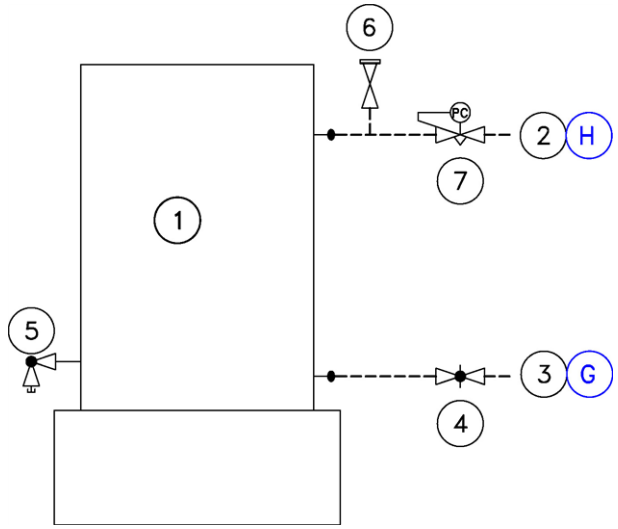
Cooling diagram F200 Generator SBF

The F200 Generator SBF is intended to be connected to a refrigeration system supplying the generator with HP liquid by pump recirculation.



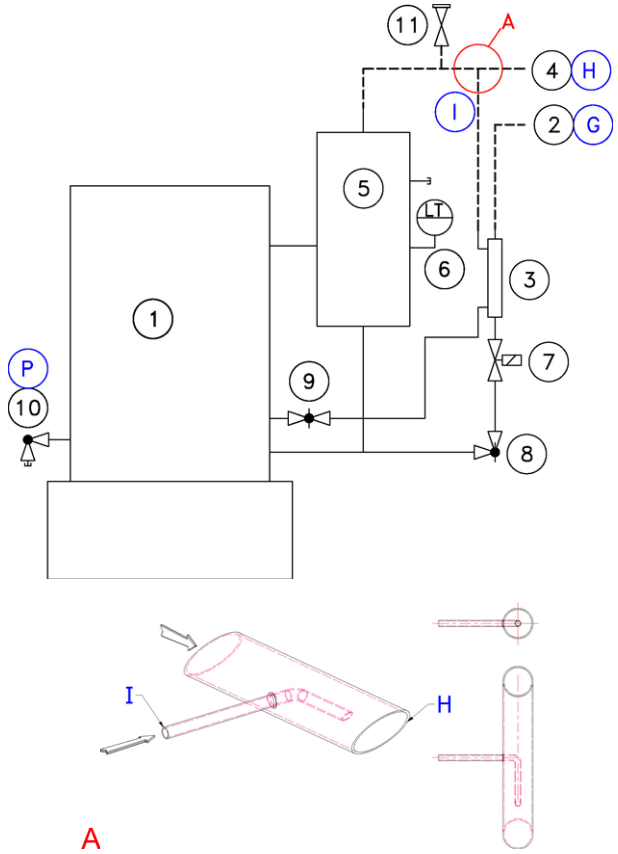
1. Generator
2. Suction
3. LP liquid supply
4. Adjuster (not supplied)
5. Oil purge
6. LP valve (not supplied)
7. Constant pressure valve (not supplied)

Connections (not supplied)

Cooling diagram F200 Generator ABF

The F200 GeneratorABF is intended to be connected to a refrigeration system supplying the generator with HP liquid.

Cooling diagram F200 ABF



- 1. Generator
- 2. HP liquid supply
- 3. Oil return exchangers
- 4. Suction
- 5. Flood bottle
- 6. Liquid level controller
- 7. Solenoid valve
- 8. HP Liquid Manual Regulator
- 9. Manual oil return regulator
- 10. Oil drain
- 11. Safety valve (not supplied))

Connections (not supplied)

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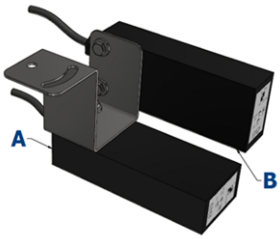
Options F200 Generator (SBF-ABF)

Salt dosing pump

- Power supply 100÷240 Vac - 50/60 Hz - 15 W
- Flow rate range: (0.1 % to 100%)x 2 L/h.
- IP65
- Fuse 1.6 A (20 W).
- 50 L reserve
- 25 Kg salt tablets

Ice level detection



- IP: 67
- CE and UL standards
- Power supply : 10-30 VDC
- 2 Infrared sensors:
  - A: Infrared sensor for security level
  - B: Infrared sensor for control level
- 1 Ice level sensors holder in inox steel

Electrical panel PGS_2

- IP: 55
- CE or UL standards
- Available power supply voltages:
  - 400 V-3+Neutral / 50 Hz
  - 400 V-3 / 50 Hz
  - 575 V-3 / 60 Hz
  - 460 V-3 / 60 Hz

Remote control for PGS_2 Electrical panel

- IP: 65
- CE or UL standards
- An On button
- An Off button
- A green On indicator light
- A red fault indicator light
- A weekly programmable clock
- An emergency stop button

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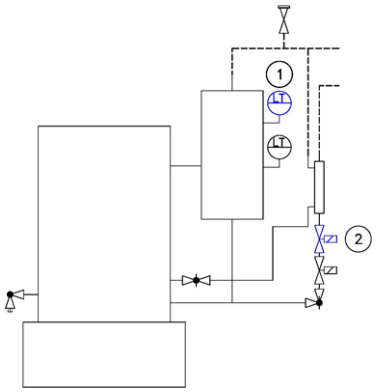
High refrigerant level detection safety device for F200 Generator ABF

1. Liquid level controller safety
2. Safety solenoid valve

Connections (not supplied)

*PGS 2 box to be adapted for this option



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