

Technical data sheet G100 Generator R744

EN_V1.00_2022-11-02



Physical limits of the G100 Generator

- Coolant type:
- According to the configuration of the G100 H ou SH: R134a, R404A, R507A, R407F ,R449A ,T R22, R717
 - According to the configuration of the G100-H CO2 ou SH CO2: R744



For the other coolants: contact Geneglace

Maxi allowable pressures (PS) :	"Permissible limits of pressure equipment"(Down)
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	0,8 to 1,5 bars
Supply water hardness	TH 15 to 20° français
Supply water acidity	PH 7/8
Sodium chloride content	100 g/m ³
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 (L)		PS (Min/Max) (Bar)	T° (Min/Max) (°C)
	Cylinder	Exchanger		
G100-H CO2*	1	0,6	-1/+40	-40/+20
G100-SH CO2**	1	-	-1/+40	-40/+20

* With plate heat exchanger for direct expansion (not installed)/ ** Generator without exchanger for recirculation by pump.

Type	Coolant	D.E.S.P. Category	Coolant group	Load (kg)	T. eq CO2
G100-H CO2	R744	Art. 4.3	2	1	0,001
G100-SH CO2	R744	Art. 4.3	2	1,1	0,001

G100 Generator supply limit

Cylinder	<ul style="list-style-type: none"> • Double-walled cylinder: Stainless steel. • Thermal insulation of the cylinder: Expanded polyurethane injection. • External cylinder coating: RAL 9006 lacquered aluminium sheet.
Base	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Central shaft: Stainless 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. • 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. • Top part with inspection hatch: Stainless steel.
Rotating part drive	<ul style="list-style-type: none"> • Geared motor with pulley-belt transmission.
Safety	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • (G100H and G100 CO2 H) Plate heat exchanger (not mounted): stainless steel. • G100 Electronic expansion valve, driver, pressure sensor, temperature sensor.
Misc.	<ul style="list-style-type: none"> • Refillable salt dosing tube + 25 kg of sodium chloride tablets

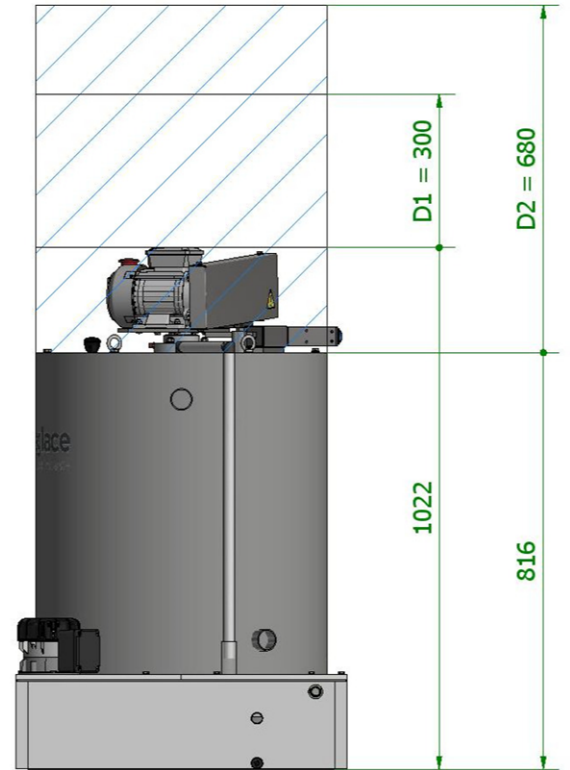
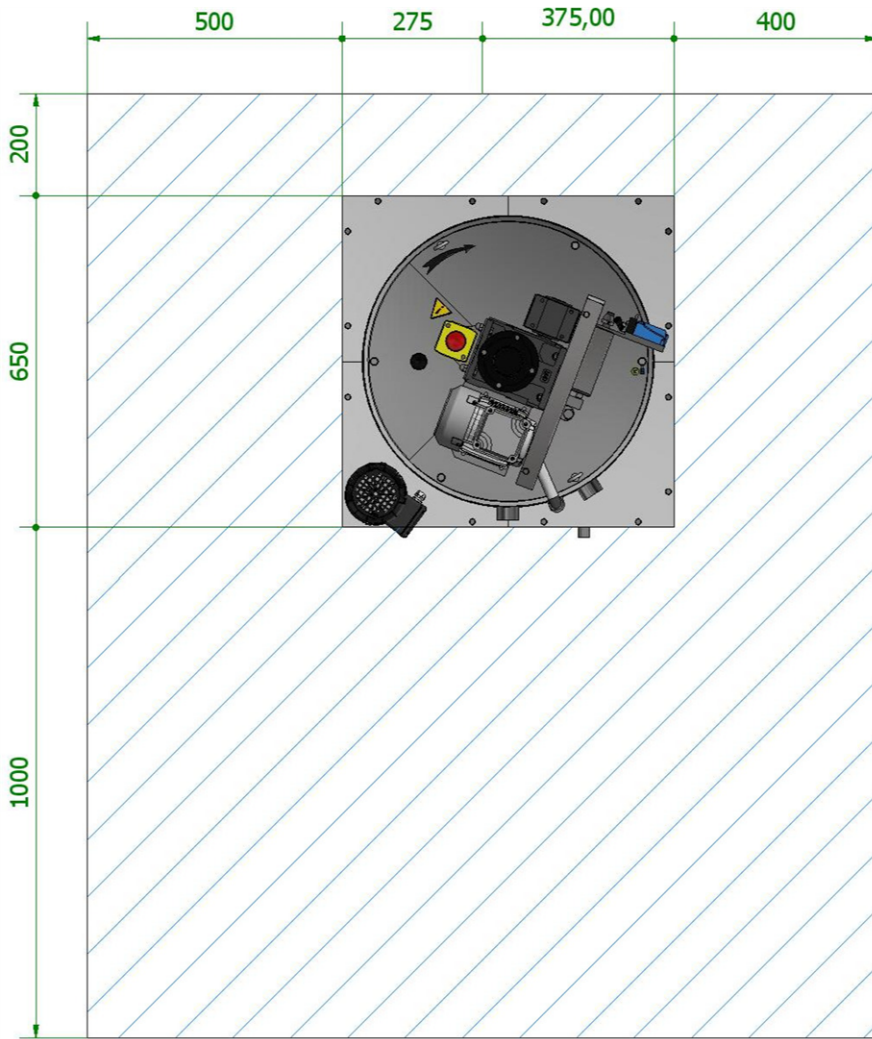
G100 H CO2 Generator with refrigerant R744 (CO2)

Characteristics	Units					
Approx. load	kg	<i>"Permissible limits of pressure equipment"(Page2)</i>				
Water to be frozen	°C	15				
	°F	59				
Production	T /24h	2,1	2,5	3	3,2	3,4
	UST/24h	2.3	2.8	3.3	3.5	3.7
Cooling capacity	KW	10	12,5	15	16	17
	BTU/h	34140	42675	51210	54624	58038
Condensation temp.						
Max.: (Liquid hammer)	°C	-	-	-	-	-
	°F	-	-	-	-	-
Min.: (Oil return)	°C	-	-	-	-	-
	°F	-	-	-	-	-
Pressure reducer	Type	E2V18SWF10				
Frequency	Hz	50				
Speed of rotation	tr/h	77	109	128	128	153
Thickness of ice flakes	mm	2,5	2,1	1,8	1,9	1,6
	inch	0.09	0.08	0.07	0.07	0.06
Evaporation temperature at the generator	°C	-23,7	-23,8	-26,1	-28,2	-28,8
	°F	-11	-11	-15	-19	-20
Frequency	Hz	60				
Speed of rotation	tr/h	79	112	131	131	131
Thickness of ice flakes	mm	2,5	2,1	1,8	1,9	1,6
	inch	0.09	0.08	0.07	0.07	0.06
Evaporation temperature at the generator	°C	-23,7	-23,8	-26,1	-28,2	-28,8
	°F	-11	-11	-15	-19	-20

G100 SH CO2 Generator with refrigerant R744 (CO2)


Characteristics	Units					
Approx. load	kg	<i>"Permissible limits of pressure equipment"(Page2)</i>				
Water to be frozen	°C	15				
	°F	59				
Production	T /24h	2,1	2,5	3	3,2	3,4
	UST/24h	2.3	2.8	3.3	3.5	3.7
Cooling capacity	KW	10	12,5	15	16	17
	BTU/h	34140	42675	51210	54624	58038
Frequency	Hz	50				
Speed of rotation	tr/h	77	109	128	128	153
Thickness of ice flakes	mm	2,5	2,1	1,8	1,9	1,6
	inch	0.09	0.08	0.07	0.07	0.06
Evaporation temperature at the generator	°C	-23,7	-23,8	-26,1	-28,2	-28,8
	°F	-11	-11	-15	-19	-20
Frequency	Hz	60				
Speed of rotation	tr/h	79	112	131	131	131
Thickness of ice flakes	mm	2,5	2,1	1,8	1,9	1,6
	inch	0.09	0.08	0.07	0.07	0.06
Evaporation temperature at the generator	°C	-23,7	-23,8	-26,1	-28,2	-28,8
	°F	-11	-11	-15	-19	-20

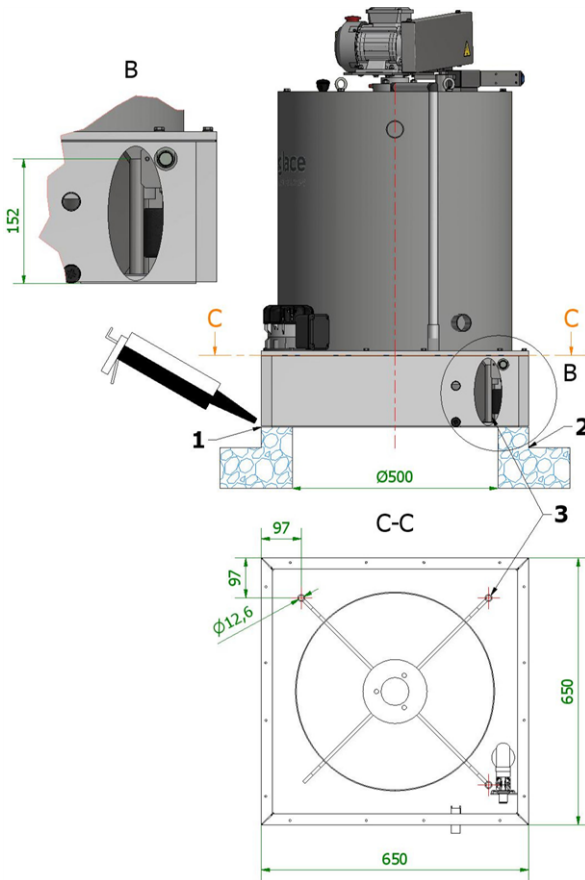
Dimensions



*Values in millimetres

G100 attachments

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



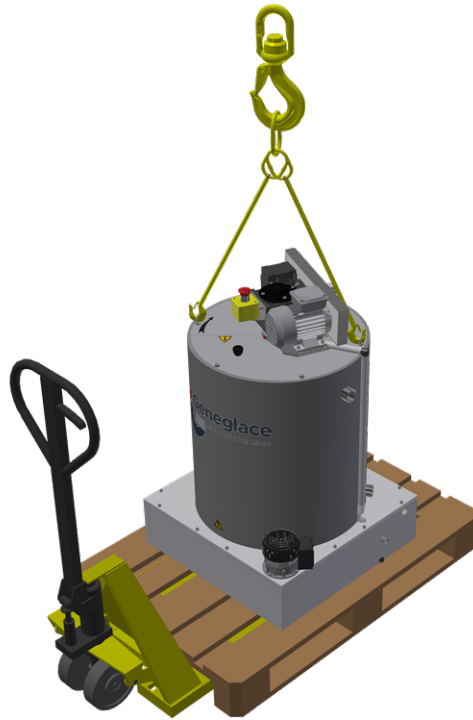
	Generator	G100
ØG	mm	500
	inch	19.69
Øi	mm	12.60
	inch	0.50
k	mm	152
	inch	5.98
a	mm	97
	inch	3.83
b	mm	97
	inch	3.83

Ref. 1 = Seal around the hole.

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

Ref. 3 = Tubular attachment spacer. Qty 3.

G100 Generator Shipment

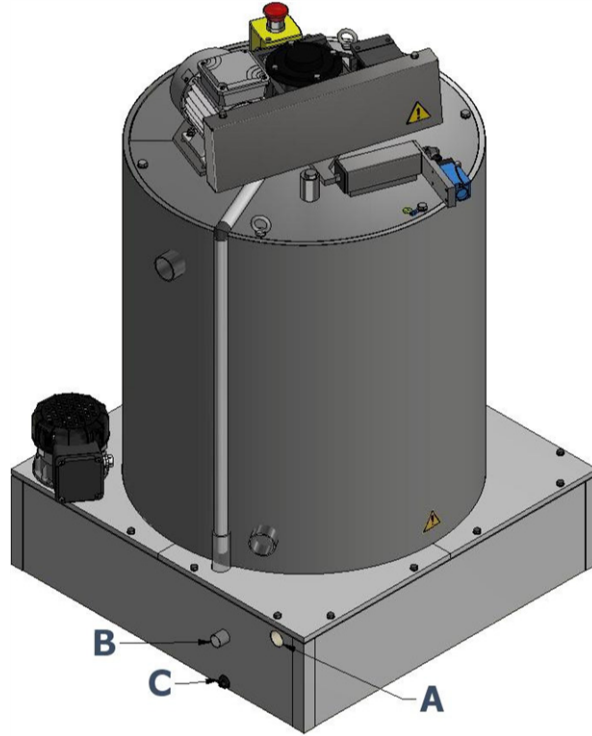


The packaging is hydrophobic and moisture resistant,
The packaging is used for air, sea and road shipments.

G100 Generator

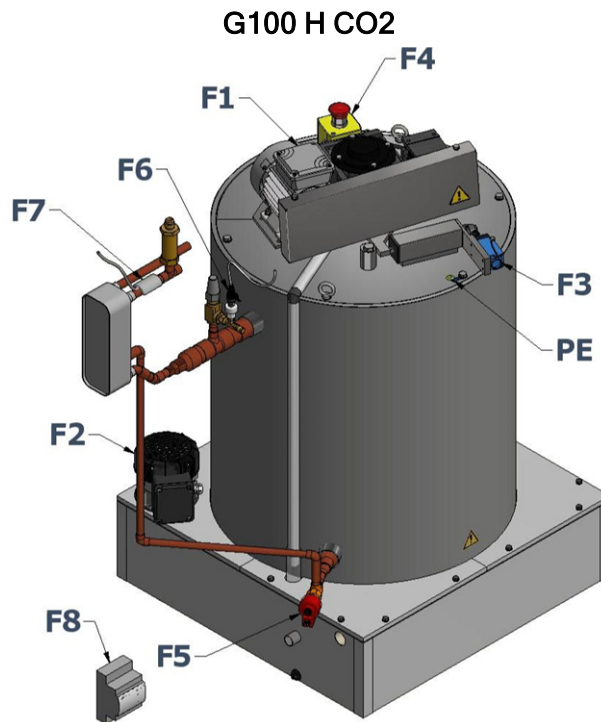
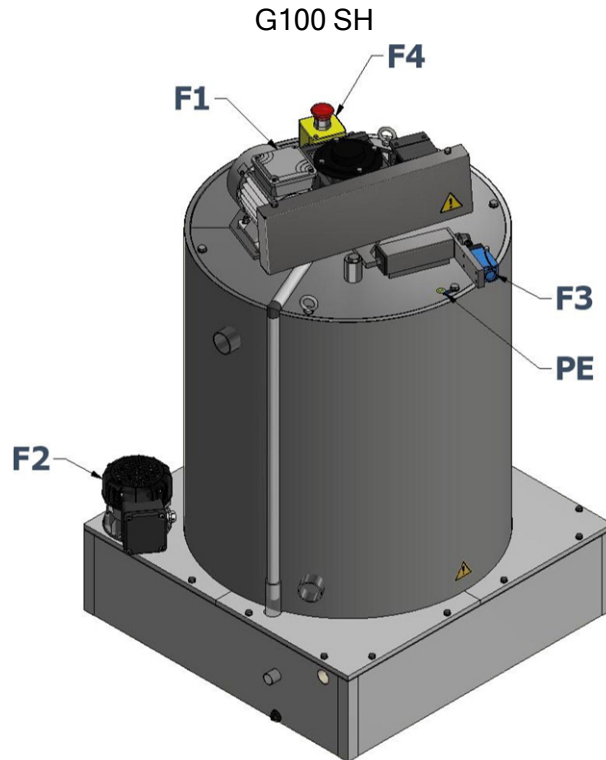
Volume	1,5 m ³
Length	1040 mm (41 inches)
Width	940 mm (37 inches)
Height	1520 mm (60 inches)
Net weight	160 Kg (353 lbs)
Gross weights	300 Kg (662 lbs)

G100 Generator Hydraulic characteristics



Ref.	Designation	Qty	Connections		
			Dimensions	Type	Material
A	Generator water supply	1	1/2" gas	Threaded	PVC
B	Overflow	1	20/22 mm	Smooth tube	Stainless steel
C	Draining	1	3/8" gas	Tapped	Stainless steel

G100 Generator Electrical characteristics

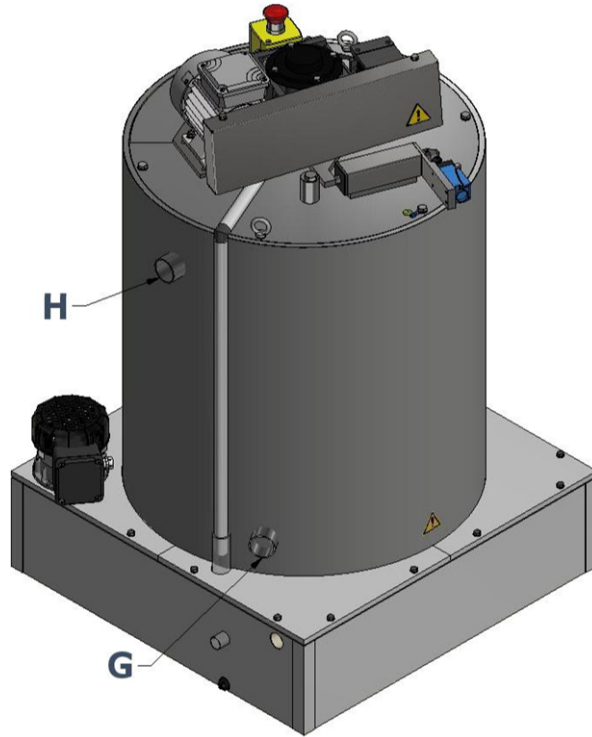


Ref.	Designation	Qty	Electrical power supply	Nominal power	Nominal current	Contact
F1	Scraper motor	1	400V - 3 - 50Hz	1 x 180W	1 x 0,8A	-
F2	Water pump	1	230V - 1 - 50Hz	1 x 40W	1 x 0,3A	-
F3	Torque limiter contact	1	-	-	-	1NC/1NO
F4	Scraper emergency stop contact	1	-	-	-	1NC/1NO
PE	equipotential earth bonding socket	1	-	-	-	-
F5*	Pressure reducer	1	24V			-
F6*	Pressure sensor	1	-	-		-
F7*	Temperature sensor	1	-	-		-
F8*	Driver	1	24V			-

*Delivered only in G100-H CO2 version

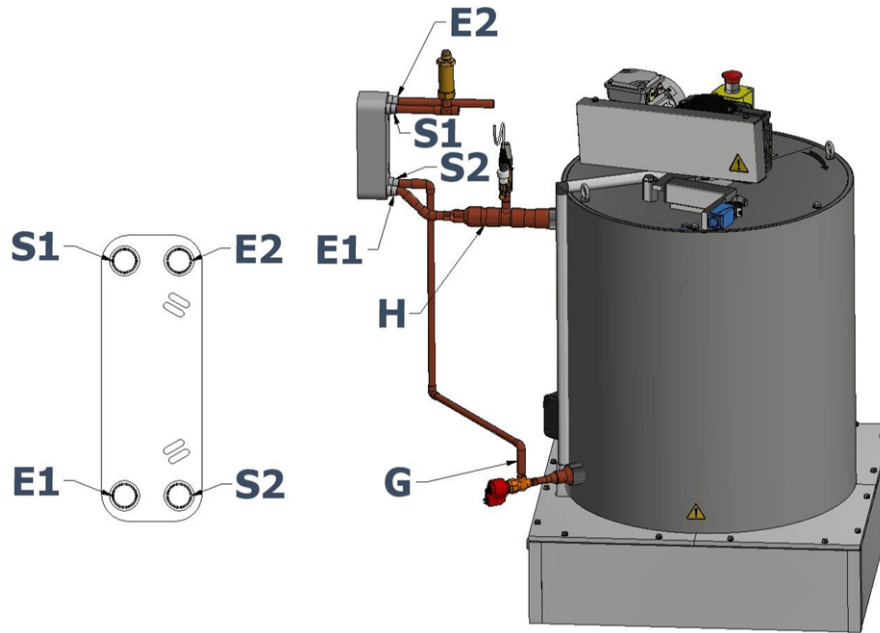
G100 Generator Cooling characteristics

Generator G100G100-SH CO2



Ref.	Designation	Qty	Connections	
H	Suction	1	Dimensions (mm)	42.16 x 3.56
			Type	Smooth tube
			Material	Stainless steel
G	Liquid supply	1	Dimensions (mm)	42.16 x 3.56
			Type	Smooth tube
			Material	Stainless steel

Generator G100-H CO₂ with exchanger

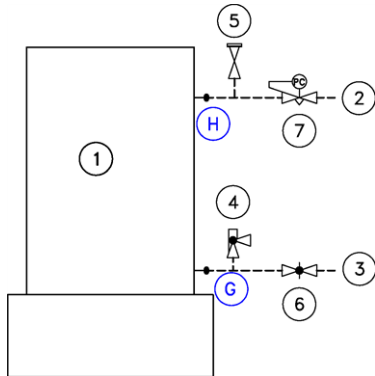


Ref.	Designation	Qty	connections	
			Dimensions (mm)	
E1 - S1	Heat exchanger Suction line	1	Dimensions (mm)	18,9 x 1,5
			Type	O.D.F
			Material	Stainless steel
E2 - S2	HP liquid supply	1	Dimensions (mm)	18,9 x 1,5
			Type	O.D.F
			Material	Stainless steel
H	Suction	1	Dimensions (mm)	1"1/8
			Type	O.D.F
			Material	Copper
G	Heat exchanger Liquid line	1	Dimensions (mm)	1/2"
			Type	O.D.F
			Material	Copper

Cooling diagram G100 Generator without exchanger

«SH» Generator without exchanger is intended to be connected to a refrigeration system supplying the generator with HP liquid by pump recirculation.

G100-SH and G100-SH CO2 generators without exchanger.

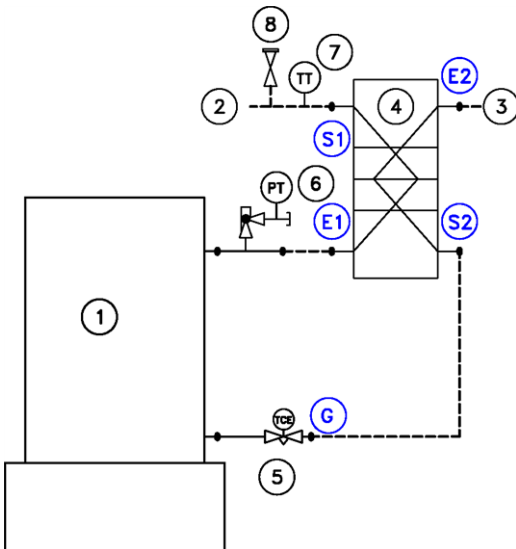


1. Generator
2. Suction
3. LP supply
4. Oil purge (only R717) (supplied/not installed)
5. Safety valve (not supplied)
6. Adjuster (not supplied)
7. Constant pressure valve (not supplied)

--- Connections not supplied

Cooling diagram G100 Generator with exchanger

G100-H connection (CO₂)



1. Generator
2. Suction
3. HP liquid supply
4. Heat exchanger
5. Electronic pressure reducer
6. Pressure sensor
7. Temperature sensor
8. Safety valve (not supplied)

--- Connections not supplied

Options G100 Generator

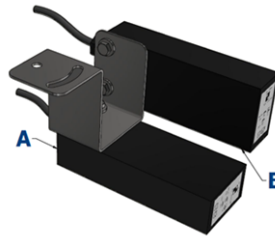
Salt dosing pump

- 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 CO2

- 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

