

Technical data sheet F15 Generator R449A

EN_V1.00_2022-02-01



Physical limits of the F15 generator

Coolant type:

- According to the configuration of the F15 machine: R134a R404A R407F R449A R717



For the other coolants: contact Geneglace

Pression Maximale de Service (PMS) :

"Permissible limits of pressure equipment" (bas)

Température Mini. évaporation

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 0,6 to 1,5 bars

Supply water hardness TH 15 to 20° French

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)
F15	1,8	-1/+18,5	-30/+45
F15 SH*	1,8	-1/+18,5	-30/+45

Type	Coolant	D.E.S.P. Category	Coolant group	Load (kg)	T. eq CO2
F15	R449A	Art. 4.3	2	1,5	2,10

Type	Coolant	D.E.S.P. Category	Coolant group	Load (kg)	T. eq CO2
F15 SH*	R449A	Art. 4.3	2	1,5	2,10

*Generator without exchange for recirculation by pump.

F15 Generator supply limit

Cylinder	<ul style="list-style-type: none">• Double-walled cylinder: Machined steel, Genecoat® coating.• Thermal insulation of the cylinder: Expanded polyurethane injection.• External cylinder coating: White lacquered aluminium sheet.
Base	<ul style="list-style-type: none">• Lower base: Stainless steel• Thermal insulation of the base: White PVC coated panels.• Base cover: White polyethylene.• 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, spherical plain bearing.• Upper central shaft bearing assembly: Stainless steel box, spherical plain bearing.• Lower water collection bowl: stainless steel.• Upper water distribution bowl: stainless steel.• Vertical deflector: stainless steel.• Overflow tube water distribution bowl• Helical reamer: stainless steel.• Eccentric reamer approach adjustment arrangement.• Scrapers for limiting the watering area: EPDM.• Top part with inspection hatch: Stainless steel.
Rotating part drive	<ul style="list-style-type: none">• Direct drive gear motor assembly.
Safety	<ul style="list-style-type: none">• Safety by force limiter on electrical contact (manual reset)
Refrigeration supply	<ul style="list-style-type: none">• Coaxial exchanger (not mounted): copper• Thermostatic expansion valve.
Misc.	<ul style="list-style-type: none">• Refillable salt dosing tube + 25 kg of sodium chloride tablets

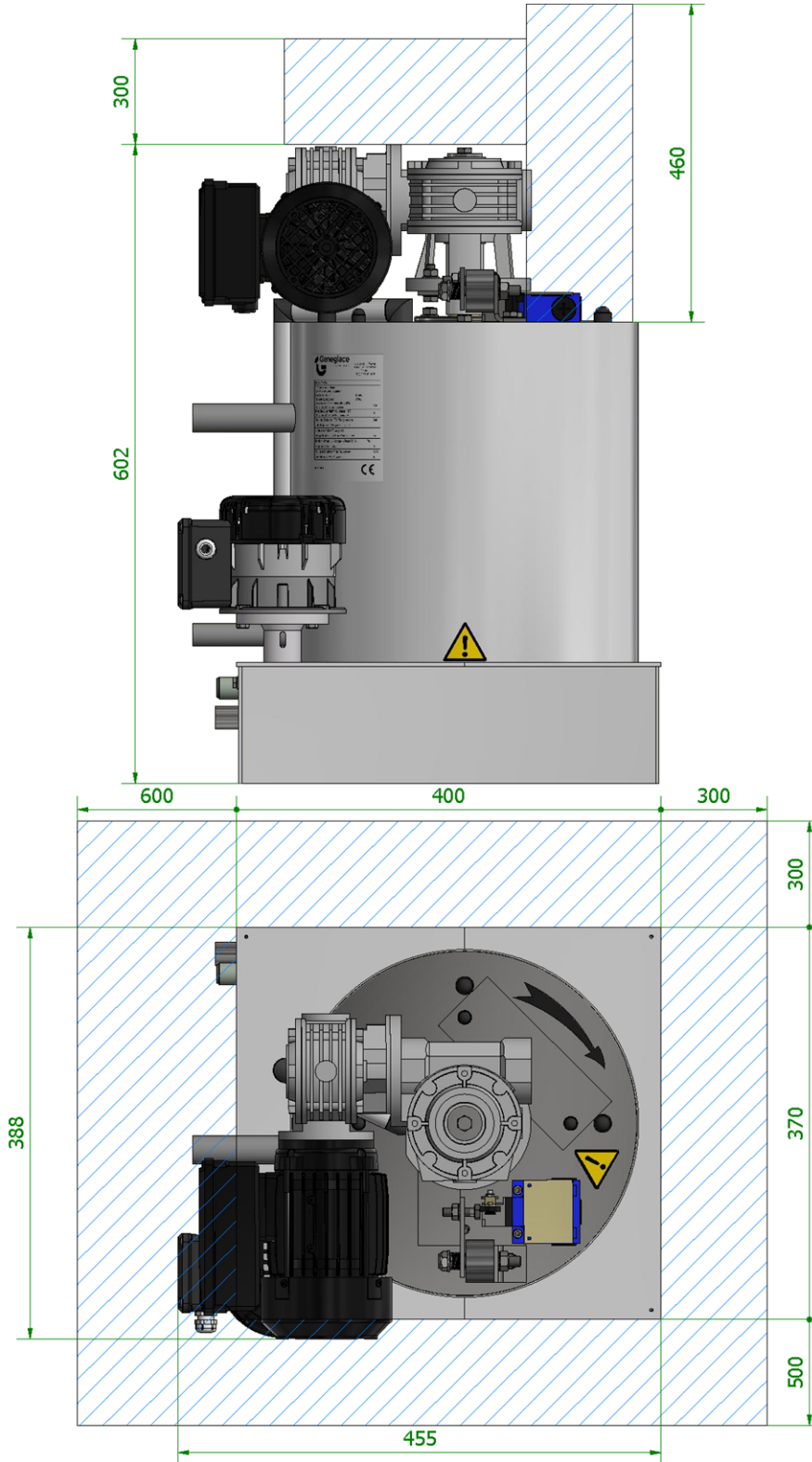
Generator F15 with refrigerant R449A

Characteristics	Units			
Approx. load	kg	<i>"Permissible limits of pressure equipment" (Page2)</i>		
Water to be frozen	°C	15		
	°F	59		
Production	T /24h	0,400	0,450	0,500
	UST/24h	0.44	0.49	0.55
Cooling capacity	KW	2	2.3	2.5
	BTU/h	6828	7848	8530
Condensation temp.				
Max.: (Liquid hammer)	°C	55	55	55
	°F	131	131	131
Min.: (Oil return)	°C	30	30	30
	°F	86	86	86
Pressure reducer	T2			
Orifice (thermostatic pressure reducer)	2			
Frequency	Hz	50		
Speed of rotation	tr/h	62	69	81
Thickness of ice flakes	mm	1,8	1,9	2
	inch	0.07	0.07	0.08
Evaporation temperature at the generator	°C	-19,1	-20,7	-22,9
	°F	-2.4	-5.26	-9.2
Frequency	Hz	60		
Speed of rotation	tr/h	75	75	75
Thickness of ice flakes	mm	1,7	1,9	2,1
	inch	0.07	0.07	0.08
Evaporation temperature at the generator	°C	-15,8	-19,9	-25,2
	°F	3.6	-3.8	-13.4

Generator F15 SH with refrigerant R449A

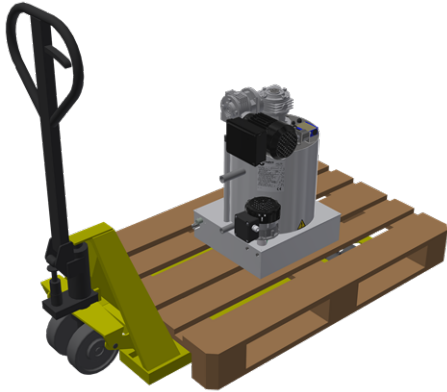
Characteristics	Units			
Approx. load	kg	<i>"Permissible limits of pressure equipment" (Page2)</i>		
Water to be frozen	°C	15		
	°F	59		
Production	T /24h	0,400	0,450	0,500
	UST/24h	0.44	0.49	0.55
Cooling capacity	KW	2	2.3	2.5
	BTU/h	6828	7848	8530
Frequency	Hz	50		
Speed of rotation	tr/h	62	69	81
Thickness of ice flakes	mm	1,8	1,9	2
	inch	0.07	0.07	0.08
Evaporation temperature at the generator	°C	-19,1	-20,7	-22,9
	°F	-2.4	-5.26	-9.2
Frequency	Hz	60		
Speed of rotation	tr/h	75	75	75
Thickness of ice flakes	mm	1,7	1,9	2,1
	inch	0.07	0.07	0.08
Evaporation temperature at the generator	°C	-15,8	-19,9	-25,2
	°F	3.6	-3.8	-13.4

Dimensions



*Values in millimetres

F15 Generator Shipment

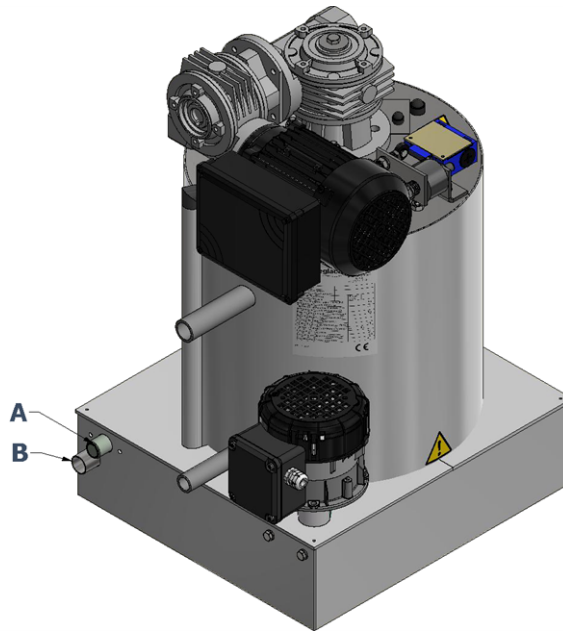


The packaging is hydrophobic and moisture resistant,
The packaging is used for air, sea and road shipments.

Volume	0,6 m ³
Length	840 mm (33 inches)
Width	740 mm (30 inches)
Height	960 mm (38 inches)
Net weight	50 Kg (111 lbs)
Gross weights	102 Kg (225 lbs)

F15 Generator Hydraulic characteristics

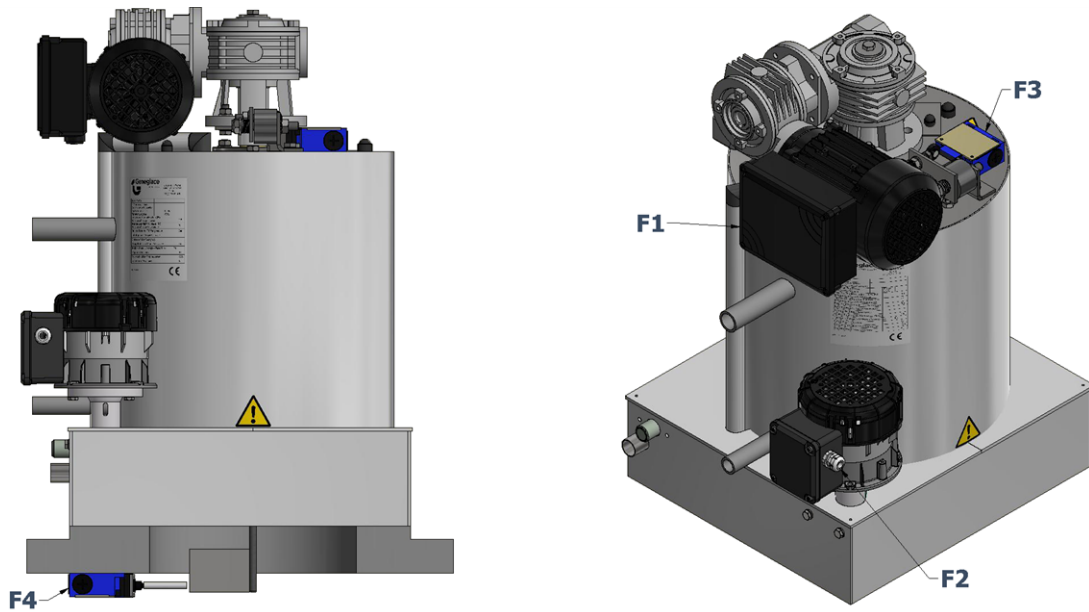
Generator F15



Generator	Ref.	Designation	Qty	Connections		
				Dimensions	Type	Material
F15	A	Water supply	1	1/2 " gaz	Threaded	PVC
	B	Overflow	1	20/22 mm	Smooth tube	Stainless steel

F15 Generator Electrical characteristics

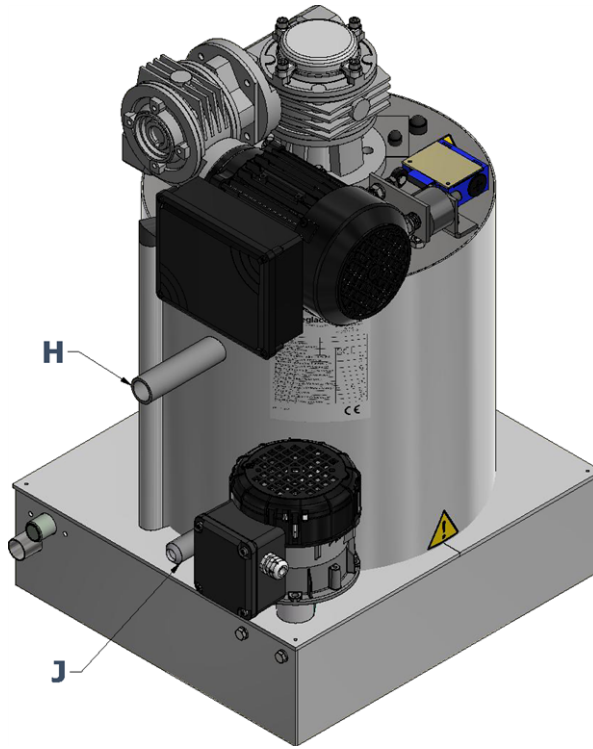
Generator F15



Ref.	Designation	Qty.	Electrical power supply	Nominal power	Nominal current	Contact
F1	Scraper motor	1	400V - 3 - 50Hz	90W	0,62A	-
	Scraper motor	1	230V - 1 - 50Hz	110W	1,2A	-
F2	Water pump	1	230V - 1 - 50Hz	16W	0,14A	-
F3	Torque limiter contact	1	-	-	-	1NC/1NO
F4	Ice level safety contact	1	-	-	-	1NC/1NO

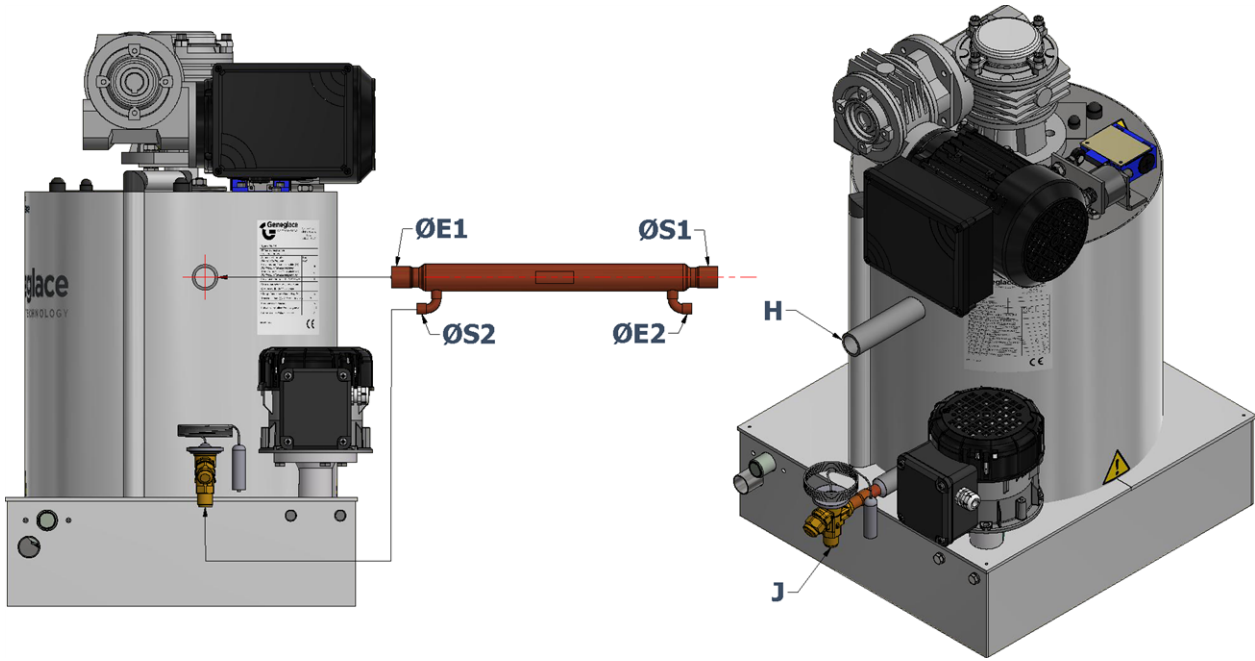
Cooling characteristics

Generator F15 SH



Ref.	Designation	Qty.	Connections	F15
H	Suction	1	Dimensions	26,7x2,9mm
			Type	Smooth tube
			Material	Steel
J	Liquid supply	1	Dimensions	21,3x2,6mm
			Type	Smooth tube
			Material	Steel

Generator F15

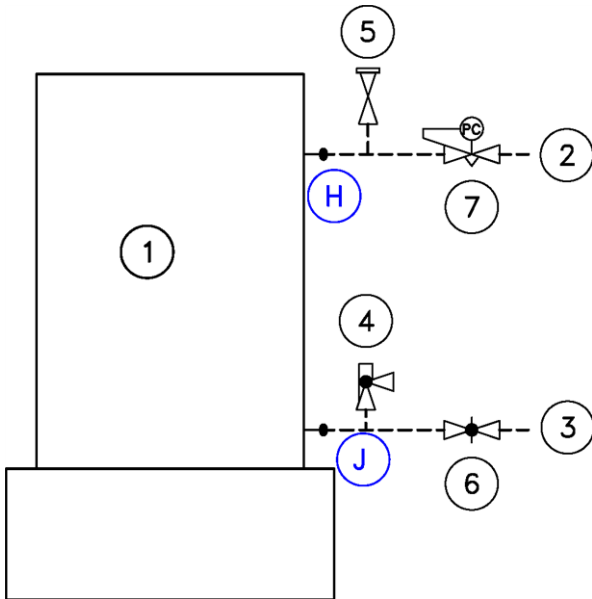


Ref.	Designation	Qty.	Connections	F15
E1-S1	Heat exchanger Suction line	1	Dimensions	7/8"
			Type	O.D.F.
			Material	Copper
E2-S2	Heat exchanger Liquid line	1	Dimensions	3/8"
			Type	O.D.F.
			Material	Copper
H	Suction	1	Dimensions	26,7x2,9mm
			Type	Smooth tube
			Material	Steel
J	Liquid supply	1	Dimensions	3/8"
			Type	Flare
			Material	Brass

Cooling diagrams F15 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.

F15 Generator SH

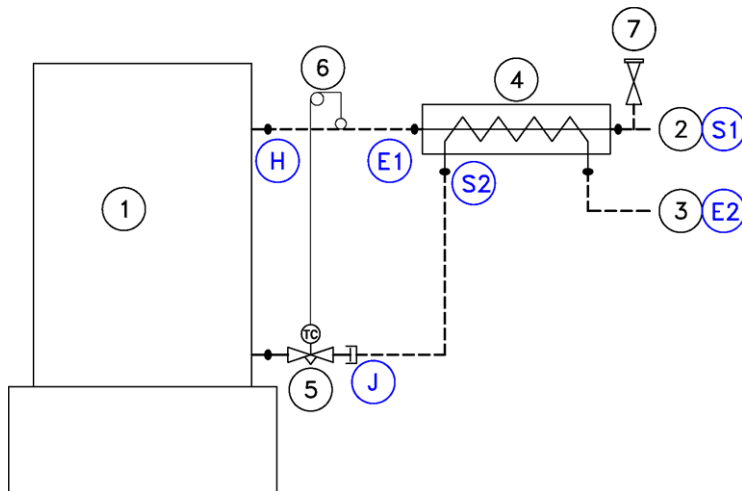


1. Generator
2. Suction
3. LP supply
4. Oil purge (only R717) (supplied/not installed)
5. Safety valve (not supplied)
6. Adjuster (not supplied)
7. Constant pressure valve (not supplied)

--- Connections not supplied

Cooling diagram F15 Generator with exchanger

The generator with exchanger is designed to be connected to a refrigeration system supplying the generator with HP liquid.



1. Generator
2. Suction
3. HP liquid supply
4. Heat exchanger
5. Thermostatic pressure reducer
6. Bulb position
7. Safety valve (not supplied)

--- Connections not supplied

Options F15 Generator

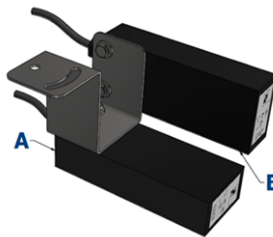
Salt dosing pump

- 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 sensor:
 - 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

