Heat pump systems
GEO HFS 60-100



fiorini

Water-water geothermal heat pumps GEO HFS 60-100

Reversible geothermal heat pump with highly efficient domestic hot water production unit. The circulation pumps on the three circuits not supplied as standard, but available as an accessory.



Power from 60 to 100 kW

Functions

✔ Production of hot water for installation
✔ Production of cold water for installation
✔ Production of high temperature domestic water
✔ Production in priority of DHW simultaneous with the production for the installation

Main features

✔ high efficiency scroll-compressor
✔ total DHW recovery
✔ DHW production up to 65°C
✔ Galileus regulation for the whole system
✔ up to 5 heat pumps in series

Applications

✔ Exchange on probe (standard)
✔ Exchange on well (upon request)

Start-up: first start-up is mandatory. See page 361

HEATING | COOLING | HOT WATER | HOT WATER & COOLING | HOT WATER & HEATING

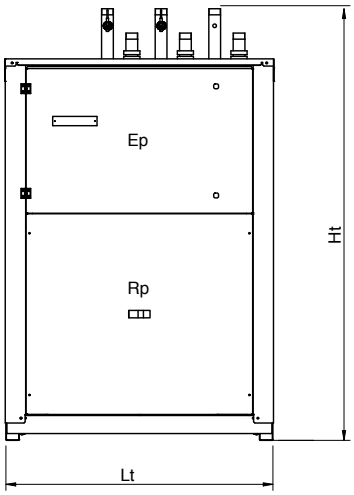


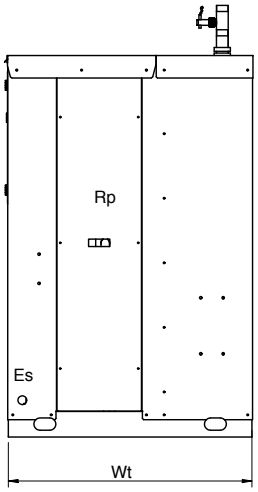
Models	
GEO/R	Heating, cooling for device and DHW production with geothermal probe
GEO/R/P	Heating, cooling for device and DHW production with well (upon request)
GEO	Heating, cooling for device with geothermal probe
GEO/P	Heating, cooling for device with well (upon request)

		without recovery GEO HFS		with recovery GEO HFS/R	
Gas	Model	Code	Price	Code	Price
R410a	60 T	444090121		444090125	
	80 T	444090122		444090126	
	100 T	444090123		444090127	

Technical data
GEO HFS 60-100

Sizes		60	80	100
Winter functioning B0/W35				
Energy label		A++	A++	A++
Thermal power	kW	48,8	64,6	85,4
Compressor absorbed power	kW	11,7	15,8	20
COP		4,2	4,1	4,3
Device				
Device's water flow rate	m3/h	8,2	10,8	14,4
Pump's absorbed power	kPa	18,0	29,3	17,5
Geothermal				
Cooling power to exchange in probe	kW	37,2	48,8	65,4
Probe liquid flow rate	m3/h	11,3	14,8	19,8
Exchanger load loss	kPa	41,9	56,3	40,6
DHW side B0/W50				
Thermal power	kW	44,9	58,5	78,6
Domestic water flow	m3/h	7,8	10,2	13,7
Exchanger load loss	kPa	15,2	20,2	14,8
Winter functioning W5/W35				
Thermal power	kW	60,1	79,3	105,0
Compressor absorbed power	kW	11,8	16,0	20,5
COP		5,2	5,0	5,2
Device				
Device's water flow rate	m3/h	10,5	13,8	18,3
Exchanger load loss	kPa	27,5	44,6	26,6
Well				
Cooling power to exchange in well	kW	48,3	63,3	84,6
Well liquid flow rate	m3/h	8,5	11,1	14,8
Exchanger pressure loss	kPa	20,1	32,2	19,2
Summer functioning B30/W18				
Cooling power	kW	65,3	86,9	117,7
Compressor's absorbed power	kW	13,0	16.8	22,0
EER		5,1	5,2	5,4
Device				
Device's water flow rate	m3/h	11,7	15,7	20,7
Device's exchanger load loss	mca	50,9	21,0	33,1
Geothermal				
Thermal power to exchange in probe	kW	78,2	103,6	139,7
Probe liquid flow rate	m3/h	14,6	19,5	25,7
Exchanger load loss	kPa	55,8	77,3	54,8
Features				
Compressor type		scroll	scroll	scroll
Number of compressors		2	2	2
Refrigerant		R410a	R410a	R410a
Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50
Diametric hydraulic fittings		1"1/2	1"1/2	1"1/2
Sound pressure at 1m	dB(A)	71	73	74
Weight (unpacked)	Kg	425	465	505
Weight (packed)	Kg	450	490	530





	Model 60-80-100
Ht	1770
Lt	1100
Wt	1000

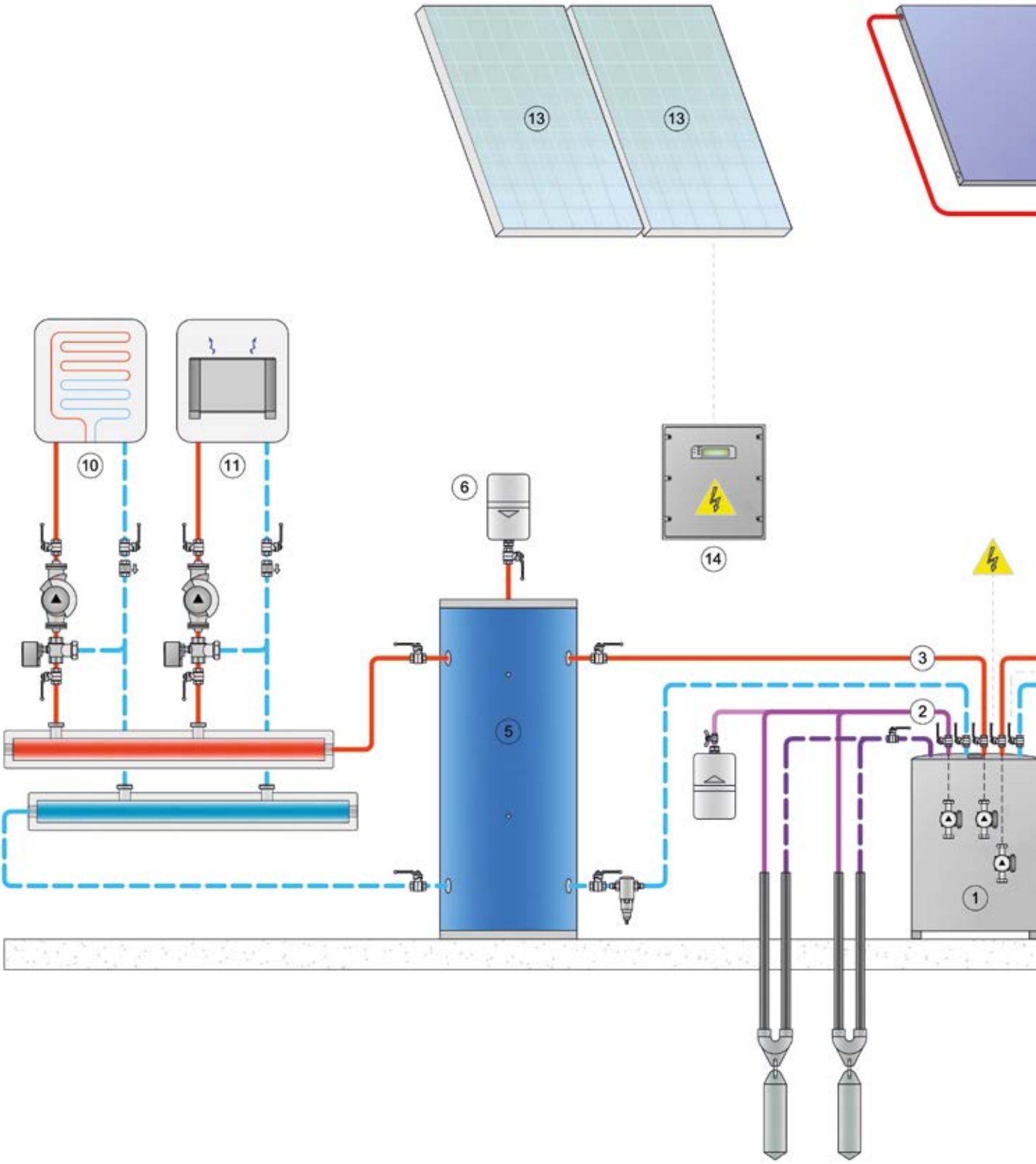
All indicated operating conditions comply with the regulation EN14511

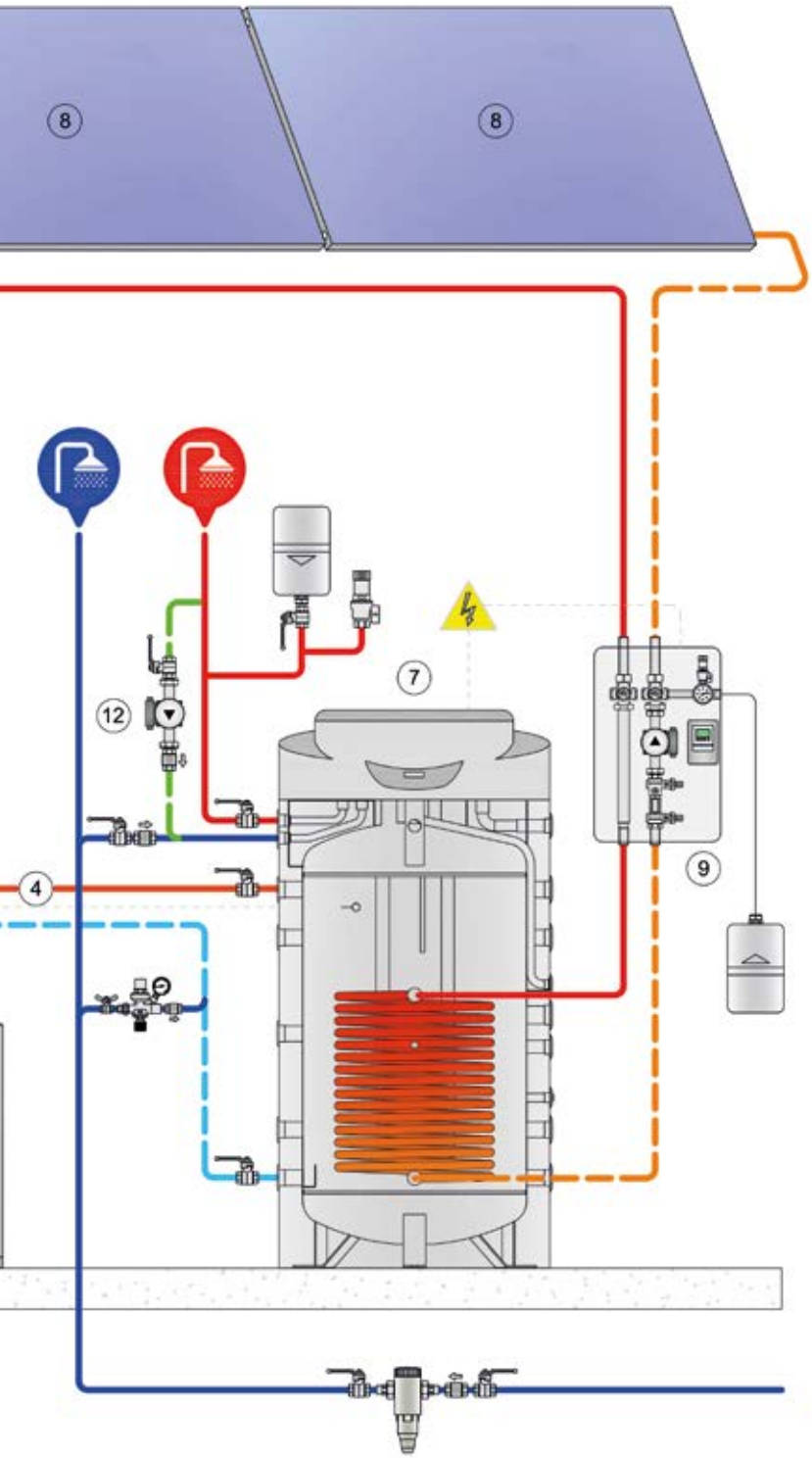
Utility circuit				
B0/W35	radiant plant	°C	30/35	In-Out
W5/W35	radiant plant	°C	30/35	In-Out
B30/W18	radiant plant	°C	23/18	In-Out
	Domestic circuit			
B0/W50	DHW	°C	45/50	In-Out
External circuit				
B0/W35	glycol water geothermal probe 20%	°C	0/-3	In-Out
W5/W35	well water	°C	10/5	In-Out
B30/W18	glycol water geothermal probe 20%	°C	30/35	In-Out
B0/W50	glycol water geothermal probe 20%	°C	0/-3	In-Out

Accessories
GEO HFS 60-100

code	description	price	function
452010006	Web Kit (remote control)		Makes it possible to control and supervise the installation via internet
452010010	Serial port kit RS485 Modbus		Makes it possible to communicate with the supervision systems through the Modbus protocol
452010074	Serial port kit Konnex		Makes it possible to communicate with the supervision systems through the Konnex protocol
452010075	Serial prot kit RS485 BACnet		Makes it possible to communicate with the supervision systems through the Bacnet protocol
452010050	My-zone kit with T/U thermostat		Thermostat for temperature and humidity. Max 30
452010051	My-board kit expansion kit for My-zone		Expansion kit to control the dehumidifier, the circulation pump, zone valve and mixing valve
452010053	Field-bus for zone RS485 kit		Necessary for connection of Galileus5 with Myzone and Myboard
452010061	My-power kit		It optimizes the self-consumption of the energy produced by the photovoltaic system and allows the activation of the heat pump according to the active electrical loads to prevent excessive consumption. It is possible to monitor a maximum phase current of 40 A.
452020122	Anti-vibration kit GEO HFS 60-80-100		Anti-vibration feet and hardware for fixing to the unit to be installed on site during the heat pump positioning. It allows to damp the vibrations transmitted by the heat pump to the structure on which it rests. For the smaller units, the anti-vibration feet are included in the supply of the unit.
452020130	Soundproofing Kit GEO HFS 60-80		The soundproofing kit must be installed on the compressor to attenuate the noise of the heat pump (the sound insulating panels are installed as standard). If purchased together with the heat pump, the soundproofing kit comes already installed.
452020131	Soundproofing Kit GEO HFS 100		
452020138	Soft starter kit GEO HFS 60 T		Electronic device installed at the factory on a three-phase unit. Reduces the maximum value of the compressor starting current by using an inverter which powers the motor by varying the frequency so as to limit the inrush current
452020139	Soft starter kit GEO HFS 80 T		
452020140	Soft starter kit GEO HFS 100 T		
452010003	Mixing kit		Makes it possible to regulate the supply temperature of the cooling device
452020142	Pumps kit GEO HFS 60		Module that includes the pumps of the geothermal, the plant and the sanitary. The electric power circuit of the pumps must be prepared by the customer. Through a command provided by special outputs set up in the electrical panel of the unit, the pumps for the circulation of hydraulic fluids between the machine and the geothermal probes, the system storage and the sanitary puffer are controlled.
452020143	Pumps kit GEO HFS 80		
452020144	Pumps kit GEO HFS 100		
452020145	Pumps kit GEO/R HFS 60		
452020146	Pumps kit GEO/R HFS 80		
452020147	Pumps kit GEO/R HFS 100		

Installation chart
GEO HFE - HFS





1	GEO heat pump
2	Geothermal or well circuit with inverter pump
3	System circuit with inverter pump
4	DHW circuit with inverter pump
5	Accumulator tank, VKG-HC model
6	Safety kit
7	Semi-instantaneous DHW preparer AQUAMATIC
8	Thermal solar collector
9	Solar pump kit
10	Heating system 1
11	Heating system 2
12	DHW recirculation sytem
13	PV system
14	PV inverter



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