

Water-water geothermal heat pumps

GEO HFE 6-33

Reversible geothermal heat pump with highly efficient domestic hot water production unit

Power from 6 to 33 kW

Functions

- ✓ Production of hot water for installation
- ✓ Production of chilled water for installation
- ✓ Production of high temperature domestic water
- ✓ Production in priority of DHW simultaneous with the production for the installation

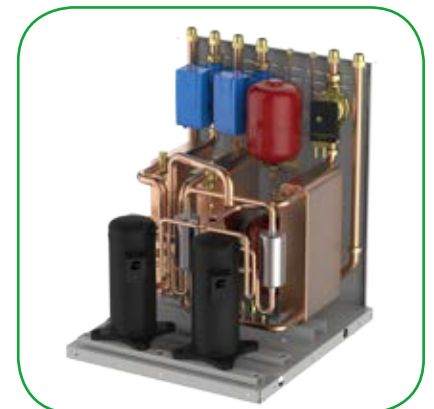
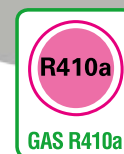
Main features

- ✓ high efficiency scroll-compressor
- ✓ inverter circulators on the three circuits (device, domestic, geothermal)
- ✓ 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

Exchange on well



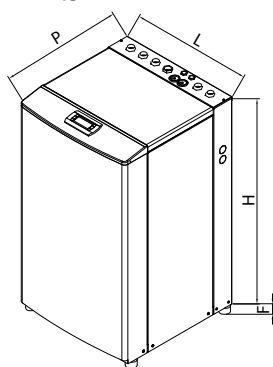
Models	
GEO/R	Heating-cooling for device and DHW production with geothermal probe
GEO/R/P	Heating-cooling for device and DHW production with well
GEO	Heating-cooling for device with geothermal probe
GEO/P	Heating-cooling for device with well

Technical data

GEO HFE 6-33

Sizes		6	8	12	16	20	24	33
Winter functioning Bo/W35								
Energy label		A++	A++	A++	A++	A++	A++	A++
Thermal power	kW	5.8	7.5	10.2	13.2	17.1	21.0	25.4
Compressor absorbed power	kW	1.30	1.7	2.2	2.9	3.7	4.4	5.5
COP		4.43	4.57	4.68	4.60	4.60	4.82	4.60
Device								
Device's water flow rate	m ³ /h	0.99	1.30	1.75	2.26	2.93	3.61	4.37
Head pressure	mca	6.5	6.2	5.8	5.0	6.7	6.0	11.1
Pump's absorbed power	kW	0.07	0.07	0.07	0.07	0.14	0.14	0.31
Geothermal								
Cooling power to exchange in probe	kW	4.5	6.0	8.1	10.5	13.5	16.0	20.2
Probe liquid flow rate	m ³ /h	1.30	1.71	2.32	3.00	3.87	4.58	5.79
Head pressure	mca	5.9	5.5	8.9	6.1	5.1	4.1	8.7
Pump's absorbed power	kW	0.07	0.07	0.14	0.14	0.14	0.14	0.31
Domestic								
Thermal power	kW	5.3	7.0	9.4	11.9	15.7	18.6	23.7
Domestic water flow	m ³ /h	0.91	1.21	1.62	2.05	2.70	3.20	4.08
Head pressure	mca	6.6	6.2	5.7	5.5	4.1	5.2	5.3
Pump's absorbed power	kW	0.07	0.07	0.07	0.07	0.07	0.14	0.14
Winter functioning								
Thermal power	kW	7.5	9.9	13.3	16.7	22.2	26.1	33.5
Compressor absorbed power	kW	1.3	1.6	2.2	2.8	3.8	4.4	5.6
COP		5.85	6.10	6.14	6.04	5.88	5.99	6.02
Device								
Device's water flow rate	m ³ /h	1.27	1.67	2.24	2.82	3.75	4.40	5.64
Head pressure	mca	5.94	5.59	4.93	3.70	5.40	4.61	8.82
Well								
Cooling power to exchange in well	kW	6.2	8.2	11.1	13.9	18.4	21.6	27.8
Well liquid flow rate	m ³ /h	1.06	1.40	1.88	2.37	3.14	3.68	4.73
Exchanger pressure loss	mca	0.3	0.4	0.6	0.7	0.7	0.9	0.9
Summer functioning								
Cooling power	kW	9.5	12.5	16.6	20.9	27.5	32.7	41.6
Compressor's absorbed power	kW	1.3	1.5	2.1	2.8	3.8	4.3	5.7
EER		7.39	8.19	7.84	7.44	7.33	7.68	7.35
Device								
Device's water flow rate	m ³ /h	1.63	2.14	2.85	3.59	4.55	5.62	7.16
Device's head pressure	mca	5.8	5.0	3.7	3.0	3.3	3.3	6.6
Geothermal								
Thermal power to exchange in probe	kW	10.7	13.9	18.6	23.6	31.0	36.8	47.0
Probe liquid flow rate	m ³ /h	3.07	2.39	3.20	4.06	5.33	6.33	8.08
Head pressure	mca	5.1	4.5	5.4	3.1	3.4	4.2	4.1
Compressor type					Scroll			
Number of compressors				1				2
Refrigerant					R410a			
Power supply	V/Ph/Hz	230-50	230-50 / 400-3N-50			400-3N-50		
Diametric hydraulic fittings				1"			1 1/4"	
Expansion vessels (device and geothermal)	liters	2		4			8	
Water circuit's max content	liters	29	29	57	57	114	114	114
Sound pressure at 1m	dB(A)	48	49	50	52	54	56	60
Weight (unpacked)	Kg	146	153	169	195	215	262	302
Weight (packed)	Kg	151	158	175	200	220	270	310

All indicated operating conditions comply with the regulation EN14511



Dimensions	Sizes			
	6-8	12	16-20	24-33
L	620	620	620	800
P	575	650	650	880
H	970	1050	1050	1040
F	30	30	30	30

Code GEO HFE 6-33



GEO Geothermal systems					
		sonda		pozzo	
		Without recovery GEO HFE	With recovery GEO HFE/R	Without recovery GEO HFE/P	With recovery GEO HFE/R/P
gas	model	code price	code price	code price	code price
R410a	6 M	444090045	444090001	444090067	444090023
	6 M + SMART START	444090046	444090002	444090068	444090024
	6 T	444090047	444090003	444090069	444090025
	6 T + SOFT START	444090048	444090004	444090070	444090026
	8 M	444090049	444090005	444090071	444090027
	8 M + SMART START	444090050	444090006	444090072	444090028
	8 T	444090051	444090007	444090073	444090029
	8 T + SOFT START	444090052	444090008	444090074	444090030
	12 M	444090053	444090009	444090075	444090031
	12 M + SMART START	444090054	444090010	444090076	444090032
	12 T	444090055	444090011	444090077	444090033
	12 T + SOFT START	444090056	444090012	444090078	444090034
	16 T	444090059	444090015	444090081	444090037
	16 T + SOFT START	444090060	444090016	444090082	444090038
	20 T	444090061	444090017	444090083	444090039
	20 T + SOFT START	444090062	444090018	444090084	444090040
	24 T	444090063	444090019	444090085	444090041
	24 T + SOFT START	444090064	444090020	444090086	444090042
33 T	444090065	444090021	444090087	444090043	
33 T + SOFT START	444090066	444090022	444090088	444090044	

Accessories

GEO HFE 6-33

Control/regulation accessories			
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
452010010	Field-bus for zone RS485 kit		Necessary for connection of Galileus5 with Myzone and Myboard
452010061	My-power 3PH kit		Records and optimizes the auto-consumption of the energy produced by the photovoltaic installation. Version for three-phase meter
452010069	MY power 1ph kit		Records and optimizes the auto-consumption of the energy produced by the photovoltaic. Version for single phase meter
452010070	MY Touch 7 kit environment supervision panel		7" touchscreen screen for the management of the installation
452010062	Meter Source-installation-sanitary 6>20 kit		Meter that measures the energy produced for cooling, DHW production and exchange with the source. Size from 6 to 20 kW.
452010063	Meter Source-installation 6>20		Meter that measures the energy produced for cooling and exchange with the source. Size from 6 to 20 kW.
452010064	Meter Source-installation-sanitary 24>33 kit		Meter that measures the energy produced for cooling, DHW production and exchange with the source. Size from 24 to 33 kW
452010065	Meter Source-installation 24>33 kit		Meter that measures the energy produced for cooling and exchange with the source. Size from 24 to 33 kW

Accessories for the device			
code	description	price	function
421120013	MFREE SMALL 6-8		Module for passive cooling – application size 6-8
421120014	MFREE MEDIUM 10-16		Module for passive cooling – application size 12-16
421120015	MFREE LARGE		Module for passive cooling – application size 20-24-33
452010005	GEO recovery deviation kit (size 6>20)		Makes it possible to transfer excess heat accrued in the tank for DHW to the heating installation. Only con solar power.
452010003	Mixing kit		Makes it possible to regulate the supply temperature of the cooling device
452010004	GEO SOL		Makes it possible to regulate the solar thermal device. Solar circulator not provided.

Machinery Accessories			
code	description	price	function
452020116	GEO 6-8-12-16 soundproof cover kit		Soundproofing for compressor, size 6 to 16 kW
452020117	GEO 20 soundproof cover kit		Soundproofing for compressor, size 20 kW
452020119	GEO 24-33 soundproof cover kit		Soundproofing for compressor, size 24 a 33 kW

Accessories for IANUS system and GEO (up to GEO 33)			
code	description	price	function
421120024	GEO FREE HEATING SMALL		Module for passive heating which uses thermal heat from the hybrid photovoltaic panels – size 6-8
421120023	GEO FREE HEATING MEDIUM		Module for passive heating which uses thermal heat from the hybrid photovoltaic panels – size 12-16
421120025	GEO FREE HEATING LARGE		Module for passive heating which uses thermal heat from the hybrid photovoltaic panels – size 20-24-33
452010042	IANUS SOL KIT		Makes it possible to regulate thermal solar system for hybrid photovoltaic panels. Solar circulator not included
452010037	IANUS deviation kit		Optimized the use of thermal sources (PVT and probes) base on the environmental conditions. Obligated with mixed system (PVT + probe)
821060053X	DRY cooler kit 15"		Air-water heat exchanger to dispel excessive heat from the IANUS system
821060054X	DRY cooler kit 30"		Air-water heat exchanger to dispel the excessive heat from the IANUS system

*the selection of the DRY COOLER model and quantity depends on the power of the IANUS system