Felzer
Spreading Baltic Comfort
Since 1891

SiltāVIETA CARBO

GROUND / WATER SOURCE R744 (CO_2) HEAT PUMP

01 INFORMATION

APPLICATION

SiltāVIETA CARBO heat pumps are designated for the production of hot water up to 90°C. They are suitable for residential, commercial and industrial applications and allow the production of hot sanitary domestic hot water from 3,000 to 15,000 liters per day.

WHERE TO USE THEM?

Heat pumps SiltāVIETA CARBO can be used in the applications there the cold water (about 5-20°C) is heated to high temperatures (about 65-90°C). Usually such applications include:

- Heating of cold sanitary tap water for hot water application (in bathrooms and kitchens of residential buildings, hotels, business centers etc.)
- Heating of cold water to high temperatures for vegetables cleaning in agriculture and food industry
- Heating of cold water and liquids to high temperatures in industrial processes

Efficiency, ease of use and the natural refrigerant R744 (CO2) are the main features of heat pump SiltāVIETA CARBO.

BENEFITS:

R744 as a refrigerant in SiltāVIETA CARBO has some benefits:

- GWP (Global warming potential) = 1. The most ecological refrigerant suits the companies how wants to act responsibly and fight against climate change and global warming.
- Wide use of the same refrigerant in Supermarket application makes the service of such equipment fast and easy – main local service contractors have required knowledge and spare parts available.
- High water temperature with good COP. It is very difficult to reach high water temperatures with heat pumps on other refrigerants. And it is more difficult to make it with high COP value.

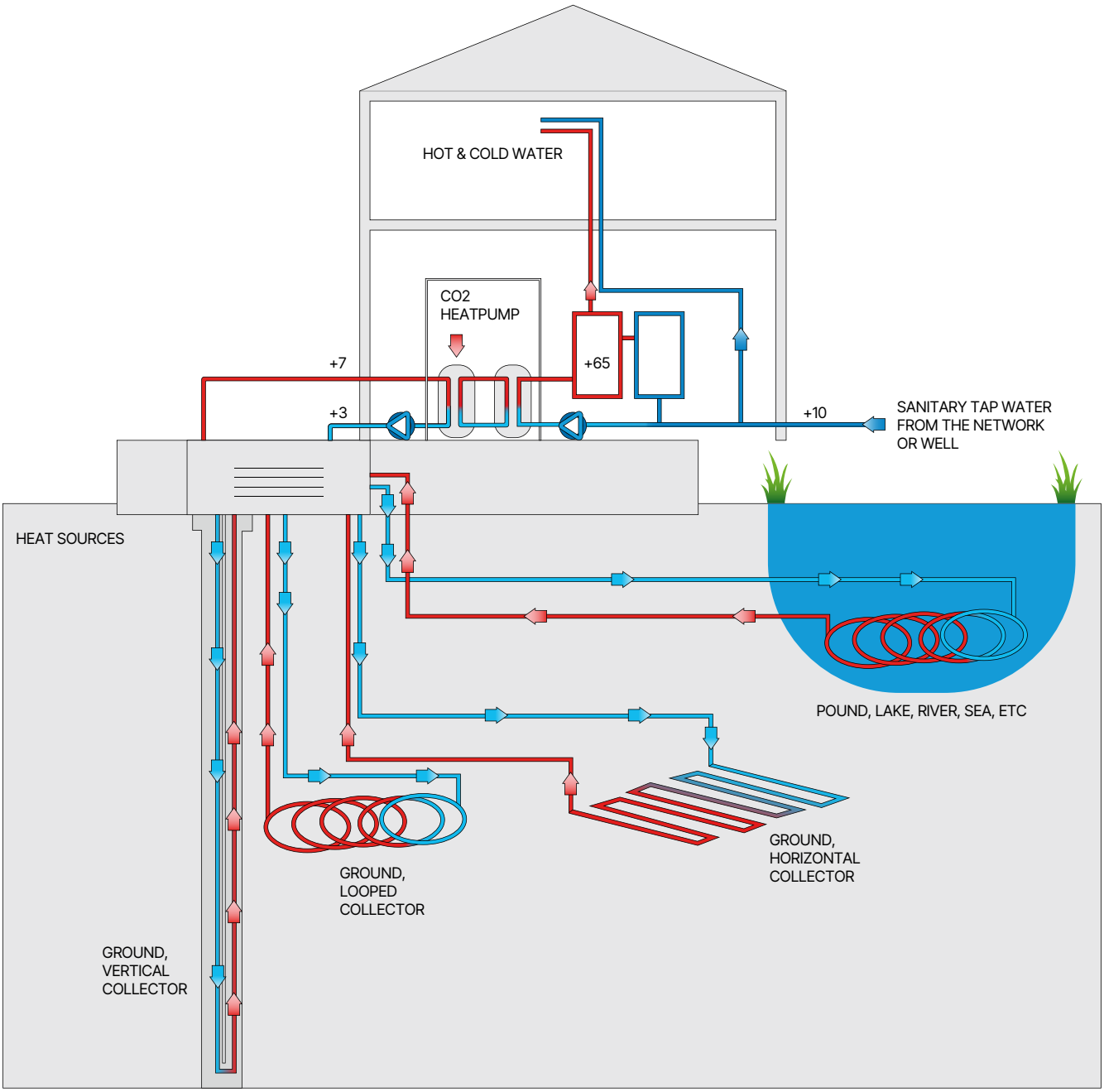
  R744 is the only refrigerant, which allows supplying hot water directly from the cold water in one pass, without the need for gradual increase of temperature in the tank.

HOW IT SHALL BE INSTALLED

The installation of the SiltāVIETA CARBO heat pump is almost the same as for other ground/water sourced heat pumps. But some small modification on the user side shall be made to assure continuous supply of cold water for minimal required time. Please ask your nearest sales office for recommended installation diagrams.

The source of the heat shall be the same as for other liquid sourced heat pumps. It can be underground wells or loops, it can be cooling systems of buildings etc.

Usually sanitary hot water is required all years around and thus the heat pump may be used as an additional heat source in the warm weather time to recover heat from the air conditioning system to the domestic hot water system.



PERFORMANCE CHARACTERISTICS AT DIFFERENT CONDITIONS

TABLE 1. HEATING CAPACITY WITH DIFFERENT TEMPERATURES OF WATER (USER SIDE) AND GLYCOL (SOURCE SIDE)

Parameter	Unit	SiltāVIETA CARBO 15			SiltāVIETA CARBO 25			SiltāVIETA CARBO 45			SiltāVIETA CARBO 100		
Source. Glycol temperature 0/-3°C													
User. Water temperature (in/out)	°C	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75
Heating capacity	kW	13	13	13.5	21	21	21.5	39	39	40	88.5	88.5	91
COP	W/W	3.7	3.5	3.4	3.8	3.5	3.4	3.8	3.5	3.4	3.8	3.5	3.4
Source. Glycol temperature +7/+3°C													
User. Water temperature (in/out)	°C	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75
Heating capacity	kW	25	25.5	25	25	25.5	25	47	47.5	47	106.5	108	107
COP	W/W	4.4	4.0	3.7	4.4	4.0	3.7	4.5	4.1	3.8	4.5	4.1	3.8
Source. Glycol temperature +12/+7°C													
User. Water temperature (in/out)	°C	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75
Heating capacity	kW	17.5	18	18	27.5	28	28	51	52.5	53	116	119	119.5
COP	W/W	4.9	4.4	4.0	4.9	4.4	4.0	4.9	4.5	4.1	5.0	4.5	4.1
Source. Glycol temperature +17/+12°C													
User. Water temperature (in/out)	°C	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75
Heating capacity	kW	19	19.5	20	30.5	31	31.5	57	58	31.5	60	60.5	62.5
COP	W/W	5.4	4.8	4.3	5.4	4.8	4.4	5.5	4.9	4.4	5.8	5.1	4.6

PERFORMANCE CHARACTERISTICS AT DIFFERENT CONDITIONS

TABLE 1. HEATING CAPACITY WITH DIFFERENT TEMPERATURES OF WATER (USER SIDE) AND GLYCOL (SOURCE SIDE)

Parameter	Unit	SiltāVIETA CARBO 15			SiltāVIETA CARBO 25			SiltāVIETA CARBO 45			SiltāVIETA CARBO 100		
Source. Glycol temperature +20/+14°C													
User. Water temperature (in/out)	°C	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75	10/55	10/65	10/75
Heating capacity	kW	20	20.5	21	32	32	33.5	129	131	134	136.5	137	142
COP	W/W	5.7	5.0	4.5	5.7	5.0	4.5	5.5	4.9	4.4	5.8	5.1	4.6

MAIN DATA

TABLE 2. TECHNICAL PARAMETERS

Parameter	Unit	SiltāVIETA CARBO 15	SiltāVIETA CARBO 25	SiltāVIETA CARBO 45	SiltāVIETA CARBO 100
Nominal capacity	kW	18	28	52.5	119
Water source temperature	°C	12	12	12	12
Water temperature	°C	10/65	10/65	10/65	10/65
COP	W/W	4.4	4.4	4.5	4.5
Flow rate	l/h	280	440	830	1870
Max input power	kW	5.5	8	15	34
Max current	A	15	25	42	85
Net weight	kg	450	495	510	900
Dimensions (WxDxH)	mm	680×698×1889	680×698×1889	680×698×1889	1500×698×1889

Notes:
- all parameters are for standard equipment;
- W - width; D - depth; H - height.

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Felzer is continuously improving its products. We therefore reserve the right to change the design and specifications without prior notification.