

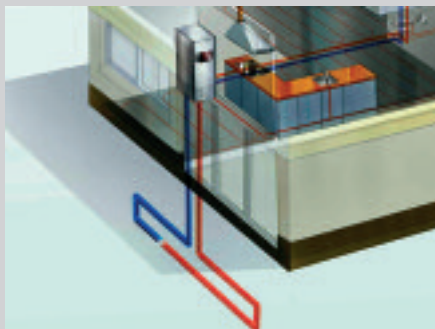


HEAT PUMPS

USING GEOTHERMAL ENERGY FOR HEATING

Heat pumps are suitable for providing both heating and hot water. One heating pump will suffice to meet the entire heating energy need of a one or two families house. The appliance uses the thermal energy beneath the earth's surface und enable warm water supply or heating based on the reversed principle of fridges. As well the economical nature of this technology, its users benefit from permanently low running costs because this "natural heat" is available for free. In regard to the prospect of ever higher prices for fossil fuels the heat pump opens up the possibility of independence of this development.

- 13 different types, including compact models with hot-water tank
- Performance range from 5 to 15 kW heating output, suitable for houses occupied by one or two families
- Fully automated, low-maintenance heating technology
- High efficiency and durability of functional components
- Environmentally friendly refrigerants used



How do heat pumps work?

Heat pumps involve the circulation of a refrigerant in a closed circuit. The refrigerant first expands, then cools down. The laws of physics mean that temperature equalisation between the refrigerant and its surroundings then takes place (the refrigerant absorbs thermal energy from its surroundings). The greater the temperature difference, the faster this process happens. At the end of the circuit the refrigerant is compressed, thus increasing the temperature (approx. 60° C), which is supplied to the domestic heating as thermal energy. 1 kWh, the electrical power needed to operate the compressor, can thus generate 3 to 5 kWh of heat.

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Brine/water heat pumps

Model range	BWS-K	BWS-Z
Installed location	Indoors	Indoors
Heat source	Flat collector	Earth probe
Heating output (kW)	Min. 4.1; Max 13.9	Min. 4.4; Max. 10.3
Coefficient of performance* (COP)	min. 2.4; Max 4.7	Min. 2.5; Max. 4.7
Heated-water temperature (°C)	+20 to +65	
Permitted brine temperature (°C)	-5 to +25	
Brine volumetric flow, nominal (l/h)	1400-1900	1400-2200
Frost protection (°C)	-13	-13
Acoustic pressure** (db)	40-42	37
Weight (kg)	195-207	290-298
Dimensions (W x H x D in mm)	650 x 500 x 1550	600 x 695 x 1920

Air/water heat pumps

Model range	BWL-I	BWL-A
Installed location	Indoors	Outdoors
Heat source	Air circuit	
Heating output (kW)	Min. 5.2 ; Max. 4.0	Min. 6.3 ; Max. 14.2
Coefficient of performance* (COP)	Min. 2.4 ; Max. 4.0	Min. 2.6; Max. 4.0
Heated-water temperature (°C)	+20 to +55	
Permitted air temperature (°C)	-20 to +35	
Brine volumetric flow, nominal (m ³ /h)	Min. 1800; Max. 3400	3000
Acoustic pressure**(db)	50-54	53
Weight (kg)	215-245	165-250
Dimensions (W x H x D in mm)	Min. 577 x 700 x 1800; Max. 1394 x 848 x 1354	Min. 650 x 650 x 1200; Max. 1394 x 848 x 1354

* Figures according to EN 12975

**Calculated 1 m from a heat pump installed outdoors



Ein Product of

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