



is an alternative to a boiler D whether as a new installation or as a replacement boiler.



gives a very high hot water temperature thanks to its technology.



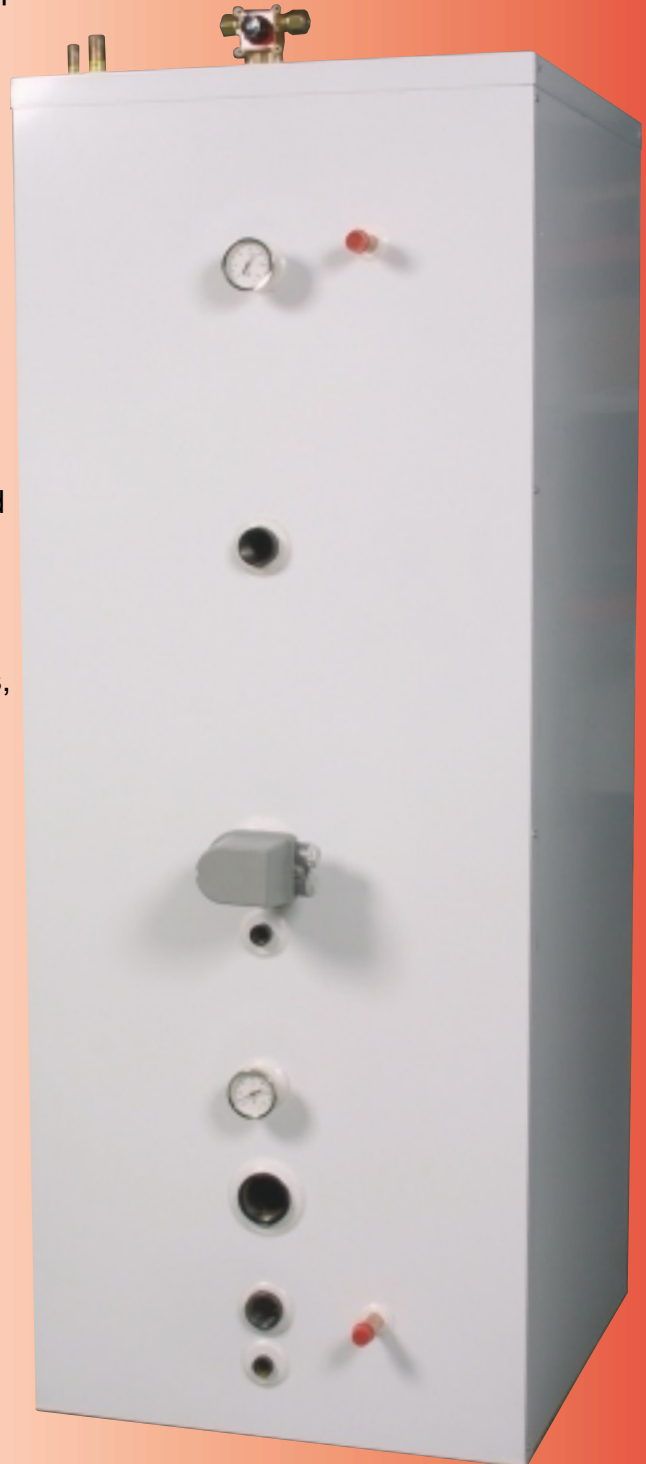
in its D-X version only requires 100 D 150 m^2 area of land to be excavated.



consists of two main units (heat pump and accumulator tank) which need not be placed next to each other thus giving great flexibility. These units, although of indoor construction, can be placed outdoors if protected from the weather.



system can be combined with a solid fuel boiler.



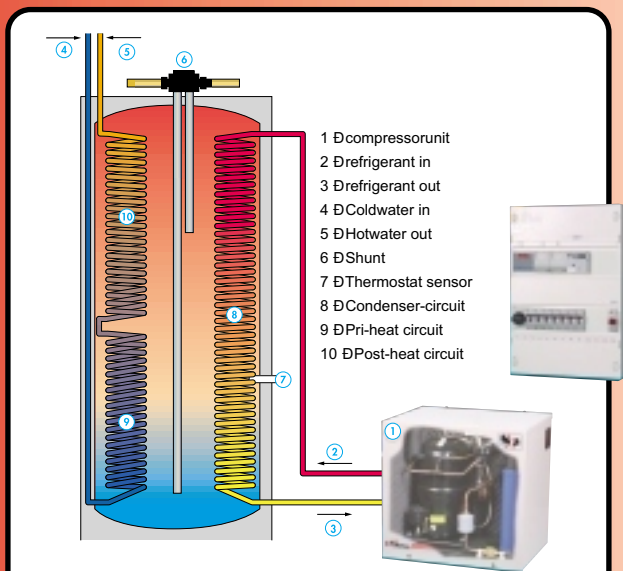
The accumulator tank is made in two sizes, 500 litres and 325 litres. (the 500 litre tank is preferred if space allows).

The heat pump is made in two sizes, both sizes exist in D-X, Brine and Air evaporator coil models.

The accumulator tank can be used with solar collectors.



Description of operation



Technical data:

Heat pump model	S2 / 5	S2 / 5	S2 / 7	S2 / 7
Cooling media	D-X/Air	Brine	D-X/Air	Brine
Power consumption at 0*/35°C	1,3kW ²	1,4kW	2,1kW ²	2,5kW
Heating capacity at 0*/35°C	5,5kW	5,5kW	9,2kW	9,2kW
Power consumption 0*/50°C	1,5kW ²	1,6kW	2,4kW ²	2,8kW
Heating capacity at 0*/50°C	4,85kW	4,85kW	7,9kW	7,9kW
Voltage	400V	400V	400V	400V
Ground collector Copper (D-X)	2x60m	∅	3x60m	∅
Ground collector Plastic hose	∅	ca 300m	∅	ca 500m
Depth of drill hole (for rock formations)	∅	ca 100m	∅	ca 160m
Refrigerant	R-407C	R-407C	R-407C	R-407C
Height	490mm	490mm	600mm	600mm
Width	500mm	500mm	600mm	600mm
Depth	400mm	400mm	450mm	450mm
Weight	65kg	65kg	75kg	75kg

* For model D-X - 7i

²Corresponds to approximately ∅1°C external temperature.

²The coil must be defrosted intermittently when the temperature falls below 0°C. The energy required for defrosting is not included in the above figures.

Accumulator tank

Volume	325 liter	500 liter
Warm water collector	2x10m	2x10m
Height	1890 mm	1910 mm
Width	600mm	700mm
Depth	600mm	725mm
Weight	150kg	180kg
Colour	White	White

Distributor:

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Heat emission:

The heat is supplied through a stainless steel heat exchanger by the warm cycle of the heat pump. On the one side of the heat exchanger flows the hot compressed refrigerant and on the other side water. The heating system is supplied with energy by, for example, the water coming from the cold end of the accumulator tank being thus heated and then pumped back to the warm end of the tank.

Heat absorption:

D-X: Heat absorption is achieved when the refrigerant is pumped under relatively low pressure through a tinplated copper pipe in the ground. The refrigerant has a very low boiling point at such pressures and is therefore vaporised allowing the refrigerant to absorb heat from the surrounding soil. The method is simple and efficient and requires no large areas to be excavated. The only disadvantage is that if the ground is permafrost sensitive, it may rise along the pipe circuit in the ground.

Brine: Heat absorption is achieved when water, usually with a mixture of antifreeze, is pumped through a plastic hose, which is either buried in the ground or sunk into a drill hole through solid rock formation. The water has initially a very low temperature which increases gradually along the hose pipe and is then released through a heat exchanger to the heat pump. The method works well but requires large areas to be excavated for the ground installation of the pipes.

Air evaporator coil:

Heat absorption occurs in an externally placed evaporator coil. Fans pull the fresh air through the coil, while the refrigerant circulates in the pipes of the coil at relatively low pressures. The refrigerant has a very low boiling point at such pressures, which allows absorption of heat from the fresh air going through. For this method the coefficient of performance is directly related to the external temperature and the heat pump should not be operated at external temperatures of below 0°C. However, this method yields a coefficient of performance in excess of 3, due to a well dimensioned coil, already when the external temperature is around 0°C.



Dimensions of the evaporator coil :

Width:	Height:	Depth:
1750mm	350mm	400mm



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