

Hoval Heat pumps  
5,4 to 81,1 kW



**Hoval**

Heat pumps mean you can tap into the natural energy available in the ground and in the air. Hoval can offer you a clean, efficient and environmentally sensitive solution.

Fit a heat pump from Hoval.

# Using the energy of the environment with a Hoval heat pump - an intelligent and cost effective alternative.



**Hoval Thermalia®**  
water to water or brine to water heat pump

The use of heat pumps mean that you no longer need to have a chimney on your house and they allow you to drastically reduce the emissions you produce.

They make use of the tiny temperature differences in the soil, or water or in the atmosphere. Together with a small amount of conventional electrical energy they can produce heat for the whole house. A heat pump from Hoval gives a clean and efficient solution.

**Proven efficiency.** The efficiency of Hoval heat pumps is excellent, as the high COP ratings show. The COP rating is a measure of the heating performance in relation to the electrical energy used by the system. The higher the COP rating, the better the efficiency of the heat pump. The COP ratings of our products have been confirmed by an independent heat pump testing centre.

**Ecological Aspects.** Our heat pump systems contain only HCFC free, biodegradable substances.

**Certified Quality.** Hoval has been producing heat pumps for over 30 years and its products qualify to display the international Seal of Quality for heat pumps.

This official seal of approval guarantees the efficiency, quality and reliability of a product as well as a comprehensive after-sales service.



**Hoval Genius®**  
air to water heat pump

**Space saving design.** Hoval heat pumps are compact and they can be installed easily even where space is limited. The space saved is available for other uses.

**Intelligent and convenient.** Hoval heat pumps are easy to control and have an intelligent integrated monitoring system which continually keeps track of the operating conditions, notifying the owner immediately when necessary. As a result you can be sure of great reliability and low running costs.

**Very low operating noise levels.** The heat pumps have a stable aluminium framework with side panels which can easily be removed for maintenance purposes. The sound and heat insulation is of high quality: For instance, the compressor has vibration free, three-way mountings. The Hoval air to water heat pump Genius® has an extremely efficient, slow speed radial fan.

**KOOLFUEL®**  
*energy for a future*

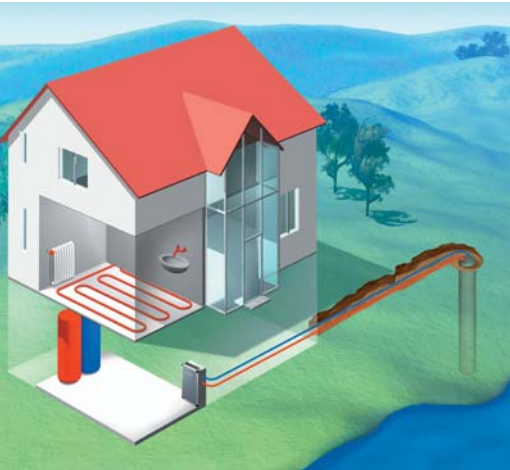


Hoval heat pumps carry the international heat pump Seal of Quality. The official label guarantees energy efficiency, high quality standards, reliability and comprehensive after-sales service.



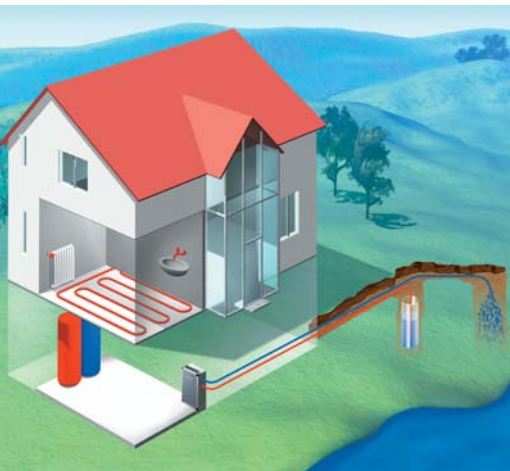
# The Thermalia® heat pumps from Hoval

## Energy source: the soil or groundwater



### Brine to water heat pumps

A brine to water heat pump uses energy which is naturally stored in the earth. This is achieved with the aid of a geothermal probe driven into the ground or with a horizontal loop of piping which lies at least 1.5 metres below ground level to protect it from frost.



### Water to water heat pumps

A water to water heat pump uses the energy stored in the groundwater. This type of pump returns the best performance and represents the most effective way of implementing heat pump technology. However, it is not possible to use groundwater at all locations.



**Valuable heating energy from the ground.** The earth on which we live remains at a constant temperature of 10° to 12 °C at a certain depth, even in deepest winter. At a depth of 100 m the temperature is about 13 to 15 °C and with increasing depth it continues to rise. This provides ideal circumstances for using an underground probe as a means of tapping heat energy. Hoval Thermalia® heat pumps extract the underground energy and turn it into valuable warmth for heating the home. As the temperature underground remains practically constant, the Hoval Thermalia®-system is almost entirely unaffected by the outside air temperature.

**Valuable heating energy from the groundwater.** Groundwater - if available - represents the ideal source of heat for the Hoval Thermalia® water heat pump. In order to be able to use it an extraction well and a discharge well are needed. In the extraction well water is obtained at a depth of at least 8 m. Its temperature lies between 10° and 12° C. In the heat pump a heat exchanger cools the water by as much as five degrees, after which it is fed into the discharge well. This technique returns the best performance figures.

# The complete range of Hoval Thermalia® heat pumps – from small to large

**Different refrigerants for different operating temperatures.** For the standard model series the Thermalia® heat pumps are equipped with the environmentally friendly refrigerant R 407C. This permits operating temperatures up to 45 °C. The series contains seventeen model variants with performance ratings ranging from 5.4 to 81.1 kW.

The Thermalia® H series uses the environmentally friendly refrigerant R 134a which allows operating temperatures of up to 65 °C. There are fifteen models in the series covering the performance range of 5.2 to 57.4 kW. The H series is utilised in applications where, for construction reasons, higher operating temperatures are needed (usually in refurbished buildings, for instance) and also where the warmed water is to be used directly, i.e. without a supplementary water cycle.



Hoval Thermalia® unit with storage tank and geothermal probe



Control panel with integrated temperature regulator



Stable profiled aluminium frame with detachable side panels

Technical Specifications Hoval Thermalia®		5	7	8	10	12	15	17	19	22	26	30	37	45	50	60	70	90
Heating Capacity (R 407C) kW		5,4	6,8	8,3	9,7	12,0	15	16,9	19,5	21,9	24,2	27,9	34,4	41,8	47	54,2	66,8	81,1
COP* Rating		4,4	4,4	4,5	4,5	4,5	4,6	4,7	4,7	4,5	4,1	4,1	4,1	4,2	4,0	4,0	4,0	4,0
Hoval Thermalia® (H)				8H	10H	12H	15H	17H	19H	22H	26H	30H	37H	45H	50H	60H	70H	90H
Heating Capacity (R 134a) kW				5,2	6,1	7,4	9,4	10,9	12,5	14,0	16,6	19,3	23,0	29,0	32,5	37,8	45	57,4
COP* Rating				4,5	4,6	4,7	4,7	4,7	4,7	4,5	4,5	4,5	4,5	4,2	4,2	4,3	4,3	4,1
Weight	kg	118	123	125	133	135	142	149	158	280	300	310	330	340	650	680	705	780
Dimensions (mm)	width	550	550	550	550	550	550	550	550	700	700	700	700	700	1450	1450	1450	1450
	depth	750	750	750	750	750	750	750	750	750	750	750	1000	1000	800	800	800	800
	height	1045	1045	1045	1045	1045	1045	1045	1045	1195	1195	1195	1275	1275	1200	1200	1200	1200
including heat storage unit height		1545	1545	1545	1545	1545	1545	1545	1545	1545								

Rating figures based on brine temperature 0 °C / heating water 35 °C

\* COP = coefficient of performance (proportion of heating capacity to active energy input)

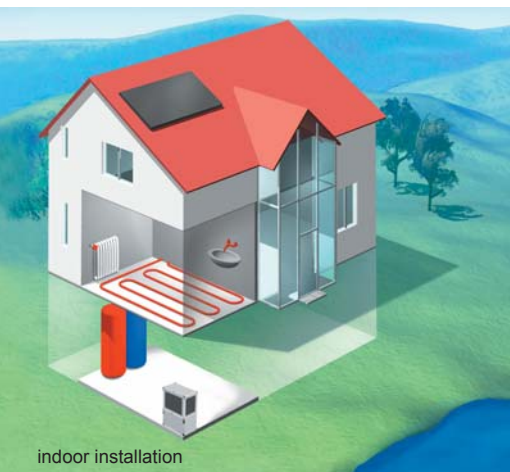
The higher the COP, the greater the efficiency of the heat pump.

Figures subject to change without notice



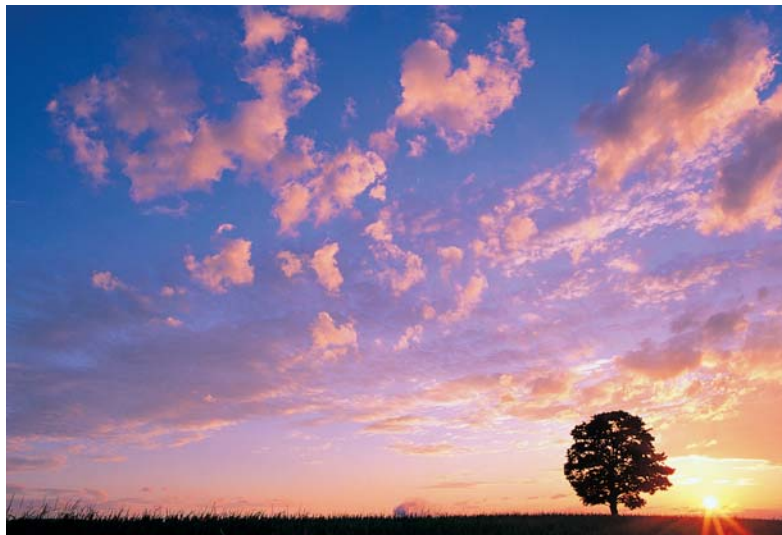
# The Genius® heat pumps from Hoval

## Energy source: the atmosphere



### Air to water heat pump

An air to water heat pump utilises the heat stored in the surrounding air. Even when the air temperature is way below freezing point, the heat pump can extract heat from the atmosphere. Normally an air to water heat pump is equipped with a supplementary heating unit to cope with peak demands, especially at very low outside temperatures.



**Valuable heating energy from the atmosphere.** The air around us contains large amounts of stored heat energy. The Hoval Genius® heat pump can make this energy available for use in the home. The technique works even at low temperatures, down to about -15 °C. However, at low temperatures the heat pump works less efficiently, and during periods when the outside temperature is low the need for warmth is especially great. Therefore air to water heat pumps are generally equipped with a small supplementary heating unit, which serves to deal with periods of peak demand. This combination ensures that even with Arctic outside temperatures your home remains comfortably warm.

**Model range:** The Hoval Genius® is available in nine model variants. The heating capacities of the different models range from 6.6 to 34.4 kW. The wide range of choice ensures that you can find the model which precisely meets your individual needs. The results are low investment costs and high operating efficiency.



Hoval Genius® in a detached house – compact and space saving

# The Hoval Genius® modular system allows you to choose the ideal configuration.

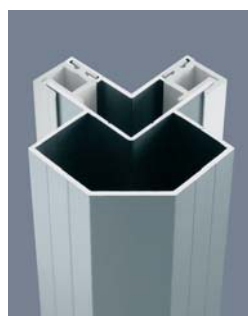


## Three of many different installation possibilities

- 1 A space saving solution with the unit placed directly in the corner of a cellar or garage.
- 2 Air supply and/or exhausted air can be conducted via ducting. This allows the use of heat pumps which replace older heating systems.
- 3 The weather-proof construction allows for external installation.



The inside of the heat pump is roomy and easily accessible. This makes installation and servicing especially easy.



A stable, thermally insulated casing of profiled aluminium prevents condensation and increases the operational life of the unit.

## Technical Specifications Hoval Genius®

		06	08	10	12	16	20	25	30	35
Heating Capacity	kW	6,6	9,7	11,6	13,6	15,7	19,9	26,2	32,6	34,4
COP* Rating		3,5	3,5	3,6	3,5	3,9	3,2	3,4	3,3	3,4
Weight	kg	250	280	290	300	315	410	420	440	450
Dimensions (mm)	width	1000	1100	1200	1200	1200	1200	1200	1300	1300
	depth	650	750	750	750	750	1200	1200	1000	1200
	height	1475	1525	1625	1625	1625	1775	1775	1905	1905
including heat storage unit height		1975	2025	2125	2125	2125				

Rating figures including defrosting losses based on air temperature 2 °C / heating water 35 °C

\* COP = coefficient of performance (proportion of heating capacity to active energy input)

The higher the COP, the greater the efficiency of the heat pump.

Figures subject to change without notice

# Extras and special features

## Choose the ideal combination for your own application



### **SolKit®:** The ecological solution.

Using the sun as the source of energy for hot water: The Hoval SolKit® in combination with Hoval heat pumps offers a solution that can meet any challenge the future may bring.

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**BioLyt® wood pellet boiler:** Modern and comfortable heating. In comfort and user operation the Hoval BioLyt is as good as oil or gas heating. Thanks to a modulating burner (30 –100%) heat performances can be adjusted as needed. Operation is fully automatic. The very small amount of ash in wood pellets is automatically transferred to a special ashbox.



**Comfort-Control:** The efficient solution. A degree or two warmer? Or a little cooler? Or do you want to switch to standby operation or turn off the heat pump operation? With the Hoval TopTronic®T Room Controller you can do all of these things. The small extra outlay for the Room Controller means much more convenience and also helps to save money.



**UltraGas® pre-mix condensing boiler:** The UltraGas output range is based on sixteen nominal burner sizes ranging from 35 to 720 kW. Twin models are available ranging from 250 to 1440 kW. The UltraGas boiler features the Hoval UltraClean® combustion system with down firing pre-mix burner. This advanced burner enables the boiler to achieve efficiencies of up to 109.9% net, with a NOx levels as low as 26 mg/kWh and CO as low as 3 mg/kWh.



**TopGas® pre-mix condensing boiler:** The TopGas output range is based on five nominal burner sizes 30, 35, 45, 60 & 80 kW. The TopGas boiler features the Hoval UltraClean® combustion system with down firing pre-mix burner. This advanced burner enables the boiler to achieve efficiencies of up to 109.7% net, with a NOx level of 28 mg/kWh and CO of 6 mg/kWh.



by Appointment to  
Her Majesty the Queen  
Boiler Manufacturers & Engineers  
Hoval Ltd Newark



**KOOLFUEL®**  
*energy for a future*

# Hoval

Conservation of energy - protection of the environment