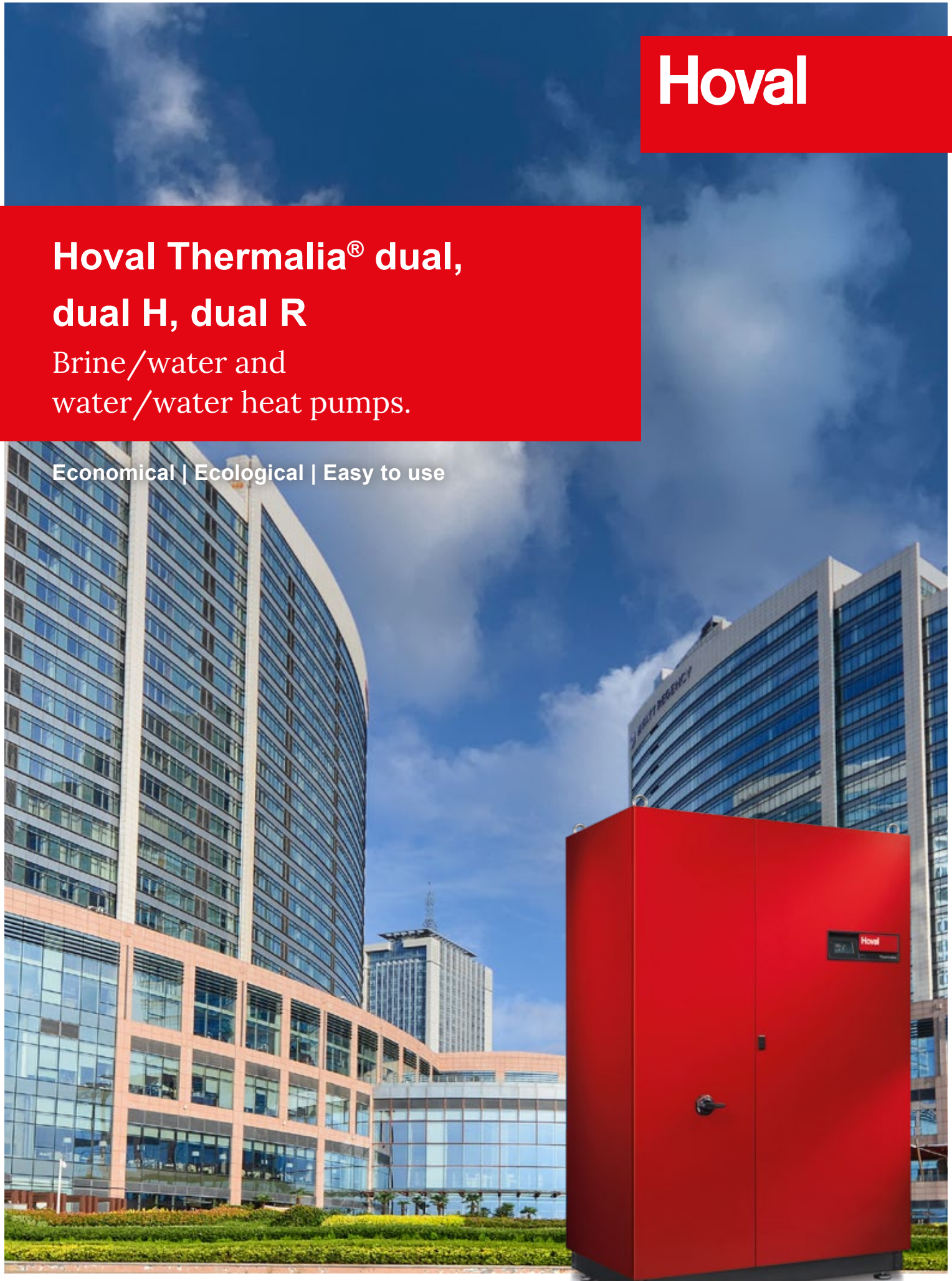
Hoval

Hoval Thermalia® dual, dual H, dual R

Brine/water and
water/water heat pumps.

Economical | Ecological | Easy to use



Hoval | Responsibility for energy and environment

Hoval Thermalia® dual (55-140), dual H (35-90), dual R (55-140)

Valuable energy from the earth or ground water.

In the ground, constant temperatures prevail all year round, even at depths of just a few metres. By means of this energy stored in the ground, a heat pump heats highly efficiently and reliably using electrical current.
And by making use of green energy or solar power – perhaps even from your own photo-voltaic system – you will be able to generate heat particularly sustainably.

Brine/water or water/water heat pump for heating, cooling and generating domestic hot water. Indoor installation, flow temperature of up to 62 °C, up to 70 °C with the H design. All models are available with a passive cooling function.

Added value for you:

- Cost-effectiveness
- Use of ecological environmental energy
- Convenience
- High thermal comfort
- Cost-effective cooling function

Thermalia® dual (55-140), Thermalia® dual H (35-90), Thermalia® dual R (55-140)

Monoblock heat pump for heating and cooling that uses geothermal heat and ground water energy to provide a heat output of 35.0 to 181.1 kW. Two output levels ensure optimum operation, higher efficiency and a long service life. Extremely reliable operation thanks to the two separate refrigeration circuits.

Suitable for blocks of flats, hospitals, hotels and schools as well as for commercial and industrial buildings, cold networks (anergy networks) – whether new buildings or renovations.

Thermalia® dual R (55-140) does not have an EHPA Quality Label.

Brine/water	Water/water
A+++ (A+++ → D)	A+++ (A+++ → D)
A++ (A+++ → D)	A+++ (A+++ → D)

EnergyManager PV smart

CleverCool inside

Top marks for cost-effectiveness

Thermalia® brine/water and water/water heat pumps impress with innovative technology providing high energy efficiency (COP). Utilising energy from the earth or from ground water achieves consistently high efficiency. Components that are perfectly aligned with one another combined with the use of large heat exchangers mean that more heat is obtained from the electrical energy used.

Use of ecological environmental energy

Thermalia® dual uses natural heat from the earth. When used in conjunction with green electricity, Thermalia® dual is a CO_2-neutral and particularly environmentally friendly way of generating valuable energy for heating, cooling and water heating. Thermalia® dual is also easily combined with solar plants to further improve the carbon footprint.

Quiet and economical

The units stand on anti-vibration rubber mats. The soundproofed, 3-bearing construction guarantees consistently quiet running. A high-quality sound-insulated and thermally insulated lining reduces noise emissions and prevents heat losses.

The EnergyManager PV smart also helps you save money. By using this standard, free feature together with HovalConnect, you will use more power generated by your own photovoltaic system and therefore consume less from the public grid.

High-temperature versions for use with radiators

The Thermalia® dual H high-temperature version is an ideal heat pump for water heating and room heating using radiators – an important factor when renovating old buildings.

Cost-effective cooling function

All Thermalia® dual models are available with a passive cooling function:
a heat exchanger transfers the comparatively low temperature from the geothermal probes to the water in the underfloor heating. The floor stays cool on hot days, creating a pleasant indoor climate.
The refrigeration circuit in the heat pump does not need to be operating in order for this sophisticated cooling function to work, which means that it does not require any electricity. The function is conveniently controlled by the TopTronic® E in the heat pump and merely requires an additional heat exchanger.

Certified quality

Thermalia® dual and Thermalia® dual H have been awarded the international heat pump quality seal. Thermalia® dual R does not have an EHPA Quality Label. The official label guarantees excellent energy efficiency, high reliability and comprehensive customer service.

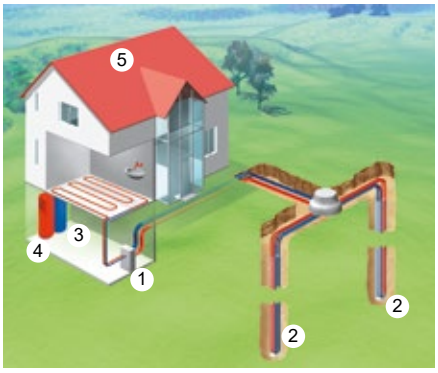
Heating and cooling with energy from the earth or from ground water.

Earth and ground water as a heat source

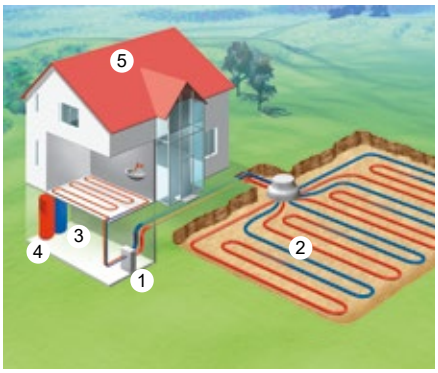
While the outdoor temperatures sometimes fall far below the freezing point in winter, moderate temperatures of between 8 and 12 °C prevail all year round under the ground, starting from just a few metres below the surface. As you get deeper below the ground, the temperatures increase by around 3 °C for every 100 metres. Ground water is also available in many places at a constant temperature of around 10 °C. Thanks to the consistently high ambient temperatures underground, earth and ground water heat pumps achieve excellent levels of efficiency. The best way of extracting this underground energy depends on local conditions and the available space.

Utilising the difference in temperature, even in summer

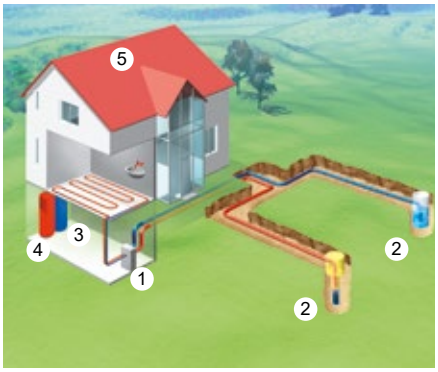
Even in summer, it is possible to make use of the constant temperatures underground. At this time of year, it is significantly cooler underground than in the outdoor air, which means that the underground temperature can be used to cool indoor areas. All Thermalia® models provide an optional passive cooling function.



Earth heat pump with depth probe
1) Heat pump, 2) Depth probe,
3) Calorifier, 4) Buffer storage tank,
5) Solar plant



Earth heat pump with flat plate collector
1) Heat pump, 2) Flat plate collector,
3) Calorifier, 4) Buffer storage tank,
5) Solar plant



Earth heat pump with ground water
1) Heat pump, 2) Extraction and absorption well,
3) Calorifier, 4) Buffer storage tank,
5) Solar plant

Hoval TopTronic® E

As little control as necessary.

Hoval TopTronic® E
is the uniform system controller for Hoval heat generators and comfort ventilation as well as other components such as solar plants or calorifiers. It connects the individual components and ensures that they interact in the most energy-efficient manner. All the connected components can be adjusted using the same control module. Hoval-Connect enables the Hoval TopTronic® E control system to be accessed via a smartphone app.

Straightforward

One control system for everything. You do not need to worry about a thing. Once set up, the TopTronic® E system controller automatically provides the right temperature in your rooms, domestic hot water and even a pleasant supply of fresh air.

Convenient

Operate your Hoval system from anywhere. The HovalConnect-App allows you to operate your system when you are on the go. The app lets you adjust temperatures, select the programmes you want or switch your system from holiday mode. It even takes into account the weather forecast, preventing rooms from overheating and saving on expensive heating energy.

Informative

The room control module's large display enables you to view information ranging from the most important system data down to the weather forecast. And no matter which unit you're using, the heating system automatically reports when a service is required or faults occur.

Thermalia® dual (55-140), dual H (35-90), dual R (55-140)

Two refrigeration circuits – for larger buildings.

Thermalia® dual R (55-140)
Heating and active cooling for larger buildings.

Taking responsibility for energy resources and the environment, while also living comfortably – it can be done! The earth and ground water heat pump extracts valuable energy from the earth or ground water using current to drive the system. It is set up inside the house.

Switching from fossil fuel energy to the future technology of heat pumps always pays off. Whether you're building a new building, renovating an existing one or replacing your boiler for a more cost-efficient solution: the Hoval heat pump range has a customised solution for all needs and areas of application.

Large heat exchangers made from stainless steel
ensure optimum heat transfer to the heating water, generate high water temperatures and excellent efficiency.

Large front doors
permit optimum accessibility for technical maintenance of the heat pump.

TopTronic® E system controller
Ecological, economical, reliable and sophisticated heating has never been this easy.

Dual technology
Two independent refrigeration circuits improve operating reliability.

Two output levels
Fewer start-ups improve cost-effectiveness and increase the service life.

Sound-optimised design
for pleasant, quiet running thanks to 3-bearing, sound-optimised and thermally separated construction.

Small installation space of only 1 m²

Thermalia® dual (55-140), dual H (35-90), dual R (55-140)
Technical data

Hoval Thermalia® dual, dual H		(55)	(70)	(85)	(110)	(140)	H (35)	H (50)	H (70)	H (90)
Brine/water B0W35										
Energy efficiency class [1] heating 35 °C (A+++→ D)		A+++	A+++	-	-	-	A+++	A+++	A+++	-
Energy efficiency class [1] heating 55 °C (A+++→ D)		A++	A++	-	-	-	A++	A++	A++	-
Heat output B0W35	kW	57.9	73.2	84.8	113.4	137.8	34.9	52.5	70.9	87.3
Coefficient of performance B0W35 [2]	COP	4.6	4.6	4.6	4.6	4.6	4.3	4.4	4.4	4.3
Water/water W10W35										
Energy efficiency class [1] heating 35 °C (A+++→ D)		A+++	-	-	-	-	A+++	A+++	-	-
Energy efficiency class [1] heating 55 °C (A+++→ D)		A+++	-	-	-	-	A+++	A+++	-	-
Heat output W10W35	kW	76.9	97.2	112.8	149.1	181.1	49.3	71.8	97.1	119.5
Coefficient of performance W10W35 [2]	COP	6.1	5.9	5.9	5.7	5.8	6.0	5.8	5.8	5.7
Max. flow temperature	°C	62	62	62	62	62	70	70	70	70
Refrigerant filling quantity (R410A)	kg	2 x 6.0	2 x 7.4	2 x 8.2	2 x 10.0	2 x 10.7	-	-	-	-
Refrigerant filling quantity (R134a)	kg	-	-	-	-	-	2 x 5.4	2 x 8.0	2 x 8.2	2 x 9.0
Weight	kg	560	620	700	770	820	491	700	770	800
Dimensions (H x W x D)	mm	1907 x 1066 x 774			1907 x 1316 x 774		1907 x 1066 x 774	1907 x 1316 x 774		

Heat output with brine at 0°C / heating water at 35 °C (EN 14511) or with water at 10 °C / heating water at 35 °C (EN 14511)
[1] Energy efficiency class (package label incl. controller)
[2] COP = proportion of heat output to active energy input; e.g. COP 3.7 = 3.7 kW heat output with only 1 kW energy consumption

Hoval Thermalia® dual R		R (55)	R (70)	R (85)	R (110)	R (140)
Brine/water - Water/water						
Cooling capacity B17W9 [1]	kW	64.7	86.2	107.0	138.1	156.9
Energy efficiency ratio B17W9 [1]	EER	6.1	6.6	7.2	6.5	6.1
Cooling capacity B25W18 [2]	kW	81.1	108.3	127.7	165.0	183.9
Energy efficiency ratio B25W18 [2]	EER	6.4	6.7	7.0	6.3	6.0
Min. flow temperature cooling	°C	7	7	7	7	7
Refrigerant filling quantity (R410A)	kg	2 x 6.0	2 x 7.4	2 x 8.2	2 x 10.0	2 x 10.7
Weight	kg	560	620	700	770	820
Dimensions (H x B x T)	mm	1907 x 1066 x 774			1907 x 1316 x 774	

[1] Output at source temperature 17 °C and cooling water flow temperature 18 °C
[2] Output at source temperature 25 °C and cooling water flow temperature 9 °C
EER = ratio of cooling capacity to energy input; e.g.: EER 7.1 = 7.1 kW cooling capacity with only 1 kW energy consumption

For heat output, see Thermalia® dual (55 - 140)

Hoval quality.
You can count on us.

Hoval

Hoval is one of the leading international companies for heating and indoor climate solutions. Drawing on more than 75 years of experience and benefiting from a close-knit team culture, the Hoval Group delivers exciting solutions and develops technically superior products. This leadership role requires a sense of responsibility for energy and the environment, which is expressed in an intelligent combination of different heating technologies and customised indoor climate solutions.

Hoval also provides personal consultations and comprehensive customer service. With around 2500 employees in 15 companies around the world, Hoval sees itself not as a conglomerate, but as a large family that thinks and acts globally.
Hoval heating and indoor climate solutions are currently exported to more than 50 countries.

Responsibility for energy and environment

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Your Hoval partner