Dimplex Heat Pump Water Heaters:
The Energy-Saving Solution

Tap into solar energy stored in the surrounding air or the waste heat contained in the room air as a valuable energy source for the heating of domestic hot water.

Saving Energy Costs with Heat from the Environment
The use of a Dimplex heat pump is to the advantage of both new home builders and exciting home owners whose heating system are in need of modernisation.

The benefit: Dimplex heat pump water heaters can meet your annual hot water demand and extract 70 % of the energy required for this heating from the surrounding air, independent of weather conditions.

Ideal for single- and two-family houses
A Dimplex heat pump water heater provides domestic water heating for your house or flat – infinitely controllable for heat pump operation up to 60°C.
It heats and stores the water until you need it irrespective of your existing heating system.

Monovalent System or Combo Solution?
Dimplex heat pump water heaters with integrated heat exchanger (...LW) are even more flexible in their use: either as monovalent systems for year-round operation using electricity, or as back-up systems for connection to your central heating system.
Advantage: During the winter months, when the gas or oil boiler is operating anyway, you can supply the system with additional energy thus reducing running costs. Outside the heating period, this solution saves you from having to activate your central heating system, which would be less economical. The heat pump water heater offers a significantly more cost effective heating solution. A connection to a solar system is possible as well.

BWP 30HLW

AWP 30HLW, BWP 30H and BWP 30HLW heat pump water heaters with optional airduct connection extract their heating energy from the solar heat stored in the surrounding air or from the waste air contained in the room air.

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Dimplex Heat Pump Water Heaters:
Versatile Technology for Greater Flexibility

AWP 30HLW

With the AWP 30HLW heat pump water heater, Dimplex offers the compact residential heat recovery ventilation system LWP 300 W (exhaust air volume flow settings: 230/185/120 m3/h). Building ventilation is effected via a 2-pipe residential ventilation system with central exhaust air and decentralised outside air supply systems via outdoor wall valves.

Economical Use of Solar Heat: Dimplex Heat Pumps

Four functional units interact in order to raise the heat extracted from the environment to a higher temperature level: Evaporator, condenser, expansion valve and compressor.

- Heat pump water heaters transfer the heat extracted from the intake air to a refrigerant in the evaporator.
- A compressor increases the pressure of the refrigerant. As a consequence of this compression, the temperature of the refrigerant rises.
- The heat is transferred to the water stored in the tank via a safety heat exchanger wrapped around the outside of the hot water storage tank.
- The expansion valve decompresses the working fluid causing it to cool down again.

Heat pump water heater suited for airduct connection

- Compact device for indoor installation for the central supply of multiple points of hot water use in both residential and commercial applications
- Water heating by active heat recovery from the intake air (air temperature operating limits: 8 to 35 °C)
- Powerful radial fan
- Connectors (2 x DN 160) for connection to a duct system (maximum duct length: 10 m)
- Waste heat utilisation largely independent of installation site
- Additional benefits: dehumidification of basement rooms, air-conditioning and ventilation function
- 290 l steel tank cylinder (inside enamelled acc. to DIN 4753) with sacrificial anti-corrosion anode
- User-friendly operating panel: hot water temperature in the heat pump mode infinitely variable from 23 °C to 60 °C; control switch for heat pump and immersion heater
- Safety condenser wrapped around outside of storage tank
- CFC-free thermal insulation to keep heat loss to a minimum
- Heating up with standard immersion heater (1.5 kW) possible up to 65 °C
- Ready for plug-in
- Colour: white, similar to RAL 9003

AWP 30HLW and BWP 30HLW heat pump water heaters are additionally equipped with the following features:

- Integrated heat exchanger coil (1.4 m^2) for connection to an external heating system (boiler or solar system)
- Relay output for activation of an external charging pump
- Immersion well (Ø inside = 12 mm) for external temperature sensor

BWP 30HLW

1 Discharge air connector DN 160

2 Intake air connector DN 160

3 Heat pump module

4 Control panel
- Heat pump
- Immersion heater
- Relay output for heat

5 Hot water temperature controller with analogue read-out

6 Vertical immersion well for external-temperature sensor (not shown)

7 Insulated foil-faced jacket

8 Sacrificial anode

9 Immersion heater, 1.5 kW

10 Storage tank, 300 l, steel, with enamelled inside acc. to DIN 4753

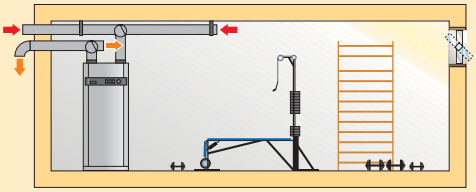
11 Safety condenser, wrapped around outside of storage tank

12 Heat exchanger coil, 1.45 m²

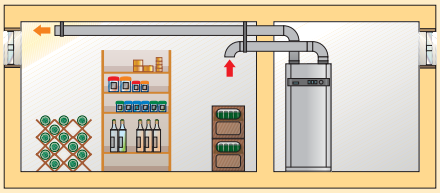
13 PUR tank insulation

Optional Airduct Connection

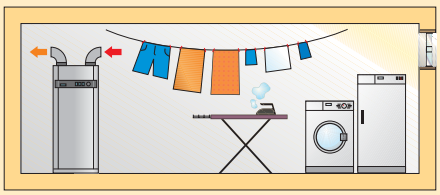
The powerful radial fan of the Dimplex heat pump water heaters provides you with the possibility to connect ductwork with a maximum duct length of 10 m. This provides flexibility and freedom in unit placement, and the variability of airflow combinations allows a great variety of applications to be realised as well as additional functions at no extra cost, e.g. dehumidification of the cellar, ventilation and air pre-cooling functions.



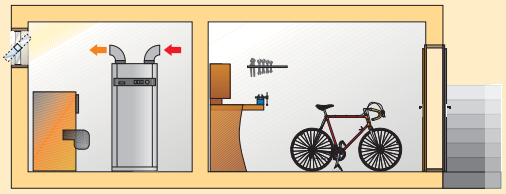
Variable changeover of inlet air
Ductwork with integrated bypass dampers allow variable utilisation of the heat contained in the outside air or room air for the production of hot water (lower operating temperature limit: +8 °C).



Pre-cooling in the recirculating air mode
Room air is exhausted (e.g. from a storage room or a wine cellar) through an air duct, it is then slightly cooled and dehumidified in the heat pump water heater and finally re-introduced into the room. Recreation, boiler or utility rooms are ideal installation sites. Ductwork leading through warm sections must be insulated in a diffusion-tight manner in order to prevent condensation.



Dehumidification in the recirculating air mode
Dehumidified air in the utility room supports laundry drying and prevents moisture-induced damage.

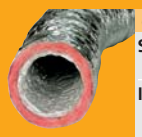


Waste heat is useful heat
The standard heat exchanger (only AWP 30HLW and BWP 30HLW) of the heat pump water heater enables direct connection to a supplementary heating system, e.g. a solar system or boiler.

Dimplex Heat Pump Water Heaters: Technical Data Overview

Dimplex Heat Pump Water Heaters					
Order code			BWP 30H	BWP 30HLW	AWP 30HLW
Type			without heat exchanger coil	with heat exchanger coil	
Cabinet	–		foil-faced jacket		sheet steel, painted
Colour	–		white, similar to RAL 9003		
Tank, rated capacity	litres		300	290	
Tank material	–		steel, enamelled acc. to DIN 4753		
Tank, rated pressure	bar		10		
Dimensions W x D x H	mm		660 x 660 x 1695		660 x 700 x 1660
Weight	kg		approx. 110	approx. 125	approx. 175
Electrical connection (ready for plug-in – cable length approx. 2.7 m)	–		1/N/PE-230 V, 50 Hz		
Fuse protection	A		16		
Refrigerant/charge capacity	–/kg		R134a/1.0		
Nominal power consumption 1) incl. electric heating 1500 W	W		2160		
Average power input 2) at 60 °C	W		615		
Water temperature range (heat pump mode) 3)	°C		23 to 60		
Heat pump operating side (air side) 3)	°C		8 to 35		
Sound pressure level 4)	dB(A)		53		
Air flow rate in heat pump mode	m^3/h		450		
External pressure	Pa		100		
Maximum air duct length	m		10		
Diameter of air duct connection (inlet/discharge)	mm		160		
Internal heat exchanger coil – transfer surface area	m^2		–	1.45	
Sensor well D inside (for sensor – heat exchanger mode)	mm		–	12	
Water connections		cold water/hot water		R 1"	
		Circulation line		R 3/4"	
		Heat exchanger supply/return	–	R 1"	
Values acc. to DIN/EN 255 at 45 °C hot water temperature:					
Coefficient of performance	COP_t	–	3.5		
Average heating capacity 2)		W	1870		
Max. volume of mixed water (40°C),	V_{max}	litres	300	290	
Power consumption for heating	W_{eh}	kWh	3.3		
Power consumption in standby	P_{es}	W	47		
Heat-up time	t_h	h,min	5,10		

1) At max. water temperature of 60 °C
2) Process of heating the nominal tank content from 15 °C to 60 °C at an intake air temperature of 15 °C and 70 % relative humidity.
3) At temperatures below +8 °C (+/-1.5 °C) an electric heating element will automatically turn on and the heat pump module will be turned off.
4) At 1 m distance (in the case of free-standing installation without intake and discharge ducts and/or without 90° elbow on discharge side).
5) Heating up of the nominal volume from 15 °C to 45 °C at an intake air temperature of 15 °C und 70 % relative humidity.



Order code	Designation	Description
SVK 852	Safety valve combination	For the cold water connection of drinking water tanks to the supply system acc. to DIN 1988, 1" external thread connection
IFR 165	Air hose	Flexible air hose DN 160 (10 m) for connection to the heat pump water heater, 25 mm heat and sound insulation with PE protective sleeve and external vapour barrier

Additional air duct accessories available as preformed sheet steel parts – consult us.

More up-to-date news can be found on the Internet at www.dimplex.de

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