

## ADV-W R32 HEAT PUMPS

Monobloc Air Source Heat Pumps For Commercial DHW





## ADV-W Air Source Heat Pumps 16-30 kW Monobloc ASHP For Commercial DHW

The ADV-W air to water heat pump range includes 16, 22 and 30 kW models.

Effective with ambient air temperatures as low as  $-25^{\circ}\text{C}$ , the ASHP can provide hot water output at up to  $60^{\circ}\text{C}$  throughout the year while significantly reducing building emissions.

Ideal for installation as part of a hybrid hot water system, ensuring the highest degree of efficiency without compromise to overall performance or reliability.



# Key Features

- Sleek and compact monobloc design
- High seasonal efficiency A+ to A+++ ErP Energy Rating
- Low GWP R32 refrigerant reduces environmental impact
- Low noise impact
- Three phase capacities
- Maximum DHW working temperature 55°C continuous
- Designed for UK climate conditions, maintaining a high efficiency down to -7°C
- Includes low voltage enable and fault signals, MODBUS support, built-in external pump and cascade controls and a remote digital control interface as standard
- Low loss headers and external pumps available

# ADV-W Monobloc Air Source Heat Pumps

The ADV16W monobloc ASHP provides an energy efficient solution that delivers domestic hot water (DHW) & space heating. It is a complete all-year-round, integrated heating system which can replace, or work in synergy with traditional gas or the latest generation of electric boilers as part of a hybrid DHW application.

## WIDE OPERATION RANGE

16 to 30 kW three phase capacity

## DOMESTIC HOT WATER & SPACE HEATING

The ADV-W range can provide domestic hot water (up to 55°C working flow) and underfloor heating, improving building comfort.

## COMPACT FOOTPRINT

Designed for installation in any type of commercial property, especially buildings with limited space.

Being a compact system with a single unit installed outdoors means the available space indoors remains unchanged.

## PERFORMANCE

Up to A+++ ErP Energy Rating

Efficient DHW capacity even when at -7°C air temperature.

Maintain continuous hot water supply up to 60°C even with outdoor temperatures as low as -25°C.

## EASY INSTALLATION & MAINTENANCE

All functions are achieved with a single outdoor unit, bringing significant cost savings. Installation is quicker and easier as there is no need for refrigerant piping and the product is pre-charged at the factory. Two-door design for easy access to internal components for easy maintenance.

## QUIET OPERATION

The ADV-W operates as low as 35D dB(A) sound pressure level at three metres. Less than a conversational level noise at just a metre.

## ENERGY MONITORING AS STANDARD

Energy consumption data for running cost analysis.

## INTUITIVE CONTROL

Low voltage enable and fault signals, MODBUS support, built-in external pump and cascade controls and a remote digital control interface as standard

# ADV16W Monobloc Air Source Heat Pump



**A+++**

Seasonal space heating efficiency class  
Working flow 35°C / Ambient 7°C

**SCOP 3.41**

Working flow 55°C / Ambient 7°C

**SCOP 4.62**

Working flow 35°C / Ambient 7°C

**16 kW**

**DHW 10-55°C**

From hot water output up to 60°C

**Ambient -25°C**

# ADV22W Monobloc Air Source Heat Pump



**22 kW**

**A+++**

Seasonal space heating efficiency class  
Working flow 35°C / Ambient 7°C

**SCOP 3.22**

Working flow 55°C / Ambient 7°C

**SCOP 4.53**

Working flow 35°C / Ambient 7°C

**DHW 30-55°C**

From hot water output up to 60°C

**Ambient -25°C**

# ADV30W Monobloc Air Source Heat Pump



**30 kW**

**A++**

Seasonal space heating efficiency class  
Working flow 35°C / Ambient 7°C

**SCOP 3.14**

Working flow 55°C / Ambient 7°C

**SCOP 4.19**

Working flow 35°C / Ambient 7°C

**DHW 30-55°C**

From hot water output up to 60°C

**Ambient -25°C**

# ADV-W Air Source Heat Pumps

Designed to extract heat from the ambient air using an environmentally friendly R-32 refrigerant circuit, ADV-W air source heat pumps (ASHP) provide fully renewable heat to a building and its hot water system through an integrated plate heat exchanger and pump, all contained within a modern and simple to install external monobloc unit.

## Reducing The Global Warming Potential Of Heat Pumps

R-32 is a hydrofluorocarbon (HFC) refrigerant developed to replace refrigerant, which can deplete and damage the ozone layer.

R-32, which offers zero potential for ozone depletion, is non-toxic, non-flammable and has a much lower Global Warming Potential (GWP) than R-410A, the previous refrigerant of choice in ASHPs.

GWP is a means for measuring the impact on the atmosphere of one kilo of released HFC compared to a single kilo of carbon.

A kilo of released R410A would do 2,090 times the damage of a kilo of carbon. With a GWP of 675, R-32 is considerably more environmentally friendly. Using R-32, Adveco ADV-W ASHP's considerably reduce the GWP of commercial hot water systems.



# R-32 Refrigerant

## A better way to protect the environment

R-32 (Difluoromethane HFC32), used across the Adveco ADV-W range of heat pumps, is an HFC refrigerant used as the preferred replacement for R410A refrigerant. Not only is the refrigerant more environmentally friendly, it enables higher performance to save energy.

The advantages of R-32 in terms of energy efficiency, safety and especially the much lower Global Warming Potential (GWP) makes ASHP systems based around R-32 refrigerant highly attractive.

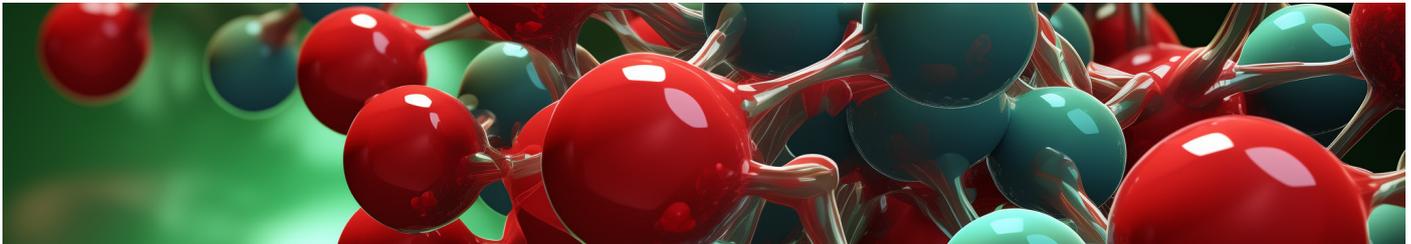
They are also more compact with improved operational functionality making the heat pump easy to install, control and maintain.

The use of R-32 provides an immediate way of reducing a building's energy consumption and operational costs. ADV-W ASHPs can therefore help reduce emissions to meet new carbon targets without compromising reliability or performance.

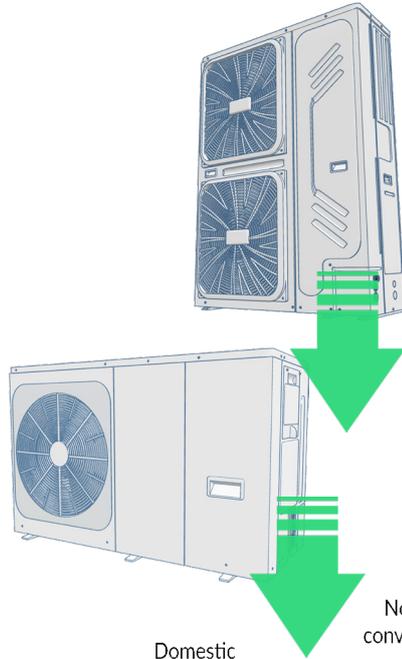
# R-32

The logo for R-32 refrigerant features the letters 'R-32' in a large, bold, green font. A small green leaf is positioned between the 'R' and the '3', symbolizing environmental friendliness.

- Much lower Global Warming Potential
- Zero potential for ozone depletion
- Non-toxic
- Non-flammable
- Better energy efficiency compared to R410A refrigerant
- R32 ASHPs require less refrigerant, considerably reducing the size of units
- Easier to recycle
- Quieter operation



# Reducing Noise Pollution

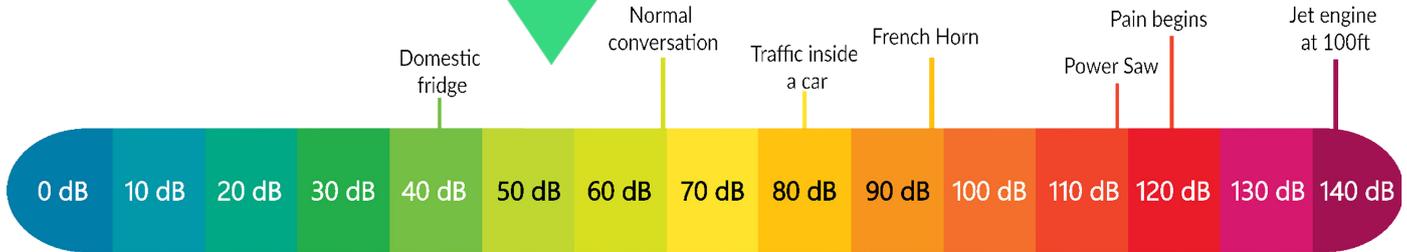


ADV-W meets all considerations relating to noise pollution, providing quiet operation for enhanced comfort and an optimised working environment.

Ultra-low operational noise ensures workers, residents within the building and particularly neighbours are not disturbed.

At one metre, ADV-WASHPs produce less noise than a normal conversation and at three meters are as low as 35 dB(A), just below that of a domestic refrigerator.

Illustrative Sound Pressure at 1m (DB(A))



## Embracing The Hybrid Approach

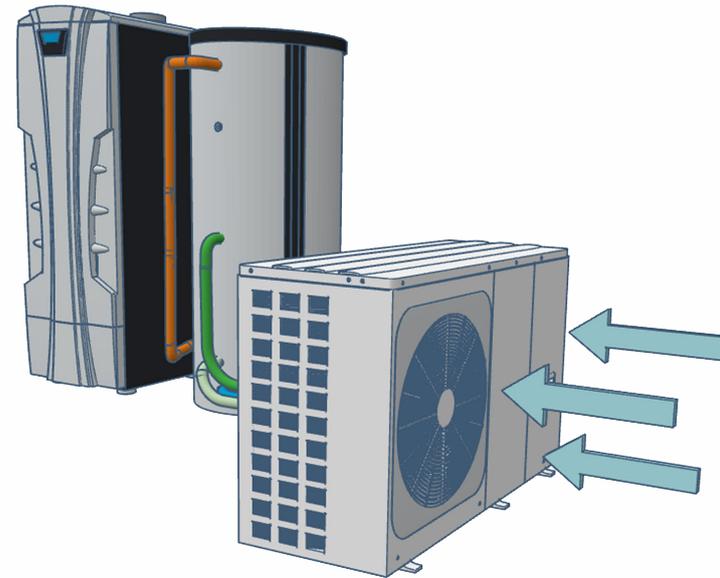
A hybrid approach, where an ASHP is packaged in combination with a gas or electric boiler/water heater and control system, presents an attractive option for commercial projects, offering a compact, highly efficient means of delivering high temperature hot water, with considerable carbon savings.

The hybrid approach offers better compatibility with existing heating distribution systems and thermal demands of higher heat loss buildings, meaning less adaptation is required.

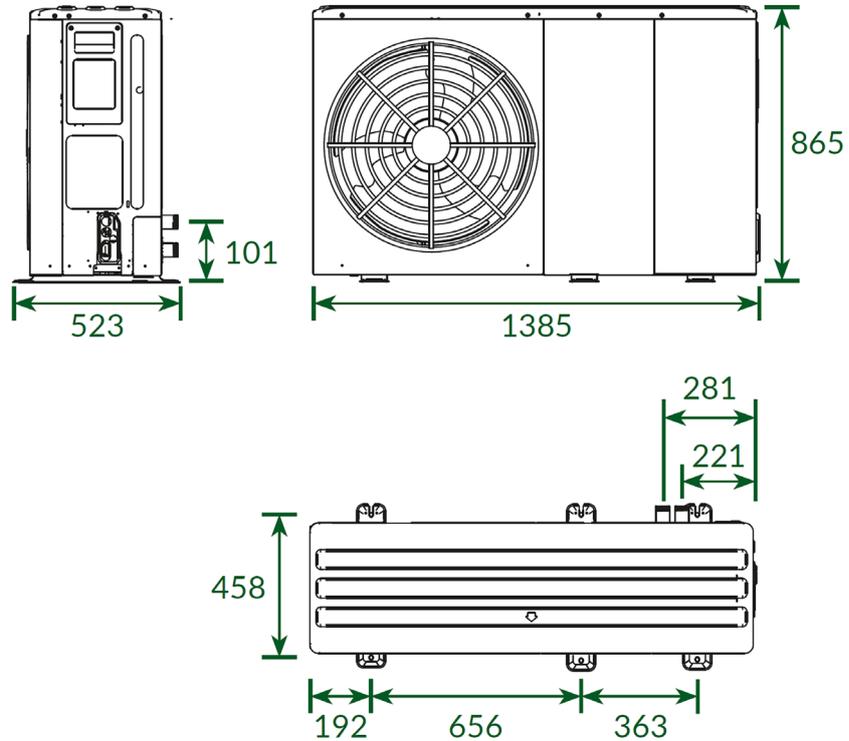
Where bespoke system design is required to meet the particular needs of a commercial project, the availability of two heat sources to meet the heating demand of a property is extremely advantageous. It enables a DHW or heating system to operate at a higher temperature grade, as well as remaining effective at very low temperatures. Using a gas or electric boiler to meet peak demands on the coldest of days also means the heat pump can be reduced in size, such as the compact ADV16W, when compared to the required capacity of a standalone electric heat pump system.

A hybrid system also gives a property the versatility of switching to the gas or electric boiler/water heater at time of network peak, helping reduce operational costs while maintaining higher water temperatures (+60°C) demanded by safe commercial operations.

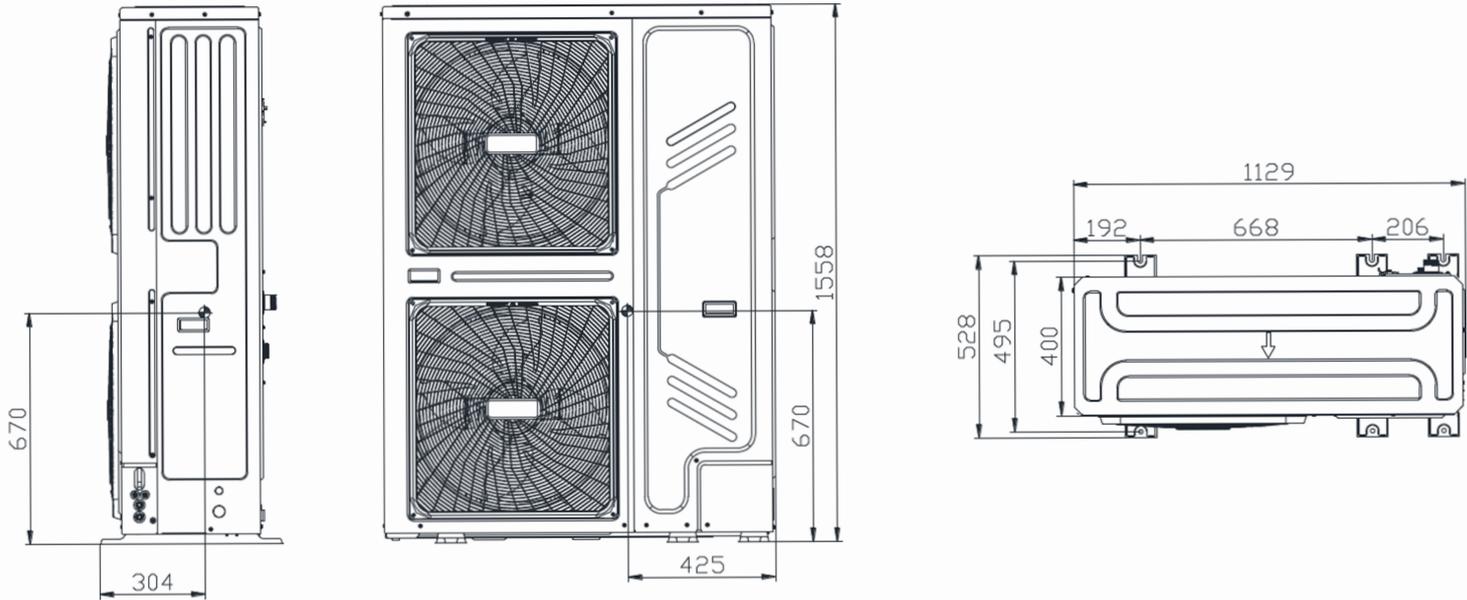
Although the heat pump does not completely replace an existing heating or DHW system, these hybrid systems keep running costs low, while helping businesses meet their carbon targets in the coming decades and helping bridge the gap to forthcoming zero carbon technologies such as hydrogen.



# Dimensions ADV16W



# Dimensions ADV22W / ADV30W



# Range Specifications

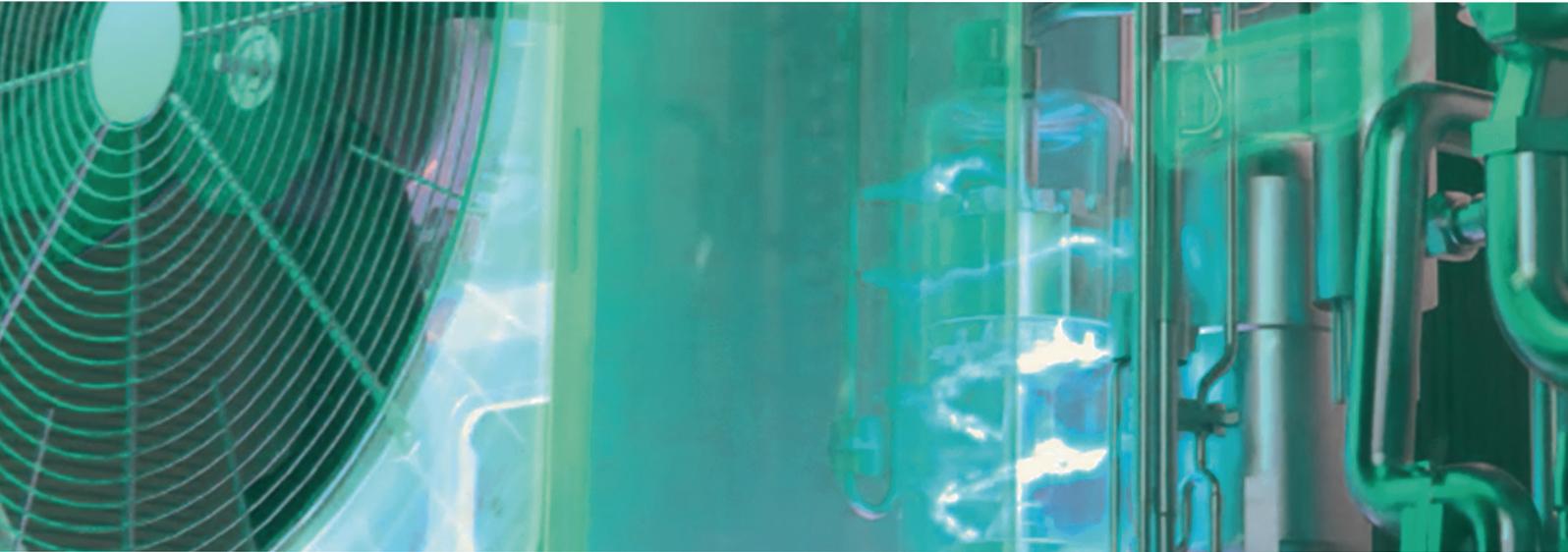
Technical Specifications		ADV16W	ADV22W	ADV30W
Heating Performance Water outlet temperature: 35°C Ambient temperature: 7°	Heating capacity (kW)	15.90	22.00	30.10
	Rated input (W)	3.53	5.00	7.69
	COP	4.50	4.40	3.91
	SCOP Average climate conditions	4.62	4.53	4.19
	Seasonal Space Heating Energy Efficiency Class	A+++	A+++	A++
Heating Performance Water outlet temperature: 55°C Ambient temperature: 7°	Heating capacity (kW)	16.00	22.00	30.00
	Rated input (W)	5.61	8.30	13.04
	COP	2.85	2.65	2.3
	SCOP Average climate condi- tions	3.41	3.22	3.14
	Seasonal Space Heating Energy Efficiency Class	A++	A++	A+
Power Supply	V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50
	Full load Amps (A)	27	28	28
	Amps Protection (A)	29	32	32
Dimensions	Appliance (mm)	1385 x 865 x526	1129 x 1558 x 528	1129 x 1558 x 528
	Packaging (mm)	1465x1120x560	1220 x 1735 x 565	1220 x 1735 x 565
Appliance Mass	Empty/Filled (kg)	144/172	177/206	177/206

Technical Specifications		ADV16W	ADV22W	ADV30W
Refrigerant	Type	R32	R32	R32
	Charged volume (kg)	1.75	5.00	5.00
Water Temperature Output Range	DHW (°C)	10 to 60	30 to 60	30 to 60
	Heating (°C)	12 to 60	25 to 60	25 to 60
	Cooling (°C)	5 to 30	0 to 25	0 to 25
Ambient Air Temperature Range	DHW (°C)	-25 to 43	-25 to 43	-25 to 43
	Heating (°C)	-25 to 35	-25 to 35	-25 to 35
	Cooling (°C)	-5 to 43	-10 to 46	-10 to 46
Noise Data	Sound Power Level (dB)	69	73	77
	Sound Pressure @1m (dB(A))	58.0	59.8	63.5
Compressor	Type	Twin Rotary DC Inverter		
	Rated Load Amps (A)	11.15	14.00	21.00
Fan	Type	Brushless DC Motor		
	Rated Motor Output (W)	170	340	340
	Full Load Amps (A)	1.5	3.0	3.0
Throttle Type	Type	Electronic Expansion Valve		
Internal Water Pump	Max. head (m)	9	12	12
Rated Water Flow	m3/h	4.00	3.78	5.18
Water Connections	Inch	1 ¼" BSP	1 ¼" BSP	1 ¼" BSP
Water Circuit Pressure Range	Bar	1 to 3	1 to 3	1 to 3

# ADVECO

HOT WATER SPECIALISTS

EXPERTLY ENGINEERED FOR YOU



**T** 01252 551 540    **E** [enquiries@adveco.co](mailto:enquiries@adveco.co)

Adveco Ltd. Unit 7 & 8 Armstrong Mall, Southwood Business Park,  
Farnborough, Hampshire GU14 0NR

[www.adveco.co](http://www.adveco.co)

Adveco ADV-W ASHP Range 2024 SR700016

© Adveco Ltd 2024 Company Reg: 09493966