



Kensa Evo Heat Pump Series

Features & Benefits

- Available in 7kW, 9kW, 13kW, 15kW and 17kW
- 15% gain in efficiency*
- ERP A+++ rated series
- Increased SCOP performance*
- 60°C heat pump output (excluding 17kW model)
- Significantly reduced noise outputs*
- Custom built control panel
- Designed for easy installation
- UK manufactured

Product Description

The ERP A+++ rated Evo series delivers heating and hot water efficiencies of SCOPs up to 4.7 at 35°C along with significantly reduced noise outputs, packaged in a contemporary contoured gunmetal and gloss-white finish, punctuated by a custom built control panel unique to the Kensa series.

Performance: Each model in the Kensa Evo series has optimised sized stainless steel heat exchangers, which allows the compressor to respond more efficiently, increasing SCOP performance and delivering up to 60°C from the heat pump. (Excluding the 17kW which is designed solely for space heating)

Appearance: The ergonomic steel casing has been designed with a focus on ease of access, whilst providing sturdy yet stylish protection from ageing and wear and tear.

Installation: The Evo has been designed to be easy to handle and install. With cross head screws in its unique bevelled front panel, the Evo's electrical component and wiring terminals are easily accessible.



The heat pump has four rear water connections, two for the ground collectors and two for the property's heating distribution system. The connections consist of four 28mm straight brass fittings designed with tight tolerances, ensuring compatibility with easy to install push fittings.

The external side panels feature a curved cut-out offering the installer an extra level of flexibility to install the Evo according to the demands of the site, with vertical and horizontal pipework exit points from the sides and top of the unit.

Controls: Kensa has developed its own control board which is the brain of the new Evo heat pump. The customer interface is an intuitive touch screen that facilitates commissioning and parameter settings, and provides live status readings supported by LED light indicators.

The custom built software also permits the control board to pre-empt system irregularities using warning safety levels, which may previously have resulted in a fault if left unchecked. This pro-active system will ultimately reduce costs and call outs and enable better diagnostics and system resolution, aided by Kensa's technical support and UK wide installation network.

* against equivalent Kensa compact units



Single Phase					Three Phase
Nominal thermal kW rating	7	9	13	17	15
Part No.	K070-S1H	K090-S1H	K130-S1H	K170-S1H	K150-S3H
MCS Approved	BBA0055/ 41	BBA0055/ 42	BBA0055/ 43	BBA0055/ 44	BBA0055/39
Performance data—rated heating output at B0/W35 BS EN14511					
Power consumption	1.8	2.3	3.4	4.6	3.8
Coefficient of performance*	4.48	4.36	4.14	3.81	4.2
Immersion heater output	Kensa heat pumps do not feature back-up electric immersion heaters**				
Brine (primary) based on 0°C in, -4°C out					
Design flow rate kg/min	29.1	28.4	39.2	50.6	42.8
Pressure drop kPa at design flow rate	12	11	17	29.2	20.6
Max inlet temperature °C	15				
Min temperature °C (Outlet)	-5 (at standard settings)				
Heating water (secondary) based on 30°C in, 35°C out					
Design flow rate l/min	22.4	28.5	38.9	51.2	45.9
Pressure drop kPa at design flow rate	4	5.7	10.1	28.3	13.6
Max flow temperature °C***	64	63	63	50	62
Electrical Values @B0/W35					
Rated Voltage	220 – 240 V / 50-60 Hz				380-420V / 50-60 Hz
Power supply rating amps	25	25	40	50	16
Rated current (max) amps	18.5	20.6	31.1	35	11.8
Typical running current @ B0/W35 amps	8.4	11.4	16	23	7.3
Starting current amps****	18.2	28.7	41.3	45	44
ENA database Number	HP_0304	HP_0306	HP_0303	HP_0308	HP_0307



Single Phase					Three Phase
Nominal thermal kW rating	7	9	13	17	15
Refrigerant circuit					
Process medium	R407C				
Fill volume kg	1.9	1.9	2	2.1	2
Compressor type	Scroll				
Dimensions					
Nominal H x W x L (mm)	1145 x 580 x 570				
Nominal Dry weight kg (Approx)	139	140	153	154	153
Operating pressure					
Brine circuit min (primary) bar g	Settable at commissioning				
Heating water circuit min (secondary) bar g	Settable at commissioning				
Low pressure reset bar g	Settable at commissioning				
Connection sizes					
Primary IN and OUT (brass stubs) mm	28				
Heating flow and return (brass stubs) mm	28				
Performance (based on Average Climate) at 35°C					
ErP rating	A+++	A+++	A++	A++	A++
SCOP	4.72	4.64	4.40	4.06	4.47
Seasonal space heating energy efficiency	181%	177%	168%	155%	171%
Performance (based on Average Climate) at 55°C					
ErP rating	A++	A++	A++	A+	A++
SCOP	3.7	3.62	3.48	3.16	3.58
Seasonal space heating energy efficiency	140%	137%	131%	118%	135%
Sound Power Level					
Sound Power Level (dB)	49.4	56.1	49.7	56.2	49.2

* The COP figure quoted is calculated as per EN14511.

** In-built immersion heaters will increase running costs and CO₂ emissions as they use direct electricity, because of this Kensa heat pumps do not include them.

*** By increasing the flow temperature from the heat pump the efficiency of the unit will drop and the COP decreases.

**** Kensa Evo heat pumps incorporate smart starts as standard to limit the starting current of the compressors. For full details on how the starting currents are calculated please contact Kensa.

Note: Design flowrates are for a ground temperature of 0 and -4°C and a load temperature of 30°C and 35°C

The 17kW is sold for space heating applications only.



Domestic Hot Water (DHW) Production

The DHW option needs to be specified at time of ordering. The 17kW Evo is designed for Space Heating only and not DHW unless specified and agreed.

The maximum DHW temperature that the heat pump can achieve at the cylinder will be approximately 60°C. (Excluding the 17kW which is designed for space heating only). If 65°C is required all year round, it is recommended that an immersion heater is linked to Evo and the Evo is programmed to operate the immersion heater for a period immediately following the DHW production. This means that the majority of the heating load for the DHW is produced at a lower cost using the heat pump, as opposed to using only the direct immersion heater.

The EVO can be programmed to raise the temperature to 65°C once a week to provide pasteurisation.

Warning - when a heat pump solely is used for heating domestic hot water, it may not get the water hot enough to kill the dangerous Legionella that can breed in hot water cylinders. Alternative arrangements as above may therefore be required to ensure the cylinder is pasteurised regularly. The installer/end user should check if this pasteurisation is required by local regulations, bearing in mind that there are often different rules for installations in rented or commercial properties.

Nominal Dimensions and Connections

