Q80 Series Heat Pumps

Features and Benefits

- Modular design
- Low running costs
- Low carbon emissions
- Heating and external cooling options
- UK manufactured
- Internal vibration eliminators

Product Description

The Kensa Q80 Series Heat Pump is designed to provide a low cost renewable heat source for a building's heating system and will generate significantly lower carbon emissions and running costs compared with traditional fossil fuels.

Kensa Q80 Series Heat Pumps are available with an output of 83kW, and are of a modular design meaning by combining them much higher loads can be achieved.

The design allows the majority of maintenance work to be carried out from the front allowing the units to be installed with minimal clearance. By individual isolation any unit may be disconnected and withdrawn for major maintenance or repair operations.

The modular design also enables the system to closely match the required heating load and offers a degree of redundancy in the unlikely event of a problem with one of the units.

Due to the size of the compressors Q80 Series Heat Pump models are only available in three phase and come fitted with soft starts as standard.

Q80 Series Heat Pumps can interface easily with a buildings heating distribution system, such as fan coils, underfloor, and air handling units etc.

Q80 Series Heat Pump models are not supplied with water pumps as these are dependant on the application and site.

Q80 Series Heat Pump models can provide external cooling as well as heating hence a single system can satisfy the buildings heating and cooling requirements. The cooling is achieved external to the heat pump by a combination of three port diverting valves. Advice can be obtained from Kensa if required.

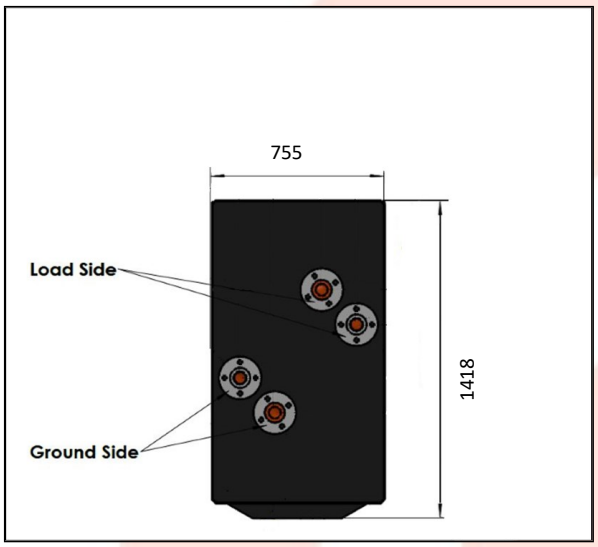
As a UK manufacturer, Kensa offers a high quality product which is supported by industry leading technical support to ensure the application engineering is performed to the highest standard.

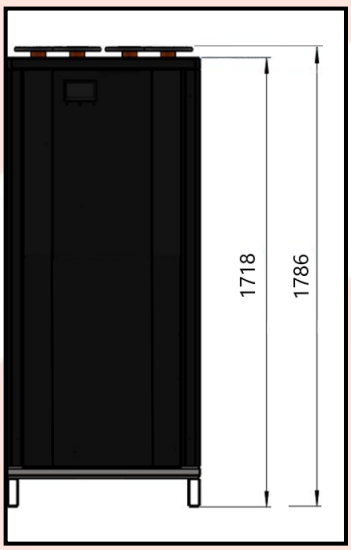
Q80 Series Range Heat Pumps

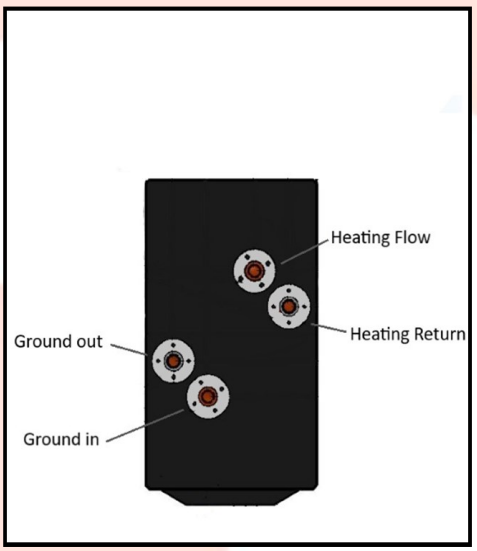
	Three Phase
Nominal thermal kW rating	**83**
MCS approved	Not required as outside of scope
Product Code	Q80-MAK
Performance data—rated heating output at B0/W35 BS EN14511	
Power consumption kW	20.5
Coefficient of performance*	3.94
Immersion heater output	Kensa heat pumps do not feature back-up electric immersion heaters**
Brine (primary) based on 0°C in, -4°C out	
Design flow rate l/min	225
Pressure drop kPa at design flow rate	29
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	240
Pressure drop kPa at design flow rate	27.6
Max flow temperature °C***	64
Electrical Values @B0/W35	
Rated Voltage	380-420V/ 50 Hz
Power supply rating amps	65
Rated current (max) amps	64
Typical running current @ B0/ W35 amps	38
Starting current amps****	118
Power Factor @ 0/35C	0.74

Q80 Series Heat Pumps

Performance data—rated heating output at B0/W55 BS EN14511	
Power consumption kW	27.5
Coefficient of performance*	2.75
Heating water (secondary) based on 47°C in, 55°C out	
Design flow rate l/min	138
Pressure drop kPa at design flow rate	10.4
Electrical Values @B0/W55	
Rated Voltage	380-420V/ 50 Hz
Power supply rating amps	65
Rated current (max) amps	64
Typical running current @ B0/ W55amps	46
Starting current amps****	118
Power Factor '@0/55C	0.82







* The COP figure quoted excludes the water pump electrical input and is calculated according to EN14511.
** In-built immersion heaters will increase running costs and CO_2 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.
**** The starting currents are per phase. For full details on how the starting currents are calculated please contact Kensa.
Note: Design flowrates and pressure drops are based on a ground temperature of 0 and –4°C and a load temperature of 30°C and 35°C or 47°C and 55°C

Q80 Series Heat Pumps

Refrigerant circuit	
Process medium	R407C
Fill volume kg	6.8
Compressor type	Twin Scroll
Dimensions (nominal)	
Height (mm)	1718
Width (mm)	755
Depth (mm)	1418
Dry weight kg	665
Operating pressure	
Brine circuit min (primary) bar g	Installer configurable
Heating water circuit min (secondary) bar g	Installer configurable
Low pressure reset bar g	Installer configurable
Connection sizes	
Primary IN and OUT PN10/16	DN50
Heating flow and return PN10/16	DN50
Performance (based on Average Climate) @35°C	
ErP rating	A++
SCOP	4.14
Seasonal space heating energy efficiency	158%
Performance (based on Average Climate) @55°C	
ErP rating	A+
SCOP	3.48
Seasonal space heating energy efficiency	131%
Sound Power Level	
dB (A)	72.3

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