

European Heat Pump KEYMARK Scheme Test report

Product	Heat Pumps
Product Type	Outdoor Air to Water Heat Pump
Sub-type and Models	EcoSilent R16
Refrigerant	R290
Mass of refrigerant	1.4 kg
Testing basis	EN 14511:2018 EN 14825:2018 EN 12102:2017 KEYMARK Certification Scheme for Heat Pumps (2023)

Model EcoSilent R16

Model name	EcoSilent R16
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	62 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	185 %	139 %
Prated	14.05 kW	13.47 kW
SCOP	4.69	3.55
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.43 kW	11.91 kW
COP Tj = -7°C	3.34	2.38
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.57 kW	7.29 kW
COP Tj = +2°C	4.52	3.49
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.14 kW	7.66 kW
COP Tj = +7°C	6.38	4.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	8.98 kW	8.89 kW
COP Tj = 12°C	8.11	6.50
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.43 kW	11.91 kW
COP Tj = Tbiv	3.34	2.38
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.01 kW	13.29 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	2.08
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	39 W	39 W
PSB	13 W	13 W
PCK	54 W	54 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.04 kW	0.18 kW
Annual energy consumption Qhe	6189 kWh	7844 kWh