

## European Heat Pump KEYMARK Scheme Test report

<b>Product</b>	Heat Pumps
<b>Product Type</b>	Outdoor Air to Water Heat Pump
<b>Sub-type and Models</b>	<b>EcoSilent</b> R11
<b>Refrigerant</b>	R290
<b>Mass of refrigerant</b>	1.15 kg
<b>Testing basis</b>	EN 14511:2018 EN 14825:2018 EN 12102:2017 KEYMARK Certification Scheme for Heat Pumps (2023)

### Model EcoSilent R11

Model name	EcoSilent R11
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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.72 kW	8.97 kW
El input	2.04 kW	3.14 kW
COP	4.27	2.85

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	135 %
Prated	10.27 kW	12.17 kW
SCOP	4.60	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.08 kW	10.77 kW
COP Tj = -7°C	3.23	2.39
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.54 kW	6.69 kW
COP Tj = +2°C	4.52	3.33
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.73 kW	5.52 kW
COP Tj = +7°C	6.16	4.53
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	6.85 kW	6.58 kW
COP Tj = 12°C	8.09	6.25
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.08 kW	10.77 kW
COP Tj = Tbiv	3.23	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.14 kW	8.73 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.73	1.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	7 W	7 W
PTO	24 W	24 W
PSB	7 W	7 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	3.44 kW
Annual energy consumption Qhe	4614 kWh	7302 kWh