

Subtype Hybrox 11

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	Hybrox 11
Registration number	041-K001-53
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.6 kg
Certification Date	24.06.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 14
Testing laboratory	Fraunhofer ISE, DE

Model alpha innotec Hybrox 11

Model name	alpha innotec Hybrox 11
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	3.45 kW	3.20 kW
El input	0.68 kW	1.06 kW
COP	5.04	3.03

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	49 dB(A)	49 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	10.50 kW	10.50 kW
SCOP	5.00	3.88
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.42 kW	8.85 kW
COP Tj = -7°C	3.07	2.35
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.72 kW	5.45 kW
COP Tj = +2°C	5.06	3.89
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	3.70 kW	3.76 kW

COP Tj = +7°C	6.39	4.96
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	4.13 kW	4.01 kW
COP Tj = 12°C	7.54	6.15
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	9.42 kW	8.85 kW
COP Tj = Tbiv	3.07	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.67 kW	8.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	78 °C	78 °C
Poff	13 W	13 W
PTO	18 W	15 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.83 kW	2.38 kW
Annual energy consumption Qhe	4336 kWh	5598 kWh

Model NOVELAN Helox 11

Model name	NOVELAN Helox 11
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	3.45 kW	3.20 kW
El input	0.68 kW	1.06 kW
COP	5.04	3.03

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