

## Subtype Hybrox 16

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	Hybrox 16
Registration number	041-K001-54
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.9 kg
Certification Date	24.06.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 14
Testing laboratory	Fraunhofer ISE, DE

**Model alpha innotec Hybrox 16**

Model name	alpha innotec Hybrox 16
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	6.14 kW	4.94 kW
El input	1.12 kW	1.50 kW
COP	5.48	3.29

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	46 dB(A)	46 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	195 %	153 %
Prated	15.60 kW	15.25 kW
SCOP	4.95	3.89
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.47 kW	13.19 kW
COP Tj = -7°C	2.81	2.24
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	8.67 kW	8.30 kW
COP Tj = +2°C	4.93	3.82
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	5.69 kW	5.47 kW

COP Tj = +7°C	6.92	5.41
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	6.38 kW	6.17 kW
COP Tj = 12°C	7.92	6.39
Cdh Tj = +12 °C	0.970	0.983
Pdh Tj = Tbiv	13.47 kW	13.19 kW
COP Tj = Tbiv	2.81	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.38 kW	12.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	78 °C	78 °C
Poff	13 W	14 W
PTO	24 W	17 W
PSB	13 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.23 kW	3.06 kW
Annual energy consumption Qhe	6505 kWh	8089 kWh

**Model NOVELAN Helox 16**

Model name	NOVELAN Helox 16
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	6.14 kW	4.94 kW
El input	1.12 kW	1.50 kW
COP	5.48	3.29

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