

## Subtype Hybrox 8

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	Hybrox 8
Registration number	041-K001-52
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.3 kg
Certification Date	19.07.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev v12
Testing laboratory	Fraunhofer ISE, DE

## Model alpha innotec Hybrox 8

Model name	alpha innotec Hybrox 8
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 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	3.14 kW	2.72 kW
El input	0.60 kW	0.89 kW
COP	5.24	3.05

### 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
$\eta_s$	185 %	146 %
Prated	8.60 kW	8.00 kW
SCOP	4.69	3.74
Tbiv	-6 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.34 kW	6.54 kW
COP Tj = -7°C	3.04	2.30
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.46 kW	4.52 kW
COP Tj = +2°C	4.64	3.70
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	3.25 kW	3.05 kW
COP Tj = +7°C	6.17	4.93

Cdh Tj = +7 °C	1.000	0.970
Pdh Tj = 12°C	3.44 kW	3.40 kW
COP Tj = 12°C	7.37	6.13
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	7.60 kW	7.29 kW
COP Tj = Tbiv	3.14	2.47
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.71 kW	5.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	17 W	17 W
PTO	21 W	21 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.89 kW	2.04 kW
Annual energy consumption Qhe	3786 kWh	4424 kWh

Model NOVELAN Helox 8		
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Application	Heating (medium temp)	
Units	Outdoor	
Climate zone (for heating)	n/a	
Cooling mode application (optional)	n/a	
Any additional heat sources	n/a	
General data		
Power supply	1x230V 50Hz	
Off-peak product	n/a	
Outdoor Air/Water		
EN 14511-4   Heating		
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Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	
EN 14511-2   Heating		
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