

## Subtype Hybrox 5

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	Hybrox 5
Registration number	041-K001-51
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1 kg
Certification Date	19.07.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev v12
Testing laboratory	Fraunhofer ISE, DE

## Model alpha innotec Hybrox 5

Model name	alpha innotec Hybrox 5
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	2.12 kW	1.82 kW
El input	0.43 kW	0.65 kW
COP	4.98	2.79

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	45 dB(A)	45 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	142 %
Prated	6.20 kW	5.67 kW
SCOP	4.75	3.63
Tbiv	-6 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.40 kW	5.01 kW
COP Tj = -7°C	3.12	2.32
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	3.32 kW	3.17 kW
COP Tj = +2°C	4.59	3.53
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	2.25 kW	2.11 kW
COP Tj = +7°C	6.40	4.81

Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	2.49 kW	2.45 kW
COP Tj = 12°C	7.68	6.36
Cdh Tj = +12 °C	0.970	0.960
Pdh Tj = Tbiv	5.60 kW	5.19 kW
COP Tj = Tbiv	3.23	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.93 kW	4.17 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.85	1.95
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	1.27 kW	1.50 kW
Annual energy consumption Qhe	2698 kWh	3226 kWh

## Model NOVELAN Helox 5

Model name	NOVELAN Helox 5
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	2.12 kW	1.82 kW
El input	0.43 kW	0.65 kW
COP	4.98	2.79

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