

## Subtype AEROTOP T32 / T32R

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AEROTOP T32 / T32R
Registration number	011-1W0302
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	9.2 kg
Certification Date	04.05.2019

## Model AEROTOP T32

Model name	AEROTOP T32
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x230V 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	38.00 kW	37.00 kW
El input	8.84 kW	13.70 kW
COP	4.30	2.70

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	152 %	114 %
Prated	22.50 kW	21.00 kW
SCOP	3.89	2.93
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	24.49 kW	22.95 kW
COP Tj = -7°C	2.86	2.01
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	27.51 kW	27.22 kW
COP Tj = +2°C	3.69	2.69
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.40 kW	37.95 kW

COP Tj = +7°C	5.17	4.19
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.63 kW	42.96 kW
COP Tj = 12°C	5.90	5.20
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	43.41 kW	21.00 kW
COP Tj = Tbiv	2.60	1.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	22.50 kW	21.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	57 °C	57 °C
Poff	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11960 kWh	16478 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	139 %	94 %
Prated	23.66 kW	31.70 kW
SCOP	3.54	2.44
Tbiv	-15 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	24.83 kW	23.63 kW
COP Tj = -7°C	3.08	2.33
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	27.59 kW	27.34 kW
COP Tj = +2°C	3.95	3.09
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.50 kW	38.15 kW
COP Tj = +7°C	5.39	4.63
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.63 kW	43.18 kW
COP Tj = 12°C	5.90	5.44
Cdh Tj = +12 °C	1.000	1.000

Pdh Tj = Tbiv	19.30 kW	21.68 kW
COP Tj = Tbiv	2.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.30 kW	21.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	57 °C	57 °C
Poff	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	23.66 kW	31.70 kW
Annual energy consumption Qhe	16470 kWh	34596 kWh
Pdh Tj = -15°C (if TOL	0.01	0.01
COP Tj = -15°C (if TOL	0.01	0.01
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	187 %	144 %
Prated	27.39 kW	26.90 kW
SCOP	4.74	3.67
Tbiv	2 °C	2 °C
TOL	-20 °C	-10 °C
Pdh Tj = +2°C	27.39 kW	26.90 kW
COP Tj = +2°C	3.26	2.40
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.20 kW	37.45 kW
COP Tj = +7°C	4.74	3.26
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.41 kW	42.51 kW
COP Tj = 12°C	5.67	4.74
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	27.39 kW	26.90 kW
COP Tj = Tbiv	3.26	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	27.39 kW	26.90 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.26	2.40
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	57 °C	57 °C
P <sub>off</sub>	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	6876 kWh	9801 kWh

## Model AEROTOP T32R

Model name	AEROTOP T32R
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x230V 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	38.00 kW	37.00 kW
El input	8.84 kW	13.70 kW
COP	4.30	2.70

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	156 %	116 %
Prated	22.50 kW	21.00 kW
SCOP	3.98	2.99
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	24.49 kW	22.95 kW
COP Tj = -7°C	2.86	2.01
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	27.51 kW	27.22 kW
COP Tj = +2°C	3.69	2.69
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.40 kW	37.95 kW

COP Tj = +7°C	5.17	4.19
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.63 kW	42.96 kW
COP Tj = 12°C	5.90	5.20
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	43.41 kW	21.00 kW
COP Tj = Tbiv	2.60	1.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	22.50 kW	21.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	57 °C	57 °C
Poff	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	11666 kWh	16185 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	140 %	95 %
Prated	23.66 kW	31.70 kW
SCOP	3.58	2.45
Tbiv	-15 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	24.83 kW	23.63 kW
COP Tj = -7°C	3.08	2.33
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	27.59 kW	27.34 kW
COP Tj = +2°C	3.95	3.09
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.50 kW	38.15 kW
COP Tj = +7°C	5.39	4.63
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.63 kW	43.18 kW
COP Tj = 12°C	5.90	5.44
Cdh Tj = +12 °C	1.000	1.000

Pdh Tj = Tbiv	19.30 kW	21.68 kW
COP Tj = Tbiv	2.25	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.30 kW	21.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	57 °C	57 °C
Poff	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	23.66 kW	31.70 kW
Annual energy consumption Qhe	16294 kWh	34419 kWh
Pdh Tj = -15°C (if TOL	0.01	0.01
COP Tj = -15°C (if TOL	0.01	0.01
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	63 dB(A)	63 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	197 %	144 %
Prated	27.39 kW	26.90 kW
SCOP	5.00	3.67
Tbiv	2 °C	2 °C
TOL	-20 °C	-10 °C
Pdh Tj = +2°C	27.39 kW	26.90 kW
COP Tj = +2°C	3.26	2.40
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	38.20 kW	37.45 kW
COP Tj = +7°C	4.74	3.26
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	43.41 kW	42.51 kW
COP Tj = 12°C	5.67	4.74
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	27.39 kW	26.90 kW
COP Tj = Tbiv	3.26	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	27.39 kW	26.90 kW



COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.26	2.40
$Cd_h T_j = TOL$ or $Pd_h T_j = T_{designh}$ if $TOL < T_{designh}$	1.000	1.000
WTOL	57 °C	57 °C
P <sub>off</sub>	0 W	0 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	6523 kWh	9801 kWh