

## Subtype AEROTOP T35 / T35R

Certificate Holder	ELCO GmbH
Address	Hohenzollernstrasse 31
ZIP	72379
City	Hechingen
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	AEROTOP T35 / T35R
Registration number	011-1W0303
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	9.2 kg
Certification Date	04.05.2019

## Model AEROTOP T35

Model name	AEROTOP T35
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	39.60 kW	37.20 kW
El input	9.66 kW	12.80 kW
COP	4.10	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	153 %	121 %
Prated	24.50 kW	23.40 kW
SCOP	3.90	3.11
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	26.19 kW	24.63 kW
COP Tj = -7°C	3.06	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	30.85 kW	29.58 kW
COP Tj = +2°C	3.84	2.95
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.56 kW	39.48 kW

COP Tj = +7°C	4.69	4.03
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.63 kW	44.07 kW
COP Tj = 12°C	5.23	4.77
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	24.50 kW	23.40 kW
COP Tj = Tbiv	2.90	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.50 kW	23.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.10
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	12964 kWh	15691 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	145 %	98 %
Prated	25.85 kW	34.90 kW
SCOP	3.69	2.53
Tbiv	-15 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	26.53 kW	25.32 kW
COP Tj = -7°C	3.32	2.47
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	31.17 kW	30.11 kW
COP Tj = +2°C	4.07	3.31
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.80 kW	39.96 kW
COP Tj = +7°C	4.83	4.32
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.63 kW	44.26 kW
COP Tj = 12°C	5.23	4.92
Cdh Tj = +12 °C	1.000	1.000

Pdh Tj = Tbiv	21.09 kW	23.90 kW
COP Tj = Tbiv	2.67	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.05 kW	23.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.43
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	25.85 kW	34.90 kW
Annual energy consumption Qhe	17170 kWh	33619 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	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	175 %	143 %
Prated	30.32 kW	28.00 kW
SCOP	4.45	3.65
Tbiv	2 °C	2 °C
TOL	-20 °C	-10 °C
Pdh Tj = +2°C	30.32 kW	28.20 kW
COP Tj = +2°C	3.46	2.70
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.08 kW	38.28 kW
COP Tj = +7°C	4.39	3.36
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.45 kW	43.69 kW
COP Tj = 12°C	5.08	4.46
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	30.32 kW	28.20 kW
COP Tj = Tbiv	3.46	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.32 kW	28.20 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.46	2.70
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	10017 kWh	14192 kWh

## Model AEROTOP T35R

Model name	AEROTOP T35R
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	39.60 kW	37.20 kW
El input	9.66 kW	12.80 kW
COP	4.10	2.90

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	157 %	124 %
Prated	24.50 kW	23.40 kW
SCOP	3.99	3.17
Tbiv	-10 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	26.19 kW	24.63 kW
COP Tj = -7°C	3.06	2.12
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	30.85 kW	29.58 kW
COP Tj = +2°C	3.84	2.95
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.56 kW	39.48 kW

COP Tj = +7°C	4.69	4.03
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.63 kW	44.07 kW
COP Tj = 12°C	5.23	4.77
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	24.50 kW	23.40 kW
COP Tj = Tbiv	2.90	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	24.50 kW	23.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.10
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	12670 kWh	15397 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	146 %	99 %
Prated	25.85 kW	34.90 kW
SCOP	7.73	2.54
Tbiv	-15 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	26.53 kW	25.32 kW
COP Tj = -7°C	3.32	2.47
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	31.17 kW	30.11 kW
COP Tj = +2°C	4.07	3.31
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.80 kW	39.96 kW
COP Tj = +7°C	4.83	4.32
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.63 kW	44.26 kW
COP Tj = 12°C	5.23	4.92
Cdh Tj = +12 °C	1.000	1.000

Pdh Tj = Tbiv	21.09 kW	23.90 kW
COP Tj = Tbiv	2.67	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.05 kW	23.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.43
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	25.85 kW	34.90 kW
Annual energy consumption Qhe	16994 kWh	33442 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	68 dB(A)	68 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	182 %	143 %
Prated	30.32 kW	28.00 kW
SCOP	4.62	3.65
Tbiv	2 °C	2 °C
TOL	-20 °C	-10 °C
Pdh Tj = +2°C	30.32 kW	28.20 kW
COP Tj = +2°C	3.46	2.70
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	40.08 kW	38.28 kW
COP Tj = +7°C	4.39	3.36
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	44.45 kW	43.69 kW
COP Tj = 12°C	5.08	4.46
Cdh Tj = +12 °C	1.000	1.000
Pdh Tj = Tbiv	30.32 kW	28.20 kW
COP Tj = Tbiv	3.46	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.32 kW	28.20 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.46	2.70
$Cd_h T_j = TOL$ 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>	9664 kWh	13839 kWh