

## Subtype THZ 5.5/8.5/504

Certificate Holder	tecalor GmbH
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City	Holzminden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	THZ 5.5/8.5/504
Registration number	011-1W0050
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.95 kg
Certification Date	06.02.2019
Testing basis	HP KEYMARK certification scheme rules V14

## Model THZ 504

Model name	THZ 504
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	No

## 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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	163 %	128 %
Prated	10.00 kW	7.00 kW
SCOP	4.14	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.42 kW	5.87 kW
COP Tj = -7°C	2.76	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	5.12 kW	3.52 kW
COP Tj = +2°C	3.94	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	3.26 kW	2.72 kW

COP Tj = +7°C	5.53	4.14
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.35 kW	3.20 kW
COP Tj = 12°C	7.09	5.29
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	8.42 kW	5.87 kW
COP Tj = Tbiv	2.76	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.37 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.88
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.63 kW	4.33 kW
Annual energy consumption Qhe	4755 kWh	4199 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	131 %	102 %
Prated	14.00 kW	11.00 kW
SCOP	3.34	2.62
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	8.62 kW	6.38 kW
COP Tj = -7°C	2.96	2.50
Pdh Tj = +2°C	5.28 kW	3.92 kW
COP Tj = +2°C	4.20	3.48
Pdh Tj = +7°C	3.42 kW	2.79 kW
COP Tj = +7°C	5.87	4.68
Pdh Tj = 12°C	3.35 kW	3.24 kW
COP Tj = 12°C	7.12	5.67
Pdh Tj = Tbiv	8.62 kW	6.38 kW
COP Tj = Tbiv	2.56	2.50

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.73 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	6.38
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	14.24 kW	10.57 kW
Annual energy consumption Qhe	10498 kWh	9932 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	207 %	150 %
Prated	9.00 kW	8.00 kW
SCOP	5.24	3.82
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = -7°C	0.00 kW	0.00 kW
COP Tj = -7°C	0.00	0.00
Pdh Tj = +2°C	8.81 kW	8.32 kW
COP Tj = +2°C	3.18	2.34
Pdh Tj = +7°C	5.77 kW	5.41 kW
COP Tj = +7°C	4.57	3.26
Pdh Tj = 12°C	3.34 kW	3.17 kW
COP Tj = 12°C	6.89	5.11
Pdh Tj = Tbiv	8.81 kW	8.32 kW
COP Tj = Tbiv	3.18	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.81 kW	8.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.34
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C

Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2243 kWh	2911 kWh

## Model THZ 8.5 flex

Model name	THZ 8.5 flex
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	No

## 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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	155 %	121 %
Prated	10.00 kW	7.00 kW
SCOP	3.95	3.10
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.42 kW	5.87 kW
COP Tj = -7°C	2.76	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	5.12 kW	3.52 kW
COP Tj = +2°C	3.94	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	3.26 kW	2.72 kW

COP Tj = +7°C	5.53	4.14
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.35 kW	3.20 kW
COP Tj = 12°C	7.09	5.29
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	8.42 kW	5.87 kW
COP Tj = Tbiv	2.76	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.37 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.88
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.63 kW	4.33 kW
Annual energy consumption Qhe	4982 kWh	4427 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	129 %	100 %
Prated	14.00 kW	11.00 kW
SCOP	3.30	2.58
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	8.62 kW	6.38 kW
COP Tj = -7°C	2.96	2.50
Pdh Tj = +2°C	5.28 kW	3.92 kW
COP Tj = +2°C	4.20	3.48
Pdh Tj = +7°C	3.42 kW	2.79 kW
COP Tj = +7°C	5.87	4.68
Pdh Tj = 12°C	3.35 kW	3.24 kW
COP Tj = 12°C	7.12	5.67
Pdh Tj = Tbiv	8.62 kW	6.38 kW
COP Tj = Tbiv	2.56	2.50

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.73 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	2.09
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	14.24 kW	10.57 kW
Annual energy consumption Qhe	10634 kWh	10109 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	5 dB(A)	50 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	184 %	133 %
Prated	9.00 kW	8.00 kW
SCOP	4.67	3.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = -7°C	0.00 kW	0.00 kW
COP Tj = -7°C	0.00	0.00
Pdh Tj = +2°C	8.81 kW	8.32 kW
COP Tj = +2°C	3.18	2.34
Cdh Tj = +2 °C		
Pdh Tj = +7°C	5.77 kW	5.41 kW
COP Tj = +7°C	4.57	3.26
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.34 kW	3.17 kW
COP Tj = 12°C	6.89	5.11
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	8.81 kW	8.32 kW
COP Tj = Tbiv	3.18	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.81 kW	8.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.34
Rated airflow rate	0 m³/h	0 m³/h



Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	24 W	24 W
PTO	69 W	69 W
PSB	24 W	24 W
PCK	55 W	55 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2517 kWh	3264 kWh

## Model THZ 5.5 eco

Model name	THZ 5.5 eco
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	154 %	121 %
Prated	6.00 kW	6.00 kW
SCOP	3.92	3.11
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.48 kW	5.54 kW
COP Tj = -7°C	2.93	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	3.28 kW	3.41 kW
COP Tj = +2°C	4.18	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.86 kW	2.71 kW

COP Tj = +7°C	5.43	4.09
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.34 kW	3.19 kW
COP Tj = 12°C	6.96	5.29
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	5.48 kW	5.54 kW
COP Tj = Tbiv	2.93	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.52 kW	3.55 kW
Annual energy consumption Qhe	3280 kWh	4138 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	135 %	101 %
Prated	9.00 kW	9.00 kW
SCOP	3.45	2.60
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	5.57 kW	5.31 kW
COP Tj = -7°C	3.14	2.52
Pdh Tj = +2°C	3.45 kW	3.28 kW
COP Tj = +2°C	4.51	3.50
Pdh Tj = +7°C	2.89 kW	2.78 kW
COP Tj = +7°C	5.78	4.56
Pdh Tj = 12°C	3.34 kW	3.23 kW
COP Tj = 12°C	6.96	5.59
Pdh Tj = Tbiv	5.57 kW	5.31 kW
COP Tj = Tbiv	3.14	2.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.36 kW	2.58 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	2.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.52 kW	8.76 kW
Annual energy consumption Qhe	6605 kWh	8311 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	134 %
Prated	7.00 kW	7.00 kW
SCOP	4.53	3.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.89 kW
COP Tj = +2°C	3.38	2.50
Pdh Tj = +7°C	4.31 kW	4.47 kW
COP Tj = +7°C	4.81	3.28
Pdh Tj = 12°C	3.32 kW	3.16 kW
COP Tj = 12°C	6.73	4.98
Pdh Tj = Tbiv	6.70 kW	6.68 kW
COP Tj = Tbiv	3.38	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 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>	1977 kWh	2694 kWh

## Model THZ 5.5 flex

Model name	THZ 5.5 flex
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	154 %	121 %
Prated	6.00 kW	6.00 kW
SCOP	3.92	3.11
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.48 kW	5.54 kW
COP Tj = -7°C	2.93	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	3.28 kW	3.41 kW
COP Tj = +2°C	4.18	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.86 kW	2.71 kW
COP Tj = +7°C	5.43	4.09

Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.34 kW	3.19 kW
COP Tj = 12°C	6.96	5.26
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	5.48 kW	5.54 kW
COP Tj = Tbiv	2.93	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.47 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.53 kW	3.55 kW
Annual energy consumption Qhe	3280 kWh	4138 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	135 %	101 %
Prated	9.00 kW	9.00 kW
SCOP	3.45	2.60
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	5.57 kW	5.31 kW
COP Tj = -7°C	3.14	2.52
Pdh Tj = +2°C	3.45 kW	3.28 kW
COP Tj = +2°C	4.51	3.50
Pdh Tj = +7°C	2.89 kW	2.78 kW
COP Tj = +7°C	5.78	4.56
Pdh Tj = 12°C	3.34 kW	3.23 kW
COP Tj = 12°C	6.96	5.59
Pdh Tj = Tbiv	5.57 kW	5.31 kW
COP Tj = Tbiv	3.14	2.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.36 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	2.09

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.25 kW	8.76 kW
Annual energy consumption Qhe	6605 kWh	8311 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	52 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	134 %
Prated	7.00 kW	7.00 kW
SCOP	4.53	3.42
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.89 kW
COP Tj = +2°C	3.38	2.50
Pdh Tj = +7°C	4.31 kW	4.47 kW
COP Tj = +7°C	4.81	3.28
Pdh Tj = 12°C	3.32 kW	3.16 kW
COP Tj = 12°C	6.73	4.98
Pdh Tj = Tbiv	6.70 kW	6.89 kW
COP Tj = Tbiv	3.38	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1977 kWh	2694 kWh



## Model THZ 5.5 SOL

Model name	THZ 5.5 SOL
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	165 %	129 %
Prated	6.00 kW	6.00 kW
SCOP	4.21	3.29
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.48 kW	5.54 kW
COP Tj = -7°C	2.93	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	3.28 kW	3.41 kW
COP Tj = +2°C	4.18	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.86 kW	2.71 kW
COP Tj = +7°C	5.43	4.09

Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.34 kW	3.19 kW
COP Tj = 12°C	6.96	5.26
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	5.48 kW	5.54 kW
COP Tj = Tbiv	2.93	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.47 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.53 kW	3.55 kW
Annual energy consumption Qhe	3052 kWh	3910 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	138 %	103 %
Prated	9.00 kW	9.00 kW
SCOP	3.53	2.64
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	5.57 kW	5.31 kW
COP Tj = -7°C	3.14	2.52
Pdh Tj = +2°C	3.45 kW	3.28 kW
COP Tj = +2°C	4.51	3.50
Pdh Tj = +7°C	2.89 kW	2.78 kW
COP Tj = +7°C	5.78	4.56
Pdh Tj = 12°C	3.34 kW	3.23 kW
COP Tj = 12°C	6.96	5.59
Pdh Tj = Tbiv	5.57 kW	5.31 kW
COP Tj = Tbiv	3.14	2.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.36 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	2.09

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.25 kW	8.76 kW
Annual energy consumption Qhe	6468 kWh	8174 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	149 %
Prated	7.00 kW	7.00 kW
SCOP	5.25	3.80
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.70 kW	6.89 kW
COP Tj = +2°C	3.38	2.50
Pdh Tj = +7°C	4.31 kW	4.47 kW
COP Tj = +7°C	4.81	3.28
Pdh Tj = 12°C	3.32 kW	3.16 kW
COP Tj = 12°C	6.73	4.98
Pdh Tj = Tbiv	6.70 kW	6.89 kW
COP Tj = Tbiv	3.38	2.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.70 kW	6.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.50
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1704 kWh	2420 kWh

## Model THZ 5.5 SOL DHW

Model name	THZ 5.5 SOL DHW
Application	Heating + DHW
Units	Indoor
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	No

## Outdoor Air/Water

### EN 16147 | Average Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	111 %
COP	2.70
Heating up time	02:06 h:min
Standby power input	132.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	352 l

### 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	3.84 kW	
El input	1.44 kW	
COP	2.66	

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	121 %	
Prated	6.00 kW	
SCOP	3.11	

Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7°C	5.54 kW
COP Tj = -7°C	2.26
Pdh Tj = +2°C	3.41 kW
COP Tj = +2°C	3.27
Pdh Tj = +7°C	2.71 kW
COP Tj = +7°C	4.09
Pdh Tj = 12°C	3.19 kW
COP Tj = 12°C	5.29
Pdh Tj = Tbiv	5.54 kW
COP Tj = Tbiv	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98
WTOL	60 °C
Poff	27 W
PTO	63 W
PSB	27 W
PCK	35 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	3.55 kW
Annual energy consumption Qhe	4138 kWh

## Model THZ 504 DHW

Model name	THZ 504 DHW
Application	Heating + DHW
Units	Indoor
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	No

## Outdoor Air/Water

### EN 16147 | Average Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	111 %
COP	2.70
Heating up time	02:06 h:min
Standby power input	132.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	352 l

### EN 16147 | Colder Climate

Declared load profile	1
Efficiency $\eta_{DHW}$	1 %
COP	1.00
Heating up time	1 h:min
Standby power input	1 W
Reference hot water temperature	1.00 °C
Mixed water at 40°C	1 l

### EN 16147 | Warmer Climate

Declared load profile	1
Efficiency $\eta_{DHW}$	1 %
COP	1.00
Heating up time	1 h:min
Standby power input	1 W
Reference hot water temperature	1.00 °C
Mixed water at 40°C	1 l

## 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	3.84 kW	
El input	1.44 kW	
COP	2.66	

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	
Sound power level outdoor	50 dB(A)	

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	128 %	
Prated	7.00 kW	
SCOP	3.27	
Tbiv	-7 °C	
TOL	-10 °C	
Pdh Tj = -7°C	5.87 kW	
COP Tj = -7°C	2.26	
Cdh Tj = -7 °C		
Pdh Tj = +2°C	3.52 kW	
COP Tj = +2°C	3.27	
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.72 kW	
COP Tj = +7°C	4.14	
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.20 kW	
COP Tj = 12°C	5.29	
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	5.87 kW	
COP Tj = Tbiv	2.26	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.67 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.88	
Rated airflow rate	0 m³/h	
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	
WTOL	60 °C	
Poff	27 W	
PTO	63 W	
PSB	27 W	
PCK	35 W	

Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	4.33 kW
Annual energy consumption Q <sub>he</sub>	4199 kWh



## Model THZ 5.5 eco DHW

Model name	THZ 5.5 eco DHW
Application	Heating + DHW
Units	Indoor
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	No

## Outdoor Air/Water

### EN 16147 | Average Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	111 %
COP	2.70
Heating up time	02:06 h:min
Standby power input	132.0 W
Reference hot water temperature	57.0 °C
Mixed water at 40°C	352 l

### 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	3.84 kW	
El input	1.44 kW	
COP	2.66	

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	52 dB(A)	

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	121 %	
Prated	6.00 kW	
SCOP	3.11	

Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7°C	5.54 kW
COP Tj = -7°C	2.26
Pdh Tj = +2°C	3.41 kW
COP Tj = +2°C	3.27
Pdh Tj = +7°C	2.71 kW
COP Tj = +7°C	4.09
Pdh Tj = 12°C	3.19 kW
COP Tj = 12°C	5.29
Pdh Tj = Tbiv	5.54 kW
COP Tj = Tbiv	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98
WTOL	60 °C
Poff	27 W
PTO	63 W
PSB	27 W
PCK	35 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	3.55 kW
Annual energy consumption Qhe	4138 kWh

## Model THZ 8.5 flex cool

Model name	THZ 8.5 flex cool
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	n/a
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	4.40 kW	3.84 kW
El input	0.93 kW	1.44 kW
COP	4.74	2.66

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	163 %	128 %
Prated	10.00 kW	7.00 kW
SCOP	4.14	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.42 kW	5.87 kW
COP Tj = -7°C	2.76	2.26
Cdh Tj = -7 °C		
Pdh Tj = +2°C	5.12 kW	3.52 kW
COP Tj = +2°C	3.94	3.27
Cdh Tj = +2 °C		
Pdh Tj = +7°C	3.26 kW	2.72 kW

COP Tj = +7°C	5.53	4.14
Cdh Tj = +7 °C		
Pdh Tj = 12°C	3.35 kW	3.20 kW
COP Tj = 12°C	7.09	5.29
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	8.42 kW	5.87 kW
COP Tj = Tbiv	2.76	2.26
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.37 kW	2.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.88
Rated airflow rate	0 m³/h	0 m³/h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.980
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.63 kW	4.33 kW
Annual energy consumption Qhe	4755 kWh	4199 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	131 %	102 %
Prated	14.00 kW	11.00 kW
SCOP	3.34	2.62
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-13 °C
Pdh Tj = -7°C	8.62 kW	6.38 kW
COP Tj = -7°C	2.96	2.50
Pdh Tj = +2°C	5.28 kW	3.92 kW
COP Tj = +2°C	4.20	3.48
Pdh Tj = +7°C	3.42 kW	2.79 kW
COP Tj = +7°C	5.87	4.68
Pdh Tj = 12°C	3.35 kW	3.24 kW
COP Tj = 12°C	7.12	5.67
Pdh Tj = Tbiv	8.62 kW	6.38 kW
COP Tj = Tbiv	2.56	2.50

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.73 kW	2.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	6.38
Rated airflow rate	0 m <sup>3</sup> /h	0 m <sup>3</sup> /h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C
Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	14.24 kW	10.57 kW
Annual energy consumption Qhe	10498 kWh	9932 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)
Sound power level outdoor	55 dB(A)	50 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	207 %	150 %
Prated	9.00 kW	8.00 kW
SCOP	5.24	3.82
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = -7°C	0.00 kW	0.00 kW
COP Tj = -7°C	0.00	0.00
Pdh Tj = +2°C	8.81 kW	8.32 kW
COP Tj = +2°C	3.18	2.34
Pdh Tj = +7°C	5.77 kW	5.41 kW
COP Tj = +7°C	4.57	3.26
Pdh Tj = 12°C	3.34 kW	3.17 kW
COP Tj = 12°C	6.89	5.11
Pdh Tj = Tbiv	8.81 kW	8.32 kW
COP Tj = Tbiv	3.18	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.81 kW	8.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.34
Rated airflow rate	0 m <sup>3</sup> /h	0 m <sup>3</sup> /h
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.98
WTOL	60 °C	60 °C

Poff	27 W	27 W
PTO	63 W	63 W
PSB	27 W	27 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2243 kWh	2911 kWh