

Subtype Monobloc LH-HHP-series 12/14/16

Certificate Holder	LumenHaus GmbH
Address	Lütticher Straße 132
ZIP	40547
City	Düsseldorf
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Monobloc LH-HHP-series 12/14/16
Registration number	011-1W1019
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.35 kg
Certification Date	12.03.2025
Testing basis	HP KEYMARK certification scheme rules rev. 14

Model LH-HHP-TE12K01CE

Model name	LH-HHP-TE12K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	12.00 kW	12.00 kW
El input	2.45 kW	3.69 kW
COP	4.90	3.25

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	150 %
Prated	12.20 kW	12.00 kW
SCOP	4.72	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.79 kW	10.62 kW
COP Tj = -7°C	3.02	2.40
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.57 kW	6.46 kW
COP Tj = +2°C	4.50	3.67
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.22 kW	4.15 kW

COP Tj = +7°C	6.60	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.69 kW	4.12 kW
COP Tj = 12°C	9.38	7.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.79 kW	10.62 kW
COP Tj = Tbiv	3.02	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.10 kW	9.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.84 kW
Annual energy consumption Qhe	5314 kWh	6477 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	254 %	174 %
Prated	11.10 kW	12.50 kW
SCOP	6.42	4.42
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.90 kW	12.30 kW
COP Tj = +2°C	3.59	2.31
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.14 kW	8.04 kW
COP Tj = +7°C	5.82	3.82
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.61 kW	3.57 kW
COP Tj = 12°C	8.30	5.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.14 kW	8.04 kW
COP Tj = Tbiv	5.82	3.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.90 kW	12.30 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.59	2.31
$Cd_h T_j = TOL$ or $Pd_h T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	75 °C	75 °C
P _{off}	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.20 kW
Annual energy consumption Q _{he}	2308 kWh	3775 kWh

Model LH-HHP-TE14K01CE

Model name	LH-HHP-TE14K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	14.00 kW	14.00 kW
El input	2.92 kW	4.38 kW
COP	4.80	3.20

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	150 %
Prated	14.50 kW	14.00 kW
SCOP	4.72	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.83 kW	12.38 kW
COP Tj = -7°C	3.00	2.40
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.81 kW	7.54 kW
COP Tj = +2°C	4.52	3.66
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.02 kW	4.85 kW

COP Tj = +7°C	6.40	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.68 kW	2.15 kW
COP Tj = 12°C	10.00	7.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.83 kW	12.38 kW
COP Tj = Tbiv	3.00	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.46 kW	10.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.73	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.04 kW	3.50 kW
Annual energy consumption Qhe	6317 kWh	7563 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	259 %	178 %
Prated	12.10 kW	13.70 kW
SCOP	6.55	4.52
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.60 kW
COP Tj = +2°C	3.44	2.18
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.78 kW	8.83 kW
COP Tj = +7°C	5.84	3.91
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.23 kW	4.08 kW
COP Tj = 12°C	8.43	5.90
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.78 kW	8.83 kW
COP Tj = Tbiv	5.84	3.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.60 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.44	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.10 kW
Annual energy consumption Qhe	2463 kWh	4037 kWh

Model LH-HHP-TE16K01CE

Model name	LH-HHP-TE16K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	15.10 kW	15.10 kW
El input	3.21 kW	4.79 kW
COP	4.70	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	188 %	150 %
Prated	15.50 kW	14.00 kW
SCOP	4.77	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.71 kW	12.38 kW
COP Tj = -7°C	3.01	2.27
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.35 kW	7.54 kW
COP Tj = +2°C	4.48	3.66
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.37 kW	4.85 kW

COP Tj = +7°C	6.73	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.38 kW	4.43 kW
COP Tj = 12°C	10.05	8.75
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.71 kW	12.38 kW
COP Tj = Tbiv	3.01	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.42 kW	10.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.08 kW	3.50 kW
Annual energy consumption Qhe	6604 kWh	7563 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	246 %	176 %
Prated	13.10 kW	13.80 kW
SCOP	6.22	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.97 kW	13.67 kW
COP Tj = +2°C	3.35	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.42 kW	8.87 kW
COP Tj = +7°C	5.31	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.29 kW	3.94 kW
COP Tj = 12°C	8.23	5.88
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.42 kW	8.87 kW
COP Tj = Tbiv	5.31	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.97 kW	13.67 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.35	2.25
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	75 °C	75 °C
P _{off}	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	0.13 kW
Annual energy consumption Q _{he}	2812 kWh	4118 kWh

Model LH-HHP-SE12K01CE

Model name	LH-HHP-SE12K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
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	12.00 kW	12.00 kW
El input	2.45 kW	3.69 kW
COP	4.90	3.25

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	150 %
Prated	12.20 kW	12.00 kW
SCOP	4.72	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.79 kW	10.62 kW
COP Tj = -7°C	3.02	2.40
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.57 kW	6.46 kW
COP Tj = +2°C	4.50	3.67
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.22 kW	4.15 kW

COP Tj = +7°C	6.60	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.69 kW	4.12 kW
COP Tj = 12°C	9.38	7.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.79 kW	10.62 kW
COP Tj = Tbiv	3.02	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.10 kW	9.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.61	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.84 kW
Annual energy consumption Qhe	5314 kWh	6477 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	254 %	174 %
Prated	11.10 kW	12.50 kW
SCOP	6.42	4.42
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.90 kW	12.30 kW
COP Tj = +2°C	3.59	2.31
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.14 kW	8.04 kW
COP Tj = +7°C	5.82	3.82
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.61 kW	3.57 kW
COP Tj = 12°C	8.30	5.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.14 kW	8.04 kW
COP Tj = Tbiv	5.82	3.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.90 kW	12.30 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.59	2.31
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	75 °C	75 °C
P _{off}	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.20 kW
Annual energy consumption Q _{he}	2308 kWh	3775 kWh

Model LH-HHP-SE14K01CE

Model name	LH-HHP-SE14K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
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	14.00 kW	14.00 kW
El input	2.92 kW	4.38 kW
COP	4.80	3.20

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	150 %
Prated	14.50 kW	14.00 kW
SCOP	4.72	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.83 kW	12.38 kW
COP Tj = -7°C	3.00	2.40
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.81 kW	7.54 kW
COP Tj = +2°C	4.52	3.66
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.02 kW	4.85 kW

COP Tj = +7°C	6.40	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.68 kW	2.15 kW
COP Tj = 12°C	10.00	7.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.83 kW	12.38 kW
COP Tj = Tbiv	3.00	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.46 kW	10.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.73	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.04 kW	3.50 kW
Annual energy consumption Qhe	6317 kWh	7563 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	259 %	178 %
Prated	12.10 kW	13.70 kW
SCOP	6.55	4.52
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.00 kW	13.60 kW
COP Tj = +2°C	3.44	2.18
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.78 kW	8.83 kW
COP Tj = +7°C	5.84	3.91
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.23 kW	4.08 kW
COP Tj = 12°C	8.43	5.90
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.78 kW	8.83 kW
COP Tj = Tbiv	5.84	3.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	13.60 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.44	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.10 kW
Annual energy consumption Qhe	2463 kWh	4037 kWh

Model LH-HHP-SE16K01CE

Model name	LH-HHP-SE16K01CE
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer
Reversibility	Yes
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	15.10 kW	15.10 kW
El input	3.21 kW	4.79 kW
COP	4.70	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	188 %	150 %
Prated	15.50 kW	14.00 kW
SCOP	4.77	3.82
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.71 kW	12.38 kW
COP Tj = -7°C	3.01	2.27
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.35 kW	7.54 kW
COP Tj = +2°C	4.48	3.66
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.37 kW	4.85 kW

COP Tj = +7°C	6.73	5.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.38 kW	4.43 kW
COP Tj = 12°C	10.05	8.75
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	13.71 kW	12.38 kW
COP Tj = Tbiv	3.01	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.42 kW	10.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.08 kW	3.50 kW
Annual energy consumption Qhe	6604 kWh	7563 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	246 %	176 %
Prated	13.10 kW	13.80 kW
SCOP	6.22	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.97 kW	13.67 kW
COP Tj = +2°C	3.35	2.25
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.42 kW	8.87 kW
COP Tj = +7°C	5.31	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.29 kW	3.94 kW
COP Tj = 12°C	8.23	5.88
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.42 kW	8.87 kW
COP Tj = Tbiv	5.31	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.97 kW	13.67 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.25
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	2 W	2 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	0.13 kW
Annual energy consumption Qhe	2812 kWh	4118 kWh