

Subtype Buderus Logatherm WLW MB-4/5/7 AR

Certificate Holder	Bosch Thermotechnik GmbH (Buderus)
Address	Sophienstraße 30-32
ZIP	35576
City	Wetzlar
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Buderus Logatherm WLW MB-4/5/7 AR
Registration number	011-1W0582
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.95 kg
Certification Date	30.03.2023
Testing basis	HP KEYMARK certification scheme rules rev. 11

Model Logatherm WLW176i-4 AR E (60°C)

Model name	Logatherm WLW176i-4 AR E (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	130 %
Prated	4.4 kW	4 kW
SCOP	4.58	3.32
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	1987 kWh	2492 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	158 %	109 %
Prated	3.8 kW	3.2 kW
SCOP	4.03	2.81
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.46 kW	1.27 kW
COP Tj = +2°C	5.03	3.43
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12 °C	6.63	5.25
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2327 kWh	2807 kWh
Pdh Tj = -15 °C (if TOL	3.12	2.64
COP Tj = -15 °C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	210 %	143 %
Prated	4.3 kW	3.8 kW
SCOP	5.33	3.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	4.31 kW	3.92 kW
COP Tj = +2 °C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	2.64 kW	2.41 kW
COP Tj = +7 °C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12 °C	1.82 kW	1.79 kW
COP Tj = 12 °C	6.72	5.01
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1077 kWh	1389 kWh

Model Logatherm WLW176i-4 AR T180 (60°C)

Model name	Logatherm WLW176i-4 AR T180 (60°C)
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	85 %
COP	1.94
Heating up time	3:08 h:min
Standby power input	93.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	73 %
COP	1.65
Heating up time	3:25 h:min
Standby power input	120.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	98 %
COP	2.21
Heating up time	3:08 h:min
Standby power input	92.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	1.97 kW
El input	0.59 kW	0.8 kW
COP	4.81	2.47

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.89 kW	3.51 kW
COP Tj = -7°C	2.88	2.10
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.23 kW
COP Tj = +2°C	4.46	3.19
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.53 kW
COP Tj = +7°C	6.12	4.26
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.96 kW	1.82 kW
COP Tj = 12°C	7.37	5.30
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.89 kW	3.51 kW
COP Tj = Tbiv	2.88	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.61 kW	3.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W

PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.79 kW	0.90 kW
Annual energy consumption Q _{he}	1999 kWh	2539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	157 %	108 %
Prated	3.8 kW	3.2 kW
SCOP	3.99	2.76
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	2.25 kW	1.84 kW
COP T _j = -7°C	3.4	2.21
C _{dh} T _j = -7 °C	0.98	0.98
P _{dh} T _j = +2°C	1.46 kW	1.26 kW
COP T _j = +2°C	4.98	3.41
C _{dh} T _j = +2 °C	0.95	0.96
P _{dh} T _j = +7°C	1.6 kW	1.56 kW
COP T _j = +7°C	5.72	4.17
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.8 kW	1.77 kW
COP T _j = 12°C	6.57	5.14
C _{dh} T _j = +12 °C	0.95	0.96
P _{dh} T _j = T _{biv}	3.11 kW	2.6 kW
COP T _j = T _{biv}	2.49	1.78
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	2.2 kW	2.02 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.89	1.35
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	60 °C	60 °C
P _{off}	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.18 kW
Annual energy consumption Q _{he}	2345 kWh	2855 kWh

Pdh Tj = -15°C (if TOL	3.11	2.6
COP Tj = -15°C (if TOL	2.49	1.78
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	141 %
Prated	4.3 kW	3.8 kW
SCOP	5.29	3.59
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.88 kW
COP Tj = +2°C	3.2	2.09
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.63 kW	2.38 kW
COP Tj = +7°C	4.92	3.03
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.67	4.91
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.88 kW
COP Tj = Tbiv	3.2	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1085 kWh	1414 kWh

Model Logatherm WLW186i-4 AR E W

Model name	Logatherm WLW186i-4 AR E W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	130 %
Prated	4.4 kW	4 kW
SCOP	4.58	3.32
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	1987 kWh	2492 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	158 %	109 %
Prated	3.8 kW	3.2 kW
SCOP	4.03	2.81
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.46 kW	1.27 kW
COP Tj = +2°C	5.03	3.43
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12 °C	6.63	5.25
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2327 kWh	2807 kWh
Pdh Tj = -15 °C (if TOL	3.12	2.64
COP Tj = -15 °C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	210 %	143 %
Prated	4.3 kW	3.8 kW
SCOP	5.33	3.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	4.31 kW	3.92 kW
COP Tj = +2 °C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	2.64 kW	2.41 kW
COP Tj = +7 °C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12 °C	1.82 kW	1.79 kW
COP Tj = 12 °C	6.72	5.01
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1077 kWh	1389 kWh

Model Logatherm WLW186i-4 AR E

Model name	Logatherm WLW186i-4 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	130 %
Prated	4.4 kW	4 kW
SCOP	4.58	3.32
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	1987 kWh	2492 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	158 %	109 %
Prated	3.8 kW	3.2 kW
SCOP	4.03	2.81
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.46 kW	1.27 kW
COP Tj = +2°C	5.03	3.43
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12 °C	6.63	5.25
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2327 kWh	2807 kWh
Pdh Tj = -15 °C (if TOL	3.12	2.64
COP Tj = -15 °C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	210 %	143 %
Prated	4.3 kW	3.8 kW
SCOP	5.33	3.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	4.31 kW	3.92 kW
COP Tj = +2 °C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	2.64 kW	2.41 kW
COP Tj = +7 °C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12 °C	1.82 kW	1.79 kW
COP Tj = 12 °C	6.72	5.01
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1077 kWh	1389 kWh

Model Logatherm WLW186i-4 AR T180

Model name	Logatherm WLW186i-4 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	85 %
COP	1.94
Heating up time	3:08 h:min
Standby power input	93.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	73 %
COP	1.65
Heating up time	3:25 h:min
Standby power input	120.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	98 %
COP	2.21
Heating up time	3:08 h:min
Standby power input	92.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	1.97 kW
El input	0.59 kW	0.8 kW
COP	4.81	2.47

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.89 kW	3.51 kW
COP Tj = -7°C	2.88	2.10
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.23 kW
COP Tj = +2°C	4.46	3.19
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.53 kW
COP Tj = +7°C	6.12	4.26
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.96 kW	1.82 kW
COP Tj = 12°C	7.37	5.30
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.89 kW	3.51 kW
COP Tj = Tbiv	2.88	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.61 kW	3.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W

PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.79 kW	0.90 kW
Annual energy consumption Q _{he}	1999 kWh	2539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	157 %	108 %
Prated	3.8 kW	3.2 kW
SCOP	3.99	2.76
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	2.25 kW	1.84 kW
COP T _j = -7°C	3.4	2.21
C _{dh} T _j = -7 °C	0.98	0.98
P _{dh} T _j = +2°C	1.46 kW	1.26 kW
COP T _j = +2°C	4.98	3.41
C _{dh} T _j = +2 °C	0.95	0.96
P _{dh} T _j = +7°C	1.6 kW	1.56 kW
COP T _j = +7°C	5.72	4.17
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.8 kW	1.77 kW
COP T _j = 12°C	6.57	5.14
C _{dh} T _j = +12 °C	0.95	0.96
P _{dh} T _j = T _{biv}	3.11 kW	2.6 kW
COP T _j = T _{biv}	2.49	1.78
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	2.2 kW	2.02 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.89	1.35
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.18 kW
Annual energy consumption Q _{he}	2345 kWh	2855 kWh

Pdh Tj = -15°C (if TOL	3.11	2.6
COP Tj = -15°C (if TOL	2.49	1.78
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	141 %
Prated	4.3 kW	3.8 kW
SCOP	5.29	3.59
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.88 kW
COP Tj = +2°C	3.2	2.09
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.63 kW	2.38 kW
COP Tj = +7°C	4.92	3.03
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.67	4.91
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.88 kW
COP Tj = Tbiv	3.2	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1085 kWh	1414 kWh

Model Logatherm WLW186i-4 AR T180 W

Model name	Logatherm WLW186i-4 AR T180 W
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	85 %
COP	1.94
Heating up time	3:08 h:min
Standby power input	93.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	73 %
COP	1.65
Heating up time	3:25 h:min
Standby power input	120.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	98 %
COP	2.21
Heating up time	3:08 h:min
Standby power input	92.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	1.97 kW
El input	0.59 kW	0.8 kW
COP	4.81	2.47

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.89 kW	3.51 kW
COP Tj = -7°C	2.88	2.10
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.23 kW
COP Tj = +2°C	4.46	3.19
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.53 kW
COP Tj = +7°C	6.12	4.26
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.96 kW	1.82 kW
COP Tj = 12°C	7.37	5.30
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.89 kW	3.51 kW
COP Tj = Tbiv	2.88	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.61 kW	3.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W

PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.79 kW	0.90 kW
Annual energy consumption Q _{he}	1999 kWh	2539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	157 %	108 %
Prated	3.8 kW	3.2 kW
SCOP	3.99	2.76
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	2.25 kW	1.84 kW
COP T _j = -7°C	3.4	2.21
C _{dh} T _j = -7 °C	0.98	0.98
P _{dh} T _j = +2°C	1.46 kW	1.26 kW
COP T _j = +2°C	4.98	3.41
C _{dh} T _j = +2 °C	0.95	0.96
P _{dh} T _j = +7°C	1.6 kW	1.56 kW
COP T _j = +7°C	5.72	4.17
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.8 kW	1.77 kW
COP T _j = 12°C	6.57	5.14
C _{dh} T _j = +12 °C	0.95	0.96
P _{dh} T _j = T _{biv}	3.11 kW	2.6 kW
COP T _j = T _{biv}	2.49	1.78
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	2.2 kW	2.02 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.89	1.35
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.18 kW
Annual energy consumption Q _{he}	2345 kWh	2855 kWh

Pdh Tj = -15°C (if TOL	3.11	2.6
COP Tj = -15°C (if TOL	2.49	1.78
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	141 %
Prated	4.3 kW	3.8 kW
SCOP	5.29	3.59
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.88 kW
COP Tj = +2°C	3.2	2.09
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.63 kW	2.38 kW
COP Tj = +7°C	4.92	3.03
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.67	4.91
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.88 kW
COP Tj = Tbiv	3.2	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1085 kWh	1414 kWh

Model Logatherm WLW176i-5 AR E (60°C)

Model name	Logatherm WLW176i-5 AR E (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	137 %
Prated	6.2 kW	6.2 kW
SCOP	4.57	3.5
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2803 kWh	3657 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	167 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.25	3.17
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW

COP Tj = 12°C	6.87	5.92
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.1	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3135 kWh	4116 kWh
Pdh Tj = -15°C (if TOL	4.62	4.3
COP Tj = -15°C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	219 %	157 %
Prated	6.4 kW	5.9 kW
SCOP	5.56	4
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.43 kW	5.93 kW
COP Tj = +2°C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	3.84 kW
COP Tj = +7°C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.95 kW	1.78 kW
COP Tj = 12°C	7.38	5.15
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1538 kWh	1969 kWh

Model Logatherm WLW176i-5 AR T180 (60°C)

Model name	Logatherm WLW176i-5 AR T180 (60°C)
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.17
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	75 %
COP	1.75
Heating up time	3:11 h:min
Standby power input	131.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.48
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.52 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.49 kW
COP Tj = +2°C	4.61	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.20 kW
COP Tj = +7°C	6.04	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.87 kW
COP Tj = 12°C	7.20	5.72
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.52 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W

PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	1.15 kW
Annual energy consumption Q _{he}	2818 kWh	3699 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	166 %	122 %
Prated	5.4 kW	5.3 kW
SCOP	4.22	3.13
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	3.44 kW	3.15 kW
COP T _j = -7°C	3.42	2.61
C _{dh} T _j = -7 °C	0.98	0.99
P _{dh} T _j = +2°C	2.07 kW	2.08 kW
COP T _j = +2°C	5.44	3.73
C _{dh} T _j = +2 °C	0.96	0.97
P _{dh} T _j = +7°C	1.74 kW	1.7 kW
COP T _j = +7°C	6.21	5.08
C _{dh} T _j = +7 °C	0.94	0.95
P _{dh} T _j = 12°C	1.91 kW	1.89 kW
COP T _j = 12°C	6.81	5.81
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	4.61 kW	4.26 kW
COP T _j = T _{biv}	2.4	1.89
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	4 kW	3.6 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.09	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	60 °C	60 °C
P _{off}	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.4 kW	1.7 kW
Annual energy consumption Q _{he}	3152 kWh	4177 kWh

Pdh Tj = -15°C (if TOL	4.61	4.26
COP Tj = -15°C (if TOL	2.4	1.89
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.95
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.42 kW	5.89 kW
COP Tj = +2°C	2.9	2.13
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.13 kW	3.81 kW
COP Tj = +7°C	4.77	3.47
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.94 kW	1.77 kW
COP Tj = 12°C	7.32	5.05
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.42 kW	5.89 kW
COP Tj = Tbiv	2.9	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.42 kW	5.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1998 kWh

Model Logatherm WLW186i-5 AR E W

Model name	Logatherm WLW186i-5 AR E W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	137 %
Prated	6.2 kW	6.2 kW
SCOP	4.57	3.5
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2803 kWh	3657 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	167 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.25	3.17
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW

COP Tj = 12°C	6.87	5.92
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.1	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3135 kWh	4116 kWh
Pdh Tj = -15°C (if TOL	4.62	4.3
COP Tj = -15°C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	219 %	157 %
Prated	6.4 kW	5.9 kW
SCOP	5.56	4
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.43 kW	5.93 kW
COP Tj = +2°C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	3.84 kW
COP Tj = +7°C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.95 kW	1.78 kW
COP Tj = 12°C	7.38	5.15
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1538 kWh	1969 kWh

Model Logatherm WLW186i-5 AR T180

Model name	Logatherm WLW186i-5 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.17
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	75 %
COP	1.75
Heating up time	3:11 h:min
Standby power input	131.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.48
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.52 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.49 kW
COP Tj = +2°C	4.61	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.20 kW
COP Tj = +7°C	6.04	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.87 kW
COP Tj = 12°C	7.20	5.72
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.52 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W

PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	1.15 kW
Annual energy consumption Q _{he}	2818 kWh	3699 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	166 %	122 %
Prated	5.4 kW	5.3 kW
SCOP	4.22	3.13
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	3.44 kW	3.15 kW
COP T _j = -7°C	3.42	2.61
C _{dh} T _j = -7 °C	0.98	0.99
P _{dh} T _j = +2°C	2.07 kW	2.08 kW
COP T _j = +2°C	5.44	3.73
C _{dh} T _j = +2 °C	0.96	0.97
P _{dh} T _j = +7°C	1.74 kW	1.7 kW
COP T _j = +7°C	6.21	5.08
C _{dh} T _j = +7 °C	0.94	0.95
P _{dh} T _j = 12°C	1.91 kW	1.89 kW
COP T _j = 12°C	6.81	5.81
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	4.61 kW	4.26 kW
COP T _j = T _{biv}	2.4	1.89
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	4 kW	3.6 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.09	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.4 kW	1.7 kW
Annual energy consumption Q _{he}	3152 kWh	4177 kWh

Pdh Tj = -15°C (if TOL	4.61	4.26
COP Tj = -15°C (if TOL	2.4	1.89
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.95
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.42 kW	5.89 kW
COP Tj = +2°C	2.9	2.13
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.13 kW	3.81 kW
COP Tj = +7°C	4.77	3.47
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.94 kW	1.77 kW
COP Tj = 12°C	7.32	5.05
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.42 kW	5.89 kW
COP Tj = Tbiv	2.9	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.42 kW	5.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1998 kWh

Model Logatherm WLW186i-5 AR E

Model name	Logatherm WLW186i-5 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	137 %
Prated	6.2 kW	6.2 kW
SCOP	4.57	3.5
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2803 kWh	3657 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.25	3.17
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW

COP Tj = 12 °C	6.87	5.92
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.1	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3135 kWh	4116 kWh
Pdh Tj = -15 °C (if TOL	4.62	4.3
COP Tj = -15 °C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	219 %	157 %
Prated	6.4 kW	5.9 kW
SCOP	5.56	4
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	6.43 kW	5.93 kW
COP Tj = +2 °C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.14 kW	3.84 kW
COP Tj = +7 °C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12 °C	1.95 kW	1.78 kW
COP Tj = 12 °C	7.38	5.15
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1538 kWh	1969 kWh

Model Logatherm WLW186i-5 AR T180 W

Model name	Logatherm WLW186i-5 AR T180 W
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.17
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	75 %
COP	1.75
Heating up time	3:11 h:min
Standby power input	131.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.48
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.52 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.49 kW
COP Tj = +2°C	4.61	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.20 kW
COP Tj = +7°C	6.04	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.87 kW
COP Tj = 12°C	7.20	5.72
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.52 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W

PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	1.15 kW
Annual energy consumption Q _{he}	2818 kWh	3699 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	166 %	122 %
Prated	5.4 kW	5.3 kW
SCOP	4.22	3.13
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	3.44 kW	3.15 kW
COP T _j = -7°C	3.42	2.61
C _{dh} T _j = -7 °C	0.98	0.99
P _{dh} T _j = +2°C	2.07 kW	2.08 kW
COP T _j = +2°C	5.44	3.73
C _{dh} T _j = +2 °C	0.96	0.97
P _{dh} T _j = +7°C	1.74 kW	1.7 kW
COP T _j = +7°C	6.21	5.08
C _{dh} T _j = +7 °C	0.94	0.95
P _{dh} T _j = 12°C	1.91 kW	1.89 kW
COP T _j = 12°C	6.81	5.81
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	4.61 kW	4.26 kW
COP T _j = T _{biv}	2.4	1.89
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	4 kW	3.6 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.09	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.4 kW	1.7 kW
Annual energy consumption Q _{he}	3152 kWh	4177 kWh

Pdh Tj = -15°C (if TOL	4.61	4.26
COP Tj = -15°C (if TOL	2.4	1.89
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.95
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.42 kW	5.89 kW
COP Tj = +2°C	2.9	2.13
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.13 kW	3.81 kW
COP Tj = +7°C	4.77	3.47
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.94 kW	1.77 kW
COP Tj = 12°C	7.32	5.05
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.42 kW	5.89 kW
COP Tj = Tbiv	2.9	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.42 kW	5.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1998 kWh

Model Logatherm WLW176i-7 AR E (60°C)

Model name	Logatherm WLW176i-7 AR E (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	138 %
Prated	6.6 kW	6.6 kW
SCOP	4.58	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	2975 kWh	3878 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	3.01
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	7	5.53
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4397 kWh	5410 kWh
Pdh Tj = -15°C (if TOL	6.01	5.37
COP Tj = -15°C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	207 %	161 %
Prated	7.1 kW	5.7 kW
SCOP	5.25	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.72 kW
COP Tj = +2°C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.67 kW
COP Tj = +7°C	4.23	3.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.37	5.59
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1807 kWh	1860 kWh

Model Logatherm WLW176i-7 AR T180 (60°C)

Model name	Logatherm WLW176i-7 AR T180 (60°C)
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	90 %
COP	2.34
Heating up time	2:40 h:min
Standby power input	92.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	73 %
COP	1.87
Heating up time	3:23 h:min
Standby power input	131.2 W
Reference hot water temperature	51 °C
Mixed water at 40°C	238 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.59
Heating up time	2:39 h:min
Standby power input	86.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.41 kW	5.90 kW
COP Tj = -7°C	2.60	2.07
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.50 kW	3.50 kW
COP Tj = +2°C	4.66	3.46
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.44 kW
COP Tj = +7°C	6.05	4.62
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.79 kW
COP Tj = 12°C	7.17	5.64
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.41 kW	5.90 kW
COP Tj = Tbiv	2.60	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.85 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.44 kW
Annual energy consumption Q _{he}	2990 kWh	3917 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	116 %
Prated	7.3 kW	6.6 kW
SCOP	4.07	2.97
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.06 kW	3.69 kW
COP T _j = -7°C	3.29	2.36
C _{dh} T _j = -7 °C	0.99	0.99
P _{dh} T _j = +2°C	2.52 kW	2.37 kW
COP T _j = +2°C	5.17	3.62
C _{dh} T _j = +2 °C	0.97	0.98
P _{dh} T _j = +7°C	1.86 kW	1.83 kW
COP T _j = +7°C	6.21	4.64
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.83 kW	1.78 kW
COP T _j = 12°C	6.95	5.42
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	6 kW	5.33 kW
COP T _j = T _{biv}	2.37	1.95
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.01 kW	3.23 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.02	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	60 °C	60 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.29 kW	3.37 kW
Annual energy consumption Q _{he}	4418 kWh	5475 kWh

Pdh Tj = -15°C (if TOL	6	5.33
COP Tj = -15°C (if TOL	2.37	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	158 %
Prated	7.1 kW	5.7 kW
SCOP	5.21	4.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.68 kW
COP Tj = +2°C	2.81	2.16
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.64 kW
COP Tj = +7°C	4.2	3.38
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.82 kW
COP Tj = 12°C	7.31	5.48
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.68 kW
COP Tj = Tbiv	2.81	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1820 kWh	1887 kWh

Model Logatherm WLW186i-7 AR E W

Model name	Logatherm WLW186i-7 AR E W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	138 %
Prated	6.6 kW	6.6 kW
SCOP	4.58	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	2975 kWh	3878 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	3.01
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	7	5.53
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4397 kWh	5410 kWh
Pdh Tj = -15°C (if TOL	6.01	5.37
COP Tj = -15°C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	207 %	161 %
Prated	7.1 kW	5.7 kW
SCOP	5.25	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.72 kW
COP Tj = +2°C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.67 kW
COP Tj = +7°C	4.23	3.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.37	5.59
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1807 kWh	1860 kWh

Model Logatherm WLW186i-7 AR E

Model name	Logatherm WLW186i-7 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	138 %
Prated	6.6 kW	6.6 kW
SCOP	4.58	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	2975 kWh	3878 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	3.01
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12 °C	7	5.53
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4397 kWh	5410 kWh
Pdh Tj = -15 °C (if TOL	6.01	5.37
COP Tj = -15 °C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	207 %	161 %
Prated	7.1 kW	5.7 kW
SCOP	5.25	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	7.08 kW	5.72 kW
COP Tj = +2 °C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.25 kW	3.67 kW
COP Tj = +7 °C	4.23	3.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12 °C	1.88 kW	1.83 kW
COP Tj = 12 °C	7.37	5.59
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1807 kWh	1860 kWh

Model Logatherm WLW186i-7 AR T180 W

Model name	Logatherm WLW186i-7 AR T180 W
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	90 %
COP	2.34
Heating up time	2:40 h:min
Standby power input	92.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	73 %
COP	1.87
Heating up time	3:23 h:min
Standby power input	131.2 W
Reference hot water temperature	51 °C
Mixed water at 40°C	238 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.59
Heating up time	2:39 h:min
Standby power input	86.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.41 kW	5.90 kW
COP Tj = -7°C	2.60	2.07
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.50 kW	3.50 kW
COP Tj = +2°C	4.66	3.46
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.44 kW
COP Tj = +7°C	6.05	4.62
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.79 kW
COP Tj = 12°C	7.17	5.64
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.41 kW	5.90 kW
COP Tj = Tbiv	2.60	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.85 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.44 kW
Annual energy consumption Q _{he}	2990 kWh	3917 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	116 %
Prated	7.3 kW	6.6 kW
SCOP	4.07	2.97
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.06 kW	3.69 kW
COP T _j = -7°C	3.29	2.36
C _{dh} T _j = -7 °C	0.99	0.99
P _{dh} T _j = +2°C	2.52 kW	2.37 kW
COP T _j = +2°C	5.17	3.62
C _{dh} T _j = +2 °C	0.97	0.98
P _{dh} T _j = +7°C	1.86 kW	1.83 kW
COP T _j = +7°C	6.21	4.64
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.83 kW	1.78 kW
COP T _j = 12°C	6.95	5.42
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	6 kW	5.33 kW
COP T _j = T _{biv}	2.37	1.95
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.01 kW	3.23 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.02	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.29 kW	3.37 kW
Annual energy consumption Q _{he}	4418 kWh	5475 kWh

Pdh Tj = -15°C (if TOL	6	5.33
COP Tj = -15°C (if TOL	2.37	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	158 %
Prated	7.1 kW	5.7 kW
SCOP	5.21	4.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.68 kW
COP Tj = +2°C	2.81	2.16
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.64 kW
COP Tj = +7°C	4.2	3.38
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.82 kW
COP Tj = 12°C	7.31	5.48
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.68 kW
COP Tj = Tbiv	2.81	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1820 kWh	1887 kWh

Model Logatherm WLW186i-7 AR T180

Model name	Logatherm WLW186i-7 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	90 %
COP	2.34
Heating up time	2:40 h:min
Standby power input	92.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	73 %
COP	1.87
Heating up time	3:23 h:min
Standby power input	131.2 W
Reference hot water temperature	51 °C
Mixed water at 40°C	238 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.59
Heating up time	2:39 h:min
Standby power input	86.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.41 kW	5.90 kW
COP Tj = -7°C	2.60	2.07
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.50 kW	3.50 kW
COP Tj = +2°C	4.66	3.46
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.44 kW
COP Tj = +7°C	6.05	4.62
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.79 kW
COP Tj = 12°C	7.17	5.64
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.41 kW	5.90 kW
COP Tj = Tbiv	2.60	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.85 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.44 kW
Annual energy consumption Q _{he}	2990 kWh	3917 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	116 %
Prated	7.3 kW	6.6 kW
SCOP	4.07	2.97
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.06 kW	3.69 kW
COP T _j = -7°C	3.29	2.36
C _{dh} T _j = -7 °C	0.99	0.99
P _{dh} T _j = +2°C	2.52 kW	2.37 kW
COP T _j = +2°C	5.17	3.62
C _{dh} T _j = +2 °C	0.97	0.98
P _{dh} T _j = +7°C	1.86 kW	1.83 kW
COP T _j = +7°C	6.21	4.64
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.83 kW	1.78 kW
COP T _j = 12°C	6.95	5.42
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	6 kW	5.33 kW
COP T _j = T _{biv}	2.37	1.95
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.01 kW	3.23 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.02	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.29 kW	3.37 kW
Annual energy consumption Q _{he}	4418 kWh	5475 kWh

Pdh Tj = -15°C (if TOL	6	5.33
COP Tj = -15°C (if TOL	2.37	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	158 %
Prated	7.1 kW	5.7 kW
SCOP	5.21	4.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.68 kW
COP Tj = +2°C	2.81	2.16
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.64 kW
COP Tj = +7°C	4.2	3.38
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.82 kW
COP Tj = 12°C	7.31	5.48
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.68 kW
COP Tj = Tbiv	2.81	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1820 kWh	1887 kWh

Model Logatherm WLW176i-4 AR TP70 (60°C)

Model name	Logatherm WLW176i-4 AR TP70 (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	1.99 kW
El input	0.59 kW	0.8 kW
COP	4.82	2.51

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	128 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.90 kW	3.53 kW
COP Tj = -7°C	2.88	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.25 kW
COP Tj = +2°C	4.47	3.21

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.54 kW
COP Tj = +7°C	6.13	4.27
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.38	5.32
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.90 kW	3.53 kW
COP Tj = Tbiv	2.88	3.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.62 kW	3.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.78 kW	0.87 kW
Annual energy consumption Qhe	1996 kWh	2526 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	105 %
Prated	3.8 kW	3.2 kW
SCOP	3.93	2.71
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.85 kW
COP Tj = -7°C	3.41	2.23
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.86 kW	1.77 kW
COP Tj = +2°C	4.78	3.26
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.61 kW	1.56 kW
COP Tj = +7°C	5.73	4.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12°C	6.58	5.16
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.14 kW	2.63 kW
COP Tj = Tbiv	2.56	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.21 kW	2.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.9	1.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.59 kW	1.15 kW
Annual energy consumption Qhe	2385 kWh	2911 kWh
Pdh Tj = -15°C (if TOL	3.14	2.63
COP Tj = -15°C (if TOL	2.56	1.79
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	209 %	142 %
Prated	4.3 kW	3.8 kW
SCOP	5.30	3.62
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.79 kW
COP Tj = +2°C	3.2	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.4 kW
COP Tj = +7°C	4.93	3.05
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.68	4.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.79 kW
COP Tj = Tbiv	3.2	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1083 kWh	1402 kWh

Model Logatherm WLW176i-5 AR TP70 (60°C)

Model name	Logatherm WLW176i-5 AR TP70 (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.53 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.50 kW
COP Tj = +2°C	4.62	3.37

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.05	4.79
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.88 kW
COP Tj = 12°C	7.21	5.74
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.53 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.44 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.76 kW	1.12 kW
Annual energy consumption Qhe	2814 kWh	3686 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	167 %	123 %
Prated	5.4 kW	5.3 kW
SCOP	4.24	3.14
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.44 kW	3.16 kW
COP Tj = -7°C	3.43	2.62
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.09 kW
COP Tj = +2°C	5.45	3.75
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.22	5.1
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.91 kW	1.9 kW

COP Tj = 12 °C	6.82	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.64 kW	4.28 kW
COP Tj = Tbiv	2.45	1.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.09	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.67 kW
Annual energy consumption Qhe	3138 kWh	4159 kWh
Pdh Tj = -15 °C (if TOL	4.64	4.28
COP Tj = -15 °C (if TOL	2.45	1.9
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.96
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	6.43 kW	5.91 kW
COP Tj = +2 °C	2.9	2.14
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.13 kW	3.83 kW
COP Tj = +7 °C	4.78	3.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12 °C	1.94 kW	1.78 kW
COP Tj = 12 °C	7.31	5.06
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.91 kW
COP Tj = Tbiv	2.9	2.14

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.14
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1990 kWh

Model Logatherm WLW186i-4 AR TP70 W

Model name	Logatherm WLW186i-4 AR TP70 W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	1.99 kW
El input	0.59 kW	0.8 kW
COP	4.82	2.51

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	128 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.90 kW	3.53 kW
COP Tj = -7°C	2.88	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.25 kW
COP Tj = +2°C	4.47	3.21

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.54 kW
COP Tj = +7°C	6.13	4.27
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.38	5.32
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.90 kW	3.53 kW
COP Tj = Tbiv	2.88	3.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.62 kW	3.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.78 kW	0.87 kW
Annual energy consumption Qhe	1996 kWh	2526 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	105 %
Prated	3.8 kW	3.2 kW
SCOP	3.93	2.71
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.85 kW
COP Tj = -7°C	3.41	2.23
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.86 kW	1.77 kW
COP Tj = +2°C	4.78	3.26
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.61 kW	1.56 kW
COP Tj = +7°C	5.73	4.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12°C	6.58	5.16
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.14 kW	2.63 kW
COP Tj = Tbiv	2.56	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.21 kW	2.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.9	1.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.59 kW	1.15 kW
Annual energy consumption Qhe	2385 kWh	2911 kWh
Pdh Tj = -15°C (if TOL	3.14	2.63
COP Tj = -15°C (if TOL	2.56	1.79
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	142 %
Prated	4.3 kW	3.8 kW
SCOP	5.30	3.62
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.79 kW
COP Tj = +2°C	3.2	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.4 kW
COP Tj = +7°C	4.93	3.05
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.68	4.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.79 kW
COP Tj = Tbiv	3.2	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1083 kWh	1402 kWh

Model Logatherm WLW186i-5 AR TP70

Model name	Logatherm WLW186i-5 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.53 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.50 kW
COP Tj = +2°C	4.62	3.37

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.05	4.79
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.88 kW
COP Tj = 12°C	7.21	5.74
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.53 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.44 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.76 kW	1.12 kW
Annual energy consumption Qhe	2814 kWh	3686 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	167 %	123 %
Prated	5.4 kW	5.3 kW
SCOP	4.24	3.14
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.44 kW	3.16 kW
COP Tj = -7°C	3.43	2.62
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.09 kW
COP Tj = +2°C	5.45	3.75
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.22	5.1
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.91 kW	1.9 kW

COP Tj = 12 °C	6.82	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.64 kW	4.28 kW
COP Tj = Tbiv	2.45	1.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.09	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.67 kW
Annual energy consumption Qhe	3138 kWh	4159 kWh
Pdh Tj = -15 °C (if TOL	4.64	4.28
COP Tj = -15 °C (if TOL	2.45	1.9
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.96
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	6.43 kW	5.91 kW
COP Tj = +2 °C	2.9	2.14
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.13 kW	3.83 kW
COP Tj = +7 °C	4.78	3.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12 °C	1.94 kW	1.78 kW
COP Tj = 12 °C	7.31	5.06
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.91 kW
COP Tj = Tbiv	2.9	2.14

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.14
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1990 kWh

Model Logatherm WLW186i-5 AR TP70 W

Model name	Logatherm WLW186i-5 AR TP70 W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.53 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.50 kW
COP Tj = +2°C	4.62	3.37

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.05	4.79
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.88 kW
COP Tj = 12°C	7.21	5.74
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.53 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.44 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.76 kW	1.12 kW
Annual energy consumption Qhe	2814 kWh	3686 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	123 %
Prated	5.4 kW	5.3 kW
SCOP	4.24	3.14
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.44 kW	3.16 kW
COP Tj = -7°C	3.43	2.62
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.09 kW
COP Tj = +2°C	5.45	3.75
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.22	5.1
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.91 kW	1.9 kW

COP Tj = 12 °C	6.82	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.64 kW	4.28 kW
COP Tj = Tbiv	2.45	1.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.09	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.67 kW
Annual energy consumption Qhe	3138 kWh	4159 kWh
Pdh Tj = -15 °C (if TOL	4.64	4.28
COP Tj = -15 °C (if TOL	2.45	1.9
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.96
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	6.43 kW	5.91 kW
COP Tj = +2 °C	2.9	2.14
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.13 kW	3.83 kW
COP Tj = +7 °C	4.78	3.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12 °C	1.94 kW	1.78 kW
COP Tj = 12 °C	7.31	5.06
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.91 kW
COP Tj = Tbiv	2.9	2.14

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.14
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1990 kWh

Model Logatherm WLW186i-4 AR TP70

Model name	Logatherm WLW186i-4 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	1.99 kW
El input	0.59 kW	0.8 kW
COP	4.82	2.51

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	128 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.90 kW	3.53 kW
COP Tj = -7°C	2.88	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.25 kW
COP Tj = +2°C	4.47	3.21

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.54 kW
COP Tj = +7°C	6.13	4.27
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.38	5.32
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.90 kW	3.53 kW
COP Tj = Tbiv	2.88	3.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.62 kW	3.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.78 kW	0.87 kW
Annual energy consumption Qhe	1996 kWh	2526 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	105 %
Prated	3.8 kW	3.2 kW
SCOP	3.93	2.71
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.85 kW
COP Tj = -7°C	3.41	2.23
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.86 kW	1.77 kW
COP Tj = +2°C	4.78	3.26
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.61 kW	1.56 kW
COP Tj = +7°C	5.73	4.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12°C	6.58	5.16
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.14 kW	2.63 kW
COP Tj = Tbiv	2.56	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.21 kW	2.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.9	1.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.59 kW	1.15 kW
Annual energy consumption Qhe	2385 kWh	2911 kWh
Pdh Tj = -15°C (if TOL	3.14	2.63
COP Tj = -15°C (if TOL	2.56	1.79
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	142 %
Prated	4.3 kW	3.8 kW
SCOP	5.30	3.62
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.79 kW
COP Tj = +2°C	3.2	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.4 kW
COP Tj = +7°C	4.93	3.05
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.68	4.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.79 kW
COP Tj = Tbiv	3.2	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1083 kWh	1402 kWh

Model Logatherm WLW176i-7 AR TP70 (60°C)

Model name	Logatherm WLW176i-7 AR TP70 (60°C)
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.98 kW
COP Tj = -7°C	2.60	2.05
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.51 kW
COP Tj = +2°C	4.67	3.47

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.06	4.63
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.14	5.66
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.98 kW
COP Tj = Tbiv	2.60	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.41 kW
Annual energy consumption Qhe	2987 kWh	3912 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.06 kW	3.7 kW
COP Tj = -7°C	3.29	2.37
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.18	3.63
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.59 kW
COP Tj = +7°C	6.21	4.81
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	6.99	5.43
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.03 kW	5.35 kW
COP Tj = Tbiv	2.41	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.02 kW	3.26 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.28 kW	3.34 kW
Annual energy consumption Qhe	4400 kWh	5436 kWh
Pdh Tj = -15°C (if TOL	6.03	5.35
COP Tj = -15°C (if TOL	2.41	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	159 %
Prated	7.1 kW	5.7 kW
SCOP	5.22	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.09 kW	5.7 kW
COP Tj = +2°C	2.82	2.17
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.66 kW
COP Tj = +7°C	4.2	3.39
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.32	5.5
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.09 kW	5.7 kW
COP Tj = Tbiv	2.82	2.17

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.09 kW	5.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	2.17
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1818 kWh	1880 kWh

Model Logatherm WLW186i-7 AR TP70

Model name	Logatherm WLW186i-7 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.98 kW
COP Tj = -7°C	2.60	2.05
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.51 kW
COP Tj = +2°C	4.67	3.47

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.06	4.63
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.14	5.66
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.98 kW
COP Tj = Tbiv	2.60	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.41 kW
Annual energy consumption Qhe	2987 kWh	3912 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.06 kW	3.7 kW
COP Tj = -7°C	3.29	2.37
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.18	3.63
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.59 kW
COP Tj = +7°C	6.21	4.81
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	6.99	5.43
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.03 kW	5.35 kW
COP Tj = Tbiv	2.41	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.02 kW	3.26 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.28 kW	3.34 kW
Annual energy consumption Qhe	4400 kWh	5436 kWh
Pdh Tj = -15°C (if TOL	6.03	5.35
COP Tj = -15°C (if TOL	2.41	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	159 %
Prated	7.1 kW	5.7 kW
SCOP	5.22	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.09 kW	5.7 kW
COP Tj = +2°C	2.82	2.17
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.66 kW
COP Tj = +7°C	4.2	3.39
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.32	5.5
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.09 kW	5.7 kW
COP Tj = Tbiv	2.82	2.17

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.09 kW	5.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	2.17
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1818 kWh	1880 kWh

Model Logatherm WLW186i-7 AR TP70 W

Model name	Logatherm WLW186i-7 AR TP70 W
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.98 kW
COP Tj = -7°C	2.60	2.05
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.51 kW
COP Tj = +2°C	4.67	3.47

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.06	4.63
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.14	5.66
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.98 kW
COP Tj = Tbiv	2.60	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.41 kW
Annual energy consumption Qhe	2987 kWh	3912 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.06 kW	3.7 kW
COP Tj = -7°C	3.29	2.37
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.18	3.63
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.59 kW
COP Tj = +7°C	6.21	4.81
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	6.99	5.43
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.03 kW	5.35 kW
COP Tj = Tbiv	2.41	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.02 kW	3.26 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.28 kW	3.34 kW
Annual energy consumption Qhe	4400 kWh	5436 kWh
Pdh Tj = -15°C (if TOL	6.03	5.35
COP Tj = -15°C (if TOL	2.41	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	159 %
Prated	7.1 kW	5.7 kW
SCOP	5.22	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.09 kW	5.7 kW
COP Tj = +2°C	2.82	2.17
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.66 kW
COP Tj = +7°C	4.2	3.39
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.32	5.5
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.09 kW	5.7 kW
COP Tj = Tbiv	2.82	2.17

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.09 kW	5.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	2.17
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1818 kWh	1880 kWh

Model Logatherm WLW176i-4 AR E

Model name	Logatherm WLW176i-4 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	130 %
Prated	4.4 kW	4 kW
SCOP	4.58	3.32
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	1987 kWh	2492 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	158 %	109 %
Prated	3.8 kW	3.2 kW
SCOP	4.03	2.81
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.46 kW	1.27 kW
COP Tj = +2°C	5.03	3.43
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12 °C	6.63	5.25
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2327 kWh	2807 kWh
Pdh Tj = -15 °C (if TOL	3.12	2.64
COP Tj = -15 °C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	210 %	143 %
Prated	4.3 kW	3.8 kW
SCOP	5.33	3.66
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	4.31 kW	3.92 kW
COP Tj = +2 °C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	2.64 kW	2.41 kW
COP Tj = +7 °C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12 °C	1.82 kW	1.79 kW
COP Tj = 12 °C	6.72	5.01
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1077 kWh	1389 kWh

Model Logatherm WLW176i-4 AR T180

Model name	Logatherm WLW176i-4 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	85 %
COP	1.94
Heating up time	3:08 h:min
Standby power input	93.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	73 %
COP	1.65
Heating up time	3:25 h:min
Standby power input	120.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	98 %
COP	2.21
Heating up time	3:08 h:min
Standby power input	92.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	1.97 kW
El input	0.59 kW	0.8 kW
COP	4.81	2.47

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	127 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.89 kW	3.51 kW
COP Tj = -7°C	2.88	2.10
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.23 kW
COP Tj = +2°C	4.46	3.19
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.53 kW
COP Tj = +7°C	6.12	4.26
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.96 kW	1.82 kW
COP Tj = 12°C	7.37	5.30
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.89 kW	3.51 kW
COP Tj = Tbiv	2.88	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.61 kW	3.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W

PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.79 kW	0.90 kW
Annual energy consumption Q _{he}	1999 kWh	2539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	157 %	108 %
Prated	3.8 kW	3.2 kW
SCOP	3.99	2.76
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	2.25 kW	1.84 kW
COP T _j = -7°C	3.4	2.21
C _{dh} T _j = -7 °C	0.98	0.98
P _{dh} T _j = +2°C	1.46 kW	1.26 kW
COP T _j = +2°C	4.98	3.41
C _{dh} T _j = +2 °C	0.95	0.96
P _{dh} T _j = +7°C	1.6 kW	1.56 kW
COP T _j = +7°C	5.72	4.17
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.8 kW	1.77 kW
COP T _j = 12°C	6.57	5.14
C _{dh} T _j = +12 °C	0.95	0.96
P _{dh} T _j = T _{biv}	3.11 kW	2.6 kW
COP T _j = T _{biv}	2.49	1.78
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	2.2 kW	2.02 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.89	1.35
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.18 kW
Annual energy consumption Q _{he}	2345 kWh	2855 kWh

Pdh Tj = -15°C (if TOL	3.11	2.6
COP Tj = -15°C (if TOL	2.49	1.78
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	209 %	141 %
Prated	4.3 kW	3.8 kW
SCOP	5.29	3.59
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.88 kW
COP Tj = +2°C	3.2	2.09
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.63 kW	2.38 kW
COP Tj = +7°C	4.92	3.03
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.67	4.91
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.88 kW
COP Tj = Tbiv	3.2	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1085 kWh	1414 kWh

Model Logatherm WLW176i-4 AR TP70

Model name	Logatherm WLW176i-4 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	1.99 kW
El input	0.59 kW	0.8 kW
COP	4.82	2.51

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	128 %
Prated	4.4 kW	4 kW
SCOP	4.55	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.90 kW	3.53 kW
COP Tj = -7°C	2.88	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.25 kW
COP Tj = +2°C	4.47	3.21

Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.73 kW	1.54 kW
COP Tj = +7°C	6.13	4.27
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.38	5.32
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.90 kW	3.53 kW
COP Tj = Tbiv	2.88	3.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.62 kW	3.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.78 kW	0.87 kW
Annual energy consumption Qhe	1996 kWh	2526 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	105 %
Prated	3.8 kW	3.2 kW
SCOP	3.93	2.71
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.85 kW
COP Tj = -7°C	3.41	2.23
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	1.86 kW	1.77 kW
COP Tj = +2°C	4.78	3.26
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.61 kW	1.56 kW
COP Tj = +7°C	5.73	4.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.81 kW	1.78 kW

COP Tj = 12°C	6.58	5.16
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	3.14 kW	2.63 kW
COP Tj = Tbiv	2.56	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.21 kW	2.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.9	1.37
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.59 kW	1.15 kW
Annual energy consumption Qhe	2385 kWh	2911 kWh
Pdh Tj = -15°C (if TOL	3.14	2.63
COP Tj = -15°C (if TOL	2.56	1.79
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	209 %	142 %
Prated	4.3 kW	3.8 kW
SCOP	5.30	3.62
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.3 kW	3.79 kW
COP Tj = +2°C	3.2	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.4 kW
COP Tj = +7°C	4.93	3.05
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.68	4.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	4.3 kW	3.79 kW
COP Tj = Tbiv	3.2	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.3 kW	3.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	14 W	14 W
PSB	15 W	15 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1083 kWh	1402 kWh

Model Logatherm WLW176i-5 AR E

Model name	Logatherm WLW176i-5 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	137 %
Prated	6.2 kW	6.2 kW
SCOP	4.57	3.5
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2803 kWh	3657 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.25	3.17
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW

COP Tj = 12°C	6.87	5.92
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.1	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3135 kWh	4116 kWh
Pdh Tj = -15°C (if TOL	4.62	4.3
COP Tj = -15°C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	219 %	157 %
Prated	6.4 kW	5.9 kW
SCOP	5.56	4
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.43 kW	5.93 kW
COP Tj = +2°C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	3.84 kW
COP Tj = +7°C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.95 kW	1.78 kW
COP Tj = 12°C	7.38	5.15
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1538 kWh	1969 kWh

Model Logatherm WLW176i-5 AR T180

Model name	Logatherm WLW176i-5 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.17
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	75 %
COP	1.75
Heating up time	3:11 h:min
Standby power input	131.0 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	234 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.48
Heating up time	2:54 h:min
Standby power input	87.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.52 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.49 kW
COP Tj = +2°C	4.61	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.20 kW
COP Tj = +7°C	6.04	4.77
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.87 kW
COP Tj = 12°C	7.20	5.72
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.52 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W

PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	1.15 kW
Annual energy consumption Q _{he}	2818 kWh	3699 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η _s	166 %	122 %
Prated	5.4 kW	5.3 kW
SCOP	4.22	3.13
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	3.44 kW	3.15 kW
COP T _j = -7°C	3.42	2.61
C _{dh} T _j = -7 °C	0.98	0.99
P _{dh} T _j = +2°C	2.07 kW	2.08 kW
COP T _j = +2°C	5.44	3.73
C _{dh} T _j = +2 °C	0.96	0.97
P _{dh} T _j = +7°C	1.74 kW	1.7 kW
COP T _j = +7°C	6.21	5.08
C _{dh} T _j = +7 °C	0.94	0.95
P _{dh} T _j = 12°C	1.91 kW	1.89 kW
COP T _j = 12°C	6.81	5.81
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	4.61 kW	4.26 kW
COP T _j = T _{biv}	2.4	1.89
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	4 kW	3.6 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.09	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.4 kW	1.7 kW
Annual energy consumption Q _{he}	3152 kWh	4177 kWh

Pdh Tj = -15°C (if TOL	4.61	4.26
COP Tj = -15°C (if TOL	2.4	1.89
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.95
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.42 kW	5.89 kW
COP Tj = +2°C	2.9	2.13
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.13 kW	3.81 kW
COP Tj = +7°C	4.77	3.47
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	1.94 kW	1.77 kW
COP Tj = 12°C	7.32	5.05
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.42 kW	5.89 kW
COP Tj = Tbiv	2.9	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.42 kW	5.89 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1998 kWh

Model Logatherm WLW176i-5 AR TP70

Model name	Logatherm WLW176i-5 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.2 kW	6.2 kW
SCOP	4.55	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.46 kW	5.53 kW
COP Tj = -7°C	2.58	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.04 kW	3.50 kW
COP Tj = +2°C	4.62	3.37

Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.05	4.79
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.94 kW	1.88 kW
COP Tj = 12°C	7.21	5.74
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.46 kW	5.53 kW
COP Tj = Tbiv	2.58	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.44 kW	5.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.76 kW	1.12 kW
Annual energy consumption Qhe	2814 kWh	3686 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	123 %
Prated	5.4 kW	5.3 kW
SCOP	4.24	3.14
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.44 kW	3.16 kW
COP Tj = -7°C	3.43	2.62
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.09 kW
COP Tj = +2°C	5.45	3.75
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.22	5.1
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.91 kW	1.9 kW

COP Tj = 12 °C	6.82	5.83
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	4.64 kW	4.28 kW
COP Tj = Tbiv	2.45	1.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.09	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.67 kW
Annual energy consumption Qhe	3138 kWh	4159 kWh
Pdh Tj = -15 °C (if TOL	4.64	4.28
COP Tj = -15 °C (if TOL	2.45	1.9
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	218 %	155 %
Prated	6.4 kW	5.9 kW
SCOP	5.53	3.96
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2 °C	6.43 kW	5.91 kW
COP Tj = +2 °C	2.9	2.14
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7 °C	4.13 kW	3.83 kW
COP Tj = +7 °C	4.78	3.49
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12 °C	1.94 kW	1.78 kW
COP Tj = 12 °C	7.31	5.06
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.43 kW	5.91 kW
COP Tj = Tbiv	2.9	2.14

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.14
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	31 W	31 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1547 kWh	1990 kWh

Model Logatherm WLW176i-7 AR E

Model name	Logatherm WLW176i-7 AR E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	138 %
Prated	6.6 kW	6.6 kW
SCOP	4.58	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	2975 kWh	3878 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	3.01
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	7	5.53
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4397 kWh	5410 kWh
Pdh Tj = -15°C (if TOL	6.01	5.37
COP Tj = -15°C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	207 %	161 %
Prated	7.1 kW	5.7 kW
SCOP	5.25	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.72 kW
COP Tj = +2°C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.67 kW
COP Tj = +7°C	4.23	3.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.37	5.59
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1807 kWh	1860 kWh

Model Logatherm WLW176i-7 AR T180

Model name	Logatherm WLW176i-7 AR T180
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency η_{DHW}	90 %
COP	2.34
Heating up time	2:40 h:min
Standby power input	92.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	235 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	73 %
COP	1.87
Heating up time	3:23 h:min
Standby power input	131.2 W
Reference hot water temperature	51 °C
Mixed water at 40°C	238 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	106 %
COP	2.59
Heating up time	2:39 h:min
Standby power input	86.1 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 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	2.83 kW	3.18 kW
El input	0.59 kW	1.18 kW
COP	4.81	2.7

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.41 kW	5.90 kW
COP Tj = -7°C	2.60	2.07
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.50 kW	3.50 kW
COP Tj = +2°C	4.66	3.46
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.44 kW
COP Tj = +7°C	6.05	4.62
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.79 kW
COP Tj = 12°C	7.17	5.64
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.41 kW	5.90 kW
COP Tj = Tbiv	2.60	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.85 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.44 kW
Annual energy consumption Q _{he}	2990 kWh	3917 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	116 %
Prated	7.3 kW	6.6 kW
SCOP	4.07	2.97
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	4.06 kW	3.69 kW
COP T _j = -7°C	3.29	2.36
C _{dh} T _j = -7 °C	0.99	0.99
P _{dh} T _j = +2°C	2.52 kW	2.37 kW
COP T _j = +2°C	5.17	3.62
C _{dh} T _j = +2 °C	0.97	0.98
P _{dh} T _j = +7°C	1.86 kW	1.83 kW
COP T _j = +7°C	6.21	4.64
C _{dh} T _j = +7 °C	0.95	0.96
P _{dh} T _j = 12°C	1.83 kW	1.78 kW
COP T _j = 12°C	6.95	5.42
C _{dh} T _j = +12 °C	0.94	0.95
P _{dh} T _j = T _{biv}	6 kW	5.33 kW
COP T _j = T _{biv}	2.37	1.95
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.01 kW	3.23 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.02	1.56
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.99	0.99
WTOL	75 °C	75 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.29 kW	3.37 kW
Annual energy consumption Q _{he}	4418 kWh	5475 kWh

Pdh Tj = -15°C (if TOL	6	5.33
COP Tj = -15°C (if TOL	2.37	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	158 %
Prated	7.1 kW	5.7 kW
SCOP	5.21	4.04
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.68 kW
COP Tj = +2°C	2.81	2.16
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.64 kW
COP Tj = +7°C	4.2	3.38
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.82 kW
COP Tj = 12°C	7.31	5.48
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.08 kW	5.68 kW
COP Tj = Tbiv	2.81	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1820 kWh	1887 kWh

Model Logatherm WLW176i-7 AR TP70

Model name	Logatherm WLW176i-7 AR TP70
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 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	2.84 kW	3.2 kW
El input	0.59 kW	1.18 kW
COP	4.82	2.72

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.56	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.98 kW
COP Tj = -7°C	2.60	2.05
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.51 kW
COP Tj = +2°C	4.67	3.47

Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.06	4.63
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.14	5.66
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	5.42 kW	5.98 kW
COP Tj = Tbiv	2.60	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.41 kW
Annual energy consumption Qhe	2987 kWh	3912 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	161 %	117 %
Prated	7.3 kW	6.6 kW
SCOP	4.09	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.06 kW	3.7 kW
COP Tj = -7°C	3.29	2.37
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.18	3.63
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	1.86 kW	1.59 kW
COP Tj = +7°C	6.21	4.81
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW

COP Tj = 12°C	6.99	5.43
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	6.03 kW	5.35 kW
COP Tj = Tbiv	2.41	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.02 kW	3.26 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.57
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.28 kW	3.34 kW
Annual energy consumption Qhe	4400 kWh	5436 kWh
Pdh Tj = -15°C (if TOL	6.03	5.35
COP Tj = -15°C (if TOL	2.41	1.95
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	206 %	159 %
Prated	7.1 kW	5.7 kW
SCOP	5.22	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.09 kW	5.7 kW
COP Tj = +2°C	2.82	2.17
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.66 kW
COP Tj = +7°C	4.2	3.39
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.32	5.5
Cdh Tj = +12 °C	0.94	0.95
Pdh Tj = Tbiv	7.09 kW	5.7 kW
COP Tj = Tbiv	2.82	2.17

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.09 kW	5.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.82	2.17
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	32 W	32 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1818 kWh	1880 kWh

Model HC HYC20 IT-4

Model name	HC HYC20 IT-4
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	173 %	126 %
Prated	4.4 kW	4 kW
SCOP	4.34	3.18
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24
Cdh Tj = +2 °C	0.97	0.97

Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	2093 kWh	2599 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	152 %	107 %
Prated	3.8 kW	3.2 kW
SCOP	3.82	2.69
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.97	0.98
Pdh Tj = +2°C	1.86 kW	1.78 kW
COP Tj = +2°C	4.8	3.32
Cdh Tj = +2 °C	0.95	0.97
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.63	5.25

Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.84	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2451 kWh	2932 kWh
Pdh Tj = -15°C (if TOL	3.12	2.64
COP Tj = -15°C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	191 %	133 %
Prated	4.3 kW	3.8 kW
SCOP	4.79	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.31 kW	3.92 kW
COP Tj = +2°C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.41 kW
COP Tj = +7°C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.82 kW	1.79 kW
COP Tj = 12°C	6.72	5.01
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1199 kWh	1511 kWh

Model HC HYC20 IT-5

Model name	HC HYC20 IT-5
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	175 %	135 %
Prated	6.2 kW	6.2 kW
SCOP	4.41	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39
Cdh Tj = +2 °C	0.97	0.98

Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2906 kWh	3758 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.16	3.13
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.95	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW
COP Tj = 12°C	6.87	5.92

Cdh Tj = +12 °C	0.94	0.94
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3199 kWh	4180 kWh
Pdh Tj = -15°C (if TOL	4.62	4.3
COP Tj = -15°C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	205 %	150 %
Prated	6.4 kW	5.9 kW
SCOP	5.16	3.78
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.43 kW	5.93 kW
COP Tj = +2°C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	3.84 kW
COP Tj = +7°C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	1.95 kW	1.78 kW
COP Tj = 12°C	7.38	5.15
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1656 kWh	2087 kWh

Model HC HYC20 IT-7

Model name	HC HYC20 IT-7
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	176 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.43	3.42
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49
Cdh Tj = +2 °C	0.98	0.98

Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.95	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	3079 kWh	3981 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	118 %
Prated	7.3 kW	6.6 kW
SCOP	4.03	2.97
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW
COP Tj = 12°C	7	5.53

Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.83	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4460 kWh	5474 kWh
Pdh Tj = -15°C (if TOL	6.01	5.37
COP Tj = -15°C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	196 %	153 %
Prated	7.1 kW	5.7 kW
SCOP	4.93	3.85
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.72 kW
COP Tj = +2°C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.67 kW
COP Tj = +7°C	4.23	3.41
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.37	5.59
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1926 kWh	1979 kWh

Model HC-Set HYC20 IT-4

Model name	HC-Set HYC20 IT-4
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	2.02 kW
El input	0.59 kW	0.79 kW
COP	4.85	2.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	173 %	126 %
Prated	4.4 kW	4 kW
SCOP	4.34	3.18
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.91 kW	3.55 kW
COP Tj = -7°C	2.89	2.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.48 kW	2.26 kW
COP Tj = +2°C	4.48	3.24
Cdh Tj = +2 °C	0.97	0.97

Pdh Tj = +7°C	1.73 kW	1.55 kW
COP Tj = +7°C	6.17	4.37
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.97 kW	1.83 kW
COP Tj = 12°C	7.43	5.41
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	3.91 kW	3.55 kW
COP Tj = Tbiv	2.89	3.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.63 kW	3.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.77 kW	0.85 kW
Annual energy consumption Qhe	2093 kWh	2599 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	152 %	107 %
Prated	3.8 kW	3.2 kW
SCOP	3.82	2.69
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.26 kW	1.87 kW
COP Tj = -7°C	3.42	2.27
Cdh Tj = -7 °C	0.97	0.98
Pdh Tj = +2°C	1.86 kW	1.78 kW
COP Tj = +2°C	4.8	3.32
Cdh Tj = +2 °C	0.95	0.97
Pdh Tj = +7°C	1.61 kW	1.58 kW
COP Tj = +7°C	5.76	4.29
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.81 kW	1.78 kW
COP Tj = 12°C	6.63	5.25

Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	3.12 kW	2.64 kW
COP Tj = Tbiv	2.51	1.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.22 kW	2.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.84	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.58 kW	1.13 kW
Annual energy consumption Qhe	2451 kWh	2932 kWh
Pdh Tj = -15°C (if TOL	3.12	2.64
COP Tj = -15°C (if TOL	2.51	1.8
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	40 dB(A)	40 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	191 %	133 %
Prated	4.3 kW	3.8 kW
SCOP	4.79	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.31 kW	3.92 kW
COP Tj = +2°C	3.21	2.12
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.64 kW	2.41 kW
COP Tj = +7°C	4.95	3.09
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.82 kW	1.79 kW
COP Tj = 12°C	6.72	5.01
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	4.31 kW	3.92 kW
COP Tj = Tbiv	3.21	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.31 kW	3.92 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.21	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1199 kWh	1511 kWh

Model HC-Set HYC20 IT-5

Model name	HC-Set HYC20 IT-5
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	175 %	135 %
Prated	6.2 kW	6.2 kW
SCOP	4.41	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.47 kW	5.57 kW
COP Tj = -7°C	2.59	2.11
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.05 kW	3.52 kW
COP Tj = +2°C	4.64	3.39
Cdh Tj = +2 °C	0.97	0.98

Pdh Tj = +7°C	2.28 kW	2.21 kW
COP Tj = +7°C	6.07	4.84
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	1.95 kW	1.88 kW
COP Tj = 12°C	7.26	5.83
Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	5.47 kW	5.57 kW
COP Tj = Tbiv	2.59	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.45 kW	5.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	1.10 kW
Annual energy consumption Qhe	2906 kWh	3758 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	124 %
Prated	5.4 kW	5.3 kW
SCOP	4.16	3.13
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.45 kW	3.18 kW
COP Tj = -7°C	3.44	2.64
Cdh Tj = -7 °C	0.98	0.99
Pdh Tj = +2°C	2.07 kW	2.1 kW
COP Tj = +2°C	5.47	3.8
Cdh Tj = +2 °C	0.95	0.97
Pdh Tj = +7°C	1.74 kW	1.71 kW
COP Tj = +7°C	6.25	5.18
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.92 kW	1.9 kW
COP Tj = 12°C	6.87	5.92

Cdh Tj = +12 °C	0.94	0.94
Pdh Tj = Tbiv	4.62 kW	4.3 kW
COP Tj = Tbiv	2.41	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.01 kW	3.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.39 kW	1.65 kW
Annual energy consumption Qhe	3199 kWh	4180 kWh
Pdh Tj = -15°C (if TOL	4.62	4.3
COP Tj = -15°C (if TOL	2.41	1.91
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	205 %	150 %
Prated	6.4 kW	5.9 kW
SCOP	5.16	3.78
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.43 kW	5.93 kW
COP Tj = +2°C	2.91	2.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.14 kW	3.84 kW
COP Tj = +7°C	4.79	3.51
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	1.95 kW	1.78 kW
COP Tj = 12°C	7.38	5.15
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	6.43 kW	5.93 kW
COP Tj = Tbiv	2.91	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.43 kW	5.93 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1656 kWh	2087 kWh

Model HC-Set HYC20 IT-7

Model name	HC-Set HYC20 IT-7
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
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	2.84 kW	3.23 kW
El input	0.59 kW	1.18 kW
COP	4.85	2.74

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	176 %	136 %
Prated	6.6 kW	6.6 kW
SCOP	4.43	3.42
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.42 kW	5.94 kW
COP Tj = -7°C	2.61	2.09
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.51 kW	3.53 kW
COP Tj = +2°C	4.68	3.49
Cdh Tj = +2 °C	0.98	0.98

Pdh Tj = +7°C	2.20 kW	2.45 kW
COP Tj = +7°C	6.09	4.68
Cdh Tj = +7 °C	0.95	0.97
Pdh Tj = 12°C	1.85 kW	1.80 kW
COP Tj = 12°C	7.23	5.75
Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	5.42 kW	5.94 kW
COP Tj = Tbiv	2.61	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.86 kW	5.21 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.74 kW	1.39 kW
Annual energy consumption Qhe	3079 kWh	3981 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	118 %
Prated	7.3 kW	6.6 kW
SCOP	4.03	2.97
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.07 kW	3.72 kW
COP Tj = -7°C	3.3	2.39
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.52 kW	2.38 kW
COP Tj = +2°C	5.2	3.67
Cdh Tj = +2 °C	0.96	0.97
Pdh Tj = +7°C	1.86 kW	1.84 kW
COP Tj = +7°C	6.24	4.72
Cdh Tj = +7 °C	0.94	0.95
Pdh Tj = 12°C	1.84 kW	1.79 kW
COP Tj = 12°C	7	5.53

Cdh Tj = +12 °C	0.93	0.94
Pdh Tj = Tbiv	6.01 kW	5.37 kW
COP Tj = Tbiv	2.38	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.03 kW	3.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.83	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	3.32 kW
Annual energy consumption Qhe	4460 kWh	5474 kWh
Pdh Tj = -15°C (if TOL	6.01	5.37
COP Tj = -15°C (if TOL	2.38	1.96
Cdh Tj = -15 °C	0.99	0.99

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	196 %	153 %
Prated	7.1 kW	5.7 kW
SCOP	4.93	3.85
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.08 kW	5.72 kW
COP Tj = +2°C	2.83	2.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.25 kW	3.67 kW
COP Tj = +7°C	4.23	3.41
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	1.88 kW	1.83 kW
COP Tj = 12°C	7.37	5.59
Cdh Tj = +12 °C	0.93	0.95
Pdh Tj = Tbiv	7.08 kW	5.72 kW
COP Tj = Tbiv	2.83	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.08 kW	5.72 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	75 °C	75 °C
Poff	6 W	6 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	22 W	22 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1926 kWh	1979 kWh