DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

CERTIFICATE

Certificate holder	**Bosch Thermotechnik GmbH** **Sophienstr. 30-32** **35576 Wetzlar** **GERMANY**
Production facility	Tranas, Eschenburg, Aveiro
Product	Air/Water Heat pumps
Type, Model	Buderus Logatherm WLW MB-10/12 AR
Testing basis	DIN EN 14511-1; DIN EN 14511-2; DIN EN 14511-3; DIN EN 14511-4:2019-07 DIN EN 14825:2019-07 DIN EN 12102-1:2018-02 DIN EN 16147:2017-08 European KEYMARK Scheme for Heat Pumps Version 12 (2023-03)
Mark of conformity	
Registration No.	011-1W0584
Valid until	2033-10-31
Right of use	This certificate entitles the holder to use the mark of conformity shown above in conjunction with the specified registration number. See annex for further information.

2023-10-11

Dipl.-Phys. Carlo Seiser
Head of Certification Body

DAkkS
Deutsche
Akkreditierungsstelle
D-ZE-11125-01-01

DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

ANNEX

Certificate 011-1W0584 dated 2023-10-11

Technical Data

Models:
Logatherm WLW186i-12 AR TP70 W
Logatherm WLW186i-12 AR TP70
Logatherm WLW176i-12 AR TP70
Logatherm WLW176i-12 AR TP70 (60°C)
Logatherm WLW186i-12 AR E W
Logatherm WLW186i-12 AR E
Logatherm WLW176i-12 AR E
Logatherm WLW176i-12 AR E (60°C)
Logatherm WLW186i-10 AR TP70 W
Logatherm WLW186i-10 AR TP70
Logatherm WLW176i-10 AR TP70
Logatherm WLW176i-10 AR TP70 (60°C)
Logatherm WLW186i-10 AR E W
Logatherm WLW186i-10 AR E
Logatherm WLW176i-10 AR E
Logatherm WLW176i-10 AR E (60°C)
Logatherm WLW176i-10 AR T180 (60°C)
Logatherm WLW176i-10 AR T180
Logatherm WLW186i-10 AR T180
Logatherm WLW186i-10 AR T180 W
Logatherm WLW176i-12 AR T180 (60°C)
Logatherm WLW176i-12 AR T180
Logatherm WLW186i-12 AR T180
Logatherm WLW186i-12 AR T180 W

See Heat Pump KEYMARK database for detailed information

Testing laboratory/ Inspection body

Fraunhofer Institut für
Solare Energiesysteme (ISE)
Auerstr. 8
79108 Freiburg
GERMANY

Test report(s) B-HPC-21-0897-6 dated 2023-01-12

Subtype Buderus Logatherm WLW MB-10/12 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-10/12 AR
Registration number	011-1W0584
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.7 kg
Certification Date	11.10.2023
Testing basis	HP KEYMARK certification scheme rules V12

Model Logatherm WLW186i-12 AR TP70 W	
Model name	Logatherm WLW186i-12 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	5.57 kW	4.94 kW
El input	1.16 kW	1.7 kW
COP	4.81	2.91

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.10 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.69 kW	6.27 kW
COP Tj = +2°C	4.69	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.22 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.65 kW
COP Tj = 12°C	8.05	5.84
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.10 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.84 kW	11.14 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.36 kW	0.86 kW
Annual energy consumption Qhe	5428 kWh	7114 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	166 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.25
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.05 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.35 kW
COP Tj = +2°C	5.38	4.08
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.57 kW
COP Tj = +7°C	5.3	5.18
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW

COP Tj = 12°C	8.03	5.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.83 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.73 kW	7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.64
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	5 kW
Annual energy consumption Qhe	7021 kWh	9107 kWh
Pdh Tj = -15°C (if TOL	10.47	9.83
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	169 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.67 kW	12.42 kW
COP Tj = +2°C	2.66	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.89 kW
COP Tj = +7°C	5.13	3.66
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.79
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.67 kW	12.42 kW
COP Tj = Tbiv	2.66	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.67 kW	12.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2847 kWh	3859 kWh

Model Logatherm WLW186i-12 AR TP70	
Model name	Logatherm WLW186i-12 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	5.57 kW	4.94 kW
El input	1.16 kW	1.7 kW
COP	4.81	2.91

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.10 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.69 kW	6.27 kW
COP Tj = +2°C	4.69	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.22 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.65 kW
COP Tj = 12°C	8.05	5.84
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.10 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.84 kW	11.14 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.36 kW	0.86 kW
Annual energy consumption Qhe	5428 kWh	7114 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	166 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.25
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.05 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.35 kW
COP Tj = +2°C	5.38	4.08
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.57 kW
COP Tj = +7°C	5.3	5.18
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW

COP Tj = 12°C	8.03	5.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.83 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.73 kW	7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.64
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	5 kW
Annual energy consumption Qhe	7021 kWh	9107 kWh
Pdh Tj = -15°C (if TOL	10.47	9.83
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	169 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.67 kW	12.42 kW
COP Tj = +2°C	2.66	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.89 kW
COP Tj = +7°C	5.13	3.66
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.79
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.67 kW	12.42 kW
COP Tj = Tbiv	2.66	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.67 kW	12.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2847 kWh	3859 kWh

Model Logatherm WLW176i-12 AR TP70

Model name	Logatherm WLW176i-12 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	5.57 kW	4.94 kW
El input	1.16 kW	1.7 kW
COP	4.81	2.91

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.10 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.69 kW	6.27 kW
COP Tj = +2°C	4.69	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.22 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.65 kW
COP Tj = 12°C	8.05	5.84
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.10 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.84 kW	11.14 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.36 kW	0.86 kW
Annual energy consumption Qhe	5428 kWh	7114 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	166 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.25
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.05 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.35 kW
COP Tj = +2°C	5.38	4.08
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.57 kW
COP Tj = +7°C	5.3	5.18
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW

COP Tj = 12°C	8.03	5.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.83 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.73 kW	7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.64
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	5 kW
Annual energy consumption Qhe	7021 kWh	9107 kWh
Pdh Tj = -15°C (if TOL	10.47	9.83
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	169 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.67 kW	12.42 kW
COP Tj = +2°C	2.66	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.89 kW
COP Tj = +7°C	5.13	3.66
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.79
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.67 kW	12.42 kW
COP Tj = Tbiv	2.66	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.67 kW	12.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2847 kWh	3859 kWh

Model Logatherm WLW176i-12 AR TP70 (60°C)	
Model name	Logatherm WLW176i-12 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	5.57 kW	4.94 kW
El input	1.16 kW	1.7 kW
COP	4.81	2.91

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.10 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.69 kW	6.27 kW
COP Tj = +2°C	4.69	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.22 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.65 kW
COP Tj = 12°C	8.05	5.84
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.10 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.84 kW	11.14 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.36 kW	0.86 kW
Annual energy consumption Qhe	5428 kWh	7114 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	166 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.25
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.05 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.35 kW
COP Tj = +2°C	5.38	4.08
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.57 kW
COP Tj = +7°C	5.3	5.18
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW

COP Tj = 12°C	8.03	5.93
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.83 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.73 kW	7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.64
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	5 kW
Annual energy consumption Qhe	7021 kWh	9107 kWh
Pdh Tj = -15°C (if TOL	10.47	9.83
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	169 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.67 kW	12.42 kW
COP Tj = +2°C	2.66	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.89 kW
COP Tj = +7°C	5.13	3.66
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.79
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.67 kW	12.42 kW
COP Tj = Tbiv	2.66	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.67 kW	12.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2847 kWh	3859 kWh

Model Logatherm WLW186i-12 AR E W	
Model name	Logatherm WLW186i-12 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	5.58 kW	4.96 kW
El input	1.15 kW	1.69 kW
COP	4.84	2.93

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	184 %	137 %
Prated	12.2 kW	12 kW
SCOP	4.66	3.51
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.73 kW	11.11 kW
COP Tj = -7°C	2.44	1.91
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.70 kW	6.28 kW
COP Tj = +2°C	4.72	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.23 kW
COP Tj = +7°C	6.28	4.48
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.02 kW	3.67 kW
COP Tj = 12°C	8.12	5.99
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.73 kW	11.11 kW
COP Tj = Tbiv	2.44	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	11.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.84 kW
Annual energy consumption Qhe	5405 kWh	7071 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	128 %
Prated	12 kW	12 kW
SCOP	4.24	3.27
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.07 kW
COP Tj = -7°C	3.6	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.36 kW
COP Tj = +2°C	5.42	4.1
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.86 kW	2.59 kW
COP Tj = +7°C	5.35	5.35
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.1 kW	2.87 kW

COP Tj = 12°C	8.1	6.09
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.44 kW	9.85 kW
COP Tj = Tbiv	2.37	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.74 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.26 kW	4.98 kW
Annual energy consumption Qhe	6979 kWh	9035 kWh
Pdh Tj = -15°C (if TOL	10.44	9.85
COP Tj = -15°C (if TOL	2.37	1.94
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	170 %
Prated	12.6 kW	12.4 kW
SCOP	5.95	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.61 kW	12.43 kW
COP Tj = +2°C	2.64	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.91 kW
COP Tj = +7°C	5.17	3.67
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.45 kW	3.58 kW
COP Tj = 12°C	8.07	5.84
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.61 kW	12.43 kW
COP Tj = Tbiv	2.64	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.61 kW	12.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2829 kWh	3834 kWh

Model Logatherm WLW186i-12 AR E	
Model name	Logatherm WLW186i-12 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	5.58 kW	4.96 kW
El input	1.15 kW	1.69 kW
COP	4.84	2.93

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	184 %	137 %
Prated	12.2 kW	12 kW
SCOP	4.66	3.51
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.73 kW	11.11 kW
COP Tj = -7°C	2.44	1.91
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.70 kW	6.28 kW
COP Tj = +2°C	4.72	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.23 kW
COP Tj = +7°C	6.28	4.48
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.02 kW	3.67 kW
COP Tj = 12°C	8.12	5.99
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.73 kW	11.11 kW
COP Tj = Tbiv	2.44	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	11.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.84 kW
Annual energy consumption Qhe	5405 kWh	7071 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	128 %
Prated	12 kW	12 kW
SCOP	4.24	3.27
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.07 kW
COP Tj = -7°C	3.6	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.36 kW
COP Tj = +2°C	5.42	4.1
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.86 kW	2.59 kW
COP Tj = +7°C	5.35	5.35
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.1 kW	2.87 kW

COP Tj = 12°C	8.1	6.09
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.44 kW	9.85 kW
COP Tj = Tbiv	2.37	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.74 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.26 kW	4.98 kW
Annual energy consumption Qhe	6979 kWh	9035 kWh
Pdh Tj = -15°C (if TOL	10.44	9.85
COP Tj = -15°C (if TOL	2.37	1.94
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	170 %
Prated	12.6 kW	12.4 kW
SCOP	5.95	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.61 kW	12.43 kW
COP Tj = +2°C	2.64	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.91 kW
COP Tj = +7°C	5.17	3.67
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.45 kW	3.58 kW
COP Tj = 12°C	8.07	5.84
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.61 kW	12.43 kW
COP Tj = Tbiv	2.64	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.61 kW	12.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2829 kWh	3834 kWh

Model Logatherm WLW176i-12 AR E	
Model name	Logatherm WLW176i-12 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	5.58 kW	4.96 kW
El input	1.15 kW	1.69 kW
COP	4.84	2.93

EN 12102-1 | Average Climate	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	184 %	137 %
Prated	12.2 kW	12 kW
SCOP	4.66	3.51
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.73 kW	11.11 kW
COP Tj = -7°C	2.44	1.91
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.70 kW	6.28 kW
COP Tj = +2°C	4.72	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.23 kW
COP Tj = +7°C	6.28	4.48
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.02 kW	3.67 kW
COP Tj = 12°C	8.12	5.99
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.73 kW	11.11 kW
COP Tj = Tbiv	2.44	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	11.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.84 kW
Annual energy consumption Qhe	5405 kWh	7071 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	128 %
Prated	12 kW	12 kW
SCOP	4.24	3.27
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.07 kW
COP Tj = -7°C	3.6	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.36 kW
COP Tj = +2°C	5.42	4.1
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.86 kW	2.59 kW
COP Tj = +7°C	5.35	5.35
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.1 kW	2.87 kW

COP Tj = 12°C	8.1	6.09
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.44 kW	9.85 kW
COP Tj = Tbiv	2.37	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.74 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.26 kW	4.98 kW
Annual energy consumption Qhe	6979 kWh	9035 kWh
Pdh Tj = -15°C (if TOL	10.44	9.85
COP Tj = -15°C (if TOL	2.37	1.94
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	170 %
Prated	12.6 kW	12.4 kW
SCOP	5.95	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.61 kW	12.43 kW
COP Tj = +2°C	2.64	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.91 kW
COP Tj = +7°C	5.17	3.67
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.45 kW	3.58 kW
COP Tj = 12°C	8.07	5.84
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.61 kW	12.43 kW
COP Tj = Tbiv	2.64	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.61 kW	12.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2829 kWh	3834 kWh

Model Logatherm WLW176i-12 AR E (60°C)	
Model name	Logatherm WLW176i-12 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	5.58 kW	4.96 kW
El input	1.15 kW	1.69 kW
COP	4.84	2.93

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	184 %	137 %
Prated	12.2 kW	12 kW
SCOP	4.66	3.51
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.73 kW	11.11 kW
COP Tj = -7°C	2.44	1.91
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.70 kW	6.28 kW
COP Tj = +2°C	4.72	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.23 kW
COP Tj = +7°C	6.28	4.48
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.02 kW	3.67 kW
COP Tj = 12°C	8.12	5.99
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.73 kW	11.11 kW
COP Tj = Tbiv	2.44	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	11.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.46	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.84 kW
Annual energy consumption Qhe	5405 kWh	7071 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	128 %
Prated	12 kW	12 kW
SCOP	4.24	3.27
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.07 kW
COP Tj = -7°C	3.6	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.72 kW	4.36 kW
COP Tj = +2°C	5.42	4.1
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.86 kW	2.59 kW
COP Tj = +7°C	5.35	5.35
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.1 kW	2.87 kW

COP Tj = 12°C	8.1	6.09
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.44 kW	9.85 kW
COP Tj = Tbiv	2.37	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.74 kW	7.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.26 kW	4.98 kW
Annual energy consumption Qhe	6979 kWh	9035 kWh
Pdh Tj = -15°C (if TOL	10.44	9.85
COP Tj = -15°C (if TOL	2.37	1.94
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	31 dB(A)	31 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	235 %	170 %
Prated	12.6 kW	12.4 kW
SCOP	5.95	4.32
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.61 kW	12.43 kW
COP Tj = +2°C	2.64	2.04
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.91 kW
COP Tj = +7°C	5.17	3.67
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.45 kW	3.58 kW
COP Tj = 12°C	8.07	5.84
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.61 kW	12.43 kW
COP Tj = Tbiv	2.64	2.04

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.61 kW	12.43 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2829 kWh	3834 kWh

Model Logatherm WLW186i-10 AR TP70 W	
Model name	Logatherm WLW186i-10 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	5.57 kW	3.46 kW
El input	1.16 kW	1.2 kW
COP	4.81	2.89

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
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.74	3.61
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.07 kW	9.29 kW
COP Tj = -7°C	2.66	2.21
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.46 kW
COP Tj = +2°C	4.81	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.40 kW
COP Tj = +7°C	6.12	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.99 kW
COP Tj = 12°C	7.85	5.87
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.07 kW	9.29 kW
COP Tj = Tbiv	2.66	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.26 kW
Annual energy consumption Qhe	4361 kWh	5728 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	171 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.3
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.42 kW	5.91 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.93 kW
COP Tj = +2°C	5.28	4.03
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.46 kW
COP Tj = +7°C	6.84	5.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.86 kW

COP Tj = 12°C	7.81	6.05
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.72 kW
COP Tj = Tbiv	2.57	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.72 kW
Annual energy consumption Qhe	5681 kWh	7474 kWh
Pdh Tj = -15°C (if TOL	8.08	7.72
COP Tj = -15°C (if TOL	2.57	2.07
Cdh Tj = -15 °C	0.99	1

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	243 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.57 kW	9.78 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.95 kW
COP Tj = +7°C	5.19	3.57
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.32	5.8
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.57 kW	9.78 kW
COP Tj = Tbiv	2.98	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.57 kW	9.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2306 kWh	3059 kWh

Model Logatherm WLW186i-10 AR TP70	
Model name	Logatherm WLW186i-10 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	5.57 kW	3.46 kW
El input	1.16 kW	1.2 kW
COP	4.81	2.89

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
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.74	3.61
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.07 kW	9.29 kW
COP Tj = -7°C	2.66	2.21
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.46 kW
COP Tj = +2°C	4.81	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.40 kW
COP Tj = +7°C	6.12	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.99 kW
COP Tj = 12°C	7.85	5.87
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.07 kW	9.29 kW
COP Tj = Tbiv	2.66	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.26 kW
Annual energy consumption Qhe	4361 kWh	5728 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	171 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.3
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.42 kW	5.91 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.93 kW
COP Tj = +2°C	5.28	4.03
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.46 kW
COP Tj = +7°C	6.84	5.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.86 kW

COP Tj = 12°C	7.81	6.05
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.72 kW
COP Tj = Tbiv	2.57	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.72 kW
Annual energy consumption Qhe	5681 kWh	7474 kWh
Pdh Tj = -15°C (if TOL	8.08	7.72
COP Tj = -15°C (if TOL	2.57	2.07
Cdh Tj = -15 °C	0.99	1

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	243 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.57 kW	9.78 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.95 kW
COP Tj = +7°C	5.19	3.57
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.32	5.8
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.57 kW	9.78 kW
COP Tj = Tbiv	2.98	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.57 kW	9.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2306 kWh	3059 kWh

Model Logatherm WLW176i-10 AR TP70	
Model name	Logatherm WLW176i-10 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	5.57 kW	3.46 kW
El input	1.16 kW	1.2 kW
COP	4.81	2.89

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
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.74	3.61
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.07 kW	9.29 kW
COP Tj = -7°C	2.66	2.21
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.46 kW
COP Tj = +2°C	4.81	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.40 kW
COP Tj = +7°C	6.12	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.99 kW
COP Tj = 12°C	7.85	5.87
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.07 kW	9.29 kW
COP Tj = Tbiv	2.66	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.26 kW
Annual energy consumption Qhe	4361 kWh	5728 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	171 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.3
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.42 kW	5.91 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.93 kW
COP Tj = +2°C	5.28	4.03
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.46 kW
COP Tj = +7°C	6.84	5.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.86 kW

COP Tj = 12°C	7.81	6.05
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.72 kW
COP Tj = Tbiv	2.57	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.72 kW
Annual energy consumption Qhe	5681 kWh	7474 kWh
Pdh Tj = -15°C (if TOL	8.08	7.72
COP Tj = -15°C (if TOL	2.57	2.07
Cdh Tj = -15 °C	0.99	1

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	243 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.57 kW	9.78 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.95 kW
COP Tj = +7°C	5.19	3.57
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.32	5.8
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.57 kW	9.78 kW
COP Tj = Tbiv	2.98	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.57 kW	9.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2306 kWh	3059 kWh

Model Logatherm WLW176i-10 AR TP70 (60°C)	
Model name	Logatherm WLW176i-10 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	5.57 kW	3.46 kW
El input	1.16 kW	1.2 kW
COP	4.81	2.89

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
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.74	3.61
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.07 kW	9.29 kW
COP Tj = -7°C	2.66	2.21
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.46 kW
COP Tj = +2°C	4.81	3.58

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.40 kW
COP Tj = +7°C	6.12	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.99 kW
COP Tj = 12°C	7.85	5.87
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.07 kW	9.29 kW
COP Tj = Tbiv	2.66	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.74 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.26 kW
Annual energy consumption Qhe	4361 kWh	5728 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	171 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.3
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.42 kW	5.91 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.93 kW
COP Tj = +2°C	5.28	4.03
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.46 kW
COP Tj = +7°C	6.84	5.18
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.86 kW

COP Tj = 12°C	7.81	6.05
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.72 kW
COP Tj = Tbiv	2.57	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.28 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.72 kW
Annual energy consumption Qhe	5681 kWh	7474 kWh
Pdh Tj = -15°C (if TOL	8.08	7.72
COP Tj = -15°C (if TOL	2.57	2.07
Cdh Tj = -15 °C	0.99	1

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	243 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.57 kW	9.78 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.95 kW
COP Tj = +7°C	5.19	3.57
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.32	5.8
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.57 kW	9.78 kW
COP Tj = Tbiv	2.98	2.12

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.57 kW	9.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2306 kWh	3059 kWh

Model Logatherm WLW186i-10 AR E W	
Model name	Logatherm WLW186i-10 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	5.58 kW	3.49 kW
El input	1.15 kW	1.2 kW
COP	4.84	2.92

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
ηs	188 %	142 %
Prated	10 kW	10 kW
SCOP	4.77	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.04 kW	9.32 kW
COP Tj = -7°C	2.68	2.22
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.89 kW	5.47 kW
COP Tj = +2°C	4.84	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.64 kW	3.41 kW
COP Tj = +7°C	6.16	4.64
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.13 kW	3.01 kW
COP Tj = 12°C	7.92	6.02
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.04 kW	9.32 kW
COP Tj = Tbiv	2.68	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.23 kW
Annual energy consumption Qhe	4333 kWh	5681 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	172 %	130 %
Prated	10 kW	10 kW
SCOP	4.36	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.43 kW	5.93 kW
COP Tj = -7°C	3.68	2.67
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.62 kW	3.94 kW
COP Tj = +2°C	5.31	4.08
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.68 kW	2.48 kW
COP Tj = +7°C	6.89	5.35
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.88 kW

COP Tj = 12°C	7.87	6.21
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.09 kW	7.75 kW
COP Tj = Tbiv	2.58	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.69 kW
Annual energy consumption Qhe	5648 kWh	7392 kWh
Pdh Tj = -15°C (if TOL	8.09	7.75
COP Tj = -15°C (if TOL	2.58	2.08
Cdh Tj = -15 °C	0.99	1

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	244 %	171 %
Prated	10.6 kW	9.8 kW
SCOP	6.18	4.34
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.58 kW	9.8 kW
COP Tj = +2°C	2.95	2.13
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.97 kW
COP Tj = +7°C	5.23	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.86 kW
COP Tj = 12°C	8.39	5.95
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.58 kW	9.8 kW
COP Tj = Tbiv	2.95	2.13

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.58 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2292 kWh	3017 kWh

Model Logatherm WLW186i-10 AR E	
Model name	Logatherm WLW186i-10 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	5.58 kW	3.49 kW
El input	1.15 kW	1.2 kW
COP	4.84	2.92

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
ηs	188 %	142 %
Prated	10 kW	10 kW
SCOP	4.77	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.04 kW	9.32 kW
COP Tj = -7°C	2.68	2.22
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.89 kW	5.47 kW
COP Tj = +2°C	4.84	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.64 kW	3.41 kW
COP Tj = +7°C	6.16	4.64
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.13 kW	3.01 kW
COP Tj = 12°C	7.92	6.02
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.04 kW	9.32 kW
COP Tj = Tbiv	2.68	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.23 kW
Annual energy consumption Qhe	4333 kWh	5681 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	172 %	130 %
Prated	10 kW	10 kW
SCOP	4.36	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.43 kW	5.93 kW
COP Tj = -7°C	3.68	2.67
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.62 kW	3.94 kW
COP Tj = +2°C	5.31	4.08
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.68 kW	2.48 kW
COP Tj = +7°C	6.89	5.35
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.88 kW

COP Tj = 12°C	7.87	6.21
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.09 kW	7.75 kW
COP Tj = Tbiv	2.58	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.69 kW
Annual energy consumption Qhe	5648 kWh	7392 kWh
Pdh Tj = -15°C (if TOL	8.09	7.75
COP Tj = -15°C (if TOL	2.58	2.08
Cdh Tj = -15 °C	0.99	1

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	244 %	171 %
Prated	10.6 kW	9.8 kW
SCOP	6.18	4.34
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.58 kW	9.8 kW
COP Tj = +2°C	2.95	2.13
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.97 kW
COP Tj = +7°C	5.23	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.86 kW
COP Tj = 12°C	8.39	5.95
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.58 kW	9.8 kW
COP Tj = Tbiv	2.95	2.13

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.58 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2292 kWh	3017 kWh

Model Logatherm WLW176i-10 AR E	
Model name	Logatherm WLW176i-10 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	5.58 kW	3.49 kW
El input	1.15 kW	1.2 kW
COP	4.84	2.92

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
ηs	188 %	142 %
Prated	10 kW	10 kW
SCOP	4.77	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.04 kW	9.32 kW
COP Tj = -7°C	2.68	2.22
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.89 kW	5.47 kW
COP Tj = +2°C	4.84	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.64 kW	3.41 kW
COP Tj = +7°C	6.16	4.64
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.13 kW	3.01 kW
COP Tj = 12°C	7.92	6.02
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.04 kW	9.32 kW
COP Tj = Tbiv	2.68	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.23 kW
Annual energy consumption Qhe	4333 kWh	5681 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	172 %	130 %
Prated	10 kW	10 kW
SCOP	4.36	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.43 kW	5.93 kW
COP Tj = -7°C	3.68	2.67
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.62 kW	3.94 kW
COP Tj = +2°C	5.31	4.08
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.68 kW	2.48 kW
COP Tj = +7°C	6.89	5.35
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.88 kW

COP Tj = 12°C	7.87	6.21
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.09 kW	7.75 kW
COP Tj = Tbiv	2.58	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.69 kW
Annual energy consumption Qhe	5648 kWh	7392 kWh
Pdh Tj = -15°C (if TOL	8.09	7.75
COP Tj = -15°C (if TOL	2.58	2.08
Cdh Tj = -15 °C	0.99	1

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	244 %	171 %
Prated	10.6 kW	9.8 kW
SCOP	6.18	4.34
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.58 kW	9.8 kW
COP Tj = +2°C	2.95	2.13
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.97 kW
COP Tj = +7°C	5.23	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.86 kW
COP Tj = 12°C	8.39	5.95
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.58 kW	9.8 kW
COP Tj = Tbiv	2.95	2.13

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.58 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2292 kWh	3017 kWh

Model Logatherm WLW176i-10 AR E (60°C)	
Model name	Logatherm WLW176i-10 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	5.58 kW	3.49 kW
El input	1.15 kW	1.2 kW
COP	4.84	2.92

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
ηs	188 %	142 %
Prated	10 kW	10 kW
SCOP	4.77	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.04 kW	9.32 kW
COP Tj = -7°C	2.68	2.22
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.89 kW	5.47 kW
COP Tj = +2°C	4.84	3.60

Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.64 kW	3.41 kW
COP Tj = +7°C	6.16	4.64
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.13 kW	3.01 kW
COP Tj = 12°C	7.92	6.02
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.04 kW	9.32 kW
COP Tj = Tbiv	2.68	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.29 kW	8.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.71 kW	1.23 kW
Annual energy consumption Qhe	4333 kWh	5681 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	172 %	130 %
Prated	10 kW	10 kW
SCOP	4.36	3.33
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.43 kW	5.93 kW
COP Tj = -7°C	3.68	2.67
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.62 kW	3.94 kW
COP Tj = +2°C	5.31	4.08
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.68 kW	2.48 kW
COP Tj = +7°C	6.89	5.35
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.88 kW

COP Tj = 12°C	7.87	6.21
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.09 kW	7.75 kW
COP Tj = Tbiv	2.58	2.08
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.6 kW	6.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.4 kW	3.69 kW
Annual energy consumption Qhe	5648 kWh	7392 kWh
Pdh Tj = -15°C (if TOL	8.09	7.75
COP Tj = -15°C (if TOL	2.58	2.08
Cdh Tj = -15 °C	0.99	1

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	244 %	171 %
Prated	10.6 kW	9.8 kW
SCOP	6.18	4.34
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.58 kW	9.8 kW
COP Tj = +2°C	2.95	2.13
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.42 kW	5.97 kW
COP Tj = +7°C	5.23	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.86 kW
COP Tj = 12°C	8.39	5.95
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.58 kW	9.8 kW
COP Tj = Tbiv	2.95	2.13

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.58 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2292 kWh	3017 kWh

Model Logatherm WLW176i-10 AR T180 (60°C)	
Model name	Logatherm WLW176i-10 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 ηDHW	95 %
COP	2.33
Heating up time	2:56 h:min
Standby power input	106 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	2.02
Heating up time	2:34 h:min
Standby power input	128.6 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.88
Heating up time	2:15 h:min
Standby power input	90 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	239 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	5.56 kW	3.44 kW
El input	1.16 kW	1.2 kW
COP	4.8	2.86

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.73	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.06 kW	9.27 kW
COP Tj = -7°C	2.66	2.20
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.45 kW
COP Tj = +2°C	4.81	3.58
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.39 kW
COP Tj = +7°C	6.11	4.57
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.98 kW
COP Tj = 12°C	7.84	5.86
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.06 kW	9.27 kW
COP Tj = Tbiv	2.66	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.28 kW	8.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.72 kW	1.29 kW
Annual energy consumption Qhe	4365 kWh	5742 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	170 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.29
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.41 kW	5.89 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.92 kW
COP Tj = +2°C	5.27	4.02
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.45 kW
COP Tj = +7°C	6.83	5.17
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.85 kW
COP Tj = 12°C	7.8	6.04
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.71 kW
COP Tj = Tbiv	2.57	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.59 kW	6.25 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	3.75 kW
Annual energy consumption Qhe	5685 kWh	7492 kWh

Pdh Tj = -15°C (if TOL	8.08	7.71
COP Tj = -15°C (if TOL	2.57	2.06
Cdh Tj = -15 °C	0.99	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	242 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.56 kW	9.76 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.41 kW	5.93 kW
COP Tj = +7°C	5.19	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.31	5.79
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.56 kW	9.76 kW
COP Tj = Tbiv	2.98	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.56 kW	9.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2308 kWh	3067 kWh

Model Logatherm WLW176i-10 AR T180	
Model name	Logatherm WLW176i-10 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 ηDHW	95 %
COP	2.33
Heating up time	2:56 h:min
Standby power input	106 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	2.02
Heating up time	2:34 h:min
Standby power input	128.6 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.88
Heating up time	2:15 h:min
Standby power input	90 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	239 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	5.56 kW	3.44 kW
El input	1.16 kW	1.2 kW
COP	4.8	2.86

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.73	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.06 kW	9.27 kW
COP Tj = -7°C	2.66	2.20
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.45 kW
COP Tj = +2°C	4.81	3.58
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.39 kW
COP Tj = +7°C	6.11	4.57
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.98 kW
COP Tj = 12°C	7.84	5.86
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.06 kW	9.27 kW
COP Tj = Tbiv	2.66	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.28 kW	8.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.72 kW	1.29 kW
Annual energy consumption Qhe	4365 kWh	5742 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	170 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.29
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.41 kW	5.89 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.92 kW
COP Tj = +2°C	5.27	4.02
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.45 kW
COP Tj = +7°C	6.83	5.17
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.85 kW
COP Tj = 12°C	7.8	6.04
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.71 kW
COP Tj = Tbiv	2.57	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.59 kW	6.25 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	3.75 kW
Annual energy consumption Qhe	5685 kWh	7492 kWh

Pdh Tj = -15°C (if TOL	8.08	7.71
COP Tj = -15°C (if TOL	2.57	2.06
Cdh Tj = -15 °C	0.99	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	242 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.56 kW	9.76 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.41 kW	5.93 kW
COP Tj = +7°C	5.19	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.31	5.79
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.56 kW	9.76 kW
COP Tj = Tbiv	2.98	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.56 kW	9.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2308 kWh	3067 kWh

Model Logatherm WLW186i-10 AR T180	
Model name	Logatherm WLW186i-10 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 ηDHW	95 %
COP	2.33
Heating up time	2:56 h:min
Standby power input	106 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	2.02
Heating up time	2:34 h:min
Standby power input	128.6 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.88
Heating up time	2:15 h:min
Standby power input	90 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	239 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	5.56 kW	3.44 kW
El input	1.16 kW	1.2 kW
COP	4.8	2.86

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.73	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.06 kW	9.27 kW
COP Tj = -7°C	2.66	2.20
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.45 kW
COP Tj = +2°C	4.81	3.58
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.39 kW
COP Tj = +7°C	6.11	4.57
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.98 kW
COP Tj = 12°C	7.84	5.86
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.06 kW	9.27 kW
COP Tj = Tbiv	2.66	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.28 kW	8.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.72 kW	1.29 kW
Annual energy consumption Qhe	4365 kWh	5742 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	170 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.29
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.41 kW	5.89 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.92 kW
COP Tj = +2°C	5.27	4.02
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.45 kW
COP Tj = +7°C	6.83	5.17
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.85 kW
COP Tj = 12°C	7.8	6.04
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.71 kW
COP Tj = Tbiv	2.57	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.59 kW	6.25 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	3.75 kW
Annual energy consumption Qhe	5685 kWh	7492 kWh

Pdh Tj = -15°C (if TOL	8.08	7.71
COP Tj = -15°C (if TOL	2.57	2.06
Cdh Tj = -15 °C	0.99	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	242 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.56 kW	9.76 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.41 kW	5.93 kW
COP Tj = +7°C	5.19	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.31	5.79
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.56 kW	9.76 kW
COP Tj = Tbiv	2.98	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.56 kW	9.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2308 kWh	3067 kWh

Model Logatherm WLW186i-10 AR T180 W	
Model name	Logatherm WLW186i-10 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 ηDHW	95 %
COP	2.33
Heating up time	2:56 h:min
Standby power input	106 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	2.02
Heating up time	2:34 h:min
Standby power input	128.6 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	237 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.88
Heating up time	2:15 h:min
Standby power input	90 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	239 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	5.56 kW	3.44 kW
El input	1.16 kW	1.2 kW
COP	4.8	2.86

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	186 %	141 %
Prated	10 kW	10 kW
SCOP	4.73	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.06 kW	9.27 kW
COP Tj = -7°C	2.66	2.20
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.88 kW	5.45 kW
COP Tj = +2°C	4.81	3.58
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.63 kW	3.39 kW
COP Tj = +7°C	6.11	4.57
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.12 kW	2.98 kW
COP Tj = 12°C	7.84	5.86
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	9.06 kW	9.27 kW
COP Tj = Tbiv	2.66	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.28 kW	8.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.72 kW	1.29 kW
Annual energy consumption Qhe	4365 kWh	5742 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	170 %	129 %
Prated	10 kW	10 kW
SCOP	4.34	3.29
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.41 kW	5.89 kW
COP Tj = -7°C	3.66	2.65
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	3.61 kW	3.92 kW
COP Tj = +2°C	5.27	4.02
Cdh Tj = +2 °C	0.97	0.98
Pdh Tj = +7°C	2.67 kW	2.45 kW
COP Tj = +7°C	6.83	5.17
Cdh Tj = +7 °C	0.95	0.96
Pdh Tj = 12°C	3.05 kW	2.85 kW
COP Tj = 12°C	7.8	6.04
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	8.08 kW	7.71 kW
COP Tj = Tbiv	2.57	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.59 kW	6.25 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.21	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.41 kW	3.75 kW
Annual energy consumption Qhe	5685 kWh	7492 kWh

Pdh Tj = -15°C (if TOL	8.08	7.71
COP Tj = -15°C (if TOL	2.57	2.06
Cdh Tj = -15 °C	0.99	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	42 dB(A)	42 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	242 %	168 %
Prated	10.6 kW	9.8 kW
SCOP	6.14	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.56 kW	9.76 kW
COP Tj = +2°C	2.98	2.12
Cdh Tj = +2 °C	0.99	1
Pdh Tj = +7°C	6.41 kW	5.93 kW
COP Tj = +7°C	5.19	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.1 kW	2.84 kW
COP Tj = 12°C	8.31	5.79
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.56 kW	9.76 kW
COP Tj = Tbiv	2.98	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.56 kW	9.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	2.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	34 W	34 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2308 kWh	3067 kWh

Model Logatherm WLW176i-12 AR T180 (60°C)	
Model name	Logatherm WLW176i-12 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 ηDHW	95 %
COP	2.34
Heating up time	2:12 h:min
Standby power input	100 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	1.99
Heating up time	2:24 h:min
Standby power input	170 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	238 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.87
Heating up time	2:03 h:min
Standby power input	90 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 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	5.56 kW	4.91 kW
El input	1.16 kW	1.7 kW
COP	4.8	2.89

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.07 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.68 kW	6.25 kW
COP Tj = +2°C	4.68	3.57
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.21 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.64 kW
COP Tj = 12°C	8.04	5.83
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.07 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.83 kW	11.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.37 kW	0.89 kW
Annual energy consumption Qhe	5432 kWh	7130 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	165 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.24
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.03 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.71 kW	4.34 kW
COP Tj = +2°C	5.38	4.07
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.56 kW
COP Tj = +7°C	5.3	5.17
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW
COP Tj = 12°C	8.02	5.92
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.81 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.72 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.63
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.28 kW	5.03 kW
Annual energy consumption Qhe	7025 kWh	9125 kWh

Pdh Tj = -15°C (if TOL	10.47	9.81
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	168 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.66 kW	12.4 kW
COP Tj = +2°C	2.66	2.03
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.87 kW
COP Tj = +7°C	5.13	3.65
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.78
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.66 kW	12.4 kW
COP Tj = Tbiv	2.66	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.66 kW	12.4 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2848 kWh	3866 kWh

Model Logatherm WLW176i-12 AR T180	
Model name	Logatherm WLW176i-12 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 ηDHW	95 %
COP	2.34
Heating up time	2:12 h:min
Standby power input	100 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	1.99
Heating up time	2:24 h:min
Standby power input	170 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	238 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.87
Heating up time	2:03 h:min
Standby power input	90 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 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	5.56 kW	4.91 kW
El input	1.16 kW	1.7 kW
COP	4.8	2.89

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.07 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.68 kW	6.25 kW
COP Tj = +2°C	4.68	3.57
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.21 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.64 kW
COP Tj = 12°C	8.04	5.83
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.07 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.83 kW	11.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.37 kW	0.89 kW
Annual energy consumption Qhe	5432 kWh	7130 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	165 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.24
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.03 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.71 kW	4.34 kW
COP Tj = +2°C	5.38	4.07
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.56 kW
COP Tj = +7°C	5.3	5.17
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW
COP Tj = 12°C	8.02	5.92
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.81 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.72 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.63
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.28 kW	5.03 kW
Annual energy consumption Qhe	7025 kWh	9125 kWh

Pdh Tj = -15°C (if TOL	10.47	9.81
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	168 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.66 kW	12.4 kW
COP Tj = +2°C	2.66	2.03
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.87 kW
COP Tj = +7°C	5.13	3.65
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.78
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.66 kW	12.4 kW
COP Tj = Tbiv	2.66	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.66 kW	12.4 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2848 kWh	3866 kWh

Model Logatherm WLW186i-12 AR T180	
Model name	Logatherm WLW186i-12 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 ηDHW	95 %
COP	2.34
Heating up time	2:12 h:min
Standby power input	100 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	1.99
Heating up time	2:24 h:min
Standby power input	170 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	238 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.87
Heating up time	2:03 h:min
Standby power input	90 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 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	5.56 kW	4.91 kW
El input	1.16 kW	1.7 kW
COP	4.8	2.89

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.07 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.68 kW	6.25 kW
COP Tj = +2°C	4.68	3.57
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.21 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.64 kW
COP Tj = 12°C	8.04	5.83
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.07 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.83 kW	11.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.37 kW	0.89 kW
Annual energy consumption Qhe	5432 kWh	7130 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.24
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.03 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.71 kW	4.34 kW
COP Tj = +2°C	5.38	4.07
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.56 kW
COP Tj = +7°C	5.3	5.17
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW
COP Tj = 12°C	8.02	5.92
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.81 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.72 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.63
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.28 kW	5.03 kW
Annual energy consumption Qhe	7025 kWh	9125 kWh

Pdh Tj = -15°C (if TOL	10.47	9.81
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	168 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.66 kW	12.4 kW
COP Tj = +2°C	2.66	2.03
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.87 kW
COP Tj = +7°C	5.13	3.65
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.78
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.66 kW	12.4 kW
COP Tj = Tbiv	2.66	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.66 kW	12.4 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2848 kWh	3866 kWh

Model Logatherm WLW186i-12 AR T180 W	
Model name	Logatherm WLW186i-12 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 ηDHW	95 %
COP	2.34
Heating up time	2:12 h:min
Standby power input	100 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	235 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	83 %
COP	1.99
Heating up time	2:24 h:min
Standby power input	170 W
Reference hot water temperature	52.9 °C
Mixed water at 40°C	238 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	117 %
COP	2.87
Heating up time	2:03 h:min
Standby power input	90 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 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	5.56 kW	4.91 kW
El input	1.16 kW	1.7 kW
COP	4.8	2.89

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	136 %
Prated	12.2 kW	12 kW
SCOP	4.64	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.69 kW	11.07 kW
COP Tj = -7°C	2.45	1.90
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.68 kW	6.25 kW
COP Tj = +2°C	4.68	3.57
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.10 kW	4.21 kW
COP Tj = +7°C	6.24	4.45
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.01 kW	3.64 kW
COP Tj = 12°C	8.04	5.83
Cdh Tj = +12 °C	0.95	0.97
Pdh Tj = Tbiv	11.69 kW	11.07 kW
COP Tj = Tbiv	2.45	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.83 kW	11.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W

PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.37 kW	0.89 kW
Annual energy consumption Qhe	5432 kWh	7130 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	165 %	127 %
Prated	12 kW	12 kW
SCOP	4.21	3.24
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.3 kW	7.03 kW
COP Tj = -7°C	3.58	2.56
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.71 kW	4.34 kW
COP Tj = +2°C	5.38	4.07
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.85 kW	2.56 kW
COP Tj = +7°C	5.3	5.17
Cdh Tj = +7 °C	0.97	0.96
Pdh Tj = 12°C	3.09 kW	2.85 kW
COP Tj = 12°C	8.02	5.92
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	10.47 kW	9.81 kW
COP Tj = Tbiv	2.35	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.72 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.63
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.28 kW	5.03 kW
Annual energy consumption Qhe	7025 kWh	9125 kWh

Pdh Tj = -15°C (if TOL	10.47	9.81
COP Tj = -15°C (if TOL	2.35	1.93
Cdh Tj = -15 °C	1	1

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	45 dB(A)	45 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	233 %	168 %
Prated	12.6 kW	12.4 kW
SCOP	5.91	4.28
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.66 kW	12.4 kW
COP Tj = +2°C	2.66	2.03
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	8.66 kW	7.87 kW
COP Tj = +7°C	5.13	3.65
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.57 kW
COP Tj = 12°C	8	5.78
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	12.66 kW	12.4 kW
COP Tj = Tbiv	2.66	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.66 kW	12.4 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	75 °C	75 °C
Poff	33 W	33 W
PTO	18 W	18 W
PSB	33 W	33 W
PCK	67 W	67 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	2848 kWh	3866 kWh