

Subtype BLWEco.1 12/16

Certificate Holder	August Brötje GmbH
Address	August-Brötje-Str. 17
ZIP	26180
City	Rastede
Country	DE
Certification Body	BRE Global Limited
Subtype title	BLWEco.1 12/16
Registration number	041-K062-03
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.84 kg
Certification Date	04.09.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 12

Model BLWEco 12.1

Model name	BLWEco 12.1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	135 %
Prated	12.00 kW	11.58 kW
SCOP	4.81	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.61 kW	10.25 kW
COP Tj = -7°C	2.88	2.01
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.69 kW	6.52 kW
COP Tj = +2°C	4.65	3.44
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.44 kW	4.36 kW
COP Tj = +7°C	6.62	4.59
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.74 kW	3.30 kW
COP Tj = 12°C	8.47	6.05
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.61 kW	10.25 kW
COP Tj = Tbiv	2.88	2.01

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.75 kW	9.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.79
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.26 kW	2.50 kW
Annual energy consumption Qhe	5153 kWh	6928 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	118 %
Prated	11.38 kW	10.32 kW
SCOP	4.08	3.02
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.05 kW	6.63 kW
COP Tj = -7°C	3.48	2.63
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.68 kW	4.07 kW
COP Tj = +2°C	4.96	3.60
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.14 kW	2.78 kW
COP Tj = +7°C	6.10	4.54
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.57 kW	3.33 kW
COP Tj = 12°C	7.87	6.25
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	9.28 kW	8.42 kW
COP Tj = Tbiv	2.59	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.01 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.13
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	30 W	30 W
PSB	20 W	20 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.37 kW	6.12 kW
Annual energy consumption Q _{he}	6871 kWh	8420 kWh
P _{dh} T _j = -15°C (if TOL	9.28	8.42
COP T _j = -15°C (if TOL	2.59	1.84
C _{dh} T _j = -15 °C	0.90	0.90

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	256 %	174 %
Prated	11.11 kW	12.51 kW
SCOP	6.53	4.42
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.11 kW	12.08 kW
COP T _j = +2°C	3.59	2.31
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	7.14 kW	8.04 kW
COP T _j = +7°C	5.87	3.86
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	3.56 kW	3.75 kW
COP T _j = 12°C	7.94	5.70
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	7.14 kW	8.04 kW
COP T _j = T _{biv}	5.87	3.86
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.11 kW	12.08 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.59	2.31
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}		
WTOL	65 °C	65 °C
P _{off}	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.44 kW
Annual energy consumption Q _{he}	2296 kWh	3780 kWh

Model BLWEco 16.1

Model name	BLWEco 16.1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	182 %	133 %
Prated	15.21 kW	13.02 kW
SCOP	4.62	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.45 kW	11.52 kW
COP Tj = -7°C	2.72	1.99
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.57 kW	7.18 kW
COP Tj = +2°C	4.41	3.34
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.70 kW	4.68 kW
COP Tj = +7°C	6.56	4.61
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.78 kW	3.32 kW
COP Tj = 12°C	8.51	6.07
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	13.45 kW	11.52 kW
COP Tj = Tbiv	2.72	1.99

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.52 kW	10.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.80
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.68 kW	2.67 kW
Annual energy consumption Qhe	6805 kWh	7896 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	158 %	122 %
Prated	13.76 kW	11.79 kW
SCOP	4.02	3.12
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.31 kW	7.64 kW
COP Tj = -7°C	3.37	2.65
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.27 kW	4.43 kW
COP Tj = +2°C	4.86	3.79
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.62 kW	2.98 kW
COP Tj = +7°C	6.49	4.81
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.35 kW	3.43 kW
COP Tj = 12°C	7.40	6.29
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.22 kW	9.62 kW
COP Tj = Tbiv	2.43	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.89 kW	5.22 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.23
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.87 kW	6.57 kW
Annual energy consumption Q _{he}	8431 kWh	9310 kWh
P _{dh} T _j = -15°C (if TOL	11.22	9.62
COP T _j = -15°C (if TOL	2.43	1.86
C _{dh} T _j = -15 °C	0.90	0.90

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	248 %	176 %
Prated	13.09 kW	14.17 kW
SCOP	6.33	4.47
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	13.09 kW	13.38 kW
COP T _j = +2°C	3.35	2.29
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	8.42 kW	9.11 kW
COP T _j = +7°C	5.36	3.89
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	3.88 kW	4.06 kW
COP T _j = 12°C	8.11	5.86
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	8.42 kW	9.11 kW
COP T _j = T _{biv}	5.36	3.89
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	13.09 kW	13.38 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.35	2.29
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}		
WTOL	65 °C	65 °C
P _{off}	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.79 kW
Annual energy consumption Q _{he}	2786 kWh	4236 kWh