MIGLIO

TECHNICAL DATASHEET

MUSE - MONOBLOCK AIR/WATER HEAT PUMP

MUSE-M outdoor unit

MUSE-M-			07S	11S	14S	17T	23T
Heating capacities according to EN 14511							
A7/W35	Nominal heating capacity	kW	7.40	11.00	13.60	17.00	22.80
	Electrical power input	kW	1.78	2.60	3.49	4.40	5.76
	Coefficient of Performance (COP)		4.15	4.23	3.90	3.87	3.96
A7/W45	Nominal heating capacity	kW	7.40	11.00	13.60	17.00	22.80
	Electrical power input	kW	2.35	3.49	4.38	5.50	7.23
	Coefficient of Performance (COP)		3.15	3.16	3.10	3.08	3.15
A7/W55	Nominal heating capacity	kW	7.36	11.10	13.20	16.80	22.70
	Electrical power input	kW	2.79	4.15	5.11	6.42	8.71
	Coefficient of Performance (COP)		2.64	2.67	2.58	2.62	2.61
A-7/W35	Nominal heating capacity	kW	5.87	7.29	9.45	12.05	16.34
	Electrical power input	kW	2.04	2.50	3.27	4.18	5.73
	Coefficient of Performance (COP)		2.88	2.91	2.89	2.88	2.85
A-7/W45	Nominal heating capacity	kW	5.86	7.28	9.44	12.04	16.33
	Electrical power input	kW	2.38	2.95	3.89	5.00	6.75
	Coefficient of Performance (COP)		2.46	2.47	2.43	2.41	2.42
A-7/W55	Nominal heating capacity	kW	6.48	8.05	10.44	13.31	17.15
	Electrical power input	kW	3.00	3.74	4.93	6.33	8.27
	Coefficient of Performance (COP)		2.16	2.15	2.12	2.10	2.07
Heating performance according to EU Regulation No. 813/2013 (average climate conditions)							
Low temperature application (W35)							
Seasonal Coefficient of Performance (SCOP)			4.77	4.85	5.05	4.98	4.96
Energy efficiency (ηs)		%	188	191	199	196	195
Energy efficiency class			A+++	A+++	A+++	A+++	A+++
Medium temperature application (W55)							
Seasonal Coefficient of Performance (SCOP)			3.46	3.50	3.40	3.40	3.43
Energy efficiency (ηs)		%	138	140	135	135	137
Energy efficiency class			A++	A++	A++	A++	A++

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Cooling capacities according to EN 14511							
A35/W18	Nominal cooling capacity	kW	7.02	8.71	11.30	14.41	19.54
	Electrical power input	kW	2.60	3.47	4.26	5.42	7.24
	Energy Efficiency Ratio (EER)		2.70	2.51	2.65	2.66	2.70
A35/W7	Nominal cooling capacity	kW	6.48	8.10	10.43	13.30	18.04
	Electrical power input	kW	2.54	3.43	4.16	5.31	7.19
	Energy Efficiency Ratio (EER)		2.55	2.37	2.51	2.51	2.51

Air inlet temperature						
Heating mode						
Min.	°C	-25	-25	-25	-25	-25
Max.	°C	30	30	30	30	30
Cooling mode						
Min.	°C	12	12	12	12	12
Max.	°C	45	45	45	45	45
Water supply temperature						
Heating mode						
Min.	°C	24	24	24	24	24
Max.	°C	55	55	55	55	55
Cooling mode						
Min.	°C	22	22	22	22	22
Max.	°C	7	7	7	7	7
Hydraulic circuit						
Min. water volume system	l	50	80	100	120	160
Min. water flow rate heat pump circuit (defrost)	l/h	815	1232	1565	1902	2571
Max. operating pressure	MPa	0.3	0.3	0.3	0.3	0.3
Primary circulation pump		Shinhoo GPA25-9H	Shinhoo GPA25-9H	Shinhoo GPA25-9H	Shinhoo GPA25-11H	Shinhoo GPA25-11H
Nominal water flow rate	m³/h	1.27	1.90	2.34	2.93	3.92
External Static Pressure (ESP) at nominal water flow rate	kPa	70	59	55	43	25
Electrical circuit						
Nominal voltage	V / ~ / Hz	230 / 1/N/PE / 50	230 / 1/N/PE / 50	230 / 1/N/PE / 50	400 / 3/N/PE / 50	400 / 3/N/PE / 50
Nominal voltage tolerance	%	-10 / +10	-10 / +10	-10 / +10	-10 / +10	-10 / +10
Max. operating current	A	13	19	23	10	14
Power factor (cos φ)		0.99	0.99	0.99	0.93	0.94
Starting current compressor, inverter controlled	A	< 10	< 10	< 10	< 10	< 10
Starting current compressor, locked rotor (LRA)	A	< 10	< 10	< 10	< 10	< 10
Recommended circuit breaker		C20A	C25A	C32A	C25A	C25A
Protection class		IP24	IP24	IP24	IP24	IP24
Max. electrical power input						
Fan	W	120	200	200	200	2 x 120
Primary circulation pump	W	95	95	95	140	140
Energy Efficiency Index (EEI) of circulation pump		≤ 0.23	≤ 0.23	≤ 0.23	≤ 0.21	≤ 0.21
Total	kW	3.00	4.40	5.30	6.90	9.70

4G module - mobile data transmission						
4G module		EG915U-EU	EG915U-EU	EG915U-EU	EG915U-EU	EG915U-EU
Transmission standard		GSM/LTE-FDD	GSM/LTE-FDD	GSM/LTE-FDD	GSM/LTE-FDD	GSM/LTE-FDD
Frequency band	MHz	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: 850/900/1800/1900	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: 850/900/1800/1900	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: 850/900/1800/1900	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: 850/900/1800/1900	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: 850/900/1800/1900
Max. transmit power	dBm	23.0	23.0	23.0	23.0	23.0
Max. data transfer rate (upload)	Mbps	5.0	5.0	5.0	5.0	5.0
Max. data transfer rate (download)	Mbps	10.0	10.0	10.0	10.0	10.0
Energy consumption, standby mode	mA	1.3	1.3	1.3	1.3	1.3
Energy consumption, idle mode	mA	13.0	13.0	13.0	13.0	13.0
Antenna	Type	FPC monopole	FPC monopole	FPC monopole	FPC monopole	FPC monopole
Antenna frequency band	MHz	698-960/1700-2700	698-960/1700-2700	698-960/1700-2700	698-960/1700-2700	698-960/1700-2700
SIM card	Type	Micro	Micro	Micro	Micro	Micro
Fan characteristics						
Fan	Type	Axial	Axial	Axial	Axial	Axial
Number of fans	n	1	1	1	1	2
Max. fan speed	1/min	900	900	900	900	900
Max. airflow rate	m³/h	3700	4450	4450	4450	7400
Refrigerant circuit						
Refrigerant	Type	R32	R32	R32	R32	R32
Safety group		A2L	A2L	A2L	A2L	A2L
Global Warming Potential (GWP)		675	675	675	675	675
Charge	kg	1.30	1.35	1.35	1.90	2.80
CO_2 equivalent	t	0.88	0.91	0.91	1.28	1.89
Compressor (hermetically sealed)	Type	Rotary EVI technology	Rotary EVI technology	Rotary EVI technology	Rotary EVI technology	Rotary EVI technology
Compressor oil	Type	VG75R	VG75R	VG75R	VG75R	VG75R
Compressor oil charge	l	0.45	0.67	0.67	0.87	1.00
Max. low operating pressure	MPa	1.20	1.20	1.20	1.20	1.20
Max. high operating pressure	MPa	4.20	4.20	4.20	4.20	4.20
Sound level						
Sound pressure level (Lp(A))*	dB(A)	39	38	39	41	47
Dimensions						
Width	mm	1030	1126	1126	1126	1122
Depth	mm	365	421	421	421	423
Height	mm	695	862	862	862	1360
Weight						
Empty	kg	88	105	110	129	165
Hydraulic connection						
Supply/return (male thread)	inch	G1	G1	G1	G1-1/4	G1-1/4
Enclosure						
Color		Traffic white	Traffic white	Traffic white	Traffic white	Traffic white
RAL color		RAL 9016	RAL 9016	RAL 9016	RAL 9016	RAL 9016

* Measured in free field, directivity factor 2, at 5 m distance from the unit.

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MUSE-SDS indoor unit (all-in-one, floor-standing model)

MUSE-SDS-		SI	TI
Hydraulic circuit			
Buffer tank volume*	l	50 (2 x 25)	50 (2 x 25)
Expansion vessel volume	l	2 x 8	2 x 8
Magnetic dirt separator magnetic flux density	G	12000	12000
Magnetic dirt separator min. particle size	µm	40	40
Manometer measurement range	MPa	0.0 to 1.0	0.0 to 1.0
Max. operating pressure	MPa	0.3	0.3
Secondary circulation pump		Shinhoo GPA25-11H	Shinhoo GPA25-11H
Hygiene boiler			
Volume	l	200	250
Min. domestic cold water inlet pressure	MPa	0.1	0.1
Max. operating pressure, tank	MPa	0.3	0.3
Max. operating pressure, heat exchanger	MPa	0.6	0.6
Tank material		SUS304	SUS304
Heat exchanger material		SUS316L	SUS316L
Electrical circuit			
Nominal voltage	V / ~ / Hz	230 / 1/N/PE / 50	400 / 3/N/PE / 50
Nominal voltage tolerance	%	-10 / +10	-10 / +10
Max. operating current	A	28	26
Recommended circuit breaker		C40A	C40A
Circuit breaker for electronics		C10A	C10A
Electric heating element for heating	kW	3	6
Circuit breaker for electric heating element for heating		C20A	C32A
Electric heating element for domestic hot water	kW	3	3
Circuit breaker for electric heating element for domestic hot water		C20A	C20A
Protection class		IP24	IP24
Sound level			
Sound pressure level (Lp(A))**	dB(A)	34	34
Dimensions			
Width	mm	795	795
Depth	mm	920	920
Height	mm	1635	1885
Weight			
Empty	kg	130	160
Hydraulic connection			
Supply/return for outdoor unit (male thread)	inch	G1	G1-1/4
Supply/return for heating/cooling (male thread)	inch	G1	G1-1/4
Domestic cold water inlet/domestic hot water outlet (male thread)	inch	G3/4	G3/4
Domestic hot water circulation (male thread)	inch	G1/2	G1/2

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Enclosure			
Color		Traffic white	Traffic white
RAL color		RAL 9016	RAL 9016

* MUSE-SD indoor unit comes without 50 l buffer tank, available only upon request.
** Measured in free field, directivity factor 2, 1.5 m height, at 1 m distance from the unit.

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