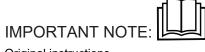
### **TECHNICAL DATA MANUAL**

DC INVERTER AQUA THERMAL SUPER AIR CONDITIONER OUTDOOR UNIT R32



Original instructions.

Please read this manual carefully and keep it for future reference. All the pictures in this manual are for illustrations purpose only.

Heat pump space he	eater	unit	MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
Indoor unit sound power (*)		[dB(A)]	1	1
Outdoor unit sound power (*)		[dB(A)]	80.0/86.0	80.0/92.0
Capacity of the back-up heater integrated in the unit		[kW]	0	0
off peak operation fu Heat pump	inction integrated in	Y/N	No	No
Space heating	Energy efficiency class 35 C (Low temp. app.)	-	A+++	A++
Space heating	Energy efficiency class 55 °C(Medium temp. app.	-	A++	A++
Average climate (De	esign temperature= –10	°C)		
Prated(declared heating capacity) @-10 °C			48	95
Space heating 35 °C	Seasonal space heating efficiency(ηs)	[%]	177	167
	Annual energy consumption	[kWh]	22 032	46 188
	Prated(declared heating capacity) @-10 °C	[kW]	40	80
Space heating 55 °C	Seasonal space heating efficiency(ηs)	[%]	133	127
	Annual energy consumption	[kWh]	24 290	50 858
Part load conditions	space heating average	climate	e low temperature application	
	Pdh(declared heating capacity)	[kW]	42.18	85.48
(A) condition (-7 °C)	COPd (declared COP)	-	3.24	3.03
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh(declared heating capacity)	[kW]	24.59	50.02
(B) condition (2 °C)	COPd (declared COP)	-	4.15	3.73
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh(declared heating capacity)	[kW]	24.00	33.85
(C) condition (7 °C)	COPd (declared COP)	-	6.20	6.23
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh(declared heating capacity)	[kW]	20.68	39.27
(D) condition (12 °C)	COPd (declared COP)	-	8.23	8.02
	Cdh(degradation coefficient)	-	0.9	0.9

Heat pump space h	eater	unit	MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
	Tol (temperature operating limit)	[°C]	-10	-10
(E) Tol(temperature	Pdh (declared heating capacity)	[kW]	47.60	94.45
operating limit)	COPd (declared COP)	-	2.71	2.38
	WTOL (Heating water Operation Limit)	[°C]	65	65
	Tbiv	[°C]	-7	-7
(F) Tbivalent temperature	Pdh (declared heating capacity)	[kW]	42.18	85.48
temperatare .	COPd (declared COP)	-	3.24	3.03
Supplementary capacity at P_design	Psup (@Tdesignh:-10°C)	[kW]	0.40	0.55
Part load conditions	space heating average	climate	e medium temperature applic	cation
	Pdh (declared heating capacity)	[kW]	35.59	69.31
(A) condition (-7 °C)	COPd (declared COP)	-	2.42	2.01
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	21.61	41.99
(B) condition (2 °C)	COPd (declared COP)	-	3.18	3.10
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	15.06	48.27
(C) condition (7 °C)	COPd (declared COP)	-	4.46	4.52
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	18.43	37.99
(D) condition (12 °C)	COPd (declared COP)	-	6.06	6.03
	Cdh(degradation coefficient)	-	0.9	0.9
	Tol (temperature operating limit)	[°C]	-10	-10
(E) Tol(temperature	Pdh (declared heating capacity)	[kW]	39.80	79.71
`operating limit)	COPd (declared COP)	-	1.83	1.76
	WTOL (Heating water Operation Limit)	[°C]	65	65
	Tbiv	[°C]	-7	-7
(F) Tbivalent temperature	Pdh (declared heating capacity)	[kW]	35.59	69.31
	COPd (declared COP)	-	2.42	2.01
Supplementary capacity at P_design	Psup (@Tdesignh:-10°C)	[kW]	0	0.29

Heat pump space heater		unit	MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
Colder climate (Design temperature = –22 °C)				
		[kW]	40	80
Space heating 35 °C	Seasonal space heating efficiency (ηs)	[%]	152.0	146.0
	Annual energy consumption	[kWh]	25 415	52 894
	Prated (declared heating capacity) @ -22 °C	[kW]	40	68
Space heating 55 °C	Seasonal space heating efficiency (ηs)	[%]	133.0	109.0
	Annual energy consumption	[kWh]	24 290	60 183
		mate lo	ow temperature application	
	Pdh (declared heating capacity)	[kW]	27.88	67.26
condition (-15 °C)	COPd (declared COP)	-	1.83	2.56
	Cdh(degradation coefficient)	-	0.90	0.9
	Pdh (declared heating capacity)	[kW]	21.53	47.25
(A) condition (-7 °C)	COPd (declared COP)	-	2.55	3.07
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	12.29	29.39
(B) condition (2 °C)	COPd (declared COP)	-	3.03	4.23
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	11.14	27.48
(C) condition (7 °C)	COPd (declared COP)	-	3.80	6.36
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	14.28	32.27
(D) condition (12 °C)	COPd (declared COP)	-	5.77	7.77
	Cdh(degradation coefficient)	-	0.9	0.9
	Tol (temperature operating limit)	[°C]	-18	-22
(E) Tol(temperature	Pdh (declared heating capacity)	[kW]	31.81	75.44
operating limit)	COPd (declared COP)	-	1.71	1.98
	WTOL (Heating water Operation Limit)	[°C]	65	65
	Tbiv	[°C]	-15	-15
(F) Tbivalent temperature	Pdh (declared heating capacity)	[kW]	27.88	67.26
isporataro	COPd (declared COP)	-	1.83	2.56
Supplementary capacity at P_design	Psup (@Tdesignh:-22°C)	[kW]	2.78	4.56

Heat pump space heater		unit	MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
Part load conditions space heating colder clin		nate n	nedium temperature application	on
	Pdh (declared heating capacity)	[kW]	32.81	56.15
condition (-15 °C)	COPd (declared COP)	-	2.71	1.86
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	24.57	43.15
(A) condition (-7 °C)	COPd (declared COP)	-	3.11	2.49
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	15.59	25.41
(B) condition (2 °C)	COPd (declared COP)	-	4.65	3.07
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	12.61	25.58
(C) condition (7 °C)	COPd (declared COP)	-	5.63	4.66
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	15.31	31.53
(D) condition (12 °C)	COPd (declared COP)	-	7.37	6.43
	Cdh(degradation coefficient)	-	0.9	0.9
	Tol (temperature operating limit)	[°C]	-22	-18
(E) Tol(temperature	Pdh (declared heating capacity)	[kW]	37.22	61.03
operating limit)	COPd (declared COP)	-	1.97	1.80
	WTOL (Heating water Operation Limit)	[°C]	65	85
	Tbiv	[°C]	-15	-15
(F) Tbivalent temperature	Pdh (declared heating capacity)	[kW]	32.81	56.15
temperature	COPd (declared COP)	-	2.71	1.86
Supplementary capacity at P_design	Psup (@Tdesignh:-22°C)	[kW]	2.19	6.97
Warmer climate (Desig	n temperature =2°C)			
	Prated (declared heating capacity) @ 2°C	[kW]	48	95
Space heating 35 °C	Seasonal space heating efficiency (ηs)	[%]	237.0	235.0
	Annual energy consumption	[kWh]	10 683	21 332
	Prated (declared heating capacity) @ 2°C	[kW]	40	80
Space heating 55 °C	Seasonal space heating efficiency (ηs)	[%]	162.0	167.0
	Annual energy consumption	[kWh]	12 970	25 115

Heat pump space heater			MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
Part load conditions sp	ace heating warmer cl	imate	low temperature application	
	Pdh (declared heating capacity)	[kW]	47.76	93.78
(B) condition (2 °C)	COPd (declared COP)	-	3.23	2.89
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	30.59	61.13
(C) condition (7 °C)	COPd (declared COP)	-	5.47	5.29
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	15.70	32.17
(D) condition (12 °C)	COPd (declared COP)	-	7.65	8.03
	Cdh(degradation coefficient)	-	0.9	0.9
	Tol (temperature operating limit)	[°C]	2	2
(E) Tol(temperature operating limit)	Pdh (declared heating capacity)	[kW]	47.76	93.78
, ,	COPd (declared COP)	-	3.23	2.89
	WTOL (Heating water Operation Limit)	[°C]	65	65
(F) Tbivalent	Tbiv	[°C]	7	7
temperature	Pdh (declared heating capacity)	[kW]	30.59	61.13
	COPd (declared COP)	-	5.47	5.29
Supplementary capacity at P_design	Psup (@Tdesignh:2 °C)	[kW]	0	1.22
Part load conditions sp	pace heating warmer c	limate	medium temperature applica	tion
	Pdh (declared heating capacity)	[kW]	39.82	79.98
(B) condition (2 °C)	COPd (declared COP)	-	2.01	2.04
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	24.93	52.24
(C) condition (7 °C)	COPd (declared COP)	-	3.71	3.84
	Cdh(degradation coefficient)	-	0.9	0.9
	Pdh (declared heating capacity)	[kW]	12.35	31.12
(D) condition (12 °C)	COPd (declared COP)	-	5.27	5.66
	Cdh(degradation coefficient)	-	0.9	0.9
	Tol (temperature operating limit)	[°C]	2	2
(E) Tol(temperature operating limit)	Pdh (declared heating capacity)	[kW]	39.82	79.98
operating little)	COPd (declared COP)	-	2.01	2.04
	WTOL (Heating water Operation Limit)	[°C]	65	65

Heat pump space heater		unit	MH-SU50/65/75-RN8L	MH-SU110/140-RN8L
(F) Tbivalent	Tbiv	[°C]	7	7
temperature	Pdh (declared heating capacity)	[kW]	24.93	52.24
	COPd (declared COP)	-	3.71	3.84
Supplementary capacity at P_design	Psup (@Tdesignh:2 °C)	[kW]	0	0
Ecodesign technical d	ata			
	Air-to-water heat pump  Water-to-water heat pump  Brine-to-water heat pump	Y/N	Yes	Yes
	Water-to-water heat pump	Y/N	No	No
Draduat description	Brine-to-water heat pump	Y/N	No	No
Product description	Low-temperature heat pump	Y/N	No	No
	Equipped with a supplementary heater	Y/N	No	No
	Heat pump combination heater	Y/N	No	No
Air to water unit	Rated airflow (outdoor)	[m <sup>3</sup> /h]	22 000/28 500	32 500/50 000
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	[m <sup>3</sup> /h]	1	1
	Capacity control	-	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.08	0.14
	Pto (Power consumption Thermostat off mode)	[kW]	0.35	0.70
Other	Psb (Power consumption Standby mode)	[kW]	0.08	0.14
	PCK (Power crankcase heater model)	[kW]	0	0
	Qelec (Daily electricity consumption)	[kWh]	1	1
	Qfuel (Daily fuel consumption)	[kWh]	1	1

Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals. Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.

		Tech	nical	parameters			
Model(s):				MH-SU50/65-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				WARMER			
Parameters are declared for low-temp	erature app	olication.					
·							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	48.0	kW	Seasonal space heating energy efficiency	ηs	237.0	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	perature 20 °0		Declared coefficient of performance or primindoor temperature 20 °C and outdoor tell			ad at
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
Tj = 2 °C	Pdh	47.8	kW	Tj = 2 °C	COPd	3.23	-
Tj = 7 °C	Pdh	30.6	kW	Tj = 7 °C	COPd	5.47	-
Tj = 12 °C	Pdh	15.7	kW	Tj = 12 °C	COPd	7.65	-
Tj = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	COPd	5.47	-
Tj = operating limit	Pdh	47.8	kW	Tj = operating limit	COPd	3.23	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW				
Standby mode	Psb	0.35	kW	Rated heat output (**)	Psup	0	kW
Thermostat-off mode	Pto	0.08	kW				
Crankcase heater mode	Pck	0.00	kW	Type of energy input		-	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	22 000	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	10 683	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	heat pump	combination	heaters,	the rated heat output Prated is equal to t p is equal to the supplementary capacity			ing

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

		Tech	nical	parameters				
Model(s):				MH-SU50/65-RN8L				
Air-to-water heat pump:			YES					
Water-to-water heat pump:				NO				
Brine-to-water heat pump:				NO				
Low-temperature heat pump:				NO				
Equipped with a supplementary heate	r:			NO				
Heat pump combination heater:				NO				
Declared climate condition:				WARMER				
Parameters are declared for medium-	temperature	application	1.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	161.8	%	
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	oerature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor 20 °			ad at	
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-	
Tj = 2 °C	Pdh	39.8	kW	Tj = 2 °C	COPd	2.01	-	
Tj = 7 °C	Pdh	24.9	kW	Tj = 7 °C	COPd	3.71	-	
Tj = 12 °C	Pdh	12.3	kW	Tj = 12 °C	COPd	5.27	-	
Tj = bivalent temperature	Pdh	24.9	kW	Tj = bivalent temperature	COPd	3.71	-	
Tj = operating limit	Pdh	39.8	kW	Tj = operating limit	COPd	2.07	-	
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-	
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C	
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than ac	tive mode			Supplementary heater				
Off mode	Poff	0.08	kW	Rated heat output (**)	Psup	0	kW	
Standby mode	Psb	0.35	kW	Nated Heat Output ( )	r sup	0	KVV	
Thermostat-off mode	Pto	0.08	kW	Type of energy input		_		
Crankcase heater mode	Pck	0.00	kW	1,77- 21 21123, 117-11				
Other items								
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	22 000	m³/h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h	
Annual energy consumption	Q <sub>HE</sub>	12 970	kWh	heat exchanger				
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%	
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh	
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ	
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)				
	ut of a supp	lementary h	eater Psu	the rated heat output Prated is equal to t up is equal to the supplementary capacity tition coefficient is Cdh = 0,9.			ing	

		Tech	nical	parameters			
Model(s):				MH-SU50/65-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	48.0	kW	Seasonal space heating energy efficiency	ηs	177.0	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor te			ad at
Tj = -7 °C	Pdh	42.2	kW	Tj = -7 °C	COPd	3.24	-
Tj = 2 °C	Pdh	24.6	kW	Tj = 2 °C	COPd	4.15	-
Tj = 7 °C	Pdh	24.0	kW	Tj = 7 °C	COPd	6.20	-
Tj = 12 °C	Pdh	20.7	kW	Tj = 12 °C	COPd	8.23	-
Tj = bivalent temperature	Pdh	42.2	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operating limit	Pdh	47.6	kW	Tj = operating limit	COPd	2.71	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd		-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Rated heat output (**)	Psup	0.40	1-10/
Standby mode	Psb	0.35	kW	Nateu Heat Output ( )	r sup	0.40	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Licotriodi	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	22 000	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	_	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	22 032	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details  (*) For heat pump space heaters and	(Penglai ind	dustry road, B	eijiao, Shu	uipment Co. Ltd inde, Foshan, Guangdong, P.R China) the rated heat output Prated is equal to t	the design l	oad for heat	ina

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

		Tech	nical	parameters			
Model(s):				MH-SU50/65-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for medium-	temperature	application					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	133.0	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	perature 20 °C	;	Declared coefficient of performance or primindoor temperature 20 °C and outdoor te			ad at
Tj = -7 °C	Pdh	35.6	kW	Tj = -7 °C	COPd	2.42	-
Tj = 2 °C	Pdh	21.6	kW	Tj = 2 °C	COPd	3.18	-
Tj = 7 °C	Pdh	15.1	kW	Tj = 7 °C	COPd	4.46	-
Tj = 12 °C	Pdh	18.4	kW	Tj = 12 °C	COPd	6.06	-
Tj = bivalent temperature	Pdh	35.6	kW	Tj = bivalent temperature	COPd	2.42	-
Tj = operating limit	Pdh	39.8	kW	Tj = operating limit	COPd	1.83	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater	_		
Off mode	Poff	0.08	kW				
Standby mode	Psb	0.35	kW	Rated heat output (**)	Psup	0	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input			
Crankcase heater mode	Pck	0.00	kW	Type of energy input			
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	22 000	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	24 290	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details	(Penglai ind	dustry road, Be	eijiao, Shu	uipment Co. Ltd inde, Foshan, Guangdong, P.R China)			

				parameters			
Model(s):				MH-SU50/65-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				COLDER			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	152.2	%
Declared capacity for heating for part load a and outdoor temperature Tj		perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor 20 °	ary energy ra		ad at
Tj = -7 °C	Pdh	24.6	kW	Tj = -7 °C	COPd	3.11	-
Tj = 2 °C	Pdh	15.6	kW	Tj = 2 °C	COPd	4.65	-
Tj = 7 °C	Pdh	12.6	kW	Tj = 7 °C	COPd	5.63	-
Tj = 12 °C	Pdh	15.3	kW	Tj = 12 °C	COPd	7.37	-
Tj = bivalent temperature	Pdh	32.8	kW	Tj = bivalent temperature	COPd	2.71	-
Tj = operating limit	Pdh	37.2	kW	Tj = operating limit	COPd	1.97	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	32.8	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	2.71	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Detail heat quitaut (**)	Psup	0.70	
Standby mode	Psb	0.35	kW	Rated heat output (**)	rsup	2.78	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW			Licotrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	22 000	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	25 415	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	ut of a supp	lementary h	eater Psu	the rated heat output Prated is equal to t p is equal to the supplementary capacity tion coefficient is Cdh = 0,9.			ting

** 1 1/ \				AUL OUES/OF BAIS			
Model(s):				MH-SU50/65-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO NO			
Brine-to-water heat pump:				NO NO			
Low-temperature heat pump:				NO NO			
Equipped with a supplementary heate	er:			NO NO			
Heat pump combination heater:				NO COLDED			
Declared climate condition:				COLDER			
Parameters are declared for medium-	temperature	application	l				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34.0	kW	Seasonal space heating energy efficiency	ηs	106.2	%
Declared capacity for heating for part load and outdoor temperature Tj	at indoor tem	perature 20 °0	;	Declared coefficient of performance or prima indoor temperature 20 °C and outdoor ter	ary energy ra		ad at
Tj = -7 °C	Pdh	21.5	kW	Tj = -7 °C	COPd	2.55	-
Tj = 2 °C	Pdh	12.3	kW	Tj = 2 °C	COPd	3.03	-
Tj = 7 °C	Pdh	11.1	kW	Tj = 7 °C	COPd	3.80	-
Tj = 12 °C	Pdh	14.3	kW	Tj = 12 °C	COPd	5.77	-
Tj = bivalent temperature	Pdh	27.9	kW	Tj = bivalent temperature	COPd	1.83	-
Tj = operating limit	Pdh	31.8	kW	Tj = operating limit	COPd	2.71	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	27.9	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	1.83	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-18	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than a	ctive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Dated heat quitaut (**)	В	0.40	
Standby mode	Psb	0.35	kW	Rated heat output (**)	Psup	2.19	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input		□1 ti 1	
Crankcase heater mode	Pck	0.00	kW			Electrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	1	22 000	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
Annual energy consumption	Q <sub>HE</sub>	30 683	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kW
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			

Model(s):				MH-SU75-RN8L							
Air-to-water heat pump:				YES							
Water-to-water heat pump:				NO NO							
Brine-to-water heat pump:				NO							
Low-temperature heat pump:		NO									
Equipped with a supplementary heater	er:			NO							
Heat pump combination heater:				NO							
Declared climate condition:				WARMER							
Parameters are declared for low-temp	perature app	lication.									
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit				
Rated heat output (*)	Prated	48.0	kW	Seasonal space heating energy efficiency	ηs	237.0	%				
Declared capacity for heating for part load and outdoor temperature Tj	at indoor tem	perature 20 °0	0	Declared coefficient of performance or primindoor temperature 20 °C and outdoor temperature 20 °			ad at				
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-				
Tj = 2 °C	Pdh	47.8	kW	Tj = 2 °C	COPd	3.23	-				
Tj = 7 °C	Pdh	30.6	kW	Tj = 7 °C	COPd	5.47	-				
Tj = 12 °C	Pdh	15.7	kW	Tj = 12 °C	COPd	7.65	-				
Tj = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	COPd	5.47	-				
Tj = operating limit	Pdh	47.8	kW	Tj = operating limit	COPd	3.23	-				
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-				
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C				
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-				
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C				
Power consumption in modes other than a	ctive mode			Supplementary heater							
Off mode	Poff	0.08	kW	Rated heat output (**)	Psup	0	kW				
Standby mode	Psb	0.35	kW	Nated Heat Sulput ( )	1 sup	0	KVV				
Thermostat-off mode	Pto	0.08	kW	Type of energy input		_					
Crankcase heater mode	Pck	0.00	kW	37 1							
Other items											
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h				
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h				
Annual energy consumption	Q <sub>HE</sub>	10 683	kWh	heat exchanger							
For heat pump combination heater:											
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$		%				
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ				
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)							

<sup>(\*\*)</sup> If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

				MH-SU75-RN8L			
r-to-water heat pump:				YES			
ater-to-water heat pump:				NO			
rine-to-water heat pump:				NO			
ow-temperature heat pump:				NO			
quipped with a supplementary heat	er:			NO			
eat pump combination heater:				NO			
eclared climate condition:				WARMER			
arameters are declared for medium	-temperature	application	l.				
em	Symbol	Value	Unit	Item	Symbol	Value	Uni
ated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	161.8	%
eclared capacity for heating for part load outdoor temperature Tj	at indoor tem	perature 20 °C		Declared coefficient of performance or prima indoor temperature 20 °C and outdoor 20			ad at
= -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
= 2 °C	Pdh	39.8	kW	Tj = 2 °C	COPd	2.01	-
= 7 °C	Pdh	24.9	kW	Tj = 7 °C	COPd	3.71	-
= 12 °C	Pdh	12.3	kW	Tj = 12 °C	COPd	5.27	-
= bivalent temperature	Pdh	24.9	kW	Tj = bivalent temperature	COPd	3.71	-
= operating limit	Pdh	39.8	kW	Tj = operating limit	COPd	2.07	-
or air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
valent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
cling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
egradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
ower consumption in modes other than a	active mode			Supplementary heater			
f mode	Poff	0.08	kW	Rated heat output (**)	Psup	0	kW
andby mode	Psb	0.35	kW	Nated Heat Sulput ( )	r sup	0	KVV
nermostat-off mode	Pto	0.08	kW	Type of energy input		_	
rankcase heater mode	Pck	0.00	kW	,, ,,			
ther items							
apacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h
ound power level, indoors/outdoors	Lwa	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
nnual energy consumption	Q <sub>HE</sub>	12 970	kWh	heat exchanger			
or heat pump combination heater:							
eclared load profile		-		Water heating energy efficiency	$\eta_{\text{wh}}$	-	%
aily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kW
nnual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	G
ontact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			

		Tech	nical	parameters			
Model(s):				MH-SU75-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	48.0	kW	Seasonal space heating energy efficiency	ηs	177.0	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	perature 20 °C		Declared coefficient of performance or prim indoor temperature 20 °C and outdoor temperature 20			ad at
Tj = -7 °C	Pdh	42.2	kW	Tj = -7 °C	COPd	3.24	-
Tj = 2 °C	Pdh	24.6	kW	Tj = 2 °C	COPd	4.15	-
Tj = 7 °C	Pdh	24.0	kW	Tj = 7 °C	COPd	6.20	-
Tj = 12 °C	Pdh	20.7	kW	Tj = 12 °C	COPd	8.23	-
Tj = bivalent temperature	Pdh	42.2	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operating limit	Pdh	47.6	kW	Tj = operating limit	COPd	2.71	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd		-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Dated heat output (**)	_	0.40	
Standby mode	Psb	0.35	kW	Rated heat output (**)	Psup	0.40	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW	Type of energy input		Licotrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h
Sound power level, indoors/outdoors	Lwa	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	22 032	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	ut of a supp	lementary h	eater Psu	the rated heat output Prated is equal to t ip is equal to the supplementary capacity tion coefficient is Cdh = 0,9.			ing

Model(s):				MH-SU75-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	er:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for medium-	temperature	application	١.				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	133.0	%
Declared capacity for heating for part load and outdoor temperature Tj	at indoor tem	perature 20 °C		Declared coefficient of performance or primi indoor temperature 20 °C and outdoor 20			ad at
Tj = -7 °C	Pdh	35.6	kW	Tj = -7 °C	COPd	2.42	-
Tj = 2 °C	Pdh	21.6	kW	Tj = 2 °C	COPd	3.18	-
Tj = 7 °C	Pdh	15.1	kW	Tj = 7 °C	COPd	4.46	-
Tj = 12 °C	Pdh	18.4	kW	Tj = 12 °C	COPd	6.06	-
Tj = bivalent temperature	Pdh	35.6	kW	Tj = bivalent temperature	COPd	2.42	-
Tj = operating limit	Pdh	39.8	kW	Tj = operating limit	COPd	1.83	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than a	ctive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Rated heat output (**)	Psup	0	kW
Standby mode	Psb	0.35	kW	Nated Heat Output ( )	r sup	U	KVV
Thermostat-off mode	Pto	0.08	kW	Type of energy input		_	
Crankcase heater mode	Pck	0.00	kW	37 1			
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
Annual energy consumption	Q <sub>HE</sub>	24 290	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			

Model(s):				MH-SU75-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:	NO						
Low-temperature heat pump:			NO				
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:	••			NO			
Declared climate condition:				COLDER			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40.0	kW	Seasonal space heating energy efficiency	ηs	152.2	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor temp	perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor temperature 20 °			ad at
Tj = -7 °C	Pdh	24.6	kW	Tj = -7 °C	COPd	3.11	-
Tj = 2 °C	Pdh	15.6	kW	Tj = 2 °C	COPd	4.65	-
Tj = 7 °C	Pdh	12.6	kW	Tj = 7 °C	COPd	5.63	-
Tj = 12 °C	Pdh	15.3	kW	Tj = 12 °C	COPd	7.37	-
Tj = bivalent temperature	Pdh	32.8	kW	Tj = bivalent temperature	COPd	2.71	-
Tj = operating limit	Pdh	37.2	kW	Tj = operating limit	COPd	1.97	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	32.8	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	2.71	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW	Rated heat output (**)	Psup	2.78	kW
Standby mode	Psb	0.35	kW	raise iisar sapar( )	. 545	2.70	KVV
Thermostat-off mode	Pto	0.08	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW				
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h
Sound power level, indoors/outdoors	Lwa	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	25 415	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	heat pump	combination	heaters,	the rated heat output Prated is equal to t			ing

		Tech	nical	parameters			
Model(s):				MH-SU75-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				COLDER			
Parameters are declared for medium-	temperature	application	1.				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34.0	kW	Seasonal space heating energy efficiency	ηs	106.2	%
Declared capacity for heating for part load	1		_	Declared coefficient of performance or prima	· ·		
and outdoor temperature Tj	at indoor term	perature 20 C		indoor temperature 20 °C and outdoor tel			au ai
Tj = -7 °C	Pdh	21.5	kW	Tj = -7 °C	COPd	2.55	-
Tj = 2 °C	Pdh	12.3	kW	Tj = 2 °C	COPd	3.03	-
Tj = 7 °C	Pdh	11.1	kW	Tj = 7 °C	COPd	3.80	-
Tj = 12 °C	Pdh	14.3	kW	Tj = 12 °C	COPd	5.77	-
Tj = bivalent temperature	Pdh	27.9	kW	Tj = bivalent temperature	COPd	1.83	-
Tj = operating limit	Pdh	31.8	kW	Tj = operating limit	COPd	2.71	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	27.9	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	1.83	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-18	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.08	kW	B			
Standby mode	Psb	0.35	kW	Rated heat output (**)	Psup	2.19	kW
Thermostat-off mode	Pto	0.08	kW	Type of energy input		Florenical	
Crankcase heater mode	Pck	0.00	kW	Type of energy input		Electrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	28 500	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/86.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	30 683	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd inde, Foshan, Guangdong, P.R China)			
	ut of a supp	lementary h	eater Psi	the rated heat output Prated is equal to t up is equal to the supplementary capacity ation coefficient is Cdh = 0,9.			ting

Model(s):				MH-SU110-RN8L			
. ,				YES			
Air-to-water heat pump:				NO			
Water-to-water heat pump:							
Brine-to-water heat pump:				NO NO			
Low-temperature heat pump:				NO NO			
Equipped with a supplementary heate	r:			NO NO			
Heat pump combination heater:				NO NO			
Declared climate condition:				WARMER			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	95.0	kW	Seasonal space heating energy efficiency	ns	235.0	%
Declared capacity for heating for part load and outdoor temperature Tj		perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor 20 °	ary energy ra		ad at
Tj = -7 °C	Pdh	_	kW	Tj = -7 °C	COPd	-	-
Tj = 2 °C	Pdh	93.8	kW	Tj = 2 °C	COPd	2.89	-
Tj = 7 °C	Pdh	61.1	kW	Tj = 7 °C	COPd	5.29	-
Tj = 12 °C	Pdh	32.2	kW	Tj = 12 °C	COPd	8.03	-
Tj = bivalent temperature	Pdh	61.1	kW	Tj = bivalent temperature	COPd	5.29	-
Tj = operating limit	Pdh	93.8	kW	Tj = operating limit	COPd	2.89	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.14	kW	Reted heet output (**)	D	4.00	1.34
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	1.22	kW
Thermostat-off mode	Pto	0.14	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW	Type of chargy input		Licotrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	32 500	m <sup>3</sup> /
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
Annual energy consumption	Q <sub>HE</sub>	21 332	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWl
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	ut of a supp	lementary h	eater Psu	the rated heat output Prated is equal to t			ing

Model(s):				MH-SU110-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	ır.			NO			
Heat pump combination heater:	••			NO			
Declared climate condition:				WARMER			
Parameters are declared for medium-	temperature	application	ı				
			<u>-</u>				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	167.4	%
Declared capacity for heating for part load and outdoor temperature Tj	at indoor tem	perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor 20 °			ad at
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
Tj = 2 °C	Pdh	80.0	kW	Tj = 2 °C	COPd	2.04	-
Tj = 7 °C	Pdh	52.2	kW	Tj = 7 °C	COPd	3.84	-
Tj = 12 °C	Pdh	31.1	kW	Tj = 12 °C	COPd	5.66	-
Tj = bivalent temperature	Pdh	52.2	kW	Tj = bivalent temperature	COPd	3.84	-
Tj = operating limit	Pdh	80.0	kW	Tj = operating limit	COPd	2.04	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than a	ctive mode			Supplementary heater			
Off mode	Poff	0.14	kW	Rated heat output (**)	Psup	0	kW
Standby mode	Psb	0.70	kW	ration hour output ( )	1 sup		KVV
Thermostat-off mode	Pto	0.14	kW	Type of energy input		_	
Crankcase heater mode	Pck	0.00	kW				
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	32 500	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	25 115	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	heat pump ut of a supp	combination lementary h	heaters, eater Psu	the rated heat output Prated is equal to t			ting

		Tech	nical	parameters			
Model(s):				MH-SU110-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for low-temp	erature app	olication.					
Itam	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Symbol	95.0	kW	Seasonal space heating energy efficiency	,	167.0	Unit %
Declared capacity for heating for part load a	Prated			Declared coefficient of performance or prima	ηs		
and outdoor temperature Tj	at indoor tem	perature 20 C		indoor temperature 20 °C and outdoor ten			au at
Tj = -7 °C	Pdh	85.5	kW	Tj = -7 °C	COPd	3.03	-
Tj = 2 °C	Pdh	50.0	kW	Tj = 2 °C	COPd	3.73	-
Tj = 7 °C	Pdh	33.9	kW	Tj = 7 °C	COPd	6.23	-
Tj = 12 °C	Pdh	85.5	kW	Tj = 12 °C	COPd	8.02	-
Tj = bivalent temperature	Pdh	94.4	kW	Tj = bivalent temperature	COPd	3.03	-
Tj = operating limit	Pdh	47.6	kW	Tj = operating limit	COPd	2.38	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd		-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	ctive mode			Supplementary heater			
Off mode	Poff	0.14	kW	Pated heat output (**)	D	0.55	134/
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	0.55	kW
Thermostat-off mode	Pto	0.14	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW			Licotrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	32 500	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	46 188	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	ut of a supp	lementary h	eater Psu	the rated heat output Prated is equal to t up is equal to the supplementary capacity tition coefficient is Cdh = 0,9.			ing

Air-to-water heat pump:  Water-to-water heat pump:  NO  Equipped with a supplementary heater:  NO  Heat pump combination heater:  Perameters are declared for medium-temperature application.  Item  Symbol Value Unit  Rated heat output (*)  Perad 900 kW  Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature 21 °C and outdoor temperature 27 °C and outdoor temperature 28 °C and outdoor temperature 29 °C ondoor temperature 29 °C ondoor temperature 29 °C ondoor temperature 2	Model(s):				MH-SU110-RN8L			
Water-to-water heat pump:  NO  Brine-to-water heat pump:  NO  Low-lemperature heat pump:  NO  Brine-to-water heat pump:  NO  Coverage repair with a supplementary heater:  NO  Declared climate condition:  Parameters are declared for medium-temperature application.  Item  Symbol Value Unit Rated heat output (")  Parameters are declared for medium-temperature application.  Item  Symbol Value Unit Rated heat output (")  Parameters are declared for part load at indoor temperature 20 "C and outdoor temperature 1" in 12" 0.  Declared capacity for heating for part load at indoor temperature 20 "C and outdoor temperature 1" in 12" 0.  Peth G9.3 kW  Tij = 2" C  Peth G9.3 kW  Tij = 2" C  Peth 38.0 kW  Tij = 12" C  Peth 38.0 kW  Tij = 2" C  Peth 38.0 kW  Tij = boreating limit  Peth 79.7 kW  For air-to-water heat pumps: Tij = 15" C  COPd 4.52  Tij = operating limit  Poych Peth 1. kW  For air-to-water heat pumps: Tij = 15" C  COPd 1.76  For air-to-water heat pumps: Tij = 15" C  COPd 5.0  Degradation co-efficient ("')  Can 0.0 -  Pewer consumption in modes other than active mode  Off mode  Peth 0.14 kW  Thermostat-off mode  Peth 0.14								
### Brine-to-water heat pump:	· · ·							
Low-temperature heat pump:  Requipped with a supplementary heater:  NO  Declared climate condition:  Rated heat output (*)  Prated  Symbol  Peraled  Symbol  Value  Unit  Seasonal space heating energy efficiency  In = -7**C  Peh  Peh  Seasonal space heating energy efficiency  In = -7**C  Peh  Yell  In = -7**C  Peh  Seasonal space heating energy efficiency  In = -7**C  Peh  Yell  In = -7**C  Peh  Seasonal space heating energy efficiency  In = -7**C  OCPd  In = -2**C  Peh  Seasonal space heating energy efficiency  In = -7**C  OCPd  In = -2**C  Peh  Seasonal space heating energy efficiency  In = -7**C  OCPd  In = -2**C  OCPd  In = -2**C  Peh  Seasonal space heating energy efficiency  In = -7**C  OCPd  In = -7**C  OCPd  In = -7**C  OCPd  In = -2**C  OCPd	· · ·							
Equipped with a supplementary heater: NO								
Heat pump combination heater:  Declared climate condition:  Parameters are declared for medium-temperature application.  Item  Symbol Value Unit Rated heat output (*)  Prated 800 kW  Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature 70 °C  Peth 60.3 kW  Tj = 7 °C  Peth 60.3 kW  Tj = 7 °C  Peth 42.0 kW  Tj = 2 °C  Peth 38.0 kW  Tj = 12 °C  Peth 69.3 kW  Tj = 12 °C  Peth 38.0 kW  Tj = 12 °C  Peth 69.3 kW  Tj = 12 °C  Peth 69.3 kW  Tj = bivalent temperature 20 °C and outdoor temperature 20		er:						
Item					NO			
Item	Declared climate condition:				AVERAGE			
Rated heat output (*)  Prated 800 kW  Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj  Tj = -7 °C  Pdh 89.3 kW  Tj = -7 °C  Pdh 42.0 kW  Tj = 2 °C  COPd 2.01  Tj = 7 °C  Pdh 38.0 kW  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 6.03  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 6.03  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 1.76  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 1.76  Tj = bivalent temperature  Pdh 99.3 kW  Tj = operating limit  Pdh 79.7 kW  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 2.01  Tj = operating limit temperature  Coperation limit temperature  ToL  Cycling interval capacity for heating  Power consumption in modes other than active mode  Off mode  Port 0.14 kW  Standby mode	Parameters are declared for medium-	temperature	application	1.				
Rated heat output (*)  Prated 800 kW  Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj  Tj = -7 °C  Pdh 89.3 kW  Tj = -7 °C  Pdh 42.0 kW  Tj = 2 °C  COPd 2.01  Tj = 7 °C  Pdh 38.0 kW  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 6.03  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 4.52  Tj = 12 °C  COPd 6.03  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 1.76  Tj = bivalent temperature  Pdh 99.3 kW  Tj = 12 °C  COPd 1.76  Tj = bivalent temperature  Pdh 99.3 kW  Tj = operating limit  Pdh 79.7 kW  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 1.76  For air-to-water heat pumps: Tj = -15 °C  COPd 2.01  Tj = operating limit temperature  Coperation limit temperature  ToL  Cycling interval capacity for heating  Power consumption in modes other than active mode  Off mode  Port 0.14 kW  Standby mode		•						
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj  Tj = -7 °C Pdh 69.3 kW Tj = 2 °C Pdh 42.0 kW Tj = 2 °C COPd 3.10 Tj = 7 °C COPd 4.52 Tj = 12 °C COPd 5.3 Tj = 12 °C COPd 6.3 Tj = 12 °C COPd 7. Tj =	Item	Symbol	Value	Unit	Item	Symbol	Value	Uni
Indoor temperature Tj	Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	127.0	%
Tj = 2 °C Pdh 42.0 kW Tj = 7 °C Pdh 28.3 kW Tj = 12 °C Pdh 38.0 kW Tj = 12 °C COPd 4.52 Tj = 12 °C Pdh 38.0 kW Tj = 12 °C COPd 6.03 Tj = bivalent temperature Pdh 69.3 kW Tj = operating limit Pdh 79.7 kW Tj = operating limit COPd 1.76 For air-to-water heat pumps: Tj = -15 °C COPd Bivalent temperature Tbbv -7 °C Cycling interval capacity for heating Pcych - kW Degradation co-efficient (**) Cdh 0.9 Degradation co-efficient (**) Cdh 0.9 Degradation co-efficient (**) Cdh 0.9 Degradation modes other than active mode Off mode Pck 0.14 kW Standby mode Psb 0.70 kW Thermostat-off mode Pck 0.00 kW  Thermostat-off mode Pck 0.00 kW  Other items  Capacity control Variable Sound power level, indoors/outdoors LWA -/80.0 dB Annual energy consumption QHE 50.858 kWh  For air-to-water heat pumps: Tj = -15 °C COPd For air-to-water heat pumps: T		at indoor tem	perature 20 °0					ad at
Tj = 7 °C Pdh 28.3 kW Tj = 12 °C Pdh 38.0 kW Tj = bivalent temperature Pdh 69.3 kW Tj = operating limit Pdh 79.7 kW Tj = operating limit COPd 1.76 For air-to-water heat pumps: Tj = -15 °C Pdh - kW Bivalent temperature Tbbv -7 °C Cycling interval capacity for heating Poych - kW Degradation co-efficient (**) Cdh 0.9 - Heating water operating limit temperature Tbbw -70 kW Thermostat-off mode Pdb 0.14 kW Crankcase heater mode Pdc 0.00 kW  Characity control Variable  Capacity control Variable  Sound power level, indoors/outdoors Annual energy consumption Pater:  Declared load profile Daily electricity consumption Qdc - kWh Daily fuel consumption Qdc - kWh	Tj = -7 °C	Pdh	69.3	kW	Tj = -7 °C	COPd	2.01	-
Tj = 12 °C Pdh 38.0 kW Tj = bivalent temperature Pdh 69.3 kW Tj = bivalent temperature Pdh 69.3 kW Tj = operating limit Pdh 79.7 kW Tj = operating limit Pdh 79.7 kW For air-to-water heat pumps: Tj = -15 °C Pdh - kW Bivalent temperature Tbiv -7 °C Bivalent temperature Tbiv -7 °C Cycling interval capacity for heating Pcych - kW Degradation co-efficient (**)	Tj = 2 °C	Pdh	42.0	kW	Tj = 2 °C	COPd	3.10	-
Tj = bivalent temperature Pdh 69.3 kW Tj = operating limit Pdh 79.7 kW For air-to-water heat pumps: Tj = -15 °C Pdh - kW Bivalent temperature Tbiv -7 °C Bivalent temperature Tbiv -7 °C Cycling interval capacity for heating Pcych - kW Degradation co-efficient (**) Cdh 0.9 - Power consumption in modes other than active mode Off mode Poff 0.14 kW Standby mode Psb 0.70 kW Thermostat-off mode Pok 0.00 kW  Crankcase heater mode Pok 0.00 kW  Other items  Capacity control variable Sound power level, indoors/outdoors LwA - Annual energy consumption Pok - Botal part of the at pump combination heater:  Declared load profile - kWh Daily electricity consumption Qciec - kWh Daily fleel consumption Qciec - kWh	Tj = 7 °C	Pdh	28.3	kW	Tj = 7 °C	COPd	4.52	-
Tj = operating limit	Tj = 12 °C	Pdh	38.0	kW	Tj = 12 °C	COPd	6.03	-
For air-to-water heat pumps: Tj = -15 °C Pdh - kW For air-to-water heat pumps: Tj = -15 °C COPd - Bivalent temperature Tbiv -7 °C Por air-to-water heat pumps: Tj = -15 °C COPd - For air-to-water heat pumps: Operation limit temperature TOL -10 Power consumption in modes other than active mode  Off mode Poif 0.14 kW Standby mode Pb 0.70 kW Thermostat-off mode Pck 0.00 kW Power heater mode Pck 0.00 kW Power level, indoors/outdoors LwA -/80.0 dB Annual energy consumption Quie Sound power level, indoors/outdoors Quie Sound power level, indoors/outdoors Power doad poile Power heat pump combination heater:  Declared load profile Power are to water heat pumps: Tj = -15 °C COPd - Power consumption im temperature ToL -10 Power imit temperature Cycling interval efficiency COPcyc - Heating water operating limit temperature WToL 65  Supplementary heater  Rated heat output (**) Power temperature Power temperature Power temperature WToL 65  Supplementary heater  Rated heat output (**) Power temperature Power temperature WToL 65  Supplementary heater  Rated in fine rate pumps: For air-to-water heat pumps: For air-to-water heat pumps: For water neat pumps: For water outdoors Power temperature Power temperature WToL 65  For water or brine-to-water heat pumps: For water flow rate, outdoor heat exchanger Power water flow rate, outdoor heat exchanger Power temperature Power temp	Tj = bivalent temperature	Pdh	69.3	kW	Tj = bivalent temperature	COPd	2.01	-
Bivalent temperature  Tolv -7 °C  Cycling interval capacity for heating Pcych - kW  Degradation co-efficient (**) Cdh 0,9  Power consumption in modes other than active mode  Off mode  Poff 0.14 kW  Standby mode Psb 0.70 kW  Thermostat-off mode Pck 0.00 kW  Thermostat-off mode Pck 0.00 kW  Crankcase heater mode Pck 0.00 kW  Other items  Capacity control variable  Sound power level, indoors/outdoors LwA -/80.0 dB  Annual energy consumption QHE 50.858 kWh  For heat pump combination heater:  Declared load profile Paid of SkW  Daily electricity consumption Qcicc - kWh  Daily electricity consumption Qcicc - kWh  Designation imit temperature ToL -10  For air-to-water heat pumps: Cycling interval efficiency Cycling interval efficiency Cycling interval efficiency Cycling interval efficiency Pcyc - Leading interval e	Tj = operating limit	Pdh	79.7	kW	Tj = operating limit	COPd	1.76	-
Operation limit temperature  Cycling interval capacity for heating  Poych  Cycling interval capacity for heating  Poych  Cycling interval efficiency  Cycling interval efficiency  Heating water operating limit temperature  Cycling interval efficiency  Heating water operating limit temperature  Wrol  65  Supplementary heater  Rated heat output (**)  Poup  Operation limit temperature  Cycling interval efficiency  Heating water operating limit temperature  Wrol  65  Supplementary heater  Rated heat output (**)  Type of energy input  Electrical  Other items  Capacity control  Variable  Sound power level, indoors/outdoors  LWA  Annual energy consumption  QHE  So 858  KWh  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Qclec  Cycling interval efficiency  Heating water operating limit temperature  Wrol  65  Supplementary heater  Rated heat output (**)  Type of energy input  Electrical  For air-to-water heat pumps: Rated inflow rate, outdoors  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Water heating energy efficiency  In the population of the properties	For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Degradation co-efficient (**)  Cdh  0.9	Bivalent temperature	Tbiv	-7	°C		TOL	-10	°C
Power consumption in modes other than active mode  Off mode  Poff O.14 kW Standby mode Psb O.70 kW Thermostat-off mode Pro O.14 kW Crankcase heater mode  Other items  Capacity control  Supplementary heater  Rated heat output (**)  Psup O.29  Type of energy input  Electrical  For air-to-water heat pumps: Rated air flow rate, outdoors  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  For heat pump combination heater:  Declared load profile Daily electricity consumption  Qclec Variable  Variable  Variable  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Variable  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  - Applications or water flow rate, outdoor heat exchanger  - Applications or water flow rate, outdoor heat exchanger  - Applications or water flow rate, outdoor heat exchanger	Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Off mode    Poff   0.14   kW     Standby mode   Psb   0.70   kW     Thermostat-off mode   Pto   0.14   kW     Crankcase heater mode   Pck   0.00   kW     Other items     Capacity control   Variable     Sound power level, indoors/outdoors   LwA   -/80.0   dB     Annual energy consumption   QHE   50 858   kWh     For heat pump combination heater:    Declared load profile   Daily electricity consumption   Qclec   - kWh     Daily fuel consumption   Qfuel   -     Daily fuel consumption	Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Standby mode Thermostat-off mode Pto 0.14 kW Crankcase heater mode Pck 0.00 kW  Type of energy input  Electrical  Type of energy input  Electrical  Capacity control  Variable Sound power level, indoors/outdoors Annual energy consumption  Annual energy consumption  Annual energy consumption  Capacity consumption  QHE Sound power level, indoors/outdoors Annual energy con	Power consumption in modes other than a	ctive mode			Supplementary heater			
Standby mode	Off mode	Poff	0.14	kW	Rated heat output (**)	Pour	0.20	kW
Type of energy input  Type of energy input  Type of energy input  Type of energy input  Electrical  For air-to-water heat pumps: Rated air flow rate, outdoors  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Type of energy input  Electrical  Electrical  For air-to-water heat pumps: Rated air flow rate, outdoors	Standby mode	Psb	0.70	kW	reaco near output ( )	1 Sup	0.29	KVV
Other items       Capacity control     variable       Sound power level, indoors/outdoors     L <sub>WA</sub> Annual energy consumption     Q <sub>HE</sub> For heat pump combination heater:       Declared load profile     -       Daily electricity consumption     Q <sub>clec</sub> -     kWh    For air-to-water heat pumps: Rated air flow rate, outdoors	Thermostat-off mode	Pto	0.14	kW	Type of energy input		Electrical	
Capacity control  Variable  Sound power level, indoors/outdoors  LWA  Annual energy consumption  Capacity control  Variable  LWA  -/80.0  Annual energy consumption  Capacity control  Annual energy consumption  Capacity control  LWA  -/80.0  Annual energy consumption  Capacity consumption  Capacity control  Capacity c	Crankcase heater mode	Pck	0.00	kW	,, o, ,		Liectrical	
Sound power level, indoors/outdoors  LwA -/80.0 dB  Annual energy consumption  QHE 50 858 kWh  Rated air flow rate, outdoors  For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Variable  Rated air flow rate, outdoors  - 32 500  Water heat in flow rate, outdoor heat exchanger  Power of the pump combination heater:  Water heating energy efficiency  Daily fuel consumption  Q <sub>fuel</sub> Daily fuel consumption  Q <sub>fuel</sub> Daily fuel consumption	Other items							
Annual energy consumption  QHE  50 858 kWh  Rated brine or water flow rate, outdoor heat exchanger	Capacity control		variable			-	32 500	m³/h
Annual energy consumption  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Q <sub>clec</sub> KWh  Daily fuel consumption  Q <sub>fuel</sub> Daily fuel consumption	Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
Declared load profile  - Water heating energy efficiency  Daily electricity consumption  Q <sub>clec</sub> - kWh  Daily fuel consumption  Q <sub>fuel</sub> -	Annual energy consumption	Q <sub>HE</sub>	50 858	kWh	heat exchanger			
Daily electricity consumption  Q <sub>clec</sub> - kWh  Daily fuel consumption  Q <sub>fuel</sub> -	For heat pump combination heater:							
150	Declared load profile		-		Water heating energy efficiency	$\eta_{\text{wh}}$	-	%
AFO A 16 A 1	Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWl
Annual electricity consumption AEC - kWh Annual fuel consumption AFC -	Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details  GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)	Contact details							

		Tech	nical	parameters			
Model(s):				MH-SU110-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				COLDER			
Parameters are declared for low-temp	erature app	lication.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	146.2	%
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor temp	perature 20 °C		Declared coefficient of performance or primindoor temperature 20 °C and outdoor tell			ad at
Tj = -7 °C	Pdh	47.3	kW	Tj = -7 °C	COPd	3.07	-
Tj = 2 °C	Pdh	29.4	kW	Tj = 2 °C	COPd	4.23	-
Tj = 7 °C	Pdh	27.5	kW	Tj = 7 °C	COPd	6.36	-
Tj = 12 °C	Pdh	32.3	kW	Tj = 12 °C	COPd	7.77	-
Tj = bivalent temperature	Pdh	67.3	kW	Tj = bivalent temperature	COPd	2.56	-
Tj = operating limit	Pdh	75.4	kW	Tj = operating limit	COPd	1.98	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	67.3	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	2.56	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.14	kW				
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	4.56	kW
Thermostat-off mode	Pto	0.14	kW				
Crankcase heater mode	Pck	0.00	kW	Type of energy input		Electrical	
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	32 500	m <sup>3</sup> /h
Sound power level, indoors/outdoors	Lwa	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h
Annual energy consumption	Q <sub>HE</sub>	52 894	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			

		i <del>C</del> CII	iiicai	parameters				
Model(s):				MH-SU110-RN8L				
Air-to-water heat pump:				YES				
Water-to-water heat pump:				NO				
Brine-to-water heat pump:				NO				
Low-temperature heat pump:				NO				
Equipped with a supplementary heate	er:			NO				
Heat pump combination heater:				NO				
Declared climate condition:				COLDER				
Parameters are declared for medium	-temperature	e application	l.					
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	108.6	%	
Declared capacity for heating for part load and outdoor temperature Tj	at indoor tem	mperature 20 °C  Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj						
Tj = -7 °C	Pdh	43.2	kW	Tj = -7 °C	COPd	2.49	-	
Tj = 2 °C	Pdh	25.4	kW	Tj = 2 °C	COPd	3.07	-	
Tj = 7 °C	Pdh	25.6	kW	Tj = 7 °C	COPd	4.66	-	
Tj = 12 °C	Pdh	31.5	kW	Tj = 12 °C	COPd	6.43	-	
Tj = bivalent temperature	Pdh	56.2	kW	Tj = bivalent temperature	COPd	1.86	-	
Tj = operating limit	Pdh	61.0	, , ,				-	
For air-to-water heat pumps: Tj = -15 °C	Pdh	56.2	, , ,				-	
Bivalent temperature	Tbiv	-15	For air-to-water heat numps:			-18	°C	
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than a	ctive mode			Supplementary heater				
Off mode	Poff	0.14	kW	Dated heat output (**)	Б			
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	6.97	kW	
Thermostat-off mode	Pto	0.14	kW	Type of energy input				
Crankcase heater mode	Pck	0.00	kW	Type of chergy input				
Other items								
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	32 500	m³/h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/80.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h	
Annual energy consumption	Q <sub>HE</sub>	Q <sub>HE</sub> 60 183 kWh heat exchanger						
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%	
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh	
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ	
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)				

		Tech	nical	parameters					
Model(s):				MH-SU140-RN8L					
Air-to-water heat pump:				YES					
Water-to-water heat pump:				NO					
Brine-to-water heat pump:				NO					
Low-temperature heat pump:				NO					
Equipped with a supplementary heate	r:			NO					
Heat pump combination heater:				NO					
Declared climate condition:				WARMER					
Parameters are declared for low-temp	erature app	lication.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit		
Rated heat output (*)	Prated	95.0	kW	Seasonal space heating energy efficiency	ηs	235.0	%		
Declared capacity for heating for part load and outdoor temperature Tj		perature 20 °C	;	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj					
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-		
Tj = 2 °C	Pdh	93.8	kW	Tj = 2 °C	COPd	2.89	-		
Tj = 7 °C	Pdh	61.1	kW	Tj = 7 °C	COPd	5.29	-		
Tj = 12 °C	Pdh	32.2	kW	Tj = 12 °C	COPd	8.03	-		
Tj = bivalent temperature	Pdh	61.1	kW	Tj = bivalent temperature	COPd	5.29	-		
Tj = operating limit	Pdh	93.8	kW	Tj = operating limit	COPd	2.89	-		
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW For air-to-water heat pumps: Tj = -15 °C			-	-		
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C		
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-		
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C		
Power consumption in modes other than ac	tive mode			Supplementary heater					
Off mode	Poff	0.14	kW	- · · · · · · · · · · · · · · · · · · ·	_				
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	1.22	kW		
Thermostat-off mode	Pto	0.14	kW	Town of account issued					
Crankcase heater mode	Pck	0.00	kW	Type of energy input		Electrical			
Other items									
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	50 000	m³/h		
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/92.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h		
Annual energy consumption	Q <sub>HE</sub>	21 332	kWh	heat exchanger					
For heat pump combination heater:									
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%		
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh		
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ		
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)					

			IIICa:	parameters			
Model(s):				MH-SU140-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heater	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				WARMER			
Parameters are declared for medium-t	emperature	application	J				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency		167.4	%
Declared capacity for heating for part load a			_	Declared coefficient of performance or prima		I atio for part loa	
and outdoor temperature Tj	7.4h			indoor temperature 20 °C and outdoor ter	<u> </u>		
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
Tj = 2 °C	Pdh	80.0	kW	Tj = 2 °C	COPd	2.04	-
Tj = 7 °C	Pdh	52.2	kW	Tj = 7 °C	COPd	3.84	-
Tj = 12 °C	Pdh	31.1	kW	Tj = 12 °C	COPd	5.66	-
Tj = bivalent temperature	Pdh	52.2	kW	Tj = bivalent temperature	COPd COPd	3.84	-
Tj = operating limit	Pdh	80.0	kW	, , ,		2.04	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C		-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature		2	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.14	kW	Rated heat output (**)	Psup	0	kW
Standby mode	Psb	0.70	kW	Nateu licat output ( )	ΓSup		Nνν
Thermostat-off mode	Pto	0.14	kW	Type of energy input			
Crankcase heater mode	Pck	0.00	kW	13pc of one.g,			
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors		50 000	m³/h
Sound power level, indoors/outdoors	Lwa	-/92.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /h
Annual energy consumption	Q <sub>HE</sub>	25 115	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			
	ut of a suppl	lementary he	eater Psu	the rated heat output Prated is equal to t p is equal to the supplementary capacity tion coefficient is Cdh = 0,9.			ing

Model(s):				MH-SU140-RN8L			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				NO			
Equipped with a supplementary heate	r:			NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for low-temp	erature app	lication.					
ltem	Symbol	Value	Unit	Item	Symbol	Value	Un
Rated heat output (*)	Prated	95.0	kW	Seasonal space heating energy efficiency	ηs	167.0	%
Declared capacity for heating for part load a				Declared coefficient of performance or primindoor temperature 20 °C and outdoor 20 °	ary energy ra	tio for part loa	
Tj = -7 °C	Pdh	85.5	kW	Tj = -7 °C	COPd	3.03	-
Tj = 2 °C	Pdh	50.0	kW	Tj = 2 °C	COPd	3.73	-
Tj = 7 °C	Pdh	33.9	kW	Tj = 7 °C	COPd	6.23	-
Tj = 12 °C	Pdh	85.5	kW	Tj = 12 °C	COPd	8.02	-
Tj = bivalent temperature	Pdh	94.4	kW	Tj = bivalent temperature COPd 3.03			
Tj = operating limit	Pdh	47.6	kW	Tj = operating limit	COPd	2.38	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	1 1 1			
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	65	°(
Power consumption in modes other than ac	tive mode			Supplementary heater			
Off mode	Poff	0.14	kW	Rated heat output (**)	Psup	0.55	leV.
Standby mode	Psb	0.70	kW	reaco near output ( )	1 Sup	0.55	k۱
Thermostat-off mode	Pto	0.14	kW	Type of energy input		Electrical	
Crankcase heater mode	Pck	0.00	kW				
Other items							
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	50 000	m <sup>2</sup>
Sound power level, indoors/outdoors	Lwa	-/92.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m <sup>3</sup> /
Annual energy consumption	Q <sub>HE</sub>	46 188	kWh	heat exchanger			
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	9
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	k۷
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	G
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)			

Model(s):				MH-SU140-RN8L				
Air-to-water heat pump:				YES				
Water-to-water heat pump:				NO				
Brine-to-water heat pump:				NO				
Low-temperature heat pump:				NO				
Equipped with a supplementary heate	er:			NO				
Heat pump combination heater:				NO				
Declared climate condition:				AVERAGE				
Parameters are declared for medium-	temperature	application	l.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Un	
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	127.0	%	
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor temp	perature 20 °C	ture 20 °C  Declared coefficient of performance or primary energy ratio for part load indoor temperature 20 °C and outdoor temperature Tj					
Tj = -7 °C	Pdh	69.3	kW	Tj = -7 °C	COPd	2.01	-	
Tj = 2 °C	Pdh	42.0	kW	Tj = 2 °C	COPd	3.10	-	
Tj = 7 °C	Pdh	28.3	kW	Tj = 7 °C	COPd	4.52	-	
Tj = 12 °C	Pdh	38.0	kW	Tj = 12 °C	COPd	6.03	-	
Tj = bivalent temperature	Pdh	69.3	kW	Tj = bivalent temperature	COPd	2.01	-	
Tj = operating limit	Pdh	79.7	kW	Tj = operating limit	COPd	1.76	-	
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-	
Bivalent temperature	Tbiv	-7	°C	C For air-to-water heat pumps: Operation limit temperature		-10	°C	
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than ac	ctive mode			Supplementary heater				
Off mode	Poff	0.14	kW	Rated heat output (**)	Psup	0.29	kV	
Standby mode	Psb	0.70	kW	react near output ( )	1 Sup	0.29	KV	
Thermostat-off mode	Pto	0.14	kW	Type of energy input		Floatrical		
Crankcase heater mode	Pck	0.00	kW			Electrical		
Other items								
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	50 000	m <sup>3</sup> /	
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/92.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	_	-	m³/l	
Annual energy consumption	Q <sub>HE</sub>	50 858	kWh	heat exchanger				
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%	
Daily electricity consumption	Q <sub>clec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kW	
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	G.	
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)				
(*) For heat pump space heaters and	, ,			, , , , , , , , , , , , , , , , , , , ,				

		Tech	nical	р	arameters						
Model(s):					MH-SU140-RN8L						
Air-to-water heat pump:					YES						
Water-to-water heat pump:					NO						
Brine-to-water heat pump:					NO						
Low-temperature heat pump:			NO								
Equipped with a supplementary heate	r:		NO								
Heat pump combination heater:					NO						
Declared climate condition:					COLDER						
Parameters are declared for low-temp	erature app	lication.									
Item	Symbol	Value	Unit	1	Item	Symbol	Value	Unit			
Rated heat output (*)	Prated	80.0	kW		Seasonal space heating energy efficiency	ηs	146.2	%			
Declared capacity for heating for part load a and outdoor temperature Tj			Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj								
Tj = -7 °C	Pdh	47.3	kW		Tj = -7 °C	COPd	3.07	-			
Tj = 2 °C	Pdh	29.4	kW		Tj = 2 °C	COPd	4.23	-			
Tj = 7 °C	Pdh	27.5	kW		Tj = 7 °C	COPd	6.36	-			
Tj = 12 °C	Pdh	32.3	kW		Tj = 12 °C		7.77	-			
Tj = bivalent temperature	Pdh	67.3	kW			COPd	2.56	-			
Tj = operating limit	Pdh	75.4	, ,		COPd	1.98	-				
For air-to-water heat pumps: Tj = -15 °C	Pdh	67.3	67.3 kW For air-to-water heat pumps: Tj = -15 °C			COPd	2.56	-			
Bivalent temperature	Tbiv	-15	°C For air-to-water heat pumps: Operation limit temperature		TOL	-22	°C				
Cycling interval capacity for heating	Pcych	-	kW		Cycling interval efficiency	COPcyc	-	-			
Degradation co-efficient (**)	Cdh	0.9			Heating water operating limit temperature	WTOL	65	°C			
Power consumption in modes other than ac	tive mode				Supplementary heater						
Off mode	Poff	0.14	kW		D	_					
Standby mode	Psb	0.70	kW		Rated heat output (**)	Psup	4.56	kW			
Thermostat-off mode	Pto	0.14	kW		Type of energy input		Flootrical				
Crankcase heater mode	Pck	0.00	kW		Type of energy input		Electrical				
Other items				[							
Capacity control		variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	50 000	m³/h			
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/92.0	dB		For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h			
Annual energy consumption	Q <sub>HE</sub>	52 894	kWh		heat exchanger						
For heat pump combination heater:											
Declared load profile		-			Water heating energy efficiency	η <sub>wh</sub>	-	%			
Daily electricity consumption	Q <sub>clec</sub>	-	9 97 7				kWh				
Annual electricity consumption	AEC	-	kWh		Annual fuel consumption	AFC	-	GJ			
Contact details  GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)											

		Tech	nical	parameters						
Model(s):				MH-SU140-RN8L						
Air-to-water heat pump:				YES						
Water-to-water heat pump:				NO						
Brine-to-water heat pump:				NO						
Low-temperature heat pump:			NO							
Equipped with a supplementary heate	r:		NO							
Heat pump combination heater:			NO NO							
Declared climate condition:				COLDER						
Parameters are declared for medium-	temperature	application								
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
Rated heat output (*)	Prated	80.0	kW	Seasonal space heating energy efficiency	ηs	108.6	%			
Declared capacity for heating for part load a and outdoor temperature Tj	at indoor tem	perature 20 °C	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = -7 °C	Pdh	43.2	kW	Tj = -7 °C	COPd	2.49	-			
Tj = 2 °C	Pdh	25.4	kW	Tj = 2 °C	COPd	3.07	-			
Tj = 7 °C	Pdh	25.6	kW	Tj = 7 °C	COPd	4.66	-			
Tj = 12 °C	Pdh	31.5	kW	Tj = 12 °C	COPd	6.43	-			
Tj = bivalent temperature	Pdh	56.2	kW	Tj = bivalent temperature	COPd	1.86	-			
Tj = operating limit	Pdh	61.0					-			
For air-to-water heat pumps: Tj = -15 °C	Pdh	56.2	56.2 kW For air-to-water heat pumps: Tj = -15 °C				-			
Bivalent temperature	Tbiv	-15	-15 °C For air-to-water heat pumps: Operation limit temperature		TOL	-18	°C			
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-			
Degradation co-efficient (**)	Cdh	0.9		Heating water operating limit temperature	WTOL	65	°C			
Power consumption in modes other than ac	tive mode			Supplementary heater						
Off mode	Poff	0.14	kW	D-4-d b444/**\		0.07				
Standby mode	Psb	0.70	kW	Rated heat output (**)	Psup	6.97	kW			
Thermostat-off mode	Pto	0.14	kW	Type of energy input						
Crankcase heater mode	Pck	0.00	kW	Type of chorgy input		Electrical	_			
Other items										
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	50 000	m³/h			
Sound power level, indoors/outdoors	L <sub>WA</sub>	-/92.0	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	-	m³/h			
Annual energy consumption	Q <sub>HE</sub>	60 183	kWh	heat exchanger						
For heat pump combination heater:							,			
Declared load profile		-		Water heating energy efficiency	η <sub>wh</sub>	-	%			
Daily electricity consumption	Q <sub>clec</sub>	Q <sub>clec</sub> - kWh Daily fuel consumption Q <sub>fuel</sub> -				-	kWh			
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ			
Contact details				uipment Co. Ltd nde, Foshan, Guangdong, P.R China)						

Model(s):			MH-SU50/65	-RN8L						
Outdoor side heat e	exchanger of c	chiller:	Air to water	Air to water						
Indoor side heat ex	changer chille	r:	Water							
Туре:	Туре:			Compressor driven vapour compression						
Driver of compresso	or:		Electric moto	r						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
Rated cooling capacity	P <sub>rated,c</sub>	57	kW	Seasonal space cooling energy efficiency	η <sub>s,c</sub>	197.0	%			
Declared cooling of temperature Tj	apacity for pa	rt load at giver	outdoor	Declared energy et outdoor temperatur		or part load at	given			
Tj=+35 °C	P <sub>dc</sub>	56.1	kW	Tj=+35 °C	EERd	2.88	-			
Tj=+30 °C	P <sub>dc</sub>	42.4	kW	Tj=+30 °C	EERd	4.00	-			
Tj=+25 °C	P <sub>dc</sub>	27.3	kW	Tj=+25 °C	EERd	5.64	-			
Tj=+20 °C	Tj=+20 °C P <sub>dc</sub> 19.3			Tj=+20 °C	EERd	8.81	-			
Degradation co-efficient	C <sub>dc</sub>	0.9	_							
for chillers (*)		Power cons	umption in mo	des other than "active	mode"					
Off mode	P <sub>OFF</sub>	0.08	kW	Crankcase heater	P <sub>CK</sub>	0.00	kW			
Thermosat-off mode	P <sub>TO</sub>	0.35	kW	mode Standby mode	P <sub>SB</sub>	0.08	kW			
mode			Othe	er items						
Capacity control		variable		For air-to-water comfort chillers:						
Sound power level, indoors / outdoors	L <sub>WA</sub>	-/80	dB	air flow rate, outdoor measured	-	22 000	m³/h			
Emissions of nitroger oxides (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or			m³/h			
GWP of the refrigerant	-	675	kg CO <sub>2 eq</sub> (100years)	water flow rate, outdoor side heat exchanger	-	-	1119/11			
Standard rating cor	nditions used	Low tempera	ature application							
Contact details			eating & Ventilating Equipment Co. , Ltd. stry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China							
(*) If Cdc is not de (**) From 26 Sept		measurement t	hen the defaul	t degradation coefficie	nt of chillers sh	nall be 0,9.				

Model(s):			MH-SU75-RN	N8L						
Outdoor side heat e	exchanger of c	hiller:	Air to water							
Indoor side heat ex	changer chille	r:	Water							
Type:			Compressor driven vapour compression							
Driver of compresso	or:		Electric moto	r						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
Rated cooling capacity	$P_{rated,c}$	70	kW	Seasonal space cooling energy efficiency	$\eta_{\text{s,c}}$	197.0	%			
Declared cooling c temperature Tj	apacity for pa	rt load at giver	outdoor	Declared energy effort		or part load at	given			
Tj=+35 °C	P <sub>dc</sub>	69.5	kW	Tj=+35 °C	EERd	2.64	-			
Tj=+30 °C	P <sub>dc</sub>	51.0	kW	Tj=+30 °C	EERd	4.04	-			
Tj=+25 °C	P <sub>dc</sub>	32.2	kW	Tj=+25 °C	EERd	5.50	-			
Tj=+20 °C	P <sub>dc</sub>	15.1	kW	Tj=+20 °C	EERd	8.63	-			
Degradation co-efficient for chillers (*)	C <sub>dc</sub>	0.9	-							
		Power cons	umption in mo	des other than "active r	mode"					
Off mode	P <sub>OFF</sub>	0.08	kW	Crankcase heater mode	P <sub>CK</sub>	0.000	kW			
Thermosat-off mode	P <sub>TO</sub>	0.35	kW	Standby mode	P <sub>SB</sub>	0.08	kW			
			Othe	er items						
Capacity control		variable		For air-to-water comfort chillers:						
Sound power level, indoors / outdoors	L <sub>WA</sub>	-/86	dB	air flow rate, outdoor measured	-	28 500	m <sup>3</sup> /h			
Emissions of nitroger oxides (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or			m³/h			
GWP of the refrigerant	-	675	kg CO <sub>2 eq</sub> (100years)	water flow rate, outdoor side heat exchanger	-	-	1117/11			
Standard rating cor	nditions used	Low tempera	ature application							
Contact details				ating Equipment Co. , l iao, Shunde, Foshan, (		28311 P.R. Ch	nina			
	(*) If Cdc is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.  (**) From 26 September 2018.									

Model(s):			MH-SU110-RN8L							
Outdoor side heat e	exchanger of c	hiller:	Air to water							
Indoor side heat exc	changer chille	r:	Water							
Type:			Compressor	Compressor driven vapour compression						
Driver of compresso	or:		Electric moto	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
Rated cooling capacity	P <sub>rated,c</sub>	100	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	189.0	%			
Declared cooling catemperature Tj	apacity for pa	rt load at giver	outdoor	Declared energy eff		or part load at	given			
Tj=+35 °C	P <sub>dc</sub>	97.0	kW	Tj=+35 °C	EERd	2.91	-			
Tj=+30 °C	P <sub>dc</sub>	77.6	kW	Tj=+30 °C	EERd	3.90	-			
Tj=+25 °C	P <sub>dc</sub>	49.1	kW	Tj=+25 °C	EERd	5.78	-			
Tj=+20 °C	P <sub>dc</sub>	29.5	kW	Tj=+20 °C	EERd	7.05	-			
Degradation co-efficient for chillers (*)	C <sub>dc</sub>	0.9	-							
		Power cons	umption in mo	des other than "active r	mode"					
Off mode	P <sub>OFF</sub>	0.14	kW	Crankcase heater mode	Рск	0.00	kW			
Thermosat-off mode	P <sub>TO</sub>	0.70	kW	Standby mode	P <sub>SB</sub>	0.14	kW			
			Othe	er items						
Capacity control		variable		For air-to-water comfort chillers:		00.500	3/1			
Sound power level, indoors / outdoors	L <sub>WA</sub>	-/80	dB	air flow rate, outdoor measured	-	32 500	m³/h			
Emissions of nitroger oxides (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or			m³/h			
GWP of the refrigerant	-	675	kg CO <sub>2 eq</sub> (100years)	water flow rate, outdoor side heat exchanger						
Standard rating con	ditions used	Low tempera	ature applicatio	n						
Contact details		GD Midea H Penglai indu	eating & Ventil stry Road, Beij	ating Equipment Co. , I iao, Shunde, Foshan, (	_td. Guangdong, 5	28311 P.R. Ch	ina			
(*) If Cdc is not de (**) From 26 Septe		measurement t	then the defaul	t degradation coefficier	nt of chillers sh	nall be 0,9.				

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Model(s):			MH-SU140-F	RN8L						
Outdoor side heat e	exchanger of c	:hiller:	Air to water							
Indoor side heat exc	changer chille	r:	Water	Water						
Type:			Compressor	driven vapour compres	sion					
Driver of compresso			Electric moto		ole,					
Driver or compresso	)r:		Electric moto	r						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
Rated cooling capacity	P <sub>rated,c</sub>	130	kW	Seasonal space cooling energy efficiency	η <sub>s,c</sub>	189.0	%			
Declared cooling ca temperature Tj	apacity for pa	rt load at given	n outdoor	Declared energy ef outdoor temperatur	ficiency ratio for the first force of the first for	or part load at	given			
Tj=+35 °C	P <sub>dc</sub>	128.2	kW	Tj=+35 °C	EERd	2.55	-			
Tj=+30 °C	P <sub>dc</sub>	96.2	kW	Tj=+30 °C	EERd	3.79	-			
Tj=+25 °C	P <sub>dc</sub>	60.5	kW	Tj=+25 °C	EERd	5.65	-			
Tj=+20 °C	P <sub>dc</sub>	29.5	kW	Tj=+20 °C	EERd	7.50	-			
Degradation co-efficient										
for chillers (*)	C <sub>dc</sub>	0.9	-							
		Power cons	umption in mo	des other than "active i	mode"					
Off mode	P <sub>OFF</sub>	0.14	kW	Crankcase heater mode	Рск	0.00	kW			
Thermosat-off mode	P <sub>TO</sub>	0.70	kW	Standby mode	P <sub>SB</sub>	0.14	kW			
			Othe	er items						
Capacity control		variable		For air-to-water comfort chillers:			2.11			
Sound power level, indoors / outdoors	L <sub>WA</sub>	-/92	dB	air flow rate, outdoor measured	-	50 000	m <sup>3</sup> /h			
Emissions of nitroger oxides (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or			m³/h			
GWP of the refrigerant - 675			kg CO <sub>2 eq</sub> (100years)	water flow rate, outdoor side heat exchanger			111 /11			
Standard rating con	nditions used	Low tempera	ature applicatio	n						
Contact details	Contact details  GD Midea Heating & Ventilating Equipment Co. , Ltd. Penglai industry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China									
(*) If Cdc is not de (**) From 26 Septe										

Conditions(°C)	model(s):	Capacity/kW	Powerinput/kW	СОР
	MH-SU50-RN8L	49.5	10.47	4.73
A 1: . <del>T</del>	MH-SU65-RN8L	64.0	15.24	4.20
Ambient Temperature: 7/6 Water temperature: 30/35	MH-SU75-RN8L	77.0	19.74	3.90
	MH-SU110-RN8L	112.0	27.00	4.15
	MH-SU140-RN8L	142.0	38.17	3.72
	MH-SU50-RN8L	49.6	12.25	4.05
	MH-SU65-RN8L	65.0	18.30	3.55
Ambient Temperature: 7/6	MH-SU75-RN8L	75.0	22.06	3.40
Water temperature: 40/45	MH-SU110-RN8L	110.0	29.90	3.68
	MH-SU140-RN8L	140.0	44.73	3.13
	MH-SU50-RN8L	49.8	15.56	3.20
	MH-SU65-RN8L	64.0	21.33	3.00
Ambient Temperature: 7/6	MH-SU75-RN8L	66.0	22.15	2.98
Water temperature: 47/55	MH-SU110-RN8L	106.0	35.30	3.00
	MH-SU140-RN8L	126.0	49.22	2.56
	MH-SU50-RN8L	49.9	19.88	2.51
	MH-SU65-RN8L	60.0	26.10	2.30
Ambient Temperature: 7/6	MH-SU75-RN8L	61.0	26.75	2.28
Water temperature: 55/65	MH-SU110-RN8L	100.0	42.90	2.33
	MH-SU140-RN8L	110.0	50.00	2.20
	MH-SU50-RN8L	43.2	13.33	3.24
	MH-SU65-RN8L	50.6	16.99	2.98
Ambient Temperature: 2/1	MH-SU75-RN8L	58.8	20.70	2.84
Water temperature: 30/35	MH-SU110-RN8L	100.0	33.33	3.00
	MH-SU140-RN8L	115.4	41.21	2.80
	MH-SU50-RN8L	42.0	14.24	2.95
A 1: . T	MH-SU65-RN8L	49.6	18.51	2.68
Ambient Temperature: 2/1	MH-SU75-RN8L	57.6	23.90	2.41
Water temperature: 40/45	MH-SU110-RN8L	96.8	35.20	2.75
	MH-SU140-RN8L	112.4	44.96	2.50
	MH-SU50-RN8L	41.5	17.15	2.42
A - 1 T	MH-SU65-RN8L	47.8	21.63	2.21
Ambient Temperature: 2/1	MH-SU75-RN8L	56.4	26.23	2.15
Water temperature: 47/55	MH-SU110-RN8L	94.7	41.17	2.30
	MH-SU140-RN8L	105.5	47.52	2.22
	MH-SU50-RN8L	38.0	13.33	2.85
Analysis Tananaratura: 7/0	MH-SU65-RN8L	43.5	16.67	2.61
Ambient Temperature: -7/-8 Water temperature: 30/35	MH-SU75-RN8L	48.5	19.40	2.50
	MH-SU110-RN8L	91.7	34.73	2.64
	MH-SU140-RN8L	100.0	39.22	2.55
	MH-SU50-RN8L	37.4	15.52	2.41
Ambient Temperature: 7/ 0	MH-SU65-RN8L	42.1	18.30	2.30
Ambient Temperature: -7/-8	MH-SU75-RN8L	45.8	21.60	2.12
Water temperature: 40/45	MH-SU110-RN8L	87.6	37.28	2.35
	MH-SU140-RN8L	92.5	43.03	2.15

Conditions(°C)	model(s):	Capacity/kW	Powerinput/kW	COP
	MH-SU50-RN8L		9.55	5.28
Ambient Temperature: 25/24	MH-SU65-RN8L	76.0	20.27	3.75
Ambient Temperature: 35/24 Water temperature: 23/18	MH-SU75-RN8L	86.0	23.12	3.72
	MH-SU110-RN8L	128.0	33.70	3.80
	MH-SU140-RN8L	138.0	36.32	3.80
	MH-SU50-RN8L	50.3	14.44	3.48
Ambient Temperature: 25/24	MH-SU65-RN8L	57.0	19.00	3.00
Ambient Temperature: 35/24	MH-SU75-RN8L	70.0	26.80	2.61
Water temperature: 12/7	MH-SU110-RN8L	100.0	32.78	3.05
	MH-SU140-RN8L	130.0	50.00	2.60

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版本更换明细(本页不出菲林,仅作为电子文档说明)

### 印刷技术要求

材质	80g双胶纸
规格	A4
颜色	黑白
其他	

### 更改记录表(仅做说明用,不做菲林)

版本升级	更改人	更改日期	更改主要内容	更改页码 印刷页(或默认页码)