



ENERG

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MHA-V12W/D2RN1 SMK-160/CSD45GN1-B



55°C

35



45dB



70dB

■ 12
■ **12**
■ 12
kW

■ 12
■ **12**
■ 12
kW



2015

811/2013

Technical parameters

Model(s):	Outdoor unit: MHA-V12W/D2RN1 Indoor unit: SMK-160/CSD45GN1-B
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:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	11.1	kW
Tj = 2 °C	Pdh	6.8	kW
Tj = 7 °C	Pdh	4.2	kW
Tj = 12 °C	Pdh	3.5	kW
Tj = bivalent temperature	Pdh	11.5	kW
Tj = operating limit	Pdh	11.4	kW
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW
Bivalent temperature	T _{biv}	-9	°C
Cycling interval capacity for heating	P _{cyh}	-	kW
Degradation co-efficient (**)	C _{dh}	0.9	-
Power consumption in modes other than active mode			
Off mode	P _{off}	0.015	kW
Standby mode	P _{sb}	0.015	kW
Thermostat-off mode	P _{to}	0.063	kW
Crankcase heater mode	P _{ck}	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L _{WA}	45 / 70	dB
Annual energy consumption	Q _{HE}	7537	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	128	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COP _d	1.98	-
Tj = 2 °C	COP _d	3.11	-
Tj = 7 °C	COP _d	4.50	-
Tj = 12 °C	COP _d	6.72	-
Tj = bivalent temperature	COP _d	1.78	-
Tj = operating limit	COP _d	1.73	-
For air-to-water heat pumps: Tj = -15 °C	COP _d	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP _{cyh}	-	-
Heating water operating limit temperature	W _{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P _{sup}	0.6	kW
Type of energy input	Electrical		

For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η _{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	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)						

(*) 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.

Technical parameters

Model(s):	Outdoor unit: MHA-V12W/D2RN1 Indoor unit: SMK-160/CSD45GN1-B
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:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	7.5	kW
Tj = 2 °C	Pdh	4.5	kW
Tj = 7 °C	Pdh	2.8	kW
Tj = 12 °C	Pdh	3.4	kW
Tj = bivalent temperature	Pdh	9.8	kW
Tj = operating limit	Pdh	7.6	kW
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW
Bivalent temperature	T _{biv}	-15	°C
Cycling interval capacity for heating	P _{cyc}	-	kW
Degradation co-efficient (**)	C _{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P _{off}	0.015	kW
Standby mode	P _{sb}	0.015	kW
Thermostat-off mode	P _{to}	0.063	kW
Crankcase heater mode	P _{ck}	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L _{WA}	-	dB
Annual energy consumption	Q _{HE}	10454	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	110	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COP _d	2.26	-
Tj = 2 °C	COP _d	3.41	-
Tj = 7 °C	COP _d	4.67	-
Tj = 12 °C	COP _d	7.68	-
Tj = bivalent temperature	COP _d	1.70	-
Tj = operating limit	COP _d	1.34	-
For air-to-water heat pumps: Tj = -15 °C	COP _d	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval efficiency	COP _{cyc}	-	-
Heating water operating limit temperature	W _{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P _{sup}	3.65	kW
Type of energy input	Electrical		

For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:					
Declared load profile		-		Water heating energy efficiency	
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC
Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)				

(*) 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.

Technical parameters

Model(s):	Outdoor unit: MHA-V12W/D2RN1 Indoor unit: SMK-160/CSD45GN1-B
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:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	P _{rated}	12	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	P _{dh}	-	kW
T _j = 2 °C	P _{dh}	11.6	kW
T _j = 7 °C	P _{dh}	8.0	kW
T _j = 12 °C	P _{dh}	3.8	kW
T _j = bivalent temperature	P _{dh}	11.6	kW
T _j = operating limit	P _{dh}	11.6	kW
For air-to-water heat pumps: T _j = -15 °C	P _{dh}	-	kW
Bivalent temperature	T _{biv}	2	°C
Cycling interval capacity for heating	P _{cy}	-	kW
Degradation co-efficient (**)	C _{dh}	0.9	-
Power consumption in modes other than active mode			
Off mode	P _{off}	0.015	kW
Standby mode	P _{sb}	0.015	kW
Thermostat-off mode	P _{to}	0.063	kW
Crankcase heater mode	P _{ck}	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L _{WA}	-	dB
Annual energy consumption	Q _{HE}	3700	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	164	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	COP _d	-	-
T _j = 2 °C	COP _d	2.34	-
T _j = 7 °C	COP _d	3.43	-
T _j = 12 °C	COP _d	5.82	-
T _j = bivalent temperature	COP _d	2.34	-
T _j = operating limit	COP _d	2.34	-
For air-to-water heat pumps: T _j = -15 °C	COP _d	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP _{cy}	-	-
Heating water operating limit temperature	W _{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P _{sup}	0	kW
Type of energy input	Electrical		

For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
-				η _{wh}	-	%	
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	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)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating P_{designh}, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating sup(T_j).
(**) If C_{dh} is not determined by measurement then the default degradation coefficient is C_{dh} = 0,9.