



# ENERG

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## MHA-V14W/D2RN1 SMK-160/CSD45GN1-B



55°C

35



**45dB**



**72dB**

■ 14  
■ **14**  
■ 14  
kW

■ 14  
■ **14**  
■ 14  
kW



2015

811/2013

### Technical parameters

Model(s):	Outdoor unit: MHA-V14W/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	14	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	12.4	kW
Tj = 2 °C	Pdh	7.5	kW
Tj = 7 °C	Pdh	5.0	kW
Tj = 12 °C	Pdh	3.4	kW
Tj = bivalent temperature	Pdh	12.4	kW
Tj = operating limit temperature	Pdh	11.5	kW
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW
Bivalent temperature	T <sub>biv</sub>	-7	°C
Cycling interval capacity for heating	P <sub>cy ch</sub>	-	kW
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	--
Power consumption in modes other than active mode			
Off mode	P <sub>off</sub>	0.015	kW
Standby mode	P <sub>sb</sub>	0.015	kW
Thermostat-off mode	P <sub>to</sub>	0.063	kW
Crankcase heater mode	P <sub>ck</sub>	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	45/ 72	dB
Annual energy consumption	Q <sub>HE</sub>	8689	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	130	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COP <sub>d</sub>	2.02	-
Tj = 2 °C	COP <sub>d</sub>	3.09	-
Tj = 7 °C	COP <sub>d</sub>	4.71	-
Tj = 12 °C	COP <sub>d</sub>	6.72	-
Tj = bivalent temperature	COP <sub>d</sub>	2.02	-
Tj = operating limit temperature	COP <sub>d</sub>	1.74	-
For air-to-water heat pumps: Tj = -15 °C	COP <sub>d</sub>	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP <sub>cy c</sub>	-	-
Heating water operating limit temperature	W <sub>TOL</sub>	60	°C
Supplementary heater			
Rated heat output (**)	P <sub>sup</sub>	2.5	kW
Type of energy input	Electrical		

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

For heat pump combination heater:							
<b>Declared load profile</b>	-			<b>Water heating energy efficiency</b>	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	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-V14W/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	15	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>J</sub>			
T <sub>J</sub> = -7 °C	P <sub>d</sub>	8.6	kW
T <sub>J</sub> = 2 °C	P <sub>d</sub>	5.3	kW
T <sub>J</sub> = 7 °C	P <sub>d</sub>	3.3	kW
T <sub>J</sub> = 12 °C	P <sub>d</sub>	3.4	kW
T <sub>J</sub> = bivalent temperature	P <sub>d</sub>	10.7	kW
T <sub>J</sub> = operating limit temperature	P <sub>d</sub>	7.7	kW
For air-to-water heat pumps: T <sub>J</sub> = -15 °C	P <sub>d</sub>	-	kW
Bivalent temperature	T <sub>biv</sub>	-12	°C
Cycling interval capacity for heating	P <sub>cy</sub>	-	kW
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	-
Power consumption in modes other than active mode			
Off mode	P <sub>off</sub>	0.015	kW
Standby mode	P <sub>sb</sub>	0.015	kW
Thermostat-off mode	P <sub>to</sub>	0.063	kW
Crankcase heater mode	P <sub>ck</sub>	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-	dB
Annual energy consumption	Q <sub>HE</sub>	12892	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	108	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>J</sub>			
T <sub>J</sub> = -7 °C	COP <sub>d</sub>	2.28	-
T <sub>J</sub> = 2 °C	COP <sub>d</sub>	3.52	-
T <sub>J</sub> = 7 °C	COP <sub>d</sub>	4.98	-
T <sub>J</sub> = 12 °C	COP <sub>d</sub>	7.83	-
T <sub>J</sub> = bivalent temperature	COP <sub>d</sub>	1.82	-
T <sub>J</sub> = operating limit temperature	COP <sub>d</sub>	1.33	-
For air-to-water heat pumps: T <sub>J</sub> = -15 °C	COP <sub>d</sub>	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval efficiency	COP <sub>cy</sub>	-	-
Heating water operating limit temperature	W <sub>TOL</sub>	60	°C
Supplementary heater			
Rated heat output (**)	P <sub>sup</sub>	6.1	kW
Type of energy input	Electrical		

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

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	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(T<sub>J</sub>).

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

### Technical parameters

Model(s):	Outdoor unit: MHA-V14W/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 <sub>rated</sub>	14	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>J</sub>			
T <sub>J</sub> = -7 °C	P <sub>d,h</sub>	-	kW
T <sub>J</sub> = 2 °C	P <sub>d,h</sub>	13.6	kW
T <sub>J</sub> = 7 °C	P <sub>d,h</sub>	9.2	kW
T <sub>J</sub> = 12 °C	P <sub>d,h</sub>	4.2	kW
T <sub>J</sub> = bivalent temperature	P <sub>d,h</sub>	13.6	kW
T <sub>J</sub> = operating limit	P <sub>d,h</sub>	13.6	kW
For air-to-water heat pumps: T <sub>J</sub> = -15 °C	P <sub>d,h</sub>	-	kW
Bivalent temperature	T <sub>biv</sub>	2	°C
Cycling interval capacity for heating	P <sub>cy, h</sub>	-	kW
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	--
Power consumption in modes other than active mode			
Off mode	P <sub>off</sub>	0.015	kW
Standby mode	P <sub>sb</sub>	0.015	kW
Thermostat-off mode	P <sub>to</sub>	0.063	kW
Crankcase heater mode	P <sub>ck</sub>	0.027	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-	dB
Annual energy consumption	Q <sub>HE</sub>	4249	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	168	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>J</sub>			
T <sub>J</sub> = -7 °C	COP <sub>d</sub>	-	-
T <sub>J</sub> = 2 °C	COP <sub>d</sub>	2.29	-
T <sub>J</sub> = 7 °C	COP <sub>d</sub>	3.41	-
T <sub>J</sub> = 12 °C	COP <sub>d</sub>	5.97	-
T <sub>J</sub> = bivalent temperature	COP <sub>d</sub>	2.29	-
T <sub>J</sub> = operating limit	COP <sub>d</sub>	2.29	-
For air-to-water heat pumps: T <sub>J</sub> = -15 °C	COP <sub>d</sub>	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP <sub>cy, c</sub>	-	-
Heating water operating limit temperature	W <sub>TOL</sub>	60	°C
Supplementary heater			
Rated heat output (**)	P <sub>sup</sub>	0	kW
Type of energy input	Electrical		

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

For heat pump combination heater:							
<b>Declared load profile</b>		-		<b>Water heating energy efficiency</b>	η <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	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<sub>rated</sub> is equal to the design load for heating P<sub>designh</sub>, and the rated heat output of a supplementary heater P<sub>sup</sub> is equal to the supplementary capacity for heating sup(T<sub>J</sub>).

(\*\*) If C<sub>dh</sub> is not determined by measurement then the default degradation coefficient is C<sub>dh</sub> = 0.9.