



# ENERG

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## MHA-V16W/D2N1 SMK-160/CD30GN1-B



55°C

35



**45dB**



**72dB**

■ 15  
■ **15**  
■ 15  
kW

■ 16  
■ **16**  
■ 16  
kW



2015

811/2013

### Technical parameters

Model(s):	Outdoor unit: MHA-V16W/D2N1    Indoor unit: SMK-160/CD30GN1-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 (*)	P <sub>rated</sub>	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,h</sub>	11.7	kW
T <sub>J</sub> = 2 °C	P <sub>d,h</sub>	8.1	kW
T <sub>J</sub> = 7 °C	P <sub>d,h</sub>	5.4	kW
T <sub>J</sub> = 12 °C	P <sub>d,h</sub>	2.8	kW
T <sub>J</sub> = bivalent temperature	P <sub>d,h</sub>	12.1	kW
T <sub>J</sub> = operating limit	P <sub>d,h</sub>	10.2	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>	-5	°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>	0.019	kW
Standby mode	P <sub>sb</sub>	0.019	kW
Thermostat-off mode	P <sub>to</sub>	0.078	kW
Crankcase heater mode	P <sub>ck</sub>	0.014	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>	9491	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	127	%
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>	1.99	-
T <sub>J</sub> = 2 °C	COP <sub>d</sub>	3.09	-
T <sub>J</sub> = 7 °C	COP <sub>d</sub>	4.73	-
T <sub>J</sub> = 12 °C	COP <sub>d</sub>	6.81	-
T <sub>J</sub> = bivalent temperature	COP <sub>d</sub>	2.15	-
T <sub>J</sub> = operating limit	COP <sub>d</sub>	1.70	-
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	-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>	4.3	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.

### Technical parameters

Model(s):	Outdoor unit: MHA-V16W/D2N1    Indoor unit: SMK-160/CD30GN1-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	16	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>	10.4	kW
T <sub>J</sub> = 2 °C	P <sub>d</sub>	6.3	kW
T <sub>J</sub> = 7 °C	P <sub>d</sub>	4.0	kW
T <sub>J</sub> = 12 °C	P <sub>d</sub>	4.0	kW
T <sub>J</sub> = bivalent temperature	P <sub>d</sub>	11.6	kW
T <sub>J</sub> = operating limit	P <sub>d</sub>	7.3	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>	0.019	kW
Standby mode	P <sub>sb</sub>	0.019	kW
Thermostat-off mode	P <sub>to</sub>	0.078	kW
Crankcase heater mode	P <sub>ck</sub>	0.014	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-	dB
Annual energy consumption	Q <sub>HE</sub>	13244	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	114	%
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>	2.44	-
T <sub>J</sub> = 2 °C	COP <sub>d</sub>	3.55	-
T <sub>J</sub> = 7 °C	COP <sub>d</sub>	5.40	-
T <sub>J</sub> = 12 °C	COP <sub>d</sub>	8.20	-
T <sub>J</sub> = bivalent temperature	COP <sub>d</sub>	1.94	-
T <sub>J</sub> = operating limit	COP <sub>d</sub>	1.24	-
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>	8.4	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			
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-V16W/D2N1    Indoor unit: SMK-160/CD30GN1-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>	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,h</sub>	-	kW
T <sub>J</sub> = 2 °C	P <sub>d,h</sub>	15.3	kW
T <sub>J</sub> = 7 °C	P <sub>d,h</sub>	9.9	kW
T <sub>J</sub> = 12 °C	P <sub>d,h</sub>	4.4	kW
T <sub>J</sub> = bivalent temperature	P <sub>d,h</sub>	15.3	kW
T <sub>J</sub> = operating limit	P <sub>d,h</sub>	15.3	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>	0.019	kW
Standby mode	P <sub>sb</sub>	0.019	kW
Thermostat-off mode	P <sub>to</sub>	0.078	kW
Crankcase heater mode	P <sub>ck</sub>	0.014	kW

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-	dB
Annual energy consumption	Q <sub>HE</sub>	4483	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η <sub>s</sub>	179	%
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>	2.34	-
T <sub>J</sub> = 7 °C	COP <sub>d</sub>	3.81	-
T <sub>J</sub> = 12 °C	COP <sub>d</sub>	6.16	-
T <sub>J</sub> = bivalent temperature	COP <sub>d</sub>	2.34	-
T <sub>J</sub> = operating limit	COP <sub>d</sub>	2.34	-
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)						

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