

MMD-VN(K) AIR-TO-AIR HEAT EXCHANGER WITH DX COIL



MMD-VN(K) ventilation products are using exhaust air + DX coil to pre-condition the incoming air, thus reducing the cooling or heating load and the overall size of the required air conditioning system.

CAPACITY



4.1kW > 10.9kW

AIR FLOW



Up to 500m³/h > 1,000m³/h

SOUND PRESSURE LEVEL



34dB(A)

OUTDOOR UNITS COMPATIBILITY



Mini SMMS-e
4, 5 & 6HP



SMMS-e



SHRM-e

LOCAL CONTROLS



NRC-01HE
RBC-AMTU31-E

Features

Model name	MMD-	Without humidifier			With humidifier				
		VN502HEX1E	VN802HEX1E	VN1002HEX1E	VNK502HEX1E	VNK802HEX1E	VNK802HEX1E		
Cooling Capacity	kW	4.10(1.30)	6.56(2.06)	8.25(2.32)	4.10(1.30)	6.56(2.06)	8.25(2.32)		
Heating Capacity	kW	5.53(2.33)	8.61(3.61)	10.92(4.32)	5.53(2.33)	8.61(3.61)	10.92(4.32)		
Power supply		1 phase 50Hz 230V(220V-240V) / 1 phase 60Hz 220V(Separate power supply for indoor units is required.)			1 phase 50Hz 230V(220V-240V)				
Temperature exchange efficiency	Extra High	%	70.5	70.0	65.5	70.5	70	65.5	
	High	%	70.5	70.0	65.5	70.5	70	65.5	
	Low	%	71.5 / 72.0	72.5 / 73.0	67.5 / 68.0	71.5	72.5	67.5	
Enthalpy exchange efficiency	Cooling	Extra High	%	56.5	56.0	52.0	56.5	56.0	52.0
		High	%	56.5	56.0	52.0	56.5	56.0	52.0
		Low	%	57.5 / 58.0	59.0 / 59.5	54.0 / 55.0	57.5	59.0	54.5
	Heating	Extra High	%	68.5	70.0	66.0	68.5	70.0	66.0
		High	%	68.5	70.0	66.0	68.5	70.0	66.0
		Low	%	69.0 / 69.0	73.0 / 73.5	68.5 / 69.0	69.0	73.0	68.5
Power input (Heat exchange mode)	Extra High	kw	0.300 / 0.365	0.505 / 0.595	0.550 / 0.720	0.305	0.530	0.575	
	High	kw	0.280 / 0.350	0.465 / 0.555	0.545 / 0.665	0.285	0.485	0.565	
	Low	kw	0.235 / 0.250	0.335 / 0.390	0.485 / 0.530	0.240	0.350	0.520	
Running current	Extra High	A	1.30 / 1.65	2.25 / 2.77	2.46 / 3.38	1.33	2.37	2.56	
	High	A	1.21 / 1.62	2.07 / 2.59	2.43 / 3.11	1.24	2.14	2.51	
	Low	A	1.01 / 1.14	1.46 / 1.79	2.16 / 2.45	1.03	1.54	2.31	
Fan unit	Standard air flow	Extra High	m ³ /h	500	800	950	500	800	950
		High	m ³ /h	500	800	950	500	800	950
		Low	m ³ /h	440 / 410	640 / 600	820 / 800	440	640	820
	External static pressure	Extra High	Pa	120 / 200	120 / 190	135 / 195	95	105	110
		High	Pa	105 / 170	100 / 155	120 / 160	85	85	90
		Low	Pa	115 / 150	100 / 130	105 / 130	95	90	115
Air flow limit	Lower limit	m ³ /h	330	480	640	330	480	640	
	Upper limit	m ³ /h	600	960	1140	600	960	1140	
Humidifier	System		-	-	-	Permeable film humidifier			
	Amount		-	-	-	3.0	5.0	6.0	
	Feed water pressure		-	-	-	0.02-0.49			
Sound pressure	Extra High	dB	37.5 / 40	41 / 43	43 / 43.5	36.5	40	42	
	High	dB	36.5 / 38	40 / 42	42 / 42	35.5	39	41	
	Low	dB	34.5 / 36.5	38 / 37	40 / 40	33.5	38	39	
Sound power		dB	55	58	59	55	58	59	
Appearance			Zinc hot dipping steel plate			Zinc hot dipping steel plate			
Dimensions	HxWxD	mm	430x1140x1690	430x1189x1739	430x1189x1789	430x1140x1690	430x1189x1739	430x1189x1739	
Weight		kg	84	100	101	91	111	112	
Heat exchanger			Finned tube			Finned tube			
Heat-insulating material			Flexible urethane foam			Flexible urethane foam			
Air filter			Standard filter & High efficiency filter			Standard filter (Gravitational method 82%) & High efficiency filter (Colorimetric method 65%)			
Controller			Remote controller (Separately sold parts)						
Connecting piping	Gas side	mm	3/8"	1/2"	1/2"	3/8"	1/2"	1/2"	
	Liquid side	mm	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	
	Drain port (Nominal dia.)	mm	25 (Polyvinyl chloride tube)			25 (Polyvinyl chloride tube)			
Water supply connection (Port size)			-	-	-	R1/2			
Operating range	Around unit		-10 - 40°C . RH ≤80%			-10 - 40°C . RH ≤80%			
	Outdoor Air (OA)		-15 - 43°C . RH ≤80%			-15 - 43°C . RH ≤80%			
	Return Air (RA)		5 - 40°C . RH ≤80%			5 - 40°C . RH ≤80%			

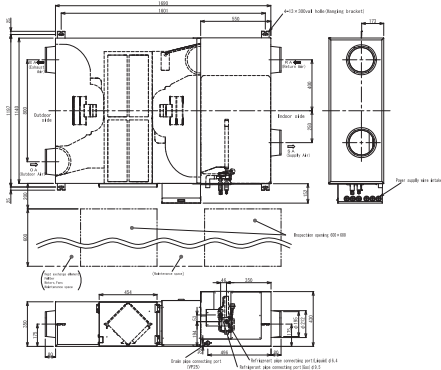
Cooling and heating capacities are based on the following conditions:
cooling capacities are based on: indoor temperature: 27°CDB/19°C WB, Outdoor temperature: 35°C DB
Heating capacities are based on: indoor temperature: 20°C DB, Outdoor temperature: 7 ° CDB/6°C WB.
The figures in () indicate the heat reclaimed from the heat recovery ventilator.

AIR-TO-AIR HEAT EXCHANGER WITH DX COIL

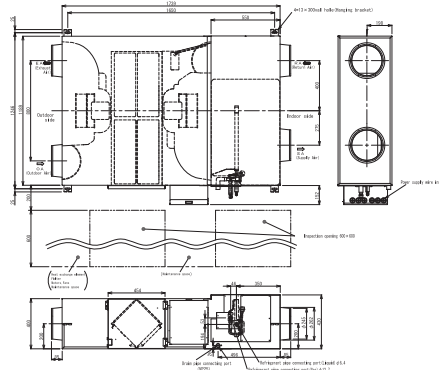
Drawings

Unit: mm

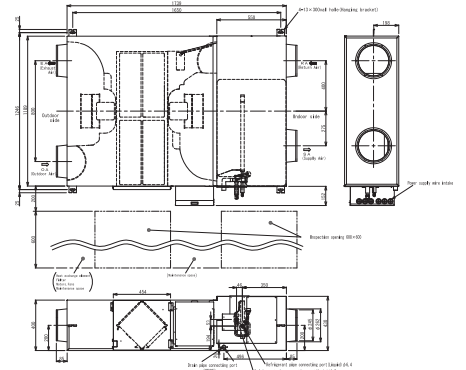
MMD-VN(K)502HEX1E



MMD-VN(K)802HEX1E

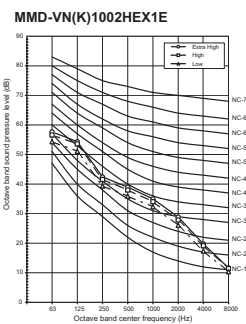
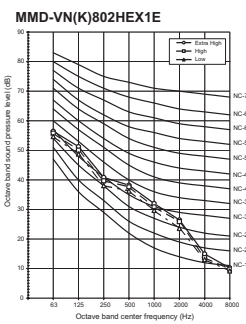
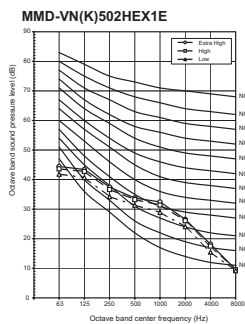


MMD-VN(K)1002HEX1E



Sound pressure levels

Unit: dB(A)



Accessories

Type	Model name	Description	Appearance	Remarks
Control	NRC-01HE	Dedicated remote controller for air-to-air heat exchanger		Integrated functions: fan speed, freecooling, air balance volume rate, temperature management and timer.
	NRB-1HE	On/off optional PCB for air-to-air heat exchanger		
Condensates	TCB-DP31HEXE	Drain pump kit		

Air-to-air heat exchanger (with DX coil) embedded connectors

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (cooling, heating, fan, defrost, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input. No IDU thermo off.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
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Other information

