

## VN-M\_HE AIR-TO-AIR HEAT EXCHANGER



Toshiba's VN model uses exhaust air to pre-condition the incoming air, thus reducing the cooling load on the system. This allows the overall capacity size of the system to be reduced.

### LOCAL CONTROLS



NRC-01HE  
RBC-AMTU31E

#### AIR FLOW



150m<sup>3</sup>/h - 2,000m<sup>3</sup>/h

#### SOUND PRESSURE LEVEL



20 dB(A)

### Features

Model name		VN-M150HE	VN-M250HE	VN-M350HE	VN-M500HE	VN-M650HE	VN-M800HE	VN-M1000HE	VN-M1500HE	VN-M2000HE	
<b>Air volume</b> (Extra high/High/Low)	m <sup>3</sup> /h	150/150/110	250/250/155	350/350/210	500/500/390	650/650/520	800/800/700	1000/1000/755	1500/1500/1200	2000/2000/1400	
<b>Power consumption</b>	Extra high	W	68-78	123-138	165-182	214-238	262-290	360-383	532-569	751-786	1084-1154
	High	W	59-67	99-111	135-145	176-192	240-258	339-353	494-538	708-784	1032-1080
	Low	W	42-47	52-69	82-88	128-142	178-191	286-300	353-370	570-607	702-742
<b>External static pressure</b>	Extra high	Pa	82-102	80-98	114-125	134-150	91-107	142-158	130-150	135-156	124-143
	High	Pa	52-78	34-65	56-83	69-99	58-82	102-132	97-122	103-129	92-116
	Low	Pa	47-64	28-40	65-94	62-92	61-96	76-112	84-127	112-142	110-143
<b>Sound pressure level</b>	Extra high	dB(A)	26-28	29.5-30	34-35	32.5-34	34-36	37-38.5	39.5-40.5	38-39	41-42.5
	High	dB(A)	24-25.5	25-27	30-32	29.5-31	33-34	35.5-37	38.5-40	36.5-37.5	39.5-41
	Low	dB(A)	20-22	21-22	27-29	26-29	31-32.5	33.5-35	34-35.5	36-37.5	37-38
<b>Temperature exchange efficiency (%)</b>	Extra high		81.5	78	74.5	76.5	75	76.5	73.5	76.5	73.5
	High		81.5	78	74.5	76.5	75	76.5	73.5	76.5	73.5
	Low		83	81.5	79.5	78	76.5	77.5	77	79	77.5
<b>Enthalpy exchange efficiency (%)</b>	Extra high	Heating	74.5	70	65	72	69.5	71	68.5	71	68.5
	High	Heating	74.5	70	65	72	69.5	71	68.5	71	68.5
	Low	Heating	76	74	71.5	73.5	71.5	71.5	71.5	73.5	72
	Extra high	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64	60.5
	High	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64	60.5
	Low	Cooling	71	69	67	66.5	64	65.5	64.5	67	65.5
<b>Power supply</b>		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V									
<b>Dimensions</b> (HxWxD)	mm	900x900x290			1140x1140x350		1189x1189x400		1189x1189x810		
<b>Weight</b>	kg	36	36	38	53	53	70	70	143	143	
<b>Duct diameter</b>	mm	100	150		200		250		Inside: 250 / Outside: 283x730		
<b>Filtration efficiency grade (%)</b>		82									
<b>Operating range</b>	Around unit	-10°C-40°C 80%RH or less									
	Outdoor Air (OA)	-15°C(*1)-43°C 80%RH or less									
	Return Air (RA)	5°C-40°C 80%RH or less									

\*1: Because these models can support only old communication protocol, please communicate with local distributor if you want to connect these indoor units.

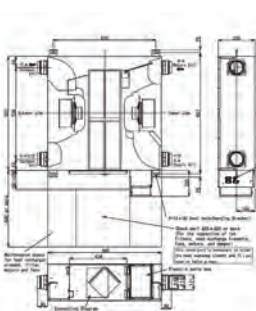
\* Air volume can be changed over to high (Extra high) mode or low mode at both heat exchange and normal ventilation modes.  
\* Sound pressure level is measured 1.5 m below the center of the unit, and the value which was measured at the acoustic room.  
\* Sound pressure level usually become higher than above values by the influence of actual installation condition such as reflected sound and peripheral noise.

\* Sound power level is the value of casing.  
\*1) When the temperature of the outdoor air is below -10°C, the unit runs cold operation mode (intermittent operation of the ventilation for air supply). The unit cannot be used at -15°C or less. The ventilator for air supply stops, and the ventilator for air exhaust also can be stopped by the setting.

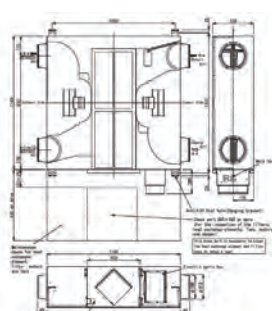
### Drawings

Unit : mm

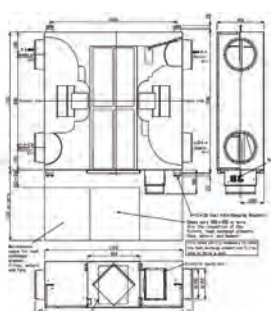
VN-M150HE to VN-M350HE



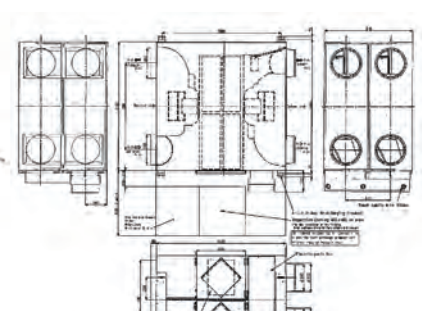
VN-M500HE to VN-M650HE



VN-M800HE to VN-M1000HE1



VN-M1500HE1 to VN-M2000HE1

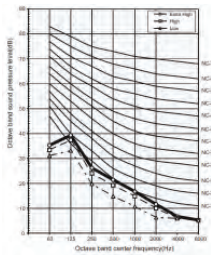


# AIR-TO-AIR HEAT EXCHANGER

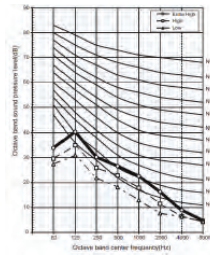
## Sound pressure levels

Unit : dB(A)

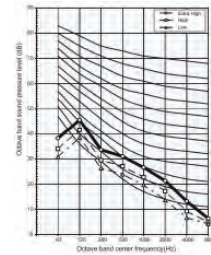
VN-M150HE



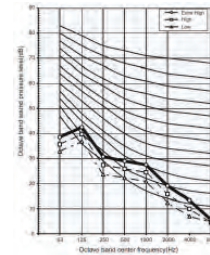
VN-M250HE



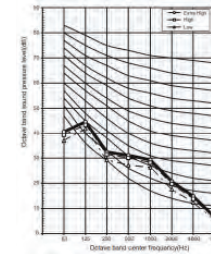
VN-M350HE



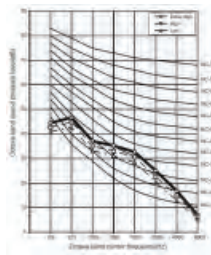
VN-M500HE



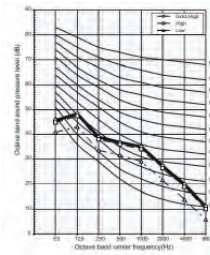
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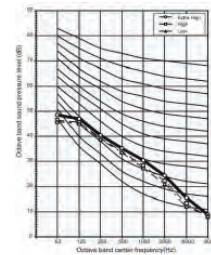
VN-M800HE



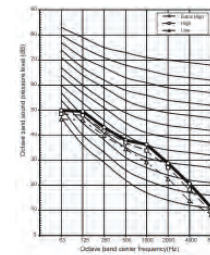
VN-M1000HE



VN-M1500HE



VN-M2000HE



## Accessories

Part name	Model name	Description	Appearance	Remarks
Control	NRC-01HE	All air-to-air heat exchangers dedicated remote control		Integrated functions : fan speed, freecooling, air balance volume rate, temperature management and timer.
	NRB-1HE	All air-to-air heat exchangers On/Off additional PCB		On/off optional PCB for air-to-air heat exchanger

## Other information

