

# TOSHIBA

## HEAT PUMPS

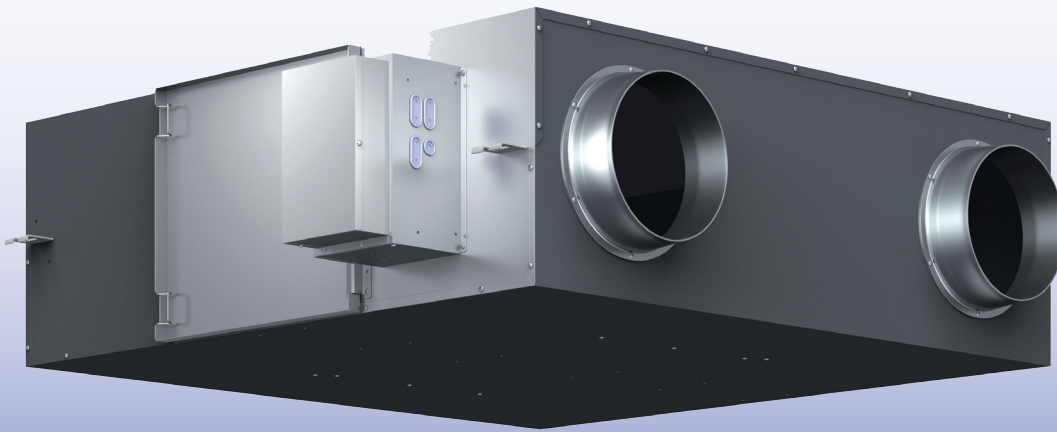
Think Toshiba. Think reliability.



*Better Air Solutions*

# VN-M\*\*HE

## HEAT RECOVERY VENTILATION



NRC-01HE



## Why Ventilation is Key

It is a fact that people spend nearly 80% of their time indoors, this increases their exposure to harmful biological substances like bacteria, viruses, mould, pollen and also chemicals such as Formaldehyde and Carbon Dioxide. Even everyday products such as deodorant, hair spray, air fresheners, and cleaning products impact on indoor air quality and health. These substances known as Volatile Organic Compounds (VOC) are the cause of "sick building syndrome" an issue first recognised in the 1970's. The consequences for building occupants includes: irritant effects, sleepiness, dizziness, respiratory issues like Asthma and other allergies.

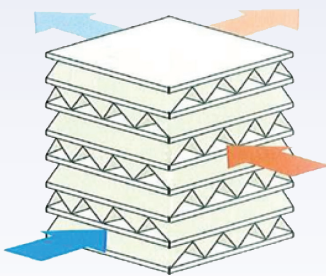
Indoor air needs to be exhausted and effectively replaced by new fresh air to keep oxygen levels correct and remove most pollutants. The use of a Toshiba air-to-air heat exchanger, to complete both functions of stale air removal and fresh air intake, limits heat dispersion (recovering up to 80% of the heat energy being expelled) therefore reducing the load on air conditioning/source of heat.

For energy savings on those hot summer nights the system will bypass the heat exchange core and bring in cooler night air reducing load on air conditioning systems or eliminate the need for air conditioning altogether.

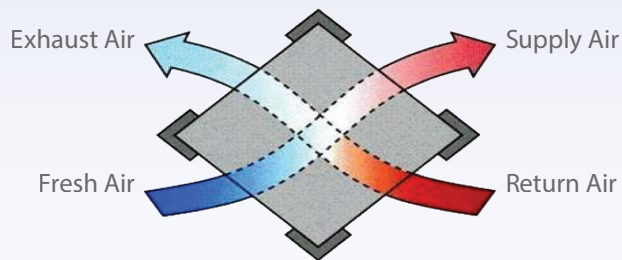
The Toshiba 'HEX' can be used as a standalone system or connected to any of Toshiba's 'RAV' series heat pump air conditioner with a wired controller.

For commercial applications the 'HEX' can be group controlled and comes with 'U' terminals for connection to TCC link, allowing integration with BACnet® Lon works® or Modbus. For increased installation flexibility the 'HEX' system can be configured as balanced, positive or negative pressure.

**Toshiba Cross Flow Heat Exchange Core**



**Heat Exchanger Core Side View**



**Suggested Residential Sizing**

Model	Dwelling Size
VN-M150HE	Up to 80sqm
VN-M250HE	Up to 125sqm
VN-M500HE	Up to 200sqm

## Technical Specifications

Model	Height (mm)	Length (mm)	Width (mm)	Weight (KG)	Airflow (L/S)	Duct Spigot (mm)	Number of Cores	Electrical Supply	Temperature Exchange %	Operational Range (OA)	Operational Range (RA)
VN-M150HE	290	900	900	36	42	100	2	230 VAC 50-60 Hz	81.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M250HE	290	900	900	36	69	150	2	230 VAC 50-60 Hz	78	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M350HE	290	900	900	38	97	150	2	230 VAC 50-60 Hz	74.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M500HE	350	1140	1140	53	140	150	2	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M650HE	350	1140	1140	53	181	150	2	230 VAC 50-60 Hz	75	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M800HE	400	1189	1189	70	222	250	2	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M1000HE	400	1189	1189	70	278	250	2	230 VAC 50-60 Hz	73.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M1500HE	810	1189	1189	143	417	250	4	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M2000HE	810	1189	1189	143	555	250	4	230 VAC 50-60 Hz	73.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less

Toshiba Air to Air heat exchange ventilation complies with NZS 4303:1990.



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Notice: Toshiba is committed to continuously improving its product to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.

All features and specifications subject to change without prior notice.

Note: All images provided in this catalogue are used for illustration purposes only.

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[www.toshibaheatpumps.com](http://www.toshibaheatpumps.com)