

SMMSe – 2 pipe heat pump

What you'll find inside:

- Expanded installation flexibility
- Key features
- Key technologies
- Specifications

+
Energy
efficient

+
Powerful
operation

+
Flexibility
in design

TOSHIBA

AIR CONDITIONING

SMMS 
SUPER MODULAR MULTI SYSTEM



About Toshiba's SMMSe

At Toshiba, we believe that innovation should be the path to a better, more efficient future.

Over the decades we have been committed to creating innovative and high quality electronic appliances that are now synonym of revolutionary technology worldwide.

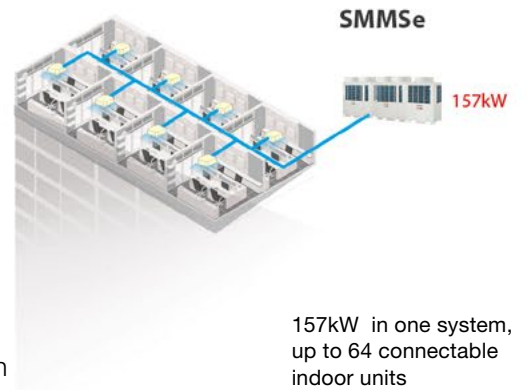
With Toshiba's SMMSe, our commercial HVAC system for all building applications, we continue our journey towards a more efficient future. The SMMSe has been designed and developed upon the pillars of excellence, expansion and experience for comfort and convenience like never before.



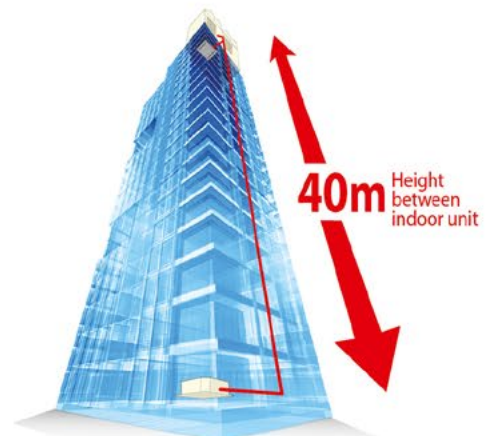
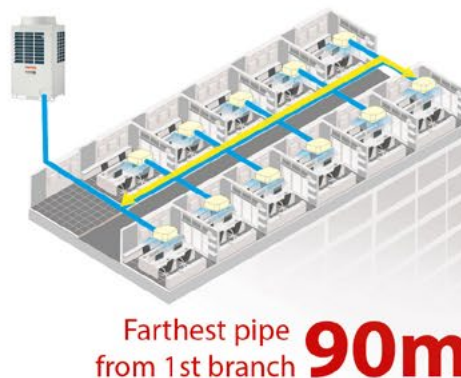
Expanded installation flexibility

The compact design of the outdoor units gives increased performance that defies their compact module size. This delivers greater freedom in layout design and minimises weight-related restrictions and allows for quicker installation.

- Very compact design with reduced footprint
- Capacity up to 56kW (20HP) can be covered with a single module, reducing pipe work and overall installation time
- Expanding the maximum combination up to 157kW (56HP) in one system, with up to 64 connectable indoor units
- Maximum piping length of 1,000 metres, farthest equivalent length 235metres
- Maximum vertical distance between indoor units, which reaches up to 40 metres, equal to an entire 11-story building



ACR Product of the Year!
With an ESEER of over 7 across the range.



*ACR - Air Conditioning Refrigeration awards UK.

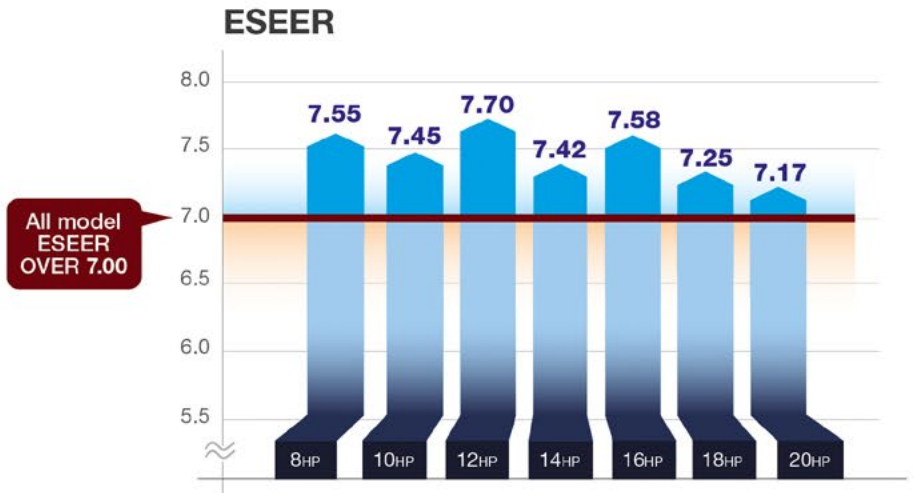
Key features

Energy saving

Adopting the highly efficient DC twin-rotary compressors with various technologies realised over 7.00 ESEER for all of capacity range.

ESEER Test condition

- 1) Indoor temperature: 27°C DB/19°C WB
- 2) Outdoor temperature: 100% 35°C DB, 50% 25°C DB, 25% 20°C DB
- 3) ESEER formula: $EER \text{ at } 35^\circ\text{C DB} \times 0.03 + EER \text{ at } 30^\circ\text{C DB} \times 0.33 + EER \text{ at } 25^\circ\text{C DB} \times 0.41 + EER \text{ at } 20^\circ\text{C DB} \times 0.23$



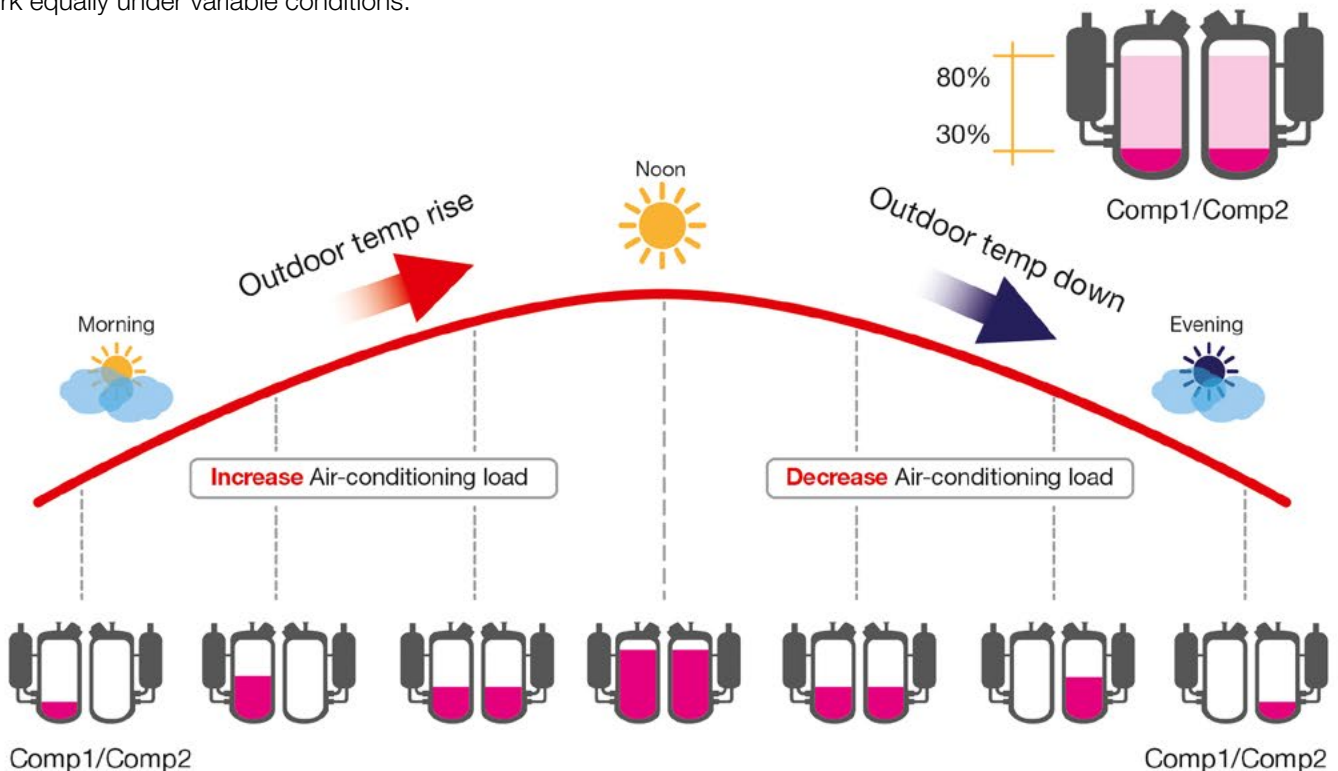
Expansion capacity range

Outdoor units improve performance to achieve greater space efficiency that defies their compact module size to deliver greater freedom in layout design. This also minimises weight-related restrictions and allows for quicker installation.



Rotational control

The rotational control in SMMS_e is designed to improve system reliability by controlling the operation of each compressor to work equally under variable conditions.

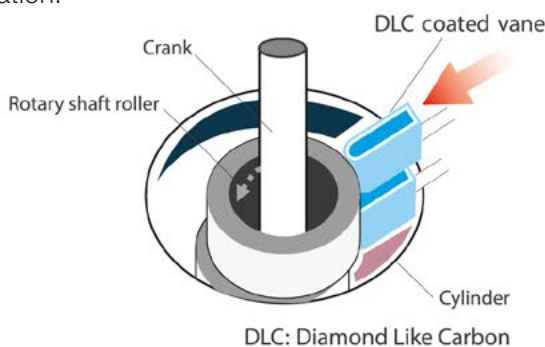


Key technologies

1 DC twin-rotary compressor

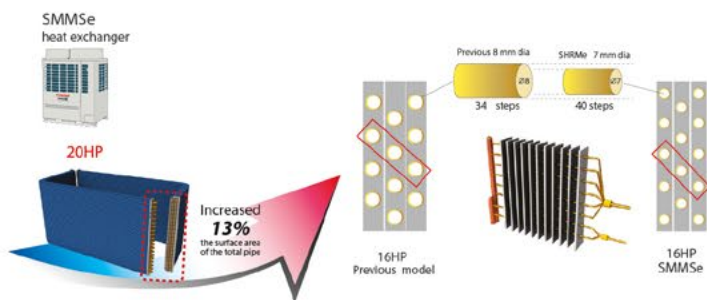


The Toshiba DC Twin Rotary Compressor is compact and reliable with a wide operating range. It utilises two rollers rotating together making accurate compressor rotation possible, and the low oil release method combines to deliver higher performance efficiencies, and peaceful operation.



DLC coated dual vane reduces friction due to increased hardness and high adhesion of the material.

2 Heat exchanger

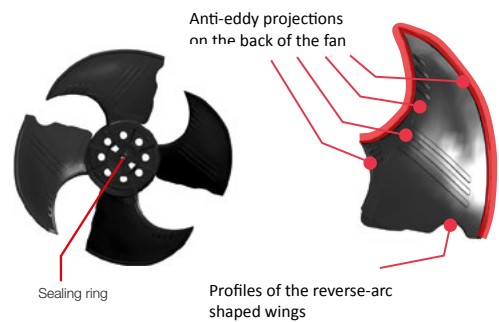


Toshiba's 3-row heat exchanger design, with reduced pipe size from 8mm to 7mm and increased total number of passes, improves both system performance and efficiency.

While the 3-row heat exchanger design allows the outdoor unit to automatically select the most suitable heat exchanger size and precisely matching the indoor capacity load, its 4-sided design ensures maximum possible flow rate across the entire coil, improving system efficiency.

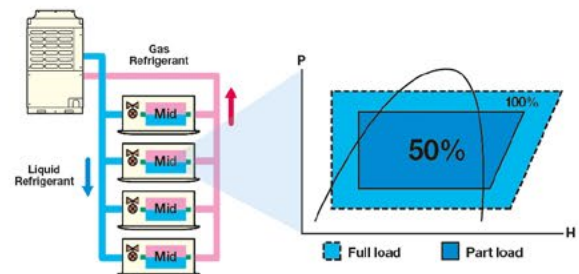


3 Propeller fan



Toshiba's bat wing fan design increases the delivery of air volume while the anti-eddy ribs and rubber sealing rings work in harmony to reduce air resistance thus achieving quieter operation.

4 Intelligent VRF control



The advanced intelligent VRF control continually adjusts the operation of both indoor and outdoor units, based on the feedback from multiple sensors.

While the refrigerant flow to each indoor unit is precisely controlled by the outdoor unit ensuring a more even capacity distribution throughout the system. Plus the evaporative and condensing temperature is automatically adjusted to maintain optimum indoor room temperature, regardless of the unit's load or its physical distance from the outdoor unit.

Indoor units




Type	Model Name	Equivalent HP	Cooling Capacity (kW)	Heating Capacity (kW)
4-way air discharge cassette type	MMU-AP0094HP1-E	1.00	2.80	3.20
	MMU-AP0124HP1-E	1.25	3.60	4.00
	MMU-AP0154HP1-E	1.70	4.50	5.00
	MMU-AP0184HP1-E	2.00	5.60	6.30
	MMU-AP0244HP1-E	2.50	7.10	8.00
	MMU-AP0274HP1-E	3.00	8.00	9.00
	MMU-AP0304HP1-E	3.20	9.00	10.00
	MMU-AP0364HP1-E	4.00	11.20	12.50
	MMU-AP0484HP1-E	5.00	14.00	16.00
	MMU-AP0564HP1-E	6.00	16.00	18.00
Compact 4-way cassette (600 x 600) type	MMU-AP0074MH1-E	0.80	2.20	2.50
	MMU-AP0094MH1-E	1.00	2.80	3.20
	MMU-AP0124MH1-E	1.25	3.60	4.00
	MMU-AP0154MH1-E	1.70	4.50	5.00
	MMU-AP0184MH1-E	2.00	5.60	6.30
2-way air discharge cassette type	MMU-AP0072WH	0.80	2.20	2.50
	MMU-AP0092WH	1.00	2.80	3.20
	MMU-AP0122WH	1.25	3.60	4.00
	MMU-AP0152WH	1.70	4.50	5.00
	MMU-AP0182WH	2.00	5.60	6.30
	MMU-AP0242WH	2.50	7.10	8.00
	MMU-AP0272WH	3.00	8.00	9.00
	MMU-AP0302WH	3.20	9.00	10.00
	MMU-AP0362WH	4.00	11.20	12.50
	MMU-AP0482WH	5.00	14.00	16.00
MMU-AP0562WH	6.00	16.00	18.00	
1-way air discharge cassette type	MMU-AP0074YH-E	0.80	2.20	2.50
	MMU-AP0094YH-E	1.00	2.80	3.20
	MMU-AP0124YH-E	1.25	3.60	4.00
	MMU-AP0154SH-E	1.70	4.50	5.00
	MMU-AP0184SH-E	2.00	5.60	6.30
MMU-AP0244SH-E	2.50	7.10	8.00	
Concealed duct type	MMD-AP0076BHP1-E	0.80	2.20	2.50
	MMD-AP0096BHP1-E	1.00	2.80	3.20
	MMD-AP0126BHP1-E	1.25	3.60	4.00
	MMD-AP0156BHP1-E	1.70	4.50	5.00
	MMD-AP0186BHP1-E	2.00	5.60	6.30
	MMD-AP0246BHP1-E	2.50	7.10	8.00
	MMD-AP0276BHP1-E	3.00	8.00	9.00
	MMD-AP0306BHP1-E	3.20	9.00	10.00
	MMD-AP0366BHP1-E	4.00	11.20	12.50
	MMD-AP0486BHP1-E	5.00	14.00	16.00
MMD-AP0566BHP1-E	6.00	16.00	18.00	
Concealed duct high static pressure type	MMD-AP0186HP-E	2.00	5.60	6.30
	MMD-AP0246HP-E	2.50	7.10	8.00
	MMD-AP0276HP-E	3.00	8.00	9.00
	MMD-AP0366HP-E	4.00	11.20	12.50
	MMD-AP0486HP-E	5.00	14.00	16.00
MMD-AP0566HP-E	6.00	16.00	18.00	
MMD-AP0726HP-E	8.00	22.40	25.00	
MMD-AP0966HP-E	10.00	28.00	31.50	
Slim duct type	MMD-AP0074SPH1-E	0.80	2.20	2.50
	MMD-AP0094SPH1-E	1.00	2.80	3.20
	MMD-AP0124SPH1-E	1.25	3.60	4.00
	MMD-AP0154SPH1-E	1.70	4.50	5.00
	MMD-AP0184SPH1-E	2.00	5.60	6.30
	MMD-AP0244SPH1-E	2.50	7.10	8.00
	MMD-AP0274SPH1-E	3.00	8.00	9.00
Super Slim duct type	MMD-AP0076MPHY	0.80	2.20	2.50
	MMD-AP0086MPHY	1.00	2.50	2.80
	MMD-AP0096MPHY	1.25	2.80	3.20
	MMD-AP0106MPHY	1.70	3.20	3.60
	MMD-AP0126MPHY	2.00	3.60	4.00
	MMD-AP0146MPHY	2.50	4.00	4.50
	MMD-AP0156MPHY	2.00	4.50	5.00
	MMD-AP0176MPHY	2.00	5.00	5.60
	MMD-AP0186MPHY	2.50	5.60	6.30
	MMD-AP0206MPHY	2.00	6.30	7.10
MMD-AP0246MPHY	2.50	7.10	8.00	
MMD-AP0276MPHY	3.00	8.00	9.00	
Under Ceiling Type	MMC-AP0157HP-E	1.70	4.50	5.00
	MMC-AP0187HP-E	2.00	5.60	6.30
	MMC-AP0247HP-E	2.50	7.10	8.00
	MMC-AP0277HP-E	3.00	8.00	9.00
	MMC-AP0367HP-E	4.00	11.20	12.50
	MMC-AP0487HP-E	5.00	14.00	16.00
MMC-AP0567HP-E	6.00	16.00	18.00	
High wall type 3 series	MMK-AP0073H1	0.80	2.20	2.50
	MMK-AP0093H1	1.00	2.80	3.20
	MMK-AP0123H1	1.25	3.60	4.00
	MMK-AP0153H1	1.70	4.50	5.00
	MMK-AP0183H1	2.00	5.60	6.30
MMK-AP0243H1	2.50	7.10	8.00	



Type	Model Name	Equivalent HP	Cooling Capacity (kW)	Heating Capacity (kW)	
High wall 7 series	MMK-AP0077HP-E	0.80	2.20	2.50	
	MMK-AP0097HP-E	1.00	2.80	3.20	
	MMK-AP0127HP-E	1.25	3.60	4.00	
Floor standing cabinet type	MML-AP0074H-E	0.80	2.20	2.50	
	MML-AP0094H-E	1.00	2.80	3.20	
	MML-AP0124H-E	1.25	3.60	4.00	
	MML-AP0154H-E	1.70	4.50	5.00	
	MML-AP0184H-E	2.00	5.60	6.30	
	MML-AP0244H-E	2.50	7.10	8.00	
Floor Console	MML-AP0074NH-E	0.80	2.20	2.50	
	MML-AP0094NH-E	1.00	2.80	3.20	
	MML-AP0124NH-E	1.25	3.60	4.00	
	MML-AP0154NH-E	1.70	4.50	5.00	
MML-AP0184NH-E	2.00	5.60	6.30		
MML-AP0244NH-E	2.50	7.10	8.00		
Floor standing concealed type	MMF-AP0156H-E	1.70	4.50	5.00	
	MMF-AP0186H-E	2.00	5.60	6.30	
	MMF-AP0246H-E	2.50	7.10	8.00	
	MMF-AP0276H-E	3.00	8.00	9.00	
	MMF-AP0366H-E	4.00	11.20	12.50	
	MMF-AP0486H-E	5.00	14.00	16.00	
	MMF-AP0566H-E	6.00	16.00	18.00	
	MMF-AP0156H-E	1.70	4.50	5.00	
Floor standing type	MMF-AP0186H-E	2.00	5.60	6.30	
	MMF-AP0246H-E	2.50	7.10	8.00	
	MMF-AP0276H-E	3.00	8.00	9.00	
	MMF-AP0366H-E	4.00	11.20	12.50	
MMF-AP0486H-E	5.00	14.00	16.00		
MMF-AP0566H-E	6.00	16.00	18.00		
Fresh air intake indoor unit type	MMD-AP0481HFE	5.00	14.00	8.90	
	MMD-AP0721HFE	8.00	22.40	13.90	
	MMD-AP0961HFE	10.00	28.00	17.40	
Air-to-Air Heat Exchangers*	Air Flow in CMH (m³/h)				
	VN-M150HE		150		
	VN-M250HE		250		
	VN-M350HE		350		
	VN-M500HE		500		
	VN-M650HE		650		
	VN-M800HE		800		
	VN-M1000HE		1000		
	VN-M1500HE		1500		
	VN-M2000HE		2000		
	Air-to-Air Heat Exchangers + DX Coils*	MMD-VN502HEXE		500	
		MMD-VN802HEXE		800	
MMD-VN1002HEXE			1000		

Controls	
NRC-01HE	Wired Remote Controller for Air-to-Air Heat Exchanger, DX Coils & Humidifier
RBC-AMS41E	Remote controller with weekly timer (7-day timer function)
RBC-AMS55E-ES	Back lit remote controller with weekly timer (7-day timer function)
TCB-EXS21TLE	Schedule timer is connected directly to the TCC Link Central Control network and can set timer functions for up to 64 indoor units in up to 8 programmable control groups
TCB-SC642TLE2	Central controller can control all the individual functions of 64 indoor units individually. Can also connect to the weekly timer.
TCB-CC163TLE2	On-Off controller. Can be connected to up to 16 indoor units via the TCC-Link Central Control network to provide simple "1 touch" ON/OFF control
BMS-SM1280ETLE	Smart Manager with Data Analyser. Advanced Central Control device that can be connected to up to 128 indoor units (2 x 64 IDU TCCLink Connections). The Smart manager model has the ability of control from a Local Area Network and, with the addition of an additional Interface, is capable of Energy Monitoring and report creation functions
BMS-CT5121E	Touch Screen Controller can be connected to 512 indoor units and offers Energy Monitoring and schedule program functions. The Touch Screen is connected to the air conditioner control network directly by relay interfaces. Password function available.
BMS-WB2561PWE BMS-WE01GTE	Web based controls. BMS-WB2561PWE (Web Server/Gateway) is an advanced Central Control device for large installations or where high-level control and/or energy monitoring functions are required (up to 256 FCU). With the use of this additional Master - BMS-WB01GTE - device it is possible to connect up to 2,048 indoor units
BACnet® BMS-IFBN640TLE	The Toshiba BACnet® control system which enables control of the attached air conditioner product from a BACnet building management system.
LonWorks® LN Interface TCB-IFLN642TLE	The Toshiba Lonworks interface 100 % LonMark Compliant and is designed to connect the Toshiba Air Conditioning system to a Lonworks BMS. This Interface connects directly to the Toshiba TCC-Link Central Control Network on the air conditioner side and can be wired on the indoor or outdoor side. Up to 64 indoor units
Modbus® Interface TCB-IFMB641TLE	The Toshiba Modbus® interface is designed to connect the Toshiba Air Conditioning system to a Modbus BMS. The Toshiba Interface connects directly to the Toshiba TCC-Link Central Control Network on the Air Conditioner and can be wired on the Indoor or outdoor side. The Interface then uses the Modbus RTU protocol based on the RS-485 type serial communications protocol to connect to a suitable Modbus Master device. Finally, this Modbus Master device is connected to the BMS control system


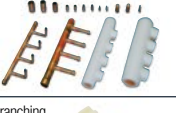

Outdoor units

Standard Model				
Model Name	Cooling Capacity (kW)	Heating Capacity (kW)	Appearance	
8 HP	MMY-MAP0806HT8P-A	22.4 kW	25.0 kW	
10 HP	MMY-MAP1006HT8P-A	28.0 kW	31.5 kW	
12 HP	MMY-MAP1206HT8P-A	33.5 kW	37.5 kW	
14 HP**	MMY-MAP1406HT8P-A	40.0 kW	45.0 kW	
16 HP**	MMY-MAP1606HT8P-A	45.0 kW	50.0 kW	
18 HP	MMY-MAP1806HT8P-A	50.4 kW	56.0 kW	
20 HP	MMY-MAP2006HT8P-A	56.0 kW	63.0 kW	
22 HP	MMY-AP2216HT8P-A	61.5 kW	69.0 kW	
24 HP	MMY-AP2416HT8P-A	67.0 kW	75.0 kW	
26 HP	MMY-AP2616HT8P-A	73.5 kW	82.5 kW	
28 HP	MMY-AP2816HT8P-A	78.5 kW	87.5 kW	
30 HP	MMY-AP3016HT8P-A	85.0 kW	95.0 kW	
32 HP	MMY-AP3216HT8P-A	90.0 kW	100.0 kW	
34 HP	MMY-AP3416HT8P-A	95.4 kW	106.0 kW	
36 HP	MMY-AP3616HT8P-A	101.0 kW	113.0 kW	
38 HP	MMY-AP3816HT8P-A	106.4 kW	119.0 kW	
40 HP	MMY-AP4016HT8P-A	112.0 kW	126.0 kW	
42 HP	MMY-AP4216HT8P-A	118.5 kW	132.5 kW	
44 HP	MMY-AP4416HT8P-A	123.5 kW	137.5 kW	

Standard Model Cont.				
Model Name	Cooling Capacity (kW)	Heating Capacity (kW)	Appearance	
46 HP	MMY-AP4616HT8P-A	130.0 kW	145.0 kW	
48 HP	MMY-AP4816HT8P-A	135.0 kW	150.0 kW	
50 HP	MMY-AP5016HT8P-A	140.4 kW	156.0 kW	
52 HP	MMY-AP5216HT8P-A	146.0 kW	163.0 kW	
54 HP	MMY-AP5416HT8P-A	152.0 kW	171.0 kW	
56 HP	MMY-AP5616HT8P-A	157.0 kW	176.0 kW	

High Efficiency Model				
Model Name	Cooling Capacity (kW)	Heating Capacity (kW)	Appearance	
20 HP	MMY-AP2026HT8P-A	56.0 kW	63.0 kW	
36 HP	MMY-AP3626HT8P-A	100.5 kW	112.5 kW	
38 HP	MMY-AP3826HT8P-A	107.0 kW	120.0 kW	
40 HP	MMY-AP4026HT8P-A	113.5 kW	127.5 kW	

Refrigerant Accessories

Appearance	Model name	Usage (Classification according to indoor unit capacity code)	
	RBM-BY55E	Total below 6.4	
	RBM-BY105E	Total 6.4 or more and below 14.2	
	RBM-BY205E	Total 14.2 or more and below 25.2	
	RBM-BY305E	Total 25.2 or more	
	RBM-HY1043E	Total below 14.2	(Max.4 branches)
	RBM-HY2043E	Total 14.2 or more and below 25.2	(Max.4 branches)
	RBM-HY1083E	Total below 14.2	(Max.8 branches)
	RBM-HY2083E	Total 14.2 or more and below 25.2	(Max.8 branches)
	RBM-BT14E	Below 26	
	RBM-BT24E	26 or more	

Our Commitment:

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

Product specifications in this brochure are only indicative and are subjected to change. These are not intended to be used in place of the engineering or installation data books.

All features and specifications are subject to change without prior notice.

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

Cooling and heating capacities mentioned for the product are nominal capacities at standard operation conditions

Part number: 1028-072018 | Date: July 2018

Equipment rates in accordance with MEPS 3823.2-2011 E&OE

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AIR CONDITIONING