

MMY-MAP_FT8P

SHRM-e



The SHRM-e, full Inverter heat recovery 3-pipe VRF, is the ultimate simultaneous heating & cooling solution for business applications.

Excellence

- Toshiba's in-house designed DC twin rotary compressor with outstanding capacity under partial load driven to improve efficiency and comfort.
- Incorporating Toshiba's latest inverter control, enables the precise modulation of the compressor, ensuring maximum performance and energy savings.
- 2 heat exchangers: outstanding 4-side heat exchanger + sub cooling heat exchanger to optimized efficiency.
- Precise refrigerant control ensures each indoor unit receives the right amount of refrigerant.

Expansion

- A complete range of indoor unit styles and capacity ranges, meets the demands of the customer and the room configuration.
- 7 outdoor unit model line-up from 8 to 20HP that can be installed in a variety of combinations, of up to a capacity of 54HP.

Enhancement

- With up to 1km of total pipe work, an equivalent piping length of 200m, and a maximum height separation of up to 70m, results in a system that is fully adaptable for all types of projects.
- Revolutionary hands-free Wave Tool technology that allows contactless commissioning and diagnoses to be carried out using a smartphone application.



SCOP MAX



3.71

CAPACITY



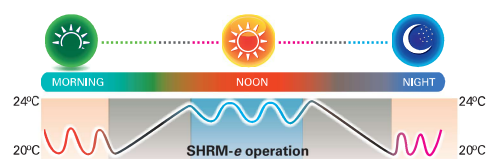
8HP > 54HP

OPERATION



-25°C > +46°C

The Dual Set Point increases the system's energy efficiency and reduces overall running costs, with longer periods of time in thermal off mode. Heating and cooling temperatures at which the indoor unit will begin to operate can now be individually selected giving maximum flexibility to the user.



SHRM-e Performances

Outdoor unit	HP	MMY-	MAP0806FT8P-E/TR	MAP1006FT8P-E/TR	MAP1206FT8P-E/TR	MAP1406FT8P-E/TR	MAP1606FT8P-E/TR	MAP1806FT8P-E/TR	MAP2006FT8P-E/TR
			8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
Cooling capacity ¹	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	C	5.95	7.96	9.75	12.70	13.90	16.00	18.60
EER	W/W		3.76	3.51	3.43	3.14	3.23	3.15	3.01
EthasC/SEER	W/W		239.8% / 6.07	238.2% / 6.03	234.6% / 5.94	221.4% / 5.61	225.8% / 5.72	232.6% / 5.89	222.6% / 5.64
Running current	A	C	9.44	12.49	15.46	19.92	21.81	25.10	29.18
Heating capacity ²	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	H	5.40	7.05	8.70	10.50	12.20	13.70	15.90
COP	W/W		4.14	3.97	3.85	3.80	3.68	3.67	3.52
EthasH/SCOP			142.6% / 3.64	138.2% / 3.53	145.4% / 3.71	139.8% / 3.57	137% / 3.5	140.6% / 3.59	140.6% / 3.59
Running current	A	H	8.57	11.06	13.80	16.47	19.14	21.49	24.68
Maximum overcurrent protection ³	A		25.0	32.0	40.0	50.0	50.0	50.0	63.0

SHRM-e Physical data

Outdoor unit	HP	MMY-	MAP0806FT8P-E/TR	MAP1006FT8P-E/TR	MAP1206FT8P-E/TR	MAP1406FT8P-E/TR	MAP1606FT8P-E/TR	MAP1806FT8P-E/TR	MAP2006FT8P-E/TR
Air flow	m³/h		9 700	9 700	12 200	12 200	17 300	17 300	17 900
Air flow	l/s		2 694	2 694	3 389	3 389	4 806	4 806	4 972
Sound Power Level	dB(A)	H	82,0	82,0	82,0	83,0	84	84	84
Sound pressure level	dB(A)	H	61,0	61,0	62,0	64,0	62	62	62
Sound Power Level	dB(A)	C	80,0	80,0	80,0	81,0	83	83	83
Sound pressure level	dB(A)	C	59,0	59,0	60,0	62,0	61	61	61
External Static pressure available	Pa		60	50	50	40	40	40	40
Dimensions (h x w x d)	mm		1830x990x780	1830x990x780	1830x1210x780	1830x1210x780	1830x1600x780	1830x1600x780	1830x1600x780
Weight	kg		263	263	316	316	377	377	377
Compressor type			Hermectic Twin Rotary	Hermectic Twin Rotary	Hermectic Twin Rotary	Hermectic Twin Rotary	Hermectic Twin Rotary	Hermectic Twin Rotary	Hermectic Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23
Suction line type - diameter			Brazed - 7/8"	Brazed - 7/8"	Brazed -1-1/8"	Brazed -1-1/8"	Brazed -1-1/8"	Brazed -1-1/8"	Brazed -1-1/8"
Liquid line type - diameter			Flare - 1/2"	Flare - 1/2"	Flare - 1/2"	Flare - 5/8"	Flare - 3/4"	Flare - 3/4"	Flare - 3/4"
Discharge line connection type - diameter			Flare - 3/4"	Flare - 3/4"	Flare - 3/4"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"
Farthest piping equivalent length ⁴	m		200	200	200	200	200	200	200
Farthest piping actual length	m		180	180	180	180	180	180	180
Maximum pipe length ⁵	m		1000	1000	1000	1000	1000	1000	1000
Maximum lift (indoor unit above/below) ⁶	m		30/70	30/70	30/70	30/70	30/70	30/70	30/70
Operating range - db ⁷	°C	C	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46
Operating range - wb ⁸	°C	H	-25/15,5	-25/15,5	-25/15,5	-25/15,5	-25/15,5	-25/15,5	-25/15,5
Power supply	V-ph-Hz		380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50

1) based on an indoor air temperature of 27°C db/19°C wb and an outdoor air temperature of 35°C db, 2) based on an indoor air temperature of 20°C db and an outdoor air temperature of 7°C db/6°C wb, 3) If outdoor units are combined, refer to the installation manual, 4) Allowable values for length equivalent to furthest pipe are shown following and they vary according to performance rank of outdoor unit, (22,4 to 56,0: 180m, 61,5 to 112:195m, 120:200m), 5) Less than 34HP: 300m, Total charging refrigerant is 140 kg or less, 6) Indoor above condition: 40m is possible for a system that uses only the flow selector unit (single port long piping type and multi port type), whose all the indoor units are 3HP or higher, and working ambient temperature is 0°C or higher, Indoor below condition: If the height difference between indoor units exceed 3 m, set 50 m or less, Also Extension up till 90m is possible, Be sure to refer the Engineering Databook for details of these conditions and requirements, 7) Low ambient cooling (-5degC or less) 1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures, 2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling, 8) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C.

SHRM-e Capacity table - Standard model

Capacity	Combination	Modèle	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Max indoor connectivity
8 HP	8	MMY-MAP0806FT8P-E/TR	22,4	25	3,76	6,19	4,14	3,64	18
10 HP	10	MMY-MAP1006FT8P-E/TR	28	31,5	3,51	6,13	3,97	3,54	22
12 HP	12	MMY-MAP1206FT8P-E/TR	33,5	37,5	3,43	6,02	3,85	3,71	27
14 HP	14	MMY-MAP1406FT8P-E/TR	40	45	3,14	5,67	3,8	3,57	31
16 HP	16	MMY-MAP1606FT8P-E/TR	45	50	3,26	5,78	3,68	3,51	36
18 HP	18	MMY-MAP1806FT8P-E/TR	50,4	56,5	3,15	5,94	3,67	3,59	40
20 HP	20	MMY-MAP2006FT8P-E/TR	56	58	3,01	5,68	6,52	3,6	41
22 HP	12 + 10	MMY-AP2216FT8P-E/TR	61,5	69	3,47	6,07	3,9	3,64	49
24 HP	14 + 10	MMY-AP2416FT8P-E/TR	68	76,5	3,29	5,88	3,8	3,56	51
26 HP	14 + 12	MMY-AP2616FT8P-E/TR	73,5	82,5	3,27	5,84	3,83	3,64	58
28 HP	14 + 14	MMY-AP2816FT8P-E/TR	80	90	3,15	5,67	3,81	3,57	63
30 HP	16 + 14	MMY-AP3016FT8P-E/TR	85	95	3,2	5,72	3,74	3,54	64
32 HP	18 + 14	MMY-AP3216FT8P-E/TR	90,4	101,5	3,15	5,82	3,1	3,59	64
34 HP	18 + 16	MMY-AP3416FT8P-E/TR	95,4	106,5	3,19	5,86	3,68	3,55	64
36 HP	18 + 18	MMY-AP3616FT8P-E/TR	100,8	113	3,15	5,94	3,68	3,59	64
38 HP	20 + 18	MMY-AP3816FT8P-E/TR	106,4	114,5	3,08	5,81	3,59	3,6	64
40 HP	20 + 20	MMY-AP4016FT8P-E/TR	112	116	3,01	5,68	3,52	3,6	64
42 HP	14 + 14 + 14	MMY-AP4216FT8P-E/TR	120	135	3,15	5,67	3,81	3,57	64
44 HP	16 + 14 + 14	MMY-AP4416FT8P-E/TR	125	140	3,18	5,71	3,77	3,55	64
46 HP	18 + 14 + 14	MMY-AP4616FT8P-E/TR	130,4	146,5	3,15	5,78	3,76	3,58	64
48 HP	18 + 16 + 14	MMY-AP4816FT8P-E/TR	135,4	151,5	3,25	5,83	3,7	3,57	64
50 HP	18 + 18 + 14	MMY-AP5016FT8P-E/TR	140,8	158	3,21	5,88	3,7	3,59	64
52 HP	18 + 18 + 16	MMY-AP5216FT8P-E/TR	145,8	163	3,18	5,89	3,68	3,57	64
54 HP	18 + 18 + 18	MMY-AP5416FT8P-E/TR	152,1	169,5	3,15	5,94	3,68	3,59	64

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Expansion

- 7 outdoor unit model line-up from 8 to 20HP that can be installed in a variety of combinations, of up to a capacity of 42HP.
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- Up to 1km total piping length; 200m in equivalent length and 70m of height difference.
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OPERATION



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In addition to the existing 3 series and new 4 series single port flow selector, Toshiba is proud to release the all new 4 and 6 port multi box, that enables multiple indoor unit connection, increasing the design flexibility and ease of installation.



SHRM-e Performances

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