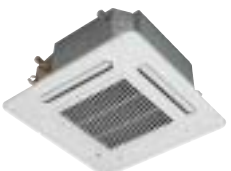


- ▮ SHRM
- ▮ R410A
- ▮ DUAL INVERTER
- ▮ HEAT RECOVERY VRF



## SHRM R410A VRF HEAT RECOVERY

### Features

Toshiba offers the three-pipe VRF that delivers simultaneous cooling and heating and exceptional energy efficiency.

These systems set new standards in the global marketplace.

For ease of installation and cost saving the 8 and 10 HP units are modular.

### Key features

Unbeatable energy consumption efficiency: average COP of 3.97 (22.4 kW).

Increased comfort: cooling or heating is automatically selected on a unit-by-unit basis to suit local area requirements and operating environment, thanks to the compact flow selector unit.

Toshiba's unique piping branch flexibility: the three-way pipe connection between indoor and outdoor units accommodates an installation height variation between indoor units of 35 m (equivalent to a 9-story building).

Enviably reliable with the Active Oil Management system.

Wide control applications: Artificial Intelligence network system available and Building Management System (BMS) compatible.

**Technical specifications heat pump**

Outdoor unit		MMY-MAP0802FT8	MMY-MAP1002T8	MMY-MAP1202T8
		8 HP	10 HP	12 HP
Cooling capacity*	kW	22.4	28	33.5
Power input, cooling	kW	6.07	8.54	12.9
EER, cooling	W/W	3.69	3.18	2.6
Energy efficiency class, cooling		A	B	E
Running current, cooling	A	9.25	13.15	19.85
Heating capacity**	kW	25	31.5	35.5
Power input, heating	kW	6.29	8.73	9.65
COP, heating	W/W	3.97	3.61	3.68
Energy efficiency class, heating		A	A	A
Running current, heating	A	9.55	13.4	14.85
Air flow	m <sup>3</sup> /h - l/s	9900 - 2750	10500 - 2917	10500 - 2917
Sound pressure level - at 1 m	dB(A)	57	58	59
Operating range - db	°C	-10 - 43°C	-10 - 43°C	-10 - 43°C
Operating range - wb	°C	-20 - 15.5°C	-20 - 15.5°C	-20 - 15.5°C
Dimensions (H x W x D)	mm	1800 x 990 x 750	1800 x 990 x 750	1800 x 990 x 750
Weight	kg	263	263	263
Compressor type		Hermetic	Hermetic	Hermetic
Refrigerant charge R410A	kg	11.5	11.5	11.5
Pipework				
Suction line type - diameter	in	Brazed - 7/8	Brazed - 7/8	Brazed - 1 - 1/8
Liquid line type - diameter	in	Flare - 1/2	Flare - 1/2	Flare - 1/2
Discharge line connection type - diameter	in	Brazed - 3/4	Brazed - 3/4	Brazed - 3/4
Maximum equivalent length separation	m	150	150	150
Maximum actual piping separation	m	125	125	125
Maximum pipe length	m	300	300	300
Maximum lift (Indoor unit above/below)***	m	30/50	30/50	30/50
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50

\* Based on an indoor air temperature of 27°C db/19°C wb and an outdoor air temperature of 35°C db

\*\* Based on an indoor air temperature of 20°C db and an outdoor air temperature of 7°C db/6°C wb




\*\*\* If the height difference between indoor units exceeds 3 m and if the indoor unit is above, max. lift is reduced to 30 m



## Protection devices.

- Discharge and suction temperature sensors
- Internal overload relay
- Compressor overcurrent relay
- Overcurrent sensor
- High pressure switch
- Low pressure sensors

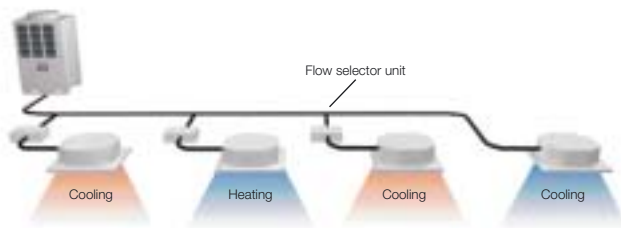
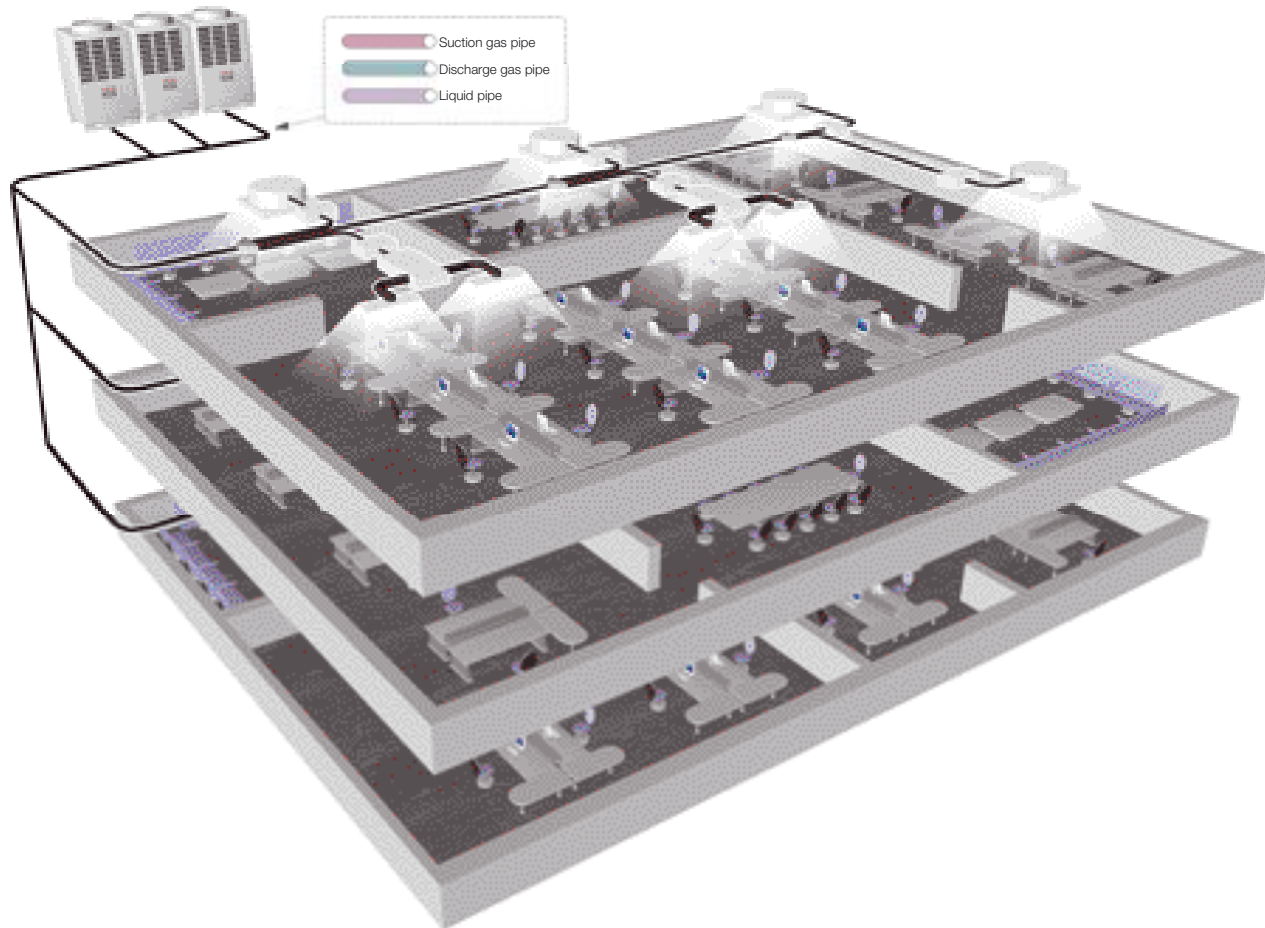
Technical specifications **outdoor units**

	Model name	Cooling capacity	Heating capacity	Outdoor units in combination	Number of indoor units	Total cap. of connectable indoor units		
						Max	Min	Max
	MMY-MAP0802FT8	8 HP	22.4 kW	25 kW	1	13	5.6 HP	10.8 HP
	MMY-MAP1002FT8	10 HP	28 kW	31.5 kW	1	16	7 HP	13.5 HP
	MMY-MAP1202FT8	12 HP	33.5 kW	35.5 kW	1	16	8.4 HP	14.4 HP
	MMY-AP1602FT8	16 HP	45 kW	50 kW	2 (22.4kW+22.4kW)	27	11.2 HP	21.6 HP
	MMY-AP1802FT8	18 HP	50.4 kW	56.5 kW	2 (22.4kW+28kW)	30	12.6 HP	24.3 HP
	MMY-AP2002FT8	20 HP	56 kW	63 kW	2 (28W+28kW)	33	14 HP	27 HP
	MMY-AP2402FT8	24 HP	68 kW	76.5 kW	3 (22.4kW+22.4kW+22.4kW)	40	16.8 HP	32.4 HP
	MMY-AP2602FT8	26 HP	73 kW	81.5 kW	3 (22.4kW+22.4kW+28kW))	43	18.2 HP	35.1 HP
	MMY-AP2802FT8	28 HP	78.5 kW	88 kW	3 (22.4kW+28kW+28kW))	47	19.6 HP	37.8 HP
	MMY-AP3002FT8	30 HP	84 kW	95 kW	3 (28kW+28kW+28kW))	48	21 HP	40.5 HP

The 12 HP unit is not modular.

**Flow Selector**

Model Name	Usage	
RBM-Y1122FE	Total capacity for indoor unit:	below 11,2kW
RBM-Y1802FE	Total capacity for indoor unit:	11.2 to below 18.0kW
RBM-Y2802FE	Total capacity for indoor unit:	18.0 to 28.0kW



**Flow selector control (models Y1122FE/Y1802FE/Y2802FE)**  
 The flow selector enables the occupant to independently set the indoor unit for cooling and heating. It is compatible with the R410A SHRM VRF system. Its lightweight compact dimensions make it easy to install.

Technical specifications heat pump

Model type	Model name	Capacity code	Cooling cap. (kW)	Heating cap. (kW)	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)	
Four-way cassette 	MMU-AP0091H	1	2.8	3.2	256	840	840	20	
	MMU-AP0121H	1.25	3.6	4					
	MMU-AP0151H	1.7	4.5	5					
	MMU-AP0181H	2	5.6	6.3					
	MMU-AP0241H	2.5	7.1	8					
	MMU-AP0271H	3	8	9	319	840	840	28	
	MMU-AP0301H	3.2	9	10					
	MMU-AP0361H	4	11.2	12.5					
	MMU-AP0481H	5	14	16					
MMU-AP0561H	6	16	18						
Compact four-way cassette 	MMU-AP0071MH	0.8	2.2	2.5	268	575	575	17	
	MMU-AP0091MH	1	2.8	3.2					
	MMU-AP0121MH	1.25	3.6	4					
	MMU-AP0151MH	1.7	4.5	5					
	MMU-AP0181MH	2	5.6	6.3					
Two-way cassette 	MMU-AP0071WH	0.8	2.2	2.5	398	830	550	33	
	MMU-AP0091WH	1	2.8	3.2					
	MMU-AP0121WH	1.25	3.6	4					
	MMU-AP0151WH	1.7	4.5	5		1350	550	44	
	MMU-AP0181WH	2	5.6	6.3					
	MMU-AP0241WH	2.5	7.1	8					
	MMU-AP0271WH	3	8	9					
MMU-AP0301WH	3.2	9	10			48			
One-way cassette 	MMU-AP0071YH	0.8	2.2	2.5	235	850	400	22	
	MMU-AP0091YH	1	2.8	3.2					
	MMU-AP0121YH	1.25	3.6	4					
	MMU-AP0152SH	1.7	4.5	5					
	MMU-AP0182SH	2	5.6	6.3					
Concealed duct, standard type 	MMD-AP0071BH	0.8	2.2	2.5	320	550	800	27	
	MMD-AP0091BH	1	2.8	3.2					
	MMD-AP0121BH	1.25	3.6	4					
	MMD-AP0151BH	1.7	4.5	5		700	800	30	
	MMD-AP0181BH	2	5.6	6.3					
	MMD-AP0241BH	2.5	7.1	8					
	MMD-AP0271BH	3	8	9					
	MMD-AP0301SH	3.2	9	10		1000	800	39	
	MMD-AP0361BH	4	11.2	12.5					
	MMD-AP0481BH	5	14	16					
	MMD-AP0561BH	6	16	18		1350	800	51	
MMD-AP0181H	2	5.6	6.3						
Concealed duct, high static pressure 	MMD-AP0241H	2.5	7.1	8	380	850	660	50	
	MMD-AP0271H	3	8	9					
	MMD-AP0361H	4	11.2	12.5					
	MMD-AP0481H	5	14	16		1200	660	52	
	MMD-AP0721H	8	22.4	25					
	MMD-AP0961H	10	28	31.5					
	MMD-AP0071SPH	0.8	2.2	2.5					
Slim Duct 	MMD-AP0091SPH	1	2.8	3.2	210	845	645	22	
	MMD-AP0121SPH	1.25	3.6	4					
	MMD-AP0151SPH	1.7	4.5	5					
	MMD-AP0181SPH	2	5.6	6.3					
	MMD-AP0181H	2	5.6	6.3					
Under-ceiling 	MMC-AP0151H	1.7	4.5	5	210	910	680	21	
	MMC-AP0181H	2	5.6	6.3					
	MMC-AP0241H	2.5	7.1	8					
	MMC-AP0271H	3	8	9		1180	680	25	
	MMC-AP0361H	4	11.2	12.5					
MMC-AP0481H	5	14	16	1595	680	33			
High-wall 	MMK-AP0072H	0.8	2.2	2.5	275	790	208	11	
	MMK-AP0092H	1	2.8	3.2					
	MMK-AP0122H	1.25	3.6	4					
High-wall 	MMK-AP0071H	0.8	2.2	2.5	368	895	210	18	
	MMK-AP0091H	1	2.8	3.2					
	MMK-AP0121H	1.25	3.6	4.0					
	MMK-AP0151H	1.7	4.5	5.0		1055	210	19	
	MMK-AP0181H	2	5.6	6.3					
	MMK-AP0241H	2.5	7.1	8.0					
Floor standing cabinet type 	MML-AP0071H	0.8	2.2	2.5	630	950	230	37	
	MML-AP0091H	1	2.8	3.2					
	MML-AP0121H	1.25	3.6	4					
	MML-AP0151H	1.7	4.5	5					
	MML-AP0181H	2	5.6	6.3					
Floor standing Concealed type 	MML-AP0241H	2.5	7.1	8	600	745	220	21	
	MML-AP0071BH	0.8	2.2	2.5					
	MML-AP0091BH	1	2.8	3.2					
	MML-AP0121BH	1.25	3.6	4		1045		220	29
	MML-AP0151BH	1.7	4.5	5					
	MML-AP0181BH	2	5.6	6.3					
Tall floor-standing 	MML-AP0241BH	2.5	7.1	8	1750	600	210	48	
	MMF-AP0151H	1.7	4.5	5					
	MMF-AP0181H	2	5.6	6.3					
	MMF-AP0241H	2.5	7.1	8			390	210	49
	MMF-AP0271H	3	8	9					
	MMF-AP0361H	4	11.2	12.5					
	MMF-AP0481H	5	14	16					
MMF-AP0561H	6	16	18			65			