

SMMS

R410A

DUAL INVERTER VRF
HEAT PUMP



SMMS R410A VRF inverter

Features

The new **2-pipe VRF** Super Modular Multi System (SMMS) operates with R410A refrigerant and incorporates the latest inverter drive technology in all outdoor unit models.

The SMMS incorporates twin-inverter compressors in every outdoor unit, unique innovation from Toshiba.

Capacities range from 14 to 135 kW in cooling mode and 16 to 150 kW in heating mode with a capability to serve up to 48 indoor units.

Key features

Best EER on the market: (4.1 with 14.4 kW size) for reduced energy consumption and increased savings.

Advanced compressor oil management system guarantees improved reliability.

Interactive Intelligence.

TCC Link: State-of-the-art communication bus system with automatically configured addressing.

Up to 48 indoor units can be connected - Toshiba exclusivity.

Latest Inverter Technology with the Intelligent Power Drive Unit (IPDU).

Extended pipe runs up to 300 m - for greater application flexibility.

Technical specifications heat pump

Outdoor unit MMY-		MAP0501HT8 5 HP	MAP0601HT8 6 HP	MAP0801HT8 8 HP	MAP1001HT8 10 HP	MAP1201HT8 12 HP
Cooling capacity*	kW	14	16	22.4	28	33.5
Power input	kW	3.65	4.64	5.67	7.67	11.92
EER	W/W	3.84	3.45	3.95	3.65	2.81
Energy efficiency class		A	A	A	A	C
Running current	A	5.85	7.28	8.62	11.55	18.30
Heating capacity**	kW	16	18	25	31.5	37.5
Power input	kW	3.84	4.56	5.88	7.97	10.19
COP	W/W	4.17	3.95	4.25	3.95	3.68
Energy efficiency class		A	A	A	A	A
Running current	A	6.09	7.08	8.93	11.98	15.65
Air flow	m ³ /h - l/s	9000 - 2520	9000 - 2520	9000 - 2520	9000 - 2520	9000 - 2520
Sound pressure level - at 1 m	dB(A)	55	56	57	58	59
Operating range	°C db	-5 - 43	-5 - 43	-5 - 43	-5 - 43	-5 - 43
Operating range	°C wb	-20 - 16	-20 - 16	-20 - 16	-20 - 16	-20 - 16
Dimensions (H x W x D)	mm	1800 x 990 x 750	1800 x 990 x 750	1800 x 990 x 750	1800 x 990 x 750	1800 x 990 x 750
Weight	kg	228	228	258	258	258
Compressor type		Hermetic	Hermetic	Hermetic	Hermetic	Hermetic
Refrigerant charge R410A	kg	8.5	8.5	12.5	12.5	12.5
Pipework						
Suction line type - diameter		Flare - 5/8	Brazed - 3/4	Brazed - 7/8	Brazed - 7/8	Brazed - 1-1/8
Liquid line type - diameter	in	Flare - 3/8	Flare - 3/8	Flare - 1/2	Flare - 1/2	Flare - 1/2
Oil balance pipe connection type - diameter	in	Flare - 3/8	Flare - 3/8	Flare - 3/8	Flare - 3/8	Flare - 3/8
Maximum equivalent length separation	m	175	175	175	175	175
Maximum actual piping separation	m	150	150	150	150	150
Maximum pipe length	m	300	300	300	300	300
Maximum lift (indoor unit above/below)***	m	40/50	40/50	40/50	40/50	40/50
Power supply	V-ph-Hz	400-3-50	400-3-50	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, maximum lift is reduced to 30 m.



Protection devices.

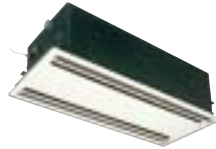
- Discharge and suction temperature sensors
- Internal overload relay
- Compressor overcurrent relay
- Overcurrent sensor
- High pressure switch
- Low pressure sensors



Four-way ceiling cassette

The classic choice

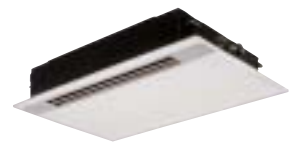
- new panel design improves air distribution and control
- easy access to control components via corner pockets, facilitating installation and height adjustment
- high lift drain (850 mm)
- simplified wiring connections



Two-way ceiling cassette

Ideal for smaller rooms

- slim and flat ceiling panel, just 8 mm high
- long-life filters fitted as standard
- fresh air intake is possible
- condensate drain pump included (510 mm)
- low noise design and balanced air flow



One-way ceiling cassette

The perfect choice for hotels and reception areas

- ideal for smaller rooms where one way air distribution is required
- compact hi-tech design
- condensate drain pump included (350 mm)



Standard ducted unit

The versatile choice

- allows complete design flexibility
- full range of filters to enhance indoor air quality
- fresh air intake is possible
- condensate drain pump included (27 mm)



High-pressure ducted unit

Meeting all your design criteria

- compatible with external static pressures up to 196 Pa
- inspection hole enables easy access and maintenance
- full range of options available



Slim-duct unit

Unobtrusive, concealed installation

- only 230 mm in height for greater application flexibility
- quiet powerful operation
- Perfect comfort throughout the room
- can use any style of air diffuser
- easy installation and maintenance



Ceiling-suspended unit

Ideal for refurbishment projects

- air distribution automatically set for cooling or heating mode
- refrigerant piping from the rear, right or top and two drain pipe directions possible
- optional high lift drain kit (600 mm)



Floor-mounted console

Suitable for refurbishment projects

- refrigerant and drain piping can be from four directions
- air distribution can be reversed to meet the occupants' preference
- wide choice of installation settings



Concealed-chassis unit

Perfect for perimeter walls

- ideal for commercial buildings with large fluctuations in load
- very quiet, ideal for specialist applications such as libraries
- split front panel for easy access
- can be hidden behind a decorative panel to blend with the room interior



Tall floor-standing unit

Ideal for rooms with no ceiling void

- reduced footprint
- wide capacity range
- air distribution angle up to 150°
- ideal for rooms with low ceilings, computer rooms and call centres



High-wall unit

Compact and stylish

- refrigerant piping can be from three directions
- 70° directional auto-swing louvre ensures even air distribution
- auxiliary piping for easy installation



Compact high-wall unit





New elegant aesthetics

- Weight reduced by 45% compared to the previous model
- Precise capacity control at all conditions
- Auto-swing mechanism
- Panel is easily removed

Technical specifications **heat pump**

Model type	Model name	Capacity code	Cooling capacity kW	Heating capacity kW	Height mm	Width mm	Depth mm	Weight kg
4-Way cassette 	MMU-AP0091H	1	2.8	3.2	256	840	840	20
	MMU-AP0121H	1.25	3.6	4.0				
	MMU-AP0151H	1.7	4.5	5.0	256	840	840	22
	MMU-AP0181H	2	5.6	6.3				
	MMU-AP0241H	2.5	7.1	8.0	256	840	840	23
	MMU-AP0271H	3	8.0	9.0				
	MMU-AP0301H	3.2	9.0	10.0				
	MMU-AP0361H	4	11.2	12.5	319	840	840	28
	MMU-AP0481H	5	14.0	16.0				
	MMU-AP0561H	6	16.0	18.0				
2-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	4.0				
	MMU-AP0151WH	1.7	4.5	5.0	398	1350	550	44
	MMU-AP0181WH	2	5.6	6.3				
	MMU-AP0241WH	2.5	7.1	8.0	398	1350	550	48
	MMU-AP0271WH	3	8.0	9.0				
	MMU-AP0301WH	3.2	9.0	10.0				
1-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	4.0				
	MMU-AP0151SH	1.7	4.5	5.0	198	1100	655	27
	MMU-AP0181SH	2	5.6	6.3				
	MMU-AP0241SH	2.5	7.1	8.0	198	1200	655	31
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	4.0				
	MMD-AP0151BH	1.7	4.5	5.0	320	700	800	30
	MMD-AP0181BH	2	5.6	6.3				
	MMD-AP0241BH	2.5	7.1	8.0	320	1000	800	39
	MMD-AP0271BH	3	8.0	9.0				
	MMD-AP0301BH	3.2	9.0	10.0				
	MMD-AP0361BH	4	11.2	12.5	320	1350	800	51
	MMD-AP0481BH	5	14.0	16.0				
MMD-AP0561BH	6	16.0	18.0					
Concealed duct, high static pressure 	MMD-AP0181H	2	5.6	6.3	380	850	660	50
	MMD-AP0241H	2.5	7.1	8.0	380	850	660	52
	MMD-AP0271H	3	8.0	9.0				
	MMD-AP0361H	4	11.2	12.5	380	850	660	56
	MMD-AP0481H	5	14.0	16.0	380	1200	660	67
	MMD-AP0721H	8	22.4	25.0	470	1380	1250	155
	MMD-AP0961H	10	28.0	31.5				
Slim duct, type 	MMD-AP0071SPH	0.8	2.2	2.5	210	845	645	24
	MMD-AP0091SPH	1	2.8	3.2				
	MMD-AP0121SPH	1.25	3.6	4.0				
	MMD-AP0151SPH	1.7	4.5	5.0	210	845	645	26
	MMD-AP0181SPH	2	5.6	6.3				
Ceiling-suspended 	MMC-AP0151H	1.7	4.5	5.0	210	910	680	21
	MMC-AP0181H	2	5.6	6.3				
	MMC-AP0241H	2.5	7.1	8.0	210	1180	680	25
	MMC-AP0271H	3	8.0	9.0				
	MMC-AP0361H	4	11.2	12.5	210	1595	680	33
	MMC-AP0481H	5	14.0	16.0				
High-wall (version 2) 	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	4.0				
High-wall (version 1) 	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	368	1055	210	19
	MMK-AP0181H	2	5.6	6.3				
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	4.0				
	MML-AP0151H	1.7	4.5	5.0				
	MML-AP0181H	2	5.6	6.3				
	MML-AP0241H	2.5	7.1	8.0	630	950	230	40
Floor-standing, concealed type 	MML-AP0071BH	0.8	2.2	2.5	600	745	220	21
	MML-AP0091BH	1	2.8	3.2				
	MML-AP0121BH	1.25	3.6	4.0				
	MML-AP0151BH	1.7	4.5	5.0	600	1045	220	29
	MML-AP0181BH	2	5.6	6.3				
	MML-AP0241BH	2.5	7.1	8.0				
Tall floor-standing 	MMF-AP0151H	1.7	4.5	5.0	1750	600	210	48
	MMF-AP0181H	2	5.6	6.3				
	MMF-AP0241H	2.5	7.1	8.0	1750	600	210	49
	MMF-AP0271H	3	8.0	9.0				
	MMF-AP0361H	4	11.2	12.5	1750	600	390	65
	MMF-AP0481H	5	14.0	16.0				
	MMF-AP0561H	6	16.0	18.0				

SMMS Technical specifications **heat pump**

	Model name	Size	Cooling capacity	Heating capacity	Outdoor units in combination	Maximum number of indoor units
	MMY-MAP0501HT8	5 HP	14 kW	16 kW	1	8
	MMY-MAP0601HT8	6 HP	16 kW	18 kW	1	10
	MMY-MAP0801HT8	8 HP	22.4 kW	25 kW	1	13
	MMY-MAP1001HT8	10 HP	28 kW	31.5 kW	1	16
	MMY-MAP1201HT8	12 HP	33.5 kW	37.5 kW	1	20
	MMY-MAP1401HT8	14 HP	38.4 kW	43 kW	2 (22.4 kW + 16 kW)	23
	MMY-MAP1601HT9	16 HP	45 kW	50 kW	2 (22.4 kW + 22.4 kW)	27
	MMY-MAP1801HT10	18 HP	50.4 kW	56.5 kW	2 (28 kW + 22.4 kW)	30
	MMY-MAP2001HT11	20 HP	56 kW	63 kW	2 (28 kW + 28 kW)	33
	MMY-MAP2201HT12	22 HP	61.5 kW	69 kW	3 (22.4 kW + 22.4 kW + 16 kW)	37
	MMY-MAP2211HT13	22 HP	61.5 kW	69 kW	2 (33.5 kW + 28 kW)	37
	MMY-MAP2401HT14	24 HP	68 kW	76.5 kW	3 (22.4 kW + 22.4 kW + 22.4 kW)	40
	MMY-MAP2411HT15	24 HP	68 kW	76.5 kW	2 (33.5 kW + 33.5 kW)	40
	MMY-MAP2601HT16	26 HP	73 kW	81.5 kW	3 (28 kW + 22.4 kW + 22.4 kW)	43
	MMY-MAP2801HT17	28 HP	78.5 kW	88 kW	3 (28 kW + 28 kW + 22.4 kW)	47
	MMY-MAP3001HT18	30 HP	84 kW	95 kW	3 (28 kW + 28 kW + 28 kW)	48
	MMY-MAP3201HT19	32 HP	90 kW	100 kW	4 (22.4 kW + 22.4 kW + 22.4 kW + 22.4 kW)	48
	MMY-MAP3211HT20	32 HP	90 kW	100 kW	3 (33.5 kW + 28 kW + 28 kW)	48
	MMY-MAP3401HT21	34 HP	96 kW	108 kW	4 (28 kW + 22.4 kW + 22.4 kW + 22.4 kW)	48
	MMY-MAP3411HT22	34 HP	96 kW	108 kW	3 (33.5 kW + 33.5 kW + 28 kW)	48
	MMY-MAP3601HT23	36 HP	101 kW	113 kW	4 (28 kW + 28 kW + 22.4 kW + 22.4 kW)	48
MMY-MAP3611HT24	36 HP	101 kW	113 kW	3 (33.5 kW + 33.5 kW + 33.5 kW)	48	
	MMY-MAP3801HT25	38 HP	106.5 kW	119.5 kW	4 (28 kW + 28 kW + 28 kW + 22.4 kW)	48
	MMY-MAP4001HT26	40 HP	112 kW	126.5 kW	4 (28 kW + 28 kW + 28 kW + 28 kW)	48
	MMY-MAP4201HT27	42 HP	118 kW	132 kW	4 (33.5 kW + 28 kW + 28 kW + 28 kW)	48
	MMY-MAP4401HT28	44 HP	123.5 kW	138 kW	4 (33.5 kW + 33.5 kW + 28 kW + 28 kW)	48
	MMY-MAP4601HT29	46 HP	130 kW	145 kW	4 (33.5 kW + 33.5 kW + 33.5 kW + 28 kW)	48
	MMY-MAP4801HT30	48 HP	135 kW	150 kW	4 (33.5 kW + 33.5 kW + 33.5 kW + 33.5 kW)	48