

TOSHIBA Leading Innovation >>>

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Retail Price Guide - Version 10.1

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Technical Support Services:

Cool Designs Ltd offer various technical support services. These include but are not limited to commissioning services, health checks, extended warranties, bespoke control design, warranty and fault finding support, Cibse registered CPDs, on site support & end user demonstrations.

Please contact your local Cool Designs Office for further information

Contents

Residential and light commercial (RAS)

RAS Inverter High Wall SKV	5
RAS Daiseikai High Wall	5
RAS Bi Flow Console	7
RAS Multi Inverter Condensing Units	9
RAS Multi Wall, Duct, BiFlow & Cassette Indoors	9-13
RAS Multi Combination Table	15-18

Light commercial (RAV)

RAV 4-Way Cassette (Digital & Super Digital)	19
RAV Compact Cassette (Digital & Super Digital)	21
RAV Ducted Systems (Digital & Super Digital)	23
RAV Slim Ducts (Digital & Super Digital)	25
RAV Ceiling Mounts (Digital & Super Digital)	27
RAV Flexi Units (Digital Inverter)	29
RAV Wall Mounts (Digital & Super Digital)	31
RAV DI/SDI Twin/Triple/Quad Combinations	33-38
RAV DI/SDI Air Handling Unit Applications	39
RAV Fault Codes & Using existing pipework (R22 replacement)	41
RAV Air to Water Heat Pump	43

Variable refrigerant flow products (VRF)

Super Modular Multi System (SMMS) Heat Pump Condensing Units	45
Super Heat Recovery Multi System (SHRM) Condensing Units	45
Mini-SMMS Heat Pump Condensing Units	45
VRF Combination Table	47
VRF Indoor Units	49-61
Air to Air Heat Exchangers	61
Technical Data	63
VRF Piping Limitations	65-78
VRF Fault codes	79-82

Controls

Accessories	83
Control Packages	85

The information in this price list is based on the following data:

Nominal capacities are based on Eurovent conditions:

Cooling: Indoor air temperature 27°C db / 19°C wb, outdoor air temperature 35°C db / 24°C wb
 Heating: Indoor air temperature 20°C db, outdoor air temperature 7°C db

UK capacities are based on the following conditions:

Cooling: Indoor air temperature 22°C db, outdoor air temperature 28°C db, 50% rh, 5m pipe run
 Heating: Indoor air temperature 21°C db, outdoor air temperature -4°C db, 100% rh, 5m pipe run
 Values are based on the maximum compressor output

The sound pressure levels are based on:

Outdoor units 1m distance, indoor units 1.5m distance

The annual power consumption is based on 500 operating hours

The maximum running current is based on 240V in the cooling mode

The manufacturer reserves the right to change product specifications and images without notice.

RAS Avant Inverter High Wall Units



- 3 in 1 Filtration
- Auto diagnostics function
- Latest digital hybrid inverter technology
- Super Oxi and Super Sterilizer filters

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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RAS Inverter High Wall Units

RAS-107SKV-E3	RAS-107SAV-E3	2.5(1.1-3.0)	0.9/3.2/4.1	2.91	2.18	2.98	£202	£478	£680
RAS-137SKV-E3	RAS-137SAV-E3	3.5(1.1-4.0)	0.9/4.2/5.0	3.89	2.92	4.47	£208	£587	£795
RAS-167SKV-E3	RAS-167SAV-E3	4.5(0.8-5.0)	0.9/5.3/6.2	5.05	3.79	5.51	£226	£714	£940

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit)

RAS Inverter High Wall Technical Data

RAS Inverter High Wall

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAS-107SKV-E3	576/522	40/29	250	740x195	8	0.75/0.86	3.29/3.68	375	A/A
RAS-137SKV-E3	630/564	40/26	275	790x205	9	1.07/1.13	3.24/3.68	535	A/A
RAS-167SKV-E3	744/690	45/30	275	790x205	9	1.60/1.55	2.82/3.42	798	C/B

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAS-107SAV-E3	OD-240-1-50	3 + E	4.0	6	3/8-1/4	10/0.63	n/a	10/8	48/50	550	660x240	29
RAS-137SAV-E3	OD-240-1-50	3 + E	5.1	6	3/8-1/4	15/0.8	20	20/10	48/50	550	780x290	35
RAS-167SAV-E3	OD-240-1-50	3 + E	7.2	10	1/2-1/4	15/0.85	20	20/10	49/50	550	780x290	35

Notes

Operating Range Cooling: -10 to 46°C (RAS-13/16) 15 to 43°C (RAS-10)
 Operating Range Heating: -15 to 24°C (RAS-13/16) -10 to 24°C (RAS-10)

Super Daiseikai Inverter High Wall



- DC Hybrid Inverter with twin rotary compressors
- All units rated A for efficiency
- Ag + Plasma Air Purifier
- Advanced and extensive air purification

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Super Daiseikai High Wall

RAS-B10SKVP	RAS-10SAVP	2.5(0.5-3.5)	3.2(0.6-6.1)	3.30	2.48	4.62	£368	£670	£1038
RAS-B13SKVP	RAS-13SAVP	3.5(0.6-4.5)	4.2(0.6-6.9)	4.07	3.05	4.91	£368	£830	£1198
RAS-B16SKVP	RAS-16SAVP	4.5(0.8-5.0)	5.5(0.8-8.0)	4.50	3.38	5.80	£380	£1100	£1480

Notes

Accessory available RBC-IT3 allows time clock interface. £98 Retail.
 Systems comes with an Infra Red remote control (packaged with indoor unit)

Super Daiseikai Technical Data

Super Daiseikai Inverter High Wall

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAS-B10SKVP	546/276	42/27	250	790x208	9	0.49/0.63	5.10/5.08	245	A/A
RAS-B13SKVP	564/276	43/27	250	790x208	9	0.85/0.95	4.12/4.42	425	A/A
RAS-B16SKVP	606/318	45/29	250	790x208	9	1.35/1.49	3.33/3.69	675	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAS-10SAVP	OD-240-1-50	3 + E	2.49	6	3/8-1/4	15/0.82	20	25/10	46/47	550	780x290	38
RAS-13SAVP	OD-240-1-50	3 + E	3.9	6	3/8-1/4	15/0.96	20	25/10	48/50	550	780x290	38
RAS-16SAVP	OD-240-1-50	3 + E	5.9	10	1/2-1/4	15/0.96	20	25/10	49/50	550	780x290	38

Notes

Operating Range Cooling: -10 to 46°C
 Operating Range Heating: -15 to 24°C

RAS Inverter Bi Flow Console Units



- Bi-flow - Two outlets for airflow with floor heating
- Auto diagnostics function
- Latest digital hybrid inverter technology
- Command controls interface (includes child lock)

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
RAS Inverter Bi Flow Units									
RAS-B10UFV	RAS-10SAV2	1.1/2.5/3.1	1.0/3.2/4.8	tbc	tbc	tbc	£550	£520	£1070
RAS-B13UFV	RAS-13SAV2	1.1/3.5/4.1	1.0/4.2/5.4	tbc	tbc	tbc	£600	£640	£1240
RAS-B18UFV	RAS-18SAV2	1.0/5.0/5.7	1.1/5.8/6.3	tbc	tbc	tbc	£665	£865	£1530

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit)

RAS Inverter Bi Flow Technical Data

RAS Inverter Bi Flow

Indoor	Airflow High m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAS-B10UFV	467	39/23	600	700x220	14	0.6/0.75	4.2/4.27	298	A/
RAS-B13UFV	500	40/24	600	700x220	14	0.97/1.13	3.61/3.73	465	A/
RAS-B18UFV	602	46/32	600	700x220	14	1.86/1.81	3.01/3.21	830	A/

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAS-10SAV2	OD-240-1-50	3 + E	3.4	6	3/8-1/4	15/0.8		20/10	48/50	550	660x240	29
RAS-13SAV2	OD-240-1-50	3 + E	4.0	6	3/8-1/4	15/0.8	20	20/10	48/50	550	780x290	35
RAS-18SAV2	OD-240-1-50	3 + E	7.2	10	1/2 1/4	15/0.8	20	20/10	49/50	550	780x290	39

Notes

Operating Range Cooling: -10 to 46°C (RAS-13/16) 15 to 43°C (RAS-10)
 Operating Range Heating: -15 to 24°C (RAS-13/16) -10 to 24°C (RAS-10)

RAS Multi-Inverter Outdoors



- R410A Refrigerant
- 2,3 and 4 way Multi Condensing Units
- Digital Hybrid Inverter Technology

Condensing Unit	Connectable Indoors (Max)	EER/COP W/W	Outdoor Retail Price
RAS-M14GAV	2 Indoors	3.70/4.35	£912
RAS-M18GAV	2 Indoors	3.25/3.62	£1012
RAS-3M26GAV	2-3 Indoors	3.33/3.53	£1660
RAS-4M27GAV	2-4 Indoors	3.20/4.00	£2055
RAS-5M34UAV	2-5 Indoors	3.42/4.24	£2380

RAS Multi-Inverter Condensing Unit

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit)
For system connected capacities please see table on following page.

RAS Multi Outdoor Technical Data

RAS Multi-Inverter Condensing Unit

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable to each	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Unit/ Tot m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAS-M14GAV	OD-240-1-50	3 + E	6.9	10	3/8-1/4	20/0.9	20	20/30	48/46	550	780x290	36
RAS-M18GAV	OD-240-1-50	3 + E	7.2	10	3/8-1/4	20/1.2	20	20/30	50/48	550	780x290	40
RAS-3M26GAV	OD-240-1-50	3 + E	10.8	16	3/8-1/4*	50/2.4	n/a	25/50	48/48	795	900x320	64
RAS-4M27GAV	OD-240-1-50	3 + E	10.6	16	3/8-1/4*	70/2.4	n/a	25/70	48/48	795	900x320	65
RAS-5M34UAV	OD-240-1-50	3 + E	tbc	tbc	tbc	40/	tbc	25/80	51/54	890	900x320	75

Notes

Operating Range Cooling: 5 to 43°C (RAS-14/18) 10 to 43°C (RAS-26/27)
Operating Range Heating: -15 to 24°C (RAS-14/18) -15 to 21°C (RAS-26/27)
* 1 Pipe connection is 1/2" & 1/4" others are 3/8" & 1/4"

RAS Multi Inverter High Wall



- Superior five stage air filtration
- For use with each multi-condensing unit
- Includes infra-red remote

Indoor unit	Nominal Cooling kW	Nominal Heating kW	Dimension H x W x D mm	Weight kg	Sound Pressure (H) dB(A)	Airflow Cool/Heat m3/h	Indoor Retail Price
RAS-M10SKV	2.5	3.2	275x790x208	10	38/40	522/576	£227
RAS-M13SKV	3.5	4.2	275x790x208	10	39/40	563/630	£240
RAS-M16SKV	4.5	5.2	275x790x208	10	45/45	691/743	£268

RAS Multi-Inverter High Wall

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit)
For system connected capacities please see table on following page.

RAS Multi Wall Mount Technical Data

RAS Multi-Inverter High Wall

Indoor	Power InputkW Cool / Heat				Pipe Size In	Annual Power kWh				Energy Label C/H			
	14	18	26	27		14	18	26	27	14	18	26	27
RAS-M10SKV	0.57/0.85	0.60/1.20	0.75/1.50	0.75/1.50	3/8-1/4	285	300	375	375	A	A	A	A
RAS-M13SKV	1.10/1.25	1.10/1.80	1.20/2.05	1.20/2.05	3/8-1/4	550	550	600	600	D	C	D	D
RAS-M16SKV		1.50/1.90	1.65/2.40	1.65/2.40	1/2-1/4		750	825	825		D	E	E

Notes

Operating Range Cooling: -10 to 46°C
Operating Range Heating: -15 to 24°C

RAS Multi-Inverter Ducted Units



- Slim Design 230mm high
- High Static Pressure
- Flexible return air below or rear

Indoor unit	Nominal Cooling kW	Nominal Heating kW	Dimension H x W x D mm	Weight kg	Sound Pressure (H) dB(A)	Airflow Cool/Heat m ³ /h	External Static Pressure (Std/Max) Pa	Indoor Retail Price
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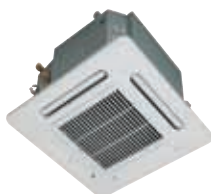
RAS Multi-Inverter Ducted Units

RAS-M10GDV	2.5	3.2	230x750x440	19	31/31	400/450	35.3/54.9	£434
RAS-M13GDV	3.5	4.2	230x750x440	19	32/32	428/479	41.2/63.7	£494
RAS-M16GDV	4.5	5.2	230x750x440	19	33/33	428/500	41.2/63.7	£591

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit), optional wired remote RBC-SH-A1LES Retail £290
For system connected capacities please see table on following page. Supplied without a filter.

RAS Multi Inverter Cassette



- Compact 575 x 575 design
- For use with each multi-condensing unit
- Includes infra-red remote

Indoor unit	Nominal Cooling kW	Nominal Heating kW	Dimension H x W x D mm	Weight kg	Sound Pressure (H) dB(A)	Airflow Cool/Heat m ³ /h	Indoor Retail Price
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RAS Multi-Inverter Cassette

RAS-M10SMUV	2.7	4.0	268x575x575	17	37/30	588	£627
RAS-M13SMUV	3.7	5.0	268x575x575	17	38/30	618	£680
RAS-M16SMUV	4.5	5.2	268x575x575	17	40/31	660	£720

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit) also Grille reference RB-B11MC(W)-E
For system connected capacities please see table on following page.

RAS Multi Ducted Unit Technical Data

RAS Multi-Inverter Ducted Unit

Indoor	Power InputkW Cool / Heat				Pipe Size In	Annual Power kWh				Energy Label C/H			
	14	18	26	27		14	18	26	27	14	18	26	27
RAS-M10GDV	0.57/0.85	0.60/1.20	0.75/1.50	0.75/1.45	3/8-1/4	285	300	375	375	A	A	A	A
RAS-M13GDV	1.10/1.25	1.10/1.80	1.20/2.05	1.20/2.05	3/8-1/4	550	550	600	600	D	C	D	D
RAS-M16GDV		1.50/1.90	1.65/2.40	1.65/2.40	1/2-1/4		750	825	825		D	E	E

Notes

Operating Range Cooling: 5 to 43°C (RAS-14/18) 10 to 43°C (RAS-26/27)
Operating Range Heating: -15 to 24°C (RAS-14/18) -15 to 21°C (RAS-26/27)

RAS Multi Cassette Technical Data

RAS Multi-Inverter Cassette

Indoor	Power InputkW Cool / Heat				Pipe Size In	Annual Power kWh				Energy Label C/H			
	14	18	2	27		14	18	26	27	14	18	26	27
RAS-M10SMUV		0.60/1.20	0.75/1.50	0.75/1.45	3/8-1/4		300	375	375		A	A	A
RAS-M13SMUV		1.10/1.80	1.20/2.05	1.20/2.05	3/8-1/4		550	600	600		C	D	D
RAS-M16SMUV		1.50/1.90	1.65/2.40	1.65/2.40	1/2-1/4		750	825	825		D	E	E

RAS Multi-Inverter Bi Flow Console Units



- Bi-flow - Two outlets for airflow with floor heating
- Auto diagnostics function
- Latest digital hybrid inverter technology
- Command controls interface (includes child lock)

Indoor unit	Nominal Cooling kW	Nominal Heating kW	Dimension H x W x D mm	Weight kg	Sound Pressure (H) dB(A)	Airflow Cool/Heat m3/h	Indoor Retail Price
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RAS Multi-Inverter Bi Flow Units

RAS-B10UFV	2.5	3.2	600x700x220	14	23/39	467/509	£550
RAS-B13UFV	3.5	4.2	600x700x220	14	24/40	509/550	£600
RAS-B18UFV	5.0	5.8	600x700x220	14	32/46	602/644	£665

Notes

Systems comes with an Infra Red remote control (packaged with indoor unit).
For system connected capacities please see table on following page.

RAS Multi Bi Flow Unit Technical Data

RAS Multi-Inverter Bi Flow Unit

Indoor	Power InputkW Cool / Heat				Pipe Size In	Annual Power kWh				Energy Label C/H			
	14	18	26	27		14	18	26	27	14	18	26	27
RAS-B10UFV	TBC				TBC	TBC				TBC			
RAS-B13UFV	TBC				TBC	TBC				TBC			
RAS-B18UFV	TBC				TBC	TBC				TBC			

Notes

Operating Range Cooling: 5 to 43°C (RAS-14/18) 10 to 43°C (RAS-26/27)
Operating Range Heating: -15 to 24°C (RAS-14/18) -15 to 21°C (RAS-26/27)

RAS Multi Combination Ratings

RAS Multi Inverter Cassette

Combination Ratings (Size 14) Heat Pump															
Units			Cooling						Heating						
	Combination		Unit kW			Cooling Capacity kW			Unit kW			Heating Capacity kW			
	A	B	A	B		Min	Rated	Max	A	B		Min	Rated	Max	
Two	10	10	1.95	1.95		1.4	3.9	4.4	2.15	2.15		0.9	4.3	4.6	
	13	10	2.33	1.67		1.4	4.0	4.5	2.5	1.9		0.9	4.4	4.7	
Combination Ratings (Size 18) Heat Pump															
Units			Cooling						Heating						
	Combination		Unit kW			Cooling Capacity kW			Unit kW			Heating Capacity kW			
	A	B	A	B		Min	Rated	Max	A	B		Min	Rated	Max	
Two	10	10	2.55	2.55		1.4	5.1	6.1	3.2	3.2		0.9	6.4	8.3	
	13	10	3.01	2.19		1.4	5.2	6.2	3.72	2.98		0.9	6.7	8.7	
	13	13	2.6	2.6		1.4	5.2	6.2	3.35	3.35		0.9	6.7	8.7	
	16	10	3.25	1.95		1.4	5.2	6.2	3.88	2.82		0.9	6.7	8.7	
Combination Ratings (Size 3M26) Heat Pump															
Units				Cooling						Heating					
	Combination			Unit kW			Cooling Capacity kW			Unit kW			Heating Capacity kW		
	A	B	C	A	B	C	Min	Rated	Max	A	B	C	Min	Rated	Max
Two	10	10		2.7	2.7		2.5	5.4	6.3	3.6	3.6		1.5	7.2	10
	13	10		3.41	2.49		2.7	5.9	6.6	4.22	3.38		1.5	7.6	10.1
	16	10		3.94	2.36		2.9	6.3	6.9	4.57	3.33		1.5	7.9	10.1
	13	13		3.15	3.15		2.9	6.3	6.9	3.95	3.95		1.5	7.9	10.1
	16	13		3.73	3.07		3	6.8	7.2	4.35	3.95		1.5	8.3	10.2
	16	13		3.6	3.6		3.2	7.2	7.5	4.3	4.3		1.5	8.6	10.2
Three	10	10	10	2.47	2.47	2.47	3.6	7.4	8.2	2.87	2.87	2.87	2	8.6	10.4
	13	10	10	3.01	2.2	2.2	3.9	7.4	8.3	3.35	2.68	2.68	2	8.7	10.5
	16	10	10	3.36	2.02	2.02	4	7.4	8.5	3.59	2.61	2.61	2	8.8	10.6
	13	13	10	2.71	2.71	1.98	4	7.4	8.5	3.14	3.14	2.51	2	8.8	10.6
	16	13	10	3.1	2.55	1.86	4	7.5	8.6	3.34	3.03	2.43	2	8.8	10.6
	13	13	13	2.5	2.5	2.5	4	7.5	8.6	2.93	2.93	2.93	2	8.8	10.6
	16	16	10	2.88	2.88	1.73	4.1	7.5	8.8	3.26	3.26	2.37	2	8.9	10.7
	16	13	13	2.84	2.33	2.33	4.1	7.5	8.8	3.16	2.87	2.87	2	8.9	10.7
	16	16	13	2.66	2.66	2.19	4.2	7.5	8.9	3.16	3.09	2.81	2	9	10.8

Combination Ratings (Size 4M27) Heat Pump																		
Units					Cooling						Heating							
	Combination				Unit kW				Cooling Capacity kW		Unit kW				Heating Capacity kW			
	A	B	C	D	A	B	C	D	Min	Rated	Max	A	B	C	D	Min	Rated	Max
Two	10	10			2.7	2.7			2.5	5.4	6.3	3.6	3.6			1.5	7.2	10.0
	13	10			3.41	2.49			2.7	5.9	6.6	4.22	3.38			1.5	7.6	10.1
	16	10			3.94	2.36			2.9	6.3	6.9	4.57	3.33			1.5	7.9	10.1
	13	13			3.15	3.15			2.9	6.3	6.9	3.95	3.95			1.5	7.9	10.1
	16	13			3.73	3.07			3.0	6.8	7.2	4.35	3.95			1.5	8.3	10.2
	16	16			3.6	3.6			3.2	7.2	7.5	4.30	4.30			1.5	8.6	10.2
Three	10	10	10		2.53	2.53	2.53		3.6	7.6	8.2	2.87	2.87	2.87		2.0	8.6	10.4
	13	10	10		3.13	2.28	2.28		3.9	7.7	8.3	3.35	2.68	2.68		2.0	8.7	10.5
	16	10	10		3.5	2.1	2.1		4.0	7.7	8.5	3.54	2.58	2.58		2.0	8.7	10.5
	13	13	10		2.82	2.82	2.06		4.0	7.7	8.5	3.11	3.11	2.49		2.0	8.7	10.5
	16	13	10		3.22	2.65	1.93		4.1	7.8	8.6	3.34	3.03	2.43		2.0	8.8	10.6
	13	13	13		2.6	2.6	2.6		4.1	7.8	8.6	2.93	2.93	2.93		2.0	8.8	10.6
	16	16	10		3.04	3.04	1.82		4.1	7.9	8.7	3.26	2.26	2.37		2.0	8.9	10.7
	16	13	13		2.99	2.46	2.46		4.1	7.9	8.7	3.16	2.87	2.87		2.0	8.9	10.7
	16	16	13		2.8	2.8	2.3		4.2	7.9	8.9	3.06	3.06	2.78		2.0	8.9	10.7
	16	16	16		2.67	2.67	2.67		4.3	8.0	9.0	3.0	3.0	3.0		2.0	9.0	10.8
Four	10	10	10	10	1.98	1.98	1.98	1.98	4.0	7.9	8.7	2.23	2.23	2.23	2.23	2.2	8.9	10.8
	13	10	10	10	2.48	1.81	1.81	1.81	4.1	7.9	8.8	2.62	2.09	2.09	2.09	2.2	8.9	10.9
	16	10	10	10	2.86	1.71	1.71	1.71	4.1	8.0	9.0	2.83	2.06	2.06	2.06	2.2	9.0	10.9
	13	13	10	10	2.31	2.31	1.69	1.69	4.1	8.0	9.0	2.50	2.50	2.0	2.0	2.2	9.0	10.9
	16	13	10	10	2.65	2.18	1.59	1.59	4.2	8.0	9.1	2.68	2.43	1.95	1.95	2.2	9.0	11.0
	13	13	13	10	2.14	2.14	2.14	1.57	4.2	8.0	9.1	2.37	2.37	2.37	1.89	2.2	9.0	11.0
	16	13	13	10	2.47	2.03	2.03	1.48	4.2	8.0	9.2	2.54	2.31	2.31	1.85	2.2	9.0	11.0
	13	13	13	13	2.0	2.0	2.0	2.0	4.2	8.0	9.2	2.25	2.25	2.25	2.25	2.2	9.0	11.0
	16	16	10	10	2.5	2.5	1.5	1.5	4.2	8.0	9.2	2.61	2.61	1.89	1.89	2.2	9.0	11.0

RAS Multi Combination Ratings

RAS Multi Inverter Cassette

Combination Ratings (Size 5M34) Heat Pump																						
Units		Cooling											Heating									
Combination		Unit kW					Cooling Capacity kW			Unit kW					Heating Capacity kW							
	A	B	C	D	E	A	B	C	D	E	Min	Rated	Max	A	B	C	D	E	Min	Rated	Max	
Two	10	10				2.7	2.7				2.5	5.4	6.3	3.6	3.6				1.5	7.2	10	
	13	10				3.41	2.49				2.7	5.9	6.6	4.22	3.38				1.5	7.6	10.1	
	16	10				3.94	2.36				2.9	6.3	6.9	4.57	3.33				1.5	7.9	10.1	
	13	13				3.15	3.15				2.9	6.3	6.9	3.95	3.95				1.5	7.9	10.1	
	16	13				3.73	3.07				3.0	6.8	7.2	4.35	3.95				1.5	8.3	10.2	
	16	16				3.6	3.6				3.2	7.2	7.5	4.30	4.30				1.5	8.6	10.2	
Three	18	18				3.6	3.6				3.2	7.2	7.5	4.3	4.3				1.5	8.6	10.2	
	10	10	10			2.53	2.53	2.53			3.8	7.6	8.2	2.87	2.87	2.87			2.0	8.6	10.4	
	13	10	10			3.13	2.28	2.28			3.9	7.7	8.3	3.35	2.68	2.68			2.0	8.7	10.5	
	16	10	10			3.5	2.1	2.1			4.0	7.7	8.5	3.54	2.58	2.58			2.0	8.7	10.5	
	13	13	10			2.82	2.82	2.06			4.0	7.7	8.5	3.11	3.11	2.49			2.0	8.7	10.5	
	16	13	10			3.22	2.65	1.93			4.1	7.8	8.6	3.34	3.03	2.43			2.0	8.8	10.6	
	13	13	13			2.60	2.60	2.60			4.1	7.8	8.6	2.93	2.93	2.93			2.0	8.8	10.6	
	16	16	10			3.04	3.04	1.82			4.1	7.9	8.7	3.26	3.26	2.37			2.0	8.9	10.7	
	16	13	13			2.99	2.46	2.46			4.1	7.9	8.7	3.16	2.87	2.87			2.0	8.9	10.7	
	16	16	13			2.80	2.80	2.30			4.1	7.9	8.7	3.06	3.06	2.78			2.0	8.9	10.7	
	18	16	13			2.99	2.69	2.21			4.1	7.9	8.7	3.24	2.97	2.7			2.0	8.9	10.7	
	18	18	13			2.88	2.88	2.13			4.1	7.9	8.7	3.14	3.14	2.62			2.0	8.9	10.7	
Four	10	10	10	10		1.98	1.98	1.98	1.98		4.0	7.9	8.7	2.23	2.23	2.23	2.23		2.2	8.9	10.8	
	13	10	10	10		2.48	1.81	1.81	1.81		4.1	7.9	8.8	2.62	2.09	2.09	2.09		2.2	8.9	10.9	
	16	10	10	10		2.86	1.71	1.71	1.71		4.1	8.0	9.0	2.83	2.06	2.06	2.06		2.2	9.0	10.9	
	13	13	10	10		2.31	2.31	1.69	1.69		4.1	8.0	9.0	2.50	2.50	2.0	2.0		2.2	9.0	10.9	
	16	13	10	10		2.65	2.18	1.59	1.59		4.2	8.0	9.1	2.68	2.43	1.95	1.95		2.2	9.0	11.0	
	13	13	13	10		2.14	2.14	2.14	1.57		4.2	8.0	9.1	2.37	2.37	2.37	1.89		2.2	9.0	11.0	
	16	13	13	10		2.47	2.03	2.03	1.48		4.2	8.0	9.2	2.54	2.31	2.31	1.85		2.2	9.0	11.0	
	13	13	13	13		2.0	2.0	2.0	2.0		4.2	8.0	9.2	2.25	2.25	2.25	2.25		2.2	9.0	11.0	
	16	16	10	10		2.5	2.5	1.5	1.5		4.2	8.0	9.2	2.61	2.61	1.89	1.89		2.2	9.0	11.0	
	16	16	13	13		2.2	2.2	1.8	1.8		4.2	8.0	9.2	2.36	2.36	2.14	2.14		2.2	9.0	11.0	
	18	18	13	13		2.3	2.3	1.7	1.7		4.2	8.0	9.2	2.45	2.45	2.05	2.05		2.2	9.0	11.0	

Combination Ratings (Size 5M34) Heat Pump																						
Units		Cooling											Heating									
Combination		Unit kW					Cooling Capacity kW			Unit kW					Heating Capacity kW							
	A	B	C	D	E	A	B	C	D	E	Min	Rated	Max	A	B	C	D	E	Min	Rated	Max	
Five	10	10	10	10	10	1.98	1.98	1.98	1.98	1.98	3.7	9.9	10.9	2.34	2.34	2.34	2.34	2.34	3.4	11.7	13.7	
	13	10	10	10	10	2.53	1.84	1.84	1.84	1.84	3.7	9.9	10.9	2.79	2.23	2.23	2.23	2.23	3.4	11.7	13.7	
	16	10	10	10	10	2.91	1.75	1.75	1.75	1.75	3.7	9.9	10.9	2.99	2.18	2.18	2.18	2.18	3.4	11.7	13.7	
	13	13	10	10	10	2.36	2.36	1.72	1.72	1.72	3.7	9.9	10.9	2.66	2.66	2.13	2.13	2.13	3.4	11.7	13.7	
	18	10	10	10	10	3.13	1.69	1.69	1.69	1.69	3.7	9.9	10.9	3.19	2.13	2.13	2.13	2.13	3.4	11.7	13.7	
	16	13	10	10	10	2.73	2.25	1.64	1.64	1.64	3.7	9.9	10.9	2.86	2.60	2.08	2.08	2.08	3.4	11.7	13.7	
	18	13	10	10	10	2.95	2.18	1.59	1.59	1.59	3.7	9.9	10.9	3.05	2.54	2.03	2.03	2.03	3.4	11.7	13.7	
	16	16	10	10	10	2.61	2.61	1.56	1.56	1.56	3.7	9.9	10.9	2.80	2.80	2.03	2.03	2.03	3.4	11.7	13.7	
	13	13	13	10	10	2.22	2.22	2.22	1.62	1.62	3.7	9.9	10.9	2.54	2.54	2.54	2.03	2.03	3.4	11.7	13.7	
	16	13	13	10	10	2.58	2.12	2.12	1.55	1.55	3.7	9.9	10.9	2.74	2.49	2.49	1.99	1.99	3.4	11.7	13.7	
	18	13	13	10	10	2.78	2.06	2.06	1.50	1.50	3.7	9.9	10.9	2.93	2.44	2.44	1.95	1.95	3.4	11.7	13.7	
	16	16	13	10	10	2.49	2.49	2.04	1.49	1.49	3.7	10.0	11.0	2.75	2.75	2.50	2.0	2.0	3.4	12.0	14.0	
13	13	13	13	10	2.09	2.09	2.09	2.09	2.09	3.7	9.9	10.9	2.44	2.44	2.44	2.44	2.44	3.4	11.7	13.7		
16	13	13	13	10	2.46	2.02	2.02	2.02	2.02	3.7	10.0	11.0	2.69	2.45	2.45	2.45	2.45	3.4	12.0	14.0		
18	13	13	10	10	2.78	2.06	2.06	1.50	1.50	3.7	10.0	11.0	2.93	2.44	2.44	1.95	1.95	3.4	12.0	14.0		
16	16	13	13	10	2.36	2.36	1.94	1.94	1.94	3.7	10.0	11.0	2.64	2.64	2.4	2.4	2.4	3.4	12.0	14.0		
13	13	13	13	13	2.0	2.0	2.0	2.0	2.0	3.7	10.0	11.0	2.4	2.4	2.4	2.4	2.4	3.4	12.0	14.0		
16	13	13	13	13	2.33	1.92	1.92	1.92	1.92	3.7	10.0	11.0	2.59	2.35	2.35	2.35	2.35	3.4	12.0	14.0		

DI/SDI 4-Way Cassette



- R22/R407C Replacement Technology
- Includes Lift Pump 650mm from base of cassette
- Individual setting of louvre positions
- Twin/Triple combinations possible

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter 4-Way Cassette

RAV-SM564UT	RAV-SM563AT	5.3(1.5-5.6)	5.6(1.5-6.3)	5.44	4.26	4.69	£760	£835	£1,647
RAV-SM804UT	RAV-SM803AT	6.7(1.5-7.4)	8.0(1.5-9.0)	7.46	5.25	6.72	£906	£1,215	£2,173
RAV-SM1104UT	RAV-SM1103AT	10.0(3.0-11.2)	11.2(3.0-13.0)	10.87	6.67	9.68	£983	£1,540	£2,575
RAV-SM1404UT	RAV-SM1403AT	12.1(3.0-13.2)	14.0(3.0-16.0)	12.61	8.15	11.92	£1,063	£1,685	£2,800
RAV-SM1604UT	RAV-SM1603AT	14.0(3.0-16.0)	16.0(3.0-18.0)	15.53	11.10	13.64	£1,074	£2,110	£3,236

Super Digital Inverter 4-Way Cassette

RAV-SM564UT	RAV-SP564AT	5.3(1.5-5.6)	5.6(1.5-6.3)	5.44	4.26	4.69	£760	£1,015	£1,827
RAV-SM804UT	RAV-SP804AT	7.1(1.9-8.0)	8.0(1.5-11.3)	7.46	5.25	6.72	£906	£1,510	£2,468
RAV-SM1104UT	RAV-SP1104AT	10.0(3.0-11.2)	11.2(3.0-13.0)	10.87	6.67	9.68	£983	£1,900	£2,935
RAV-SM1404UT	RAV-SP1404AT	12.1(3.0-13.2)	14.0(3.0-16.0)	12.61	8.15	11.92	£1,063	£2,100	£3,215

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-AX31U(W)	Wireless Remote Control kit (Includes replacement corner pocket receiver)	£142
TCB-EXS21TLE	Schedule Timer	£220
TCB-PCNT30TL	1:1 model connection interface for connecting Digital Inverter to U3/U4 VRF Network	£65
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

All cassettes include a 950mm x 950mm x 30mm RBC-U31PG(W) Grille. Price of £153 included.
System prices include a RBC-AMT32E Wired Remote at £52. This can be exchanged for one of the above.

DI/SDI 4-Way Cassettes Technical Data

Digital Inverter 4-Way Cassette

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM564UT	1050/726	32/27	256	840x840	21	1.65/1.44	3.21/3.89	825	A/A
RAV-SM804UT	1200/816	37/28	256	840x840	22	2.09/2.21	3.21/3.62	1045	A/A
RAV-SM1104UT	1680/1080	39/33	319	840x840	26	3.11/3.10	3.22/3.61	1555	A/A
RAV-SM1404UT	2040/1200	47/34	319	840x840	26	3.77/3.88	3.21/3.61	1885	A/A
RAV-SM1604UT	2130/1260	45/36	319	840x840	26	4.49/4.43	3.12/3.61	2245	B/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.9	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38
RAV-SM803AT	OD-240-1-50	3 + E	10.1	16	5/8-3/8	20/1.7	40	30/30	48/50	550	780x290	42
RAV-SM1103AT	OD-240-1-50	3 + E	14.4	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77
RAV-SM1403AT	OD-240-1-50	3 + E	17.7	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77
RAV-SM1603AT	OD-240-1-50	3 + E	23.9	25	5/8-3/8	30/3.1	40	50/30	51/53	1340	900x320	99

Super Digital Inverter 4-Way Cassette

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM564UT	1050/726	32/27	256	840x840	21	1.65/1.44	3.61/4.63	825	A/A
RAV-SM804UT	1200/816	37/28	256	840x840	22	2.09/2.21	3.82/4.19	1045	A/A
RAV-SM1104UT	1680/1080	39/33	319	840x840	26	3.11/3.10	3.22/3.61	1555	A/A
RAV-SM1404UT	2040/1200	47/34	319	840x840	26	3.77/3.88	3.21/3.61	1885	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.4	20	50/30	46/47	550	780x290	44
RAV-SP804AT	OD-240-1-50	3 + E	8.72	10	5/8-3/8	30/2.1	40	50/30	47/49	890	900x320	63
RAV-SP1104AT	OD-240-1-50	3 + E	11.24	20	5/8-3/8	30/3.1	40	75/30	49/51	1340	900x320	95
RAV-SP1404AT	OD-240-1-50	3 + E	16.21	20	5/8-3/8	30/3.1	40	75/30	53/54	1340	900x320	95

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI 4-Way Compact Cassette



- R22/R407C Replacement Technology
- Includes Lift Pump 850mm from base of cassette
- 575 x 575mm Cassette
- Twin/Triple combinations possible

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Compact Cassette

RAV-SM562MUT	RAV-SM563AT	5.3(1.5-5.6)	5.6(1.5-6.3)	5.44	4.22	4.69	£742	£835	£1,629
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Super Digital Inverter Compact Cassette

RAV-SM402MUT	RAV-SP404AT	3.6(1.5-4.0)	4.0(1.5-5.0)	3.88	3.20	3.93	£717	£950	£1,719
RAV-SM562MUT	RAV-SP564AT	5.0(2.2-5.6)	5.6(2.2-7.0)	5.44	4.22	4.69	£742	£1,015	£1,809

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-EXS21TLE	Schedule Timer	£220
TCB-PCNT30TL	1:1 model connection interface for connecting Digital Inverter to U3/U4 VRF Network	£65
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

All cassettes include a 700mm x 700mm x 17mm RBC-UM11PG(W)-E Grille. Price of £152 included.
System prices include a RBC-AMT32E Wired Remote at £52. This can be exchanged for one of the above.

DI/SDI 4-Way Compact Cassettes Technical Data

Digital Inverter 4-Way Compact Cassette

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562MUT	762/522	44/39	268	575x575	17	1.61/1.61	3.11/3.48	805	B/B

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.7	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38

Super Digital Inverter 4-Way Compact Cassette

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM404MUT	660/468	40/31	268	575x575	17	1.00/0.97	3.60/4.12	500	A/A
RAV-SM562MUT	762/522	44/39	268	575x575	17	1.53/1.54	3.27/3.64	765	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP404AT	OD-240-1-50	3 + E	5.2	10	1/2-1/4	20/1.0	20	30/30	45/47	550	780x290	40
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.5	20	50/30	46/47	550	780x320	44

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI Ducted


- R22/R407C Replacement Technology
- Includes Lift Pump 290mm from base of unit
- Static Pressure up to 98Pa
- Includes 200mm Discharge Spigots
- Twin/Triple combinations possible
- Twin/Triple combinations

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Ducted

RAV-SM562BT	RAV-SM563AT	5.3(1.5-5.6)	5.6(1.5-6.3)	5.44	4.20	4.69	£585	£835	£1,472
RAV-SM802BT	RAV-SM803AT	7.1(1.5-8.0)	8.0(1.5-9.0)	7.76	5.85	6.70	£870	£1,215	£2,137
RAV-SM1102BT	RAV-SM1103AT	10.0(3.0-11.2)	11.2(3.0-12.5)	10.87	7.64	9.31	£995	£1,540	£2,587
RAV-SM1402BT	RAV-SM1403AT	12.5(3.0-13.2)	14.0(3.0-16.0)	12.81	8.73	11.92	£1,102	£1,685	£2,839

Super Digital Inverter Ducted

RAV-SM562BT	RAV-SP564AT	5.0(2.2-5.6)	5.6(2.2-7.0)	5.44	4.20	5.21	£585	£1,015	£1,652
RAV-SM802BT	RAV-SP804AT	7.1(2.2-8.0)	8.0(2.2-10.0)	7.76	5.85	7.08	£870	£1,510	£2,432
RAV-SM1102BT	RAV-SP1104AT	10.0(3.0-12.0)	11.2(3.0-13.0)	11.65	8.19	9.68	£995	£1,900	£2,947
RAV-SM1402BT	RAV-SP1404AT	12.5(3.0-14.0)	14.0(3.0-16.5)	13.59	9.26	12.29	£1,102	£2,100	£3,254

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-AX21E2	Wireless Remote Control kit (Includes receiver)	£233
TCB-EXS21TLE	Schedule Timer	£220
TCB-PCNT30TL	1:1 model connection interface for connecting Digital Inverter to U3/U4 VRF Network	£65
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

System prices include a RBC-AMT32E Wired Remote at £52. This can be exchanged for one of the above.

DI/SDI Ducted Technical Data
Digital Inverter Ducted

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H	Spigots Qty x mm
RAV-SM562BT	781/581	40/33	320	700x800	30	1.78/1.71	2.81/3.27	890	C/C	2 x 200
RAV-SM802BT	1141/799	40/34	320	1000x800	39	2.53/2.41	2.81/3.32	1265	C/C	3 x 200
RAV-SM1102BT	1620/1134	42/36	320	1350x800	51	3.56/3.14	2.81/3.57	1780	C/B	4 x 200
RAV-SM1402BT	1980/1386	44/38	320	1350x800	51	4.42/4.03	2.83/3.47	2210	C/B	4 x 200

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.9	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38
RAV-SM803AT	OD-240-1-50	3 + E	10.1	16	5/8-3/8	20/1.7	40	30/30	48/50	550	780x290	42
RAV-SM1103AT	OD-240-1-50	3 + E	14.4	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77
RAV-SM1403AT	OD-240-1-50	3 + E	17.7	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77

Super Digital Inverter Ducted

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H	Spigots Qty x mm
RAV-SM562BT	781/581	40/33	320	700x800	30	1.39/1.55	3.60/3.61	695	A/A	2 x 200
RAV-SM802BT	1141/799	40/34	320	1000x800	39	2.10/2.10	3.38/3.81	1050	A/A	3 x 200
RAV-SM1102BT	1620/1134	42/36	320	1350x800	51	2.50/2.50	4.00/4.48	1250	A/A	4 x 200
RAV-SM1402BT	1980/1386	44/38	320	1350x800	51	3.90/3.60	3.21/3.89	1950	A/A	4 x 200

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.4	20	50/30	46/47	550	780x290	44
RAV-SP804AT	OD-240-1-50	3 + E	8.72	10	5/8-3/8	30/2.1	40	50/30	47/49	890	900x320	63
RAV-SP1104AT	OD-240-1-50	3 + E	11.24	20	5/8-3/8	30/3.1	40	75/30	49/51	1340	900x320	95
RAV-SP1404AT	OD-240-1-50	3 + E	16.51	20	5/8-3/8	30/3.1	40	75/30	53/54	1340	900x320	95

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI Slim Duct



- R22/R407C Replacement Technology
- Includes Lift Pump 850mm from base of unit
- Slim 210mm design
- Static pressure up to 45 Pa (10Pa Factory setting)
- Twin/Triple combinations possible
- Return air bottom standard, rear optional

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Slim Duct

RAV-SM564SDT	RAV-SM563AT	5.0(1.5-5.6)	5.6(1.5-6.3)	5.44	4.22	4.69	£545	£835	£1,432
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Super Digital Inverter Slim Duct

RAV-SM404SDT	RAV-SP404AT	3.6(2.2-4.0)	4.0(2.2-5.0)	3.88	3.20	3.93	£534	£950	£1,536
RAV-SM564SDT	RAV-SP564AT	5.0(2.2-5.6)	5.6(2.2-7.0)	5.44	4.22	4.69	£545	£1,015	£1,612

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-AX21E2	Wireless Remote Control kit (Includes receiver)	£233
TCB-EXS21TLE	Schedule Timer	£220
TCB-PCNT30TL	1:1 model connection interface for connecting Digital Inverter to U3/U4 VRF Network	£65
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

All cassettes include a 700mm x 700mm x 17mm RBC-UM11PG(W)-E Grille. Price of £152 included.
System prices include a RBC-AMT32E Wired Remote at £52. This can be exchanged for one of the above.

DI/SDI Slim Duct Technical Data

Digital Inverter Slim Duct

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM564SDT	780/582	45/36	210	845x645	22	1.55/1.44	3.23/3.89	775	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.7	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38

Super Digital Inverter 4-Way

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM404SDT	690/522	39/33	210	845x645	22	1.03/1.00	3.50/4.00	515	A/A
RAV-SM564SDT	780/582	45/36	210	845x645	22	1.55/1.44	3.23/3.89	775	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP404AT	OD-240-1-50	3 + E	5.2	10	1/2-1/4	20/1.0	20/1.0	30/30	47/45	550	780x290	40
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.5	20/1.5	50/30	46/47	550	780x290	44

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI Ceiling Mount



- R22/R407C Replacement Technology
- Optional Lift Pump
- Twin/Triple combinations possible

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Ceiling Mount

RAV-SM562CT	RAV-SM563AT	5.0(1.5-5.6)	5.6(1.5-6.3)	5.44	4.22	5.21	£655	£835	£1,542
RAV-SM802CT	RAV-SM803AT	7.0(1.5-8.0)	8.0(1.5-9.0)	7.76	5.85	7.08	£775	£1,215	£2,042
RAV-SM1102CT	RAV-SM1103AT	10.0(3.0-11.2)	11.2(3.0-12.5)	11.65	7.73	9.68	£845	£1,540	£2,437
RAV-SM1402CT	RAV-SM1403AT	12.3(3.0-13.2)	14.0(3.0-16.0)	13.59	8.75	12.29	£1,105	£1,685	£2,842

Super Digital Inverter Ceiling Mount

RAV-SM562CT	RAV-SP564AT	5.0(2.2-5.6)	5.6(2.2-7.0)	5.44	4.22	5.21	£655	£1,015	£1,722
RAV-SM802CT	RAV-SP804AT	7.1(2.2-8.0)	8.0(2.2-10.0)	7.76	5.85	7.08	£775	£1,510	£2,337
RAV-SM1102CT	RAV-SP1104AT	10.0(3.0-12.0)	11.2(3.0-13.0)	11.65	7.73	9.68	£845	£1,900	£2,797
RAV-SM1402CT	RAV-SP1404AT	12.5(3.0-14.0)	14.0(3.0-16.5)	13.59	8.75	12.29	£1,105	£2,100	£3,257

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
RBC-AX22CE2	Wireless Remote Control kit (Includes receiver)	£160
TCB-EXS21TLE	Schedule Timer	£220
TCB-PCNT30TL	1:1 model connection interface for connecting Digital Inverter to U3/U4 VRF Network	£65
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

System prices include a RBC-AMT32E Wired Remote at £52. This can be exchanged for one of the above.

DI/SDI Ceiling Mount Technical Data

Digital Inverter Ceiling Mount

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562CT	781/601	36/30	210	910x680	21	1.82/1.64	2.75/3.41	910	D/B
RAV-SM802CT	1109/875	38/33	210	1180x680	25	2.53/2.47	2.77/3.24	1265	D/C
RAV-SM1102CT	1649/1271	41/35	210	1595x680	33	3.51/3.20	2.85/3.50	1755	C/B
RAV-SM1402CT	1800/1386	43/37	210	1595x680	33	4.52/4.14	2.72/3.38	2260	D/C

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.9	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38
RAV-SM803AT	OD-240-1-50	3 + E	10.1	16	5/8-3/8	20/1.7	40	30/30	48/50	550	780x290	42
RAV-SM1103AT	OD-240-1-50	3 + E	14.4	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77
RAV-SM1403AT	OD-240-1-50	3 + E	17.7	20	5/8-3/8	30/2.8	40	50/30	53/54	795	900x320	77

Super Digital Inverter Ceiling Mount

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562CT	781/601	36/30	210	910x680	21	1.41/1.50	3.55/3.73	705	A/A
RAV-SM802CT	1109/875	38/33	210	1180x680	25	2.10/2.20	3.38/3.64	1050	A/A
RAV-SM1102CT	1649/1271	41/35	210	1595x680	33	2.40/2.50	4.17/4.48	1200	A/A
RAV-SM1402CT	1800/1386	43/37	210	1595x680	33	3.90/3.75	3.21/3.73	1950	A/A

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.4	20	50/30	46/47	550	780x290	44
RAV-SP804AT	OD-240-1-50	3 + E	8.72	10	5/8-3/8	30/2.1	40	50/30	47/49	890	900x320	63
RAV-SP1104AT	OD-240-1-50	3 + E	11.24	20	5/8-3/8	30/3.1	40	75/30	49/51	1340	900x320	95
RAV-SP1404AT	OD-240-1-50	3 + E	16.21	20	5/8-3/8	30/3.1	40	75/30	53/54	1340	900x320	95

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI Flexi
DI/SDI Flexi Technical Data


- R22/R407C Replacement Technology
- Can be installed as ceiling or floor mount
- Factory set as <C> Ceiling, change dip to <F> for floor mounted

Digital Inverter Flexi

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562XT	839/601	43/36	208	1093x633	23	1.87/1.70	2.67/3.29	935	D/C
RAV-SM802XT	1109/641	46/37	208	1093x633	23	2.72/2.67	2.46/3.00	1360	E/D

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Ceiling Mount

RAV-SM562XT	RAV-SM563AT	5.0(1.5-5.6)	5.6(1.5-6.3)	5.44	4.22	5.21	£465	£835	£1,300
RAV-SM802XT	RAV-SM803AT	7.0(1.5-8.0)	8.0(1.5-9.0)	7.76	5.85	7.08	£485	£1,215	£1,700

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.3	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38
RAV-SM803AT	OD-240-1-50	3 + E	11.32	16	5/8-3/8	20/1.7	40	30/30	48/50	550	780x290	42

Accessories

RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

System prices include an Infra Red remote that is packaged with the indoor. Hard wired is not available on this system. Nor can it be twinned/tripled.

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI/SDI Wall Mount



- R22/R407C Replacement Technology
- Twin/Triple combinations possible

Indoor unit	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cooling kW	UK Heating kW	Indoor Retail Price	Outdoor Retail Price	System Retail Price
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Digital Inverter Wall Mount

RAV-SM562KRT	RAV-SM563AT	5.0(1.5-5.6)	5.6(1.5-6.3)	5.44	4.22	4.69	£388	£835	£1,223
RAV-SM802KRT	RAV-SM803AT	6.7(1.5-8.0)	8.0(1.5-9.0)	7.76	5.85	6.70	£419	£1,215	£1,634

Super Digital Inverter Wall Mount

RAV-SM562KRT	RAV-SP564AT	5.0(2.2-5.6)	5.6(2.2-7.0)	5.44	4.22	4.69	£ 388	£1,015	£1,403
RAV-SM802KRT	RAV-SP804AT	6.9(2.2-8.0)	8.0(2.2-9.5)	7.76	5.85	6.70	£ 419	£1,510	£1,929

Accessories

RBC-AMT32E	Wired Remote Control (Group up to 8 indoors)	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group up to 8 indoors)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-EXS21TLE	Schedule Timer	£220
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

System comes with an Infra Red remote in the indoor packaging. One of the above controls can also be used at the cost shown. These systems include U3/U4 connections so they can be connected to a Central Controller without the need for interface

DI/SDI Wall Mount Technical Data

Digital Inverter Wall Mount

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562KRT	839/641	45/36	298	998x221	12	1.74/1.70	2.93/3.29	870	C/C
RAV-SM802KRT	1109/731	45/36	298	998x221	12	2.72/2.67	2.46/3.00	1360	E/D

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM563AT	OD-240-1-50	3 + E	7.3	10	1/2-1/4	20/1.0	20	30/30	46/48	550	780x290	38
RAV-SM803AT	OD-240-1-50	3 + E	11.32	16	5/8-3/8	20/1.7	40	30/30	48/50	550	780x290	42

Super Digital Inverter Wall Mount

Indoor	Airflow High/Low m ³ /h	Sound Pressure dB(A) H/L	Height mm	Width x Depth mm	Weight kg	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label C/H
RAV-SM562KRT	839/641	45/36	298	998x221	12	1.39/1.55	3.60/3.61	695	A/A
RAV-SM802KRT	1109/731	45/36	298	998x221	12	2.40/2.40	2.88/3.33	1200	C/C

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP564AT	OD-240-1-50	3 + E	7.17	10	1/2-1/4	20/1.4	20	50/30	46/47	550	780x290	44
RAV-SP804AT	OD-240-1-50	3 + E	8.72	10	5/8-3/8	30/2.1	40	50/30	47/49	890	900x320	63

Notes

Operating Range Cooling: -15 to 43°C
Operating Range Heating: -15 to 15°C

DI Twin/Triple Split

DI Twin/Triple Technical Data



- R22/R407C Replacement Technology
- Twin or Triple Operation
- Twin rotary compressor & DC fan
- Single drain connection

Qty / Indoor unit	Style	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cool kW	UK Heating kW	System Retail Price
Digital Inverter								
Twin								
2 No RAV-SM564UT	Cassette	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£3112
2 No RAV-SM562MUT	600 Cassette	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£3076
2 No RAV-SM562BT	Ducted	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£2762
2 No RAV-SM564SDT	Slim Duct	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£2682
2 No RAV-SM562CT	Ceiling	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£2902
2 No RAV-SM562KRT	Wall	RAV-SM1103AT	10.0	11.2	10.87	6.67	9.68	£2368
2 No RAV-SM804UT	Cassette	RAV-SM1403AT	12.5	14.0	12.81	8.35	11.92	£3549
2 No RAV-SM802BT	Ducted	RAV-SM1403AT	12.5	14.0	12.81	8.35	11.92	£3477
2 No RAV-SM802CT	Ceiling	RAV-SM1403AT	12.3	14.0	12.81	8.35	11.92	£3287
2 No RAV-SM802KRT	Wall	RAV-SM1403AT	12.0	14.0	12.81	8.35	11.92	£2575
2 No RAV-SM804UT	Cassette	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3974
2 No RAV-SM802BT	Ducted	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3902
2 No RAV-SM802CT	Ceiling	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3712
2 No RAV-SM802KRT	Wall	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3000
Triple								
3 No RAV-SM564UT	Cassette	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£4601
3 No RAV-SM562MUT	600 Cassette	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£4547
3 No RAV-SM562BT	Ducted	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£4076
3 No RAV-SM564SDT	Slim Duct	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3956
3 No RAV-SM562CT	Ceiling	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£4286
3 No RAV-SM562KRT	Wall	RAV-SM1603AT	14.0	16.0	15.33	11.1	13.64	£3485
RBC-AMT32E	Wired Remote Control							£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group control)							£65
RBC-AS21E2	Wired Simplified Remote Control							£60

Notes

Triple Prices include pipe kits as follows: RBC-TRP100E
 Twin Kits are not required. SM1103AT use reducing tees 5/8" to 1/2" 1/2" and 3/8" to 1/4" 1.4"
 RAV-SM14/1603AT use tees 5/8" to 5/8" 5/8" and 3/8" to 3/8" 3/8" - standard refrigeration tees are not included in the above pricing
 Prices include hard wired remote RBC-AMT32E priced at £52

Digital Inverter

Indoor	Outdoor	Pipe Size to Indoor In	Pipe Size to Outdoor In	Power Input kW	EER/ COP W/W	Annual Power kWh	Energy Label Cool/Heat
2 No RAV-SM564UT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.52	2.84/3.57	1760	C/B
2 No RAV-SM562MUT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.51	2.85/3.50	1755	C/B
2 No RAV-SM562BT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.56	2.81/3.57	1780	C/B
2 No RAV-SM564SDT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.48	2.87/3.57	1740	B/B
2 No RAV-SM562CT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.51	2.85/3.50	1755	C/B
2 No RAV-SM562KRT	RAV-SM1103AT	1/4" 1/2"	3/8" 5/8"	3.48	2.87/3.57	1740	C/B
2 No RAV-SM804UT	RAV-SM1403AT	3/8" 5/8"	3/8" 5/8"	4.09	3.06/3.50	2045	B/B
2 No RAV-SM802BT	RAV-SM1403AT	3/8" 5/8"	3/8" 5/8"	4.42	2.83/3.47	2210	C/B
2 No RAV-SM802CT	RAV-SM1403AT	3/8" 5/8"	3/8" 5/8"	4.52	2.72/3.38	2260	D/C
2 No RAV-SM802KRT	RAV-SM1403AT	3/8" 5/8"	3/8" 5/8"	5.10	2.65/3.30	2260	D/C
2 No RAV-SM804UT	RAV-SM1603AT	3/8" 5/8"	3/8" 5/8"	4.49	3.12/3.61	2245	B/A
2 No RAV-SM802BT	RAV-SM1603AT	3/8" 5/8"	3/8" 5/8"	5.12	2.73/3.41	2560	D/B
2 No RAV-SM802CT	RAV-SM1603AT	3/8" 5/8"	3/8" 5/8"	4.99	2.81/3.41	2495	C/B
2 No RAV-SM802KRT	RAV-SM1603AT	3/8" 5/8"	3/8" 5/8"	5.10	2.75/3.21	2550	D/B
Triple							
3 No RAV-SM564UT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	4.49	3.12/3.61	2245	B/A
3 No RAV-SM562MUT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	4.99	2.81/3.41	2495	C/B
3 No RAV-SM562BT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	5.12	2.73/3.41	2560	D/B
3 No RAV-SM564SDT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	4.99	2.81/3.41	2495	C/B
3 No RAV-SM562CT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	4.99	2.81/3.41	2495	C/B
3 No RAV-SM562KRT	RAV-SM1603AT	1/4" 1/2"	3/8" 5/8"	5.10	2.75/3.21	2550	D/C

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes in	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM1103AT	OD-240-1-50	3 + E	15.0	20	3/8" 5/8"	30/2.8	40	50/30	54	795	900x320	77
RAV-SM1403AT	OD-415-3-50	3 + E	17.6	20	3/8" 5/8"	30/2.8	40	50/30	54	795	900x320	77
RAV-SM1603AT	OD-240-1-50	3 + E	23.9	25	3/8" 5/8"	30/3.1	40	50/30	53	1340	900x320	99

Notes

Operating Range Cooling: -15 to 46°C
 Operating Range Heating: -20 to 15°C
 Please refer to the technical section for further information on refrigerant charge, pipe sizes and wiring.

DI Twin/Triple/Quad Split

DI Twin/Triple/Quad Technical Data



- R22/R407C Replacement Technology
- Twin, Triple or Quad Operation
- Twin rotary compressor & Twin DC fan
- Single drain connection

Qty / Indoor unit	Style	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cool kW	UK Heating kW	System Retail Price
Digital Inverter								
Twin								
2 No RAV-SM1104UT	Cassette	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,018
2 No RAV-SM1102CT	Ceiling Mount	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£4,742
2 No RAV-SM1102BT	Ducted	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,042
2 No RAV-SM1404UT	Cassette	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,328
2 No RAV-SM1402CT	Ceiling Mount	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,312
2 No RAV-SM1402BT	Ducted	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,406
Triple								
3 No RAV-SM804UT	Cassette	RAV-SM2244AT8	20.0	22.4	21.7	16.7	15.9	£5,929
3 No RAV-SM802CT	Ceiling Mount	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,536
3 No RAV-SM802BT	Ducted	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,821
3 No RAV-SM802KRT	Wall Mount	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£4,468
3 No RAV-SM804UT	Cassette	RAV-SM2804AT8	23.0	27.0	26.0	20.9	19.7	£6,076
3 No RAV-SM802CT	Ceiling Mount	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,686
3 No RAV-SM802BT	Ducted	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,971
3 No RAV-SM802KRT	Wall Mount	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£4,618
Quad								
4 No RAV-SM564UT	Cassette	RAV-SM2244AT8	20.0	22.4	21.7	16.7	15.9	£6,273
4 No RAV-SM562CT	Ceiling Mount	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,853
4 No RAV-SM562BT	Ducted	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,573
4 No RAV-SM562KRT	Wall Mount	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£4,785
4 No RAV-SM562MUT	600 Cassette	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£6,201
4 No RAV-SM564SDT	Slim Ducted	RAV-SM2244AT8	20.0	22.4	21.7	14.9	14.0	£5,413
4 No RAV-SM804UT	Cassette	RAV-SM2804AT8	23.0	27.0	26.2	20.9	19.7	£7,007
4 No RAV-SM802CT	Ceiling Mount	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£6,483
4 No RAV-SM802BT	Ducted	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£6,863
4 No RAV-SM802KRT	Wall Mounted	RAV-SM2804AT8	23.0	27.0	26.2	17.7	17.4	£5,059

RBC-AMT32E	Wired Remote Control	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group control)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60

Notes

Prices include pipe kits as follows: Triiple : RBC-TRP100E, Quad : RBC-DTWP101E Not required for Twins - use standard tees
 Prices include hard wired remote RBC-AMT32E priced at £52

Digital Inverter

Indoor	Outdoor	Pipe Size to Indoor In	Pipe Size to Outdoor In	Power Input kW	EER/ COP W/W	Annual Power kWh	Energy Label Cool/Heat
Twin							
2 No RAV-SM1104UT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	6.24	3.21/3.85		A/A
2 No RAV-SM1102CT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
2 No RAV-SM1102BT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
2 No RAV-SM1404UT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	8.19	2.81/3.61		C/A
2 No RAV-SM1402CT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
2 No RAV-SM1402BT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
Triple							
3 No RAV-SM804UT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
3 No RAV-SM802CT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
3 No RAV-SM802BT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
3 No RAV-SM802KRT	RAV-SM2244AT8	5/8 3/8	1 1/8 1/2	7.12	2.81/3.50		C/B
3 No RAV-SM804UT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
3 No RAV-SM802CT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
3 No RAV-SM802BT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
3 No RAV-SM802KRT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
Quad							
4 No RAV-SM564UT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM562CT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM562BT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM562KRT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM562MUT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM564SDT	RAV-SM2244AT8	1/2 1/4	1 1/8 1/2	7.12	2.81/3.50		C/B
4 No RAV-SM804UT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
4 No RAV-SM802CT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
4 No RAV-SM802BT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B
4 No RAV-SM802KRT	RAV-SM2804AT8	5/8 3/8	1 1/8 1/2	9.55	2.41/3.41		E/B

Condensing Unit	Power Supply To-V-ph-Hz	Int. Cable	Max Run Amps	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SM2244AT8	OD-415-3-50	3 + E	10.09	16	1 1/8-1/2	30/5.9	70/30	56/57	1540	900x320	134	
RAV-SM2804AT8	OD-415-3-50	3 + E	13.24	16	1 1/8-1/2	30/5.9	70/30	57/58	1540	900x320	134	

Notes

Operating Range Cooling: -15 to 46°C
 Operating Range Heating: -20 to 15°C
 Please refer to the technical section for further information on refrigerant charge, pipe sizes and wiring.

SDI Twin/Triple Split

SDI Twin Technical Data



- R22/R407C Replacement Technology
- Twin/Triple combinations possible

Qty / Indoor unit	Style	Condensing Unit	Nominal Cooling kW	Nominal Heating kW	UK Total Cooling kW	UK Sensible Cool kW	UK Heating kW	System Retail Price
Super Digital Inverter								
2 No RAV-SM564UT	Cassette	RAV-SP1104AT	3.0-12.0	3.0-13.0	10.87	6.67	9.31	£3472
2 No RAV-SM804UT	Cassette	RAV-SP1404AT	3.0-14.0	3.0-16.5	13.59	8.86	12.29	£3964
2 No RAV-SM404MUT	Mini Cassette	RAV-SP804AT	1.9-8.0	1.3-10.6	7.76	5.85	7.08	£2996
2 No RAV-SM562MUT	Mini Cassette	RAV-SP1104AT	3.0-12.0	3.0-13.0	10.87	6.67	9.31	£3436
2 No RAV-SM562BT	Ducted	RAV-SP1104AT	3.0-14.0	3.0-13.0	10.87	6.67	9.31	£3122
2 No RAV-SM802BT	Ducted	RAV-SP1404AT	3.0-14.0	3.0-16.5	13.59	8.86	12.29	£3892
2 No RAV-SM404SDT	Slim Duct	RAV-SP804AT	1.9-8.0	1.3-10.6	7.76	5.85	7.08	£2630
2 No RAV-SM564SDT	Slim Duct	RAV-SP1104AT	3.0-12.0	3.0-13.0	10.87	6.67	9.31	£3042
2 No RAV-SM562CT	Ceiling	RAV-SP1104AT	3.0-12.0	3.0-13.0	10.87	6.67	9.31	£3262
2 No RAV-SM802CT	Ceiling	RAV-SP1404AT	3.0-14.0	3.0-16.5	13.59	8.86	12.29	£3702
2 No RAV-SM562KRT	Wall	RAV-SP1104AT	3.0-12.0	3.0-13.0	10.87	6.67	9.31	£2728
2 No RAV-SM802KRT	Wall	RAV-SP1404AT	3.0-14.0	3.0-16.5	13.59	8.86	12.29	£2990

Super Digital Inverter

Indoor	Outdoor	Pipe Size to Indoor In	Pipe Size to Outdoor In	Power Input kW C/H	EER/ COP W/W	Annual Power kWh	Energy Label Cool/Heat
2 No RAV-SM564UT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.4/2.55	4.17/4.39	1200	A/A
2 No RAV-SM804UT	RAV-SP1404AT	3/8 5/8	3/8 5/8	3.56/3.58	3.51/3.91	1780	A/A
2 No RAV-SM404MUT	RAV-SM804AT	1/2 1/4	3/8 5/8	2.21/2.16	3.21/3.70	1105	A/A
2 No RAV-SM562MUT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.67/2.67	3.75/4.19	1335	A/A
2 No RAV-SM562BT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.5/2.55	4.0/4.39	1250	A/A
2 No RAV-SM802BT	RAV-SP1404AT	3/8 5/8	3/8 5/8	3.9/3.6	3.21/3.89	1950	A/A
2 No RAV-SM404SDT	RAV-SP804AT	1/2 1/4	3/8 5/8	2.21/2.16	3.21/3.62	1105	A/A
2 No RAV-SM564SDT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.5/2.55	4.0/4.39	1250	A/A
2 No RAV-SM562CT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.4/2.55	4.17/4.39	1200	A/A
2 No RAV-SM802CT	RAV-SP1404AT	3/8 5/8	3/8 5/8	3.9/3.75	3.21/3.73	1950	A/A
2 No RAV-SM562KRT	RAV-SP1104AT	1/2 1/4	3/8 5/8	2.4/2.55	4.17/4.39	1200	A/A
2 No RAV-SM802KRT	RAV-SP1404AT	3/8 5/8	3/8 5/8	4.0/3.85	3.08/3.64	1950	B/A

Accessories

RBC-AMT32E	Wired Remote Control	£52
RBC-AMS41E	Wired Remote Control (7 Day timer, 8 program functions per day, group control)	£65
RBC-AS21E2	Wired Simplified Remote Control	£60
TCB-EXS21TLE	Schedule Timer	£220
RBC-SMF1	Fan control lead	£40
RBC-SMT1	Timer interface lead	£15

Notes

Twin Kits are not required. SP1104AT use reducing tees 5/8" to 1/2" 1/2" and 3/8" to 1/4" 1.4"
 RAV-SP1404AT use tees 5/8" to 5/8" 5/8" and 3/8" to 3/8" 3/8" - standard refrigeration tees are not included in the above pricing
 Prices include hard wired remote RBC-AMT32E priced at £52

Notes

Operating Range Cooling: -15 to 43°C
 Operating Range Heating: -15 to 15°C
 Please refer to the technical section for further information on refrigerant charge, pipe sizes and wiring.

Condensing Unit	Int. Cable	Max Run Amps	Max Run A Cool	Fuse Size Amps	Pipe Sizes In	Pre - Charge M/kg	Add R410A g/m	Max Run/ Lift m	Sound Press. dB(A)	Height mm	Width x Depth mm	Weight kg
RAV-SP804AT	OD-240-1-50	3 + E	8.95	10	5/8-3/8	30/2.1	20	50/30	48/49	890	900x320	63
RAV-SP1104AT	OD-240-1-50	3 + E	11.24	20	5/8-3/8	30/3.1	40	75/30	49/51	1340	900x320	95
RAV-SP1404AT	OD-240-1-50	3 + E	16.21	20	5/8-3/8	30/3.1	40	75/30	53/54	1340	900x320	95

DI/SDI Air Handling Applications

- R22/R407C Replacement Technology
 - High efficiency inverter compressor
 - No additional mechanical equipment required
 - Bespoke "easy to use" control set up
- Note: Minimum air on condition to the coil must be 18°C in heating mode.

Condensing Unit	Cooling Capacity kW	Heating Capacity kW	Replacement Technology	Outdoor Retail Price	Interface Retail Price	System Retail Price
Digital Inverter						
RAV-SM563AT-E	1.1-5.6	1.5-6.3	Yes	£835	£440	£1275
RAV-SM803AT-E	1.5-7.1	1.5-9.0	Yes	£1215	£440	£1655
RAV-SM1103AT-E	3.0-11.2	3.0-13.0	Yes	£1540	£440	£1980
RAV-SM1403AT-E	3.0-13.2	3.0-16.0	Yes	£1685	£440	£2125
RAV-SM1603AT-E	3.0-15.0	3.0-16.0	Yes	£2110	£440	£2550
RAV-SM2244AT8-E	9.8-22.4	9.8-25.0	Yes	£3000	£440	£3440
RAV-SM2803AT8-E	9.8-27.0	9.8-31.5	Yes	£3150	£440	£3590

Super Digital Inverter

RAV-SP564AT-E	1.2-5.6	0.9-8.1	Yes	£1015	£440	£1455
RAV-SP804AT-E	1.9-8.0	1.3-11.3	Yes	£1510	£440	£1950
RAV-SP1104AT-E	3.0-12.0	2.4-13.0	Yes	£1900	£440	£2340
RAV-SP1404AT-E	3.0-14.0	2.4-16.5	Yes	£2100	£440	£2540

Notes

Digital Inverter

Condensing Unit	HEX Air Volume m3/hr	HEX Coil Volume cm3	HEX Coil Diameter mm/in	HEX Paths	EX. Piping Limits	EX. Pipe Diameter	Power Supply Ph
RAV-SM563AT-E	780-1050	500-1450	9.52 / 3/8	4-6	5-30	12.7 / 6.4	1
RAV-SM803AT-E	810-1230	600-1850	9.52 / 3/8	6-8	5-30	15.9 / 9.5	1
RAV-SM1103AT-E	1120-2010	1000-3000	9.52 / 3/8	6-10	5-50	15.9 / 9.5	1
RAV-SM1403AT-E	1230-2100	1250-3750	9.52 / 3/8	8-12	5-50	15.9 / 9.5	1
RAV-SM1603AT-E	1260-2130	1450-4250	9.52 / 3/8	8-12	5-50	15.9 / 9.5	1
RAV-SM2244AT8-E	1170-2010	2000-6000	9.52 / 3/8	10-12	5-75	19.1 / 12.7	3
RAV-SM2803AT8-E	1230-2100	2550-7500	9.52 / 3/8	10-12	5-75	19.1 / 12.7	3

Super Digital Inverter

Condensing Unit	HEX Air Volume m3/hr	HEX Coil Volume cm3	HEX Coil Diameter mm/in	HEX Paths	EX. Piping Limits	EX. Pipe Diameter	Power Supply Ph
RAV-SP564AT-E	780-1050	500-1450	9.52 / 3/8	4-6	5-50	12.7 / 6.4	1
RAV-SP804AT-E	810-1230	600-1850	9.52 / 3/8	6-8	5-50	15.9 / 9.5	1
RAV-SP1104AT-E	1120-2010	1000-3000	9.52 / 3/8	6-10	5-75	15.9 / 9.5	1
RAV-SP1404AT-E	1230-2100	1250-3750	9.52 / 3/8	8-12	5-75	15.9 / 9.5	1

Notes

DI/SDI Fault Codes

Fault codes are displayed on the wired remote control - to access service history :

- > Press CHECK and SET for 4 seconds
- > Scroll through stored codes using the TEMP set buttons
- > Press CHECK to cancel service history
- > Press CLEAR to delete codes

Code	Description
E01	Controller receives no communication from a master indoor (master may be turned off for example)
E02	Local controller failure - unable to transmit
E03	Master indoor receives no data to A-B (Can appear as E01 fault)
E04	Indoor (not twin) receives no data from outdoor
E08	Duplicated indoor address
E09	2 local controllers in a group set as masters
E10	Indoor PCB failure
E18	Communication error between master and slave indoor
F01	Indoor TCJ sensor error
F02	Indoor TC2 sensor error
F04	TD1 sensor error
F06	TE1 sensor error
F08	TO sensor error
F10	Indoor TA sensor error
F29	Indoor PCB failure
H01	Inverter compressor over current detected
H02	Master outdoor over current detected shortly after start up
H03	Current detected on master outdoor unit while idle
H06	Low pressure detected by Ps sensor (0.02Mpa)
L03	Duplicated master indoor units in a group
L07	Indoor in a group addressed as a single unit
L08	Indoor address not set
L09	Indoor capacity not set
L29	IPDU error
L30	Input on CN80 circuit for 1min
L31	Outdoor PCB error
P01	Indoor fan motor error
P03	High discharge temperature (TD1 exceeded 115°C)
P04	High pressure switch activated (detected by high TE temp)
P07	Heat Sink Overheat
P10	Float switch activated
P12	Indoor fan motor error - detected by feedback circuit
P19	Wrong change in temperature (4-Way valve error)
P22	Outdoor Fan IPDU error
P26	Giant transistor short circuit
P29	Compressor error detected by feed back circuit
P31	Indoor PCB error
C05	Sending error in TCC-Link central control device
C06	Receive error in TCC-Link central control device
C12	Batch alarm for general purpose equipment control interface
P30	Group control follower unit error/duplicated central control addresses

DI Existing Pipework and Electrics

3-series Digital and 4-series Super Digital Inverter outdoor units may be coupled with appropriately sized 3 or 4-series cassettes or the other 2-series models, by either new or existing pipework. Existing pipework may not be the correct size and may contain a residue of oil (mineral or synthetic) and refrigerant (HCFC or HFC). The procedures and qualifications for these situations are outlined below.

Conditions when re-using pipework	
Requirements	<ul style="list-style-type: none"> • The existing system is still in place and can operate in the cooling mode • The pipes are: refrigeration quality, un-contaminated, insulated and in good mechanical condition. Wall thickness must be >0.8 mm (>1.0 mm if 3/8" dia).
Procedure	<ul style="list-style-type: none"> • Operate existing equipment in cooling for 30 minutes, then pump down. • Recover remaining refrigerant from isolated pipework. • Flush pipework with (oxygen free) nitrogen at 8 psig. Where a twin circuit is used, the individual branches must be flushed; check that any oil is clean. • Connect new components with the flare nuts supplied. Flared connections must be re-made. • Leak test at 500 psig for at least one hour (oxygen-free nitrogen). • Triple-evacuate to 4 Torr (4000 Micron) and maintain for at least 30 minutes. • Add additional refrigerant if necessary (in liquid state); additional charge is determined by the length and size of the liquid line used. <ul style="list-style-type: none"> o 1/4" 20 g/m o 3/8" 40 g/m o 1/2" 80 g/m* • Slowly open both isolation valves and operate the system in the cooling mode. • Close liquid isolation valve and when suction pressure is 10 to 20 psig, remove gauge line from the Schrader valve. • Re-open liquid valve, replace all caps and ensure that system is free of leaks.
When using 3/4" vapour pipe, adjust outdoor PCB settings:	<ul style="list-style-type: none"> • RAV- SM803AT-E SW801-3 (sub PCB) must be ON • RAV-SM1 (1or 4 or 6)03/04AT-E SW801-5 (outdoor PCB) must be ON <p>This reduces the compressor current limiting threshold and discharge pressure.</p>

The effects of non-standard sized pipes

Existing pipes:	1/4 and 1/2	1/4 and 5/8	3/8 and 5/8	3/8 and 3/4	1/2 and 3/4
563 (5.6 kW)	30/20m				
803 (8 kW)	20/20m	20/20m	30/20m	30/20m	
1103/04 (11 kW)			50/20m	50/20m	25/10m
1403/04 (14kW)			50/30m	50/30m	25/15m
1603 (16kW)			50/30m	50/30m	25/15m

The lengths shown are the **maximum/pre-charged** separations for each application.

Air to Water Heat Pump



Model	Nominal Cooling kW	Nominal Heating kW	EER/COP	Dimensions H x W x D mm	Weight kg	Retail
Outdoor Model						
HWS-802H-E	6.00	8.00	2.82 / 4.08	890 x 900 x 320	63	£1845
HWS-1102H-E	10.00	11.20	2.84 / 4.66	1340 x 900 x 320	93	£2037
HWS-1402H-E	11.00	14.00	2.69 / 4.45	1340 x 900 x 320	93	£2397

Notes

The HWS-802H Outdoor runs with the HWS-802XWH Hydro Unit
The HWS-1102H and HWS-1402H run with the HWS-1402XWH Hydro Unit

Hydro Unit Model	To be used with (Outdoor)	Electric Backup Heater kW	Backup Heater V-ph-Hz	Dimensions H x W x D mm	Weight kg	Retail
Hydro Unit						
HWS-802XWHM3-E	HWS-802H-E	3	230-1-50	925 x 525 x 355	50	£2770
HWS-802XWHT6-E	HWS-802H-E	6	400-3-50	925 x 525 x 355	50	£2878
HWS-1402XWHM3-E	1102/1402H-E	3	230-1-50	925 x 525 x 355	54	£3645
HWS-1402XWHT6-E	1102/1402H-E	6	400-3-50	925 x 525 x 355	54	£3758
HWS-1402XWHT9-E	1102/1402H-E	9	400-3-50	925 x 525 x 355	54	£3777

Hot Water Tank Model	Volume Litres	Max Water Temp °C	Dimensions H x Dia mm	Material	Retail
Domestic Hot Water Tank					
HWS-1501CSHM3	150	70	1090 x 550	Stainless Steel	£830
HWS-2101CSHM3	210	70	1474 x 550	Stainless Steel	£970
HWS-3001CSHM3	300	70	2040 x 550	Stainless Steel	£1135

Accessories

TCB-PCIN3E	Boiler operation signal, alarm signal, Compressor operation signal and defrost signal output	£72
TCB-PCM03E	Room thermostat and emergency operation stop input	£52

Notes

Air to Water Heat Pump Technical Data



Model	Power Input kW Cool/Heat	Pipe Length Min / Max / Height	Flare Connections (Gas - Liquid)	Sound Pressure dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Outdoor Model								
HWS-802H-E	2.13/1.96	30 / 5 / 30	5/8" - 3/8"	48	20.8	1	25	230-1-50
HWS-1102H-E	3.52/2.40	30 / 3 / 30	5/8" - 3/8"	49	22.8	1	25	230-1-50
HWS-1402H-E	4.08/3.15	30 / 3 / 30	5/8" - 3/8"	51	22.8	1	25	230-1-50

Notes

Pre charged to 30M R410A refrigerant

Hydro Unit Model	Leaving Water Temp Cool °C	Leaving Water Temp Heat °C	Sound Pressure dB(A)	Max Operating Current A	Suggested Fuse A
Hydro Unit					
HWS-802XWHM3-E	10 to 30	20 to 55	27	13	16
HWS-802XWHT6-E	10 to 30	20 to 55	27	15	25
HWS-1402XWHT6-E	10 to 30	20 to 55	29	13	16
HWS-1402XWHT6-E	10 to 30	20 to 55	29	15	25
HWS-1402XWHT9-E	10 to 30	20 to 55	29	23	25

Hot Water Tank Model	Electric Heater kW	Max Current A	Suggested Fuse A	Power Supply V-ph-Hz
Domestic Hot Water Tank				
HWS-1501CSHM3	2.75	12	16	230-1-50
HWS-2101CSHM3	2.75	12	16	230-1-50
HWS-3001CSHM3	2.75	12	16	230-1-50

Notes

VRF Condensing Units



VRF Outdoor	hp	Nominal Cooling kW	Nominal Heating kW	Min/Max Capacity Code	EER / COP	Dimensions HxWxD	Weight kg	Retail Price
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S-HRM VRF Heat Recovery

MMY-MAP0802FT8	8	22.4	25.0	5.6 - 10.8	3.69/3.97	1800x900x750	268	£6212
MMY-MAP1002FT8	10	28.0	31.5	7.0 - 13.5	3.18/3.61	1800x900x750	268	£6756
MMY-MAP1202FT8	12	33.5	35.5	8.4 - 14.4	2.60/3.68	1800x900x750	268	£8258

S-MMS VRF Heat Pump

MMY-MAP0501HT8	5	14.0	16.0	2.5 - 6.75	3.84/4.17	1800x900x750	228	£4284
MMY-MAP0601HT8	6	16.0	18.0	3.0 - 8.1	3.45/3.95	1800x900x750	228	£4482
MMY-MAP0801HT8	8	22.4	25.0	4.1 - 8.0	3.95/4.25	1800x900x750	268	£5260
MMY-MAP1001HT8	10	28.0	31.5	5.0 - 13.5	3.65/3.95	1800x900x750	268	£6236
MMY-MAP1201HT8	12	33.5	35.5	6.0 - 16.2	2.81/3.68	1800x900x750	268	£7468

Mini S-MMS VRF Heat Pump

MCY-MAP0401HT8	4	12.1	12.5	3.2 - 5.2	4.29/4.61	1340x900x320	117	£3640
MCY-MAP0501HT8	5	14.0	16.0	4.0 - 6.5	4.03/4.00	1340x900x320	117	£4135
MCY-MAP0601HT8	6	15.5	18.0	4.3 - 7.8	3.35/3.71	1340x900x320	117	£4450

Accessories

RBM-Y1122FE	Flow Selector Box 0 - 11.2kW connecting up to 5 indoors in one area	£442
RBM-Y1802FE	Flow Selector Box 11.2 - 18.0kW connecting up to 8 indoors in one area	£490
RBM-Y2802FE	Flow Selector Box 18.0 - 28.0kW connecting up to 8 indoors in one area	£770
RBC-FSEX15	15M Extension Cable for FS Box	£94
RBM-PMV0361E	External PMV Valve for Mini-SMMS Indoor Capacity 2.2-3.6kW	£150
RBM-PMV0901E	External PMV Valve for Mini-SMMS Indoor Capacity 4.5-5.0kW	£162

Notes



VRF Condensing Unit Technical Data

- True inverter VRF (No fixed speed compressors)
- Connectable capacity up to 135%
- Superior SEER for reduced energy costs
- Flexible piping branch design

S-HRM VRF Heat Recovery

VRF Outdoor	Power Input Cool/Heat kW	Max Run Cool/Heat Amps	Sound Pressure dB(A) 1m	R410A Charge kg	Start Current Amps	Fuse per Phase Amps	Power Supply V-ph-Hz
MMY-MAP0802FT8	6.07/6.29	9.25/9.55	57	11.5	1	16	415-3-50
MMY-MAP1002FT8	8.54/8.73	13.15/13.40	58	11.5	1	20	415-3-50
MMY-MAP1202FT8	12.9/9.65	19.85/14.85	59	11.5	1	25	415-3-50

S-MMS VRF Heat Pump

MMY-MAP0501HT8	3.65/3.84	5.85/6.09	55	8.5	1	10	415-3-50
MMY-MAP0601HT8	4.64/4.56	7.28/7.08	56	8.5	1	10	415-3-50
MMY-MAP0801HT8	5.67/5.88	8.62/8.93	57	12.5	1	16	415-3-50
MMY-MAP1001HT8	7.68/7.97	11.55/11.98	58	12.5	1	20	415-3-50
MMY-MAP1201HT8	11.92/10.19	18.3/15.65	59	12.5	1	25	415-3-50

Mini S-MMS VRF Heat Pump

MCY-MAP0401HT8	2.82/2.71	13.2/12.5	50	7.2	1	16	220/240-1-50
MCY-MAP0501HT8	3.47/4.0	16.1/18.3	52	7.2	1	25	220/240-1-50
MCY-MAP0601HT8	4.63/4.85	21.4/22.2	53	7.2	1	25	220/240-1-50

Notes

Operating Range Cooling: -10 to 43°C
Operating Range Heating: -15 to 20°C

S-HRM VRF Combination Table

VRF Outdoor	hp	Nominal Cooling kW	Nominal Heating kW	Min/Max Capacity Code	Max no Indoors	Units in Combination
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S-HRM VRF Heat Recovery

MMY-MAP0802FT8	8	22.4	25.0	5.6 - 10.8	13	8
MMY-MAP1002FT8	10	28.0	31.5	7.0 - 13.5	16	10
MMY-MAP1202FT8	12	33.5	35.5	8.4 - 14.4	16	12
MMY-AP1602FT8	16	45.0	50.0	11.2 - 21.6	27	8+8
MMY-AP1802FT8	18	50.4	56.5	12.6 - 24.3	30	10+8
MMY-AP2002FT8	20	56.0	63.0	14.0 - 27.0	33	10+10
MMY-AP2402FT8	24	68.0	76.5	16.8 - 32.4	40	8+8+8
MMY-AP2602FT8	26	73.0	81.5	18.2 - 35.1	43	10+8+8
MMY-AP2802FT8	28	78.5	88.0	19.6 - 37.8	47	10+10+8
MMY-AP3002FT8	30	84.0	95.0	21.0 - 40.5	48	10+10+10

Notes

Note that combinations require a RBM-BT13FE joint kit (2 units need 1 and 3 units need 2)
A 3/8" oil line is required between condensing unit in a combined module

S-MMS VRF Combination Table

VRF Outdoor	hp	Nominal Cooling kW	Nominal Heating kW	Min/Max Capacity Code	Max no Indoors	Units in Combination
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S-MMS VRF Heat Pump

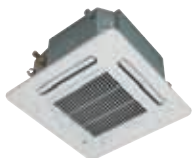
MMY-MAP0501HT8	5	14.0	16.0	2.5 - 6.75	8	5
MMY-MAP0601HT8	6	16.0	18.0	3.0 - 8.1	10	6
MMY-MAP0801HT8	8	22.4	25.0	4.0 - 10.8	13	8
MMY-MAP1001HT8	10	28.0	31.5	5.0 - 13.5	16	10
MMY-MAP1201HT8	12	33.5	35.5	6.0 - 16.2	20	12
MMY-AP1401HT8	14	45.0	43.0	7.0 - 18.9	23	8+6
MMY-AP1601HT8	16	45.0	50.0	8.0 - 21.6	27	8+8
MMY-AP1801HT8	18	50.4	56.5	9.0 - 24.3	30	10+8
MMY-AP2001HT8	20	56.0	63.0	10.0 - 27.0	33	10+10
MMY-AP2201HT8	22	61.5	69.0	11.0 - 29.7	37	8+8+6
MMY-AP2211HT8	22	61.5	69.0	11.0 - 29.7	37	12+10
MMY-AP2401HT8	24	68.0	76.5	12.0 - 32.4	40	8+8+8
MMY-AP2411HT8	24	68.0	76.5	12.0 - 32.4	40	12+12
MMY-AP2601HT8	26	73.0	81.5	13.0 - 35.1	43	10+8+8
MMY-AP2801HT8	28	78.5	88.0	14.0 - 37.8	47	10+10+8
MMY-AP3001HT8	30	84.0	95.0	15.0 - 40.5	48	10+10+10
MMY-AP3201HT8	32	90.0	100.0	16.0 - 43.2	48	8+8+8+8
MMY-AP3211HT8	32	90.0	100.0	16.0 - 43.2	48	12+10+10
MMY-AP3401HT8	34	96.0	108.0	17.0 - 45.9	48	10+8+8+8
MMY-AP3411HT8	34	96.0	108.0	17.0 - 45.9	48	12+12+10
MMY-AP3601HT8	36	101.0	113.0	18.0 - 48.6	48	10+10+8+8
MMY-AP3611HT8	36	101.0	113.0	18.0 - 48.6	48	12+12+12
MMY-AP3801HT8	38	106.5	119.5	19.0 - 51.3	48	10+10+10+8
MMY-AP4001HT8	40	112.0	126.5	20.0 - 54.0	48	10+10+10+10
MMY-AP4201HT8	42	118.0	132.0	21.0 - 56.7	48	12+10+10+10
MMY-AP4401HT8	44	123.5	138.0	22.0 - 59.4	48	12+12+10+10
MMY-AP4601HT8	46	130.0	145.0	23.0 - 62.1	48	12+12+12+10
MMY-AP4801HT8	48	135.0	150.0	24.0 - 64.8	48	12+12+12+12

Notes

Note that combinations require a RBM-BT13E joint kit (2 units need 1, 3 units need 2 and 4 units need 3)
A 3/8" oil line is required between condensing unit in a combined module

VRF Indoor Units

VRF Indoor Unit Technical Data



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions	Weight kg	Retail
Compact 600x600mm Cassette						
MMU-AP0071MH	0.8	2.2	2.5	268x575x575	17	£918
MMU-AP0091MH	1.0	2.8	3.2	268x575x575	17	£942
MMU-AP0121MH	1.25	3.6	4.0	268x575x575	17	£966
MMU-AP0151MH	1.7	4.5	5.0	268x575x575	17	£1047
MMU-AP0181MH	2.0	5.6	6.3	268x575x575	17	£1104

Notes

Indoor units come complete with a RBC-UM11PG(W)E grille (Weight 3kg - Dimensions 27x700x700mm)
Indoor units fitted with lift pump as standard



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions	Weight kg	Retail
4-Way Standard Cassettes						
MMU-AP0092H	1.0	2.8	3.2	256x840x840	20	£988
MMU-AP0122H	1.25	3.6	4.0	256x840x840	20	£1018
MMU-AP0152H	1.7	4.5	5.0	256x840x840	22	£1073
MMU-AP0182H	2.0	5.6	6.3	256x840x840	23	£1133
MMU-AP0242H	2.5	7.1	8.0	256x840x840	23	£1175
MMU-AP0272H	3.0	8.0	9.0	256x840x840	23	£1262
MMU-AP0302H	3.2	9.0	10.0	256x840x840	23	£1383
MMU-AP0362H	4.0	11.2	12.5	319x840x840	28	£1480
MMU-AP0482H	5.0	14.0	16.0	319x840x840	28	£1641
MMU-AP0562H	6.0	16.0	18.0	319x840x840	28	£1808

Notes

Indoor units come complete with a RBC-U31PG(W)E grille (Weight 4.5kg - Dimensions 35x950x950mm)
Indoor units fitted with lift pump as standard

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Run Amps	Start Amps	Fuse Size Amps	Power Supply V-ph-Hz
Compact 600x600mm Cassette								
MMU-AP0071MH	0.034	552/462/378	212/178/145	36/32/28	0.28	0.49	3	240-1-50
MMU-AP0091MH	0.036	570/468/378	219/180/145	37/33/28	0.30	0.52	3	240-1-50
MMU-AP0121MH	0.038	594/504/402	228/194/155	37/33/29	0.31	0.54	3	240-1-50
MMU-AP0151MH	0.041	660/552/468	254/212/180	40/35/30	0.34	0.59	3	240-1-50
MMU-AP0181MH	0.052	762/642/522	293/247/201	44/39/34	0.42	0.73	3	240-1-50

Notes

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Int. Cable	Max Run Amps	Fuse Size A	Power Supply V-ph-Hz
4-Way Standard Cassettes								
MMU-AP0092H	0.020	800/730/680	222/203/189	30/29/27	0.17	0.30	3	240-1-50
MMU-AP0122H	0.020	800/730/680	222/203/189	30/29/27	0.17	0.30	3	240-1-50
MMU-AP0152H	0.022	930/830/790	258/231/219	31/29/27	0.19	0.33	3	240-1-50
MMU-AP0182H	0.026	1050/920/800	292/256/222	32/29/28	0.21	0.36	3	240-1-50
MMU-AP0242H	0.032	1200/920/820	333/256/228	34/31/28	0.24	0.42	3	240-1-50
MMU-AP0271H	0.032	1200/920/820	333/256/228	34/31/28	0.24	0.42	3	240-1-50
MMU-AP0301H	0.048	1320/1110/850	367/308/236	37/33/30	0.35	0.59	3	240-1-50
MMU-AP0361H	0.070	1680/1300/1070	467/361/297	40/36/33	0.59	0.87	3	240-1-50
MMU-AP0481H	0.110	2040/1430/1130	567/397/314	44/38/34	0.81	1.23	3	240-1-50
MMU-AP0561H	0.112	2090/1520/1230	581/422/342	45/40/34	0.83	1.26	3	240-1-50

Notes

Indoor units come complete with a RBC-U31PG(W)E grille (Weight 4.5kg - Dimensions 35x950x950mm)
Indoor units fitted with lift pump as standard

VRF Indoor Units

VRF Indoor Unit Technical Data



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions	Weight kg	Retail
2-Way Cassette						
MMU-AP0071WH	0.8	2.2	2.5	398x830x550	33	£1056
MMU-AP0091WH	1.0	2.8	3.2	398x830x550	33	£1088
MMU-AP0121WH	1.25	3.6	4.0	398x830x550	33	£1116
MMU-AP0151WH	1.7	4.5	5.0	398x1350x550	44	£1211
MMU-AP0181WH	2.0	5.6	6.3	398x1350x550	44	£1291
MMU-AP0241WH	2.5	7.1	8.0	398x1350x550	48	£1373
MMU-AP0271WH	3.0	8.0	9.0	398x1350x550	48	£1518
MMU-AP0310WH	3.2	9.0	10.0	398x1350x550	48	£1563

Notes

Indoor units come complete with a Grille. RBC-UW136PG (0071-0121) or RBC-UW266PG (0151-0301).
Indoor units fitted with lift pump as standard 500mm



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions	Weight kg	Retail
1-Way Cassette						
MMU-AP0071YH	0.8	2.2	2.5	235x850x400	22	£1209
MMU-AP0091YH	1.0	2.8	3.2	235x850x400	22	£1269
MMU-AP0121YH	1.25	3.6	4.0	235x850x400	22	£1299
MMU-AP0152SH	1.7	4.5	5.0	198x1000x655	27	£1318
MMU-AP0182SH	2.0	5.6	6.3	198x1000x655	27	£1428
MMU-AP0242SH	2.5	7.1	8.0	198x1200x655	31	£1498

Notes

Indoor units come complete with a RBC-UY135PG (0071-0121) or RBC-US21PGE (0152-0242)
Indoor units fitted with lift pump as standard 350mm

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Int. Cable	Max Run Amps	Fuse Size A	Power Supply V-ph-Hz
2-Way Cassette								
MMU-AP0071WH	0.070	570/510/450	158/142/125	34/32/30	0.31	0.47	3	240-1-50
MMU-AP0091WH	0.070	570/510/450	158/142/125	34/32/30	0.31	0.47	3	240-1-50
MMU-AP0121WH	0.070	570/510/450	158/142/125	34/32/30	0.31	0.47	3	240-1-50
MMU-AP0151WH	0.072	780/700/600	217/195/167	35/33/30	0.32	0.60	3	240-1-50
MMU-AP0181WH	0.072	780/700/600	217/195/167	35/33/30	0.32	0.60	3	240-1-50
MMU-AP0241WH	0.105	1140/960/720	317/267/200	38/35/33	0.46	0.89	3	240-1-50
MMU-AP0271WH	0.105	1140/960/720	317/267/200	38/35/33	0.46	0.89	3	240-1-50
MMU-AP0310WH	0.106	1260/1140/960	350/317/267	40/37/34	0.47	0.98	3	240-1-50

Notes

Notes

Indoor units come complete with a RBC-U31PG(W)E grille (Weight 4.5kg - Dimensions 35x950x950mm)
Indoor units fitted with lift pump as standard

VRF Indoor Units

VRF Indoor Unit Technical Data



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Slim Duct Units						
MMD-AP0071SPH	0.8	2.2	2.5	210x845x645	22	£710
MMD-AP0091SPH	1.0	2.8	3.2	210x845x645	22	£730
MMD-AP0121SPH	1.25	3.6	4.0	210x845x645	22	£750
MMD-AP0151SPH	1.7	4.5	5.0	210x845x645	23	£770
MMD-AP0181SPH	2.0	5.6	6.3	210x845x645	23	£790

Notes

Indoor units fitted with lift pump as standard 850mm



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Standard Duct						
MMD-AP0071BH	0.8	2.2	2.5	320x550x800	28	£700
MMD-AP0091BH	1.0	2.8	3.2	320x550x800	28	£710
MMD-AP0121BH	1.25	3.6	4.0	320x550x800	28	£760
MMD-AP0151BH	1.7	4.5	5.0	320x700x800	32	£790
MMD-AP0181BH	2.0	5.6	6.3	320x700x800	32	£900
MMD-AP0241BH	2.5	7.1	8.0	320x1000x800	43	£940
MMD-AP0271BH	3.0	8.0	9.0	320x1000x800	43	£1010
MMD-AP0301BH	3.2	9.0	10.0	320x1000x800	43	£1080
MMD-AP0361BH	4.0	11.2	12.5	320x1350x800	55	£1235
MMD-AP0481BH	5.0	14.0	16.0	320x1350x800	55	£1320
MMD-AP0561BH	6.0	16.0	18.0	320x1350x800	55	£1445

Notes

Indoor units fitted with lift pump as standard 270mm

Indoor Model	Power Input kW	Airflow h/m/l m ³ /h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Slim Duct Unit								
MMD-AP0071SPH	0.039	540/470/400	150/131/111	36/33/30	0.29	0.51	3	240-1-50
MMD-AP0091SPH	0.039	540/470/400	150/131/111	36/33/30	0.29	0.51	3	240-1-50
MMD-AP0121SPH	0.043	600/520/450	167/144/125	38/35/32	0.31	0.54	3	240-1-50
MMD-AP0151SPH	0.045	690/600/520	192/167/144	39/36/33	0.32	0.56	3	240-1-50
MMD-AP0181SPH	0.054	780/680/580	217/189/161	40/38/36	0.39	0.68	3	240-1-50

Notes

Indoor Model	Power Input kW	Airflow h/m/l m ³ /h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Standard Duct								
MMD-AP0071BH	0.033	480/420/340	133x117x95	30/28/26	0.29	0.50	3	240-1-50
MMD-AP0091BH	0.033	480/420/340	133x117x95	30/28/26	0.29	0.50	3	240-1-50
MMD-AP0121BH	0.039	570/490/400	158x136x111	31/29/27	0.34	0.59	3	240-1-50
MMD-AP0151BH	0.039	650/540/480	181x150x133	31/29/27	0.34	0.59	3	240-1-50
MMD-AP0181BH	0.050	780/660/540	217x183x150	32/30/28	0.43	0.75	3	240-1-50
MMD-AP0241BH	0.060	1140/990/870	317x275x242	33/31/29	0.52	0.90	3	240-1-50
MMD-AP0271BH	0.060	1140/990/870	317x275x242	33/31/29	0.52	0.90	3	240-1-50
MMD-AP0301BH	0.071	1260x1080x870	350x300x242	34/32/29	0.61	1.05	3	240-1-50
MMD-AP0361BH	0.107	1620x1410x1200	450x392x333	36/34/32	0.83	1.44	3	240-1-50
MMD-AP0481BH	0.128	1980x1710x1490	550x475x414	38/36/32	0.98	1.70	3	240-1-50
MMD-AP0561BH	0.128	1980x1710x1490	550x475x414	38/36/32	0.98	1.70	3	240-1-50

Notes

VRF Indoor Units
VRF Indoor Unit Technical Data


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
High Static Duct						
MMD-AP0181H	2.0	5.6	6.3	380x850x660	50	£1229
MMD-AP0241H	2.5	7.1	8.0	380x850x660	52	£1282
MMD-AP0271H	3.0	8.0	9.0	380x850x660	52	£1457
MMD-AP0361H	4.0	11.2	12.5	380x850x660	56	£1641
MMD-AP0481H	5.0	14.0	16.0	380x1200x660	67	£1772
MMD-AP0721H	8.0	22.4	25.0	470x1380x1250	150	£2784
MMD-AP0961H	10.0	28.0	31.5	470x1380x1250	150	£2996

Notes


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Ceiling Mount						
MMC-AP0151H	1.7	4.5	5.0	210x910x680	22	£1145
MMC-AP0181H	2.0	5.6	6.3	210x910x680	22	£1260
MMC-AP0241H	2.5	7.1	8.0	210x1180x680	26	£1330
MMC-AP0271H	3.0	8.0	9.0	210x1180x680	26	£1350
MMC-AP0361H	4.0	11.2	12.5	210x1595x680	34	£1370
MMC-AP0481H	5.0	14.0	16.0	210x1595x680	34	£1400

Notes

Indoor units with optional 600mm lift pump

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
High Static Duct								
MMD-AP0181H	0.184	1080/900/720	300/250/200	37/35/33	0.81	1.3	3	240-1-50
MMD-AP0241H	0.299	1580/1320/1060	439/367/295	40/38/36	1.35	3.5	5	240-1-50
MMD-AP0271H	0.299	1580/1320/1060	439/367/295	40/38/36	1.35	3.5	5	240-1-50
MMD-AP0361H	0.368	1920/1600/1280	533/445/356	40/38/36	1.63	4.1	5	240-1-50
MMD-AP0481H	0.414	2520/2100/1680	700/583/467	40/38/36	1.84	4.8	10	240-1-50
MMD-AP0721H	1.200	4320/3600/2880	1200/1000/800	49/47/45	5.25	13.6	16	240-1-50
MMD-AP0961H	1.260	5040/4200/3360	1400/1167/933	50/48/46	5.52	14.8	16	240-1-50

Notes

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Ceiling Mount								
MMC-AP0151H	0.033	720/600/540	200/167/150	35/32/30	0.29	0.43	3	240-1-50
MMC-AP0181H	0.038	780/660/540	217/183/150	36/33/30	0.32	0.48	3	240-1-50
MMC-AP0241H	0.050	1110/900/840	308/250/233	38/36/33	0.42	0.62	3	240-1-50
MMC-AP0271H	0.050	1110/900/840	308/250/233	38/36/33	0.42	0.62	3	240-1-50
MMC-AP0361H	0.091	1650/1380/1200	458/383/333	41/38/35	0.78	1.17	3	240-1-50
MMC-AP0481H	0.110	1800/1560/1320	500/433/367	43/40/37	0.84	1.25	3	240-1-50

Notes

VRF Indoor Units
VRF Indoor Unit Technical Data


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Wall Mounted						
MMK-AP0072H	0.8	2.2	2.5	275x790x208	11	£542
MMK-AP0092H	1.0	2.8	3.2	275x790x208	11	£555
MMK-AP0122H	1.25	3.6	4.0	275x790x208	11	£565

Notes


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Wall Mounted						
MMK-AP0073H	0.8	2.2	2.5	320x1050x228	15	£542
MMK-AP0093H	1.0	2.8	3.2	320x1050x228	15	£555
MMK-AP0123H	1.25	3.6	4.0	320x1050x228	15	£565
MMK-AP0153H	1.7	4.5	5.0	320x1050x228	15	£675
MMK-AP0183H	2.0	5.6	6.3	320x1050x228	15	£690
MMK-AP0243H	2.5	7.1	8.0	320x1050x228	17	£700

Notes

Indoor units with optional 600mm lift pump
Indoor units include infra red remote control

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Wall Mounted								
MMK-AP0072H	0.017	480/420/360	133/117/100	35/32/29	0.17	0.22	3	240-1-50
MMK-AP0092H	0.018	510/450/360	142/125/100	36/33/29	0.18	0.23	3	240-1-50
MMK-AP0122H	0.019	540/450/360	150/125/100	37/33/29	0.19	0.24	3	240-1-50

Notes

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Wall Mounted								
MMK-AP0073H	0.018	570/450/390	158/125/108	35/32/29	0.17	0.22	3	240-1-50
MMK-AP0093H	0.021	600/480/390	167/133/108	36/33/29	0.19	0.24	3	240-1-50
MMK-AP0123H	0.021	600/480/390	167/133/108	37/33/29	0.19	0.24	3	240-1-50
MMK-AP0153H	0.043	840/660/540	233/183/150	42/38/35	0.32	0.41	3	240-1-50
MMK-AP0183H	0.043	840/660/540	233/183/150	42/38/35	0.32	0.41	3	240-1-50
MMK-AP0243H	0.050	1020/750/570	283/208/158	42/38/35	0.37	0.47	3	240-1-50

Notes

VRF Indoor Units
VRF Indoor Unit Technical Data


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Floor Mounted						
MML-AP0071H	0.8	2.2	2.5	630x950x230	37	£890
MML-AP0091H	1.0	2.8	3.2	630x950x230	37	£910
MML-AP0121H	1.25	3.6	4.0	630x950x230	37	£935
MML-AP0151H	1.7	4.5	5.0	630x950x230	37	£980
MML-AP0181H	2.0	5.6	6.3	630x950x230	40	£1040
MML-AP0241H	2.5	7.1	8.0	630x950x230	40	£1100

Notes


Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Floor Chassis						
MML-AP0071BH	0.8	2.2	2.5	600x745x220	21	£790
MML-AP0091BH	1.0	2.8	3.2	600x745x220	21	£810
MML-AP0121BH	1.25	3.6	4.0	600x745x220	21	£835
MML-AP0151BH	1.7	4.5	5.0	600x1045x220	29	£875
MML-AP0181BH	2.0	5.6	6.3	600x1045x220	29	£930
MML-AP0241BH	2.5	7.1	8.0	600x1045x220	29	£965

Notes

Indoor units with optional 600mm lift pump

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Floor Mounted								
MML-AP0071H	0.056	480/420/360	133/117/100	39/37/35	0.26	0.60	3	240-1-50
MML-AP0091H	0.056	480/420/360	133/117/100	39/37/35	0.26	0.60	3	240-1-50
MML-AP0121H	0.092	900/780/650	250/217/181	45/41/38	0.43	0.80	3	240-1-50
MML-AP0151H	0.092	900/780/650	250/217/181	45/41/38	0.43	0.80	3	240-1-50
MML-AP0181H	0.102	1080/930/780	300/258/217	49/44/39	0.47	1.10	3	240-1-50
MML-AP0241H	0.102	1080/930/780	300/258/217	49/44/39	0.47	1.10	3	240-1-50

Notes

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Floor Chassis								
MML-AP0071H	0.056	460/400/300	128/111/83	36/34/32	0.25	0.60	3	240-1-50
MML-AP0091H	0.056	460/400/300	128/111/83	36/34/32	0.25	0.60	3	240-1-50
MML-AP0121H	0.056	460/400/300	128/111/83	36/34/32	0.25	0.60	3	240-1-50
MML-AP0151H	0.090	740/600/490	206/167/136	36/34/32	0.45	0.80	3	240-1-50
MML-AP0181H	0.090	740/600/490	206/167/136	36/34/32	0.45	0.80	3	240-1-50
MML-AP0241H	0.095	950/790/640	264/220/178	42/37/33	0.46	1.00	3	240-1-50

Notes

VRF Indoor Units

VRF Indoor Unit Technical Data



Indoor Model	Capacity Code hp	Nominal Cooling kW	Nominal Heating kW	Dimensions H x W x D mm	Weight kg	Retail
Floor Cabinet						
MMF-AP0151H	1.7	4.5	5.0	1750x600x210	48	£1350
MMF-AP0181H	2.0	5.6	6.3	1750x600x210	48	£1400
MMF-AP0241H	2.5	7.1	8.0	1750x600x210	49	£1470
MMF-AP0271H	3.0	8.0	9.0	1750x600x210	49	£1520
MMF-AP0361H	4.0	11.2	12.5	1750x600x390	65	£1560
MMF-AP0481H	5.0	14.0	16.0	1750x600x390	65	£1630
MMF-AP0561H	6.0	16.0	18.0	1750x600x390	65	£1720

Notes



Indoor Model	Airflow High/Low m3/h	Airflow High/Low l/s	Temperature Exchange Efficiency	Dimensions H x W x D mm	Weight kg	Retail
Heat Exchanger						
VN-250TE	250/170	69/47	75/75/77 %	270x599x882	29	£920
VN-350TE	350/280	97/78	75/75/77 %	270x804x882	37	£1165
VN-500TE	500/370	139/103	75/75/77 %	270x904x962	43	£1490
VN-800TE	800/650	222/181	75/75/76 %	388x884x1322	71	£2165
VN-1KTAE	1000/810	278/225	75/75/76 %	388x1134x1322	83	£2480

Heat Exchanger Controls

RBC-VNC1/P1	Wall controller to suit VN unit (includes RBC-VNP1)	£440
RBC-VNP1	PCB for VN unit (used for Wal Controller and DI module)	£130
RBC-VNH1	Heater for VN-250 (1 x 1kW heater diameter 150mm)	£325
RBC-VNH2	Heater for VN-350/500 (2 x 1kW heater diameter 200mm)	£325
RBC-VNH3	Heater for VN-800/1000 (2 x 1kW heater diameter 250mm)	£325

Notes

Indoor Model	Power Input kW	Airflow h/m/l m3/h	Airflow h/m/l l/s	Sound Pressure h/m/l dB(A)	Max Operating Current A	Start Current A	Fuse Size A	Power Supply V-ph-Hz
Floor Cabinet								
MMF-AP0151H	0.150	900/780/660	250/217/183	46/43/38	0.67	0.90	3	240-1-50
MMF-AP0181H	0.150	900/780/660	250/217/183	46/43/38	0.67	0.90	3	240-1-50
MMF-AP0241H	0.190	1200/1020/840	333/283/233	49/45/40	0.88	1.10	3	240-1-50
MMF-AP0271H	0.190	1200/1020/840	333/283/233	49/45/40	0.88	1.10	3	240-1-50
MMF-AP0361H	0.280	1910/1680/1380	533/467/383	51/48/44	1.29	1.70	3	240-1-50
MMF-AP0481H	0.350	2160/1860/1560	600/517/433	54/50/46	1.60	2.10	3	240-1-50
MMF-AP0561H	0.350	2160/1860/1560	600/517/433	54/50/46	1.60	2.10	3	240-1-50

Notes

Indoor Model	Max. Ext. Static Pa	Duct Diameter mm	Input Power eh/h/l W	Sound Pressure eh/h/l dB(A)	Operating Range °C	Relative Humidity %	Fuse Size A	Power Supply V-ph-Hz
Heat Exchanger								
VN-250TE	90/80/37	150	119/114/90	28/27/22	-10 to 40	< 85%	3	240-1-50
VN-350TE	95/65/42	150	154/137/128	32/30/26	-10 to 40	< 85%	3	240-1-50
VN-500TE	105/70/38	200	214/188/166	34/32/26	-10 to 40	< 85%	3	240-1-50
VN-800TE	140/110/70	250	347/329/327	39/37.5/34	-10 to 40	< 85%	3	240-1-50
VN-1KTAE	90/55/35	250	445/399/367	38.5/37/33	-10 to 40	< 85%	3	240-1-50



Notes

Technical Data Toshiba Configuration Menu


To Access the Menu

Press   together for 4 seconds

Use the   to change the menu number (Large 2 digit hexadecimal number)

Use the   alter the value of that menu item (Smaller 4 digit number)

When the required item has been changed, press 

When you have finished changing all menu items press  to finish

The system will now re-configure and "SETTING" will be displayed.

Common Values

Item	Description	Description	Value	Default
03	Network / Central Control Address	When under on a Network	0001 to 0064	0099
0E	SHRM Flow Box Indoor Grouping	Used when FS Box serves 2+ indoor units	0000 = normal 0001 = multiple units	0000
12	Outdoor Unit #	Is addressed automatically, can be set manual	0001 to 0030	0099
13	System #	Automatic addressed, twins share same no	0001 to 0064	0099
14	Group master/slave	Automatically addressed, set group arrangement	0000 = Single Indoor 0001 = Group Master 0002 = Group Slave	0000
1F	Max Temp Setting in Cooling Mode	18'c – 29'c	0018 to 0029	0029
20	Min Temp Setting in Cooling Mode	18'c – 29'c	0018 to 0029	0018
21	Max Temp Setting in Heating Mode	18'c – 29'c	0018 to 0029	0029
22	Min Temp Setting in Heating Mode	18'c – 29'c	0018 to 0029	0018
25	Max Temp Setting in Auto Mode	18'c – 29'c	0018 to 0029	0029
26	Min Temp Setting in Auto Mode	18'c – 29'c	0018 to 0029	0018
28	Auto restart	Enable or Disable	0000 = disabled 0001 = enabled	0000
32	Sensor Location	Return air or local controller	0000 = Return Air 0001 = Local Remote	0000

Data from wired controller

Press  and  for 4 seconds

Use   to change the menu item

Item	Value	Item	Value
00	Room Temperature Sensor	60	TE (heat exchanger) sensor
01	Controller Temp	61	TO (ambient air) sensor
02	TA (return air) sensor	62	TD (discharge) sensor
03	TC (indoor coil) sensor	65	THS (heat sink) sensor
04	TCJ (indoor coil) sensor		

Technical Data VRF Addressing

Pre-check

1. Check that the rotary switches SW01, SW02 & SW03 on the outdoor PCB are set to 1.
2. If error code is displayed on 7-segment LED display, check fault list.
3. Check that [L08] is displayed on LED (meaning indoors are not addressed). If the indoors have been addressed it will state [U1].
4. Ensure power is to each indoor and the remote control is showing its frame lines (not totally blank).
5. If the system is using the central controller network (U3/U4) – the white relay connector (Outdoor connects to U1/U2) should be disconnected.
6. If multiple outdoor refrigerant systems are being connected to a single control system (central controller or BMS for example) then at this point you should manually address the outdoor unit numbers on each header only. System 1, System 2 etc. This is to avoid duplicate addresses of outdoor units on addressing (done using SW13 and SW14 on the outdoor).

Auto. Addressing Procedure

1. Turn on power of indoors then outdoors.
2. Check that [U1 L08] is flashing.
3. Push SW15 to start the automatic addressing (takes 5~10mins).
4. You should see count (Auto 1.. Auto 2..Auto 3..etc) then [U1] flashing.
5. When [U1] is no longer flashing (is static) the addressing is complete.
6. If using the (U3/U4) central control network, reconnect the white relay connector at the outdoor units.
7. If multiple refrigerant lines are connected to one control network ensure that only the header system (1) has the terminal resistance (SW30-2) set to ON. Each subsequent header should have (SW30-2) set to OFF.

To clear the address of one indoor

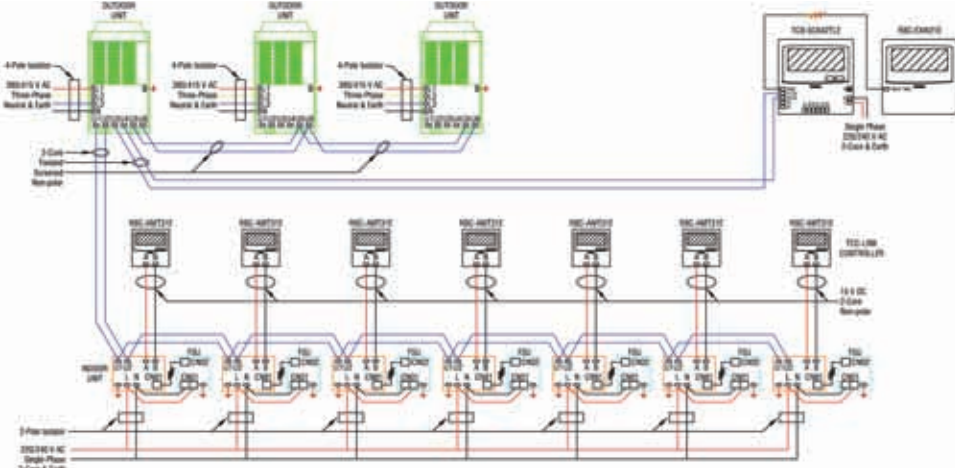
1. Refer to the configuration menu.
2. Reset menu options 03, 12, 13 & 14 to 0099.
3. This is now reset. You can now re-address this indoor

To clear the indoor addresses of a VRF refrigerant Circuit

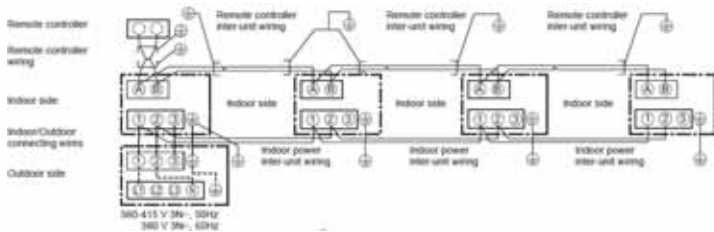
1. Turn off the power to that circuit.
2. On the header, remove the relay connector (U1/U2) to (U3/U4).
3. Turn ON SW30-2 terminal resistance on header if it is set to OFF
4. Turn ON the Indoor then outdoor power
5. Check when [U1] is displayed
6. At the header of line to be cleared, set SW01 to [2] SW02 to [1] SW03 to [2]
7. Check the display states [A.d.buS] and then press SW04 for 5 seconds (to clear line + indoor + group address)
8. At the header of line to be cleared, set SW01 to [2] SW02 to [2] SW03 to [2]
9. Check that display states [A.d.nEt] and then press SW04 for 5 seconds (to clear central addresses)
10. After [A.d.c.L] is showing return SW01, SW02 and SW03 to [1][1][1]
11. When it has cleared [U1 L08] should be displayed to note nil addresses are set

Technical Data - Wiring

VRF Example Wiring Diagram (SHRM)

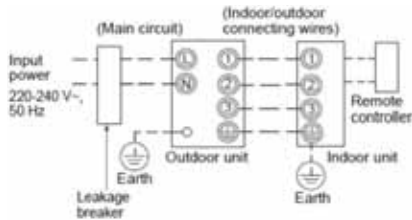


Digital Inverter Quad Wiring



Same applies to Triple and Twin wiring but please note difference in mains supply to each model of condensing unit.

Digital Inverter Single System Wiring



Technical Data - Piping

Digital Inverter Twin/Triple/Quad Piping Guidelines (for RAV-SM2244AT & RAV-SM2804AT)

Refrigerant Pipe Length

Simultaneous twin, triple

Outdoor unit	Allowable pipe length (m)			Height difference (m)		
	Total length + R1 + R2 + R1 + R3 + R1 + R4 Maximum	Branch piping + R2 + R3 + R4 Maximum	Branch piping + R3 + R2 + R4 + R2 + R4 + R3 Maximum	Indoor-outdoor H		Indoor-outdoor (LN)
			Indoor unit: Upper	Outdoor unit: Upper		
SM2244	70	30	10	30	30	0.5
SM2804	70	30	10	30	30	0.5

Outdoor unit	Pipe diameter (mm)				Number of bent portions
	Main pipe		Branch piping		
	Gas side	Liquid side	Gas side	Liquid side	
SM2244	Ø28.6	Ø12.7	Ø15.9	Ø9.5	10 or less
SM2804	Ø28.6	Ø12.7	Ø15.9	Ø9.5	10 or less

Figure of Simultaneous twin

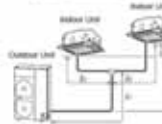
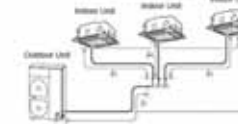


Figure of Simultaneous triple

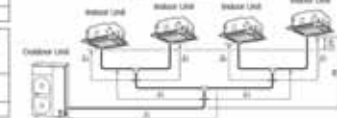


Simultaneous double twin

Outdoor unit	Allowable pipe length (m)				Height difference (m)		
	Total length + R1 + R2 + R4 + R1 + R2 + R5 + R1 + R3 + R6 + R1 + R3 + R7 Maximum	Branch piping + R4 + R5 + R6 + R7 Maximum	Branch piping + R4 + R2 + R5 + R2 + R6 + R3 + R7 + R3 Maximum	Branch piping + (R4 + R2) - (R5 + R2) + (R4 + R2) - (R7 + R3) + (R5 + R2) - (R6 + R3) + (R5 + R2) - (R7 + R3) + (R6 + R3) - (R7 + R3) Maximum	Indoor-outdoor H		Indoor-outdoor (LN)
				Indoor unit: Upper	Outdoor unit: Upper		
SM2244	70	15	20	6	30	30	0.5
SM2804	70	15	20	6	30	30	0.5

Outdoor unit	Pipe diameter (mm)				Number of bent portions
	Main pipe		Branch piping		
	Gas side	Liquid side	Gas side	Liquid side	
SM2244	Ø28.6	Ø12.7	Ø4, Ø5, Ø6, Ø7, Ø12.7	Ø2, Ø3, Ø6.5	10 or less
SM2804	Ø28.6	Ø12.7	Ø2 to Ø7, Ø15.9	Ø2 to Ø7, Ø9.5	10 or less

Figure of Simultaneous double twin



DI Twin/Triple Piping Guidelines (for RAV-SM1603AT, RAV-SM1403AT & RAV-SM1103AT)

Simultaneous twin, triple

System	Allowable pipe length (m)		Height difference (m)		Pipe diameter (mm)		Number of bent portions
	Total length + R1 + R2 + R1 + R3 + R1 + R4 Maximum	Distributed pipes + R2 + R4 + R3 + R4 + R4 + R3 Maximum	Indoor-outdoor H Indoor unit: Upper Outdoor unit: Upper	Indoor-outdoor (LN)	Main pipe Gas side Liquid side	Branching pipe Gas side Liquid side	
TWIN	50	15	10	30	0.5	Ø15.9 Ø9.5 Ø11.9 Ø9.1	10 or less
TRIPLE	50	15	10	30	0.5	Ø15.9 Ø9.5 Ø12.7 Ø5.4	10 or less

Figure of Single

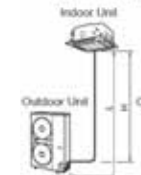


Figure of Simultaneous twin

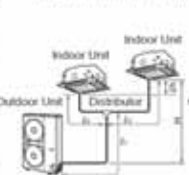
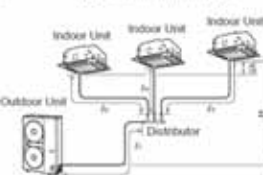


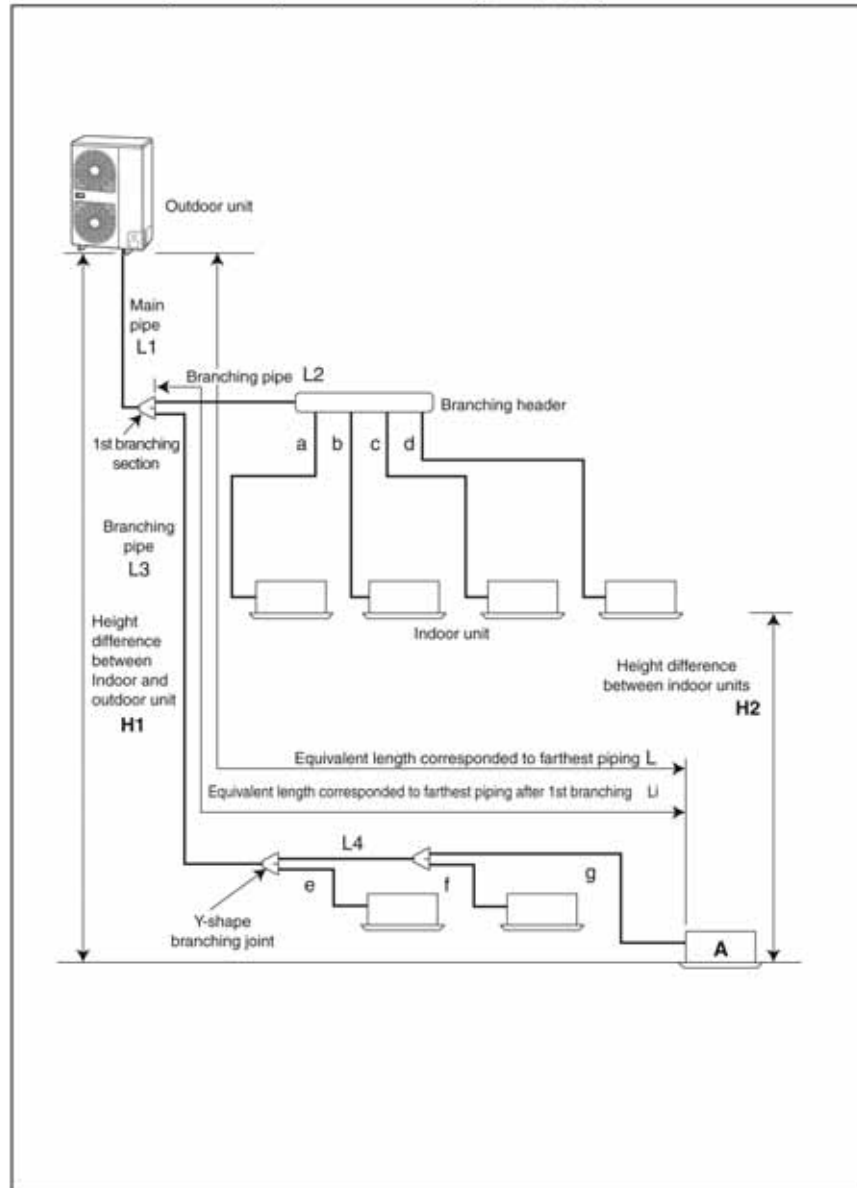
Figure of Simultaneous triple



Mini_SMMS pipe limitations

1-4-2. Refrigerant piping length and piping size

① Allowable length and height difference of refrigerant piping



① Allowable length and height difference of refrigerant piping

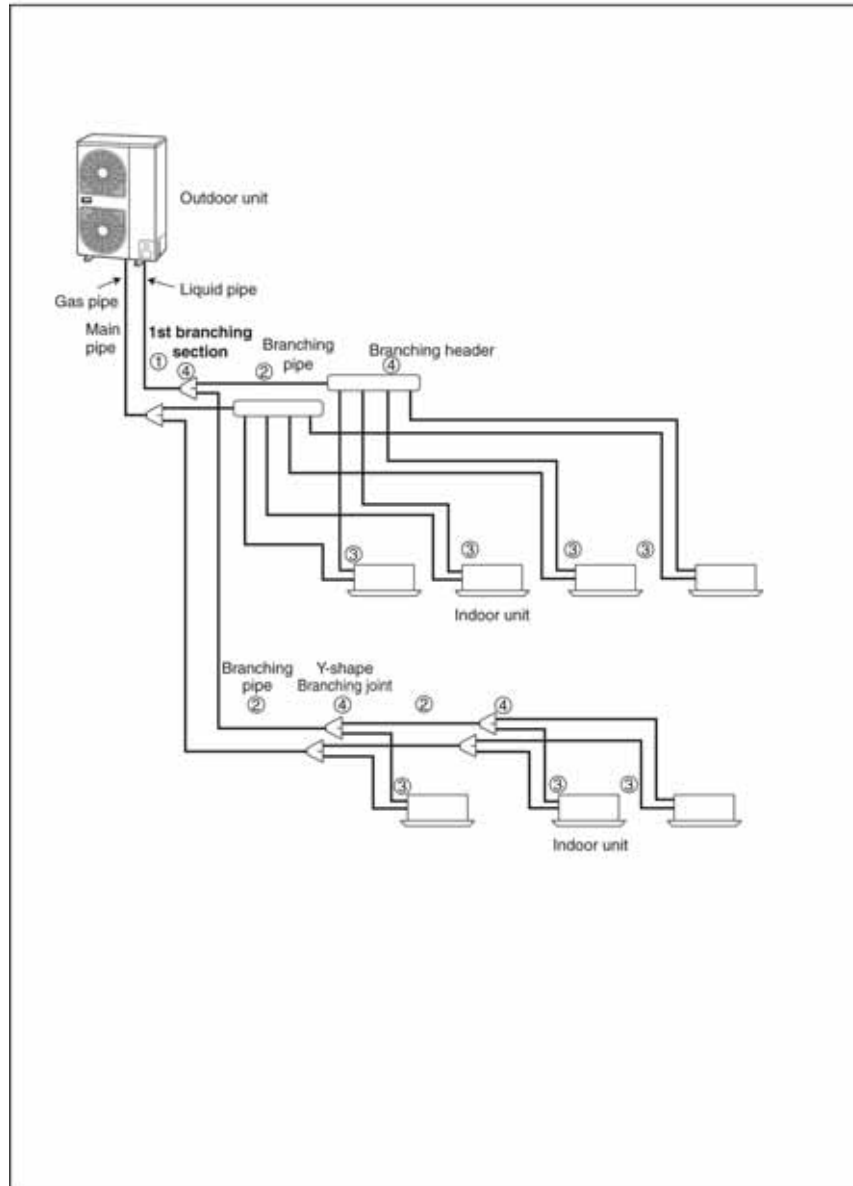
		Allowable value	Piping section	
Piping Length	Total extension of pipe (Liquid pipe, real length)	180m	$L1+L2+L3+L4+a+b+c+d+e+f+g$	
	Furthest piping length L (*1)	Real length	100m	
		Equivalent length	125m	$L1+L3+L4+g$
	Max.equivalent length of main pipe	65m	L1	
	Equivalent length of furthest piping from 1st branching L1 (*1)	35m	$L3+L4+g$	
Height Difference	Max.real length of indoor unit connecting pipe	15m	a, b, c, d, e, f, g	
	Height between indoor and outdoor units H1	Upper outdoor unit	30m	—
		Lower outdoor unit	20m	—
	Height between indoor units H2	15m	—	

*1 Furthest indoor unit from 1st branch to be named "A"

Mini_SMMS pipe limitations

1-4-2. Refrigerant piping length and piping size

② Selection of refrigerant piping



② Selection of refrigerant piping

No.	Piping parts	Name	Selection of pipe size		
①	Outdoor unit ↓ 1st branching section	Main pipe	Size of main pipe		
			Outdoor unit capacity type	Gas pipe (mm)	Liquid pipe (mm)
			0401 type	15.9	9.5
0501 type	15.9	9.5			
0601 type	19.1	9.5			
②	Branching section ↓ Branching section	Branching pipe	Pipe size between branching sections		
			Total capacity codes of indoor units at down stream side	Gas pipe (mm)	Liquid pipe (mm)
			Equivalent to HP	12.7	9.5
			2.8 to below 6.4	15.9	9.5
6.4 to below 7.2	19.1	9.5			
Note) If the total capacity code value of indoor units exceeds that of the outdoor units, apply the capacity code of outdoor units.					
③	Branching section ↓ Indoor unit	Indoor unit connecting pipe	Connecting pipe size of indoor unit		
			Indoor unit capacity type	Gas pipe (mm)	Liquid pipe (mm)
			007, 009, 012 type	9.5	6.4
			015, 018 type	12.7	6.4
024, 030, 036, 048 type	15.9	9.5			
④	Branching section	Y-shape branching joint Branching header	Selection of branching section		
			Total capacity codes of indoor units at down stream side	Equivalent to HP	Model name
			Y-shape branching joint	Below 6.4	RBM-BY53E
				6.4 to below 7.8	RBM-BY103E
			Branching header	For 4 branches Below 7.8	RBM-HY1043E
				For 8 branches Below 7.8	RBM-HY1083E
Note) *1 : When using a Y-shape branching joint for the 1st branch, select according to capacity code of the outdoor unit. *2 : For 1 line after branching header indoor units with a maximum capacity code of 6.0 in total can be connected.					

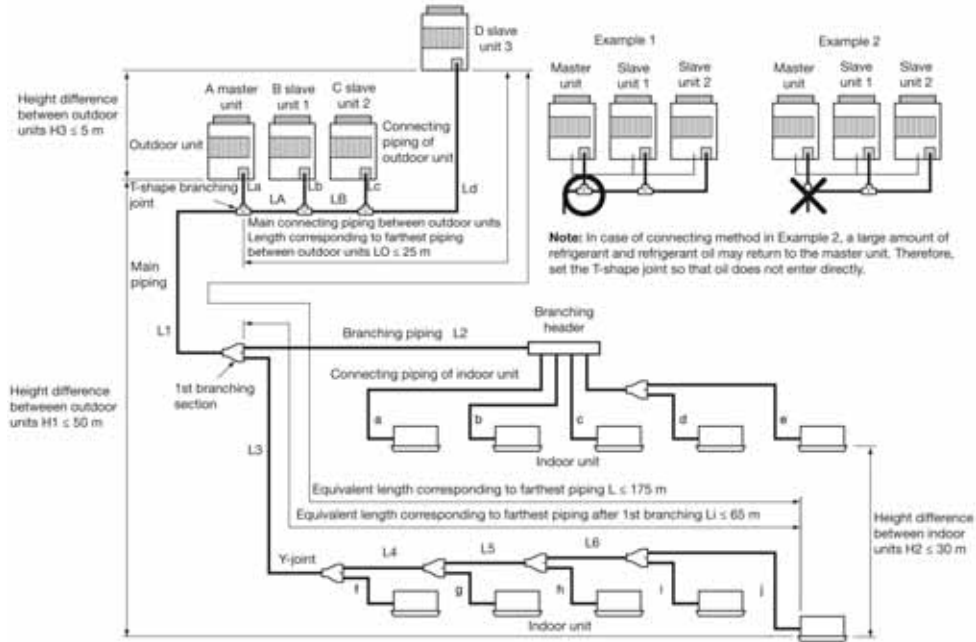
Minimum wall thickness for R410A application

Soft	Half Hard or Hard	OD (inch)	OD (mm)	Minimum wall thickness (mm)
OK	OK	1/4"	6.35	0.80
OK	OK	3/8"	9.52	0.80
OK	OK	1/2"	12.70	0.80
OK	OK	5/8"	15.88	1.00
NG*	OK	3/4"	19.05	1.00

*If the pipe size is ϕ 19.0 or more, use a suitable material.

SMMS pipe limitations

3. Allowable length/height difference of refrigerant piping



System restrictions

Max. No. of combined outdoor units	4 units
Max. capacity of combined outdoor units	48 hp
Max. No. of connected indoor units	48 units
Max. capacity of combined indoor units	$H_1 \leq 15$ 135%
	$H_1 > 15$ 105%

- Note 1:** Combination of outdoor units: Master unit (1 unit) + slave units (0 to 3 units). Master unit is the outdoor unit nearest to the connected indoor units.
- Note 2:** Install the outdoor units in order of capacity. (Master unit \geq slave unit 1 \geq slave unit 2 \geq slave unit 3)
- Note 3:** Refer to outdoor unit combination table on page 7.
- Note 4:** Piping to indoor units shall be perpendicular to piping to the master outdoor unit as in Example 1. Do not connect piping to indoor units in the same direction as the master outdoor unit in Example 2.

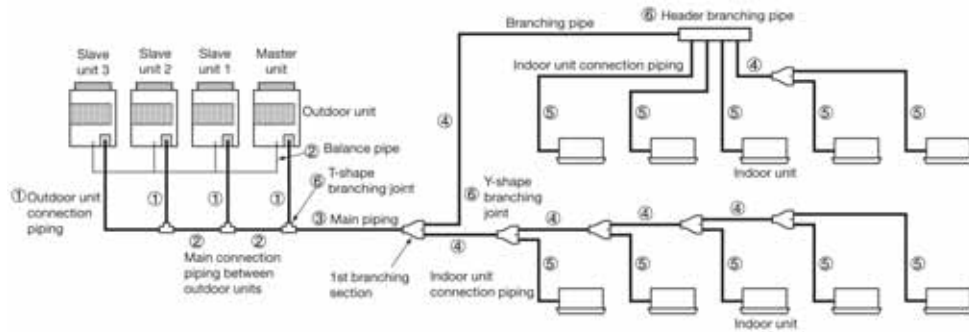
Allowable length and height difference of refrigerant piping

Piping length	Allowable value		Piping section
	Total extension of pipe (liquid pipe, actual length)	Equivalent length	
	300 m		$L_A + L_B + L_a + L_b + L_c + L_d + L_1 + L_2 + L_3 + L_4 + L_5 + L_6 + L_7 + a + b + c + d + e + f + g + h + i + j$
Farthest piping length L (*)	150 m		$L_A + L_B + L_d + L_1 + L_3 + L_4 + L_5 + L_6 + j$
	175 m		$L_3 + (L_4 + L_5 + L_6 + j)$
Equivalent length of farthest piping from 1st branching L_i (**)	85 m		$L_A + L_B + L_d + L_1 + L_3 + L_4 + L_5 + L_6 + L_c$
Equivalent length of farthest piping between outdoor units $L0$ (†)	25 m		L_1
Max. equivalent length of main piping (***)	85 m		L_1
Max. equivalent length of outdoor unit connection piping	10 m		L_d, L_a, L_b, L_c
Max. actual length of indoor unit connection piping	30 m		$a, b, c, d, e, f, g, h, i, j$
Height difference			
Height between indoor and outdoor units $H1$	Upper outdoor unit	50 m	---
	Lower outdoor unit	40 m (**)	---
Height between indoor units $H2$		30 m	---
Height between outdoor units $H3$		5 m	---

* (D) is outdoor unit farthest from 1st branching, and (j) is indoor unit farthest from 1st branching.
 ** If the height difference ($H2$) between indoor units exceeds 3 m, set below 30 m.
 *** If the maximum combination capacity of the outdoor units is 46 hp or more, the maximum equivalent length is restricted up to 70 m.

SMMS pipe limitations

4. Selection of refrigerant piping



① Pipe size of outdoor unit (Table 1)

Model name	MMY-	Gas side	Liquid side
MAP0501T8	MAP0501HT8	Ø5/8"	Ø3/8"
MAP0601T8	MAP0601HT8	Ø3/4"	Ø3/8"
MAP0801T8	MAP0801HT8	Ø7/8"	Ø1/2"
MAP1001T8	MAP1001HT8	Ø7/8"	Ø1/2"
MAP1201T8	MAP1201HT8	Ø1-1/8"	Ø1/2"

② Connecting pipe size between outdoor units (Table 2)

Total capacity code of outdoor units downstream	Gas side	Liquid side	Balance pipe
14 to below 22	Ø1-1/8"	Ø5/8"	Ø3/8"
22 to below 26	Ø1-3/8"	Ø5/8"	Ø3/8"
26 to below 36	Ø1-3/8"	Ø3/4"	Ø3/8"
36 or more	Ø1-5/8"	Ø7/8"	Ø3/8"

③ Size of main pipe (Table 3)

Total capacity code of all outdoor units (*1)	Gas side	Liquid side
Below 6	Ø5/8"	Ø3/8"
6 to below 8	Ø3/4"	Ø3/8"
8 to below 12	Ø7/8"	Ø1/2"
12 to below 14	Ø1-1/8"	Ø1/2"
14 to below 22	Ø1-1/8"	Ø5/8"
22 to below 26	Ø1-3/8"	Ø5/8"
26 to below 36	Ø1-3/8"	Ø3/4"
36 to below 46	Ø1-5/8"	Ø7/8"
46 or more	Ø1-5/8" (*5)	Ø7/8"

Determine thickness of the main pipe according to capacity of the outdoor units.

④ Pipe size between branching sections (Table 4)

Total capacity code of indoor units downstream (*1)	Gas side	Liquid side
2.8 or less	Ø1/2"	Ø3/8"
2.8 to below 6.4	Ø5/8"	Ø3/8"
6.4 to below 12.2	Ø7/8"	Ø1/2"
12.2 to below 20.2	Ø1-1/8"	Ø5/8"
20.2 to below 25.2	Ø1-3/8"	Ø5/8"
25.2 to below 35.2	Ø1-3/8"	Ø3/4"
35.2 or more	Ø1-5/8"	Ø7/8"

If the total capacity code value of indoor units exceeds that of the outdoor units, apply the capacity code of the outdoor units.

⑤ Piping of indoor unit (Table 5)

Indoor unit size	Gas side	Liquid side
007 to 012	Actual length 15 m or less Actual length exceeds 15 m	Ø3/8" Ø1/4"
015 to 018		Ø1/2" Ø1/4"
024 to 056		Ø5/8" Ø3/8"
072 to 096		Ø7/8" Ø1/2"

⑥ Selection of branching section (Table 6)

	Total capacity code of indoor unit (*1)	Model
Y-shape branching joint (*2)	Below 6.4	RBM-BY53E
	6.4 to below 14.2	RBM-BY103E
	14.2 to below 25.2	RBM-BY203E
	25.2 or more	RBM-BY303E
Branching header (*3)	For 4 branching	RBM-HY1043E
	For 8 branching	RBM-HY2043E
T-shape branching joint (For connecting outdoor unit)	For 4 branching	RBM-HY1083E
	For 8 branching	RBM-HY2083E
T-shape branching joint (For connecting outdoor unit)	1 set of 3 types of T-shape joint pipes as described below: The required quantity is arranged and combined at the site.	RBM-BT13E
	<ul style="list-style-type: none"> Balance pipe (Corresponding difference Ø3/8" × 1) Piping at liquid side (Corresponding difference Ø3/8" to Ø7/8" × 1) Piping at gas side (Corresponding difference Ø5/8" to Ø1-5/8" × 1) 	

⑦ Minimum wall thickness for R-410A application (Table 7)

Soft	Half hard or hard	OD (inch)	Minimum wall thickness (mm)
OK	OK	1/4"	0.80
OK	OK	3/8"	0.80
OK	OK	1/2"	0.80
OK	OK	5/8"	1.00
NG	OK (*4)	3/4"	1.00
NG	OK (*4)	7/8"	1.00
NG	OK (*4)	1-1/8"	1.00
NG	OK (*4)	1-3/8"	1.10
NG	OK (*4)	1-5/8"	1.25

*1 Code is determined according to the unit size. For details, refer to pages 7-9.

*2 When using Y-shape branching joint for 1st branching, select according to capacity code of outdoor unit.

*3 For one line after header branching, indoor units with a maximum of 6.0 capacity code in total can be connected.

*4 If the pipe size is Ø3/4" or more, use a hard type or half hard type for material of the pipe.

*5 The maximum equivalent length of the main pipe should be 70 m or shorter.

SHRM pipe limitations

* Selection of refrigerant piping

No.	Item	Suction gas side	Discharge gas side	Liquid side		Outdoor unit model name	
①	Pipe size of outdoor unit	Ø22.2	Ø19.1	Ø12.7	—	MMY-MAP0802FT8	
		Ø22.2	Ø19.1	Ø12.7		MMY-MAP1002FT8	
		Ø28.6	Ø19.1	Ø12.7		MMY-MAP1202FT8	

No.	Item	Suction gas side	Discharge gas side	Liquid side	Balance pipe	Total capacity code of indoor units at downstream side	
						Equivalent to capacity	Equivalent to HP
②	Connecting pipe size between outdoor unit	Ø28.6	Ø22.2	Ø15.9	Ø9.5	Below 61.5	Below 22

No.	Item	Suction gas side	Discharge gas side	Liquid side		Total capacity code of all outdoor units	
						Equivalent to capacity	Equivalent to HP
③	Size of main pipe	Ø22.2	Ø19.1	Ø12.7	—	Below 33.5	
		Ø28.6	Ø19.1	Ø12.7		33.5	
		Ø28.6	Ø22.2	Ø19.1		45.0 to below 61.5	
		Ø34.9	Ø28.6	Ø19.1		61.5 to below 73.0	
		Ø34.9	Ø28.6	Ø22.2		73.0 or more	

No.	Item	Suction gas side	Discharge gas side	Liquid side		Total capacity code of all outdoor units	
						Equivalent to capacity	Equivalent to HP
④	Pipe size between branching sections *1, *2	Ø15.9	Ø12.7	Ø9.5	—	Below 18.0	
		Ø22.2	Ø19.1	Ø12.7		18.0 to below 34.0	
		Ø28.6	Ø22.2	Ø15.9		34.0 to below 56.5	
		Ø34.9	Ø28.6	Ø15.9		56.5 to below 70.5	
		Ø34.9	Ø28.6	Ø19.1		70.5 or more	
⑤	Pipe size between the end of branch and FS unit	Ø15.9	Ø12.7	Ø9.5	—	Below 18.0	
		Ø22.2	Ø19.1	Ø12.7		18.0 or more	

No.	Item	Suction gas side	Discharge gas side	Liquid side		Capacity rank of indoor unit	
⑥	Piping of indoor unit	Ø9.5	—	Ø6.4	—	007 to 012 type	
		Ø12.7	—	Ø6.4		015 to 018 type	
		Ø15.9	—	Ø9.5		024 to 056 type	
		Ø22.2	—	Ø12.7		072 to 096 type	
⑦	Piping of indoor unit (Between branching and indoor unit) *2	Ø9.5	—	Ø6.4	—	15 m or less	007 to 012 type
		Ø12.7	—	Ø9.5			
		Ø12.7	—	Ø6.4		15 m or less	015 to 018 type
		Ø15.9	—	Ø9.5			
		Ø15.9	—	Ø9.5		024 to 056 type	
		Ø22.2	—	Ø12.7		072 to 096 type	

* Selection for branching section

No.		Total capacity code of indoor unit		Model name	
		Equivalent to capacity	Equivalent to HP	For 3 piping	For 2 piping
⑧	Y-Shape branching joint *3, *4	Below 18.0	Below 6.4	RBM-BY53FE	RBM-BY53E
		18.0 to below 40.0	6.4 to below 14.2	RBM-BY103FE	RBM-BY103E
		40.0 to below 70.5	14.2 to below 25.2	RBM-BY203FE	RBM-BY203E
		70.5 or more	25.2 or more	RBM-BY303FE	RBM-BY303E
		Below 40.0	Below 14.2	RBM-HY1043FE	RBM-HY1043E
⑨	Branching header *3, *4, *5	40.0 to below 70.5	14.2 to below 25.2	RBM-HY2043FE	RBM-HY2043E
		Below 40.0	Below 14.2	RBM-HY1083FE	RBM-HY1083E
⑩	T-Shape branching joint (For connecting outdoor unit)	40.0 to below 70.5	14.2 to below 25.2	RBM-HY2063FE	RBM-HY2063E
		For RBM-BT13FE model, only one set of four types of T-joints is packaged with a unit each. Therefore, No. of T-joints corresponding to No. of units of the system should be procured when work at local site. • Balance pipe (Ø9.52) × 1 • Piping at liquid side (Ø12.7 to Ø22.2) × 1 • Piping at discharge gas side (Ø19.1 to Ø28.6) × 1 • Piping at suction gas side (Ø22.2 to Ø38.1) × 1		RBM-BT13FE	

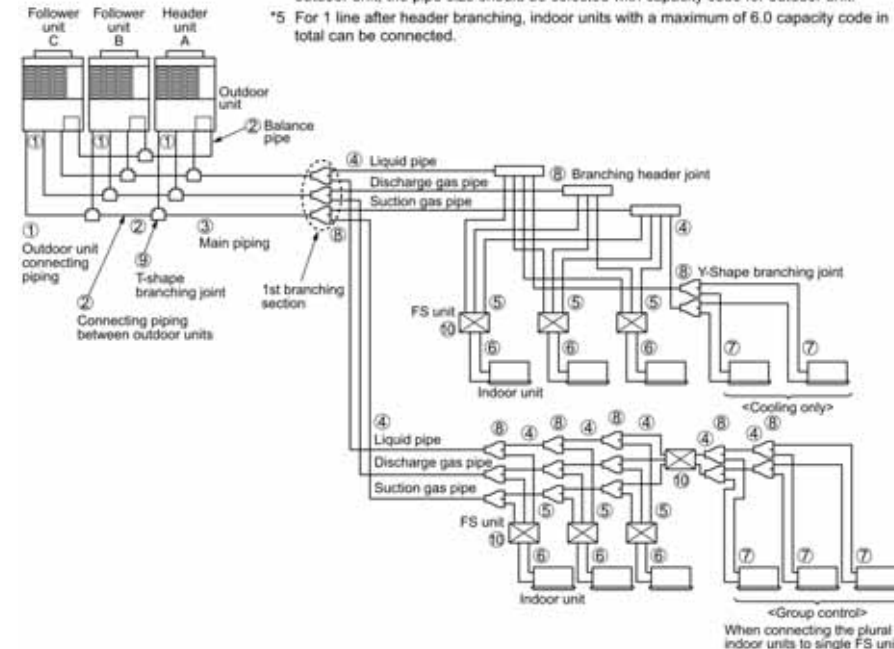
* Selection of FS unit

No.	Model name	Total capacity code of indoor unit		Max. No. of connected indoor unit
		Equivalent to capacity (kW)		
⑪	RBM-Y1122FE	Below 11.2		5
	RBM-Y1802FE	11.2 to below 18.0		8
	RBM-Y2802FE	18.0 to 28.0 or less		8

* Minimum wall thickness for R410A application

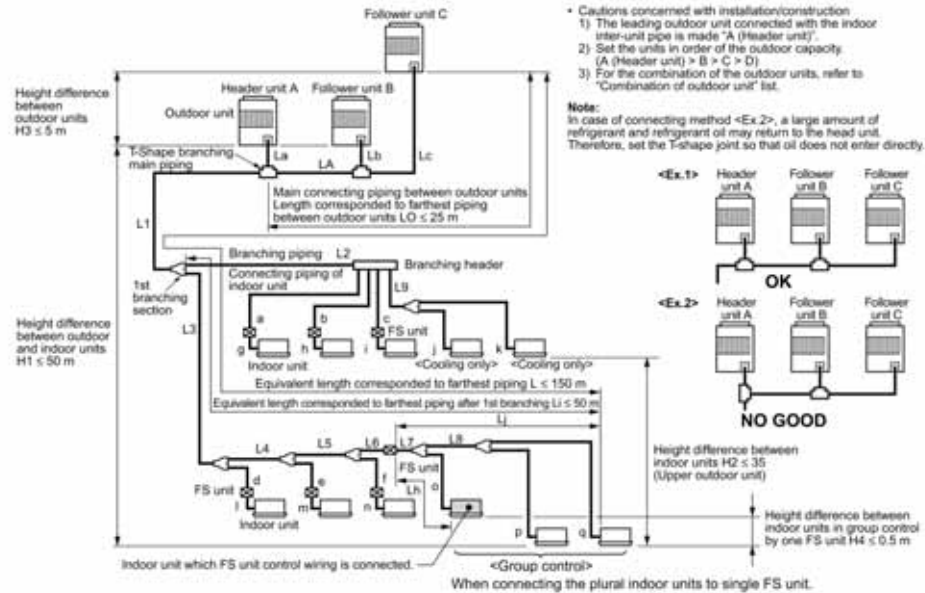
Soft	Half Hard or Hard	Outer dia. (Inch)	Outer dia. (mm)	Minimum wall thickness (mm)
OK	OK	1/4"	6.35	0.80
OK	OK	3/8"	9.52	0.80
OK	OK	1/2"	12.70	0.80
OK	OK	5/8"	15.88	1.00
NG	OK	3/4"	19.05	1.00
NG	OK	7/8"	22.20	1.00
NG	OK	1.1/8"	28.58	1.00
NG	OK	1.3/8"	34.92	1.10

- *1 In case the pipe exceeds main pipe size, it should be the same as main pipe size.
- *2 2 pipes for cooling only indoor unit shall be used with liquid pipe and suction gas pipe.
- *3 Branching pipe on the 1st branch should be selected according to the capacity code for outdoor unit.
- *4 In case total capacity code for indoor units shall be exceeded to capacity code for outdoor unit, the pipe size should be selected with capacity code for outdoor unit.
- *5 For 1 line after header branching, indoor units with a maximum of 6.0 capacity code in total can be connected.



SHRM pipe limitations

Allowable length of refrigerant pipe and height difference



• Allowable length/height difference of the refrigerant pipe

		Allowable value	Pipe section	
Pipe length	Total extension of pipe (Liquid pipe/real length)	300 m	$LA + LA + LB + LC + L1 + L2 + L3 + L4 + L5 + L6 + L7 + LB + L9 + a + b + c + d + e + f + g + h + i + j + k + l + m + n + o + p + q$	
	Farthest piping length L (*1)	Real length	125 m	$LA + Lc + L1 + L3 + L4 + L5 + L6 + L7 + LB + q$
		Equivalent length	150 m	
	Max. equivalent length of main piping	85 m	L1	
	Equivalent length of farthest piping from 1st branching Li (*1)	50 m	$L3 + L4 + L5 + L6 + L7 + LB + q$	
	Max. real length of indoor unit connecting piping	30 m	$a + g, b + h, c + i, d + l, e + m, f + n, j, k$	
	Max. real length between FS unit and indoor unit (*2)	15 m	$g, h, i, l, m, n, L7 + o$	
	Max. equivalent length of outdoor unit connecting pipe LO (*1)	25 m	$LA + Lc (LA + Lb)$	
	Max. real length of outdoor unit connecting pipe	10 m	La, Lb, Lc	
	Max. equivalent length between FS unit and indoor unit Lj	30 m	$L7 + LB + p, L7 + LB + q$	
Max. real length between FS unit and indoor unit which FS unit control wiring is connected Lh (*2)	15 m	$L7 + o$		
Height difference	Height between indoor unit and outdoor unit H1	Upper outdoor unit: 50 m Lower outdoor unit: 30 m	---	
	Height between indoor unit H2	Upper outdoor unit: 35 m Lower outdoor unit: 15 m	---	
	Height between outdoor units H3	5 m	---	
	Height difference between indoor units in group control by one FS unit H4	0.5 m	---	

- *1 : The farthest indoor unit from 1st branch to be named C, and farthest indoor unit from 1st branch to be named (q).
- *2 : Attached connection cable can be used up to 5 m in pipe length between indoor unit and FS unit. When the pipe length between indoor and FS unit exceeds 5 m, be sure to use the connection cable kit (RBC-CBK15FE).

• Restriction to the system

Max. No. of combined outdoor units	3 units	
Max. capacity of combined outdoor units	84.0 kW	
Max. No. of connected indoor units	48 units	
Max. capacity of connected indoor units	H2 ≤ 15 m	135% (*3)
	H2 > 15 m	105%
Min. capacity of connected indoor units	Outdoor capacity : 70%	

*3 : MMY-MAP1202FT8 up to 120%.

- Note 1) Combination of outdoor unit : Header unit (1 unit) + Follower unit (0 to 2 units). Header unit is outdoor unit nearest to the connected indoor units.
- Note 2) Install the outdoor units in order of capacity. (Header unit ≥ Follower unit 1 ≥ Follower unit 2)
- Note 3) Refer to outdoor unit combination table in page 5.
- Note 4) Piping to indoor units shall be perpendicular to piping to the head outdoor unit as <Ex. 1>. Do not connect piping to indoor units in the same direction of head outdoor unit as <Ex. 2>.

VRF fault codes

Fault Codes SMMS/SHRM

Remote controller AMT21/31, will automatically display fault codes at the bottom left of the LCD display. On the outdoor unit fault codes are obtained by the three rotary switches being in the 1-1-1 positions.

IPDU: Intelligent Power Drive Unit
O: Operation T: Timer R: Ready F: Flash

○:LED ON ◐:LED Flasing ●:LED OFF
Alt: Flashing is alternately when there are two flashing LED.
Sim: Simultaneous flashing when there are two flashing LED.

Main TCC Remote	Check Code		AI Central controller	Wireless Remote				Check Code	Judging Device
	Outdoor 7 segment display			Sensor block display					
	Sub code			O	T	R	F		
E01	---	---	---	○	●	●		Communication error between indoor unit and remote controller (Detected at remote controller)	Remote Controller
E02	---	---	---	○	●	●		Sending error of remote controller	Remote Controller
E03	---	---	97	○	●	●		Communication error between indoor unit and remote controller (Detected indoor)	Indoor
E04	---	---	04	●	●	○		Communication circuit error between indoor and outdoor units (Detected indoor)	Indoor
E06	E06	No. of indoor units in which sensor has been normally received	04	●	●	○		Decrease of No. of indoor units	I/F
---	E07	---	---	●	●	○		Communication circuit error of indoor and outdoor units (Detected outdoor)	I/F
E08	E08	Duplicated indoor address	96	○	●	●		Duplicated indoor address	Indoor / I/F
E09	---	---	99	○	●	●		Duplicated master remote controllers	Remote controller
E10	---	---	CF	○	●	●		Communication error in indoor PCB's ass'y	Indoor
E12	E12	01: Indoor / Outdoor communication 02: Communication between outdoor units	42	○	●	●		Automatic address start error	I/F
E15	E15	---	42	●	●	○		No indoor automatic address	I/F
E16	E16	00: Over capacity 01: No. of connected units	89	●	●	○		No. of indoor units / Over capacity	I/F
E18	---	---	97 / 99	○	●	●		Communication error between indoor header and follower units	Indoor
E19	E19	00: No. header units 02: Two or more header units	96	●	●	○		Outdoor header units quantity error	I/F
E20	E20	01: Outdoor of other line connected 02: Indoor of other line connected	42	●	●	○		Other line connected during automatic address	I/F
E23	E23	---	15	●	●	○		Sending error in communication between outdoor units	I/F
E25	E25	---	15	●	●	○		Duplicated follower outdoor unit addresses	I/F
E26	E26	No. of outdoor units which received signal normally	15	●	●	○		Decrease of No. of connected outdoor units	I/F
E28	E28	Detected outdoor unit number	d2	●	●	○		Outdoor follower error	I/F
E31	E31	01: IPDU 1 error 02: IPDU 2 error 03: IPDU 1, 2 error 04: Fan IPDU error 05: IPDU 1 + Fan IPDU error 06: IPDU 2 + Fan IPDU error 07: All IPDU error	CF	●	●	○		IPDU communication error	I/F

Main TCC Remote	Check Code		AI Central controller	Wireless Remote				Check Code	Judging Device
	Outdoor 7 segment display			Sensor block display					
	Sub code			O	T	R	F		
F01	---	---	0F	○	○	●	Alt	Indoor TC1 (Coil) sensor error	Indoor
F02	---	---	0d	○	○	●	Alt	Indoor TC2 (Coil) sensor error	Indoor
F03	---	---	93	○	○	●	Alt	Indoor TC1 (Coil) sensor error	Indoor
F04	F04	---	19	○	○	○	Alt	Outdoor TD1 (Discharge) sensor error	I/F
F05	F05	---	A1	○	○	○	Alt	Outdoor TD2 (Discharge) sensor error	I/F
F06	F06	---	18	○	○	○	Alt	Outdoor TE1 () sensor error	I/F
F07	F07	---	18	○	○	○	Alt	Outdoor TL () sensor error	I/F
F08	F08	---	1b	○	○	○	Alt	Outdoor T0 (Ambient) sensor error	I/F
F10	---	---	0C	○	○	●	Alt	Indoor TA (Return Air) sensor error	Indoor
F12	F12	---	A2	○	○	○	Alt	Outdoor TS1 (Suction) sensor error	I/F
F13	F13	01: Compressor 1 side 02: Compressor 2 side	43	○	○	○	Alt	Outdoor TH (IPDU) sensor error	IPDU
F15	F15	---	18	○	○	○	Alt	Outdoor temp. sensors misconnected (TE, TL)	I/F
F16	F16	---	43	○	○	○	Alt	Outdoor pressure sensors misconnected (Pd, Ps)	I/F
F23	F23	---	43	○	○	○	Alt	Outdoor Ps (pressure) sensor error	I/F
F24	F24	---	43	○	○	○	Alt	Outdoor Pd (pressure) sensor error	I/F
F29	---	---	12	○	○	●	Sim	Indoor other error	Indoor
F31	F31	---	1C	○	○	○	Sim	Outdoor EPROM error	I/F
H01	H01	01: Compressor 1 side 02: Compressor 2 side	IF	●	○	●		Compressor breakdown	IPDU
H02	H02	01: Compressor 1 side 02: Compressor 2 side	1d	●	○	●		Magnetic switch (contactor) error Over current relay operation Compressor error (Lock)	MG-SW Over current relay IPDU
H03	H03	01: Compressor 1 side 02: Compressor 2 side	17	●	○	●		Current detection circuit system error	IPDU
H04	H04	---	44	●	○	●		Compressor 1 case thermo operation	I/F
H06	H06	---	20	●	○	●		Low pressure protection operation	I/F
H07	H07	---	d7	●	○	●		Low oil level protection detected	I/F
H08	H08	01: TK1 sensor error 02: TK2 sensor error 03: TK3 sensor error 04: TK4 sensor error	d4	●	○	●		Oil level detection temperature sensor error	I/F
H14	H14	---	44	●	○	●		Compressor 2 case thermo operation	I/F
H16	H16	01: TK1 oil circuit system error 02: TK2 oil circuit system error 03: TK3 oil circuit system error 04: TK4 oil circuit system error	d7	●	○	●		Oil level detection circuit error Magnetic switch (contactor) error Over current relay operation	I/F MG-SW Over current relay
L03	L03	---	96	○	●	○	Sim	Duplicated indoor header units	Indoor
L04	L04	---	96	○	○	○	Sim	Duplicated outdoor line address	I/F
L05	L05	---	96	○	●	○	Sim	Duplicated indoor units with priority (Displayed on indoor unit with priority)	I/F
L06	L06	No. of indoor units with priority	96	○	●	○	Sim	Duplicated indoor units with priority (Displayed in unit other than indoor unit with priority)	I/F
L07	---	---	99	○	●	○	Sim	Group line in individual indoor unit	Indoor

VRF fault codes

Main TCC Remote	Check Code		AI Central controller	Wireless Remote Sensor block display				Check Code	Judging Device	
	Outdoor 7 segment display			O	T	R	F			
	Sub code									
L07	---	---	99	○	●	○	Sim	Group line in individual indoor unit	Indoor	
L08	L08	---	99	○	●	○	Sim	Indoor group / address unset	Indoor I/F	
L09	---	---	46	○	●	○	Sim	Indoor capacity unset	Indoor	
L10	L10	---	88	○	○	○	Sim	Outdoor capacity unset	I/F	
L17	L17	---	46	○	○	○	Sim	Inconsistency error of outdoor units	I/F	
L18	L18	---	8A	○	○	○	Sim	FS unit error	FS unit	
L20	---	---	98	○	○	○	Sim	Duplicated central controller addresses	AI-NET Indoor	
L28	L28	---	46	○	○	○	Sim	No. of connected outdoor units overcapacity	I/F	
L29	L29	01: IPDU1 error 02: IPDU2 error 03: IPDU3 error 04: Fan IPDU error 05: IPDU1 + Fan IPDU error 06: IPDU2 + Fan IPDU error 07: All IPDU error	CF	○	○	○	Sim	No. of IPDU error	I/F	
L30	L30	Detected indoor address	b6	○	○	○	Sim	Auxiliary interlock in indoor unit	Indoor	
---	L31	---	---	---	---	---	---	IC error	I/F	
P01	---	---	11	●	○	○	Alt	Indoor fan motor error	Indoor	
P03	P03	---	1E	○	●	○	Alt	Discharge temperature TD1 error	I/F	
P04	P04	01: Compressor 1 side 02: Compressor 2 side	21	○	●	○	Alt	High pressure switch detection error	IPDU	
P05	P05	01: Phase-missing detection 02: Phase order error	AF	○	●	○	Alt	Phase-missing detection / Phase order error	I/F	
P07	P07	01: Compressor 1 side 02: Compressor 2 side	1C	○	●	○	Alt	Heat sink overheat error	IPDU I/F	
P10	P10	Detected indoor address	0b	●	○	○	Alt	Indoor overflow error	Indoor	
P12	---	---	11	●	○	○	Alt	Indoor fan motor error	Indoor	
P13	P13	---	47	●	○	○	Alt	Outdoor liquid back detection error	I/F	
P15	P15	01: TS condition 02: TD condition	AE	○	●	○	Alt	Gas leak detection	I/F	
P17	P17	---	bb	○	●	○	Alt	Discharge temperature TD2 error	I/F	
P19	P19	Detected outdoor unit number	08	○	●	○	Alt	4-Way valve inverse error	I/F	
P20	P20	---	22	○	●	○	Alt	High pressure protection operation	I/F	
P22	P22	0_: IGBT short 1_: Fan motor position detectable circuit error 3_: Fan motor error C_: TH sensor temp. error (Heat sink overheat) D_: TH sensor error E_: Vdc output error	1A	○	●	○	Alt	Outdoor fan IPDU error	Fan IPDU	
P26	P26	01: Compressor 1 side 02: Compressor 2 side	14	○	●	○	Alt	G-TR short circuit protection error	IPDU	
P29	P29	01: Compressor 1 side 02: Compressor 2 side	16	○	●	○	Alt	Compressor position detectable circuit system error	IPDU	
P31	---	---	47	○	●	○	Alt	Other indoor unit error (Group follower unit error)	Indoor	
---	---	---	b7	By alarm device			Alt	Error in indoor group	AI-NET	
---	---	---	97	---				Alt	AI-NET communication system error	AI-NET
---	---	---	99	---				Alt	Duplicated network adaptors / addresses	AI-NET

Error detected by TCC-Link central control device

Central control device	Check Code		AI Central controller	Wireless Remote Sensor block display				Check Code Name	Judging Device
	Outdoor 7 segment display			O	T	R	F		
	Auxiliary code								
C05	---	---	---	---				Sending error in TCC-Link central control device	TCC-LINK
C06	---	---	---	---				Receiving error in TCC-Link central control device	TCC-LINK
C12	---	---	---	---				Batch alarm of general purpose equipment control interface	HA control interface I/F
P30	Differs according to error contents of unit with occurrence of alarm							Group control follower unit error	TCC-LINK
	---	---	(L20 is displayed)				Duplicated central control addresses		

Accessories

Control Model No	Description	Retail
Remote Controls		
RBC-AMT32E	Hard wired remote control. Group up to 8 indoors.	£52
RBC-AMS41E	As per the AMT32E but includes a 7 day timer.	£65
RBC-AS21E2	Simplified hard wired remote control (hotel remote)	£55
RBC-AX22CE2	Wireless remote control kit for ceiling mounted units	£160
TCB-AX21E2	Wireless remote control kit for ducted units	£233
TCB-AX21U(W)-E2	Wireless remote control kit for cassettes using the U21 Grille	£142
RBC-AX31U(W)-E2	Wireless remote control kit for cassettes using the U31 Grille	£142
TCB-EXS21TLE	7 Day schedule timer for use with the AMT32 controller or centralised controller	£220
TCB-SC642TLE	64 Zone central controller	£600
TCB-CC163TLE2	16 Zone remote on/off controller	£645
BMS-CM1280FTLE	Hi-Spec compliant manager	£2,178
BMS-CM1280TLE	Standard compliant manager	£1,380
TCB-TC21LE2	Remote Temperature Sensor	£56

Indoor Optional Accessories

RBC-SMCN61	Interface lead for On/Off and unit controller lock by volt free contact.	£8
RBC-SMCN61L	Interface lead for remote controller lock	£8
RBC-SMIM2	Indicator module to give heating, cooling or fan only mode - shows via LEDs and relay output	£70
RBC-SMIM3	Indicator module for lock-out fault and unit run - shows via LEDs and relay output	£60
RBC-SMIM4	Indicator module for remote on/off, fault and unit run - shows via LEDs and relay output	£67
RBC-SMF1	Enables control of external fans includes single pole relay	£40
RBC-IT4-PE	Allows for 240V switching of equipment	£77
RBC-SMT1	Timer interface lead (connects to remote control)	£15
TCB-IFCB-4E2	Remote location on/off control box	£200
CDL-BMS01	Interface lead to provide On/Off and run/stop-fault indication (requires additional relay connection)	£15

Outdoor Unit Optional PCBs

TCB-PCDM2E	Power peak-cut control board	£66
TCB-PCIN2E	Error output control board for SMMS/SHRM	£68
TCB-PCM02E	External master on/off control	£50
TCB-PCOS1E2	Application control kit connects to SDI/DI and limits compressor and fan (5dB(A) reduction)	£130

Network Adapters

TCB-PCNT20E	Network adapter to connect TCC control to AI network	£140
TCB-PCNT30TLE2	Connection interface allows connection of SDI/DI to VRF control (not needed on KRT)	£65
TCB-PX30MUE	Terminal box for TCB-PCNT30TLE2	£51

Control Model No	Description	Retail
Intelligent Control		
CDL-FDP01	Intelligent system operation overriding system use based on internal and ambient temperature	£POA
CDL-FDP02	For use within cellular offices. Prevents systems being left on when rooms are unoccupied.	£POA
CDL-FDP03	Meeting room control can be set to clients requirements, typically includes keycard interlock	£POA
CDL-FDP04	Hotel room control bringing in control dependant on occupancy, open windows and heating	£POA
CDL-FDP05	For IT rooms giving run/standby and fault changeover. One needed per system.	£POA
CDL-FDP06	Retail solution with summer/winter setting, fire interlock & alarm logging.	£POA
CDL-WEBVTX	Remote access via mobile, internet or modems	£POA

VRF C/U Options

CACC-SF	Single fan unit coil anti-corrosion coating	£333
CACC-DF	Twin fan unit coil anti-corrosion coating	£427
CACC-VRF	VRF Module coil anti-corrosion coating	£823
RBC-VRF-FP	VRF Flat pack service (includes break down of VRF and one day site technical adviser)	£1650

* Note it is the contractors responsibility to re-build the VRF unit although full details are given

Branch Kits

RBM-BY54E	Y-Joint 2 Pipe <6.4HP	£66
RBM-BY104E	Y-Joint 2 Pipe <6.4 - 14.2HP	£84
RBM-BY204E	Y-Joint 2 Pipe <14.2 - 25.2HP	£142
RBM-BY304E	Y-Joint 2 Pipe 25.2HP	£186
RBM-BY54FE	Y-Joint 3 Pipe <6.4HP	£67
RBM-BY104FE	Y-Joint 3 Pipe <6.4 - 14.2HP	£92
RBM-BY204FE	Y-Joint 3 Pipe <14.2 - 25.2HP	£153
RBM-BY304FE	Y-Joint 3 Pipe 25.2HP	£208
RBM-HY1043E	4 Way Header 2 Pipe <14.2HP	£128
RBM-HY2043E	4 Way Header 2 Pipe <14.2 - 25.2HP	£140
RBM-HY1083E	8 Way Header 2 Pipe <14.2HP	£204
RBM-HY2083E	8 Way Header 2 Pipe <14.2 - 25.2HP	£224
RBM-HY1043FE	4 Way Header 3 Pipe <14.2HP	£140
RBM-HY2043FE	4 Way Header 3 Pipe <14.2 - 25.2HP	£195
RBM-HY1083FE	8 Way Header 3 Pipe <14.2HP	£225
RBM-HY2083FE	8 Way Header 3 Pipe <14.2 - 25.2HP	£235
RBM-BT13E	T-Piece for 2 Pipe SMMS Modular Units	£118
RBM-BT13FE	T-Piece for 3 Pipe SHRM Modular Units	£118

Control Packages

Control Model No	Description	Retail
Windows BMS		
RBC-WP1-PE	Windows package front end software. Requires connection to PC.	£3,660
TCB-IFLN640TLE	LonWorks Gateway - 1 required for every 64 indoor units.	£1,070
RBC-IK1-PE	Allows remote access via Internet Explorer (optional)	£1,587
RBC-EM1-PE	Power meter and current transformers (one per refrigerant system required) (optional)	£1200
TCB-PCNT30TLE2	One per SDI/DI split system to be added to BMS (not required for KRT) (optional)	£65
RBC-DI1-PE	Gives 8 inputs/outputs for control of external equipment (optional)	£720

BACnet

BMS-LSV6E	Intellegent Server controlling up to 128 indoor units (required)	£2,950
BMS-STBN08E	BACnet software flash card (required)	£3,350
BMS-IFLSV3E	Relay Interface (required)	£610
CDL-BAC01	BACnet package for up to 128 indoor units (comprising of above)	£6,910

Trend (VRF or >7 Split Systems)

LTX-VC1	Communication Interface	£1,350
TCB-IFLN640TLE	LonWorks Gateway for up to 64 indoor units	£1,070
LTX-21	One required per 16 indoor units	£1,594
TCB-PCNT30TLE2	SDI/DI connection (one per split system)	£65

Trend (<7 Split Systems)

TCB-PCNT20TLE	AI Network connection - one required per system	£140
RBC-LG1	LonWorks Gateway for AI network	£635
LTX-21	One required per 16 indoor units	£1,594

Modbus (VRF or >7 Split Systems)

LTX-VC1	Communication Interface	£1,350
TCB-IFLN640TLE	LonWorks Gateway for up to 64 indoor units	£1,070
LTX-51	One required per 16 indoor units	£1,594
TCB-PCNT30TLE2	SDI/DI connection (one per split system)	£65

Modbus (<7 Split Systems)

TCB-PCNT20TLE	AI Network connection - one required per system	£140
RBC-LG1	LonWorks Gateway for AI network	£635
LTX-51	One required per 16 indoor units	£1,594

Other Interfaces

RBC-FDP2-AC10	Interface card for Modbus. 1/1 connection to SDI/DI indoor to BMS.	£250
TCB-IFLN640TLE	LonWorks gateway connecting up to 64 indoor units on a U1/U2 network	£1070

Control Packages

Control Model No	Description	Retail
Control Panels		
CDL-CPRSB02	Control Panel to offer 1 Run 1 standby with 100hr changeover. Includes Alarm. For SDI/DI.	£POA
CDL-CPRSB03	Control Panel to offer 2 Run 1 standby with 100hr changeover. Includes Alarm. For SDI/DI.	£POA
CDL-CPCO2	Control panel to operate heat exchangers via CO2 detection	£POA
CDL-CPEM01	Control panel offering energy monitoring solution c/w pulse power meters	£POA

Touch Screen Control

BMS-TP0641	Touch screen control for up to 64 indoor units. Billing optional.	POA
BMS-TP5121	Touch screen control for up to 512 indoor units. Billing optional.	POA

Central Controller Hi-Spec

BMS-CM1280TLE	Control up to 128 indoor units. Can run over PC and control through I.E.	£2178
BMS-IFWH4E2	Energy Monitoring relay interface - can connect up to 8 power meters (optional)	£680
RBC-EM1-PE	Power meter and current transformers - Use 1 per modular refrigerant system (optional)	£1200
BMS-IFDD02E2	D/I module connects via RS485 and provides 8 inputs and 4 outputs (optional)	£680
TCB-PCNT30TLE	Network adapter to connect SDI/DI to the compliant manager (optional)	£65