

VRF Systems

YDS-C • R410A

INDOOR UNIT TYPES

YDS Variable refrigerant flow system

YDMH 100, 140, 252, 280, 335, 400, 450 C
Cooling capacities 10.0 kW to 180.0 kW



YDS System

- Capacities from 10 to 180 kW
- Operating range of nominal power (10% - 100 %)
- Digital Scroll Technology
- Low noise levels
- High performance
- Flexible and quickly installation

Comfort – Quality

- Cooling and heating
- Connection up to 64 indoor units per refrigeration circuit (4 outdoor units)
- Complete range in R410A
- Reduced space of ground
- Is appropriate particularly for existing buildings
- Cooling to -10°C to +48°C (outdoor temperature)
- Heating to -15°C to +30°C (outdoor temperature)



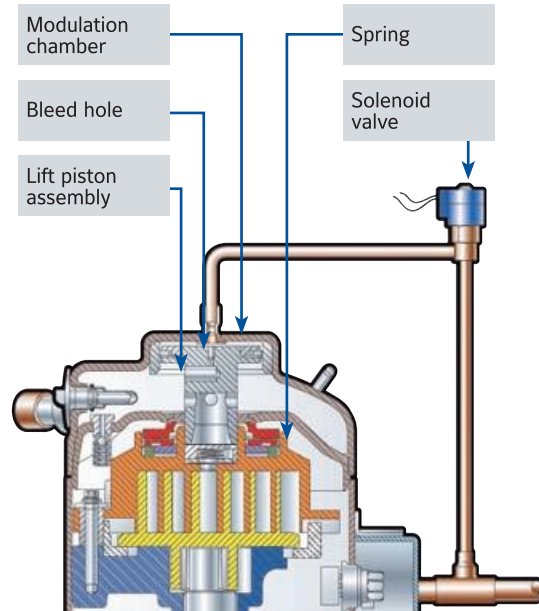
YDS Variable refrigerant flow system

YDMH 100, 140, 252, 280, 335, 400, 450 C



Technology of future: Digital Scroll Compressor operation

The Digital Scroll Compressor uses a simple and effective method to modulate the capacity of an AC, giving unparalleled performance in the modulation field. To modulate the capacity the Digital Scroll operates in two stages, the "loaded state" in which the compressor works as a normal Scroll compressor at full capacity and mass flow, and the "unloaded state", where there is not capacity and mass flow. During the "unloaded state" there is a separation between the scrolls. Once the scrolls separate, any gas passing through is no longer compressed. Changing the cycle time ("Loaded state" time and "Unloaded state" time) determines the capacity modulation of the compressor.



With the introduction of the third generation of the YDS systems, we offer one of the biggest capacity capabilities in the VRF market. Cooling capacity from 10 kW to 180 kW is now available. This capacity is now possible to achieve through connecting from 4 outdoor units together.

The range is based on 2 outdoor units of 10 kW and 14 kW capacity (Digital scroll compressor) and 4 basic modules of different capacities from 25.2 kW to 45 kW, each basic module including a Digital Scroll compressor and a conventional compressor. You can connect up to 64 indoor units in one

refrigerant circuit. More than 30 models are available, high walls, cassettes, duct and floor/ceiling types. The individual setting is done by infra red or wired remote control. Additionally it is possible to use a central controller.



YDS Variable refrigerant flow system

YDMH 100 to 900



YDS Technical features - Single module outdoor unit

Model		YDMH 100C	YDMH 140C	YDMH 252C	YDMH 280C	YDMH 335C	YDMH 400C	YDMH 450C
Cooling capacity	kW	10.00	14.00	25.20	28.00	33.50	40.00	45.00
Heating capacity	kW	12.00	16.00	27.00	31.50	35.00	43.00	47.00
Air flow	m ³ /h	6 000	6 000	10 000	10 000	10 000	14 000	14 000
Noise level at 1 m	dB(A)	55	55	58	58	58	60	60
Electrical features								
Power supply		3/N/ 400V 50Hz						
Power input "cooling"	kW	3.50	4.50	7.31	8.05	9.68	11.53	12.86
Running current "cooling"	A	8.50	8.50	12.5	14.60	17.30	20.20	23.00
Power input "heating"	kW	3.41	4.40	7.01	8.14	9.12	11.17	12.08
Running current "heating"	A	7.60	7.60	12.00	14.50	16.40	19.50	21.40
Compressor	Type	Digital Scroll			Digital Scroll and Fix Scroll			
Dimensions and Weight								
Height x Width x Length	mm	1245 x 940 x 340	1245 x 940 x 340	1630 x 980 x 800			1630 x 1380 x 830	
Weight	kg	117	117	245			382	
Piping connections								
Gas		18mm / 3/4"		28mm / 1 1/8"			35mm / 1 3/8"	
Liquid		10mm / 3/8"		12mm / 1/2"			16mm / 5/8"	
Refrigerant charge	Type	R410A						
	kg	4.10	4.10	11.0	11.00	11.00	16.00	16.00
Piping length / Height difference								
Max. piping length	m	70	70	175	175	175	175	175
Max. height difference	m	8	8	70	70	70	70	70
Max. number of indoor units		6	8	13	16	20	20	20

YDS Technical features - Outdoor units with two module combinations

Model		YDMH 532C	YDMH 560C	YDMH 615C	YDMH 680C	YDMH 730C	YDMH 785C	YDMH 850C	YDMH 900C
Module combinations		1x YDMH252 1x YDMH280	2x YDMH280	1x YDMH280 1x YDMH335	1x YDMH280 1x YDMH400	1x YDMH280 1x YDMH450	1x YDMH335 1x YDMH450	1x YDMH400 1x YDMH450	2x YDMH450
Cooling capacity	kW	53.2	56.00	61.50	68.00	73.00	78.50	85.00	90.00
Heating capacity	kW	58.5	63.00	66.50	74.50	78.50	82.00	90.00	94.00
Noise level at 1 m	dB(A)	62	62	62	62	62	63	63	63
Electrical features									
Power supply		3/N/ 400V 50Hz							
Power input "cooling"	kW	15.36	16.10	17.73	19.58	20.91	22.54	24.39	25.72
Power input "heating"	kW	15.15	16.28	17.26	19.31	20.22	21.20	23.25	24.16
Dimensions and Weight									
Height x Width x Length	mm	1630 x 1960 x 800			1630 x 2360 x 830			1630 x 2760 x 830	
Weight	kg	490			627			764	
Piping size between the outdoor unit and the first branch									
Gas		35mm / 1 3/8"			42mm / 1 5/8"				
Liquid		18mm / 3/4"			22mm / 7/8"				
Refrigerant piping									
Piping 1		16mm / 5/8"							
Piping 2		18mm / 3/4"							
Connection between modules (out. groups)		YDSA / RD102					YDSA / RD103		
Max. number of indoor units		20	20	20	20	20	20	32	32

YDS Variable refrigerant flow system

YDMH 960 to 1800



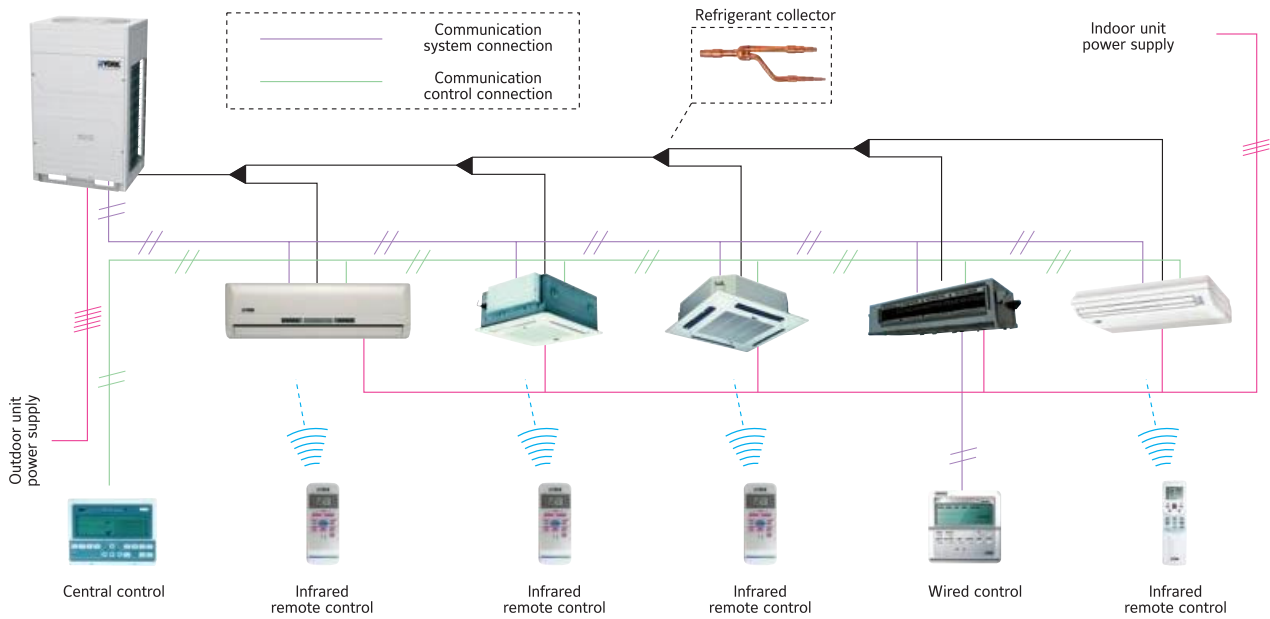
YDS Technical features - Outdoor units with three module combinations

Model		YDMH 960C	YDMH 1010C	YDMH 1065C	YDMH 1130C	YDMH 1180C	YDMH 1235C	YDMH 1300C	YDMH 1350C	
Module combinations		2x YDMH280 1x YDMH400	2x YDMH280 1x YDMH450	1x YDMH280 1x YDMH335 1x YDMH450	1x YDMH280 1x YDMH400 1x YDMH450	1x YDMH280 2x YDMH450	1x YDMH335 2x YDMH450	1x YDMH400 2x YDMH450	3x YDMH450	
Cooling capacity	kW	96.00	101.00	106.50	113.00	118.00	122.50	130.00	135.00	
Heating capacity	kW	106.00	110.00	113.50	121.50	125.50	129.00	137.00	141.00	
Noise level at 1 m	dB(A)	64	64	64	64	64	64	64	64	
Electrical features										
Power supply		3/N/ 400V 50Hz								
Power input "cooling"	kW	27.63	28.96	30.59	32.44	33.77	35.40	37.25	38.58	
Power input "heating"	kW	27.45	28.36	29.34	31.39	32.30	33.28	35.33	36.24	
Dimensions and Weight										
Height x Width x Length	mm	1630 x 3340 x 830			1630 x 3740 x 830			1630 x 4140 x 830		
Weight	kg	872			1.009			1.146		
Piping size between the outdoor unit and the first branch										
Gas		42mm / 1 5/8"								
Liquid		22mm / 7/8"								
Refrigerant piping										
Piping 1		16mm / 5/8"								
Piping 2		18mm / 3/4"								
Connection between modules (out. groups)		1x YDSA / RD102 + 1x YDSA / RD01					1x YDSA / RD103 + 1x YDSA / RD01			
Max. number of indoor units		32	32	32	40	40	40	40	40	

YDS Technical features - Outdoor units with four module combinations

Model		YDMH 1405C	YDMH 1455C	YDMH 1520C	YDMH 1570C	YDMH 1630C	YDMH 1685C	YDMH 1750C	YDMH 1800C	
Module combinations		3x YDMH335 1x YDMH400	3x YDMH335 1x YDMH450	2x YDMH335 1x YDMH400 1x YDMH450	2x YDMH335 2x YDMH450	1x YDMH280 3x YDMH450	1x YDMH335 3x YDMH450	1x YDMH400 3x YDMH450	4x YDMH450	
Cooling capacity	kW	140.50	145.50	152.00	156.00	163.00	168.50	175.00	180.00	
Heating capacity	kW	148.00	152.00	160.00	164.00	172.50	176.00	184.00	188.00	
Noise level at 1 m	dB(A)	65	65	65	65	65	65	65	65	
Electrical features										
Power supply		3/N/ 400V 50Hz								
Power input "cooling"	kW	40.57	41.90	43.75	45.08	46.63	48.26	50.11	51.44	
Power input "heating"	kW	38.53	39.44	41.49	42.40	44.38	45.36	47.41	48.32	
Dimensions and Weight										
Height x Width x Length	mm	1.630 x 4.320 x 830		1.630 x 4.720 x 830		1.630 x 5.120 x 830		1.630 x 5.520 x 830		
Weight	kg	1.117		1.254		1.391		1.528		
Piping size between the outdoor unit and the first branch										
Gas		54mm / 2 1/8"								
Liquid		28mm / 1 1/8"								
Refrigerant piping										
Piping 1		16mm / 5/8"								
Piping 2		18mm / 3/4"								
Connection between modules (out. groups)		1x YDSA / RD102 + 2x YDSA / RD01					1x YDSA / RD103 + 2x YDSA / RD01			
Max. number of indoor units		50	50	50	50	50	64	64	64	

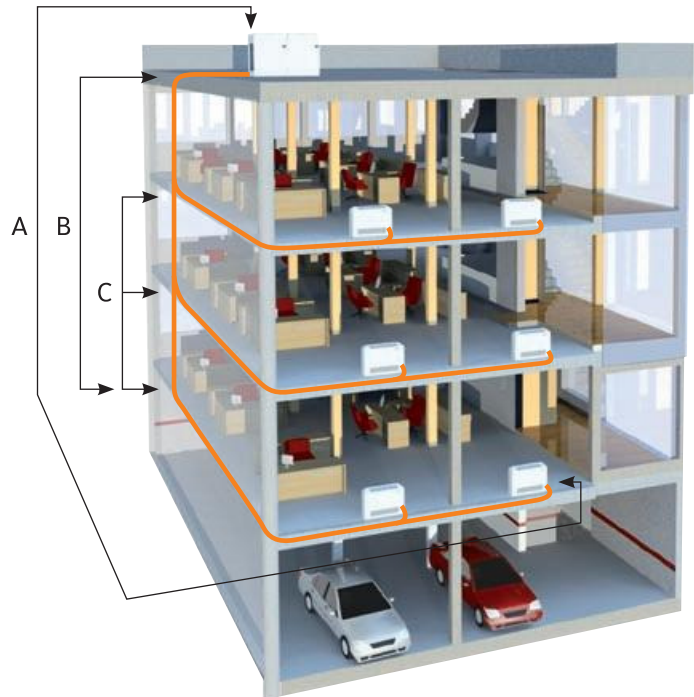
YDS System – System Diagram



YORK System YDS

The YORK system with Digital Scroll is working like the VRF principle and offers you economical air-conditioning system for projects, which are requiring more capacity than the normal split and multi split solutions.

The lengths for the connecting tubes between the indoor and outdoor have been prolonged, which brings you more flexible solutions for complex air-conditioning projects.

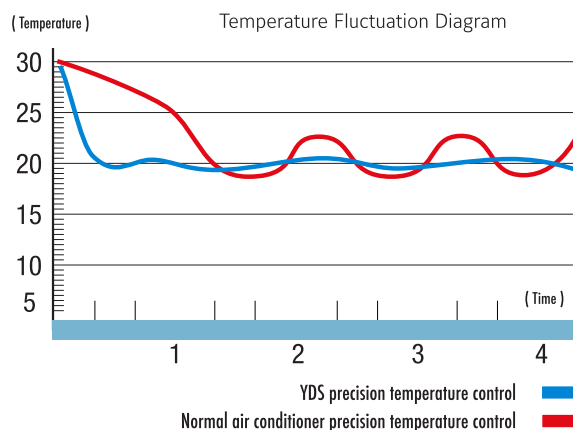


- A – Real length of refrigerant piping : 150 m.
- B – Maximum difference in height : 70 m.
- C – Maximum difference in height between 2 indoor units : 15 m.

Intelligent technology

Comfortable and pleasant intelligent temperature control. The advanced temperature control system maintains the indoor ambient temperature at a precision of $\pm 0.5^{\circ}\text{C}$. This precise temperature control improves the feeling of comfort.

The different indoor units have diverse charges that are measured by the control system, and refrigerant quality distributed to each one of the indoor units is calculated and controlled by the microprocessor, so that each indoor unit may satisfy all individual needs.



Management System YDS

It is possible to control the YDS system through the computer with the software or to connect to an overall BMS with LONWORKS® or BacNet® protocols.



YDS Technical features indoor units



High wall

Model			YDHW022C	YDHW028C	YDHW036C	YDHW045C	YDHW056C
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
	Heating	kW	2.6	3.2	4.0	5.0	6.3
	Air flow	m³/h	580 / 430 / 410			1 150 / 800 / 650	
Noise level at 1 m	H / M / L	dB(A)	42 / 39 / 36			46 / 43 / 39	
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E				
	Starting current	A	2.2			3.2	
Dimensions and Weight	H x W x D	mm	265 x 790 x 195			292 x 920 x 225	
	Weight	kg	14			15	
Piping	Gas		12mm / 1/2"				
	Liquid		6mm / 1/4"				



High wall (EXV integrated)

Model			YDHC022C	YDHC028C	YDHC036C	YDHC045C	YDHC056C
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
	Heating	kW	2.6	3.2	4.0	5.0	6.3
	Air flow	m³/h	580 / 500 / 420			900 / 760 / 650	
Noise level at 1 m	H / M / L	dB(A)	35 / 32 / 29			40 / 38 / 34	
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E				
	Starting current	A	2.5			3.3	
Dimensions and Weight	H x W x D	mm	290 x 915 x 210			315 x 1070 x 210	
	Weight	kg	12			15	
Piping	Gas		12mm / 1/2"				
	Liquid		6mm / 1/4"				



Cassette

Model			YDCS022C	YDCS028C	YDCS036C	YDCS045C	YDCS056C
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
	Heating	kW	2.6	3.2	4.0	5.0	6.3
	Air flow	m³/h	570 / 400				
Noise level at 1 m	H / L	dB(A)	38 / 35			39 / 36	
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E				
	Starting current	A	3.6				
Dimensions and Weight	H x W x D	mm	254 x 580 x 580				
	Weight	kg	18	18	18	24	24
Panel	H x W x D	mm	30 x 650 x 650				
	Weight	kg	3				
Piping	Gas		12mm / 1/2"				
	Liquid		6mm / 1/4"				



Cassette

Model			YDCL056C	YDCL071C	YDCL080C	YDCL090C	YDCL112C	YDCL140C
Capacity	Cooling	kW	5.6	7.1	8.0	9.0	11.2	14.0
	Heating	kW	6.3	8.0	9.0	10.0	12.5	15.0
	Air flow	m³/h	950 / 800 / 650	1 220 / 1 010 / 820		1 540 / 1 300 / 1 120		1 802 / 1 483 / 1 284
Noise level at 1 m	H / M / L	dB(A)	42 / 38 / 35	48 / 45 / 42		53 / 48 / 45		48 / 45 / 43
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E					
	Starting current	A	3.6	4.2		6.0		
Dimensions and Weight	H x W x D	mm	230 x 840 x 840			300 x 840 x 840		
	Weight	kg	27	30		36		
Panel	H x W x D	mm	46 x 950 x 950					
	Weight	kg	6					
Piping	Gas		16mm / 5/8"					
	Liquid		10mm / 3/8"					



Convertible console floor/ceiling

Model		YDFC036C	YDFC045C	YDFC056C	YDFC071C	YDFC080C	YDFC090C	YDFC112C	YDFC140C	
Capacity	Cooling	kW	3.5	4.7	5.3	7.0	7.9	8.8	11.7	14.1
	Heating	kW	4.0	5.1	6.2	8.2	9.4	10.6	13.2	15.5
	Air flow	m ³ /h	650 / 570 / 500	800 / 600 / 500			1 400 / 1 200 / 1 000		2 000 / 1 800 / 1 600	
Noise level at 1 m	H / M / L	dB(A)	43 / 41 / 38			45 / 43 / 40		47 / 45 / 42		
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E							
	Starting current	A	4.7	5.4			6.2		7.7	
Dimensions and Weight	H x W x D	mm	660 x 995 x 198			660 x 1 285 x 198		680 x 1 670 x 240		
	Weight	kg	29			37		54		
Piping	Gas		12mm / 1/2"		16mm / 5/8"					
	Liquid		6mm / 1/4"		10mm / 3/8"					



Floor standing

Model		YDEFS022C	YDEFS028C	YDEFS036C	YDEFS045C	YDEFS056C	YDEFS071C	YDEFS080C	
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0
	Heating	kW	2.6	3.2	4.0	5.0	6.3	8.0	9.0
	Air flow	m ³ /h	530 / 456 / 400	569 / 485 / 421	624 / 522 / 375	660 / 542 / 440	1 150 / 970 / 830	1 380 / 1 100 / 870	1 332 / 1 212 / 1 023
Noise level at 1 m	H / M / L	dB(A)	37 / 35 / 33		39 / 37 / 35	39 / 37 / 35	41 / 39 / 37	43 / 41 / 38	
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E						
Dimensions and Weight	H x W x D	mm	625 / 1 000 / 220		625 / 1 200 / 220		625 / 1 500 / 220		
	Weight	kg	30		37		44		
Piping	Gas		12mm / 1/2"			16mm / 5/8"			
	Liquid		6mm / 1/4"			10mm / 3/8"			



Floor standing concealed

Model		YDCFS022C	YDCFS028C	YDCFS036C	YDCFS045C	YDCFS056C	YDCFS071C	YDCFS080C	
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0
	Heating	kW	2.6	3.2	4.0	5.0	6.3	8.0	9.0
	Air flow	m ³ /h	530 / 456 / 400	569 / 485 / 421	624 / 522 / 375	660 / 542 / 440	1 150 / 970 / 830	1 380 / 1 100 / 870	1 332 / 1 212 / 1 023
Noise level at 1 m	H / M / L	dB(A)	37 / 35 / 33		39 / 37 / 35	39 / 37 / 35	41 / 39 / 37		
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E						
Dimensions and Weight	H x W x D	mm	544 / 840 / 212		544 / 1 036 / 212		544 / 1 336 / 212	545 / 1 336 / 212	
	Weight	kg	26		29.5		36		
Piping	Gas		12mm / 1/2"			16mm / 5/8"			
	Liquid		6mm / 1/4"			10mm / 3/8"			



Blower

Model		YDDN022C	YDDN028C	YDDN036C	YDDN045C	YDDN056C	YDDN071C	YDDN080C	YDDN090C	YDDN112C	YDDN140C	
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0
	Heating	kW	2.6	3.2	4.0	5.0	6.3	8.0	8.4	10.0	12.5	15.0
	Air flow	m ³ /h	570 / 400 / 320			1 160 / 1 100 / 950		1 400 / 1 100 / 900		1 800 / 1 500 / 1 200		
Noise level at 1 m	H / M / L	dB(A)	34 / 32 / 30	35 / 33 / 31		45 / 41 / 38		46 / 44 / 42		47 / 45 / 43		48 / 46 / 44
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E									
	Static pressure	Pa	10			40			70			
Dimensions and Weight	H x W x D	mm	210 x 955 x 385			298 x 1 000 x 800			298 x 1 350 x 800			
	Weight	kg	15			37.2			51.4			
Piping	Gas		12mm / 1/2"			16mm / 5/8"						
	Liquid		6mm / 1/4"			10mm / 3/8"						



High Static Pressure Blower

Model		YDDH200C	YDDH250C	YDDH280C	
Capacity	Cooling	kW	20.0	25.0	28.0
	Heating	kW	22.6	27.5	31.1
	Air flow	m ³ /h	4 180 / 3 820 / 3 200		4 400 / 3 940 / 3 300
Noise level at 1 m	H / M / L	dB(A)	61 / 58 / 55		
Electrical features	Power supply	V/Ph/Hz	230 / 1 / 50 + N + E		
	Static pressure	Pa	196		
Dimensions and Weight	H x W x D	mm	500 x 1 425 x 928		
	Weight	kg	122		
Piping	Gas		16mm / 5/8"		
	Liquid		10mm / 3/8"		

Controllers

Remote Controllers

R05 Remote Controller

Light background, LCD display screen, clock function, ON / OFF / Temperature setting / Mode setting / Fan speed setting / Horizontal swing setting functions. Using for the Floor/Ceiling units.



R51 Remote Controller

LCD display, clock function, ON / OFF / Temperature setting / Mode setting / Fan speed / Swing etc. Using for all the indoor units except Floor/Ceiling units.



Central Control Monitor

AMR02Y Outdoor CCM

Max. 32 outdoor units control.



AMR03Y Indoor CCM

Max. 64 indoor units control; New mode lock function.



AMR09Y Indoor CCM

Max. 64 indoor units control. New weekly timer function.



Wired Controller

AMR01Y

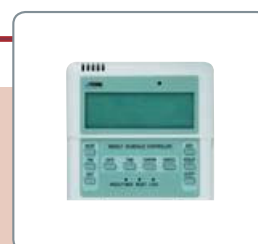
ON / OFF / Mode setting / Temp. setting / Fan speed / Time setting / Swing, etc.
Temp sensor built-in.



Weekly Timer

AMR02M Weekly schedule timer

Control one indoor unit.
Note: Weekly schedule timer and indoor CCM cannot be used simultaneously



BMS Accessories

AMR07Y LonWorks gateway

Matched with network CCM system (V3.0), connect to LonWorks.



Software 3.0

3rd network central control system kit.



AMR08Y Bacnet gateway

BACNET connection, max. connection 4 air-conditioning groups
(each group can connect max. 64 indoor units or 32 outdoor units).

