BC CONTROLLERS FOR R2 LINES

CMB-M V-J1/V-JA1/V-KB1, CMB-P V-KA1

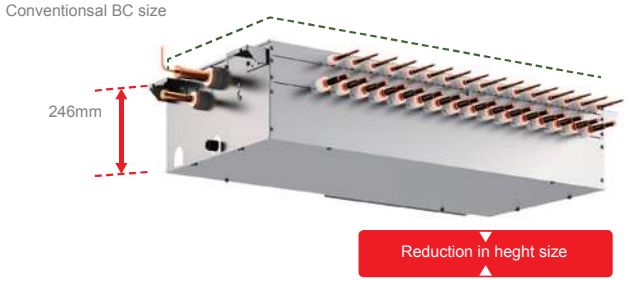
BC Distributors

The new BC distributor of the CMB-P(M)-V-J(1) series effectively distributes the refrigerant depending on the operating mode of the indoor units (heating or cooling). It contains the highly efficient gas/liquid separator developed by Mitsubishi Electric and carefully separates the gas for heating from the cooling liquid. For a greater height difference and an increase in the maximum pipe length, it uses a subcooling heat exchanger that further chills the coolant destined for the indoor units in cooling mode.

New BC controller

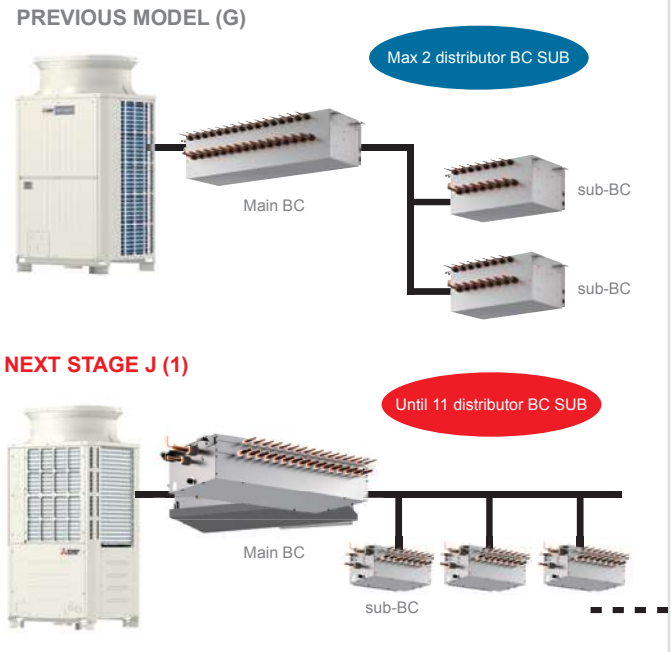
Increased number of connections (for systems with BC SUB distributor) and increase of geometric limits. In the R2 heat recovery systems of the new YNW-A1 line it is possible to connect up to 11 BC SUB distributors to the BC MAIN distributor thus allowing greater configuration flexibility. The adoption of the
new architecture allows a reduction of the refrigerant charge adopted in the system.

Reduced height



The new BC distributor can also be installed in false ceilings with limited heights thanks to a 40.5 mm lower average height (compared to the previous model (G)).

SYSTEM LAYOUT R2



Greater flexibility in system configuration

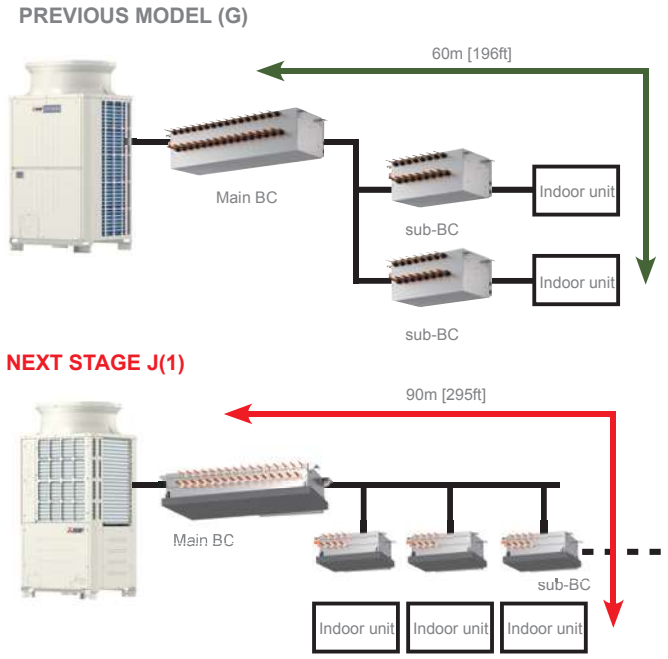
The maximum length of the refrigeration line between the BC MAIN distributor unit and the indoor unit has been increased to 90 metres* (compared to 60 metres for the previous model) for greater flexibility of system design.

*If the indoor unit is connected to an SUB BC Controller unit

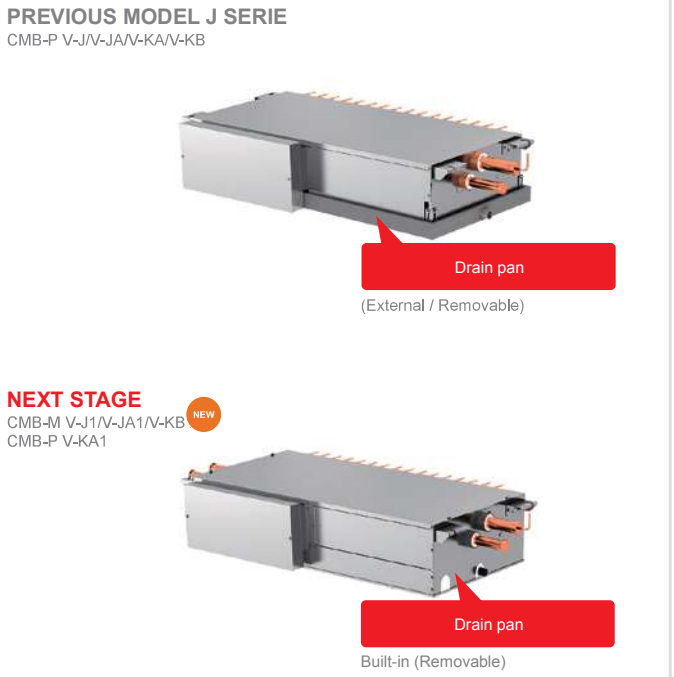
Greater accessibility and ease of maintenance

In the previous model, the drainage panel was on the lower side of the distributor. In the new model it is instead installed on the lower side of the structure, making it easy to remove from the lower part for maintenance access.

GREATER FLEXIBILITY IN SYSTEM CONFIGURATION



GREATER ACCESSIBILITY AND EASE OF MAINTENANCE

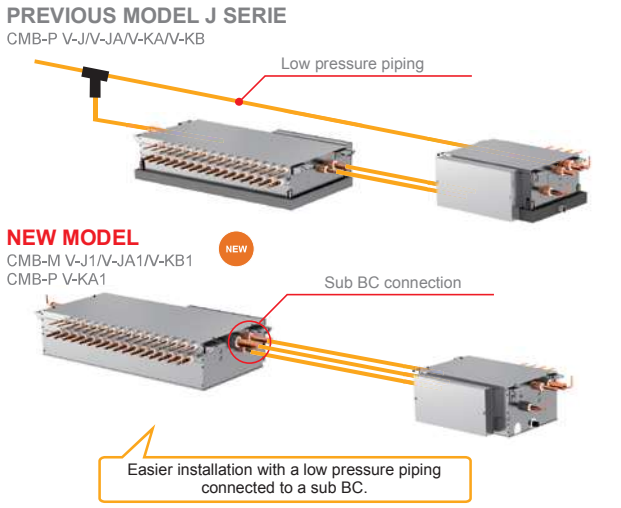


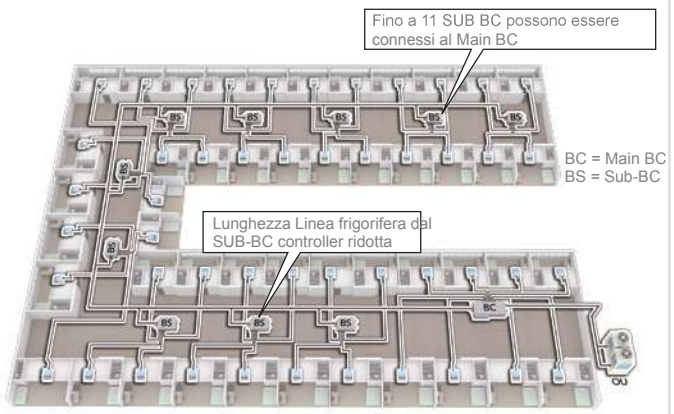
Sub-BC controller connections increased

Only two sub-BC controllers could be connected to a main BC controller in previous models. Up to 11 sub-BC controllers can now be connected to the new BC controller, allowing for more flexibility in system design. The line-branching method enables the creation of system designs that use less refrigerant.

The line-branching method with a main BC controller and sub-BC controllers

The sub-BC controller can be installed near the indoor units, so the branch piping can be greatly reduced. This also reduces the length of system piping, enabling using less refrigerant design.





Technical specifications

MODEL Single				CMB-M104V-J1	CMB-M106V-J1	CMB-M108V-J1	CMB-M1012V-J1	CMB-M1016V-J1
Number of branch				4	6	8	12	16
Power source				1-phase 220-230-240 V				
Power input	kW	50Hz	Cooling	0.067/0.076/0.085	0.097/0.110/0.123	0.127/0.144/0.161	0.186/0.211/0.236	0.246/0.279/0.312
			Heating	0.030/0.034/0.038	0.045/0.051/0.057	0.060/0.068/0.076	0.090/0.102/0.114	0.119/0.135/0.151
Indoor unit capacity connectable to 1 branch				Model P80 or smaller (Use optional joint pipe combing 2 branches when the total unit capacity exceeds P81.)				
Connectable outdoor/heat source unit capacity				P200 to P350				
Height	mm			250	250	250	252	252
Width	mm			596	596	596	911	1,135
Depth	mm			476	476	476	622	622
Refrigerant piping diameter	To outdoor/heat source unit			Connectable unit capacity				
				P200	P250/P300		P350	
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed		19.05 (3/4) Brazed or 22.2 (7/8) Brazed	
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed		28.58 (1-1/8) Brazed	
	To indoor unit	Liquid pipe		Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed				
		Gas pipe		Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4), 22.2(7/8) with optional joint pipe used.)				
Drain pipe	mm (in.)			O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)
Net weight	kg (lbs)			26 (58)	29 (64)	33 (73)	49 (109)	59 (131)

Technical specifications

MODEL Main				CMB-M108V-JA1			CMB-M1012V-JA1			CMB-M1016V-JA1		
Number of branch				8			12			16		
Power source				1-phase 220-230-240 V								
Power input	kW	50Hz	Cooling	0.127/0.144/0.161			0.186/0.211/0.236			0.246/0.279/0.312		
			Heating	0.060/0.068/0.076			0.090/0.102/0.114			0.119/0.135/0.151		
Indoor unit capacity connectable to 1 branch				Model P80 or smaller (Use optional joint pipe combing 2 branches when the total unit capacity exceeds P81.)								
Connectable outdoor/heat source unit capacity				P200 to P900								
Height	mm			252			252			252		
Width	mm			911			1,135			1,135		
Depth	mm			622			622			622		
Refrigerant piping diameter	To outdoor/heat source unit			Connectable unit capacity								
				P200	P250/P300	P350	P400 to P500	P550	P600	P650	P700 to P800	P850 to P900
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed or 22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed or 34.93 (1-3/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28 (1-5/8) Brazed
	To indoor unit	Liquid pipe		Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed								
		Gas pipe		Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4), 22.2 (7/8) with optional joint pipe used.)								
	To other BC controller			Total down-stream Indoor unit capacity								
				to P200	P201 to P300	P301 to P350	P351 to P400	P401 to P600	P601 to P650	P651 to P800	P801 to P1000	P1001 or above
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed
	Liquid pipe			9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
Drain pipe	mm (in.)			O.D. 32 (1-1/4)			O.D. 32 (1-1/4)			O.D. 32 (1-1/4)		
Net weight	kg (lbs)			48 (106)			60 (133)			68 (150)		

★ Combination chart of BC Controller for R2 series (YNW)

	P200-P350	P400-P900	P950-P1100
CMB-M VJ1	•	N/A	N/A
CMB-M V-JA1	•	•	N/A
CMB-P V-KA1	•	•	•
CMB-M V-KB1 (Sub)	CMB-M108/1012/1016V-JA1, CMB-P1016V-KA1		