

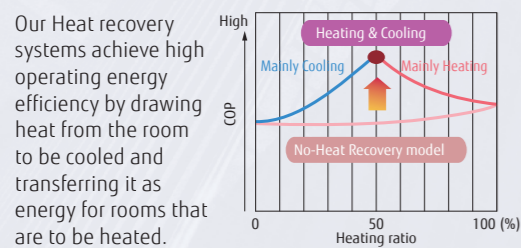
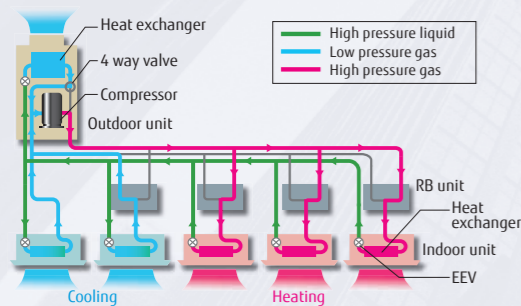
Heat Recovery

Modular Type



High Operating Energy Efficiency

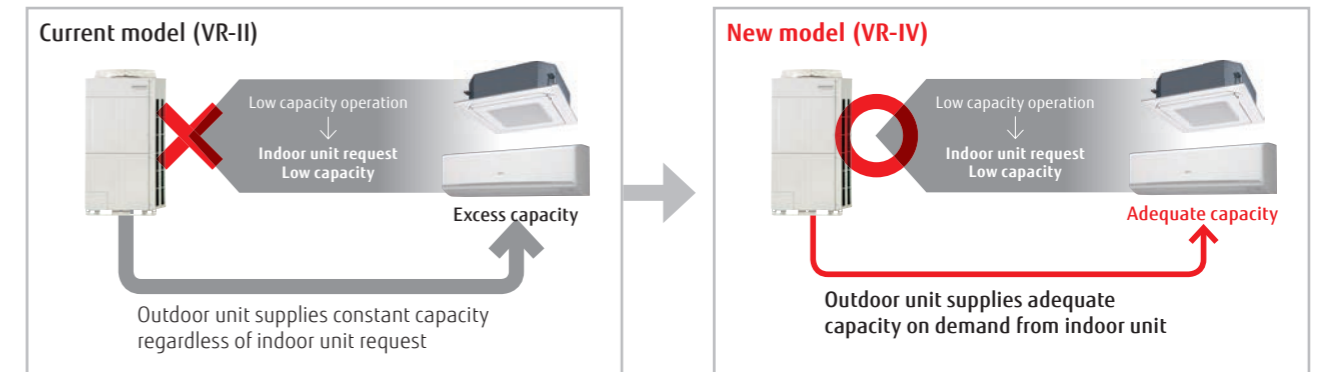
Our Heat recovery systems achieve high operating energy efficiency by drawing heat from the room to be cooled and transferring it as energy for rooms that are to be heated.



Our Heat recovery systems achieve high operating energy efficiency by drawing heat from the room to be cooled and transferring it as energy for rooms that are to be heated.

New intelligent refrigerant control

Fujitsu general proposes New outdoor unit which includes New refrigerant control. New refrigerant control can be operated with suitable control corresponding to heat load of the room and can offer a more comfortable space. New refrigerant control can also provide more energy savings.



* The improvement by the control and the actual sine wave varies by the combination of the indoor unit and system operating condition.

Improvement in the number of connectable indoor units

Connectable indoor unit capacity range

New model (VR-IV)	25%* to 150%
Current model (VR-II)	50% to 150%

*: For modular type, 25% to 49.9% operation in the entire system is available. (by one unit operation)

Connectable indoor unit number Space Saving Combination (Unit)

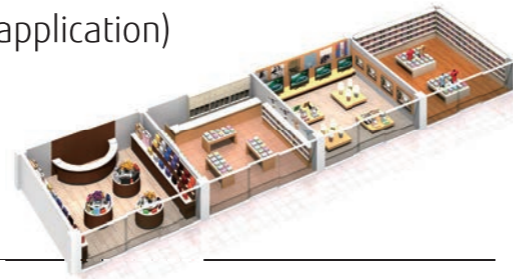
HP	8	10	12	14	16	...	28	30	32	...	48
New model (VR-IV)	17	21	26	30	34	...	60	64	64	...	64
Current model (VR-II)	15	16	17	21	24	...	42	45	48	...	64

Energy saving technology that boosted operation efficiency

- Powerful large propeller fan**
By using CFD* technology, a newly designed fan achieves high performance and low noise operation.
*: CFD = Computational Fluid Dynamics
- 3 phase DC fan motor**
Efficiency is substantially improved by high efficient motor with sophisticated driver control. In addition, low noise is realized by DC fan motor.
- Subcool heat exchanger**
High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.
- High efficient and large capacity DC twin rotary compressor**
Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.
- Sine-wave DC inverter control**
High efficiency is realized by adoption of reduced switching loss IPM.
- 4-face heat exchanger**
Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.
- Front intake port (Corner cut air inlet structure)**
In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

Extended connection ratio (for Multi-tenant application)

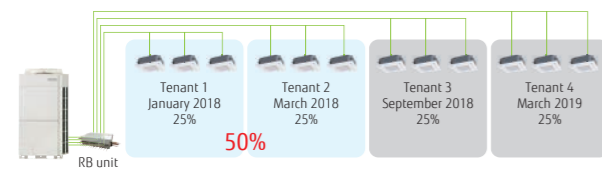
This function is especially effective when partial air-conditioning starts at the building under construction. Installation work can be added flexibly for each tenant.



Stand alone

Current model (VR-II)

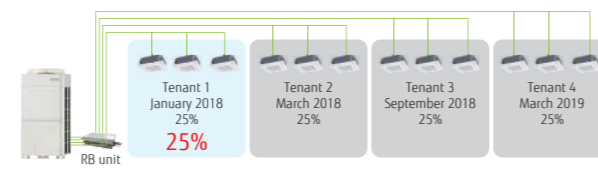
Example) for 12HP: 6HP operations for 50% are required.



Construction work is required even at the tenant which is not yet open.

New model (VR-IV)

Example) for 12HP: 3HP operations for 25% are enabled.

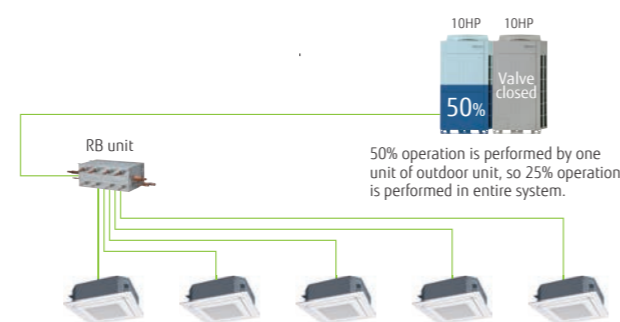


Installation and commissioning can be added flexibly according to the opening date of other tenants.

Modular type

One outdoor unit operates effectively for the connectable indoor unit capacity in the entire system. (25% operation by multiple units is not available.)

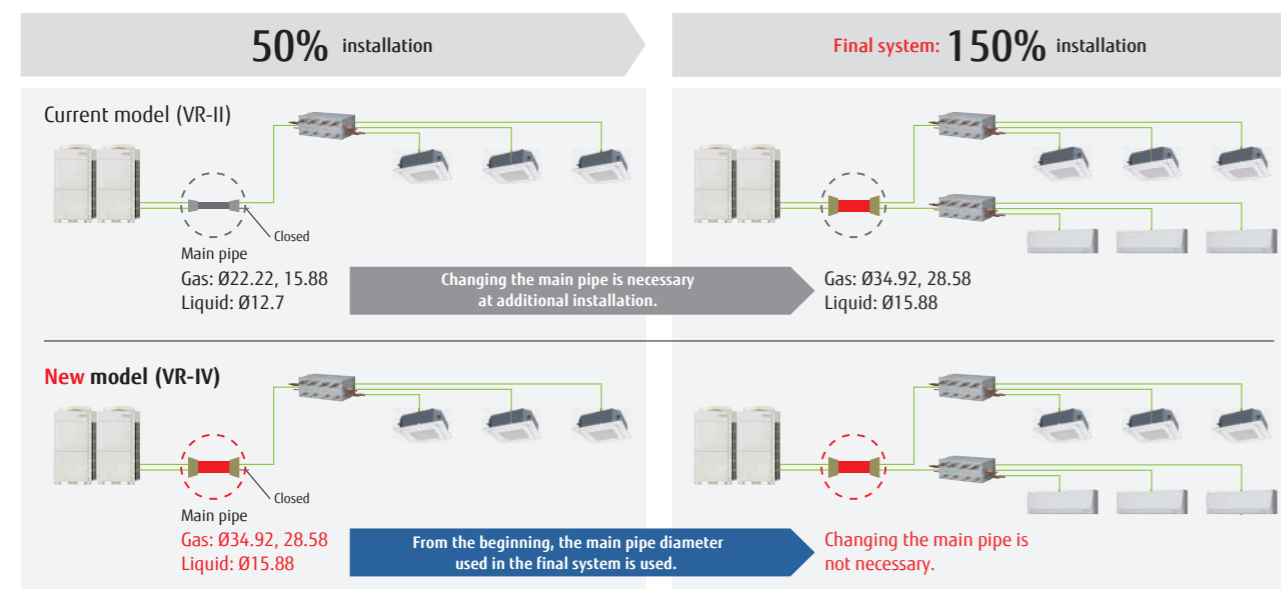
Example) for 25% operation (5HP) of 20HP (10HP x 2 units)
5HP operation by 50% of one 10HP outdoor unit is performed.
→25% operation by 2 units is not performed.



50% operation is performed by one unit of outdoor unit, so 25% operation is performed in entire system.

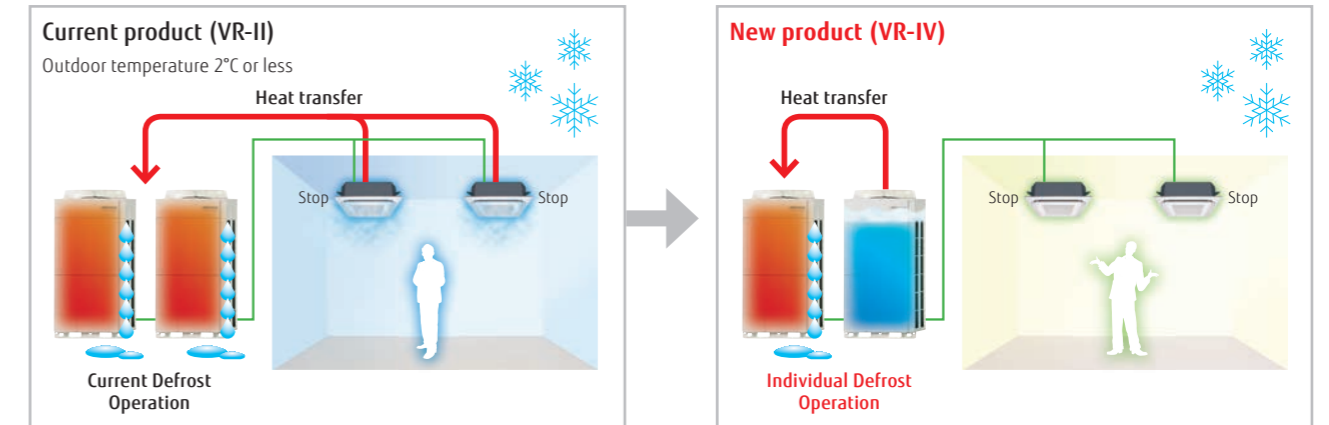
Additional installation without changing the main pipe

Installation work can be performed from the beginning by the main pipe diameter used in the final system. Unlike current model, changing the main pipe is not necessary, so duplication of work is resolved.



New Individual Defrost Operation

"Individual Defrost Operation" is a function to maintain the indoor comfort while under defrost operation.

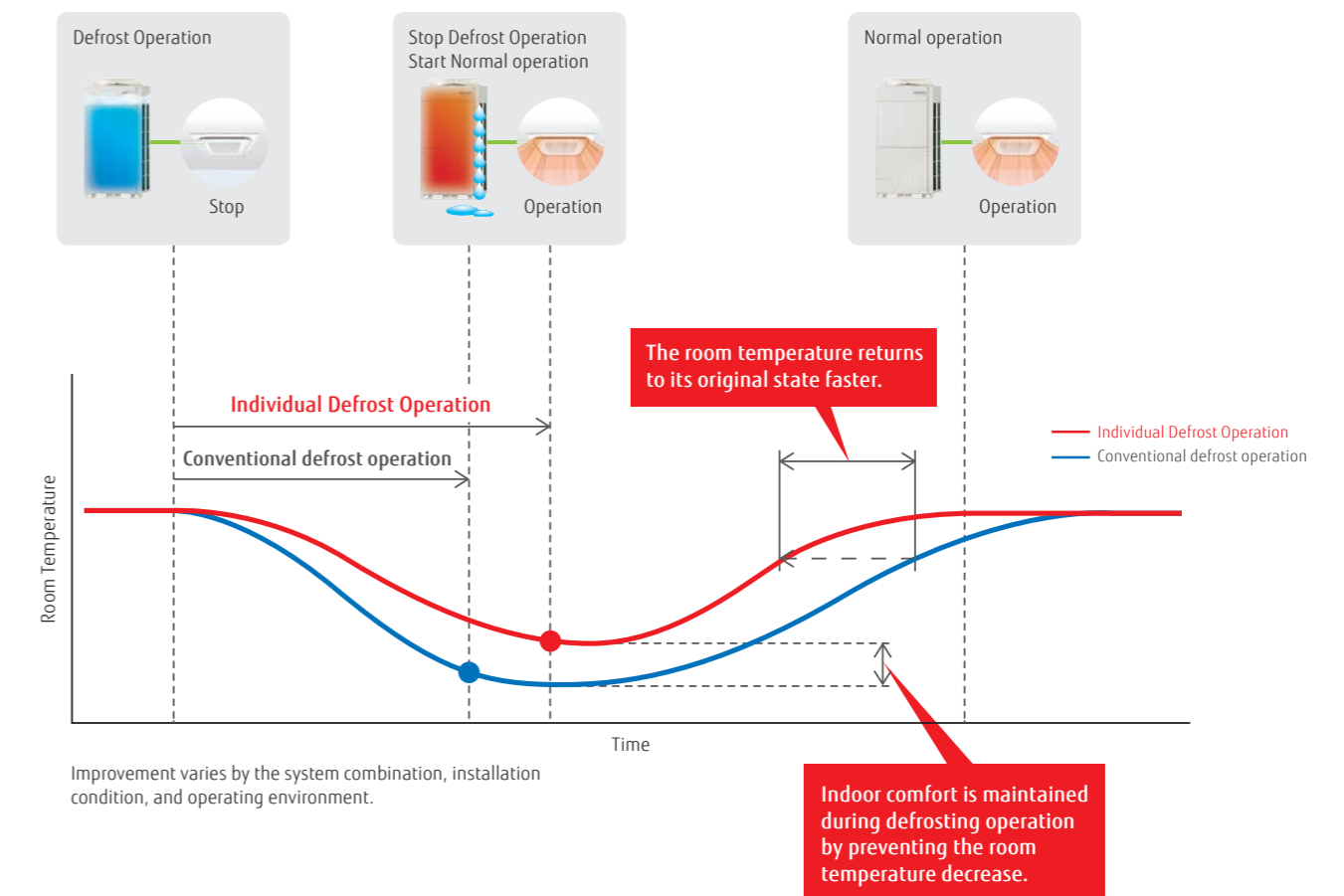


When under the defrost operation, the heat is absorbed from the indoor dropping the room temperature.

With the "Individual Defrost operation", the heat is absorbed from outdoor by the other unit to avoid excessive room temperature drop.

* It can be used only when the outdoor unit has a modular connection.

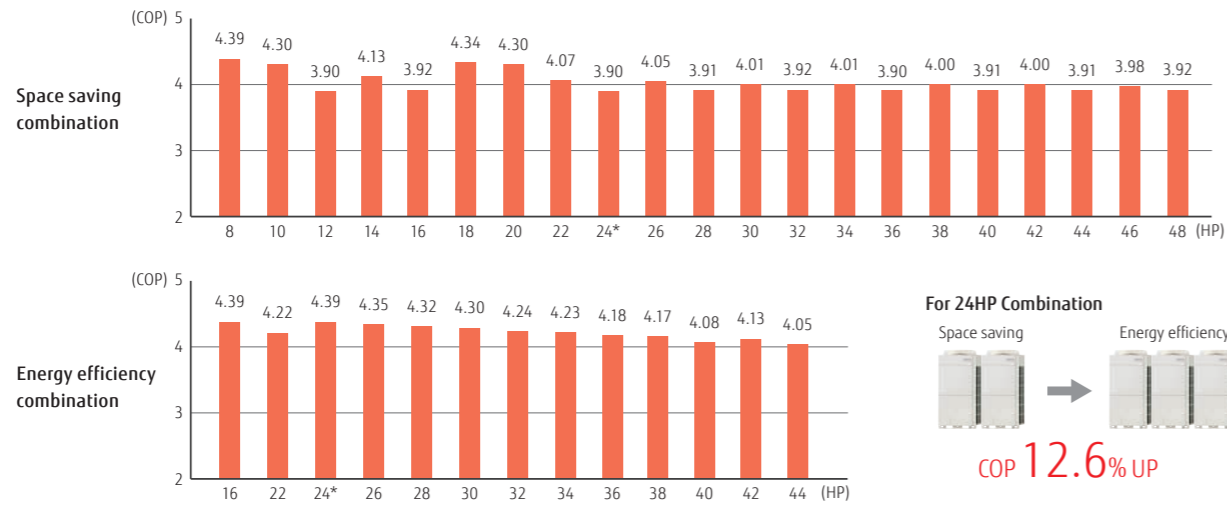
In the case of individual defrost operation, indoor unit returns to its original state quickly after defrost operation.



Improvement varies by the system combination, installation condition, and operating environment.

Efficiency in actual operation

Top class high COP(Max. Heating) is achieved for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and our own technologies.



All inverter compressor

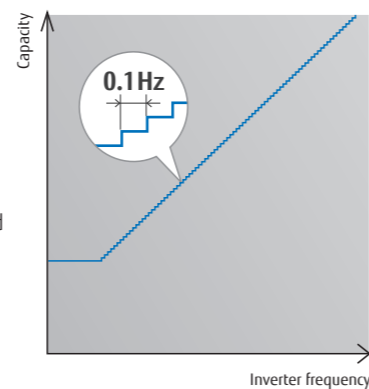
Large capacity DC inverter compressor

Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.



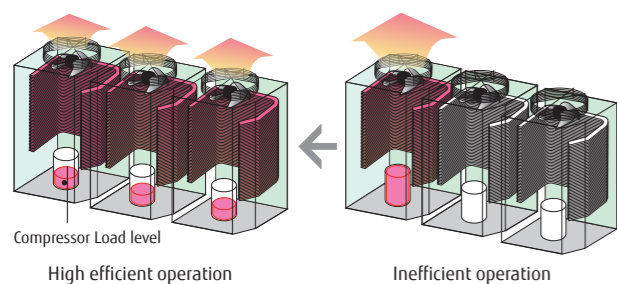
High efficient compressor speed control

Comfortable space with small room temperature changes and little energy loss is created by 0.1Hz steps compressor speed control.



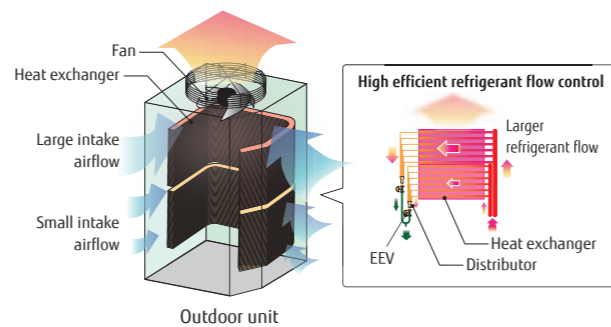
Multiple outdoor operation control

When multiple outdoor units are connected a sophisticated operation is performed by each compressor. Rather than running one compressor at full load and distributing refrigerant to one heat exchanger, this control method operates all compressors at part load and distributes refrigerant to all of the heat exchangers which allows for the overall system efficiency to be improved.



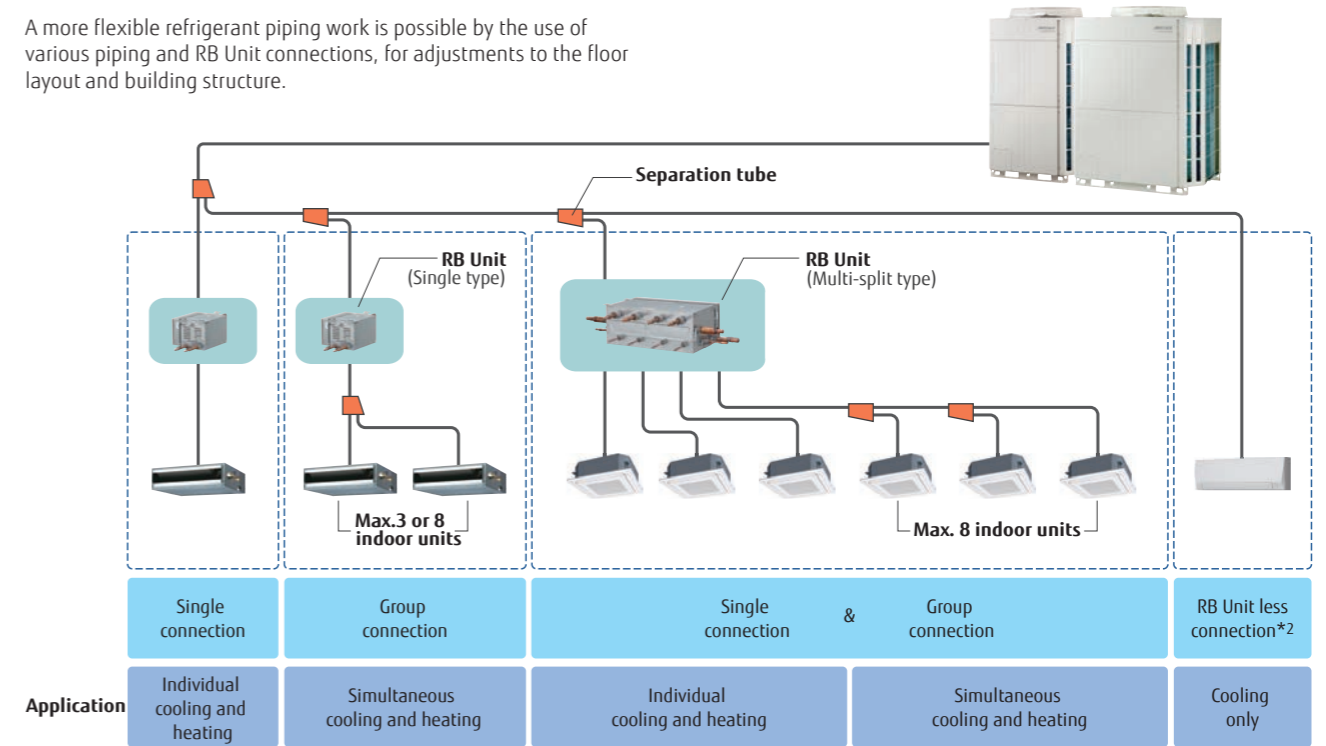
Heat exchanger refrigerant control

The heat exchanger in the outdoor unit is split into two parts (Top and Bottom). The efficiency of the heat exchanger has been improved by adopting an optimum refrigerant path control where the refrigerant is distributed more into the top heat exchanger as this is where there is a greater air flow intake.



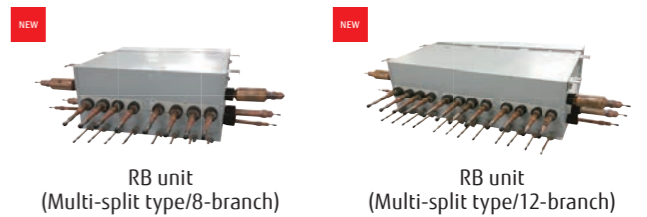
Flexible piping connection

A more flexible refrigerant piping work is possible by the use of various piping and RB Unit connections, for adjustments to the floor layout and building structure.



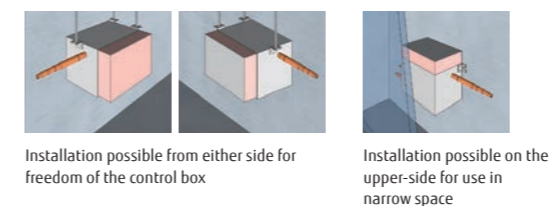
- The RB unit can be freely positioned between the first branch and the indoor unit.
- The maximum height difference between RB units is 15 m.
- *2. RB Unit is not necessary for cooling only use.

Flexible installation of RB unit

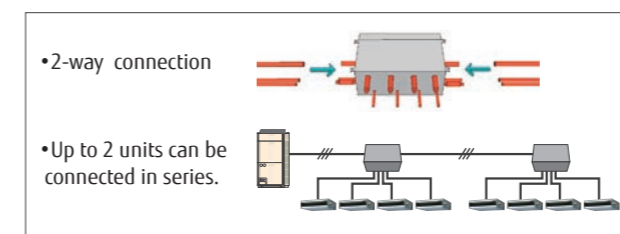
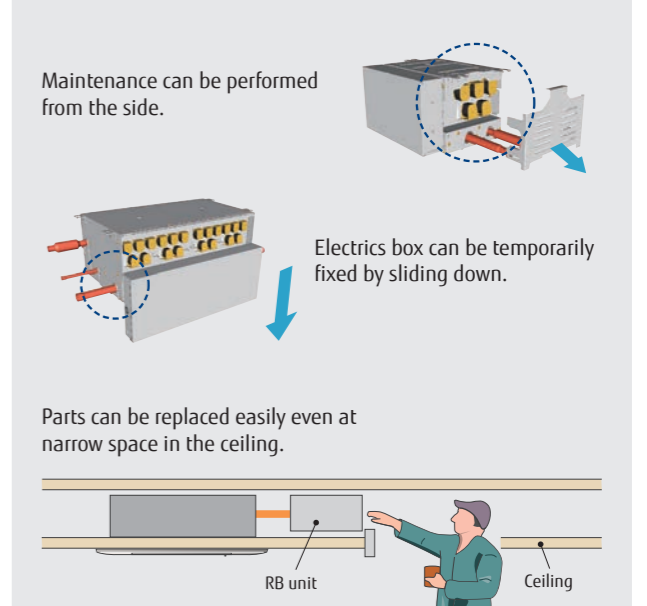


Small & slim design saves space. Height 198 mm!

- A drain pipe is not required
- The control box position can be changed to meet the installation conditions
- Simple installation series connection design



Easy to maintenance in a narrow space




Outdoor units lineup • Combinations other than the followings are not recommended.

Space saving Combinations

22.4kW (8HP)  AJY072GALBH UNIT : AJY072GALBH	28.0kW (10HP)  AJY090GALBH UNIT : AJY090GALBH	33.5kW (12HP)  AJY108GALBH UNIT : AJY108GALBH	40.0kW (14HP)  AJY126GALBH UNIT : AJY126GALBH	45.0kW (16HP)  AJY144GALBH UNIT : AJY144GALBH
50.4kW (18HP)  AJY162GALBH UNIT : AJY090/072GALBH	56.0kW (20HP)  AJY180GALBH UNIT : AJY090/090GALBH	61.5kW (22HP)  AJY198GALBH UNIT : AJY108/090GALBH	67.0kW (24HP)  AJY216GALBH UNIT : AJY108/108GALBH	73.0kW (26HP)  AJY234GALBH UNIT : AJY144/090GALBH
78.5kW (28HP)  AJY252GALBH UNIT : AJY144/108GALBH	85.0kW (30HP)  AJY270GALBH UNIT : AJY144/126GALBH	90.0kW (32HP)  AJY288GALBH UNIT : AJY144/144GALBH	95.0kW (34HP)  AJY306GALBH UNIT : AJY108/108/090GALBH	100.5kW (36HP)  AJY324GALBH UNIT : AJY108/108/108GALBH
106.5kW (38HP)  AJY342GALBH UNIT : AJY144/108/090GALBH	112.0kW (40HP)  AJY360GALBH UNIT : AJY144/108/108GALBH	118.0kW (42HP)  AJY378GALBH UNIT : AJY144/144/090GALBH	123.5kW (44HP)  AJY396GALBH UNIT : AJY144/144/108GALBH	130.0kW (46HP)  AJY414GALBH UNIT : AJY144/144/126GALBH
135.0kW (48HP)  AJY432GALBH UNIT : AJY144/144/144GALBH				

Energy efficiency Combinations

44.8kW (16HP)  AJY144GALBHH UNIT : AJY072/072GALBH	62.4kW (22HP)  AJY198GALBHH UNIT : AJY126/072GALBH	67.2kW (24HP)  AJY216GALBHH UNIT : AJY072/072/072GALBH	72.8kW (26HP)  AJY234GALBHH UNIT : AJY090/072/072GALBH	78.4kW (28HP)  AJY252GALBHH UNIT : AJY090/090/072GALBH
84.0kW (30HP)  AJY270GALBHH UNIT : AJY090/090/090GALBH	90.4kW (32HP)  AJY288GALBHH UNIT : AJY126/090/072GALBH	96.0kW (34HP)  AJY306GALBHH UNIT : AJY126/090/090GALBH	102.4kW (36HP)  AJY324GALBHH UNIT : AJY126/126/072GALBH	108.0kW (38HP)  AJY342GALBHH UNIT : AJY126/126/090GALBH
113.0kW (40HP)  AJY360GALBHH UNIT : AJY144/126/090GALBH	120.0kW (42HP)  AJY378GALBHH UNIT : AJY126/126/126GALBH	125.0kW (44HP)  AJY396GALBHH UNIT : AJY144/126/126GALBH		

8,10,12HP : AJY072GALBH / AJY090GALBH / AJY108GALBH
14,16HP : AJY126GALBH / AJY144GALBH



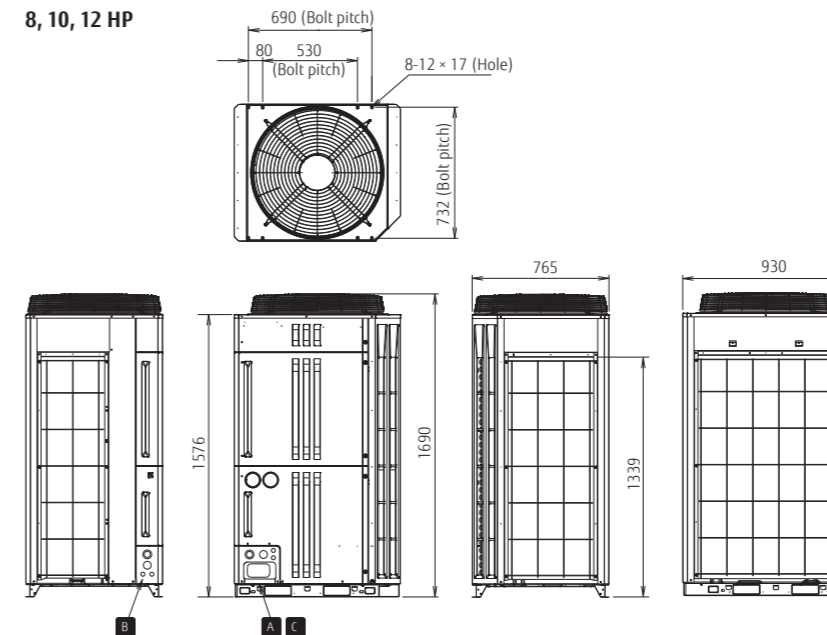
8, 10, 12 HP

14, 16 HP

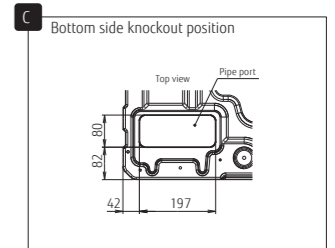
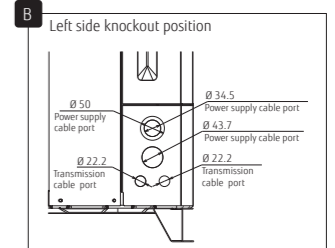
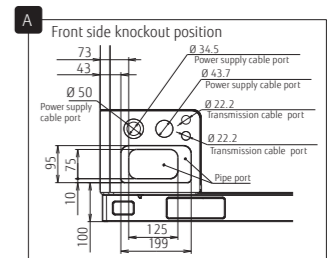
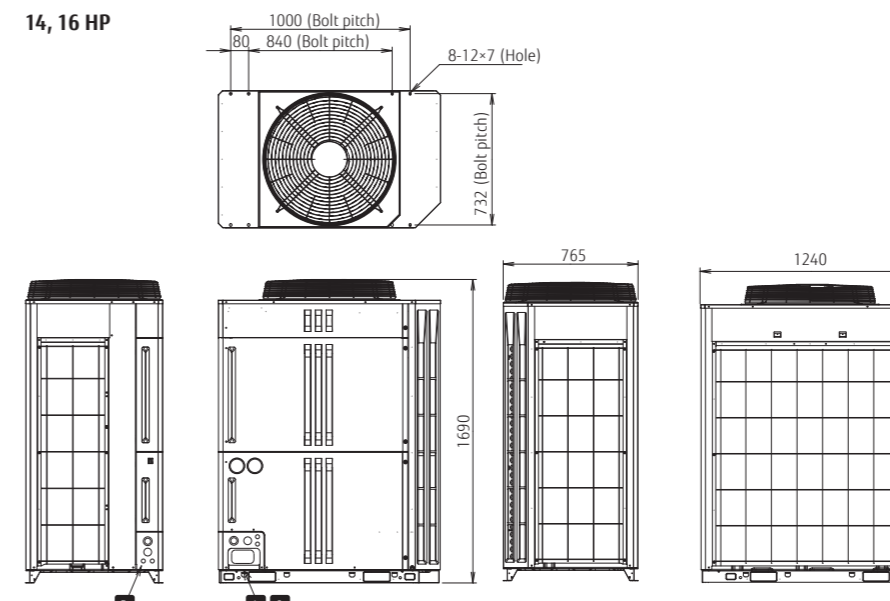
Dimensions

(Unit : mm)

8, 10, 12 HP



14, 16 HP



Outdoor units specifications

Space Saving Combination

Rating Capacity range	HP	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
Set Model name		AJY072GALBH	AJY090GALBH	AJY108GALBH	AJY126GALBH	AJY144GALBH	AJY162GALBH	AJY180GALBH	AJY198GALBH	AJY216GALBH	AJY234GALBH	AJY252GALBH	AJY270GALBH	AJY288GALBH	AJY306GALBH	AJY324GALBH	AJY342GALBH	AJY360GALBH	AJY378GALBH	AJY396GALBH	AJY414GALBH	AJY432GALBH	
Unit 1 Unit 2 Unit 3		AJY072GALBH	AJY090GALBH	AJY108GALBH	AJY126GALBH	AJY144GALBH	AJY090GALBH AJY072GALBH	AJY090GALBH AJY090GALBH	AJY108GALBH AJY090GALBH	AJY108GALBH	AJY144GALBH AJY090GALBH	AJY144GALBH AJY108GALBH	AJY144GALBH AJY126GALBH	AJY144GALBH AJY144GALBH	AJY108GALBH AJY108GALBH	AJY108GALBH AJY108GALBH	AJY144GALBH AJY108GALBH	AJY144GALBH AJY108GALBH	AJY144GALBH AJY108GALBH	AJY144GALBH AJY090GALBH	AJY144GALBH AJY108GALBH	AJY144GALBH AJY126GALBH	AJY144GALBH AJY144GALBH
Maximum Connectable Indoor Unit*		17	21	26	30	34	39	43	47	52	56	60	64	64	64	64	64	64	64	64	64	64	64
Indoor unit connectable capacity	kW	5.6-33.6	7.0-42.0	8.4-50.2	10.0-60.0	11.3-67.5	12.6-75.6*3	14.0-84.0*3	15.4-92.2*3	16.8-100.5*3	18.3-109.5*3	19.7-117.7*3	21.3-127.5*3	22.5-135.0*3	23.8-142.5*3	25.2-150.7*3	26.7-159.7*3	28.0-168.0*3	29.5-177.0*3	30.9-185.2*3	32.5-195.0*3	33.8-202.5*3	
Power source	3 phase 4 wire, 400 V, 50Hz											3 phase 4 wire, 400 V, 50Hz											
Capacity	Cooling	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	67.0	73.0	78.5	85.0	90.0	95.0	100.5	106.5	112.0	118.0	123.5	130.0	135.0	
	Nominal Heating	22.4	28.0	33.5	40.0	45.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	25.0	31.5	37.5	45.0	50.0	56.5	63.0	69.0	75.0	81.5	87.5	95.0	100.0	106.5	112.5	119.0	125.0	131.5	137.5	145.0	150.0	
Input power	Cooling	5.45	7.11	9.75	11.34	14.42	12.56	14.22	16.86	19.50	21.53	24.17	25.76	28.84	26.61	29.25	31.28	33.92	35.95	38.59	40.18	43.26	
	Nominal Heating	4.73	6.00	7.89	8.85	10.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	5.70	7.33	9.62	10.90	12.77	13.03	14.66	16.95	19.24	20.10	22.39	23.67	25.54	26.57	28.86	29.72	32.01	32.87	35.16	36.44	38.31	
EER	Cooling	4.11	3.94	3.44	3.53	3.12	4.01	3.94	3.65	3.44	3.39	3.25	3.30	3.12	3.57	3.44	3.40	3.30	3.28	3.20	3.24	3.12	
COP	Nominal Heating	4.74	4.67	4.25	4.52	4.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	4.39	4.30	3.90	4.13	3.92	4.34	4.30	4.07	3.90	4.05	3.91	4.01	3.92	4.01	3.90	4.00	3.91	4.00	3.91	3.98	3.92	
Airflow rate		11,100	11,100	11,100	13,000	13,000	11,100x2	11,100x2	11,100x2	11,100x2	13,000+11,100	13,000+11,100	13,000x2	13,000x2	11,100x3	11,100x3	13,000+11,100x2	13,000+11,100x2	13,000+11,100	13,000+11,100	13,000x3	13,000x3	
Sound pressure level**/ Power level	Cooling	56 / 75	58 / 76	59 / 79	60 / 81	61 / 81	60 / 79	61 / 79	62 / 81	62 / 82	63 / 82	63 / 83	64 / 84	64 / 84	63 / 83	64 / 84	64 / 84	65 / 85	65 / 85	65 / 85	65 / 86	66 / 86	66 / 86
	Heating	58 / 76	59 / 77	62 / 82	62 / 82	62 / 82	62 / 80	62 / 80	63 / 83	64 / 85	63 / 83	64 / 85	64 / 85	64 / 85	65 / 86	67 / 87	65 / 86	67 / 87	66 / 86	67 / 87	67 / 87	67 / 87	67 / 87
Maximum external static pressure	Pa	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	
Compressor motor output	kW	7.5	7.5	7.5	11.0	11.0	7.5x2	7.5x2	7.5x2	7.5x2	11.0x7.5	11.0x7.5	11.0x2	11.0x2	7.5x3	7.5x3	11.0x7.5x2	11.0x7.5x2	11.0x7.5x2	11.0x7.5x2	11.0x3	11.0x3	
Heat exchanger fin		Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	
Net Dimensions	Height	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	
	Width	930	930	930	1,240	1,240	930x2	930x2	930x2	930x2	1,240x930	1,240x930	1,240x2	1,240x2	930x3	930x3	1,240x930x2	1,240x930x2	1,240x930x2	1,240x930x2	1,240x3	1,240x3	
	Depth	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	
Weight	kg	262	262	262	286	286	262x2	262x2	262x2	262x2	286x262	286x262	286x2	286x2	262x3	262x3	286x262x2	286x262x2	286x262x2	286x262x2	286x3	286x3	
Refrigerant	Type (Global Warming Potential)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	R410A (2,088)	
	Charge kg(CO2eq-1)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	11.8 (24.6)	
Connection pipe diameter	Liquid	12.70	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	15.88	
	Discharge Gas	15.88	19.05	19.05	22.22	22.22	22.22	22.22	22.22	22.22	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	
	Suction Gas	22.22	22.22	28.58	28.58	28.58	28.58	28.58	28.58	34.92	34.92	34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27	41.27	41.27	
Operation range	Cooling	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	
	Heating	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	
	Cooling/Heating	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	

Energy Efficiency Combination

Rating Capacity range	HP	16	22	24	26	28	30	32	34	36	38	40	42	44	
Set Model name		AJY144GALBHH	AJY198GALBHH	AJY216GALBHH	AJY234GALBHH	AJY252GALBHH	AJY270GALBHH	AJY288GALBHH	AJY306GALBHH	AJY324GALBHH	AJY342GALBHH	AJY360GALBHH	AJY378GALBHH	AJY396GALBHH	
Unit 1 Unit 2 Unit 3		AJY072GALBH AJY072GALBH	AJY126GALBH AJY072GALBH	AJY072GALBH AJY072GALBH AJY072GALBH	AJY090GALBH AJY072GALBH AJY072GALBH	AJY090GALBH AJY090GALBH AJY072GALBH	AJY090GALBH AJY090GALBH AJY090GALBH	AJY126GALBH AJY090GALBH AJY072GALBH	AJY126GALBH AJY090GALBH AJY090GALBH	AJY126GALBH AJY126GALBH AJY072GALBH	AJY126GALBH AJY126GALBH AJY072GALBH	AJY144GALBH AJY126GALBH AJY090GALBH	AJY126GALBH AJY126GALBH AJY126GALBH	AJY144GALBH AJY126GALBH AJY126GALBH	
Maximum Connectable Indoor Unit*		34	47	52	56	60	64	64	64	64	64	64	64	64	
Indoor unit connectable capacity	kW	11.2-67.2*3	15.6-93.6*3	16.8-100.8*3	18.2-109.2*3	19.6-117.6*3	21.0-126.0*3	22.6-135.6*3	24.0-144.0*3	25.6-153.6*3	27.0-162.0*3	28.3-169.5*3	30.0-180.0*3	31.3-187.5*3	
Power source	3 phase 4 wire, 400 V, 50Hz							3 phase 4 wire, 400 V, 50Hz							
Capacity	Cooling	44.8	62.4	67.2	72.8	78.4	84.0	90.4	96.0	102.4	108.0	113.0	120.0	125.0	
	Nominal Heating	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	50.0	70.0	75.0	81.5	88.0	94.5	101.5	108.0	115.0	121.5	126.5	135.0	140.0	
Input power	Cooling	10.90	16.79	16.35	18.01	19.67	21.33	23.90	25.56	28.13	29.79	32.87	34.02	37.10	
	Nominal Heating	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	11.40	16.60	17.10	18.73	20.36	21.99	23.93	25.56	27.50	29.13	31.00	32.70	34.57	
EER	Cooling	4.11	3.72	4.11	4.04	3.99	3.94	3.78	3.76	3.64	3.63	3.44	3.53	3.37	
COP	Nominal Heating	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max Heating	4.39	4.22	4.39	4.35	4.32	4.30	4.24	4.23	4.18	4.17	4.08	4.13	4.05	
Airflow rate	m³/h	11,100x2	13,000+11,100	11,100x3	11,100x3	11,100x3	11,100x3	13,000+11,100x2	13,000+11,100x2	13,000x2+11,100	13,000x2+11,100	13,000x2+11,100	13,000x3	13,000x3	
Sound pressure level**/ Power level	Cooling	59 / 78	61 / 82	61 / 80	62 / 80	62 / 80	63 / 81	63 / 83	64 / 83	64 / 85	64 / 85	65 / 85	65 / 86	65 / 86	
	Heating	61 / 79	63 / 83	63 / 82	63 / 81	63 / 81	63 / 81	64 / 84	65 / 84	66 / 86	66 / 86	66 / 86	67 / 87	67 / 87	
Maximum external static pressure	Pa	80	80	80	80	80	80	80	80	80	80	80	80	80	
Compressor motor output	kW	7.5x2	11.0x7.5	7.5x3	7.5x3	7.5x3	7.5x3	11.0x7.5x2	11.0x7.5x2	11.0x7.5x2					