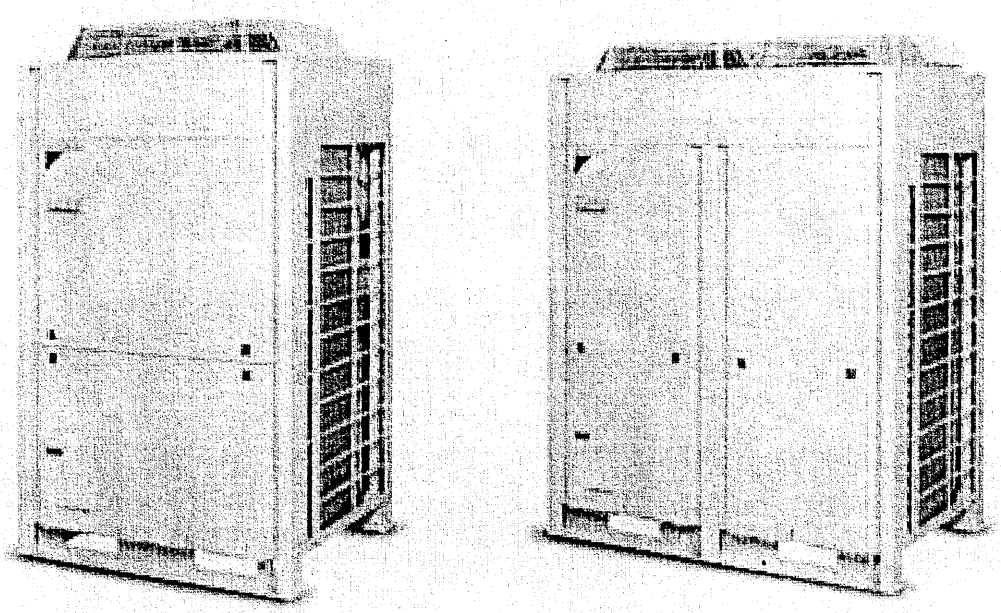
DAIKIN

AIR CONDITIONING

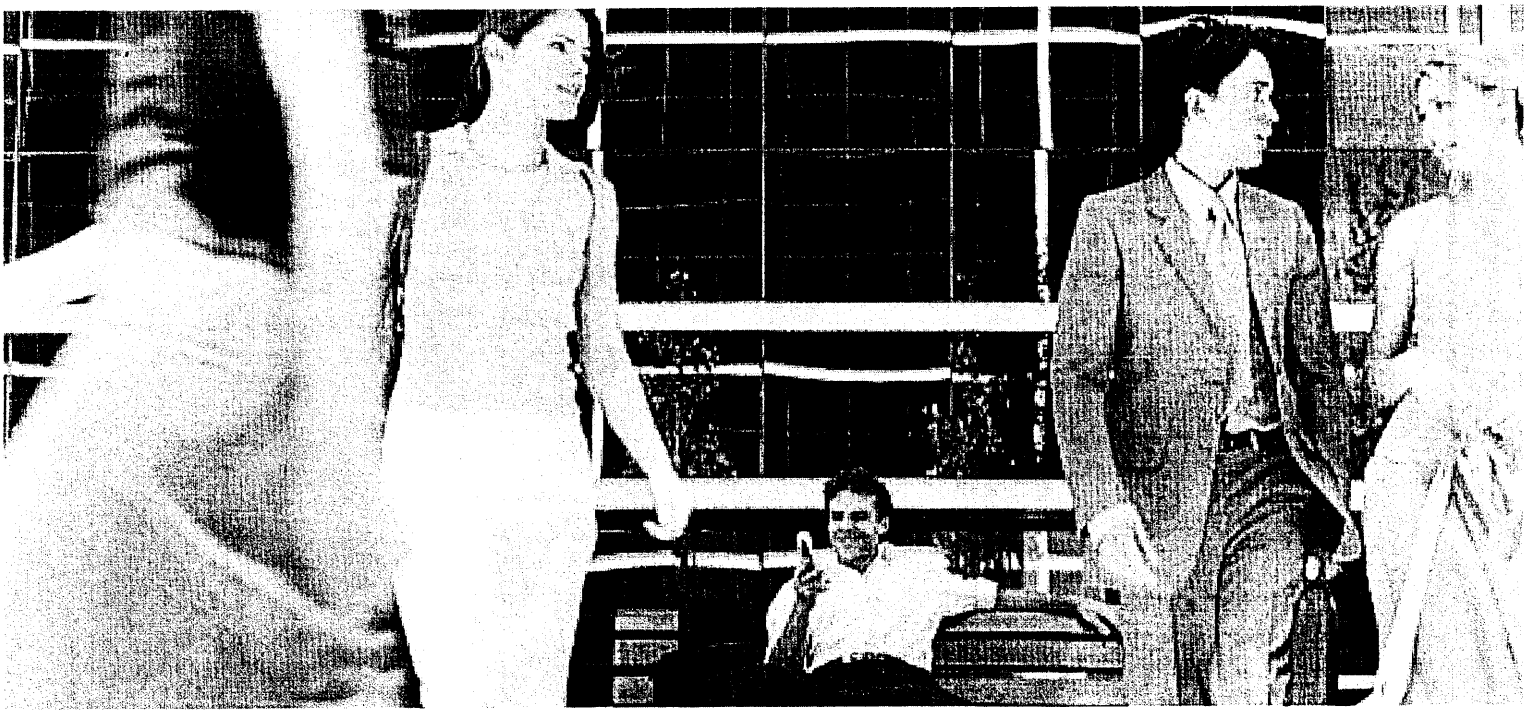
VRV III

Heat Recovery Preview

R-410A



The new VRVIII heat recovery system



The environment

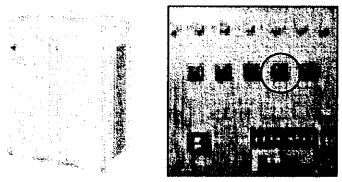
Energy efficiency

VRVIII Heat Recovery takes full account of Building Regulations Part 'L' energy efficiency requirements. It returns significantly higher efficiencies than VRVII with an enviable 14% average increase in efficiency across the range, with the most efficient units reaching a 20% increase in efficiency. COPs and EERs of up to 4.3 and 4.1 respectively are obtained at 100% connection. This exceeds the criteria set for ECA qualification.

Refrigerant containment

The new brazed connections for the condensing unit and the branch selector box ensure that the potential for leakage is reduced when compared to the flare connections used on previous systems.

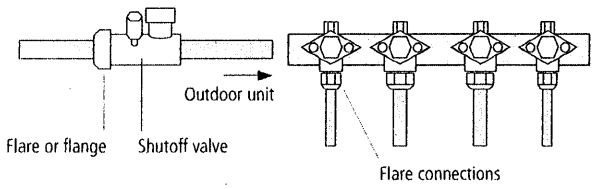
The system refrigerant volume is also reduced from VRVII.



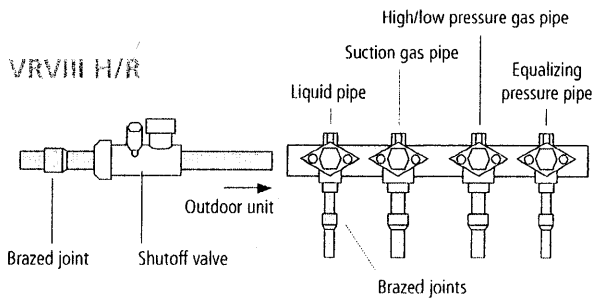
The refrigerant containment check facility provides a simple way to check the refrigerant volume in the system. By pressing a button on the outdoor unit printed circuit board, any changes will be indicated by LED's.

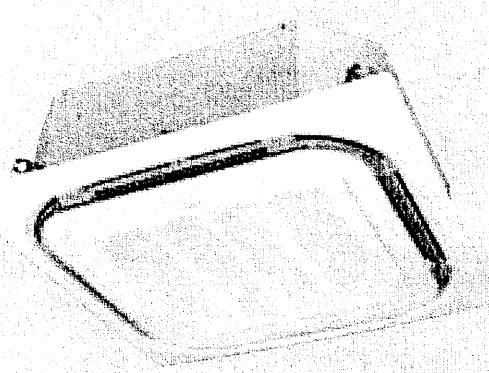
Better refrigerant containment

VRVII H/R

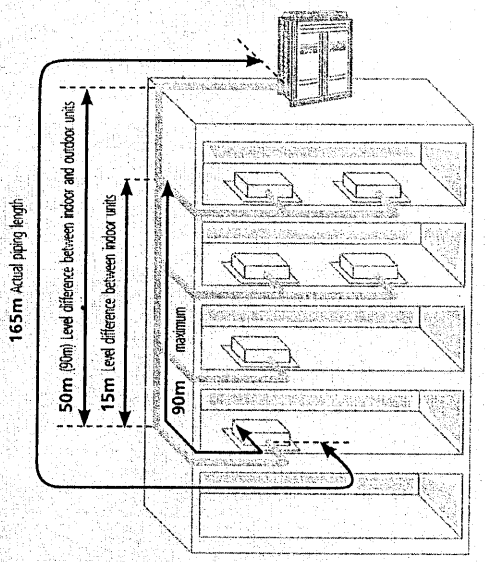


VRVIII H/R





Industry1st:- Roundflow Cassette

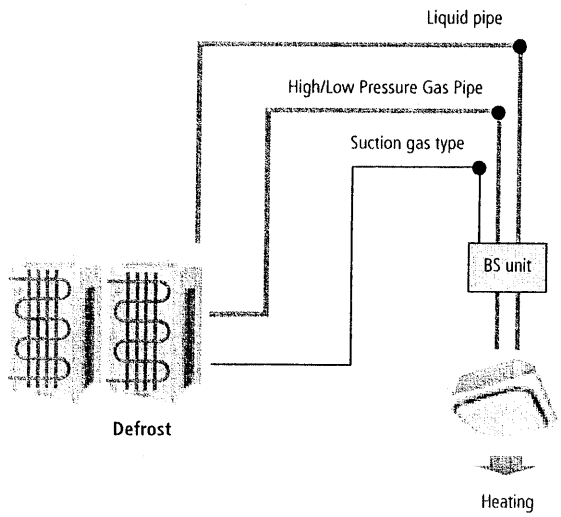


Increased comfort...

...through continuous heating

The new VRVIII Heat Recovery system improves on delivered heating capacity compared to other systems on the market, through changes in operation during defrost. As each system comprises at least 2 heat exchangers in the outdoor unit, the system will defrost these alternatively. This results in continuous heating at the indoor unit even during the defrost cycle. Where other VRF systems stop operating, VRVIII continues in heating to maintain comfort.

Continuous heating during defrost



Flexibility

Wide range of indoor units

VRV air conditioning brings summer freshness and winter warmth to offices, hotels, department stores and many other commercial premises. It enhances the indoor environment and creates a basis for increased business prosperity and whatever the air conditioning requirement, a Daikin indoor unit will provide the answer. VRV air conditioning can be supplied via 13 different indoor unit models in a total of 75 variations, including the new low-height roundflow cassette.

The maximum number of indoor units connectable to one system has increased across the range with up to 64 being connectable to the largest outdoor unit.

Extended piping length

VRVIII offers an extended piping length of 165m (190m equivalent piping length) with a total system piping length of 1,000m.

When the outdoor unit is located above the indoor unit, the standard height difference is 50m. This can be extended to 90m as an option.

In case the outdoor unit is located below the indoor unit, the height difference is 90m as standard.

After the first branch the longest piping length is now a maximum of 90m.

Higher External Static Pressure

Due to the increased External Static Pressure in VRVIII Heat Recovery to 78.4 Pa, it is now possible to install condensing units within the building when external space is restricted.

Easy maintenance

Self diagnostic function

This function operated via push button on the PCB, speeds up troubleshooting and is used for start-up and maintenance.

Installation and maintenance

Installation and maintenance friendly design

Automatic charge function

Conventional way:

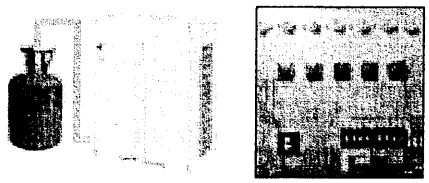
1. manual calculation of additional refrigerant charging volume
2. manual charging the unit with additional refrigerant

VRVIII

With VRVIII however, these 2 steps are omitted since VRVIII unit can be charged with the necessary amount of refrigerant automatically via a push button on the PCB. Automatic charging will cease once the appropriate amount of refrigerant has been transferred.

Automatic test

When refrigerant charging has ceased, pushing the test operation button on the PCB will initiate a check on the wiring, shut off valves, sensors and refrigerant volume. This test ceases automatically when completed.



VRVIII heat recovery

REYQ-P			8	10	12	14	16
Models	REYQ8P		1				
	REYQ10P			1			
	REYQ12P				1		
	REYQ14P					1	
	REYQ16P						1
Number of outdoor units			1	1	1	1	1
Equivalent horsepower		HP	8	10	12	14	16
Capacity	cooling	kW	22.4	28	33.5	40	45
	heating	kW	25	31.5	37.5	45	50
Nominal input	cooling	kW	5.46	7.09	9.08	11.4	14.1
	heating	kW	5.81	7.38	8.93	11.0	12.8
EER	cooling		4.10	3.95	3.69	3.51	3.19
COP	heating		4.30	4.27	4.20	4.10	3.90
Max. number of connectable indoor units			13	16	19	22	26
Minimum capacity index			100	125	150	175	200
Maximum capacity index - 130 %			260	325	390	455	520
Capacity steps			30	37	37	26	26
Dimensions	height	mm	1,680	1,680	1,680	1,680	1,680
	width	mm	1,300	1,300	1,300	1,300	1,300
	depth	mm	765	765	765	765	765
Weight		kg	331	331	331	339	339
Casing			painted galvanised steel				
Colour			ivory white				
Sound pressure level		dB(A)	58	58	60	62	63
Sound power level		dB(A)	*	*	*	*	*
Fan	type		propeller fan				
	air flow rate		190	190	210	235	240
Refrigerant	name		R-410A				
	charge	kg	10.3	10.6	10.8	11.1	11.1
	control		electronic expansion valve				
Refrigerant oil	type		synthetic ether oil				
	charge	l	*	*	*	*	*
Compressor	type		hermetically sealed scroll compressor				
	starting method		soft start				
Piping connections	liquid	mm	9.52	9.52	12.7	12.7	12.7
	gas	mm	19.1	22.2	28.6	28.6	28.6
	discharge gas	mm	15.9	19.1	19.1	22.2	22.2
	pressure equalizer tube	mm	none	none	none	none	none
Operation range	cooling	°CDB	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43
	heating	°CWB	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5
Power supply		V1	3~, 50Hz, 380-415V				
Safety devices			HPS, fan motor overcurrent protector, inverter overload protector, overcurrent relay, PC board fuse				

*Information was not available at time of publication

REYQ-P			18	20	22
Modules	REMQ8P		1	1	
	REMQ10P		1		1
	REMQ12P			1	1
	REMQ14P				
	REMQ16P				
Number of outdoor units			2	2	2
Equivalent horsepower		HP	18	20	22
Capacity	cooling	kW	50.4	55.9	61.5
	heating	kW	56.5	62.5	69
Nominal input	cooling	kW	13.0	15.2	17.0
	heating	kW	13.6	15.3	17.1
EER	cooling		3.88	3.68	3.61
COP	heating		4.15	4.08	4.03
Max. number of connectable indoor units			29	32	35
Minimum capacity index			225	250	275
Maximum capacity index - 130 %			585	650	715
Capacity steps			31	31	38
Dimensions	height	mm	1,680	1,680	1,680
	width	mm	930 + 930	930 + 930	930 + 930
	depth	mm	765	765	765
Weight		kg	204 + 254	204 + 254	254 + 254
Casing					
Colour					
Sound pressure level		dB(A)	61	62	62
Sound power level		dB(A)	81.0	82.0	82.0
Fan	type				
	air flow rate		180 + 185	180 + 200	185 + 200
Refrigerant	name				
	charge	kg	8.2 + 9.0	8.2 + 9.1	9.0 + 9.1
	control				
Refrigerant oil	type				
	charge	l	8.2	8.4	10.4
Compressor	type				
	starting method				
Piping connections	liquid	mm	15.9	15.9	15.9
	gas	mm	28.6	28.6	28.6
	discharge gas	mm	22.2	28.6	28.6
	pressure equalizer tube	mm	19.1	19.1	19.1
Operation range	cooling	°CDB	-5 ~ 43	-5 ~ 43	-5 ~ 43
	heating	°CWB	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5
Power supply		V1			
Safety devices					

Notes: • Nominal cooling capacities are based on: indoor temperature: 27°CDB, 19°CWB
• outdoor temperature: 35°CDB • equivalent refrigerant piping: 7.5m • level difference: 0m
• Nominal heating capacities are based on: indoor temperature: 20°CDB
• outdoor temperature: 7°CDB/6°CWB • equivalent refrigerant piping: 7.5m • level difference: 0m

24	26	28	30	32	34	36	38	40	42	44	46	48
					1	1						
	1				1		1		1			
2		1				1	1	2		1		
			1								1	
	1	1	1	2	1	1	1	1	2	2	2	3
2	2	2	2	2	3	3	3	3	3	3	3	3
24	26	28	30	32	34	36	38	40	42	44	46	48
67.0	73.0	78.5	85.0	90.0	95.4	101.0	107.0	112.0	118.0	124.0	130.0	135.0
75	81.5	87.5	95	100	107	113	119	125	132	138	145	150
19.2	21.6	23.8	26.6	28.4	27.2	29.4	31.2	33.4	35.8	38.0	40.8	42.6
18.9	20.6	22.3	24.2	25.8	26.5	28.2	30.0	31.8	33.5	35.2	37.1	38.7
3.49	3.38	3.3	3.2	3.17	3.51	3.43	3.43	3.35	3.3	3.26	3.19	3.17
3.97	3.96	3.92	3.93	3.88	4.04	4.01	3.97	3.93	3.94	3.92	3.91	3.88
39	42	45	48	52	55	58	61	64	64	64	64	64
300	325	350	375	400	425	450	475	500	525	550	575	600
780	845	910	975	1,040	1,105	1,170	1,235	1,300	1,365	1,430	1,495	1,560
38	41	41	46	46	36	36	41	41	46	46	51	51
1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680
930 + 930	930 + 1,240	930 + 1,240	1,240 + 1,240	1,240 + 1,240	930 + 930 + 1,240	930 + 930 + 1,240	930 + 930 + 1,240	930 + 930 + 1,240	930 + 1,240 + 1,240	930 + 1,240 + 1,240	1,240 + 1,240 + 1,240	1,240 + 1,240 + 1,240
765	765	765	765	765	765	765	765	765	765	765	765	765
254 + 254	254 + 334	254 + 334	334 + 334	334 + 334	204 + 254 + 334	204 + 254 + 334	254 + 254 + 334	254 + 254 + 334	254 + 334 + 334	254 + 334 + 334	334 + 334 + 334	334 + 334 + 334
				painted galvanised steel								
				ivory white								
63	62	63	63	63	63	64	64	65	64	65	65	65
83.0	82.0	83.0	83.0	83.0	83.0	84.0	84.0	85.0	84.0	85.0	85.0	85.0
				propeller fan								
200 + 200	185 + 230	200 + 230	230 + 230	230 + 230	180 + 185 + 230	180 + 200 + 230	185 + 200 + 230	200 + 200 + 230	185 + 230 + 230	200 + 230 + 230	230 + 230 + 230	230 + 230 + 230
				R-410A								
9.1 + 9.1	9.0 + 11.7	9.1 + 11.7	11.7 + 11.7	11.7 + 11.7	8.2 + 9.0 + 11.7	8.2 + 9.1 + 11.7	9.0 + 9.1 + 11.7	9.1 + 9.1 + 11.7	9.0 + 11.7 + 11.7	9.1 + 11.7 + 11.7	11.7 + 11.7 + 11.7	11.7 + 11.7 + 11.7
				electronic expansion valve								
				synthetic ether oil								
10.6	12.6	12.8	14.9	15.0	15.7	15.9	17.9	18.1	20.1	20.3	22.4	22.5
				hermetically sealed scroll compressor								
				soft start								
15.9	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
34.9	34.9	34.9	34.9	34.9	34.9	41.3	41.3	41.3	41.3	41.3	41.3	41.3
28.6	28.6	28.6	28.6	28.6	28.6	28.6	34.9	34.9	34.9	34.9	34.9	34.9
19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43	-5 ~ 43
-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5	-20 ~ 15.5
				3~, 50Hz, 380-415V								
				HPS, fan motor overcurrent protector, inverter overload protector, overcurrent relay, PC board fuse								

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