DAIKIN

Air Conditioning

SUBMITTAL DATA SHEET

MODEL: Heat Recovery 50Hz - REYQ38TAY1

PROJECT NAME:	
Location:	Approval:
Engineer:	Date
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

FEATURES AND BENEFITS

The new VRV R series enables simultaneous operation of cooling and heating within a single refrigerant piping circuit by controlling the BS unit. This series also substantially improves energy efficiency by recycling exhaust heat.

Modern office buildings are highly airtight and subject to an increasing heat load due to the use of computers, lighting equipment and other office equipment. In these buildings some rooms may require artificial cooling even in winter, depending on the amount of sunshine received and the number of people in the room. In order to meet such requirements the Heat Recovery Series enables the simultaneous operation of cooling and heating by controlling the BS unit that switches cooling and heating. This series also substantially improves energy efficiency by recycling waste heat.

Development of a highly efficient heat exchanger utilizing of a two-split structure in a conventional system, two heat exchanger panels are utilized: one is used as an evaporator; while the other is used as a condenser. In the newly developed system, a two-split structure is utilized, with one panel split into two parts (top and bottom) at an optimal ratio depending on the capacity required for simultaneous cooling and heating operation. Heat radiation loss has been minimized, and the heat recovery efficiency and partial load characteristics have been improved.

VRT Smart Control optimally supply only for the needed capacity of indoor units Daikin developed VRT smart control by combining air volume control (VAV: Variable Air Volume) for indoor units with conventional VRT control, which optimizes compressor speed by calculating the required load for the entire system and optimal target refrigerant temperature based on data sent from each indoor unit. Coordination with the air volume control reduces compressor load and minimizes operation loss based on detailed control. VRT smart control ensures energy savings and comfortable air conditioning to meet actual operating conditions.

Comfort low operation sound night time quiet operation function for areas with stringent restrictions placed on outdoor sound levels, the outdoor unit can be set for low operation sound during the nighttime to meet sound restrictions. Large airflow, high static pressure and quiet technology.

Compact design with high performance highly integrated heat exchanger, optimized inner design to ensure smooth airflow, electric components were downsized and positioned in the dead space of the bell mouth side to decrease airflow resistance. Sufficient cooling for electrical components

High reliability at high ambient temperatures it is possible to keep operation stable even at high ambient temperatures by cooling the inverter power module.

Outer Rotor DC Motor (ODM) Only Daikin has adapted an ODM with the feature of stable rotation and volumetric efficiency.

Easy maintenance the electrical components are strategically located on the top which eases the maintenance process. Moreover, the heat exchanger on the front side can be used effectively to improve its performance. Without affecting the fan volume, the electric components are designed to be at the top and this utilizes dead space. This eliminates the problem of suction resistance.

Long piping length provides more design flexibility, which can match even large-sized buildings.

EXTERNAL APPEARANCE

VRV R SERIES

INVERTER R-410A

Variable Refrigerant Temperature

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SPECIFICATIONS

Model Name			**REYQ38TAY1 (REYQ12TAY1+REYQ12TAY1+REYQ14TAY1)**
Power supply			3 phase, 380-415 V, 50 Hz
*1 Cooling capacity		kcal/h	92.000
		Btu/h	365.000
		kW	107,0
*2 Heating capacity		kcal/h	103.000
		Btu/h	409.000
		kW	120,0
Casing colour			Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	(1,657×930×765)+(1,657×930×765)+ (1,657×1,240×765)
Heat exchanger			Cross fin coil
Compressor	Type		Hermetically sealed scroll type
	Motor output× Number of units	kW	(4.9×1)+(4.9×1)+(3.0×1)+(3.1×1)
	Starting method		Soft start
Fan	Type		Propeller fan
	Motor output	kW	(0.50×1)+(0.50×1)+(0.60×2)
	Airflow rate	m³/min	180+180+234
		l/s	3,000+3,000+3,900
		cfm	6,354+6,354+8,260
	Drive		Direct drive
Connecting pipes	Liquid pipe	mm	f19.1 C1220T (Brazing connection)
	Gas pipe	mm	f41.3 C1220T (Brazing connection)
	High and low pressure gas pipe	mm	f34.9 C1220T (Brazing connection)
Mass		kg	230+230+310
*3 Sound pressure level		dB(A)	64
Sound power level		dB(A)	85
Safety devices			High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector
Capacity control		%	4-100
Refrigerant	Refrigerant name		R410A
	Charge	kg	9.9+9.9+11.8
	Control		Electronic expansion valve
Refrigerator oil			Refer to the nameplate of compressor
Standard accessories			Installation manual, Operation manual, Connection pipes, Clamps
Drawing No.	Specifications		—
	Sound level		—

Notes:
*1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
*2. Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length: 7.5 m, level difference: 0 m.
*3. Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.5 m.
During actual operation, these values are normally somewhat higher as a result of ambient conditions and oil recovery mode.
When there is concern for noise the surrounding area such as residences, we recommend investigating the installation location and taking soundproofing measures.

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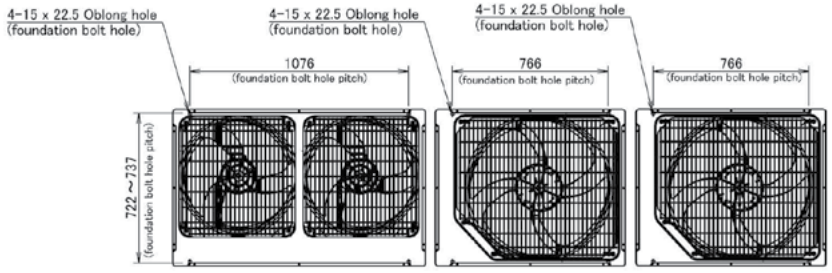
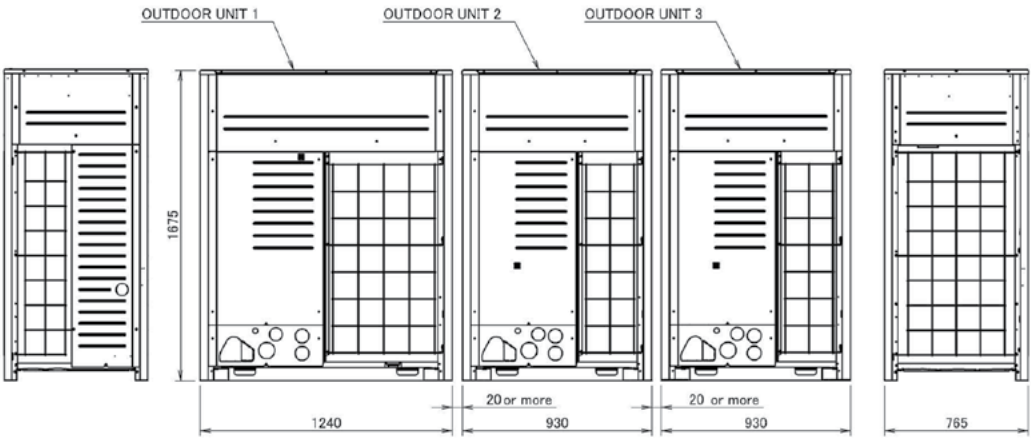
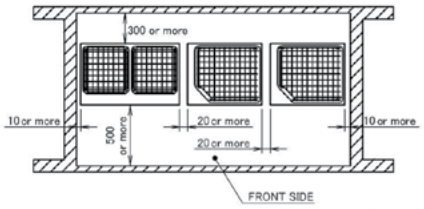
DIMENSIONS



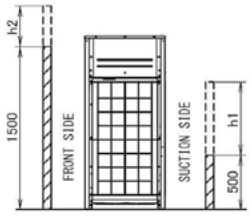


● The example of installation required space



〈 Unit : mm 〉

Note: 1. For the wall height of the example for this installation required space area.
Fornt side: 1500 mm
Suction side: 500 mm
Lateral side: No height limitation
This installation required space example has the standard of cooling operation at outdoor unit air temperature 35°C.
In case the temperature is over 35°C of designed outdoor air temperature,or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.
2. In case of it is over the wall height as specified, make sure to add each dimension h2/2, h1/2 or more to the front side, suction side space as below diagram.
3. When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.
4. For front side space, make sure to install by considering the neccesary space for refrigerant piping construction at the field.



SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.	OUTDOOR UNIT3	DWG. No.
REYQ38TA	REYQ14TA	3D091906	REYQ12TA	3D091888	REYQ12TA	3D091888
REYQ40TA	REYQ16TA	3D091906	REYQ12TA	3D091888	REYQ12TA	3D091888

Unit: mm

C; 3D091947A

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