Carrier

Turn to the experts

Mini VRF H Series - Cooling Only 1 Phase

(50/60 Hz)

Carrier

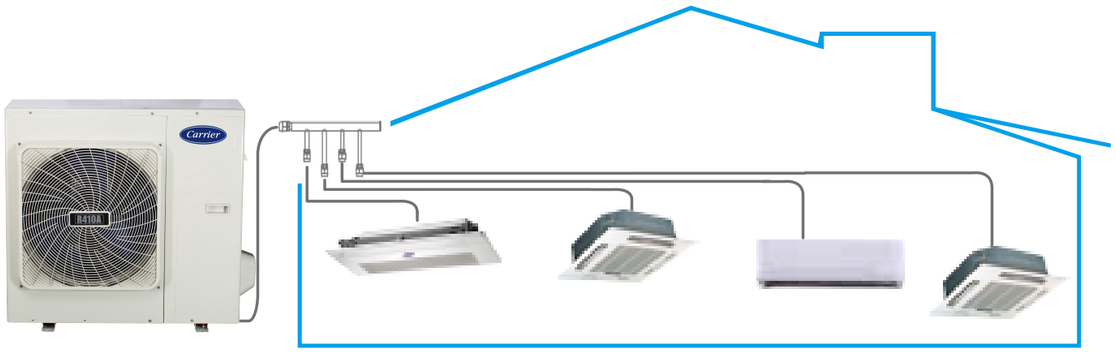
Mini H Series-Cooling Only 1 Phase

Wide Application Range

- IEER up to 22
- Compact Dimension
- Up to 9 indoor units can be connected
- WiFi connection enabled
- R4104 Refrigerant
- Full DC Inverter Technology
- High Efficiency Compressor and Fan Motor
- Long Piping Capability (Longer than Flex systems)
- Indoor units free capacity combination (No combination restriction compare with Flex systems)
- Wide Range of Indoor Units for residential, commercial and building applications (With 10 types and more than 100 models, same as Carrier VRF)
- Anti-Corrosion Blue Fin protection for a high performance heat exchanger

Wide range of outdoor units

Hp			3	4	5	6
kBtu/h			27.3	35.8	47.8	52.9
Air Cooled - Cooling Only	Mini H Series-Cooling Only 220-240V/1Ph/50Hz & 208-230V/1Ph/60Hz		●	●	●	●



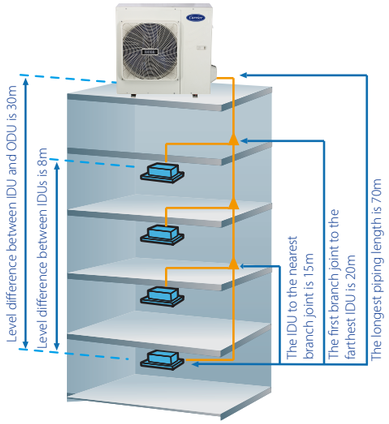
Flexible indoor units connection

Mini VRF with intelligent control gives you independent zoning control with maximum flexibility. A single outdoor unit supports up to nine indoor units, freeing up considerable space outside.

- Max. 7 indoor units for a 6HP (52.9kBtu/h) outdoor unit installation
- Max. 6 indoor units for a 5HP (47.8kBtu/h) outdoor unit installation
- Max. 6 indoor units for a 4HP (40.9kBtu/h) outdoor unit installation
- Max. 5 indoor units for a 4HP (35.8kBtu/h) outdoor unit installation
- Max.4 indoor units for a 3HP (27.3kBtu/h) outdoor unit installation

Flexible piping design

The Mini VRF provides a total piping length possibility of 100m, a maximum height difference between outdoor and indoor units of 30m. The height difference between indoors unit can be up to 8m. These generous allowances facilitate an extensive array of system designs.



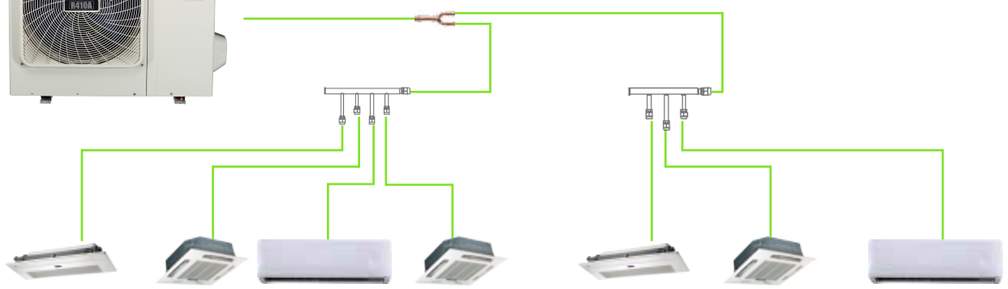
Mini H VRF piping capability

Permitted value			3HP/4HP (27.3/35.8kBtu/h)	5HP/6HP (47.8/52.9kBtu/h)
Piping length	Total piping length (Actual)		≤100m	≤100m
	Longest piping (L)	Actual length	≤45m	≤60m
		Equivalent length	≤50m	≤70m
	Equivalent piping length (from the first line branch pipe to furthest indoor unit)		≤20m	≤20m
	Equivalent piping length (from the nearest branch pipe equivalent length)		≤15m	≤15m
Level difference	Level difference between IDU~ODU	Outdoor unit up	≤30m	≤30m
		Outdoor unit down	≤20m	≤20m
	Level difference between IDU~IDU		≤8m	≤8m

1 Total pipe length is equal to all the liquid pipe or all the gas pipe length.
2 When the total equivalent pipe length of liquid side plus gas side is more than 90m(295.2ft),

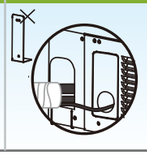
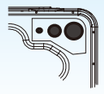
New piping connection design

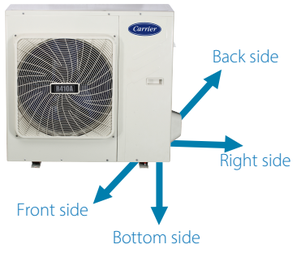
Branch-headers and Y-branches require only a single connection from the condenser to supply multiple units with sufficient amount of refrigerant. Improving savings from installation costs and allowing installers more flexible designs under typical conditions, for limited ceiling spaces in residential and light commercial applications.



More convenience in installation

A four-direction space is available for connecting pipes and wiring in various installation sites.

Front side	Right side	Back side	Bottom side
			



Dimension Comparison

- Smaller size with same cooling capacity.

Carrier Cooling Only line up

38VR003C11A010
38VR004C11A01S
38VR004C11A010
Capacity: 3HP / 4HP
Volume:
973*862*302mm
=0.253m^3

38VR005C11A010
38VR006C11A010
Capacity: 5HP / 6HP;
Volume:
1040*865*410mm
=0.47m^3

Other Brand

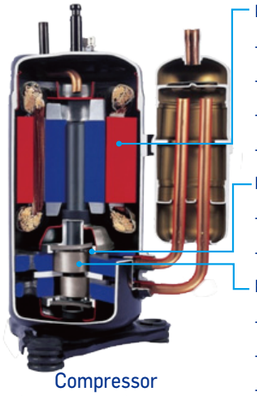
Capacity: 5HP;
Volume:
1000*1200*375mm
=0.45m^3

Carrier Mini H Series outdoor units are 50% smaller compare to other brands,as well delivering same cooling capacity. As a result, from our new compact design and reduced footprint, residential and light commercial applications become the best solution in the market for space savings.

Advanced Technologies

Full DC inverter technology

At the heart of our system is a highly intelligent inverter driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the cooling or heating demands of the zone that it controls. This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the limiting the impact on the environment.



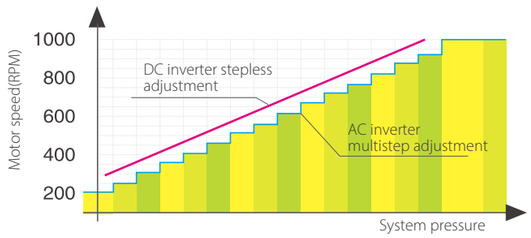
Compressor
(Twin Rotary) structure

Highly Efficient DC Motor:
- Creative motor core design
- High density neodymium magnet
- Concentrated type stator
-Wider operating frequency range

Better balance and Extremely Low Vibration:
- Twin eccentric cams
- 2 balance weights

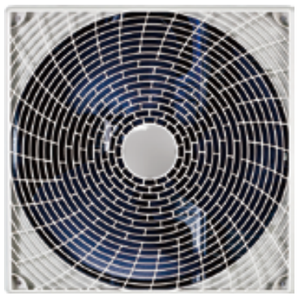
Highly Stable Moving Parts:
- Optimal material matching rollers and vanes
-Optimize compressor drive technology
- Highly robust bearings
-Compact structure

High efficiency DC fan motor saved power up to 50%.

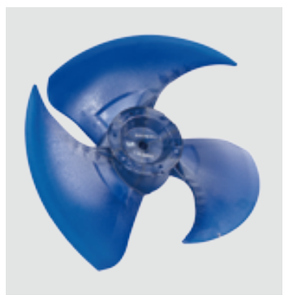


Noise reducing design

Optimally designed fan shape and air discharge grille increases air volume and reduces running noise.

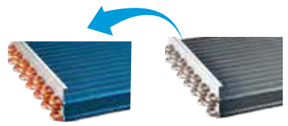


Newly Designed Fan Guard



Powerful Large Propeller

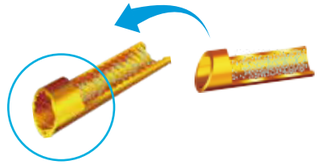
High performance heat exchanger – Built to last



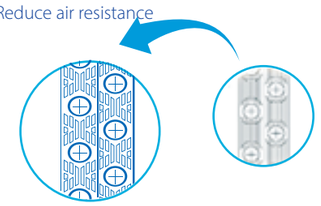
Hydrophilic fins + inner-threaded pipes

The outdoor unit is built to last with a coil blue fin anti-corrosive treatment, enhances durability and protects against corrosion from air, water and other corrosive agents, for a longer coil service life.

The new designed window fins enlarge the heat-exchanging area, decreases the air resistance, saves more power and enhances heat exchange performance.



High efficiency inner-threaded pipe, enhance heat transfer.



New design Original design

Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.

Efficiency base on test result

Our units are tested under severe scenarios to ensure the efficiency under full and partial load. Representing a great option for those Hvac projects where energy savings is a key feature.

Model	Capacity (HP)	Capacity (kBtu/h)	EER (Btu/kw)	SEER	IEER
38VR003C11A010	3	24.6	15.0	17.2	31
38VR004C11A01S	4	31.4	15.2	17.6	32.6
38VR004C11A010	4	37.5	13.6	15.6	30.1
38VR005C11A010	5	49.5	13.8	16	31.1
38VR006C11A010	6	58.0	14.5	16.7	31.5

EER: Efficiency energy ratio at full load (100%)
SEER: Seasonal energy efficiency ratio.
IEER: Integrated energy efficiency ratio (100%,75%, 50%, 25%)

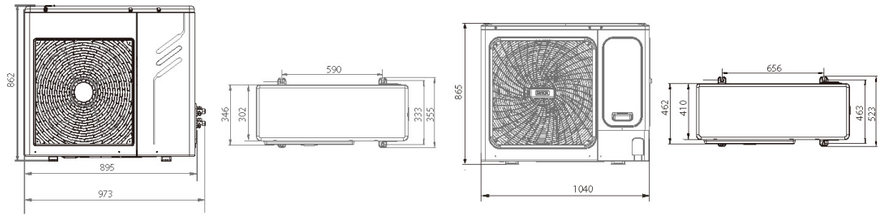
Mini H Series-Cooling Only 1 Phase

Specifications 50/60Hz

Model name			38VR003C11A010	38VR004C11A01S	38VR004C11A010	38VR005C11A010	38VR006C11A010
Power supply		V-Ph-Hz	1-phase, 220-240V, 50Hz 1-phase,208-230V,60Hz				
Cooling[1]	Capacity	kW	7.2	9.2	11	14.5	17
	Power input	kW	1.64	2.13	2.75	3.57	4.24
	EER		4.39	4.32	4	4.06	4.26
Connected indoor units	Total capacity		45-130% of outdoor unit capacity				
	Maximum quantity		4	5	6	8	9
Compressor	Type		DC inverter				
	Quantity		1				
Fan motor	Motor Type		DC				
	Quantity		1				
Refrigerant	Type		R410A				
	Factory charging	kg	1.4	1.4	1.4	2.6	2.6
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Airflow rate		m^3/h	3400	3400	3400	5100	5100
Sound pressure level[2]		dB(A)	54	54	54	55	55
Net dimensions (WxHxD)		mm	973×862×302	973×862×302	973×862×302	1053×865×523	1053×865×523
Packed dimensions (WxHxD)		mm	1025×910×410	1025×910×410	1025×910×410	1120×890×560	1120×890×560
Net weight		kg	58	58	58	85	85
Gross weight		kg	63	63	63	92	92
Operating temperature range		℃	Cooling: -5 to 48				

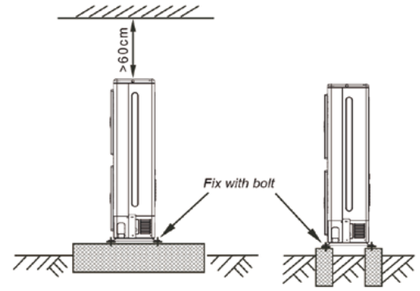
Notes:
1. Indoor air temperature 27°C (80.6DB, 19°C (66.2) WB; outdoor air temperature 35°C (95DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Sound pressure level is measured at a position 1m (3.28ft.) in front of the unit and 1.3m (4.26ft.) above the floor in a semi-anechoic chamber.
3. For a system with more than one IDU, to ensure even distribution of refrigant, the capacity of each indoor unit should not exceed 8kW.

Mini H Series-Cooling Only

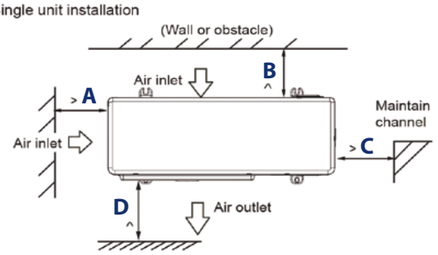


7.2/9.2/11kW　　14.5/17kW

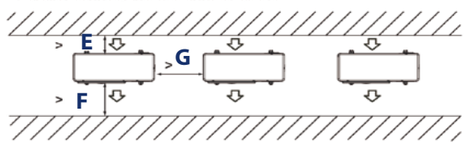
Unit install space allowance



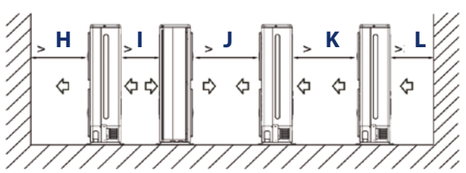
- Single unit installation



- Parallel connect the two units or above



- Parallel connect the front with rear sides



Model (kW)	A	B	C	D	E	F	G	H	I	G	K	L
8-18kW	300	300	600	2000	300	2000	600	2000	500	3000	3000	300
20-33.5kW	300	300	600	3000	300	3000	600	3000	1000	6000	4000	300
40-45kW	400	400	600	4000	400	4000	600	4000	1000	8000	6000	400

*length in CMS

Indoor Unit Range

- 10 types, more than 100 models.

1-way cassette
(6-24Kbtu)

2-way cassette
(7-24Kbtu)

4-way cassette
(9-24Kbtu)

Compact
4-way cassette
(7-16Kbtu)

Medium static
pressure duct
(7-60Kbtu)

Wall-mounted
(7-30Kbtu)

High static
pressure duct
(24-190Kbtu)

Ceiling & Flooring
(12-60Kbtu)

Heat Recovery
Ventilator
(42-96Kbtu)

Vertical
(18-54kBtu)

Wide Application Range

Wide Range of Indoor Units

The new Mini VRF line up has a variety of 9 indoor unit types, designed to meet all residential and light commercial projects requirements.

Indoor Unit Range

Two-way Cassette	Four-way Cassette	Ceiling & Floor	Wall-mounted	High ESP Duct
				
For narrow spaces and corners	For open spaces, air supply balance	For spaces already decorated	For small spaces with low-noise requirements	ESP up to 196Pa -specially designed for large spaces

Mini VRF AHU Control Box for retrofit applications

High Efficiency

AHU kit facilitates raising the EER/COP of the complete AHU system.

Wide Capacity Range

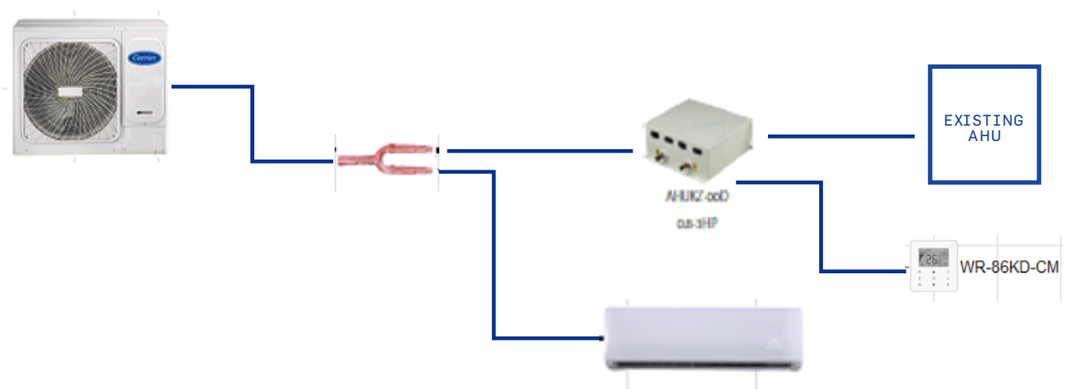
Two AHU Control box options for one-to-one retrofit applications, for an overall capacity range up to 6HP

AHUKZ-00D
0.8-3HP

AHUKZ-01D
3.2-6HP

Compatible with All VRF Systems

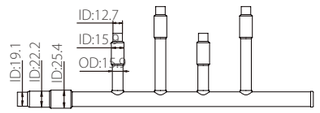
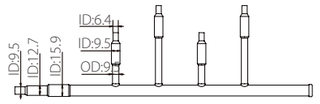
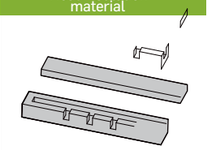
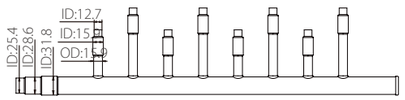
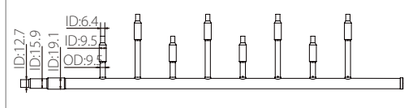
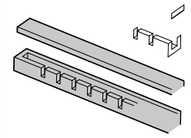
AHU kits are compatible with all Carrier VRF outdoor units and can be used together with all types of Carrier VRF indoor units.



Branch Header

Welding type (Applicable with Side discharge and top discharge VRF)

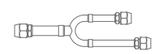
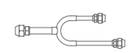
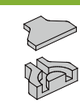
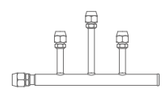
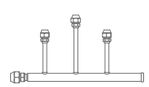
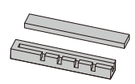
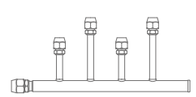
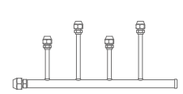
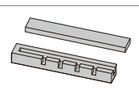
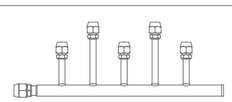
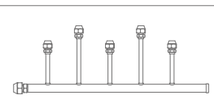
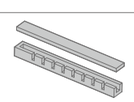
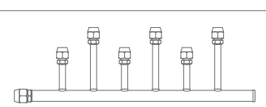
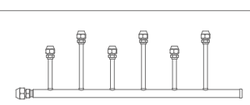
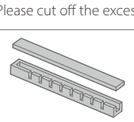
Dimension

Name	Gas side joints	Liquid side joints	Heat insulation material
header for 4 branches (DXFQT4-01)			
header for 8 branches (DXFQT8-01)			

Specification

Model		DXFQT4-01	DXFQT8-01
Max. total capacity of downstream indoor units		28kW	68kW
Max. number of downstream indoor units		4	8
Max. capacity of units per branch		16kW	16kW
Max. number of units per branch		1	1
Branch piping diameter (liquid pipe)		16mm	19mm
Branch piping diameter (gas pipe)		22mm	32mm
Max. connectable piping diameter (liquid pipe)		16mm	19mm
Max. connectable piping diameter (gas pipe)		25mm	32mm
Additional refrigerant charge		150g	250g
Diameter (indoor side)	Liquid pipe	ID6/ID9	ID6/ID9
	Gas pipe	ID12/ID16	ID12/ID16
Diameter (outdoor side)	Liquid pipe	ID9/ID12/ID16	ID12/ID16/ID19
	Gas pipe	ID19/ID22/ID25	ID25/ID28/ID32

Thread type (Applicable with MINI VRF only 8-16kW)

Name	Gas side joints (Φ15.9→Φ12.7)	Liquid side joints (Φ9.52→Φ6.35)	Heat insulation material	Adaptor
DXFQT2-02				Φ6.35→Φ9.52 (2 PC) Φ12.7→Φ15.9 (2 PC) Φ15.9→Φ19.1 (1 PC)
DXFQT3-02			 (Please cut off the excess)	Φ6.35→Φ9.52 (3 PC) Φ12.7→Φ15.9 (3 PC) Φ15.9→Φ19.1 (1 PC)
DXFQT4-02				Φ6.35→Φ9.52 (3 PC) Φ12.7→Φ15.9 (3 PC) Φ15.9→Φ19.1 (1 PC)
DXFQT5-02			 (Please cut off the excess)	Φ6.35→Φ9.52 (2 PC) Φ12.7→Φ15.9 (2 PC) Φ15.9→Φ19.1 (1 PC)
DXFQT6-02			 (Please cut off the excess)	Φ6.35→Φ9.52 (2 PC) Φ12.7→Φ15.9 (2 PC) Φ15.9→Φ19.1 (1 PC)

Wireless Remote Controllers	Wired Controllers	Centralized Controllers	Accessories
WL-12B-CM  **Standard wireless remote for all non-ducted indoor units**	**WR-86KD-CM**  **Factory recommended thermostat**	**CRF-270C-CM** 	**Hotel Key Card Interface Module**  **CA-HKCW**  **CA-HKCS**
WL-12F-CM 	**WR-120G-CM** 	**CRF-15B-CM** 	**Infrared Sensor Controller**  **CA-IS**
			**Diagnosis software**  **VRF-DIAG-B** **XYE Extension Kit**  **CA-EK** **Indoor Unit Online Kit**  **CAC-PIDU**

WIFI Enable System

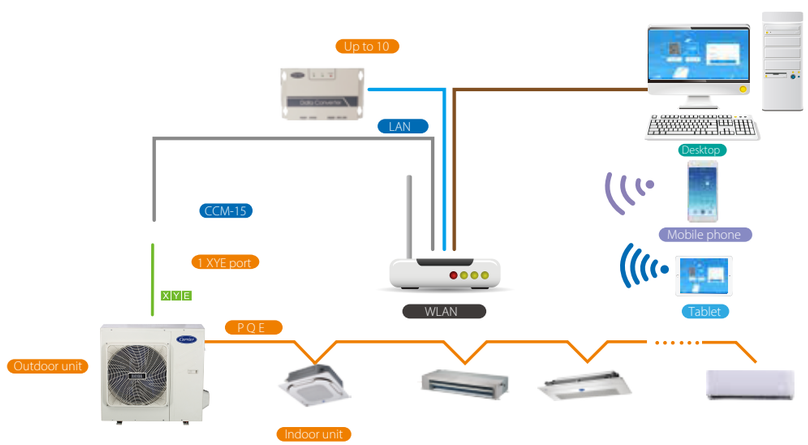
The Carrier Mini VRF can be controlled via WIFI with the installation of our Data Converter. For maximum comfort and convenience. Data converter sold separately, part# CIF-15B-CM

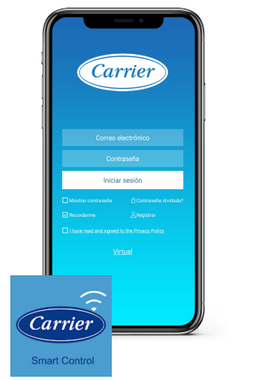
Carrier WIFI enabled

Compatible with iphone, android, windows

Flexibility

The Data Converter can be connected directly to a network of indoor / outdoor units.





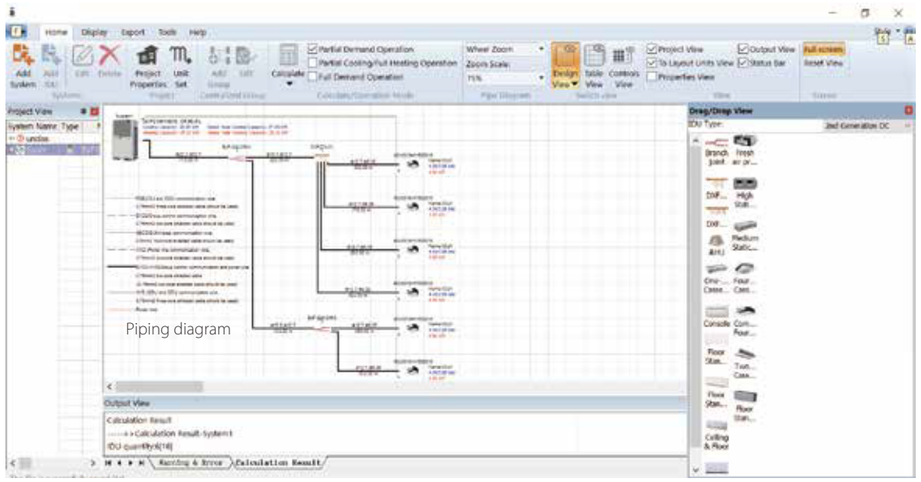
Download the “M-Control”

Selection Software"CSSP"

High Efficiency

Carrier's advanced design automation tool can be used by designers, consultants and distributors to greatly reduce the time and effort that must be devoted to the selection process. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

The Selection Software provides distributors' sales team with a comprehensive selection of system design reports and calculations. Load calculations may be on either an initial estimate basis or detailed room-by-room basis. Based on the indoo units, outdoor units and controllers selected, the software produces detailed system layout diagrams and piping requirement calculations.



Piping diagram

CAD View

Turn to the experts

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