



Outdoor Units

Heat Pump
380-415 / 3 / 50-
60 220 / 3 / 60
460 / 3 / 60

Four Seasons SERIES



Four Seasons

SERIES

- META Technology
- Zen Air Technology
- Doctor M Technology
- Enhanced Vapor Injection (EVI) Compressor
- Triple Configurations
- High Efficiency G-Shape Heat Exchanger
- ESP up to 120Pa
- Plate Heat (PHE) Subcooling
- Precise Oil Control Technology
- Multi Silent Modes
- Duty Cycling
- Backup Operation
- UL Anti-Corrosion Certificate
- Refrigerant Cooling PCB
- Auto Snow-blowing Function
- Dust-clean Function
- Multi-Functional Diagnosis Box
- Automatic Refrigerant Detecting/Charging/Recycling

Optimized design
for small to large
buildings



Safety devices

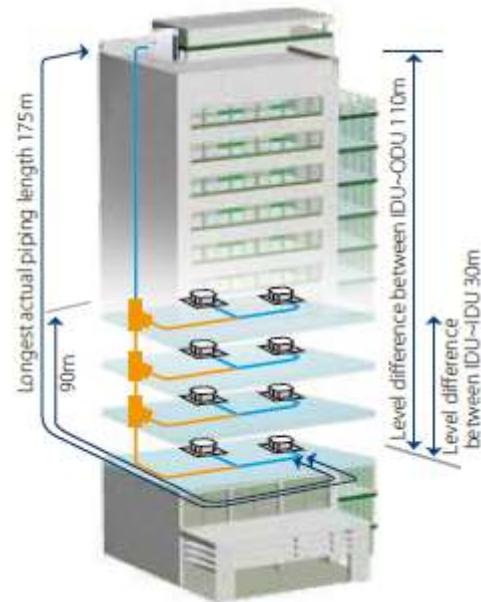
- High/low pressure switch,
- Fan driver overload protector
- Overcurrent relay,
- Inverter overload protector
- Overvoltage protector

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Optimized design for small to large buildings

Long Piping Capability

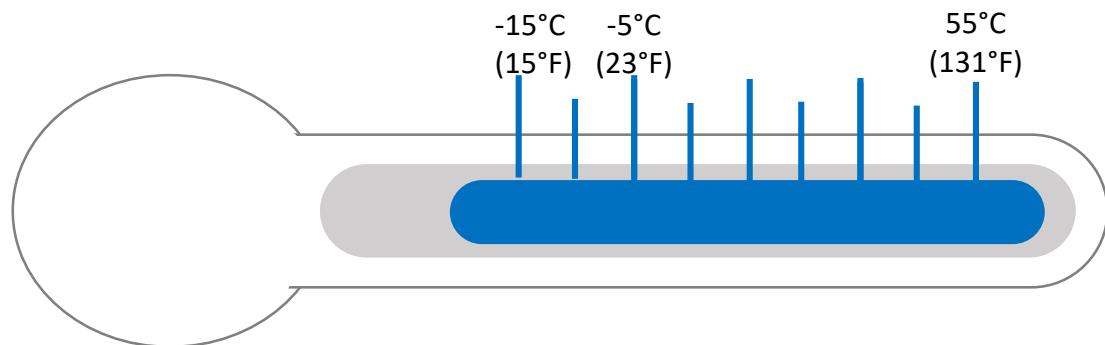
Piping Length	Capability	
	m	Ft
Total piping length	1,000	3,280
Longest piping length - actual / equivalent	175/200	574/656
Longest piping length after first branch	40/90(*)	(131.2/295.2)
Largest level difference between IDUs and ODU-ODU up/down	90/110	(295.2/360.8)
Largest level difference between IDUs	30	98.4



*The longest length after first branch is 40m(131.2ft.) as standard but can be extended to up to 90m(295.2ft.) under certain conditions. Please contact your local dealer for further information.

Wide Operating Temperature Range

The **Tropical Series** VRF can operate stably in a wide ambient temperature range: from -15°C (5°F)* to 55°C (131°F) in cooling mode.



Heat Pump

220 / 3 / 60Hz
460 / 3 / 60Hz

Four Seasons

SERIES



		Model			
(220V, 3Ph, 60Hz) Voltage A		CTVS-EMO-H-086-A-CE-DC-1	CTVS-EMO-H-096-A-CE-DC-1	CTVS-EMO-H-120-A-CE-DC-1	
(460V, 3Ph, 60Hz) Voltage D		CTVS-EMO-H-086-D-CE-DC-1	CTVS-EMO-H-096-D-CE-DC-1	CTVS-EMO-H-120-D-CE-DC-1	
Combination type		I	I	I	
Cooling	Capacity	kBtu/h	86	95.5	
		kW	25.2	28	
		HP	8	10	
	Power input	kW	5.36	6.22	
	EER		4.7	4.5	
Heating	Capacity	kBtu/h	92.1	107.5	
		kW	27	31.5	
	Power input	kW	4.82	5.94	
	COP		5.6	5.3	
Connectable indoor unit	Total capacity	50~130% of outdoor unit capacity			
	Max. quantity	13	16	20	
Compressor	Type	DC inverter			
	Quantity	1			
Fan motor	Type	DC motor			
	Quantity	1			
	Static pressure	Pa(in.wg)	0-20(0-0.08)(default)		
		Pa(in.wg)	20-60(0.08-0.24) (customized)		
Refrigerant	Type	R410A			
	Factory charging	Kg	9	11	
		Lbs	19.8	24.2	
Pipe connections	Liquid pipe	mm	2.7	5.9	
		inch	1/2"	5/8"	
	Gas pipe	mm	25.4	28.6	
		inch	1"	1-1/8"	
	Oil balance pipe	mm	6.35		
		inch	1/4"		
Airflow rate		m³/h	12,000		
		CFM	7,063		
Sound pressure level		dB(A)	58	59	
			59	60	
Net dimension (WxHxD)		mm	990 x 1,635 x 790		
		inch	39" x 64-3/8" x 31-1/8"		
Packing size (WxHxD)		mm	1,090 x 1,805 x 860		
		inch	42-15/16" x 71-1/16" x 33-7/8"		
Net weight (220V)		kg	219	237	
		lbs	481.8	521.4	
Gross weight (220V)		kg	234	252	
		lbs	514.8	554.4	
Net weight (460V)		kg	229	247	
		lbs	503.8	543.4	
Gross weight (460V)		kg	249	267	
		lbs	548	587	
Operating temperature range		°C	Cooling : 5 to 48; Heating: 20 to 24		
		°F	Cooling : 23 to 118.4; Heating: -4 to 75.2		

Notes:

Capacities are based on the following conditions:

Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB; Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.

Piping length: Interconnecting piping length is 7.5m, level difference is zero.

Connection piping diameter of multi-unit is the main pipe connecting to the first indoor branch joint, in case of the total equivalent liquid length is less than 90m. If the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.

Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Heat Pump

220 / 3 / 60Hz
460 / 3 / 60Hz

Four Seasons

SERIES



		Model								
(220V, 3Ph, 60Hz) Voltage A		CTVS-EMO-H-137-A-CE-DC-1	CTVS-EMO-H-154-A-CE-DC-1	CTVS-EMO-H-171-A-CE-DC-1	CTVS-EMO-H-191-A-CE-DC-1	CTVS-EMO-H-210-A-CE-DC-1				
(460V, 3Ph, 60Hz) Voltage D		CTVS-EMO-H-137-D-CE-DC-1	CTVS-EMO-H-154-D-CE-DC-1	CTVS-EMO-H-171-D-CE-DC-1	CTVS-EMO-H-191-D-CE-DC-1	CTVS-EMO-H-210-D-CE-DC-1				
Combination type										
Cooling	Capacity	kBtu/h	136.5	153.5	170.6	191.1				
		kW	40	45	50	56				
		HP	14	16	18	20				
	Power input	kW	9.3	10.98	12.82	14.51				
Heating	Capacity	kBtu/h	153.5	170.6	191.1	215				
		kW	45	50	56	63				
		Power input	9.38	10.87	13.18	15.29				
	COP		4.8	4.6	4.25	4.12				
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity							
	Max. quantity		23	26	29	33				
Compressor	Type	DC inverter								
	Quantity	2								
Fan motor	Type	DC motor								
	Quantity	2								
	Static pressure	Pa(in.wg)	0-20(0-0.08) (default)							
		Pa(in.wg)	20-60(0.08-0.24) (customized)							
Refrigerant	Type	R410 OA								
	Factory charging	Kg	13			16				
		Lbs	28.6			35.2				
Pipe connections	Liquid pipe	mm	5.9	19.1						
		inch	5/8"	3/4"						
	Gas pipe	mm	31.8	31.8						
		inch	1-1/4"	1-1/4"						
	Oil balance pipe	mm	6.35							
		inch	1/4"							
Airflow rate		m³/h	14,000	16,000						
		CFM	8,240	9,417						
Sound pressure level		dB(A)	62	63						
Net dimension (WxHxD)		mm	1,340 x 1,635 x 790							
		inch	52-3/4" x 64-3/8" x 31-1/8"							
Packing size (WxHxD)		mm	1,405 x 1,805 x 855							
		inch	55-5/16" x 71-1/16" x 33-21/32"							
Net weight (220V)		kg	297	305	340					
		lbs	654.3	671.0	748.0					
Gross weight (220V)		kg	315	323	358					
		lbs	693.0	710.6	787.6					
Net weight (460V)		kg	326	334	369					
		lbs	717.2	734.8	811.8					
Gross weight (460V)		kg	353	361	396					
		lbs	777	794	871					
Operating temperature range		°C	Cooling : 5 to 48; Heating: 20 to 24							
		°F	Cooling : 23 to 118.4; Heating: -4 to 75.2							

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