



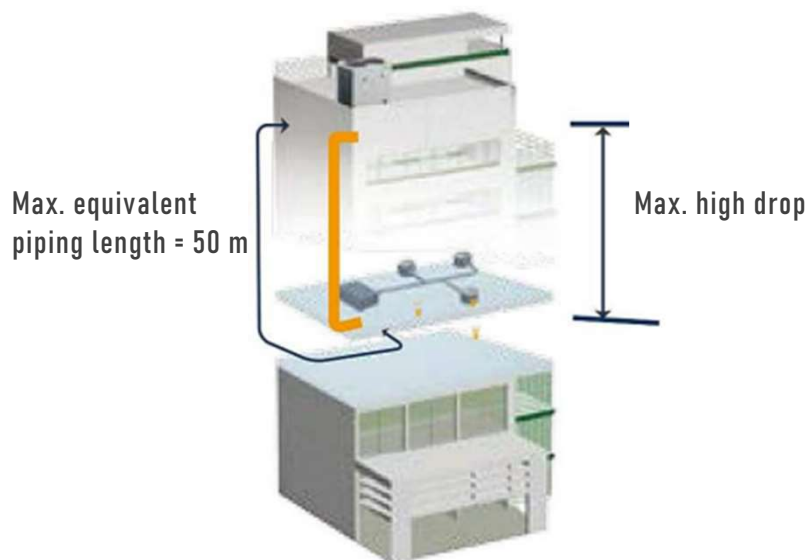
Wide cooling capacity range

Wide cooling capacity range, from 96,000Btu/ h to 240,000Btu/h.

Long piping length

Max. equivalent piping length is 50m. The outdoor unit can be installed at any ventilation locations.

		Permitted value
Max. equivalent piping length		50 m
Max. high drop between indoor and outdoor unit	Outdoor unit Up	25 m
	Outdoor unit Down	30 m



Outstanding reliability

Durable construction

- Pre-painted exterior cabinet panels pass 1000 hours Salt Spray Test for durability.
- Weather-resistant construction with capped steams and sloped top panels.
- G90 galvanized heavy gauge plate conforming to ASTM-A-653.



Customized anti-corrosion treatment

The large split air conditioners with special anti-corrosion treatment are suitable for seaside areas or the areas exposed to acidic substances.



- Special anti-corrosion treatment of heat exchanger provides 5 to 6 times greater resistance against acid rain and salt corrosion.
- All PCB parts in the unit are coated with double-side moisture proof paint. The outer side of electric box metal cover is spray-painted.
- All screws are anti-rust.
- Casings of the unit and motors are anti-rust.

Reliable scroll compressor

- Famous brand compressor: Hitachi, Danfoss, etc. More reliable.
- No complex internal suction and discharge valves for quieter operation and higher reliability.
- Compact, light-weight design, and fewer moving parts design.



Multi-protection design

- Multi-measurement to ensure units operate normally and reliably:
System current protection, High/low pressure switch protection, Temperature sensor on/off protection, etc.
- Three-phase protector can be customized.



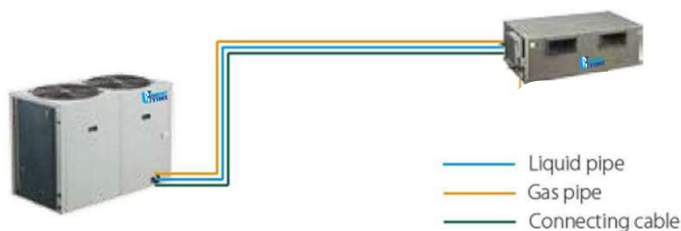
HP/LP Switch



Temperature Sensor

Easy for installation

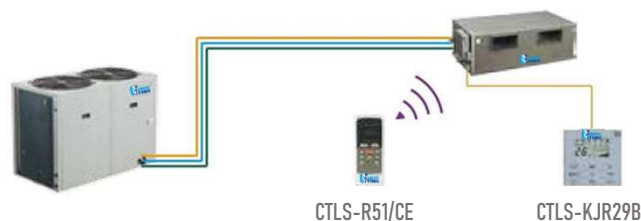
- Units are completely assembled, internally wired, charged outdoor unit with refrigerant at the factory.
- The site work only needs connect refrigerant pipes and communication wires between outdoor unit and indoor unit.



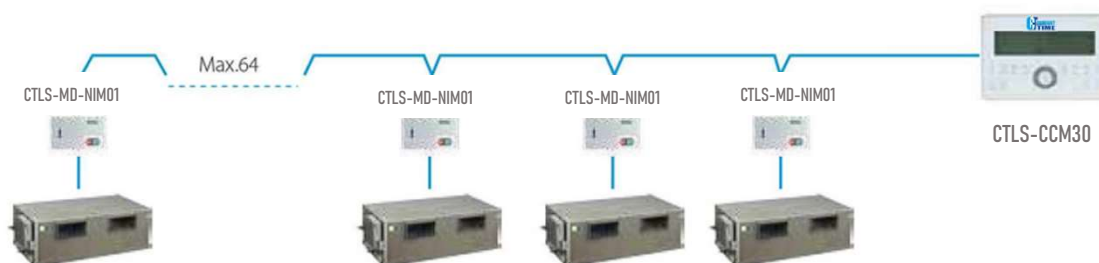
Flexible chaise of accessories

Controllers

- Wireless remote controller as standard. (Only available for tropical T3 type units)
- Wired controller as optional



- Centralized control function can be achieved through the centralized controller as optional. MD-NIM01 should be connected between the indoor units and centralized controller. (Only available for tropical T3 type units)



Multi-accessories

Description		Indoor Duct Unit	
		Standard accessories	Optional accessories
Filter			<input checked="" type="checkbox"/>
Outlet drainage		<input checked="" type="checkbox"/>	
EHK (Electric heater kits)			<input checked="" type="checkbox"/>
Three-phase protector			<input checked="" type="checkbox"/>
Wireless controller	CTLS-R51/CE	<input checked="" type="checkbox"/>	
Wired controler	CTLS-KJR29B		<input checked="" type="checkbox"/>
Centralized controller	CTLS-CCM30		<input checked="" type="checkbox"/>

Casing

Unit casing is constructed of heavy gauge galvanized steel plate. Both sides of the casing are waterproof and anti-corrosion coated. Unit panel structure is allowed to maintain on one side of the unit. Service panels are removed easily and reinstalled by removing bolts. The inside of indoor unit panels will be covered with 10 mm insulation to prevent heat and noise coming out. Units are available for forklift transportation.

Compressor

All units are equipped with direct-drive, hermetic, scroll type compressor, and its built-in motor is cooled with suction gas. The voltage utilization range is $\pm 10\%$ of unit nameplate voltage. The compressors, incorporating a built-in muffler, are mounted on springs within a steel housing to reduce noise. An electric heater around the compressor crankcase to ensure stability starting.

Heat-exchange coils

Inner-threaded copper tubes mechanically bonded to a configured hydrophilic aluminum fin is standard for the outdoor heat-exchanger. The one which is equipped in indoor unit is standard configured with copper tubes. All the coils are leak tested at 4.4MPa at the factory to ensure the pressure integrity. All the indoor units are standard configured with a condensate drain pan.

Outdoor fan

The outdoor fan is multi-blade vane-axial type, made of aluminum alloy for quiet operation and durability. It is directly driven by waterproof motor to ensure reliable continuous operations. Statically and dynamically balanced drive motor design with maintenance-free bearing for outdoor installation.

Indoor fan

The indoor fan is forward-curved blade centrifugal fan. Impeller and casing are made of galvanized steel sheet. The high-quality ball bearings are air-sealed with preset lubricating oil. They are coated after assembly to provide corrosion resistance. The fan is directly driven by a waterproof motor. The fan and motor assembly is tested, and dynamic balance is implemented in the factory.

Three-phase protector

The unit with three-phase power supply is equipped with phase sequence protector as optional. These devices protect motors and compressors against problems caused by phase lack, phase imbalance and phase reversal indication. When the voltage is above or below the normal range, it works and prevents unit from suffering voltage fluctuations.

Controls

Units are completely factory-wired with necessary controls and wiring terminals for power wiring. Microprocessor controls the cooling, heating and ventilating modes in response to signals from sensors measuring indoor and outdoor temperatures. It will keep accurate temperature control, minimum drift from the set point and provide better building comfort.



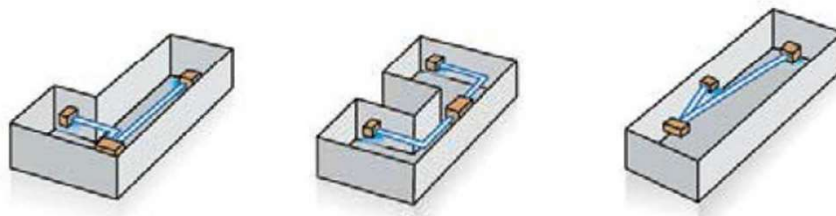
CTLS-R51/CE

Convenient installation

- Compact design. Concealed installation without floor space requirement.
- Hidden in the ceiling, unit installation is not hindered by the location of lighting fixtures or room structure.
- Air inlet & outlet flange are standard for easy duct connection.
- Easy maintenance through the inspection port.

Free air duct design

- Multi diffusers from one indoor unit, air-conditioned multi rooms at the same time.
- Three speeds of air supply can be chosen via controller.
- The indoor unit is suitable for various applications where many rooms or halls, such as restaurant, concert halls and hotels.
- Flexible duct design for different room styles.



Auto Restart
Function



Auto
Defrosting



Independent
Dehumidification



Timer



PTC Heater



Anti-Cold
Air Function



Wired
Controller

Indoor Units Specifications

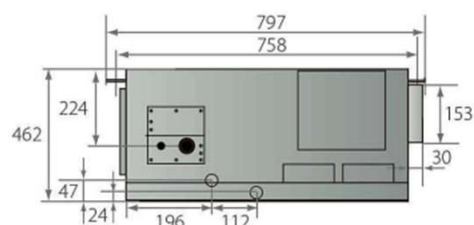
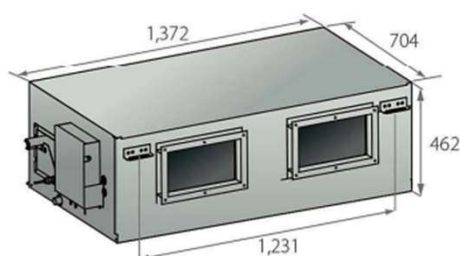
Indoor unit Model			CTLS-E-096-C-I	CTLS-E-120-C-I	CTLS-E-180-C-I	CTLS-E-240-C-I
Outdoor unit model (Quantity)			CTLS-C-096-C-1 (1)	CTLS-E-120-C-1 (1)	CTLS-C-096-C-1 (2)	CTLS-E-120-C-1 (2)
Indoor unit power supply			V/Ph/Hz	208~230/1/60	208~230/1/60	208~230/1/60
Cooling	Capacity (T1/T3)	Btu/h	95,600 / 90,400	119,400 / 90,400	179,100 / 166,800	238,840 / 209,800
		kW	28.0 / 26.50	35.0 / 29.50	52.5 / 48.94	70.0 / 61.50
	Input (T1/T3)	kW	9.6 / 11.92	12.0 / 14.50	18.1 / 22.01	24.0 / 30.50
		W/W	2.92	2.92	2.9	2.92
	EER (T1)	Btu/h/W	9.96	9.96	9.90	9.96
Max Power input			W	1,700	1,900	2,500
Max. current			A	8.4	9.0	12.5
Air flow (HI)			m3/h	5,100	6,375	10,000
			CFM	3,000	3,750	5,880
Standard external static pressure			Pa	100	150	150
Noise level			dB(A)	56	58	60
Fan type / Drive type			Centrifugal direct	Centrifugal direct	Centrifugal direct	Centrifugal direct
Coil			Cooper tube / aluminum fin	Cooper tube / aluminum fin	Cooper tube / aluminum fin	Cooper tube / aluminum fin
Dimension	Net (WxHxD)	mm	1,452 x 462 x 797	1,988 x 669 x 906	1,988 x 669 x 905	1,988 x 669 x 905
	Packing (WxHxD)	mm	1,555 x 500 x 875	2,095 x 600 x 964	2,095 x 600 x 964	2,095 x 600 x 964
Net / Gross weight			Kg	96 / 108	188 / 220	190 / 217

Tropical (T3) application

208~230V/3Ph~60Hz

Duct indoor unit: CTLS-E-096-C-I, CTLS-E-120-C-I

(Units: mm)

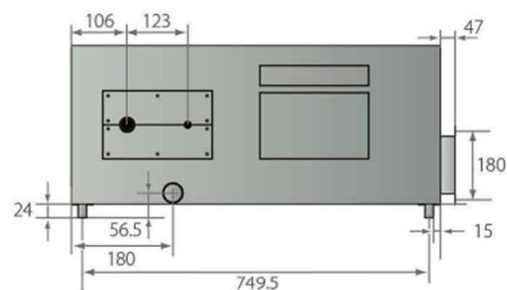
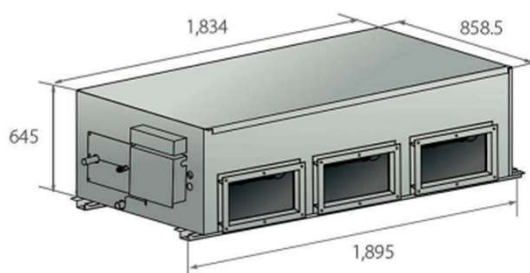


Tropical (T3) application

208~230V/3Ph~60Hz

Duct indoor unit: CTLS-E-180-C-I, CTLS-E-240-C-I

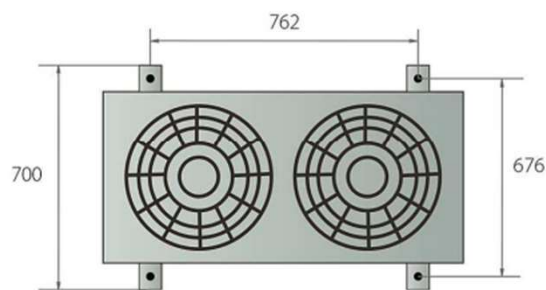
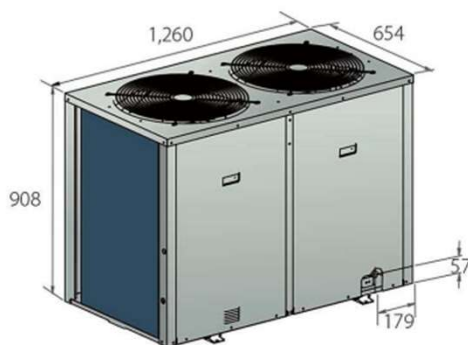
(Units: mm)



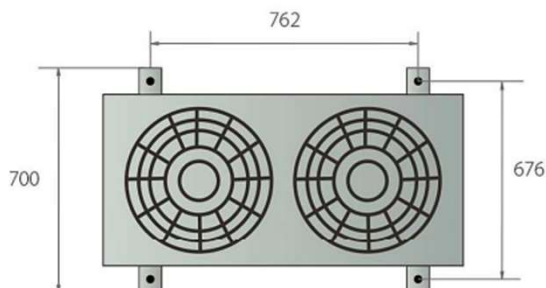
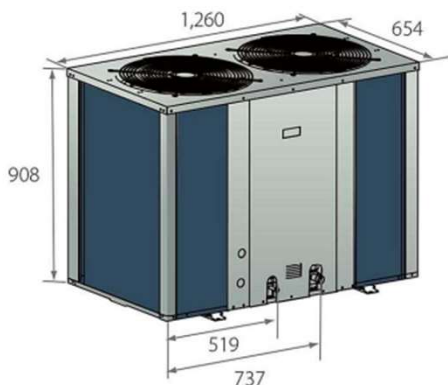
Outdoor Units Specifications

Outdoor unit model (Quantity)			CTLS-C-096-C-1	CTLS-E-120-C-1
Indoor unit power supply		V/Ph/Hz	208~230/3/60	208~230/3/60
Max. power input		W	16,700	18,200
Max. current		A	44.4	53.1
Air flow rate		m3/h	12500	13000
Noise level		dB(A)	69	70
Compressor Type (Quantity)			Scroll (1)	Scroll (1)
Refrigerant	Type		R410A	R410A
	Charged	Kg	6.5	7.5
Coil			Cooper tube / aluminum fin	Cooper tube / aluminum fin
Refrigerant piping size	Liquid	mm	Φ 9.52	Φ 12.7
		inch	Φ 3/8"	Φ 1/2"
	Gas	mm	Φ 22.0	Φ 25.0
		inch	Φ 7/8"	Φ 1"
Ambient temperature		°C	17 ~ 52	17 ~ 52
Dimension	Body (WxHxD)	mm	1,260 x 908 x 700	1,260 x 908 x 700
	Packing (WxHxD)	mm	1,320 x 1,060 x 730	1,320 x 1,060 x 730
Net / Gross weight		Kg	187 / 204	199 / 215

T3 application,
208~230V/3Ph~ 60Hz
Outdoor unit: **CTLS-C-096-C-1**
(Units: mm)



T3 application,
208~230V/3Ph~ 60Hz
Outdoor unit: **CTLS-C-120-C-1**
(Units: mm)



Remote Controller



Parameter

Model:

CTLS-R51/CE (Cooling only type)

CTLS-R51/E (Heat pump type)

Dimension (mm): 140×60×15

Power: 1.5V (LR03/AAA)×2



Parameter

Model: CTLS-RM05

Dimension (mm): 150×65×20

Power: 1.5V (LR03/AAA)×2
(OPTIONAL)

Standard features

- It provides a convenient way for users to control the air conditioners everywhere within a range up to 11m.
- Built-in daily timer offers the convenience of automatically starting and turning down the air conditioners according to the set time

Wired Controller – CTLS-KJR-29B



Parameter

Model: CTLS-KJR-29B (Touch-style key)

Dimension (mm): 120×120×20

Power: From the display panel, extra power is unnecessary.
(OPTIONAL)

Standard features

- Keyboard locking function as standard, it can be used to prevent other people from using the controller.
- Built-in daily timer offers the convenience of automatically starting and turning down the air conditioners according to the set time

Remote signal receiving function

- CTLS-KJR-29B provides a signal receiver to receive the signal from remote controller.
- The received signal can be directly sent to the indoor unit by wired controller. It is convenient to control the air conditioner

Silent mode

During the operating, when operate the silent mode, the units can reduce the running noise through setting the fan speed to low automatically. It will help you bring a quieter environment



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