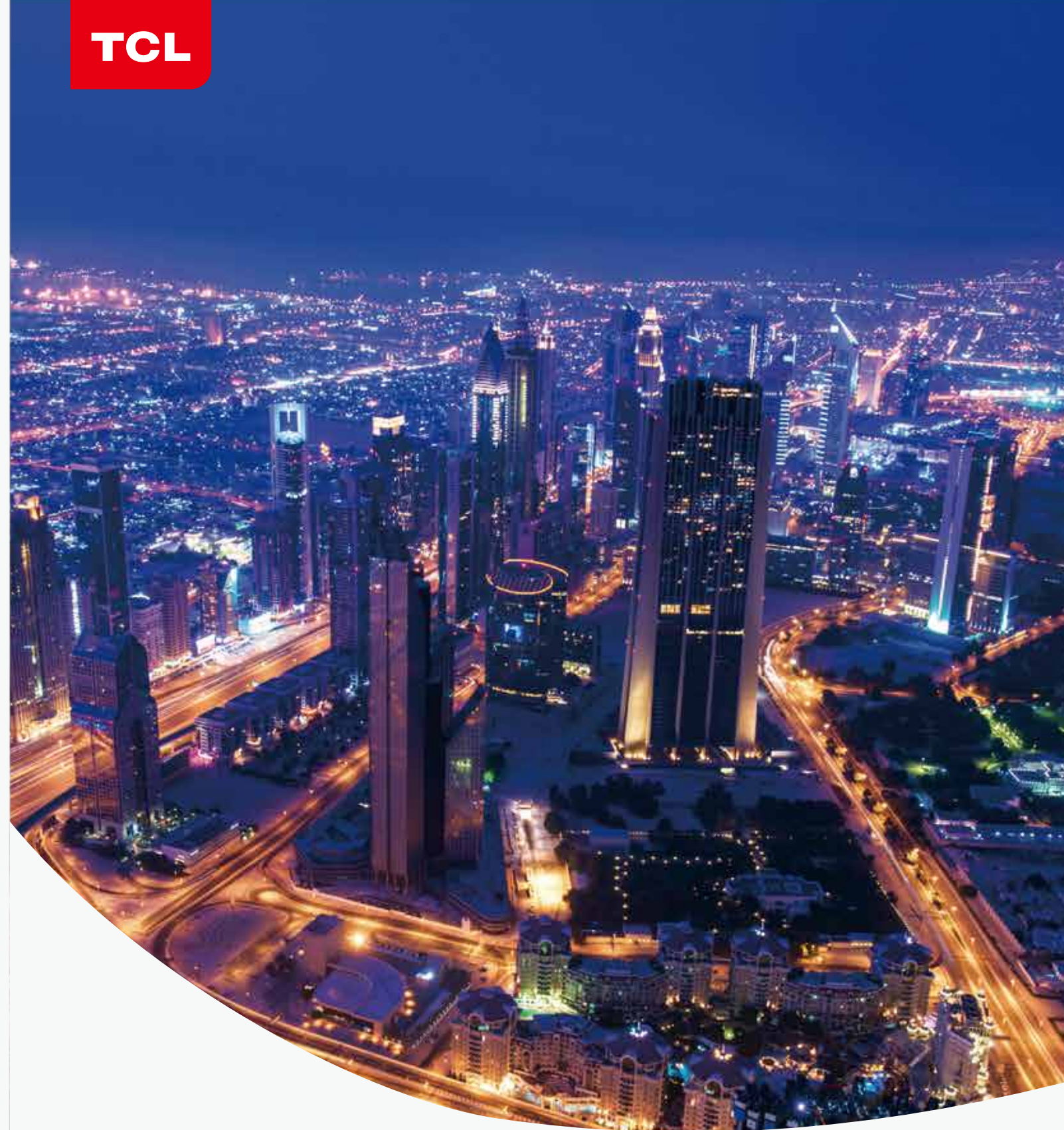


**TCL**

TCL Commercial Air Conditioner



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[hao.tcl.com](http://hao.tcl.com)

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## TCL Commercial Air Conditioner 2016 Catalogue



One of

# The Biggest Consumer Electronic Enterprises in China

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Total sales revenue of 15.8 billion USD ( 2014 )

Brand value of 10.5 billion USD ( 2014 )





# TCL Air Conditioner

After 16 years development, now TCL AC is a comprehensive professional air conditioner industry group, who is one of the few air conditioner companies in the air conditioner industry that has the complete industry chain from compressor to air conditioner.

With innovative technologies and fashionable design, TCL AC has been awarded honors such as the ‘China Red Dot’ TCL commercial air conditioners now have been widely applied to governments, sports events, real estate, hotel, etc., including projects in Beijing Olympics Game, Shanghai World Expo, Guangzhou Asian Games, etc.

## Outstanding Product Capabilities

TCL AC is concentrating on innovation of comprehensive, outstanding and excellent commercial products. Product range of commercial air conditioner has been expanded in a large extent with multiple new series of ceiling floor, F5 ultra-thin ducted type, DC inverter free match, TMVX, rotary screw units, fan coils, etc.

## Advanced Internalization

Internalization is most prioritized by TCL AC. In recent years, the overseas business of TCL Corporation increased rapidly, with a contribution of income revenue of 4.7 billion RMB in 2014, which accounts for 47% of the total amount. TCL AC will continue to unswervingly follow the path of internalization.

## Excellent Quality

Implement the "crafted artisan spirit", TCL AC never stopped undertaking and promoting series of knowledge training and upgrading in quality supervision and inspection, and thus, product quality has been consistently increased for years.

## Intensified Marketing Support

By following the Corporate ‘Dual Wheel’ internationalized strategies, TCL AC took the lead in the enhancement of overseas branding and marketing expansion, with a better support to the global partners in the aspects of advertising, exhibition, sports event, terminal sales promotion, etc.



### Content

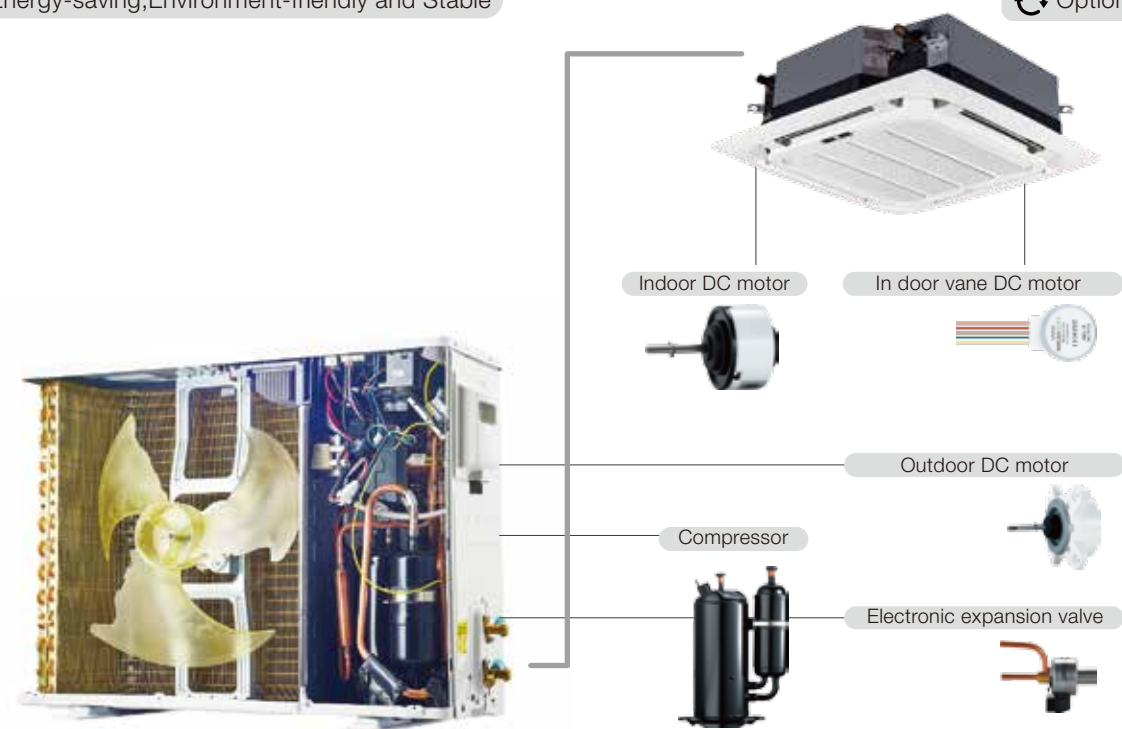
<b>Unitary</b>	<b>11</b>
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# Full 5D DC Inverter Air Conditioner

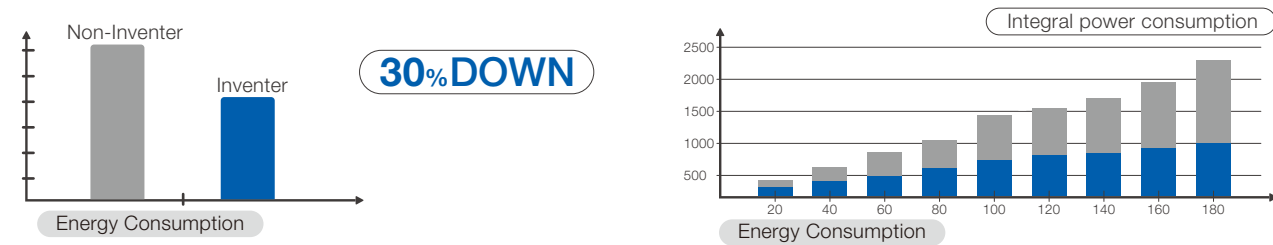
Smart, Energy-saving, Environment-friendly and Stable

Optional



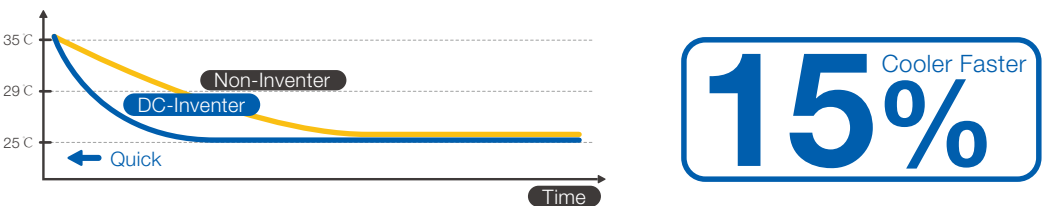
## Saving Energy, Saving Money

A DC motor uses magnetic force to operate the compressor. This dramatically reduces energy consumption compared to conventional non-inverter motors. A DC inverter AC automatically slows down and operates at minimum suitable capacity after reaching the set temperature. Energy consumption can be reduced by 30%.



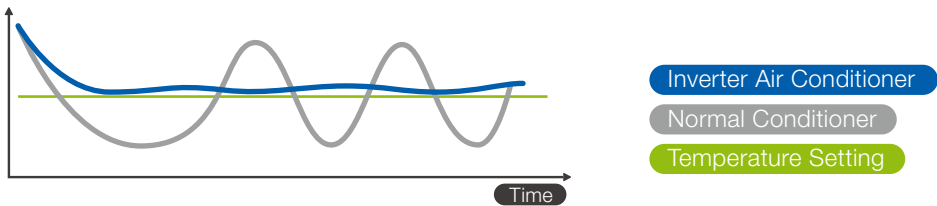
## Strong Heating & Cooling

A DC inverter AC enables the compressor to achieve maximum frequency in the shortest time from start up. It cools you down 15% faster compared to conventional non-inverter AC. This make you enjoy more powerful cooling from the moment you switch on your DC Inverter AC.



## Precise Control, Enjoy Comfort

- Temperature fluctuation is controlled within  $\pm 0.1^{\circ}\text{C}$ .
- A conventional non-inverter ac can only operate at a constant speed. Therefore, it switches the compressor on and off repeatedly. This causes wider temperature fluctuations.
- A DC inverter AC varies the rotation speed of the compressor providing a precise method of maintaining the set temperature. The temperature fluctuation is controlled within  $\pm 0.5^{\circ}\text{C}$ .



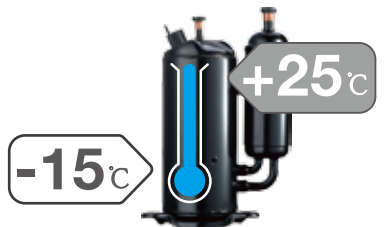
## Low Noise

A DC inverter AC works at an extra-quiet mode to ensure you a good night's sleep.



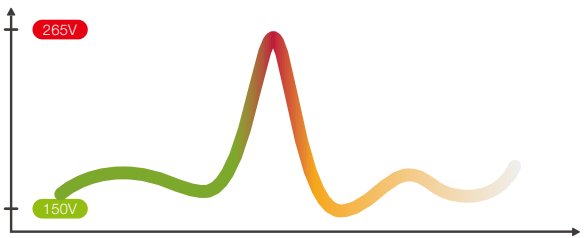
## Low Temperature Heating

- The high frequency of a DC inverter AC enables the compressor to operate at various speed, which can be applied to different environment and ambient temperatures.
- TCL DC Inverter AC even can start at  $-15^{\circ}\text{C}$ , keep you warm all the winter.

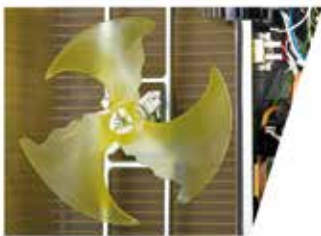


## Wide Voltage Range

- In a DC Inverter AC, voltage and current to the motor are controlled to ensure high efficient operation and reduced vibration.
- A DC inverter AC can operate within the voltage range of 165-265V, even in voltage unstable areas.
- The start up voltage is as low as 135V.



## Long Life Span



- • Soft Start Up  
The starting current of a DC inverter AC can be reduced by soft-Starter kit, which reduces the damage to the compressor.
- • DC Inverter  
Much less activation of compressor of a DC inverter AC increase its life in the largest extent.
- • High Reliability Material  
To realize longer life span and to withstand high pressure.

# WIFI Control



Optional

Based on TCL's cloud web system and with the android system platform,a wifi module is provided in the air conditioners to achieve different functions through terminals (mobile phone,IPAD and computer)for easy and visualized operation.

# Wired Controller



Touch Button  
(86mm x 86mm)

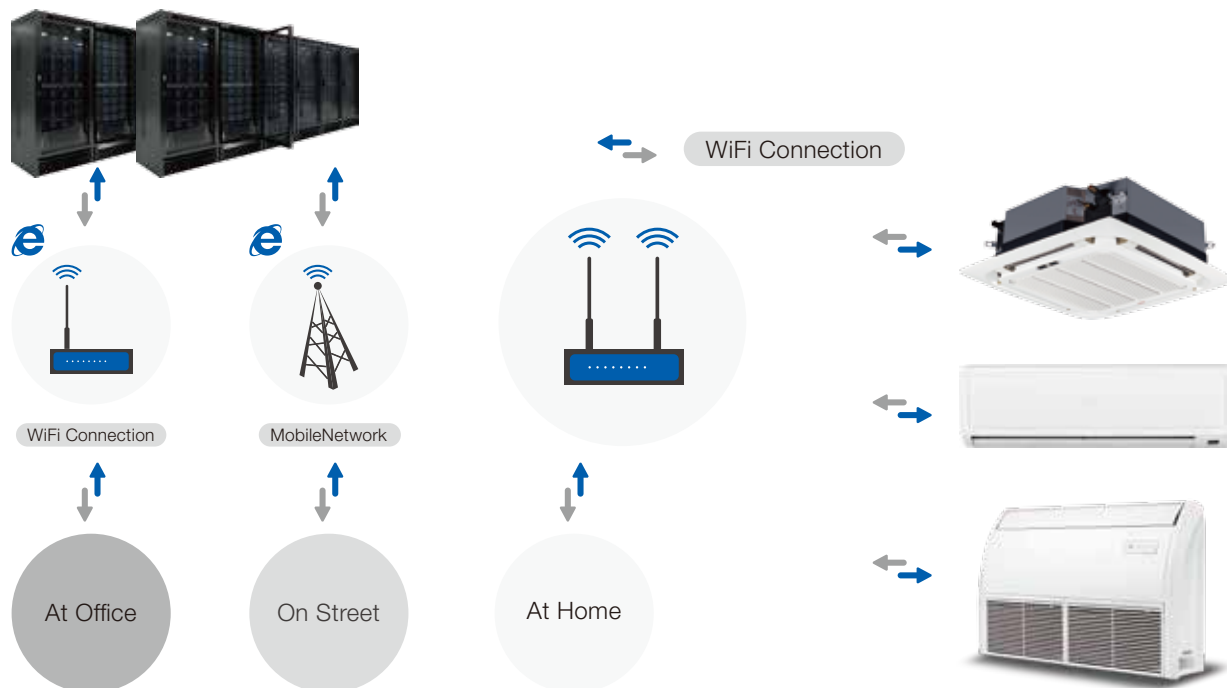
Standard Touch Button  
(120mm x 120mm)

Touch Key  
(105mm x 86mm)

Wire controller (optional)

- On/Off, temperature setting;
- Mode setting;
- Monitoring function;
- Error code display
- Timer function.

# Remote Controller







# TitanGold® NanoTiO<sub>2</sub>

## Titan-Gold VS Ordinary Metal

### Titan-gold Core – Long-stand, Efficient and More Economic

Titan-gold material of TCL air conditioner enjoys strong corrosion resistance and abrasion resistance, which can effectively reduce aging of air conditioners, and ensure that hydrophilic property almost never decay, maintain the lasting unblocking of two devices, and air-conditioner energy efficiency level does not decay.

### Titan-gold Core – Cooling/Heating More Powerful

Titanium gold enjoys a super-strong hydrophilic property. No ponding, not dust and no water bridge and no blockage of air duct on the surface of “Two Devices” made of Titanium gold. The features of Titan-gold abrasion resistance and corrosion resistance can effectively prevent the diminishing of cooling/heating effect and the cooling/heating effect is of course more powerful

### Titan-gold Core – Sterilization Healthier

No ponding on the surface of titan-gold Two Devices can fundamentally prevent the mold and bacteria growth and effectively remove the odor from the air conditioner; meanwhile, Nano TiO<sub>2</sub> can transform the surrounding oxygen and water molecules into the chlorine oxygen free radicals and hydrogen peroxide with sterilization property just by absorbing faint light, and it can kill almost all harmful gases, molds and bacteria; the sterilization effect of total heat exchangers is over 10 times the valid area of ordinary sterilization filter mesh.

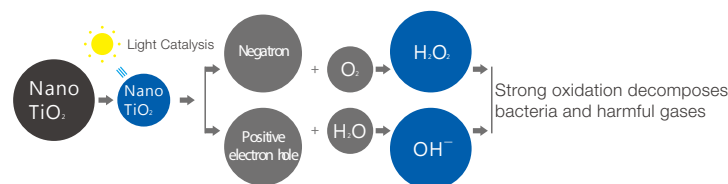
### Titan-gold Core-Nature of Self-cleaning

Titan-gold Two Devices has a unique lotus effect. The dust and foul on the surface of the Two Devices can be automatically cleaned by rain or condensed water to maintain the lasting cleanness of the Two Devices and achieve the real cleaning exemption and maintain long-time good state of the air conditioner.

## Large Photocatalyst Net Used for Killing Bacteria and Keeping indoor air Healthy

TCL unique TitanGold contains nano titanium dioxide which has catalysis function, enabling the entire TianGold evaporator to form a large photocatalyst net for processing indoor air and degrade hazardous components in the air (such as formaldehyde, deactivating virus, restricting the growth of bacteria and better improve indoor air quality).

Diagram of anti-bacteria of Titan Nano TiO<sub>2</sub>

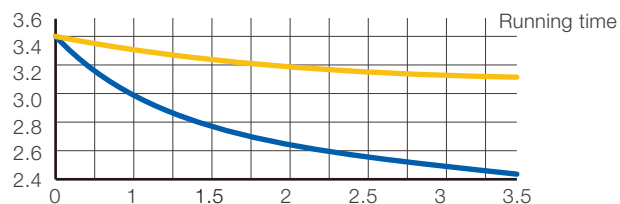


## 8-Year TitanGold Life, Efficient and Saving Energy

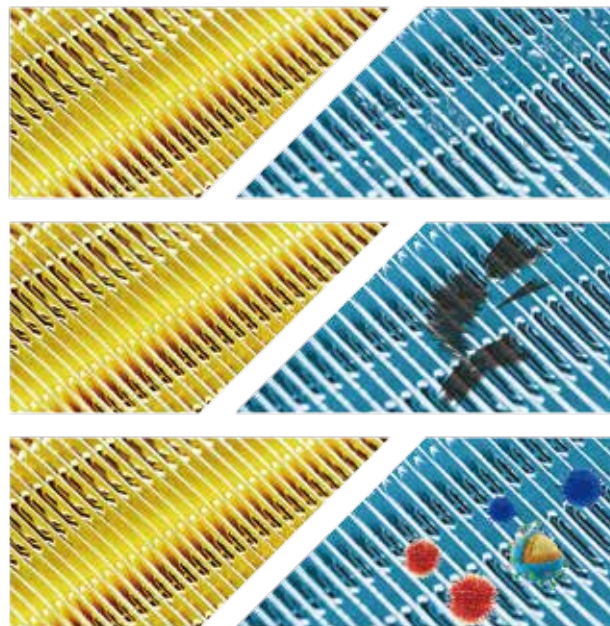
Compare to ordinary air conditioner, TitanGold air conditioner is more efficient and energy-saving as it attenuate more slowly.

- Titan-gold air conditioner
- Ordinary Class-A air conditioner

Energy efficiency rate



## TitanGold Condenser & Evaporator





## Light Commercial Air Conditioner

Enjoy The Creative Life  
with TCL Air Conditioner



ON/OFF R410a / R22

Series	12000Btu/h	18000Btu/h	24000Btu/h	36000Btu/h	48000Btu/h	60000Btu/h	90000Btu/h
Outdoor Unit (On/Off)							
Slim Duct							
Duct							
Cassette							
Compact Cassette							
Ceiling & Floor							
Floor standing							
10HP High static pressure duct							

Top Discharge Series R410a

Series	24000Btu/h	36000Btu/h	48000Btu/h	60000Btu/h
Top Discharger				
Ceiling&Floor				

Inverter R410a

Series	18000Btu/h	24000Btu/h	36000Btu/h	48000Btu/h	60000Btu/h
Outdoor Unit					
Duct					
Cassette					
Ceiling & Floor					

Free Match R410a

Series	18000Btu/h	21000Btu/h	28000Btu/h	36000Btu/h
Multi DC Inverter Product				
Series	7000Btu/h	9000Btu/h	12000Btu/h	18000Btu/h
Cassette				
Duct				
Ceiling Floor				
Wall-mounted Split				



# Cassette



## Features

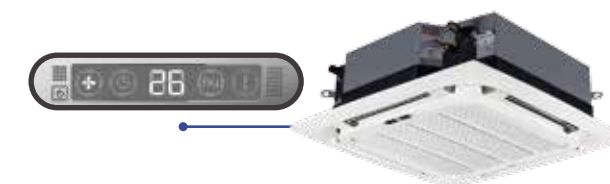
### 570mm X 570mm available

Specially designed compact cassette of 18K, which can fit for ceiling style with limited installing space.



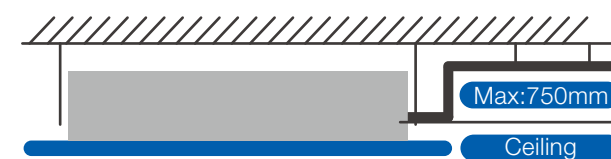
### New designed Panel

New design which is more suitable for room decoration.



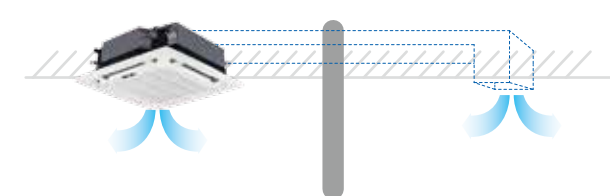
### Build-in Drainage Pump

The condensing water can be lifted up to 750mm, which is convenient for installation.



### Outlet Air Branch Opening

It can distribute air to small space like study room, when needed.



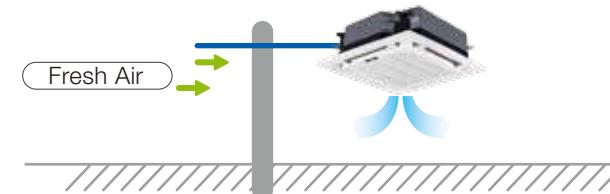
### Easy-clean Filter

Filters can be removed easily for cleaning and maintenance.



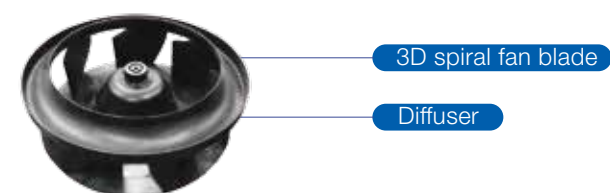
### Fresh Air Inlet

Fresh air is brought in to increase room air quality to be more comfortable and healthy.



### 3D Indoor Fan

Quiet operation by using optimized 3D indoor fan.



### Wire Control (optional)

Wire control is available, especially for hotel rooms, offices, etc.





# Ceiling & Floor



## Features

### LED Display

Fashionable design with clear LED display of temperature and error codes.



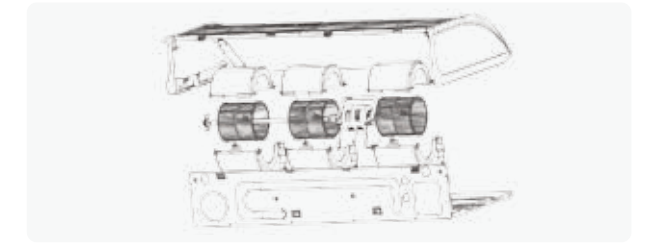
### Ultra-thin Design

Compact design which fits for various room styles.



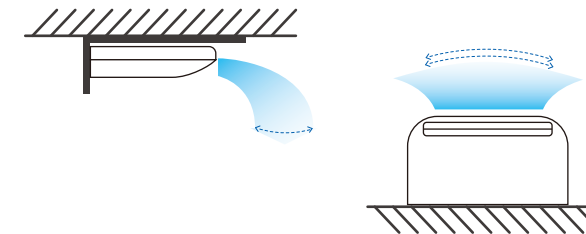
### Detachable Plastic Blowers

Universal designed parts and assemblies applied, which is easy for maintenance.



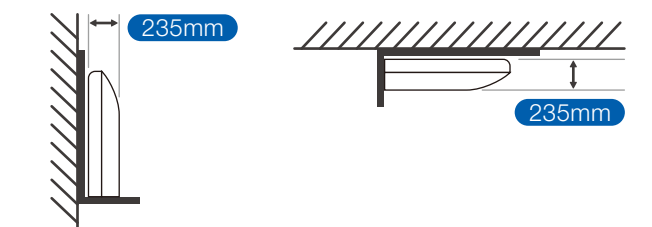
### Wide Range of Air Flow

Air is supplied in a wider angle with cross-direction swing.



### Flexible Installation

Two ways of installation available, either ceiling suspended or floor standing.



### Dual Direction of Drainage

Condensing water can be drained either from left or from right.



### Wire Control (optional)

Wire control is available, especially for hotel rooms, offices, etc.





# Duct



## Features

### Ultra Slim Design

The min. height is 200mm, which saves the space of installation.



### Optimized 'V' Type Evaporator

'V' type design of evaporator increases the area of heat exchanging, and thus, increases its efficiency.



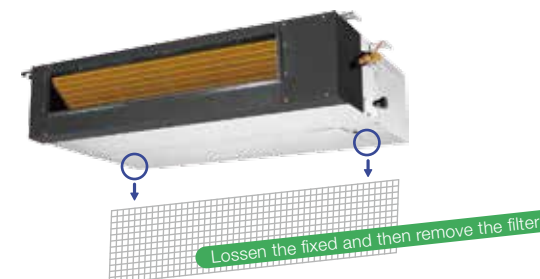
### Dual Direction of Water Drainage

The condensing water can be drained either from the left or right.

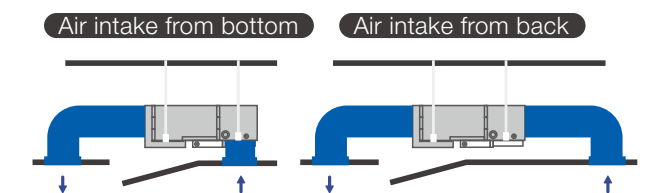


### Easy Maintenance

Filters can be easily removed for cleaning. Also, wire controller is optional to have air inlet from back or bottom with the same size of plate, which will be very flexible and convenient for installation.

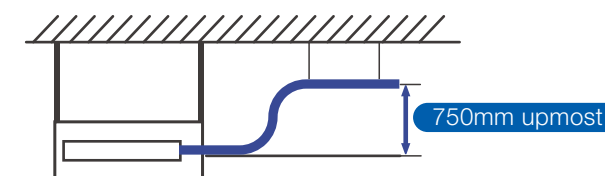


### Flexible Air Intake



### Built-in Drain Pump (optional)

The drainage pump can lift the condensing water up to 750mm.



### New Air Outlet grill (Slim duct only)

Adjustable grill is optional to supply air in various directions.





# Universal Outdoor Unit



## Features

### Universal Outdoor Design

- The same ODU can match Cassette, C/F, Duct with same capacity
- Reducing stock and after-sales costs



### High-efficient Outdoor Fan

Advanced 3D propeller can enlarge the air volume and reduce the noise level.



Bionic Fan

### Antirust and Long Lift Span

The outdoor unit is made from galvanized sheet, and treated with special cataphoric crafts



### Optimized Air-outlet Grill

- Optimized air flow increases the air volume, thus,
- increases the efficiency of heating exchange;



### Low Ambient Model (Optional)

- Low ambient kit, cooling in winter at min.  $-15^{\circ}\text{C}$ .
- Two fan speed of ODU fan motor, 3dB(a) can be reduced when running in low speed







Universal Outdoor - R410A Cooling Only

Outdoor unit		Model	TOU-18CA	TOU-24CA	TOU-36CSA	TOU-48CSA	TOU-60CSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Air Flow Volume	m3/h	2100	3500	4900	6300	6300
	Noise Level	dB(A)	49	58	55	57	57
Outdoor dimension	Unit (WxHxD)	mm	760×540×260	900×650×315	900x805x360	940x1250x340	940x1250x340
	Packing (WxHxD)	mm	863×590×361	1028×705×430	1031x835x447	1030x1365x430	1030x1365x430
Outdoor weight	Net	kg	33	52	75	93	98
	Gross	kg	36	57	85	103	108
Piping Size	Liquid Pipe Size	mm	φ 6.35	φ 9.52	φ 9.52	φ 9.52	φ 9.52
	Gas Pipe Size	mm	φ 12.7	φ 15.88	φ 19.05	φ 19.05	φ 19.05
	Max. Pipe Length	m	25	30	30	50	50
	Max. Height Difference	m	15	15	20	30	30
Operating Range	Cooling	C	21 ~ 43	21 ~ 43	21 ~ 43	21 ~ 43	21 ~ 43
	Heating	C	/	/	/	/	/



Cassette - R410A Cooling Only

Indoor unit		Model	TCC-18CRA-C	TCC-18CRA	TCC-24CRA	TCC-36CRSA	TCC-48CRSA	TCC-60CRSA
Outdoor unit		Model	TOU-18CA	TOU-18CA	TOU-24CA	TOU-36CSA	TOU-48CSA	TOU-60CSA
Capacity	Cooling Capacity	Btu/h	18000	18000	24000	36000	48000	55000
		kW	5.175	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/	/
		kW	/	/	/	/	/	/
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1683	1732	2432	3723	4636	5694
		Heating	/	/	/	/	/	/
Proformance	EER	W/W	3.07	3.06	2.96	2.83	3.02	2.83
	COP	W/W	/	/	/	/	/	/
	Air Flow Volume	m3/h	800/750/600	1100/950/880	1400/1200/950	1700/1500/1400	1700/1500/1400	1900/1700/1500
	Noise Level (dB(A))	Hi/Med/Low	41/38/34	42/39/35	43/41/37	45/43/41	45/43/41	47/44/43
Indoor dimension	Unit (WxHxD)	mm	575×260×575	830x230x830	830x230x830	830x290x830	830x290x830	830x290x830
	Packing (WxHxD)	mm	725×300×725	950×250×950	950×250×950	950x320x950	950x320x950	950x320x950
Indoor weight	Net	kg	18.5	24	25	30	30	30
	Gross	kg	23	29	30	35	35	35
Panel	Unit (WxHxD)	mm	650×30×650	950x45x950	950x45x950	950x45x950	950x45x950	950x45x950
	Packing (WxHxD)	mm	760×100×760	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net/Gross	kg	2.5/4.5	6/9	6/9	6/9	6/9	6/9
Piping Size	Liquid	mm	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD32	OD32	OD32	OD32	OD32	OD32
Stuffing Quantity	20'/40'/40"HQ	Set	60/124/130	35/82/96	33/73/83	35/65/75	23/49/57	23/49/57

\*All datas are subject to change without notice, due to our continuous improvement.



Duct - R410A Cooling Only

Indoor unit		Model	TTB-18CRA	TTB-24CRA	TTB-36CRSA	TTB-48CRSA	TTB-60CRSA
Outdoor unit		Model	TOU-18CA	TOU-24CA	TOU-36CSA	TOU-48CSA	TOU-60CSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1761	2351	3584	4560	5694
		Heating	/	/	/	/	/
Proformance	EER	W/W	3.01	3.06	2.94	3.07	2.83
	COP	W/W	/	/	/	/	/
	Air Flow Volume	m3/h	1170/770/650	1400/950/800	1800/1500/1350	2100/1750/1550	2200/1800/1600
	External Static Pressure	Pa	70	70	80	100	100
Indoor dimension	Noise Level (dB(A))	Hi/Med/Low	43/35/32	46/43/41	46/44/42	47/44/42	47/45/43
	Unit (WxHxD)	mm	920x210x570	920x270x570	1140x270x710	1200x300x800	1200x300x800
Indoor weight	Packing (WxHxD)	mm	1115x280x655	1115×340×655	1345x360x795	1405x390x890	1405x390x890
	Net	kg	23	24	35	45	45
Piping Size	Gross	kg	28	29	40	50	54
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
Stuffing Quantity	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	20'/40'/40"HQ	Set	60/111/124	55/91/104	24/54/82	25/50/54	25/50/54

Ceiling & Floor - R410A Cooling Only



Indoor unit		Model	TUB-18CRA	TUB-24CRA	TUB-36CRSA	TUB-48CRSA	TUB-60CRSA
Outdoor unit		Model	TOU-18CA	TOU-24CA	TOU-36CSA	TOU-48CSA	TOU-60CSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1712	2230	3578	4551	5594
		Heating	/	/	/	/	/
Proformance	EER	W/W	3.10	3.23	2.95	3.08	2.88
	COP	W/W	/	/	/	B	/
	Air Flow Volume	m3/h	900/800/700	1200/1050/900	1700/1300/1100	2177/1689/1434	2177/1689/1434
	Noise Level (dB(A))	Hi/Med/Low	43/41/38	45/43/40	45/43/40	52/49/46	52/49/46
Indoor dimension	Unit (WxHxD)	mm	1055x675x235	1055x675x235	1275x675x235	1635x675x235	1635x675x235
	Packing (WxHxD)	mm	1131x753x313	1131x753x313	1351x753x313	1711x753x313	1711x753x313
Indoor weight	Net	kg	24	24	29	38	41
	Gross	kg	29	30	35	46	48
Piping Size	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD25	OD25
Stuffing Quantity	20'/40'/40"HQ	Set	105/231/297	105/231/297	84/168/216	63/126/144	63/126/144

\*All datas are subject to change without notice, due to our continuous improvement.





Universal Outdoor - R410A Cooling & Heating

Outdoor unit		Model	TOU-18HA	TOU-24HA	TOU-36HSA	TOU-48HSA	TOU-60HSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	53000	60500
		kW	5.900	7.900	12.000	16.000	17.731
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Air Flow Volume	m3/h	2400/1850	4000/2450	4900/2750	6300/4650	6300/4650
	Noise Level	dB(A)	49	55	55	57	57
Outdoor dimension	Unit (WxHxD)	mm	780×605×290	900×650×310	900×805×360	1250×940×340	1250×940×340
	Packing (WxHxD)	mm	883×412×653	1015×720×425	1031×925×447	1365×1030×430	1365×1030×430
Outdoor weight	Net	kg	38	52	79	99	103
	Gross	kg	42	55	87	110	112
Piping Size	Liquid Pipe Size	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas Pipe Size	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Max. Pipe Length	m	25	30	30	50	50
	Max. Height Difference	m	15	15	20	30	30
Operating Range	Cooling	C	-15~43	-15~43	-15~43	-15~43	-15~43
	Heating	C	-7 ~ 24	-7 ~ 24	-7 ~ 24	-7 ~ 24	-7 ~ 24



Cassette - R410A Cooling & Heating

Indoor unit		Model	TCC-18HRA-C	TCC-18HRA	TCC-24HRA	TCC-36HRSA	TCC-48HRSA	TCC-60HRSA
Outdoor unit		Model	TOU-18HA	TOU-18HA	TOU-24HA	TOU-36HSA	TOU-48HSA	TOU-60HSA
Capacity	Cooling Capacity	Btu/h	18000	18000	24000	36000	48000	55000
		kW	5.175	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	19000	20000	26500	40000	53000	60500
		kW	5.600	5.900	7.900	12.000	16.000	17.731
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1683	1732	2432	3723	4636	5694
		Heating	1761	1671	2192	3409	5079	5700
Proformance	EER	W/W	3.07	3.06	2.96	2.83	3.02	2.83
	COP	W/W	3.18	3.53	3.60	3.52	3.15	3.11
	Air Flow Volume	m3/h	800/750/600	1100/950/880	1400/1200/950	1700/1500/1400	1700/1500/1400	1900/1700/1500
	Noise Level (dB(A))	Hi/Med/Low	41/38/34	42/39/35	43/41/37	45/43/41	45/43/41	47/44/43
Indoor dimension	Unit (WxHxD)	mm	575×260×575	830x230x830	830x230x830	830x290x830	830x290x830	830x290x830
	Packing (WxHxD)	mm	725×300×725	950×250×950	950×250×950	950x320x950	950x320x950	950x320x950
Indoor weight	Net	kg	18.5	24	25	30	30	31
	Gross	kg	23	29	30	35	35	36
Panel	Unit (WxHxD)	mm	650×30×650	950x45x950	950x45x950	950x45x950	950x45x950	950x45x950
	Packing (WxHxD)	mm	760×100×760	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net/Gross	kg	2.5/4.5	6/9	6/9	6/9	6/9	6/9
Piping Size	Liquid	mm	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD32	OD32	OD32	OD32	OD32	OD32
Stuffing Quantity	20'/40'/40'HQ	Set	60/124/130	35/82/96	33/73/83	35/65/75	23/49/57	23/49/57

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Duct - R410A Cooling & Heating

Indoor unit		Model	TTB-18HRA	TTB-24HRSA	TTB-36HRSA	TTB-48HRSA	TTB-60HRSA
Outdoor unit		Model	TOU-18HA	TOU-24HSA	TOU-36HSA	TOU-48HSA	TOU-60HSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	53000	60500
		kW	5.900	7.900	12.000	16.000	17.731
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1761	2351	3584	4560	5694
		Heating	1513	2388	3468	4446	4845
Proformance	EER	W/W	3.01	3.06	2.94	3.07	2.83
	COP	W/W	3.90	3.31	3.46	3.60	3.66
	Air Flow Volume	m3/h	1170/770/650	1400/950/800	1800/1500/1350	2100/1750/1550	2200/1800/1600
	External Static Pressure	Pa	70	70	80	100	100
Indoor dimension	Noise Level (dB(A))	Hi/Med/Low	43/35/32	46/43/41	46/44/42	47/44/42	47/45/43
	Unit (WxHxD)	mm	920x210x570	920x270x570	1140x270x710	1200x300x800	1200x300x800
Indoor weight	Packing (WxHxD)	mm	1115x290x656	1115x340x655	1345x360x790	1405x390x890	1405x390x890
	Net	kg	23	24	35	45	45
Piping Size	Gross	kg	28	29	40	50	54
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
		Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05
Stuffing Quantity	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	20'/40'/40'HQ	Set	60/111/124	55/91/104	24/54/82	25/50/54	25/50/54



Ceiling & Floor - R410A Cooling & Heating

Indoor unit		Model	TUB-18HRA	TUB-24HRA	TUB-36HRSA	TUB-48HRSA	TUB-60HRSA
Outdoor unit		Model	TOU-18HA	TOU-24HA	TOU-36HSA	TOU-48HSA	TOU-60HSA
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	53000	60500
		kW	5.900	7.900	12.000	16.000	17.731
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1712	2230	3578	4551	5594
		Heating	1782	2254	3468	4432	5147
Proformance	EER	W/W	3.10	3.23	2.95	3.08	2.88
	COP	W/W	3.31	3.50	3.46	3.61	3.44
	Air Flow Volume	m3/h	900/800/700	1200/1050/900	1700/1300/1100	2177/1689/1434	2455/2393/1330
	Noise Level (dB(A))	Hi/Med/Low	43/41/38	45/43/40	45/43/40	52/49/46	55/50/45
Indoor dimension	Unit (WxHxD)	mm	1055×675×235	1055×675×235	1275×675×235	1635x675x235	1635x675x235
	Packing (WxHxD)	mm	1131x753x313	1131x753x313	1351x753x313	1711x753x313	1711x753x313
Indoor weight	Net	kg	24	24	29	38	41
	Gross	kg	29	30	35	46	48
Piping Size	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD25	OD25
Stuffing Quantity	20'/40'/40'HQ	Set	105/231/297	105/231/297	84/168/216	63/126/144	63/126/144

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On/Off



Universal Outdoor - R22 Cooling Only

Outdoor unit		Model	TOU-18C	TOU-24C	TOU-36CS	TOU-48CS	TOU-60CS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Air Flow Volume	m3/h	2400	4000	4900	6300	6300
	Noise Level	dB(A)	55	58	58	60	60
	Unit (WxHxD)	mm	780×605×290	900×650×310	900×805×360	1250×940×340	1250×940×340
Outdoor dimension	Packing (WxHxD)	mm	883×412×653	1015×720×425	1031×925×447	1365×1030×430	1365×1030×430
	Net	kg	38	52	75	93	98
Outdoor weight	Gross	kg	42	57	85	103	108
	Liquid Pipe Size	mm	φ 6.35	φ 9.52	φ 9.52	φ 9.52	φ 9.52
Piping Size	Gas Pipe Size	mm	φ 12.7	φ 15.88	φ 19.05	φ 19.05	φ 19.05
	Max. Pipe Length	m	25	30	30	50	50
	Max. Height Difference	m	15	15	20	30	30
	Cooling	C	21~43	21~43	21~43	21~43	21~43
Operating Range	Heating	C	/	/	/	/	/



Cassette - R22 Cooling Only

Indoor unit		Model	TCC-18CR	TCC-24CR	TCC-36CRS	TCC-48CRS	TCC-60CRS
Outdoor unit		Model	TOU-18C	TOU-24C	TOU-36CS	TOU-48CS	TOU-60CS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1785	2600	3838	5013	5870
		Heating	/	/	/	/	/
	EER	W/W	2.97	2.77	2.75	2.79	2.75
Proformance	COP	W/W	/	/	/	/	/
	Air Flow Volume	m3/h	1100/950/880	1400/1200/950	1700/1500/1400	1700/1500/1400	1900/1700/1500
	Noise Level (dB(A))	Hi/Med/Low	42/39/35	43/41/37	45/43/41	45/43/41	47/44/43
	Unit (WxHxD)	mm	830x230x830	830x230x830	830x290x830	830x290x830	830x290x830
Indoor dimension	Packing (WxHxD)	mm	950x250x950	950x250x950	950x320x950	950x320x950	950x320x950
	Net	kg	24	25	30	30	31
Indoor weight	Gross	kg	29	30	35	35	36
	Unit (WxHxD)	mm	950x45x950	950x45x950	950x45x950	950x45x950	950x45x950
Panel	Packing (WxHxD)	mm	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net/Gross	kg	6/9	6/9	6/9	6/9	6/9
Piping Size	Liquid	mm	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD32	OD32	OD32	OD32	OD32
	Stuffing Quantity	20'/40'/40'HQ	Set	35/82/96	33/73/83	35/65/75	23/49/57

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On/Off



Duct - R22 Cooling Only

Indoor unit		Model	TTB-18CR	TTB-24CR	TTB-36CRS	TTB-48CRS	TTB-60CRS
Outdoor unit		Model	TOU-18C	TOU-24C	TOU-36CS	TOU-48CS	TOU-60CS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1831	2351	3673	4950	5762
		Heating	/	/	/	/	/
	EER	W/W	2.89	3.06	2.87	2.83	2.80
Proformance	COP	W/W	/	/	/	/	/
	Air Flow Volume	m3/h	1170/770/650	1400/950/800	1800/1500/1350	2100/1750/1550	2200/1800/1600
	External Static Pressure	Pa	70	70	80	100	100
	Noise Level (dB(A))	Hi/Med/Low	43/35/32	46/43/41	46/44/42	47/44/42	47/45/43
Indoor dimension	Unit (WxHxD)	mm	920x210x570	920x270x570	1140x270x710	1200x300x800	1200x300x800
	Packing (WxHxD)	mm	1115x280x656	1115x340x655	1345x360x795	1405x390x890	1405x390x890
Indoor weight	Net	kg	23	24	35	45	45
	Gross	kg	28	29	40	50	50
Piping Size	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	Stuffing Quantity	20'/40'/40'HQ	Set	60/111/124	55/91/104	24/54/82	25/50/54



Ceiling & Floor - R22 Cooling Only

Indoor unit		Model	TUB-18CR	TUB-24CR	TUB-36CRS	TUB48CRS	TUB-60CRS
Outdoor unit		Model	TOU-18C	TOU-24C	TOU-36CS	TOU-48CS	TOU-60CS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	/	/	/	/	/
		kW	/	/	/	/	/
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1764	2354	3673	4691	5767
		Heating	/	/	/	/	/
	EER	W/W	3.00	3.06	2.87	2.98	2.80
Proformance	COP	W/W	/	/	/	/	/
	Air Flow Volume	m3/h	900/800/700	1200/1050/900	1700/1300/1100	2177/1689/1434	2177/1689/1434
	Noise Level (dB(A))	Hi/Med/Low	43/41/38	45/43/40	45/43/40	52/49/46	52/49/46
	Unit (WxHxD)	mm	1055x675x235	1055x675x235	1275x675x235	1275x675x235	1635x675x235
Indoor dimension	Packing (WxHxD)	mm	1131x753x313	1131x753x313	1351x753x313	1351x753x313	1711x753x313
	Net	kg	24	24	29	38	41
Indoor weight	Gross	kg	29	30	35	46	48
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
Piping Size	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	Stuffing Quantity	20'/40'/40'HQ	Set	105/231/297	105/231/297	84/168/216	63/126/144

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Universal Outdoor - R22 Cooling&Heating

Outdoor unit		Model	TOU-18H	TOU-24H	TOU-36HS	TOU-48HS	TOU-60HS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	51500	60500
		kW	5.750	7.766	11.730	15.093	17.731
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Air Flow Volume	m3/h	2400	4000	4900	6300	6300
	Noise Level	dB(A)	55	58	58	60	60
Outdoor dimension	Unit (WxHxD)	mm	780×605×290	900×650×310	900×805×360	1250×940×340	1250×940×340
	Packing (WxHxD)	mm	883×412×653	1015×720×425	1031×925×447	1365×1030×430	1365×1030×430
Outdoor weight	Net	kg	39.5	52	79	99	103
	Gross	kg	43.5	55	87	110	112
Piping Size	Liquid Pipe Size	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas Pipe Size	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Max. Pipe Length	m	25	30	30	50	50
	Max. Height Difference	m	15	15	20	30	30
Operating Range	Cooling	C	21~43	21~43	21~43	21~43	21~43
	Heating	C	-7 ~24	-7 ~24	-7 ~24	-7 ~24	-7 ~24



Cassette - R22 Cooling&Heating

Indoor unit		Model	TCC-18HR-C(Smll pnel)	TCC-18HR(Big pnel)	TCC-24HR	TCC-36HRS	TCC-48HRS	TCC-60HRS
Outdoor unit		Model	TOU-18H	TOU-18H	TOU-24H	TOU-36HS	TOU-48HS	TOU-60HS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000	
		kW	5.175	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	19600	20000	26500	40000	51500	60500
		kW	5.750	5.750	7.766	11.730	15.093	17.731
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1815	1850	2556	3950	5013	5694
		Heating	1960	1900	2700	3620	4503	4872
Proformance	EER	W/W	2.85	2.86	2.82	2.67	2.79	2.83
	COP	W/W	2.93	3.03	2.88	3.24	3.35	3.64
	Air Flow Volume	m3/h	800/750/600	1100/950/880	1400/1200/950	1700/1500/1400	1700/1500/1400	1900/1700/1500
	Noise Level (dB(A))	Hi/Med/Low	41/38/34	42/39/35	43/41/37	45/43/41	45/43/41	47/44/43
Indoor dimension	Unit (WxHxD)	mm	575×260×575	830x230x830	830x230x830	830x290x830	830x290x830	830x290x830
	Packing (WxHxD)	mm	725×300×725	950×250×950	950×250×950	950x320x950	950x320x950	950x320x950
Indoor weight	Net	kg	18.5	24	25	30	30	31
	Gross	kg	23	29	30	35	35	36
Panel	Unit (WxHxD)	mm	650×30×650	950x45x950	950x45x950	950x45x950	950x45x950	950x45x950
	Packing (WxHxD)	mm	760×100×760	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net/Gross	kg	2.5/4.5	6/9	6/9	6/9	6/9	6/9
Piping Size	Liquid	mm	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Drainage	mm	OD32	OD32	OD32	OD32	OD32	OD32
Stuffing Quantity	20'/40'/40'HQ	Set	60/124/130	35/82/96	33/73/83	35/65/75	23/49/57	23/49/57

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Duct - R22 Cooling&Heating

Indoor unit		Model	TTB-18HR	TTB-24HR	TTB-36HR	TTB-48HR	TTB-60HR
Outdoor unit		Model	TOU-18H	TOU-24H	TOU-36HS	TOU-48HS	TOU-60HS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	51500	60500
		kW	5.750	7.766	11.730	15.093	17.731
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1831	2351	3673	4701	5762
		Heating	1763	2653	3620	4600	5191
Proformance	EER	W/W	2.89	3.06	2.87	2.98	2.80
	COP	W/W	3.26	2.93	3.24	3.28	3.42
	Air Flow Volume	m3/h	1170/770/650	1400/950/800	1800/1500/1350	2100/1750/1550	2200/1800/1600
	External Static Pressure	Pa	70	70	80	100	100
Indoor dimension	Noise Level (dB(A))	Hi/Med/Low	43/35/32	46/43/41	46/44/42	47/44/42	47/45/43
	Unit (WxHxD)	mm	920x210x570	920x270x570	1140x270x710	1200x300x800	1200x300x800
Indoor weight	Packing (WxHxD)	mm	1115x280x656	1115x340×655	1345x360x795	1405x390x890	1405x390x890
	Net	kg	23	24	35	45	45
Piping Size	Gross	kg	28	29	40	50	54
	Liquid	mm	φ6.35	φ9.52	φ 9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ 19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD25	OD25
Stuffing Quantity	20'/40'/40'HQ	Set	60/111/124	55/91/104	24/54/82	25/50/54	25/50/54

Ceiling & Floor - R22 Cooling&Heating



Indoor unit		Model	TUB-18HR	TUB-24HR	TUB-36HRS	TUB48HRS	TUB-60HRS
Outdoor unit		Model	TOU-18H	TOU-24H	TOU-36HS	TOU-48HS	TOU-60HS
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.200	10.550	14.000	16.119
	Heating Capacity	Btu/h	20000	26500	40000	51500	60500
		kW	5.750	7.766	11.730	15.093	17.731
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1764	2354	3673	4691	5656
		Heating	1960	2700	3620	4610	5218
Proformance	EER	W/W	3.00	3.06	2.87	2.98	2.85
	COP	W/W	2.93	2.88	3.24	3.27	3.40
	Air Flow Volume	m3/h	900/800/700	1200/1050/900	1700/1300/1100	2177/1689/1434	2455/2393/1330
	Noise Level (dB(A))	Hi/Med/Low	43/41/38	45/43/40	45/43/40	52/49/46	55/50/45
Indoor dimension	Unit (WxHxD)	mm	1055×675×235	1055×675×235	1275×675×235	1635x675x235	1635x675x235
	Packing (WxHxD)	mm	1131x753x313	1131x753x313	1351x753x313	1711x753x313	1711x753x313
Indoor weight	Net	kg	24	24	29	38	41
	Gross	kg	29	30	35	46	48
Piping Size	Liquid	mm	φ6.35	φ9.52	φ 9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ 19.05	φ19.05	φ19.05
	Drainage	mm	OD25	OD25	OD25	OD32	OD25
Stuffing Quantity	20'/40'/40'HQ	Set	105/231/297	105/231/297	84/168/216	63/126/144	63/126/144

\*All datas are subject to change without notice, due to our continuous improvement.



Inverter



Universal Outdoor - R410A Cooling&Heating

Outdoor unit		Model	TCA-18HA/DVO	TCA-24HA/DVO	TCA-36HA/DVO	TCA-48HA/DV3O	TCA-60HA/DV3O
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.050	10.550	14.000	16.000
	Heating Capacity	Btu/h	19800	26400	39600	52800	60500
Electrical parts		kW	5.800	7.750	11.600	15.500	17.600
	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Air Flow Volume	m3/h	2400	4000	5500	6300	6300
Outdoor dimension	Noise Level	dB(A)	55	58	59	60	60
	Unit (WxHxD)	mm	780×605×290	900×650×310	940×915×340	1250×940×340	1250×940×340
	Packing (WxHxD)	mm	883×412×653	1015×720×425	1030×950×430	1365×1030×430	1365×1030×430
Outdoor weight	Net	kg	44	56	95	127	132
	Gross	kg	49	61	105	137	142
Piping Size	Liquid Pipe Size	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas Pipe Size	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
	Max. Pipe Length	m	35	35	50	50	50
	Max. Height Difference	m	25	25	30	30	30
Operating Range	Cooling	°C	-15~45	-15~45	-15~45	-15~45	-15~45
	Heating	°C	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24



Cassette - R410A Cooling&Heating

Indoor unit		Model	TCA-18CHRA/DVI	TCA-24CHRA/DVI	TCA-36CHRA/DVI	TCA-48CHRA/DV3I
Outdoor unit		Model	TCA-18HA/DVO	TCA-24HA/DVO	TCA-36HA/DVO	TCA-48HA/DV3O
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000
		kW	5.300	7.050	10.550	14.000
	Heating Capacity	Btu/h	19800	26400	39600	52800
Electrical parts		kW	5.800	7.750	11.600	15.500
	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1656	2203	3297	4375
Proformance		Heating	1706	2279	3412	4559
	EER	W/W	3.20	3.20	3.20	3.20
	COP	W/W	3.40	3.40	3.40	3.40
Indoor dimension	Air Flow Volume	m3/h	1100/950/880	1400/1200/950	1700/1500/1400	1700/1500/1400
	Noise Level (dB(A))	Hi/Med/Low	42/39/35	43/41/37	45/43/41	45/43/41
	Unit (WxHxD)	mm	830×230×830	830×230×830	830×290×830	830×290×830
Indoor weight	Packing (WxHxD)	mm	950×250×950	950×250×950	950×320×950	950×320×950
	Net	kg	26	27	37	37
Panel	Gross	kg	30	31	43	43
	Unit (WxHxD)	mm	950×45×950	950×45×950	950×45×950	950×45×950
	Packing (WxHxD)	mm	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035
Piping Size	Net/Gross	kg	6/9	6/9	6/9	6/9
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05
Stuffing Quantity	Drainage	mm	OD32	OD32	OD32	OD32
	20'/40'/40'HQ	Set	35/82/96	33/73/83	35/65/75	23/49/57

\*All datas are subject to change without notice, due to our continuous improvement.

Inverter



Duct - R410A Cooling&Heating

Indoor unit		Model	TCA-18D2HRA/DVI	TCA-24D2HRA/DVI	TCA-36D2HRA/DVI	TCA-48D2HRA/DV3I	TCA-60D2HRA/DV3I
Outdoor unit		Model	TCA-18HA/DVO	TCA-24HA/DVO	TCA-36HA/DVO	TCA-48HA/DV3O	TCA-60HA/DV3O
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.050	10.550	14.000	16.000
	Heating Capacity	Btu/h	19800	26400	39600	52800	60500
Electrical parts		kW	5.800	7.750	11.600	15.500	17.600
	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1656	2203	3297	4375	5000
Proformance		Heating	1706	2279	3412	4559	5176
	EER	W/W	3.20	3.20	3.20	3.20	3.20
	COP	W/W	3.40	3.40	3.40	3.40	3.40
Indoor dimension	Air Flow Volume	m3/h	1170/770/650	1400/950/800	1800/1500/1350	2100/1750/1550	2200/1800/1600
	External Static Pressure	Pa	70	70	80	100	100
	Noise Level (dB(A))	Hi/Med/Low	43/35/32	46/43/41	46/44/42	47/44/42	47/45/43
Indoor weight	Unit (WxHxD)	mm	920×210×570	920×270×570	1140×270×710	1200×300×800	1200×300×800
	Packing (WxHxD)	mm	1115×280×656	1115×340×655	1345×360×795	1405×390×890	1405×390×890
	Net	kg	23	25	35	45	47
Piping Size	Gross	kg	28	30	40	50	52
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
Stuffing Quantity	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	20'/40'/40'HQ	Set	60/111/124	55/91/104	24/54/82	25/50/54	25/50/54

Ceiling & Floor - R410A Cooling&Heating



Indoor unit		Model	TCA-18ZHRA/DVI	TCA-24ZHRA/DVI	TCA-36ZHRA/DVI	TCA-48ZHRA/DV3I	TCA-60ZHRA/DV3I
Outdoor unit		Model	TCA-18HA/DVO	TCA-24HA/DVO	TCA-36HA/DVO	TCA-48HA/DV3O	TCA-60HA/DV3O
Capacity	Cooling Capacity	Btu/h	18000	24000	36000	48000	55000
		kW	5.300	7.050	10.550	14.000	16.000
	Heating Capacity	Btu/h	19800	26400	39600	52800	60500
Electrical parts		kW	5.800	7.750	11.600	15.500	17.600
	Power Supply	V~, Hz, Ph	220-240V~/50Hz/1P	220-240V~/50Hz/1P	220-240V~/50Hz/1P	380-415V~/50Hz/3P	380-415V~/50Hz/3P
	Power Input (W)	Cooling	1656	2203	3297	4375	5000
Proformance		Heating	1706	2279	3412	4559	5176
	EER	W/W	3.20	3.20	3.20	3.20	3.20
	COP	W/W	3.40	3.40	3.40	3.40	3.40
Indoor dimension	Air Flow Volume	m3/h	900/800/700	1200/1050/900	1700/1300/1100	2177/1689/1434	2455/2393/1330
	Noise Level (dB(A))	Hi/Med/Low	43/41/38	45/43/40	45/43/40	52/49/46	55/50/45
	Unit (WxHxD)	mm	1055×675×235	1055×675×235	1275×675×235	1635×675×235	1635×675×235
Indoor weight	Packing (WxHxD)	mm	1131×753×313	1131×753×313	1351×753×313	1711×753×313	1711×753×313
	Net	kg	23	24	29	38	39
Piping Size	Gross	kg	29	30	35	46	47
	Liquid	mm	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52
	Gas	mm	φ12.7	φ15.88	φ19.05	φ19.05	φ19.05
Stuffing Quantity	Drainage	mm	OD25	OD25	OD25	OD25	OD25
	20'/40'/40'HQ	Set	105/231/297	105/231/297	84/168/216	63/126/144	63/126/144

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# 10HP Floor Standing



- Strong cooling & Heating
- Extra-long distance air supply

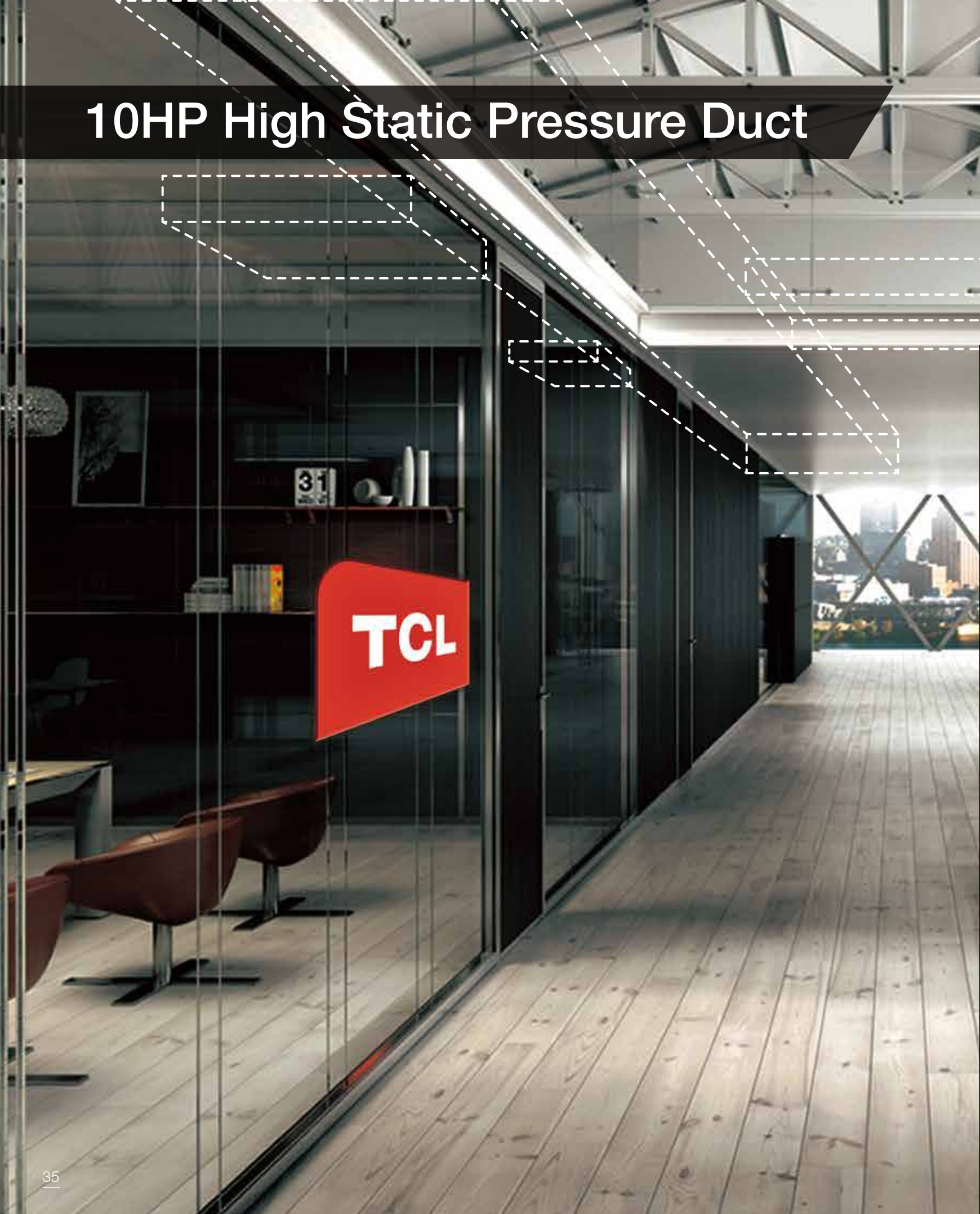
10HP Floor Standing - R410A Cooling&Heating

Indoor unit		Model	TCA-90FHR/U3
Outdoor unit		Model	TCA-90FHR/U3
Capacity	Cooling Capacity	Btu/h	90000
		kW	26.000
	Heating Capacity	Btu/h	97000
		kW	28.000
Electrical parts	Power Supply	V ~, Hz, Ph	220-240V~/50Hz/1P
	Power Input (W)	Cooling	10100
		Heating	9020
	EER	W/W	2.61
Proformance	COP	W/W	3.15
	Air Flow Volume	m3/h	4280
	Noise Level (dB(A))	Hi/Med/Low	58
Indoor dimension	Unit (WxHxD)	mm	1200x420x1860
	Packing (WxHxD)	mm	
Indoor weight	Net	kg	150
	Gross	kg	165
	Liquid	mm	φ12.7(x2)
Piping Size	Gas	mm	φ19.05(x2)
	Drainage	mm	OD32

\* All specification is subject to our final confirmation.



# 10HP High Static Pressure Duct



- Long distance air flow with a high pressure static from 100 – 196 Pa.
- Air can be distributed to various rooms as per different installation requirements.
- Ultra-slim design: 380mm thickness
- Air outside can be lead into the room via a connection pipe.

10HP High Static Pressure Duct

Indoor unit		Model	TCB-90D1HR/U3
Outdoor unit		Model	TCB-90D1HR/U3
Capacity	Cooling Capacity	Btu/h	90000
		kW	26.400
	Heating Capacity	Btu/h	97000
		kW	28.400
Electrical parts	Power Supply	V -, Hz, Ph	220-240V~/50Hz/1P
	Power Input (W)	Cooling	10600
		Heating	11000
	EER	W/W	2.49
Proformance	COP	W/W	2.58
	Air Flow Volume	m3/h	4200
	Noise Level (dB(A))	Hi/Med/Low	55
	Unit (WxHxD)	mm	1330x850x500
Indoor dimension	Packing (WxHxD)	mm	1588x1030x650
	Net	kg	104
Indoor weight	Gross	kg	134
	Liquid	mm	φ12.7(×2)
Piping Size	Gas	mm	φ19.05(×2)
	Drainage	mm	OD32

★ All specification is subject to our final confirmation.





# Top Discharge Series



## Features



### Universal design

Universal design of spare parts, which is convenient for stocks and maintenance.



### 24V Communication Connection

The voltage required for communication connection is as low as 24V, which is much safer and more convenient, especially in operation and maintenance.



### Multiple protection

Safety procedures include exhausted temperature, high pressure protection, low pressure protection, etc.



### Anti-Rust

Specially design of metal grille to protect against rust.



Top Discharge Series

Top Discharge Series - R410A Cooling Only

Outdoor unit		Model	TCU-24ZCRA/U2	TCU-36ZCRA/U2	TCU-48ZCRA/U2	TCU-60ZCRA/U2
Capacity	Cooling Capacity	Btu/h	24000	36000	48000	60000
		kW	7.1	10.5	14	16
	Heating Capacity	Btu/h	/	/	/	/
Electrical parts		kW	/	/	/	/
	Power Supply	V~,Hz,Ph	220-230,60,1	220-230,60,1	220-230,60,1	220-230,60,1
	Air Flow Volume	m3/h	2900	3600	6400	6600
Outdoor dimension	Noise Level	dB(A)	57	59	63	63
	Unit (WxHxD)	mm	554*633*554	600*759*600	740*759*740	740*843*740
	Packing (WxHxD)	mm	584*655*584	630*792*630	769*792*769	769*875*769
	Net	kg	42	66	90	95
Outdoor weight	Gross	kg	45	70	95	100
	Liquid Pipe Size	mm	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas Pipe Size	mm	16(5/8)	19(3/4)	19(3/4)	19(3/4)
Piping Size	Max. Pipe Length	m	30	30	50	50
	Max. Height Difference	m	10	20	25	25
Operating Range	Cooling	°C	21-43	21-43	21-43	21-43
	Heating	°C	/	/	/	/

Ceiling Floor - R410A Cooling Only

Indoor unit		Model	TCU-24ZCRA/U2I	TCU-36ZCRA/U2I	TCU-48ZCRA/U2I	TCU-60ZCRA/U2I
Outdoor unit		Model	TCU-24ZCRA/U2O	TCU-36ZCRA/U2O	TCU-48ZCRA/U2O	TCU-60ZCRA/U2O
Capacity	Cooling Capacity	Btu/h	24000	36000	48000	60000
		kW	7.1	10.5	14	16
	Heating Capacity	Btu/h	/	/	/	/
Electrical parts		kW	/	/	/	/
	Power Supply	V~, Hz, Ph	220-230,60,1	220-230,60,1	220-230,60,1	220-230,60,1
	Power Input (W)	Cooling	85	210	180x2	180x2
Proformance		Heating	/	/	/	/
	EER	W/W	2.72	2.72	2.72	2.72
	COP	W/W	/	/	/	/
	Air Flow Volume	m3/h	1100	1800	2600	2600
Indoor dimension	Noise Level (dB(A))	Hi/Med/Low	45/43/40	52/49/46	53/51/48	53/51/48
	Unit (WxHxD)	mm	1055x675x235	1275x675x235	1635x675x235	1635x675x235
Indoor weight	Packing (WxHxD)	mm	1131x753x313	1351x753x313	1711x753x313	1711x753x313
	Net	kg	25	30	41	41
	Gross	kg	31	36	48	48
Piping Size	Liquid	mm	9.52	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas	mm	φ15.88	19(3/4)	19(3/4)	19(3/4)
	Drainage	mm	OD25	OD25	OD25	OD25
Stuffing Quantity	20'/40'/40'HQ	Set	105/231/297	84/168/216	63/126/144	63/126/144

\*Other types of power supply can be customized.  
\*All datas are subject to change without notice, due to our continuous improvement.

Free Match

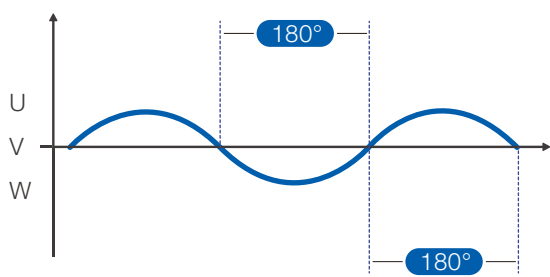




Features

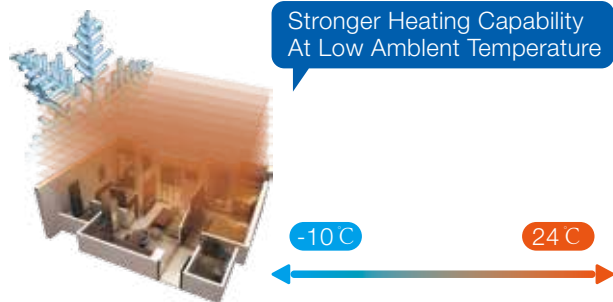
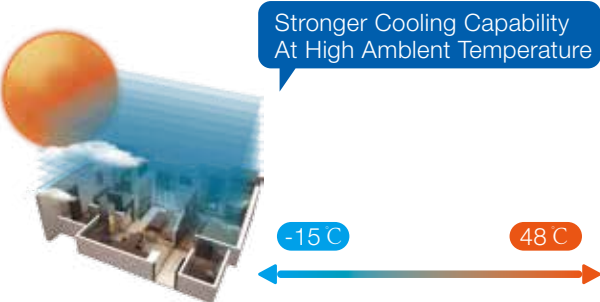
180°Sine Wave DC Drive Technique

It enables compressor to operate smoothly with efficiency dramatically increased. At the same time ,both harmonic current and electromegneic noise are suppressed.



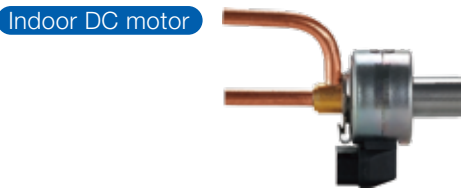
Wide Operating Range

Outdoor Uint Heating: -10~24 C , cooling:15~48 C .



Electronic Expansion Valve

Outdoor unit uses 4 - way electronic Expansion Valves, which has the function of optimizing the distribution of refrigerant to all the working indoor unit.



The Control Technique For Oil Recycles

Micro-Computer can automatically analyze the position where oil may stay. Through adjusting the speed of compressor and electronic-expansion valve, the flow speed of refrigerant is controlled and oil is recycled to the compressor, and thus, ensure compressor to run steadily.

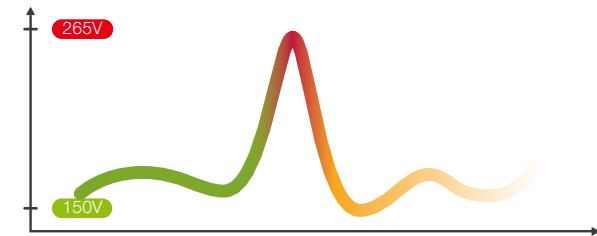
Twin Rotary DC Inverter Compressor

The twin rotary inverter compressor design reduces friction during operation Its rotation is smoother with less vibration,while also preventing leakage of refrig-erang gas during compression .



Wide Power Voltage Operation

The units can fit wide voltage range from 150V~265V.



Free Match

Universal Outdoor - R410A Cooling&Heating

Outdoor unit		Model	TCC-18I2HA/DVO	TCC-21I3HA/DVO	TCC-28I4HA/DVO	TCC-36I5HA/DVO
Capacity	Cooling Capacity	Btu/h	18000(4200~20000)	21000(9500~22500)	28000(10600~30000)	36000(10600~37000)
		kW	5.200(1.230~5.860)	6.150(2.800~6.600)	8.200(3.100~8.790)	10.500(3.100~10.800)
	Heating Capacity	Btu/h	20000(4400~21000)	22000(8350~23300)	29000(8700~31000)	37000(8700~38000)
Electrical parts		kW	5.860(1.290~6.280)	6.600(2.450~6.900)	8.500(2.550~9.080)	10.800(2.550~11.000)
	Power Supply	V~,Hz,Ph	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ
	Air Flow Volume	m3/h	3500	4200	5000	5500
Dimensions & Weight	Noise Level	dB(A)	65	68	70	70
	Unit (WxHxD)	WxHxD	820x605x300	900x660x310	900x790x360	940x340x910
	Packing (WxHxD)	kg	46	49	67	70
	Net	WxHxD	965x438x650	1030x720x435	1030x855x447	1030x430x950
Piping Size	Gross	kg	50	55	80	85
	Liquid Pipe Size	mm	6.35	6.35	6.35	6.35
	Gas Pipe Size	mm	9.52	9.52	9.52	9.52

Wall-mounted Air Conditioner - R410A Cooling&Heating

Outdoor unit		Model	TCA-07GHRA/DVI	TCA-09GHRA/DVI	TCA-12GHRA/DVI	TCA-18GHRA/DVI
Capacity	Cooling Capacity	Btu/h	7000	9000	12000	18000
		kW	2.100	2.700	3.500	5.000
	Heating Capacity	Btu/h	7500	9500	13000	18500
Electrical parts		kW	2.200	2.800	3.800	5.400
	Power Supply	V~,Hz,Ph	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ
	Air Flow Volume	m3/h	450	500	600	800
Dimensions & Weight	Noise Level	dB(A)	50/42/38	50/42/38	50/42/38	52/43/39
	Unit (WxHxD)	WxHxD	799x280x183	799x280x183	799x280x183	898x280x200
	Packing (WxHxD)	kg	10	10	10	11
	Net	WxHxD	885x366x278	885x366x278	885x366x278	995x365x298
Piping Size	Gross	kg	12	12	12	14
	Liquid Pipe Size	mm	6.35	6.35	6.35	6.35
	Gas Pipe Size	mm	9.52	9.52	9.52	12.7

Cassette - R410A Cooling&Heating

Outdoor unit		Model	TCA-09CHRA/DVI	TCA-12CHRA/DVI	TCA-18CHRA/DVI
Capacity	Cooling Capacity	Btu/h	9000	12000	18000
		kW	2.700	3.500	5.000
	Heating Capacity	Btu/h	9500	13000	18500
Electrical parts		kW	2.800	3.800	5.400
	Power Supply	V~,Hz,Ph	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ
	Air Flow Volume	m3/h	500	600	800
Dimensions & Weight	Noise Level	dB(A)	50/42/38	50/42/38	52/43/39
	Unit (WxHxD)	WxHxD	574x574x250	574x574x250	574x574x250
	Packing (WxHxD)	kg	20	20	20
	Net	WxHxD	725x725x290	725x725x290	725x725x290
Piping Size	Gross	kg	23	23	23
	Liquid Pipe Size	mm	6.35	6.35	6.35
	Gas Pipe Size	mm	9.52	9.52	12.7

\*All datas are subject to change without notice, due to our continuous improvement.



Duct - R410A Cooling&Heating

Outdoor unit		Model	TCA-07D5HRA/DVI	TCA-09D5HRA/DVI	TCA-12D5HRA/DVI	TCA-18D5HRA/DVI
Capacity	Cooling Capacity	Btu/h	7000	9000	12000	18000
		kW	2.100	2.700	3.500	5.000
	Heating Capacity	Btu/h	7500	9500	13000	18500
		kW	2.200	2.800	3.800	5.400
Electrical parts	Power Supply	V~,Hz,Ph	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ	220-240V~/50HZ
	Air Flow Volume	m3/h	450	500	600	800
	Noise Level	dB(A)	50/42/38	50/42/38	50/42/38	52/43/39
Dimensions & Weight	Unit (WxHxD)	WxHxD	799×280×183	799×280×183	799×280×183	898×280×200
	Packing (WxHxD)	kg	10	10	10	11
	Net	WxHxD	885×366×278	885×366×278	885×366×278	995×365×298
		Gross	kg	12	12	14
Piping Size	Liquid Pipe Size	mm	6.35	6.35	6.35	6.35
	Gas Pipe Size	mm	9.52	9.52	9.52	12.7



Ceiling & Floor - R410A Cooling&Heating

Outdoor unit		Model	TCA-18ZHRA/DVI
Capacity	Cooling Capacity	Btu/h	18000
		kW	5.000
	Heating Capacity	Btu/h	18500
		kW	5.400
Electrical parts	Power Supply	V~, Hz, Ph	220-240V~/50HZ
	Air Flow Volume	m3/h	800
	Noise Level	dB(A)	52/43/39
Dimensions & Weight	Unit (WxHxD)	WxHxD	1055×675×235
	Packing (WxHxD)	kg	24
	Net	WxHxD	1131×753×313
	Gross	kg	27
Piping Size	Liquid Pipe Size	mm	6.35
	Gas Pipe Size	mm	12.7

\*All datas are subject to change without notice, due to our continuous improvement.

Combination Table

Model No.	TCC-18I2HA/DVO	TCC-21I3HA/DVO	TCC-28I4HA/DVO	TCC-36I5HA/DVO
Standard indoor combination under Erp	9+9	7+7+7	7+7+7+7	7+7+7+7+7
One unit	7,9,12,18	7,9,12,18	7,9,12,18	7,9,12,18
Two units	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12	7+7,7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12, 12+18,
Three units	N/A	7+7+7, 7+7+9, 7+7+12, 7+9+9, 7+9+12, 7+9+9, 9+9+12, 9+9+18, 9+12+12, 9+12+18, 12+12+12	12+18, 18+18 7+7+7, 7+7+9, 7+7+12, 7+9+9, 7+9+12, 9+9+9, 9+9+12, 9+9+18, 9+12+12, 9+12+18, 12+12+12	18+18 7+7+7, 7+7+9, 7+7+12, 7+9+9, 7+9+12, 9+9+9, 9+9+12, 9+9+18, 9+12+12, 9+12+18, 12+12+12
Four units	N/A	N/A	7+7+7+7, 7+7+7+9, 7+7+7+12, 7+7+7+18, 7+7+9+9, 7+7+9+12, 7+7+12+12, 7+9+9+9, 7+9+9+12, 7+9+12+12, 9+9+9+9, 9+9+9+12	7+7+7+7+7, 7+7+7+9, 7+7+7+12, 7+7+7+18, 7+7+9+9, 7+7+9+12, 7+7+12+12, 7+9+9+9, 7+9+9+12, 7+9+12+12, 9+9+9+9, 9+9+9+12
Five units	N/A	N/A	N/A	7+7+7+7+7+7, 7+7+7+7+9, 7+7+7+7+12, 7+7+7+7+18, 7+7+7+9+9, 7+7+7+9+12, 7+7+7+12+12, 7+7+9+9+9, 7+7+9+9+12, 7+7+9+12+12, 7+9+9+9+9, 7+9+9+9+12, 9+9+9+9+9, 9+9+9+9+12 N/A

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# Evolving Experience & Expertise


















































































TCL DC Inverter TMV-X Series





VRF TMV-X

Series	18	22	28	36	45	50	56	63	71	80	90	110	112	125	140						
Cassette																					
Ceiling & Floor																					
Low Static Pressure Duct																					
Medium Static Pressure Duct																					
High Static Pressure Duct																					
Wall Mounted																					
12-14KW		16KW																			
DC Inverter Mini VRF System TMV Outdoor Unit																					
25.2-33.5KW		40-50KW		56-68KW		73-83.5KW		90-100KW		106-117KW		123-135KW		140-150KW		156-167KW		173-184KW		190-200KW	
DC Inverter VRF System TMV Outdoor Unit																					

Fan Coil Unit

Series	34	51	68	85	102	130	136	170	204	238
Ceiling Conceal Ducted Type Fan Coil Unit										
Universal Type Fan Coil Unit										
4-Way Cassette Type Fan Coil Unit										

Chiller

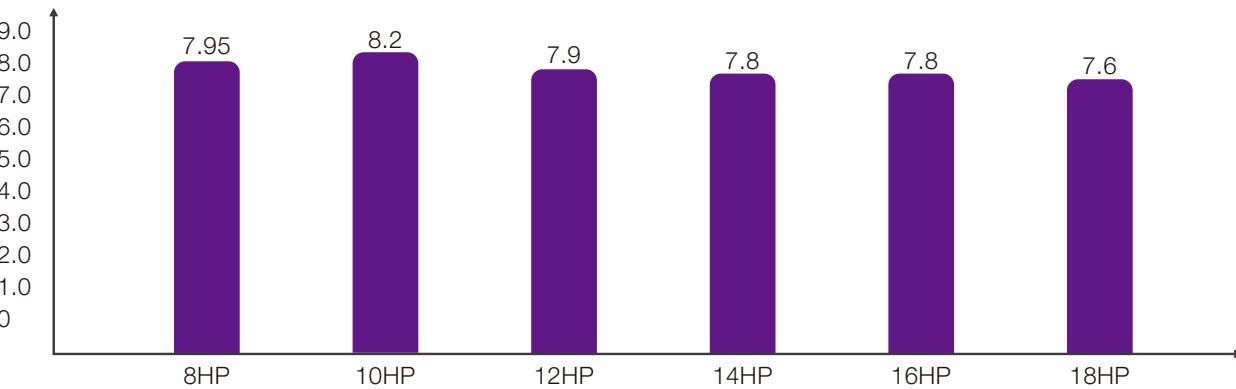
Series	65KW-130KW	246KW-404KW	440KW-6194KW
Water Cooled Chiller		 R134a	 R22
Air Cooled Chiller			



Features

IPLV(C) can be up to 8.2

TMV-X applies with high efficient full DC inverter modular units, which equipped with high efficient TitanGold dual core technologies, well-known compressor, precise expansion valve, etc., to increase its IPLV(C) to 8.05.



Note: Test is undertaken according to the national standard of GB21454-2008.

The Advantages of Applying IPLV(C)

What is IPLV(C)?

IPLV (C) refers to integrated part load value (cooling) and is used to balance the part load efficiency of multi-connected air conditioner in cooling seasons. Because only part load of air conditioners in most of time in commercial places is needed, the IPLV (C) can accurately reflect the energy saving of central air conditioner in the actual practice. The IPLV (C) value of TCL titan-gold central air conditioner is far more than the current national grade-I energy-saving level.

IPLV(C) =

0.05 x 100% Load operation efficiency

0.3 x 75% Load operation efficiency

0.4 x 50% Load operation efficiency

0.25 x 25% Load operation efficiency

EER Vs. IPLV(C) value (w/w)

Nominal Cooling Capacity (CC) W	Energy Efficiency Rating				
	Grade -5	Grade -4	Grade-3	Grade-2	Grade-1
Cc≤28000	2.80	3.00	3.20	3.40	3.60
28000<CC≤84000	2.75	2.95	3.15	3.35	3.55

The IPLV (C) of multi-split unit products is classified into five grades in accordance with the Minimum Allowable Values of the IPLV and Energy Efficiency Grades for Multi-Connected Air Conditioner (heat pump) Unit (GB21454-2008) , of which, grade 1 is the highest energy efficiency grade.

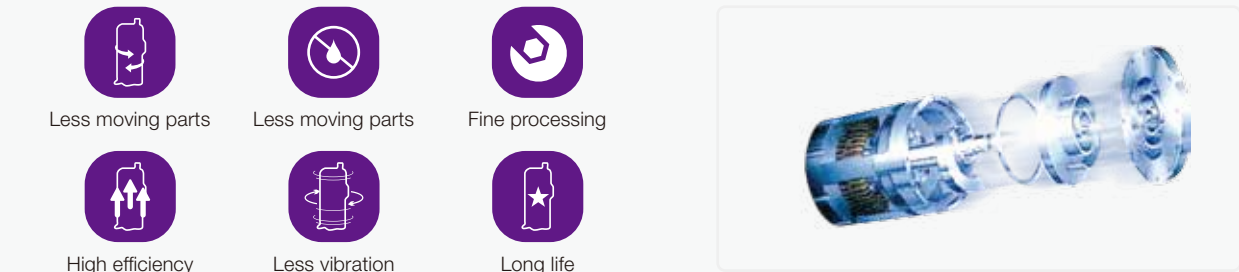
Energy-saving Certification of China Quality Certification Center

It has passed the energy-saving certification of China Quality Certification Center and been listed into the Government Procurement List of Energy-Saving Products.

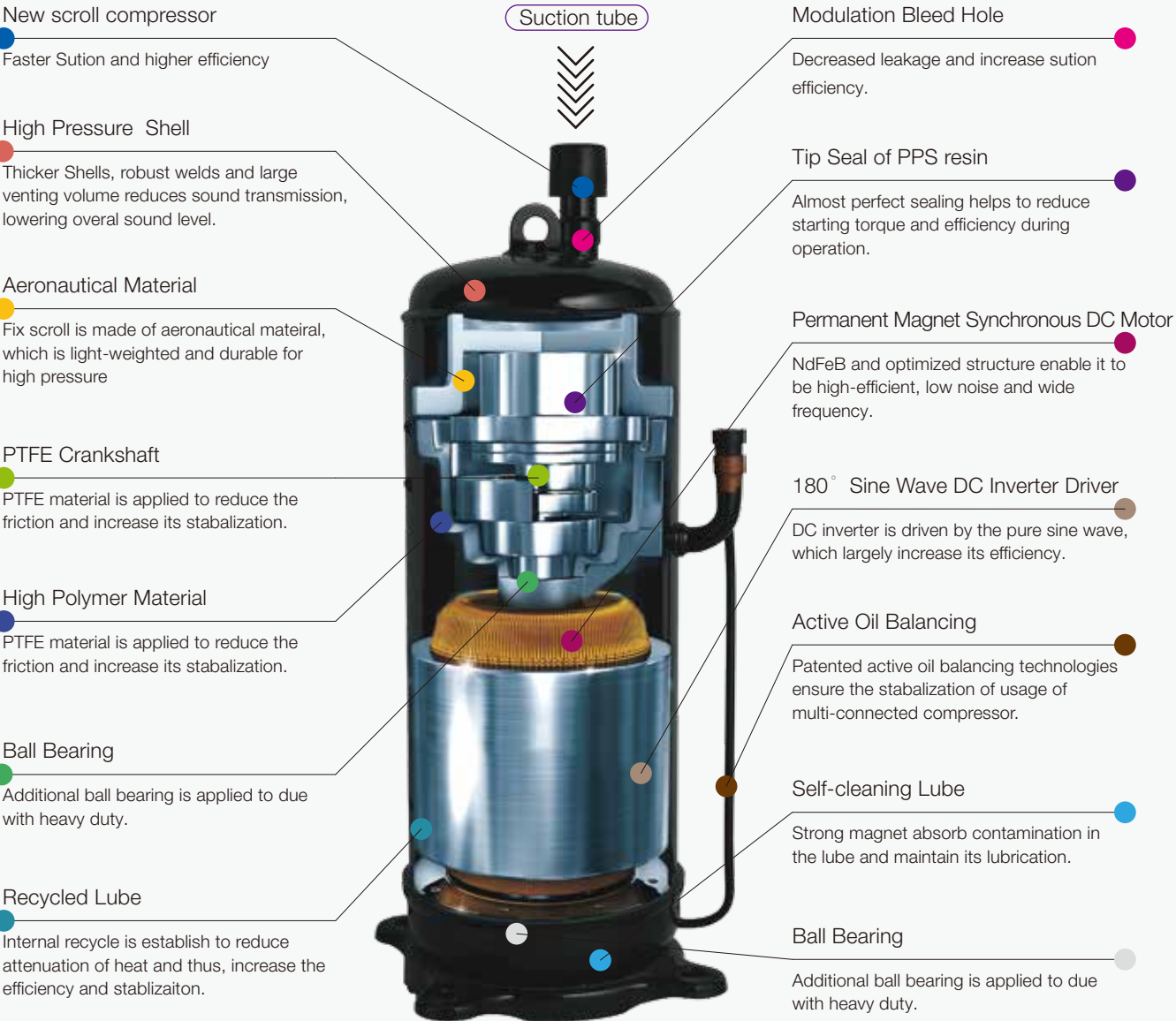


Full DC Inverter High Pressure Chamber Scroll Compressor

TCL full DC inverter compressor is built-in with brushless reluctance DC compressor control, DC fan motor, and upgraded heat exchanger, which is more efficient and energy-saving.



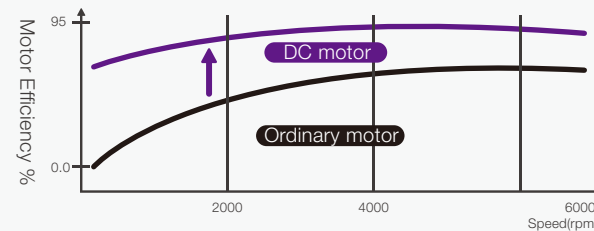
New scroll compressor



## Features

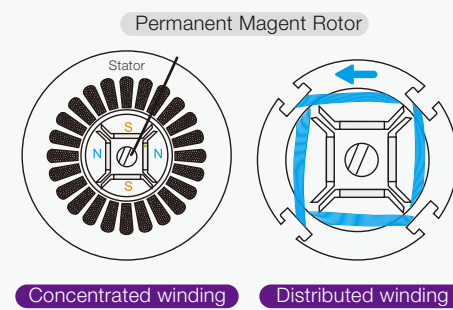
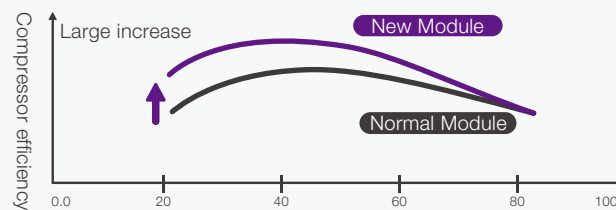
### Efficient DC Motor

Through the DC inverter motor, in the 30-70Hz frequency range of the longest running time, the performance of inverter compressor significantly increases to achieve higher torque and efficiency



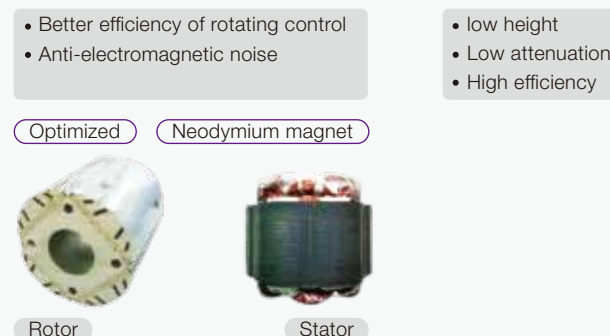
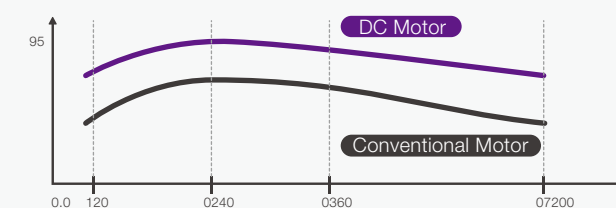
### Compressor Motor Structure

The new permanent magnet DC inverter compressor uses the concentrated winding motor, whose energy efficiency has greatly improved compared to that of distributed winding motormotor



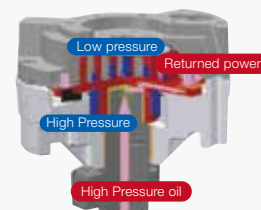
### Motor Core of the Compressor

Through DC motor in the frequency of 30~70Hz, the efficiency of inverter compressor is highly increased with extra low noise.



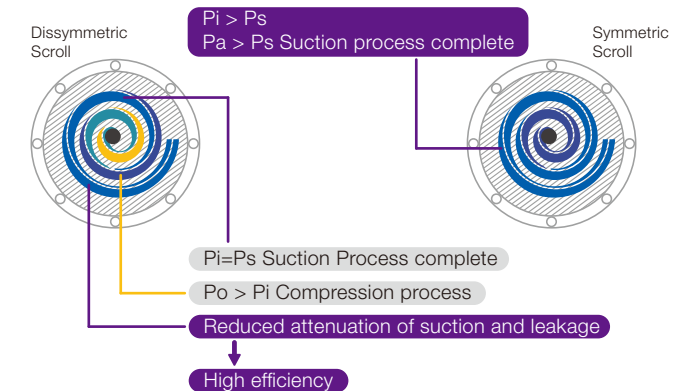
### Pressure-difference Oil Film Lubrication Technology

Use the pressure difference to make the contact surface of mobile scroll to produce oil film to reduce friction and effectively decrease running noise and mechanical losses



## Dissymmetric Scroll Technology

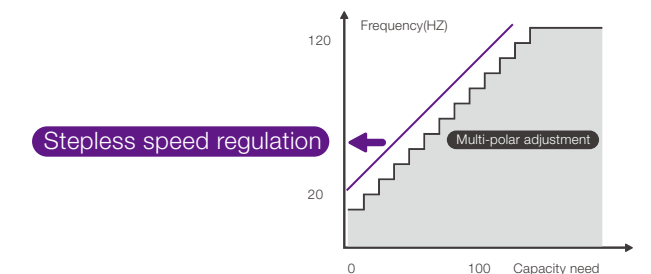
Dissymmetric scroll technology efficiently decrease conventional leakage and thus, compressor is functioning more efficient and stable.



### Stepless Inverter Technology

- Running speed of DC inverter compressor motor can be continuously and freely adjusted according to change of system capacity, with higher accuracy and stepless frequency variation and combination with adaptive control technology. Automatically adjust the capacity output according to the actual AC load to ensure to achieve more smooth variation curve to meet the comfort of higher needs.
- The compressor uses 180° sinusoidal vector drive technology. It can obtain the ideal smooth sine wave curve to ensure unblocked running of the motor and higher energy efficiency and promote the rotation of the motor and meanwhile reduce the harsh sound.
- Vector control technology can effectively inhibit the high magnetic harmonic current and electromagnetic noise. It is tested through the national EMC electro-magnetic interference.

- Stepless adjustment for the system, with the leading integrated part load value (IPLV)

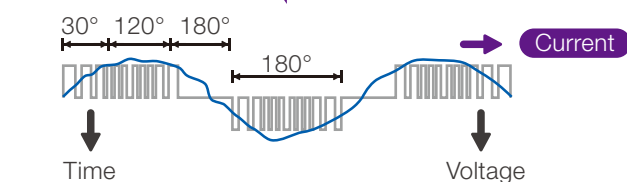


High-speed calculation vector controller

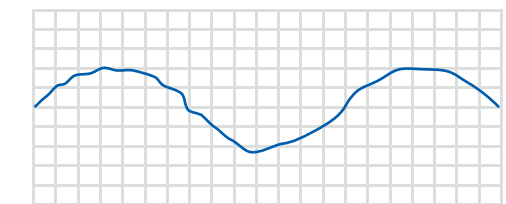


### Common Inverter Output Square Wave

#### 120° Rectangular wave

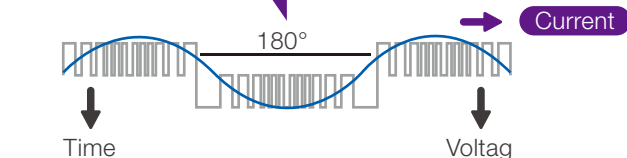


#### Conventional control way

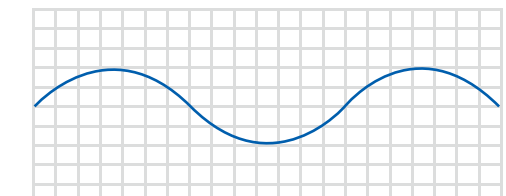


### Rectangular wave

#### 180° Sine wave



#### 180° Sine Wave DC Drive







Features

Low Noise Technology

- The placement of components , through the optimized air-flow analytical design, ensure the operation in a low noise and reduce the pressure loss of outdoor unit.
- New grill - Increased quantity of air discharge with reduce rotating noise and vibration.

Under the premise of operating sound, high-wind low noise technology uses the advanced analytical technique of CFD, FEM, etc., to optimize fan design, increase air flow and reduce the noise while improving the static pressure outside of the unit.

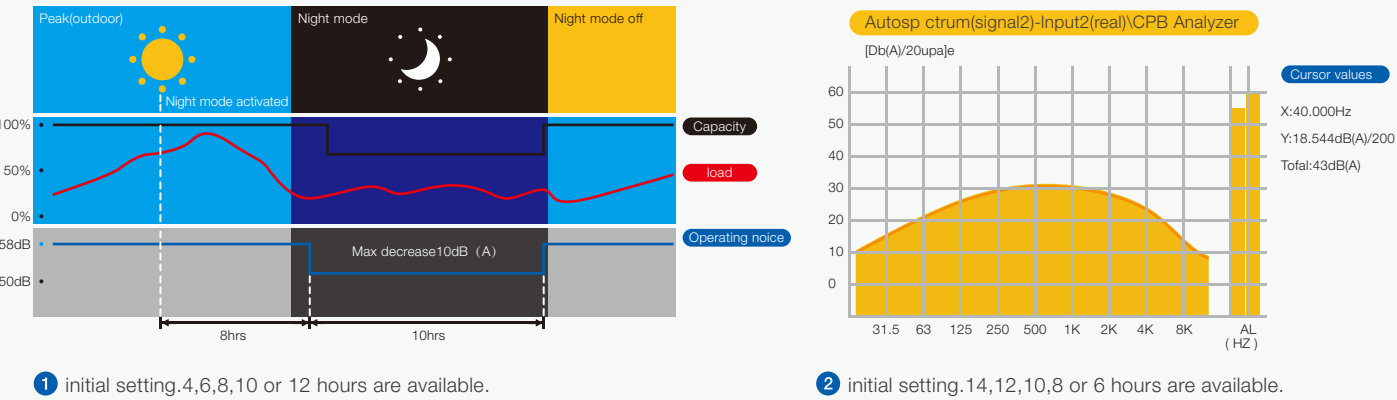




- Advanced compressor with less vibration and low noise.
- Precise noise insulation technology.
- Compressor is equipped with absorber and optimized piping system.
- Stable motor with cast aluminium, DC inverter and vector control technology.
- Antiresonated motor supported.

Silent Operation Function at night enables the user to enjoy a healthy sleep

The computer board of the outdoor unit can automatically memorize the occurrence time of the highest outdoor temperature and it will start the mute running mode after 8 hours \*1 and recover to the normal mode after 10 hours \*2. Through such a setting, the running noise of outdoor unit at night is reduced to 10dB(A).

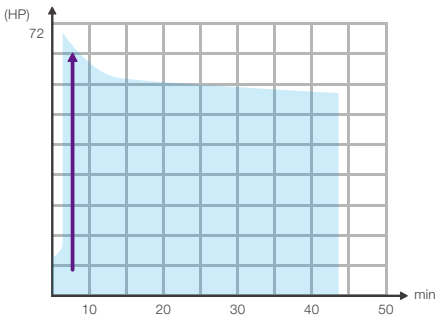


Super-heating Technology

Quick Start Under Heating Mode

Use the large capacity of DC inverter compressor to run it and quickly start the units in a form of soft start to realize the output of instant super heating energy and rapidly meet load need of indoor air conditioner and ensure a quicker comfort.

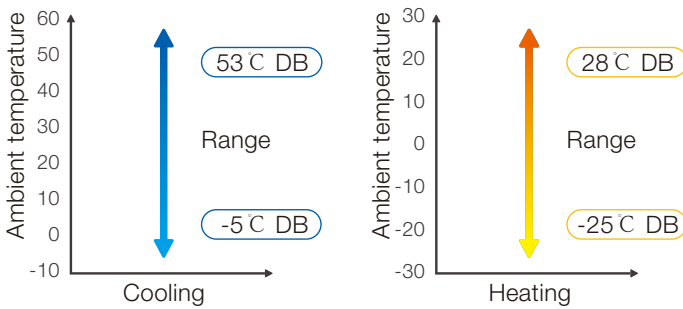
Reach 100% capacity(72HP) in 3 minutes or so



Excellent Heating Performance

Broader Heating/Cooling Range

New DC inverter scroll compressor is used and its heating operating temperature range is down to -25~28 C (cooling:-5~52 C).



Low-temperature heating decay rate is smaller

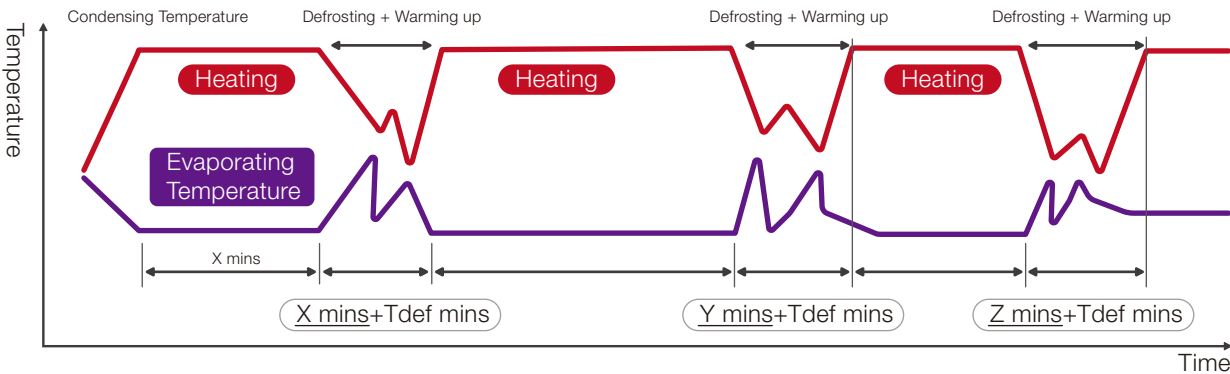
When outdoor temperature is 0 C , for example, system decay rate is as follows:

Capacity	8HP	10HP	12HP	14HP	16HP	18HP
Decay rate (%)	0.0	0.58	1.23	1.63	2.24	2.33

Intelligent Defrosting Technology

It is necessary to judge whether it is needed to remove the frost according to corresponding criteria under the different load states so as to avoid unnecessary defrosting heating loss.

- When the system runs under the full load, the defrosting time is accurately judged according to the heat-exchanging temperature difference of outdoor unit;
- Under the partial load, the defrosting time is accurately judged according to the heat-exchanging efficiency difference of outdoor unit;
- When it is not easy to frost (outdoor temperature is lower than -2 C ), try the best to extend the heating time to reduce the defrosting heating loss;
- When the environmental humidity is bigger, it is necessary to properly advance the defrosting time to reduce the defrosting time and ensure the indoor comfort



Features

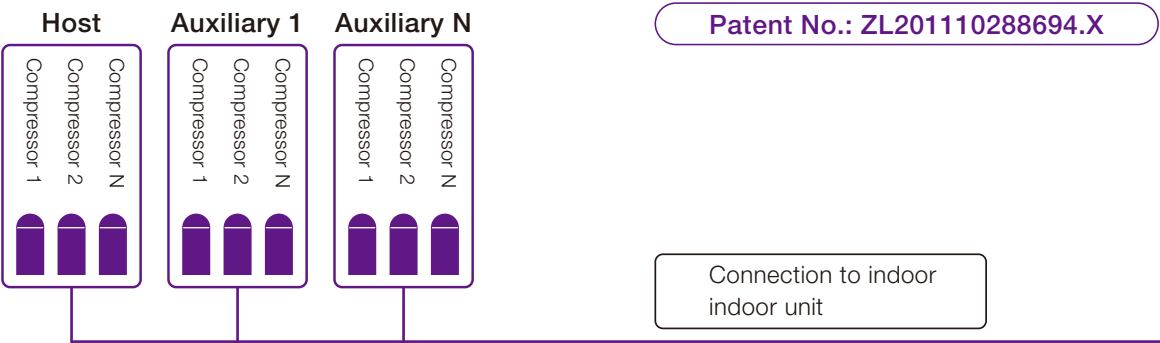
Forecasting Function of Dust Pollution on Heat Exchanger

By comparing the data before and after defrosting operation, accurately judge the heat-exchanging changes resulted from the dust to reduce the senseless defrosting operation resulted from pollution of heat exchanger and raise the heat-exchanging efficiency.

High Reliable Air Conditioning System

Multi-connection system and control

- A new control way that the output of modular multi-split air conditioner outdoor unit uniformly assigns the total capacity load of the modular multi-split air conditioning system to the host and different auxiliary units.
- The optimum load point of the host is set up based on the principle that the load energy efficiency rate of host is the highest. When the total load of the system is greater than the optimum load point of the host, the host will run to the optimum load point, and the excessive load will be uniformly assigned to various auxiliary units. Through the said control, the system is guaranteed under the part load and the host runs around the optimum load point, and various auxiliary units uniformly run under semi-load state, which significantly improves the part load energy efficiency rate of the system and its reliability.



Double Backup System

Even if the local failure is occurred in the system, e.g. one of two or three compressors of outdoor unit is failed or one outdoor unit is failed in the multi-connection system , the automatic compensation function can shield the failed compressor or other outdoor unit to perform the emergency operation to ensure the air conditioning system can still continue the stable operation.



Alternate Operation Technology

If the system is connected to many modules, in order to ensure the running balance of the compressors, the automatic reversal circulation operation function can be realized among modules by the automatic control of microprocessor in the host, which effectively prolongs the service life of the unit.



Multiple Protection Functions



Pressure Sensor

- Each pressure sensor will accurately measure the running pressure of the units, and the system will automatically adjust the fan and compressor outputs according to the corresponding values to achieve the efficient and reliable operation of the system and ensure its operation in the most energy efficient state.
- Each pressure sensor will accurately measure the ambient temperature and refrigerant evaporation temperature during the running process of the unit, and the system will automatically adjust and correct it according to the tested digits to ensure the running safety of the system.
- The pressure is tested at any time through pressure sensor technology. Every 20seconds, the system pressure is compared with the optimum pressure to timely adjust the speed of DC motor to achieve the control of accurate pressure of the system.



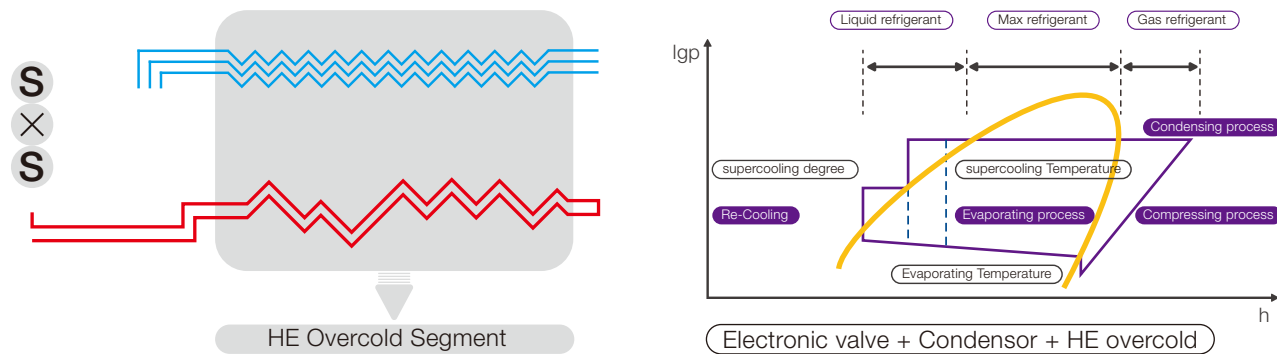


Features

Supercooling Technology

- The efficient e-Pass heat exchanger (HE) structure of outdoor unit can improve the heat-exchanging efficiency and realize the purpose of cooling the refrigerant to 37.1 °C for outdoor temperature 35 °C , with an efficient heat exchange of 2.1 temperature difference to realize the overcold of 11.2 °C .
- The re-cooling loop is used to further cool the refrigerant of 37.1 °C , which can be as low as 25 °C ,to improve the cooling and heating effect and ensure the best efficiency and reliability of the system;
- The overcold degree is increased to benefit the stable operation of the electronic expansion valve and ensure the increase of total length of the tubing.

Overcold Figure

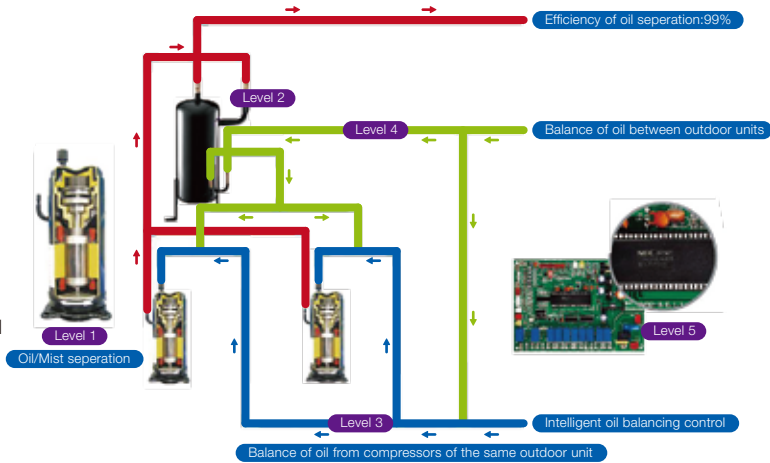


Oil Control Technology

Five-Level Control Technology

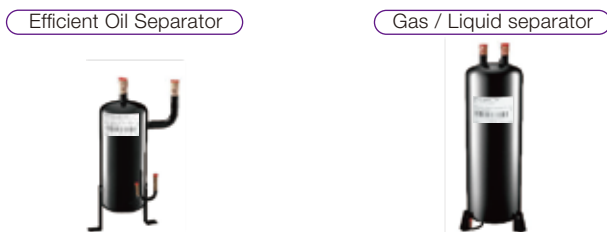
- Ensure that each outdoor unit and compressor is always in the safe oil level to fundamentally solve the safety problem of oil shortage.  
Level 1: oil/mist separation in compressor;  
Level 2: efficient oil separator;  
Level 3: balancing oil technology among compressors;  
Level 4: balancing oil technology among outdoor units;  
Level 5: automatic oil return of the system.

- Balancing Oil Control Technology  
A balancing oil pipe is set up in compressor. When oil of either compressor is excessive, the balancing oil and exhaust pipes will work together to send the oil to the system, which will then balances and distributes the oil to other compressors.



Oil Return Control Technology

- Oil Return of Oil Separator  
The distinctive structure design - centrifugal oil separator can rapidly separate the oil exhausted from the compressor, with oil separation efficiency up to 99%, and effectively transmit the oil to various compressors to ensure the oil demand of compressors.
- Oil Return of Gas/liquid Separator  
Unique oil-return hole design can ensure the stable and effective oil return of the compressor. Ultra-large capacity design can store more refrigerant for the large systems and avoid the liquid strike the better.
- Automatic Oil Return of the System  
The system will automatically return the oil through the instructions issued by main chip according to the running time and status.

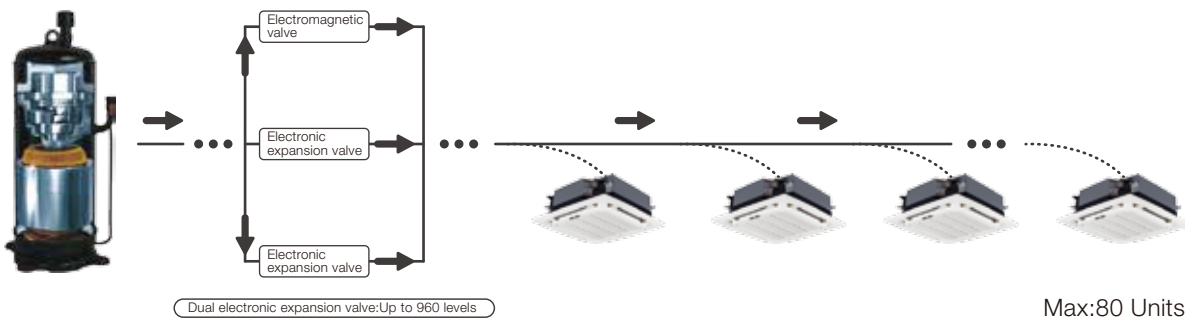


Refrigerant Control Technology

- Refrigerant Balancing in Module  
The structural integration of solenoid valve and capillary tube ensures a relatively uniform distribution of the refrigerant and reasonable and effective utilization of heat exchanger. The solenoid valve performs the ON/OFF actions to disconnect the refrigerant flow path so as to effectively control the heat-exchanging temperature of indoor unit. This design is characterized by simple structure and high safety and reliability.

Refrigerant control technology, stable and reliable operating system

- Refrigerant balancing technology: The refrigerant flow in outdoor unit is evenly distributed.
- Bypass control technology: Dual electronic valve and bypass control technology can optimized the circulation amount of refrigerant, control the overheating degree of the compressor so as to ensure the compressor to be high efficient, safty and reliable.



Patented Pressure Control Technology

The direct contact of pressure sensor and refrigerant in the pipeline can timely and accurately test the running high pressure and low pressure of the system and quickly and accurately carry out the control and protection of the air conditioner system; according to the system load and need, test the low/high pressures of the system and adjust the rotating speed of the external fan, accurately and quickly adjust the refrigerant in combination with the electronic expansion valve, and meanwhile, control the output adjustment of external capacity in variable capacity system to ensure the seasonable efficiency of the system to be better and the running of the system to be more reliable.

Patent number: ZL201120096495.4

Test the pressure at any time via the pressure sensor, and make comparison of the system pressure with the best pressure once every 20 seconds, and timely adjust the speed of DC motor to achieve the control of accurate pressure of the system.

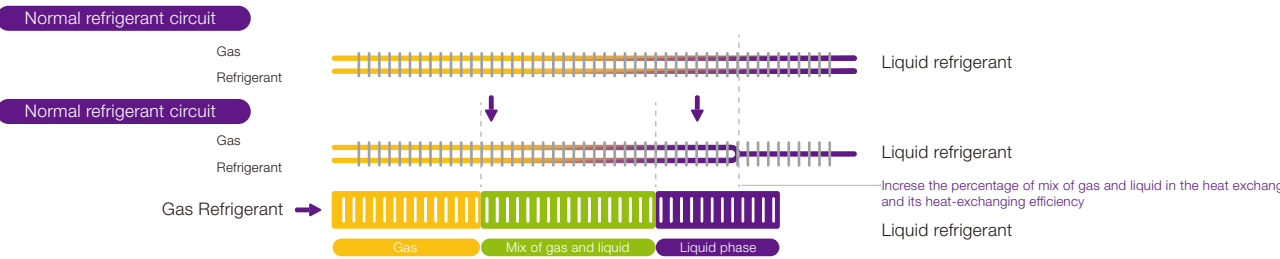


Features

Heat Exchange Technology

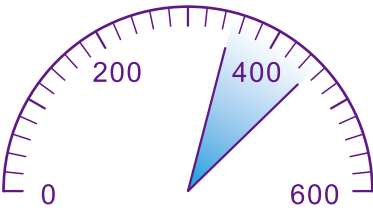
Efficient Heat Exchanger – D.I.S.O Loop

The heat exchange efficiency of liquid refrigerant is higher than that of gaseous refrigerant. This loop can increase not only the amount of liquid refrigerant, but also the flow rate of refrigerant and the heat-exchanging efficiency.



Wide Voltage Range Operation

Unit can be operate within a voltage range from 350V to 456V, also, it can be started up with low voltage, which can suit for various condition of power supply.



Convenient Design and Installation

Reduce the Main Pipeline and Save Installation Materials

Use the R410A new-style environmental refrigerant and over-cold new technology, TMV-X series can uses the refrigerant pipe with smaller diameters to reduce the piping cost.

Model		Ordinary AC	TMV-X Series R410A
8HP/10HP/12HP	Liquid pipe	Φ 12.7	Φ 12.7
	Gas pipe	Φ 28.6	Φ 25.4
14HP/18HP	Liquid pipe	Φ 15.9	Φ 12.7
	Gas pipe	Φ 38.0	Φ 28.6

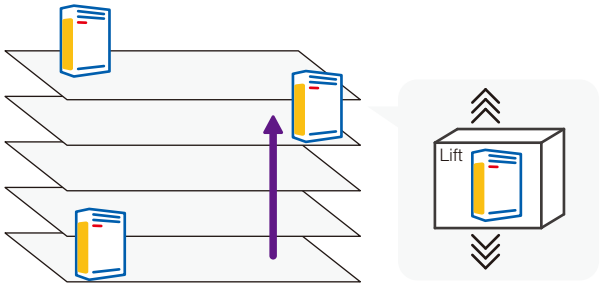
48HP for example

Normal AC	Liquid pipe	Φ 25
	Gas pipe	Φ 54
TMV-X series (R410A)	Liquid pipe	Φ 19.1
	Gas pipe	Φ 41.3

Standard Modules for More Convenient Installation

- Standard module of outdoor unit has two sizes, which improved the system flexibility while simplifying the design process.
- The maximum floor area of outdoor unit module is only 1.06m<sup>2</sup>, and the minimum floor area is only 0.76m<sup>2</sup>, which can be easily handled by elevator without need of large-size equipment of crane, and it can effectively simplify the handling work and save the construction time and manpower.

It can be transported by elevator, which can effectively simplify installation and save time and manpower.

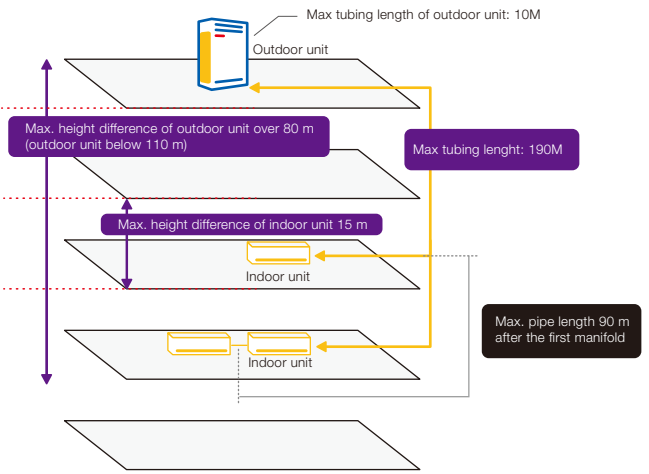


Design and Wiring is More Flexible

- The total length of tubing is up to 1000m, which enables to floor design to be more flexible.
- Simple wiring: dual-cable and multiplex transmission and communication system has achieved the connecting communication of single system between outdoor unit and indoor unit through a dual-core shield communication cable and simplified the wiring.

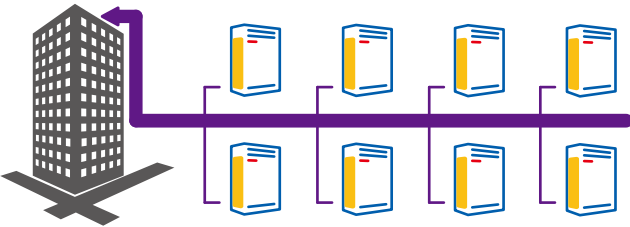


- Automatic address code setting: the control panel of host microcomputer can automatically set up the address of indoor unit and avoid the problem of manual setting while the system indoor unit is connected.



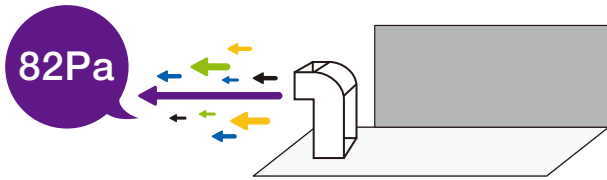
Automatic addressing function of outdoor unit

- Outdoor unit automatically assigns the address to indoor unit, more convenient and more intelligent.
- Controller can perform the address query and setting of outdoor unit



External static pressure is up to 82Pa

Under the premise of remaining the noise unchanged, the system has achieved the higher external static pressure, with maximum pressure up to 82Pa, through the mutual action of new fan of large air volume and DC fan motor, etc., to ensure the heat radiation effect of outdoor unit for both centralized placement and hierarchical placement.





Features

Automatic Reset Function

In case of any long-time outage, the system will automatically store the settings memory, and it can be automatically reset after it is re-energized (the manual startup is also available).the previous settings will not be cancelled and they shall remain in force, and it is not necessary to reset the programs. The service is more intelligent and more intimate.

Notes: this function can take effect only through the setting of line controller.

Auto Recharging of Refrigerant (Optional)

- Self-diagnosis: Intelligent system applied to monitor and diagnose the operating status of refrigerant amount, to ensure the stalbalization of system.
- Auto recharging (Optional): Refrigerant is automactically recharged if it is necessary.



Multi-direction of Connection Pipe

Connection pipe can be connected from front, left and right.



Smart Diagnosis Software

Smart software enable full diagnosis and testing of the air conditioner.



Trial Button

A trial button is designed for convenient trial operation.

CAN Connection

CAN(Controller Area Network) is originated from application in car and military industries. By apply such technology, the efficiency of communication between devices can be increased by up to 100% without a host computer. Max 96 nodes can be connected with a network lenght of up to 2000M,which will be more conveynent for the wiring.

Personalized DIP Setting

Personalized DIP adjustment and setting switch is designed specially for the indoor unit. When the load of indoor unit increase or decrease, the capacity of indoor unit can be increased or decreased by +/- 0.25HP via the adjustment of DIP switch to adapt to the indoor load change and facilitate the operation of the user.

Capacity code setting of indoor unit	capacity of indoor unit (W)	DIP	capacity of indoor unit (W)	DIP
	1800/2000	0	8000	7
	2500/2800	1	9000	8
	3200/3600	2	10000	9
	4000/4500	3	11200	A
	5000/5600	4	12500	B
	6300	5	14000	C
	7100	6		

Warning: DIP has been set before delivery , which cannot be changed except the repairman.

Full Range of Indoor Unit for choice

Type		Capacity														
		18	22	28	36	45	50	56	63	71	80	90	100	112	125	140
	Eight-way cassette			●	●	●	●	●	●	●	●	●	●	●	●	●
	Slim duct	●	●	●	●	●	●	●								
	Low staticpressure duct								●	●	●	●	●	●	●	●
	Med-static pressure duct					●	●	●	●	●	●	●	●	●	●	●
	High-static pressure duct								●	●	●	●	●	●	●	●
	Ceiling floor					●	●	●	●	●	●	●	●	●	●	●
	Wall-mounted split type	●	●	●	●	●	●	●								

Individual Controller

Remote controller (Standard configuration)

- Cooling/Dehumidifying/Fan/Heating/Auto mode;
- Sleep/Timing/Swing;
- Other setting.



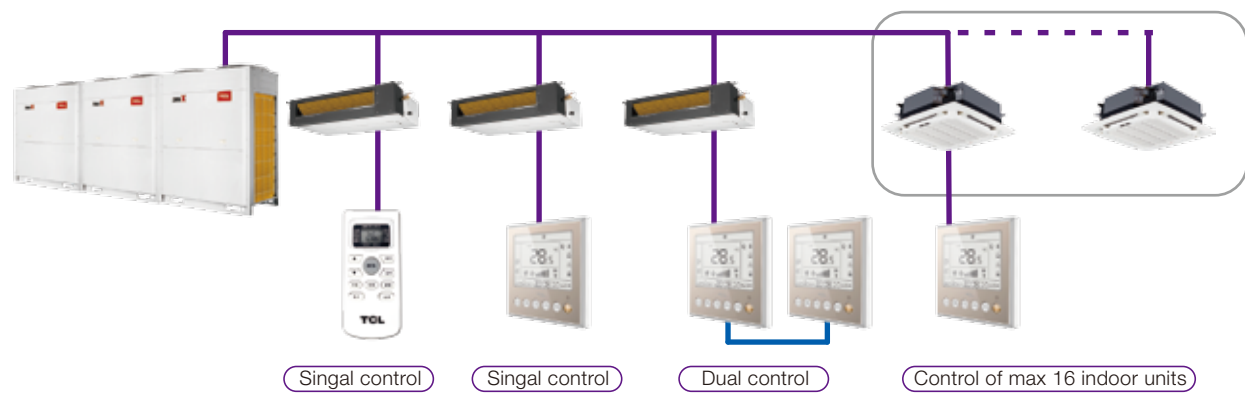
Wired controller (optional)

- Cooling/Dehumidifying/Fan/Heating/Auto mode;
- Sleep/Timing/Swing;
- Monitor/Large interface;
- Remote control signal.



Features

Multiple Combination of Network Control



Centralized Control

Touch screen centralized controller

- Extra-large operating interface;
- Multiple machine control;
- Connected to and monitor max 32 modular systems or 256 indoor units;
- Schedule control, operational history and fault reports available;
- Network control application.



Network Control

Convertor

- Contains 5 communication ports (CAN, RS485-1, RS485-2, RS485-3, USB);
- CAN ports can be connected to the air conditioner network, to monitor and transfer up to 4 outdoor units and 80 indoor units;
- USD ports can be connected to PC, to configure the systems via softwares;
- RS485-1 ports can be connected to the electricity meter for information of energy consumption;
- RS485-3 ports can be connected to the external modular connection for data transaction to the network.



TCL external modular connection

- Through port 485, it can be connected to max 32 potocol converters;
- Through ethernet, it can be connected to the centrolized controller;
- Through ethernet, it can be conneted to TCL user management center, to monitor and control all the air conditioners connected.



Linked Control Function

The system can be linked with electronic door, fire and lighting equipment signals, and subject to the linkage control with hotel key card system to ensure the automatic ON/OFF of air conditioner while traveler inserts/pulls out the power card so as to ensure the more reasonable operation of the air conditioner.



Auto activation

Power connected

TCL Management System

Centrolized control of indoor unit:

- It can monitor the detailed working status of both indoor and outdoor units;
- Max connection of outdoor units: 2560;
- Convenient.



Data analysis:

- Operating data records;
- Records and alarms for errors and faults;
- History of operating shedules .



Estimate of energy consumption:

- Running cost is caculated according to the running time, operating mode, refrigerant flow, etc.;
- Detail reports and bills of energy consumption are available.



Schedule function:

- Annual, monthly and daily schedules are available;
- A single or cycled schdule is available;
- Schedules of individual or multiple units can be sets, which is convenient for centralized control.



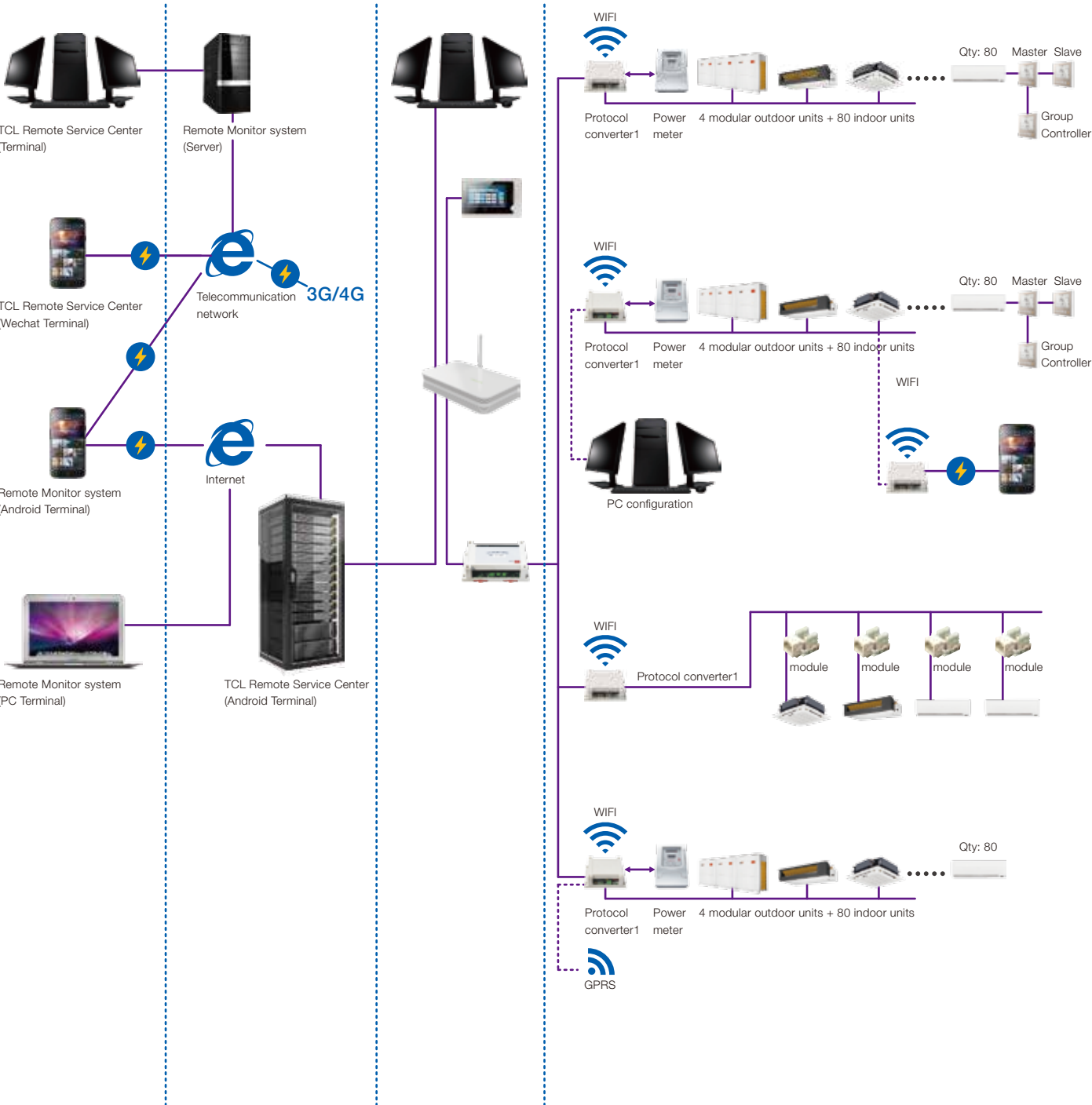


Features

TCL Remote Service Center

TCL remote service center can track units' operation status and data, in order to provide best 24hrs services to the user:

- Once there is a fault alarm, data can be analyzed from remote service center and best solution can be provided shortly;
- Maintenance reminder and long life span.



Application	Network Communication	Centralized Control	VRF system
-------------	-----------------------	---------------------	------------

Configuration software (PC Terminal)

It can monitor max 4 outdoor units and 80 indoor units;

- Line chart display of up to 12 parameters;
- Recording of raw datas;
- Testing of overload, which is convenient for maintenance.



Environmental Protection Technology

R410A Efficient and Environmental Refrigerant

- R410A belongs to the HFC refrigerant that does not damage the ozone layer, and the use of R410A can improve the COP and protect the ozone layer, and it is a kind of efficient and environmental refrigerant.
- Scientific Safety: R410A is non-toxic and it belongs to "non-flammable refrigerant". R410 component structure is not easy to change and it is very stable.

	R410A	R407C	R410A Features
Component Structure	R32/R125 Azeotropic refrigerant	R32/R125/R134a Azeotropic refrigerant	Convenient for Construction and Maintenance
Ozone depletion potential (ODP)	0	0	No depletion of ozone
Global warming potential (GWP)	1730	1530	Raise energy-saving efficiency and reduce the power consumption Control CO2 emission and prevent the greenhouse effect
Working pressure (R22 comparison)	160%	107%	DC high back pressure scroll compressor
Cooling capacity (R22 comparison)	147%	100%	High cooling capacity
Pressure loss (R22 comparison)	56%	106%	High efficiency

Correspond to EU RoHS Directive, Restrict the Use of Hazardous Substances

RoHS refers to the directive of Restriction of the Hazardous Substances. This directive stipulates to prohibit the use of following six hazardous substances in the electronic and electrical equipment, such as, lead, mercury, cadmium, hexavalent chromium, polybrominated diphenyl ethers (PBDE) or polybrominated biphenyls (PBB). The purpose of this directive is to protect the human health and guarantee that the recycling and disposal of scrapped electronic equipment is in line with the environmental protection.

Six Hazardous Substances	Limit of TCL RoHS directive
Lead(p a)	0.1%(1000ppm)
Mercury(H g)	0.1%(1000ppm)
Cadmium(C d)	0.01%(1000ppm)
Hexavalent Chromium[Cr(VI)]	0.1%(1000ppm)
Polybrominated diphenyl ethers(PBDE)	0.1%(1000ppm)
Polybrominated biphenyls (PBB)	0.1%(1000ppm)

RoHS Certification

Global Prevailing Quality. All TMV-X products obtained the EU RoHS certification.



Line up of outdoor unit

Combination of outdoor units

Capacity	8~12HP	14~18HP	20~24HP	26~30HP
Picture				
Model of Outdoor Unit	TMV-Vd+252W/N1S TMV-Vd+280W/N1S TMV-Vd+335W/N1S	TMV-Vd+400W/N1S TMV-Vd+450W/N1S TMV-Vd+500W/N1S	TMV-Vd+560W/N1S TMV-Vd+615W/N1S TMV-Vd+680W/N1S	TMV-Vd+730W/N1S TMV-Vd+780W/N1S TMV-Vd+835W/N1S

Capacity	32~36HP	38~42HP	44~48HP
Picture			
Model of Outdoor Unit	TMV-Vd+900W/N1S TMV-Vd+950W/N1S TMV-Vd+1000W/N1S	TMV-Vd+1060W/N1S TMV-Vd+1120W/N1S TMV-Vd+1170W/N1S	TMV-Vd+1060W/N1S TMV-Vd+1120W/N1S TMV-Vd+1170W/N1S

Capacity	50~54HP	56~60HP
Picture		
Model of Outdoor Unit	TMV-Vd+1230W/N1S TMV-Vd+1280W/N1S TMV-Vd+1350W/N1S	TMV-Vd+1560W/N1S TMV-Vd+1620W/N1S TMV-Vd+1670W/N1S

Capacity	62~66HP	68~72HP
Picture		
Model of Outdoor Unit	TMV-Vd+1730W/N1S TMV-Vd+1780W/N1S TMV-Vd+1840W/N1S	TMV-Vd+1900W/N1S TMV-Vd+1950W/N1S TMV-Vd+2000W/N1S

HP	Model		Combination Way	Connection assembly of outdoor unit	Number of indoor units that can be connected	Suggested No. of indoor units that can be connected
8HP	TMV-Vd+252W/N1S	252	/	/	13	7
10HP	TMV-Vd+280W/N1S	280	/	/	16	9
12HP	TMV-Vd+335W/N1S	335	/	/	19	11
14HP	TMV-Vd+400W/N1S	400	/	/	23	13
16HP	TMV-Vd+450W/N1S	450	/	/	26	15
18HP	TMV-Vd+500W/N1S	500	/	/	29	16
20HP	TMV-Vd+560W/N1S	560	10+10	AY02	33	18
22HP	TMV-Vd+615W/N1S	615	12+10	AY02	36	20
24HP	TMV-Vd+680W/N1S	680	12+10	AY02	39	22
26HP	TMV-Vd+730W/N1S	730	16+10	AY02	43	24
28HP	TMV-Vd+780W/N1S	780	18+10	AY02	46	26
30HP	TMV-Vd+835W/N1S	835	18+12	AY02	50	27
32HP	TMV-Vd+900W/N1S	900	18+14	AY02	53	29
34HP	TMV-Vd+950W/N1S	950	18+16	AY02	56	31
36HP	TMV-Vd+1000W/N1S	1000	18+18	AY02	59	32
38HP	TMV-Vd+1060W/N1S	1060	18+10+10	AY02 / AY03	63	35
40HP	TMV-Vd+1120W/N1S	1120	18+12+10	AY02 / AY03	64	36
42HP	TMV-Vd+1170W/N1S	1170	18+12+12	AY02 / AY03	65	38
44HP	TMV-Vd+1230W/N1S	1230	18+16+10	AY02 / AY03	66	39
46HP	TMV-Vd+1280W/N1S	1280	18+18+10	AY02 / AY03	67	40
48HP	TMV-Vd+1350W/N1S	1350	18+18+12	AY02 / AY03	68	41
50HP	TMV-Vd+1400W/N1S	1400	18+18+14	AY02 / AY03	69	42
52HP	TMV-Vd+1450W/N1S	1450	18+18+16	AY02 / AY03	70	43
54HP	TMV-Vd+1500W/N1S	1500	18+18+18	AY02 / AY03	71	44
56HP	TMV-Vd+1560W/N1S	1560	18+18+10+10	AY02 / AY03 (2 pcs)	72	45
58HP	TMV-Vd+1620W/N1S	1620	18+18+12+10	AY02 / AY03 (2 pcs)	73	46
60HP	TMV-Vd+1670W/N1S	1670	18+18+12+12	AY02 / AY03 (2 pcs)	74	47
62HP	TMV-Vd+1730W/N1S	1730	18+18+16+10	AY02 / AY03 (2 pcs)	75	48
64HP	TMV-Vd+1780W/N1S	1780	18+18+18+10	AY02 / AY03 (2 pcs)	76	49
66HP	TMV-Vd+1840W/N1S	1840	18+18+18+12	AY02 / AY03 (2 pcs)	77	50
68HP	TMV-Vd+1900W/N1S	1900	18+18+18+14	AY02 / AY03 (2 pcs)	78	51
70HP	TMV-Vd+1950W/N1S	1950	18+18+18+16	AY02 / AY03 (2 pcs)	79	52
72HP	TMV-Vd+2000W/N1S	2000	18+18+18+18	AY02 / AY03 (2 pcs)	80	52



Parameters of the Outdoor Unit

Parameters of the Outdoor Unit

Horsepower		8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	
Model TMV-Vd+()W/N1S		252	280	335	400	450	500	560	615	680	730	780	850	900	950	1000	1060	1120	
Power supply		380V 3N~50Hz																	
Cooling capacity (KW)		25.2	28	33.5	40	45	50	56	61.5	67	73	78	83.5	90	95	100	106	112	
Heating capacity(KW)		27	31.5	37.5	45	50	56	63	69	75	81.5	87.5	93.5	101	106	112	119	125	
Consumed power	Cooling(KW)	6.6	7.5	9.1	11.4	13.0	14.7	14.9	16.6	18.2	20.4	22.2	23.8	26.1	27.7	29.4	29.6	31.3	
	Heating(KW)	6.7	7.7	9.3	11.7	13.1	15.1	15.4	17.0	18.6	20.8	22.8	24.4	26.8	28.2	30.2	30.5	32.1	
Compressor	Type	Full-closed vortex																	
	Quantity(set)	1			2						3				4				
Fan	Type	Direct transmission																	
	Levels	Stepless speed regulation																	
	Air Volume(m3/)	12000	12000	12000	16000	16000	16000	24000	24000	24000	28000	28000	28000	32000	32000	32000	40000	40000	
	Drive	1	1	1	2	2	2	2	2	2	3	3	3	4	4	4	4	4	
Refrigerant Flow control		Microcomputer control/electronic expansion valve																	
Protective device		Exhaust & intake air temperature sensor, an over-current sensor, high and low pressure sensor,high volyage switch,outage transient protection																	
External Hydrostatic of outdoor unit (Pa)		82Pa																	
Dimension (LxWxH)	Outdoor(mm)	930×780×1610			1310×780×1610			2*(930×780×1610)			1*(930×780×1610)+ 1*(1310×780×1610)			2*(1310×780×1610)			2*(930×780×1610)+ 1*(1310×780×1610)		
	Packing(mm)	1000×840×1820			1380×840×1820			2*(1000×840×1820)			1*(1000×840×1820)+ 1*(1380×840×1820)			2*(1380×840×1820)			2*(1000×840×1820)+ 1*(1380×840×1820)		
Weight	Net(kg)	210	210	220	300	310	310	420	420	420	520	520	530	610	620	620	730	740	
	Gross(kg)	230	230	240	325	335	335	460	460	460	565	565	565	660	670	670	795	805	
Refrigerant		R410A																	
Cooling pipe specification	Quantity(kg)	8.5	8.5	10	11	12	13	17	18.5	20	20.5	21.5	23	24	25	26	30	31.5	
	Gas Pipe(mm)	Φ25.4	Φ25.4	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ31.8	Φ31.8	Φ31.8	Φ34.9	Φ34.9	Φ34.9	Φ34.9	Φ34.9	Φ34.9	Φ38.1	Φ38.1	
	Oil Pipe(mm)	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	
	Oil balance pipe(mm)	Φ6.35(welding)																	
Running noise	Standard mode dB(A)	59	59	59	63	63	63	59	59	59	63	63	63	63	63	63	63	63	
	Mute mode dB(A)	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	









Notes:

- 1.The design of this unit shall comply with the Standard GB/T18837-2002
- 2.Cooling conditions:indoor temperature:27 DB,19 DB Outdoor temperature:35 DB,24 WB; equivalent tubing length:10m;height difference:0m;
- 3.Heating conditions:indoor temperature:20 DB,15 DB Outdoor temperature:7 DB,6 WB; equivalent tubing length:10m;height difference:0m;
- 4.The running noise recorded in this sample is the value tested in the semi-anechoic chamber. in the actual installa-tion state,its value is generally higher than the recorded value in this sample due to the impact of surrounding background noise;
- 5.Due to the continuous optimization and technical progress of the product,the data are subject to any change without notice. The parameters in the nameplate shall prevail.

Horsepower		42HP	44HP	46HP	48HP	50HP	52HP	54HP	56HP	58HP	60HP	62HP	64HP	66HP	68HP	70HP	72HP
Model TMV-Vd+()W/N1S		1170	1230	1280	1350	1400	1450	1500	1560	1620	1670	1730	1780	1870	1900	1950	2000
Power supply		380V 3N~50Hz															
Cooling capacity (KW)		117	123	128	133.5	140	145	150	156	161.5	167	173	178	183.5	190	195	200
Heating capacity(KW)		133	137.5	143.5	149.5	157	162	168	175	181	187.5	193.5	199.5	205.5	213	218	224
Consumed power	Cooling(KW)	32.9	35.1	36.9	38.5	40.8	42.4	44.1	44.3	46	47.6	49.8	51.6	53.2	55.5	57.1	58.8
	Heating(KW)	33.7	35.9	37.9	39.5	41.9	43.3	45.3	45.6	47.2	48.8	51	53	54.6	57	58.4	60.4
Compressor	Type	Full-closed vortex															
	Quantity(set)	4	5			6					7			8			
Fan	Type	Direct transmission															
	Levels	Stepless speed regulation															
	Air Volume(m3/)	40000	44000	44000	44000	48000	48000	48000	56000	56000	56000	60000	60000	60000	64000	64000	64000
	Drive	4	5	5	5	6	6	6	6	6	6	7	7	7	8	8	8
Refrigerant Flow control		Microcomputer control/electronic expansion valve															
Protective device		Exhaust & intake air temperature sensor, an over-current sensor, high and low pressure sensor,high volyage switch,outage transient protection															
External Hydrostatic of outdoor unit (Pa)		82Pa															
Dimension (LxWxH)	Outdoor(mm)	same as the left	1*(930×780×1610)+ 2*(1310×780×1610)			3*(1310×780×1610)			2*(930×780×1610)+ 2*(1310×780×1610)			1*(930×780×1610)+ 3*(1310×780×1610)			4*(1310×780×1610)		
	Packing(mm)	same as the left	1*(1000×840×1820)+ 2*(1380×840×1820)			3*(1380×840×1820)			2*(1000×840×1820)+ 2*(1380×840×1820)			1*(1000×840×1820)+ 1*(1380×840×1820)			4*(1380×840×1820)		
Weight	Net(kg)	750	830	940	840	920	930	930	1040	1050	1060	1140	1140	1150	1230	1240	1680
	Gross(kg)	815	900	1025	910	995	1005	1005	1130	1140	1150	1235	1235	1245	1330	1340	1840
Refrigerant		R410A															
Cooling pipe specification	Quantity(kg)	33	33.5	34.5	36	37	38	39	43	44.5	46	46.5	47.5	49	50	51	52
	Gas Pipe(mm)	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ41.2	Φ41.2	Φ41.2	Φ41.2	Φ41.2	Φ41.2	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5
	Oil Pipe(mm)	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2
	Oil balance pipe(mm)	Φ6.35(welding)															
Running noise	Standard mode dB(A)	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
	Mute mode dB(A)	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45

Notes:

- 1.The design of this unit shall comply with the Standard GB/T18837-2002
- 2.Cooling conditions:indoor temperature:27 DB,19 DB Outdoor temperature:35 DB,24 WB; equivalent tubing length:10m;height difference:0m;
- 3.Heating conditions:indoor temperature:20 DB,15 DB Outdoor temperature:7 DB,6 WB; equivalent tubing length:10m;height difference:0m;
- 4.The running noise recorded in this sample is the value tested in the semi-anechoic chamber. in the actual installa-tion state,its value is generally higher than the recorded value in this sample due to the impact of surrounding background noise;
- 5.Due to the continuous optimization and technical progress of the product,the data are subject to any change without notice. The parameters in the nameplate shall prevail.

Pattern	Appearance	Type	Model	Capacity														
				18	22	28	36	45	50	56	63	71	80	90	100	112	125	140
Casstte		Cooling	TMV-V()Q8/N1Y			•	•	•	•	•	•	•	•	•	•	•	•	•
		Heating	TMVd-V()Q8/N1(S)Y			•	•	•	•	•	•	•	•	•	•	•	•	•
Slim Duct		Cooling	TMV-V()F5/N1Y	•	•	•	•	•	•	•								
		Heating	TMVd-V()F5/N1Y	•	•	•	•	•	•	•								
Low Static Pressure Duct		Cooling	TMV-V()F3/N1Y								•	•	•	•	•	•	•	•
		Heating	TMVd-V()F3/N1Y								•	•	•	•	•	•	•	•
Middle Static Pressure Duct		Cooling	TMV-V()F2/N1Y					•	•	•	•	•	•	•	•	•	•	•
		Heating	TMVd-V()F2/N1(S)Y					•	•	•	•	•	•	•	•	•	•	•
High Static Pressure Duct		Cooling	TMV-V()F1/N1Y								•	•	•	•	•	•	•	•
		Heating																
AHU		Cooling	TMV-V()F1/XFN1Y								•	•	•	•	•	•	•	•
		Heating																
Ceiling & Floor		Cooling	TMV-V()ZD/N1Y					•	•	•	•	•	•	•	•	•	•	•
		Heating																
Wall Mounted		Cooling	TMV-V()G/N1Y(KC)	•	•	•	•	•	•	•								
		Heating	TMVd-V()G/N1Y(KC)	•	•	•	•	•	•	•								

TCL TMV X

TCL TMV X



# Air Cooled Chiller



## Features

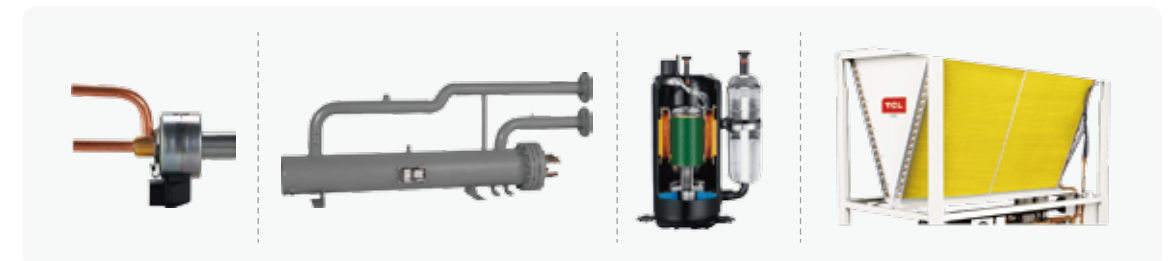
### Modular Design

- Modular design, flexible combination, more convenient for design and installation.
- The maximum combination can consist of 16 moduls, with capacity as much as 2080kw.



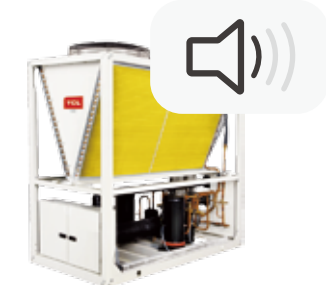
### High Efficiency and Energy Saving

Seamlessly constructed V shaped condensor coil with optimized air flow system, expansion vavle and compressor, which increase the efficiency of heat exchange by up to 30%.



### Quiet Operation

Well-known compressor with built-in vibration insulation enable the operation to be quiet and stable.



Features

Upgraded Operating System

- Smart compressor features abrading balancing, internal motor protection, cast-in frame and scroll, etc., which enable it to operate more steadily with longlife application.
- Current transformer is equipped with anti-overcurrent.
- Optimized expansion valve.



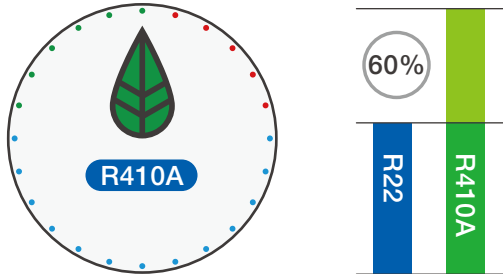
Intelligent System Control

- Built-in function of timer, anti-freezing, shut-off valve, etc.
- Self-diagnosis for easy errors identification.
- Classified pin locks for both users and manufacturers, which is more convenient for installation, usage and maintenance.
- Fashionable new wired control.



Environmental-friendly

R410 refrigerant is applied, which is more environmental-friendly and efficient.



Performance Parameter Table of the Unit

AIR-COOLED Chiller - R22

Mode			LSRFM65	LSRFM100	LSRFM130
Capacity	Cooling	kW	65	100	130
	Heating	kW	70	110	140
Rated power	Cooling	kW	19.9	30.8	39.7
	Heating	kW	19.5	30.6	40.0
Power supply			380V~/50Hz/3P	380V~/50Hz/3P	380V~/50Hz/3P
Compressor	Type		Scroll	Scroll	Scroll
	Quantity	Pieces	2	3	4
	Capacity adjustment	%	50%, 100%	33%, 66%, 100%	25%, 50%, 75%, 100%
Refrigerant	Type		R22	R22	R22
	Refrigerant control		Thermal expansion valve	Thermal expansion valve	Thermal expansion valve
	Weight	kg	7x2	6x3	7x4
Condenser (Air side)	Type		Titan gold TM fin-coil	Titan gold TM fin-coil	Titan gold TM fin-coil
	Heat exchange	φ *row*no	φ 9.52*2*2	φ 7.0*4*2	φ 9.52*4*2
Fan Motor	Quantity of fan motor	Pieces	2	2	2
	Fan motor input	KW	1.1×2	1.1×2	2.2×2
Evaporator (Water side)	Type		Shell and tube	Shell and tube	Shell and tube
	Water resistance lose	kPa	30	40	40
	Water inlet/outlet pipeline	mm	DN50	DN65	DN65
	Water flow	m3/h	11.2	17.2	22.3
	Max.Pressure	MPa	1	1	1
Dimension	Net(D×W×H)	mm	2162×1034×1980	2262×1034×1980	2262×1034×2036
Noise level		dB(A)	65	68	70
Weight		kg	650	820	980

AIR-COOLED Chiller - R410A

Mode			LSRFM65A	LSRFM100A	LSRFM130A
Capacity	Cooling	kW	65	100	130
	Heating	kW	70	110	140
Rated power	Cooling	kW	19.9	30.8	39.7
	Heating	kW	19.5	30.6	40
Power supply			380V~/50Hz/3P	380V~/50Hz/3P	380V~/50Hz/3P
Compressor	Type		Scroll	Scroll	Scroll
	Quantity	Pieces	2	3	4
	Capacity adjustment	%	50%, 100%	33%, 66%, 100%	25%, 50%, 75%, 100%
Refrigerant	Type		R410A	R410A	R410A
	Refrigerant control		Thermal expansion valve	Thermal expansion valve	Thermal expansion valve
	Weight	kg	6x2	6x3	7x4
Condenser (Air side)	Type		Titan gold TM fin-coil	Titan gold TM fin-coil	Titan gold TM fin-coil
	Heat exchange	φ *row*no	φ 9.52*2*2	φ 7.0*4*2	φ 9.52*4*2
Fan Motor	Quantity of fan motor	Pieces	2	2	2
	Fan motor input	KW	1.1×2	1.1×2	2.2×2
Evaporator (Water side)	Type		Shell and tube	Shell and tube	Shell and tube
	Water resistance lose	kPa	30	40	40
	Water inlet/outlet pipeline	mm	DN50	DN65	DN65
	Water flow	m3/h	11.2	17.2	22.3
	Max.Pressure	MPa	1	1	1
Dimension	Net(D×W×H)	mm	2162×1034×2030	2162×1034×2030	2162×1034×2086
Noise level		dB(A)	65	68	70
Weight		kg	650	820	980

\*All datas are subject to change without notice, due to our continuous improvement.



# Water Cooled Screw Chiller



## Features

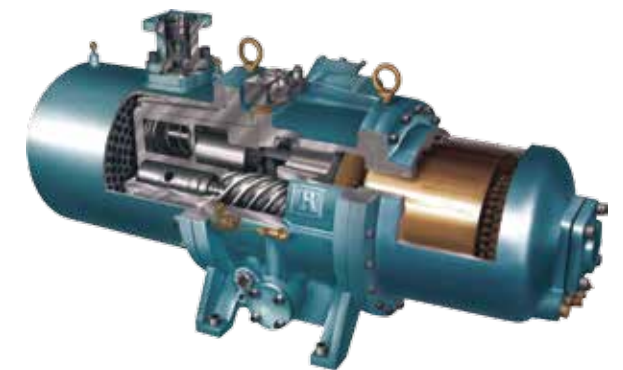
### Efficient and Energy-Saving

- The compressor has the structure of adjusting the energy and can also realize the stepless/stepped capacity adjustment;
- The units can choose the interlock control functions. The control cabinet is equipped with control interfaces for cooling water pump and chilled water pump to ensure the linkage control between the units and the external equipment and realize the energy-saving of the system.



### Long Life and Low Noise

- Compressor's Automatic Balance Wear Function: the multi-system unit is used to set up the adjusting function in the unit process. In order to ensure the running time of each compressor to tend to balance, the microcomputer shall monitor and compare the running time of each compressor, and then balance their running time by the energy adjustment of the unit, namely, firstly unload the compressor with a long running time when conducting the unloading operation, and when conducting the uploading operation, firstly upload the compressor with a short running time so as to effectively extend the service life of the whole machine.
- The asymmetric mode is used for male and female rotors of the compressor. The liquid is sprayed between the rotors and between the bearings for cooling purpose, and they have been protected by oil films and the efficient electric motor is built in. It is characterized by low noise and long life.



### Convenient Installation, Time and Space Economization

- The assembled unit has been filled with the refrigerant that is subject to the all-performance test before it is delivered and the unit can be subject to the commissioning and trial run only via the connection with the water pump and power supply;
- Comprehensive Design, Compact Structure, Small Volume and Convenient Hoisting.

### Remote Monitoring Prompt Maintenance

- Use RS-232 standard serial communication port to connect the communication port of computer (PC machine) or modem communications. For example, through the MODEM, enter the public telecom switching network to conduct the remote communication monitoring;
- In the computer, the running parameters, dynamic curve and fault information (optional) of the units can be displayed.

### Multiple Protection Functions, Safe and Reliable System

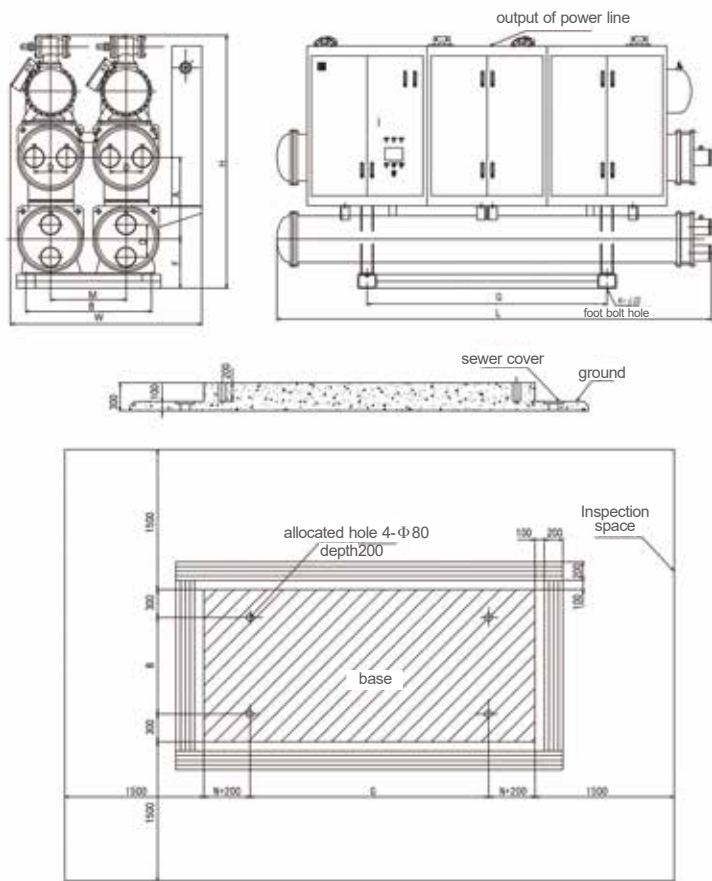
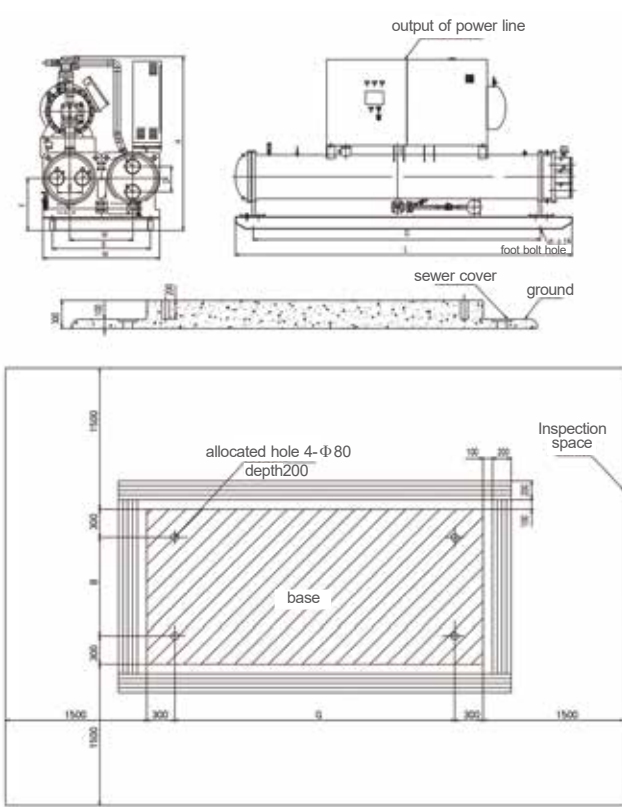
- The multi-compressor and multi-loop mode is used to start the compressor one by one to reduce the startup current so as to avoid the impact on the power grid and enhance the safety of the power grid.
- Phase Sequence Protector: semi-sealed screw compressor uses the phase-sequence protector in control mode due to the special requirements of its structure;
- The unit is of the functions of resisting the overload, overheat, phase failure and short circuit, and compressor motor winding thermal protection.
- The cooling system of the units has set up the high-voltage and low-voltage protection device;
- Water-break Protection: the water flow switch in the standard configuration can guarantee the shutdown protection of the unit to prevent the damage to the compressor when the chilled or cooling water is not sufficient or is broken.
- Chilled Water Under-temperature Protection: the compressor will gradually unload when the chilled water temperature is lower than the specified one. In case of a bigger temperature difference of inlet/outlet water, the anti-freeze temperature controller shall be set up in the outlet pipe to achieve the secondary protection of water temperature so as to avoid the cracking of evaporator after the water is frozen.
- Compressor Automatic Heating: the unit is equipped with the electric heater. The electric heater will automatically heat prior to the shutdown of the compressor to prevent the accumulation of refrigerant in the crankcase. When the unit is booted, the electric heater will automatically cut off to save the energy.
- Self-locking Function: when the safety device of the unit actuates, the unit will be subject to an automatic shutdown protection and the corresponding fault information will be displayed. The system can re-operate until the system is restored to its normal operation and the switch is manually reset.

Performance Parameter Table of the Unit

Performance Parameter Table 1(R22) of oil Flooded water-cooled chiller

Model	Code	L	W	H	B	D	F	G	H
LSBLG440/M		3545	1160	1760	1040	240	545	3050	670
LSBLG530/M		3545	1160	1760	1040	240	545	3250	670
LSBLG670/M		3580	1240	1800	1120	270	570	3250	720
LSBLG780/M		3780	1240	1935	1120	270	570	3250	720
LSBLG880/M		3785	1320	1935	1240	300	570	3250	780
LSBLG1020/M		3785	1320	1935	1240	300	570	3250	780
LSBLG1290/M		3800	1440	1960	1240	320	600	3250	780
LSBLG1450/M		3800	1440	1960	1240	320	600	3250	780

Unit:mm



Dimension(R22) of Oil Flooded Water-cooled Chiller (four handpieces)

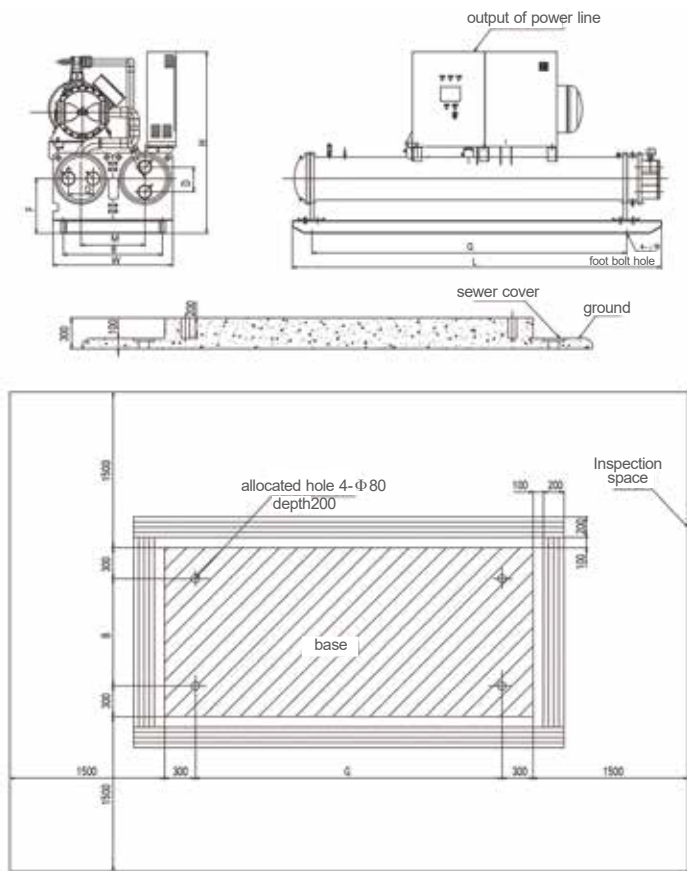
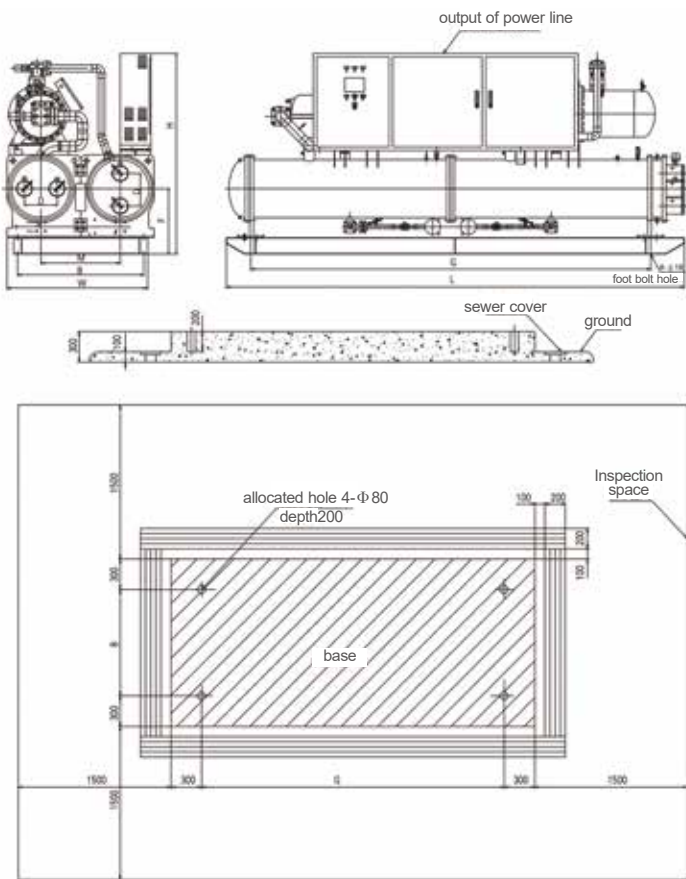
Model	Code	L	W	H	B	D	F	G	M	H
LSBLG3590/4M		4485	1950	2950	810	320	680	2600	980	1000
LSBLG4030/4M		4500	2050	2950	860	350	705	2600	1030	1000
LSBLG4700/4M		4700	2150	3000	860	350	705	2600	1030	1000
LSBLG5510/4M		4715	2420	3040	910	380	730	2600	1080	1000
LSBLG6200/4M		4715	2420	3040	910	380	730	2600	1080	1000

Unit:mm

Dimension (R22) of Oil Flooded Water-cooled Chiller (dual handpiece)

Model	Code	L	W	H	B	D	F	G	H
LSBLG1680/2M		4485	1440	1975	1340	320	665	3925	780
LSBLG1890/2M		4500	1540	2075	1340	350	665	4125	830
LSBLG2190/2M		4700	1540	2100	1440	350	690	4125	830
LSBLG2750/2M		4715	1640	2100	1440	380	690	4125	880
LSBLG3100/2M		4715	1640	2100	1440	380	690	4125	880

Unit:mm



Dimension (R134a) of Oil Flooded Water-cooled Chiller (single handpiece)

Model	Code	L	W	H	B	D	F	G	H
LSBLG250/M		3150	1160	1755	960	240	530	2850	620
LSBLG300/M		3345	1160	1755	960	240	530	3050	620
LSBLG430/M		3545	1160	1755	960	240	530	3050	620
LSBLG510/M		3545	1160	1780	960	240	530	3250	620
LSBLG600/M		3545	1160	1795	1040	270	545	3250	670
LSBLG660/M		3580	1240	1825	1040	270	545	3450	670
LSBLG780/M		3780	1240	1825	1040	270	545	3450	670
LSBLG940/M		3780	1320	1850	1120	300	570	3450	720

Unit:mm

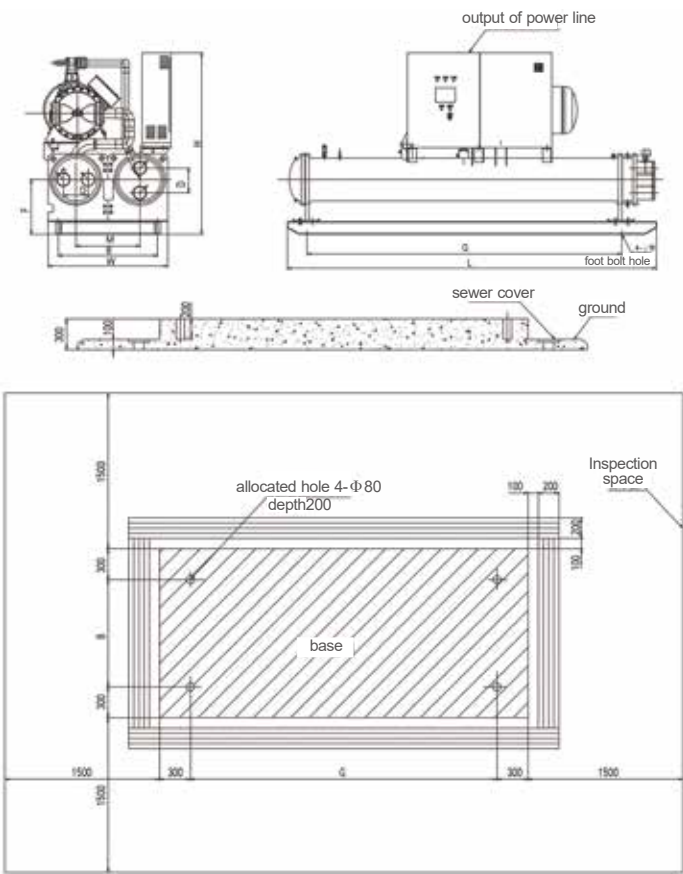


Performance Parameter Table of the Unit

Dimension (R134a) of Oil Flooded Water - cooled Chiller (dual handpiece)

Model	Code	L	W	H	B	D	F	G	H
LSBLG250/M		3145	1160	1755	960	240	530	2850	620
LSBLG300/M		3345	1160	1755	960	240	530	3050	620
LSBLG430/M		3545	1160	1755	960	240	530	3050	620
LSBLG510/M		3545	1160	1780	960	240	530	3250	620
LSBLG600/M		3545	1160	1795	1040	270	545	3250	670
LSBLG660/M		3580	1240	1825	1040	270	545	3450	670
LSBLG780/M		3780	1240	1825	1040	270	545	3450	670
LSBLG940/M		3780	1320	1850	1120	300	570	3450	720

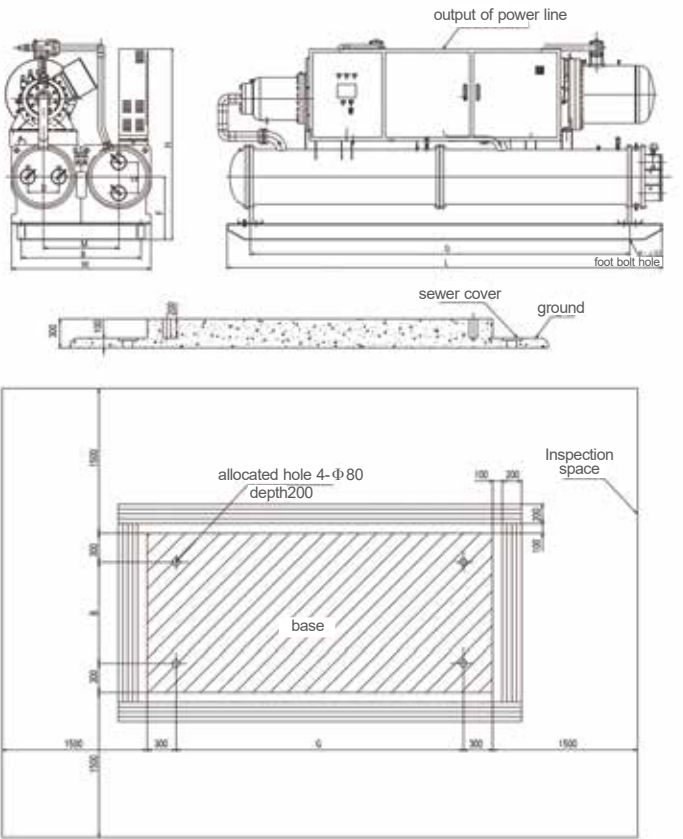
Unit:mm



Dimension (R134a) of Oil Flooded Water - cooled Chiller (dual handpiece)

Model	Code	L	W	H	B	D	F	G	H
LSBLG1110/2M		4450	1240	1870	1120	270	585	3925	670
LSBLG1290/2M		4470	1320	1940	1240	300	640	3925	780
LSBLG1410/2M		4485	1440	1965	1240	320	640	4125	780
LSBLG1690/2M		4485	1440	2035	1240	320	640	4125	780
LSBLG2030/2M		4500	1540	2060	1340	350	640	4125	830

Unit:mm



Performance Parameter Table of the Unit

Performance Parameter Table 1(R22) of oil Flooded water-cooled chiller

Model LSBLG		440/M	530/M	670/M	780/M	880/M	1020/M
Cooling Capacity	USRT	125	150	190	220	250	290
	104Kcal/h	37.8	45.3	57.4	66.5	75.5	87.7
	KW	440	528	668	774	879	1021
Cooling input power,KW	KW	79.6	95.7	115.1	135.3	148.9	174.7
Compressor	Power Source	3~.380V.50Hz					
	Form	Imported semo-sealed screw compressor					
	Set	1	1	1	1	1	1
	Energy adjustment	25%-100%					
Controller	Control way	full-auto control by Microcomputer programmable controller					
	Safety Protection	High/low pressure protection, water-break protection,antifreeze protection,phase-failure protection, oil pressure protection, overheating protection, etc.					
Evaporator	Form	Efficient shell tube heat exchanger					
	Inlet/outlet Temperature, C	Coldwater Inlet 12 C, outlet 7 C					
Condenser	Chilled water flow	76	91	115	133	151	176
	Tubing specification DN	125	125	125	125	125	150
	Water resistance, kpa	40	48	57	66	75	61
	Form	Efficient shell tube heat exchanger					
	Inlet/outlet Temperature, C	Cooling water inlet 30 C, outlet 35 C					
Refrigerant	Chilled water flow	89	107	135	156	177	206
	Tubing specification DN	125	125	125	125	150	150
	Water resistance, kpa	47	57	67	78	61	71
	Type	R22					
	Charging capacity, kg	119	144	171	199	224	261
Dimension	L mm	3545	3545	3580	3780	3785	3785
	W mm	1160	1160	1240	1240	1320	1320
	H mm	1760	1760	1800	1935	1935	1935
Unit Weight, kg	Transport Weight, kg	1650	1800	1950	2150	2800	3500
	Running weight, kg	1800	1950	2100	2400	3000	3850

Notes

- The cooling capacity of the units is determined according to the following working conditions: chilled water's inlettemperature: 12℃ and outlet temperature 7℃; the cooled water inlet temperature: 30℃ and outlet temperature: 35℃ ;
- Water-side fouling factor: 0.086m<sup>2</sup> C/kw;
- Designed water-side bearing pressure of evaporator/condenser: 1.0Mpa;
- The thermal recovery function is optional. If the unit needs such a function, please feel free to contact us.
- All datas are subject to change without notice, due to our continuous improvement.

Performance Parameter Table of the Unit

Performance Parameter Table 2 (R22) of Oil Flooded water-cooled chiller

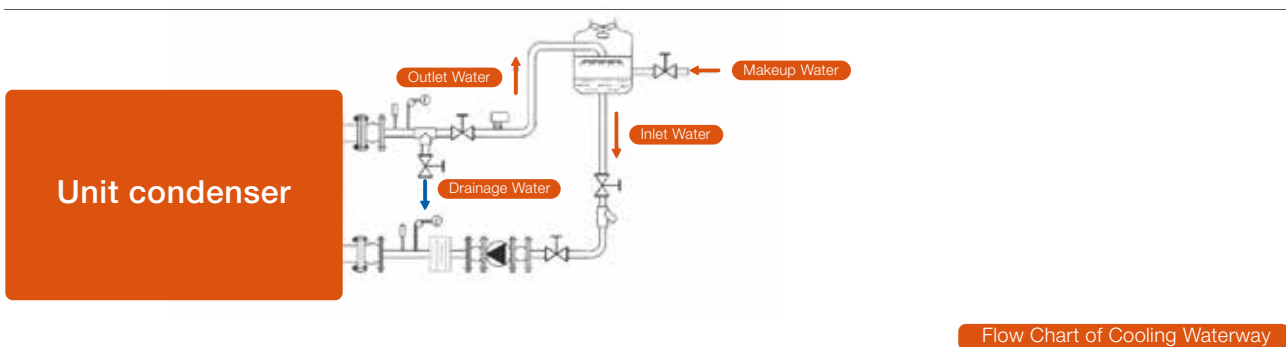
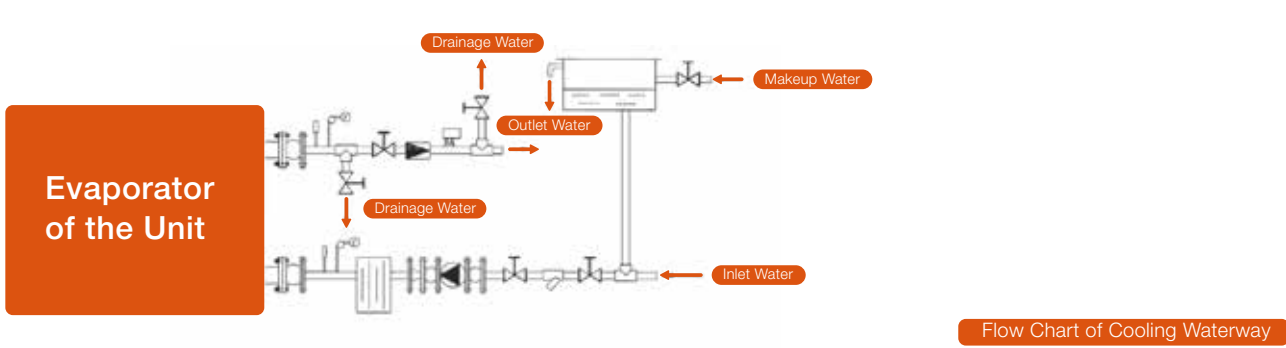
Model LSBLG		1290/M	1450/M	1680/M	1890/M	2190/M	2750/M
Cooling Capacity	USRT	365	410	475	535	620	780
	104Kcal/h	110.2	123.9	143.5	161.7	187.4	235.7
	KW	1283	1442	1671	1882	2181	2744
Cooling input power,KW	KW	211.0	237.2	279.8	310.8	358.3	453.6
Compressor	Power Source	3~.380V,50Hz					
	Form	Imported semo-sealed screw compressor					
	Set	1	1	2	2	2	2
	Energy adjustment	25%-100%		12.5%-100%			
Controller	Control way	full-auto control by Microcomputer programmable controller					
	Safety Protection	High/low pressure protection, water-break protection,antifreeze protection,phase-failure protection, oil pressure protection, overheating protection, etc.					
Evaporator	Form	Efficient shell tube heat exchanger					
	Inlet/outlet Temperature, C	Coldwater Inlet 12 C , outlet 7 C					
Condenser	Chilled water flow	221	248	287	324	375	472
	Tubing specification DN	150	150	150	150	150	150
	Water resistance, kpa	71	80	92	104	121	142
	Form	Efficient shell tube heat exchanger					
	Inlet/outlet Temperature, C	Cooling water inlet 30 C , outlet 35 C					
Refrigerant	Chilled water flow	257	289	335	377	437	550
	Tubing specification DN	150	150	150	200	200	200
	Water resistance, kpa	82	93	108	68	79	93
	Type	R22					
Dimension	Charging capacity, kg	306	345	407	457	533	625
	L mm	3800	3800	4485	4500	4700	4715
	W mm	1440	1440	1440	1540	1540	1640
	H mm	1960	1960	1975	2075	2100	2100
Unit Weight, kg	Transport Weight, kg	3500	3900	5800	6200	6500	6500
	Running weight, kg	3850	4350	5900	7000	7900	7900

Notes

- The cooling capacity of the units is determined according to the following working conditions: chilled water's inlettemperature: 12 C and outlet temperature 7 C ; the cooled water inlet temperature: 30 C and outlet temperature: 35 C ;
- Water-side fouling factor: 0.086m2 C/kw;
- Designed water-side bearing pressure of evaporator/condenser: 1.0Mpa;
- The thermal recovery function is optional. If the unit needs such a function, please feel free to contact us.
- All datas are subject to change without notice, due to our continuous improvement.

Performance Parameter Table of the Unit

Flow Chart of Cooling Waterway



Flow Chart of Cooling Waterway

Sign	Name&Specification	Recommended Installation Position
	Shockproof flexible joint	Junctures and in front of and behind the water pump
	Thermometer(0~50 C )	Inlet/outlet water pipelines
	Pressure Gauge(0.1~1.0Mpa)	Inlet/outlet water pipelines
	Shut-off valve	Various positions in graphic expression. In the outlet pipeline while it is for air exhaust and between the highest position and expansion tank.
	Electronic descaling instrument	In chilled water pipelines and behind water pump
	Water filter	In inlet pipeline and in front of water pump
	Tee	Various positions in graphic expression
	Expansion Tank	1-1.5m higher than the highest position of the system
	Target-type flow controller	At horizontal section of outlet pipeline,at pipe diameter of at least 5 times to elbow valve; arrow direction consistent with the water flow direction
	Check valve	In chilled outlet pipelines
	Water pump	In inlet pipeline
	Cooling tower	

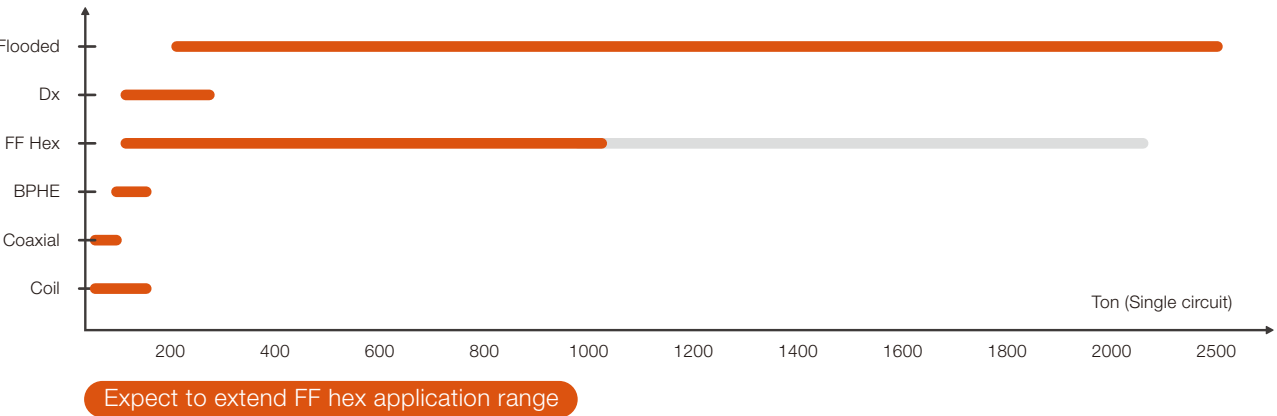


# Water Cooled Falling Film Screw Chiller



## Features

Capacity Range(single circuit)



## Advantage of FF Evap

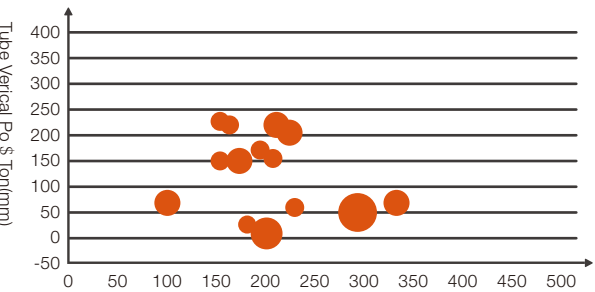
- Falling Film VS Flooded
- More robust oil management
- Less refrigerant charge
- Better part load efficiency

Applying FF Evap reduces cost&enhances performance

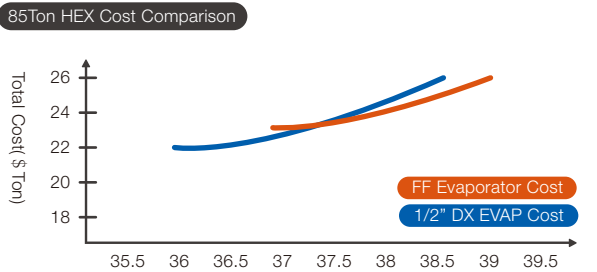


## Advantage of FF Evap

Results of Run34

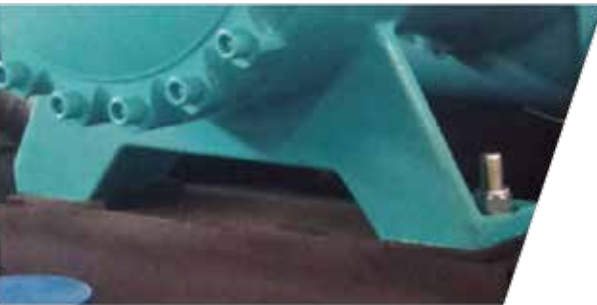


Compare with DX  
Low cost than DX especially at high saturated temperature



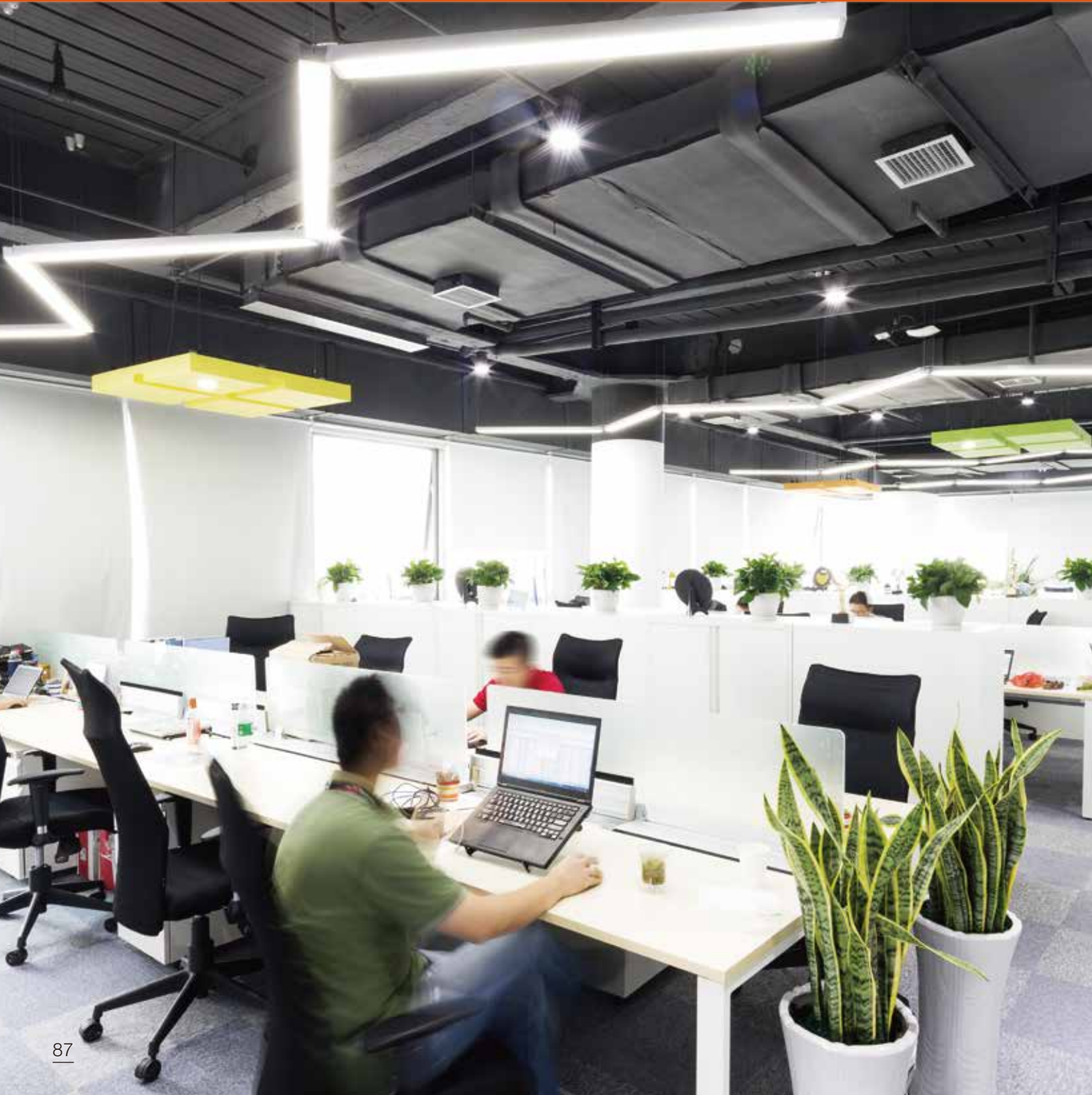
## Optimized Noise Control System

- Optimized piping system which can speed down the air flow and reduce the high frequent noise.
- Double-deck bridge supporters design, which can effectively reduce operating noise.





# Fan Coil



# Ceiling Conceal Duct Fan Coil



## Optimized Water Collection Tray

- Specially designed plate which is tensile, smooth, corrosion resistant and anti-rust.
- Secondary drip tray is avoided by the thermal insulation.
- Dual mouth slope shape design, water remain inside the tray is reduced, which greatly prevent the bacterial from accumulating.

## Heat Exchanger

- Titangold fin is applied to ensure the efficiency of heat exchange and strong cooling and heating.
- Highly qualified cooper applied, which is durable to large water pressure.

## Complete Models

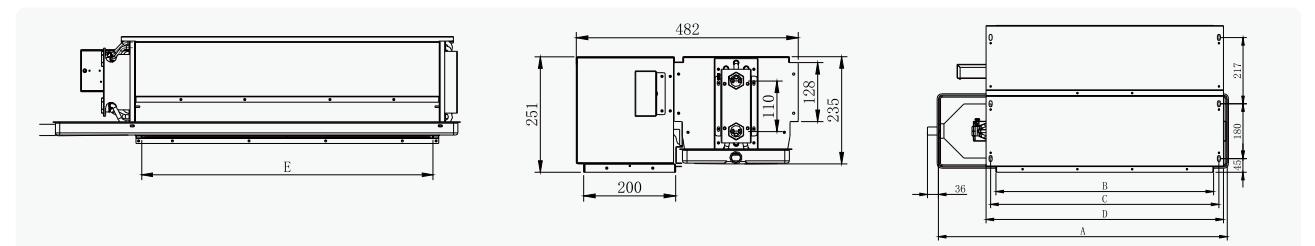
Standard or high static pressure types are available, various models can be provided with a air volume of 340m³/h-2380m³/h and a cooling capacity of 1800W - 12600W.

## Symmetrical Design, easy installation

Symmetrical design, which is easy for installation as the water tube can be connected either from left or right.

## Optimized Noise Control System

- Air return box is optional, which can easw installation, reducing construction cost
- Integrated models  
Air volume from 340 to 2380m³/h, include 9 models and also different static pressure type;
- High efficiency  
Adopt good quality heat exchanger and fan, which is benifit to the heat exchanging capacity and efficiency;
- Symmetrical design, easy installation  
Symmetrical design, it is easy to change the unit from left(right) water tube connection to right(left) connection.





Performance Parameter Table of the Fan Coil - Ceiling Conceal Duct

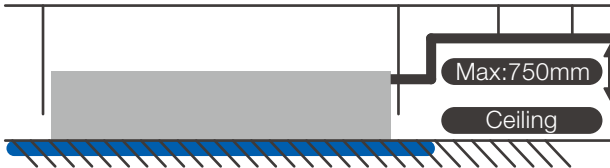
Model			FP-34WA	FP-51WA	FP-68WA	FP-85WA	FP-102WA	FP-136WA	FP-170WA	FP-204WA	FP-238WA	
Power supply			220V,50HZ,1PH									
Air Volume	H	m³ /h	340	510	680	850	1020	1360	1700	2040	2380	
	M		270	380	515	660	765	1040	1280	1550	1800	
	L		190	260	340	430	530	710	860	1050	1280	
Static pressure			Pa	12(30)	12(30)	12(30)	12(30)	12(30)	12(30)	12(30)	12(30)	
Cooling capacity	TH	H	W	1800	2700	3600	4500	5400	7200	9000	10800	12600
			BTU/h	6142	9212	12283	15354	18425	24566	30708	36850	42991
			W	1341	2012	2682	3353	4023	5364	6705	8046	9387
	SH	H	BTU/h	4575	6865	9151	11440	13726	18302	22877	27453	32028
			W	1458	2187	2916	3645	4374	5832	7290	8748	10206
			W	1152	1728	2304	2880	3455	4607	5759	6911	8063
	TH	M	W	1134	1701	2268	2835	3402	4536	5670	6804	7938
			W	930	1395	1860	2325	2790	3720	4649	5579	6509
			W	2700	4050	5400	6750	8100	10800	13500	16200	18900
Heating capacity	M	W	2079	3119	4158	5198	6237	8316	10395	12474	14553	
			1634	2450	3267	4084	4901	6534	8168	9801	11435	
			1634	2450	3267	4084	4901	6534	8168	9801	11435	
Noise	High speed	12Pa	dB(A)	35	36	38	40	43	44	45	46	49
		30Pa	dB(A)	39	41	43	45	48	49	50	52	54
Power input	High speed	12Pa	W	34	41	59	73	91	118	146	182	216
		30Pa	W	41	54	65	82	98	132	168	206	247
Waterflow volume	High speed	m³/h	0.31	0.46	0.62	0.77	0.93	1.23	1.54	1.85	2.16	
Pressure dropping			kPa	16	18	20	23	28	30	33	37	40
Water tube connection(inlet)			ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	
Water tube connection(outlet)			ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	
Coil		Type	Hydrophilic aluminum fin to wear copper tube									
Maximum working pressure		MPa	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
Condensation pipe size (diameter)		mm	DN20(External thread)									
Maximum working pressure		mm	755×482×235	855×482×235	955×482×235	1080×482×235	1175×482×235	1460×482×235	1650×482×235	1915×482×235	2150×482×235	
Net weight		kg	15.4	17.9	20	21.9	23.3	32.3	35.7	40	44.9	

Ceiling Conceal Duct Fan Coil



Convenient Installation

High lift water drained pump (750mm), easy to plan the condensate drained pipe.



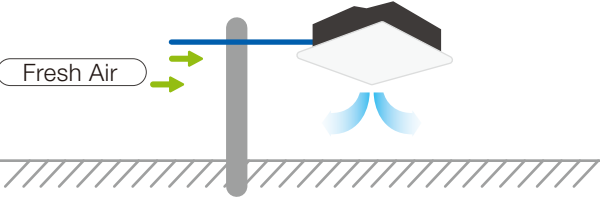
Computerised System

Advanced controlling system can be easily interfaced with most BMS and proprietary supervisory system based on mod Bus protocol.



Fresh Air Intake

There is offered (optional) a fresh air input system which can improve the indoor environment.



Easy Drainage of Water

The water remain in the tray, which is easy to drained manually. A rubber plug is available on the water collecting tray, easy draining of accumulated water can largely prevent dirt and bacterial building up.

Performance Parameter Table of the Fan Coil - Ceiling Conceal Duct

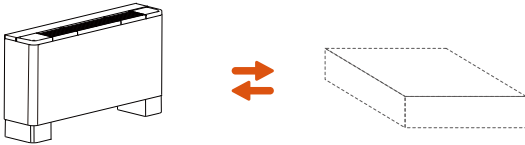
Model(2-tube system)			FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	FP-34Q4	
Power supply			220V,50Hz,1Ph										
Air Volume	H	m³ /h	340	510	680	850	1020	1300	1360	1700	2040	2380	
	M		280	380	515	660	765	1000	1040	1280	1550	1800	
	L		180	260	340	430	530	680	710	860	1050	1280	
		Pa	0	0	0	0	0	0	0	0	0	0	
Cooling capacity	TH	H	W	1800	2700	3600	4500	5400	7000	7200	9000	10800	12600
			BTU/h	6142	9212	12283	15354	18425	23884	24566	30708	36850	42991
	SH	H	W	1311	1971	2700	3184	4196	5158	5362	6707	8072	9070
			BTU/h	4473	6725	9212	10864	14317	17599	18295	22884	27542	30947
	TH	M	W	1500	2460	3000	3715	4423	6289	6435	7848	9296	10500
			SH	W	994	1555	1995	2426	3041	4156	4236	5393	6603
	TH	L	W	1391	2057	2479	2921	3793	5478	5604	7223	8534	8900
			SH	W	823	1200	1530	1826	2373	3196	3284	4416	5248
Heating capacity	H	W	2700	4050	5400	6750	8100	10500	10800	13500	16200	18900	
	M		1949	2770	3938	4902	5694	7687	7924	10473	12997	13900	
	L		1297	1774	2779	3505	3876	5342	5421	6992	8645	9700	
Noise	High speed	dB(A)	37	39	41	43	45	47	46	48	50	51	
Power input	High speed	W	37	52	62	76	96	125	134	152	189	228	
Waterflow volume	High speed	m³/h	0.31	0.46	0.62	0.77	0.93	1.19	1.23	1.54	1.85	2.16	
Pressure dropping		kPa	11.8	11.8	22.4	27	29.6	28.7	29.6	35.4	35.4	40	
Water tube connection(inlet)			ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	
Water tube connection(outlet)			ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	
Coil		Type	Hydrophilic aluminum fin to wear copper tube										
Maximum working pressure		MPa	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
Condensation pipe size (diameter)		mm	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	Φ 26	
Net dime nosin	Drained by pump	mm LxWxH	593×593×270			752×752×293			822×822×250		822×822×293		
	Drained by nature		593×593×420			752×752×443			822×822×400		822×822×443		
	Panel		650×650×45			850×850×45			950×950×45				
Net weight	Drained by pump	kg	16	16	17.8	21.8	24	24.4	24.3	26.6	28	28	
	Drained by nature		17.5	17.5	19.5	24.3	26.2	26.2	26.3	30.8	30.8	30.8	
	Panel		2.2			4.5			6				

Floor Standing Fan Coil



Universal Design

The unit can be installed by vertical or horizontal.



Optimized Drainage

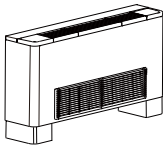
PVC drain pan, hollow structural design and heat insulation are applied to prevent it from leaking.

Dual Water Connection

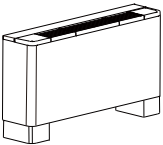
Water pipe connection is located on both the left and right, which is convenient for installtion.

Various Distribution Type

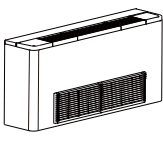
There are optional up to 6 types of air distribution solutions.



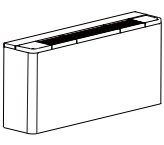
Version style 1



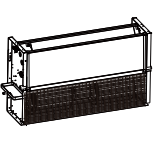
Version style 2



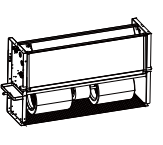
Version style 3



Version style 4



Version style 5



Version style 6



Performance Parameter Table of the Fan Coil - Universal Type

Model				MFP-34TM	MFP-51TM	MFP-68TM	MFP-85TM	MFP-102TM	MFP-136TM	MFP-170TM	MFP-204TM	MFP-238TM
Power supply				220V,50Hz,1Ph								
Air Volume	H	m³ /h		340	510	680	850	1020	1360	1700	2040	2380
	M			260	390	510	640	770	1020	1280	1530	1790
	L			170	260	340	430	510	680	850	1020	1190
Cooling capacity	TH	H	W	1800	2700	3600	4500	5400	7200	9000	10800	12600
			BTU/h	6142	9212	12283	15354	18425	24566	30708	36850	42991
	SH	H	W	1368	2052	2736	3420	4103	5471	6839	8207	9575
			BTU/h	4668	7001	9335	11669	13999	18667	23335	28002	32670
	TH	M	W	1494	2242	2989	3736	4483	5978	7472	8967	10461
			W	1181	1771	2362	2952	3541	4722	5903	7084	8265
	TH	L	W	1162	1744	2325	2906	3487	4649	5812	6974	8136
			W	953	1430	1907	2383	2860	3813	4765	5718	6672
Heating capacity	H	W		2700	4050	5400	6750	8100	10800	13500	16200	18900
	M			2131	3197	4262	5328	6393	8524	10655	12786	14917
	L			1675	2511	3349	4186	5024	6697	8372	10046	11721
Noise		High speed	dB(A)	37	39	41	43	45	46	48	50	51
Power input			W	37	52	62	76	96	134	152	189	228
Waterflow volume	High speed	m³/h		0.31	0.46	0.62	0.77	0.93	1.23	1.54	1.85	2.16
Pressure dropping		kPa		16	18	20	23	28	30	33	37	40
Water tube connection(inlet)				ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"
Water tube connection(outlet)				ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"	ZG3/4"
Coil			Type	high efficient copper pipe to wear Hydrophilic aluminum coil								
Maximum working pressure			MPa	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Condensation pipe size (diameter)			mm	Φ 16								

Projects



Shenzhen Universiade



Guangzhou Asian Games



# Projects



Shanghai World Expo



Beijing Olympic Games



Outlets Mall



Beijing Dacheng International Center



Dujiangyan Stadium



# Projects



Kunshan South High-speed Rail Station



Shuangliu International Airport



Guanyin Bridge COSMO



Shuangliu International Airport II



Shuangliu International Airport III