

XP
CIPK

Rooftop Package Inverter CIPK Series

48 - 120 MBH (4 - 10 TR)



50/60 Hz

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COOLEX HI EFFECIENCY INVERTER PRODUCTS

- 1. Split Wall Type Inverter**
- 2. Spit Ducted Inverter**
- 3. Package Type Inverter**
- 4. Variable Refrigerant Flow (VRF)**



About RIC

Refrigeration Industries & Storage and Oil Services Company, occupies a leading position as one of the largest industrial companies in Kuwait which established in 1973, it plays a proactive role in providing various services and diverse activities such as manufacturing, storage, and oil services to meet the needs of customers both inside and outside Kuwait.

Since its inception, RIC has been committed to excellence and advancing its progress, leading to the establishment of the brand (Cooler) in 1986, a true milestone in the Kuwaiti market as the first in the region in the sector of manufacturing air conditioning systems and cooling solutions.

Furthermore, the company has consistently empowered its workforce, enhanced safety and competitiveness, and utilized innovative technologies to launch new products that meet the needs of various sectors, contributing to expansion and supporting growth and prosperity.

To ensure the highest performance in the future, RIC harnesses its continuous research to enhance efficiency and quality, while continuing its efforts to manufacture products capable of adapting to climate, environmental, and energy challenges.

Facts throughout the years

- 1973 Warehouses were established by Amiri Decree.
- 1979 RIC Constructed the Medical Cold Stores Complex, the world's largest at that time.
- 1980 RIC Air Conditioning manufacturing plant set up in Sulaibya.
- 1981 Production of Package & Mini-Split A/Cs started under York-Gulf.
- 1984 RIC was listed in Kuwait Stock Exchange.
- 1986 COOLEX brand Production Launched.
- 1991 RIC rebuilt the manufacturing plant destroyed during the war.
- 1997 Achieved ISO Certification ISO 9001:1994.
- 2002 ETL Designed testing lab became fully operational.
- 2004 Privatization of RIC.
- 2010 COOLEX becomes the first A/C Unit to Pass MEW's new regulations.
- 2010 RIC Factory Renovation and Expansion into neighboring countries.
- 2012 Achieved UL & AHRI Certification for Cooler Units.
- 2014 Achieved SASO Certification for Concealed Ducted Split Series.
- 2014 Achieved EUROVENT Certification for Air Handling Units AHU.
- 2014 Achieved UL Certification for Air Cooled Chillers.
- 2015 Achieved ISO 17025 Certification for Psychrometric Laboratory.
- 2016 Achieved Energy Efficiency Certification for Concealed Ducted Split Series & Rooftop Package units (Kingdom of Bahrain).
- 2016 Acquisition of Gulf Paramount for Electrical Services Company.
- 2021 Acquisition of Kuwait Pipes Industries & Oil Services factory, resulting in a change of the company's name from Refrigeration Industries & Storage Co. to Refrigeration Industries & Storage and Oil Services Co.

نبذة عن الشركة

تتبع شركة صناعات التبريد والتخزين والخدمات النفطية مكانة رائدة باعتبارها واحدة من أكبر الشركات الصناعية في دولة الكويت، والتي تأسست عام 1973 لتؤدي دوراً غير استباقي في تقديم خدمات متعددة وأنشطة متنوعة كالتصنيع والتخزين والخدمات النفطية لتلبية مختلف احتياجات العملاء داخل الكويت وخارجها.

ومنذ انطلاقة الشركة وهي تعمل على إبراز التميز ومواصلة مسيرة التقدم مما مكنها من تأسيس العلامة التجارية (كولكس) عام 1986 والتي جاء ميلادها إنجازاً حقيقياً في السوق الكويتي باعتبارها الأولى في المنطقة في قطاع تصنيع أنظمة التكييف وحلول التبريد في الكويت.

وعلى صعيد متصل، دأبت الشركة على تمكين قوتها العاملة وتعزيز السلامة والقدرة التنافسية والاستفادة من التقنيات المبتكرة لإطلاق منتجات جديدة تلبي مختلف القطاعات وتسهم في تحقيق التوسع والذي من شأنه يدعم النمو والازدهار.

ولضمان أعلى أداء في المستقبل، تسخر الشركة بحوثها المستمرة لتعزيز الكفاءة والجودة كما تواصل جهودها لتصنيع منتجات قادرة على التكيف مع تحديات المناخ والبيئة والطاقة.

حقائق وتواريخ

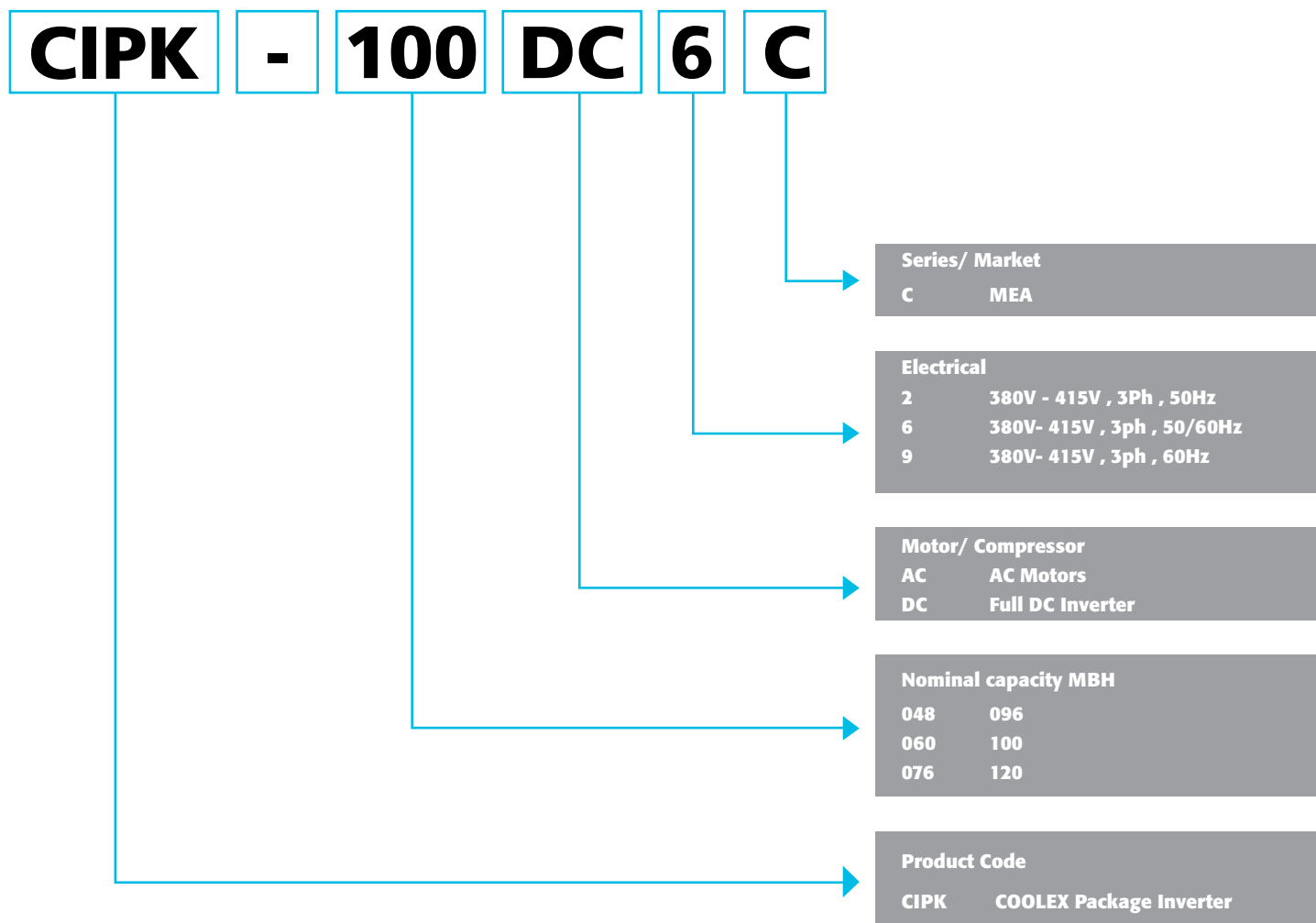
- 1973 تم إنشاء المستودعات بناء على مرسوم أميري.
- 1979 عهدت وزارة الصحة الكويتية لشركة صناعات التبريد بإنشاء مجمع مستودعات مخازن التبريد الطبية، وقد كان هذا المجمع حينها هو الأضخم من نوعه على مستوى العالم، وقد وصلت تكلفته إلى 12,000,000 دينار كويتي.
- 1980 تم إنشاء مصنع مكيفات الهواء التابع لشركة صناعات التبريد في الصليبية.
- 1981 بدء إنتاج أجهزة التكييف المدمجة والمنفصلة الصغيرة تحت علامة York-Gulf.
- 1984 تم قيد شركة صناعات التبريد في سوق الكويت للأوراق المالية.
- 1986 بدء إنتاج مكيفات علامة كولكس.
- 1991 قامت شركة صناعات التبريد بإعادة بناء مصنعها الذي دمرته الحرب.
- 1997 الحصول على شهادة الأيزو 9001:1994.
- 2002 بدء تشغيل مختبر فحص وحدات التكييف (ETL).
- 2004 خصخصة شركة صناعات التبريد.
- 2010 كانت وحدات كولكس أول وحدات تكييف هواء تجتاز اللوائح التي أقرتها (وزارة الكهرباء والماء).
- 2010 تم تجديد مصنع شركة صناعات التبريد وبدء التوسع والتصدير إلى الدول المجاورة.
- 2012 الحصول على شهادة UL و AHRI لأجهزة التكييف كولكس.
- 2014 الحصول على شهادة SASO لأجهزة التكييف المنفصلة.
- 2014 الحصول على شهادة EUROVENT لأجهزة مناولة الهواء.
- 2014 الحصول على شهادة UL لمبردات الهواء الشيلر.
- 2015 الحصول على شهادة الأيزو 17025 لمختبر السيكرومترية.
- 2016 الحصول على شهادة كفاءة الطاقة لأجهزة التكييف المنفصلة والوحدات المدمجة (مملكة البحرين).
- 2016 الاستحواذ على شركة بارامونت الخليج للخدمات الكهربائية.
- 2021 الاستحواذ على مصنع الشركة الكويتية لصناعة الأنابيب والخدمات النفطية مما أدى على إثره تغيير اسم الشركة من شركة صناعات التبريد والتخزين إلى شركة صناعات التبريد والتخزين والخدمات النفطية.

INTRODUCTION

COOLEX Hi Efficiency and latest INVERTER generations product was designed and manufactured to offer the solutions for villas, offices, shops, hospital and other applications under hi ambient and low voltage areas conditions, compressor are all inverter type match to DC brushless motors.



NOMENCLATURE OUTDOOR UNIT



OUT STANDING FEATURES

Evaporator's Side

- Easy access to the evaporator side with removable panel for maintenance purpose for the fan, motor, and expansion device.
- Easy access to drain pan for cleaning.



Compressor's Side

- Easy access to the compressor side with removable panel for maintenance purpose for the compressor, and filter drier.
- Easy access to condenser fans, and motors.



Electrical Panel

- Easy access to the electrical panel with removable panel for microprocessor assess, drivers and electrical parts.



OUTSTANDING FEATURES

CIPK Tropical Series



VER Technology

Variable Energy - Efficiency Regulation

Evaporating and condensing temperature makes strong effect to the cooling performance and energy-efficiency ratio of AC system. CIPK series has various modes with different refrigerant temperature which lead the system to different performance and energy-efficiency ratio.

Cooling : 3 modes with different evaporating temperature

High Cool Mode :

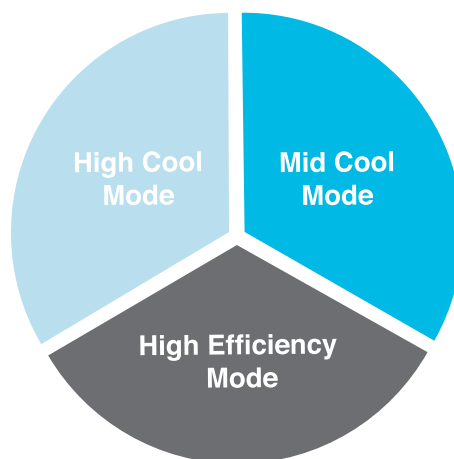
High cooling performance cool down the room rapidly.

Mid Cool Mode :

Basic cooling mode performance balance the reaction speed and efficiency.

High Efficiency Mode :

Satisfy the lowest capacity requirement and low the energy consumption. Users can choose a certain model according to the actual need in different area and climate so that the system can satisfy various requirement and seasonal efficiency can be optimized.



IPLV : Integrated Part Loading Value (ARI 550/590) (C) : Cooling

The Integrated Part Load Value is a performance characteristic develop by the AHRI, it is most commonly use to describe the performance of AC system capacity modulation. Unlike EER or COP which describe the efficiency at full load conditions. The IPLV is derived from the equipment efficiency while operating at various capacity. Since CIPK package inverter does not always run at 100% capacity the EER /COP is not an ideal representation of typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.

OUTSTANDING FEATURES

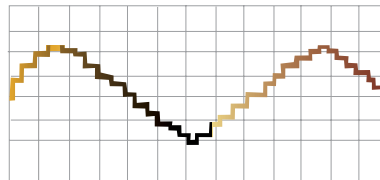
High Efficiency and Energy Saving

High EER

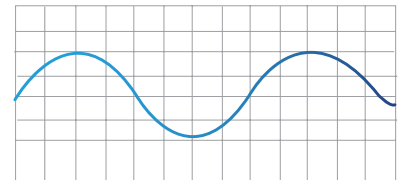
Coollex Package Inverter tropical series have excellent energy efficiency in cooling mode by using DC inverter compressor and motors.

180° Sine Wave Control

DC inverter compressor users 180° sine wave vector control technique makes motor operate smooth and increases the efficiency. significantly compared with traditional sawtooth wave. It also can lower the noise level.



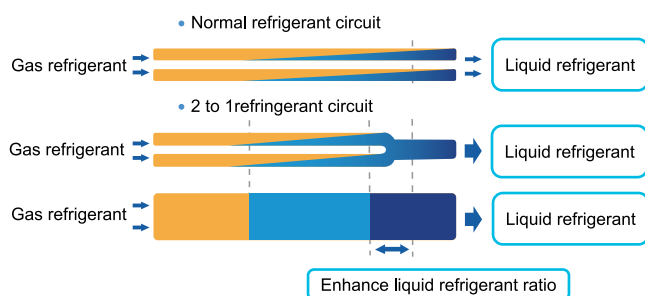
Traditional Control



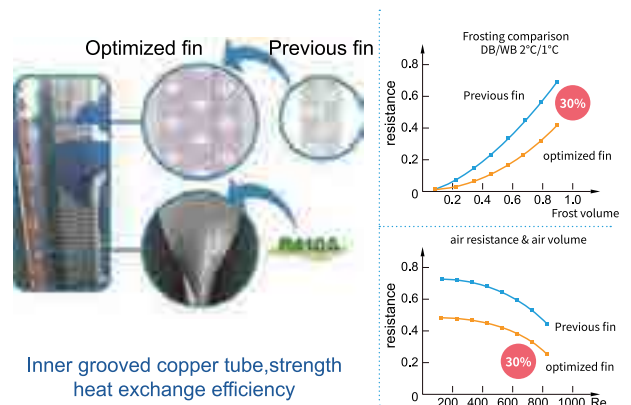
180° Sine Wave DC Control

High Efficient Heat Exchanger

Optimized 2 to 1 refrigerant circuit design, increase the heat exchanging efficiency and enhance the ratio of liquid which flow to the evaporator.

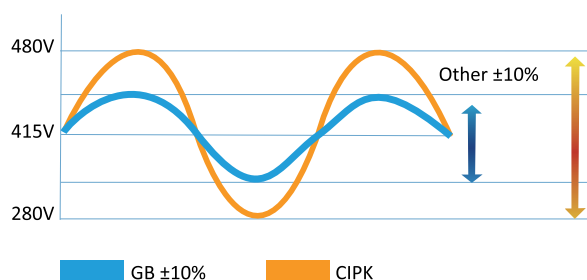


Optimized fin design, reduces the water resistance and wind resistance.



Wide Voltage Design

Suitable for area with unstable voltage, CIPK system still could run stably.



OUTSTANDING FEATURES

DC Inverter Compressor

Pressure relief valve structure

Improving the partial load efficiency, adapt to the transformer ratio working condition, improving the compressor performance.

Dynamic oil balance structure

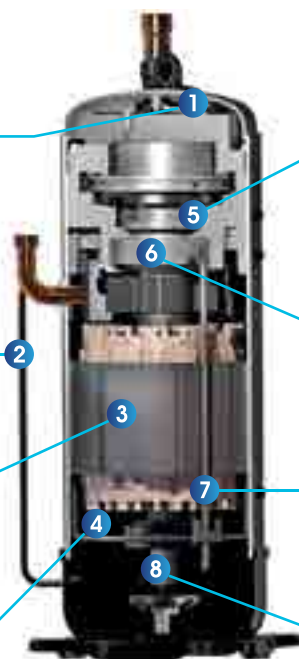
Oil balance tube implementation parallel compressor and oil quantity dynamic equilibrium, ensuring the reliability of several parallel compressors.

High efficiency motor configuration

Using high quality material concentrated stator, cooperate with neodymium magnet rotor, having outstanding efficiency.

High pressure cavity structure

Large exhaust buffer volume, reducing the air flow noise and vibration of the runtime.



The intermediate pressure servo mechanism

According to the operation pressure among dynamic adjusting middle pressure, has realized the axial flexible, optimization of dynamic vortex disk meshing, improve product performance.

High reliability of the bearing

Adopt cylinder bearing and self-aligning ball bearing bearing group, improving the reliability of the compressor.

Internal oil circulation structure

Lubricating oil to achieve internal circulation, reducing heat loss, decreasing the rate of spitting oil, improve the efficiency and reliability.

Positive displacement gear oil pump

Positive displacement gear oil pump to ensure the high and low frequency can satisfy the oil supply, improving the reliability of the compressor.

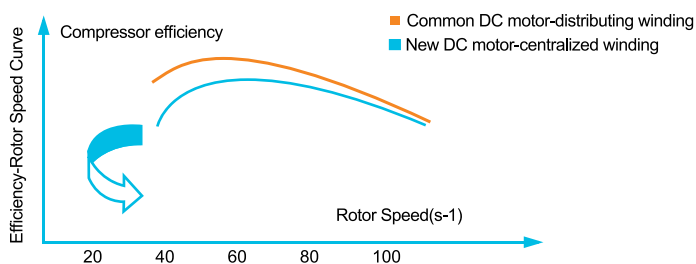
High-efficient permanent magnetic motors are installed, giving better performance than traditional DC inverter compressors.



Centralizing winding



Distributin winding



Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.

Hi Efficiency Fan Assembly

Fan motor adjusts the fan speed in stepless controlled by outdoor PCB according to the system operating pressure and running load to enhance the efficiency by reducing the energy consumption and maintain the system best performance.



ECM Plug Fan

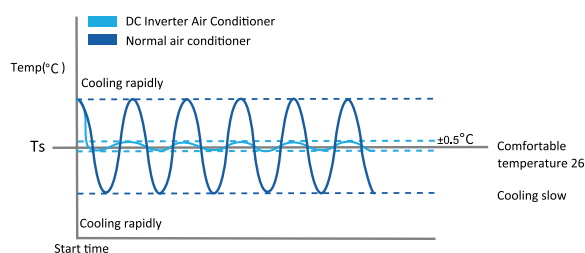


DC Brushless Axial FM

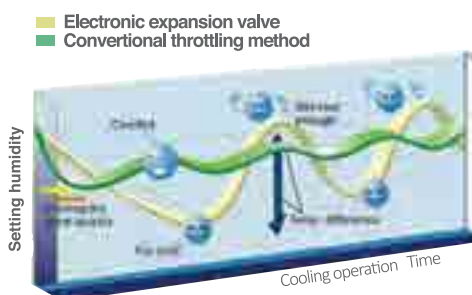
OUTSTANDING FEATURES

Precise Temperature Control

COOLEX composite temperature control technology, through the indoor/outdoor operation condition detection, adjust outdoor power output, optimize the indoor air distribution, achieve the high precision adjustment of 0.5°C.

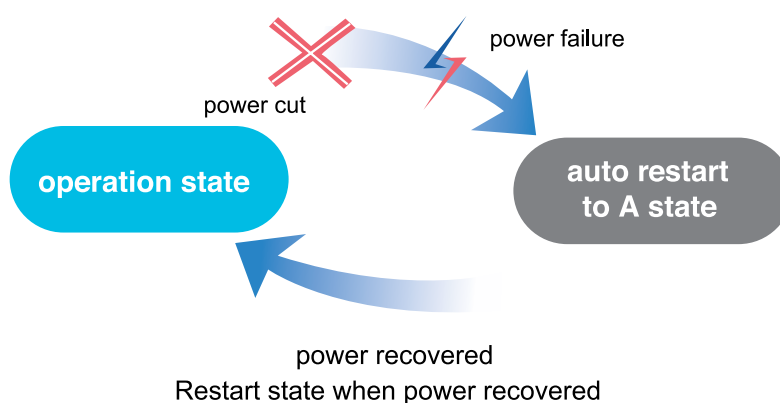


The EEV uses PI calculation principle to calculate the percentage of indoor capacity demand according to indoor temperatures, perform real-time control to compressor operating frequency through EEV precise level adjustment of refrigerant flow.



Auto Restart Function

The AC can automatically memorize the operation setting when power is cut off accidentally. It can return to previous setting when power resumes. Recover the last operation state when power is re-stored, no need to restart the unit manually.



LED DISPLAY

LED Display in PCB shows compressor system operation status and error codes.

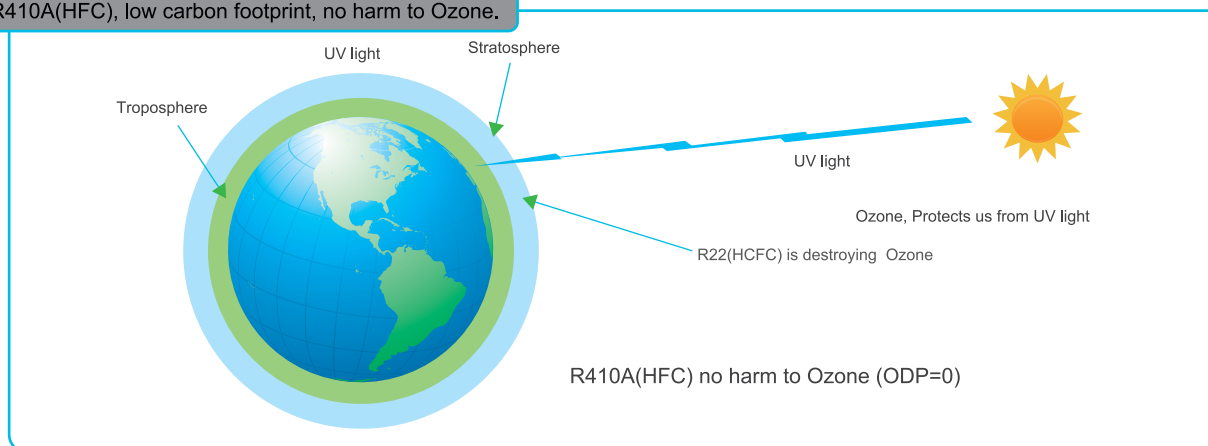


OUTSTANDING FEATURES

Comfortable And Healthy Environment

Refrigerant R410A(HFC), low carbon footprint, no harm to Ozone.

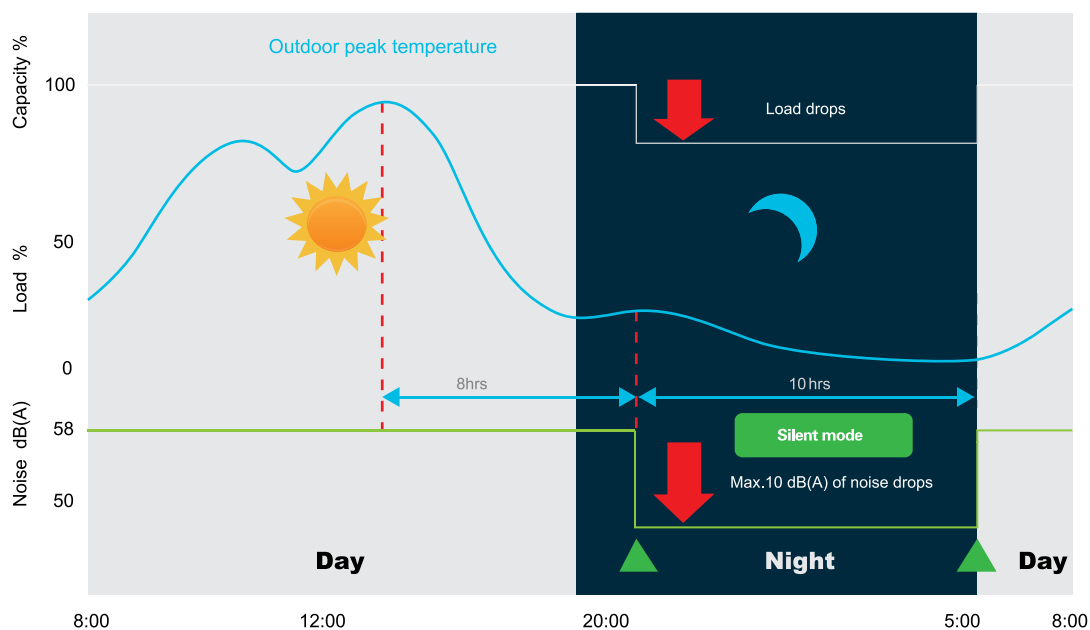
R410A(HFC), low carbon footprint, no harm to Ozone.



Silence Operation

Outdoor Unit Quiet Mode

By using optimized fan assembly with CFD technology, the product is equipped with low noise fan functions. Provide more quite operation during night time thru outdoor PCB sensors technology.



CONTROL SYSTEM

User-Friendly & Elegant Design

It is a hidden-mode controller specially designed for hotels, hospitals, schools, offices.

Fitted with a background light as standard, easy to use in the dark night.

Error Reporting

If there is a malfunction, error codes are displayed in the temperature setting area of the controller's display screen.



STANDARD SPECIFICATIONS

General

The New COOLEX PACKAGE INVERTER MODELS are factory assembled suitable for outdoor installation mounting on the roof or ground. The packaged unit consists of inverter scroll compressors, cooling coil, condenser coil, fans, control wiring, interconnecting pipes and all factory assembled.

Unit Casing

Panels are fabricated from hot dipped G90, Zinc coating and zero spangle galvanized steel, oven-baked powder coated. The unit is provided with an integral weather resistant control panel for outdoor application. Panels and access doors are provided for inspection and access for all internal parts..

Compressor

The compressors are hi quality BLDC Scroll inverter compressor with rubber vibration isolators for quiet and efficient operation. The compressors are built to RoHS and CE certification.

Evaporator Coils

The coils are built up of ripple finned seamless copper tubes and mechanically bonded to scientifically designed pre coated aluminum louvered fins. The assembled coils are factory leak tested under water at a pressure of 350 psig for quality and leak free units.

Condenser Coils

The coils are built up of ripple finned seamless copper tubes and mechanically bonded to scientifically designed pre coated aluminum louvered fins. The assembled coils are factory leak tested under water at a pressure of 700 psig for quality and leak free units.

Evaporator Fan / Motor

Motors are ECM type with class F insulation and IP54 ingress protection rating. Thermally protected motor equipped with maintenance free ball bearings. The fan assembly construction is plug fan type using impeller aluminum blade. Approved from CCC, CE and RoHS compliant.

STANDARD SPECIFICATIONS

Condenser Fans / Motor

Condenser fans is propeller type with cold rolled carbon steel sheets (SPCC), a direct drive BLDC thermally protected motor with class F insulation and IP54 rating. Assembly is upward blow with fan grille mounted in casing, maintenance free ball bearing. Approved from CCC, CE and RoHS compliant.

Drain Pan

The drain pan is fabricated of painted galvanized steel with insulation.

Air Filter

High dust holding capacity, low resistance filter. It consists of metal aluminum mesh with unique pattern and can be cleaned with regular water and prolonged use.

Refrigerant Circuit

CIPK series comes complete, as standard, with properly sized refrigerant lines including electronic expansion valve for precise refrigerant flow, filter drier, automatic high and low pressure switch and full operating charge of R410A in each circuit

Control Panel

The control panel enclosure is fabricated with galvanized sheet. Internal power and control wiring is neatly routed and properly anchored. All wires are identified with cable marked.

Coollex Microprocessor Inverter Technology Controller

The Package New Inverter Generation Units are provided with technologically advanced system logic based controller, incorporating the following benefits and features:

- Wire thermostat
- Auto restart
- Three speed indoor blower fan
- Precise realtime EEV level adjustment as per room temperature demand
- Wide range operating voltage from 280-480 volts
- Anti short cycle timer
- Time delay protection for compressor
- Reverse phase protection
- Overload protection for motors and compressor
- Power surge and phase failure protector
- Anti freeze protection
- High and Low pressure switch protection
- High and Low voltage protection
- Fault diagnostics Error code at 7 segments display

OPTIONAL SPECIFICATIONS

Construction

- Anti-corrosion coating for coils
- Copper fins for evaporator / condenser coil
- Stainless steel drain pan
- Stainless steel mesh filter

GENERAL SPECIFICATION FULL DC INVERTER

PACKAGE TROPICAL INVERTER SYSTEM

Unit Model Name			CIPK-048DC6C	CIPK-060DC6C	CIPK-076DC6C	CIPK-090DC6C	CIPK-0100DC6C	CIPK-120DC6C
Power Supply			380~420V-3Ph-50/60Hz					
Compressor	Type		DC INVERTER - Scroll					
Blower Fan	Type / Quantity		EC Plug Fan / 1pc					EC Plug Fan / 2pc
Outdoor Fan	Type / Quantity		EC Axial Fan / 1 pc					
Condenser Coil	Type		Blue Coated Aluminum Fins and IGT 7mm Copper Tubes					
	Number of Rows		3Rows					
Evaporator Coil	Type		Blue Coated Aluminum Fins and IGT 9.52mm Copper Tubes					
	Number of Rows		3Rows				4Rows	
Expansion Device	Type		Electronic Expansion Device					
Air Filter	Type		Washable Aluminum Mesh					
	Thickness	mm	25.4					
Unit Dimension	(HxWxL)	mm	1261x1402x1878			1718x1402x1928		1645x2200x2198
Unit Weight	Net	Kg.	350	350	375	420	457	750
Drain Pipe		inch	1-1/4"					

Electrical and Wiring Data

Electrical Connection and Power Supply			380 ~ 420V-3Ph-50/60Hz					
Maximum Power Input		kW	6.9	8.6	9.0	12.0	12.5	14.3
Maximum Current		A	13	15	15	20	21	24
Condenser Fan Motor (W)			650	650	650	650	650	700
Evaporator Fan Motor (W)			950	950	840	840	840	840x2
Connection Wire	Power wire size	mm2	4			6		
	Signal wire size	mm2	0.75 (4-core shielded cable)					

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature [°F]											
	Air Flow		Temp ° F	95			115			118.4			125		
	CFM	DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
CIPIK-048DC6C	1400	86	72	50,383	37,231	4.05	48,041	34,734	4.77	47,136	33,990	4.87	35,496	31,946	4.46
		80	67	46,836	37,312	3.87	41,678	32,415	4.56	40,893	31,721	4.65	30,795	27,716	4.26
		74	62	41,567	36,017	3.66	34,815	30,085	4.31	34,159	29,441	4.39	25,724	23,151	4.02
		68	57	36,502	34,153	3.56	25,077	27,066	4.14	24,604	26,487	4.18	18,529	16,676	3.83
	1500	86	72	51,627	38,122	4.14	49,228	35,560	4.87	48,301	34,799	4.97	36,373	32,736	4.55
		80	67	48,011	38,215	3.89	42,699	33,195	4.59	41,894	32,485	4.68	31,549	28,394	4.28
		74	62	42,595	36,895	3.70	35,658	30,807	4.36	34,987	30,149	4.45	26,347	23,712	4.07
		68	57	37,393	34,974	3.54	28,879	27,731	4.16	28,334	27,137	4.23	21,337	19,204	3.87
	1551	86	72	52,137	38,492	4.17	49,707	35,904	4.92	48,771	35,136	5.02	36,727	33,055	4.60
		80	67	48,462	38,586	3.93	43,131	33,642	4.63	42,407	32,923	4.72	31,935	28,742	4.32
		74	62	43,006	37,242	3.74	36,002	31,095	4.41	35,324	30,430	4.49	26,601	23,941	4.11
		68	57	37,755	35,310	3.58	29,149	27,961	4.20	28,601	27,363	4.28	21,538	19,384	3.91

CIPIK-060DC6C	1600	86	72	61,119	41,424	5.02	55,124	38,692	5.58	53,639	36,895	5.64	50,008	45,008	6.06
		80	67	57,336	43,274	4.80	49,297	38,411	5.32	47,969	36,619	5.39	44,722	40,250	5.78
		74	62	54,968	44,928	4.53	44,882	37,539	5.03	43,673	35,795	5.09	40,717	36,645	5.46
		68	57	50,602	43,492	4.41	38,846	33,749	4.83	37,800	32,180	4.84	35,242	31,718	5.20
	1700	86	72	61,410	41,837	5.12	55,389	39,056	5.69	53,898	37,241	5.76	50,250	45,225	6.18
		80	67	57,607	43,480	4.82	49,534	39,309	5.36	48,200	37,483	5.42	44,937	40,443	5.82
		74	62	55,228	45,134	4.59	45,090	37,711	5.10	43,876	35,960	5.16	40,906	36,816	5.53
		68	57	50,844	43,698	4.38	39,027	33,900	4.86	37,976	32,325	4.91	35,405	31,865	5.27
	1818	86	72	61,700	41,816	5.18	55,654	39,249	5.75	54,156	37,516	5.82	50,490	45,441	6.24
		80	67	57,880	43,687	4.87	49,777	38,826	5.41	48,541	37,241	5.47	45,255	40,730	5.87
		74	62	55,489	45,340	4.64	45,298	37,883	5.14	44,079	36,123	5.21	41,095	36,986	5.59
		68	57	51,085	43,904	4.43	39,206	34,051	4.90	38,150	32,470	4.96	35,568	32,011	5.32

CIPIK-076DC6C	2200	86	72	77,489	58,848	6.55	62,264	51,943	6.40	56,463	49,708	6.02	52,907	47,616	6.98
		80	67	72,033	58,977	6.26	54,017	48,475	6.11	48,985	46,390	5.74	45,900	41,310	6.66
		74	62	63,929	56,929	5.92	45,122	44,990	5.78	40,918	43,056	5.43	38,341	34,507	6.29
		68	57	56,139	53,982	5.76	32,501	40,476	5.55	29,473	38,735	5.16	27,617	24,855	5.99
	2400	86	72	79,402	60,257	6.70	63,802	53,178	6.54	57,859	50,891	6.14	54,214	48,793	7.12
		80	67	73,841	60,403	6.30	55,340	49,641	6.15	50,184	47,507	5.78	47,023	42,321	6.70
		74	62	65,510	58,317	5.99	46,215	46,071	5.85	41,910	44,090	5.49	39,270	35,343	6.37
		68	57	57,510	55,280	5.73	37,429	41,471	5.58	33,941	39,687	5.23	31,803	28,623	6.06
	2538	86	72	80,185	60,842	6.76	64,423	53,692	6.60	58,422	51,384	6.20	54,742	49,268	7.19
		80	67	74,534	60,989	6.36	55,900	50,310	6.21	50,799	48,148	5.83	47,599	42,839	6.76
		74	62	66,143	58,866	6.05	46,660	46,501	5.91	42,314	44,501	5.55	39,649	35,684	6.43
		68	57	58,066	55,811	5.79	37,779	41,815	5.63	34,260	40,017	5.28	32,102	28,892	6.13

Note: Capacity in KW= (Btu/hr)*0.0003. Cooling capacities are gross ratings
Power Input is Total Power (kW)

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature [°F]											
	Air Flow		Temp ° F	95			115			118.4			125		
	CFM	DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
CIPIK-090DC6C	2600	86	72	95,243	71,360	7.78	75,912	58,749	7.68	71,666	55,773	7.48	67,750	60,975	8.39
		80	67	89,348	74,547	7.43	67,888	58,321	7.32	64,090	55,356	7.14	60,588	54,529	8.01
		74	62	85,657	77,397	7.01	61,808	56,999	6.92	58,351	54,111	6.75	55,162	49,646	7.57
		68	57	78,854	74,923	6.83	53,496	51,243	6.64	50,504	48,646	6.42	47,744	42,970	7.20
	2700	86	72	95,696	72,073	7.93	76,278	59,301	7.83	72,011	56,297	7.63	68,077	61,269	8.56
		80	67	89,770	74,903	7.47	68,214	59,685	7.37	64,398	56,662	7.18	60,879	54,791	8.06
		74	62	86,063	77,752	7.11	62,094	57,260	7.01	58,622	54,360	6.84	55,418	49,877	7.67
		68	57	79,231	75,278	6.79	53,744	51,472	6.68	50,738	48,866	6.51	47,966	43,169	7.30
	2877	86	72	96,149	72,036	8.01	76,643	59,594	7.91	72,356	56,711	7.71	68,402	61,562	8.64
		80	67	90,196	75,260	7.54	68,549	58,952	7.44	64,854	56,297	7.25	61,310	55,179	8.13
		74	62	86,470	78,108	7.18	62,381	57,521	7.07	58,893	54,607	6.90	55,675	50,107	7.74
		68	57	79,606	75,634	6.86	53,992	51,702	6.74	50,972	49,084	6.57	48,186	43,368	7.37

CIPIK-100DC6C	3000	86	72	98,964	75,417	8.38	83,761	69,100	8.43	80,156	65,703	8.50	77,933	54,553	9.71
		80	67	91,996	75,582	8.00	72,667	64,486	8.05	69,541	61,317	8.11	67,612	47,329	9.27
		74	62	81,646	72,957	7.57	60,700	59,851	7.61	58,088	56,909	7.67	56,478	39,534	8.76
		68	57	71,698	69,181	7.37	43,722	53,845	7.31	41,841	51,199	7.29	40,680	28,476	8.33
	3150	86	72	101,407	77,223	8.57	85,830	70,743	8.61	82,137	67,265	8.67	79,860	55,902	9.90
		80	67	94,305	77,410	8.06	74,446	66,038	8.10	71,242	62,792	8.16	69,267	48,487	9.32
		74	62	83,666	74,737	7.67	62,171	61,288	7.70	59,496	58,277	7.76	57,846	40,492	8.86
		68	57	73,449	70,845	7.33	50,351	55,169	7.35	48,183	52,456	7.39	46,847	32,793	8.44
	3305	86	72	102,408	77,972	8.64	86,665	71,427	8.69	82,937	67,918	8.76	80,637	56,446	10.01
		80	67	95,190	78,161	8.14	75,200	66,928	8.18	72,115	63,640	8.24	70,115	49,081	9.41
		74	62	84,474	75,439	7.74	62,770	61,860	7.78	60,069	58,820	7.84	58,404	40,883	8.95
		68	57	74,159	71,525	7.40	50,823	55,626	7.42	48,637	52,892	7.46	47,288	33,102	8.53

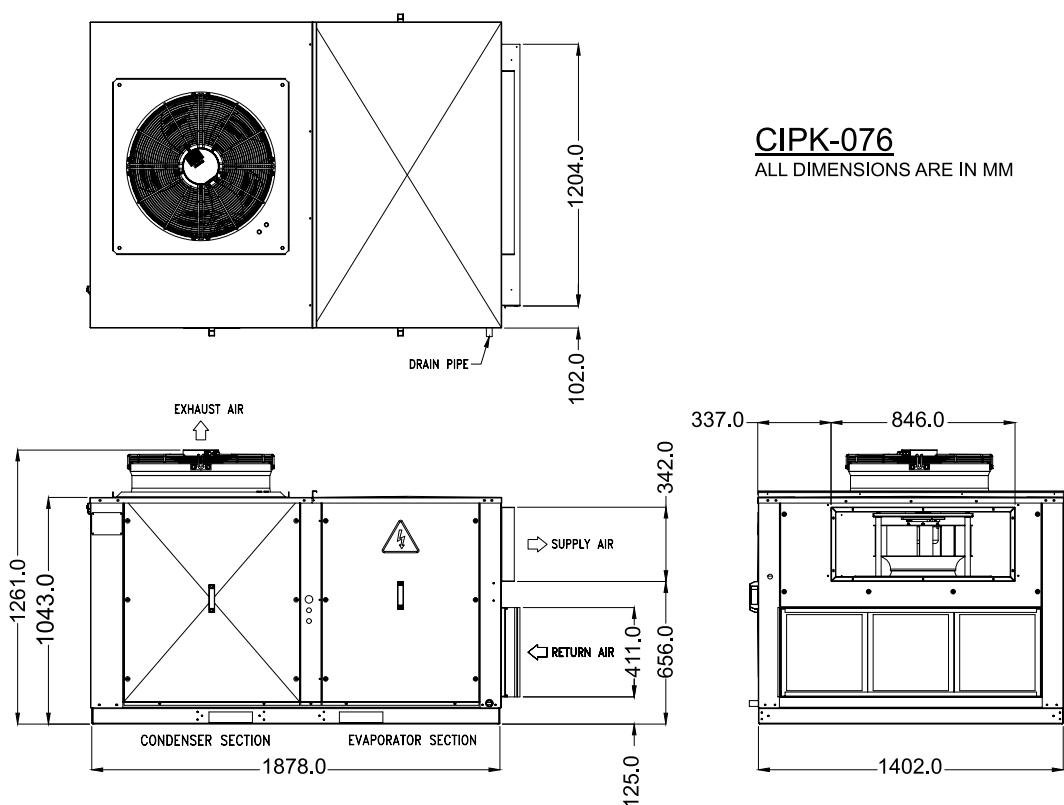
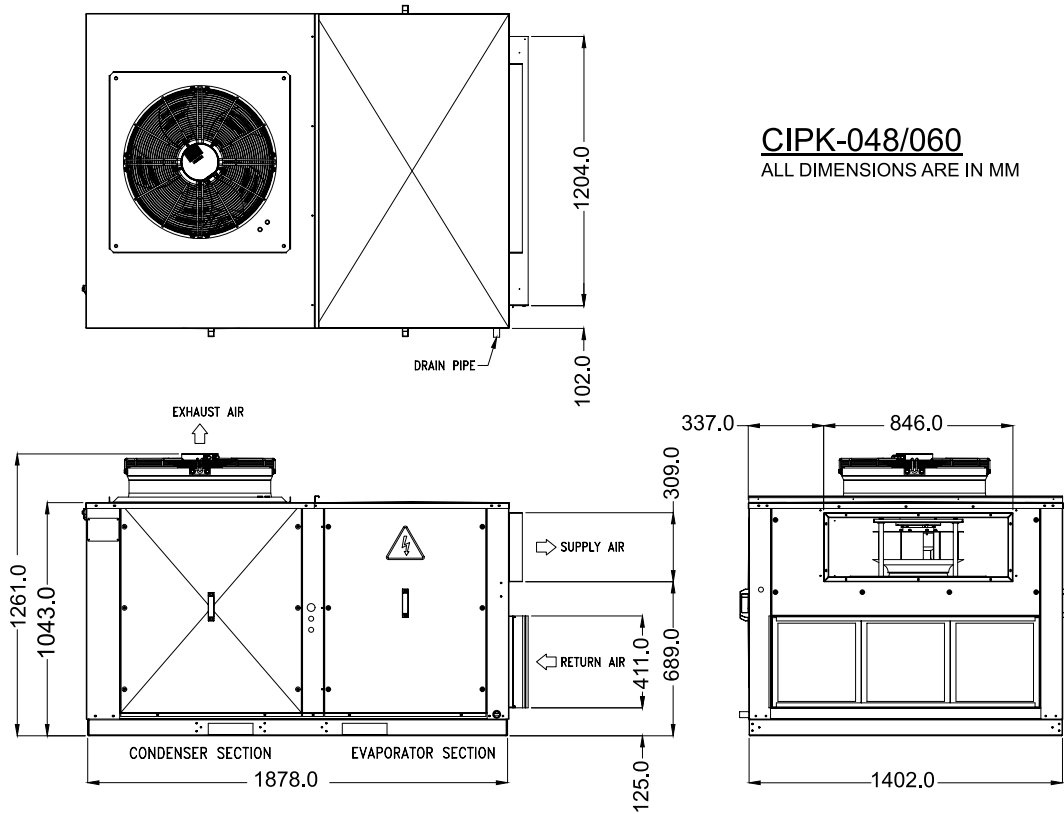
CIPIK-120DC6C	3800	86	72	124,133	94,512	9.27	107,974	85,505	9.52	103,972	79,091	10.12	91,213	63,849	11.02
		80	67	116,450	98,733	8.86	96,560	84,882	9.08	92,981	78,499	9.66	81,571	57,100	10.52
		74	62	111,640	102,507	8.36	87,913	82,957	8.59	84,654	76,734	9.13	74,266	51,986	9.94
		68	57	102,774	99,230	8.14	76,090	74,580	8.23	73,271	68,984	8.69	64,279	44,996	9.46
	4000	86	72	124,725	95,456	9.46	108,493	86,309	9.71	104,473	79,834	10.33	91,653	64,157	11.24
		80	67	117,001	99,204	8.91	97,024	86,867	9.14	93,428	80,351	9.72	81,963	57,374	10.58
		74	62	112,170	102,977	8.47	88,319	83,337	8.70	85,048	77,087	9.25	74,611	52,228	10.07
		68	57	103,265	99,701	8.09	76,443	74,914	8.29	73,611	69,296	8.81	64,578	45,204	9.59
	4151	86	72	125,314	95,406	9.56	109,013	86,734	9.82	104,973	80,422	10.43	92,091	64,464	11.35
		80	67	117,555	99,677	8.99	97,500	85,800	9.23	94,089	79,834	9.81	82,543	57,780	10.68
		74	62	112,699	103,448	8.56	88,728	83,717	8.78	85,441	77,437	9.34	74,956	52,469	10.17
		68	57	103,754	100,171	8.17	76,795	75,249	8.37	73,949	69,605	8.90	64,874	45,412	9.68

Note: Capacity in KW= (Btu/hr)*0.0003. Cooling capacities are gross ratings
Power Input is Total Power (kW)

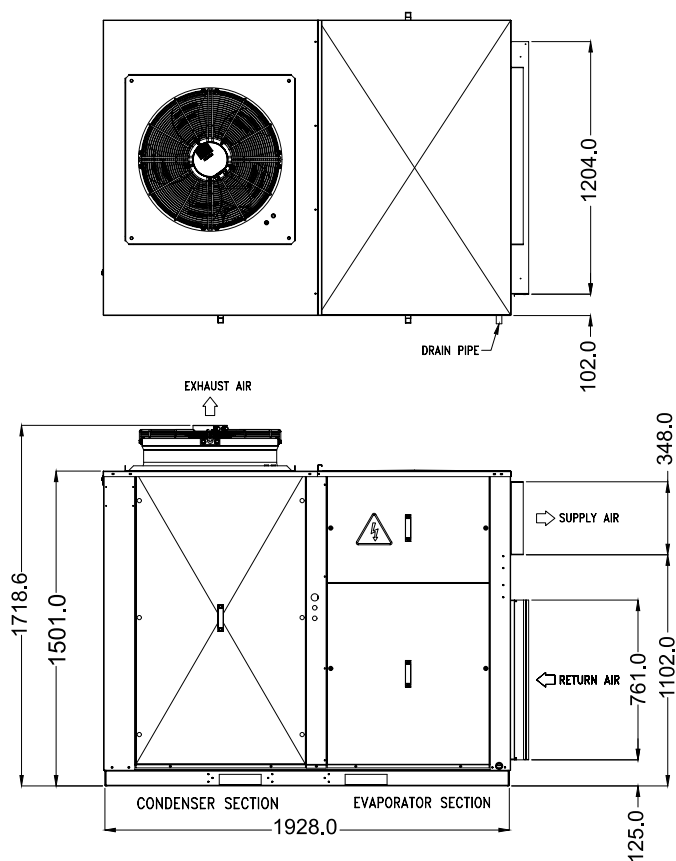
FAN PERFORMANCE

Model	External Static Pressure (in.wg / Pascal)								
	CFM	(0.0 / 0)	(0.20 / 50)	(0.30 / 75)	(0.40 / 100)	(0.50 / 125)	(0.60 / 150)	(0.70 / 175)	(0.80 / 200)
		RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM
CIPK-048DC6C	1400	880	980	1052	1100	1150	1182	1238	1294
	1500	950	1050	1100	1150	1200	1250	1300	1350
	1600	1000	1100	1150	1200	1250	1300	1350	1400
CIPK-060DC6C	1600	1000	1100	1150	1200	1250	1300	1350	1400
	1700	1050	1150	1200	1250	1300	1350	1400	1450
	1800	1100	1200	1250	1300	1350	1400	1450	1500
CIPK-076DC6C	2200	1000	1100	1100	1175	1200	1233	1283	1333
	2400	1075	1150	1225	1225	1275	1279	1304	1329
	2500	1100	1200	1250	1275	1330	1345	1385	1425
CIPK-090DC6C	2600	1150	1220	1270	1300	1350	1366	1406	1446
	2700	1175	1230	1290	1325	1400	1450	1500	1550
	2900	1200	1250	1300	1375	1530	-	-	-
CIPK-100DC6C	3000	1225	1275	1320	1385	1420	1446	1506	1550
	3150	1250	1325	1360	1400	1450	1470	1515	-
	3300	1300	1350	1400	1450	1500	-	-	-
CIPK-120DC6C	3800	1100	1200	1250	1280	1300	1314	1339	1573
	4000	1150	1250	1300	1370	1420	1453	1513	-
	4200	1200	1300	1400	1450	1500	-	-	-

UNIT DIMENSIONS

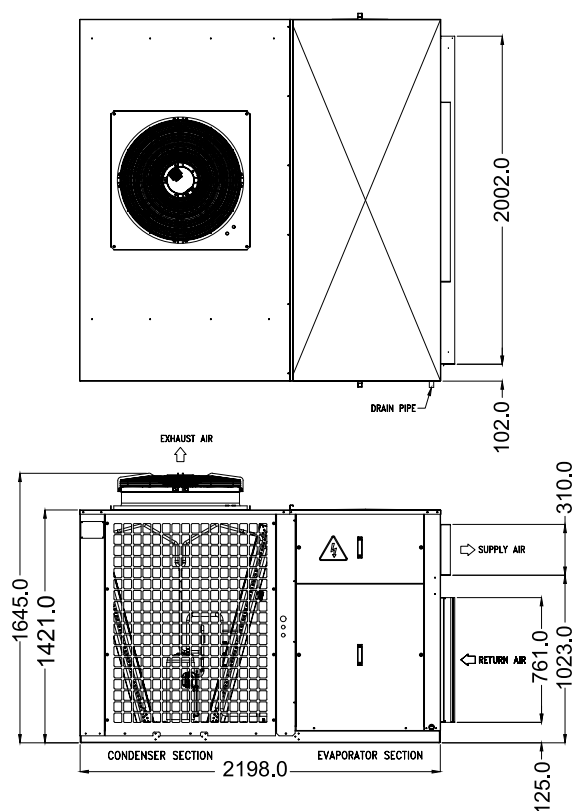
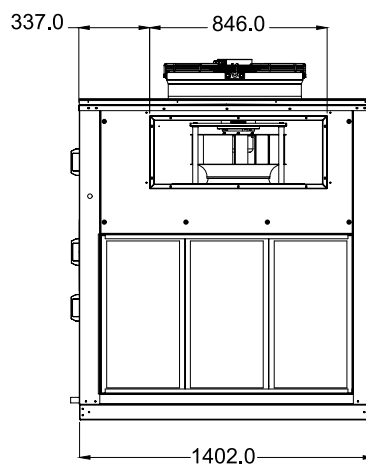


UNIT DIMENSIONS



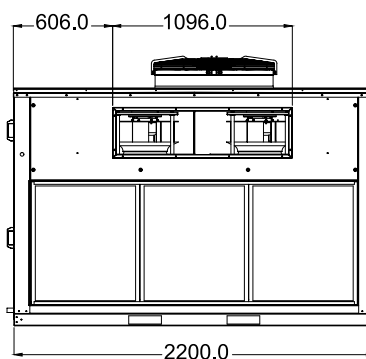
CIPK-090/100

ALL DIMENSIONS ARE IN MM

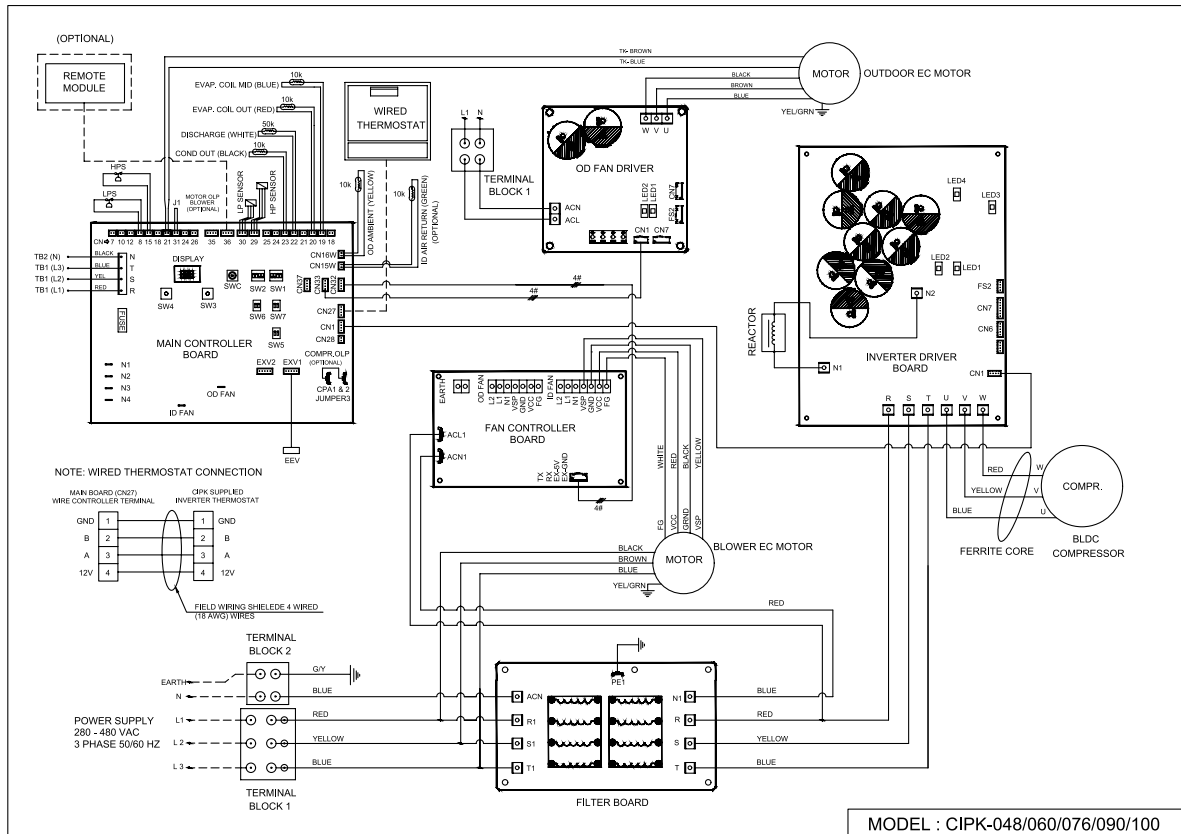


CIPK-120

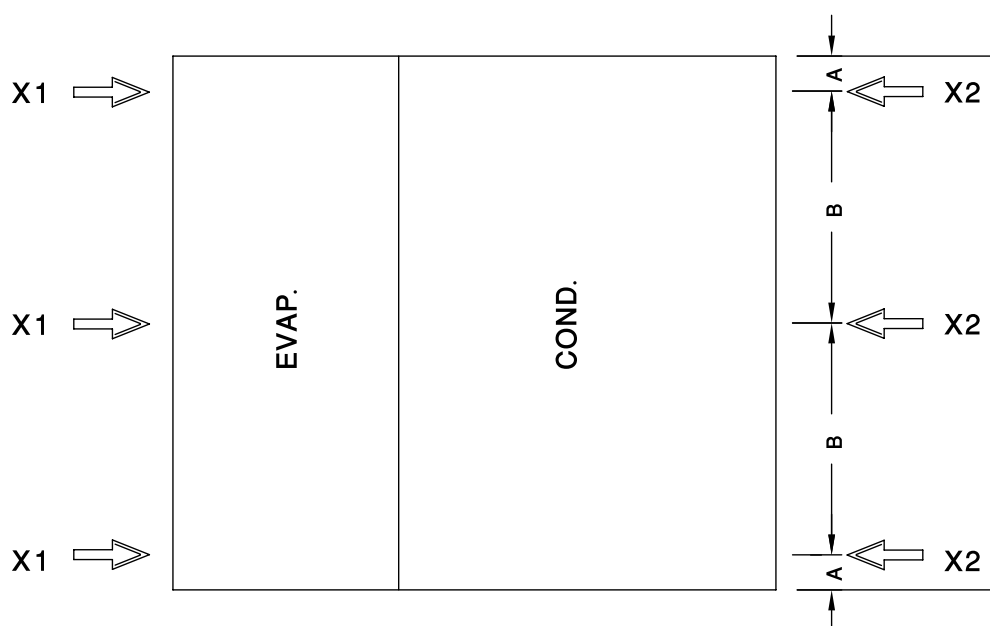
ALL DIMENSIONS ARE IN MM



WIRING DIAGRAMS



LOAD DISTRIBUTION



LOAD DISTRIBUTION				
MODEL	A (mm)	B (mm)	X1 (kg)	X2 (kg)
CIPK-048	75	N/A	79	96
CIPK-060	75	N/A	79	96
CIPK-076	75	N/A	84	103
CIPK-090	75	N/A	95	116
CIPK-100	75	N/A	103	126
CIPK-120	125	980	113	137



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