PNGv Series
Packaged Air Conditioners

Range: 076 to 300 MBH

50 Hz

Features / Benefits

- Statically and dynamically balanced belt driven Centrifugal, DIDW Forward Curved fan, designed for low sound operation.
- Motor pulleys are adjustable Speed Sheaves designed to allow changes to driven shaft speed where drive motor speed is fixed.
- Painted electro-static powder coat, zinc coated steel panels provide additional protection against rust and discoloration in areas with high UV factor.
- Cooling coils are built up of inner grooved copper tubes with mechanically bonded hydrophilic aluminum fins provide peak heat transfer.
- Standard factory installed thermostatic expansion vales (TXV).
- Standard sloped drain pan with 8 mm polyethylene insulation.
- Low resistance aluminum washable filters having frontal access for removal.
- Easy panel removal of side panel allows access to serviceable components.

High Capacity Packaged Units With Tropical Hermetic Compressor

R410a
Environment Friendly

The new series of Coolex Package Units air conditioner are designed and manufactured to provide comfort cooling for residential and commercial applications with the optimum performance, high efficiency, reliability, ease of service & maintenance and capable to operate at extremely ambient conditions up to 125°F.

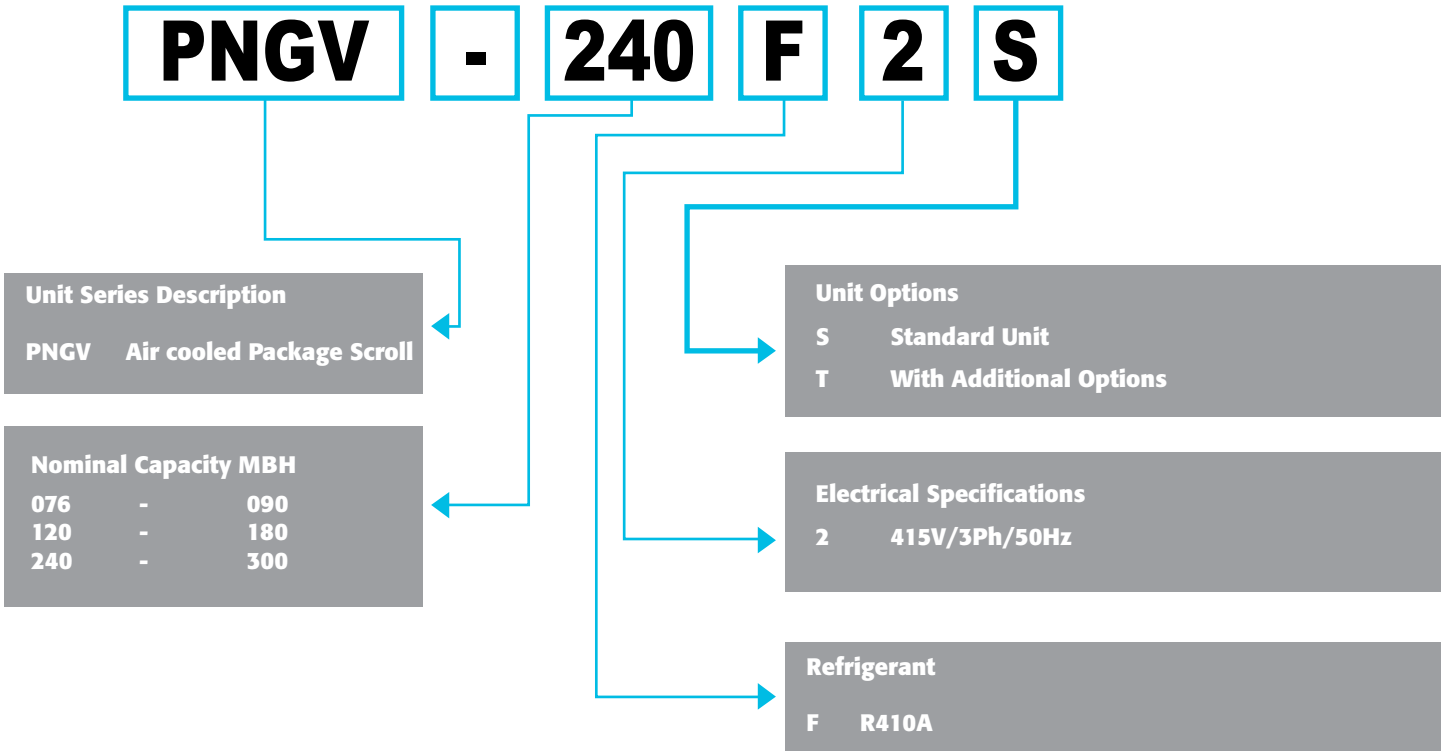
For more technical information please visit **www.coolex.com.kw**

Table of Contents

OTHER COOLEX PRODUCTS

1. Air Cooled Screw Water Chillers
2. Air Cooled Scroll Water Chillers
3. Air Handling Units
4. Ducted Split Units
5. Concealed Split Units
6. Fan Coil Units

NOMENCLATURE



UNIT RATING SUMMARY

Unit Model	Air Flow	Ambient temp 95°F			Ambient temp 115°F			Ambient temp 125°F		
	(CFM)	Cooling Capacity (Btu/h)	Total Power (kW)	EER	Cooling Capacity (Btu/h)	Total Power (kW)	EER	Cooling Capacity (Btu/h)	Total Power (kW)	EER
PNGV-076	2500	72,568	6.15	11.79	64,575	7.68	8.41	60,484	8.50	7.12
PNGV-090	3000	86,653	7.69	11.27	78,100	9.71	8.04	73,535	10.84	6.78
PNGV-130	4800	140,952	11.19	12.60	127,500	14.04	9.08	119,737	15.80	7.58
PNGV-180	6300	164,556	14.92	11.03	146,580	18.32	8.00	139,865	20.54	6.81
PNGV-240	7300	239,677	21.02	11.40	218,064	26.38	8.26	205,856	29.60	6.95
PNGV-300	9500	273,010	22.46	12.16	246,750	28.33	8.71	231,914	31.81	7.29

Rating Conditions: Indoor Temperature DB = 80⁰ F (26.7⁰ C).
WB = 67⁰ F (19.4⁰ C).

STANDARD SPECIFICATIONS

General

- The Package Units (PNGV) are factory assembled cooling or combination of cooling and heating with electric heater, suitable for outdoor installation mounting on the roof or ground.
- The packaged unit consists of scroll compressors, cooling coil, condenser coil, fans, electric heater (optional), control wiring and interconnecting piping-all factory assembled.
- The units are rated and tested in accordance with AHRI 210/240 & AHRI 340/360 standard.

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 hermetic scroll type provided with crankcase heater, internal pressure relief valve which provides high pressure protection to the refrigerant system and rubber vibration isolators for quiet and efficient operation. The compressors are equipped with internal motor protector for safe operation. The compressors are built to NF, VPE, CSA, & UL 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

The units are provided with centrifugal forward curve fans which are statically and dynamically balanced belt driven, designed for low sound level operation

Evaporator Blower Motor

Motors are Open Drip Proof (ODP) type with class B insulation with permanently lubricated bearings and automatic thermal protection.

Condenser Fans

Condenser air fan is of the propeller type, aluminum blade with a direct drive motor upward discharge and provided with fan grille mounted in casing.

Condenser Fan Motor

Motors are totally enclosed air-over type with class F insulation for weather protection with permanently lubricated bearings and automatic thermal protection.

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

PNGv series comes complete, as standard, with properly sized refrigerant lines including thermostatic expansion valve, sight glass, 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 out of heavy gauge sheet steel powder coated bake finished. Internal power and and control wiring is neatly routed, properly anchored and all wires are identified with cable markers as per NEC standard applicable to HVAC units. Major components used in the control panel are UL approved.

MICROPROCESSOR BASED CONTROLLER

The Air cooled Package Scroll (PNGV) are provided with technologically advanced Microprocessor based controller, incorporating the following benefits and features:

- Anti-recycling timing device
- Compressor lock out function
- Balance loading of compressors
- Compressors lead-lag operation
- Pump down option
- Fault diagnostics
- Indicator lights for high & low pressure safety

OPTIONAL SPECIFICATIONS

Construction

- Double skin for evaporator side
- Anti-corrossion coating for coils
- Copper fins for evaporator and/or condenser
- Stainless steel drain pan
- Special Air filter material
- Filter box with High Efficiency Bag filters
- Sand trap louver

Electrical

- Electric heater
- Compressor circuit breaker
- Blower motor circuit breaker
- Condenser fan motor circuit breaker
- External overload for condenser fan motor
- External overload for compressor
- TEFC Blower motor with Class F insulation
- Mild ambient kit
- Anti - ice thermostat
- Air flow switch
- Ultra violet light
- Modbus connectivity
- Wi-Fi Thermostat

Refrigeration

- Pump down kit
- Hot gas bypass kit
- High & Low Pressure gauges
- Rotalock valve for compressor
- Replaceable filter drier with mechanical shut-off valve
- Adjustable high/low pressure switch

Coolex App

Wi Fi Module

Typical Thermostat

GENERAL DATA

Outdoor Units		PNGV-076	PNGV-090	PNGV-130	PNGV-180	PNGV-240	PNGV-300
Power Supply	V / PH / HZ	415/3/50					
Evaporator Blower	Type	Centrifugal Forward Curve Belt Driven					
	Motor Enclosure/Ins Class	Open Drip Proof, Class B					
	Nominal HP	1	2	2	3	5	
Evaporator Coil	Type	Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes					
	Rows	4R					
Air Filter	Type	Washable aluminum mesh					
	Thickness (in)	1"			2"		
Compressor	Type	Hermetic Scroll					
	Quantity	1			2		
	Refrigerant	R410A					
	Refrigerant circuits	1			2		
	Expansion device type	Thermostatic Expansion Valve					
Condenser Fan	Type	Propeller					
	No. of fans	1			2		
	Motor Enclosure/Ins Class	Totally Enclosed Air Over Type , Class F					
	Nominal HP x Qty	0.7 x 1	1.3 x 1		0.7 x 1	1.3 x 2	2.1 x 2
Condenser Coil	Type	Enhanced Aluminum Fins & Copper Tubes					
	Rows	3R/4R					
Weight	kg	232	300	576	657	810	1074

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]								
	CFM	95			115			125		
		Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
		Total	Sen.		Total	Sen.		Total	Sen.	
PNGV-076	2200	68,607	48,664	6.04	61,050	45,948	7.49	57,182	44,585	8.40
	2350	71,722	55,277	6.11	63,822	52,193	7.62	59,778	50,644	8.46
	2500	72,568	59,204	6.15	64,575	55,901	7.68	60,484	54,243	8.50
PNGV-090	2600	83,107	59,718	7.59	74,904	56,681	9.59	70,526	55,090	10.67
	2800	85,332	65,202	7.65	76,910	61,886	9.66	72,415	60,148	10.76
	3000	86,653	69,406	7.69	78,100	65,877	9.71	73,535	64,027	10.84
PNGV-130	4000	135,614	96,854	11.07	122,671	91,985	13.89	115,202	89,227	15.63
	4400	138,035	103,123	11.12	124,861	97,938	13.96	117,259	95,002	15.71
	4800	140,952	112,825	11.19	127,500	107,152	14.04	119,737	103,941	15.80
PNGV-180	5100	157,822	112,237	13.90	140,582	106,244	17.99	134,141	104,159	20.30
	5700	162,048	122,543	14.51	144,346	116,000	18.22	137,734	113,723	20.40
	6300	164,556	130,445	14.92	146,580	123,481	18.32	139,865	121,057	20.54
PNGV-240	6800	232,496	161,876	20.87	211,531	153,659	26.20	199,689	149,109	29.39
	7000	236,234	169,751	20.95	214,932	161,134	26.30	202,899	156,363	29.50
	7300	239,677	177,969	21.02	218,064	168,935	26.38	205,856	163,933	29.60
PNGV-300	9000	264026	181015	22.30	238,631	170,972	28.12	224,283	165,421	31.58
	9200	268682	190217	22.38	242,839	179,664	28.23	228,239	173,830	31.70
	9500	273010	200167	22.46	246,750	189,062	28.33	231,914	182,923	31.81

LEGEND:

CFM : Air flow rate (Ft^3/minute)
P.I. : power input is total power.

Note: Above performance based on Evaporator On Coil Temperature of 80°F DB / 67°F WB

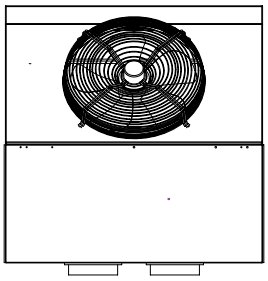
UNIT ELECTRICAL DATA

MODEL	POWER SUPPLY	VOLTAGE RANGE		Condenser Fan Motor		Compressor 1		Compressor 2		Evaporator Blower Motor		MCA	MOCP
	(V-PH-HZ)	MIN.	MAX.	HP	FLA	RLA	LRA	RLA	LRA	HP	FLA		
PNGV-076	415-3-50	374	457	0.7 x 1	1.25 x 1	12.5	75	-	-	1.0	3.3	17.6	30
PNGV-090	415-3-50	374	457	24.8	2.3 x 1	14.5	101	-	-	2.0	4.3	24.8	35
PNGV-130	415-3-50	374	457	130 x 1	2.3 x 1	20.8	144	-	-	2.0	4.3	33.8	50
PNGV-180	415-3-50	374	457	0.7 x 2	1.25 x 1	12.5	75	14.5	101	3.0	4.6	43.8	50
PNGV-240	415-3-50	374	457	1.3 x 2	2.3 x 2	16.4	128	16.4	128	5.0	7.2	50.1	60
PNGV-300	415-3-50	374	457	2.1 x 2	3.8 x 2	18	139	20.8	144	5.0	7.2	57.2	70

LEGEND:

FLA - Full Load Amps
HP - Horse Power
LRA - Locked Rotor Amps
RLA - Rated Load Amps
MCA - Minimum Circuit Amps
MOCP - Maximum Over Current Protection

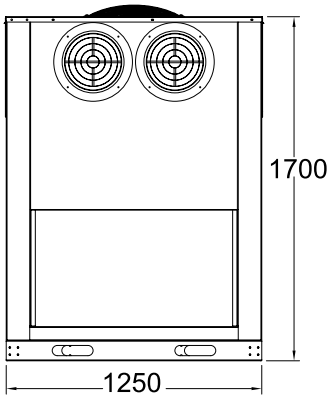
UNIT DIMENSIONS



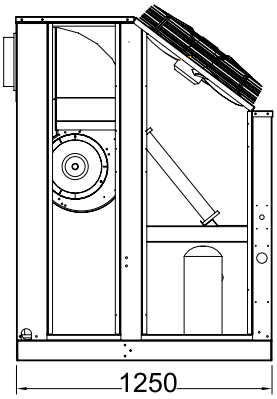
TOP VIEW

PNGV-076

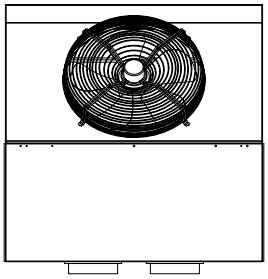
ALL DIMENSIONS ARE IN MM



FRONT VIEW



SIDE VIEW



TOP VIEW

PNGV-090/120

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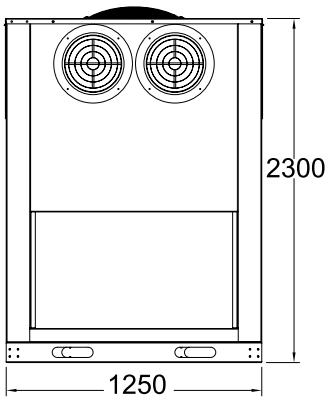
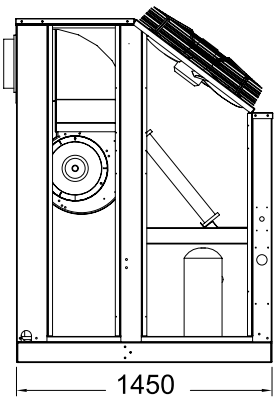
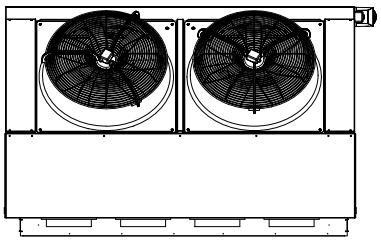


FRONT VIEW



SIDE VIEW

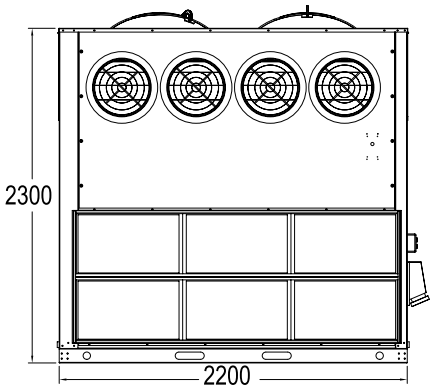
UNIT DIMENSIONS



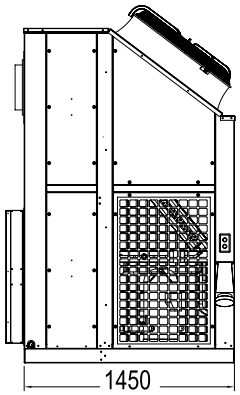
TOP VIEW

PNGV-180/240

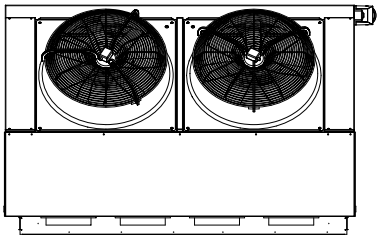
ALL DIMENSIONS ARE IN MM



FRONT VIEW



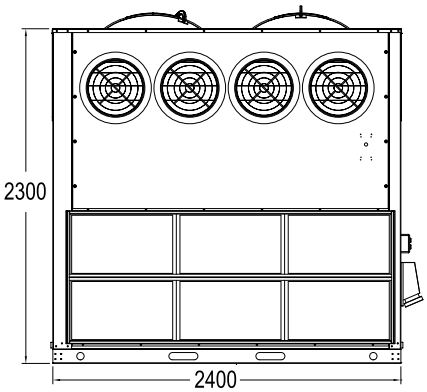
SIDE VIEW



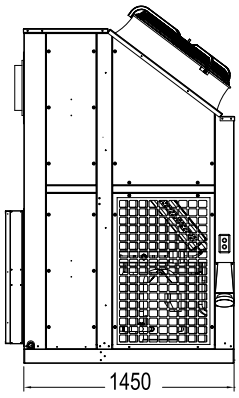
TOP VIEW

PNGV-300

ALL DIMENSIONS ARE IN MM

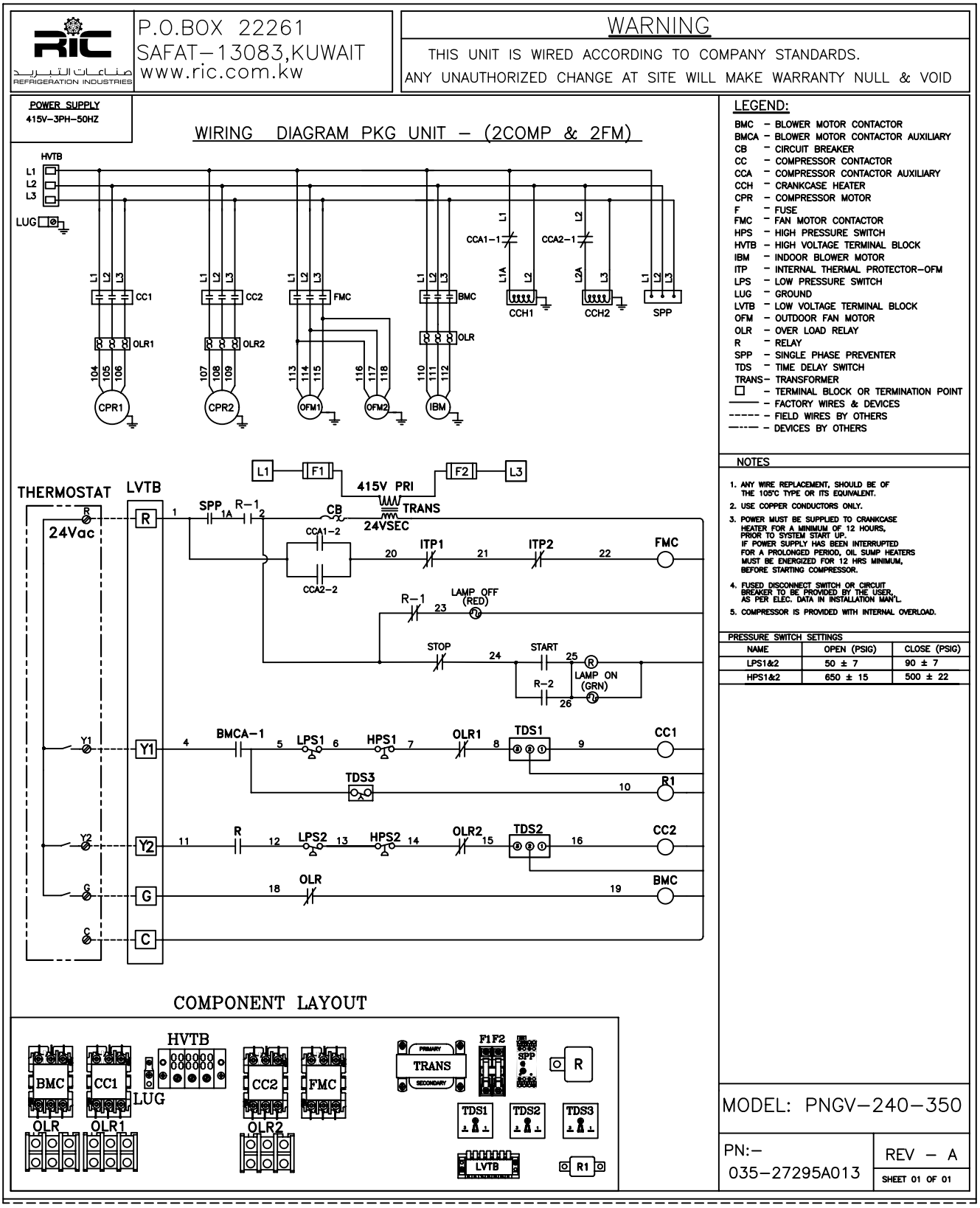


FRONT VIEW



SIDE VIEW

TYPICAL WIRING DIAGRAM



COOLEX

NOTES

صناعات التبريد
REFRIGERATION INDUSTRIES

About RIC

Refrigeration Industries Company (KSE 504) is a group holding company with diversified interests in manufacturing, contracting and services. Recognized regionally for our engineering capabilities and management excellence, RIC and its subsidiaries offer a wide range of high quality products and services that cater to both residential and commercial customers, in the areas of climate control technologies and specialized storage solutions.

In view of the growing Kuwait infrastructure and the limitations imposed on it by the country's arid climate, the Refrigeration Industries Company was established 43 years ago in 1973, by Amiri Decree. The company's operations began with the construction of the first cold stores in the region, to enable the storage of the imported foods, on which Kuwait relied. Along with the development and advancement of the country, so has RIC prospered and expanded, and is now a milestone in the history of modern Kuwait.

RIC takes pride in its successful record and the many accolades it has garnered over time, but the greatest achievement has been the provision of comfort and protection from the harsh climate, to the people of Kuwait.

More than 43 years of uninterrupted service, overcoming extreme weather conditions, war, economic recessions and ever increasing competition, is testimony to the fact that RIC has met the expectations and responsibilities that was envisioned at the beginning and also highlights the tenacity and vision to exceed them in the future.

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 Coolex 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).

نبذة عن الشركة

شركة صناعات التبريد (متداولة في سوق الكويت للأوراق المالية برقم 504) هي شركة متنوعة الأنشطة تعمل في مجال التصنيع والمقاولات والخدمات. ونحن نقدم مجموعة كبيرة من المنتجات والخدمات والحلول التقنية في مجال مواجهة الظروف المناخية وحلول التخزين. وقد حازت الشركة على إعتراف إقليمي بقدراتها الهندسية وكفاءتها الإدارية.

شركة صناعات التبريد هي مجموعة شركات تهدف إلى توفير أعلى مستويات الجودة من حيث المنتجات والخدمات التي تلبي إحتياجات عملائها السكنية والتجارية. وعلى مدى ثلاثة و أربعون عاماً مضت على إنشاء شركتنا فقد إستطعنا أن نوطد أقدامنا في جميع قطاعات السوق الكويتي. ونحن إذ نفتخر بالإنجازات التي حققناها، إلا أننا أشد فخرا بأننا تمكنا من الوقوف إلى جانب أهل الكويت على مدى سنوات طويلة في مواجهة تقلبات الظروف المناخية القاسية سواء من حيث درجات الحرارة العالية أو الأتربة أو الرطوبة.

وبإعتبارها إحدى الشركات الصناعية العاملة في دولة الكويت، فقد واجهت الشركة تحديات وآمال كبيرة في سعيها لتحقيق النجاح، وقد كانت الشركة – ولا تزال – معلما من المعالم المهمة في نظر أهل الكويت لما قدمته من منتجات وخدمات إستطاعت أن تغير الطبيعة القاسية لمناخ الكويت. فبعد نحو 43 عاما تقريبا، لا يزال السؤال مطروحا حول تحقيقنا لهذه التوقعات، فهل إستطاعت الشركة أن تتحمل مسؤولياتها على الوجه الأكمل؟ ويأتي الرد بالإيجاب، فعلى مدى ثلاثة و أربعين عاما تقريبا لم تتوقف الشركة خلالها عن الإستمرار في تقديم خدماتها وأعمالها رغم الصعوبات التي تمثلت في ظروف الطقس القاسية أو الحروب أو الكساد الاقتصادي أو إرتفاع حدة المنافسة، فقد كانت كل واحدة من هذه الظروف بمثابة شهادة على أننا حققنا ما وعدنا به وما عقدنا العزم على تنفيذه.

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 الآيزو 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 ISO 17025 لمختبر السيكرومترية.

2016 الحصول على شهادة كفاء الطاقة لأجهزة التكييف المنفصلة و الوحدات المدمجة (مملكة البحرين).

COOLEX

COOLEX DISTRIBUTORS

Sultanate of Oman

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