COOLEX

Rooftop Package Series
R-407C 48-480 MBH

Packaged Air Conditioning Units
With Hermetic Compressor
Tropical

60 Hz

R407C

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

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OTHER COOLEX PRODUCTS

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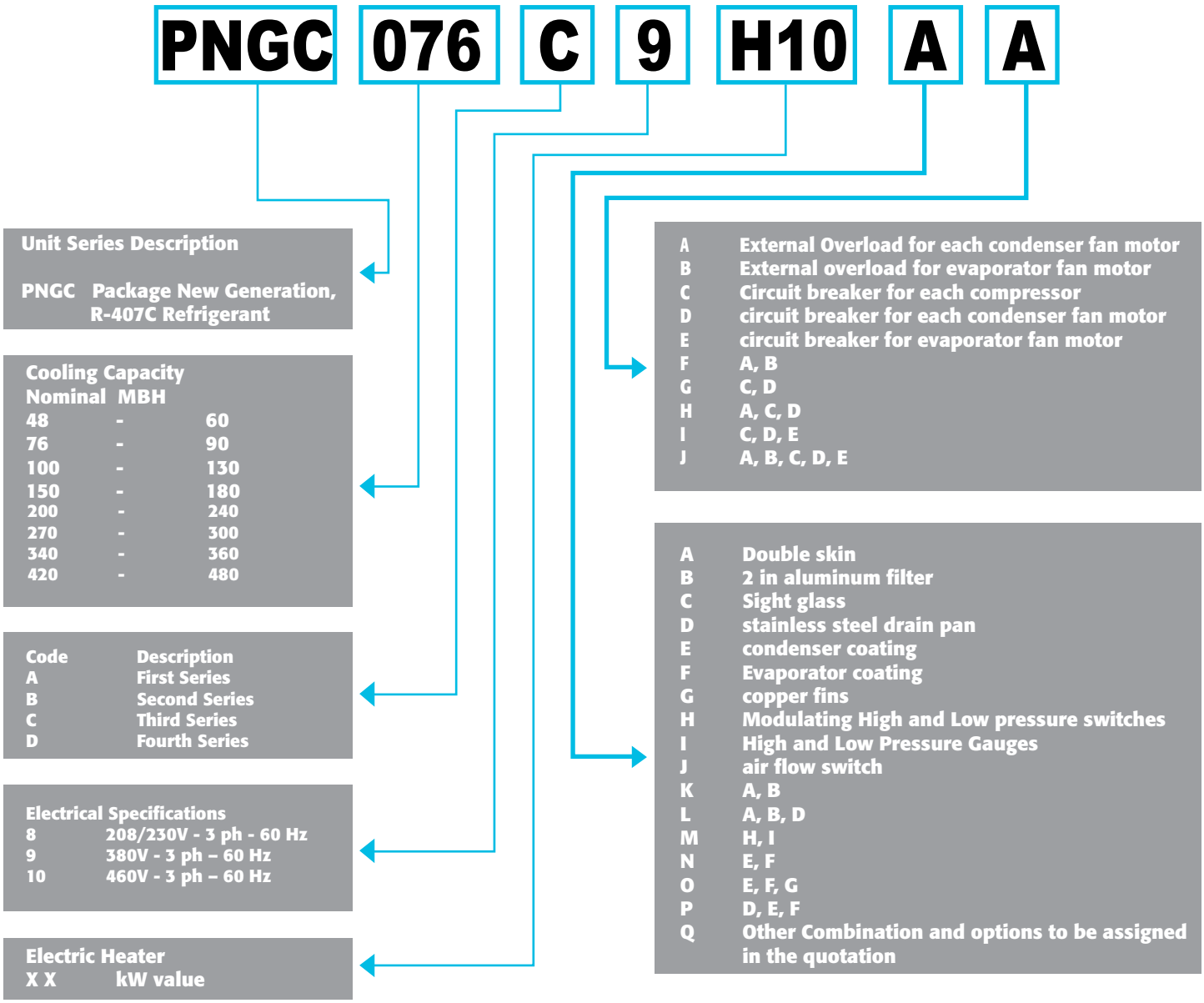
4. Ducted Split Units
5. Concealed Split Units
6. Fan Coil Units

INTRODUCTION

COOLEX High Efficiency Package Units are designed for outdoor installation specifically for tropical operation with high performance, low power consumption, easy installation and low noise operations.

Coolex Packaged Units can be used for cooling or heating with optional electric heater.

NOMENCLATURE



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UNIT RATING SUMMARY

Model	Air Flow (MAX)	Ambient temp 95°F				Ambient temp 115°F				Ambient temp 118.4°F				Ambient temp 122°F			
		Cooling Capacity	Total Power (kW)	kW/Ton	EER	Cooling Capacity	Total Power (kW)	kW/Ton	EER	Cooling Capacity	Total Power (kW)	kW/Ton	EER	Cooling Capacity	Total Power (kW)	kW/Ton	EER
	(CFM)	(MBH)				(MBH)				(MBH)				(MBH)			
PNGC 048	1900	54.51	4.67	1.03	11.67	48.68	5.49	1.35	8.86	47.69	5.65	1.42	8.44	45.30	5.99	1.59	7.56
PNGC 060	2200	62.33	5.43	1.05	11.48	55.81	6.54	1.41	8.53	54.70	6.86	1.50	7.97	51.97	7.27	1.68	7.15
PNGC 076	2600	78.46	6.73	1.03	11.66	67.78	7.96	1.41	8.51	65.96	8.73	1.59	7.56	62.66	9.25	1.77	6.77
PNGC 090	2900	92.63	8.05	1.04	11.51	82.88	9.72	1.41	8.53	81.23	10.20	1.51	7.96	77.17	10.81	1.68	7.14
PNGC 100	3300	97.69	8.37	1.03	11.67	88.00	10.30	1.40	8.54	86.35	11.46	1.59	7.54	82.03	12.15	1.78	6.75
PNGC 130	3950	124.22	10.72	1.04	11.59	115.70	12.67	1.31	9.13	114.25	13.05	1.37	8.76	108.54	13.83	1.53	7.85
PNGC 150	4800	155.98	13.48	1.04	11.57	139.50	15.03	1.29	9.28	136.70	15.44	1.36	8.85	129.87	16.37	1.51	7.93
PNGC 180	5200	182.78	15.94	1.05	11.47	161.00	17.77	1.32	9.06	157.30	18.30	1.40	8.60	149.43	19.40	1.56	7.70
PNGC 200	6300	196.82	17.10	1.04	11.51	181.60	21.29	1.41	8.53	179.01	22.00	1.47	8.14	170.06	23.32	1.65	7.29
PNGC 240	7000	225.20	19.50	1.04	11.55	201.47	23.70	1.41	8.50	197.44	25.10	1.53	7.87	187.57	26.61	1.70	7.05
PNGC 270	8000	255.16	22.10	1.04	11.55	225.18	26.40	1.41	8.53	220.09	27.60	1.50	7.97	209.08	29.26	1.68	7.15
PNGC 300	9900	283.49	26.64	1.13	10.64	252.44	29.50	1.40	8.56	247.17	32.10	1.56	7.70	234.81	34.03	1.74	6.90
PNGC 340	10450	332.17	30.89	1.12	10.75	292.96	34.40	1.41	8.52	286.29	35.50	1.49	8.06	271.98	37.63	1.66	7.23
PNGC 360	11000	345.96	32.76	1.14	10.56	304.37	35.70	1.41	8.53	297.31	38.54	1.56	7.71	282.44	40.85	1.74	6.91
PNGC 420	12000	416.69	38.57	1.11	10.80	367.62	42.92	1.40	8.56	359.28	44.18	1.48	8.13	341.32	46.83	1.65	7.29
PNGC 480	13000	444.36	41.94	1.13	10.60	402.52	44.56	1.33	9.03	395.41	45.80	1.39	8.63	375.64	48.55	1.55	7.74

Rating Conditions: Indoor Temperature DB = 80 °F (26.7 °C).
WB 67 °F (19.4 °C).

OUT STANDING FEATURES

Superior Efficiency

- High EER (Energy Efficiency Ratio) exceeds the new ASHRAE 90.1 efficiency levels
- Low power consumption
- High volumetric efficiency scroll compressors
- Designed to operate at severe ambient temperature up to 52°C without tripping

Quiet operation

- Low noise level compressors, condenser fans and evaporator blower
- Compact physical footprint
- Special designed refrigerant piping in addition to the insulation for the evaporator section

Controls

- Single point power supply
- Color coded wires
- Weather proof Control panel
- Microprocessor Controller

Quality Assurance

All units in the PNG series are:

- Factory run tested.
- Produced in an ISO 9001-2000 listed manufacturing facility.
- Constructed in compliance with ASHRAE 15 safety requirements.
- AHRI certified cooling coils

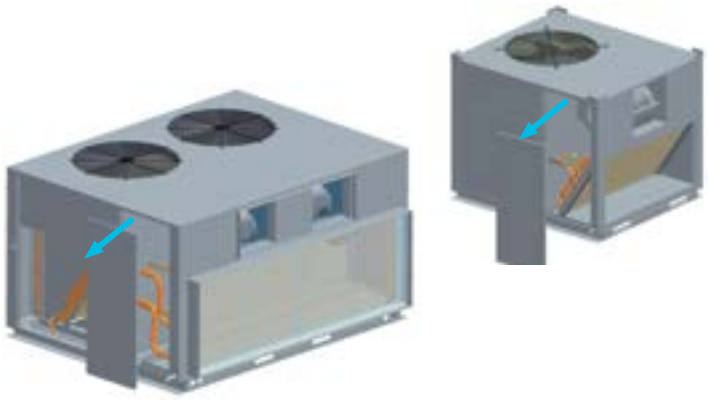
Options & Accessories

- Totally Enclosed Fan cooled (TEFC) Blower Motor
- Intelligent air Quality System by Economizer control
- Ultra Violet (UV) lamps

OUT STANDING FEATURES

Evaporator's Side

- Easy access to the evaporator side with removable panel for maintenance purpose for the fan, motor, belt, pulleys, 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 hinged door for microprocessor access and electrical parts

STANDARD SPECIFICATIONS

General

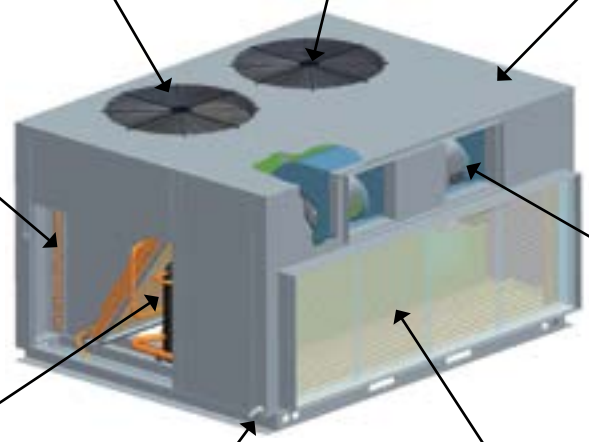
- The Package New Generation unit is a factory assembled cooling or combination of cooling and heating, suitable for outdoor installation mounting on the roof or ground.
- The packaged unit consists of scroll compressors, cooling coil, condenser coil, fans, electric heater (optional), control wiring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

Condenser Fans
The fans are selected for optimum efficiency and maximum sound power reduction, propeller type and direct driven, upward discharge and provided with fan grille mounted on the casing.

Condenser Fan Motor
Condenser fan motors are totally enclosed air-over type with class F insulation. The motors are provided with inherent thermal protection and auto rest type.

Condenser Coils
The coils are built up seamless copper tubes and mechanically bonded to scientifically designed louvered fins.
The assembled coils are factory leak tested under water at a pressure of 450 psig for quality and leak free unit.

Unit Casing
The casing sheet metal is 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 Fan
The units are provided with centrifugal fans which are statically and dynamically balanced, designed for low sound level operation
Belt driven.

Drain Pan
The drain pan is fabricated of galvanized steel. The drain pan is powder coat painted and the outer surface is thermally insulated.

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

OPTIONAL SPECIFICATIONS

Construction

- Double skin for evaporator side
- Coil protection materials:
  a) Polyurethane pre-coat Aluminum fins with copper tubes
  b) Tinned copper tubes with copper fins
- Condenser coil guard
- Mesh around perimeter of condenser sections
- Stainless steel drain pan
- Double side drain connections
- Other types of filter: synthetic fiber media for flat filter, 2" or 4" flat filter, bag filter
- Mixing box
- Vibration isolation for the unit :
  a) Neoprene rubber pads
  b) 1" spring isolator
- Lockable door for the control panel

Electrical

- Electric heaters (open coil type)
- Electric heaters (fin type)
- Compressor circuit breaker
- Mild ambient (fan cycling) control
- Duct sensor
- Anti - ice thermostat
- Volt free contacts
- External overload
- Ultra violet light
- Dirty filter indication
- Fire alarm connection
- Economizer controller

Refrigeration

- Pump down solenoid valve (PDS)
- Hot gas bypass valve
- Adjustable high pressure switch
- Adjustable low pressure switch
- Muffler
- Replaceable filter drier with mechanical shut-off valve

Coolex App

Wi Fi Module

Typical Thermostat

MICROPROCESSOR CONTROLLER

Microprocessor Based Controller

The Package New Generation units are provided with technologically advanced Microprocessor based controller, incorporating the following benefits and features:

- ANTI-RECYCLE TIMER
- Compressor lock out function
- Balance loading of compressors
- Compressors lead-lag operation
- Pump down option.
- Fault diagnostics
- Indicator lights for high & low pressure Safeties

GENERAL DATA

Model		PNGC-048	PNGC-060	PNGC-076	PNGC-090	PNGC-100	PNGC-130
Power supply [Volts/Phase/Hz]		380 V - 3 Ph -60 Hz					
Compressor	Type	Scroll Hermetic					
	Quantity	1					
	Refrigerant	R - 407C					
Condenser Fan	Type	Propeller					
	Diameter, mm	610			762		
	Air Flow, m3 /min. (CFM)	95 (3360)	102 (3605)		198 (6995)		
	Motor Enclosure/Ins Class	Totally Enclosed Air Cooled, Class F					
	Nominal kW (HP)	0.56 (3/4)			0.75 (1)		1.12 (1.5)
Condenser Coil	Type	Enhanced Fins & Tubes					
	No of Rows	2R/3R					
Evaporator Blower	Type	Centrifugal					
	Motor Enclosure/Ins Class	Open Drip-Proof, Class B					
	Nominal kW (HP)	0.56 (3/4)	0.75 (1)		1.12 (1.5)	1.5 (2)	
Evaporator Coil	Type	Enhanced Fins & Tubes					
	No of Rows	3R/4R					
Expansion Device	Type	Capillary		Thermostatic Expansion Valve			
Air filter	Type	Washable Aluminum Mesh					
	Thickness [inch]	0.5"		1"			
Weight	kg	180	196	233	277	361	375

GENERAL DATA

Model		PNGC-150	PNGC-180	PNGC-200	PNGC-240	PNGC-270
Power supply [Volts/Phase/Hz]		380 V - 3 Ph -60 Hz				
Compressor	Type	Hermetic Scroll				
	Quantity	2				
	Refrigerant	R-407C				
Condenser Fan	Type	Propeller – Direct Drive				
	Diameter, mm	630		762		
	No. of fans	2				
	Air Flow, m3 /min. (CFM)	345(12,200)		518(18,300)		
	Motor Enclosure/Ins Class	Totally Enclosed Air Over, Class F / Class B				
	Nominal kW (HP)	2 x 0.75 (1.0)		2 x 1.10 (1.5)		
Condenser Coil	Type	Enhanced Fins & Tube				
	No of Rows	3R/4R				
Evaporator Blower	Type	Centrifugal - Belt Driven				
	Motor Enclosure/Ins Class	Open Drip-Proof, Class F / Class B				
	Nominal kW (HP)	2.2(3)		3.7(5)		
Evaporator Coil	Type	Enhanced Fins & Tube				
	No of Rows	3R/4R				
	Expansion device type	Thermostatic Expansion Valve				
Air filter	Type	Washable Aluminum Mesh				
	Thickness [inch]	2 "				
Operating Weight	kg	610	635	742	755	1005

Model		PNGC-300	PNGC-340	PNGC-360	PNGC-420	PNGC-480
Power supply [Volts/Phase/Hz]		380 V - 3 Ph -60 Hz				
Compressor	Type	Hermetic Scroll				
	Quantity	2				
	Refrigerant	R-407C				
Condenser Fan	Type	Propeller – Direct Drive				
	Diameter, mm	762	800	762		
	No. of fans	2		4		
	Air Flow, m3 /min. (CFM)	518(18,300)	623(22,000)	1036(36,600)		
	Motor Enclosure/Ins Class	Totally Enclosed Air Over, Class F / Class B				
	Nominal kW (HP)	2 x 1.10 (1.5)	2 x 1.5 (2)	4 x 1.10 (1.5)		
Condenser Coil	Type	Enhanced Fins & Tube				
	No of Rows	3R/4R				
Evaporator Blower	Type	Centrifugal - Belt Driven				
	Motor Enclosure/Ins Class	Open Drip-Proof, Class F / Class B				
	Nominal kW (HP)	3.7(5)				5.5(7.5)
Evaporator Coil	Type	Enhanced Fins & Tube				
	No of Rows	3R/4R				
	Expansion device type	Thermostatic Expansion Valve				
Air filter	Type	Washable Filter Mesh				
	Thickness [inch]	2 "				
Operating Weight	kg	1065	1225	1350	1555	1635

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PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-048	1400	86	72	59,049	40,062	4.71	52,722	37,615	5.66	51,636	37,198	5.83	49,051	35,711	6.18
		80	67	53,049	36,941	4.50	47,364	34,684	5.41	46,389	34,300	5.56	44,066	32,929	5.90
		74	62	46,759	33,443	4.25	41,748	31,400	5.11	40,889	31,053	5.26	38,841	29,811	5.57
		68	57	40,633	29,880	4.14	36,278	28,055	4.90	35,531	27,745	5.01	33,751	26,636	5.34
	1600	86	72	59,832	40,712	4.81	53,420	38,225	5.78	52,321	37,802	5.95	49,701	36,290	6.30
		80	67	53,754	37,672	4.53	47,993	35,371	5.44	47,005	34,979	5.60	44,651	33,581	5.93
		74	62	47,376	34,137	4.31	42,299	32,052	5.18	41,428	31,697	5.32	39,353	30,430	5.64
		68	57	41,172	30,383	4.12	36,760	28,528	4.94	36,003	28,212	5.07	34,200	27,084	5.38
	1900	86	72	60,671	41,515	4.86	54,169	38,979	5.84	53,055	38,547	6.01	50,397	37,006	6.37
		80	67	54,511	38,375	4.67	48,679	36,042	5.49	47,687	35,645	5.65	45,303	34,219	5.99
		74	62	48,038	34,729	4.35	42,890	32,608	5.23	42,007	32,247	5.38	39,903	30,958	5.70
		68	57	41,751	31,036	4.16	37,276	29,141	4.98	36,509	28,818	5.12	34,680	27,666	5.43
PNGC-060	1890	86	72	67,519	44,373	5.49	60,444	42,834	6.84	59,230	42,571	7.07	56,264	40,869	7.50
		80	67	60,658	40,917	5.24	54,302	39,497	6.53	53,211	39,255	6.75	50,546	37,685	7.16
		74	62	53,466	37,042	4.95	47,863	35,757	6.17	46,902	35,538	6.38	44,553	34,117	6.76
		68	57	46,461	33,096	4.81	41,592	31,948	5.92	40,756	31,752	6.08	38,715	30,483	6.49
	2000	86	72	68,414	45,094	5.60	61,245	43,529	6.98	60,015	43,263	7.22	57,010	41,533	7.65
		80	67	61,464	41,727	5.27	55,023	40,279	6.57	53,918	40,032	6.79	51,218	38,431	7.20
		74	62	54,171	37,811	5.01	48,495	36,500	6.25	47,521	36,276	6.47	45,141	34,826	6.85
		68	57	47,078	33,653	4.79	42,144	32,486	5.96	41,298	32,287	6.16	39,229	30,996	6.53
	2200	86	72	69,373	45,983	5.65	62,104	44,387	7.05	60,857	44,115	7.29	57,809	42,351	7.73
		80	67	62,330	42,505	5.43	55,809	41,043	6.54	54,700	40,794	6.86	51,965	39,162	7.27
		74	62	54,928	38,467	5.06	49,172	37,133	6.31	48,185	36,905	6.53	45,771	35,430	6.92
		68	57	47,739	34,376	4.84	42,736	33,184	6.02	41,878	32,981	6.22	39,780	31,662	6.60
PNGC-076	2160	86	72	84,996	57,101	6.94	73,408	50,945	8.70	71,425	49,897	9.00	67,848	47,902	9.54
		80	67	76,359	52,653	6.63	65,948	46,976	8.31	64,167	46,010	8.59	60,953	44,170	9.11
		74	62	67,304	47,667	6.26	58,128	42,528	7.85	56,558	41,654	8.12	53,726	39,988	8.61
		68	57	58,486	42,589	6.09	50,512	37,998	7.53	49,147	37,216	7.74	46,686	35,729	8.26
	2400	86	72	86,122	58,028	7.08	74,381	51,772	8.88	72,372	50,707	9.19	68,748	48,680	9.74
		80	67	77,373	53,695	6.66	66,824	47,906	8.36	65,018	46,921	8.65	61,763	45,045	9.16
		74	62	68,193	48,657	6.34	58,896	43,411	7.95	57,304	42,519	8.23	54,435	40,819	8.72
		68	57	59,263	43,306	6.06	51,183	38,637	7.58	49,800	37,843	7.84	47,306	36,330	8.31
	2600	86	72	87,329	59,172	7.15	75,424	52,792	8.97	73,387	51,707	9.28	69,711	49,640	9.84
		80	67	78,463	54,697	6.73	67,778	48,814	7.96	65,962	47,814	8.73	62,664	45,901	9.25
		74	62	69,146	49,500	6.40	59,718	44,164	7.79	58,105	43,256	8.31	55,195	41,526	8.80
		68	57	60,096	44,237	6.12	51,902	39,468	7.66	50,500	38,656	7.91	47,971	37,111	8.39

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PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-090	2400	86	72	100,339	60,134	8.30	89,768	54,843	10.20	87,955	53,943	10.52	83,551	51,786	11.15
		80	67	90,143	55,450	7.93	80,646	50,571	9.73	79,017	49,741	10.04	75,060	47,752	10.64
		74	62	79,454	50,199	7.49	71,084	45,783	9.20	69,648	45,031	9.49	66,160	43,231	10.06
		68	57	69,044	44,851	7.28	61,770	40,905	8.82	60,522	40,234	9.04	57,491	38,626	9.65
	2600	86	72	101,669	61,110	8.47	90,958	55,734	10.41	89,121	54,819	10.74	84,658	52,627	11.38
		80	67	91,340	56,547	7.97	81,717	51,572	9.79	80,066	50,725	10.10	76,057	48,697	10.71
		74	62	80,503	51,241	7.59	72,022	46,733	9.32	70,567	45,966	9.61	67,033	44,128	10.19
		68	57	69,961	45,606	7.25	62,591	41,594	8.88	61,326	40,911	9.15	58,254	39,276	9.71
	2900	86	72	103,094	62,315	8.56	92,233	56,832	10.51	90,371	55,900	10.84	85,845	53,665	11.49
		80	67	92,627	57,602	8.05	82,884	52,550	9.72	81,228	51,691	10.20	77,167	49,623	10.81
		74	62	81,628	52,129	7.66	73,028	47,544	9.41	71,553	46,764	9.71	67,969	44,894	10.29
		68	57	70,944	46,586	7.32	63,470	42,488	8.97	62,187	41,791	9.24	59,073	40,120	9.81
PNGC-100	2700	86	72	105,820	75,017	8.50	95,304	70,369	11.33	93,499	69,578	11.82	88,817	66,796	12.53
		80	67	95,067	69,173	8.11	85,619	64,887	10.82	83,998	64,157	11.28	79,791	61,592	11.96
		74	62	83,794	62,623	7.67	75,467	58,744	10.23	74,038	58,083	10.66	70,330	55,761	11.30
		68	57	72,816	55,952	7.46	65,579	52,486	9.81	64,336	51,895	10.16	61,115	49,821	10.84
	3000	86	72	107,223	76,235	8.67	96,568	71,512	11.57	94,739	70,708	12.06	89,995	67,880	12.79
		80	67	96,330	70,542	8.16	86,756	66,171	10.89	85,113	65,427	11.35	80,851	62,812	12.03
		74	62	84,900	63,922	7.77	76,463	59,963	10.36	75,015	59,289	10.80	71,258	56,919	11.45
		68	57	73,783	56,893	7.42	66,450	53,369	9.88	65,191	52,769	10.29	61,926	50,659	10.91
	3300	86	72	108,725	77,737	8.76	97,921	72,921	11.68	96,067	72,101	12.18	91,256	69,219	12.91
		80	67	97,687	71,858	8.37	87,996	67,426	10.30	86,348	66,673	11.46	82,031	64,006	12.15
		74	62	86,087	65,031	7.84	77,531	61,003	10.02	76,063	60,317	10.90	72,253	57,906	11.56
		68	57	74,820	58,116	7.49	67,384	54,516	9.97	66,107	53,904	10.38	62,796	51,748	11.02
PNGC-130	3200	86	72	134,560	91,057	10.74	125,305	83,462	13.06	123,709	82,170	13.46	117,514	78,884	14.26
		80	67	120,886	83,964	10.26	112,572	76,960	12.47	111,137	75,768	12.85	105,572	72,739	13.62
		74	62	106,552	76,013	9.69	99,224	69,673	11.78	97,960	68,595	12.14	93,054	65,852	12.87
		68	57	92,592	67,915	9.43	86,223	62,251	11.30	85,123	61,287	11.56	80,861	58,837	12.34
	3600	86	72	136,344	92,535	10.97	126,966	84,817	13.33	125,349	83,504	13.74	119,072	80,165	14.56
		80	67	122,492	85,626	10.32	114,066	78,483	12.55	112,613	77,268	12.92	106,974	74,179	13.70
		74	62	107,959	77,591	9.82	100,533	71,120	11.94	99,252	70,019	12.30	94,281	67,219	13.04
		68	57	93,822	69,058	9.38	87,368	63,299	11.38	86,255	62,319	11.71	81,935	59,827	12.43
	3950	86	72	138,254	94,359	11.08	128,746	86,489	13.46	127,107	85,150	13.87	120,740	81,745	14.70
		80	67	124,218	87,223	10.72	115,696	79,972	12.67	114,247	78,739	13.05	108,535	75589	13.83
		74	62	109,467	78,936	9.91	101,938	72,353	12.05	100,639	71,233	12.42	95,598	68,385	13.16
		68	57	95,140	70,543	9.47	88,596	64,660	11.49	87,466	63,659	11.82	83,086	61,113	12.55

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-150	4000	86	72	168,969	105,366	12.99	151,088	99,499	15.50	148,021	98,500	15.92	140,609	94,561	16.88
		80	67	151,799	97,158	12.40	135,735	91,747	14.79	132,979	90,826	15.20	126,320	87,194	16.11
		74	62	133,798	87,958	11.72	119,640	83,061	13.98	117,212	82,227	14.36	111,341	78,939	15.23
		68	57	116,269	78,588	11.40	103,964	74,212	13.41	101,853	73,467	13.68	96,752	70,530	14.61
	4400	86	72	171,208	107,076	13.26	153,091	101,114	15.82	149,984	100,099	16.25	142,473	96,096	17.23
		80	67	153,815	99,081	12.48	137,537	93,563	14.88	134,745	92,623	15.29	127,998	88,921	16.21
		74	62	135,565	89,783	11.87	121,219	84,785	14.16	118,758	83,934	14.55	112,810	80,578	15.42
		68	57	117,813	79,910	11.35	105,345	75,461	13.50	103,206	74,704	13.86	98,037	71,717	14.71
	4800	86	72	173,607	109,187	14.32	155,237	103,107	15.97	152,087	102,072	16.41	144,470	97,991	17.39
		80	67	155,982	100,929	13.48	139,502	95,338	15.03	136,700	94,387	15.44	129,865	90,612	16.37
		74	62	137,459	91,340	11.99	122,913	86,255	14.30	120,417	85,390	14.69	114,386	81,975	15.57
		68	57	119,469	81,628	11.46	106,825	77,083	13.63	104,656	76,310	13.99	99,415	73,258	14.85
PNGC-180	4200	86	72	197,993	123,821	15.07	174,364	115,432	18.32	170,316	114,004	18.87	161,787	109,445	20.00
		80	67	177,874	114,175	14.39	156,646	106,439	17.49	153,009	105,122	18.02	145,346	100,919	19.10
		74	62	156,782	103,364	13.60	138,072	96,361	16.53	134,866	95,169	17.02	128,112	91,364	18.05
		68	57	136,241	92,352	13.23	119,981	86,096	15.85	117,194	85,031	16.22	111,325	81,632	17.31
	4600	86	72	200,618	125,831	15.39	176,676	117,306	18.70	172,575	115,855	19.26	163,932	111,222	20.42
		80	67	180,237	116,435	14.48	158,726	108,546	17.59	155,040	107,203	18.12	147,277	102,917	19.21
		74	62	158,852	105,509	13.78	139,894	98,362	16.74	136,646	97,145	17.25	129,802	93,261	18.28
		68	57	138,051	93,906	13.16	121,575	87,545	15.96	118,751	86,462	16.42	112,804	83,005	17.43
	5200	86	72	203,429	128,311	16.94	179,153	119,618	18.88	174,994	118,138	19.45	166,230	113,415	20.62
		80	67	182,776	118,607	15.94	160,993	110,604	17.77	157,290	109,244	18.30	149,426	104,874	19.40
		74	62	161,071	107,339	13.91	141,848	100,068	16.90	138,555	98,830	17.41	131,615	94,878	18.46
		68	57	139,991	95,925	13.29	123,283	89,427	16.11	120,419	88,321	16.58	114,389	84,789	17.60
PNGC-200	5000	86	72	213,208	143,407	17.63	196,680	138,292	21.95	193,834	137,421	22.69	184,127	131,926	24.05
		80	67	191,542	132,235	16.83	176,693	127,519	20.96	174,136	126,715	21.66	165,416	121,648	22.96
		74	62	168,829	119,714	15.91	155,742	115,445	19.80	153,489	114,718	20.47	145,802	110,131	21.69
		68	57	146,711	106,960	15.47	135,336	103,147	19.00	133,377	102,497	19.50	126,697	98,399	20.81
	5700	86	72	216,034	145,735	18.00	199,287	140,538	22.41	196,404	139,652	23.16	186,569	134,067	24.54
		80	67	194,086	134,852	16.93	179,039	130,043	21.08	176,448	129,222	21.79	167,614	124,057	23.09
		74	62	171,059	122,198	16.12	157,798	117,842	20.06	155,514	117,099	20.73	147,725	112,417	21.98
		68	57	148,659	108,760	15.40	137,134	104,883	19.13	135,149	104,222	19.75	128,380	100,055	20.95
	6300	86	72	219,061	148,607	18.18	202,081	143,308	22.63	199,158	142,404	23.38	189,183	136,711	24.79
		80	67	196,821	137,368	17.10	181,597	132,509	21.29	179,009	131,683	22.00	170,059	126,416	23.32
		74	62	173,448	124,317	16.27	160,002	119,886	20.26	157,687	119,130	20.93	149,789	114,367	22.19
		68	57	150,748	111,098	15.55	139,061	107,138	19.31	137,047	106,463	19.93	130,184	102,205	21.15

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-240	6000	86	72	243,951	162,043	20.11	218,207	152,396	25.04	213,792	150,753	25.88	203,085	144,725	27.43
		80	67	219,161	149,420	19.20	196,033	140,524	23.91	192,066	139,009	24.71	182,447	133,451	26.19
		74	62	193,173	135,272	18.14	172,789	127,219	22.59	169,292	125,848	23.35	160,814	120,816	24.75
		68	57	167,865	120,861	17.65	150,149	113,666	21.67	147,109	112,441	22.24	139,742	107,946	23.74
	6400	86	72	247,184	164,674	20.52	221,100	154,870	25.56	216,626	153,201	26.42	205,778	147,075	28.00
		80	67	222,072	152,377	19.31	198,636	143,305	24.05	194,616	141,760	24.86	184,871	136,093	26.35
		74	62	195,724	138,078	18.38	175,069	129,859	22.89	171,526	128,460	23.66	162,936	123,324	25.08
		68	57	170,094	122,894	17.56	152,144	115,579	21.82	149,064	114,334	22.53	141,598	109,762	23.91
	7000	86	72	250,648	167,920	20.73	224,199	157,923	25.81	219,664	156,221	26.68	208,662	149,974	28.28
		80	67	225,201	155,220	19.50	201,474	146,023	23.70	197,440	144,459	25.10	187,568	138,681	26.61
		74	62	198,458	140,473	18.55	177,515	132,112	23.01	173,922	130,688	23.88	165,212	125,463	25.32
		68	57	172,485	125,536	17.73	154,281	118,064	22.03	151,158	116,792	22.74	143,587	112,121	24.13
PNGC-270	6800	86	72	276,407	188,808	22.79	243,886	175,578	27.64	238,314	173,327	28.46	226,380	166,396	30.17
		80	67	248,319	174,100	21.76	219,103	161,900	26.38	214,096	159,823	27.17	203,375	153,433	28.80
		74	62	218,874	157,615	20.56	193,123	146,571	24.93	188,711	144,692	25.68	179,260	138,907	27.22
		68	57	190,199	140,824	20.00	167,819	130,957	23.92	163,983	129,277	24.46	155,771	124,110	26.11
	7200	86	72	280,071	191,873	23.26	247,119	178,429	28.21	241,474	176,141	29.05	229,381	169,097	30.79
		80	67	251,618	177,546	21.89	222,012	165,105	26.54	216,939	162,987	27.33	206,077	156,471	28.97
		74	62	221,764	160,885	20.83	195,672	149,614	25.26	191,200	147,695	26.01	181,625	141,791	27.57
		68	57	192,725	143,193	19.90	170,049	133,161	24.08	166,162	131,454	24.77	157,840	126,198	26.29
	8000	86	72	283,996	195,655	23.49	250,584	181,946	28.49	244,860	179,613	29.34	232,596	172,431	31.09
		80	67	255,163	180,858	22.10	225,184	168,236	26.40	220,087	166,090	27.60	209,083	159,446	29.26
		74	62	224,862	163,675	21.03	198,405	152,209	25.50	193,872	150,257	26.26	184,162	144,249	27.84
		68	57	195,433	146,271	20.09	172,438	136,024	24.31	168,496	134,280	25.01	160,057	128,910	26.54
PNGC-300	8000	86	72	307,094	211,159	25.36	273,412	198,794	31.98	267,637	196,688	33.10	254,234	188,824	35.09
		80	67	275,888	194,710	24.22	245,628	183,307	30.53	240,439	181,365	31.60	228,398	174,113	33.50
		74	62	243,173	176,273	22.88	216,503	165,951	28.85	211,930	164,194	29.86	201,316	157,629	31.65
		68	57	211,314	157,494	22.26	188,136	148,272	27.67	184,160	146,702	28.45	174,938	140,838	30.36
	9000	86	72	311,164	214,587	25.89	277,036	202,021	32.64	271,185	199,881	33.79	257,605	191,889	35.81
		80	67	279,552	198,564	24.36	248,889	186,935	30.71	243,631	184,954	31.79	231,433	177,561	33.70
		74	62	246,384	179,931	23.18	219,360	169,396	29.23	214,726	167,602	30.25	203,972	160,901	32.07
		68	57	214,121	160,144	22.15	190,635	150,768	27.86	186,607	149,171	28.81	177,261	143,207	30.57
	9900	86	72	315,525	218,817	27.31	280,920	206,003	32.96	274,988	203,821	34.12	261,215	195,672	36.16
		80	67	283,491	202,268	26.64	252,445	190,480	29.50	247,167	188,476	32.10	234,809	180,937	34.03
		74	62	249,826	183,051	23.41	222,425	172,334	29.21	217,726	170,510	30.54	206,822	163,692	32.38
		68	57	217,130	163,587	22.37	193,313	154,009	28.13	189,228	152,378	29.09	179,751	146,285	30.87

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-340	9000	86	72	360,678	238,035	29.49	317,415	217,670	35.57	310,004	214,204	36.61	294,480	205,640	38.80
		80	67	324,027	219,492	28.16	285,160	200,712	33.96	278,501	197,516	34.95	264,554	189,619	37.05
		74	62	285,604	198,708	26.61	251,348	181,709	32.09	245,479	178,816	33.03	233,185	171,667	35.01
		68	57	248,187	177,540	25.88	218,415	162,351	30.78	213,313	159,767	31.46	202,631	153,380	33.58
	9500	86	72	365,459	241,899	30.10	321,623	221,203	36.31	314,114	217,682	37.36	298,384	208,978	39.61
		80	67	328,331	223,836	28.32	288,946	204,685	34.16	282,199	201,426	35.16	268,069	193,374	37.27
		74	62	289,375	202,831	26.95	254,665	185,480	32.51	248,718	182,528	33.46	236,261	175,231	35.47
		68	57	251,482	180,527	25.75	221,317	165,084	31.00	216,147	162,456	31.86	205,322	155,960	33.81
	10450	86	72	370,580	246,667	32.83	326,132	225,564	36.67	318,519	221,973	37.73	302,566	213,098	39.99
		80	67	332,170	228,012	30.89	292,960	208,567	34.40	286,294	205,261	35.50	271,979	197,051	37.63
		74	62	293,418	206,349	27.21	258,223	188,698	32.82	252,193	185,694	33.78	239,562	178,269	35.80
		68	57	255,016	184,408	26.00	224,426	168,633	31.29	219,184	165,949	32.17	208,206	159,313	34.13
PNGC-360	9000	86	72	374,760	276,039	30.93	329,654	252,978	38.46	321,927	249,054	39.74	305,806	239,096	42.12
		80	67	336,678	254,536	29.53	296,155	233,270	36.72	289,212	229,651	37.94	274,729	220,469	40.22
		74	62	296,755	230,434	27.91	261,039	211,184	34.70	254,920	207,909	35.85	242,153	199,596	38.01
		68	57	257,877	205,885	27.15	226,836	188,686	33.28	221,517	185,760	34.15	210,424	178,334	36.46
	10000	86	72	379,728	280,521	31.58	334,024	257,086	39.26	326,195	253,098	40.56	309,860	242,977	43.00
		80	67	341,150	259,573	29.71	300,087	237,887	36.94	293,052	234,197	38.17	278,379	224,835	40.46
		74	62	300,674	235,215	28.27	264,484	215,568	35.15	258,284	212,225	36.32	245,348	203,740	38.50
		68	57	261,301	209,350	27.01	229,850	191,862	33.51	224,460	188,887	34.59	213,219	181,334	36.71
	11000	86	72	385,049	286,050	34.82	338,707	262,153	39.64	330,769	258,087	40.96	314,203	247,768	43.42
		80	67	345,957	264,416	32.76	304,374	242,399	35.70	297,305	238,656	38.54	282,440	229,110	40.85
		74	62	304,875	239,295	28.54	268,179	219,307	35.21	261,892	215,906	36.67	248,776	207,273	38.87
		68	57	264,973	213,850	27.28	233,079	195,987	33.83	227,613	192,948	34.92	216,214	185,232	37.06
PNGC-420	10000	86	72	451,381	301,608	36.62	398,154	278,010	44.26	389,034	273,994	45.56	369,552	263,038	48.29
		80	67	405,513	278,113	34.97	357,693	256,352	42.26	349,499	252,648	43.49	331,997	242,546	46.10
		74	62	357,428	251,778	33.04	315,281	232,080	39.93	308,059	228,728	41.10	292,631	219,583	43.57
		68	57	310,600	224,956	32.14	273,971	207,356	38.30	267,693	204,361	39.15	254,287	196,192	41.79
	11000	86	72	457,365	306,504	37.38	403,432	282,523	45.18	394,192	278,442	46.50	374,452	267,308	49.29
		80	67	410,900	283,617	35.18	362,443	261,425	42.51	354,140	257,648	43.75	336,408	247,349	46.38
		74	62	362,147	257,002	33.48	319,441	236,897	40.45	312,123	233,476	41.64	296,492	224,142	44.14
		68	57	314,725	228,741	31.98	277,611	210,846	38.56	271,250	207,801	39.65	257,665	199,492	42.08
	12000	86	72	463,774	312,546	40.99	409,088	288,092	45.62	399,719	283,931	46.96	379,699	272,578	49.77
		80	67	416,689	288,908	38.57	367,621	266,383	42.92	359,279	262,554	44.18	341,315	252,052	46.83
		74	62	367,207	261,460	33.80	323,904	241,006	40.84	316,484	237,526	42.04	300,634	228,028	44.56
		68	57	319,148	233,658	32.29	281,511	215,379	38.93	275,060	212,269	40.03	261,284	203,780	42.48

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			122		
		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.	
PNGC-480	11000	86	72	481,355	307,368	38.44	435,951	299,104	45.95	428,154	297,693	47.23	406,713	285,790	50.06
		80	67	432,441	283,423	36.70	391,650	275,802	43.87	384,644	274,501	45.09	365,382	263,526	47.79
		74	62	381,163	256,586	34.68	345,211	249,689	41.46	339,037	248,512	42.61	322,057	238,576	45.16
		68	57	331,226	229,252	33.73	299,980	223,089	39.77	294,611	222,038	40.59	279,858	213,162	43.32
	12000	86	72	487,736	312,357	39.24	441,731	303,960	46.90	433,830	302,526	48.21	412,105	290,429	51.10
		80	67	438,185	289,033	36.92	396,851	281,261	44.13	389,751	279,934	45.36	370,236	268,743	48.08
		74	62	386,196	261,910	35.13	349,767	254,872	42.00	343,510	253,671	43.17	326,306	243,529	45.76
		68	57	335,624	233,109	33.57	303,965	226,844	40.04	298,526	225,775	41.11	283,575	216,748	43.62
	13000	86	72	494,570	318,514	42.10	447,923	309,951	47.36	439,914	308,490	48.68	417,881	296,155	51.60
		80	67	444,359	294,425	41.94	402,520	286,595	44.56	395,407	285,264	45.80	375,637	273,853	48.55
		74	62	391,591	266,453	35.47	354,653	259,293	42.40	348,309	258,071	43.58	330,864	247,752	46.19
		68	57	340,341	238,120	33.90	308,235	231,721	40.42	302,719	230,629	41.50	287,558	221,407	44.04

LEGEND:

CFM : Air flow rate (Ft3/minute)
DB : Dry bulb temperature (°F)
WB : Wet bulb temperature (°F)
P.I : Power input is Total Power Input (kW)
*Note: Capacity in kW= (Btu/hr/12000)*3.517*

UNIT ELECTRICAL DATA

Model	Power Supply	VOLTAGE RANGE		FM	Compressor		Evaporator Blower Motor		Electric Heater		MCA	MOCP
	(V-PH-Hz)	MIN.	MAX.	FLA	RLA	LRA	HP	FLA	KW	FLA		
PNGC-048	230-3-60	207	253	2.39	16.4	91	0.75	4.3	-	-	27.2	43.6
PNGC-060	230-3-60	207	253	2.39	16.4	124	1	5.4	-	-	28.3	44.7
PNGC-076	230-3-60	207	253	2.39	20.7	126	1	3.1	-	-	31.4	52.1
PNGC-090	230-3-60	207	253	4.92	25	164	1.5	4.2	-	-	40.3	65.3
PNGC-100	230-3-60	207	253	4.92	32.1	195	2	5.6	-	-	50.6	82.7
PNGC-130	230-3-60	207	253	4.92	33.6	225	2	5.6	-	-	52.5	86.1
PNGC-150	230-3-60	207	253	2.39	20.7	128	3	7.8	-	-	59.2	79.9
PNGC-180	230-3-60	207	253	2.39	20.7	156	3	7.8	-	-	59.2	79.9
PNGC-200	230-3-60	207	253	4.92	25	164	5	13	-	-	79.1	104.1
PNGC-240	230-3-60	207	253	4.92	32.1	195	5	13	-	-	95.1	127.2
PNGC-270	230-3-60	207	253	4.92	33.6	225	5	13	-	-	98.4	132.0
PNGC-300	230-3-60	207	253	4.92	41.4	239	5	13	-	-	116.0	157.4
PNGC-340	230-3-60	207	253	4.92	47.1	245	5	13	-	-	128.8	175.9
PNGC-360	230-3-60	207	253	4.92	25	164	5	13	-	-	145.2	195.2
PNGC-420	230-3-60	207	253	4.92	25/32.1	164/195	5	13	-	-	162.9	209.4
PNGC-480	230-3-60	207	253	4.92	32.1	195	7.5	18.5	-	-	182.6	246.8

Model	Power Supply	Voltage Range		FM	Compressor		Evaporator Blower Motor		Electric Heater		MCA	MOCP
	(V-PH-Hz)	MIN.	MAX.	FLA	RLA	LRA	HP	FLA	KW	FLA		
PNGC-048	380-3-60	342	418	1.38	9.3	54	0.75	4.3	-	-	17.3	26.6
PNGC-060	380-3-60	342	418	1.38	9.3	65.8	1	5.4	-	-	18.4	27.7
PNGC-076	380-3-60	342	418	1.38	10.7	70	1	1.6	-	-	16.4	27.1
PNGC-090	380-3-60	342	418	2.84	12.1	100	1.5	2.3	-	-	20.3	32.4
PNGC-100	380-3-60	342	418	2.84	16.7	123	2	3	-	-	26.7	43.4
PNGC-130	380-3-60	342	418	2.84	18.6	140	2	3	-	-	29.1	47.7
PNGC-150	380-3-60	342	418	1.38	10.7	64	3	4.3	-	-	31.1	41.8
PNGC-180	380-3-60	342	418	1.38	10.7	70	3	4.3	-	-	31.1	41.8
PNGC-200	380-3-60	342	418	2.84	12.1	100	5	7.1	-	-	40.0	52.1
PNGC-240	380-3-60	342	418	2.84	16.7	123	5	7.1	-	-	50.4	67.1
PNGC-270	380-3-60	342	418	2.84	18.6	140	5	7.1	-	-	54.6	73.2
PNGC-300	380-3-60	342	418	2.84	23.6	145	5	7.1	-	-	65.9	89.5
PNGC-340	380-3-60	342	418	2.84	24.4	145	5	7.1	-	-	67.7	92.1
PNGC-360	380-3-60	342	418	2.84	12.1	100	5	7.1	-	-	72.9	97.1
PNGC-420	380-3-60	342	418	2.84	12.1/16.7	100/123	5	7.1	-	-	84.4	117.8
PNGC-480	380-3-60	342	418	2.84	16.7	123	7.5	10.5	-	-	97.0	130.4

UNIT ELECTRICAL DATA

Model	Power Supply	VOLTAGE RANGE		FM	Compressor		Evaporator Blower Motor		Electric Heater		MCA	MOCP
	(V-PH-Hz)	MIN.	MAX.	FLA	RLA	LRA	HP	FLA	KW	FLA		
PNGC-048	460-3-60	414	506	1.42	7.9	50	0.75	4.3	-	-	15.6	23.5
PNGC-060	460-3-60	414	506	1.42	8.3	59.6	1	5.4	-	-	17.2	25.5
PNGC-076	460-3-60	414	506	1.42	10	75	1	1.6	-	-	15.5	25.5
PNGC-090	460-3-60	414	506	2.85	12.1	100	1.5	2.1	-	-	20.0	32.1
PNGC-100	460-3-60	414	506	2.85	16.4	95	2	2.8	-	-	26.2	42.6
PNGC-130	460-3-60	414	506	2.85	17.3	114	2	2.8	-	-	27.3	44.6
PNGC-150	460-3-60	414	506	1.42	10	63	3	3.9	-	-	29.2	39.2
PNGC-180	460-3-60	414	506	1.42	10	75	3	3.9	-	-	29.2	39.2
PNGC-200	460-3-60	414	506	2.85	12.1	100	5	6.5	-	-	39.4	51.5
PNGC-240	460-3-60	414	506	2.85	16.4	95	5	6.5	-	-	49.1	65.5
PNGC-270	460-3-60	414	506	2.85	17.3	114	5	6.5	-	-	51.1	68.4
PNGC-300	460-3-60	414	506	2.85	19.2	125	5	6.5	-	-	55.4	74.6
PNGC-340	460-3-60	414	506	2.85	20.7	125	5	6.5	-	-	58.8	79.5
PNGC-360	460-3-60	414	506	2.85	12.1	100	5	6.5	-	-	72.4	96.6
PNGC-420	460-3-60	414	506	2.85	12.1/16.4	100/95	5	6.5	-	-	83.1	115.9
PNGC-480	460-3-60	414	506	2.85	16.4	95	7.5	9.3	-	-	94.5	127.3

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

SUPPLY AIR PERFORMANCE

CFM Values, PNGC 048 & PNGC 060 (Direct driven motor)

MODEL	RPM	External Static Pressure [in.wg]				
		0.1	0.2	0.3	0.4	0.5
PNGC-048	940	1900	1690	1580	1460	1360
	932	1700	1530	1420	1390	-
	920	1630	1490	1380	-	-
PNGC-060	966	2200	2100	1990	1960	1890
	959	2075	2000	1946	1895	-
	947	2000	1940	1900	-	-

RPM Values, PNGC 076 - 130 (Belt Driven)

Model	CFM	External Static Pressure [in.wg]						
		0.1	0.2	0.3	0.4	0.5	0.6	0.7
PNGC-076	2160	826	845	932	984	1042	1076	1114
	2400	900	946	984	1022	1060	1098	1136
	2600	992	1022	1122	1222	1322	1422	1522
PNGC-090	2500	930	953	977	1001	1025	1050	1075
	2700	957	979	1002	1025	1048	1072	1096
	2900	984	1006	1027	1049	1072	1094	1117
PNGC-100	2700	-	-	942	980	1017	1055	1092
	3000	-	1045	1076	1106	1137	1167	1198
	3300	1057	1109	1155	1212	1278	1300	-
PNGC-130	3150	-	882	893	904	914	924	935
	3550	878	896	907	916	951	985	1018
	3950	896	913	943	974	1012	1051	1089

SUPPLY AIR PERFORMANCE

RPM Values, PNGC 150 - 480 (Belt Driven Motor)

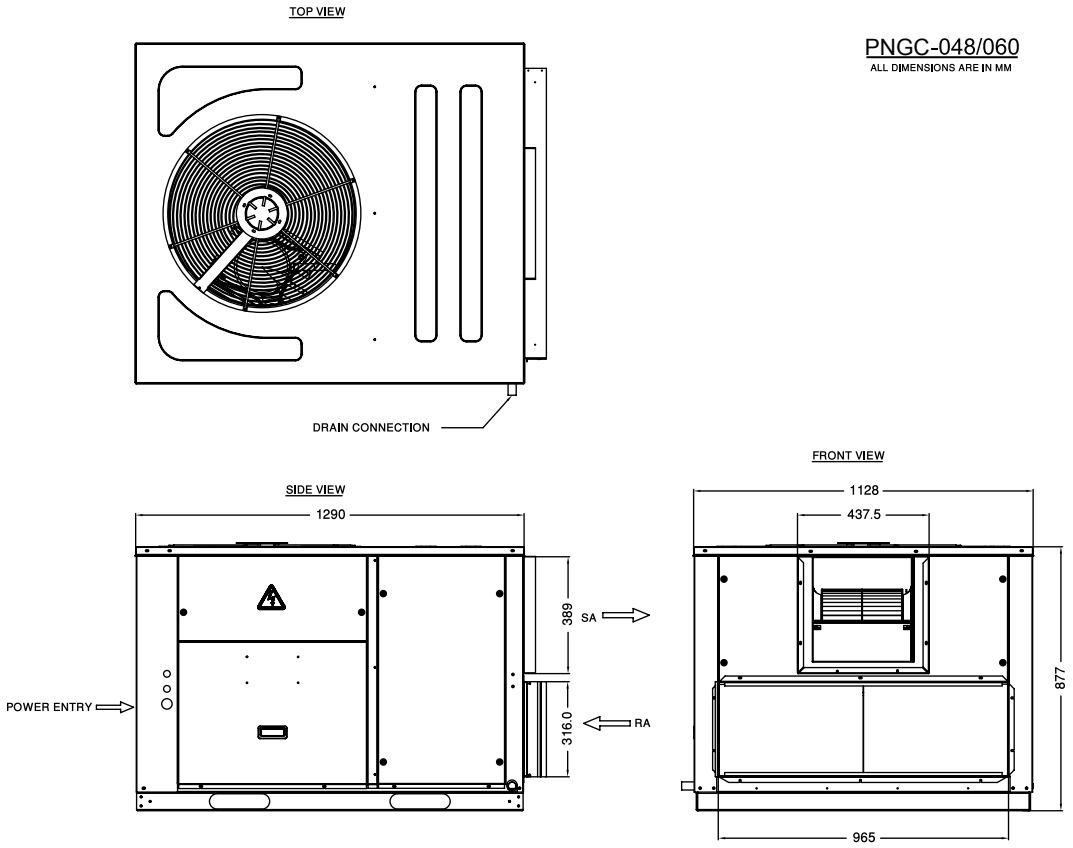
Model	CFM	External Static Pressure [in.wg]						
		0.1	0.2	0.3	0.4	0.5	0.6	0.7
PNGC-150	4000	-	934	961	994	1027	1039	1068
	4400	1015	1040	1065	1100	1125	1150	1175
	4800	1030	1060	1088	1118	1145	1172	1199
PNGC-180	4200	-	945	987	1019	1052	1074	1123
	4600	1021	1050	1078	1108	1135	1162	1189
	5200	1140	1178	1203	1238	1246	1268	1294
PNGC-200	5000	-	895	923	958	989	1022	1051
	5500	992	1030	1061	1093	1129	1196	1257
	6300	1127	1154	1179	1207	1225	1245	1308
PNGC-240	6000	-	882	917	948	978	1021	1073
	6400	-	955	980	1011	1047	1080	1124
	7000	1068	1105	1142	1175	1211	1312	1476
PNGC-270	6800	-	892	913	946	978	1021	1073
	7200	971	1006	1044	1088	1117	1137	1163
	8000	1067	1120	1175	1230	1286	1341	1397
PNGC-300	8000	-	-	-	-	757	781	813
	9000	-	-	-	-	792	822	851
	9900	-	-	788	818	845	866	899
PNGC-340	9000	-	-	-	847	870	894	945
	9500	802	830	860	886	916	938	971
	10450	872	900	925	949	974	998	1023
PNGC-360	9000	-	-	-	852	880	907	938
	10000	842	872	903	930	962	985	1020
	11000	916	945	971	996	1023	1048	1074
PNGC-420	10000	842	872	903	930	962	985	1020
	11000	916	945	971	996	1023	1048	1074
	12000	961	992	1020	1046	1074	1100	1128
PNGC-480	11000	-	-	-	885	914	943	975
	12000	859	889	921	949	981	1005	1040
	13000	919	951	986	1015	1050	1075	1113

Note: Please refer to the factory for higher static pressure values

UNIT DIMENSIONS

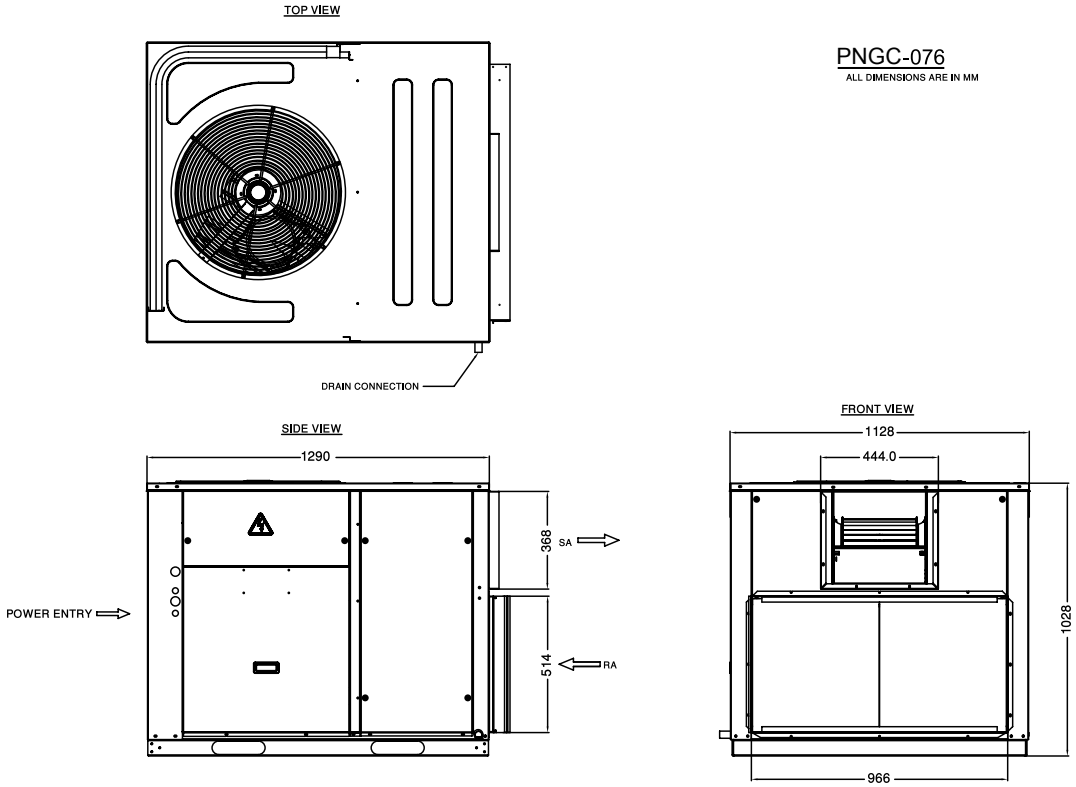
PNGC-048/060

ALL DIMENSIONS ARE IN MM



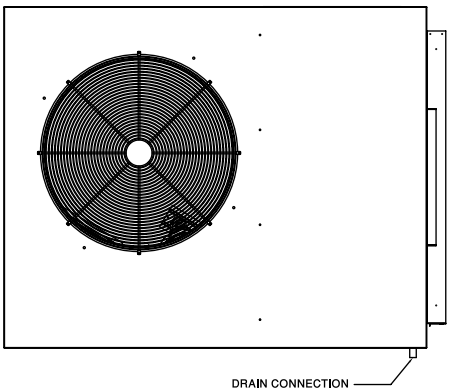
PNGC-076

ALL DIMENSIONS ARE IN MM



UNIT DIMENSIONS

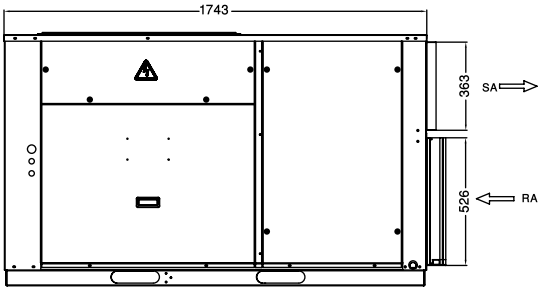
TOP VIEW



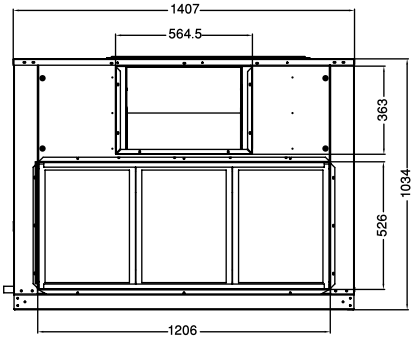
PNGC -090/100/130

ALL DIMENSIONS ARE IN MM

SIDE VIEW

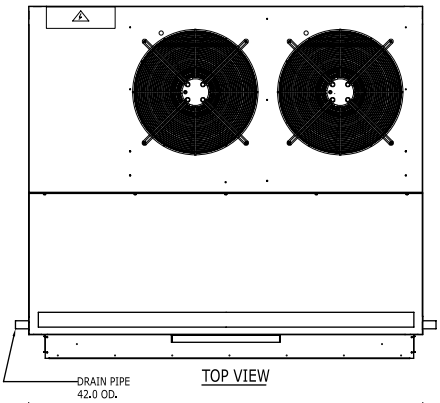


FRONT VIEW

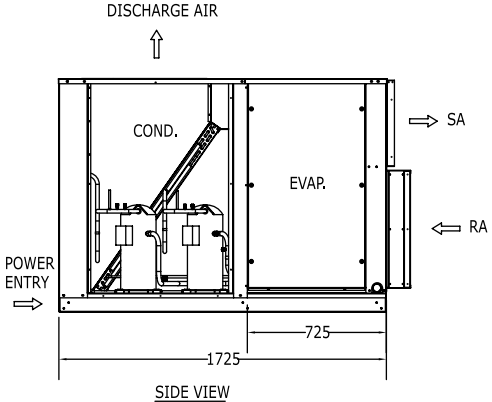


PNGC - 150/180

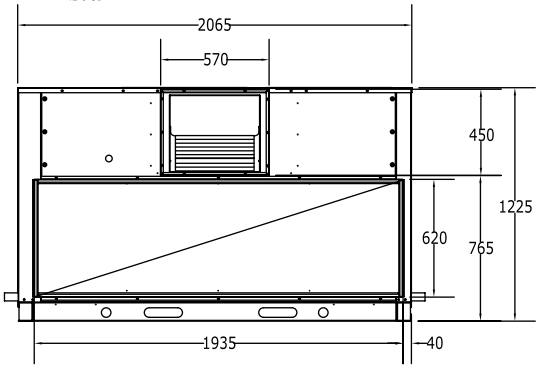
ALL DIMENSIONS ARE IN MM



TOP VIEW



SIDE VIEW

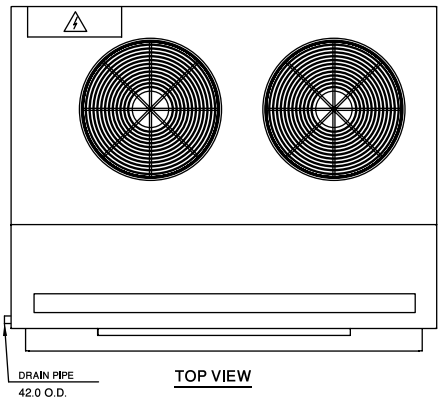


FRONT VIEW

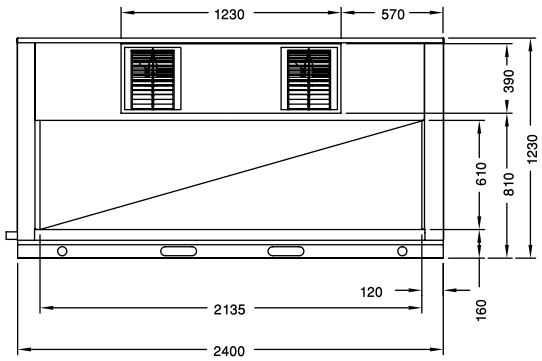
UNIT DIMENSIONS

PNGC - 200/240

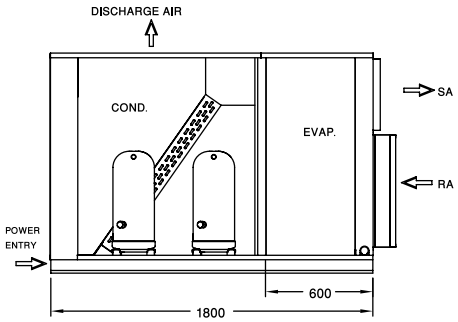
ALL DIMENSIONS ARE IN MM



TOP VIEW



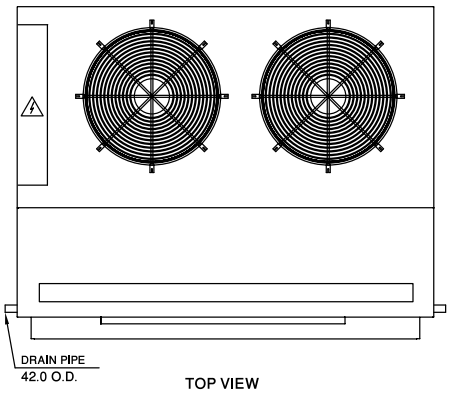
FRONT VIEW



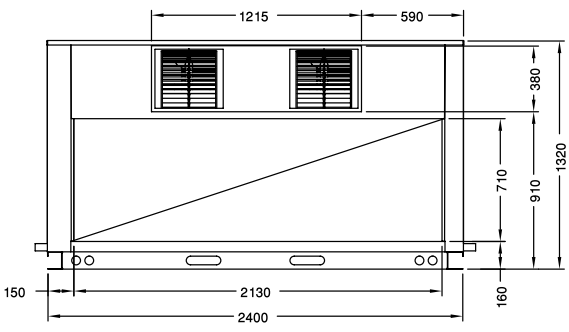
SIDE VIEW

PNGC -270

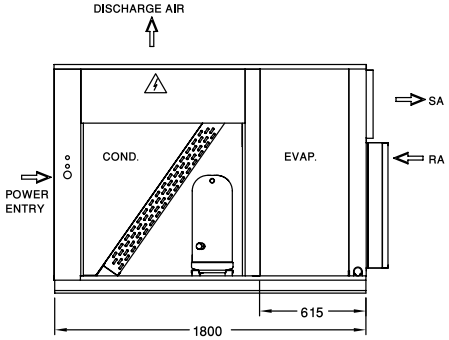
ALL DIMENSIONS ARE IN MM



TOP VIEW



FRONT VIEW

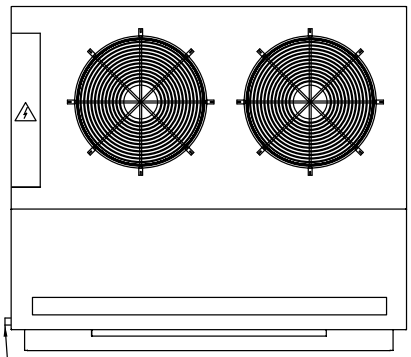


SIDE VIEW

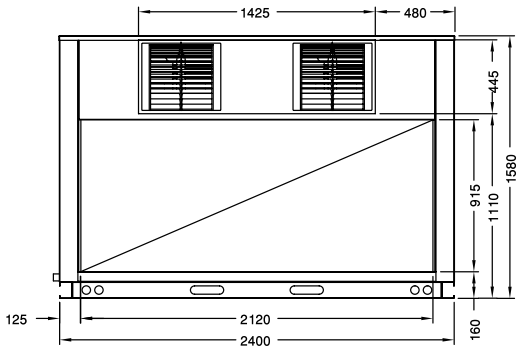
UNIT DIMENSIONS

PNGC -300/340

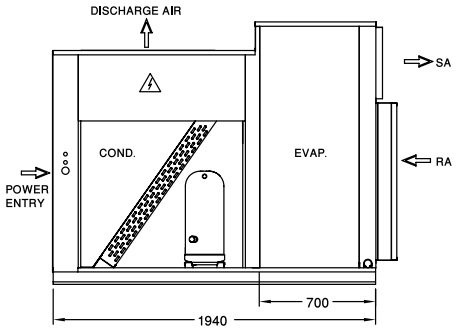
ALL DIMENSIONS ARE IN MM



TOP VIEW



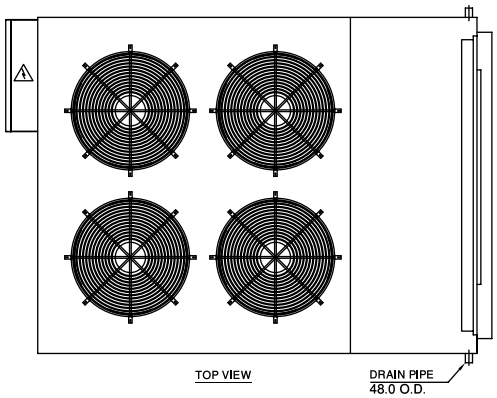
FRONT VIEW

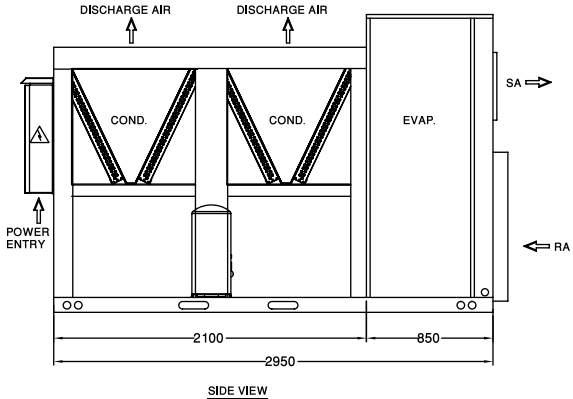


SIDE VIEW

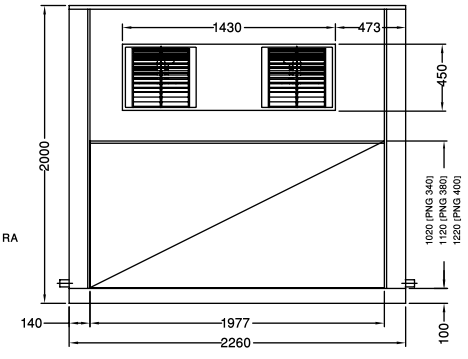
PNGC -360/420/480

ALL DIMENSIONS ARE IN MM





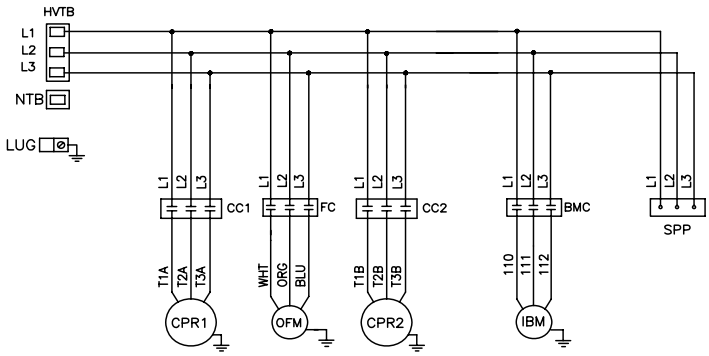
SIDE VIEW

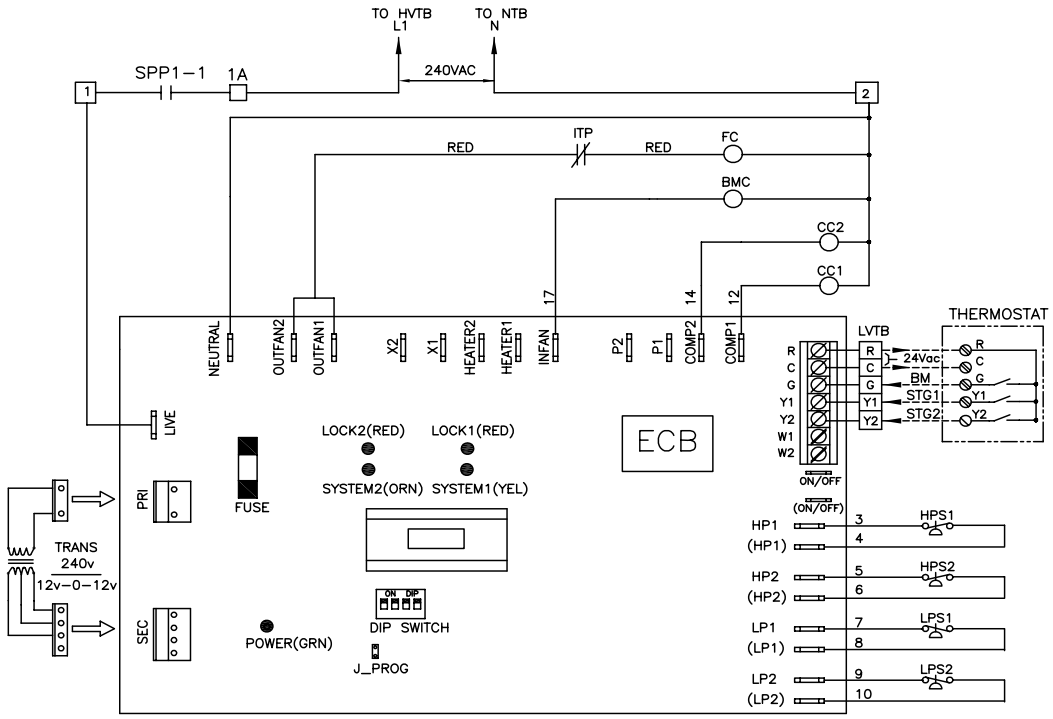


FRONT VIEW

TYPICAL WIRING DIAGRAM

WITH MICROPROCESSOR BASED CONTROLLER (STANDARD)





LEGEND:

BMC	–	BLOWER MOTOR CONTACTOR
CC	–	COMPRESSOR CONTACTOR
CPR	–	COMPRESSOR MOTOR
ECB	–	ELECTRONIC CONTROL BOARD
FC	–	FAN CONTACTOR
HPS	–	HIGH PRESSURE SWITCH
HVTB	–	HIGH VOLTAGE TERMINAL BLOCK
IBM	–	INDOOR BLOWER MOTOR
ITP	–	INTERNAL THERMAL PROTECTOR
LPS	–	LOW PRESSURE SWITCH
LUG	–	GROUND TERMINAL
LVTB	–	LOW VOLTAGE TERMINAL BLOCK
MAC	–	MILD AMBIENT CONTROL
NTB	–	NEUTRAL TERMINAL BLOCK
OFM	–	OUTDOOR FAN MOTOR
OLR	–	OVER LOAD RELAY
SPP	–	SINGLE PHASE PREVENTER
TRANS	–	TRANSFORMER
□	–	TERMINAL BLOCK OR TERMINATION POINT
———	–	FACTORY WIRES & DEVICES
- - - - -	–	FIELD WIRES BY OTHERS
———	–	DEVICES BY OTHERS

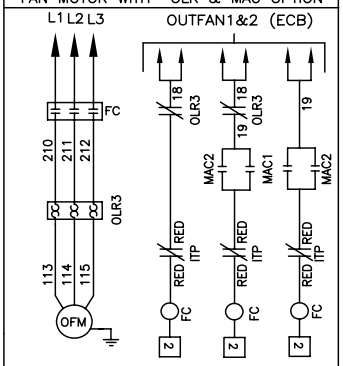
NOTES

1. ANY WIRE REPLACEMENT, SHOULD BE OF THE 105°C TYPE OR ITS EQUIVALENT.
2. USE COPPER CONDUCTORS ONLY.
3. FUSED DISCONNECT SWITCH OR CIRCUIT BREAKER TO BE PROVIDED BY THE USER, AS PER ELEC. DATA IN INSTALLATION MAN'L.
4. COMPRESSOR IS PROVIDED WITH INTERNAL OVERLOAD.
5. IF ANY CHANGE IN DIP SWITCH SETTING IS REQUIRED, TURN OFF POWER FIRST & SET REQUIRED SETTING.

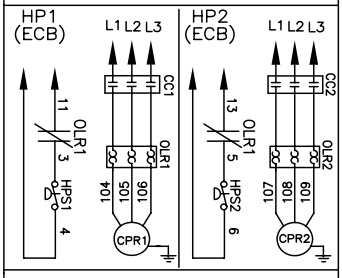
PRESSURE SWITCH SETTINGS

NAME	OPEN (PSIG)	CLOSE (PSIG)
LPS1&2	25 ± 5	42 ± 5
HPS1&2	420 ± 10	310 ± 10
MAC1&2	185 ± 10	242 ± 10

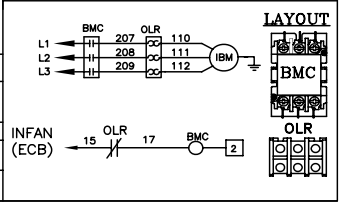
FAN MOTOR WITH OLR & MAC OPTION



COMPRESSOR WITH OLR OPTION



IBM MOTOR WITH OLR OPTION



ECB DIP SWITCH SETTINGS & LED INDICATORS

DIP SWITCH FUCTIONS

S1	OFF=TEST MODE DISABLE	ON= TEST MODE ENABLE
S2	OFF= LOAD BALANCE (Comp1&2 Auto Lead Lag)	ON= COMPRESSOR 1 LEAD
S3	OFF= WITHOUT PUMP DOWN	ON=WITH PUMP DOWN OPTION
S4	OFF=SINGLE STAGE	ON=DUAL STAGE

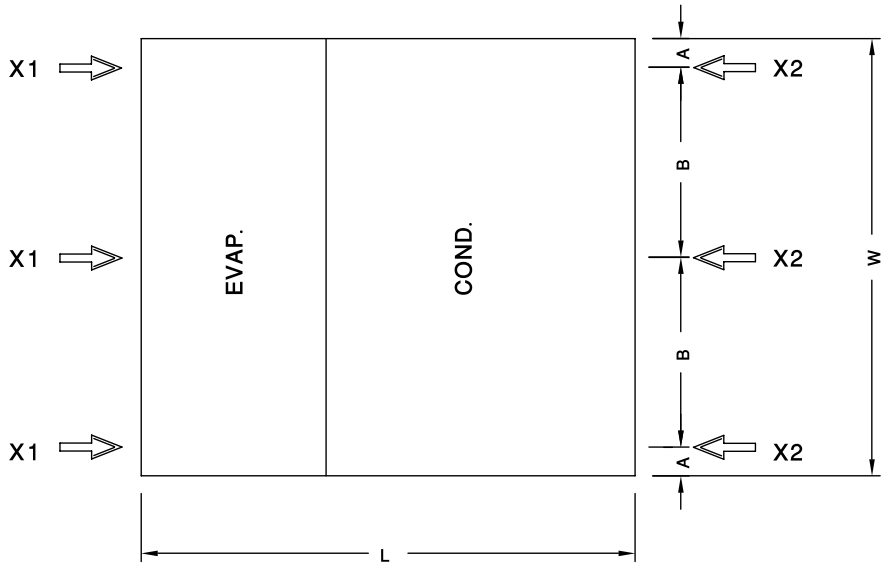
FACTORY SETTINGS OF DIP SWITCHES

DIP SWITCH#	S1	S2	S3	S4
ON				✔
OFF	✔	✔	✔	

LED INDICATORS

GREEN	POWER ON/OFF INDICATOR
RED	LOCK-OUT DUE TO SYSTEM FAULT
YELLOW	LPS1 TRIP – BLINKING SLOW HPS1 TRIP – BLINKING FAST
ORANGE	LPS2 TRIP – BLINKING SLOW HPS2 TRIP – BLINKING FAST

LOAD DISTRIBUTION



	LOAD DISTRIBUTION					
MODEL	L (mm)	W (mm)	A (mm)	B (mm)	X1 (kg)	X2 (kg)
PNGC-048	1290	1130	75	-	50	45
PNGC-060	1290	1130	75	-	51	47
PNGC-076	1290	1130	75	-	64	58.5
PNGC-090	1740	1405	75	-	71	68
PNGC-100	1740	1405	75	-	94	87
PNGC-130	1740	1405	75	-	98	90
PNGC-150	1725	2065	125	980	97.6	105.7
PNGC-180	1725	2065	125	980	101.6	110.1
PNGC-200	1800	2400	125	1075	118.7	128.6
PNGC-240	1800	2400	125	1075	120.8	130.9
PNGC-270	1800	2400	125	1075	160.8	174.2
PNGC-300	1940	2400	125	1075	170.4	184.6
PNGC-340	1940	2400	125	1075	196	212.3
PNGC-360	2950	2260	125	1005	216	234
PNGC-420	2950	2260	125	1005	248	268.7
PNGC-480	2950	2260	125	1005	261.6	283.4

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

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Fax : +968 24709401
Email : info@alnoorprojects.com
Email : gm@alnoorprojects.com
Website : www.alnoorprojects.com

United Arab Emirates UAE

Obaid Humaid Al-Tayer Engineering Division Al Tayer Group
Address: Dubai – UAE, PO Box 2623
Tel : +971 4 2011272
Fax : +971 4 2825008
Mobile : +971 50 3500747
Email : bkrishnan@altayer-eng.com
Website : www.altayer.com

Kingdom of Bahrain

Y.K. Almoayyed & Sons
Address: EHAD – Project Department, Sehla Workshop
P.O. Box 143, Manama, Kingdom of Bahrain
Tel : +973 17 400 444, Extn. 205
Direct : +973 17 405 250
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Email : anshul.bawa@almoayyed.com.bh
Website : www.almoayyed.com

Kingdom of Saudi Arabia KSA

Al-Etmad for Refrigeration and Air Conditioning Industries Company
Address: Al Qortobah Quartier, King Abdullah Road
Riyadh – KSA, P.O. Box 50467 Riyadh 11533
Tel : + 966 11 2447789
Fax : + 966 11 4958812
Mobile : + 966 560034240
Email : abunaif722@ksacoolex.com
Website : www.Coolex.com

Republic of Iraq

SWEER Company Limited
Address: Al Senak -Jumhuria Street - Baghdad-Iraq
P.O. Box: 8095
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Mobile : +964 7705 884444
Email : sweerco@yahoo.com
Website : www.sweerco.com

State of Qatar

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Mobile : +974 55843255
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Website : www.jaric-qa.com

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Mobile : +98 912 119 2961
Email : info@capitaliceberg.com
Email : saeed.s@capitaliceberg.com
Email : sara.s@capitaliceberg.com
Website : www.capitaliceberg.com

Sudan

Abina For Advises And Engineering Work Company
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Mobile : +92-321-2280011
Email : info@agtek.com.pk
Email : coo@agtek.com.pk
Website : www.agtek.com.pk

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Email : ahmad@coolex-eg.com
Website : www.coolex-eg.com

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Email : info@team-syr.net
Email : georgeyoussef@team-syr.net
Website : www.team-syr.net

Nepal

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Email : ajay.sharma2852@gmail.com

Please contact Sales and Marketing Department sales@ric.com.kw or www.coolex.com.kw for specific information on the current design and specifications. Ref no.: CPC21-6-000

CENTRAL AIR CONDITIONING AND SPLIT UNIT

Coolex continuously works towards the improvement of its products. Hence, the design and specifications of the ordered product may vary without prior notice.

COOLEX is a subsidiary of the RIC Group
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COOLEX

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