COOLEX

Vertical Indoor Split Unit Series NGCF + NGEFV 76 to 340 MBH (6.3 to 28 TR)

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.
- Standard double skin units with 25 mm fiber glass insulation for a better indoor air quality.
- Painted electro-static powder coat, zinc coated steel panels pro vide 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 factory installed air flow switch.
- 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.
- Two refrigerant independent circuits starting on 7.5 Tons which provide efficient part load.

The new series of Vertical Split 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.

50 Hz

Ducted Vertical Split Units
With Tropical Hermetic Compressor

R410a
Environment Friendly

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

Table of Contents

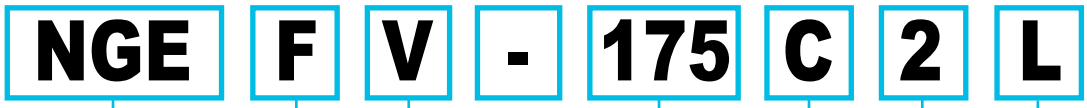
NOMENCLATURE	2
UNIT RATING SUMMARY	4
STANDARD SPECIFICATIONS	5
MICROPROCESSOR BASED CONTROLLER	6
OPTIONAL SPECIFICATIONS	6
SELECTION PROCEDURE	7
GENERAL DATA	8
PERFORMANCE DATA TABLES	12
UNIT ELECTRICAL DATA	17
FAN PERFORMANCE	18
RECOMMENDED SUCTION AND LIQUID LINE SIZES	20
UNIT DIMENSIONS	21
INSTALLATION CLEARANCE	28
TYPICAL WIRING DIAGRAMS	31
LOAD DISTRIBUTION	32
ABOUT RIC	33
COOLEX DISTRIBUTORS	34

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

INDOOR UNIT



Refrigerant Pipe Location

L	Left Hand
R	Right Hand

Electrical Specifications

2	415/3Ph/50Hz

Code	Description
A	First Series
B	Second Series
C	Third Series

Unit Nominal Capacity at rating conditions in MBH

076,090,100,120,130,150,175,200,240,270,300,340

Unit Configuration

Vertical Discharge

Refrigerant:

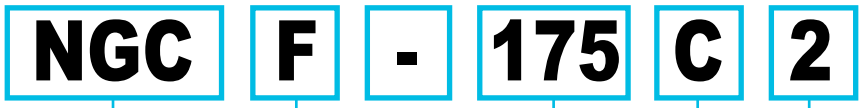
F:	R-410A

Unit Series Description

NGE	New Generation Evaporator

NOMENCLATURE

OUTDOOR UNIT



Electrical Specifications

2	415/3Ph/50Hz

Code	Description
A	First Series
B	Second Series
C	Third Series
D	Fourth Series

Unit Nominal Capacity at rating conditions in MBH

076,090,100,120,130,150,175,200,240,270,300,340

Refrigerant:

F:	R-410A

Unit Series Description

NGC	New Generation Condenser

UNIT RATING SUMMARY

Model	Air Flow	Ambient temp 95°F				Ambient temp 115°F				Ambient temp 118.4°F				Ambient temp 125°F			
	(CFM)	Cooling Capacity (Btu/h)	Total Power (kW)	kW/Ton	EER	Cooling Capacity (Btu/h)	Total Power (kW)	kW/Ton	EER	Cooling Capacity (Btu/h)	Total Power (kW)	kW/Ton	EER	Cooling Capacity (Btu/h)	Total Power (kW)	kW/Ton	EER
NGEFV/ NGCF -076	2400	76,307	6.6	1.0	11.5	68,174	8.0	1.4	8.6	66,812	8.2	1.5	8.1	64,047	8.8	1.6	7.3
NGEFV/ NGCF -090	2800	90,093	7.5	1.0	12.1	79,933	9.0	1.4	8.9	78,275	9.3	1.4	8.4	74,471	10.0	1.6	7.5
NGEFV/ NGCF -100	3200	100,743	8.8	1.0	11.4	89,434	10.7	1.4	8.4	87,533	11.0	1.5	8.0	83,222	11.8	1.7	7.1
NGEFV/ NGCF -120	3800	120,832	10.5	1.0	11.5	107,810	12.7	1.4	8.5	105,520	13.1	1.5	8.1	100,711	14.0	1.7	7.2
NGEFV/ NGCF -130	4200	132,157	11.8	1.1	11.2	117,812	14.3	1.5	8.3	115,682	14.7	1.5	7.9	110,245	15.7	1.7	7.0
NGEFV/ NGCF -150	4800	150,444	13.9	1.1	10.8	134,590	16.6	1.5	8.1	132,024	17.1	1.6	7.7	126,547	18.2	1.7	7.0
NGEFV/ NGCF -175	5600	176,391	16.6	1.1	10.6	158,288	19.3	1.5	8.2	155,170	19.8	1.5	7.8	149,117	20.8	1.7	7.2
NGEFV/ NGCF -200	6500	193,078	17.7	1.1	10.9	173,069	20.6	1.4	8.4	169,700	21.1	1.5	8.0	162,672	22.2	1.6	7.3
NGEFV/ NGCF -240	7300	242,658	22.4	1.1	10.8	217,477	26.6	1.5	8.2	213,131	27.3	1.5	7.8	203,805	28.9	1.7	7.0
NGEFV/ NGCF -270	8000	270,112	22.5	1.0	12.0	241,021	26.8	1.3	9.0	235,920	27.6	1.4	8.5	225,848	29.3	1.6	7.7
NGEFV/ NGCF -300	9000	301,857	25.0	1.0	12.1	267,967	30.0	1.3	8.9	262,104	30.9	1.4	8.5	249,274	30.6	1.5	8.2
NGEFV/ NGCF -340	10000	340,365	28.6	1.0	11.9	304,163	34.0	1.3	9.0	298,070	35.0	1.4	8.5	243,262	33.0	1.6	7.4

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

Controls

- Microprocessor Controller
- Color coded wires
- Weather proof Control panel

Quality Assurance

All NGEFV/NGCF model series are:

- Factory run tested.
- Produced in an ISO 9001-2015 listed manufacturing facility.
- Constructed in compliance with ASHRAE 15 safety requirements.
- AHRI rated cooling coils

STANDARD SPECIFICATIONS

General

- The top discharge condensing units are provided with the latest advanced technology to provide quiet, reliable performance. The straight V-coils adds aesthetical appeal and gives optimum heat transfer efficiency. The access panels & guards provide access to the compressor and to the control box. Removal of top panel gives access to fan motor and coil.
- The indoor unit is double skin consists of a coil, motor/blower assembly and a drain pan securely mounted on heavy gauge galvanized steel housing.

Unit Casing

- Panels are fabricated from hot dipped G90, Zinc coating and zero spangle galvanized steel, oven-baked powder coated.
- 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 inner grooved 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.

Condenser Coils

The coils are built up of inner grooved copper tubes and mechanically bonded to scientifically designed 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 fans which are statically and dynamically balanced, designed for low sound level operation Belt driven.

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.

Air Flow Switch

This control is used to detect air flow or absence of air flow by responding only to the velocity of air movement within the discharge of evaporator fan.

Drain Pan

The drain pan is fabricated of painted galvanized steel and insulated with 8 MM thick fiberglass insulation.

Air Filter

High dust holding capacity, low resistance filter. It can be cleaned with regular water and prolonged use. It consists of 1" or 2" metal aluminum mesh with unique pattern.

Refrigerant Circuit

NGEFV/NGCF 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 Vertical Split Units (NGEFV) 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

Typical Thermostat (Optional)

OPTIONAL SPECIFICATIONS

Construction

- 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

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
- Ultra violet light
- Wi-Fi Thermostat
- Modbus connectivity

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

*Note: * For Models NGCF-076 to 120 only.*

SELECTION PROCEDURE

The below example illustrates the selection procedure to assist using this catalog to select the appropriate NGEFV/NGCF unit that meets the design requirements.

Example :

Design requirements

•	Total cooling capacity	115	[MBH]
•	Sensible cooling capacity	90	[MBH]
•	Design ambient temperature	95	[°F]
•	Evaporator air flow	3800	[CFM]
•	Evaporator entering temperature DB/WB	80/67	[°F/°F]
•	External static pressure	0.7	[in.wg]
•	Altitude	2000	[ft]
•	Power supply	415V /3Ph /50Hz	

Altitude [ft]	Correction factor
Sea level	1
1000	0.996
2000	0.990
3000	0.984
4000	0.980
5000	0.974
6000	0.965
7000	0.960

*Using the correction factor table at the specified altitude, thereby the required capacity will be:

Corrected capacity = Required capacity /corr. factor

Corrected total capacity = 115 [MBH]/0.99
= 116.2 MBH

Corrected sensible capacity = 90 [MBH]/0.99
= 91 MBH

From the cooling capacity at performance data tables (page 13), the closest selection model to the required capacity is NGEFV/NGCF-120. From the performance table:

Total capacity = 120.8 [MBH]

Sensible capacity = 92.3 [MBH]

GENERAL DATA

Outdoor Units			NGCF-076 C2	NGCF-090 D2	NGCF-100 D2	NGCF-120 D2	NGCF-130 D2	NGCF-150 C2
Cooling Capacity (Nominal)	MBH		76.3	90.1	100.7	120.8	132.2	150.4
	KW		22.4	26.4	29.5	35.4	38.7	44.1
Power Supply	V / Ph / Hz		415 / 3Ph / 50Hz					
Compressor	Type		Hermetic Scroll					
	Quantity		1	2				
	Refrigerant		R410A					
Condenser Fan	Type		Propeller					
	Diameter	in	24					
	No. of fans		1	2				
	Motor Enclosure/Ins Class		Totally Enclosed Air Over Type, Class F					
	Nominal HP		3/4					
	RPM		900					
Condenser Coil	Type		Enhanced Aluminum Fins & Copper Tubes					
	Rows - FPI		2-16	2-14			2-16	3-16
	Total Face area	ft^2	18.3	27.0			31.6	
Refrigerant Pipe	Suction	in	7/8	3/4 (X2)		7/8 (X2)		7/8 (X2)
	Liquid	in	1/2	3/8 (X2)		3/8 (X2)		1/2 (X2)
Refrigerant Charge		kg	5.6	3.6/system	4.2/3.6	4.5/4.0	5.2/4.2	6/system
Weight		kg	163	221	226	232	243	275

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

GENERAL DATA

Indoor Units			NGEFV -076 C2	NGEFV -090 C2	NGEFV -100 C2	NGEFV -120 C2	NGEFV -130 C2	NGEFV -150 C2
Cooling Capacity (Nominal)	MBH		76.31	90.10	100.74	120.83	132.16	150.44
	KW		22.37	26.41	29.53	35.41	38.73	44.09
Power Supply	V / Ph / Hz		415 / 3Ph / 50Hz					
Air Flow Rate (Nominal)	CFM		2400	2800	3200	3800	4200	4800
Evaporator Blower	Type		Centrifugal					
	Quantity		1					
	Motor Enclosure/Ins Class		Open Drip Proof, Class B					
	Nominal HP		1	2		3		
Evaporator Coil	Type		Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes					
	Rows - FPI		3-16	4-14	4-12	4-12		3-13
	Total Face area	ft^2	6.2		8.1	10.2		12
Air Filter	Type		Washable aluminum mesh					
	Thickness	in	1				2	
Expansion Devices	Type		Thermostatic Expansion Valve					
Refrigerant Pipe	Suction	in	7/8	3/4 (X2)		7/8 (X2)		7/8 (X2)
	Liquid	in	1/2	3/8 (X2)		3/8 (X2)		1/2 (X2)
Drain Pipe		mm X TPI	27 X 14				42 X 11.5	
Weight		kg	133	165	172	178	184	191

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

GENERAL DATA

Outdoor Units			NGCF-175 C2	NGCF-200 C2	NGCF-240 C2	NGCF-270 C2	NGCF-300 C2	NGCF-340 C2
Cooling Capacity (Nominal)	MBH		176.4	193.1	242.7	270.1	301.9	340.4
	KW		51.7	56.6	71.1	79.2	88.5	99.8
Power Supply	V / Ph / Hz		415 / 3Ph / 50Hz					
Compressor	Type		Hermetic Scroll					
	Quantity		2					
	Refrigerant		R410A					
Condenser Fan	Type		Propeller					
	Diameter	in	30					31.5
	No. of fans		2					
	Motor Enclosure/Ins Class		Totally Enclosed Air Over Type, Class F					
	Nominal HP		1.5					2
	RPM		900					
Condenser Coil	Type		Enhanced Aluminum Fins & Copper Tubes					
	Rows - FPI		2-16		2-13	3-13		4-14
	Total Face area	ft^2	19.3		21.1	26.4		
Refrigerant Pipe	Suction	in	1-1/8(X2)		1-1/8 (X2)	1-3/8 (X2)		
	Liquid	in	1/2 (X2)		5/8 (X2)	5/8 (X2)		
Refrigerant Charge		kg	5.4/6.8	5.5/6	12.1/system	12.5/system	13/system	13.5/system
Weight		kg	400	470	550	600	718	861

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

GENERAL DATA

Indoor Units			NGEFV-175 C2	NGEFV-200 C2	NGEFV-240 C2	NGEFV-270 C2	NGEFV-300 C2	NGEFV-340 C2
Cooling Capacity (Nominal)	MBH		176.39	193.08	242.66	270.11	301.86	340.37
	KW		51.70	56.59	71.12	79.16	88.47	99.76
Power Supply	V / Ph / Hz		415 / 3Ph / 50Hz					
Air Flow Rate (Nominal)	CFM		5600	6500	7300	8000	9000	10000
Evaporator Blower	Type		Centrifugal					
	Quantity		2					
	Motor Enclosure/Ins Class		Open Drip Proof, Class B					
	Nominal HP		5					
Evaporator Coil	Type		Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes					
	Rows - FPI		4-12	4-14	4-12	4-13		
	Total Face area	ft^2	13.7	15.02	16.80	20.1	22.0	
Air Filter	Type		Washable aluminum mesh					
	Thickness	in	2					
Expansion Devices	Type		Thermostatic Expansion Valve					
Refrigerant Pipe	Suction	in	1-1/8 (X2)		1-1/8 (X2)	1-3/8 (X2)		
	Liquid	in	1/2 (X2)		5/8 (X2)	5/8 (X2)		
Drain Pipe		mm X TPI	42 X 11.5					
Weight		kg	290	297	303	472	478	480

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]												
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
NGEFV/NGCF -076	2100	86	72	81,077	55,468	6.74	72,546	52,187	8.07	71,195	51,677	8.32	68,282	50,586	8.88
		80	67	74,843	54,315	6.60	66,986	51,114	7.93	65,738	50,614	8.18	63,049	49,545	8.73
		74	62	68,981	53,003	6.47	61,627	49,836	7.76	60,479	49,349	8.00	58,005	48,307	8.54
		68	57	63,485	51,435	6.35	56,804	48,354	7.57	55,746	47,881	7.81	53,466	46,870	8.33
	2400	86	72	82,657	59,322	6.78	73,833	55,866	8.10	72,357	55,321	8.35	69,363	54,223	8.91
		80	67	76,307	57,950	6.63	68,174	54,717	7.96	66,812	54,183	8.21	64,047	53,108	8.76
		74	62	70,362	56,433	6.50	62,720	53,349	7.79	61,467	52,829	8.03	58,923	51,780	8.57
		68	57	64,884	54,705	6.38	57,812	51,762	7.60	56,656	51,257	7.83	54,312	50,240	8.35
	3000	86	72	84,792	66,671	6.84	75,664	62,923	8.15	74,208	62,403	8.40	70,983	61,258	8.98
		80	67	78,467	64,930	6.68	69,865	61,629	8.01	68,521	61,119	8.26	65,543	59,998	8.83
		74	62	72,490	63,036	6.54	64,276	60,088	7.84	63,039	59,591	8.08	60,300	58,498	8.64
		68	57	66,779	60,828	6.42	59,245	58,301	7.64	58,106	57,819	7.88	55,581	55,370	8.42
NGEFV/NGCF -090	2300	86	72	94,891	63,873	7.51	84,371	59,796	9.10	82,843	59,213	9.38	79,034	57,775	10.05
		80	67	87,216	62,255	7.43	77,547	58,280	9.00	76,143	57,712	9.27	72,641	56,310	9.93
		74	62	79,890	60,387	7.38	71,033	56,532	8.93	69,747	55,981	9.20	66,539	54,621	9.85
		68	57	73,087	58,270	7.32	64,984	54,550	8.86	63,808	54,019	9.13	60,873	52,707	9.77
	2800	86	72	98,051	70,447	7.53	86,967	66,298	9.13	85,164	65,635	9.41	81,025	64,121	10.08
		80	67	90,093	68,647	7.45	79,933	64,618	9.03	78,275	63,971	9.30	74,471	62,496	9.96
		74	62	82,504	66,591	7.39	73,219	62,680	8.96	71,700	62,052	9.23	68,216	60,621	9.88
		68	57	75,541	64,274	7.33	66,984	60,482	8.89	65,595	59,877	9.16	62,407	58,496	9.80
	3100	86	72	99,363	74,183	7.54	88,066	70,031	9.16	86,240	69,368	9.43	82,047	67,859	10.10
		80	67	91,326	72,303	7.46	80,943	68,256	9.05	79,265	67,611	9.32	75,411	66,140	9.98
		74	62	83,654	70,134	7.41	74,144	66,209	8.98	72,606	65,582	9.25	69,076	64,155	9.90
		68	57	76,531	67,676	7.35	67,831	63,888	8.91	66,424	63,283	9.17	63,194	61,907	9.82
NGEFV/NGCF -100	2800	86	72	107,094	75,197	8.89	95,228	70,698	10.80	93,352	69,998	11.13	88,801	68,313	11.95
		80	67	98,796	73,362	8.77	87,848	68,973	10.65	86,118	68,291	10.97	81,920	66,647	11.78
		74	62	90,793	71,162	8.65	80,733	66,904	10.49	79,142	66,242	10.80	75,284	64,647	11.60
		68	57	83,383	68,814	8.58	74,144	64,697	10.40	72,683	64,057	10.71	69,140	62,515	11.50
	3200	86	72	109,261	80,562	8.92	96,946	75,986	10.83	94,886	75,233	11.16	90,213	73,540	11.97
		80	67	100,743	78,562	8.80	89,434	74,133	10.68	87,533	73,398	11.00	83,222	71,747	11.80
		74	62	92,631	76,306	8.70	82,190	71,909	10.52	80,443	71,196	10.83	76,481	69,594	11.62
		68	57	85,034	73,696	8.61	75,482	69,537	10.43	73,878	68,847	10.74	70,239	67,298	11.52
	4000	86	72	112,146	90,741	8.95	99,203	86,114	10.87	97,059	85,360	11.19	91,775	83,500	12.02
		80	67	103,455	88,528	8.83	91,516	84,014	10.72	89,538	83,278	11.03	84,664	81,463	11.84
		74	62	95,076	85,872	8.71	84,103	81,493	10.56	82,285	80,779	10.86	77,806	77,806	11.66
		68	57	87,316	83,039	8.64	77,239	74,999	10.47	75,570	74,285	10.77	71,456	71,170	11.55

See Note on Pg. 16

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
NGEFV/NGCF-120	3500	86	72	125,702	95,027	10.62	112,325	89,548	12.84	109,948	88,590	13.27	105,073	86,639	14.17
		80	67	119,376	88,562	10.48	106,672	83,456	12.66	104,414	82,563	13.08	99,785	80,745	13.97
		74	62	109,945	85,905	10.35	98,245	80,952	12.50	96,165	80,086	12.91	91,902	78,323	13.79
		68	57	100,992	83,160	10.26	90,244	78,365	12.38	88,334	77,526	12.79	84,418	75,820	13.65
	3800	86	72	127,196	98,954	10.64	113,524	93,456	12.86	111,112	92,501	13.29	106,048	90,503	14.19
		80	67	120,832	92,260	10.50	107,810	87,098	12.68	105,520	86,208	13.10	100,711	84,345	13.99
		74	62	111,343	89,791	10.38	99,293	84,485	12.52	97,184	83,622	12.93	92,755	81,815	13.81
		68	57	102,221	86,794	10.28	91,207	81,785	12.40	89,270	80,949	12.81	85,201	79,200	13.67
	4700	86	72	130,698	110,455	10.66	116,443	104,891	12.87	113,863	103,896	13.29	108,622	101,889	14.20
		80	67	124,119	102,940	10.54	110,582	97,755	12.72	108,132	96,828	13.13	103,155	94,957	14.03
		74	62	114,314	99,852	10.41	101,846	94,822	12.56	99,590	93,923	12.96	95,006	92,108	13.85
		68	57	105,005	96,661	10.32	93,552	91,792	12.44	91,480	90,921	12.84	87,269	86,920	13.71
NGEFV/NGCF-130	3700	86	72	143,219	98,172	11.97	127,853	92,258	14.46	125,645	91,423	14.87	119,871	89,256	15.92
		80	67	132,120	95,871	11.79	117,945	90,095	14.23	115,908	89,280	14.63	110,582	87,164	15.66
		74	62	121,551	93,283	11.62	108,510	87,663	14.02	106,636	86,870	14.41	101,735	84,810	15.43
		68	57	111,642	90,119	11.47	99,664	84,690	13.82	97,943	83,924	14.21	93,442	81,934	15.20
	4200	86	72	146,051	104,446	12.02	130,188	98,489	14.50	127,835	97,618	14.91	121,826	95,408	15.97
		80	67	132,157	100,060	11.83	117,812	94,349	14.27	115,682	93,515	14.67	110,245	91,397	15.70
		74	62	123,982	99,239	11.66	110,492	93,584	14.06	108,494	92,757	14.45	103,395	90,656	15.47
		68	57	113,861	95,979	11.51	101,485	90,410	13.86	99,650	89,611	14.25	94,966	87,581	15.25
	5100	86	72	149,679	115,235	12.07	133,094	109,189	14.56	130,745	108,345	14.97	111,820	97,236	16.15
		80	67	138,080	112,534	11.89	122,781	106,630	14.33	120,614	105,805	14.72	103,155	94,957	15.89
		74	62	127,034	109,495	11.72	112,958	103,751	14.12	110,964	102,949	14.51	94,903	92,393	15.65
		68	57	116,678	105,782	11.56	103,750	100,232	13.92	101,918	99,457	14.30	87,166	86,817	15.42
NGEFV/NGCF-150	4200	86	72	159,670	108,530	14.12	143,217	102,150	16.86	140,298	101,037	17.37	134,615	98,887	18.49
		80	67	147,569	106,090	13.83	132,363	99,853	16.49	129,666	98,765	16.99	124,413	96,664	18.08
		74	62	135,764	103,225	13.57	121,774	97,157	16.16	119,292	96,098	16.65	114,460	94,054	17.71
		68	57	124,696	99,725	13.34	111,847	93,862	15.87	109,567	92,839	16.35	105,129	90,864	17.39
	4800	86	72	162,842	115,560	14.19	145,626	109,084	16.93	142,850	108,051	17.44	136,924	105,857	18.56
		80	67	150,444	112,976	13.89	134,590	106,632	16.56	132,024	105,622	17.06	126,547	103,478	18.15
		74	62	138,692	110,048	13.63	123,823	103,753	16.23	121,462	102,770	16.72	116,423	100,684	17.78
		68	57	127,681	106,614	13.40	114,132	100,234	15.94	111,560	99,284	16.42	106,932	97,269	17.46
	5800	86	72	166,712	126,857	14.28	148,900	120,321	17.02	145,828	119,209	17.53	139,791	117,037	18.66
		80	67	154,078	124,005	13.98	137,615	117,616	16.64	134,776	116,529	17.14	129,197	114,406	18.24
		74	62	141,752	120,657	13.71	126,606	114,440	16.31	123,994	113,383	16.80	118,861	111,317	17.87
		68	57	130,196	116,565	13.48	116,285	110,559	16.02	113,886	109,537	16.50	109,172	107,542	17.54

See Note on Pg. 16

COOLEX

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
NGEFV/NGCF-175	4800	86	72	187,067	128,203	16.78	168,263	120,964	19.52	164,962	119,715	20.03	158,571	117,312	21.10
		80	67	172,412	125,076	16.57	155,081	118,014	19.25	152,039	116,795	19.76	146,148	114,451	20.80
		74	62	158,619	121,574	16.37	142,674	114,709	19.00	139,876	113,524	19.50	134,457	111,246	20.52
		68	57	145,688	117,571	16.15	131,043	110,933	18.72	128,473	109,787	19.21	123,495	107,584	20.21
	5600	86	72	191,471	138,275	16.84	171,742	130,913	19.58	168,360	129,663	20.09	161,792	127,257	21.14
		80	67	176,391	134,890	16.63	158,288	127,720	19.31	155,170	126,501	19.81	149,117	124,153	20.85
		74	62	162,230	131,130	16.43	145,625	124,144	19.06	142,756	122,959	19.55	137,187	120,677	20.56
		68	57	149,041	126,792	16.25	133,753	120,057	18.77	131,119	118,911	19.26	126,004	116,704	20.25
	6800	86	72	196,284	152,792	16.90	175,651	145,305	19.64	172,073	144,021	20.15	165,179	141,562	21.21
		80	67	180,907	149,065	16.69	161,890	141,761	19.37	158,593	140,508	19.88	152,238	138,110	20.91
		74	62	166,434	144,892	16.48	148,939	137,791	19.12	145,906	136,574	19.61	140,059	134,243	20.63
		68	57	152,866	140,121	16.26	136,797	133,255	18.84	134,011	132,077	19.32	128,641	128,126	20.31
NGEFV/NGCF-200	5500	86	72	204,866	144,322	17.83	184,169	136,491	20.79	180,537	135,137	21.34	173,094	132,382	22.47
		80	67	188,816	140,802	17.59	169,741	133,162	20.50	166,394	131,841	21.04	159,534	129,153	22.14
		74	62	173,711	136,859	17.37	156,162	129,434	20.22	153,082	128,150	20.75	146,771	125,537	21.84
		68	57	159,550	132,354	17.13	143,431	125,172	19.92	140,603	123,931	20.43	134,806	121,404	21.50
	6500	86	72	209,490	157,085	17.89	187,780	149,107	20.85	184,124	147,782	21.40	176,499	145,033	22.54
		80	67	193,078	153,254	17.66	173,069	145,470	20.56	169,700	144,178	21.10	162,672	141,496	22.22
		74	62	177,632	148,963	17.43	159,224	141,397	20.28	156,124	140,141	20.81	149,659	137,534	21.91
		68	57	163,151	144,059	17.19	146,244	136,742	19.98	143,396	135,527	20.50	137,458	133,006	21.57
	7500	86	72	212,990	169,450	17.93	190,659	161,422	20.90	186,938	160,101	21.45	179,106	157,334	22.60
		80	67	196,304	165,317	17.70	175,723	157,485	20.61	172,293	156,196	21.15	165,075	153,496	22.27
		74	62	180,599	160,688	17.48	161,665	153,076	20.33	158,510	151,822	20.86	151,869	149,198	21.96
		68	57	165,877	155,398	17.23	148,486	144,180	20.02	145,588	143,113	20.54	139,488	138,930	21.62
NGEFV/NGCF-240	6500	86	72	258,711	174,953	22.64	232,240	164,671	26.88	227,462	162,846	27.64	217,476	159,063	29.29
		80	67	238,443	170,686	22.31	214,046	160,654	26.47	209,642	158,874	27.21	200,439	155,184	28.84
		74	62	219,368	165,907	22.00	196,922	156,156	26.08	192,871	154,426	26.81	184,404	150,839	28.40
		68	57	201,485	160,445	21.66	180,869	151,015	25.65	177,147	149,342	26.36	169,371	145,873	27.92
	7300	86	72	263,284	184,892	22.73	235,963	174,511	26.96	231,247	172,747	27.73	221,128	168,990	29.39
		80	67	242,658	180,383	22.40	217,477	170,254	26.55	213,131	168,533	27.30	203,805	164,868	28.93
		74	62	223,245	175,332	22.09	200,079	165,487	26.16	196,081	163,814	26.89	187,501	160,252	28.49
		68	57	205,046	169,560	21.74	183,768	160,039	25.73	180,096	158,421	26.45	172,215	154,976	28.01
	8000	86	72	266,512	193,324	22.80	238,684	182,918	27.03	233,733	181,096	27.79	223,300	177,275	29.45
		80	67	245,633	188,608	22.47	219,986	178,457	26.62	215,422	176,679	27.36	205,806	172,951	28.99
		74	62	225,982	183,327	22.15	202,387	173,460	26.22	198,188	171,732	26.96	189,342	168,108	28.55
		68	57	207,560	177,292	21.81	185,888	167,750	25.79	182,032	166,079	26.51	173,906	162,574	28.07

See Note on Pg. 16

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [°F]												
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
NGEFV/NGCF-270	7000	86	72	286,453	193,999	22.74	256,831	182,531	27.15	251,542	180,518	27.98	240,726	176,435	29.68
		80	67	264,012	189,268	22.41	236,711	178,079	26.74	231,836	176,115	27.55	221,867	172,132	29.21
		74	62	242,891	183,968	22.10	217,774	173,093	26.34	213,289	171,184	27.14	204,118	167,312	28.77
		68	57	223,090	177,912	21.75	200,021	167,394	25.91	195,901	165,549	26.69	187,478	161,804	28.28
	8000	86	72	292,514	207,136	22.84	261,508	195,437	27.24	255,974	193,382	28.07	245,045	189,351	29.78
		80	67	270,112	202,469	22.50	241,021	190,671	26.83	235,920	188,665	27.63	225,848	184,733	29.31
		74	62	248,030	196,426	22.19	221,740	185,332	26.43	217,047	183,382	27.22	207,780	179,560	28.87
		68	57	227,810	189,959	21.84	203,663	179,230	25.99	199,353	177,345	26.77	190,841	173,649	28.38
	9000	86	72	297,132	219,798	22.91	265,380	208,067	27.32	259,832	206,046	28.14	248,279	201,861	29.85
		80	67	273,855	214,437	22.57	244,590	202,992	26.90	239,477	201,020	27.71	228,829	196,938	29.38
		74	62	251,946	208,433	22.26	225,023	197,309	26.50	220,319	195,392	27.29	210,522	191,424	28.94
		68	57	231,407	201,571	21.91	206,679	190,813	26.06	202,358	188,959	26.84	193,360	185,122	28.44
NGEFV/NGCF-300	8000	86	72	321,798	218,474	25.23	285,898	204,591	30.38	279,662	202,222	31.31	266,473	197,255	33.24
		80	67	296,588	213,146	24.85	263,501	199,601	29.91	257,753	197,290	30.82	245,597	192,444	30.47
		74	62	272,861	207,178	24.49	242,421	194,012	29.45	237,133	191,766	30.34	225,949	187,056	29.96
		68	57	250,617	200,357	24.09	222,658	187,625	28.95	217,801	185,452	29.82	207,530	180,897	29.40
	9000	86	72	327,515	231,272	25.35	290,745	217,366	30.50	284,383	215,000	31.43	270,463	209,860	31.11
		80	67	301,857	225,631	24.97	267,967	212,064	30.02	262,104	209,756	30.93	249,274	204,742	30.58
		74	62	277,709	219,314	24.60	246,530	206,126	29.56	241,136	203,883	30.45	229,332	199,009	30.07
		68	57	255,069	212,093	24.21	226,432	199,340	29.06	221,478	197,171	29.93	210,637	192,457	29.50
	1000	86	72	332,135	243,713	25.44	294,469	229,728	30.59	287,585	227,210	31.51	273,485	222,091	31.20
		80	67	306,115	237,768	25.06	271,400	224,125	30.11	265,056	221,669	31.01	252,060	216,674	30.66
		74	62	281,626	231,111	24.70	249,688	217,849	29.65	243,851	215,462	30.53	231,895	210,607	30.15
		68	57	258,667	223,502	24.30	229,333	210,677	29.15	223,972	208,369	30.01	212,991	203,673	29.58

See Note on Pg. 16

PERFORMANCE DATA TABLES

Model	Air Flow	Condenser Ambient Temperature [ºF]												
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW	Capacity Btu/Hr		KW
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
NGEFV/NGCF-340	9000	86	72	363,356	245,319	28.97	325,353	230,544	34.41	318,776	228,030	35.44	304,633	222,670	37.57
		80	67	334,890	239,336	28.54	299,864	224,921	33.87	293,803	222,469	34.87	280,768	217,239	33.98
		74	62	308,099	232,635	28.12	275,875	218,623	33.35	270,298	216,240	34.34	258,306	211,156	33.41
		68	57	282,982	224,976	27.67	253,385	211,425	32.78	248,263	209,121	33.75	237,249	204,204	32.77
	10000	86	72	369,296	257,980	29.09	330,017	243,016	34.52	323,406	240,536	35.54	308,998	235,177	34.70
		80	67	340,365	251,688	28.65	304,163	237,089	33.98	298,070	234,670	34.97	284,790	229,441	34.09
		74	62	313,136	244,641	28.23	279,830	230,450	33.46	274,224	228,099	34.44	262,007	223,016	33.52
		68	57	287,608	236,587	27.77	257,018	222,864	32.88	251,869	220,590	33.84	240,648	215,674	32.88
	11000	86	72	374,276	270,331	29.18	334,261	255,342	34.62	326,973	252,653	35.62	312,354	247,294	34.79
		80	67	344,954	263,738	28.74	308,074	249,115	34.07	301,357	246,491	35.06	287,884	241,263	34.18
		74	62	317,358	256,353	28.32	283,428	242,139	33.55	277,249	239,589	34.52	264,853	234,507	33.60
		68	57	291,486	247,914	27.86	260,323	234,168	32.98	254,647	231,701	33.92	243,262	226,787	32.96

LEGEND:

CFM : Air flow rate (Ft^3/minute)
DB : Dry bulb temperature (°F)
WB : Wet bulb temperature (°F)
KW : Total Power Input (Kilowatts)

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.
2. Direct interpolation is permissible – Do not extrapolate.

UNIT ELECTRICAL DATA

Outdoor Units		NGCF-076	NGCF-090	NGCF-100	NGCF-120	NGCF-130	NGCF-150	NGCF-175	NGCF-200	NGCF-240	NGCF-270	NGCF-300	NGCF-340
Unit Power Supply	Volt	415											
	Phase	3											
	Hz	50											
Compressor	V - Ph - Hz	415 -3- 50											
	RLA-1	12.5	6.8	10.7	10.9	12.5	13.6	14.5	14.5	17.9	20.7	20.8	28.6
	LRA-1	75	43	64	64	75	100	101	101	139	118	144	174
	RLA-2	-	6.8	6.8	10	10.9	13.6	13.6	14.5	17.9	17.9	20.8	25
	LRA-2	-	43	52	64	64	100	100	101	139	139	144	140
Condenser Fan Motor	V - Ph - Hz	415 -3- 50											
	Hp	3/4	2 x 3/4	2 x 3/4	2 x 3/4	2 x 3/4	2 x 3/4	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 2
	FLA	1.6	1.6	1.6	1.6	1.6	1.6	3	3	3	3	3	3.8
Unit Ampacity, Ampere		17.2	18.5	23.4	26.8	29.7	33.8	37.7	38.6	46.3	49.8	52.8	68.4
Max. Fuse Size, Ampere		25	25	30	35	40	45	50	50	60	70	70	90
Minimum Wire Size, mm²		2.5	4	6	6	10	10	10	10	16	16	16	25

Indoor Units		NGEFV-076	NGEFV-090	NGEFV-100	NGEFV-120	NGEFV-130	NGEFV-150	NGEFV-175	NGEFV-200	NGEFV-240	NGEFV-270	NGEFV-300	NGEFV-340
Unit Power Supply	Volt	415											
	Phase	3											
	Hz	50											
Blower Motor	V - Ph - Hz	415 -3- 50											
	Hp	1	2	2	3	3	3	5	5	5	5	5	5
	FLA	2.4	4.3	4.3	4.6	4.6	4.6	7.2	7.2	7.2	7.2	7.2	7.2
Max. Fuse Size, Ampere		5	10	10	10	10	10	16	16	16	16	16	16
Minimum Wire Size, mm²		1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

LEGEND:

FLA : Full Load Amps
RLA : Rated Load Amps
LRA : Locked Rotor Amps

FAN PERFORMANCE

Model	CFM	External Static Pressure [in.wg]																	
		0.25		0.40		0.70		1.00		1.20		1.40		1.60		1.80		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEFV-076	2100	766	0.54	825	0.61	936	0.77	-	-	-	-	-	-	-	-	-	-	-	-
	2400	769	0.65	824	0.73	931	0.90	1030	1.07	1092	1.19	1151	1.32	-	-	-	-	-	-
	3000	795	0.96	843	1.04	935	1.22	1025	1.42	1083	1.55	1139	1.69	1194	1.83	1247	1.98	1298	2.13
NGEFV-090	2300	767	0.61	824	0.69	932	0.85	1032	1.02	1094	1.14	-	-	-	-	-	-	-	-
	2800	784	0.84	834	0.93	931	1.10	1024	1.29	1084	1.42	1142	1.55	-	-	-	-	-	-
	3100	801	1.02	848	1.11	939	1.29	1026	1.49	1083	1.62	1139	1.76	1192	1.91	1245	2.05	1296	2.21
NGEFV-100	2800	784	0.84	834	0.93	931	1.10	1024	1.29	1084	1.42	1142	1.55	1197	1.69	1251	1.83	1303	1.97
	3200	808	1.08	854	1.17	942	1.36	1028	1.56	1084	1.70	1138	1.84	1192	1.98	1243	2.13	1294	2.29
	4000	-	-	910	1.81	989	2.04	1063	2.27	1111	2.43	1158	2.59	1204	2.75	1250	2.91	1295	3.08

Model	CFM	External Static Pressure [in.wg]																	
		0.25		0.40		0.70		1.00		1.20		1.40		1.60		1.80		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEFV-120	3500	844	1.32	902	1.45	957	1.59	1037	1.80	1090	1.94	1141	2.09	1192	2.24	1242	2.45	1291	2.55
	3800	867	1.56	922	1.71	975	1.85	1051	2.07	1101	2.22	1150	2.37	1198	2.53	1245	2.69	1292	2.86
	4500	-	-	-	-	1026	2.59	1111	3.11	1141	3.02	1204	3.04	1227	3.37	1269	3.54	1311	3.72
NGEFV-130	3700	676	1.03	735	1.18	791	1.35	870	1.60	919	1.77	967	1.95	1014	2.13	-	-	-	-
	4200	687	1.25	744	1.43	797	1.60	873	1.87	920	2.06	967	2.25	1011	2.45	1055	2.64	1097	2.85
	5100	713	1.78	766	1.97	816	2.17	887	2.48	932	2.69	975	2.90	1018	3.12	1058	3.35	1098	3.57

LEGEND:

RPM : Fan Speed in revolution per minute
BHP : Fan absorbed power

Note:

1. Internal Static pressure is based on pressure drops through evaporator coil, fan casing and 2" washable filters.
2. The blue shaded area indicates the operating range of a standard pulley combination.
3. The blue and green shaded area indicates the operating range of a standard motor; out of this range shift to next larger motor size.
4. To determine the power of motor to be installed, just multiply the value of the absorbed power indicated above by 1.2.

FAN PERFORMANCE

Model	CFM	External Static Pressure [in.wg]																	
		0.25		0.40		0.70		1.00		1.20		1.40		1.60		1.80		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEFV-150	4200	701	1.30	771	1.51	797	1.60	873	1.87	920	2.06	967	2.25	1011	2.45	1055	2.64	1097	2.85
	4800	717	1.63	783	1.87	809	1.96	881	2.26	927	2.46	971	2.67	1014	2.88	1056	3.09	1096	3.31
	5800	753	2.37	813	2.63	836	2.74	904	3.07	947	3.3	989	3.53	1029	3.77	1068	4.01	1106	4.25
NGEFV-175	4800	835	1.58	917	1.82	949	1.92	1039	2.22	1096	2.42	1151	2.62	1204	2.82	1256	3.02	1305	3.24
	5600	859	2.06	936	2.34	965	2.46	1051	2.80	1105	3.04	1158	3.26	1208	3.28	1258	3.72	1306	3.96
	6800	-	-	978	3.36	1005	3.50	1082	3.90	1132	4.18	1181	4.46	1228	4.74	1275	5.02	1320	5.30
NGEFV-200	5500	856	2.00	933	2.28	963	2.38	1049	2.72	1104	2.96	1157	3.18	1208	3.40	1258	3.64	1306	3.86
	6500	-	-	966	3.08	993	3.2	1073	3.60	1124	3.88	1174	4.14	1222	4.40	1269	4.66	1315	4.92
	7500	-	-	-	-	-	-	1108	4.68	1155	4.98	1201	5.28	1246	5.60	1334	6.20	1334	6.20

Model	CFM	External Static Pressure [in.wg]																	
		0.25		0.40		0.70		1.00		1.20		1.40		1.60		1.80		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEFV-240	6500	871	2.34	933	2.60	963	2.74	1049	3.14	1104	3.40	1157	3.68	1209	3.96	1259	4.26	1308	4.54
	7300	893	2.88	953	3.18	982	3.32	1064	3.78	1117	4.08	1167	4.38	1217	4.68	1264	4.98	1311	5.30
	8000	914	3.44	972	3.76	1001	3.92	1081	4.40	1132	4.74	1181	5.06	1228	5.38	1274	5.72	1319	6.04
NGEFV-270	7000	703	2.04	762	2.36	790	2.52	870	3.00	920	3.34	969	3.68	-	-	-	-	-	-
	8000	711	2.48	767	2.82	794	2.98	871	3.52	920	3.88	967	4.26	1012	4.64	1056	5.02	1098	5.4
	9000	723	3.00	777	3.36	802	3.54	876	4.12	923	4.50	968	4.9	1012	5.32	1055	5.72	1096	6.14

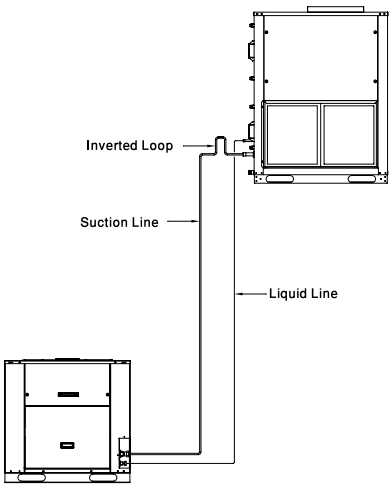
Model	CFM	External Static Pressure [in.wg]																	
		0.25		0.40		0.70		1.00		1.20		1.40		1.60		1.80		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEFV-300	8000	726	2.56	767	2.82	794	2.98	871	3.52	1012	4.64	1056	5.02	1098	5.4	-	-	-	-
	9000	737	3.10	777	3.36	802	3.54	876	4.12	1012	5.32	1055	5.72	1096	6.14	1195	7.22	-	-
	10000	750	3.72	789	4.00	813	4.20	885	4.80	1016	6.08	1057	6.52	1097	6.96	1193	8.12	1284	9.30
NGEFV-340	9000	737	3.10	777	3.36	802	3.54	876	4.12	1012	5.32	1055	5.72	1096	6.14	1195	7.22	-	-
	10000	750	3.72	789	4.00	813	4.20	885	4.80	1016	6.08	1057	6.52	1097	6.96	1193	8.12	1284	9.30
	11000	766	4.44	803	4.74	827	4.96	896	5.60	1024	6.96	1063	7.42	1102	7.90	1195	9.10	1283	10.28

RECOMMENDED SUCTION AND LIQUID LINE SIZES

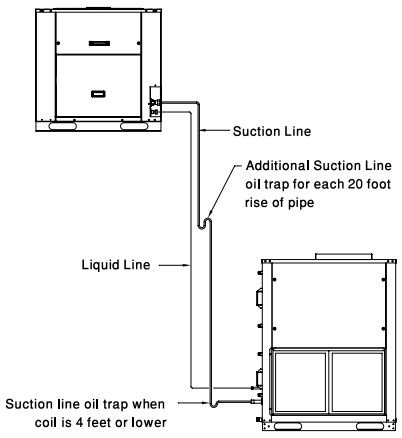
MODELS (NGEFV/ NGCF)	Refrigerant Equivalent Length - Ft.									
	0-25		26-50		51-75		76-100		100-120	
	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid
76	7/8	1/2	7/8	1/2	7/8	1/2	1-1/8	5/8	1-1/8	5/8
90	3/4	3/8	3/4	1/2	7/8	1/2	7/8	1/2	7/8	1/2
100	3/4	3/8	3/4	1/2	7/8	1/2	7/8	1/2	7/8	1/2
120	7/8	3/8	7/8	1/2	7/8	1/2	1-1/8	1/2	1-1/8	1/2
130	7/8	3/8	7/8	1/2	1-1/8	1/2	1-1/8	1/2	1-1/8	5/8
150	7/8	1/2	7/8	1/2	1-1/8	1/2	1-1/8	5/8	1-1/8	5/8
175	7/8	1/2	7/8	1/2	1-1/8	5/8	1-1/8	5/8	1-1/8	5/8
200	7/8	1/2	7/8	1/2	1-1/8	5/8	1-1/8	5/8	1-1/8	5/8
240	1 1/8	5/8	1 1/8	5/8	1 1/8	5/8	1 3/8	5/8	1 3/8	7/8
270	1 3/8	5/8	1 3/8	5/8	1 3/8	5/8	1 3/8	7/8	1 3/8	7/8
300	1 3/8	5/8	1 3/8	5/8	1 3/8	5/8	1 3/8	7/8	1 3/8	7/8
340	1 3/8	5/8	1 3/8	5/8	1 3/8	5/8	1 3/8	7/8	1 5/8	7/8

Note:

1. *Pipe diameters are based on equivalent length of copper tubing sizes.*
2. *Pipe sizes are based on 2°F Temperature Drop.*
3. *If the condensing unit is above evaporating unit, Oil traps should be installed at equal intervals along the suction line.*
4. *If the evaporating unit is above condensing unit, Vapor line trap should be installed near the indoor unit to prevent liquid refrigerant migration to compressor.*
5. *Suction line sized based on maximum 5% capacity loss.*
6. *For different piping installation than mentioned above kindly consult Coolex.*

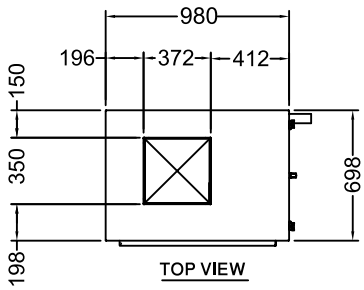


Evaporating Unit above Condensing Unit

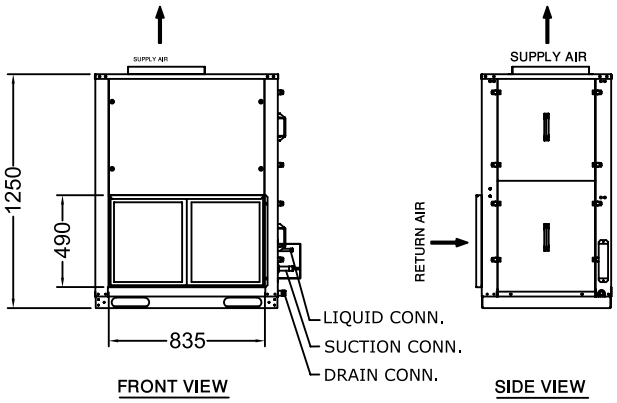


Condensing Unit above Evaporating Unit

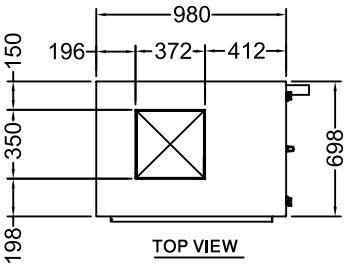
UNIT DIMENSIONS

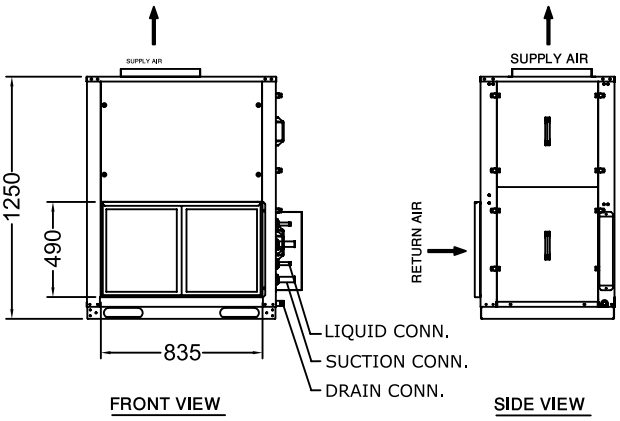


NGEFV-076
(ALL DIMENSIONS ARE IN MM)



NGEFV-090
(ALL DIMENSIONS ARE IN MM)

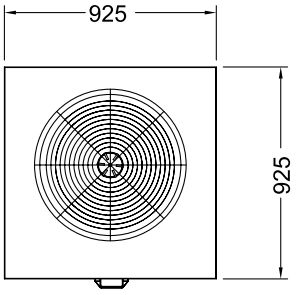




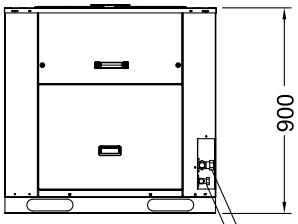
UNIT DIMENSIONS

NGCF-076

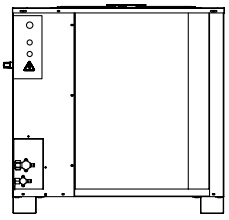
(ALL DIMENSIONS ARE IN MM)



TOP VIEW



FRONT VIEW



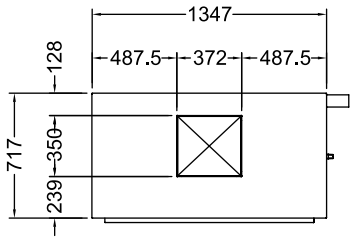
SIDE VIEW

LIQUID CONN.

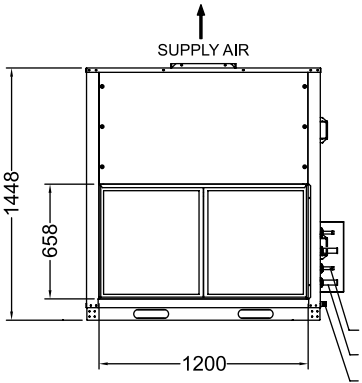
SUCTION CONN.

NGEFV-100/120

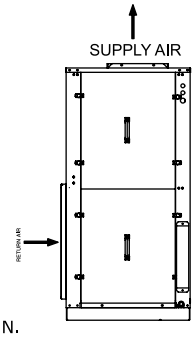
(ALL DIMENSIONS ARE IN MM)



TOP VIEW



FRONT VIEW



SIDE VIEW

LIQUID CONN.

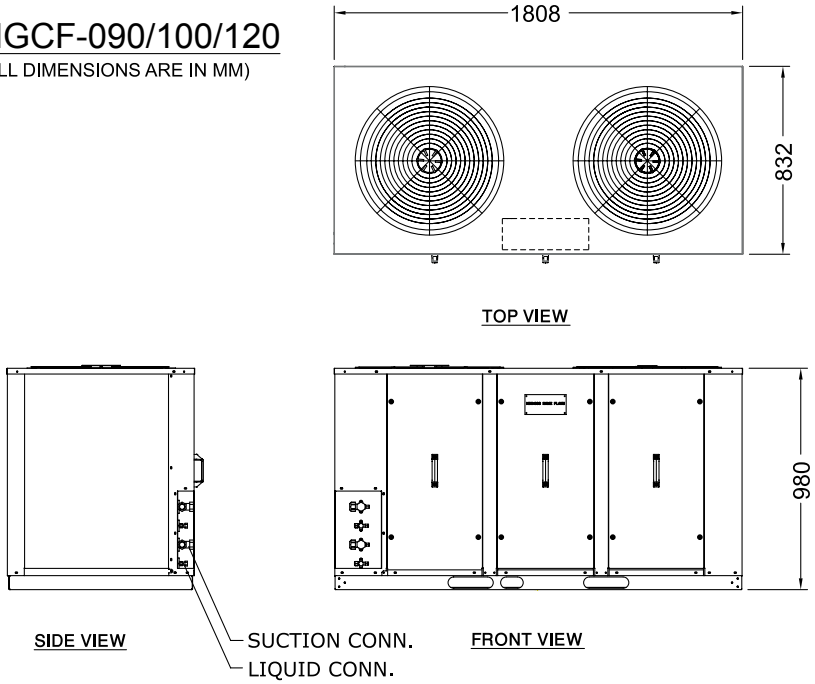
SUCTION CONN.

DRAIN CONN.

UNIT DIMENSIONS

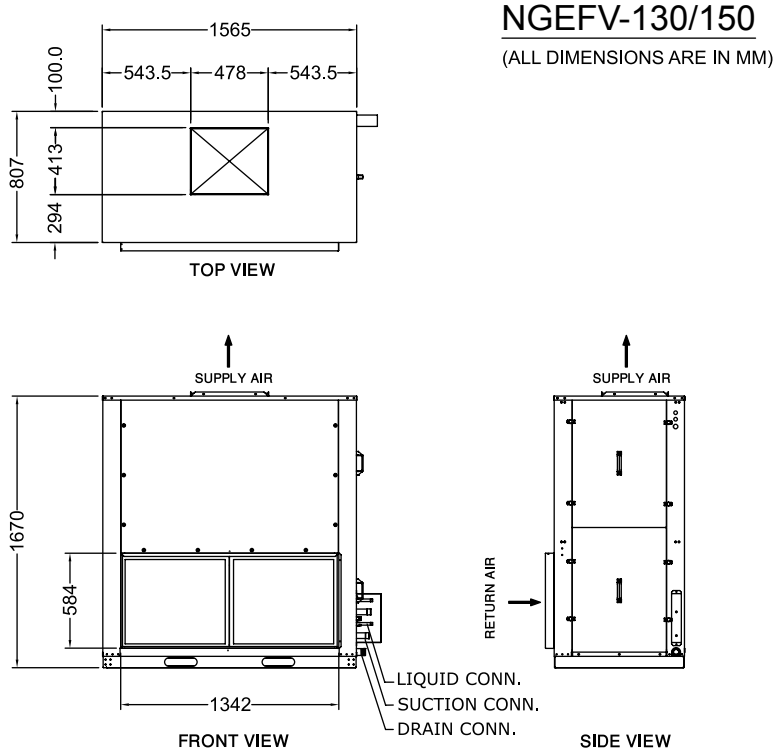
NGCF-090/100/120

(ALL DIMENSIONS ARE IN MM)



NGEFV-130/150

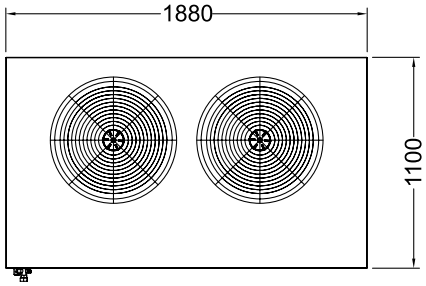
(ALL DIMENSIONS ARE IN MM)



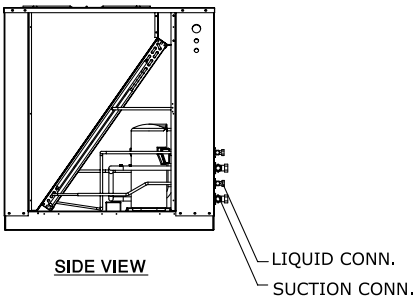
UNIT DIMENSIONS

NGCF-130/150

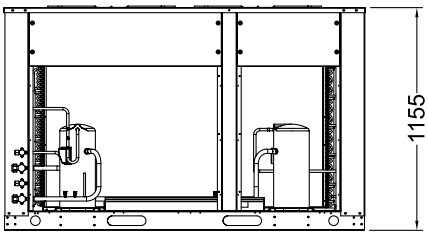
(ALL DIMENSIONS ARE IN MM)



TOP VIEW



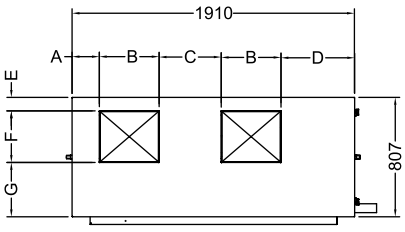
SIDE VIEW



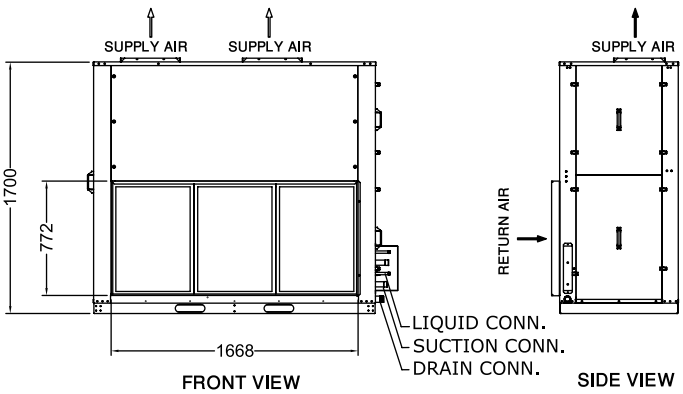
FRONT VIEW

NGEFV-175/200/240

(ALL DIMENSIONS ARE IN MM)



TOP VIEW



FRONT VIEW

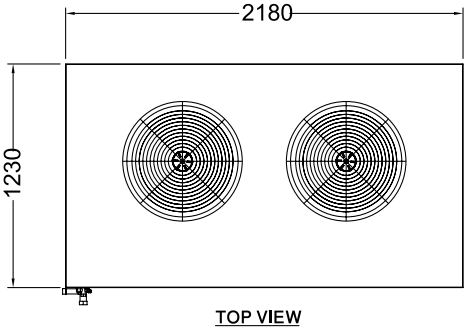
SIDE VIEW

MODELS	A	B	C	D	E	F	G
NGEFV-175	172	318	505	592	106	348	346
NGEFV-200	172	318	505	592	106	348	346
NGEFV-240	185	404	421	495	91	348	361

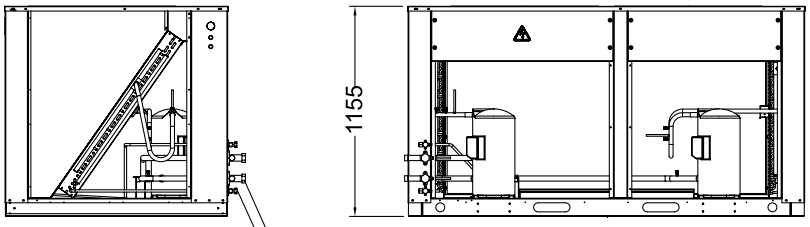
UNIT DIMENSIONS

NGCF-175/200

ALL DIMENSIONS ARE IN MM



TOP VIEW

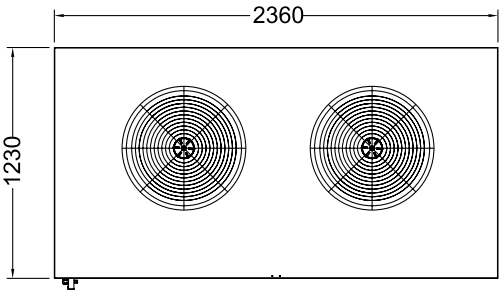


SIDE VIEW

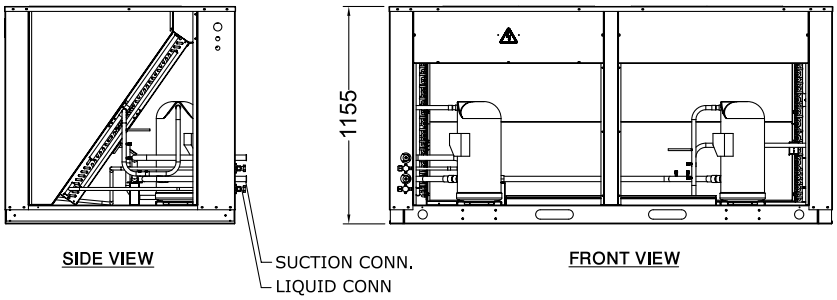
FRONT VIEW

NGCF-240

ALL DIMENSIONS ARE IN MM



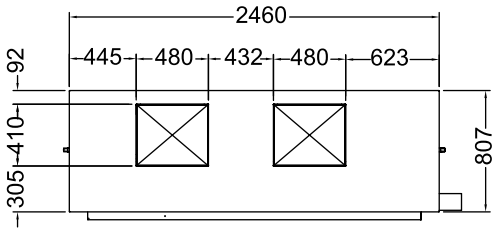
TOP VIEW



SIDE VIEW

FRONT VIEW

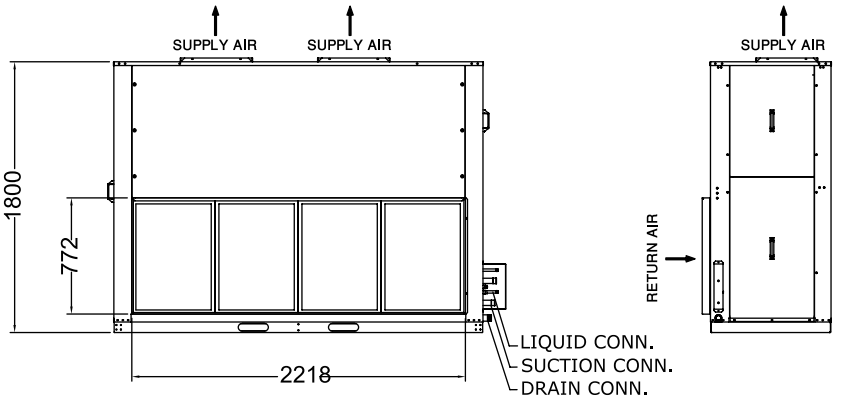
UNIT DIMENSIONS



TOP VIEW

NGEFV-270/300/340

(ALL DIMENSIONS ARE IN MM)

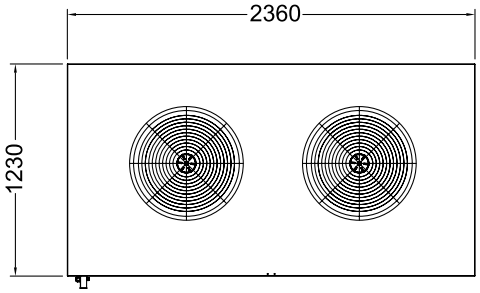


FRONT VIEW

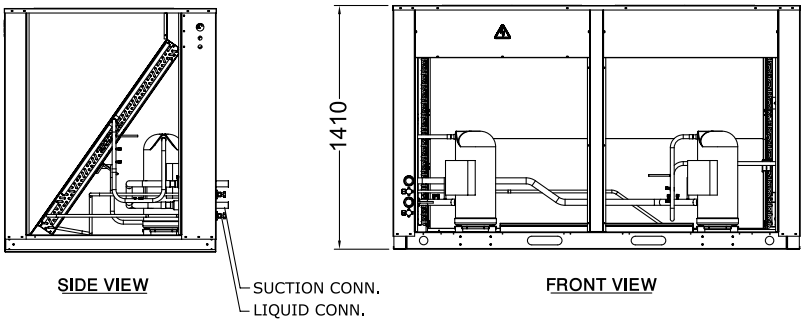
SIDE VIEW

NGCF-270/300

ALL DIMENSIONS ARE IN MM



TOP VIEW



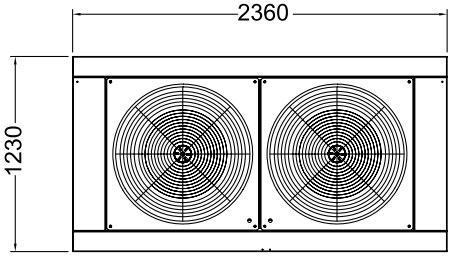
SIDE VIEW

FRONT VIEW

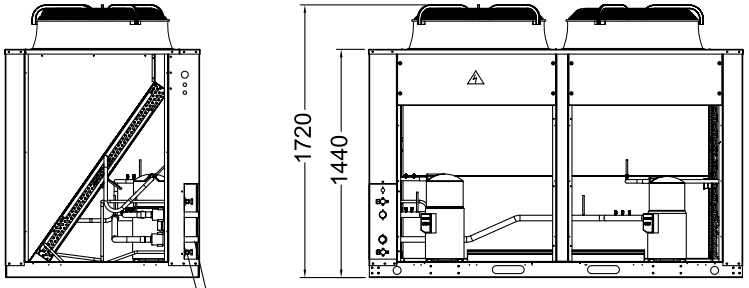
UNIT DIMENSIONS

NGCF-340

ALL DIMENSIONS ARE IN MM



TOP VIEW



SIDE VIEW

FRONT VIEW

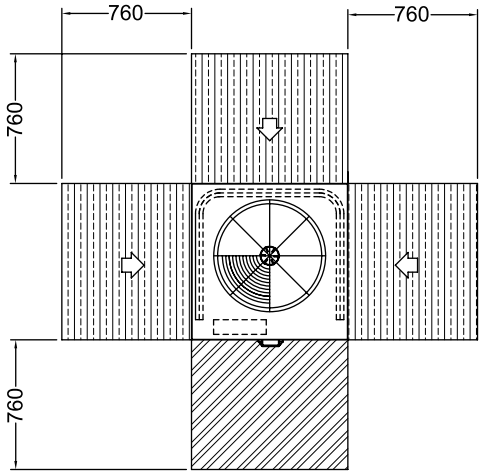
INSTALLATION CLEARANCE

NGCF-076

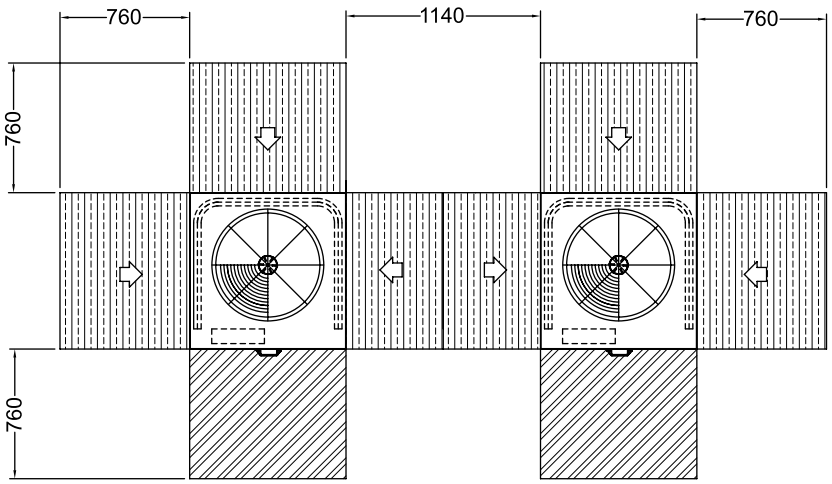
ALL DIMENSIONS ARE IN (MM)

SPACING FOR AIR FLOW

SPACING FOR SERVICE



SINGLE UNIT



MULTIPLE UNIT

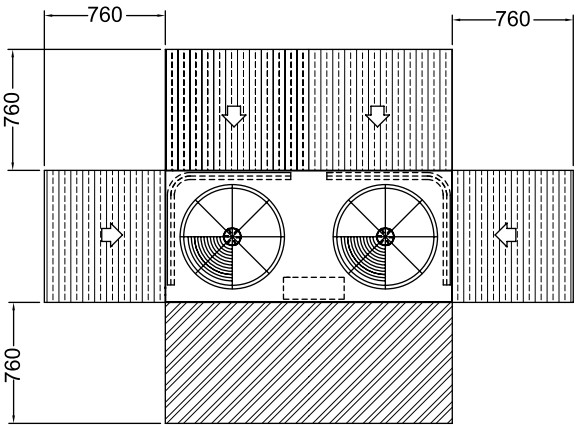
INSTALLATION CLEARANCE

NGCF-090/100/120

(ALL DIMENSIONS ARE IN MM)

SPACING FOR AIR FLOW

SPACING FOR SERVICE



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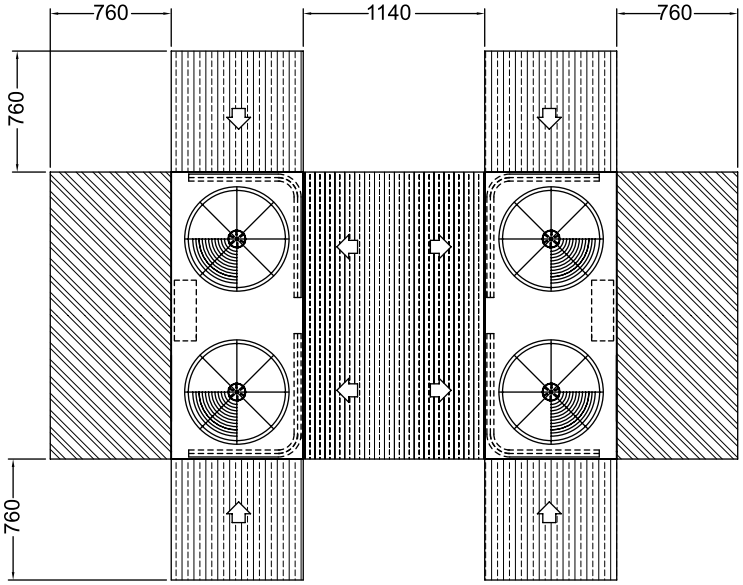
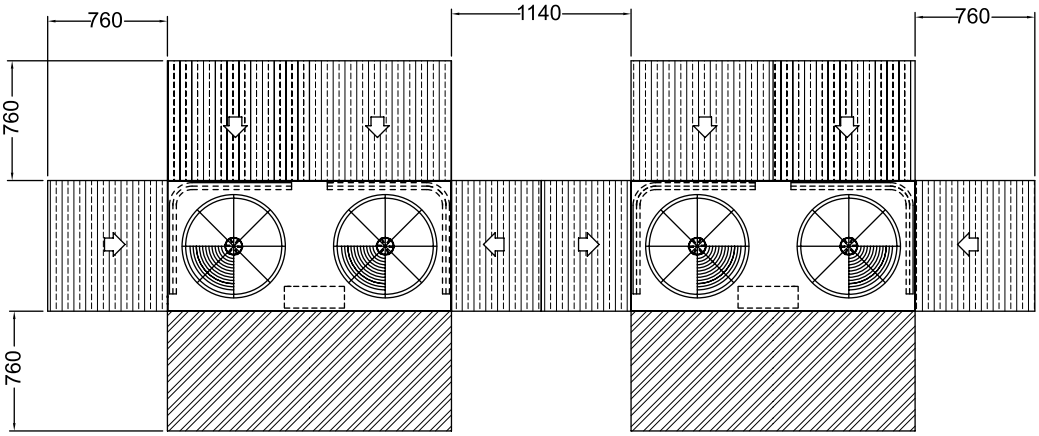


MULTIPLE UNIT



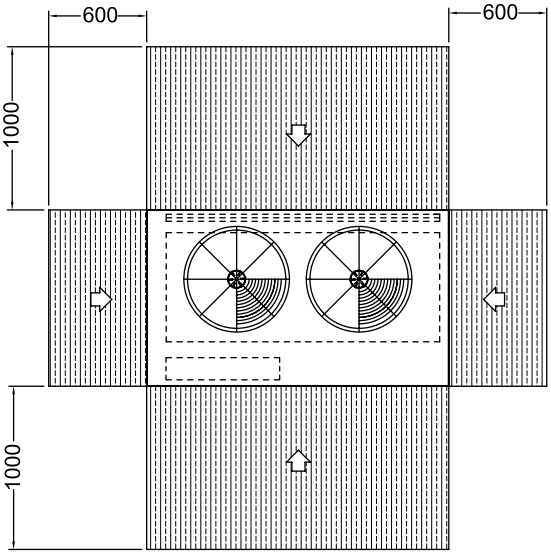
MULTIPLE UNIT

INSTALLATION CLEARANCE

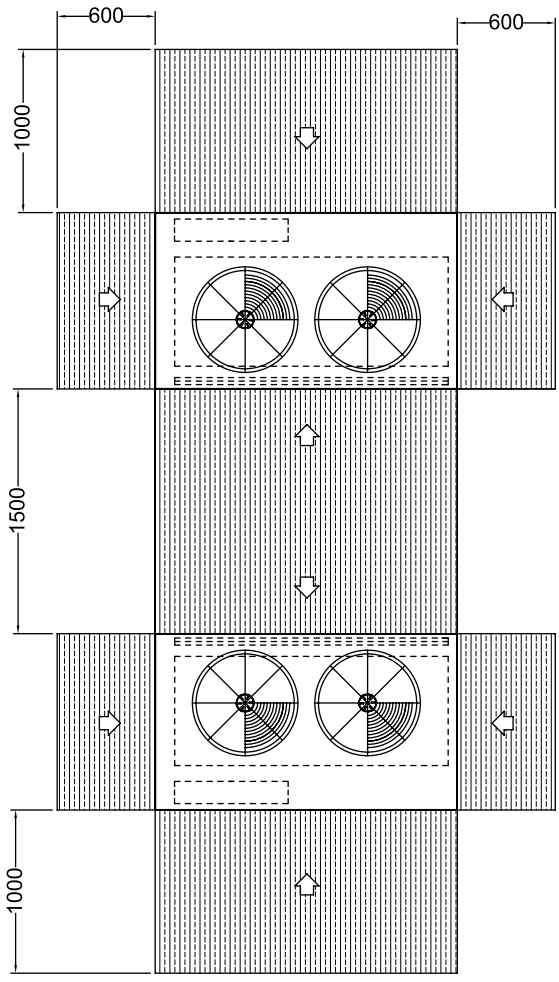
NGCF-135 TO 340

ALL DIMENSIONS ARE IN MM

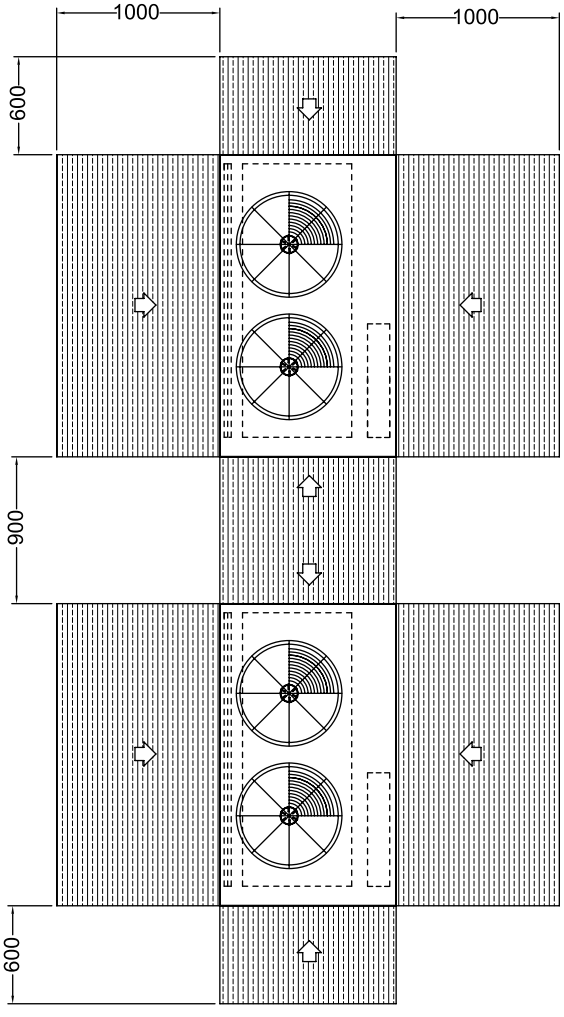
SPACING FOR AIR FLOW



SINGLE UNIT

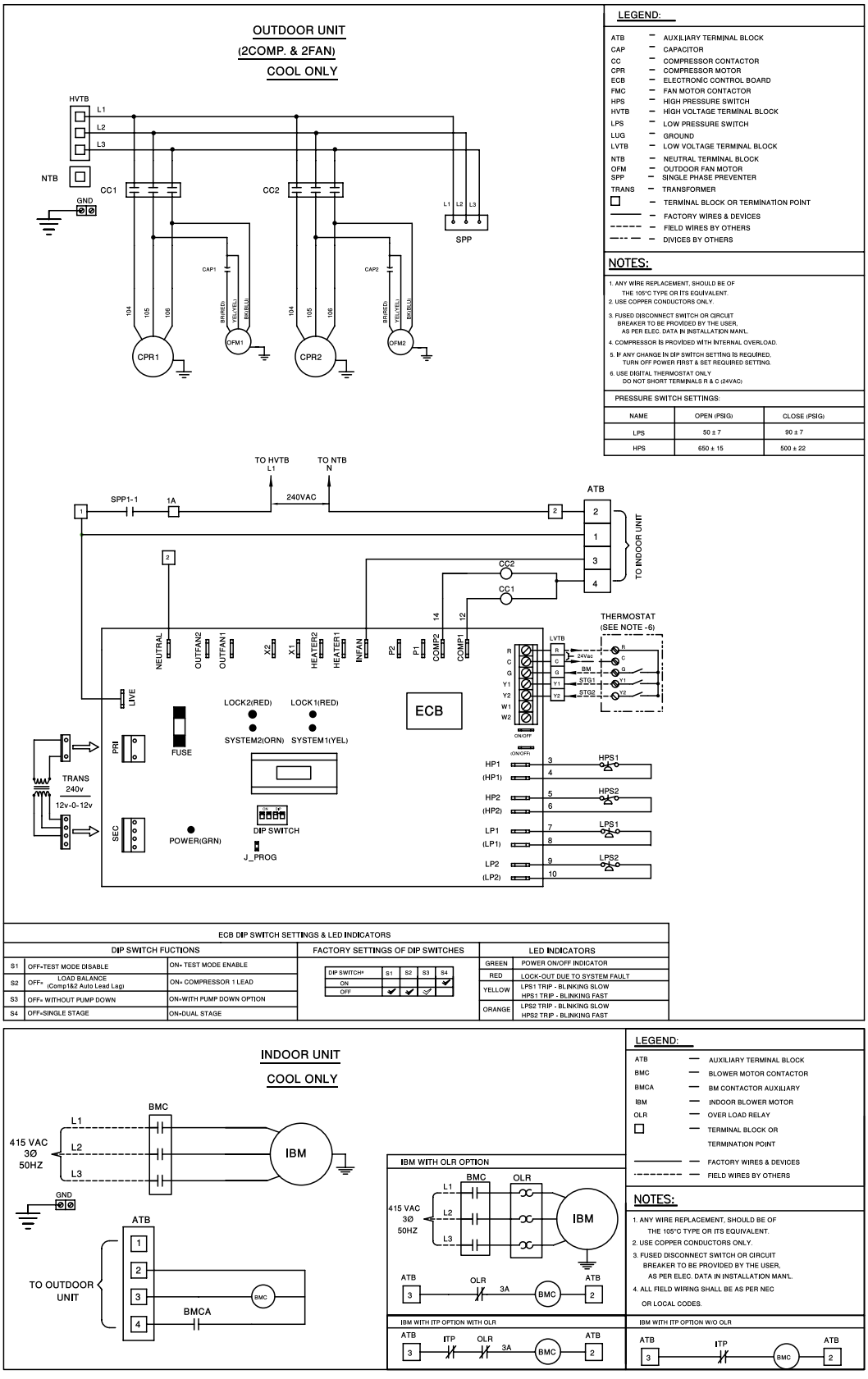


MULTIPLE UNIT



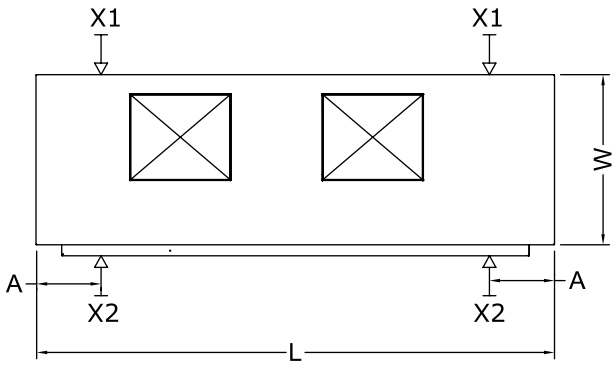
MULTIPLE UNIT

TYPICAL WIRING DIAGRAM

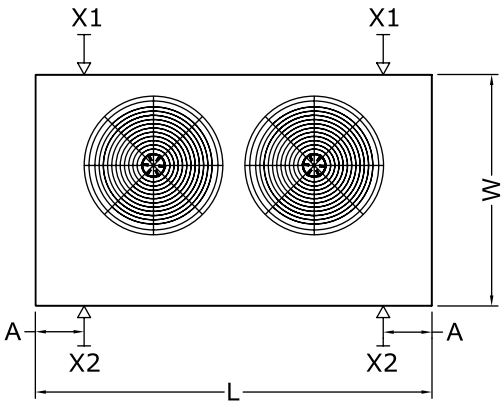


LOAD DISTRIBUTION

NGEFV



NGCF



	LOAD DISTRIBUTION				
MODEL	L (mm)	W (mm)	A (mm)	X1 (kg)	X2 (kg)
NGEFV-076	980	698	75	31.3	29.6
NGEFV-090	980	698	75	38.8	43.7
NGEFV-100	1347	717	75	40.4	45.6
NGEFV-120	1347	717	75	41.8	47.2
NGEFV-130	1565	807	75	43.3	48.7
NGEFV-150	1565	807	75	44.9	50.6
NGEFV-175	1910	807	75	68.2	76.8
NGEFV-200	1910	807	75	69.8	78.7
NGEFV-240	1910	807	75	71.2	80.3
NGEFV-270	2460	807	75	122.7	113.3
NGEFV-300	2460	807	75	112.3	126.7
NGEFV-340	2460	807	75	112.8	127.2
NGCF-076	925	925	75	42.4	39.1
NGCF-090	1808	980	75	57.5	53.0
NGCF-100	1808	980	75	59.3	53.7
NGCF-120	1808	980	75	61.5	54.5
NGCF-130	1880	1100	75	57.1	64.4
NGCF-150	1880	1100	75	64.7	72.8
NGCF-175	2180	1230	75	94.0	106.0
NGCF-200	2180	1230	75	110.5	124.5
NGCF-240	2180	1230	75	129.3	145.7
NGCF-270	2360	1230	75	141.0	159.0
NGCF-300	2360	1230	75	168.7	190.3
NGCF-340	2360	1230	75	202.3	228.2

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 عاما 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

Al Noor Projects Engineering & Trading Company
Address: Third Floor, Oman House
P.O. Box: 1047, P.C: 114 Hay Al Mina - Muscat
Tel : +968 24709402/403
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
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Fax : +973 17 400 388
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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
Tel : +964 1 8181196
Mobile : +964 7705 884444
Email : sweerco@yahoo.com
Website : www.sweerco.com

State of Qatar

Al Jaber for air conditioning & Refrigeration industries
Address: PO.Box 23546 Doha
Tel : +974 44210963
Fax : +974 44448919
Mobile : +974 55610321
Mobile : +974 55843255
Email : Customercare@jaric-qatar.com
Website : www.jaric-qa.com

Iran

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Fax : +98 (021) 26110510
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
Address: Katrena Street - East Qurashi Park
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Mobile : +249 900900246/247/248/249/250/251/252
Email : maha1237@yahoo.com

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Cell : +92-300-4745624
Mobile : +92-321-2280011
Email : info@agtek.com.pk
Email : coo@agtek.com.pk
Website : www.agtek.com.pk

Egypt

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Tel : +202267240/837
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Email : adel@coolex-eg.com
Email : ahmad@coolex-eg.com
Website : www.coolex-eg.com

Syrian Arab Republic

Team for Engineering & Trading co.
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Mobile : +963 93 322 6288
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Email : info@team-syr.net
Email : georgeyoussef@team-syr.net
Website : www.team-syr.net

Nepal

Global Air Conditioning And Trading Pvt Ltd
Address: SINAMANGAL-9, KATHMANDU-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.: CSDCF19-5-000

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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