COOLEX
COMFORT BEYOND EXPECTATIONS

New Generation Compact Series R407C

076-340 MBH (6.3 TO 28.3 TR)

R407C

Ducted Split with Hermetic Compressor Tropical

50 Hz

TABLE OF CONTENT

ABOUT THE COMPANY

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

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

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

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

Facts throughout the years

1973 Warehouses were established by Amiri Decree.

1979 RIC Constructed the Medical Cold Stores Complex, the world's largest at that time.

1980 RIC Air Conditioning manufacturing plant set up in Sulaibya.

1981 Production of Package & Mini-Split A/Cs started under York-Gulf.

1984 RIC was listed in Kuwait Stock Exchange.

1986 COOLEX brand Production Launched.

1991 RIC rebuilt the manufacturing plant destroyed during the war.

1997 Achieved ISO Certification ISO 9001:1994.

2002 ETL Designed testing lab became fully operational.

2004 Privatization of RIC.

2010 COOLEX becomes the first A/C Unit to Pass MEW's new regulations.

2010 RIC Factory Renovation and Expansion into neighboring countries.

2012 Achieved UL & AHRI Certification for 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).

2016 Acquisition of Gulf Paramount for Electrical Services Company.

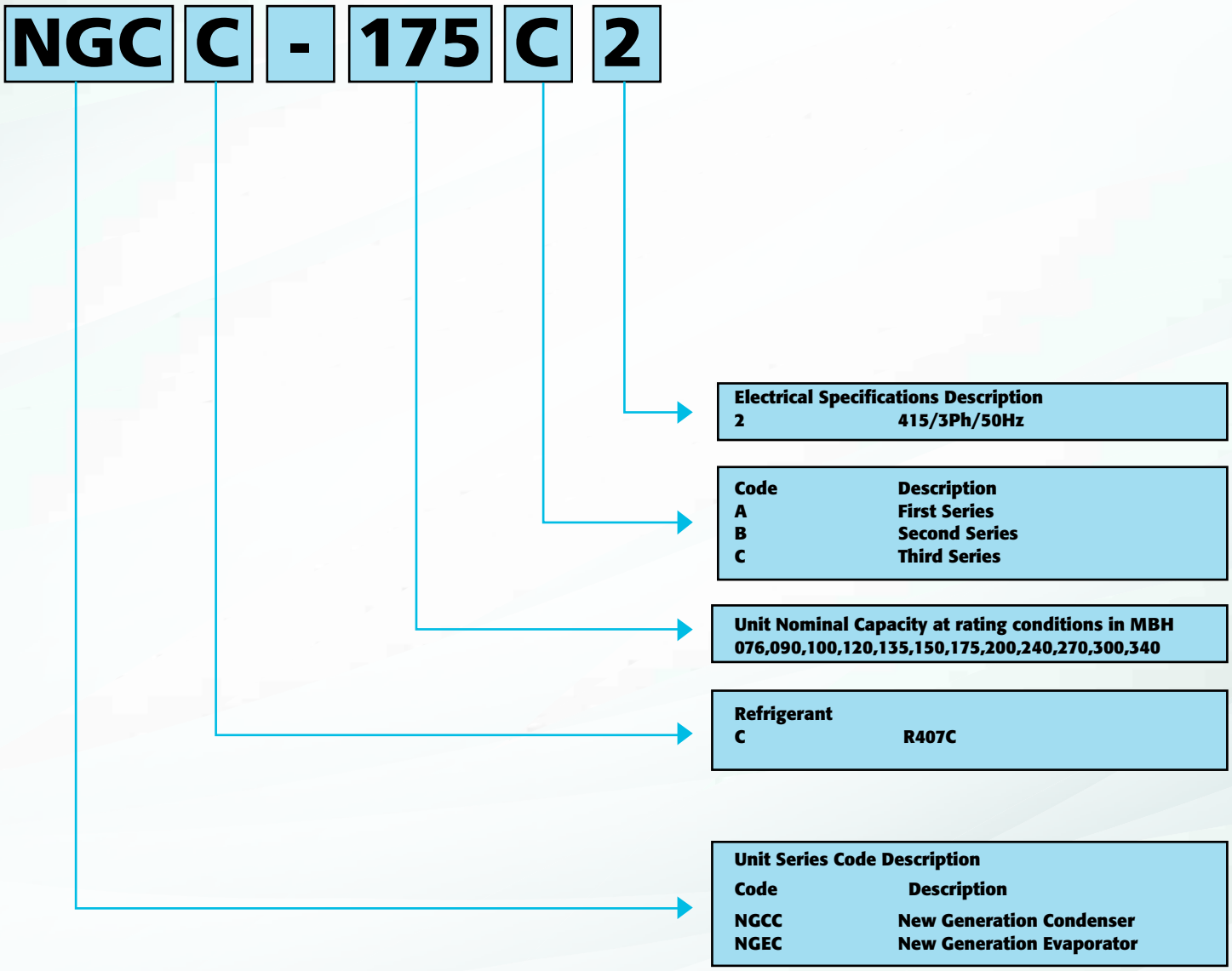
2021 Acquisition of Kuwait Pipes Industries & Oil Services factory, resulting in a change of the company's name from Refrigeration Industries & Storage Co. to Refrigeration Industries & Storage and Oil Services Co.

INTRODUCTION

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

COOLEX Ducted Split Units can be used for cooling or heating with optional duct electric heater.

NOMENCLATURE



UNIT RATING SUMMARY

Model	Air Flow	Ambient temp 95°F				Ambient temp 115°F				Ambient temp 118.4°F				Ambient temp 125°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)	(Btu/h)				(Btu/h)				(Btu/h)				(Btu/h)			
NGCC/NGEC -076 C2	2793	77,571	6.58	1.02	11.79	71,056	7.81	1.32	9.10	70,920	8.23	1.39	8.61	68,515	8.68	1.52	7.89
NGCC/NGEC -090 C2	3258	93,923	7.47	0.95	12.57	86,062	8.84	1.23	9.74	83,040	9.46	1.36	8.78	81,068	10.40	1.54	7.80
NGCC/NGEC -100 C2	3588	107,464	8.78	0.98	12.24	98,469	10.40	1.27	9.47	96,480	11.19	1.39	8.62	92,743	12.36	1.60	7.50
NGCC/NGEC -120 C2	4402	128,912	10.29	0.96	12.53	118,123	12.75	1.30	9.26	115,320	13.42	1.39	8.59	112,171	14.35	1.54	7.82
NGCC/NGEC -135 C2	4594	132,544	11.33	1.03	11.70	124,536	12.71	1.22	9.80	116,520	14.51	1.49	8.03	110,817	15.91	1.72	6.97
NGCC/NGEC -150 C2	5296	163,881	13.36	0.98	12.27	156,339	15.06	1.16	10.38	147,000	17.20	1.40	8.55	139,116	18.76	1.62	7.41
NGCC/NGEC -175 C2	6215	187,160	15.98	1.02	11.71	178,547	18.02	1.21	9.91	169,560	20.78	1.47	8.16	158,878	22.44	1.70	7.08
NGCC/NGEC -200 A2	7087	221,427	18.87	1.02	11.74	211,237	21.27	1.21	9.93	197,640	24.17	1.47	8.18	187,967	26.50	1.69	7.09
NGCC/NGEC -240 C2	7986	245,089	19.83	0.97	12.36	233,810	22.35	1.15	10.46	218,760	25.40	1.39	8.61	208,053	27.84	1.61	7.47
NGCC/NGEC -270 C2	8582	271,978	21.98	0.97	12.37	259,461	24.78	1.15	10.47	242,760	28.16	1.39	8.62	230,878	30.87	1.60	7.48
NGCC/NGEC -300 C2	8998	294,394	24.34	0.99	12.10	280,845	27.44	1.17	10.23	261,480	31.03	1.42	8.43	249,907	34.18	1.64	7.31
NGCC/NGEC -340 C2	9932	335,791	27.85	1.00	12.06	314,614	31.40	1.20	10.02	292,920	35.51	1.45	8.25	279,955	39.12	1.68	7.16

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

OUT STANDING FEATURES

Indoor Unit:

- Compact design
- Low profile
- Low sound power level
- For ducted application
- Single speed motors
- Easy maintenance
- Easy installation
- External terminal box

Outdoor Unit:

- High efficiency tropical design
- Galvanized heavy gauge panels, oven baked powder coated
- Designed to operate at severe ambient temperature up to 52°C without tripping
- External service valve with gauge ports
- Coil guard protection
- Microprocessor controller
- 240Volt controls

Options & Accessories

- Digital thermostat
- Cleanable air filter

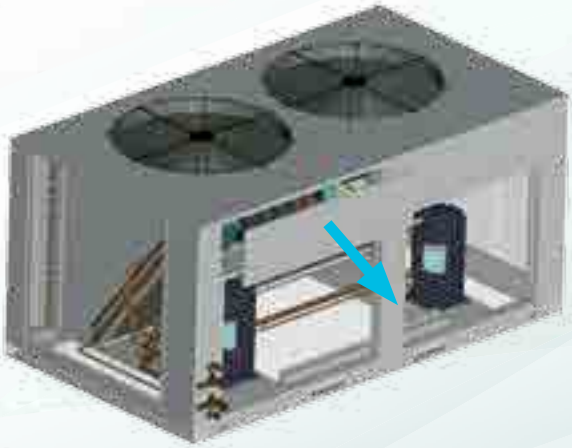
OUT STANDING FEATURES

Evaporator's Side

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

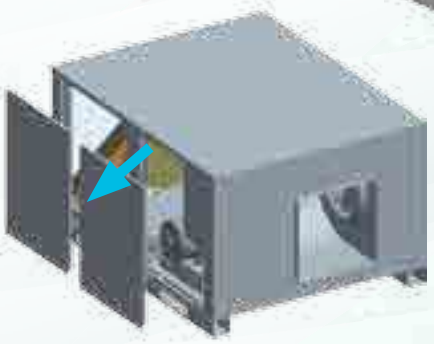
Compressor's Side

- Easy access to the compressor side with removable coil guard or panel for maintenance purpose for the compressor
- Easy access to condenser fans, and motors



Electrical Panel

- Easy access to the electrical panels with removable panel for microprocessor access and electrical parts



STANDARD SPECIFICATIONS

(OUTDOOR UNIT) & (INDOOR UNIT)

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.

Unit Construction

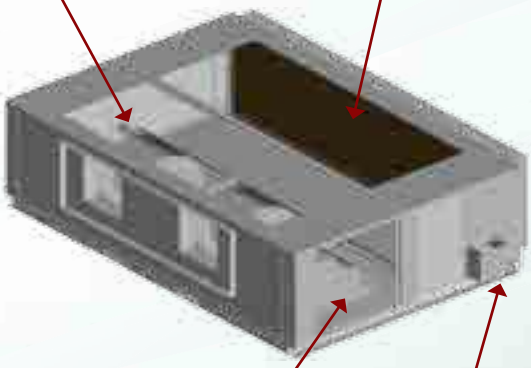
The indoor unit consists of a coil, motor/blower assembly and a drain pan securely mounted on heavy gauge galvanized steel housing.

Condenser Fans
Axial type condenser fan are used which precisely match with extra strong fan motor to ensure efficient hot air dissipation.

Blower Assembly
The units are provided with centrifugal fans which are statically and dynamically balanced, designed for low sound level operation.

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.

Condenser Fan Motor
The condenser fan motors are a 4/6 poles electric motor which directly drive the condenser fans confirming to BS/IES standards. They are totally enclosed air over type electric motors with built-in thermal protector class F insulation.



Condenser 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 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.

Compressor
The compressors are hermetically sealed type. The compressors are equipped with internal motor protector and necessary accessories for safe operation.

Evaporator Blower Motor
The evaporator blower motor is Belt Drive the evaporator blower. it is open drip proof type electric motors with built-in thermal protector and permanently lubricated ball bearings class B insulation.

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

OPTIONAL SPECIFICATIONS

Construction & Refrigeration

- 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.
- Sight glass
- Vibration isolation for the unit:
  a) Neoprene rubber pads.
  b) 1" spring isolator.
- Lockable door for the control panel.
- Pump down solenoid valve (PDS)
- Hot gas bypass valve
- Muffler
- Replaceable filter drier with mechanical shut-off valve

Electrical

- Electric heaters (open coil type)
- Electric heaters (fin type)
- Compressor circuit breaker
- Mild ambient (fan cycling) control
- Duct sensor
- Adjustable high pressure switch
- Anti-ice thermostat
- Volt free contacts
- External overload
- Ultra violet light
- Dirty filter indication
- Fire alarm connection
- Modbus connectivity
- Wi-Fi Thermostat

Coolex App

Wi Fi Module

Typical Thermostat

MICROPROCESSOR BASED CONTROLLER

The new generation of condensing units is provided with technologically advanced microprocessor based controller, incorporating the following benefits and features:

- Anti-recycle timer
- Compressor lock out function
- Balance loading of compressors
- Compressor lead-lag operation
- Pump down option
- Fault diagnostics
- Indicator lights for high & low pressure safeties

SELECTION PROCEDURE

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

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

Example :

Design requirements

• Total cooling capacity	162	[MBH]
• Sensible cooling capacity	120	[MBH]
• Design ambient temperature	118.4	[°F]
• Evaporator air flow	6200	[CFM]
• Evaporator entering temperature DB/WB	80/67	[°F/°F]
• External static pressure	0.2	[in.wg]
• Altitude	2000	[ft]
• Power supply	415V / 3Ph / 50Hz	

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

Corrected capacity = Required capacity /corr. factor

Corrected total capacity = 162 [MBH]/0.99
= 163.63 MBH

Corrected sensible capacity = 120 [MBH]/0.99
= 121.2 MBH

From the cooling capacity at performance data tables (page 13), the closest selection model to the required capacity is NGCC/NGEC-175 C2 From the performance table:

Total capacity = 169.56 [MBH]

Sensible capacity = 123.78 [MBH]

GENERAL DATA

Outdoor Units		NGCC-076	NGCC-090	NGCC-100	NGCC-120	NGCC-135	NGCC-150
Cooling Capacity (Nominal)	MBH	77.6	93.9	107.5	128.9	132.5	163.9
	KW	22.7	27.5	31.5	37.8	38.8	48.0
Power Supply	V / Ph / Hz	415 / 3Ph / 50Hz					
Compressor	Type	Scroll Hermetic					
	Quantity	1	1	1	1	2	2
	Refrigerant	R407C					
Condenser Fan	Type	Propeller					
	Diameter, mm x Qty	610		762		610 x 2	
	Motor Encl./Ins. Class	Totally Enclosed Air Over, Class F					
	Nominal kW (HP)	0.56 (0.75)		0.75(1)	1.12 (1.5)	0.75(1)x2	
Condenser Coil	Type	Enhance Aluminum Fins & Inner Grooved Copper Tubes					
	Row /FPI	3/14	2/16	2/16		3/16	3/16
	Total Area, Sq.m	1.63	2.13	2.13	2.13	2.94	2.94
Refrigerant Pipe	Suction, in	7/8	1-1/8			1-1/8 x 2	
	Liquid, in	1/2	5/8			1/2 x 2	
Weight	kg	163	179	206	217	241	275

Indoor Units		NGEC-076	NGEC-090	NGEC-100	NGEC-120	NGEC-135	NGEC-150
Cooling Capacity (Nominal)	MBH	77.6	93.9	107.5	128.9	132.5	163.9
	KW	22.7	27.5	31.5	37.8	38.8	48.0
Power Supply	V / Ph / Hz	415 / 3Ph / 50Hz					
Air Flow Rate(Nominal)	CFM	2700	3250	3550	4300	4594	5296
Evaporator Blower	Type	Centrifugal Forward Curve DWDI					
	Motor Encl./Ins. Class	Open Drip-Proof, Class B					
	Nominal kW (HP)	0.75 (1)	1.5 (2.0)				2.2 (3)
Evaporator Coil	Type	Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes					
	Row/FPI	4/12	3/14			4/13	
	Total Area, Sq.m	0.58	0.77	0.77	0.95	1.05	1.05
Air Filter	Type	Washable Aluminum Mesh					
	Thickness (inch)	1					2
Expansion Devices	Type	Thermostatic Expansion Valve					
Refrigerant Pipe	Suction, in	7/8	1-1/8			1-1/8 x 2	
	Liquid, in	1/2	5/8			1/2 x 2	
Drain Pipe	mm X TPI	27 X 14				42 X 11.5	
Operating Weight	kg	127	160	166	176	176	185

GENERAL DATA

Outdoor Units		NGCC-175	NGCC-200	NGCC-240	NGCC-270	NGCC-300	NGCC-340
Cooling Capacity (Nominal)	MBH	187.2	221.4	245.1	272.0	294.4	335.8
	KW	54.9	64.9	71.8	79.7	86.3	98.4
Power Supply	V / Ph / Hz	415 / 3Ph / 50Hz					
Compressor	Type	Propeller					
	Quantity	2					4
	Refrigerant	R407C					
Condenser Fan	Type	Propeller					
	Diameter, mm x Qty	762 x 2				800 x 2	800 x 4
	Motor Encl./Ins. Class	Totally Enclosed Air Over, Class F					
	Nominal kW (HP)	2 x 1.10 (1.5)	2 x 1.10 (1.5)	2 x 1.10 (1.5)	2 x 1.10 (1.5)	2 x 1.5 (2)	4 x 1.5 (2)
Condenser Coil	Type	Enhance Aluminum Fins & Inner Grooved Copper Tubes					
	Row /FPI	3/16	4/16	4/16	4/14	4/14	3/13
	Total Area, Sq.m	3.58	3.9	3.9	4.92	4.92	6.52
Refrigerant Pipe	Suction, in	1-1/8 x 2	1-3/8 x 2				1-1/8 x 4
	Liquid, in	1/2 x 2	5/8 x 2				1/2 x 4
Weight	kg	550	556	718	757	861	942

Indoor Units		NGEC-175	NGEC-200	NGEC-240	NGEC-270	NGEC-300	NGEC-340
Cooling Capacity (Nominal)	MBH	187.2	221.4	245.1	272.0	294.4	335.8
	KW	54.9	64.9	71.8	79.7	86.3	98.4
Power Supply	V / Ph / Hz	415 / 3Ph / 50Hz					
Air Flow Rate(Nominal)	CFM	6215	7087	7986	8582	8998	9932
Evaporator Blower	Type	Centrifugal Forward Curve DWDI					
	Quantity	2	2	2	2	2	2
	Motor Encl./Ins. Class	Open Drip-Proof, Class B					
	Nominal kW (HP)	3.7 (5.0)	3.7 (5.0)	3.7 (5.0)	3.7 (5.0)	3.7 (5.0)	3.7 (5.0)
Evaporator Coil	Type	Enhanced Fins and Tubes					
	Row/FPI	3/13	4/13	4/14	4/14	4/14	4/13
	Total Area, Sq.m	1.40	1.40	1.62	2.04	2.04	2.08
Air Filter	Type	Washable Aluminum Mesh					
	Thickness (inch)	2					
Expansion Devices	Type	Thermostatic Expansion Valve					
Refrigerant Pipe	Suction, in	1-1/8 x 2	1-3/8 x 2				1-1/8 x 4
	Liquid, in	1/2 x 2	5/8 x 2				1/2 x 4
Drain Pipe	mm X TPI	42 X 11.5					
Operating Weight	kg	295	299	387	408	464	508

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature												
	Air Flow	Temp ° F		95° F			115° F			118.4° F			125° F			
	CFM	DB	WB	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.		
NGCC/NGEC-076C2	2200	86	72	78,770	53,078	6.79	72,155	50,199	8.05	71,288	49,886	8.48	69,583	49,277	8.95	
		80	67	75,663	51,913	6.48	69,309	49,100	7.69	68,472	48,796	8.10	66,828	48,205	8.54	
		74	62	66,314	50,517	6.12	60,751	47,781	7.26	60,021	47,482	7.67	58,582	46,900	8.07	
		68	57	61,160	48,929	5.96	56,028	46,275	6.97	55,351	45,987	7.31	54,019	45,425	7.74	
	2500	86	72	79,569	53,611	6.93	72,884	50,711	8.22	72,006	50,395	8.66	70,282	49,779	9.13	
		80	67	76,422	52,460	6.52	69,958	49,617	7.73	69,132	49,309	8.15	67,507	48,712	8.59	
		74	62	66,983	51,029	6.20	61,361	48,263	7.36	60,623	47,960	7.76	59,171	47,372	8.18	
		68	57	61,779	49,421	5.93	56,588	46,747	7.01	55,907	46,454	7.40	54,569	45,886	7.80	
	2793	86	72	80,757	55,738	7.00	73,972	52,718	8.30	73,085	52,391	8.74	71,340	51,757	9.22	
		80	67	77,571	54,645	6.58	71,745	51,685	7.81	70,920	51,364	8.23	68,515	50,742	8.68	
		74	62	67,992	51,787	6.26	62,279	48,980	7.43	61,531	48,674	7.84	60,059	48,079	8.26	
		68	57	62,708	50,168	5.98	57,436	47,443	7.08	56,745	47,147	7.47	55,387	46,573	7.87	
NGCC/NGEC-090C2	2600	86	72	106,570	74,337	7.70	95,307	66,975	9.12	94,224	66,542	9.73	94,702	66,560	10.73	
		80	67	91,613	67,607	7.35	81,930	60,917	8.71	80,999	60,525	9.29	81,412	60,542	10.24	
		74	62	86,689	67,479	6.94	77,526	60,799	8.23	76,647	60,407	8.78	77,040	60,424	9.68	
		68	57	78,572	63,548	6.76	70,266	57,252	7.89	69,468	56,882	8.37	69,820	56,899	9.28	
	2900	86	72	107,653	75,085	7.86	96,271	67,654	9.31	95,176	67,217	9.94	95,657	67,231	10.95	
		80	67	92,535	68,290	7.39	82,469	63,116	8.76	81,627	62,781	9.35	82,228	61,149	10.30	
		74	62	87,570	68,162	7.04	78,310	61,412	8.34	77,420	61,016	8.90	77,813	61,032	9.81	
		68	57	79,362	65,054	6.72	70,976	57,834	7.95	70,167	57,459	8.47	70,519	57,474	9.35	
	3258	86	72	109,265	76,206	7.93	97,710	68,667	9.40	96,602	68,226	10.03	97,097	68,242	11.06	
		80	67	93,923	39,316	7.47	86,062	62,459	8.84	83,040	63,975	9.46	81,068	62,065	10.40	
		74	62	88,877	69,177	7.10	79,485	62,329	8.42	78,579	61,925	8.98	78,973	61,947	9.90	
		68	57	80,547	65,150	6.79	72,034	58,696	8.02	71,217	58,319	8.55	71,582	58,337	9.44	
NGCC/NGEC-100C2	2800	86	72	121,932	80,950	9.05	111,733	76,607	10.73	107,795	73,897	11.53	107,809	73,928	12.74	
		80	67	104,820	73,622	8.65	96,049	69,677	10.24	92,665	67,214	11.01	92,680	67,243	12.17	
		74	62	99,185	73,483	8.17	90,888	69,542	9.68	87,687	67,083	10.40	87,702	67,114	11.50	
		68	57	89,899	69,201	7.95	82,376	65,485	9.28	79,472	63,169	9.91	79,484	63,198	11.03	
	3200	86	72	123,174	81,765	9.24	112,862	77,383	10.95	108,884	74,646	11.77	108,897	74,673	13.01	
		80	67	105,876	74,366	8.70	96,682	72,193	10.30	93,382	69,720	11.07	93,610	67,918	12.24	
		74	62	100,194	74,227	8.28	91,806	70,244	9.80	88,570	67,760	10.54	88,583	67,787	11.65	
		68	57	90,804	70,841	7.91	83,207	66,150	9.35	80,272	63,809	10.03	80,279	63,836	11.10	
	3588	86	72	125,017	82,986	9.33	114,550	78,543	11.06	110,515	75,767	11.88	110,536	75,796	13.13	
		80	67	107,464	75,483	8.78	98,469	71,440	10.40	96,480	68,914	11.19	92,743	67,286	12.36	
		74	62	101,690	72,335	8.36	93,184	71,292	9.90	89,897	68,769	10.64	89,904	66,018	11.76	
		68	57	92,160	70,946	7.98	84,448	67,137	9.44	81,473	64,764	10.13	81,490	64,794	11.21	

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature												
	Air Flow	Temp ° F		95° F			115° F			118.4° F			125° F			
	CFM	DB	WB	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.		
NGCC/NGEC-120C2	3200	86	72	135,362	88,676	10.61	126,498	85,629	13.15	123,228	84,059	13.83	123,629	83,417	14.80	
		80	67	124,402	88,741	10.13	114,304	84,429	12.55	111,087	82,108	13.21	110,898	79,969	14.13	
		74	62	112,289	84,373	9.57	104,065	81,030	11.86	101,648	77,809	12.49	102,547	73,815	13.35	
		68	57	100,731	79,681	9.31	94,064	78,572	11.38	91,592	77,301	11.91	91,805	77,042	12.81	
	3800	86	72	138,869	90,974	10.83	129,771	87,851	13.42	126,417	86,242	14.12	126,828	85,588	15.11	
		80	67	127,627	88,915	10.19	117,258	86,616	12.63	113,958	84,235	13.29	113,766	82,038	14.22	
		74	62	115,198	86,562	9.70	106,758	83,128	12.02	104,282	79,825	12.65	105,213	75,729	13.53	
		68	57	103,334	81,752	9.27	96,496	80,164	11.45	93,962	79,310	12.06	94,184	72,675	12.90	
	4402	86	72	140,274	91,890	10.94	131,089	88,737	13.55	127,700	87,109	14.26	128,113	86,444	15.26	
		80	67	128,912	89,831	10.29	118,123	87,582	12.75	115,320	85,147	13.42	112,171	80,890	14.35	
		74	62	116,363	87,436	9.79	107,838	83,968	12.13	105,335	80,634	12.78	106,271	76,497	13.66	
		68	57	104,381	82,571	9.36	97,473	81,422	11.56	94,913	80,107	12.17	95,136	74,537	13.02	
NGCC/NGEC-135C2	4000	86	72	138,227	93,918	11.11	131,865	85,885	12.46	123,377	82,794	14.23	117,339	80,086	15.60	
		80	67	127,280	91,628	11.04	121,423	83,790	12.39	113,607	80,775	14.15	108,047	78,133	15.51	
		74	62	116,716	88,970	10.98	111,345	81,360	12.31	104,178	78,432	14.06	99,079	75,867	15.42	
		68	57	106,916	83,365	10.87	101,995	76,234	12.19	95,430	73,491	13.92	90,759	71,087	15.26	
	4300	86	72	139,644	94,304	11.22	133,217	86,237	12.59	124,643	83,134	14.38	118,542	80,415	15.76	
		80	67	128,586	92,003	11.16	122,668	84,134	12.52	114,772	81,106	14.29	109,155	78,453	15.67	
		74	62	117,913	89,335	11.09	112,487	81,694	12.44	105,246	78,754	14.21	100,095	76,178	15.57	
		68	57	108,012	83,707	10.98	103,041	76,547	12.32	96,409	73,792	14.06	91,690	71,379	15.42	
	4594	86	72	143,943	96,326	11.39	135,246	88,087	12.78	126,541	84,917	14.60	120,347	82,140	16.00	
		80	67	132,544	93,977	11.33	124,536	85,938	12.71	116,520	82,846	14.51	110,817	80,136	15.91	
		74	62	121,543	91,252	11.26	114,200	83,446	12.63	106,849	80,443	14.42	101,619	77,812	15.81	
		68	57	111,337	85,503	11.15	104,610	78,189	12.50	97,877	75,375	14.28	93,086	72,910	15.65	
NGCC/NGEC-150C2	4200	86	72	173,526	123,375	13.10	165,539	112,821	14.77	155,651	109,300	16.87	147,303	105,204	18.40	
		80	67	159,784	120,365	13.03	152,430	110,070	14.68	143,325	106,634	16.77	135,638	102,638	18.29	
		74	62	146,522	116,875	12.95	139,779	106,878	14.60	131,429	103,541	16.67	124,380	99,662	18.18	
		68	57	134,219	109,512	12.82	128,042	100,144	14.45	120,393	97,018	16.50	113,936	93,383	18.00	
	4700	86	72	175,305	123,881	13.24	167,237	113,284	14.92	157,247	109,748	17.04	148,814	105,636	18.59	
		80	67	161,423	120,859	13.16	153,994	110,521	14.84	144,795	107,071	16.94	137,030	103,059	18.48	
		74	62	148,025	117,354	13.08	141,212	107,316	14.75	132,777	103,966	16.84	125,656	100,071	18.37	
		68	57	135,595	109,961	12.95	129,355	100,555	14.60	121,628	97,416	16.67	115,105	93,766	18.19	
	5296	86	72	177,975	126,538	13.44	169,784	115,714	15.15	159,642	112,102	17.30	151,080	107,902	18.87	
		80	67	163,881	123,452	13.36	156,339	112,892	15.06	147,000	109,368	17.20	139,116	105,270	18.76	
		74	62	150,279	119,872	13.28	143,363	109,618	14.97	134,799	106,196	17.10	127,570	102,217	18.65	
		68	57	137,660	112,320	13.15	131,325	102,712	14.82	123,480	99,506	16.93	116,858	95,777	18.46	

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

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature												
	Air Flow	Temp ° F		95° F			115° F			118.4° F			125° F			
	CFM	DB	WB	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.		
NGCC/NGEC-175C2	5100	86	72	198,175	138,248	15.67	189,054	126,423	17.67	179,539	123,701	20.38	168,228	117,887	22.01	
		80	67	182,481	134,877	15.58	174,083	123,339	17.57	165,321	120,684	20.26	154,906	115,012	21.88	
		74	62	167,335	130,965	15.49	159,634	119,763	17.46	151,599	117,184	20.14	142,049	111,677	21.75	
		68	57	153,284	122,714	15.33	146,230	112,218	17.29	138,870	109,802	19.94	130,121	104,641	21.53	
	5700	86	72	200,207	138,816	15.83	190,993	126,942	17.85	181,380	124,209	20.59	169,953	118,371	22.24	
		80	67	184,353	135,430	15.74	175,868	123,845	17.75	167,017	121,179	20.47	156,495	115,484	22.11	
		74	62	169,052	131,502	15.65	161,271	120,254	17.64	153,154	117,665	20.35	143,506	112,135	21.97	
		68	57	154,856	123,218	15.49	147,730	112,678	17.46	140,294	110,252	20.14	131,455	105,070	21.75	
	6215	86	72	203,256	141,793	16.08	193,902	129,664	18.12	184,142	126,873	20.90	172,541	120,910	22.58	
		80	67	187,160	138,335	15.98	178,547	126,502	18.02	169,560	123,779	20.78	158,878	117,961	22.44	
		74	62	171,626	134,323	15.88	163,727	122,833	17.91	155,487	120,189	20.66	145,691	114,540	22.31	
		68	57	157,215	125,861	15.73	149,979	115,095	17.73	142,430	112,617	20.45	133,457	107,324	22.08	
NGCC/NGEC-200C2	6000	86	72	234,458	156,839	18.50	223,668	143,423	20.86	209,271	138,262	23.71	199,028	133,740	25.99	
		80	67	215,892	153,013	18.39	205,956	139,925	20.74	192,699	134,889	23.57	183,267	130,478	25.83	
		74	62	197,973	148,576	18.28	188,861	135,867	20.61	176,705	130,978	23.42	168,056	126,694	25.68	
		68	57	181,349	139,216	18.10	173,003	127,307	20.41	161,867	122,726	23.19	153,945	118,712	25.42	
	6500	86	72	236,863	157,482	18.69	225,962	144,011	21.08	211,417	138,829	23.95	201,070	134,288	26.25	
		80	67	218,106	153,641	18.58	208,068	140,499	20.95	194,675	135,443	23.81	185,147	131,013	26.10	
		74	62	200,003	149,185	18.47	190,798	136,424	20.82	178,517	131,515	23.66	169,780	127,214	25.94	
		68	57	183,209	139,787	18.29	174,777	127,830	20.62	163,527	123,229	23.43	155,523	119,199	25.68	
	7087	86	72	240,470	160,860	18.98	229,403	147,100	21.40	214,637	141,807	24.32	204,132	137,169	26.65	
		80	67	221,427	156,937	18.87	211,237	143,513	21.27	197,640	138,348	24.17	187,967	133,823	26.50	
		74	62	203,049	152,385	18.75	193,704	139,351	21.14	181,236	134,336	24.02	172,365	129,942	26.34	
		68	57	185,999	142,785	18.56	177,439	130,572	20.93	166,018	125,873	23.78	157,892	121,756	26.07	
NGCC/NGEC-240C2	7000	86	72	259,513	178,558	19.45	247,569	163,285	21.92	231,634	157,409	24.91	220,297	152,261	27.31	
		80	67	238,962	174,203	19.33	227,964	159,302	21.79	213,291	153,570	24.77	202,851	148,547	27.15	
		74	62	219,128	169,151	19.21	209,043	154,683	21.66	195,588	149,116	24.62	186,015	144,239	26.98	
		68	57	200,728	158,495	19.02	191,490	144,938	21.45	179,164	139,722	24.37	170,395	135,152	26.71	
	7500	86	72	262,174	179,291	19.65	250,108	163,955	22.15	234,010	158,055	25.17	222,556	152,885	27.59	
		80	67	241,413	174,918	19.53	230,302	159,956	22.02	215,479	154,200	25.02	204,932	149,156	27.43	
		74	62	221,376	169,845	19.41	211,187	155,317	21.88	197,594	149,728	24.87	187,923	144,831	27.26	
		68	57	202,787	159,145	19.22	193,454	145,532	21.67	181,002	140,295	24.62	172,143	135,707	26.99	
	7986	86	72	266,167	183,137	19.94	253,917	167,472	22.49	237,573	161,445	25.55	225,945	156,165	28.01	
		80	67	245,089	178,670	19.83	233,810	163,387	22.35	218,760	157,507	25.40	208,053	152,356	27.84	
		74	62	224,747	173,489	19.71	214,403	158,649	22.22	200,603	152,939	25.25	190,784	147,938	27.68	
		68	57	205,875	162,559	19.51	196,400	148,654	22.00	183,758	143,304	25.00	174,764	138,618	27.40	

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

PERFORMANCE DATA TABLES

Model	Air On Evaporator			Condenser Ambient Temperature												
	Air Flow	Temp ° F		95° F			115° F			118.4° F			125° F			
	CFM	DB	WB	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	Capacity Btu/Hr		kw Input	
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.		
NGCC/NGEC-270C2	8000	86	72	287,984	200,900	21.56	274,730	183,715	24.31	257,046	177,104	27.62	244,465	171,312	30.28	
		80	67	265,178	196,000	21.43	252,974	179,234	24.16	236,691	172,784	27.46	225,106	167,134	30.10	
		74	62	243,169	190,316	21.30	231,977	174,037	24.02	217,046	167,774	27.29	206,422	162,287	29.92	
		68	57	222,750	178,326	21.09	212,498	163,072	23.78	198,820	157,204	27.02	189,089	152,063	29.62	
	8300	86	72	290,937	201,724	21.78	277,548	184,469	24.56	259,683	177,831	27.90	246,973	172,015	30.59	
		80	67	267,898	196,804	21.65	255,569	179,970	24.41	239,119	173,493	27.74	227,415	167,819	30.41	
		74	62	245,663	191,097	21.52	234,357	174,751	24.26	219,272	168,462	27.57	208,540	162,952	30.22	
		68	57	225,034	179,058	21.31	214,678	163,741	24.02	200,860	157,849	27.30	191,029	152,686	29.92	
	8582	86	72	295,368	206,051	22.11	281,774	188,426	24.93	263,637	181,645	28.33	250,734	175,704	31.05	
		80	67	271,978	201,026	21.98	259,461	183,830	24.78	242,760	177,215	28.16	230,878	171,419	30.87	
		74	62	249,404	195,196	21.85	237,925	178,499	24.63	222,611	172,076	27.99	211,715	166,448	30.68	
		68	57	228,461	182,899	21.63	217,947	167,254	24.39	203,918	161,235	27.71	193,938	155,962	30.38	
NGCC/NGEC-300C2	8200	86	72	311,719	215,969	23.87	297,373	197,495	26.92	276,868	189,455	30.44	264,614	184,161	33.53	
		80	67	287,034	210,701	23.73	273,824	192,678	26.76	254,943	184,834	30.25	243,659	179,669	33.33	
		74	62	263,210	204,591	23.59	251,097	187,090	26.59	233,783	179,473	30.07	223,436	174,459	33.13	
		68	57	241,109	191,702	23.35	230,012	175,304	26.33	214,152	168,167	29.77	204,674	163,468	32.80	
	8500	86	72	314,916	216,855	24.12	300,423	198,305	27.19	279,708	190,232	30.75	267,328	184,917	33.87	
		80	67	289,978	211,565	23.97	276,633	193,468	27.03	257,558	185,592	30.56	246,158	180,407	33.67	
		74	62	265,910	205,430	23.83	253,672	187,858	26.87	236,181	180,210	30.38	225,727	175,175	33.47	
		68	57	243,582	192,488	23.59	232,371	176,023	26.60	216,349	168,857	30.08	206,773	164,139	33.13	
	8998	86	72	319,712	221,506	24.49	304,998	202,559	27.61	283,967	194,312	31.22	271,399	188,883	34.39	
		80	67	294,394	216,104	24.34	280,845	197,618	27.44	261,480	189,573	31.03	249,907	184,276	34.18	
		74	62	269,959	209,837	24.19	257,535	191,888	27.28	239,777	184,075	30.84	229,165	178,932	33.98	
		68	57	247,291	196,617	23.95	235,910	179,799	27.00	219,643	172,479	30.54	209,922	167,660	33.64	
NGCC/NGEC-340C2	9200	86	72	349,200	242,937	27.32	333,129	222,157	30.80	310,158	213,112	34.83	296,431	207,158	38.37	
		80	67	321,547	237,012	27.16	306,748	216,739	30.62	285,597	207,915	34.62	272,956	202,105	38.14	
		74	62	294,858	230,139	26.99	281,288	210,453	30.43	261,892	201,885	34.41	250,301	196,244	37.91	
		68	57	270,099	215,640	26.72	257,669	197,195	30.13	239,901	189,166	34.07	229,283	183,881	37.53	
	9600	86	72	352,781	243,934	27.60	336,545	223,068	31.12	313,339	213,987	35.19	299,471	208,008	38.76	
		80	67	324,845	237,985	27.44	309,894	217,628	30.93	288,526	208,768	34.98	275,756	202,935	38.53	
		74	62	297,883	231,083	27.27	284,173	211,316	30.75	264,579	202,713	34.77	252,868	197,050	38.30	
		68	57	272,870	216,525	27.00	260,311	198,004	30.44	242,362	189,942	34.42	231,635	184,635	37.92	
	9932	86	72	364,669	249,167	28.02	341,670	227,853	31.59	318,111	218,577	35.72	304,032	212,470	39.35	
		80	67	335,791	243,089	27.85	314,614	222,296	31.40	292,920	213,246	35.51	279,955	207,288	39.12	
		74	62	307,920	236,040	27.69	288,501	215,849	31.21	268,608	207,062	35.30	256,719	201,276	38.88	
		68	57	282,064	221,169	27.41	264,275	202,251	30.90	246,053	194,017	34.94	235,163	188,596	38.49	

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

UNIT ELECTRICAL DATA

Outdoor Units		NGCC-076	NGCC-090	NGCC-100	NGCC-120	NGCC-135	NGCC-150
Unit Power Supply	Volt	415					
	Phase	3					
	Hz	50					
Compressor	V - Ph - Hz	415-3-50					
	RLA-1	12.1	16.4	17.3	19.2	10	12.1
	LRA-1	101	95	111	118	74	101
	RLA-2					10	12.1
	LRA-2					74	101
Condenser Fan Motor	V - Ph - Hz	415 -1- 50	415-3-50			415 -1- 50	
	kW (hp)	0.56 (3/4)	0.75 (1)		1.12 (1.5)	2 x 0.75 (1)	
	FLA	1.6	2.4	2.4	3	3.2	3.2
Unit Ampacity, Ampere		16.7	22.9	24	27	28.9	33.6
Max. Fuse Size, Ampere		25	35	40	45	35	45
Minimum Wire Size, mm²		4	6	6	10	10	16

Indoor Units		NGEC-076	NGEC-090	NGEC-100	NGEC-120	NGEC-135	NGEC-150
Unit Power Supply	Volt	415					
	Phase	3					
	Hz	50					
Blower Motor	V - Ph - Hz	415-3-50					
	kW (hp)	0.75 (1)	1.5 (2)	1.5 (2)	1.5 (2)	1.5 (2)	2.2 (3)
	FLA	2.4	4.3	4.3	4.3	4.3	4.6
Max. Fuse Size, Ampere		5	10	10	10	10	10
Minimum Wire Size, mm²		1.5	2.5	2.5	2.5	2.5	2.5

LEGEND:

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

UNIT ELECTRICAL DATA

Outdoor Units		NGCC-175	NGCC-200	NGCC-240	NGCC-270	NGCC-300	NGCC-340
Unit Power Supply	Volt	415					
	Phase	3					
	Hz	50					
Compressor	V - Ph - Hz	415-3-50					
	RLA-1	16.4	17.3	17.3	19.2	22.1	12.1(3ea)
	LRA-1	95	111	111	118	118	101
	RLA-2	16.4	17.3	19.2	22.1	22.9	16.4
	LRA-2	95	111	118	118	140	95
Condenser Fan Motor	V - Ph - Hz	415-3-50					
	kW (hp)	2 x 1.12 (1.5)				2X1.5(2)	2X1.5(4)
	FLA	3	3	3	3	3.8	3.8
Unit Ampacity, Ampere		42.9	44.9	47.3	52.8	58.3	72
Max. Fuse Size, Ampere		50	60	60	70	80	80
Minimum Wire Size, mm²		16	16	16	25	25	35

Indoor Units		NGEC-175	NGEC-200	NGEC-240	NGEC-270	NGEC-300	NGEC-340
Unit Power Supply	Volt	415					
	Phase	3					
	Hz	50					
Blower Motor	V - Ph - Hz	415-3-50					
	kW (hp)	3.7 (5)	3.7 (5)	3.7 (5)	3.7 (5)	3.7 (5)	3.7 (5)
	FLA	7.2	7.2	7.2	7.2	7.2	7.2
Max. Fuse Size, Ampere		15	15	15	15	15	15
Minimum Wire Size, mm²		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]																			
		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80		0.90		1.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
NGEC-076	2200	770	0.55	810	0.60	848	0.64	886	0.70	923	0.75	-	-	-	-	-	-	-	-	-	-
	2500	780	0.67	818	0.72	854	0.78	889	0.83	923	0.88	-	-	-	-	-	-	-	-	-	-
	2793	793	0.80	829	0.86	863	0.91	897	0.98	930	1.03	-	-	-	-	-	-	-	-	-	-
NGEC-090	2600	784	0.71	821	0.76	856	0.82	891	0.87	925	0.92	958	1.00	991	1.04	1023	1.11	1055	1.17	1086	1.23
	2900	798	0.84	833	0.91	868	0.97	901	1.03	933	1.10	965	1.15	996	1.22	1027	1.29	1057	1.34	1086	1.41
	3258	815	1.00	849	1.07	882	1.14	914	1.21	945	1.27	976	1.34	1006	1.41	1035	1.47	1064	1.55	1092	1.62
NGEC-100	2800	793	0.80	829	0.86	863	0.91	897	0.98	930	1.03	962	1.10	994	1.15	1025	1.22	1055	1.29	1085	1.35
	3200	815	1.00	849	1.07	882	1.14	914	1.21	945	1.27	976	1.34	1006	1.41	1035	1.47	1064	1.55	1092	1.62
	3588	841	1.26	873	1.34	905	1.41	935	1.49	965	1.55	994	1.64	1023	1.72	1051	1.78	1078	1.86	1105	1.94

Model	CFM	External Static Pressure [in.wg]																			
		0.30		0.40		0.60		0.80		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	RPM	BHP
NGEC-120	3200	708	0.84	738	1.00	798	1.15	857	1.34	-	-	-	-	-	-	-	-	-	-	-	-
	3800	716	1.15	745	1.23	800	1.39	853	1.57	904	1.76	954	1.96	1004	2.16	1052	2.37	-	-	-	-
	4402	731	1.45	758	1.53	810	1.72	860	1.90	908	2.09	955	2.29	1000	2.49	1044	2.72	1088	2.94	1130	3.18
NGEC-135	4000	721	1.23	749	1.34	803	1.49	855	1.68	905	1.86	953	2.05	1001	2.27	1048	2.48	1094	2.71	1139	2.94
	4300	728	1.39	756	1.47	808	1.65	859	1.84	907	2.02	954	2.23	1000	2.44	1045	2.65	1089	2.87	1132	3.10
	4594	744	1.69	770	1.78	821	1.97	869	2.17	916	2.37	960	2.59	1004	2.80	1046	3.02	1087	3.24	1128	3.47
NGEC-150	4200	726	1.34	753	1.42	806	1.60	857	1.78	906	1.97	954	2.17	1000	2.37	1045	2.59	1090	2.82	1134	3.04
	4700	740	1.61	766	1.70	818	1.89	866	2.09	913	2.29	958	2.49	1002	2.71	1045	2.92	1087	3.15	1128	3.38
	5296	760	2.01	786	2.10	835	2.32	881	2.52	926	2.73	970	2.95	1011	3.18	1052	3.41	1092	3.65	1131	3.89
NGEC-175	5100	859	1.80	892	1.90	954	2.10	1014	2.32	1071	2.52	1126	2.74	1179	2.94	1231	3.16	1281	3.38	1329	3.60
	5700	878	2.20	909	2.30	968	2.54	1025	2.78	1080	3.00	1133	3.24	1185	3.46	1235	3.70	1283	3.94	1330	4.18
	6215	902	2.66	931	2.78	987	3.04	1041	3.30	1093	3.54	1145	3.80	1194	4.06	1243	4.32	1289	4.58	1335	4.84
NGEC-200	6000	889	2.42	919	2.54	977	2.78	1032	3.02	1086	3.26	1139	3.50	1189	3.76	1238	4.00	1286	4.24	1332	4.50
	6500	925	2.32	939	2.94	993	3.20	1047	3.48	1099	3.74	1149	4.00	1198	4.26	1246	4.54	1292	4.80	1338	5.06
	7087	944	3.32	961	3.42	1013	3.70	1064	4.00	1114	4.26	1162	4.52	1210	4.82	1256	5.12	1301	5.40	1345	5.68
NGEC-240	7000	884	2.66	915	2.82	975	3.10	1031	3.38	1085	3.66	1137	3.96	1188	4.24	1237	4.54	1286	4.84	1333	5.16
	7500	898	3.04	929	3.18	987	3.50	1042	3.80	1095	4.10	1146	4.40	1195	4.76	1243	5.02	1290	5.34	1336	5.66
	7986	914	3.44	943	3.60	1001	3.92	1055	4.24	1107	4.58	1156	4.90	1204	5.22	1251	5.56	1297	5.88	1342	6.22
NGEC-270	8000	709	2.66	737	2.84	791	3.20	843	3.58	893	3.96	942	4.36	989	4.78	1035	5.20	1080	5.62	1124	6.08
	8300	712	2.82	740	3.00	793	3.16	844	3.76	893	4.14	941	4.56	983	4.98	1033	5.40	1078	5.84	1121	6.30
	8582	716	3.00	743	3.18	795	3.54	846	3.94	894	4.34	941	4.76	987	5.18	1026	5.60	1076	6.06	1118	6.52

See Note on pg. 18

FAN PERFORMANCE

Model	CFM	External Static Pressure [in.wg]																			
		0.40		0.50		0.60		0.80		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	RPM	BHP
NGEC-300	8200	739	2.94	766	3.12	792	3.32	843	3.70	893	4.08	941	4.50	988	4.90	1034	5.34	1078	5.78	1122	6.22
	8500	742	3.12	769	3.30	795	3.48	845	3.88	894	4.28	941	4.68	987	5.12	1032	5.54	1076	6.00	1119	6.44
	8998	748	3.42	774	3.62	799	3.80	849	4.20	896	4.62	942	5.04	987	5.46	1031	5.92	1068	6.36	1116	6.84
NGEC-340	9200	751	3.54	776	3.74	802	3.94	850	4.34	897	4.76	943	5.18	988	5.62	1031	6.08	1073	6.54	1115	6.96
	9600	756	3.82	782	4.02	807	4.22	854	4.64	901	5.06	945	5.50	989	5.94	1031	6.40	1073	6.86	1114	7.34
	9932	762	4.10	787	4.32	812	4.46	859	4.94	904	5.38	948	5.82	991	6.28	1033	6.74	1074	7.22	1114	7.72

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. Blue shaded area indicates the operating range of a standard motor and drive combination.
3.Green shaded area indicates the operating range of a standard motor with non standard drive combination.
4. Gray shaded area indicates operating range using non standard motor and drive combination.
5. To determine the power of motor to be installed, just multiply the value of the absorbed power indicated above by 1.2.

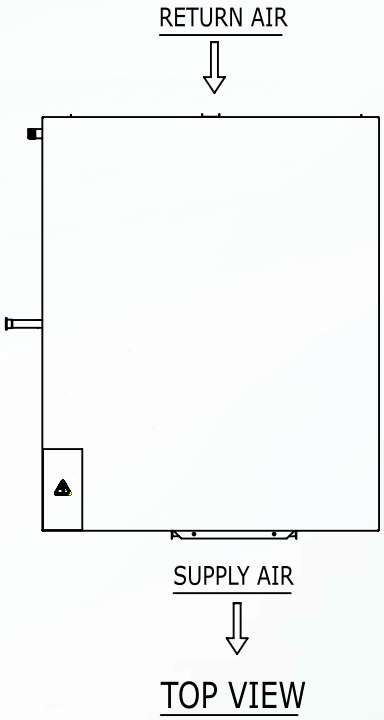
UNIT DIMENSIONS

Indoor Unit

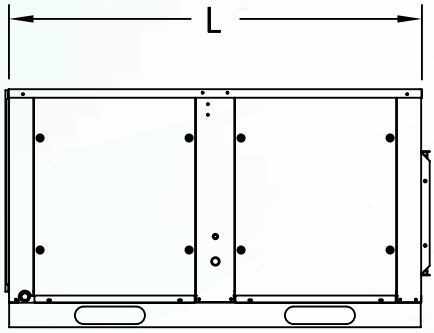
NGEC-076/090/100/120

ALL DIMENSIONS ARE IN mm

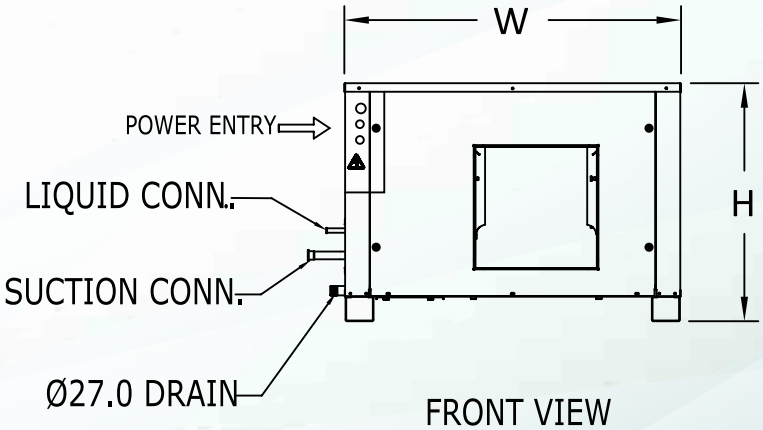
MODEL	NGEC-076	NGEC-090	NGEC-100	NGEC-120
HEIGTH (H)	680	731	731	731
WIDTH (W)	962	1110	1328	1328
LENGTH (L)	1182	1302	1302	1302
LIQUID CONN.	Ø1/2"	Ø5/8"	Ø5/8"	Ø5/8"
SUCTION CONN.	Ø7/8"	Ø1-1/8"	Ø1-1/8"	Ø1-1/8"



TOP VIEW



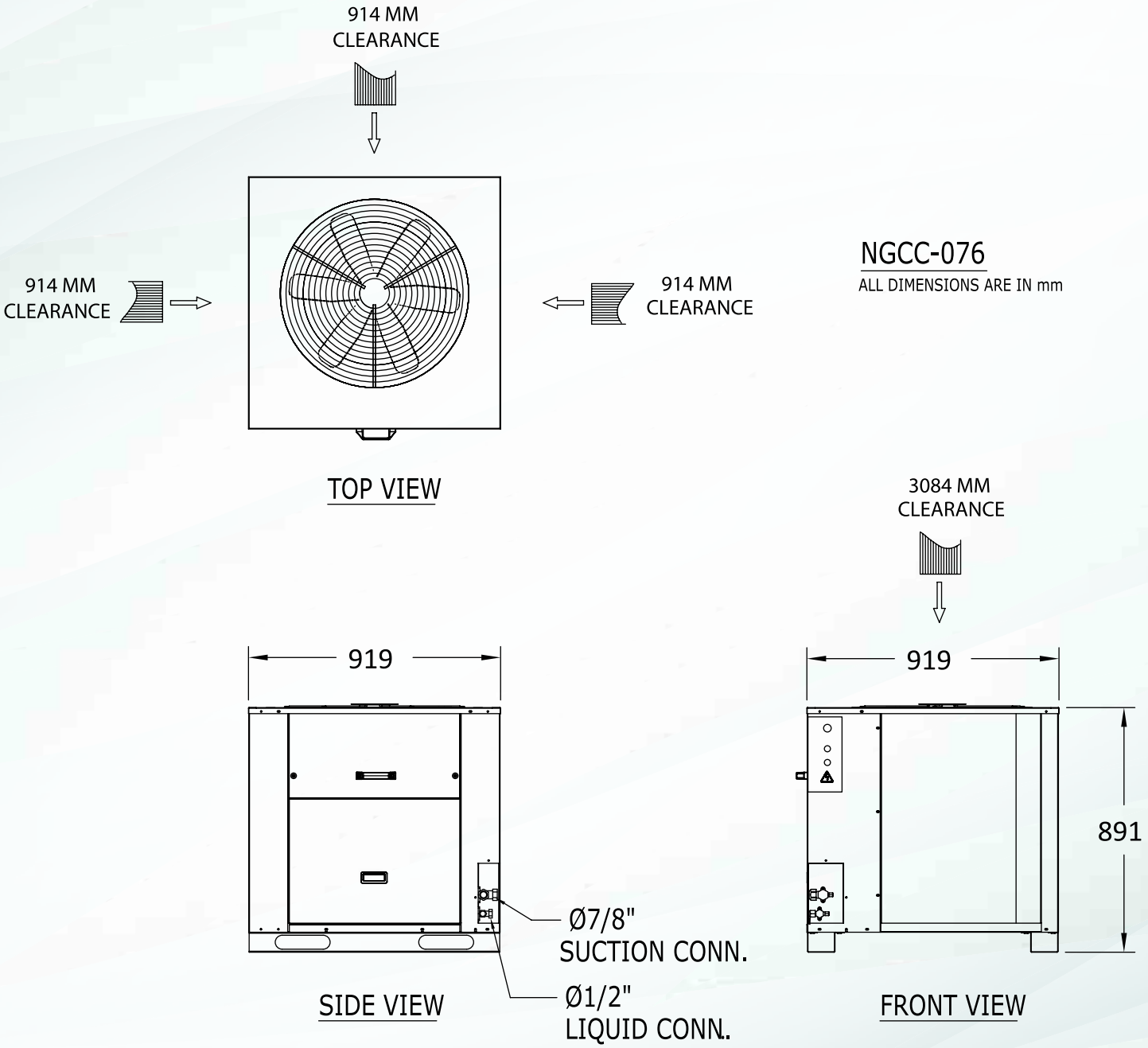
SIDE VIEW



FRONT VIEW

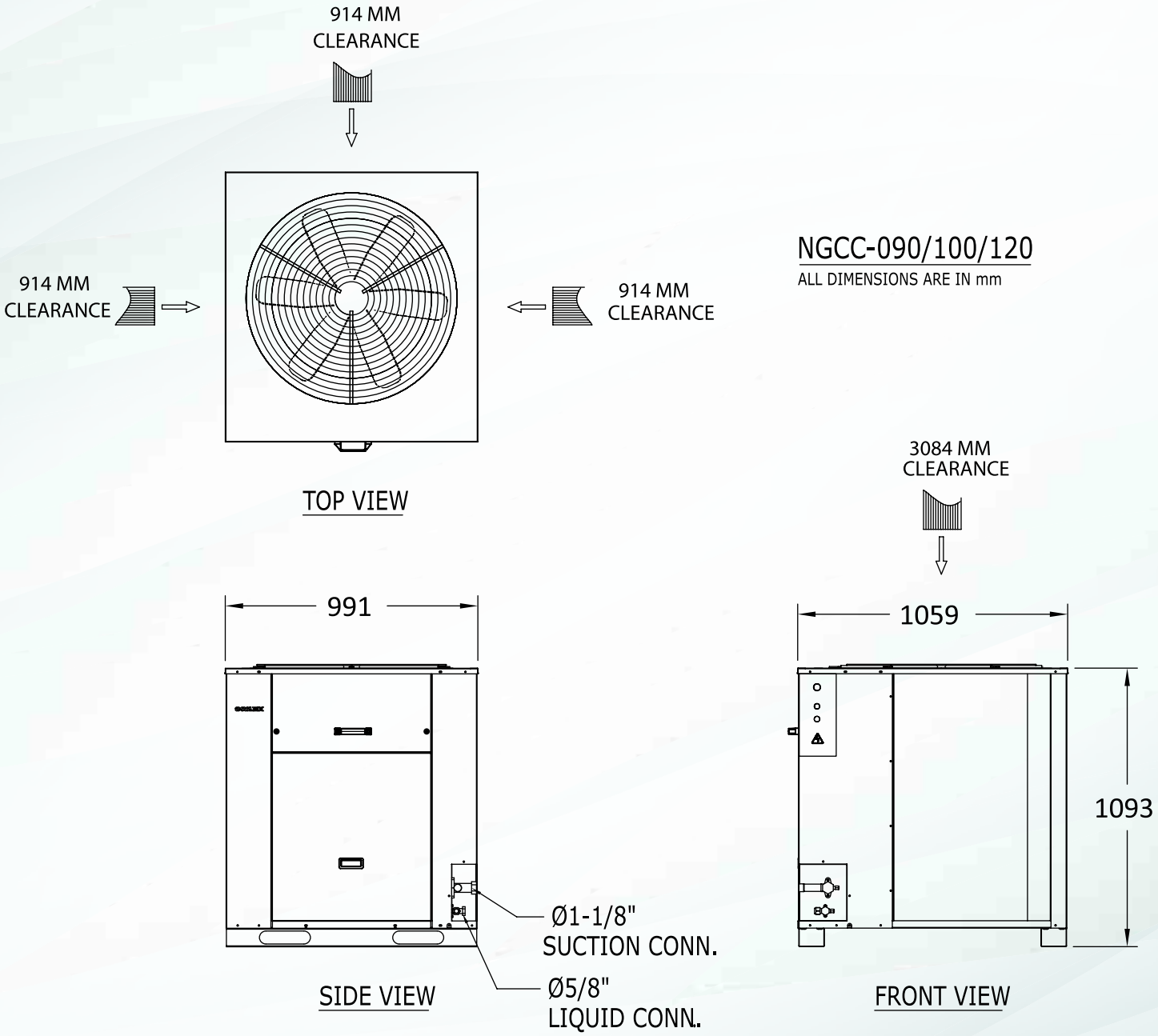
UNIT DIMENSIONS

Outdoor Units



UNIT DIMENSIONS

Outdoor Units

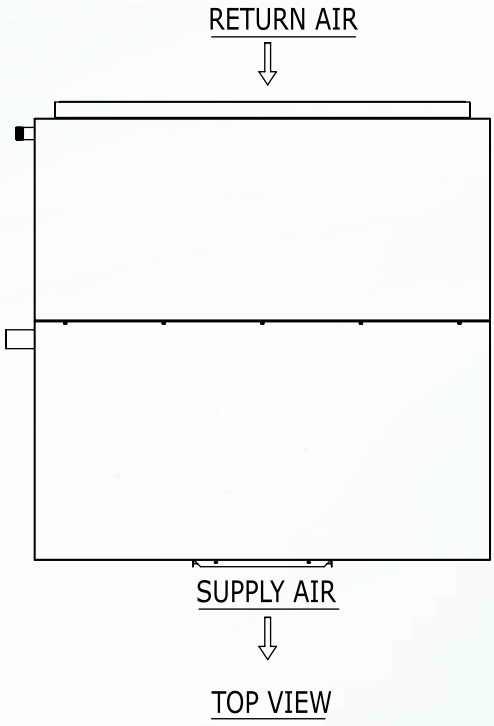


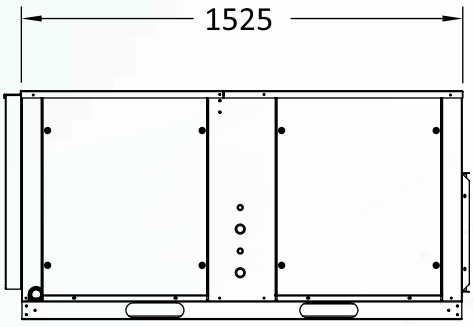
UNIT DIMENSIONS

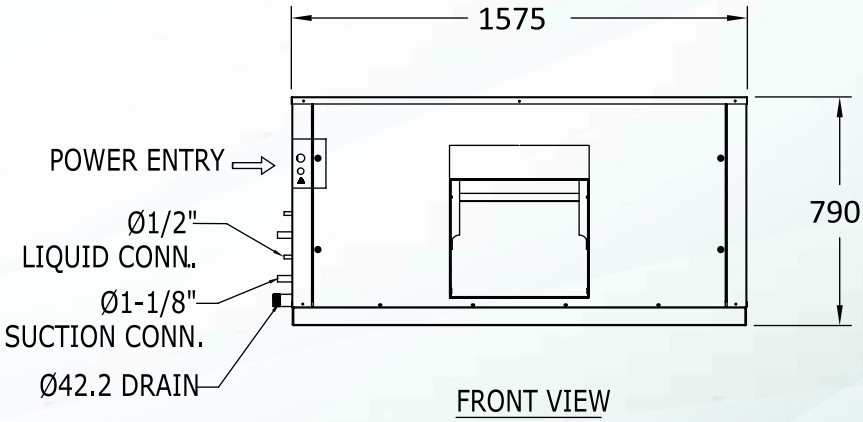
Indoor Units

NGEC-135/150

ALL DIMENSIONS ARE IN mm

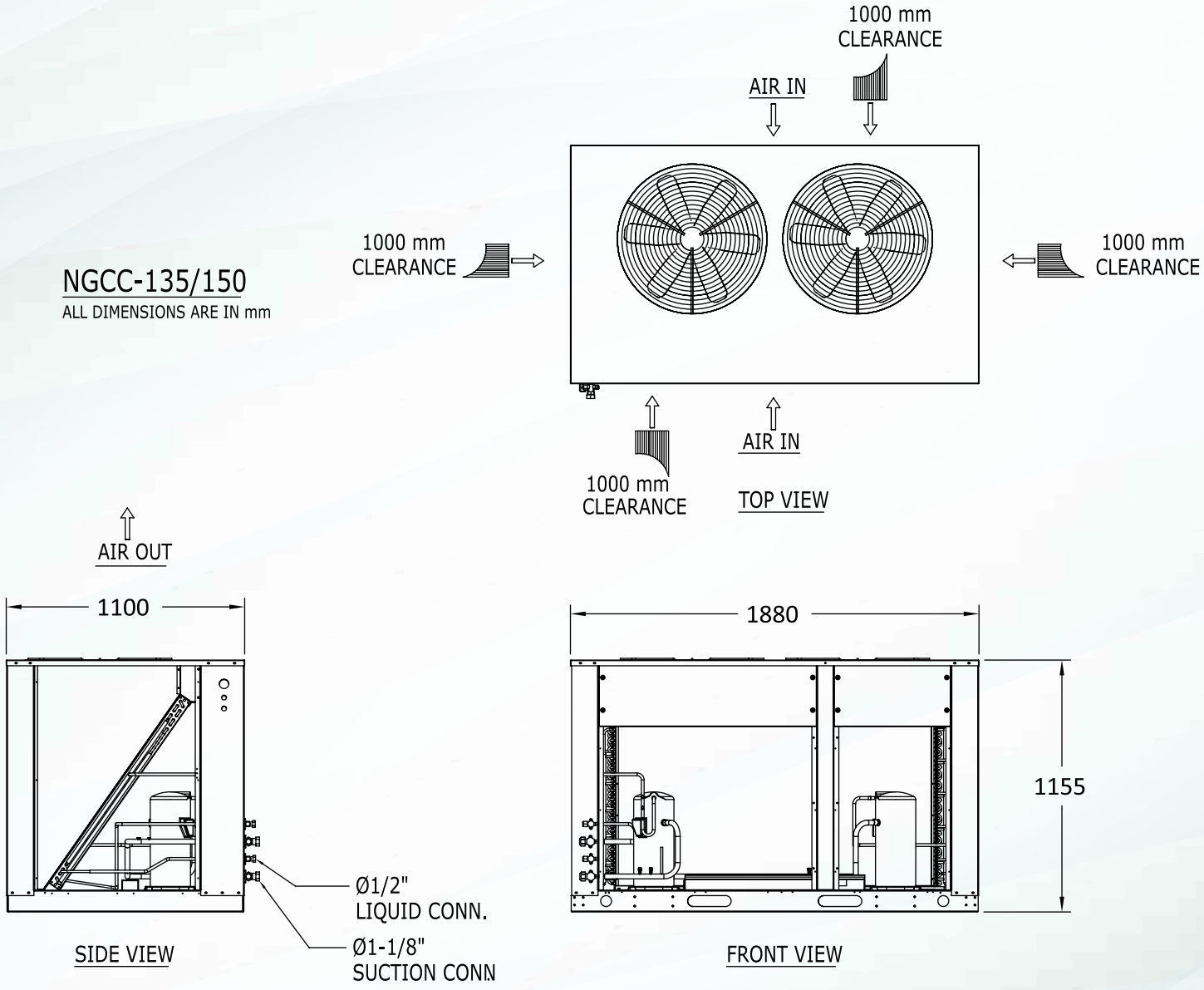






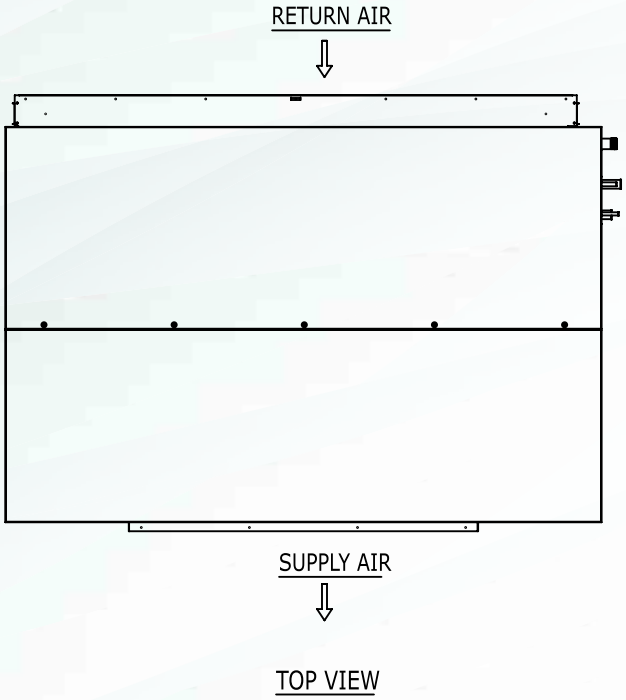
UNIT DIMENSIONS

Outdoor Units



UNIT DIMENSIONS

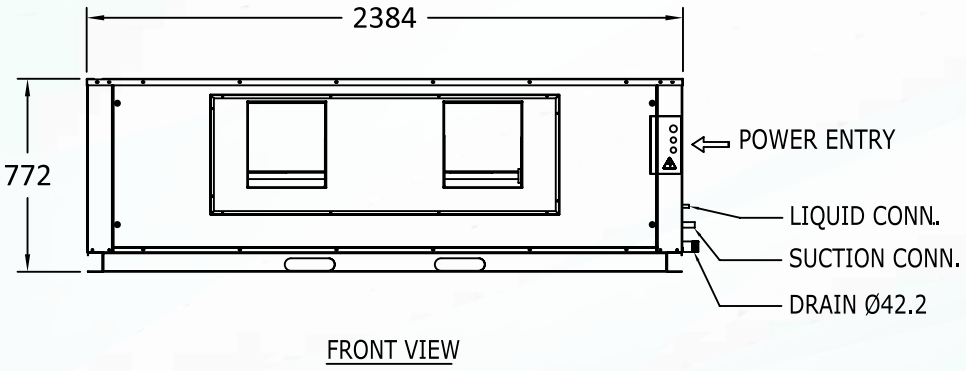
Indoor Units

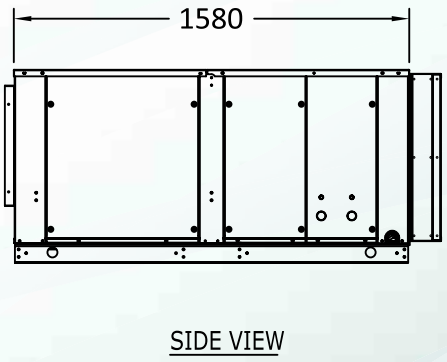


NGEC-175/200

ALL DIMENSIONS ARE IN mm

MODEL	NGEC-175	NGEC-200
SUCTION CONN.	Ø1-1/8"	Ø1-3/8"
LIQUID CONN.	Ø1/2"	Ø5/8"



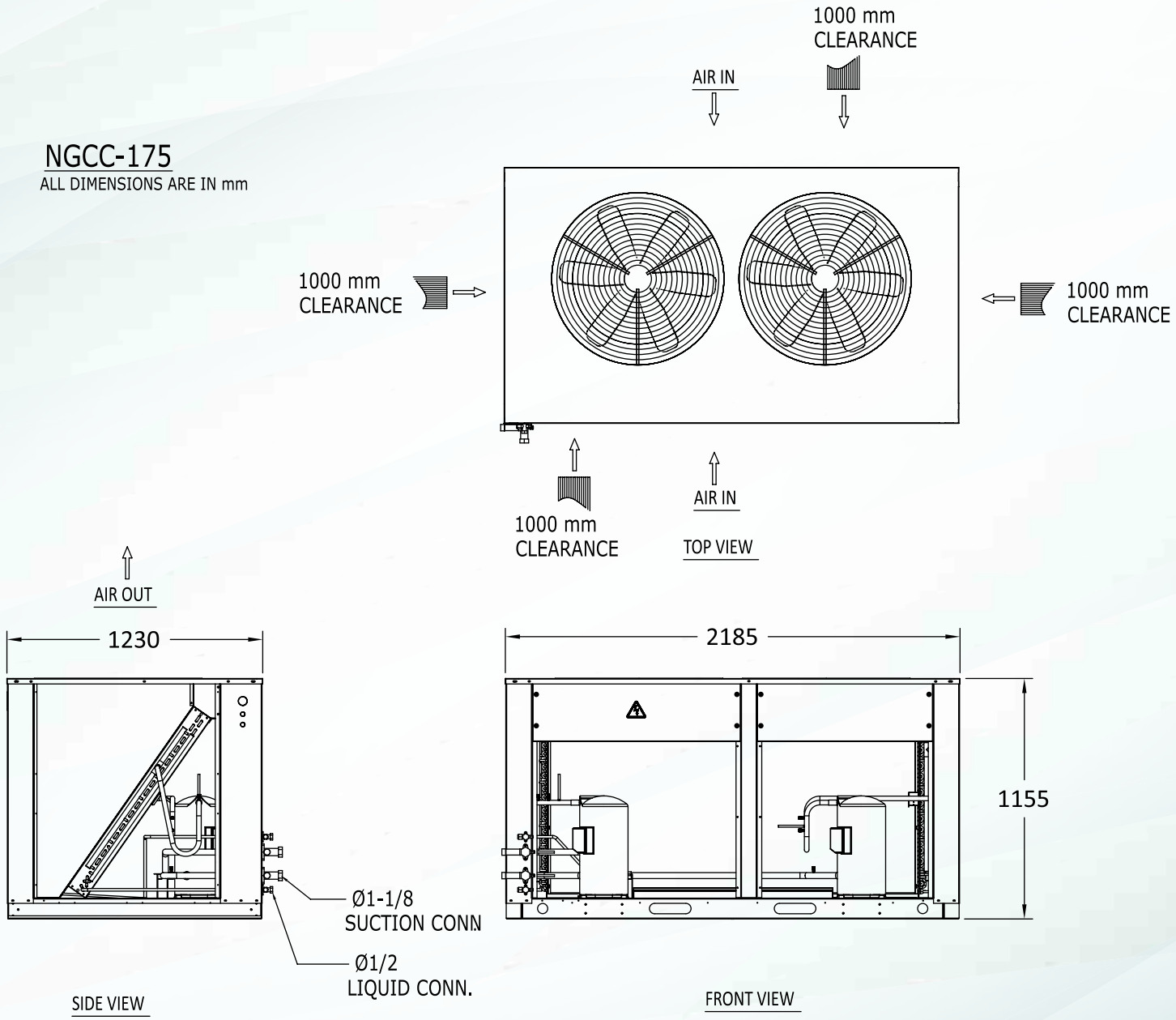


UNIT DIMENSIONS

Outdoor Units

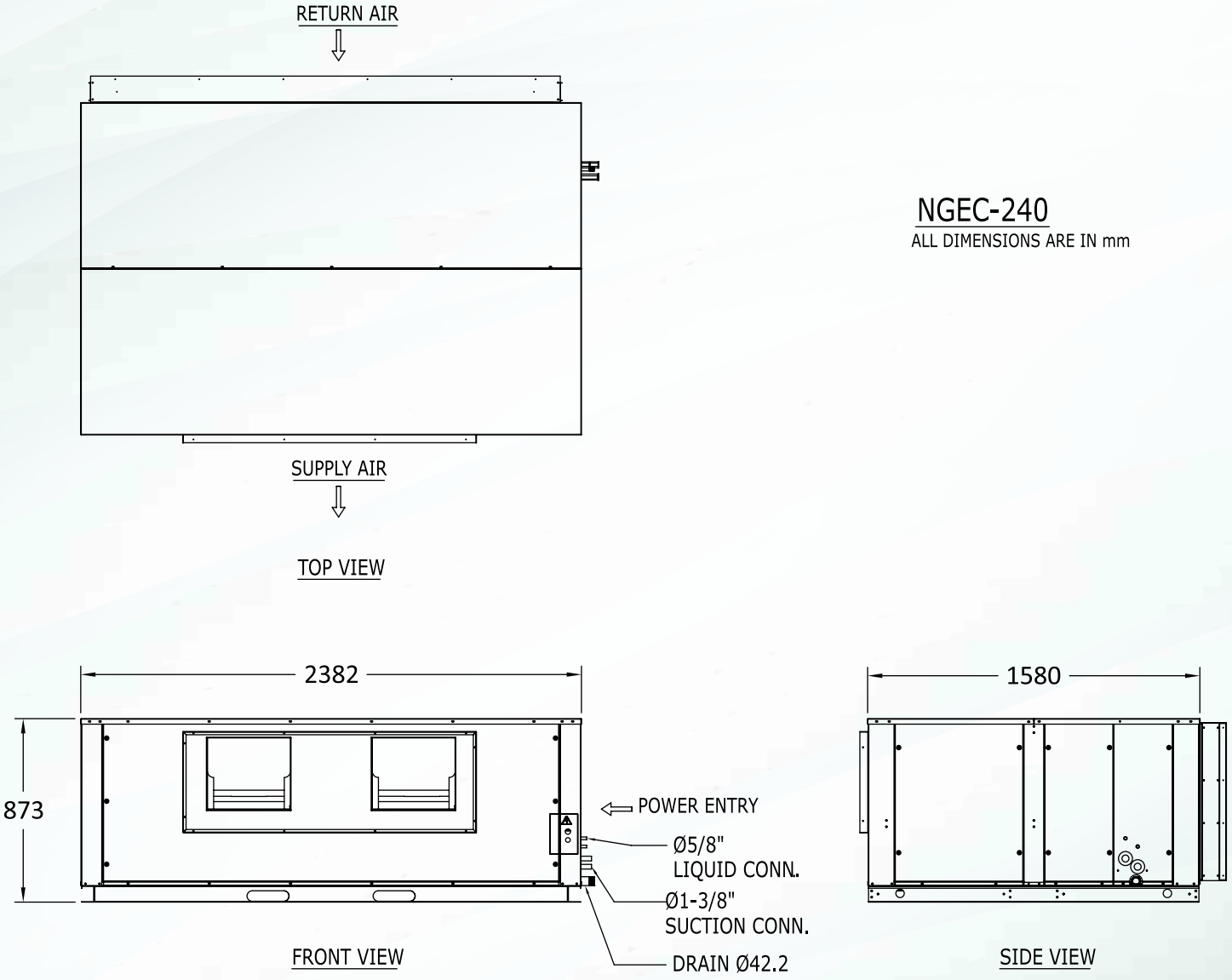
NGCC-175

ALL DIMENSIONS ARE IN mm



UNIT DIMENSIONS

Indoor Units

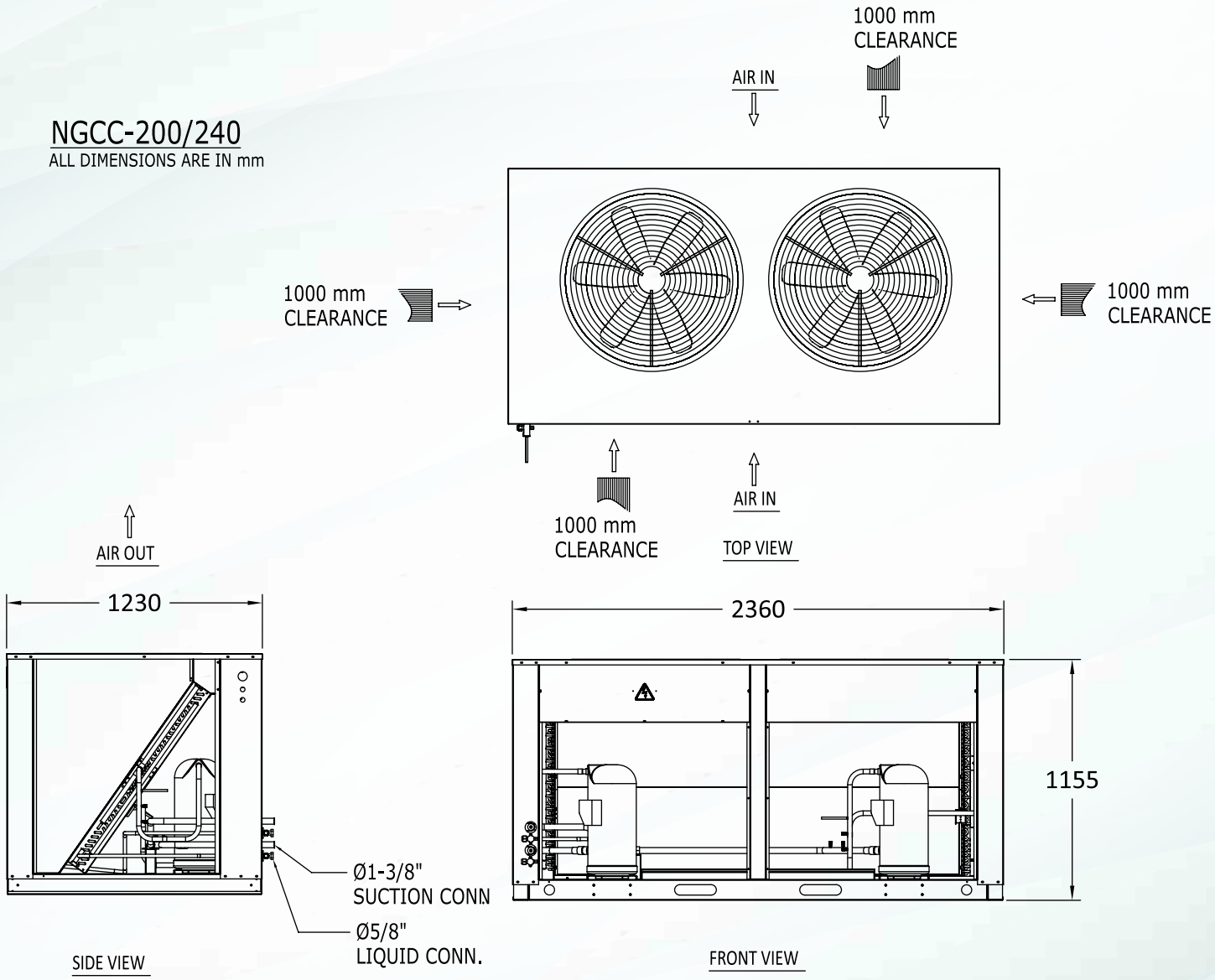


UNIT DIMENSIONS

Outdoor Units

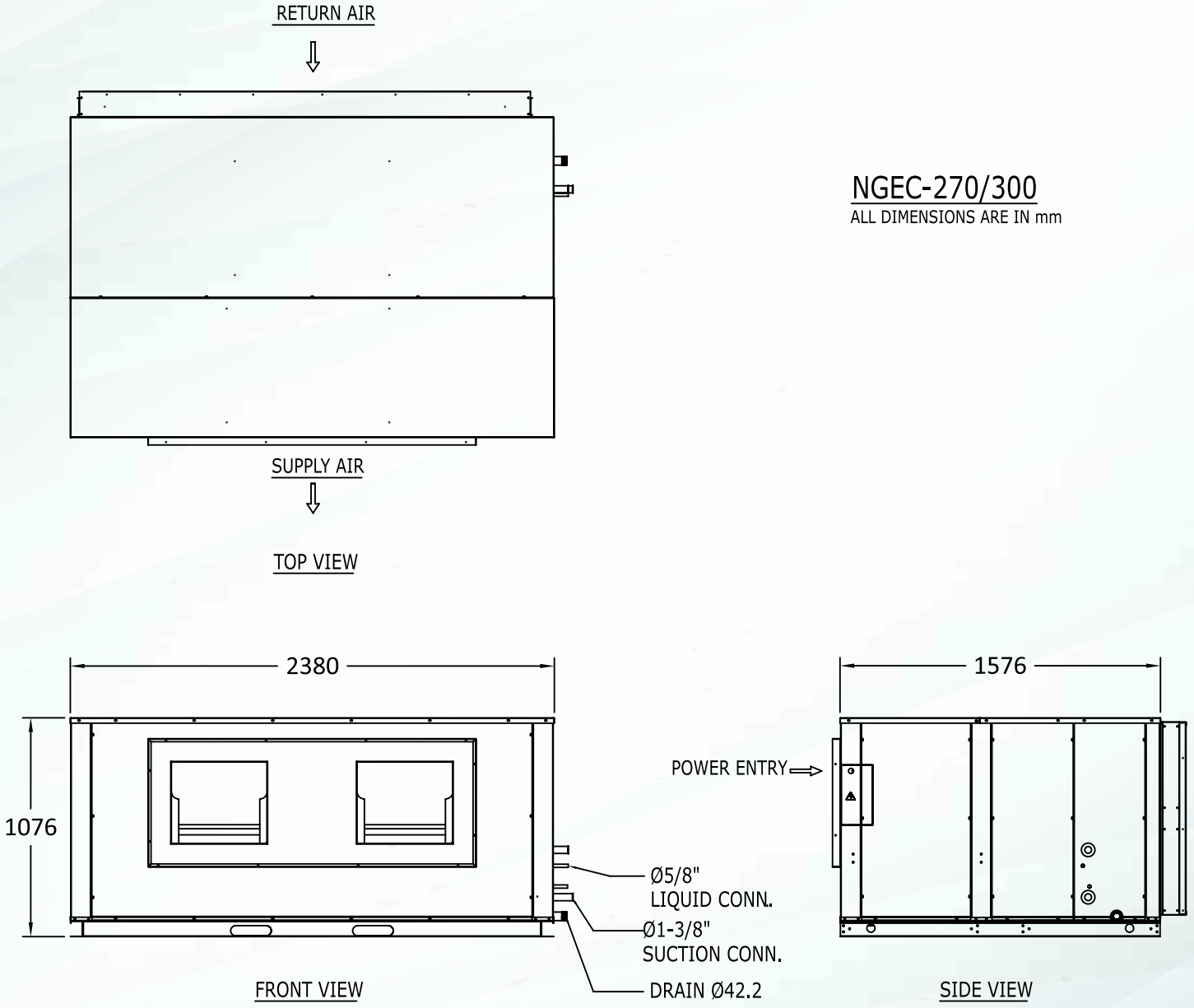
NGCC-200/240

ALL DIMENSIONS ARE IN mm



UNIT DIMENSIONS

Indoor Units

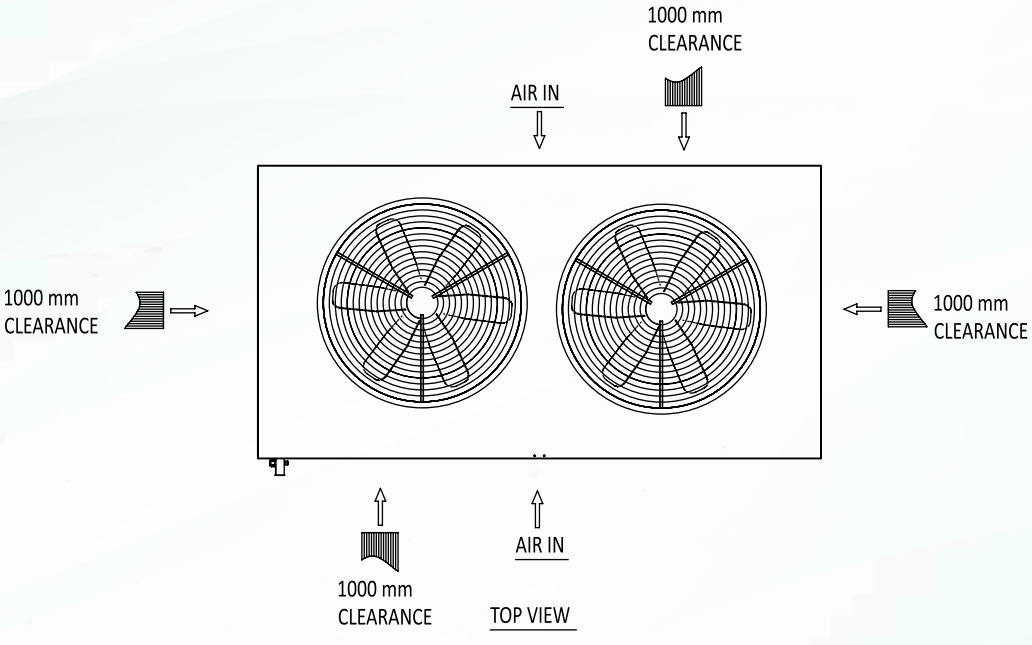


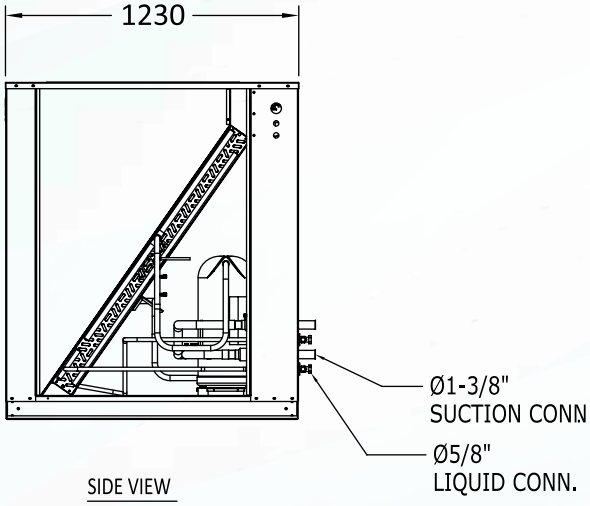
UNIT DIMENSIONS

Outdoor Units

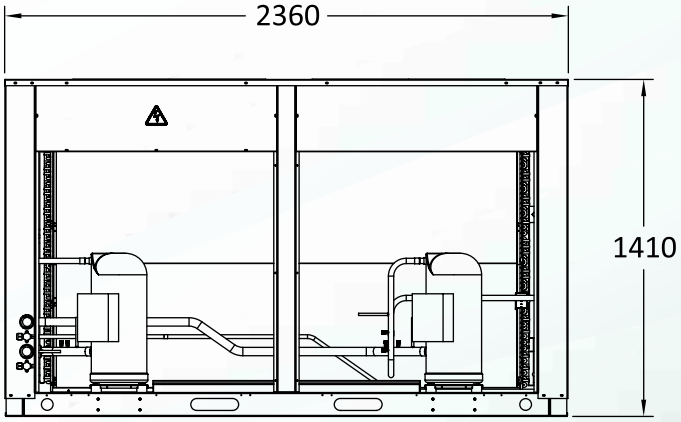
NGCC-270

ALL DIMENSIONS ARE IN mm





SIDE VIEW



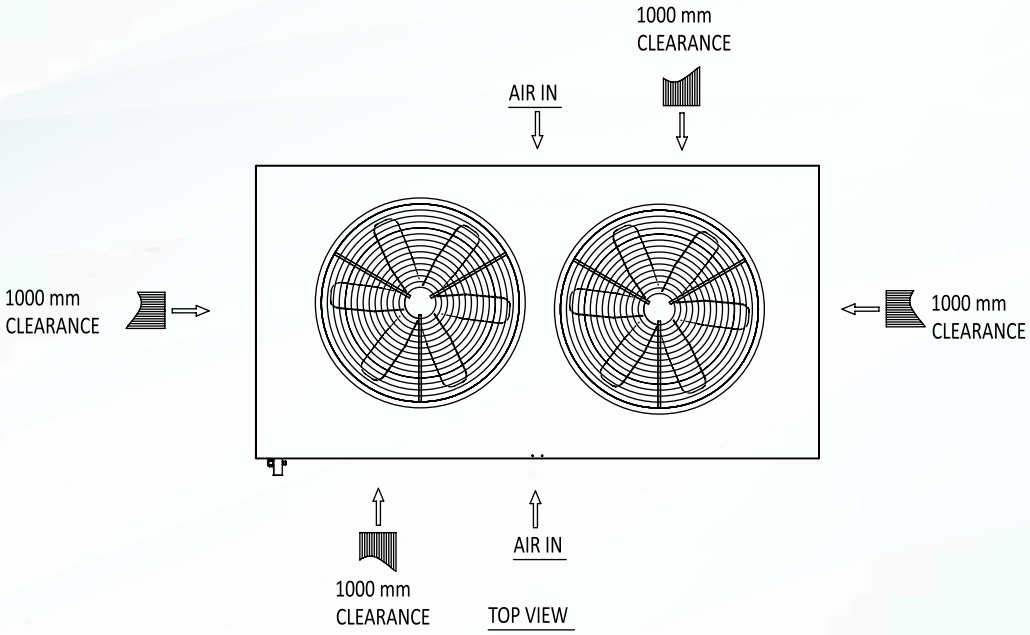
FRONT VIEW

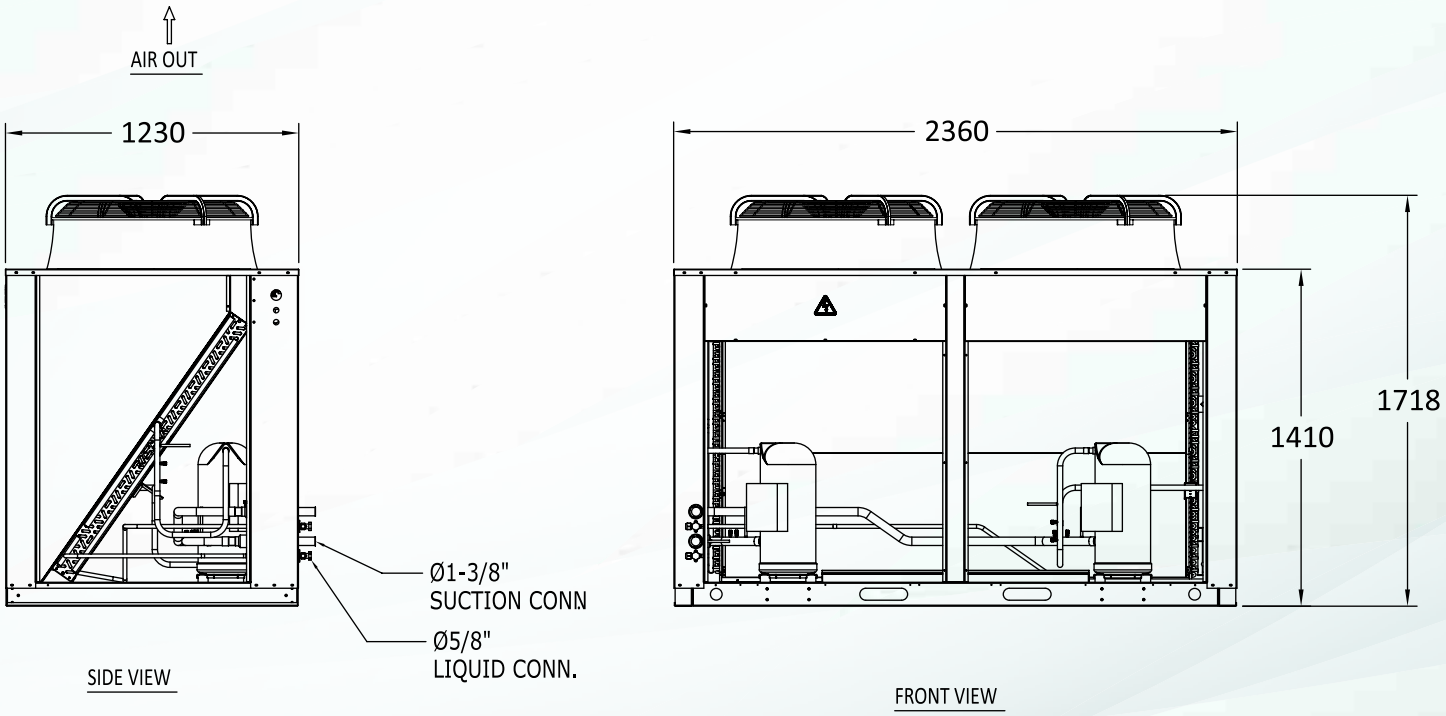
UNIT DIMENSIONS

Outdoor Units

NGCC-300

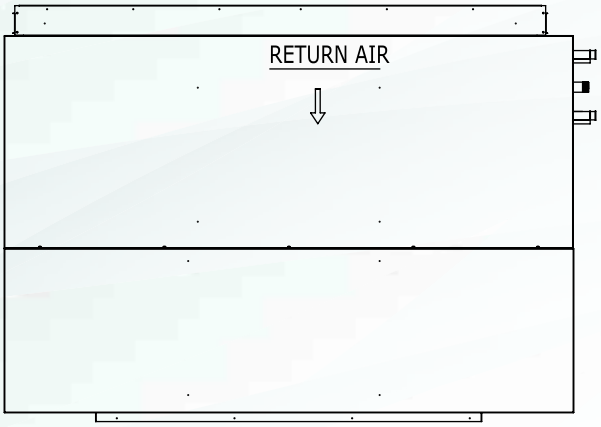
ALL DIMENSIONS ARE IN mm





UNIT DIMENSIONS

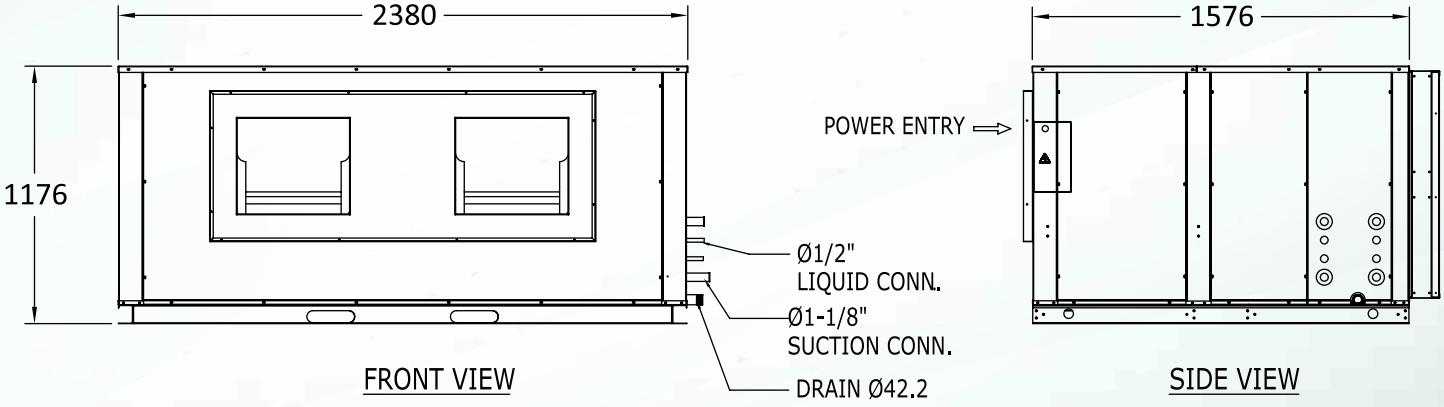
Indoor Units



TOP VIEW

NGEC-340

ALL DIMENSIONS ARE IN mm

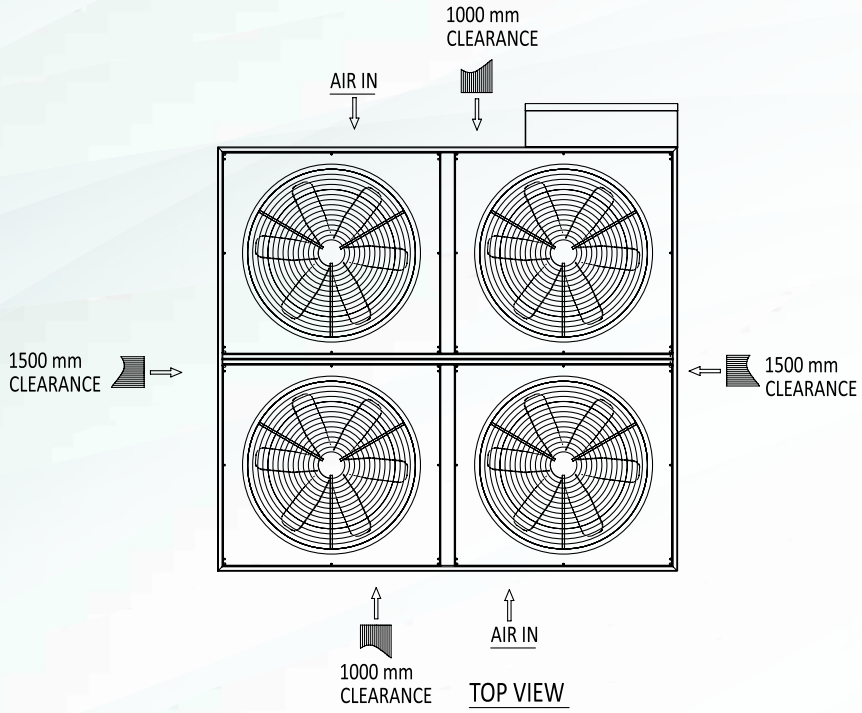


FRONT VIEW

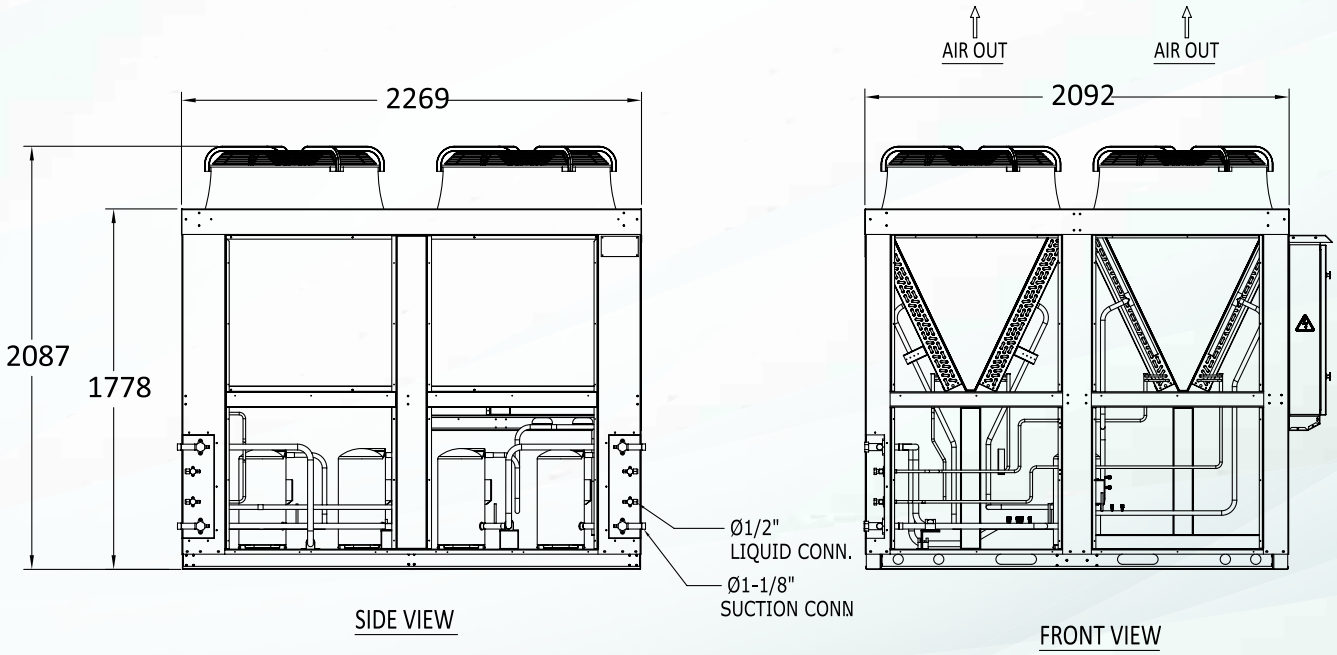
SIDE VIEW

UNIT DIMENSIONS

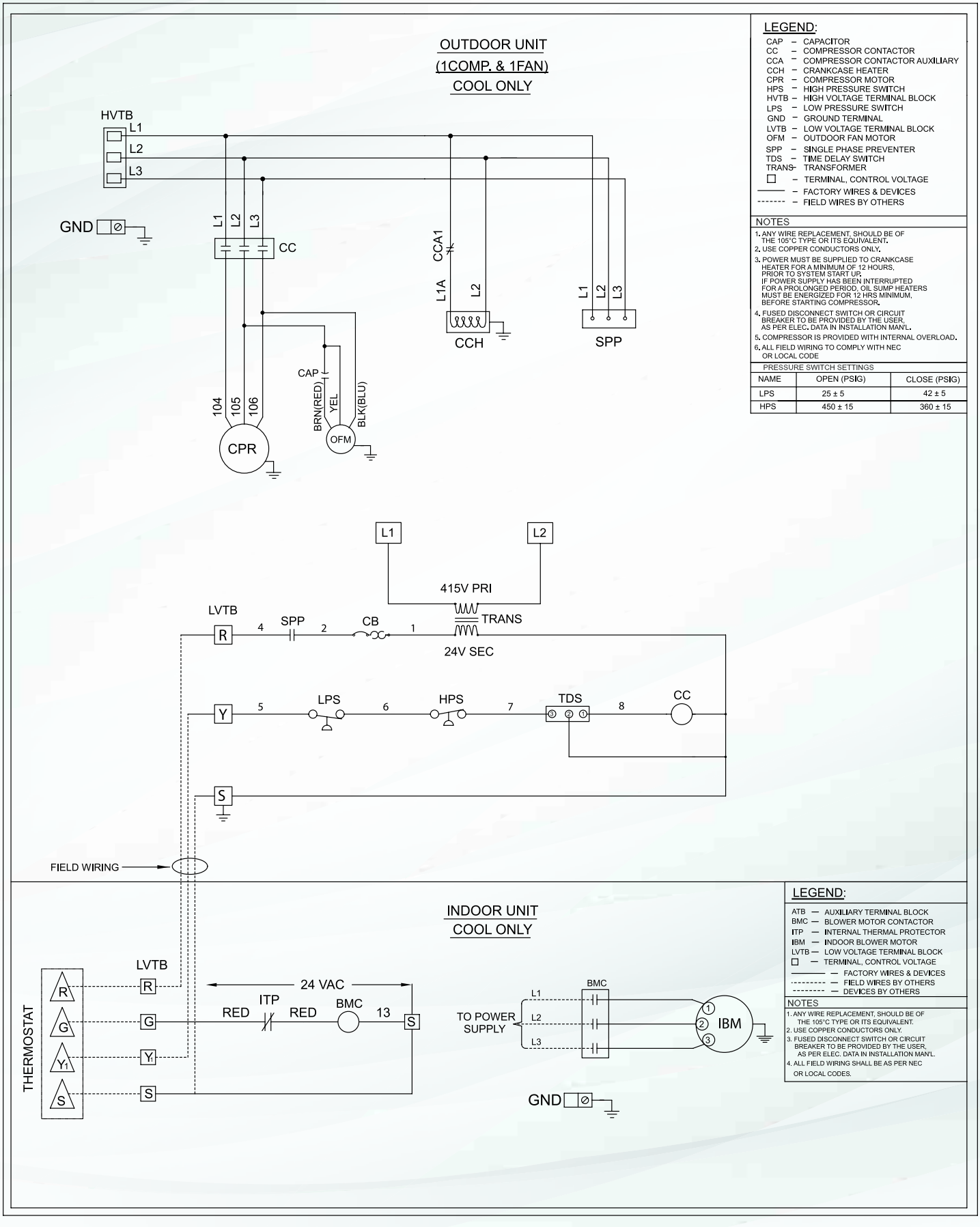
Outdoor Units



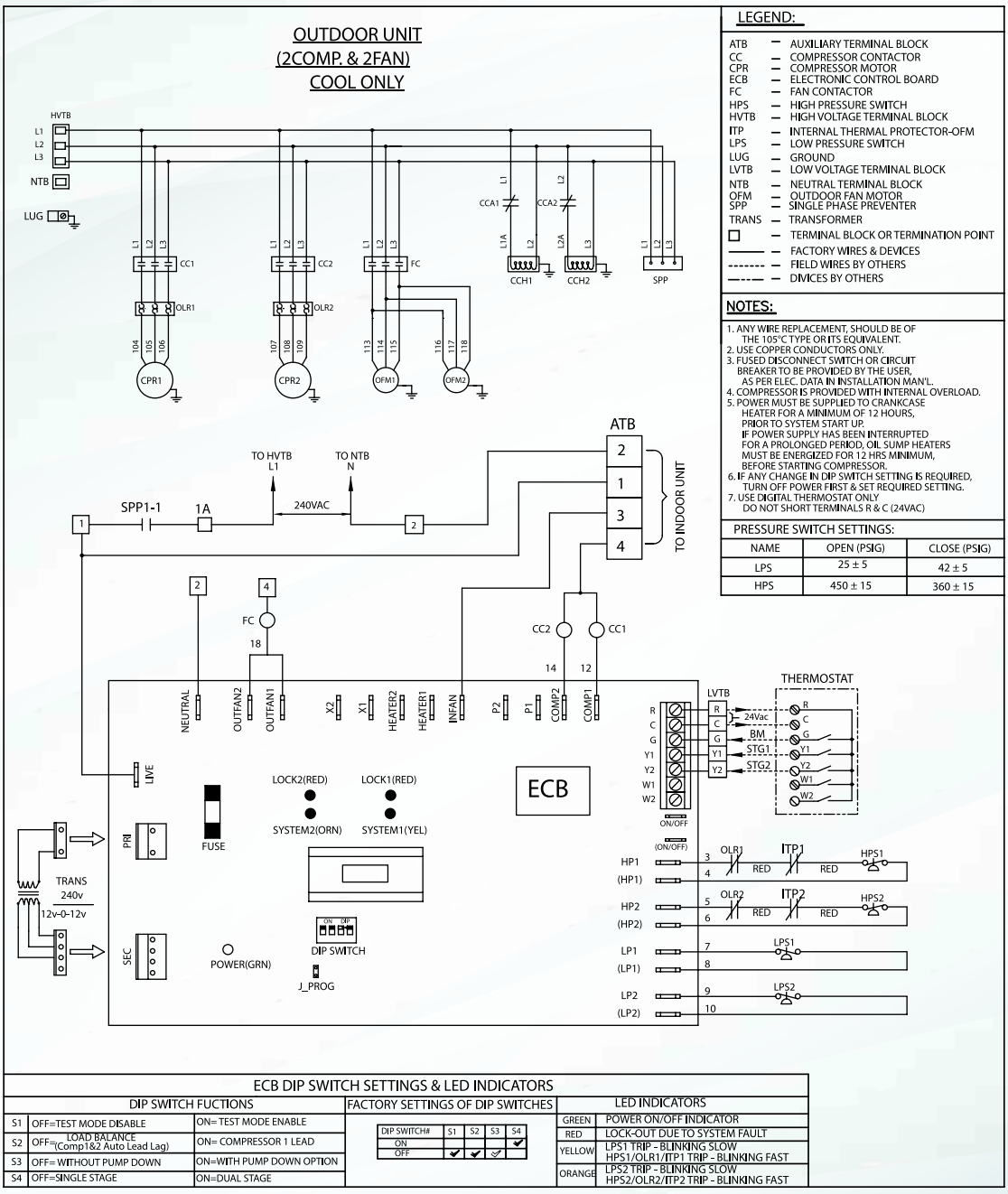
NGCC-340
ALL DIMENSIONS ARE IN mm



TYPICAL WIRING DIAGRAMS



TYPICAL WIRING DIAGRAMS



LEGEND:

ATB	—	AUXILIARY TERMINAL BLOCK
CC	—	COMPRESSOR CONTACTOR
CPR	—	COMPRESSOR MOTOR
ECB	—	ELECTRONIC CONTROL BOARD
FC	—	FAN CONTACTOR
HPS	—	HIGH PRESSURE SWITCH
HVTB	—	HIGH VOLTAGE TERMINAL BLOCK
ITP	—	INTERNAL THERMAL PROTECTOR-OFM
LPS	—	LOW PRESSURE SWITCH
LUG	—	GROUND
LVTB	—	LOW VOLTAGE TERMINAL BLOCK
NTB	—	NEUTRAL TERMINAL BLOCK
OFM	—	OUTDOOR FAN MOTOR
SPP	—	SINGLE PHASE PREVENTER
TRANS	—	TRANSFORMER
□	—	TERMINAL BLOCK OR TERMINATION POINT
———	—	FACTORY WIRES & DEVICES
- - - - -	—	FIELD WIRES BY OTHERS
—·—·—	—	DIVICES 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. POWER MUST BE SUPPLIED TO CRANKCASE HEATER FOR A MINIMUM OF 12 HOURS, PRIOR TO SYSTEM START UP. IF POWER SUPPLY HAS BEEN INTERRUPTED FOR A PROLONGED PERIOD, OIL SUMP HEATERS MUST BE ENERGIZED FOR 12 HRS MINIMUM, BEFORE STARTING COMPRESSOR.
6. IF ANY CHANGE IN DIP SWITCH SETTING IS REQUIRED, TURN OFF POWER FIRST & SET REQUIRED SETTING.
7. USE DIGITAL THERMOSTAT ONLY DO NOT SHORT TERMINALS R & C (24VAC)

PRESSURE SWITCH SETTINGS:

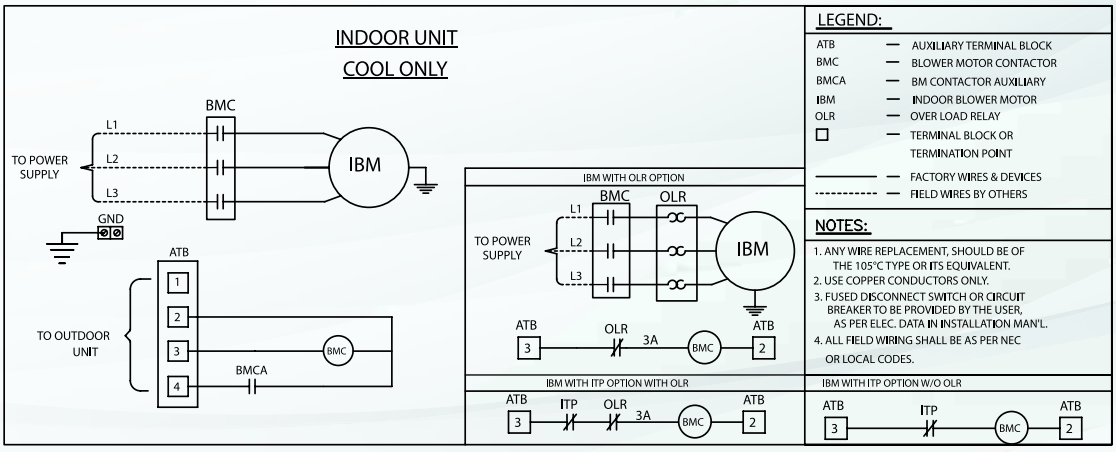
NAME	OPEN (PSIG)	CLOSE (PSIG)
LPS	25 ± 5	42 ± 5
HPS	450 ± 15	360 ± 15

ECB DIP SWITCH SETTINGS & LED INDICATORS

DIP SWITCH FUCTIONS			FACTORY SETTINGS OF DIP SWITCHES
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	

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/OLR1/ITP1 TRIP - BLINKING FAST
ORANGE	LPS2 TRIP - BLINKING SLOW HPS2/OLR2/ITP2 TRIP - BLINKING FAST



LEGEND:

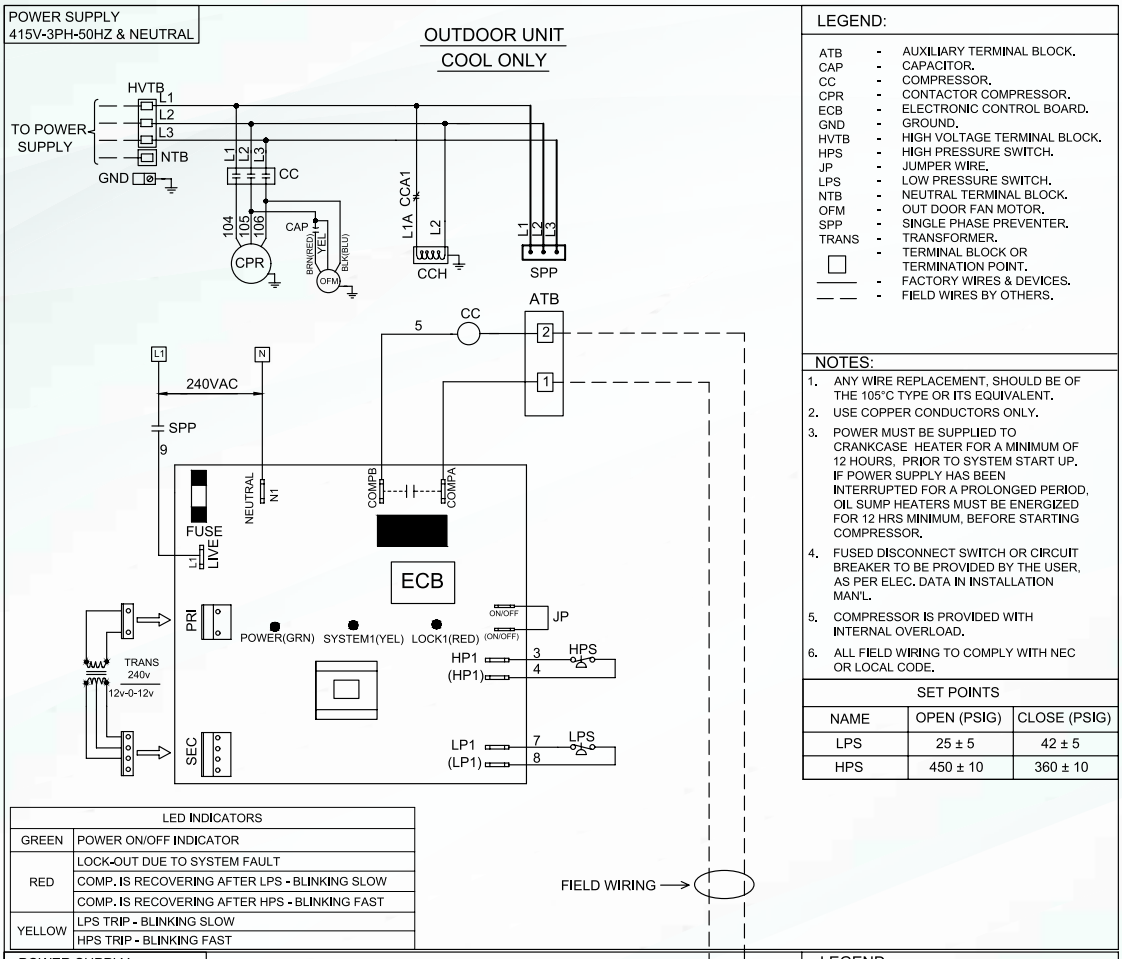
ATB	—	AUXILIARY TERMINAL BLOCK
BMC	—	BLOWER MOTOR CONTACTOR
BMCA	—	BM CONTACTOR AUXILIARY
IBM	—	INDOOR BLOWER MOTOR
OLR	—	OVER LOAD RELAY
□	—	TERMINAL BLOCK OR TERMINATION POINT
———	—	FACTORY WIRES & DEVICES
- - - - -	—	FIELD WIRES BY OTHERS

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. ALL FIELD WIRING SHALL BE AS PER NEC OR LOCAL CODES.

TYPICAL WIRING DIAGRAMS

Microprocessor Based Controller (Optional)



LED INDICATORS	
GREEN	POWER ON/OFF INDICATOR
RED	LOCK-OUT DUE TO SYSTEM FAULT
	COMP. IS RECOVERING AFTER LPS - BLINKING SLOW
	COMP. IS RECOVERING AFTER HPS - BLINKING FAST
YELLOW	LPS TRIP - BLINKING SLOW
	HPS TRIP - BLINKING FAST

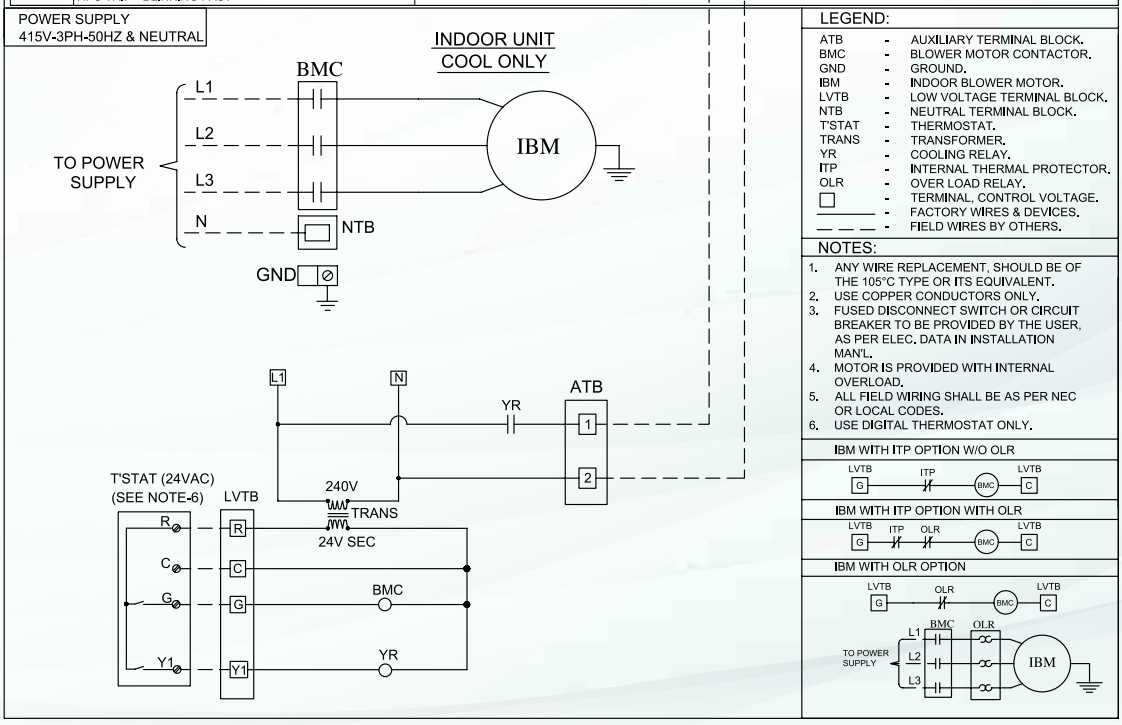
LEGEND:

ATB	-	AUXILIARY TERMINAL BLOCK.
CAP	-	CAPACITOR.
CC	-	COMPRESSOR.
CPR	-	CONTACTOR COMPRESSOR.
ECB	-	ELECTRONIC CONTROL BOARD.
GND	-	GROUND.
HVTB	-	HIGH VOLTAGE TERMINAL BLOCK.
HPS	-	HIGH PRESSURE SWITCH.
JP	-	JUMPER WIRE.
LPS	-	LOW PRESSURE SWITCH.
NTB	-	NEUTRAL TERMINAL BLOCK.
OFM	-	OUT DOOR FAN MOTOR.
SPP	-	SINGLE PHASE PREVENTER.
TRANS	-	TRANSFORMER.
□	-	TERMINAL BLOCK OR TERMINATION POINT.
———	-	FACTORY WIRES & DEVICES.
— —	-	FIELD WIRES BY OTHERS.

NOTES:

1. ANY WIRE REPLACEMENT, SHOULD BE OF THE 105°C TYPE OR ITS EQUIVALENT.
2. USE COPPER CONDUCTORS ONLY.
3. POWER MUST BE SUPPLIED TO CRANKCASE HEATER FOR A MINIMUM OF 12 HOURS, PRIOR TO SYSTEM START UP. IF POWER SUPPLY HAS BEEN INTERRUPTED FOR A PROLONGED PERIOD, OIL SUMP HEATERS MUST BE ENERGIZED FOR 12 HRS MINIMUM, BEFORE STARTING COMPRESSOR.
4. FUSED DISCONNECT SWITCH OR CIRCUIT BREAKER TO BE PROVIDED BY THE USER, AS PER ELEC. DATA IN INSTALLATION MAN'L.
5. COMPRESSOR IS PROVIDED WITH INTERNAL OVERLOAD.
6. ALL FIELD WIRING TO COMPLY WITH NEC OR LOCAL CODE.

SET POINTS		
NAME	OPEN (PSIG)	CLOSE (PSIG)
LPS	25 ± 5	42 ± 5
HPS	450 ± 10	360 ± 10



LEGEND:

ATB	-	AUXILIARY TERMINAL BLOCK.
BMC	-	BLOWER MOTOR CONTACTOR.
GND	-	GROUND.
IBM	-	INDOOR BLOWER MOTOR.
LVTB	-	LOW VOLTAGE TERMINAL BLOCK.
NTB	-	NEUTRAL TERMINAL BLOCK.
T'STAT	-	THERMOSTAT.
TRANS	-	TRANSFORMER.
YR	-	COOLING RELAY.
ITP	-	INTERNAL THERMAL PROTECTOR.
OLR	-	OVER LOAD RELAY.
□	-	TERMINAL, CONTROL VOLTAGE.
———	-	FACTORY WIRES & DEVICES.
— — —	-	FIELD WIRES 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. MOTOR IS PROVIDED WITH INTERNAL OVERLOAD.
5. ALL FIELD WIRING SHALL BE AS PER NEC OR LOCAL CODES.
6. USE DIGITAL THERMOSTAT ONLY.

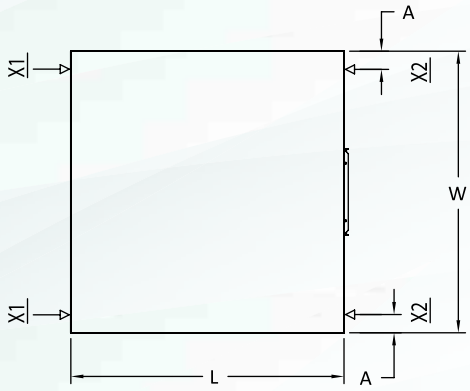
IBM WITH ITP OPTION W/O OLR

IBM WITH ITP OPTION WITH OLR

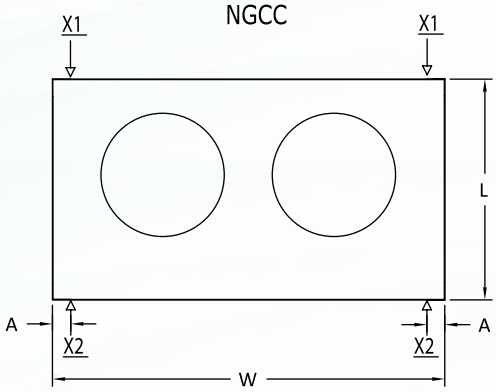
IBM WITH OLR OPTION

LOAD DISTRIBUTION

NGEC



NGCC



MODEL	LOAD DISTRIBUTION				
	L (mm)	W (mm)	A (mm)	X1 (kg)	X2 (kg)
NGEC-076	1182.0	962.0	75.0	60.12	66.88
NGEC-090	1302.0	1110.0	75.0	76.8	83.2
NGEC-100	1302.0	1328.0	75.0	78.8	87.2
NGEC-120	1302.0	1328.0	75.0	84.5	91.5
NGEC-135	1525.0	1575.0	75.0	84.5	91.5
NGEC-150	1525.0	1575.0	75.0	84.5	91.5
NGEC-175	1580.0	2384.0	75.0	70.7	76.6
NGEC-200	1580.0	2384.0	75.0	71.8	77.8
NGEC-240	1580.0	2382.0	75.0	92.8	100.6
NGEC-270	1576.0	2380.0	75.0	97.9	106.0
NGEC-300	1576.0	2380.0	75.0	111.3	120.6
NGEC-340	1576.0	2380.0	75.0	121.8	132.0
NGCC-076	919.0	919.0	75.0	84.8	78.2
NGCC-090	991.0	1059.0	75.0	93.2	86.1
NGCC-100	991.0	1059.0	75.0	107.6	98.6
NGCC-120	991.0	1059.0	75.0	112.6	103.9
NGCC-135	1100.0	1880.0	75.0	125.3	115.7
NGCC-150	1100.0	1880.0	75.0	132.0	143.0
NGCC-175	1230.0	2185.0	75.0	132.0	143.0
NGCC-200	1230.0	2360.0	75.0	133.4	144.6
NGCC-240	1230.0	2360.0	75.0	172.3	186.7
NGCC-270	1230.0	2360.0	75.0	181.7	196.8
NGCC-300	1230.0	2360.0	75.0	206.6	223.9
NGCC-340	2092.0	2269.0	75.0	226.1	244.9

شركة صناعات التبريد والتخزين والخدمات النفطية

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