

COOLEX

PHE Precision Cooling Units

R 410A

3.5-15 TR
12.3-52 KW



50 Hz

R410A

Table of Contents

INTRODUCTION	3
NOMENCLATURE	3
OUT STANDING FEATURES	4
ELECTRICAL HEATER	6
GENERAL DATA	7
UNIT ELECTRICAL DATA	8
UNIT DIMENSIONS	9
WIRING DIAGRAMS	17
NOTES	19
ABOUT RIC	22
RIC Distributors	23

OTHER COOLEX PRODUCTS

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

INTRODUCTION

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

NOMENCLATURE

PHEF 042 A 2 A

PHEF - High Efficiency Evaporator
PHCF- High Efficiency condenser

Cooling Capacity Nominal MBH		
42	-	76
130	-	175

Code	Description
A	First Series
B	Second Series
C	Third Series

ELECTRICAL POWER SUPPLY (V-Ph-Hz)	
2	415V-3Ph-50Hz
7	240V-1PH-50Hz

OPTIONS**
A FLOOD DETECTOR
B AIR FLOW SWITCH

OUT STANDING FEATURES

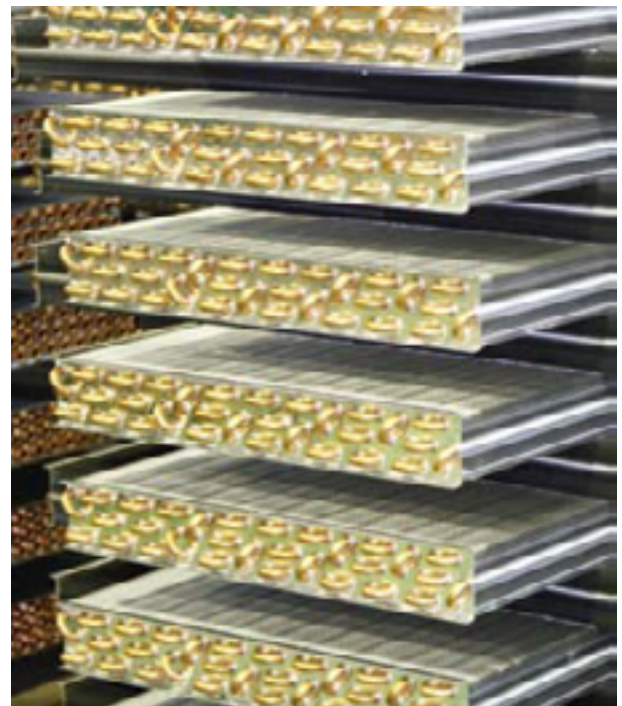
COMPRESSOR

Scroll Compressor has proven to be the most reliable, most efficient and quietest compressor technology available today. Compressor exclusive design features both axial and radial compliance, which allows the compressor to be more tolerant of liquid refrigerant or debris. Compliant Scroll compressors perform at higher efficiency levels than reciprocating compressors, and last longer over time. Scroll compressors have 50% fewer moving parts, which increases reliability and reduces sound levels. They also operate without suction valves, for added reliability and ease of maintenance.



CONDENSERS & EVAPORATOR COIL

The coils are built up seamless copper tubes and mechanically bonded to scientifically designed aluminum fins for maximum heat transfer efficiency. The assembled coils are factory leak tested under water at a pressure of 700 psig for quality and leak free unit. They also undergo dry chemical cleaning after Manufacturing for optimum system cleanness.



OUT STANDING FEATURES

CONDENSER FAN MOTOR

All condenser fan motors are totally enclosed air over type (TEAO) with class "F" winding insulation and ball bearings for high ambient application. The motors shall be three phase with internal thermal protection of automatic reset type.



EC CENTRIFUGAL FAN

is more efficient than ever.

The EC centrifugal fans are characterized especially by the following points:

- Best overall efficiency
- Comfortable noise level
- Compact design
- Consistent series
- Fast availability
- Easy startup (uncomplicated configuration of the control electronics)
- Well coordinated system (preconfigured motor / control electronics / impeller system)
- Logistic advantages due to complete unit
- EC motor without rare earth magnets



ELECTRIC HEATER

FINNED TYPE ELECTRIC STRIP HEATER

The Finned Type Electric Strip Heater provides a large surface area for excellent heat dissipation and rapid heat transfer, while a 304 stainless steel sheath construction protects these heaters from moisture. Which in turn increases the Efficiency and Durability of the Heaters

MODEL	kW
PHEF-042	-
PHEF-076	2.5 - 7.5
PHEF-130	2.5 - 10
PHEF-175	2.5 - 20



HUMIDIFIER

HIGH EFFICIENCY IMMERSED ELECTRODE HUMIDIFIER

Immersed-electrode steam humidifier are efficient and compact, and these humidifiers are capable of modulating the steam flow from 20% of the rated flow to 100%, according to the requirement. And its simply made up of a support system (with hoses, valves, etc.), a steam cylinder and some auxiliary components, and controlled by the dedicated Controller and/or an external Controller.

MODEL	kG/Hr
PHEF-042	-
PHEF-076	1.5 - 3.0
PHEF-130	1.5 - 3.0
PHEF-175	5.0 - 8.0



GENERAL DATA

Indoor/Outdoor Model		PHEF042/PHCF042	PHEF076/PHCF076	PHEF130/PHCF130	PHEF175/PHCF175
Capacity	Cooling, KW	10.5	17.6	35.2	52.7
	Sensible, KW	7.6	12.7	25.3	38.0
Power Supply	Volt/Phase/Hz	240/1/50	415/3/50	415/3/50	415/3/50
Piping Connection	Suction, MM	22.2	-	28.6	34.9
	Discharge, MM	-	12.7	-	-
	Liquid, MM	9.5	12.7	15.8	22.2

Indoor Units		PHEF 042	PHEF 076	PHEF 130	PHEF175
Evaporator Blower	Type	EC Axial	EC Centrifugal Backward Curve		
	Quantity	4	1	1	2
	Nominal KW	4 x 0.083	3.35	3.35	2x3.35
	Airflow, CMH	4,535	6,122	9,507	14,515
	Drive	Direct			
Evaporator Coil	Type	Enhanced Fins and Tubes			
	Row Deep	3	2	3	3
	Total Area, Sq. M	0.39	0.92	1.23	1.82
Compressor	Type	Hermetically Sealed			
	Quantity	-	1	-	-
	Refrigerant	R410A			
Expansion Devices		Thermal Expansion Valve			
Dimension	H x W x D, MM	1990x1000x400	1990x1105x900	1990x1405x900	1990x2065x900

Outdoor Units		PHCF 042	PHCF 076	PHCF 130	PHCF 175
Compressor	Type	Hermetically Sealed			
	Quantity	1	-	1	1
	Refrigerant	R410A			
Condenser Fan	Type	Propeller			
	Quantity	2	1	2	2
	Nominal KW	0.37	0.56	2 x 0.56	2 x 1.2
	Drive	Direct			
Condenser Coil	Type	Enhanced Fins and Tubes			
	Row Deep	2	2	3	2
	Total Area, Sq. M.	0.95	1.69	2.94	3.59
Dimension	H x W x D, MM	1260/875/335	900/925/925	1160/1880/1100	1155/2185/1230
Weight	kg	89	163	275	550

Note : Cooling Capacity is based on 24 °C DB/19.4WB air entering and 48 °C ambient temperature.
The unit can be operate at 18.3 °C minimum and 55 °C maximum ambient temperature.

UNIT ELECTRICAL DATA

Outdoor Unit		PHCF-042	PHCF-076	PHCF-130	PHCF-175
Unit Power Supply	Volt	415			
	Phase	3			
	Hz	50			
Compressor	V - Ph - Hz	380-420 / 3 / 50	-	380-420 / 3 / 50	
	RLA	6.8	-	24.3	34.3
	LRA	43	-	140	229
Condenser Fan Motor	V - Ph - Hz	415-3-50	415-1-50		415 -3- 50
	Qty.	2	1	2	2
	Input kW	0.37EA	0.56	0.56EA	1.12EA
	FLA	0.7EA	1.6	1.6EA	3EA
Unit Ampacity, Ampere		9.9	1.3	33.6	48.9
Max. Fuse Size, Ampere		16	5	50	80
Minimum Wire Size, mm ²		2.5	1.5	10	16

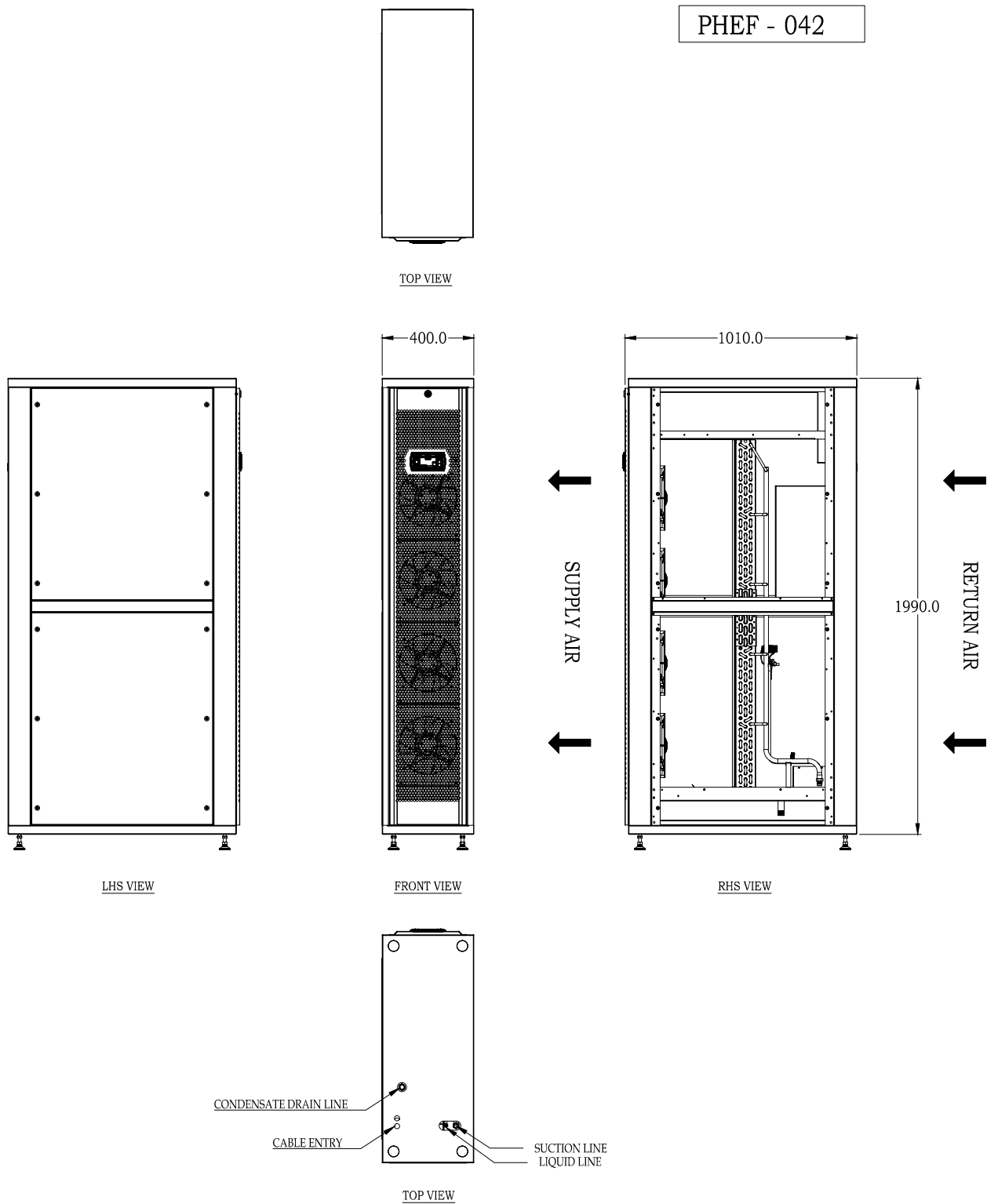
Indoor Unit		PHEF-042	PHEF-076	PHEF-130	PHEF-175
Unit Power Supply	Volt	240	415		
	Phase	1	3		
	Hz	50	50		
Compressor	V - Ph - Hz	-	380-420 / 3 / 50	-	-
	RLA	-	12.5	-	-
	LRA	-	75	-	-
Blower Motor	V - Ph - Hz	240 / 1 / 50	380-480/3/50		
	Qty.	4	1	1	2
	Input kW	0.083EA	3.65	3.65	3.65EA
	FLA	0.72EA	5.5	5.5	5.5EA
Heater	V / Ph / Hz	-	240 - 1 -50		
	Qty.	-	3	3	8
	kW	-	2.5	2.5	2.5
	FLA	-	31.3	31.3	83.3
Humidifier	V / Ph / Hz	-	400 / 3 / 50		
	kg/hr	-	3	3	8
	FLA	-	3.2	3.2	8.7
Unit Ampacity, Ampere		3.1	55.6	41.4	104.4
Max. Fuse Size, Ampere		10	60	45	110
Minimum Wire Size, mm ²		1.5	16	10	35

LEGEND:

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

UNIT DIMENSIONS

Indoor Unit:



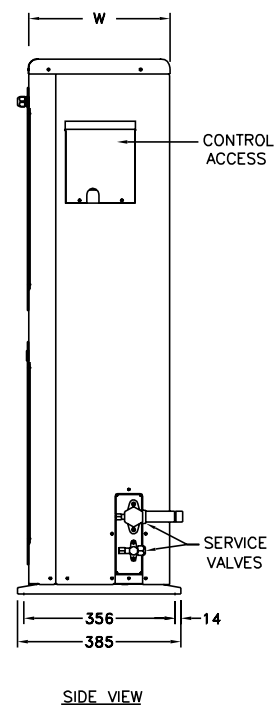
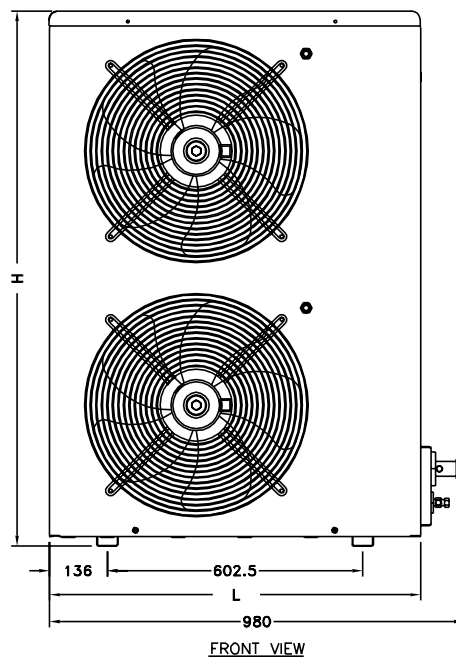
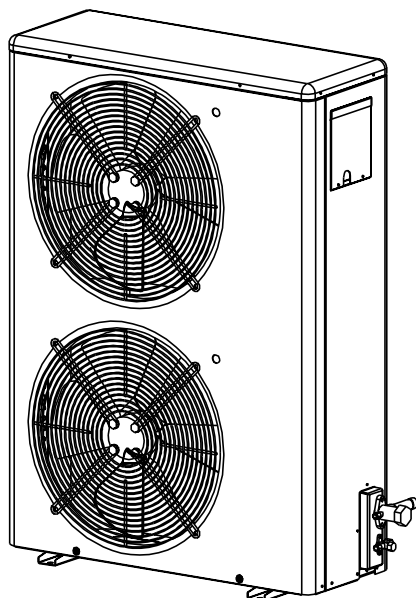
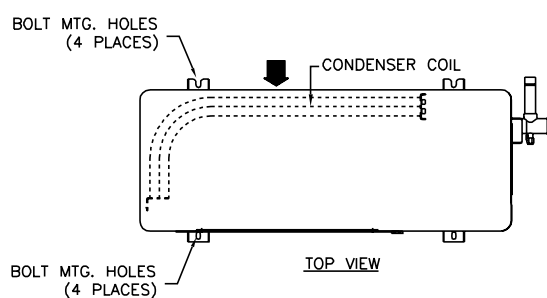
UNIT DIMENSIONS

Outdoor Unit:

PHCF-042

MODEL	DIMENSIONS		
	H	L	W
PHCF-042	1260	875	335

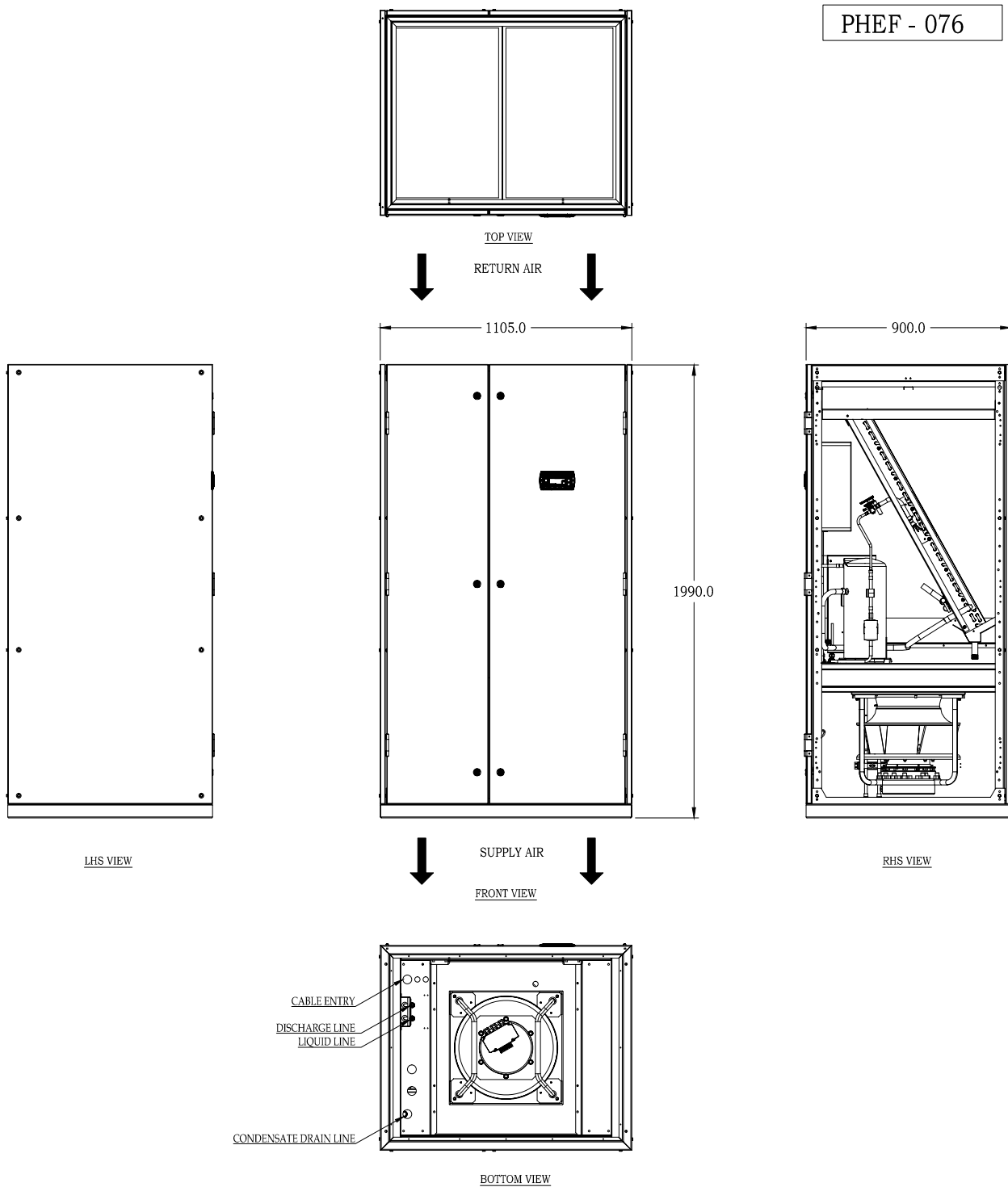
ALL DIMENSIONS ARE IN MM



UNIT DIMENSIONS

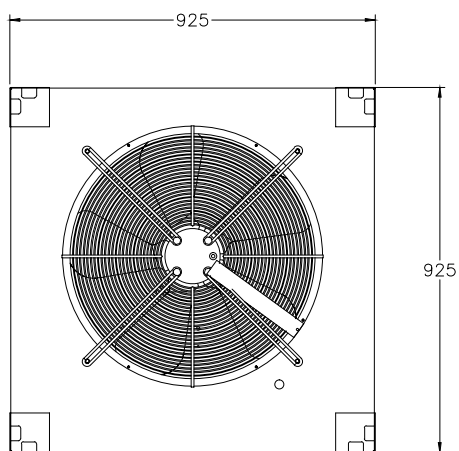
Indoor Unit:

PHEF - 076



UNIT DIMENSIONS

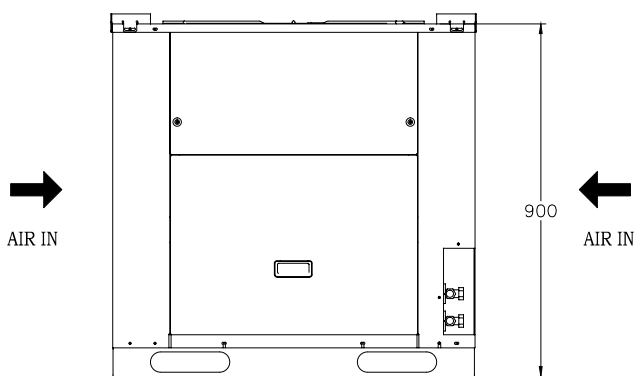
Outdoor Unit:



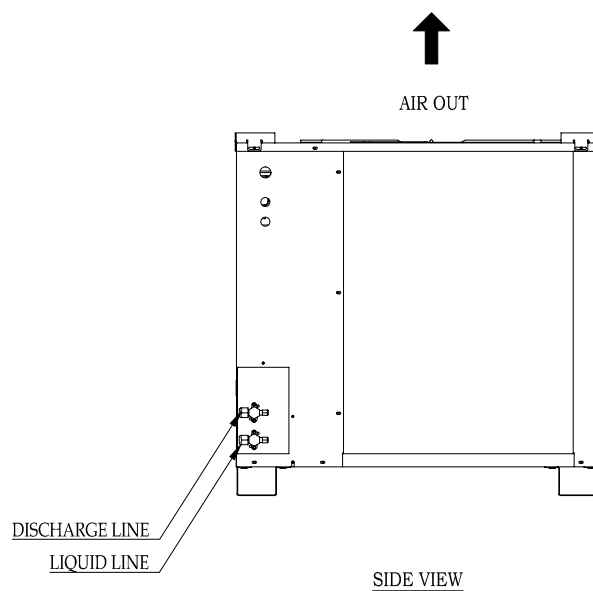
TOP VIEW

PHCF- 076

MODEL	PHCF-076
DISCHARGE CONNECTION	1/2"
LIQUID CONNECTION	1/2"



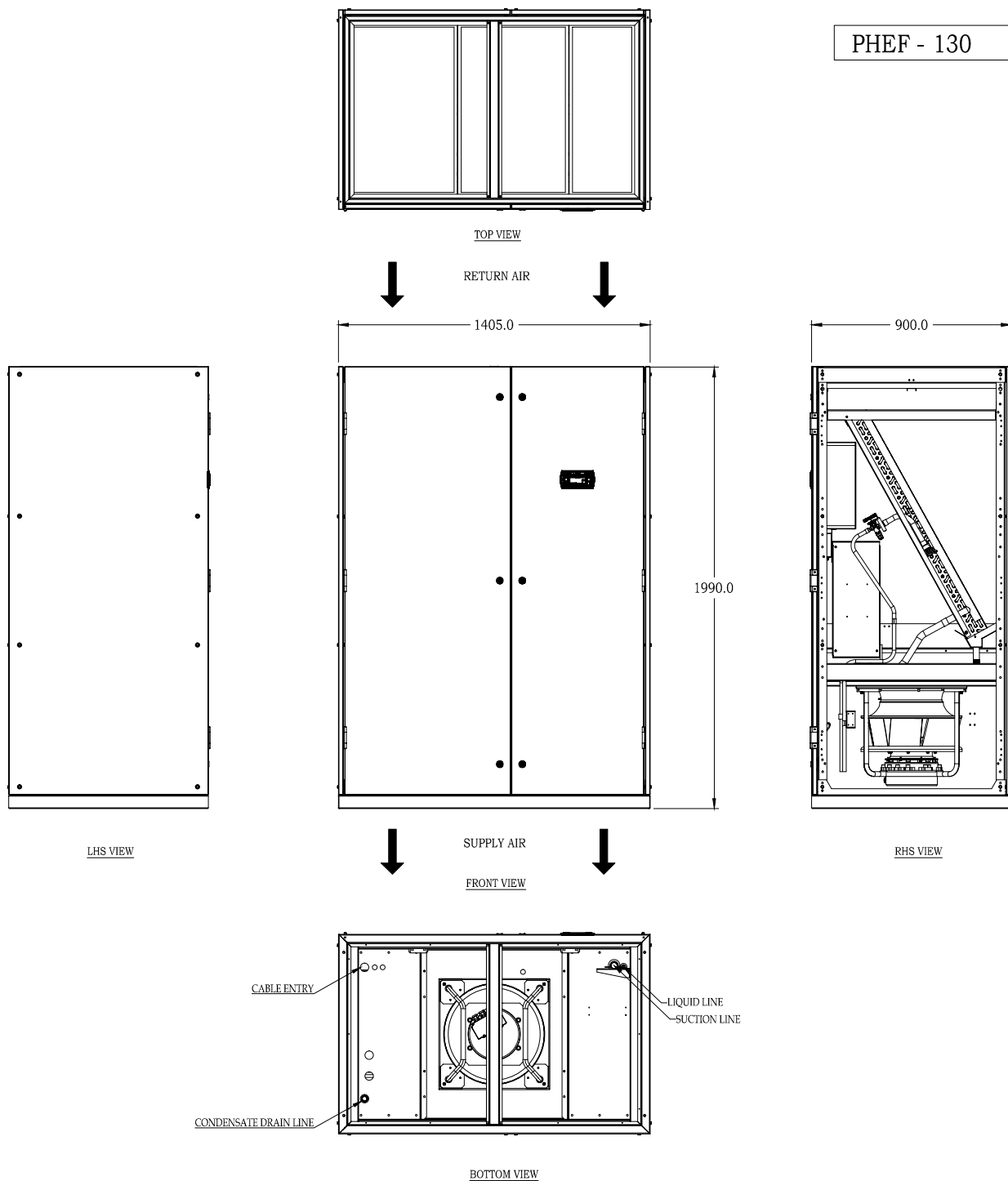
FRONT VIEW



SIDE VIEW

UNIT DIMENSIONS

Indoor Unit:

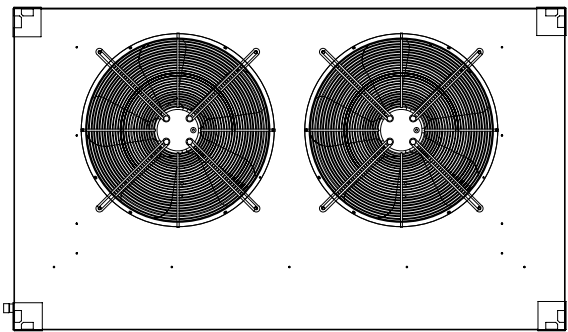


UNIT DIMENSIONS

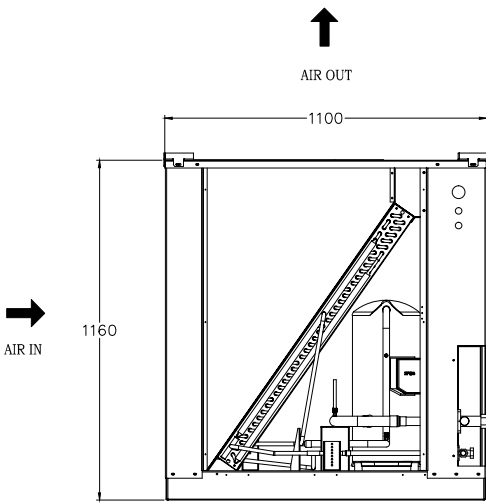
Outdoor Unit:

PHCF- 130

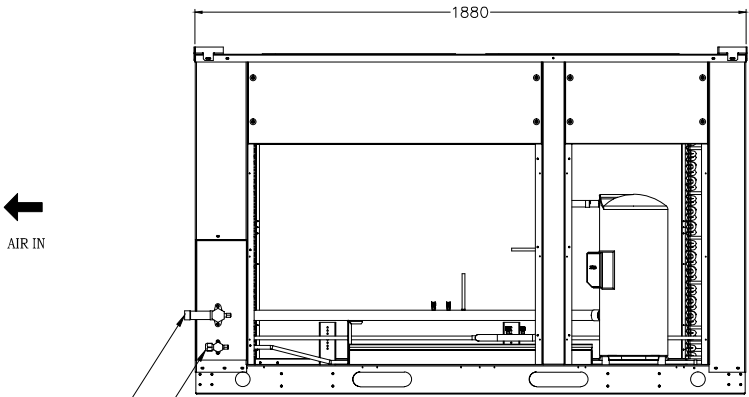
MODEL	PHCF-130
SUCTION CONNECTION	1 1/8"
LIQUID CONNECTION	5/8"



TOP VIEW



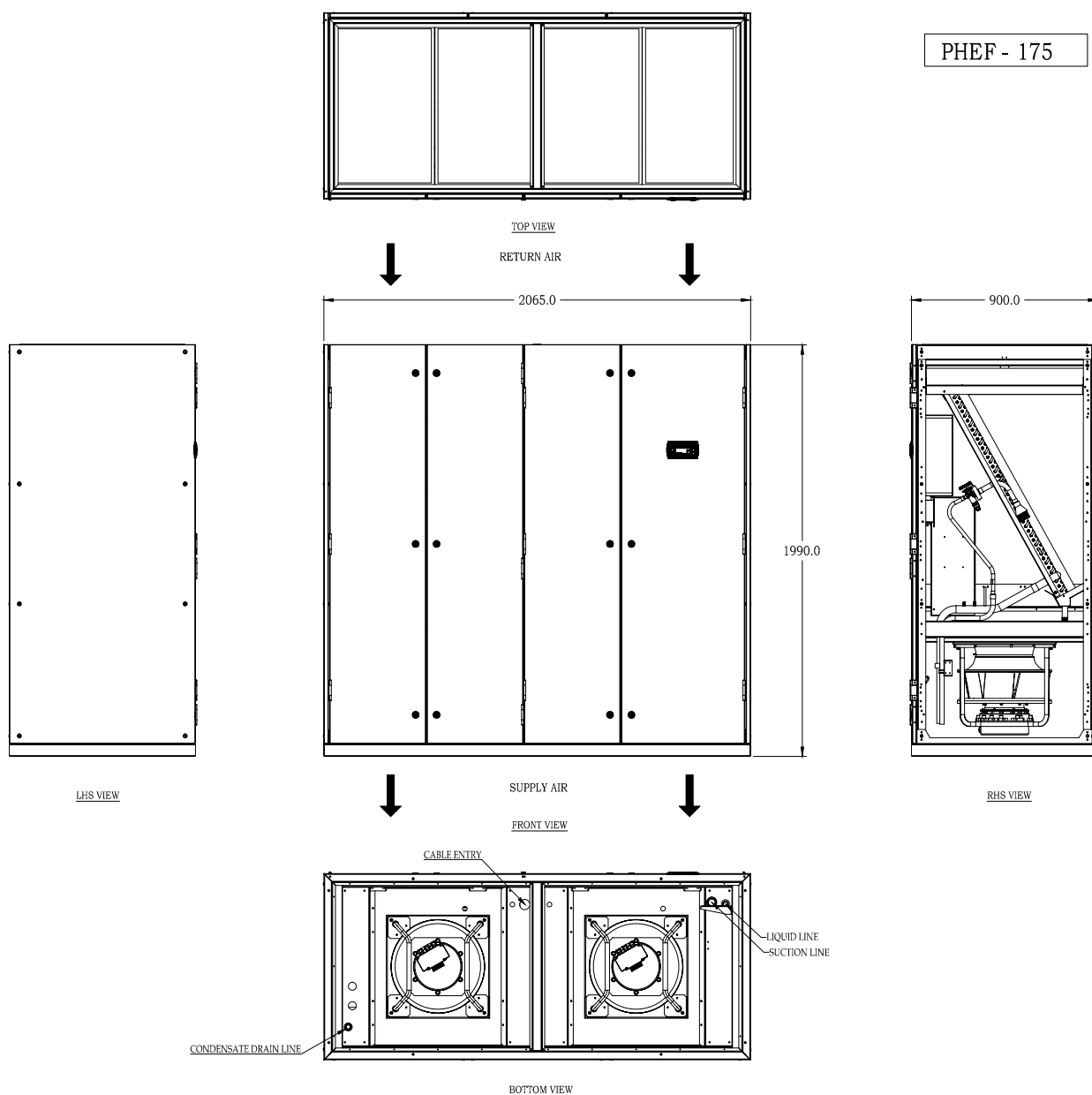
SIDE VIEW



FRONT VIEW

UNIT DIMENSIONS

Indoor Unit:

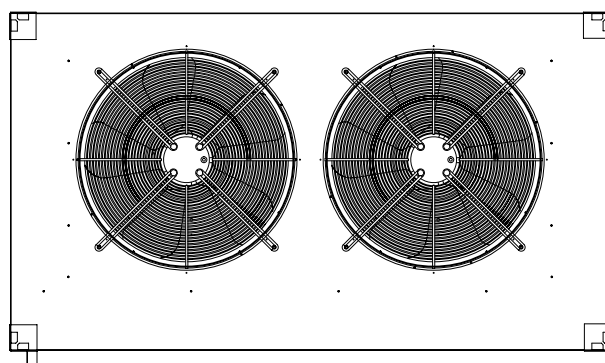


UNIT DIMENSIONS

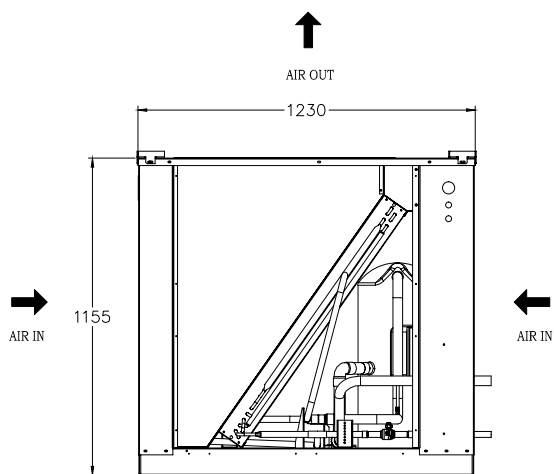
Outdoor Unit:

PHCF- 175

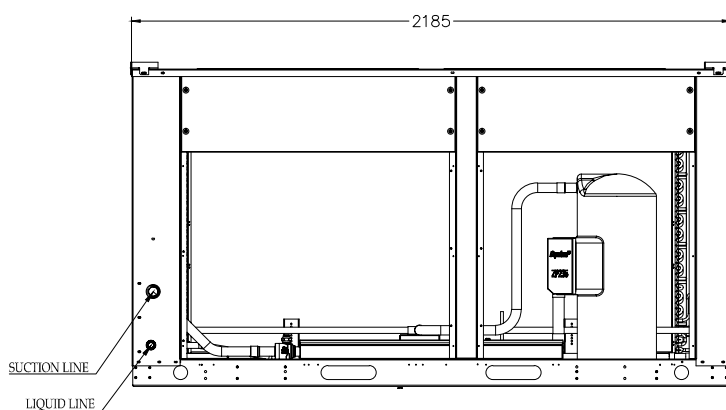
MODEL	PHCF-175
SUCTION CONNECTION	1 3/8"
LIQUID CONNECTION	7/8"



TOP VIEW

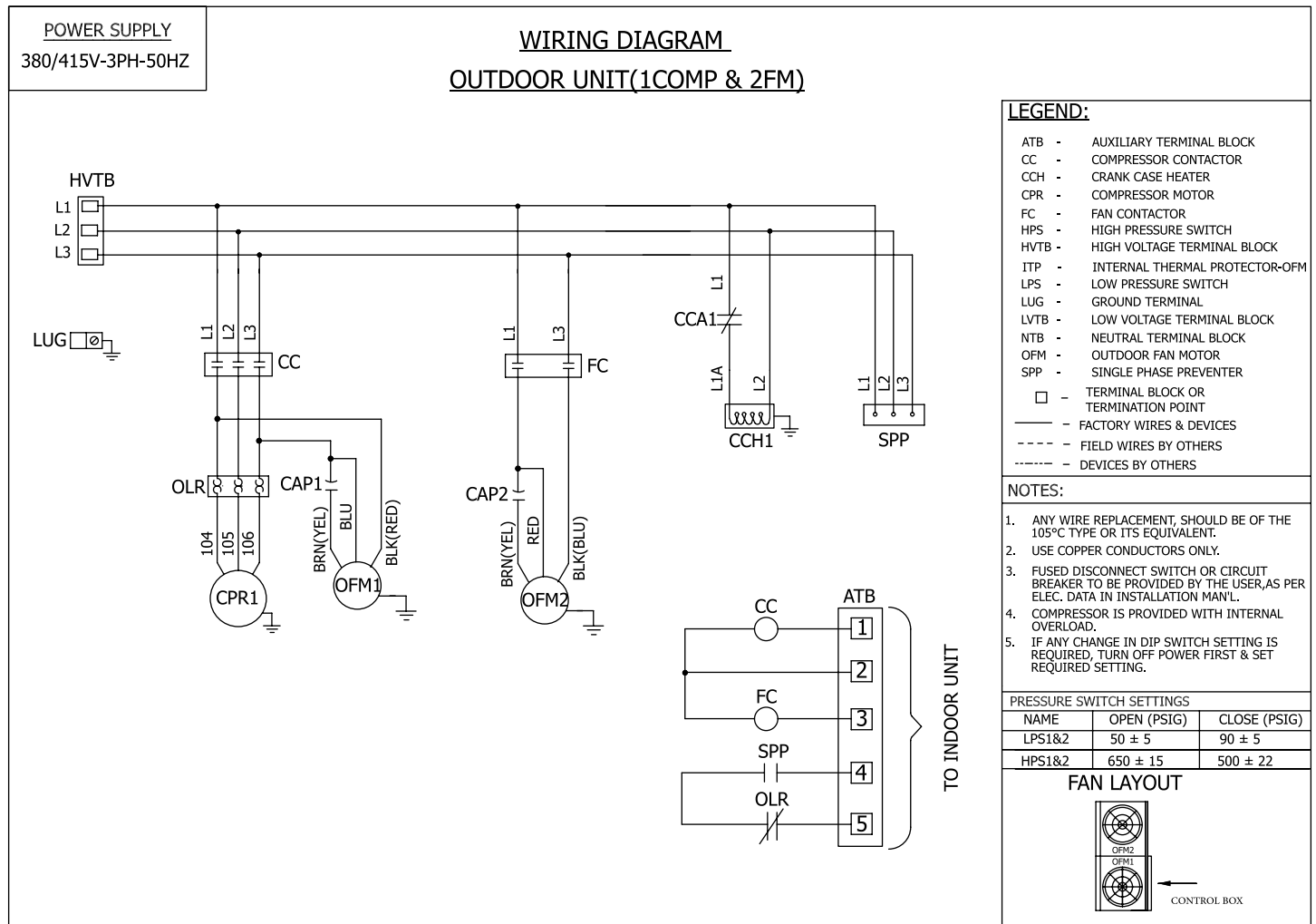


SIDE VIEW



FRONT VIEW

TYPICAL WIRING DIAGRAMS



NOTES

NOTES

NOTES

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
Direct : +973 17 405 250
Fax : +973 17 400 388
Email : Pradeep@almoayyed.com.bh
Email : anshul.bawa@almoayyed.com.bh
Website: www.almoayyed.com

Kingdom of Saudi Arabia KSA

Al-Etmdad 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@ksacoollex.com
Website: www.Coollex.com

Republic of Iraq

SWEER Company Limited

Address: Al Senak -Jumhuri 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

Capital ICEBERG Limited Company

Address: No. 31, 3rd Floor, Aghdasieyh Trade Center
Aghdasieyh Street. Tehran – Iran
Tel : +98 (021) 26110510
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
Sudan – Khartoum
Tel : +249 574064
Fax : +249 574064
Mobile : +249 900900246/247/248/249/250/251/252
Email : maha1237@yahoo.com

Islamic Republic of Pakistan

AG TEK Pvt. Ltd.

Address: 179-S, Imperial Garden Paragon City
Lahore - Pakistan
Tel : +92-42-37187640-43
Fax : +92-42-37187644
Cell : +92-300-4745624
Mobile : +92-321-2280011
Email : info@agtek.com.pk
Email : coo@agtek.com.pk
Website: www.agtek.com.pk

Egypt

Total Group Egypt Company

Address: 4 Buildings Al-Noor – Sheraton Housings
Cairo – Egypt
Tel : +202267240/837
Mobile : +20109966627
Mobile : +21201299444
Email : adel@coollex-eg.com
Email : ahmad@coollex-eg.com
Website: www.coollex-eg.com

Syrian Arab Republic

Team for Engineering & Trading co.

Address: Damascus - Kafer Souseh
P.O.Box: 16311
Tel : +963 11 222 2996
Tel-Fax : +963 11 222 1125
Mobile : +963 93 322 6288
Mobile : +963 94 421 1146
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
Tel : +977 9813388560
Email : ajay.sharma2852@gmail.com

Please contact Sales and Marketing Department
sales@ric.com.kw for specific information on
the current design and specifications.

Ref no.: CPRF 23-5-000

CENTRAL AIR CONDITIONING AND SPLIT UNIT
Coollex 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**



www.coollex.com.kw