# Concealed Ducted Split Series R407C 24-60 MBH

**Ducted Split with Hermetic Compressor Tropical**

R407C

50 Hz

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## OTHER COOLEX PRODUCTS

1. Air Cooled Screw Water Chillers
2. Commercial Packaged Units
3. Residential  Packaged Units
4. Air Handling Units
5. Ducted Split Units
6. Fan Coil Units

## About RIC

Refrigeration Industries & Storage and Oil Services Company, occupies a leading position as one of the largest industrial companies in Kuwait which 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 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.

## نبذة عن الشركة

تتبوأ شركة صناعات التبريد والتخزين والخدمات النفطية مكانة رائدة باعتبارها واحدة من أكبر الشركات الصناعية في دولة الكويت، والتي تأسست عام 1973 لتؤدي دوراً غير استباقي في تقديم خدمات متعددة وأنشطة متنوعة كالتصنيع والتخزين والخدمات النفطية لتلبية مختلف احتياجات العملاء داخل الكويت وخارجها.

ومنذ انطلاقة الشركة وهي تعمل على إبراز التميز ومواصلة مسيرة التقدم مما مكنها من تأسيس العلامة التجارية (كولكس) عام 1986 والتي جاء ميلادها إنجازاً حقيقياً في السوق الكويتي باعتبارها الأولى في المنطقة في قطاع تصنيع أنظمة التكييف وحلول التبريد في الكويت.

وعلى صعيدٍ متصل، دأبت الشركة على تمكين قوتها العاملة وتعزيز السلامة والقدرة التنافسية والاستفادة من التقنيات المبتكرة لإطلاق منتجات جديدة تلبي مختلف القطاعات وتسهم في تحقيق التوسع والذي من شأنه يدعم النمو والازدهار.

ولضمان أعلى أداء في المستقبل، تسخر الشركة بحوثها المستمرة لتعزيز الكفاءة والجودة كما تواصل جهودها لتصنيع منتجات قادرة على التكيف مع تحديات المناخ والبيئة والطاقة.

### 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 1994:9001

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).

2016 الاستحواذ على شركة بارامونت الخليج للخدمات الكهربائية.

2021 الاستحواذ على مصنع الشركة الكويتية لصناعة الأنابيب والخدمات النفطية مما أدى على إثره تغيير اسم الشركة من شركة صناعات التبريد والتخزين إلى شركة صناعات التبريد والتخزين والتخزين والخدمات النفطية.

## INTRODUCTION

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

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

## NOMENCLATURE

**CHCC 036 A 2**

**Unit Series Description**

**CHCC- Concealed High Efficiency Condenser, R-407C refrigerant**
**CHEC- Concealed High Efficiency Evaporator, R-407C refrigerant**

**Cooling Capacity Nominal MBH**

| | | |
|---|---|---|
| 24 | - | 30 |
| 36 | - | 42 |
| 48 | - | 60 |

**Electrical Specifications**

| CODE | DESCRIPTION |
|---|---|
| 2 | 415V / 3 ph / 50hz |
| 7 | 240V / 1 ph / 50hz |

| CODE | DESCRIPTION |
|---|---|
| A | First Series |
| B | Second Series |
| C | Third Series |

## UNIT RATING SUMMARY

| Unit Model | Air Flow | Ambient temp 95°F | | | | Ambient temp 115°F | | | | Ambient temp 118.4°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 |
| | (CFM) | (Btu/h) | | | | (Btu/h) | | | | (Btu/h) | | | |
| CHCC-024A7/ CHEC-024A7 | 814 | 27,263 | 1.92 | 0.84 | 14,2 | 23,906 | 2.48 | 1.24 | 9.64 | 23,098 | 2.58 | 1.34 | 8.93 |
| CHCC-030A7/ CHEC-030A7 | 1214 | 36,039 | 3.02 | 1.00 | 11.9 | 32,734 | 3.64 | 1.34 | 9.0 | 32,160 | 3.75 | 1.40 | 8.6 |
| CHCC-036A2/ CHEC-036A7 | 1117 | 36,686 | 2.78 | 0.91 | 13.18 | 33,931 | 3.53 | 1.25 | 9.6 | 33,430 | 3.67 | 1.32 | 9.1 |
| CHCC-042A2/ CHEC-042A7 | 1572 | 48,760 | 4.25 | 1.05 | 11.5 | 45,611 | 5.05 | 1.33 | 9.0 | 45,840 | 5.31 | 1.39 | 8.6 |
| CHCC-048A2/ CHEC-048A7 | 1766 | 58,321 | 5.04 | 1.04 | 11.6 | 54,996 | 5.89 | 1.29 | 9.3 | 53,520 | 6.15 | 1.38 | 8.7 |
| CHCC-060A2/ CHEC-060A7 | 2020 | 65,880 | 5.57 | 1.01 | 11.8 | 59,602 | 6.67 | 1.34 | 8.9 | 59,760 | 6.99 | 1.40 | 8.5 |

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

## OUT STANDING FEATURES

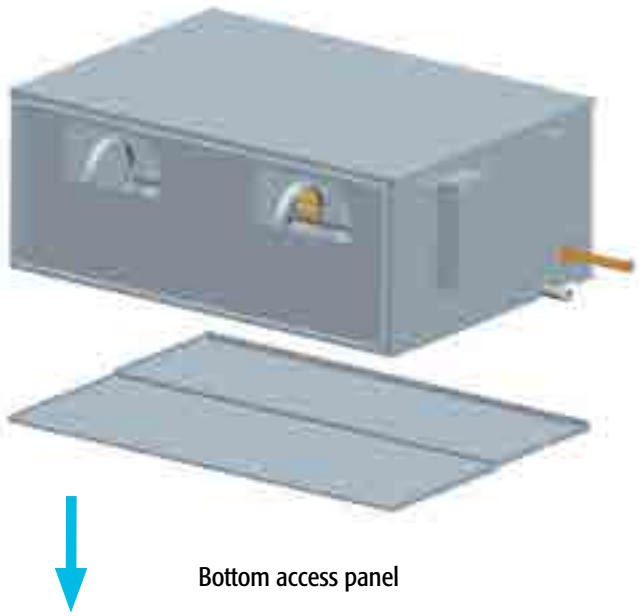
### Indoor Unit

- Compact design
- Low profile
- Low sound power level
- For ducted application
- 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
- 24v control
- Coil guard protection
- External service valve with gauge ports

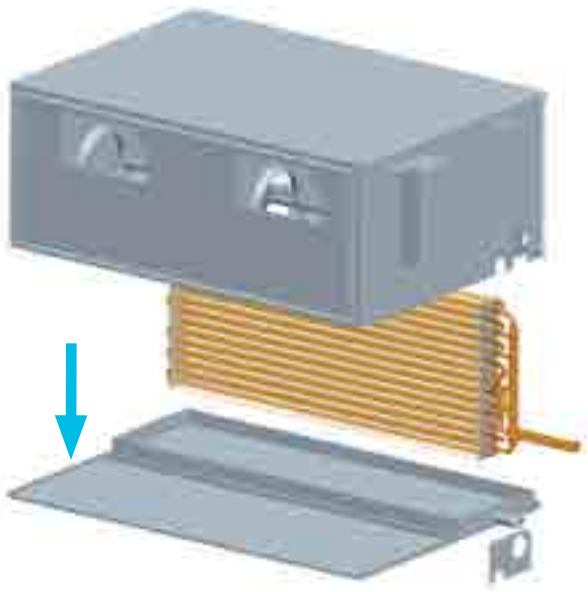
## OUT STANDING FEATURES



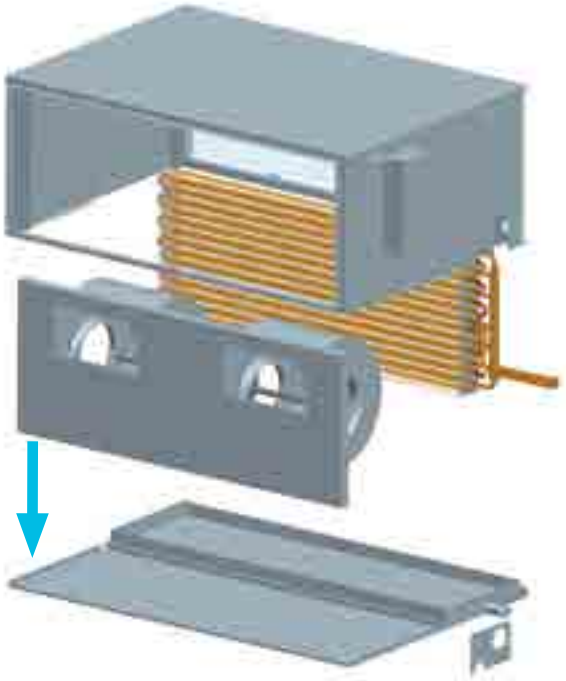
Bottom access panel

### Options & Accessories

- Microprocessor controller
- Digital thermostat
- Cleanable air filter



Bottom sliding coil and drain pan



Bottom sliding fan deck

## STANDARD SPECIFICATIONS (OUTDOOR UNIT) & (INDOOR UNIT)

### General

The side discharge condensing units are provided with the latest advanced technology to provide quiet, reliable performance. The wrap around coil adds aesthetical appeal and gives optimum heat transfer efficiency. The access panels provide access to the compressor and to the control box. Removal of top panel gives access to fan motor and coil.

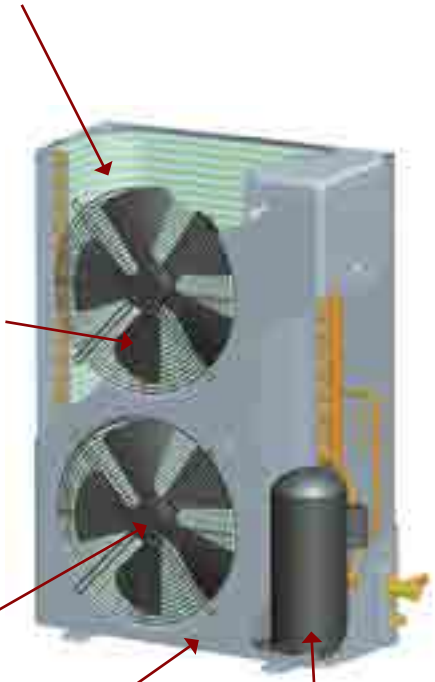
### Unit Construction

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

**Condenser 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.

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

**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.

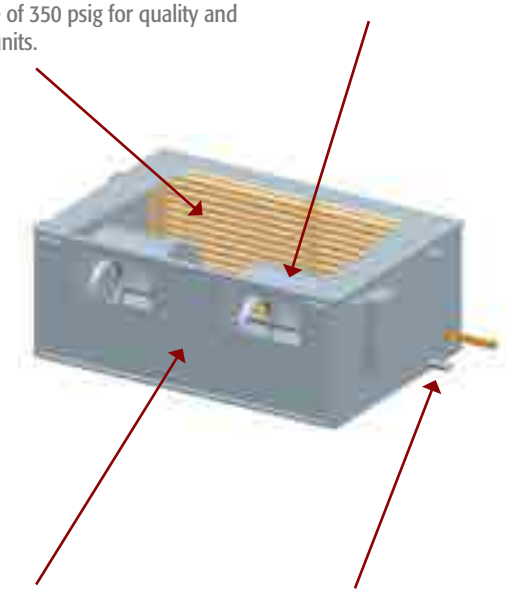


**Unit Casing**
The casing sheet metal is fabricated from hot dipped G90, Zinc coating and zero spangle galvanized steel, oven-baked powder coated.

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

**Evaporator 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.

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



**Evaporator Blower Motor**
The evaporator blower motor is directly drives the evaporator blower conforming to BS/IES standards 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

### Duct Electric Heater

A protection box with duct electric heater and safety control can also be provided. Maximum kW Ratings is as shown

| Model | kW | Model | kW |
|---|---|---|---|
| CHEC-024 A7 | 2.0 | CHEC-042 A7 | 4.0 |
| CHEC-030 A7 | 3.0 | CHEC-048 A7 | 4.0 |
| CHEC-036 A7 | 3.0 | CHEC-060 A7 | 5.0 |

## MICROPROCESSOR BASED CONTROLLER

The concealed ducted split units are provided with Microprocessor based controller, incorporating the following benefits and features:

- Compressor anti short cycle timer.
- Compressor lock out function.
- Compressor trip/lock out error indication through LED.

### Home Automation System

Coolex App


Wi Fi Module


Typical Thermostat


### Thermostat features:

1. Voltage rating: 24VAC
2. Room temperature/Set temperature display in °C or °F
3. Mode of operation: Cool/Heat/Auto
4. Fan mode: Auto/ON
5. Key lock function
6. Preset temperature setting: Comfort/Economy/Away
7. Duct/Remote sensor option
8. Temperature offset calibration
9. BMS Modbus option

## SELECTION PROCEDURE

The below example illustrates the selection procedure to assist using this catalog to select the appropriate CHEC/CHCC 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 | 32,000 | [Btu/hr] |
| • Sensible cooling capacity | 24,000 | [Btu/hr] |
| • Design ambient temperature | 118.4 | [°F] |
| • Evaporator air flow | 1100 | [CFM] |
| • Evaporator entering temperature DB/WB | 80/67 | [°F/°F] |
| • 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** = 32,000 [Btu/hr]/0.99
= 32,323 [Btu/hr]

**Corrected sensible capacity** = 24,000 [Btu/hr]/0.99
= 24,242[Btu/hr]

From the cooling capacity at performance data tables (page 9), the closest selection model to the required
Capacity is CHEC/CHCC 036:

**Total capacity** = 33,430 [Btu/hr]

**Sensible capacity** = 25,077 [Btu/hr]

## GENERAL DATA

| Outdoor Units | | CHCC 24 | CHCC 30 | CHCC 36 | CHCC 42 | CHCC 48 | CHCC 60 |
|---|---|---|---|---|---|---|---|
| Compressor | Type | Hermetically Sealed | | | | | |
| | Quantity | 1 | 1 | 1 | 1 | 1 | 1 |
| | Refrigerant | R 407C | | | | | |
| Condenser Fan | Type | SPCC Axial Fan | | | | | |
| | Quantity | 1 | 1 | 2 | 2 | 2 | 2 |
| | Airflow, m³/h | 4500 | 4500 | 9000 | 9000 | 9000 | 9000 |
| | (CFM) | 2650 | 2650 | 5300 | 5300 | 5300 | 5300 |
| | Drive | Direct | | | | | |
| Condenser Coil | Type | Coated Louvered Aluminum Fin & Inner Grooved Tube | | | | | |
| | Row Deep | 2 | 2 | 2 | 2 | 3 | 3 |
| | Total Area, Sq.m | 0.73 | 0.82 | 1.25 | 1.25 | 1.24 | 1.24 |
| | (Sq.Ft) | 7.85 | 8.82 | 13.45 | 13.45 | 13.34 | 13.34 |
| Weight | kg | 74 | 78 | 108 | 109 | 128 | 131 |

| Indoor Units | | CHEC 024 | CHEC 030 | CHEC 036 | CHEC 042 | CHEC 048 | CHEC 060 |
|---|---|---|---|---|---|---|---|
| Evaporator Blower | Type | Centrifugal Forward Curve DWDI | | | | | |
| | Drive | Direct | | | | | |
| Evaporator Coil | Type | Hydrophilic Aluminum Fins and Inner Grooved Copper Tubes | | | | | |
| | Row Deep | 3 | 3 | 3 | 3 | 3 | 3 |
| | Total Area, Sq.m | 0.23 | 0.23 | 0.32 | 0.32 | 0.35 | 0.42 |
| | (Sq.Ft) | 2.5 | 2.5 | 3.4 | 3.4 | 3.8 | 4.5 |
| Expansion Devices | | Capillary | | | | | |
| Weight | kg | 38 | 39 | 54 | 54 | 58 | 61 |

COOLEX

## PERFORMANCE DATA TABLES

| Model | Evaporator | | | Condenser Ambient Temperature | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air Flow | Temp ° F | | 95 °F | | | 115 °F | | | 118.4 °F | | |
| | CFM | DB | WB | Capacity Btu/Hr | | kw Input | Capacity Btu/Hr | | kw Input | Capacity Btu/Hr | | kw Input |
| | | | | Total | Sen. | | Total | Sen. | | Total | Sen. | |
| CHCC-024A7 CHEC-024A7 | 726 | 86 | 72 | 27,087 | 19,936 | 2.02 | 23,220 | 17,647 | 2.58 | 22,876 | 17,234 | 2.68 |
| | | 80 | 67 | 25,577 | 18,825 | 1.90 | 21,926 | 16,664 | 2.46 | 21,602 | 16,274 | 2.56 |
| | | 74 | 62 | 23,071 | 16,980 | 1.78 | 19,778 | 15,031 | 2.34 | 19,485 | 15,068 | 2.44 |
| | | 68 | 57 | 21,229 | 15,625 | 1.66 | 18,199 | 13,831 | 2.22 | 17,930 | 13,507 | 2.32 |
| | 770 | 86 | 72 | 27,668 | 20,363 | 2.03 | 23,718 | 18,026 | 2.59 | 23,367 | 17,730 | 2.69 |
| | | 80 | 67 | 26,126 | 19,229 | 1.91 | 22,397 | 17,022 | 2.47 | 22,065 | 16,743 | 2.57 |
| | | 74 | 62 | 23,566 | 17,344 | 1.79 | 20,202 | 15,353 | 2.35 | 19,903 | 15,502 | 2.45 |
| | | 68 | 57 | 21,685 | 15,960 | 1.67 | 18,589 | 14,128 | 2.23 | 18,314 | 13,896 | 2.33 |
| | 814 | 86 | 72 | 28,872 | 21,249 | 2.04 | 25,316 | 19,765 | 2.60 | 24,461 | 19,240 | 2.70 |
| | | 80 | 67 | 27,263 | 20,072 | 1.92 | 23,906 | 18,674 | 2.48 | 23,098 | 18,169 | 2.58 |
| | | 74 | 62 | 24,591 | 18,099 | 1.80 | 21,563 | 16,834 | 2.36 | 20,834 | 16,388 | 2.46 |
| | | 68 | 57 | 22,629 | 16,655 | 1.68 | 19,842 | 15,491 | 2.24 | 19,172 | 15,080 | 2.34 |
| CHCC-030A7 CHEC-030A7 | 1028 | 86 | 72 | 35,867 | 22,040 | 2.95 | 32,598 | 21,122 | 3.57 | 32,038 | 20,989 | 3.66 |
| | | 80 | 67 | 33,083 | 21,436 | 2.92 | 30,051 | 20,512 | 3.53 | 29,377 | 20,317 | 3.62 |
| | | 74 | 62 | 30,289 | 20,507 | 2.89 | 27,490 | 19,554 | 3.48 | 26,998 | 19,375 | 3.58 |
| | | 68 | 57 | 27,702 | 19,675 | 2.86 | 25,119 | 18,616 | 3.46 | 24,722 | 18,602 | 3.55 |
| | 1064 | 86 | 72 | 37,665 | 23,468 | 3.01 | 34,231 | 22,490 | 3.63 | 33,644 | 22,348 | 3.73 |
| | | 80 | 67 | 34,741 | 22,825 | 2.97 | 31,557 | 21,841 | 3.59 | 30,849 | 21,633 | 3.69 |
| | | 74 | 62 | 31,808 | 21,835 | 2.94 | 28,867 | 20,821 | 3.56 | 28,351 | 20,631 | 3.65 |
| | | 68 | 57 | 29,090 | 20,951 | 2.91 | 26,378 | 19,823 | 3.53 | 25,961 | 19,808 | 3.61 |
| | 1214 | 86 | 72 | 39,071 | 25,046 | 3.05 | 35,510 | 24,002 | 3.69 | 34,900 | 23,851 | 3.78 |
| | | 80 | 67 | 36,039 | 24,360 | 3.02 | 32,734 | 23,309 | 3.64 | 32,160 | 23,246 | 3.75 |
| | | 74 | 62 | 32,995 | 23,304 | 2.98 | 29,945 | 22,221 | 3.60 | 29,409 | 22,018 | 3.71 |
| | | 68 | 57 | 30,176 | 22,359 | 2.95 | 27,363 | 21,155 | 3.58 | 26,931 | 21,139 | 3.66 |
| CHCC-036A2 CHEC-036A7 | 1028 | 86 | 72 | 36,363 | 26,763 | 2.87 | 33,585 | 25,525 | 3.62 | 33,089 | 24,615 | 3.76 |
| | | 80 | 67 | 34,337 | 25,272 | 2.72 | 31,714 | 24,103 | 3.47 | 31,245 | 22,461 | 3.61 |
| | | 74 | 62 | 30,972 | 22,795 | 2.57 | 28,606 | 21,741 | 3.32 | 28,183 | 20,833 | 3.46 |
| | | 68 | 57 | 28,500 | 20,976 | 2.42 | 26,323 | 20,005 | 3.17 | 25,934 | 18,733 | 3.31 |
| | 1064 | 86 | 72 | 37,143 | 27,337 | 2.90 | 34,306 | 26,072 | 3.65 | 33,799 | 25,324 | 3.79 |
| | | 80 | 67 | 35,074 | 25,814 | 2.75 | 32,394 | 24,620 | 3.50 | 31,916 | 23,108 | 3.64 |
| | | 74 | 62 | 31,636 | 23,284 | 2.60 | 29,220 | 22,207 | 3.35 | 28,788 | 21,433 | 3.49 |
| | | 68 | 57 | 29,111 | 21,426 | 2.45 | 26,887 | 20,434 | 3.20 | 26,490 | 19,273 | 3.34 |
| | 1117 | 86 | 72 | 38,850 | 28,594 | 2.93 | 35,932 | 28,606 | 3.68 | 35,402 | 27,309 | 3.82 |
| | | 80 | 67 | 36,686 | 26,214 | 2.78 | 33,931 | 25,787 | 3.53 | 33,430 | 25,077 | 3.67 |
| | | 74 | 62 | 33,091 | 24,354 | 2.63 | 30,606 | 24,364 | 3.38 | 30,154 | 23,259 | 3.52 |
| | | 68 | 57 | 30,450 | 22,411 | 2.48 | 28,163 | 22,420 | 3.23 | 27,747 | 21,403 | 3.37 |

## PERFORMANCE DATA TABLES

| Model | Evaporator | | | Condenser Ambient Temperature | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air Flow | Temp ° F | | 95 °F | | | 115 °F | | | 118.4 °F | | |
| | CFM | DB | WB | Capacity Btu/Hr | | kw Input | Capacity Btu/Hr | | kw Input | Capacity Btu/Hr | | kw Input |
| | | | | Total | Sen. | | Total | Sen. | | Total | Sen. | |
| CHCC-042A2 CHEC-042A7 | 1311 | 86 | 72 | 48,878 | 27,569 | 4.16 | 47,886 | 27,095 | 4.92 | 45,106 | 26,890 | 5.06 |
| | | 80 | 67 | 45,152 | 27,387 | 4.11 | 42,237 | 27,018 | 4.89 | 41,671 | 26,838 | 5.02 |
| | | 74 | 62 | 41,399 | 25,654 | 4.05 | 38,665 | 25,293 | 4.80 | 38,153 | 25,105 | 4.93 |
| | | 68 | 57 | 37,892 | 24,614 | 4.01 | 35,421 | 24,311 | 4.74 | 34,935 | 24,121 | 4.87 |
| | 1359 | 86 | 72 | 50,883 | 29,352 | 4.24 | 49,851 | 28,399 | 5.02 | 46,957 | 28,183 | 5.16 |
| | | 80 | 67 | 47,005 | 29,042 | 4.19 | 43,971 | 28,317 | 4.97 | 43,380 | 28,129 | 5.11 |
| | | 74 | 62 | 43,098 | 26,888 | 4.14 | 40,251 | 26,510 | 4.90 | 39,719 | 26,312 | 5.03 |
| | | 68 | 57 | 39,447 | 25,798 | 4.08 | 36,875 | 25,480 | 4.83 | 36,369 | 25,281 | 4.96 |
| | 1572 | 86 | 72 | 52,784 | 31,084 | 4.31 | 51,712 | 30,309 | 5.09 | 48,710 | 30,079 | 5.23 |
| | | 80 | 67 | 48,760 | 30,995 | 4.25 | 46,450 | 30,221 | 5.05 | 45,840 | 31,018 | 5.31 |
| | | 74 | 62 | 44,708 | 28,696 | 4.19 | 41,755 | 28,293 | 4.96 | 41,203 | 28,082 | 5.10 |
| | | 68 | 57 | 40,921 | 27,532 | 4.14 | 38,252 | 27,193 | 4.90 | 37,726 | 26,981 | 5.04 |
| CHCC-048A2 CHEC-048A7 | 1450 | 86 | 72 | 57,953 | 34,268 | 4.90 | 53,026 | 31,126 | 5.75 | 52,323 | 30,986 | 5.90 |
| | | 80 | 67 | 54,005 | 33,136 | 4.88 | 50,927 | 32,277 | 5.71 | 48,985 | 31,581 | 5.86 |
| | | 74 | 62 | 50,811 | 32,511 | 4.84 | 46,051 | 31,615 | 5.66 | 45,231 | 31,234 | 5.79 |
| | | 68 | 57 | 46,078 | 32,145 | 4.69 | 41,790 | 30,939 | 5.58 | 41,421 | 30,268 | 5.69 |
| | 1526 | 86 | 72 | 60,581 | 36,184 | 5.00 | 55,431 | 32,867 | 5.85 | 54,696 | 32,821 | 6.02 |
| | | 80 | 67 | 56,455 | 34,989 | 4.98 | 53,236 | 34,081 | 5.82 | 51,207 | 33,347 | 5.98 |
| | | 74 | 62 | 53,116 | 34,329 | 4.93 | 48,140 | 33,383 | 5.77 | 47,282 | 32,982 | 5.90 |
| | | 68 | 57 | 48,168 | 33,943 | 4.79 | 43,686 | 32,668 | 5.68 | 43,300 | 31,961 | 5.81 |
| | 1766 | 86 | 72 | 62,584 | 38,331 | 5.06 | 57,263 | 34,816 | 5.92 | 56,504 | 34,699 | 6.09 |
| | | 80 | 67 | 58,321 | 37,065 | 5.04 | 54,996 | 36,104 | 5.89 | 53,520 | 36,425 | 6.15 |
| | | 74 | 62 | 54,871 | 36,366 | 4.99 | 49,731 | 35,364 | 5.84 | 48,845 | 34,938 | 5.98 |
| | | 68 | 57 | 49,762 | 35,956 | 4.84 | 45,130 | 34,606 | 5.76 | 44,731 | 33,857 | 5.88 |
| CHCC-060A2 CHEC-060A7 | 1548 | 86 | 72 | 66,817 | 40,527 | 5.56 | 61,022 | 38,899 | 6.50 | 59,791 | 38,692 | 6.68 |
| | | 80 | 67 | 60,477 | 39,566 | 5.39 | 54,715 | 37,855 | 6.45 | 54,528 | 37,616 | 6.55 |
| | | 74 | 62 | 52,786 | 37,694 | 5.33 | 47,928 | 34,842 | 6.23 | 47,228 | 34,025 | 6.27 |
| | | 68 | 57 | 49,723 | 35,527 | 5.13 | 44,011 | 34,624 | 6.13 | 43,708 | 33,951 | 6.23 |
| | 1674 | 86 | 72 | 70,166 | 43,151 | 5.67 | 64,079 | 41,419 | 6.64 | 62,788 | 41,198 | 6.81 |
| | | 80 | 67 | 63,508 | 42,129 | 5.49 | 57,911 | 40,306 | 6.57 | 57,261 | 40,052 | 6.69 |
| | | 74 | 62 | 55,431 | 40,136 | 5.44 | 50,330 | 37,098 | 6.35 | 49,594 | 36,228 | 6.39 |
| | | 68 | 57 | 52,215 | 37,723 | 5.23 | 46,217 | 36,867 | 6.26 | 45,992 | 36,150 | 6.32 |
| | 2020 | 86 | 72 | 72,785 | 46,053 | 5.75 | 66,472 | 44,203 | 6.73 | 65,133 | 43,968 | 6.90 |
| | | 80 | 67 | 65,880 | 44,961 | 5.57 | 60,410 | 43,017 | 6.67 | 59,760 | 40,408 | 6.99 |
| | | 74 | 62 | 57,501 | 42,835 | 5.51 | 52,210 | 39,592 | 6.58 | 51,446 | 38,664 | 6.61 |
| | | 68 | 57 | 54,165 | 40,925 | 5.30 | 47,942 | 39,346 | 6.41 | 47,797 | 38,581 | 6.46 |

*Note: Capacity in KW= (Btu/hr)*0.0003. Cooling capacities are gross ratings*
*Total power Input Includes (Indoor Unit kW, Outdoor Unit kW)*

## UNIT ELECTRICAL DATA

| Outdoor Units | | CHCC 024 | CHCC 030 | CHCC 036 | CHCC 042 | CHCC 048 | CHCC 060 |
|---|---|---|---|---|---|---|---|
| Unit Power Supply | Volt | 240 | 240 | 415 | 415 | 415 | 415 |
| | Phase | 1 | 1 | 3 | 3 | 3 | 3 |
| | Hz | 50 | | | | | |
| Compressor | V - Ph - Hz | 220/240 - 1 - 50 | | 380/420 - 3 - 50 | | | |
| | RLA | 11.4 | 13.6 | 6.4 | 7.9 | 8.3 | 10 |
| | LRA | 60 | 76 | 46 | 50 | 61.8 | 65.5 |
| Condenser Fan Motor | V - Ph - Hz | 240 - 1 -50 | | | 415 - 3 - 50 | | |
| | Output kW | 0.40 | 0.40 | 0.4x2 | 0.37x2 | 0.37x2 | 0.37x2 |
| | FLA | 1.70 | 1.70 | 1.7x2 | 0.70x2 | 0.70x2 | 0.70x2 |
| Unit Ampacity, Ampere | | 16.0 | 18.7 | 11.4 | 11.3 | 11.8 | 13.9 |
| Max. Fuse Size, Ampere | | 25 | 30 | 15 | 20 | 20 | 20 |
| Minimum Wire Size, mm² | | 4 | 4 | 2.5 | 2.5 | 2.5 | 2.5 |

| Indoor Units | | CHEC 024 | CHEC 030 | CHEC 036 | CHEC 042 | CHEC 048 | CHEC 060 |
|---|---|---|---|---|---|---|---|
| Unit Power Supply | Volt | 240 | | | | | |
| | Phase | 1 | | | | | |
| | Hz | 50 | | | | | |
| Blower Motor | V - Ph - Hz | 240 - 1 - 50 | | | | | |
| | Output Motor Hp | 1/3 | 1/3 | 1/3 | 1/2 | 3/4 | 3/4 |
| | FLA | 2.5 | 2.5 | 2.5 | 3.1 | 4.5 | 4.5 |
| Unit Ampacity, Ampere | | 3.1 | 3.1 | 3.1 | 3.9 | 5.6 | 5.6 |
| Max. Fuse Size, Ampere | | 5 | 5 | 5 | 5 | 10 | 10 |
| Minimum Wire Size, mm² | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

## LEGEND:

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

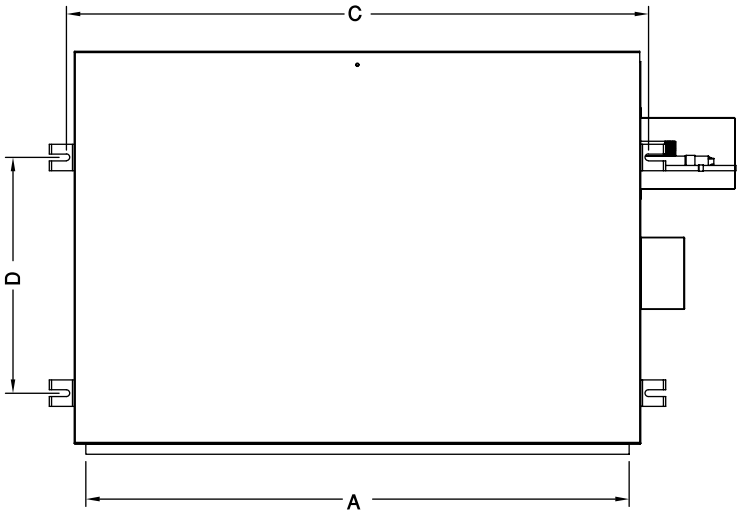
## SUPPLY AIR PERFORMANCE

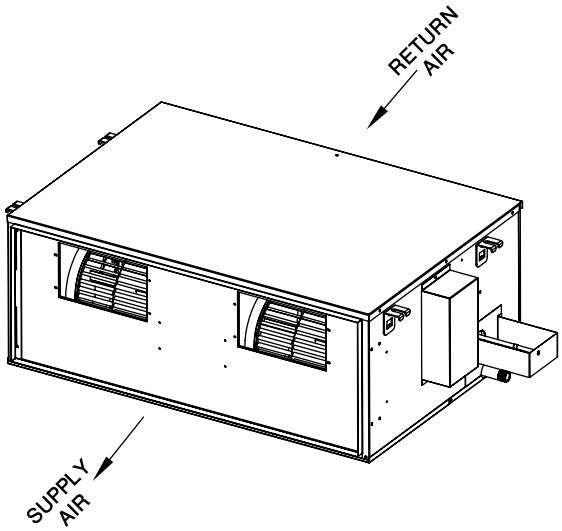
| Model | SPEED | External Static Pressure [in.wg] | | | | |
|---|---|---|---|---|---|---|
| | | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 |
| | | Air Flow Rate [CFM] | | | | |
| CHEC-024 | HIGH | 814 | 773 | 673 | 622 | 519 |
| | MED | 770 | 714 | 619 | 571 | - |
| | LOW | 726 | 655 | 565 | - | - |
| CHEC-030 | HIGH | 1214 | 1008 | 919 | 825 | 752 |
| | MED | 974 | 843 | 743 | 606 | - |
| | LOW | 923 | 817 | 721 | - | - |
| CHEC-036 | HIGH | 1117 | 1050 | 961 | 867 | 794 |
| | MED | 1064 | 1001 | 911 | 790 | - |
| | LOW | 1028 | 952 | 861 | - | - |
| CHEC-042 | HIGH | 1572 | 1338 | 1269 | 1210 | 1207 |
| | MED | 1441 | 1294 | 1220 | 1173 | - |
| | LOW | 1311 | 1251 | 1172 | 1137 | - |
| CHEC-048 | HIGH | 1766 | 1466 | 1426 | 1338 | 1224 |
| | MED | 1608 | 1416 | 1358 | 1285 | 1060 |
| | LOW | 1450 | 1367 | 1291 | 1232 | - |
| CHEC-060 | HIGH | 2020 | 1644 | 1583 | 1466 | 1241 |
| | MED | 1784 | 1561 | 1497 | 1396 | 1187 |
| | LOW | 1548 | 1477 | 1410 | 1327 | 1134 |

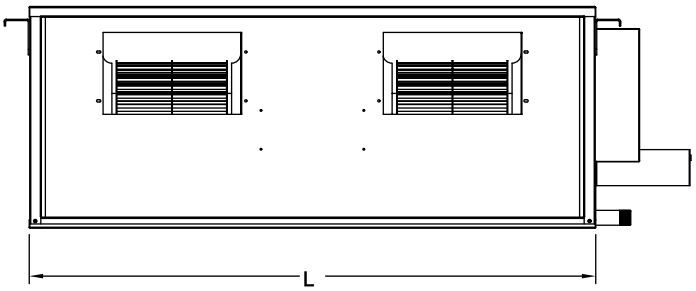
## UNIT DIMENSIONS

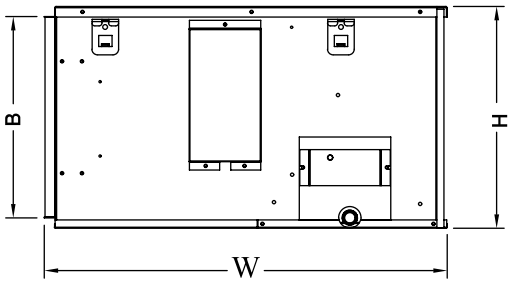
**Indoor Unit**

| MODEL | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|
| | L | W | H | DUCT CINNECTION AXB | C | D |
| CHEC-024 | 952 | 636 | 325 | 912X288 | 980 | 380 |
| CHEC-030 | 952 | 636 | 325 | 912X288 | 980 | 380 |
| CHEC-036 | 952 | 707 | 370 | 912X333 | 980 | 425 |
| CHEC-042 | 952 | 707 | 370 | 912X333 | 980 | 425 |
| CHEC-048 | 1022 | 727 | 400 | 980X363 | 1050 | 425 |
| CHEC-060 | 1022 | 877 | 400 | 980X363 | 1050 | 600 |
| ALL DIMENSIONS ARE IN MM | | | | | | |



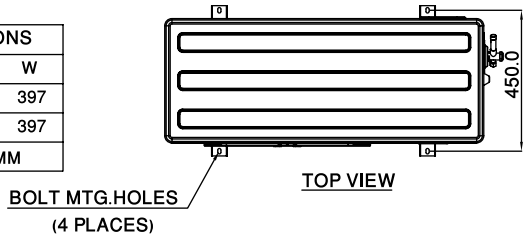



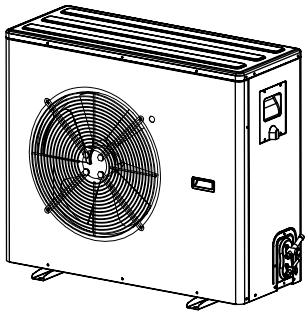



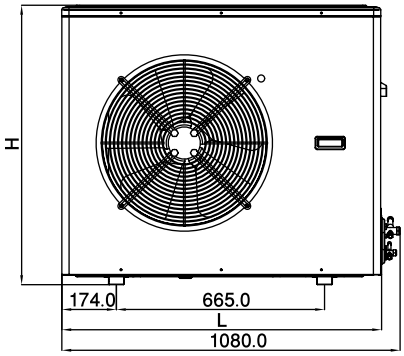
# UNIT DIMENSIONS

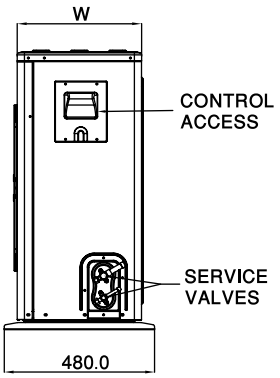
## Outdoor Units

| MODEL | DIMENSIONS | | |
|---|---|---|---|
| | H | L | W |
| CHCC-024 | 804 | 1021 | 397 |
| CHCC-030 | 892 | 1021 | 397 |
| ALL DIMENSIONS ARE IN MM | | | |

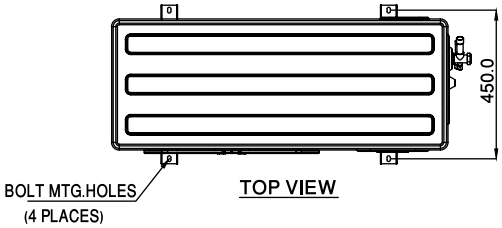


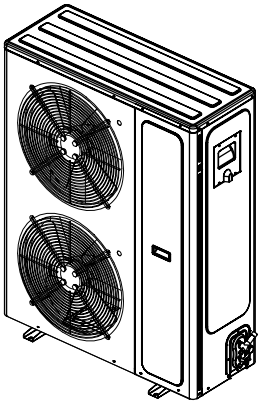



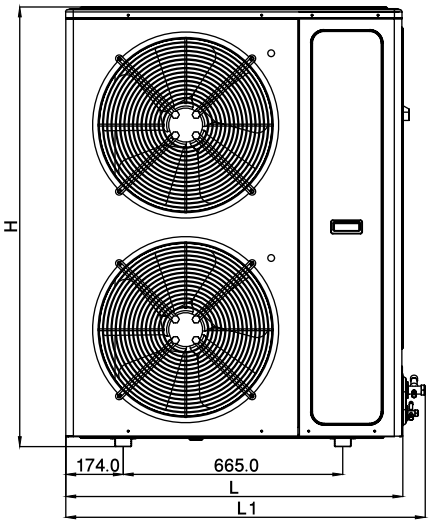


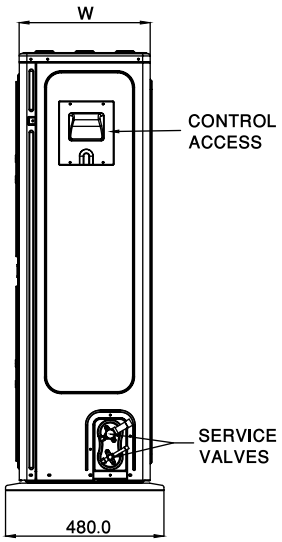




| MODEL | DIMENSIONS | | | |
|---|---|---|---|---|
| | H | L | L1 | W |
| CHCC-036 | 1332 | 1021 | 1090 | 397 |
| CHCC-042 | 1332 | 1021 | 1104 | 397 |
| CHCC-048 | 1332 | 1021 | 1104 | 397 |
| CHCC-060 | 1332 | 1021 | 1104 | 397 |
| ALL DIMENSIONS ARE IN MM | | | | |



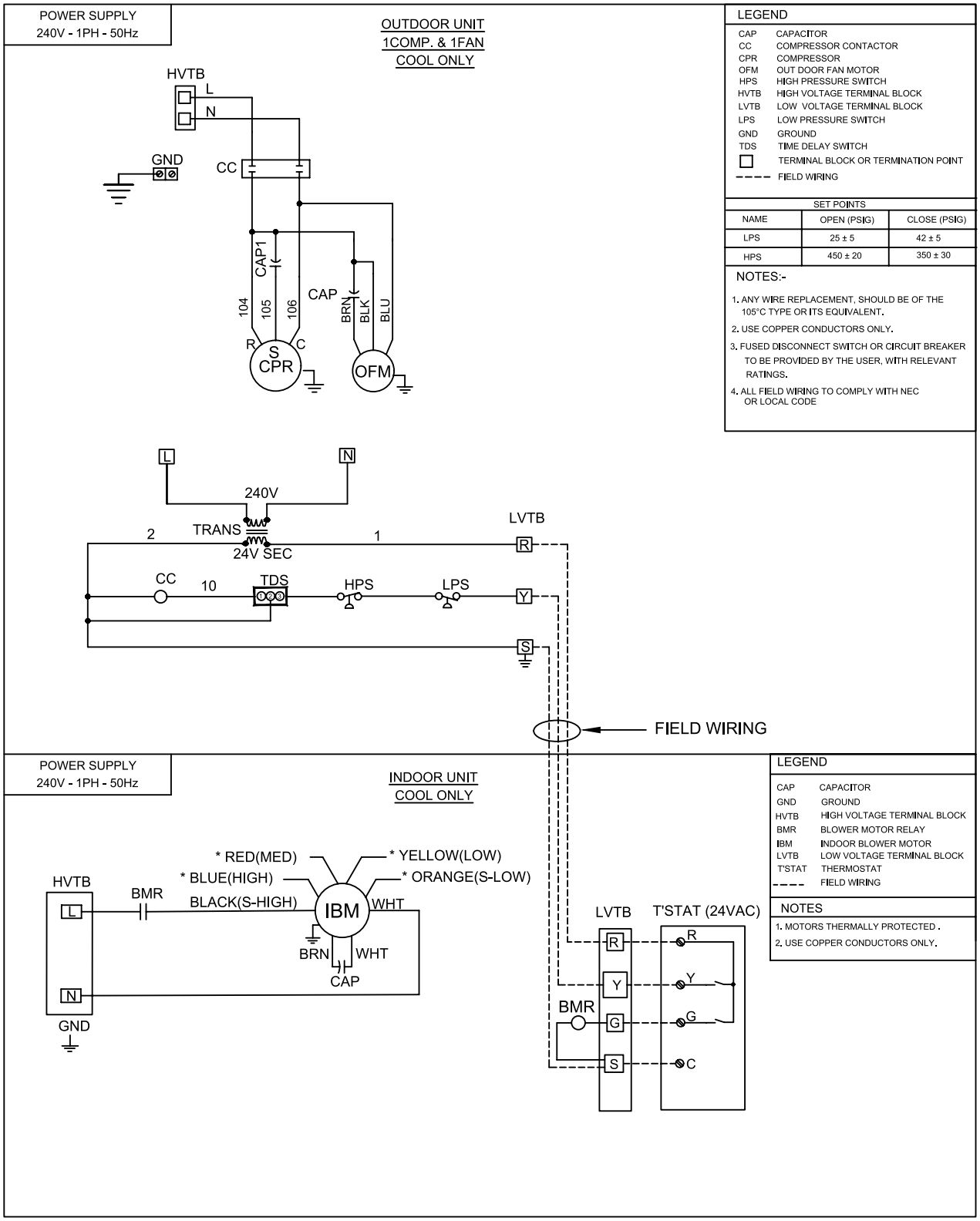





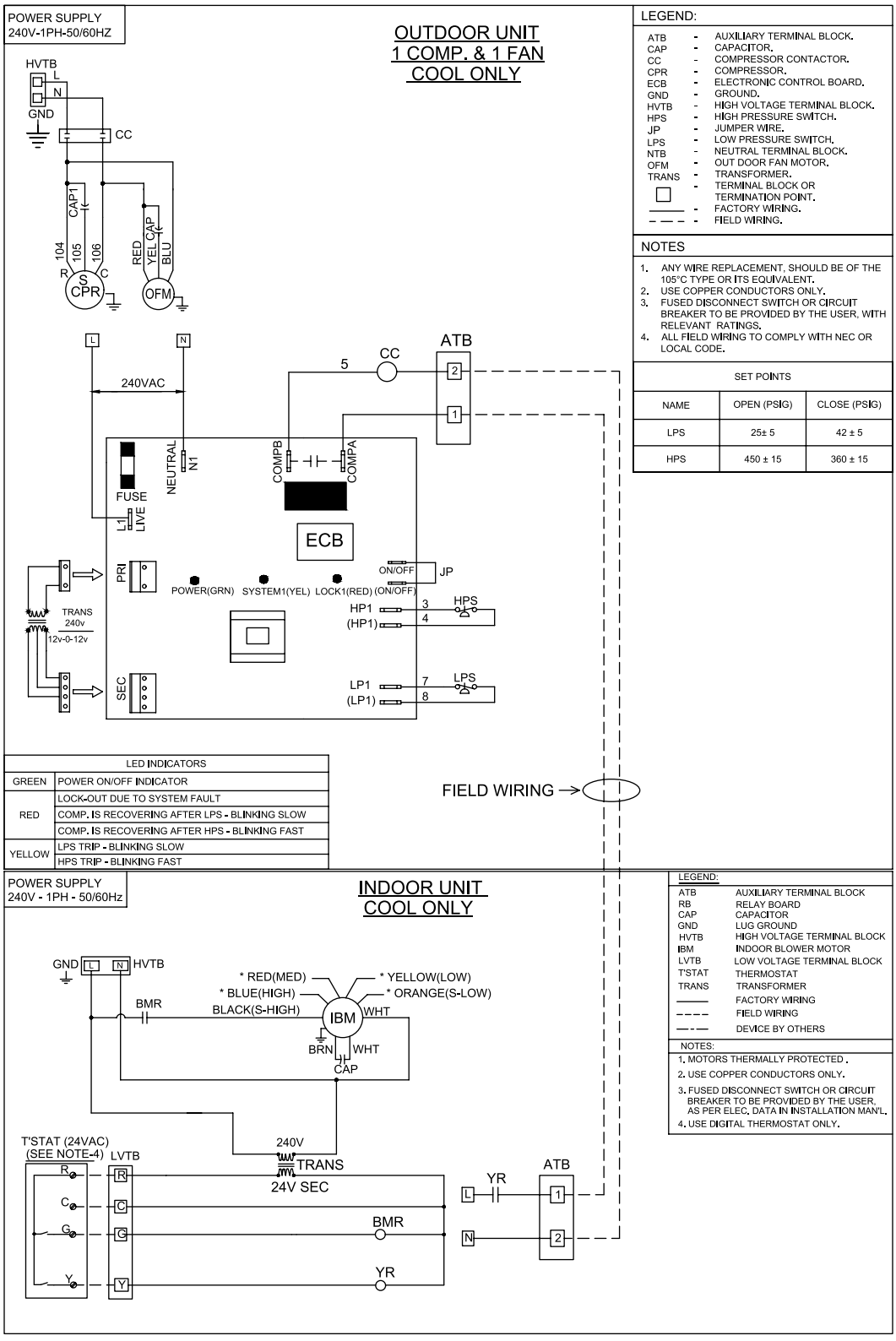
# TYPICAL WIRING DIAGRAMS

## Electro-Mechanical Controls(24Vac)



# TYPICAL WIRING DIAGRAMS

## Microprocessor Based Controller (Optional)



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