

## Air Cooled Semi-Hermetic Chiller



### Superior Full-And Part-Load Performance



- 172.4 To 206.4 Ton
- HFC Refrigerant R-410-A
- **VFD Variable Frequency Drive (provided in one compressor to adjust accuracy temperature and capacity control )**
- Carlyle Semi-Hermetic Serviceable VFD already Compressors
- High Efficient Valve Design – Designed For Newer r410a HFC Refrigerants (Versus Fixed Vi Of Scroll)
- **EC Electronic Commutated Fan Motors (85 thru 220)**
- Electronic Temperature Controls
- Shell And Cooper Tubes Heat Exchanger
- Micro channel Aluminum Condenser
- 0°F To 65°F Glycol/Water Temperatures
- 50/60 Hz Available
- One Chiller Meets All Industrial Temperature Applications!
- -40°F To 0°F Options
- Belt Free, External Shaft Free Axial Fans
- Electronic Oil Sensor

### Options

- Variable speed Frequency all compressors
- Stainless Steel Brazed Plate Heat Exchanger
- Titanium Shell and Tube Heat Exchanger
- Stainless Steel pumps and Recirculating tank Kit
- 20 to 80 Hz Frequency Over Speed compressors, Increasing Capacity up to 33%

**Tabla de capacidades a diferentes temperaturas de agua**

**\*Solicitar por fabricación especial**

| Model       | Process Temperature<br>At 55f° (12.5c°) |             | Medium Temperature<br>At 45f° (7c°) |             | Medium-Low Temperature<br>At 32°F (0c°) |             | Low Temperature<br>At 0°F (-18c°) |             |
|-------------|---|-------------|-------------------------------------|-------------|---|-------------|-----------------------------------|-------------|
|             | Capacity Ton                            | Capacity Kw | Capacity Ton                        | Capacity Kw | Capacity Ton                            | Capacity Kw | Capacity Ton                      | Capacity Kw |
| ECCLASH0180 | 172.4                                   | 603.4       | 139                                 | 486.5       | 102.6                                   | 359.01      | 58.2                              | 203.7       |
| ECCLASH0200 | 189.2                                   | 665         | 152.9                               | 535.15      | 112.86                                  | 395.01      | 64.02                             | 224.07      |
| ECCLASH0220 | 206.4                                   | 722.4       | 166.8                               | 583.8       | 123.12                                  | 430.92      | 69.84                             | 244.44      |

### Many Reasons to Choose The New Ultra Series



Semi-hermetic Compressors



Electrical components



Standard shell and Tube Heat Exchanger



Aluminum Microchannel Air Cooled Condenser



EC Electronic Variable speed Fan Motors

### Ecochillers Inc

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Ramon Corona 645 B  
Santa Anita, Tlaquepaque, Jalisco  
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## Physical Data

Table 1: ECCLASH128 thru 2476 physical data

| Component                 |           | ULTRA COMPACT MODELS |               |               |
|---------------------------|-----------|----------------------|---------------|---------------|
|                           |           | ECCLASH0180          | ECCLASH0200   | ECCLASH0220   |
| Nominal tonnage*          |           | 172                  | 189.2         | 206.4         |
| <b>REFRIGERANT (Lb)</b>   |           |                      |               |               |
| Refrigerant type          |           | R-410A               | R-410A        | R-410A        |
| Holding charge            |           | 1                    | 1             | 1             |
| Operating charge          | system #1 | 63.6                 | 63.6          | 63.6          |
|                           | system #2 | 63.6                 | 63.6          | 63.6          |
|                           | system #3 | 63.6                 | 63.6          | 63.6          |
|                           | system #4 | 24.6                 | 49.2          | 63.6          |
| <b>Dimensions (In)</b>    |           |                      |               |               |
| Length                    |           | 93                   | 93            | 93            |
| Width                     |           | 229.6                | 229.6         | 229.6         |
| Height                    |           | 67                   | 67            | 67            |
| <b>Weight (Lb)</b>        |           |                      |               |               |
| Shipping                  |           | 9423                 | 10283         | 10880         |
| Operating                 |           | 9894                 | 10797         | 11424         |
| <b>Compressors</b>        |           |                      |               |               |
| Type                      |           | Semi-Hermetic        | Semi-Hermetic | Semi-Hermetic |
| Quantity                  |           | 10                   | 11            | 12            |
| <b>Cooling</b>            |           |                      |               |               |
| Nominal capacity*         | System #1 | 51.6                 | 51.6          | 51.6          |
|                           | System #2 | 51.6                 | 51.6          | 51.6          |
|                           | system #3 | 51.6                 | 51.6          | 51.6          |
|                           | system #4 | 17.2                 | 34.4          | 51.6          |
| Capacity Stages           | System #1 | 3                    | 3             | 3             |
|                           | System #2 | 3                    | 3             | 3             |
|                           | system #3 | 3                    | 3             | 3             |
|                           | system #4 | 2                    | 2             | 3             |
| <b>Water system</b>       |           |                      |               |               |
| Design water flow (gpm)   |           | 412                  | 453           | 495           |
| water flow tolerance      |           | +/- 10%              | +/- 10%       | +/- 10%       |
| <b>Outdoor coil data</b>  |           |                      |               |               |
| Face area (sq. Ft)        | System #1 | 44                   | 44            | 44            |
|                           | System #2 | 44                   | 44            | 44            |
|                           | system #3 | 44                   | 44            | 44            |
|                           | system #4 | 22                   | 44            | 44            |
| Type of coil              |           | Microchannel         | Microchannel  | Microchannel  |
| Quantity of coils         |           | 7                    | 8             | 8             |
| Rows                      |           | 1                    | 1             | 1             |
| <b>Condenser fan data</b> |           |                      |               |               |
| No. Fans                  |           | 7                    | 8             | 8             |
| Diameter (In)             |           | 31                   | 31            | 31            |
| Type                      |           | Axial                | Axial         | Axial         |
| Drive type                |           | Direct               | Direct        | Direct        |
| No. Speeds                |           | 1                    | 1             | 1             |
| Number of motors          | System #1 | 2                    | 2             | 2             |
|                           | System #2 | 2                    | 2             | 2             |
|                           | system #3 | 2                    | 2             | 2             |

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|                 |           | system #4 | 1     | 2     | 2     |
|-----------------|-----------|-----------|-------|-------|-------|
| Motor HP (ea.)  |           |           | 2     | 2     | 2     |
| Rotation ***    |           |           | CW    | CW    | CW    |
| RPM             |           |           | 1030  | 1030  | 1030  |
| Nominal CFM**** | System #1 |           | 30960 | 30960 | 30960 |
|                 | System #2 |           | 30960 | 30960 | 30960 |
|                 | system #3 |           | 30960 | 30960 | 30960 |
|                 | system #4 |           | 10320 | 20640 | 30960 |

\* capacity at 55°F LWT 65°F EWT 95°F ambient temperature

\*\* standard conexions Schedule 80 PVC union nut, as an option Treaded conexions, Flanged conexions and Vitaulic.

\*\*\* When viewing the top of the motor

\*\*\*\* CFM conditions at sea level

## Características Principales:

- **Compresores Semi-herméticos Carlyle** por su diseño Desarmable y Reparable en Campo
- **1 Variador de Velocidad en 1 compresor para Ahorro de energía y Temperaturas mas exactas**
- Filtro de succión de malla de acero inoxidable protege al compresor de partículas o sólidos en el retorno.
- Sensor de presión de aceite electrónico
- **Motores Ventiladores de velocidad Variable EC Electronic Commutated Fan Motors**
- **Controlador de estado Solido programable** Carel de 2 y 4 etapas. Display Control de temperatura.
- **Intercambiador de Calor de Casco y Tubo** de Alta Eficiencia con Registro UL, ETL.
- Temperatura de operación desde -18oC a + 25oC estándar
- **Moto Ventiladores Axiales Alemanes** sin Flecha las aspas y el rotor giran alrededor del motor.
- **Condensador de Microchannel Aluminio 100%** con cabezal Muffler que absorbe pulsaciones de descarga y receptor de líquido integrado, **espesor de paredes 20% más grueso** al standard.
- Mirilla de líquido.
- Mirilla de nivel de aceite en compresores
- **Válvulas de servicio en Cada Compresor** aíslan 100% del sistema al compresor y así darle servicio en Campo
- Válvulas de servicio en filtro deshidratador de líquido aíslan el filtro para servicio.
- Filtro deshidratador de líquido
- Presostatos Switch de protección de alta y baja presión
- **Control de Motores ventiladores en base a demanda.**
- Cuenta con entradas eléctricas duales – inferior y lateral.
- Equipos tipo Process cuenta con tuberías Hidráulicas o de agua en pvc cedula 80, cuenta con tuercas unión para tanque y bomba.
- Diseñado para Exteriores en **estructura principal de Acero galvanizado calibre 12**
- Pintura electrostática horneada de alta resistencia UV
- Descarga de aire vertical.
- Incluye carga completa de refrigerante.
- **Servicio de arranque está incluido LAB su planta, incluye hasta 1 días sin costo valido únicamente en Guadalajara, Monterrey y Mexico D.F., de lo contrario tendrá costo viáticos.**

## Opciones disponibles:

- Chillers enfriados por Agua
- **Válvula PWM (Pulse With Modulating) exclusiva Válvula de Modulación** de Capacidad de Succión en posiciones infinitas del 20 al 100%.
- Intercambiador de Calor Tipo Placas Stainless Steel Alta Eficiencia con Registro UL, ETL, ASME.
- Microprocesador con pantalla touch Pad, capacidad de Interface con ambiente ethernet.
- **Freecooling, enfriamiento del agua de proceso por medio del aire ambiente**, ahorros de 40% en invierno climas de 5°C o menores.

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### Clearances

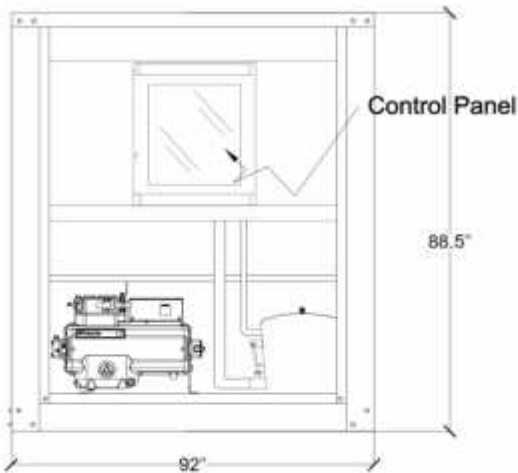
The unit must be installed with sufficient clearance for air to enter the condenser coil, for air discharge and for servicing access.

see table for clearance

| Minimum Clearance     |                    |
|-----------------------|--------------------|
| Clearance Description | Distance in inches |
| Overhead (Top)        | 100                |
| Front                 | 100                |
| Back                  | 100                |
| Left Side             | 30                 |
| Right Side            | 30                 |
| Bottom                | 0                  |

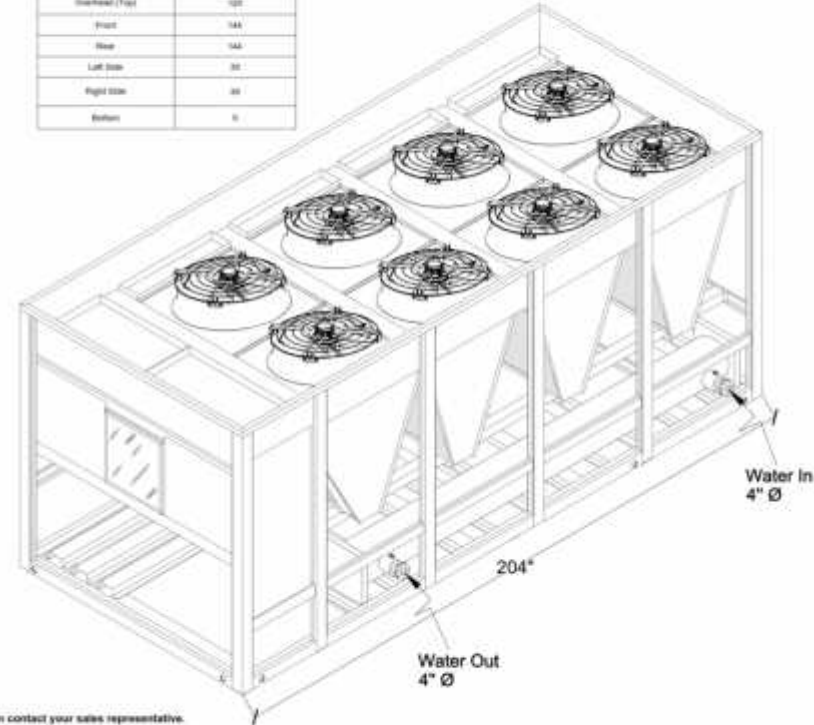
### PHYSICAL DATA

| MODEL              | T.R.  | AVAILABLE POWER SUPPLY | Water Inlet / Outlet Ø |
|--------------------|-------|------------------------|------------------------|
| ECCLASH0180A25BRR4 | 172.4 | 208/230-3-60           | 4"                     |
| ECCLASH0200A25BRR4 | 190   | 380-3-50<br>460-3-60   | 4"                     |
| ECCLASH0220A25BRR4 | 206.3 | 575-3-60               | 4"                     |



#### IMPORTANT :

This drawing is illustrative only , dimensions , weight and design can change without notice, for more information contact your sales representative.



PRODUCT DRAWING  
AIR COOLED SEMIHERMETIC CHILLER UNIT  
MODELS : ECCLASH2064 to ECCLASH2472  
NOT FOR CONSTRUCTION

Project name:  
Location:  
Engineer:  
Contractor:

Sold to:  
Cust Purch Order:  
Contract:

Date: October 2014  
Rev.: 1.0  
Form.:  
ENGDEP-SUM1-1014  
Dwg.: S.G.R

# Ecogreen

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