AquaSnap® 30RC 065-150 Air-Cooled Chillers and 30RC 067-152 Air-Cooled Chillers with Greenspeed® Technology

Installation Instructions

CONTENTS

SAFETY CONSIDERATIONS

Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location.

Only trained, qualified installers and service mechanics should install, start up, and service this equipment.

Untrained personnel can perform basic maintenance functions, such as cleaning coils. All other operations should be performed by trained service personnel. Qualified installers and service technicians are required to have been trained on the following topics when installing and servicing air-conditioning equipment with A2L refrigerant such as R-32:

1. Explosive potential of A2L refrigerants
2. Potential ignition sources
3. Safety measures for unventilated and ventilated rooms or enclosures
4. Refrigerant detectors
5. Concept of sealed components and sealed enclosures according to IEC 60079-15:2010
6. Correct work procedures for the following:
   a. Commissioning
   b. Maintenance
   c. Repair
   d. Decommissioning
   e. Disposal

Reference UL 60335-2-40 Annex HH for complete guidelines.

When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

1. Follow all safety codes.
2. Keep quenching cloth and fire extinguisher nearby when brazing.
3. Wear safety glasses and work gloves.
4. Use care in handling, rigging, and setting bulky equipment.

⚠ WARNING

Electrical shock can cause personal injury and death. Shut off all power to this equipment during installation. There may be more than one disconnect switch. Tag all disconnect locations to alert others not to restore power until work is completed.

IMPORTANT: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause radio interference. It has been tested and found to comply with the limits of a Class A computing device pursuant to International Standard in North America EN 61000-2/3, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

⚠ CAUTION

This system uses either Puron® refrigerant (R-410A) or an A2L refrigerant (R-32), both of which have higher pressures than R-22 and other refrigerants. No other refrigerant can be used in this system. Failure to use gauge set, hoses, and recovery systems designed to handle Puron refrigerant (R-410A) or R-32 may result in equipment damage or personal injury. Reference UL 60335-2-40 Annex DD for guidelines on proper A2L refrigerant handling and equipment used for A2L refrigerant. If unsure about equipment, consult the equipment manufacturer.

⚠ WARNING

DO NOT USE TORCH to remove any component. System contains oil and refrigerant under pressure.

To remove a component, wear protective gloves and goggles and proceed as follows:

a. Shut off electrical power to unit.
b. Recover refrigerant to relieve all pressure from system using both high-pressure and low pressure ports.
c. Traces of vapor should be displaced with nitrogen and the work area should be well ventilated. Refrigerant in contact with an open flame produces toxic gases.
d. Cut component connection tubing with tubing cutter and remove component from unit. Use a pan to catch any oil that may come out of the lines and as a gauge for how much oil to add to the system.
e. Carefully unsweat remaining tubing stubs when necessary. Oil can ignite when exposed to torch flame.

Failure to follow these procedures may result in personal injury or death.

⚠ CAUTION

DO NOT re-use compressor oil or any oil that has been exposed to the atmosphere. Dispose of oil per local codes and regulations. DO NOT leave refrigerant system open to air any longer than the actual time required to service the equipment. Seal circuits being serviced and charge with dry nitrogen to prevent oil contamination when timely repairs cannot be completed. Failure to follow these procedures may result in damage to equipment.

INTRODUCTION

These instructions cover installation of 30RC 065-150 and 30RC 067-152 air-cooled liquid chillers with electronic controls and units with factory-installed options (FIOPs). See Fig. 1 for model number nomenclature.

NOTE: The 30RC 065-150 and 30RC 067-152 air-cooled chillers with Greenspeed® technology include high-efficiency variable speed condenser fans. (See Fig. 1.)

INSTALLATION

Storage

If the unit is to be stored for a period of time before installation or start-up, be sure to protect the machine from construction dirt and moisture. Keep protective shipping covers in place until machine is ready for installation.

⚠ WARNING

If unit is to be stored, it shall be stored in an area or room without continuously operating open flames (for example, an operating gas appliance) or other potential ignition sources, such as operating electric heaters or hot surfaces.

Step 1 — Place, Rig, and Mount the Unit

NOTE: Inspect the unit upon arrival for damage. If damage is found, file a claim right away with the shipping company.

PLACING UNIT

When considering location for the unit, be sure to consult National Electrical Code (NEC, U.S.A.) and local code requirements. Allow sufficient space for airflow, wiring, piping, and service. (See Fig. 2-24.) Be sure surface beneath the unit is level and is capable of supporting the operating weight of the unit. See Fig. 25 and Tables 1-8 for unit lifting points and mounting and operating weights.

Locate the unit so that the condenser airflow is unrestricted both above and on the sides of the unit. Airflow and service clearances are 6 ft (1.8 m) around the unit. Acceptable clearance on the evaporator connection side or end opposite the control box unit can be reduced to 3 ft (1 m) without sacrificing performance as long as the remaining three sides are unrestricted. Acceptable clearance on the side with a control box can be reduced to 4 ft (1.3 m), due to NEC regulations, without sacrificing performance as long as the remaining three sides are unrestricted. Provide ample room for servicing and removing evaporator. See Fig. 6-24 for required clearances. Local codes for clearances take precedence over the manufacturer's recommendations when local codes call for greater clearances.

If multiple units are installed at the same site, a separation of 10 ft (3 m) between the sides of the machines is required to maintain proper airflow and minimize the chances of condenser air recirculation.

MOUNTING UNIT

The unit may be mounted on a level pad directly on the base rails, on rails along the long axis of the machine, or on vibration isolation springs. (See Fig. 28.) For all units, ensure placement area is strong enough to support unit operating weight. (See Tables 1-3 and Fig. 25.) Mounting holes are provided for securing the unit to the pad, mounting rail, or vibration isolation springs. The base rail is made from steel; see Fig. 26 for base rail shape. See Fig. 6-24 for locations of mounting points. At the mounting points, a U-shaped channel is welded into the base rail to provide a flat plate for mounting. See Fig. 27 for mounting plate dimensions. The 1.46 in. (37 mm) dimension shown is from the outside edge of the rail to the mounting hole.

NOTE: The 1.46 in. (37 mm) dimension in Fig. 27 is not the same dimension as the 1.48 in. (37.5 mm) flange that is turned under the base rail in Fig. 26.

Bolt the unit securely to pad or rails. If vibration isolators (field-supplied, see Fig. 28) are required for a particular installation, refer to unit weight distribution in Fig. 25 to aid in the proper selection of isolators. Once installed, the unit must be level to within 1/8 in. per ft (1 cm per meter) along the long axis of the unit. This is required for oil return to the compressor(s). For more details about physical data, see Tables 4-7.

NOTE: For units that are point loaded, such as those using rubber and shear isolators, the mounting pocket in the base rail must be supported. If the isolator includes a plate that spans across the mounting pocket, no further support is needed. If the isolator is point loaded, add a backup plate to the mounting plate 1/4 in. thick x 6 in. wide x 8 in. long, centered on the unit mounting plate.

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example:	3	0	R	C	-	1	1	0	6	S	-	1	-	-	-	-	K

Model
30RC — Air-Cooled AquaSnap® Chiller

- — Design Series

Nominal Capacity

R-410A Units:			**R-32 Units**:		
065	090	120	067	092	122
070	100	130	072	102	132
080	110	150	082	112	152

Voltage Options
1 — 575-3-60
2 — 380-3-60
5 — 208/230-3-60
6 — 460-3-60

Tier
S — Standard
C — Compact

Compressor Fan and Bypass Options
- — Fixed Speed Condenser Fans
0 — Variable Speed Condenser Fans
2 — Fixed Speed Condenser Fans, HGBP with BPHE Evap
3 — Variable Speed Condenser Fans, HGBP with BPHE Evap
5 — Fixed Speed Condenser Fans, HGBP with DX Evap
6 — Variable Speed Condenser Fans, HGBP with DX Evap
H — Variable Speed Condenser Fans, Low LWT Fluid, MCHX Coils

Condenser Coil Options
- — Aluminum Fin / Copper Tube
0 — Aluminum Fin / Copper Tube, E-Coat
1 — Microchannel
2 — Microchannel, E-coat
3 — Aluminum Fin / Copper Tube, Chicago Relief Valve
4 — Aluminum Fin / Copper Tube, E-coat, Chicago Relief Valve
5 — Microchannel, Chicago Relief Valve
6 — Microchannel, E-coat, Chicago Relief Valve
7 — Aluminum Fin/Copper Tube, Desuperheater
8 — Aluminum Fin/Copper Tube, E-Coat, Desuperheater
9 — Microchannel, Desuperheater
B — Microchannel, E-coat, Desuperheater
C — Aluminum Fin/Copper Tube, Chicago Relief Valve, Desuperheater
D — Aluminum Fin/Copper Tube, E-Coat, Chicago Relief Valve, Desuperheater
F — Microchannel, Chicago Relief Valve, Desuperheater
G — Microchannel, E-Coat, Chicago Relief Valve, Desuperheater

Evaporator and Refrigerant Circuit Options
- — BPHE Evaporator, No Heater
0 — BPHE Evaporator, No Heater, Suction Line Insulation
1 — BPHE Evaporator, No Heater, Suction Service Valve
2 — BPHE Evaporator, No Heater, Suction Line Insulation, Suction Service Valve
3 — BPHE Evaporator, Heater
4 — BPHE Evaporator, Heater, Suction Line Insulation
5 — BPHE Evaporator, Heater, Suction Service Valve
6 — BPHE Evaporator, Heater, Suction Line Insultation, Suction Service Valve
8 — DX Evaporator, No Heater
9 — DX Evaporator, No Heater, Suction Line Insulation
B — DX Evaporator, No Heater, Suction Service Valve
C — DX Evaporator, No Heater, Suction Line Insulation, Suction Service Valve
D — DX Evaporator, Heater
F — DX Evaporator, Heater, Suction Line Insulation
G — DX Evaporator, Heater, Suction Service Valve
H — DX Evaporator, Heater, Suction Line Insulation, Suction Service Valve

NOTE: When an Engineered to Order (ETO) unit is provided, digits 12 through 17 will vary to match the item ordered and will not follow the standard nomenclature above.

Security/Low Sound Options
K — CFSP
0 — CFSP, Low Sound
2 — CFSP, Coil Trim Panels
3 — CFSP, Low Sound, Coil Trim Panels
5 — CFSP, Coil Trim Panels, Security Grilles
6 — CFSP, Low Sound, Coil Trim Panels, Security Grilles
8 — Coil Trim Panels, Security Grilles, Hail Guard (End)
9 — Low Sound, Coil Trim Panels, Security Grilles, Hail Guard (End)
C — Full Hail Guard
D — Low Sound, Full Hail Guard
G — Coil Trim Panels, Skid + Bag
H — Low Sound, Coil Trim Panels, Skid + Bag

Controls/Communication Options
- — PIC6, Remote Connectivity (RC), BACnet IP
0 — PIC6, RC, EMM, BACnet IP
1 — PIC6, RC, EMM, GFI, BACnet IP
2 — PIC6, RC, GFI, BACnet IP
3 — PIC6, RC, BACnet IP, LEI Lonworks Translator (TL)
4 — PIC6, RC, EMM, BACnet IP, LEI Lonworks TL
5 — PIC6, RC, EMM, GFI, BACnet IP, LEI Lonworks TL
6 — PIC6, RC, GFI, BACnet IP, LEI Lonworks TL

Electrical Options
- — Single Point, Std SCCR
0 — Single Point, Non-Fused Disconnect (NFD), Std SCCR
1 — Dual Point, Std SCCR
2 — Dual Point, Non-Fused Disconnect, Std SCCR
4 — Single Point, Non-Fused Disconnect, High SCCR
6 — Dual Point, Non-Fused Disconnect, High SCCR
7 — Single Point, Std SCCR, 7" Display
8 — Single Point, NFD, Std SCCR, 7" Display
9 — Dual Point, Std SCCR, 7" Display
B — Dual Point, NFD, Std SCCR, 7" Display
D — Single Point, NFD, High SCCR, 7" Display
G — Dual Point, NFD, High SCCR, 7" Display

Hydronic Pump Package Options

BPHE Evaporator
- — None
0 — Single Pump, 5 HP
1 — Single Pump, 7.5 HP
2 — Single Pump, 10 HP
3 — Single Pump, 15 HP
5 — Dual Pump, 5 HP
6 — Dual Pump, 7.5 HP
7 — Dual Pump, 10 HP
8 — Dual Pump, 15 HP
B — Dual VFD-Pump, 5 HP
C — Dual VFD-Pump, 7.5 HP
D — Dual VFD-Pump, 10 HP
F — Dual VFD-Pump, 15 HP

DX Evaporator
J — None
K — Single Pump, 5 HP
L — Single Pump, 7.5 HP
M — Single Pump, 10 HP
N — Single Pump, 15 HP
Q — Dual Pump, 5 HP
R — Dual Pump, 7.5 HP
S — Dual Pump, 10 HP
T — Dual Pump, 15 HP
V — Dual VFD-Pump, 5 HP
W — Dual VFD-Pump, 7.5 HP
X — Dual VFD-Pump, 10 HP
Y — Dual VFD-Pump, 15 HP

LEGEND
BPHE — Brazed Plate Heat Exchanger
CFSP — Coil Face Shipping Protection
DX — Direct Expansion
EMM — Energy Management Module
GFI — Ground Fault Interrupter
LEI — Local Equipment Interface
LWT — Leaving-Water Temperature
MCHX — Microchannel Heat Exchanger
RTPF — Round Tube, Plate Fin
SCCR — Short Circuit Current Rating
VFD — Variable Frequency Drive

Fig. 1 — Aquasnap® Chiller Model Number Nomenclature

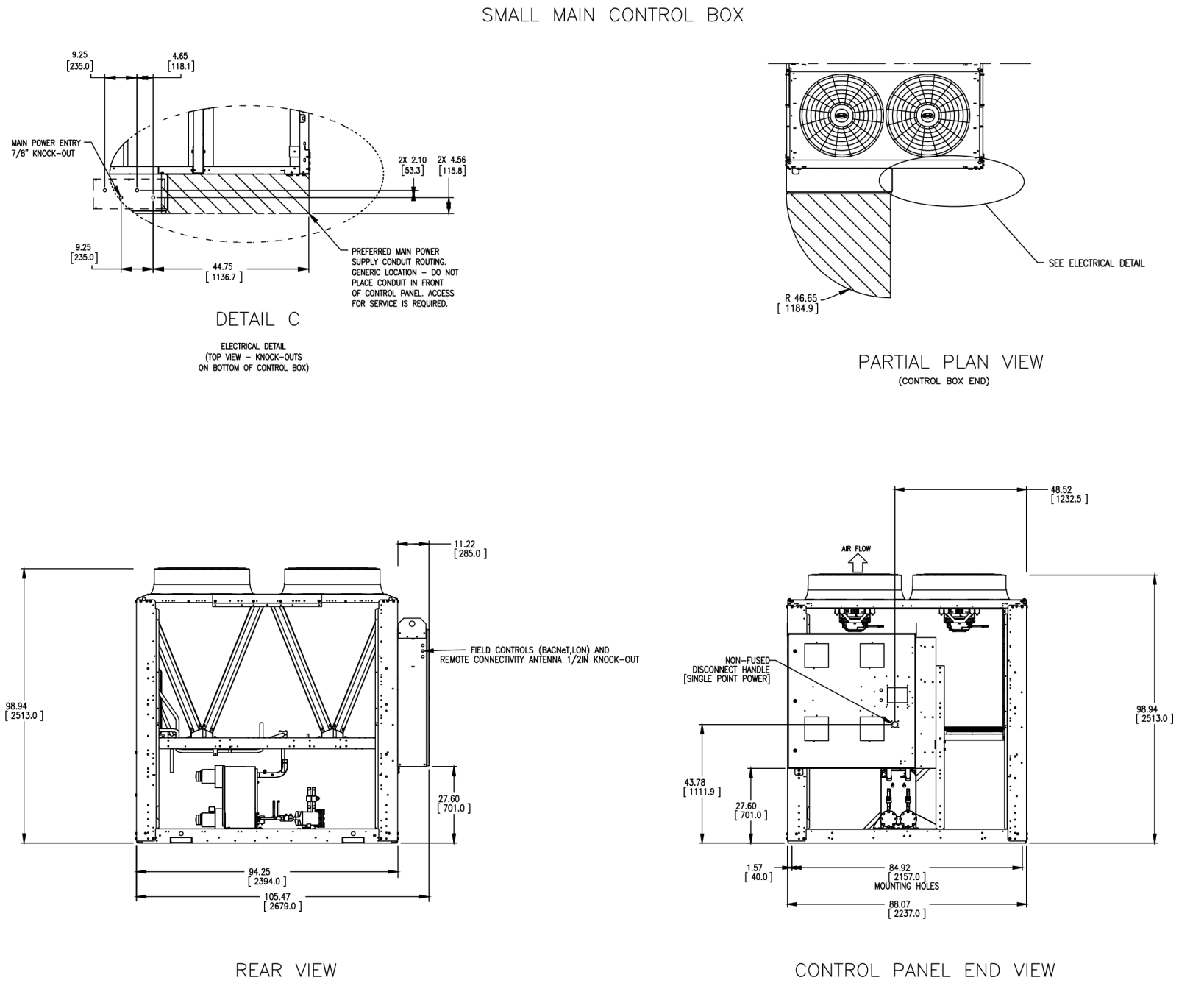
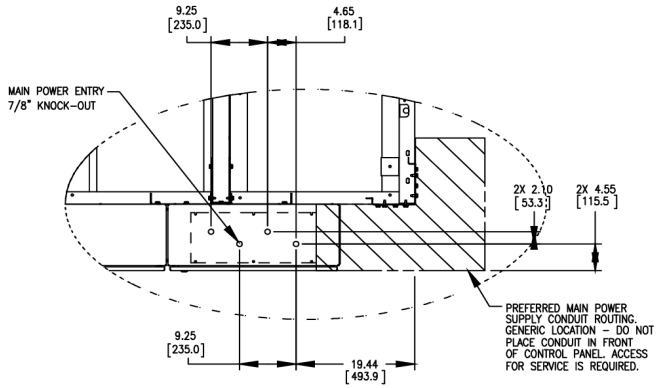


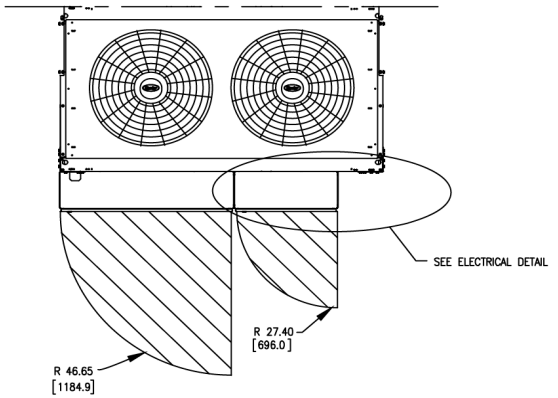
Fig. 2 — 30RC Small Main Control Box and Wiring

SMALL MAIN W/SIDE CONTROL BOX

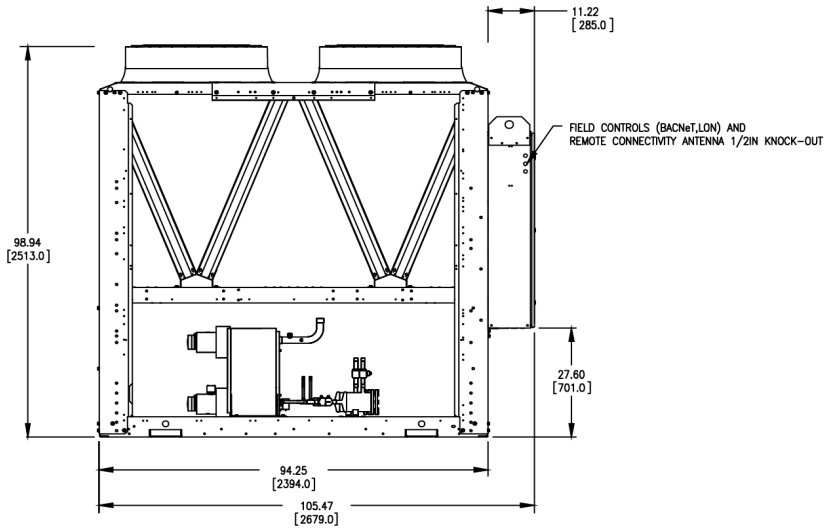


DETAIL C

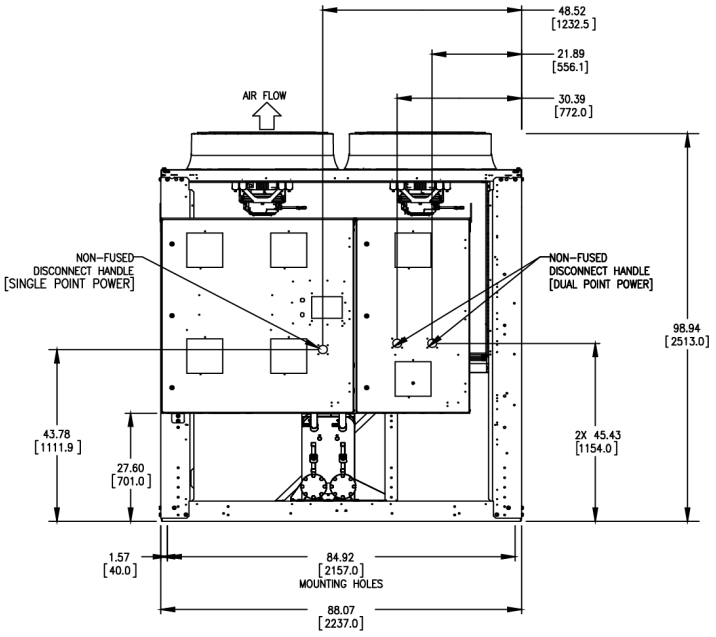
ELECTRICAL DETAIL
(TOP VIEW - KNOCK-OUTS
ON BOTTOM OF CONTROL BOX)



PARTIAL PLAN VIEW
(CONTROL BOX END)



REAR VIEW



CONTROL PANEL END VIEW

Fig. 3 — 30RC Small Main with Side Control Box and Wiring

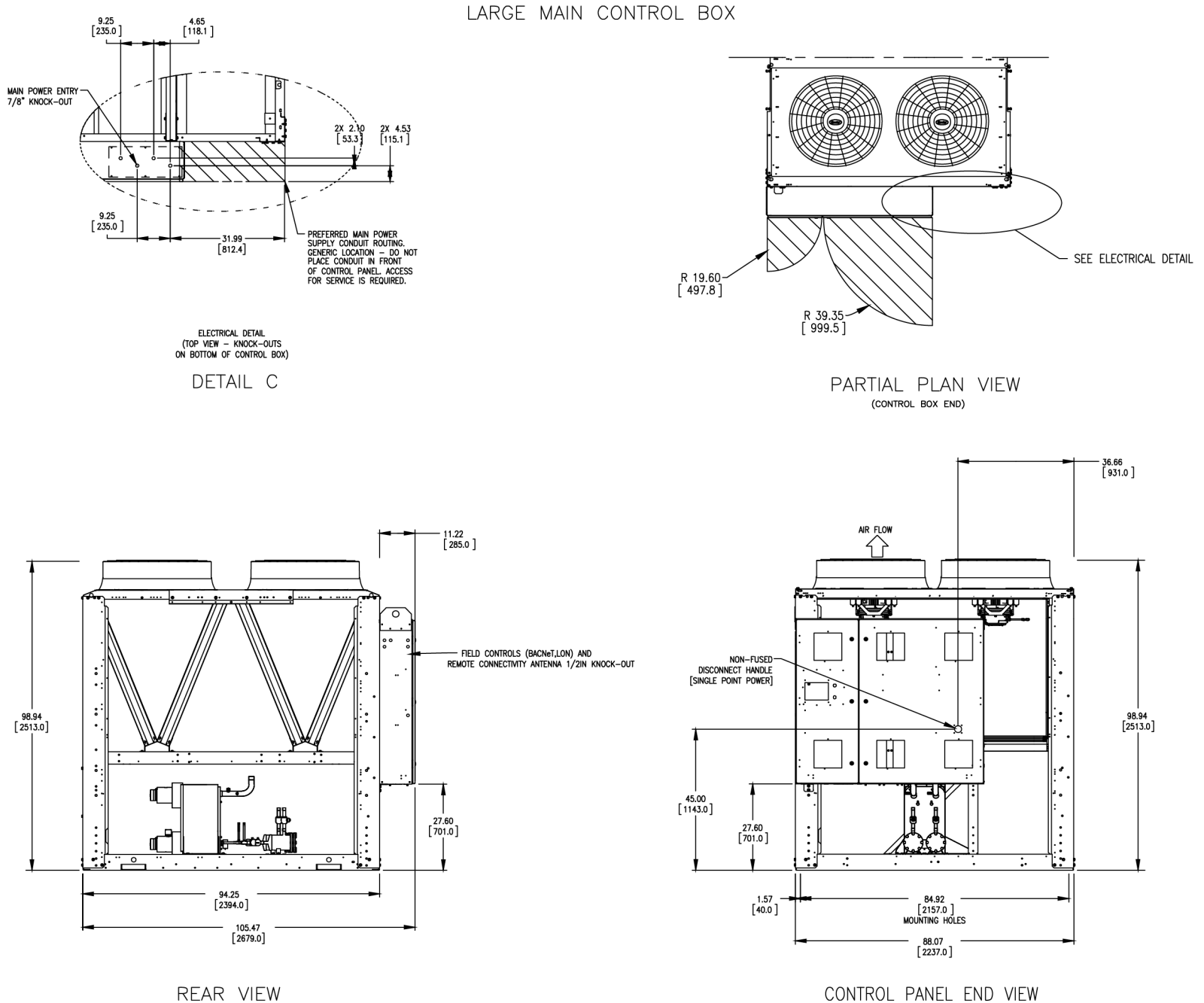
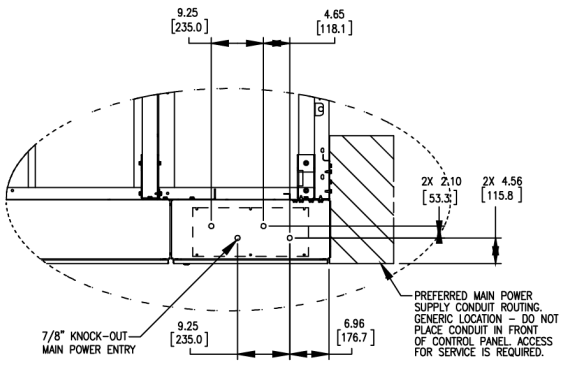
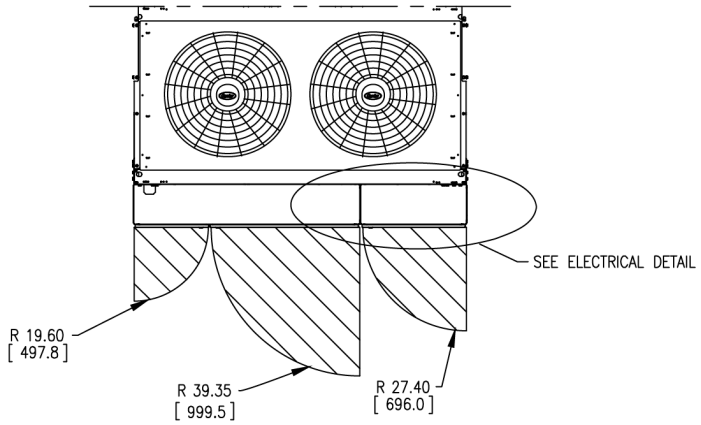


Fig. 4 — 30RC Large Main Control Box and Wiring

LARGE MAIN W/SIDE CONTROL BOX

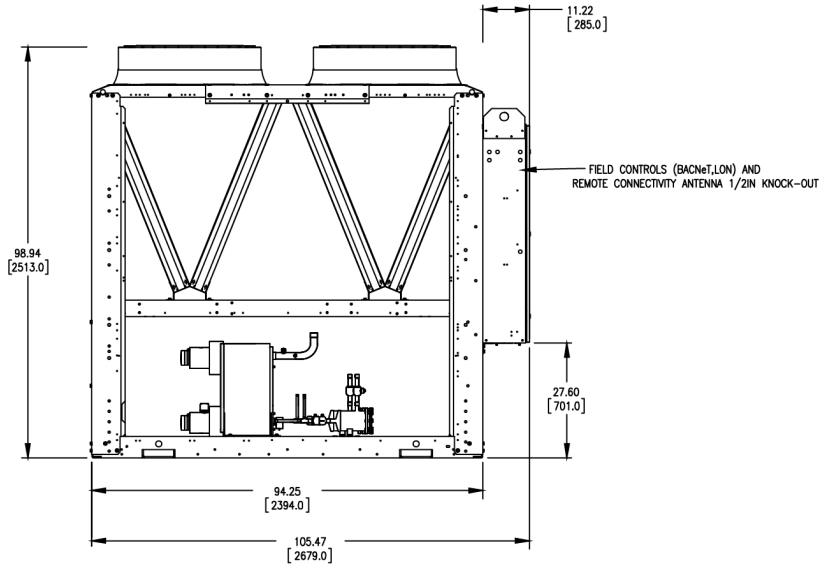


DETAIL C

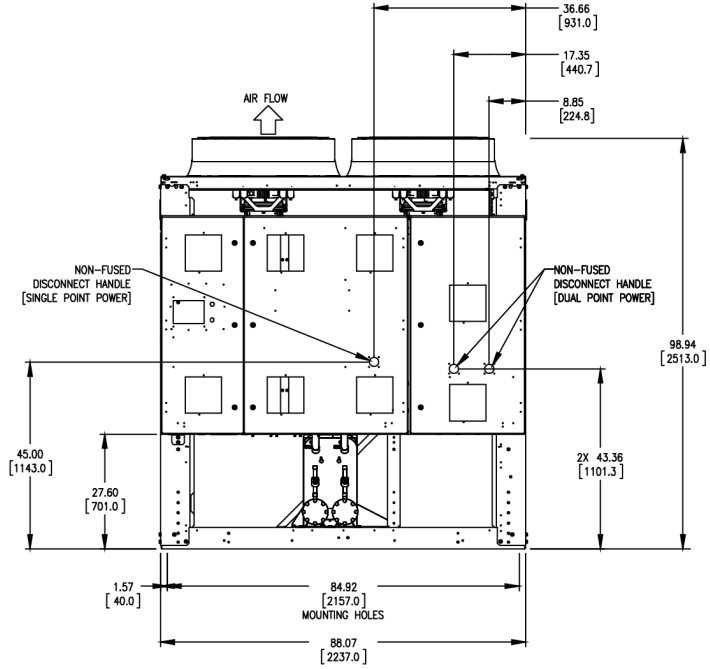


PARTIAL PLAN VIEW
(CONTROL BOX END)

ELECTRICAL DETAIL
(TOP VIEW - KNOCK-OUTS
ON BOTTOM OF CONTROL BOX)



REAR VIEW



CONTROL PANEL END VIEW

Fig. 5 — 30RC Large Main with Side Control Box and Wiring

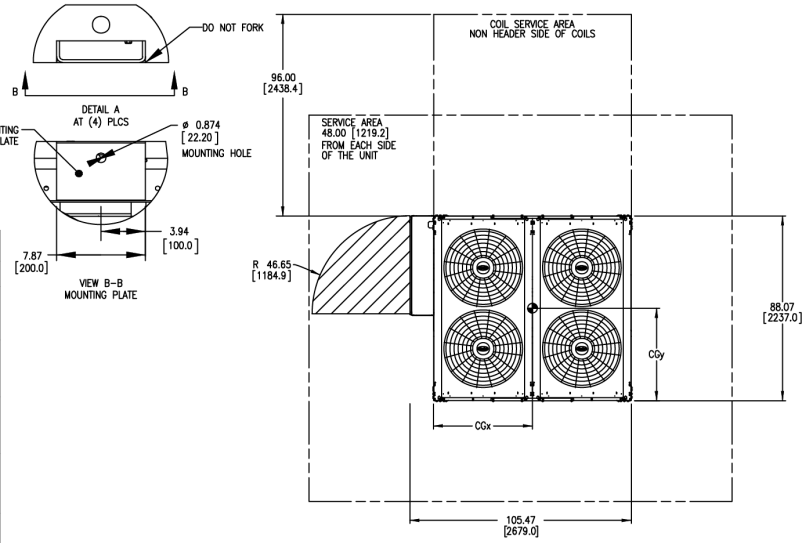
NOTES:

1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

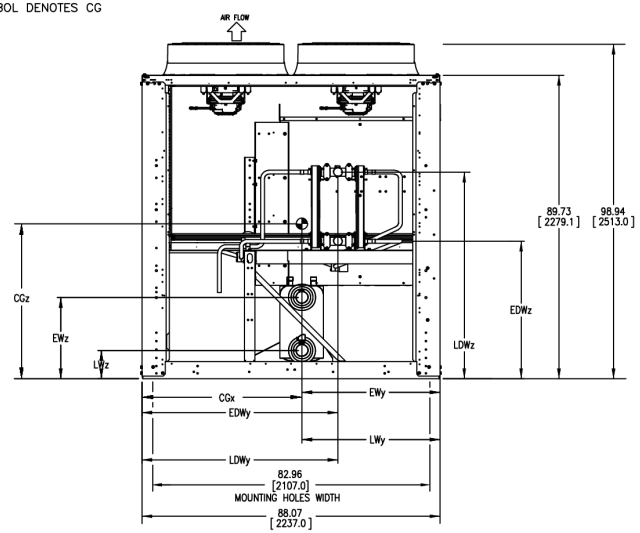
065–STD, 070–STD, 080–CMPT, 067–STD, 072–STD, 082–STD, 092–CMPT BPHE W/O PUMP SHOWN BELOW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
065–STD	CUAL	38.1 [967]	38.7 [984]	45.2 [1147]	21.6 [548]	40.8 [1038]	24.0 [611]	21.6 [548]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	37.0 [941]	38.1 [967]	42.6 [1082]												
070–STD	CUAL	40.2 [1020]	37.7 [957]	43.6 [1108]	19.9 [505]	40.8 [1038]	24.0 [611]	19.9 [505]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	39.4 [1001]	36.9 [938]	41.1 [1043]												
080–CMPT	CUAL	40.4 [1026]	36.8 [933]	42.2 [1072]	17.9 [454]	40.8 [1038]	24.0 [611]	17.9 [454]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	39.7 [1008]	35.9 [913]	39.6 [1007]												
067–STD	CUAL	38.1 [967]	38.7 [984]	45.2 [1147]	30.3 [770]	40.8 [1038]	24.0 [611]	30.3 [770]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	37.0 [941]	38.1 [967]	42.6 [1082]												
072–STD	CUAL	40.2 [1020]	37.7 [957]	43.6 [1108]	28.6 [727]	40.8 [1038]	24.0 [611]	28.6 [727]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	39.4 [1001]	36.9 [938]	41.1 [1043]												
082–STD	CUAL	40.4 [1026]	36.8 [933]	42.2 [1072]	26.6 [676]	40.8 [1038]	24.0 [611]	26.6 [676]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	39.7 [1008]	35.9 [913]	39.6 [1007]												
092–CMPT	CUAL	40.4 [1026]	36.7 [933]	42.2 [1072]	17.7 [450]	40.8 [1038]	24.0 [611]	17.7 [450]	40.8 [1038]	8.4 [213]	--	--	--	--	--	--
	MCHX	39.7 [1008]	35.9 [913]	39.6 [1007]												

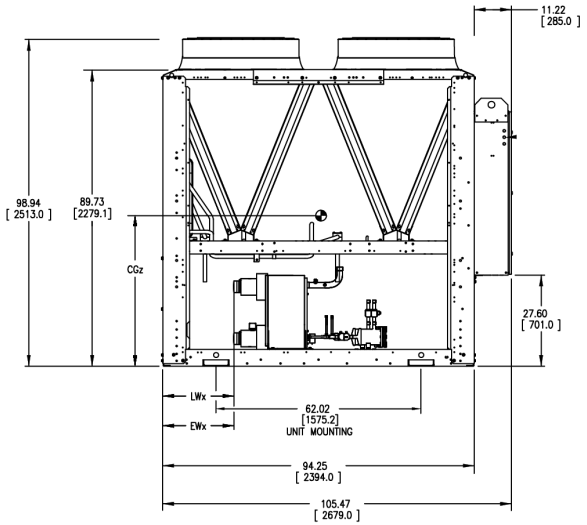
⊕ SYMBOL DENOTES CG



PLAN VIEW



NON CONTROL PANEL END VIEW



REAR VIEW

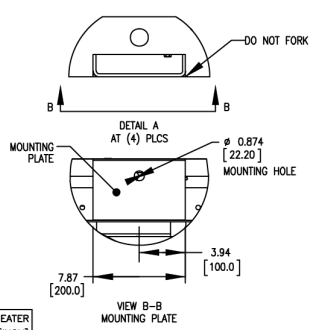
LEGEND

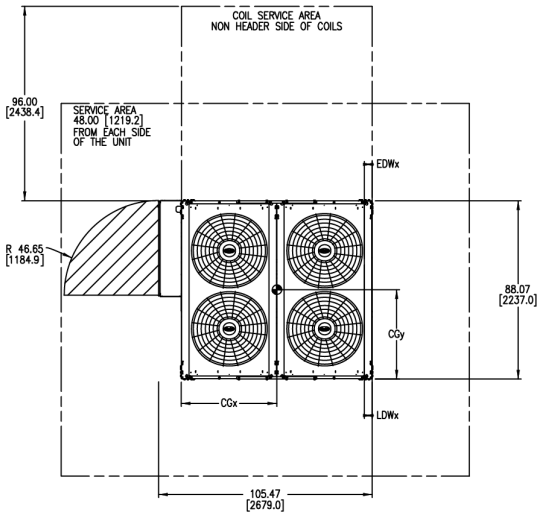
BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

Fig. 6 — 30RC 065 Std/070 Std/080 Compact/067 Std/072 Std/082 Std/092 Compact BPHE No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

065–STD, 070–STD, 080–CMPT, 067–STD, 072–STD, 082–STD, BPHE W/ PUMP SHOWN BELOW

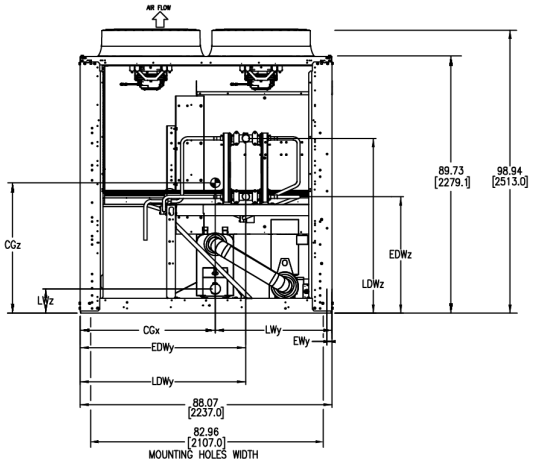




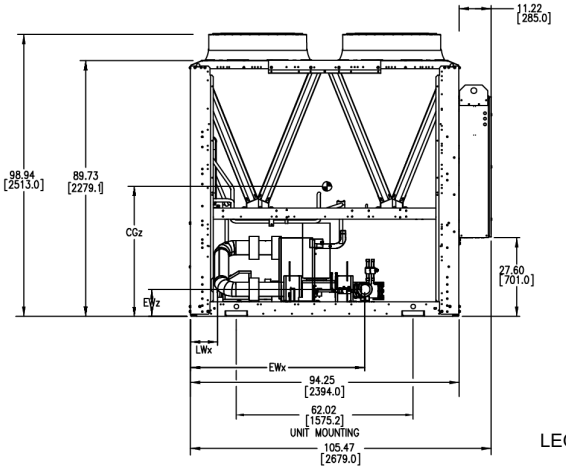
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
065–STD	CUAL	40.6 [1031]	45.5 [1155]	39.0 [991]	61.2 [1555]	1.7 [44]	9.4 [240]	9.5 [243]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.0 [1017]	45.6 [1157]	36.5 [927]												
070–STD	CUAL	42.1 [1071]	44.3 [1126]	38.1 [967]	61.2 [1555]	1.7 [44]	9.4 [240]	7.9 [200]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.7 [1060]	44.3 [1125]	35.6 [904]												
080–CMPT	CUAL	42.4 [1076]	43.7 [1110]	37.2 [944]	61.2 [1555]	1.8 [45]	9.4 [240]	5.9 [149]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	42.0 [1066]	43.6 [1108]	34.8 [883]												
067–STD	CUAL	40.6 [1031]	45.5 [1155]	39.0 [991]	61.2 [1555]	1.7 [44]	9.4 [240]	9.5 [243]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.0 [1017]	45.6 [1157]	36.5 [927]												
072–STD	CUAL	42.1 [1071]	44.3 [1126]	38.1 [967]	61.2 [1555]	1.8 [46]	9.4 [240]	7.9 [200]	40.9 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.7 [1060]	44.3 [1125]	35.6 [904]												
082–STD	CUAL	42.4 [1076]	43.7 [1110]	37.2 [944]	61.2 [1555]	1.8 [45]	9.4 [240]	5.9 [149]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	42.0 [1066]	43.6 [1108]	34.8 [883]												

◆ SYMBOL DENOTES CG



NON CONTROL PANEL END VIEW



REAR VIEW

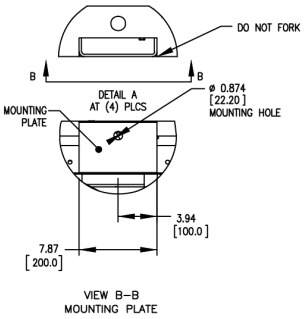
LEGEND

BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

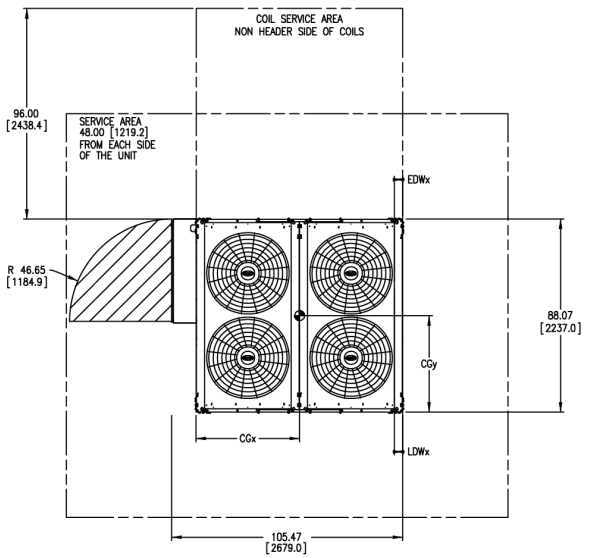
Fig. 7 — 30RC 065 Std/070 Std/080 Compact/067 Std/072 Std/082 Std BPHE with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

065–STD, 070–STD, 080–CMPT, 067–STD, 072–STD, 082–STD, DX W/O PUMP SHOWN BELOW



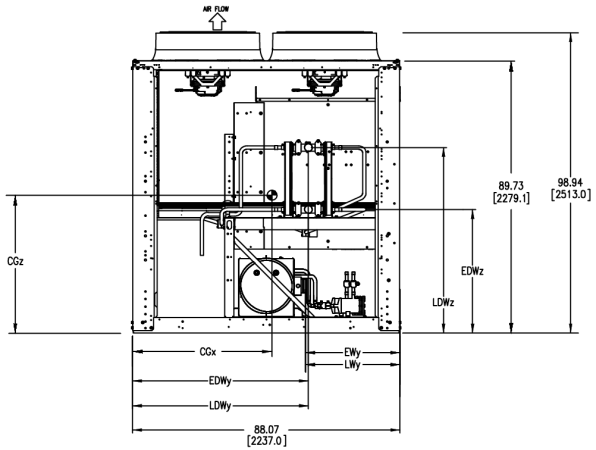
VIEW B–B
MOUNTING PLATE



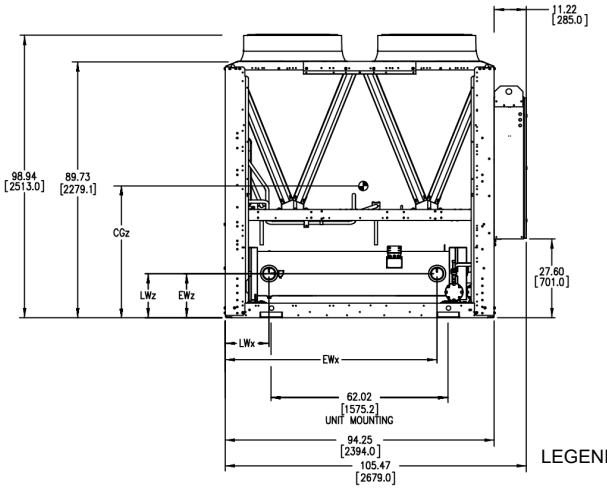
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
065–STD	CUAL	39.0 [990]	39.8 [1010]	40.4 [1027]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	38.2 [970]	39.3 [998]	37.9 [962]												
070–STD	CUAL	40.6 [1032]	38.8 [985]	39.5 [1002]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.0 [1017]	38.2 [971]	36.9 [938]												
080–CMPT	CUAL	40.6 [1032]	37.9 [962]	38.5 [979]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.1 [1018]	37.3 [947]	36.0 [915]												
067–STD	CUAL	39.0 [990]	39.8 [1010]	40.4 [1027]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	38.2 [970]	39.3 [998]	37.9 [962]												
072–STD	CUAL	40.6 [1032]	38.8 [985]	39.5 [1002]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.0 [1017]	38.2 [971]	36.9 [938]												
082–STD	CUAL	40.6 [1032]	37.9 [962]	38.5 [979]	74.2 [1884]	31.1 [789]	15.4 [392]	15.3 [389]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.1 [1018]	37.3 [947]	36.0 [915]												

◆ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

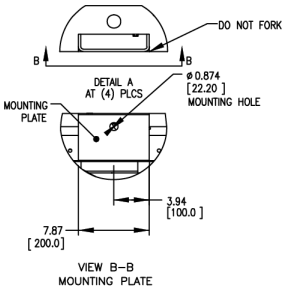
LEGEND

MCHX — Microchannel Heat Exchanger

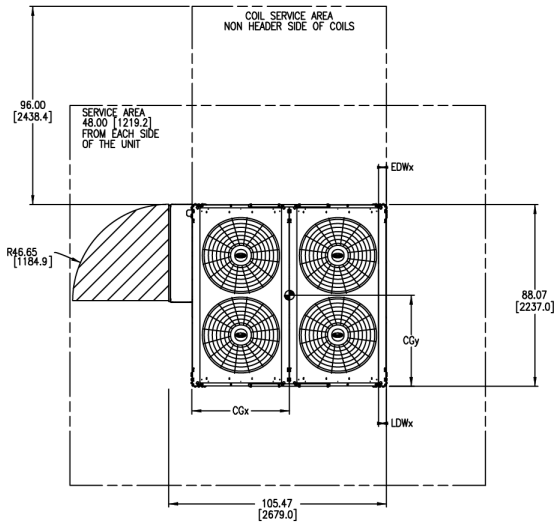
Fig. 8 — 30RC 065 Std/070 Std/080 Compact/067 Std/072 Std/082 Std DX (Direct Expansion) No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

065–STD, 070–STD, 080–CMPT, 067–STD, 072–STD, 082–STD, DX W/ PUMP SHOWN BELOW



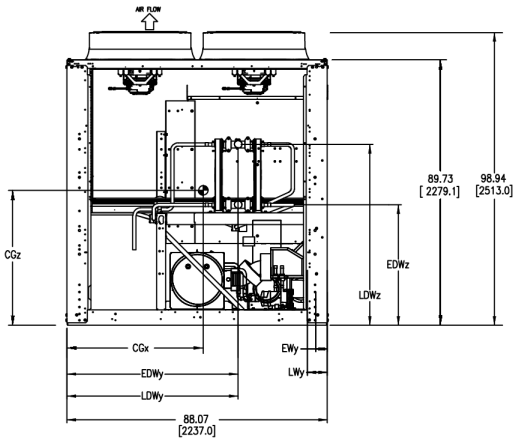
VIEW B–B
MOUNTING PLATE



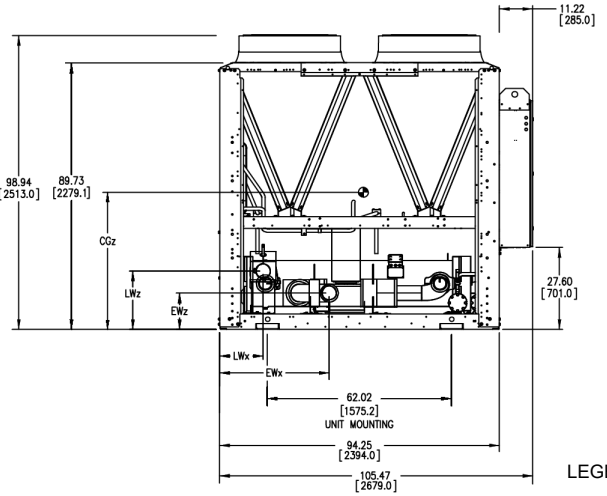
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
065–STD	CUAL	40.8 [1036]	45.6 [1158]	35.9 [913]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.3 [1024]	45.7 [1160]	33.6 [853]												
070–STD	CUAL	42.1 [1069]	44.6 [1132]	35.3 [897]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.7 [1060]	44.6 [1132]	33.0 [838]												
080–CMPT	CUAL	42.1 [1070]	44.1 [1119]	34.7 [880]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.8 [1061]	44.0 [1118]	32.4 [823]												
067–STD	CUAL	40.8 [1036]	45.6 [1158]	35.9 [913]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	40.3 [1024]	45.7 [1160]	33.6 [853]												
072–STD	CUAL	42.1 [1069]	44.6 [1132]	35.3 [897]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.7 [1060]	44.6 [1132]	33.0 [838]												
082–STD	CUAL	42.1 [1070]	44.1 [1119]	34.7 [880]	36.9 [936]	3.8 [98]	12.2 [310]	14.6 [372]	6.7 [171]	19.6 [498]	3.9 [98]	57.9 [1470]	40.7 [1033]	3.9 [98]	57.9 [1470]	61.1 [1552]
	MCHX	41.8 [1061]	44.0 [1118]	32.4 [823]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

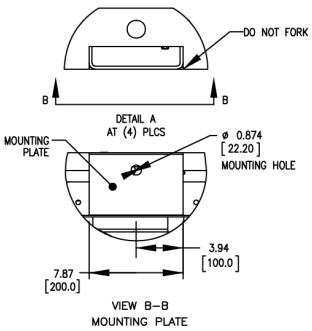
LEGEND

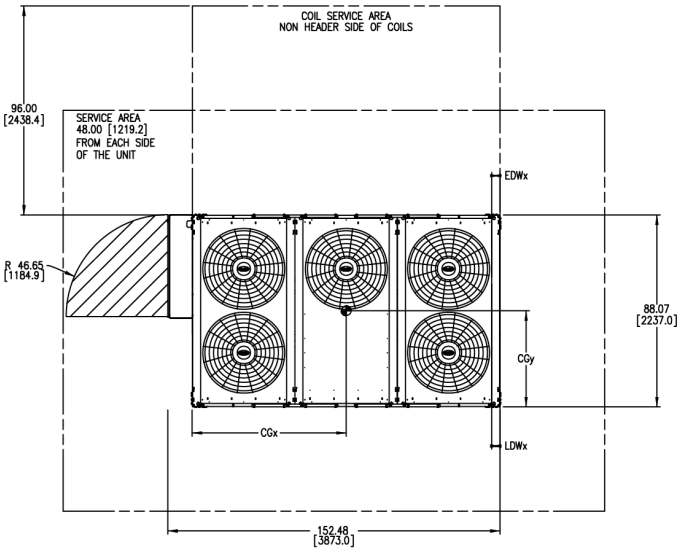
MCHX — Microchannel Heat Exchanger

Fig. 9 — 30RC 065 Std/070 Std/080 Compact/067 Std/072 Std/082 Std DX (Direct Expansion) with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

080–STD, 090–STD, 092–STD BPHE W/O PUMP SHOWN BELOW

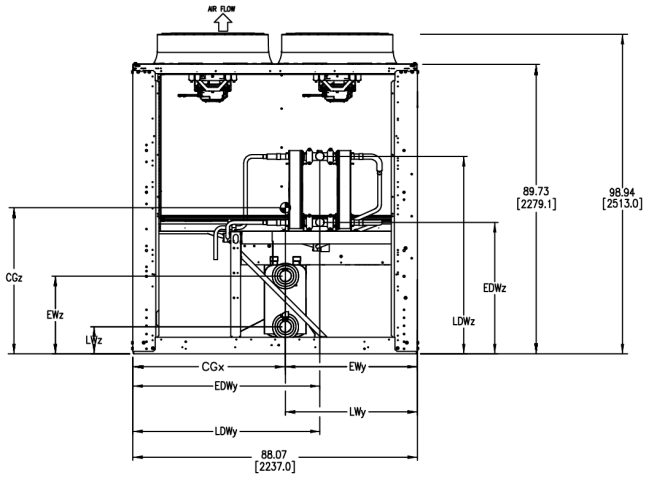




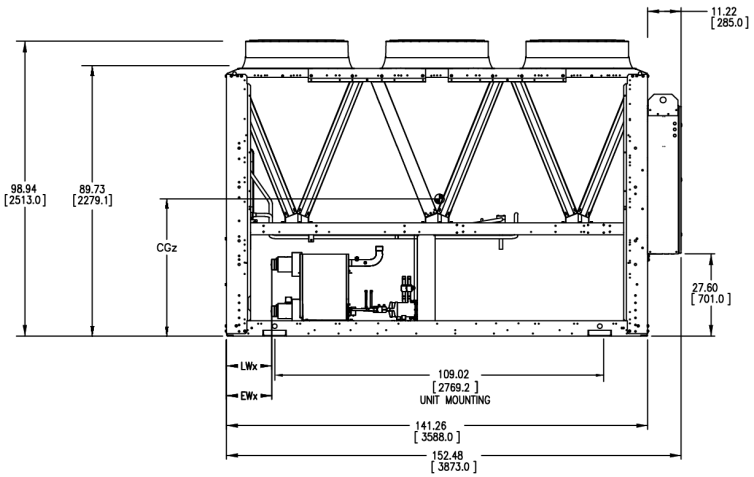
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
080–STD	CUAL	65.0 [1652]	38.6 [981]	44.8 [1138]	15.3 [388]	40.8 [1038]	24.0 [611]	15.2 [386]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.4 [1637]	37.8 [960]	42.3 [1074]												
090–STD	CUAL	65.3 [1659]	38.2 [971]	45.6 [1158]	15.2 [386]	40.8 [1038]	24.0 [611]	15.2 [386]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.6 [1642]	37.4 [950]	42.8 [1088]												
092–STD	CUAL	65.3 [1659]	38.2 [971]	45.6 [1158]	15.2 [386]	40.8 [1038]	24.0 [611]	15.2 [386]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.6 [1642]	37.4 [950]	42.8 [1088]												

◆ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

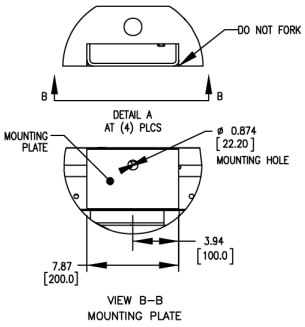
LEGEND

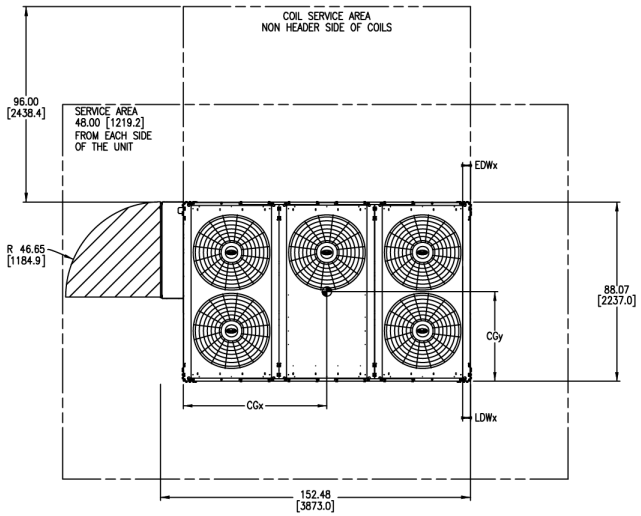
BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

Fig. 10 — 30RC 080 Std/090 Std/092 Std BPHE No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

080–STD, 090–STD, 092–STD BPHE W/ PUMP SHOWN BELOW

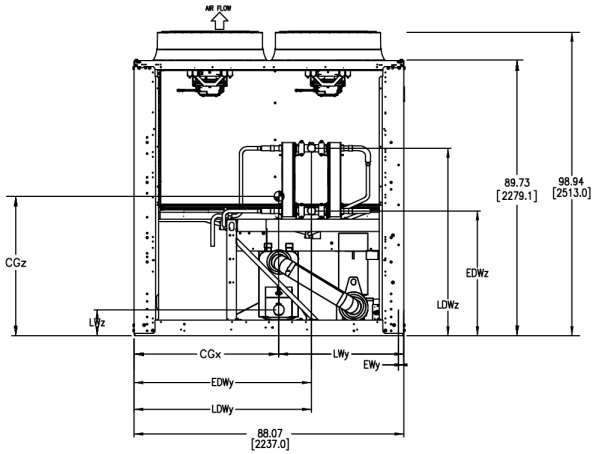




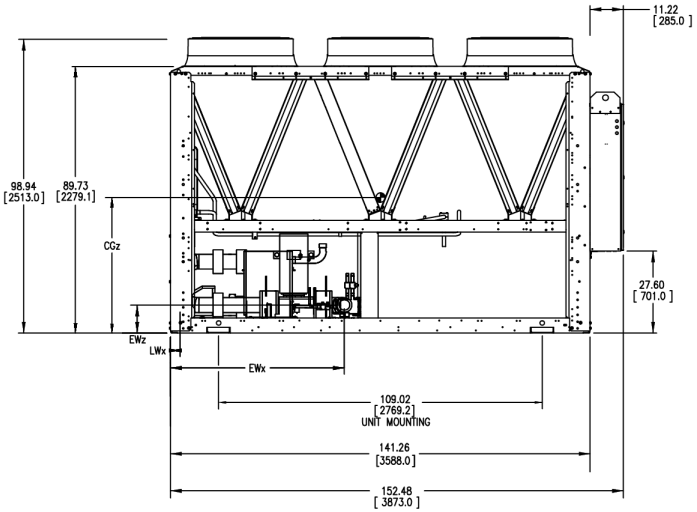
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
080–STD	CUAL	70.8 [1799]	44.3 [1126]	39.9 [1014]	58.5 [1487]	1.8 [45]	9.4 [240]	3.2 [82]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	70.9 [1800]	44.2 [1123]	37.5 [952]												
090–STD	CUAL	70.9 [1801]	43.9 [1114]	40.7 [1034]	58.5 [1487]	1.8 [45]	9.4 [240]	3.2 [80]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	71.0 [1802]	43.8 [1112]	38.0 [965]												
092–STD	CUAL	70.9 [1801]	43.9 [1114]	40.7 [1034]	58.5 [1487]	1.8 [45]	9.4 [240]	3.2 [80]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	71.0 [1802]	43.8 [1112]	38.0 [965]												

◆ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

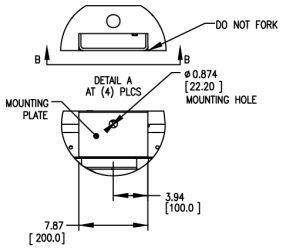
LEGEND

BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

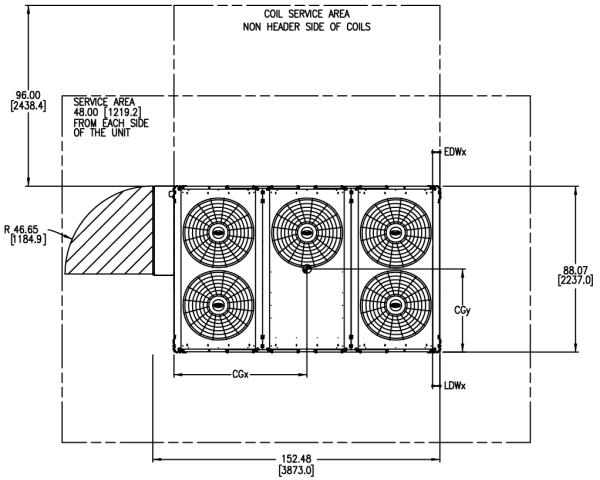
Fig. 11 — 30RC 080 Std/090 Std/092 Std BPHE with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

080–STD, 090–STD, 100–STD, 092–STD, 102–STD, DX W/O PUMP SHOWN BELOW



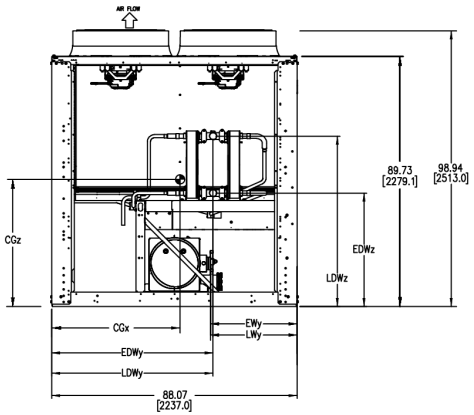
VIEW B–B
MOUNTING PLATE



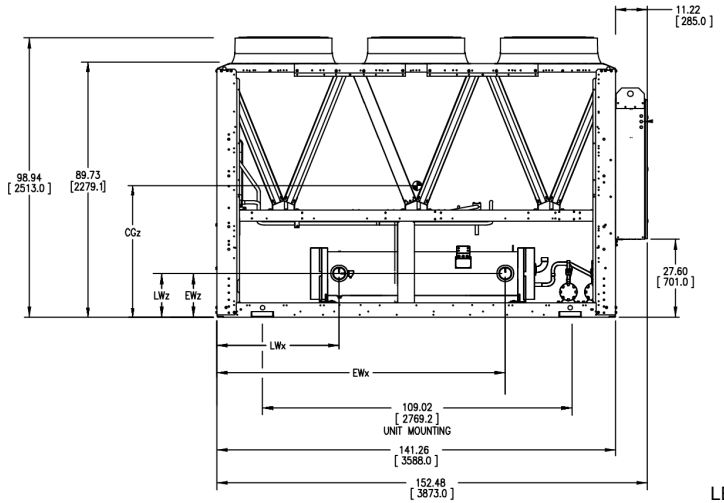
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
080–STD	CUAL	62.7 [1593]	39.2 [996]	41.4 [1052]	102.2 [2595]	31.1 [789]	15.4 [392]	43.3 [1100]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	62.0 [1574]	38.5 [979]	38.9 [988]												
090–STD	CUAL	62.9 [1597]	38.9 [987]	42.2 [1073]	102.2 [2595]	31.1 [789]	15.4 [392]	43.3 [1100]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	62.0 [1575]	38.2 [970]	39.4 [1001]												
100–STD	CUAL	62.9 [1596]	38.8 [987]	42.2 [1072]	102.2 [2595]	31.1 [789]	15.4 [392]	43.3 [1100]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	62.0 [1574]	38.2 [970]	39.4 [1001]												
092–STD	CUAL	62.9 [1597]	38.9 [987]	42.2 [1073]	102.2 [2595]	31.1 [789]	15.4 [392]	43.3 [1100]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	62.0 [1575]	38.2 [970]	39.4 [1001]												
102–STD	CUAL	62.9 [1596]	38.8 [987]	42.2 [1072]	102.2 [2595]	31.1 [789]	15.4 [392]	43.3 [1100]	31.1 [789]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	62.0 [1574]	38.2 [970]	39.4 [1001]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

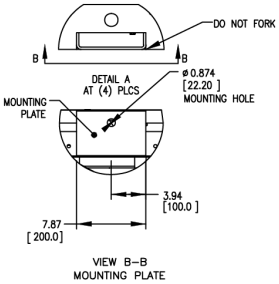
LEGEND

MCHX — Microchannel Heat Exchanger

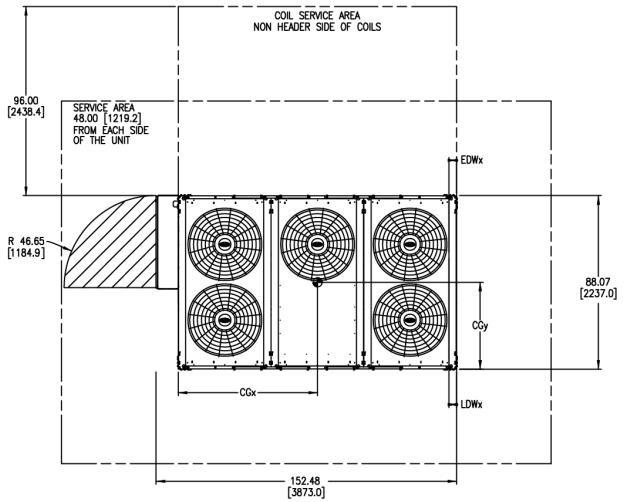
Fig. 12 — 30RC 080 Std/090 Std/100 Std/092 Std/102 Std DX (Direct Expansion) No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

080–STD, 090–STD, 100–STD, 092–STD, 102–STD, DX W/ PUMP SHOWN BELOW



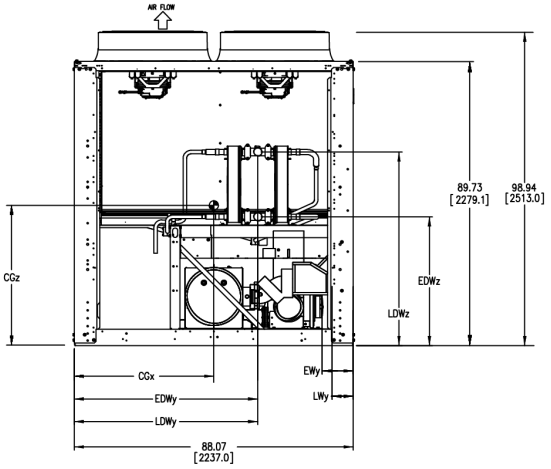
VIEW B–B
MOUNTING PLATE



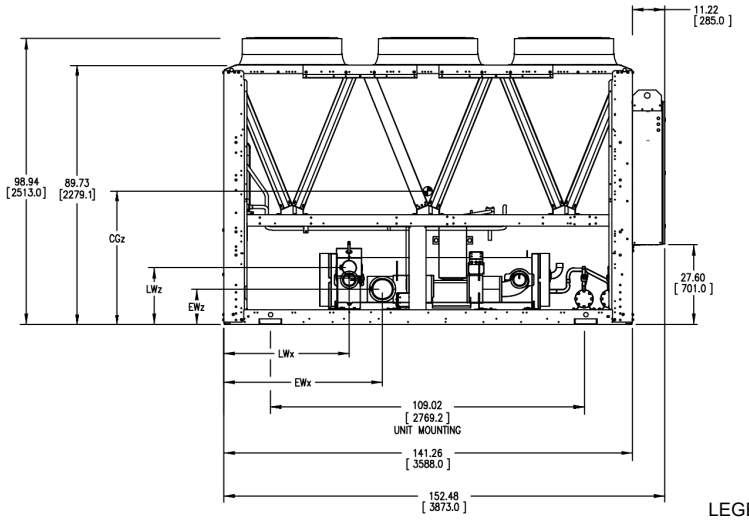
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
080–STD	CUAL	63.6 [1616]	44.4 [1128]	37.5 [952]	54.9 [1394]	9.8 [250]	12.2 [310]	43.3 [1100]	6.7 [171]	19.7 [500]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	63.1 [1603]	44.3 [1125]	35.1 [892]												
090–STD	CUAL	63.8 [1620]	44.0 [1118]	38.2 [971]	54.9 [1394]	9.8 [250]	12.2 [310]	43.3 [1100]	6.7 [171]	19.7 [500]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	63.1 [1604]	43.9 [1116]	35.6 [904]												
100–STD	CUAL	63.7 [1619]	44.0 [1117]	38.2 [971]	54.9 [1394]	9.8 [250]	12.2 [310]	43.3 [1100]	6.7 [171]	19.7 [500]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	63.1 [1603]	43.9 [1116]	35.6 [904]												
092–STD	CUAL	63.8 [1620]	44.0 [1118]	38.2 [971]	54.9 [1394]	9.8 [250]	12.2 [310]	43.3 [1100]	6.7 [171]	19.7 [500]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	63.1 [1604]	43.9 [1116]	35.6 [904]												
102–STD	CUAL	63.7 [1619]	44.0 [1117]	38.2 [971]	54.9 [1394]	9.8 [250]	12.2 [310]	43.3 [1100]	6.7 [171]	19.7 [500]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	63.1 [1603]	43.9 [1116]	35.6 [904]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

LEGEND

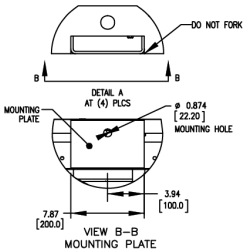
MCHX — Microchannel Heat Exchanger

Fig. 13 — 30RC 080 Std/090 Std/100 Std/092 Std/102 Std DX (Direct Expansion) with Pump

NOTES:

1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

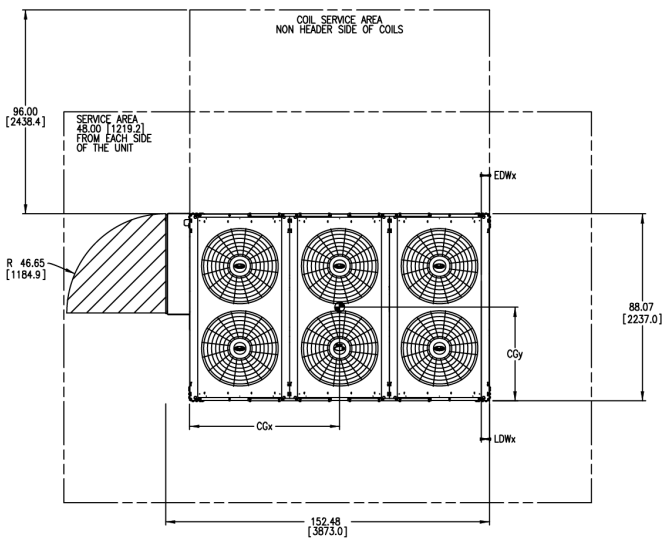
100–STD, 110–STD, 120–CMPT, 102–STD, 112–STD, 122–CMPT, 132–CMPT, 152–CMPT BPHE W/O PUMP SHOWN BELOW



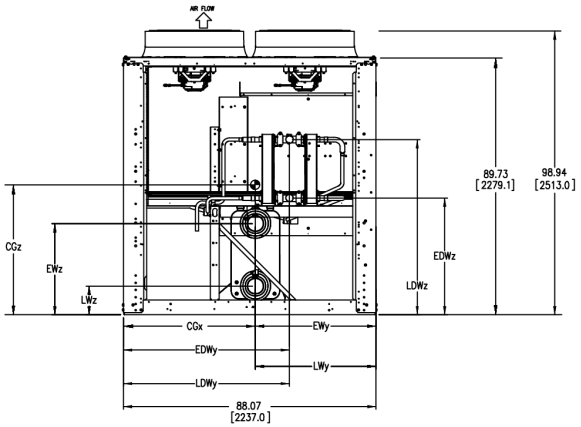
VIEW B–B
MOUNTING PLATE

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
100–STD	CUAL	64.7 [1644]	38.1 [967]	46.1 [1172]	19.5 [495]	42.1 [1069]	31.8 [807]	19.5 [495]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.0 [1625]	37.2 [945]	43.4 [1102]												
110–STD	CUAL	64.8 [1645]	36.9 [937]	44.3 [1126]	16.6 [421]	42.1 [1069]	31.8 [807]	16.6 [421]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.0 [1627]	36.0 [913]	41.5 [1055]												
120–CMPT	CUAL	67.5 [1716]	37.2 [944]	43.5 [1105]	16.6 [421]	42.1 [1069]	31.8 [807]	16.6 [421]	42.1 [1069]	10.0 [254]	--	--	--	--	--	--
	MCHX	67.2 [1707]	36.3 [921]	40.8 [1035]												
102–STD	CUAL	64.7 [1644]	38.1 [967]	46.1 [1172]	19.5 [495]	42.1 [1069]	31.8 [807]	19.5 [495]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.0 [1625]	37.2 [945]	43.4 [1102]												
112–STD	CUAL	64.8 [1645]	36.9 [937]	44.3 [1126]	15.2 [386]	40.8 [1038]	24.0 [611]	15.2 [386]	40.8 [1038]	8.4 [213]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.0 [1627]	36.0 [913]	41.5 [1055]												
122–CMPT	CUAL	67.5 [1716]	37.2 [944]	43.5 [1105]	16.6 [421]	42.1 [1069]	31.8 [807]	16.6 [421]	42.1 [1069]	10.0 [254]	--	--	--	--	--	--
	MCHX	67.2 [1707]	36.3 [921]	40.8 [1035]												
132–CMPT	CUAL	67.8 [1723]	36.2 [919]	42.1 [1070]	14.9 [379]	42.1 [1069]	31.8 [807]	14.9 [379]	42.1 [1069]	10.0 [254]	--	--	--	--	--	--
	MCHX	67.5 [1715]	35.2 [895]	39.4 [1000]												
152–CMPT	CUAL	69.7 [1771]	36.1 [916]	41.0 [1041]	12.8 [326]	42.1 [1069]	31.8 [807]	12.9 [328]	42.1 [1069]	10.0 [254]	--	--	--	--	--	--
	MCHX	69.6 [1769]	35.1 [893]	38.1 [969]												

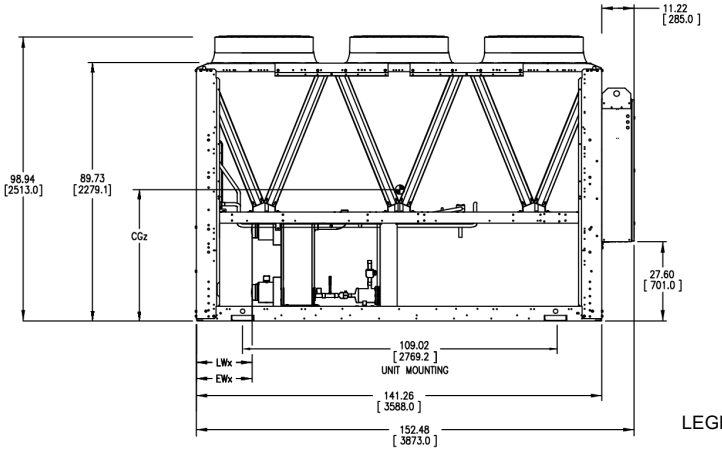
⊕ SYMBOL DENOTES CG



PLAN VIEW



NON–CONTROL PANEL END VIEW



REAR VIEW

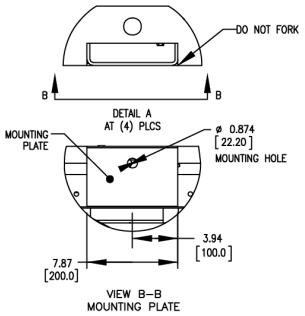
LEGEND

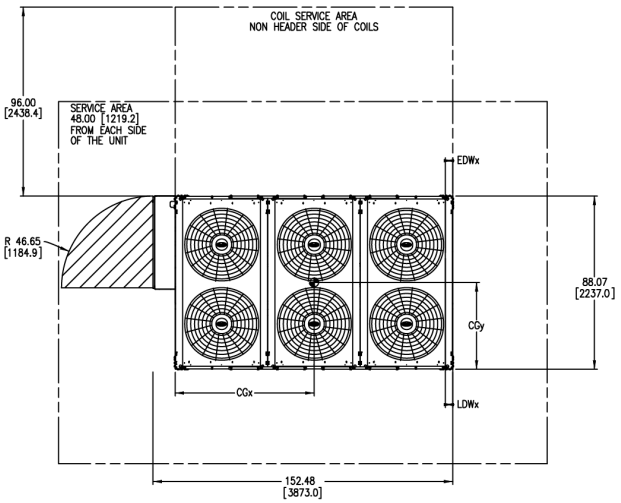
BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

Fig. 14 — 30RC 100 Std/110 Std/120 Compact/102 Std/112 Std/122 Compact/132 Compact/152 Compact BPHE No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

100–STD, 110–STD, 102–STD, 112–STD, BPHE W/ PUMP SHOWN BELOW

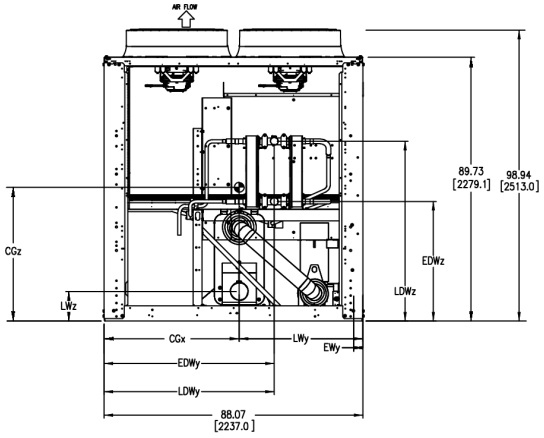




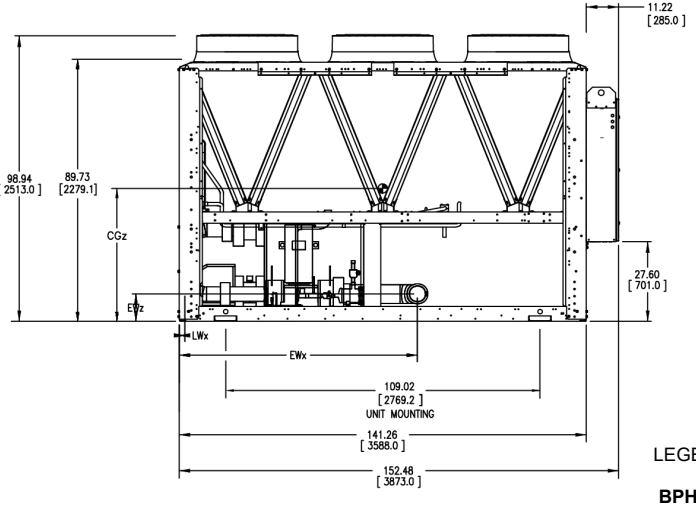
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]				LEAVING WATER (LW) MM [INCH]				ENTERING DESUPERHEATER WATER (EDW) MM [INCH]				LEAVING DESUPERHEATER WATER (LDW) MM [INCH]			
		CGx	CGy	CGz	X ±25	Y DUAL PUMP ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25		X ±25	Y ±25	Z ±25		X ±25	Y ±25	Z ±25	
100–STD	CUAL	71.1 [1806]	43.8 [1113]	40.9 [1038]	82.6 [2099]	58.5 [1486]	3.2 [80]	9.4 [240]	2.0 [50]	42.1 [1069]	10.0 [254]		3.9 [98]	57.9 [1471]	40.7 [1033]		3.9 [98]	57.9 [1471]	61.1 [1552]	
	MCHX	71.2 [1808]	43.7 [1111]	38.1 [968]																
110–STD	CUAL	70.8 [1798]	42.6 [1081]	39.6 [1007]	82.6 [2099]	58.5 [1486]	3.2 [82]	9.4 [240]	2.0 [51]	42.1 [1069]	10.0 [254]		3.9 [98]	57.9 [1471]	40.7 [1033]		3.9 [98]	57.9 [1471]	61.1 [1552]	
	MCHX	70.8 [1799]	42.4 [1076]	36.9 [938]																
102–STD	CUAL	71.1 [1806]	43.8 [1113]	40.9 [1038]	82.6 [2099]	58.5 [1486]	3.2 [80]	9.4 [240]	2.0 [50]	42.1 [1069]	10.0 [254]		3.9 [98]	57.9 [1471]	40.7 [1033]		3.9 [98]	57.9 [1471]	61.1 [1552]	
	MCHX	71.2 [1808]	43.7 [1111]	38.1 [968]																
112–STD	CUAL	70.8 [1798]	42.6 [1081]	39.6 [1007]	82.6 [2099]	58.5 [1486]	3.2 [80]	9.4 [240]	2.0 [51]	42.1 [1069]	10.0 [254]		3.9 [98]	57.9 [1471]	40.7 [1033]		3.9 [98]	57.9 [1471]	61.1 [1552]	
	MCHX	70.8 [1799]	42.4 [1076]	36.9 [938]																

◆ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

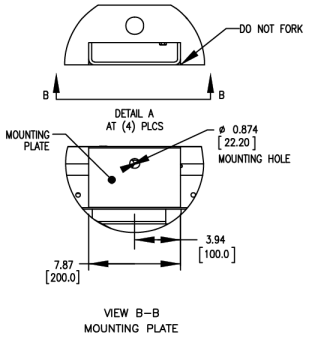
LEGEND

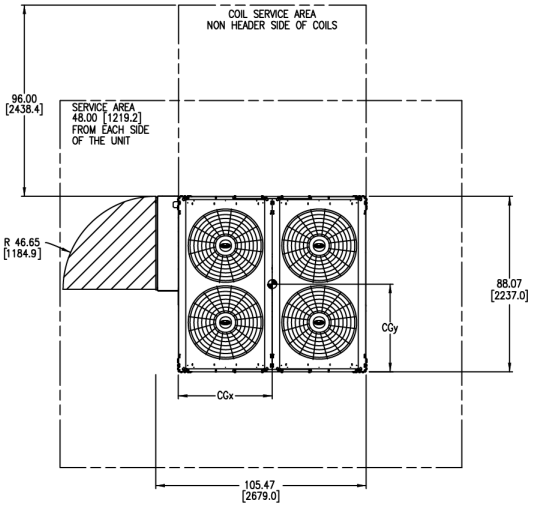
BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

Fig. 15 — 30RC 100 Std/110 Std/102 Std/112 Std BPHE with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

102–CMPT BPHE W/O PUMP SHOWN BELOW

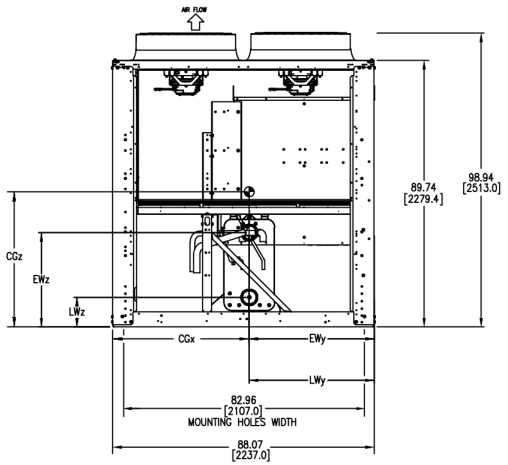




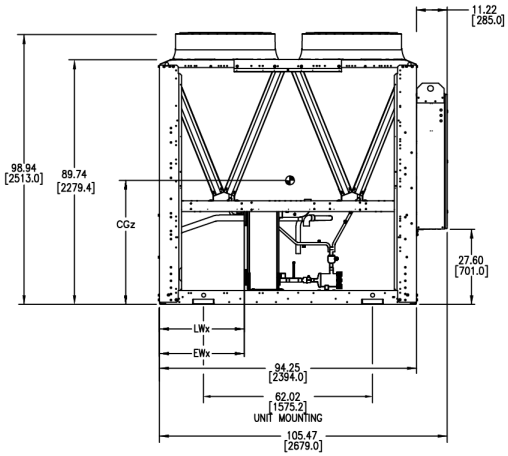
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
102–CMPT	CUAL	40.5 [1030]	36.8 [935]	42.1 [1068]	31.1 [790]	42.1 [1068]	31.8 [807]	31.1 [790]	42.1 [1068]	10.0 [254]	--	--	--	--	--	--
	MCHX	39.9 [1013]	36.0 [915]	39.5 [1004]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

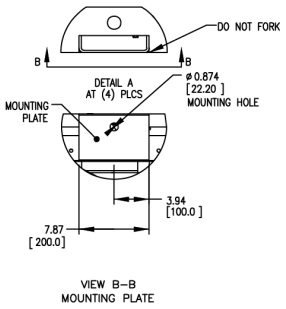
LEGEND

BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

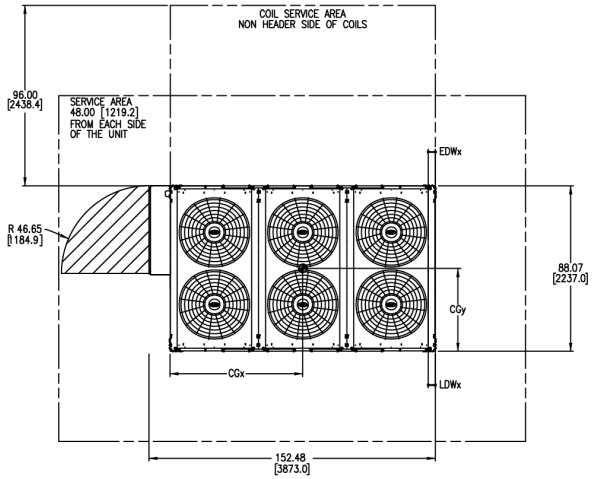
Fig. 16 — 30RC 102 Compact BPHE No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

110–STD AND 112–STD DX W/O PUMP SHOWN BELOW



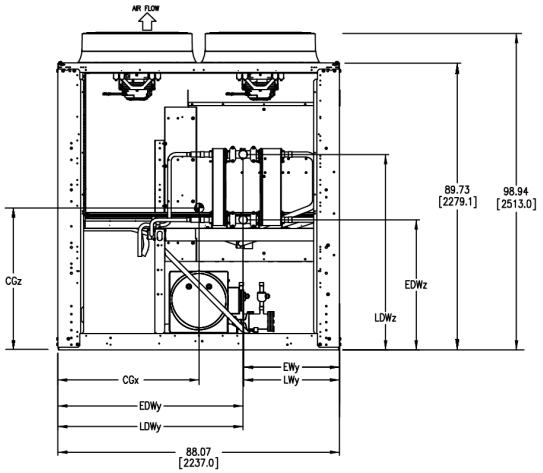
VIEW B–B
MOUNTING PLATE



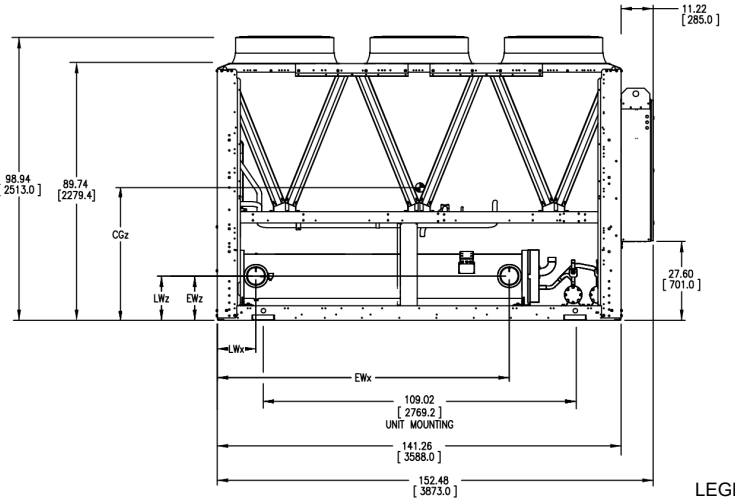
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
110–STD	CUAL	65.3 [1659]	37.9 [963]	40.5 [1028]	102.2 [2595]	30.0 [762]	15.4 [392]	13.5 [343]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.8 [1645]	37.2 [945]	37.7 [957]												
112–STD	CUAL	65.3 [1659]	37.9 [963]	40.5 [1028]	102.2 [2595]	30.0 [762]	15.4 [392]	13.5 [343]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	64.8 [1645]	37.2 [945]	37.7 [957]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

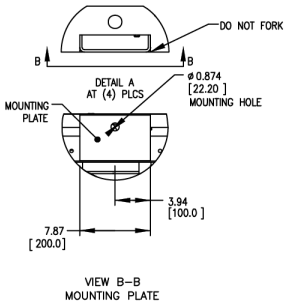
LEGEND

MCHX — Microchannel Heat Exchanger

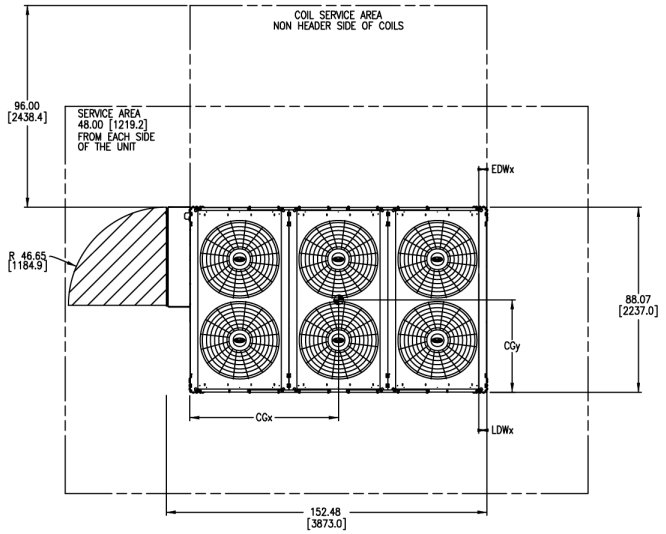
Fig. 17 — 30RC 110 Std/112 Std DX (Direct Expansion) No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

110–STD AND 112–STD DX W/ PUMP SHOWN BELOW



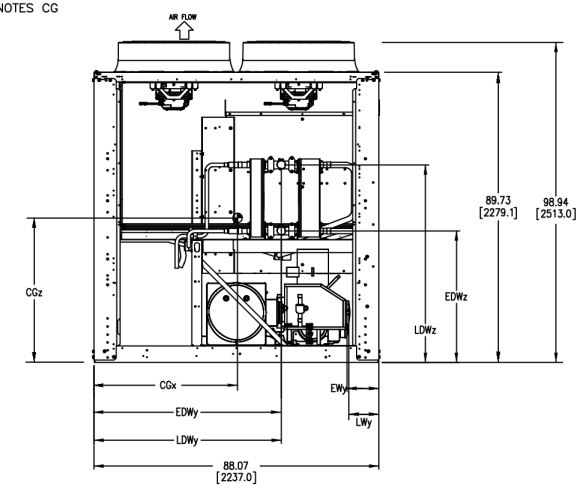
VIEW B–B
MOUNTING PLATE



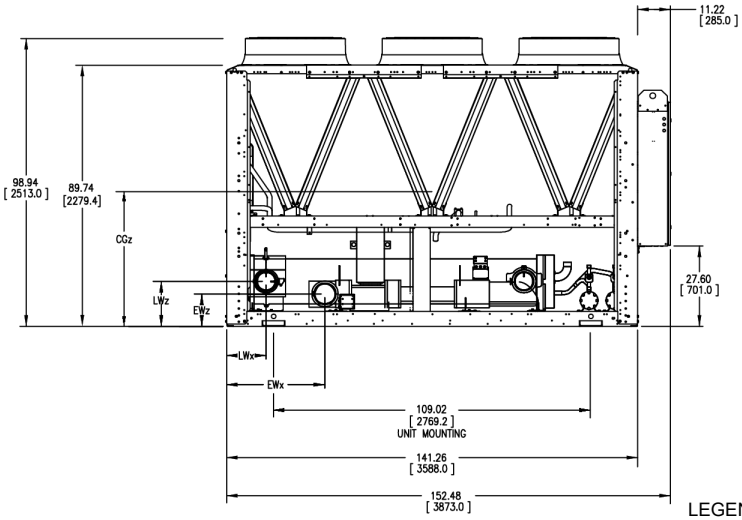
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
110–STD	CUAL	68.9 [1751]	43.4 [1102]	36.6 [929]	33.7 [856]	9.8 [250]	11.1 [282]	13.5 [343]	9.2 [235]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	68.8 [1747]	43.3 [1099]	34.0 [864]												
112–STD	CUAL	68.9 [1751]	43.4 [1102]	36.6 [929]	33.7 [856]	9.8 [250]	11.1 [282]	13.5 [343]	9.3 [237]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	68.8 [1747]	43.3 [1099]	34.0 [864]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

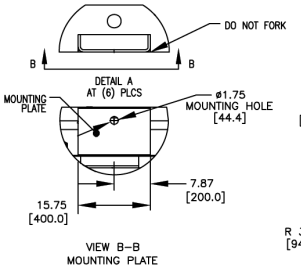
LEGEND

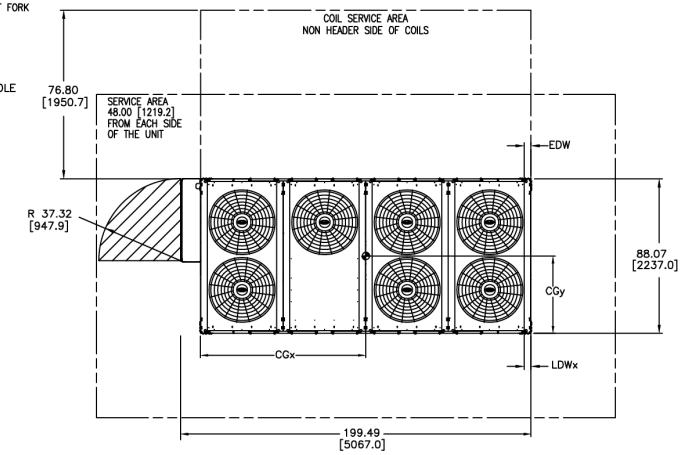
MCHX — Microchannel Heat Exchanger

Fig. 18 — 30RC 110 Std/112 Std DX (Direct Expansion) with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

120–STD, 130–STD, 150–STD, 122–STD, 132–STD, 152–STD, BPHE W/O PUMP SHOWN BELOW

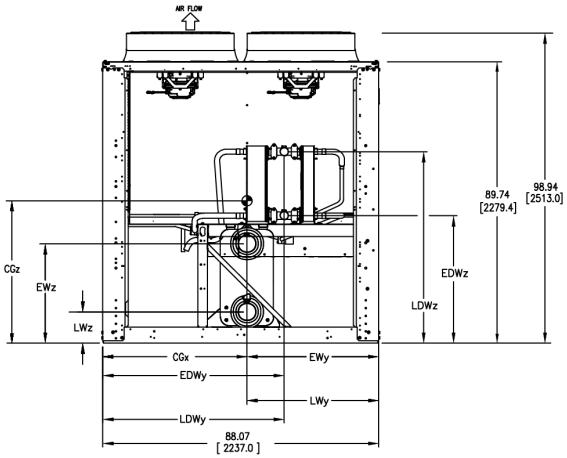




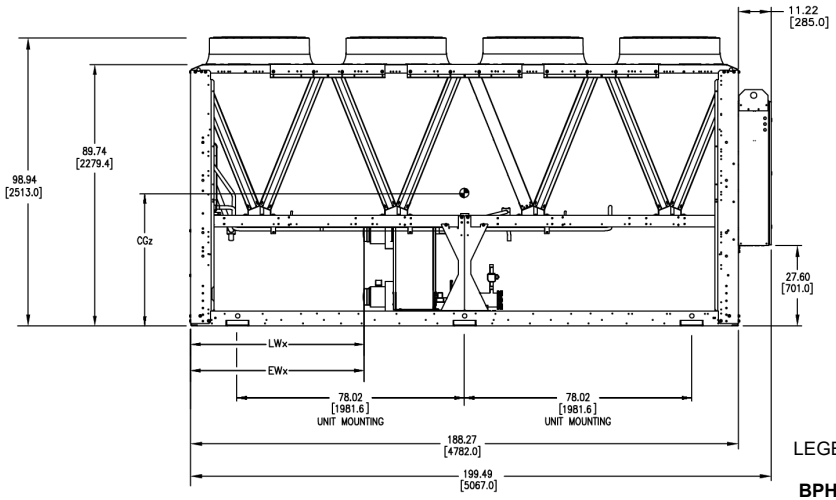
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
120–STD	CUAL	89.6 [2277]	38.6 [981]	45.9 [1165]	59.6 [1513]	42.1 [1069]	31.7 [806]	59.6 [1515]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	88.9 [2258]	37.7 [957]	43.1 [1095]												
130–STD	CUAL	86.9 [2207]	37.2 [945]	45.2 [1148]	66.8 [1698]	42.1 [1069]	31.8 [807]	66.8 [1698]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	85.9 [2183]	36.2 [920]	42.3 [1074]												
150–STD	CUAL	88.6 [2252]	37.1 [941]	44.2 [1122]	55.8 [1418]	42.1 [1069]	31.7 [806]	55.8 [1418]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	87.9 [2234]	36.1 [916]	41.2 [1046]												
122–STD	CUAL	89.6 [2277]	38.6 [981]	45.9 [1165]	55.8 [1418]	42.1 [1069]	31.7 [806]	55.8 [1418]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	88.9 [2258]	37.7 [957]	43.1 [1095]												
132–STD	CUAL	86.9 [2207]	37.2 [945]	45.2 [1148]	66.8 [1698]	42.1 [1069]	31.8 [807]	66.8 [1698]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	85.9 [2183]	36.2 [920]	42.3 [1074]												
152–STD	CUAL	88.6 [2252]	37.1 [941]	44.2 [1122]	55.8 [1418]	42.1 [1069]	31.7 [806]	55.8 [1418]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	87.9 [2234]	36.1 [916]	41.2 [1046]												

◆ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

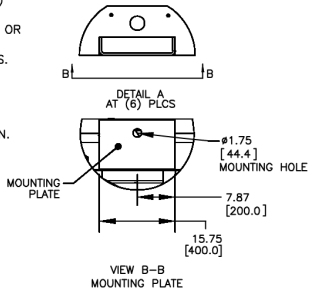
LEGEND

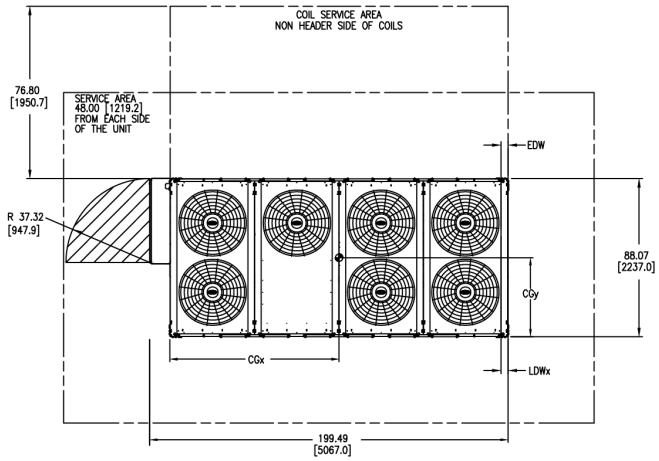
BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

Fig. 19 — 30RC 120 Std/130 Std/150 Std/122 Std/132 Std/152 Std BPHE No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

120–STD, 130–STD, 150–STD, 122–STD, 132–STD, 152–STD, BPHE W/ PUMP SHOWN BELOW

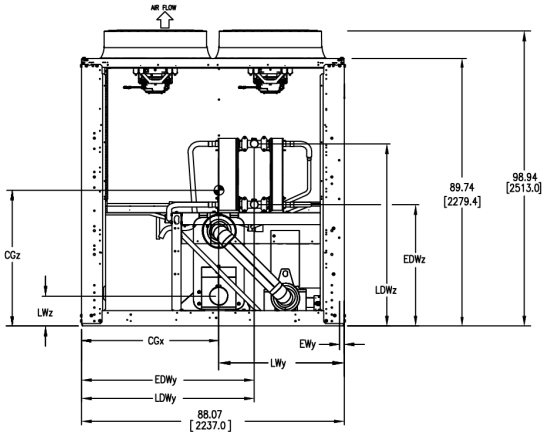




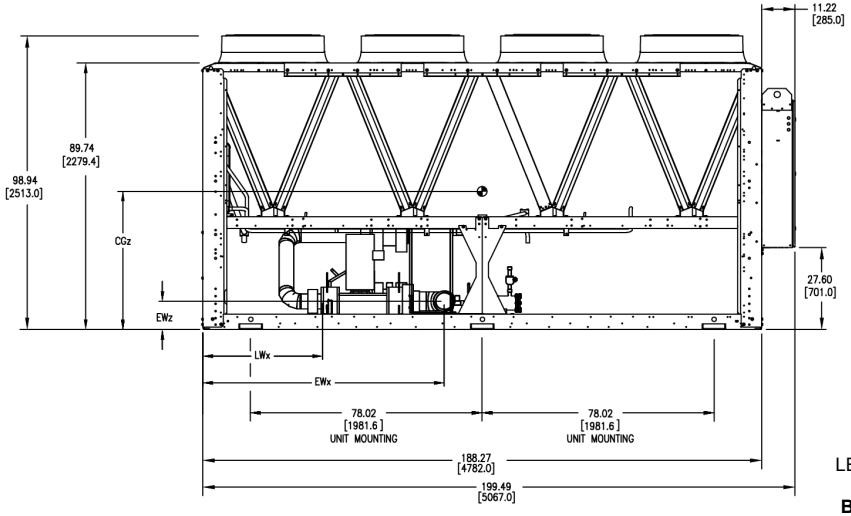
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
120–STD	CUAL	94.9 [2411]	43.1 [1096]	41.3 [1048]	81.3 [2065]	1.6 [40]	9.4 [240]	40.4 [1025]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	94.9 [2410]	42.8 [1088]	38.6 [979]												
130–STD	CUAL	92.3 [2344]	41.7 [1059]	41.0 [1041]	81.3 [2065]	1.6 [40]	9.4 [240]	40.4 [1025]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	92.1 [2339]	41.3 [1050]	38.1 [968]												
150–STD	CUAL	95.1 [2415]	41.7 [1059]	40.4 [1027]	81.3 [2065]	1.6 [40]	9.4 [240]	38.3 [973]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	95.2 [2418]	41.4 [1051]	37.6 [954]												
122–STD	CUAL	94.9 [2411]	43.1 [1096]	41.3 [1048]	81.3 [2065]	1.6 [40]	9.4 [240]	42.0 [1068]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	94.9 [2410]	42.8 [1088]	38.6 [979]												
132–STD	CUAL	92.3 [2344]	41.7 [1059]	41.0 [1041]	81.3 [2065]	1.6 [40]	9.4 [240]	40.4 [1025]	42.1 [1069]	10.0 [254]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	92.1 [2339]	41.3 [1050]	38.1 [968]												
152–STD	CUAL	95.1 [2415]	41.7 [1059]	40.4 [1027]	81.3 [2065]	1.6 [40]	9.4 [240]	38.3 [973]	42.1 [1069]	10.0 [253]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	95.2 [2418]	41.4 [1051]	37.6 [954]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

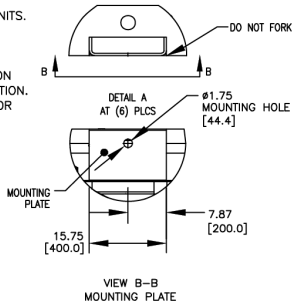
LEGEND

BPHE — Brazed Plate Heat Exchanger
MCHX — Microchannel Heat Exchanger

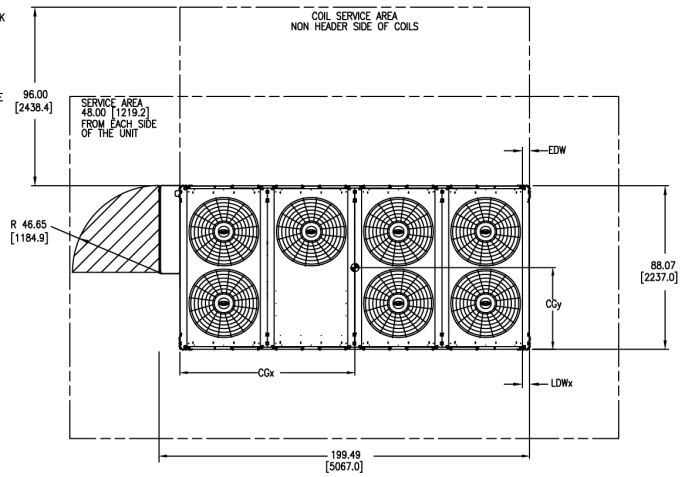
Fig. 20 — 30RC 120 Std/130 Std/150 Std/122 Std/132 Std/152 Std BPHE with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

120–STD, 130–STD, 122–STD, 132–STD, DX W/O PUMP SHOWN BELOW



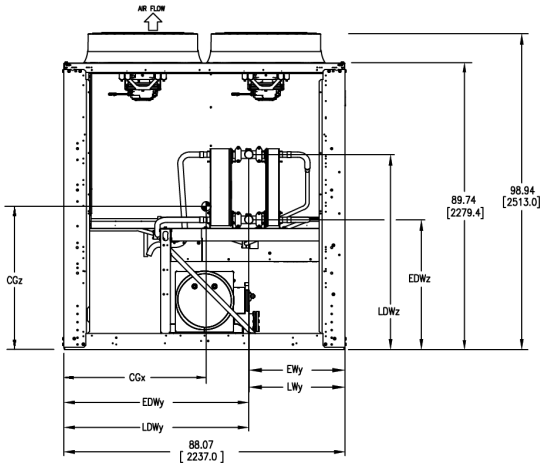
VIEW B–B
MOUNTING PLATE



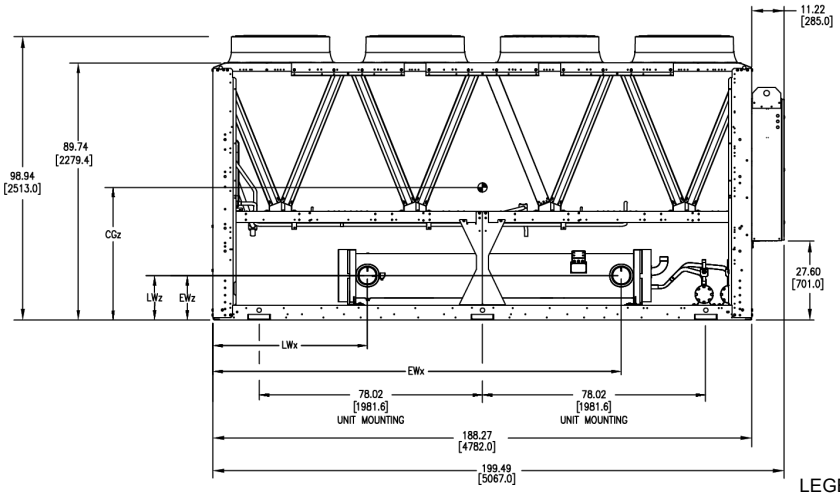
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
120–STD	CUAL	88.2 [2240]	39.3 [998]	42.3 [1073]	142.6 [3622]	30.0 [762]	15.4 [392]	54.0 [1371]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	87.4 [2221]	38.5 [979]	39.5 [1003]												
130–STD	CUAL	85.7 [2176]	38.0 [964]	41.9 [1064]	142.6 [3622]	30.0 [762]	15.4 [392]	54.0 [1371]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	84.7 [2152]	37.2 [944]	38.9 [989]												
122–STD	CUAL	88.2 [2240]	39.3 [998]	42.3 [1073]	142.6 [3622]	30.0 [762]	15.4 [392]	54.0 [1371]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	87.4 [2221]	38.5 [979]	39.5 [1003]												
132–STD	CUAL	85.7 [2176]	38.0 [964]	41.9 [1064]	142.6 [3622]	30.0 [762]	15.4 [392]	54.0 [1371]	30.0 [762]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	84.7 [2152]	37.2 [944]	38.9 [989]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

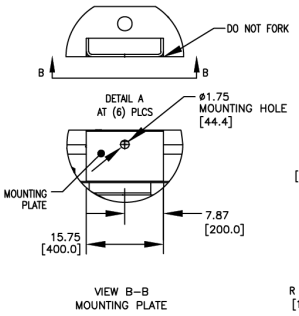
LEGEND

MCHX — Microchannel Heat Exchanger

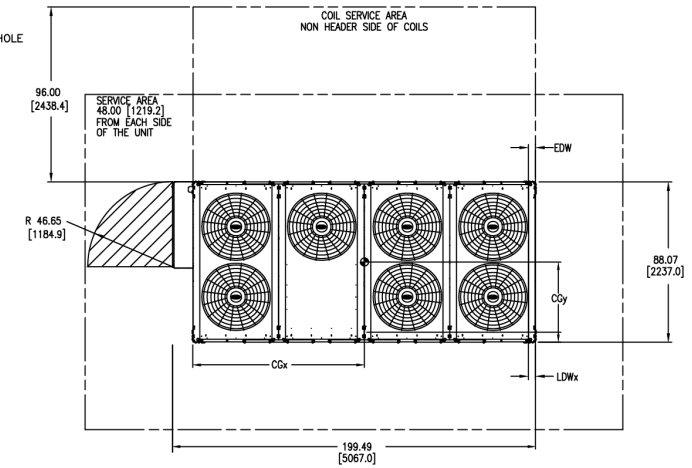
Fig. 21 — 30RC 120 Std/130 Std/122 Std/132 Std DX (Direct Expansion) No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

120–STD, 130–STD, 122–STD, 132–STD, DX W/ PUMP SHOWN BELOW



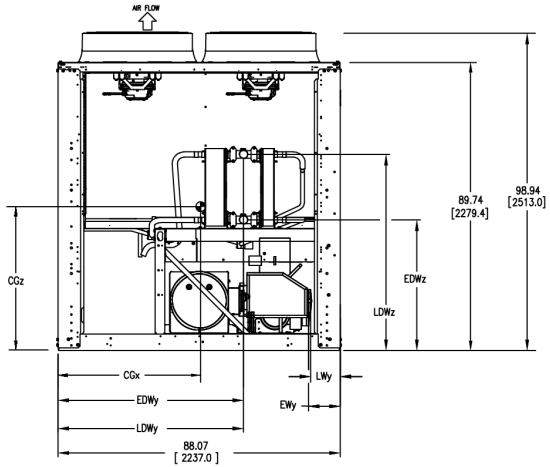
VIEW B–B
MOUNTING PLATE



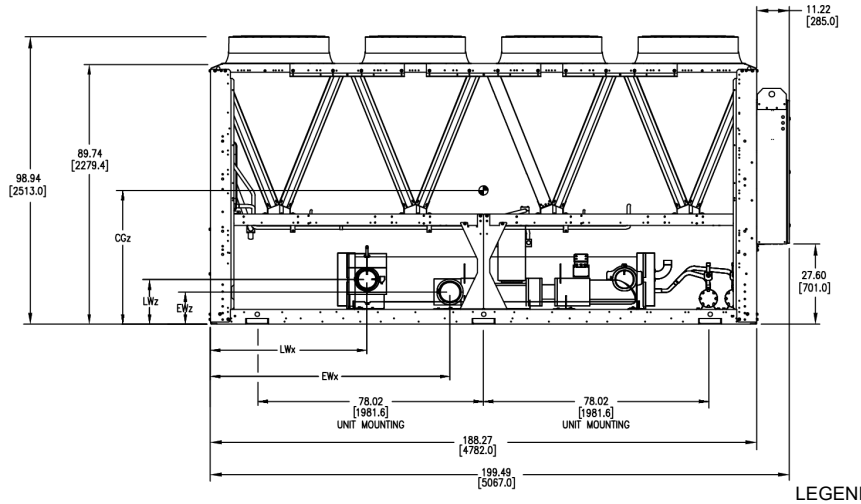
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
120–STD	CUAL	87.4 [2221]	44.0 [1117]	38.4 [976]	82.6 [2097]	9.8 [250]	11.1 [282]	54.0 [1371]	9.2 [235]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	86.7 [2203]	43.8 [1112]	35.8 [909]												
130–STD	CUAL	85.3 [2168]	42.6 [1082]	38.3 [973]	82.6 [2097]	9.8 [250]	11.1 [282]	54.0 [1371]	9.2 [235]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	84.5 [2146]	42.4 [1077]	35.5 [902]												
122–STD	CUAL	87.4 [2221]	44.0 [1117]	38.4 [976]	82.6 [2097]	9.8 [250]	11.1 [282]	54.0 [1371]	9.2 [235]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	86.7 [2203]	43.8 [1112]	35.8 [909]												
132–STD	CUAL	85.3 [2168]	42.6 [1082]	38.3 [973]	82.6 [2097]	9.8 [250]	11.1 [282]	54.0 [1371]	9.2 [235]	15.4 [392]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	84.5 [2146]	42.4 [1077]	35.5 [902]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

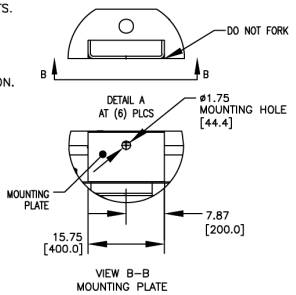
LEGEND

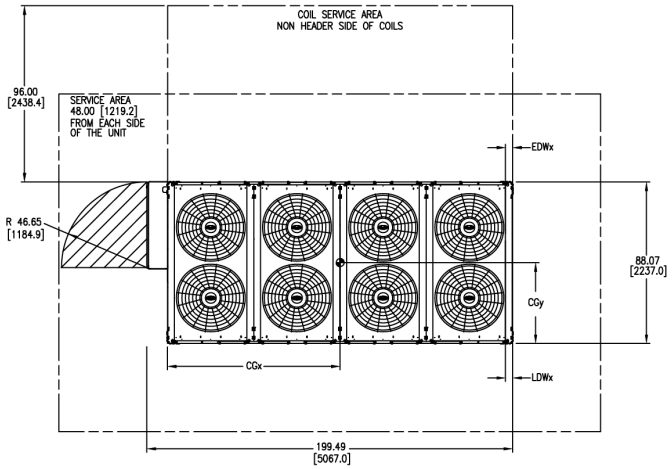
MCHX — Microchannel Heat Exchanger

Fig. 22 — 30RC 120 Std/130 Std/122 Std/132 Std DX (Direct Expansion) with Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

150–STD AND 152–STD DX W/O PUMP SHOWN BELOW

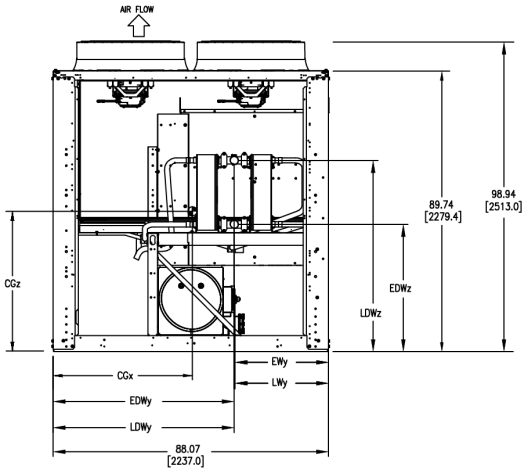




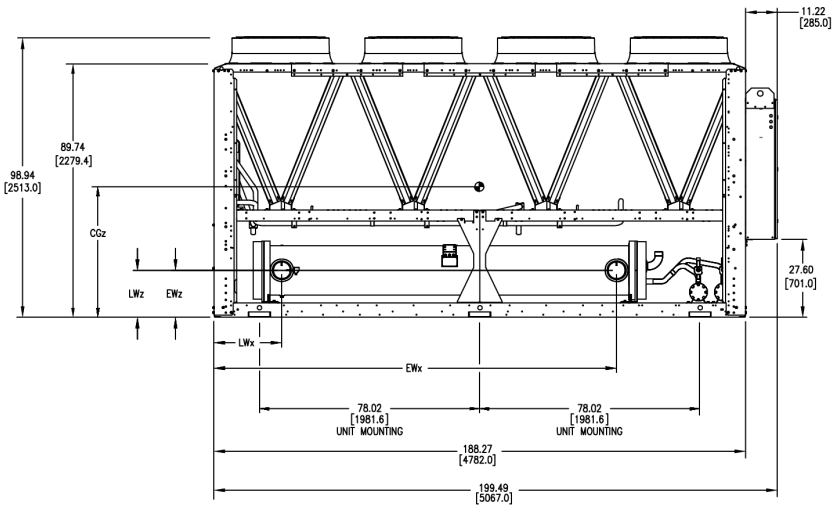
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
150–STD	CUAL	90.3 [2292]	38.3 [972]	39.4 [1001]	142.6 [3622]	29.9 [759]	16.6 [422]	24.0 [609]	29.9 [759]	16.6 [422]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	89.8 [2282]	37.6 [954]	36.4 [926]												
152–STD	CUAL	90.3 [2292]	38.3 [972]	39.4 [1001]	142.6 [3622]	29.9 [759]	16.6 [422]	24.0 [609]	29.9 [759]	16.6 [422]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	89.8 [2282]	37.6 [954]	36.4 [926]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

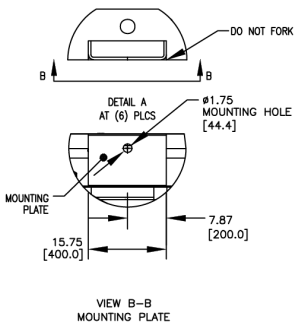
LEGEND

MCHX — Microchannel Heat Exchanger

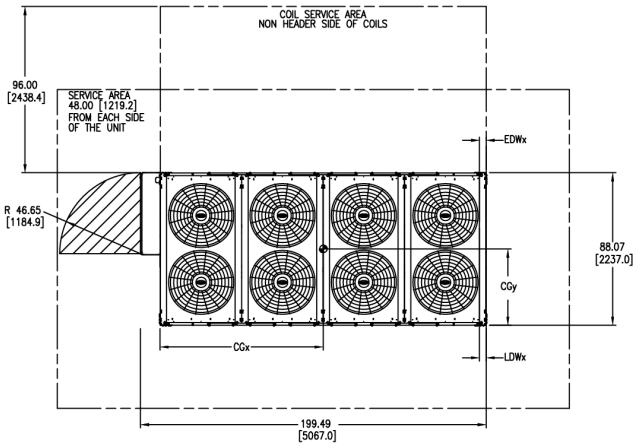
Fig. 23 — 30RC 150 Std/152 Std DX (Direct Expansion) No Pump

NOTES:
1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP– DO NOT RESTRICT. SIDES AND END– 6' FROM SOLID SURFACE.
   FOR COIL NON–HEADER SIDE– 8' REQUIRED FOR COIL SERVICE AREA.
   IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPARATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW.
2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335–2–40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
4. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES.
5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES.
6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES.
7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

150–STD AND 152–STD DX W/ PUMP SHOWN BELOW



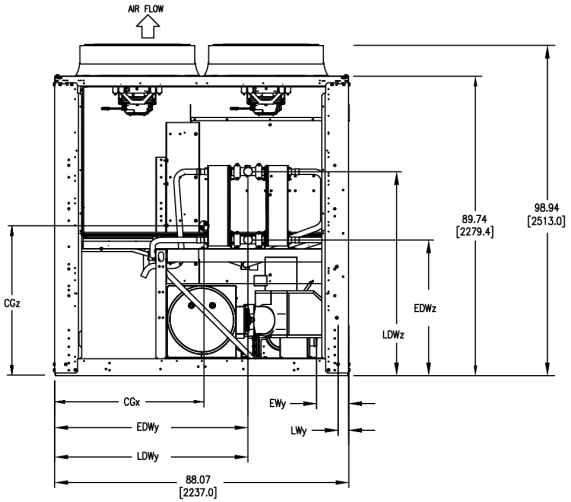
VIEW B–B
MOUNTING PLATE



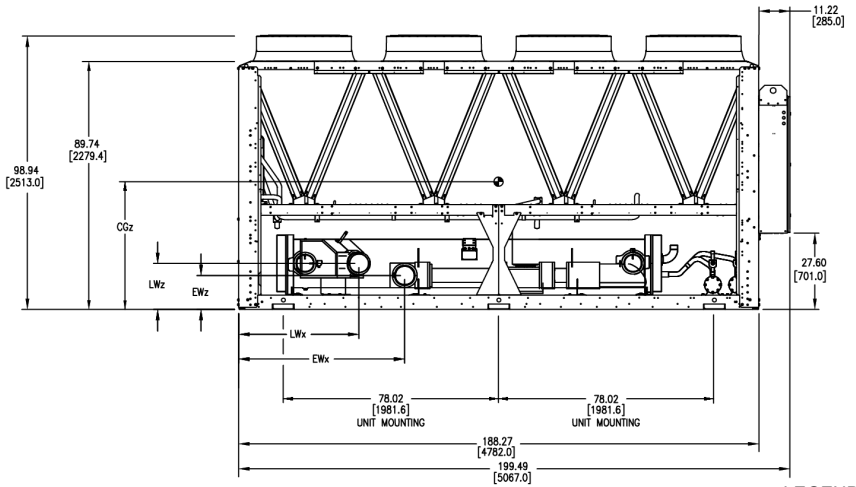
PLAN VIEW

UNIT	COILS	CENTER OF GRAVITY MM [INCH]			ENTERING WATER (EW) MM [INCH]			LEAVING WATER (LW) MM [INCH]			ENTERING DESUPERHEATER WATER (EDW) MM [INCH]			LEAVING DESUPERHEATER WATER (LDW) MM [INCH]		
		CGx	CGy	CGz	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25	X ±25	Y ±25	Z ±25
150–STD	CUAL	90.3 [2294]	43.4 [1103]	36.2 [920]	60.0 [1525]	9.7 [246]	12.3 [312]	43.5 [1106]	3.2 [81]	16.6 [422]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	90.0 [2285]	43.3 [1101]	33.5 [851]												
152–STD	CUAL	90.3 [2294]	43.4 [1103]	36.2 [920]	60.0 [1525]	9.7 [246]	12.3 [312]	43.5 [1106]	3.2 [81]	16.6 [422]	3.9 [98]	57.9 [1471]	40.7 [1033]	3.9 [98]	57.9 [1471]	61.1 [1552]
	MCHX	90.0 [2285]	43.3 [1101]	33.5 [851]												

⊕ SYMBOL DENOTES CG



NON–CONTROL PANEL END VIEW



REAR VIEW

LEGEND

MCHX — Microchannel Heat Exchanger

Fig. 24 — 30RC 150 Std/152 Std DX (Direct Expansion) with Pump

Table 1 — Unit Weights, No Pump

MCHX/BPHE — English

Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	Total		
065/067	459.5	1013.6	1244.4	690.3	3407.9		
070/072	537.8	989.5	1282.8	831.0	3641.0		
080 C[a]/082	560.1	1023.5	1379.7	916.3	3879.5		
092 C[a]	560.1	1023.5	1379.7	916.3	3879.5		
102 C[a]	578.9	1039.6	1398.7	938.0	3955.2		
080	849.8	1109.0	1431.3	1172.1	4562.1		
090/092	857.8	1112.8	1461.6	1206.6	4638.8		
100/102	886.6	1119.0	1470.6	1238.3	4714.5		
110/112	928.8	1169.0	1616.2	1376.1	5090.1		
120 C/122 C[a]	968.9	1129.3	1576.9	1416.5	5091.6		
132 C[a]	1011.9	1166.6	1709.7	1554.9	5443.0		
152 C[a]	1078.6	1127.9	1684.9	1635.7	5527.1		
Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	746.9	831.9	916.9	1185.0	1100.1	1015.1	5795.8
130/132	712.4	858.6	1004.7	1358.1	1211.9	1065.7	6211.3
150/152	761.4	868.2	975.0	1338.4	1231.6	1124.7	6299.3

MCHX/BPHE — SI

Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	Total		
065/067	208.4	459.7	564.4	313.1	1545.5		
070/072	243.9	448.8	581.7	376.9	1651.3		
080 C[a]/082	254.0	464.1	625.7	415.5	1759.4		
092 C[a]	254.0	464.1	625.7	415.5	1759.4		
102 C[a]	262.5	471.5	634.3	425.4	1793.7		
080	385.4	502.9	649.1	531.5	2069.0		
090/092	389.0	504.7	662.9	547.2	2103.8		
100/102	402.1	507.5	667.0	561.6	2138.1		
110/112	421.2	530.1	733.0	624.1	2308.4		
120 C/122 C[a]	439.4	512.2	715.1	642.4	2309.1		
132 C[a]	458.9	529.1	775.4	705.2	2468.5		
152 C[a]	489.2	511.5	764.1	741.8	2506.6		
Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	338.7	377.3	415.8	537.4	498.9	460.3	2628.5
130/132	323.1	389.4	455.7	615.9	549.6	483.3	2816.9
150/152	345.3	393.8	442.2	607.0	558.5	510.1	2856.8

AL-CU/BPHE — English

Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	Total		
065/067	560.7	1115.4	1343.4	788.6	3808.2		
070/072	639.0	1091.4	1381.7	929.3	4041.4		
080 C[a]/082	661.3	1125.3	1478.6	1014.6	4279.8		
092 C[a]	661.3	1125.3	1478.6	1014.6	4279.8		
102 C[a]	680.1	1141.5	1497.7	1036.3	4355.5		
080	984.4	1244.7	1555.7	1295.4	5080.2		
090/092	1009.9	1265.3	1609.8	1354.4	5239.3		
100/102	1038.7	1271.4	1618.8	1386.1	5315.0		
110/112	1080.9	1321.4	1764.4	1523.9	5690.6		
120 C/122 C[a]	1121.0	1281.8	1725.0	1564.3	5692.0		
132 C[a]	1163.9	1319.1	1857.8	1702.7	6043.5		
152 C[a]	1230.7	1280.3	1833.1	1783.5	6127.5		
Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	874.4	956.8	1039.3	1296.9	1214.5	1132.1	6514.0
130/132	847.4	993.9	1140.4	1489.9	1343.4	1196.9	7011.9
150/152	896.5	1003.6	1110.7	1470.2	1363.1	1256.0	7100.0

AL-CU/BPHE — SI

Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	Total		
065/067	254.3	505.9	609.2	357.7	1727.1		
070/072	289.8	494.9	626.6	421.5	1832.8		
080 C[a]/082	299.9	510.3	670.6	460.2	1940.9		
092 C[a]	299.9	510.3	670.6	460.2	1940.9		
102 C[a]	308.4	517.7	679.2	470.0	1975.3		
080	446.4	564.5	705.5	587.5	2303.9		
090/092	458.0	573.8	730.1	614.2	2376.1		
100/102	471.1	576.6	734.1	628.6	2410.4		
110/112	490.2	599.3	800.2	691.1	2580.8		
120 C/122 C[a]	508.4	581.3	782.3	709.4	2581.4		
132 C[a]	527.9	598.2	842.6	772.2	2740.8		
152 C[a]	558.1	580.6	831.3	808.8	2778.9		
Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	396.6	433.9	471.3	588.2	550.8	513.4	2954.2
130/132	384.3	450.8	517.2	675.7	609.3	542.8	3180.0
150/152	406.6	455.1	503.7	666.7	618.2	569.6	3219.9

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).

LEGEND

Al-Cu — Aluminum Fins, Copper Tubing
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
MCHX — Microchannel Heat Exchanger

Table 1 — Unit Weights, No Pump (cont)

MCHX/DX — English

Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	Total		
065/067	623.8	1216.6	1437.6	844.8	4122.9		
070/072	695.1	1188.3	1472.5	979.3	4335.2		
080 C[a]/082	705.2	1221.3	1569.4	1053.3	4549.2		
080	934.5	1349.4	1674.7	1259.8	5218.3		
090/092	939.0	1356.2	1705.5	1288.3	5289.0		
100/102	938.6	1358.2	1708.5	1288.9	5294.2		
110/112	1058.3	1365.5	1808.0	1500.8	5732.6		
Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	803.3	942.0	1080.6	1348.7	1210.1	1071.5	6456.3
130/132	755.7	961.9	1168.1	1522.3	1316.1	1109.8	6834.0
150/152	960.1	1062.5	1164.8	1529.4	1427.0	1324.7	7468.4

MCHX/DX — SI

Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	Total		
065/067	282.9	551.8	652.0	383.1	1869.8		
070/072	315.2	538.9	667.8	444.1	1966.1		
080 C[a]/082	319.8	553.9	711.7	477.7	2063.1		
080	423.8	612.0	759.5	571.3	2366.6		
090/092	425.9	615.1	773.5	584.2	2398.7		
100/102	425.7	616.0	774.8	584.5	2401.0		
110/112	479.9	619.3	820.0	680.6	2599.8		
Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	364.3	427.2	490.1	611.7	548.8	485.9	2928.0
130/132	342.7	436.3	529.8	690.4	596.9	503.3	3099.3
150/152	435.4	481.8	528.3	693.6	647.2	600.8	3387.0

AL-CU/DX — English

Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	Total		
065/067	725.0	1318.4	1536.6	943.2	4523.3		
070/072	796.3	1290.1	1571.5	1077.7	4735.5		
080 C[a]/082	806.4	1323.1	1668.3	1151.6	4949.5		
080	1069.1	1485.1	1799.0	1383.1	5736.3		
090/092	1091.1	1508.7	1853.7	1436.0	5889.5		
100/102	1090.7	1510.7	1856.7	1436.7	5894.7		
110/112	1210.3	1518.0	1956.2	1648.6	6333.1		
Unit	Mounting Weight (lb) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	930.9	1066.9	1203.0	1460.6	1324.6	1188.5	7174.5
130/132	890.8	1097.3	1303.8	1654.1	1447.6	1241.1	7634.6
150/152	1095.2	1197.8	1300.4	1661.2	1558.6	1455.9	8269.1

AL-CU/DX — SI

Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	Total		
065/067	328.8	597.9	696.9	427.8	2051.4		
070/072	361.1	585.1	712.7	488.7	2147.6		
080 C[a]/082	365.7	600.1	756.6	522.3	2244.7		
080	484.9	673.5	815.9	627.3	2601.5		
090/092	494.8	684.2	840.7	651.3	2671.0		
100/102	494.6	685.1	842.0	651.6	2673.4		
110/112	548.9	688.4	887.2	747.6	2872.1		
Unit	Mounting Weight (kg) — No Pump						
30RC	A	B	C	D	E	F	Total
120/122	422.2	483.9	545.6	662.4	600.7	539.0	3253.8
130/132	404.0	497.6	591.3	750.2	656.5	562.8	3462.4
150/152	496.7	543.2	589.8	753.4	706.8	660.3	3750.1

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).

LEGEND

Al-Cu — Aluminum Fins, Copper Tubing
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
MCHX — Microchannel Heat Exchanger

Table 2 — Unit Weights, Single Pump

MCHX/BPHE — English

Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	Total		
065/067	703.2	1,181.6	1,266.0	787.6	3,938.4		
070/072	781.4	1,157.5	1,304.3	928.2	4,171.6		
080 C[a]/082	804.3	1,198.4	1,407.4	1,013.3	4,423.4		
080	1,144.2	1,237.6	1,408.8	1,315.4	5,106.1		
090/092	1,152.2	1,241.4	1,439.2	1,350.0	5,182.8		
100/102	1,206.1	1,238.1	1,445.3	1,413.3	5,302.8		
110/112	1,248.3	1,288.1	1,590.9	1,551.1	5,678.4		
Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	975.3	982.7	990.0	1,166.5	1,159.2	1,151.8	6,425.6
130/132	940.8	1,009.3	1,077.9	1,339.6	1,271.0	1,202.4	6,841.0
150/152	1,017.7	1,033.6	1,049.5	1,312.2	1,296.3	1,280.4	6,989.5

MCHX/BPHE — SI

Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	Total		
065/067	318.9	535.9	574.2	357.2	1,786.1		
070/072	354.4	525.0	591.5	421.0	1,891.9		
080 C[a]/082	364.8	543.5	638.3	459.6	2,006.1		
080	518.9	561.3	638.9	596.6	2,315.7		
090/092	522.5	563.0	652.7	612.2	2,350.5		
100/102	547.0	561.5	655.5	641.0	2,404.9		
110/112	566.1	584.2	721.5	703.5	2,575.2		
Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	442.3	445.7	449.0	529.0	525.7	522.4	2,914.1
130/132	426.6	457.7	488.8	607.5	576.4	545.3	3,102.5
150/152	461.5	468.7	476.0	595.1	587.9	580.7	3,169.8

AL-CU/BPHE — English

Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	Total		
065/067	804.4	1,283.4	1,365.0	885.9	4,338.7		
070/072	882.7	1,259.3	1,403.3	1,026.6	4,571.9		
080 C[a]/082	905.5	1,300.2	1,506.4	1,111.7	4,823.8		
080	1,278.9	1,373.4	1,533.2	1,438.7	5,624.1		
090/092	1,304.3	1,393.9	1,587.3	1,497.7	5,783.3		
100/102	1,358.2	1,390.5	1,593.5	1,561.1	5,903.3		
110/112	1,400.4	1,440.6	1,739.1	1,698.9	6,278.9		
Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,102.8	1,107.6	1,112.4	1,278.4	1,273.6	1,268.8	7,143.8
130/132	1,075.8	1,144.7	1,213.5	1,471.4	1,402.5	1,333.7	7,641.7
150/152	1,152.7	1,168.9	1,185.1	1,444.0	1,427.8	1,411.6	7,790.1

AL-CU/BPHE — SI

Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	Total		
065/067	364.8	582.1	619.0	401.8	1,967.7		
070/072	400.3	571.1	636.4	465.6	2,073.4		
080 C[a]/082	410.7	589.7	683.2	504.2	2,187.6		
080	580.0	622.8	695.3	652.5	2,550.6		
090/092	591.5	632.1	719.9	679.2	2,622.8		
100/102	616.0	630.6	722.7	708.0	2,677.2		
110/112	635.1	653.3	788.7	770.5	2,847.6		
Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	500.1	502.3	504.5	579.8	577.6	575.4	3,239.8
130/132	487.9	519.1	550.4	667.3	636.1	604.8	3,465.6
150/152	522.8	530.1	537.5	654.9	647.5	640.2	3,532.9

MCHX/DX — English

Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	Total		
065/067	929.9	1,427.9	1,465.5	967.5	4,790.8		
070/072	1,001.2	1,399.5	1,500.4	1,102.0	5,003.1		
080 C[a]/082	1,042.3	1,447.4	1,583.7	1,178.5	5,251.9		
080	1,210.4	1,624.1	1,755.5	1,341.7	5,931.6		
090/092	1,214.9	1,631.0	1,786.3	1,370.2	6,002.3		
100/102	1,214.5	1,633.0	1,789.3	1,370.8	6,007.6		
110/112	1,447.3	1,592.1	1,821.2	1,676.5	6,537.2		
Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	999.7	1,141.9	1,284.0	1,413.6	1,271.5	1,129.3	7,240.0
130/132	952.0	1,161.8	1,371.6	1,587.2	1,377.4	1,167.6	7,617.6
150/152	1,193.2	1,299.8	1,406.3	1,606.4	1,499.9	1,393.3	8,398.9

MCHX/DX — SI

Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	Total		
065/067	421.7	647.6	664.6	438.8	2,172.7		
070/072	454.1	634.7	680.4	499.8	2,269.0		
080 C[a]/082	472.7	656.4	718.2	534.5	2,381.8		
080	548.9	736.6	796.1	608.5	2,690.1		
090/092	551.0	739.7	810.1	621.4	2,722.2		
100/102	550.8	740.6	811.5	621.7	2,724.5		
110/112	656.4	722.0	826.0	760.3	2,964.7		
Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	453.4	517.9	582.3	641.1	576.6	512.1	3,283.4
130/132	431.8	526.9	622.0	719.8	624.7	529.5	3,454.7
150/152	541.2	589.5	637.8	728.5	680.2	631.9	3,809.0

AL-CU/DX — English

Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	Total		
065/067	1,031.1	1,529.7	1,564.4	1,065.9	5,191.1		
070/072	1,102.4	1,501.3	1,599.3	1,200.4	5,403.4		
080 C[a]/082	1,143.5	1,549.3	1,682.6	1,276.9	5,652.2		
080	1,345.0	1,759.8	1,879.8	1,465.0	6,449.7		
090/092	1,367.0	1,783.5	1,934.5	1,517.9	6,602.8		
100/102	1,366.6	1,785.4	1,937.5	1,518.6	6,608.1		
110/112	1,599.4	1,744.6	1,969.4	1,824.3	7,137.7		
Unit	Mounting Weight (lb) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,127.2	1,266.8	1,406.4	1,525.5	1,385.9	1,246.3	7,958.2
130/132	1,087.1	1,297.2	1,507.2	1,719.0	1,508.9	1,298.9	8,418.3
150/152	1,328.3	1,435.2	1,542.0	1,738.2	1,631.4	1,524.5	9,199.6

AL-CU/DX — SI

Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	Total		
065/067	467.6	693.7	709.5	483.4	2,354.3		
070/072	500.0	680.9	725.3	544.4	2,450.5		
080 C[a]/082	518.6	702.6	763.1	579.1	2,563.4		
080	610.0	798.1	852.5	664.4	2,925.0		
090/092	619.9	808.8	877.3	688.4	2,994.5		
100/102	619.8	809.7	878.7	688.7	2,996.9		
110/112	725.4	791.2	893.2	827.3	3,237.0		
Unit	Mounting Weight (kg) — Single Pump						
30RC	A	B	C	D	E	F	Total
120/122	511.2	574.5	637.8	691.8	628.5	565.2	3,609.2
130/132	493.0	588.3	683.5	779.6	684.3	589.1	3,817.8
150/152	602.4	650.9	699.3	788.3	739.9	691.4	4,172.1

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).

LEGEND

Al-Cu — Aluminum Fins, Copper Tubing
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
MCHX — Microchannel Heat Exchanger

Table 3 — Unit Weights, Dual Pump

MCHX/BPHE — English

Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	896.4	1,404.0	1,326.0	818.3	4,444.7		
070/072	974.6	1,379.9	1,364.3	959.0	4,677.8		
080 C[a]/082	1,030.8	1,443.5	1,465.6	1,052.9	4,992.8		
080	1,431.3	1,418.3	1,406.5	1,419.4	5,675.4		
090/092	1,439.3	1,422.1	1,436.8	1,454.0	5,752.1		
100/102	1,505.0	1,429.5	1,445.0	1,520.5	5,899.9		
110/112	1,547.2	1,479.5	1,590.6	1,658.3	6,275.5		
Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,166.4	1,140.6	1,114.9	1,173.6	1,199.3	1,225.0	7,019.8
130/132	1,131.8	1,167.3	1,202.7	1,346.6	1,311.1	1,275.7	7,435.3
150/152	1,232.2	1,192.9	1,153.7	1,298.7	1,338.0	1,377.2	7,592.8

MCHX/BPHE — SI

Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	406.5	636.7	601.3	371.1	2,015.7		
070/072	442.0	625.8	618.7	434.9	2,121.5		
080 C[a]/082	467.5	654.6	664.7	477.5	2,264.3		
080	649.1	643.2	637.8	643.7	2,573.9		
090/092	652.7	644.9	651.6	659.4	2,608.7		
100/102	682.5	648.3	655.3	689.6	2,675.7		
110/112	701.7	671.0	721.4	752.1	2,846.0		
Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	529.0	517.3	505.6	532.2	543.9	555.6	3,183.6
130/132	513.3	529.4	545.5	610.7	594.6	578.5	3,372.0
150/152	558.8	541.0	523.2	589.0	606.8	624.6	3,443.4

AL-CU/BPHE — English

Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	997.6	1,505.8	1,424.9	916.7	4,845.0		
070/072	1,075.9	1,481.7	1,463.2	1,057.4	5,078.2		
080 C[a]/082	1,132.0	1,545.3	1,564.6	1,151.2	5,393.1		
080	1,565.9	1,554.0	1,530.8	1,542.7	6,193.5		
090/092	1,591.3	1,574.5	1,584.9	1,601.8	6,352.6		
100/102	1,657.1	1,581.9	1,593.2	1,668.3	6,500.4		
110/112	1,699.3	1,631.9	1,738.8	1,806.1	6,876.0		
Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,293.9	1,265.6	1,237.3	1,285.5	1,313.8	1,342.1	7,738.0
130/132	1,266.9	1,302.6	1,338.4	1,478.4	1,442.7	1,406.9	8,235.9
150/152	1,367.3	1,328.3	1,289.3	1,430.6	1,469.5	1,508.5	8,393.4

AL-CU/BPHE — SI

Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	452.4	682.9	646.2	415.7	2,197.3		
070/072	487.9	672.0	663.6	479.5	2,303.0		
080 C[a]/082	513.4	700.8	709.6	522.1	2,445.8		
080	710.2	704.8	694.3	699.7	2,808.8		
090/092	721.7	714.1	718.8	726.4	2,881.0		
100/102	751.5	717.4	722.5	756.6	2,948.0		
110/112	770.6	740.1	788.6	819.1	3,118.4		
Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	586.8	574.0	561.1	583.0	595.8	608.6	3,509.3
130/132	574.6	590.8	607.0	670.5	654.3	638.1	3,735.1
150/152	620.1	602.4	584.7	648.8	666.4	684.1	3,806.5

MCHX/DX — English

Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	1,072.6	1,645.1	1,547.7	975.2	5,240.6		
070/072	1,143.9	1,616.8	1,582.6	1,109.7	5,452.9		
080 C[a]/082	1,197.1	1,691.7	1,690.8	1,196.2	5,775.8		
080	1,395.3	1,839.0	1,820.0	1,376.3	6,430.6		
090/092	1,399.8	1,845.9	1,850.8	1,404.8	6,501.3		
100/102	1,399.5	1,847.8	1,853.8	1,405.5	6,506.6		
110/112	1,684.1	1,803.4	1,863.3	1,744.0	7,094.8		
Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,111.0	1,296.6	1,482.1	1,495.1	1,309.6	1,124.1	7,818.6
130/132	1,063.4	1,316.5	1,569.6	1,668.7	1,415.6	1,162.4	8,196.2
150/152	1,375.1	1,496.6	1,618.1	1,665.6	1,544.1	1,422.6	9,122.2

MCHX/DX — SI

Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	486.5	746.1	701.9	442.3	2,376.7		
070/072	518.8	733.2	717.7	503.3	2,473.0		
080 C[a]/082	542.9	767.2	766.8	542.5	2,619.4		
080	632.8	834.0	825.4	624.2	2,916.4		
090/092	634.9	837.1	839.4	637.1	2,948.5		
100/102	634.7	838.0	840.7	637.4	2,950.8		
110/112	763.8	817.9	845.0	790.9	3,217.6		
Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	503.9	588.0	672.1	678.1	593.9	509.8	3,545.8
130/132	482.3	597.1	711.8	756.8	642.0	527.2	3,717.1
150/152	623.6	678.7	733.8	755.4	700.3	645.2	4,137.0

AL-CU/DX — English

Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	1,173.9	1,746.9	1,646.6	1,073.6	5,641.0		
070/072	1,245.1	1,718.6	1,681.5	1,208.1	5,853.2		
080 C[a]/082	1,298.3	1,793.5	1,789.8	1,294.6	6,176.1		
080	1,530.0	1,974.7	1,944.3	1,499.6	6,948.7		
090/092	1,551.9	1,998.3	1,999.0	1,552.6	7,101.8		
100/102	1,551.5	2,000.3	2,002.0	1,553.2	7,107.1		
110/112	1,836.2	1,955.8	2,011.4	1,891.8	7,695.3		
Unit	Mounting Weight (lb) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	1,238.6	1,421.5	1,604.5	1,607.0	1,424.1	1,241.1	8,536.8
130/132	1,198.5	1,451.9	1,705.2	1,800.5	1,547.1	1,293.7	8,996.9
150/152	1,510.2	1,632.0	1,753.7	1,797.4	1,675.7	1,553.9	9,922.8

AL-CU/DX — SI

Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	Total		
065/067	532.4	792.2	746.8	486.9	2,558.3		
070/072	564.7	779.4	762.6	547.9	2,654.5		
080 C[a]/082	588.8	813.4	811.7	587.1	2,801.0		
080	693.9	895.6	881.8	680.1	3,151.3		
090/092	703.8	906.3	906.6	704.1	3,220.8		
100/102	703.6	907.2	907.9	704.4	3,223.2		
110/112	832.8	887.0	912.2	858.0	3,489.9		
Unit	Mounting Weight (kg) — Dual Pump						
30RC	A	B	C	D	E	F	Total
120/122	561.7	644.7	727.6	728.8	645.8	562.9	3,871.6
130/132	543.5	658.5	773.4	816.5	701.6	586.7	4,080.2
150/152	684.9	740.1	795.3	815.2	759.9	704.7	4,500.1

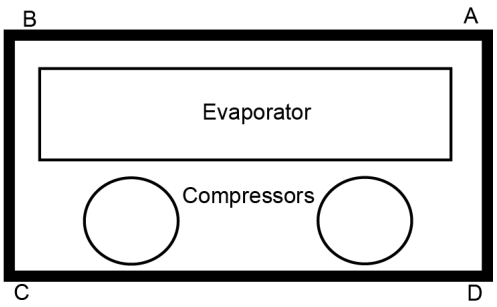
NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).

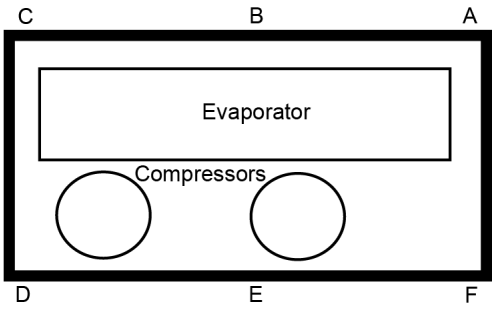
LEGEND

Al-Cu — Aluminum Fins, Copper Tubing
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
MCHX — Microchannel Heat Exchanger

30RC 065-112 Standard Tier Units
30RC 080 C-152 C Compact Tier Units



30RC 120-152 Standard Tier Units



NOTE: Corner weights are calculated at mounting locations. Refer to Fig. 6 to 24 (certified drawings) for mounting locations.

Fig. 25 — Unit Weights, Mounting Points Diagram

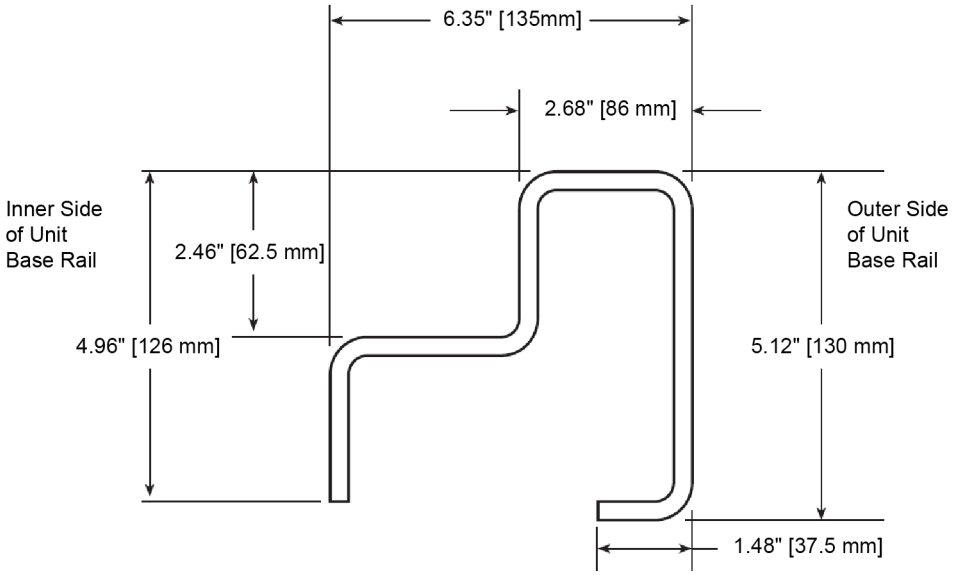


Fig. 26 — 30RC Base Rail Cross Section

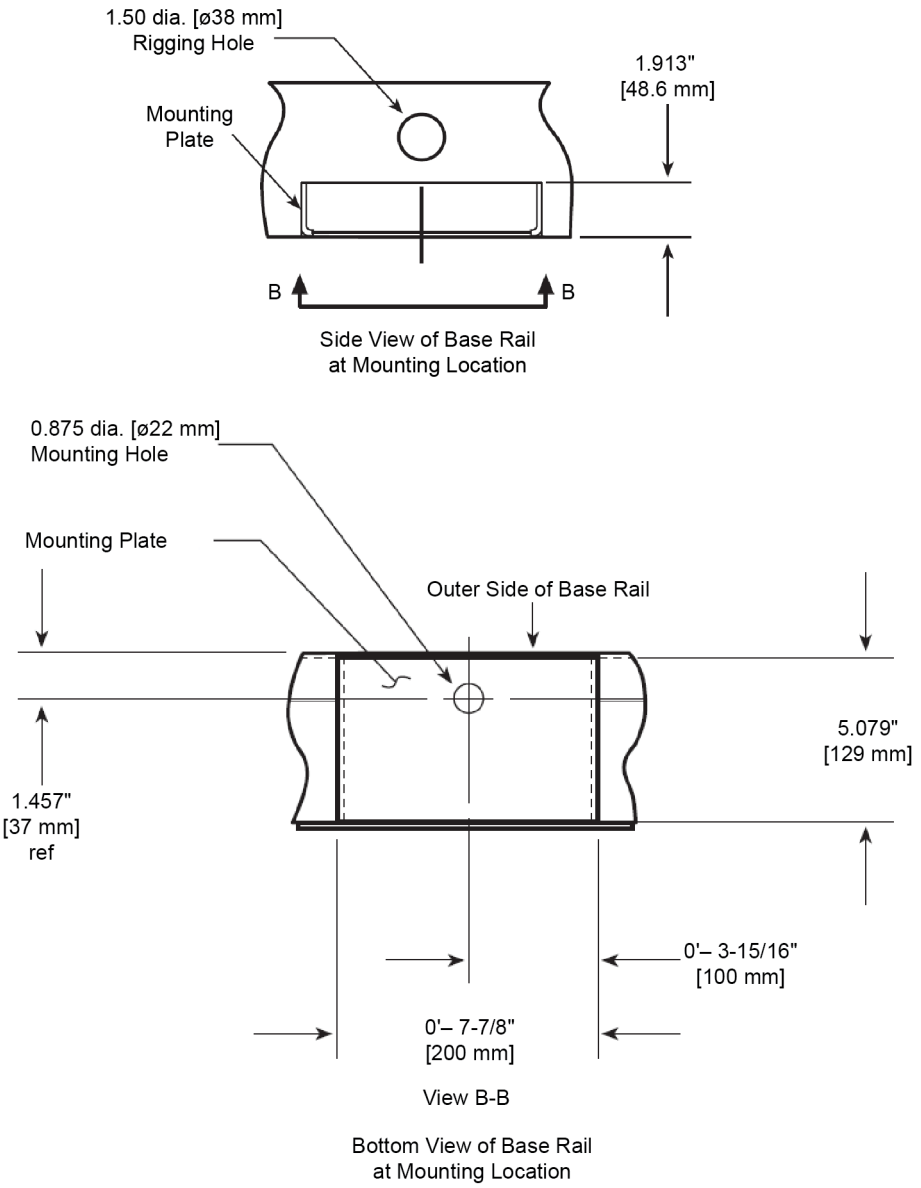


Fig. 27 — 30RC Mounting Plates

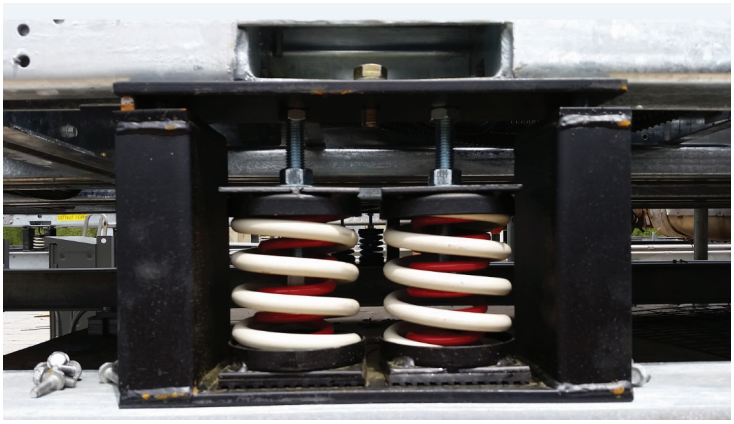


Fig. 28 — Isolation Springs

Table 4 — Physical Data, 30RC 065-150 R-410A — English

UNIT 30RC	065	070	080 C[a]	080	090	100	110	120 C[a]	120	130	150
CHASSIS DIMENSIONS (ft-in.)											
Length	8-9	8-9	8-9	12-8	12-8	12-8	12-8	12-8	16-7	16-7	16-7
Width	7-4	7-4	7-4	7-4	7-4	7-4	7-4	7-4	7-4	7-4	7-4
Height	8-3	8-3	8-3	8-3	8-3	8-3	8-3	8-3	8-3	8-3	8-3
Required Pad Length	7-10	7-10	7-10	11-9	11-9	11-9	11-9	11-9	15-8	15-8	15-8
MAXIMUM ALTITUDE (ft)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
SHIPPING WEIGHT (lb)[b]											
MCHX/BPHE	3409	3642	3881	4564	4640	4576	4918	4919	5623	6019	6082
MCHX/DX	4123	4335	4549	5218	5289	5294	5733	—	6456	6834	7468
AL-CU/BPHE	3810	4043	4281	5082	5241	5176	5518	5520	6342	6820	6882
AL-CU/DX	4523	4736	4949	5736	5890	5895	6333	—	7175	7635	8269
OPERATING WEIGHT (lb)[b]											
MCHX/BPHE	3451	3690	3936	4619	4695	4660	5024	5026	5730	6138	6217
MCHX/DX	4384	4596	4810	5479	5550	5555	6115	—	6838	7216	8081
AL-CU/BPHE	3852	4090	4336	5137	5296	5260	5625	5626	6448	6939	7018
AL-CU/DX	4784	4997	5211	5997	6151	6156	6715	—	7557	8017	8882
REFRIGERANT TYPE	R-410A, EXV Controlled System										
Refrigerant Charge — R-410A[c]											
MCHX/BPHE, Ckt A/Ckt B (lb)	25.0/25.8	25.2/32.8	32.7/33.1	35.4/38.7	40.8/40.2	41.9/40.6	49.5/41.3	35.5/53.8	42.9/55.6	56.0/56.0	56.0/56.4
MCHX/DX, Ckt A/Ckt B (lb)	26.9/28.1	26.9/34.8	34.5/35.1	37.0/41.0	42.4/43.2	43.1/43.4	51.2/44.5	—	44.3/58.7	56.5/58.8	59.6/61.7
AL-CU/BPHE, Ckt A/ Ckt B (lb)	65.3/ 66.1	65.5/ 73.1	72.5/ 72.9	75.7/ 99.2	101.3/ 100.6	102.3/ 101.1	110.0/ 101.7	75.3/ 133.5	103.3/ 136.1	136.3/ 136.6	136.5/ 137.0
AL-CU/DX, Ckt A/Ckt B (lb)	67.2/ 68.7	67.2/ 75.4	74.3/ 75.3	77.3/ 101.8	102.8/ 104.0	103.5/ 104.2	111.6/ 105.3	—	104.7/ 139.8	137.4/ 139.9	140.2/ 142.9
COMPRESSORS — R-410A											
Quantity	4	4	4	4	4	4	5	5	5	6	6
Speed (rpm)	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
(Qty) Compressor Model Number Ckt A	(2) DSH184	(2) DSH184	(2) DSH240	(2) DSH240	(2) DSH240	(2) DSH295	(3) DSH240	(2) DSH295	(2) DSH295	(3) DSH240	(3) DSH295
(Qty) Compressor Model Number Ckt B	(2) DSH184	(2) DSH240	(2) DSH240	(2) DSH240	(2) DSH295	(2) DSH295	(2) DSH295	(3) DSH295	(3) DSH295	(3) DSH295	(3) DSH295
Oil Charge (Pt, Ckt A/Ckt B)[c]	13.4/13.4	13.4/24.3	24.3/24.3	24.3/24.3	24.3/24.3	24.3/24.3	36.4/24.3	24.3/36.4	24.3/36.4	36.4/36.4	36.4/36.4
No. Capacity Steps											
Standard	4	4	4	4	4	4	5	5	5	6	6
Optional (Maximum)	5	5	5	5	5	5	6	6	6	7	7
Minimum Capacity Step (%)											
Standard	25	21	25	25	22	25	18	20	20	15	17
Optional	14	12	17	17	15	18	12	15	15	10	12
Capacity (%)											
Ckt A	50	43	50	50	44	50	55	40	40	44	50
Ckt B	50	57	50	50	56	50	45	60	60	56	50
EVAPORATOR											
STANDARD BPHE											
Weight (empty, lb)	132.4	151.3	174.0	174.0	174.0	94.6	118.1	118.1	118.1	131.6	148.4
Net Fluid Volume (gal)	4.5	5.2	6.1	6.1	6.1	8.7	11.4	11.4	11.4	12.9	14.8
Maximum Refrigerant Pressure (psig)	445	445	445	445	445	445	445	445	445	445	445
Maximum Water Side Pressure w/o Pumps (psig)	300	300	300	300	300	300	300	300	300	300	300
Maximum Water Side Pressure w/Pumps (psig)	150	150	150	150	150	150	150	150	150	150	150
Water Side Operating Temperatures, Max[d] / Min (°F)	70/15[e]	70/15[e]	70/15[e]	70/15[e]	70/15[e]	70/15[e]	70/15[e]	70/38	70/15[e]	70/15[e]	70/15[e]
OPTIONAL DX COOLER											
Weight (empty, lb)	856	856	856	856	856	856	970	970	970	970	1518
Net Fluid Volume (gal)	31.3	31.3	31.3	31.3	31.3	31.3	45.8	45.8	45.8	45.8	73.5
Maximum Refrigerant Pressure (psig)	445	445	445	445	445	445	445	445	445	445	445
Maximum Water Side Pressure w/o Pumps (psig)	300	300	300	300	300	300	300	300	300	300	300
Maximum Water Side Pressure w/Pumps (psig)	150	150	150	150	150	150	150	150	150	150	150
Water Side Operating Temperatures, Max[d] / Min (°F)	70/30[e]	70/30[e]	70/30[e]	70/30[e]	70/30[e]	70/30[e]	70/30[e]	—	70/30[e]	70/30[e]	70/30[e]
WATER CONNECTIONS (in.)											
STANDARD BPHE											
Inlet and Outlet, Victaulic®[f]	3	3	3	3	3	5	5	5	5	5	5
OPTIONAL DX COOLER											
Inlet and Outlet, Victaulic®[f]	4	4	4	4	4	4	6	—	6	6	6
Drain (NPT)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	—	3/4	3/4	3/4

Table 4 — Physical Data, 30RC 065-150 R-410A — English (cont)

UNIT 30RC	065	070	080 C[a]	080	090	100	110	120 C[a]	120	130	150
CONDENSER FANS											
Axial Flying Bird 6 — 8 Pole Fixed Speed											
Fan Speed (rpm) Standard	850	850	850	850	850	850	850	850	850	850	850
No. Blades…Diameter (in.)	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Airflow (cfm) AL-CU Coil	40, 575	40, 575	40, 575	50,719	60,863	60,863	60,863	60,863	71,007	81,151	81,151
Total Airflow (cfm) MCHX Coil	41,906	41,906	41,906	52,383	62,860	62,860	62,860	62,860	73,336	83,813	83,813
Axial Flying Bird 6 — 6 Pole Variable Speed											
Fan Speed (rpm) Standard	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
No. Blades…Diameter (in.)	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Airflow (cfm) AL-CU Coil	55,877	55,877	55,877	69,847	83,816	83,816	83,816	83,816	97,785	111,755	111,755
Total Airflow (cfm) MCHX Coil	57,633	57,633	57,633	72,041	86,449	86,449	86,449	86,449	100,857	115,266	115,266
CONDENSER COILS											
No. Coils (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Face Area (sq ft)	110	110	110	137	164	164	164	164	192	219	219
Max Working Refrigerant Pressure (psig)	656	656	656	656	656	656	656	656	656	656	656
OPTIONAL PARTIAL HEAT RECOVERY											
Weight (empty, lb)	64.8	78.5	92.2	92.2	92.2	92.2	110.6	—	110.6	129.1	129.1
Net Fluid Volume (gal)	1.00	1.50	2.00	2.00	2.00	2.00	2.66	—	2.66	3.33	3.33
Maximum Refrigerant Pressure (psig)	656	656	656	656	656	656	656	—	656	656	656
Maximum Water Side Pressure (psig)	300	300	300	300	300	300	300	—	300	300	300
Water Connections (in.)											
Inlet and Outlet, Victaulic®[f]	2	2	2	2	2	2	2	—	2	2	2
HYDRONIC MODULE (Optional)	Pump(s) with pressure/temperature taps and combination valve										
Pump	Single or Dual, 1800 or 3600 RPM										

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).
b. Neither shipping weight nor operating weight include any options.
c. All refrigerant and oil charge values reflect the standard chiller. See the Packaged Chiller Builder Program for charge values when the low LWT Fluid option is employed (when LWT is below 38°F [3.3°C]).
d. If the EWT requirement is greater than 70°F (21.1°C), a mixing loop is required. The EWT cannot exceed 70°F (21.1°C) for extended operation. Pulldown can be accomplished from 95°F (35°C).
e. 30RC air-cooled chillers with LWT below 38°F (3.3°C) are considered brine application chillers and require selection of either C, D, G, or H in position 11. Brine application chillers are factory-installed with lower refrigerant charge and, for R-32 chillers, increased oil charge.
f. Third-party trademarks and logos are the property of their respective owners.

LEGEND

Al-Cu — Aluminum Fin/Copper Tube Condenser Coil
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
EXV — Electronic Expansion Valve
MCHX — Microchannel Heat Exchanger

Table 5 — Physical Data, 30RC 067-152 R-32 — English

UNIT 30RC	067	072	082	092 C[a]	092	102 C[a]	102	112	122 C[a]	122	132 C[a]	132	152 C[a]	152
Chassis Dimensions (ft-in.)														
Length	105	105	105	105	152	105	152	152	152	199	152	199	152	199
Width	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Height	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Required Pad Length	94	94	94	94	141	94	141	141	141	188	141	188	141	188
MAXIMUM ALTITUDE (ft)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
SHIPPING WEIGHT (lb)[b]														
MCHX/BPHE	3409	3642	3881	3881	4640	3817	4576	4918	4919	5623	5251	6019	5309	6082
MCHX/DX	4123	4335	4549	—	5289	—	5294	5733	—	6456	—	6834	—	7468
AL-CU/BPHE	3810	4043	4281	4281	5241	4217	5176	5518	5520	6342	5851	6820	5910	6882
AL-CU/DX	4523	4736	4949	—	5890	—	5895	6333	—	7175	—	7635	—	8269
OPERATING WEIGHT (lb)[b]														
MCHX/BPHE	3451	3690	3936	3936	4695	3901	4660	5024	5026	5730	5370	6138	5445	6217
MCHX/DX	4384	4596	4810	—	5550	—	5555	6115	—	6838	—	7216	—	8081
AL-CU/BPHE	3852	4090	4336	4336	5296	4301	5260	5625	5626	6448	5971	6939	6046	7018
AL-CU/DX	4784	4997	5211	—	6151	—	6156	6715	—	7557	—	8017	—	8882
REFRIGERANT TYPE	R-32, EXV Controlled System													
Refrigerant Charge — R-32[c]														
MCHX/BPHE, Ckt A/ Ckt B (lb)	23.1/ 23.8	23.5/ 28.8	28.6/ 29.0	28.5/ 28.7	37.4/ 36.2	29.0/ 29.1	37.1/ 36.1	43.3/ 36.7	31.0/ 47.9	37.9/ 49.2	43.3/ 42.8	48.6/ 48.6	43.5/ 37.7	49.0/ 43.8
MCHX/DX, Ckt A/Ckt B (lb)	25.3/ 26.5	26.0/ 31.4	31.2/ 31.2	—	37.3/ 39.3	—	38.8/ 39.5	45.6/ 40.7	—	40.0/ 53.2	—	51.0/ 53.2	—	54.1/ 51.2
AL-CU/BPHE, Ckt A/ Ckt B (lb)	58.0/ 58.6	58.2/ 63.7	63.5/ 63.9	63.5/ 63.7	88.6/ 88.1	64.0/ 64.1	89.4/ 88.4	95.6/ 89.0	66.1/ 117.9	90.2/ 118.9	95.9/ 95.3	118.6/ 118.6	96.1/ 90.3	119.2/ 114.4
AL-CU/DX, Ckt A/Ckt B (lb)	60.2/ 61.4	60.2/ 66.2	65.4/ 66.2	—	90.5/ 91.6	—	91.1/ 91.8	97.9/ 93.0	—	92.3/ 122.9	—	120.7/ 122.9	—	123.8/ 121.0
COMPRESSORS — R-32														
Quantity	4	4	4	4	4	4	4	5	5	5	6	6	5	5
Speed (rpm)	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
(Qty) Compressor Model Number Ckt A	(2) DSF200	(2) DSF200	(2) DSF240	(2) DSF240	(2) DSF240	(2) DSF295	(2) DSF295	(3) DSF240	(2) DSF295	(2) DSF295	(3) DSF240	(3) DSF240	(3) DSF295	(3) DSF295
(Qty) Compressor Model Number Ckt B	(2) DSF200	(2) DSF240	(2) DSF240	(2) DSF295	(2) DSF295	(2) DSF295	(2) DSF295	(2) DSF295	(3) DSF295	(3) DSF295	(3) DSF295	(3) DSF295	(2) DSF485	(2) DSF485
Oil Charge (Pt, Ckt A/ Ckt B)[c]	14.4/ 14.4	14.4/ 23.2	23.2/ 23.2	23.2/ 23.2	23.2/ 23.2	23.2/ 23.2	23.2/ 23.2	34.8/ 23.2	23.2/ 34.8	23.2/ 34.8	34.8/ 34.8	34.8/ 34.8	34.8/ 23.2	34.8/ 23.2
No. Capacity Steps														
Standard	4	4	4	4	4	4	4	5	5	5	6	6	5	5
Optional (Maximum)	5	5	5	5	5	5	5	6	6	6	7	7	6	6
Minimum Capacity Step (%)														
Standard	25	21	25	22	22	25	25	18	20	20	15	15	16	16
Optional	14	12	17	15	15	18	18	12	15	15	10	10	12	12
Capacity (%)														
Ckt A	50	43	50	44	44	50	50	55	40	40	44	44	48	48
Ckt B	50	57	50	56	56	50	50	45	60	60	56	56	52	52
EVAPORATOR														
STANDARD BPHE														
Weight (empty, lb)	132.4	151.3	174.0	174.0	174.0	94.6	94.6	118.1	118.1	118.1	131.6	131.6	148.4	148.4
Net Fluid Volume (gal)	4.5	5.2	6.1	6.1	6.1	8.7	8.7	11.4	11.4	11.4	12.9	12.9	14.8	14.8
Maximum Refrigerant Pressure (psig)	445	445	445	445	445	445	445	445	445	445	445	445	445	445
Maximum Water Side Pressure w/o Pumps (psig)	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Maximum Water Side Pressure w/Pumps (psig)	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Water Side Operating Temperatures, Max[d] / Min (°F)	70/20[e]	70/20[e]	70/20[e]	70/38	70/20[e]	70/38	70/20[e]	70/20[e]	70/38	70/20[e]	70/38	70/20[e]	70/38	70/20[e]
OPTIONAL DX COOLER														
Weight (empty, lb)	856	856	856	856	856	856	856	970	970	970	970	970	1518	1518
Net Fluid Volume (gal)	31.3	31.3	31.3	31.3	31.3	31.3	31.3	45.8	45.8	45.8	45.8	45.8	73.5	73.5
Maximum Refrigerant Pressure (psig)	445	445	445	445	445	445	445	445	445	445	445	445	445	445
Maximum Water Side Pressure w/o Pumps (psig)	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Maximum Water Side Pressure w/Pumps (psig)	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Water Side Operating Temperatures, Max[d] / Min (°F)	70/30[e]	70/30[e]	70/30[e]	—	70/30[e]	—	70/30[e]	70/30[e]	—	70/30[e]	—	70/30[e]	—	70/30[e]

Table 5 — Physical Data, 30RC 067-152 R-32 — English (cont)

UNIT 30RC	067	072	082	092 C[a]	092	102 C[a]	102	112	122 C[a]	122	132 C[a]	132	152 C[a]	152
WATER CONNECTIONS (in.)														
STANDARD BPHE														
Inlet and Outlet, Victaulic®[f]	3	3	3	3	3	5	5	5	5	5	5	5	5	5
OPTIONAL DX COOLER														
Inlet and Outlet, Victaulic®[f]	4	4	4	—	4	—	4	6	—	6	—	6	—	6
Drain (NPT)	3/4	3/4	3/4	—	3/4	—	3/4	3/4	—	3/4	—	3/4	—	3/4
CONDENSER FANS														
Axial Flying Bird 6 — 8 Pole Fixed Speed														
Fan Speed (rpm) Standard	850	850	850	850	850	850	850	850	850	850	850	850	850	850
No. Blades… Diameter (in.)	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30
No. Fans (Ckt A/ Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Airflow (cfm) AL-CU Coil	40,575	40,575	40,575	40,575	60,863	40,575	60,863	60,863	60,863	71,007	60,863	81,151	60,863	81,151
Total Airflow (cfm) MCHX Coil	41,906	41,906	41,906	41,906	62,860	41,906	62,860	62,860	62,860	73,336	62,860	83,813	62,860	83,813
Axial Flying Bird 6 — 6 Pole Variable Speed														
Fan Speed (rpm) Standard	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
No. Blades… Diameter (in.)	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30	9…30
No. Fans (Ckt A/ Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Airflow (cfm) AL-CU Coil	55,877	55,877	55,877	55,877	83,816	55,877	83,816	83,816	83,816	97,785	83,816	111,755	836,816	111,755
Total Airflow (cfm) MCHX Coil	57,633	57,633	57,633	57,633	86,449	57,633	86,449	86,449	86,449	100,857	86,449	115,266	86,449	115,266
CONDENSER COILS														
No. Coils (Ckt A/Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Face Area (sq ft)	110	110	110	110	164	110	164	164	164	192	164	219	164	219
Max Working Refrigerant Pressure (psig)	656	656	656	656	656	656	656	656	656	656	656	656	656	656
OPTIONAL PARTIAL HEAT RECOVERY														
Weight (empty, lb)	64.8	78.5	92.2	—	92.2	—	92.2	110.6	—	110.6	—	129.1	—	129.1
Net Fluid Volume (gal)	1.00	1.50	2.00	—	2.00	—	2.00	2.66	—	2.66	—	3.33	—	3.33
Maximum Refrigerant Pressure (psig)	656	656	656	—	656	—	656	656	—	656	—	656	—	656
Maximum Water Side Pressure (psig)	300	300	300	—	300	—	300	300	—	300	—	300	—	300
Water Connections (in.)														
Inlet and Outlet, Victaulic®[f]	2	2	2	—	2	—	2	2	—	2	—	2	—	2
HYDRONIC MODULE (Optional)	Pump(s) with pressure/temperature taps and combination valve													
Pump	Single or Dual, 1800 or 3600 RPM													

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).
b. Neither shipping weight nor operating weight include any options.
c. All refrigerant and oil charge values reflect the standard chiller. See the Packaged Chiller Builder Program for charge values when the low LWT Fluid option is employed (when LWT is below 38°F [3.3°C]).
d. If the EWT requirement is greater than 70°F (21.1°C), a mixing loop is required. The EWT cannot exceed 70°F (21.1°C) for extended operation. Pulldown can be accomplished from 95°F (35°C).
e. 30RC air-cooled chillers with LWT below 38°F (3.3°C) are considered brine application chillers and require selection of either C, D, G, or H in position 11. Brine application chillers are factory-installed with lower refrigerant charge and, for R-32 chillers, increased oil charge.
f. Third-party trademarks and logos are the property of their respective owners.

LEGEND

Al-Cu — Aluminum Fin/Copper Tube Condenser Coil
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
EXV — Electronic Expansion Valve
MCHX — Microchannel Heat Exchanger

Table 6 — Physical Data, 30RC 065-150 R-410A — SI

UNIT 30RC	065	070	080 C[a]	080	090	100	110	120 C[a]	120	130	150
Chassis Dimensions (mm)											
Length		2678				3872				5066	
Width						2236					
Height						2513					
Required Pad Length		2393				3587				4781	
MAXIMUM ALTITUDE (m)						3,048					
SHIPPING WEIGHT (kg)[b]											
MCHX/BPHE	1546	1652	1760	2070	2105	2075	2230	2231	2550	2730	2758
MCHX/DX	1870	1966	2063	2367	2399	2401	2600	—	2928	3099	3387
AL-CU/BPHE	1728	1833	1942	2305	2377	2348	2503	2503	2876	3093	3121
AL-CU/DX	2051	2148	2245	2602	2671	2673	2872	—	3254	3462	3750
OPERATING WEIGHT (kg)[b]											
MCHX/BPHE	1565	1673	1785	2095	2129	2113	2279	2279	2599	2784	2820
MCHX/DX	1988	2084	2182	2485	2517	2519	2773	—	3101	3273	3665
AL-CU/BPHE	1747	1855	1967	2330	2402	2386	2551	2551	2924	3147	3183
AL-CU/DX	2170	2266	2363	2720	2789	2792	3045	—	3427	3636	4028
REFRIGERANT TYPE	R-410A, EXV Controlled System										
Refrigerant Charge — R-410A[c]											
MCHX/BPHE, Ckt A/Ckt B (kg)	11.4/11.7	11.4/14.9	14.8/15.0	16.0/17.6	18.5/18.2	19.0/18.4	22.5/18.7	16.1/24.4	19.4/25.2	25.4/25.4	25.4/25.6
MCHX/DX, Ckt A/Ckt B (kg)	12.2/12.7	12.2/15.8	15.6/15.9	16.8/18.6	19.2/19.6	19.5/19.7	23.2/20.2	—	20.1/26.6	25.6/26.6	27.0/28.0
AL-CU/BPHE, Ckt A/Ckt B (kg)	29.6/30.0	29.7/33.2	32.9/33.1	34.3/45.0	45.9/45.6	46.4/45.8	49.9/46.1	34.2/60.6	46.8/61.7	61.8/61.9	61.9/62.1
AL-CU/DX, Ckt A/Ckt B (kg)	30.5/31.1	30.5/34.2	33.7/34.1	35.1/46.2	46.6/47.2	46.9/47.3	50.6/47.8	—	47.5/63.4	62.3/63.4	63.6/64.8
COMPRESSORS — R-410A											
Quantity	4	4	4	4	4	4	5	5	5	6	6
Speed (r/s)	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3
(Qty) Compressor Model Number Ckt A	(2) DSH184	(2) DSH184	(2) DSH240	(2) DSH240	(2) DSH240	(2) DSH295	(3) DSH240	(2) DSH295	(2) DSH295	(3) DSH240	(3) DSH295
(Qty) Compressor Model Number Ckt B	(2) DSH184	(2) DSH240	(2) DSH240	(2) DSH240	(2) DSH295	(2) DSH295	(2) DSH295	(3) DSH295	(3) DSH295	(3) DSH295	(3) DSH295
Oil Charge (L, Ckt A/Ckt B)[c]	7.6/7.6	7.6/13.8	13.8/13.8	13.8/13.8	13.8/13.8	13.8/13.8	20.7/13.8	13.8/20.7	13.8/20.7	20.7/20.7	20.7/20.7
No. Capacity Steps											
Standard	4	4	4	4	4	4	5	5	5	6	6
Optional (Maximum)	5	5	5	5	5	5	6	6	6	7	7
Minimum Capacity Step (%)											
Standard	25	21	25	25	22	25	18	20	20	15	17
Optional	14	12	17	17	15	18	12	15	15	10	12
Capacity (%)											
Ckt A	50	43	50	50	44	50	55	40	40	44	50
Ckt B	50	57	50	50	56	50	45	60	60	56	50
EVAPORATOR											
STANDARD BPHE											
Weight (empty, kg)	60.0	68.6	78.9	78.9	78.9	42.9	53.6	53.6	53.6	59.7	67.3
Net Fluid Volume (L)	17.0	19.7	23.1	23.1	23.1	32.9	43.1	43.1	43.1	48.8	56.0
Maximum Refrigerant Pressure (kPa)	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068
Maximum Water Side Pressure w/o Pumps (kPa)	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
Maximum Water Side Pressure w/Pumps (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
Water Side Operating Temperatures, Max[d] / Min (°C)	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ 3.3	21.1/ –9.4[e]	21.1/ –9.4[e]	21.1/ –9.4[e]
OPTIONAL DX COOLER											
Weight (empty, kg)	388.2	388.2	388.2	388.2	388.2	388.2	439.9	439.9	439.9	439.9	688.4
Net Fluid Volume (L)	118.5	118.5	118.5	118.5	118.5	118.5	173.4	173.4	173.4	173.4	278.2
Maximum Refrigerant Pressure (kPa)	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068
Maximum Water Side Pressure w/o Pumps (kPa)	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
Maximum Water Side Pressure w/Pumps (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
Water Side Operating Temperatures, Max[d] / Min (°C)	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	—	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]
WATER CONNECTIONS (in.)											
STANDARD BPHE											
Inlet and Outlet, Victaulic®[f]	3	3	3	3	3	5	5	5	5	5	5
OPTIONAL DX COOLER											
Inlet and Outlet, Victaulic®[f]	4	4	4	4	4	4	6	—	6	6	6
Drain (NPT)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	—	3/4	3/4	3/4

Table 6 — Physical Data, 30RC 065-150 R-410A — SI (cont)

UNIT 30RC	065	070	080 C[a]	080	090	100	110	120 C[a]	120	130	150
CONDENSER FANS											
Axial Flying Bird 6 — 8 Pole Fixed Speed											
Fan Speed (r/s) Standard	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
No. Blades…Diameter (mm)	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Airflow (L/s) AL-CU Coil	19,149	19,149	19,149	23,937	28,724	28,724	28,724	28,724	33,511	38,299	38,299
Total Airflow (L/s) MCHX Coil	19,778	19,778	19,778	24,722	29,666	29,666	29,666	29,666	34,611	39,555	39,555
Axial Flying Bird 6 — 6 Pole Variable Speed											
Fan Speed (r/s) Standard	19	19	19	19	19	19	19	19	19	19	19
No. Blades…Diameter (mm)	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Airflow (L/s) AL-CU Coil	26,371	26,371	26,371	32,964	39,557	39,557	39,557	39,557	46,149	52,742	52,742
Total Airflow (L/s) MCHX Coil	27,200	27,200	27,200	34,000	40,799	40,799	40,799	40,799	47,559	54,399	54,399
CONDENSER COILS											
No. Coils (Ckt A/Ckt B)	2/2	2/2	2/2	3/2	3/3	3/3	3/3	2/4	3/4	4/4	4/4
Total Face Area (sq m)	10.2	10.2	10.2	12.7	15.2	15.2	15.2	15.2	17.8	20.3	20.3
Max Working Refrigerant Pressure (kPa)	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523
OPTIONAL PARTIAL HEAT RECOVERY											
Weight (empty, kg)	29.4	35.6	41.8	41.8	41.8	41.8	50.2	—	50.2	58.6	58.6
Net Fluid Volume (L)	3.78	5.67	7.56	7.56	7.56	7.56	10.08	—	10.08	12.60	12.60
Maximum Refrigerant Pressure (kPa)	4523	4523	4523	4523	4523	4523	4523	—	4523	4523	4523
Maximum Water Side Pressure (kPa)	2068	2068	2068	2068	2068	2068	2068	—	2068	2068	2068
Water Connections (in.)											
Inlet and Outlet, Victaulic®[f]	2	2	2	2	2	2	2	—	2	2	2
HYDRONIC MODULE (Optional)	Pump(s) with pressure/temperature taps and combination valve										
Pump	Single or Dual, 29.2 or 58.3 r/s										

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).
b. Neither shipping weight nor operating weight include any options.
c. All refrigerant and oil charge values reflect the standard chiller. See the Packaged Chiller Builder Program for charge values when the low LWT Fluid option is employed (when LWT is below 38°F [3.3°C]).
d. If the EWT requirement is greater than 70°F (21.1°C), a mixing loop is required. The EWT cannot exceed 70°F (21.1°C) for extended operation. Pulldown can be accomplished from 95°F (35°C).
e. 30RC air-cooled chillers with LWT below 38°F (3.3°C) are considered brine application chillers and require selection of either C, D, G, or H in position 11. Brine application chillers are factory-installed with lower refrigerant charge and, for R-32 chillers, increased oil charge.
f. Third-party trademarks and logos are the property of their respective owners.

LEGEND

Al-Cu — Aluminum Fin/Copper Tube Condenser Coil
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
EXV — Electronic Expansion Valve
MCHX — Microchannel Heat Exchanger

Table 7 — Physical Data, 30RC 067-152 R-32 — SI

UNIT 30RC	067	072	082	092 C[a]	092	102 C[a]	102	112	122 C[a]	122	132 C[a]	132	152 C[a]	152
Chassis Dimensions (mm)														
Length	2678	2678	2678	2678	3872	2678	3872	3872	3872	5066	3872	5066	3872	5066
Width	2236	2236	2236	2236	2236	2236	2236	2236	2236	2236	2236	2236	2236	2236
Height	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513
Required Pad Length	2393	2393	2393	2393	3587	2393	3587	3587	3587	4781	3587	4781	3587	4781
MAXIMUM ALTITUDE (m)	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048
SHIPPING WEIGHT (kg)[b]														
MCHX/BPHE	1546	1652	1760	1760	2105	1731	2075	2230	2231	2550	2381	2730	2408	2758
MCHX/DX	1870	1966	2063	—	2399	—	2401	2600	—	2928	—	3099	—	3387
AL-CU/BPHE	1728	1833	1942	1942	2377	1912	2348	2503	2503	2876	2654	3093	2680	3121
AL-CU/DX	2051	2148	2245	—	2671	—	2673	2872	—	3254	—	3462	—	3750
OPERATING WEIGHT (kg)[b]														
MCHX/BPHE	1565	1673	1785	1785	2129	1769	2113	2279	2279	2599	2435	2784	2469	2820
MCHX/DX	1988	2084	2182	—	2517	—	2519	2773	—	3101	—	3273	—	3665
AL-CU/BPHE	1747	1855	1967	1967	2402	1951	2386	2551	2551	2924	2708	3147	2742	3183
AL-CU/DX	2170	2266	2363	—	2789	—	2792	3045	—	3427	—	3636	—	4028
REFRIGERANT TYPE	R32, EXV Controlled System													
Refrigerant Charge — R-32[c]														
MCHX/BPHE, Ckt A/ Ckt B (kg)	10.5/ 10.8	10.7/ 13.1	13.0/ 13.1	12.9/ 13.0	17.0/ 16.4	13.2/ 13.2	16.8/ 16.4	19.7/ 16.6	14.1/ 21.7	17.2/ 22.3	19.7/ 19.4	22.0/ 22.0	19.7/ 17.1	22.2/ 19.9
MCHX/DX, Ckt A/ Ckt B (kg)	11.5/ 12.0	11.8/ 14.2	14.1/ 14.1	—	16.9/ 17.8	—	17.6/ 17.9	20.7/ 18.4	—	18.1/ 24.1	—	23.1/ 24.1	—	24.5/ 23.2
AL-CU/BPHE, Ckt A/ Ckt B (kg)	26.3/ 26.6	26.4/ 28.9	28.8/ 29.0	28.8/ 28.9	40.2/ 39.9	29.0/ 29.1	40.6/ 40.1	43.4/ 40.3	30.0/ 53.5	40.9/ 53.9	43.5/ 43.2	53.8/ 53.8	43.6/ 40.9	54.1/ 51.9
AL-CU/DX, Ckt A/Ckt B (kg)	27.3/ 27.8	27.3/ 30.0	29.7/ 30.0	—	41.1/ 41.6	—	41.3/ 41.6	44.4/ 42.2	—	41.9/ 55.8	—	54.7/ 55.8	—	56.2/ 54.9
COMPRESSORS — R-32														
Quantity	4	4	4	4	4	4	4	5	5	5	6	6	5	5
Speed (r/s)	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3
(Qty) Compressor Model Number Ckt A	(2) DSF200	(2) DSF200	(2) DSF240	(2) DSF240	(2) DSF240	(2) DSF295	(2) DSF295	(3) DSF240	(2) DSF295	(2) DSF295	(3) DSF240	(3) DSF240	(3) DSF295	(3) DSF295
(Qty) Compressor Model Number Ckt B	(2) DSF200	(2) DSF240	(2) DSF240	(2) DSF295	(2) DSF295	(2) DSF295	(2) DSF295	(2) DSF295	(3) DSF295	(3) DSF295	(3) DSF295	(3) DSF295	(2) DSF485	(2) DSF485
Oil Charge (L, Ckt A/Ckt B)[c]	8.2/ 8.2	8.2/ 13.2	13.2/ 13.2	13.2/ 13.2	13.2/ 13.2	13.2/ 13.2	13.2/ 13.2	19.8/ 13.2	13.2/ 19.8	13.2/ 19.8	19.8/ 19.8	19.8/ 19.8	19.8/ 13.2	19.8/ 13.2
No. Capacity Steps														
Standard	4	4	4	4	4	4	4	5	5	5	6	6	5	5
Optional (Maximum)	5	5	5	5	5	5	5	6	6	6	7	7	6	6
Minimum Capacity Step (%)														
Standard	25	21	25	22	22	25	25	18	20	20	15	15	16	16
Optional	14	12	17	15	15	18	18	12	15	15	10	10	12	12
Capacity (%)														
Ckt A	50	43	50	44	44	50	50	55	40	40	44	44	48	48
Ckt B	50	57	50	56	56	50	50	45	60	60	56	56	52	52
EVAPORATOR														
STANDARD BPHE														
Weight (empty, kg)	60.0	68.6	78.9	78.9	78.9	42.9	42.9	53.6	53.6	53.6	59.7	59.7	67.3	67.3
Net Fluid Volume (L)	17.0	19.7	23.1	23.1	23.1	32.9	32.9	43.1	43.1	43.1	48.8	48.8	56.0	56.0
Maximum Refrigerant Pressure (kPa)	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068
Maximum Water Side Pressure w/o Pumps (kPa)	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
Maximum Water Side Pressure w/Pumps (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
Water Side Operating Temperatures, Max[d] / Min (°C)	21.1/ –6.7[e]	21.1/ –6.7[e]	21.1/ –6.7[e]	21.1/ 3.3	21.1/ –6.7[e]	21.1/ 3.3	21.1/ –6.7[e]	21.1/ –6.7[e]	21.1/ 3.3	21.1/ –6.7[e]	21.1/ 3.3	21.1/ –6.7[e]	21.1/ 3.3	21.1/ –6.7[e]
OPTIONAL DX COOLER														
Weight (empty, kg)	388.2	388.2	388.2	388.2	388.2	388.2	388.2	439.9	439.9	439.9	439.9	439.9	688.4	688.4
Net Fluid Volume (L)	118.5	118.5	118.5	118.5	118.5	118.5	118.5	173.4	173.4	173.4	173.4	173.4	278.2	278.2
Maximum Refrigerant Pressure (kPa)	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068
Maximum Water Side Pressure w/o Pumps (kPa)	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
Maximum Water Side Pressure w/Pumps (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
Water Side Operating Temperatures, Max[d] / Min (°C)	21.1/ –1.1[e]	21.1/ –1.1[e]	21.1/ –1.1[e]	—	21.1/ –1.1[e]	—	21.1/ –1.1[e]	21.1/ –1.1[e]	—	21.1/ –1.1[e]	—	21.1/ –1.1[e]	—	21.1/ –1.1[e]

Table 7 — Physical Data, 30RC 067-152 R-32 — SI (cont)

UNIT 30RC	067	072	082	092 C[a]	092	102 C[a]	102	112	122 C[a]	122	132 C[a]	132	152 C[a]	152
WATER CONNECTIONS (in.)														
STANDARD BPHE														
Inlet and Outlet, Victaulic®[f]	3	3	3	3	3	5	5	5	5	5	5	5	5	5
OPTIONAL DX COOLER														
Inlet and Outlet, Victaulic®[f]	4	4	4	—	4	—	4	6	—	6	—	6	—	6
Drain (NPT)	3/4	3/4	3/4	—	3/4	—	3/4	3/4	—	3/4	—	3/4	—	3/4
CONDENSER FANS														
Axial Flying Bird 6 — 8 Pole Fixed Speed														
Fan Speed (r/s) Standard	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
No. Blades…Diameter (mm)	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Airflow (L/s) AL-CU Coil	19,149	19,149	19,149	19,149	28,724	19,149	28,724	28,724	28,724	33,511	28,724	38,299	28,724	38,299
Total Airflow (L/s) MCHX Coil	19,778	19,778	19,778	19,778	29,666	19,778	29,666	29,666	29,666	34,611	29,666	39,555	29,666	39,555
Axial Flying Bird 6 — 6 Pole Variable Speed														
Fan Speed (r/s) Standard	19	19	19	19	19	19	19	19	19	19	19	19	19	19
No. Blades…Diameter (mm)	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762	9…762
No. Fans (Ckt A/Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Airflow (L/s) AL-CU Coil	26,371	26,371	26,371	26,371	39,557	26,371	39,557	39,557	39,557	46,149	39,557	52,742	39,557	52,742
Total Airflow (L/s) MCHX Coil	27,200	27,200	27,200	27,200	40,799	27,200	40,799	40,799	40,799	47,599	40,799	54,399	40,799	54,399
CONDENSER COILS														
No. Coils (Ckt A/Ckt B)	2/2	2/2	2/2	2/2	3/3	2/2	3/3	3/3	2/4	3/4	3/3	4/4	3/3	4/4
Total Face Area (sq m)	10.2	10.2	10.2	10.2	15.2	10.2	15.2	15.2	15.2	17.8	15.2	20.3	15.2	20.3
Max Working Refrigerant Pressure (kPa)	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523	4523
OPTIONAL PARTIAL HEAT RECOVERY														
Weight (empty, kg)	29.4	35.6	41.8	—	41.8	—	41.8	50.2	—	50.2	—	58.6	—	58.6
Net Fluid Volume (L)	3.78	5.67	7.56	—	7.56	—	7.56	10.08	—	10.08	—	12.6	—	12.6
Maximum Refrigerant Pressure (kPa)	4523	4523	4523	—	4523	—	4523	4523	—	4523	—	4523	—	4523
Maximum Water Side Pressure (kPa)	2068	2068	2068	—	2068	—	2068	2068	—	2068	—	2068	—	2068
Water Connections (in.)														
Inlet and Outlet, Victaulic®[f]	2	2	2	—	2	—	2	2	—	2	—	2	—	2
HYDRONIC MODULE (Optional)	Pump(s) with pressure/temperature taps and combination valve													
Pump	Single or Dual, 29.2 or 58.3 r/s													

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).
b. Neither shipping weight nor operating weight include any options.
c. All refrigerant and oil charge values reflect the standard chiller. See the Packaged Chiller Builder Program for charge values when the low LWT Fluid option is employed (when LWT is below 38°F [3.3°C]).
d. If the EWT requirement is greater than 70°F (21.1°C), a mixing loop is required. The EWT cannot exceed 70°F (21.1°C) for extended operation. Pulldown can be accomplished from 95°F (35°C).
e. 30RC air-cooled chillers with LWT below 38°F (3.3°C) are considered brine application chillers and require selection of either C, D, G, or H in position 11. Brine application chillers are factory-installed with lower refrigerant charge and, for R-32 chillers, increased oil charge.
f. Third-party trademarks and logos are the property of their respective owners.

LEGEND

Al-Cu — Aluminum Fin/Copper Tube Condenser Coil
BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion
EXV — Electronic Expansion Valve
MCHX — Microchannel Heat Exchanger

EXPORT SHIPPING RAILS

Units with the export packaging option will include steel shipping rails. These should be removed prior to mounting the unit. There are mounting bolts on the outside of the base frame and on the inside of the frame. If the optional sound enclosure is included, the top cover may need to be removed to access all of the bolts. The bag retainer rail is used to secure the bag for shipping. These may be removed before or after mounting the unit. (See Fig. 29.)

RIGGING UNIT

The 30RC 065-150 and 30RC 067-152 units are designed for overhead rigging, and it is important to use this method. Holes are provided in frame base channels, marked for rigging (see rigging label on unit). It is recommended that field-supplied shackles be used to facilitate lifting. Secure the shackles to the base rails at the points noted on the rigging label. See Table 8 for the number of lifting points for each unit.

Do not use a forklift truck to move the units.

Table 8 — Number of Lifting Points

30RC	NUMBER OF LIFTING POINTS
065-110	4
067-112	4
080 C-120 C[a]	4
092 C-152 C[a]	4
120-150	6
122-152	6

NOTE(S):

a. When a “C” is shown in the chiller size, this indicates a compact unit (and digit 10 of the unit model number is a “C”).

Use spreader bars to keep cables or chains clear of unit sides. As further protection, plywood sheets may be placed against the sides of the unit, behind cables or chains. Run cables or chains to a central suspension point so that angle from horizontal is not less than 45 degrees. Raise and set unit down carefully. See Fig. 30 for rigging centers of gravity.

For shipping, some domestic units and all export units have steel skids mounted under the entire base of the unit. Skid can be removed before unit is moved to installation site. Lift the unit from above to remove skid. See Fig. 30 for rigging center of gravity. If the unit was shipped with a shipping bag, the bag must be removed to gain access to the rigging holes in the base rail.

If overhead rigging is not available, the unit can be moved on rollers or dragged. When unit is moved on rollers, the unit skid, if equipped, must be removed. To lift the unit, use jacks at the rigging points. Use a minimum number of rollers to distribute the load such that the rollers are no more than 6 feet (1.8 m) apart. If the unit is to be dragged, lift the unit as described above and place unit on a pad. Apply moving force to the pad, not the unit. When in its final location, raise the unit and remove the pad.

If the unit was shipped with coil protection, it must be removed before start-up. The shipping bag for export units must be removed before start-up.

NOTE: If the application includes a remote-mounted cooler option, follow the instructions included with the accessory for cooler placement and refrigerant piping.

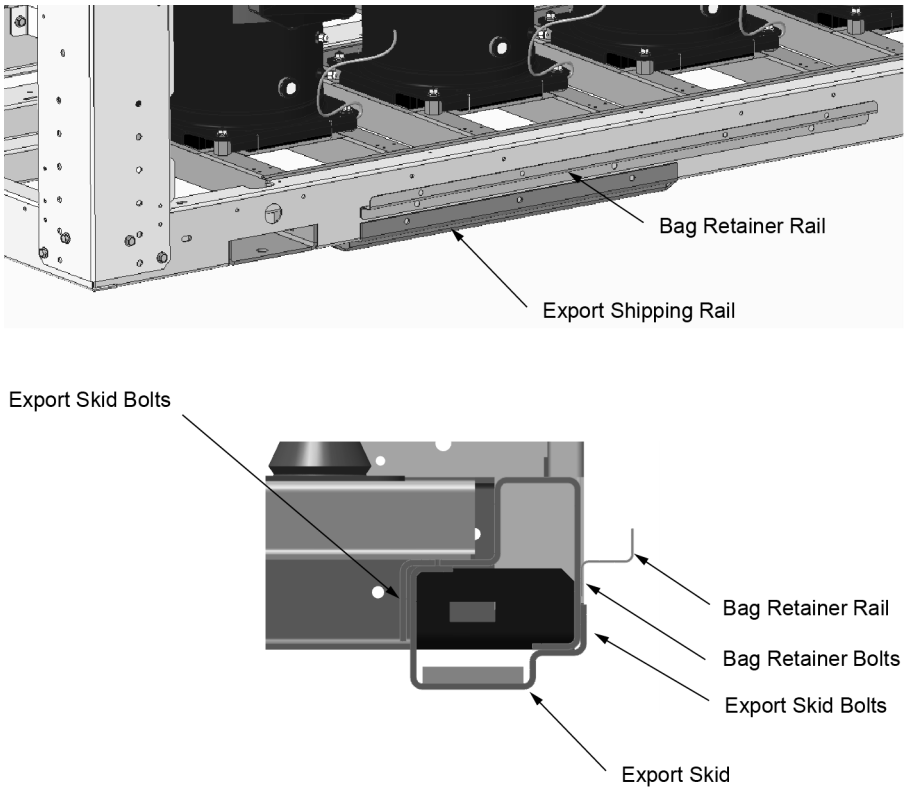


Fig. 29 — Export Shipping Rails

CAUTION - NOTICE TO RIGGERS:

ALL PANELS MUST BE IN PLACE WHEN RIGGING. DO NOT FORK THESE UNITS IF NO SKID IS SUPPLIED.

NOTE:

1. 1.50 dia (38.1mm) lifting holes provided for field supplied clevis.
2. Rig with a minimum of 25 ft (7620mm) length chain or cables.
3. If central lifting point is used, it must be minimum of 13 ft (3962mm) above the top of the unit.
4. Spreader bars made from steel, or double nailed and notched 2x6's approximately 8 ft (2438mm) long, must be placed just above the top of the unit and coils.
5. If overhead rigging is not available, the unit can be moved on roller or dragged. When unit is moved on roller, the unit steel skid, if equipped, must be removed. To lift the unit, use jacks at rigging points. Use a minimum of one roller every 6 ft (1829mm) to distribute the load. If the unit is to be dragged, lift the unit as described above, and place unit on a pad. Apply moving force to the pad, not the unit. When in its final location, raise the unit and remove the pad.
6. Check the unit model number, position 12 and 13, to determine the unit weight as per condenser option.
7. Check the bill of lading to determine shipping weight of the unit.

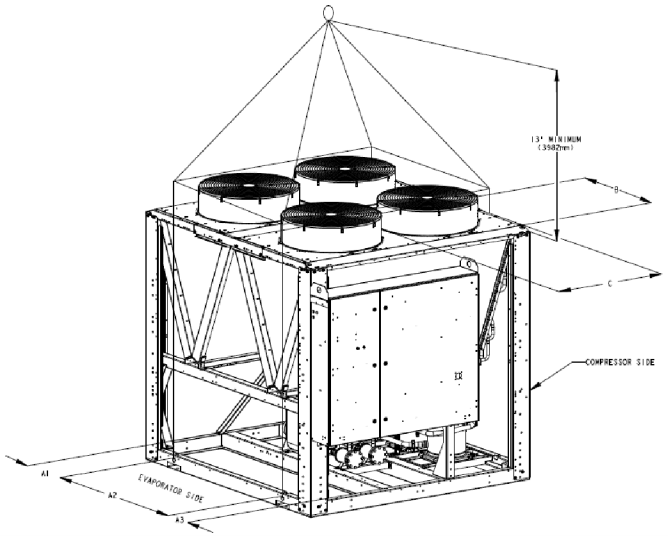


Fig. 30 — Unit Rigging Label Detail 30RC 065-150 and 30RC 067-152

Model Number	Model Number Position 10	Max Shipping Wt w/o Packaging Model Number Position 12 = 1, 2, 5, 6, 9, B, F, G Model Number Position 13 = -, 0, 1, 2, 3, 4, 5, 6 MCHX / BPHE		Max Shipping Wt w/o Packaging Model Number Position 12 = 1, 2, 5, 6, 9, B, F, G Model Number Position 13 = 8, 9, B, C, D, F, G, H MCHX / DX		Max Shipping Wt w/o Packaging Model Number Position 12 = -, 0, 3, 4, 7, 8, C, D Model Number Position 13 = -, 0, 1, 2, 3, 4, 5, 6 AL-CU / BPHE		Max Shipping Wt w/o Packaging Model Number Position 12 = -, 0, 3, 4, 7, 8, C, D Model Number Position 13 = 8, 9, B, C, D, F, G, H AL-CU / DX		Lifting Holes A1		A2		A3		Center of Gravity B BPHE		DX		C BPHE		DX	
		Lbs	Kgs	Lbs	Kgs	Lbs	Kgs	Lbs	Kgs	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
30RCA065-067	S	3408	1546	4123	1870	3808	1727	4523	2051	16.1	409	62.0	1575	16.1	409	39.3	997	40.0	1016	42.1	1068	42.8	1088
30RCA070-072	S	3641	1651	4335	1966	4041	1833	4736	2148	16.1	409	62.0	1575	16.1	409	41.2	1045	41.5	1055	40.9	1039	41.8	1062
30RCA080	S	4562	2069	5218	2367	5080	2304	5736	2602	16.1	409	109.0	2769	16.1	409	68.1	1730	63.0	1600	41.3	1048	41.8	1062
	C	3879	1759	4549	2063	4280	1941	4949	2245	16.1	409	62.0	1575	16.1	409	41.3	1050	41.6	1057	40.0	1016	41.2	1045
30RCA082	S	3879	1759	4549	2063	4280	1941	4949	2245	16.1	409	62.0	1575	16.1	409	41.3	1050	41.6	1057	40.0	1016	41.2	1045
30RCA090-092	S	4639	2104	5289	2399	5239	2376	5890	2671	16.1	409	109.0	2769	16.1	409	68.2	1733	63.1	1603	40.8	1037	41.5	1053
30RCA092	C	3879	1759	—	—	4280	1941	—	—	16.1	409	62.0	1575	16.1	409	40.0	1017	—	—	36.3	923	—	—
30RCA100-102	S	4715	2138	5294	2401	5315	2410	5895	2673	16.1	409	109.0	2769	16.1	409	69.2	1757	63.1	1602	40.8	1037	41.4	1053
30RCA102	C	3955	1794	—	—	4356	1975	—	—	16.1	409	62.0	1575	16.1	409	40.2	1021	—	—	36.4	925	—	—
30RCA110-112	S	5090	2308	5733	2600	5691	2581	6333	2872	16.1	409	109.0	2769	16.1	409	69.1	1756	67.4	1712	39.6	1006	40.7	1033
30RCA120-122	S	5796	2628	6456	2928	6514	2954	7175	3254	16.1	409	156.0	3963	16.1	409	93.0	2362	87.7	2229	40.7	1034	41.5	1055
30RCA120-122	C	5092	2309	—	—	5692	2581	—	—	16.1	409	109.0	2769	16.1	409	67.4	1711	—	—	36.7	933	—	—
30RCA130-132	S	6211	2817	5834	3099	7012	3180	7635	3462	16.1	409	156.0	3963	16.1	409	90.4	2295	85.3	2168	39.3	998	40.2	1021
30RCA132	C	5443	2469	—	—	6044	2741	—	—	16.1	409	109.0	2769	16.1	409	67.7	1719	—	—	35.7	907	—	—
30RCA150-152	S	6299	2857	7468	3387	7100	3220	8269	3750	16.1	409	156.0	3963	16.1	409	92.7	2356	90.2	2290	39.3	998	40.8	1036
30RCA152	C	5527	2507	—	—	6128	2779	—	—	16.1	409	109.9	2769	16.1	409	69.7	1770	—	—	35.6	904	—	—

ADD THESE VALUES FOR UNITS WITH PUMP OPTIONS

BPHE - Pump Addition (lb)

	Single Pump	Dual Pump
30RCA065-072	530.5	1036.8
30RCA080-092	544.0	1113.3
30RCA100-112	588.3	1185.4
30RCA120-132	629.7	1224.0
30RCA150 / 152	690.2	1293.5

DX - Pump Addition (lb)

	Single Pump	Dual Pump
30RCA065-072	667.9	1117.7
30RCA080-102	708.0	1219.5
30RCA110 / 112	804.6	1362.2
30RCA120-132	783.7	1362.2
30RCA150 / 152	930.5	1653.8

ADD THESE VALUES FOR MAX SHIPPING WEIGHT WITH PACKAGING

Packaging Addition (lb)

Standard Tier Units	
30RCA065-072, 82	283
30RCA080, 090-112	391
30RCA120-152	499

Compact Tier Units	
30RCA080-102	283
30RCA120-152	391

Fig. 30 — Unit Rigging Label Detail 30RC 065-150 and 30RC 067-152 (cont)

COMPRESSOR SOUND BLANKETS

For units equipped with the low sound option, the sound blanket top covers are shipped inside the control box(es) for the unit. Remove the top covers from the control boxes and install prior to start-up. Align the discharge tube with the cutout on the top cover. (See Fig. 31.) Firmly press the hook and loop fastener sections together, ensuring the top cover is held tightly against the blanket.

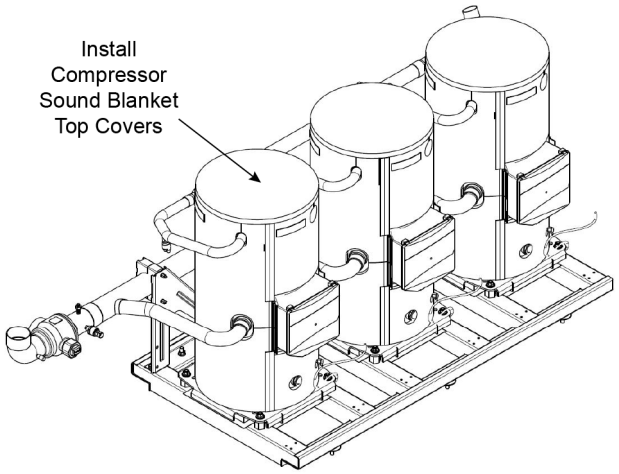


Fig. 31 — Compressor Sound Blanket Top Covers

Step 2 — Make Evaporator Fluid, Partial Heat Recovery, and Drain Piping Connections

To facilitate servicing, it is recommended additional field-supplied air vents be installed. Locate air vents at the highest possible point of the chilled water and partial heat recovery systems. In addition to field-supplied air vents, facilitate servicing and flow balancing by installing field-supplied shut off valves, thermometers, clean-out tees, and pressure and temperature taps in the inlet and outlet piping. Locate valves in return and supply evaporator water and partial heat recovery lines, as close to the chiller as possible. In sound-sensitive applications, consider the installation of piping vibration isolators. Provide proper support for the piping. If packaging grilles or hail guards have been added, holes must be cut in the grilles or hail guards for field piping and insulation.

FREEZE PROTECTION

Upon completion of the field piping installation, freeze protection must be considered.

Freeze protection for the evaporator is available from the factory with a freeze protection option for the unit. Freeze protection for the pump (hydronic) package is standard on all units with the optional hydronic package (hydronic packages available on 30RC STD Tier units only). External piping freeze protection also must be considered. Field-supplied freeze-up protection should include using inhibited glycol or another suitable inhibited antifreeze solution and electric heat tapes in areas where piping is exposed to low ambient temperatures (34°F [1°C] or below). Heat tapes should possess a rating for area ambient temperatures and be covered with a suitable thickness of closed-cell insulation. Since power is sometimes lost for extended periods during winter storms, freeze protection provided by heater tapes will be effective only if a back-up power supply can be assured for the unit's control circuit, heater, and evaporator pump. If not protected with an antifreeze solution, draining the evaporator and outdoor piping is recommended if the system will not be used during freezing weather conditions.

NOTE: See Freeze Protection section on page 66 for a more detailed overview of freeze protection.

IMPORTANT: Glycol antifreeze solutions are highly recommended, as heater tapes provide no protection in the event of a power failure.

BPHE UNITS WITHOUT HYDRONIC PUMP PACKAGE

Refer to Fig. 6-7, 10-11, 14-16, 19-20 for brazed plate heat exchanger (BPHE) connection locations. These chillers are supplied with a factory-installed strainer, a 1/4 in. NPT vent in the entering fluid piping, and a flow switch and 1/4 in. NPT drain in the leaving fluid piping. Flow switch wiring is factory-installed. For all sizes, piping connections are located on the back of the chiller when facing the control panel. All sizes have grooved coupling-type connections, as shown in Tables 4-7, the physical data tables (follow connection directions as provided by the coupling manufacturer).

See Fig. 32 for a typical piping diagram of a 30RC BPHE-equipped unit without a hydronic pump package.

DX COOLER UNITS WITHOUT HYDRONIC PUMP PACKAGE

Refer to Fig. 8-9, 12-13, 17-18, and 21-24 for direct expansion (DX) cooler connection locations. It is required that a field-supplied strainer with a minimum size of 20 mesh be installed within 10 ft (3.05 m) of and ahead of the cooler inlet to prevent debris from damaging internal cooler tubes. The cooler has water-side grooved coupling-type connections (follow connection directions as provided by the coupling manufacturer).

See Fig. 33 for a typical piping diagram of a 30RC DX cooler-equipped unit without a hydronic pump package.

A drain connection is located at the leaving water (supply) end of the cooler. See Fig. 6-24 for connection location. Insulate the drain piping (in the same manner as the chilled water piping) for at least 12 in. (305 mm) from the unit.

BPHE UNITS WITH HYDRONIC PUMP PACKAGE

The BPHE-equipped 30RC 065-150 and 30RC 067-152 units (excluding all compact tier units, except the 30RC 080 compact tier unit) can be equipped with a factory-installed hydronic pump package, consisting of pumps(s), a permanent strainer at the inlet of the pump(s), combination valve, internal piping, and wiring connected at the factory. Permanent strainer should be cleaned after the first 24 hours of chiller operation.

The combination valve has the following functions:

- Drip-tight shut-off valve
- Spring closure design with a non-slam check valve
- Flow-throttling valve

Refer to Fig. 6-7, 10-11, 14-16, and 19-20 for BPHE connection locations.

Figures 34 and 36 illustrate typical single and dual pump packages. One drain connection is provided, located at the pump volute.

NOTE: A field-supplied expansion tank must be installed in the inlet piping, as close to the pump as possible. Install the tank in accordance with the manufacturer's instructions.

DX COOLER UNITS WITH HYDRONIC PUMP PACKAGE

The DX cooler-equipped 30RC 065-150 and 30RC 067-152 units (excluding compact tier units) can be equipped with a factory-installed hydronic pump package, consisting of a suction guide/strainer, pump(s), combination valve, internal piping, and wiring connected at the factory.

Refer to Fig. 8-9, 12-13, 17-18, and 21-24 for DX cooler connection locations. The inlet is connected to the suction guide/strainer of the pump via a grooved coupling-type connection.

Figures 35 and 37 illustrate typical single and dual pump packages. Two drain connections are provided, located at the pump volute and the suction guide.

NOTE: A field-supplied expansion tank must be installed in the inlet piping, as close to the pump as possible. Install the tank in accordance with the manufacturer's instructions.

DX cooler-equipped units with factory-installed hydronic pumps may be applied on open loop systems. These units require an additional field-installed strainer with a minimum size of 20 mesh installed within 10 ft (3.05 m) of and ahead of the DX cooler inlet to prevent debris from damaging the DX cooler's internal tubes. All units equipped with the BPHE evaporator are not suitable for open loop system applications.

⚠ CAUTION

The suction guide/strainer is shipped from the factory with a permanent stainless steel strainer, as well as a run in screen that is tack-welded to the outside of the strainer. The screen is a temporary device used during the start-up/clean-up process of the chilled water circuit to prevent construction debris from damaging the pump or internal tubes of the DX cooler. After all debris has been removed, or a maximum of 24 running hours, the temporary screen must be removed.

⚠ CAUTION

Do not circulate water through unit without strainers in place. Failure to use the strainers represents abuse and may impair or otherwise negatively affect the Carrier product warranty.

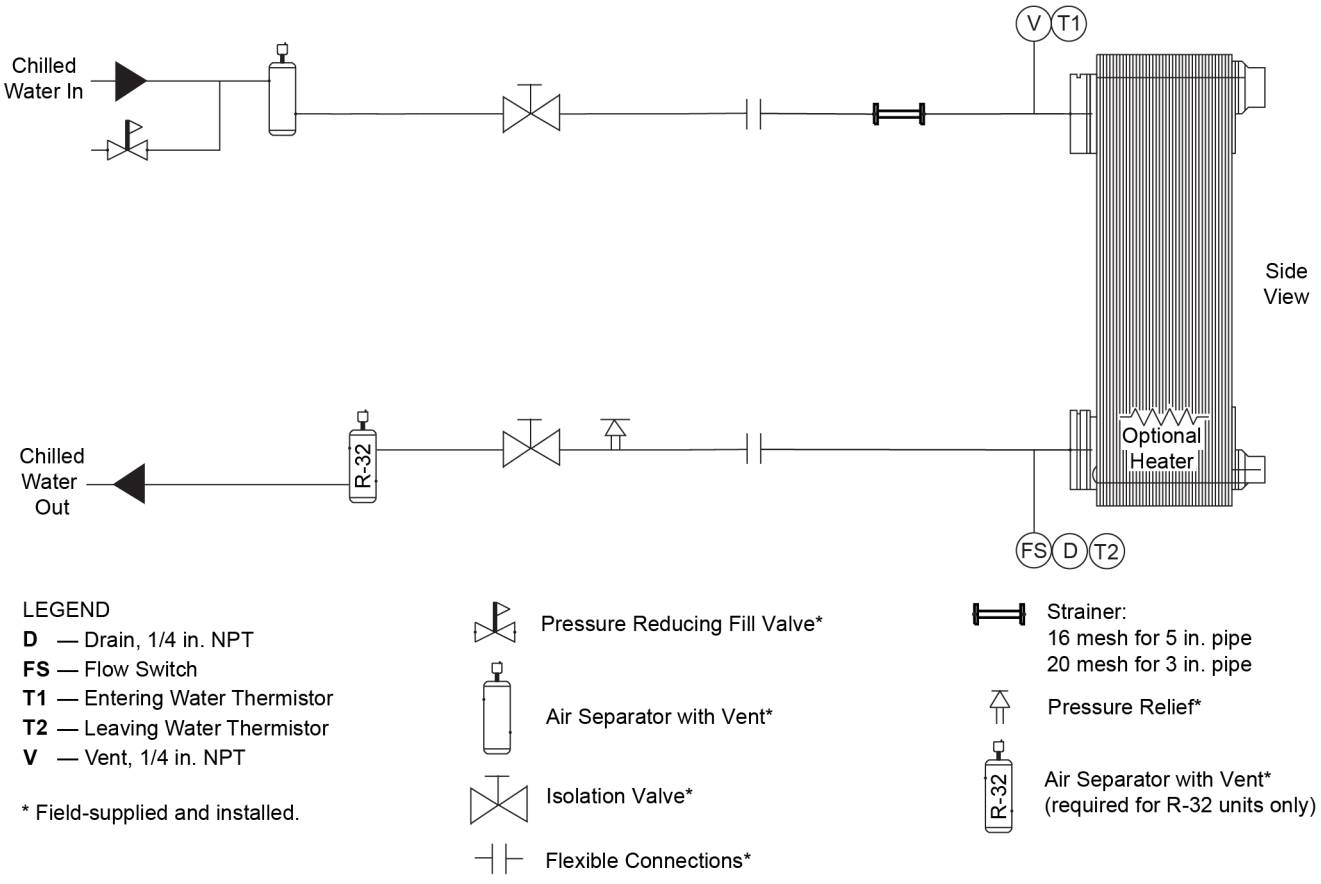


Fig. 32 — Typical Piping Diagram for 30RC BPHE without Hydronic Package

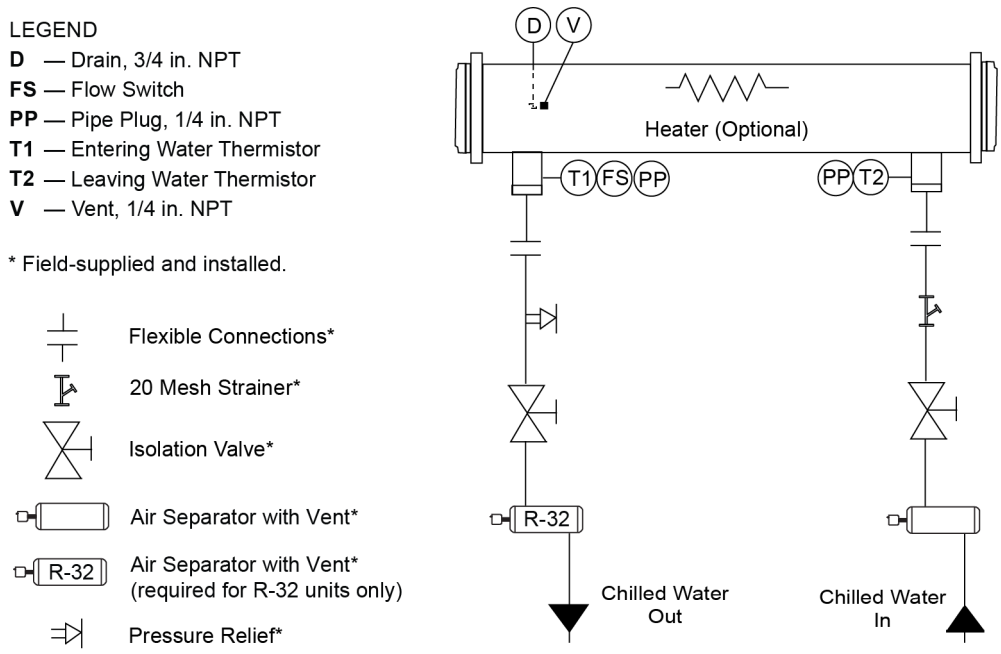


Fig. 33 — Typical Piping Diagram for 30RC DX Cooler without Hydronic Package

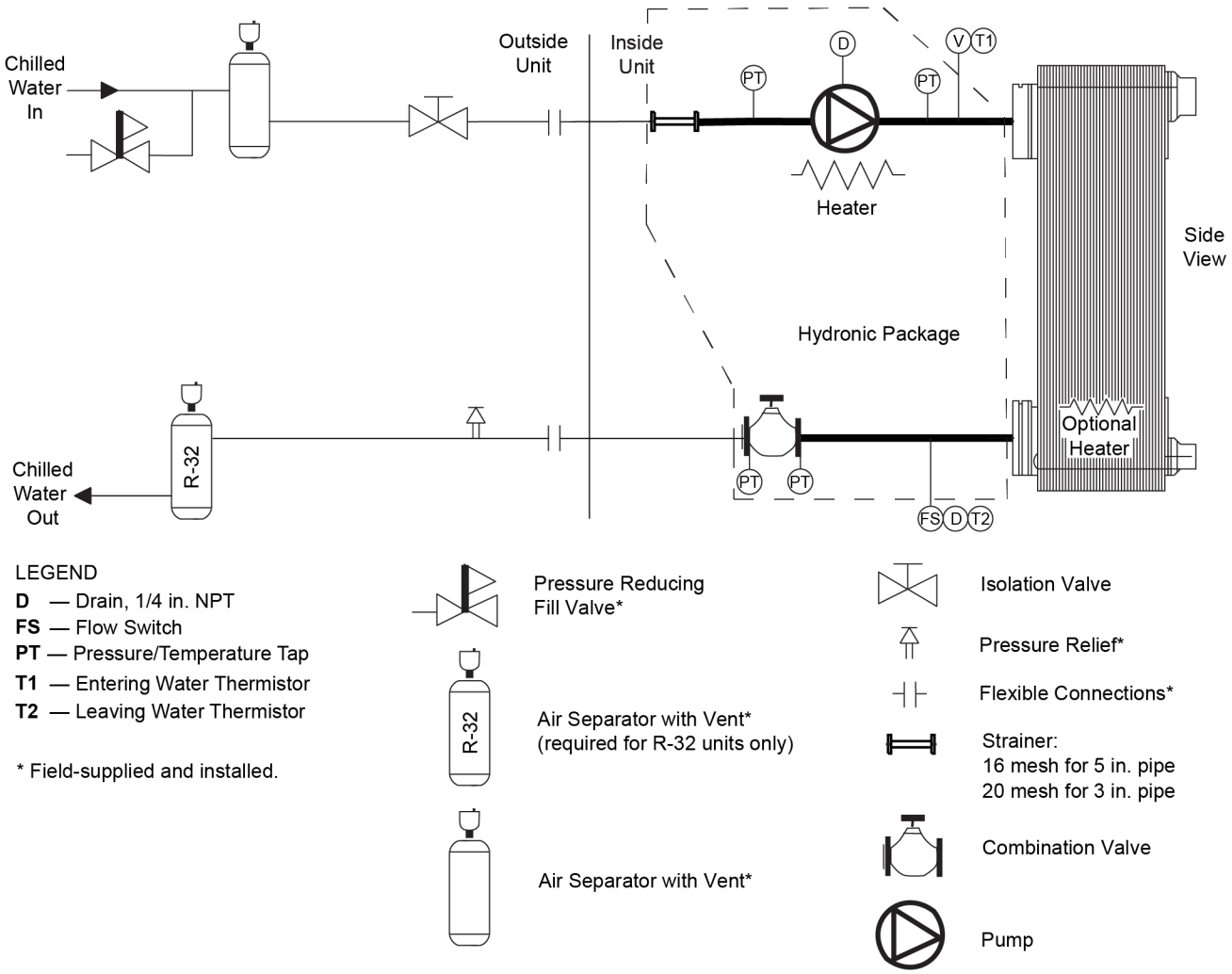


Fig. 34 — Typical Piping Diagram for 30RC BPHE with Hydronic Package — Single Pump

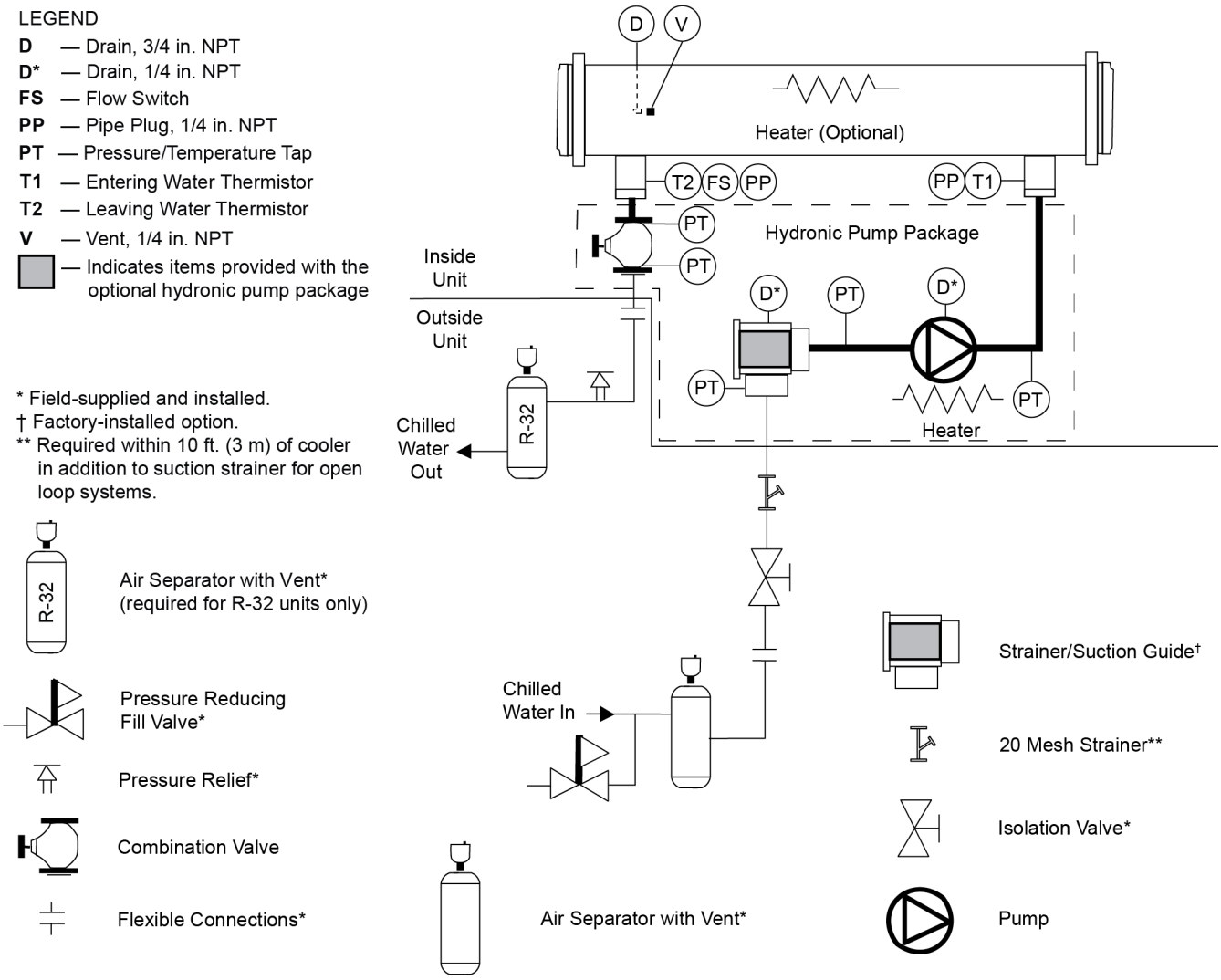


Fig. 35 — Typical Piping Diagram for 30RC DX Cooler with Hydronic Package — Single Pump

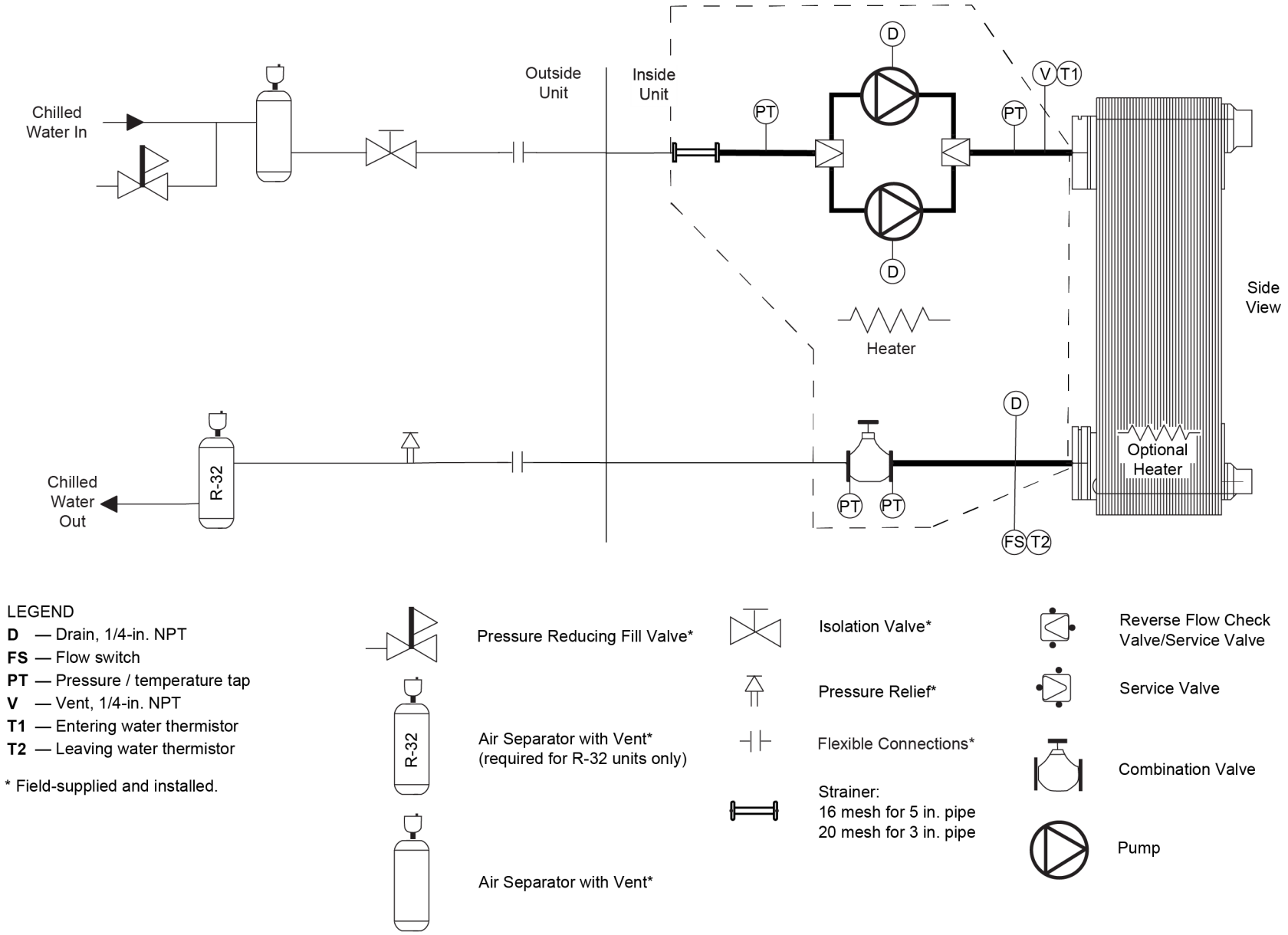


Fig. 36 — Typical Piping Diagram for 30RC BPHE with Hydronic Package — Dual Pumps

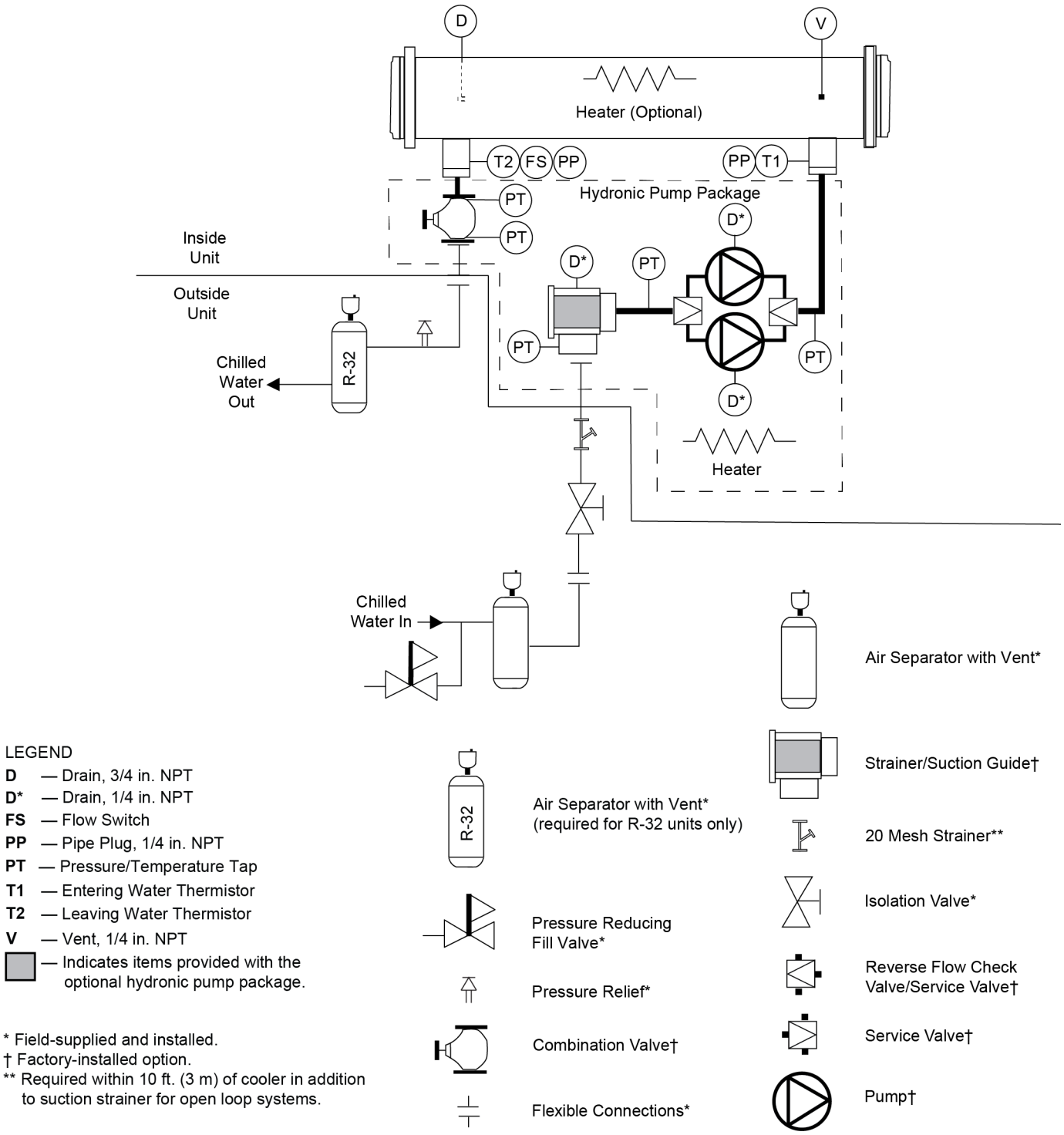


Fig. 37 — Typical Piping Diagram for 30RC DX Cooler with Hydronic Package — Dual Pumps

UNITS WITH OPTIONAL PARTIAL HEAT RECOVERY

The 30RC 065-150 and 30RC 067-152 units, excluding compact tier units, can be equipped with a factory-installed partial heat recovery package consisting of one brazed-plate heat exchanger (desuperheater) per circuit to allow for heat from compressor discharge gas to be partially recovered for heating process water. Units equipped with partial heat recovery must also be equipped with variable speed fans. The partial heat recovery desuperheater fluid connections are at the end of the unit opposite the control panel. Refer to the Controls, Start-Up, Operation, Service, and Troubleshooting literature for detailed operational information.

The partial heat recovery desuperheaters have water-side grooved coupling-type connections (follow connection directions as provided by the coupling manufacturer). The water supply and water return for each desuperheater are manifolded together such that there is a single water inlet and a single water outlet to the partial heat recovery system. (See Fig. 38.) Both inlet and outlet connections are nominal 2 in. Provide proper support for the piping. The hydraulic connection on the desuperheater water inlet and outlet must not generate any local mechanical stress on the exchangers. If necessary, install flexible couplings. If external grilles or hail guards have been added, holes must be cut for field piping and insulation. A field-supplied strainer with a minimum size of 20 mesh must be installed within 10 ft (3.0 m) of the inlet to the desuperheaters. Field-supplied water flow rate balancing and control valves shall be fitted at the outlet of the desuperheaters.

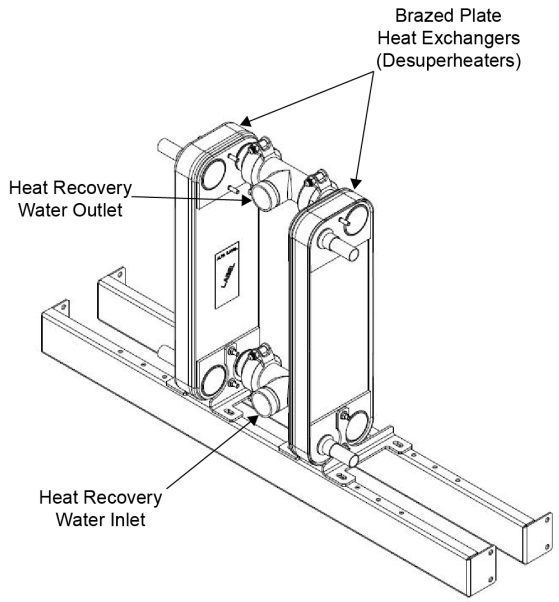


Fig. 38 — Partial Heat Recovery Desuperheaters

The minimum entering water temperature is 70°F (21.1°C). See Table 9 for entering water temperature ranges. The volume of the partial heat recovery water loop must be as low as possible to be able to rapidly increase the temperature during start-up. If entering water temperatures are below the minimum entering operational temperature, 80°F (26.7°C), then a field-installed 3-way valve may be required to control entering water temperature to the minimum required temperature. If a 3-way valve is required, it is recommended that the valve be located within 40 ft (12.2 m) of the desuperheaters and that the field-supplied circulating pump be located between the valve and the desuperheaters. It is essential for the desuperheater water loop to comprise a valve and an expansion vessel, which must be selected to take the volume of the water loop and the maximum possible temperature into account (248°F/120°C) in the event that the circulating pump stops running.

Table 9 — Heat Recovery Inlet Temperatures

PARTIAL HEAT RECOVERY ENTERING WATER TEMPERATURE	MIN °F / °C	MAX °F / °C
Entering Water Temperature at Start-Up	70 / 21.1	150 / 65.6
Entering Water Temperature During Operation	80 / 26.7	150 / 65.6

See Fig. 39 for a typical piping diagram of the partial heat recovery desuperheaters and 3-way valve location. All piping must follow standard piping techniques. Refer to Carrier System Design Manual or appropriate ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) handbook for details.

⚠ CAUTION

Do not circulate water through unit without strainers in place. Failure to use the strainers represents abuse and may impair or otherwise negatively affect the Carrier product warranty.

All desuperheaters used on 30RC units are single wall heat exchangers and are not suitable for potable water. This may require the use of secondary heat exchangers. Refer to UL 60335-2-40 Annex GG.6 for further guidelines.

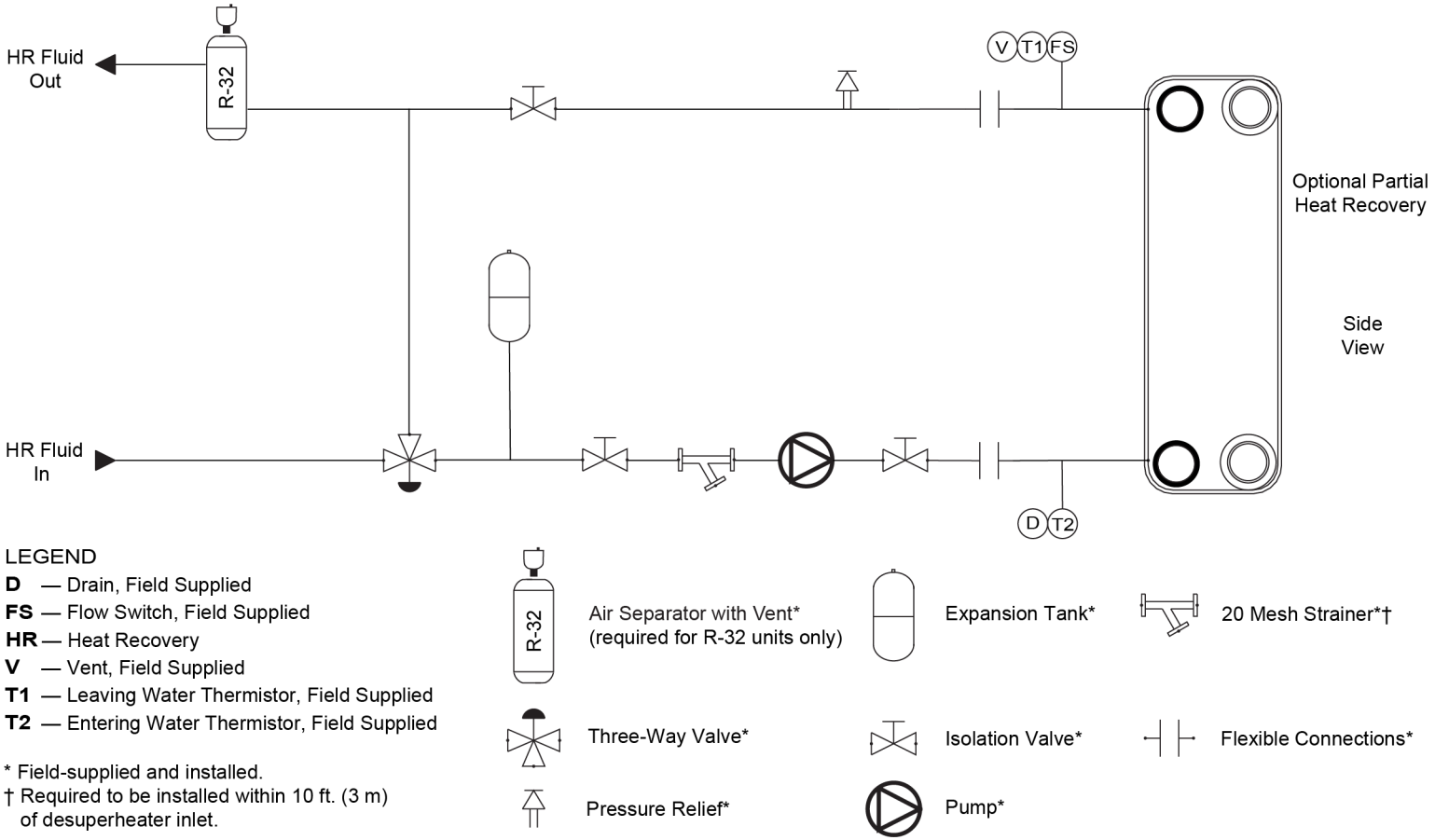


Fig. 39 — Typical Piping Diagram for 30RC Partial Heat Recovery System

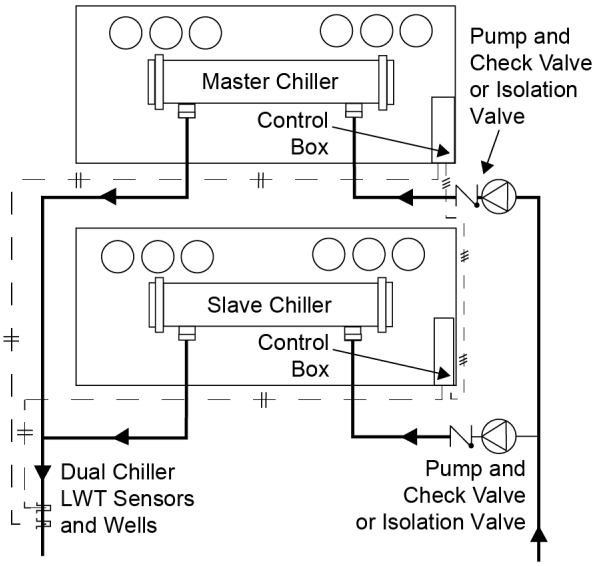
FOR ALL UNITS

Dual Chiller Control Option

If the dual chiller algorithm is used and the machines are installed in parallel, an additional chilled water sensor must be installed for each module. Install the wells in the common leaving water header. (See Fig. 40.)

Parallel chiller control with dedicated pumps is recommended. Chiller must start and stop its own water pump located in its own piping. If pumps are not dedicated for each chiller, then isolation valves are required. Each chiller must open and close its own isolation valve through the unit control (the valve must be connected to the pump outputs).

See Dual Chiller Control Option section on page 68 for more dual chiller leaving water sensor information.



LEGEND
LWT — Leaving Water (Fluid) Temperature
– –//– – Field Wiring
– –///– – Field Communication Wiring
NOTE: This is a simplified piping diagram — not all hydronic specialties are shown.

Fig. 40 — Dual Chiller Control Option Thermistor Location

Minimum Loop Volume

The preferred minimum loop volume is dependent on the type of application. In order to obtain leaving water temperature stability for comfort cooling applications, a minimum of 3 gallons per ton (3.25 liters per kW) is required on all unit sizes. For process cooling applications, applications where high stability is critical or operation at ambient temperatures below 32°F (0°C) is expected, the loop volume should be increased to at least 6 gallons per ton (6.46 liters per kW) of cooling.

In order to achieve this volume, it may be necessary to add a water storage tank to the water loop. If a storage tank is added to the system, it should be properly vented so that the tank can be completely filled and all air eliminated. Failure to do so could cause lack of pump stability and poor system operation. Any storage tank that is placed in the water loop should have internal baffles to allow thorough mixing of the fluid. (See Fig. 41.)

For units with partial heat recovery option, the volume of the water loop must be as low as possible to rapidly increase the temperature at start-up.

Tank Installation

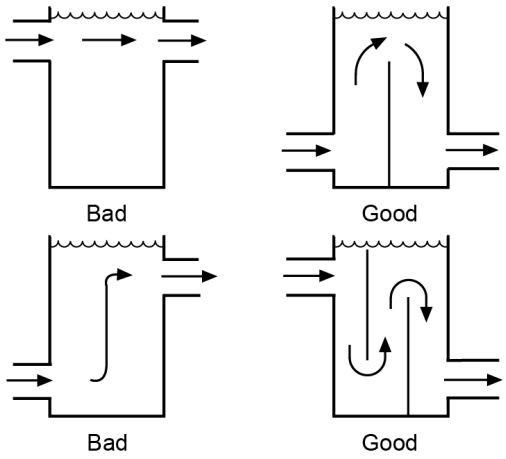


Fig. 41 — Tank Baffling

System Piping

Proper system design and installation procedures should be followed closely. The system must be constructed with pressure-tight components and thoroughly tested for leaks.

Installation of water systems should follow sound engineering practice and applicable local and industry standards. Improperly designed or installed systems may cause unsatisfactory operation and/or system failure. Consult a water treatment specialist or appropriate literature for information regarding filtration, water treatment, and control devices.

Figures 34-37 show a typical installation with components that might be installed with the hydronic package of the 30RC unit. It is recommended for units with the hydronic package that an inlet isolation (shutoff) valve be placed exterior to the unit to allow removal and service of the entire pump assembly, if necessary. The hydronic package is supplied from the factory with a combination valve for isolation of leaving water.

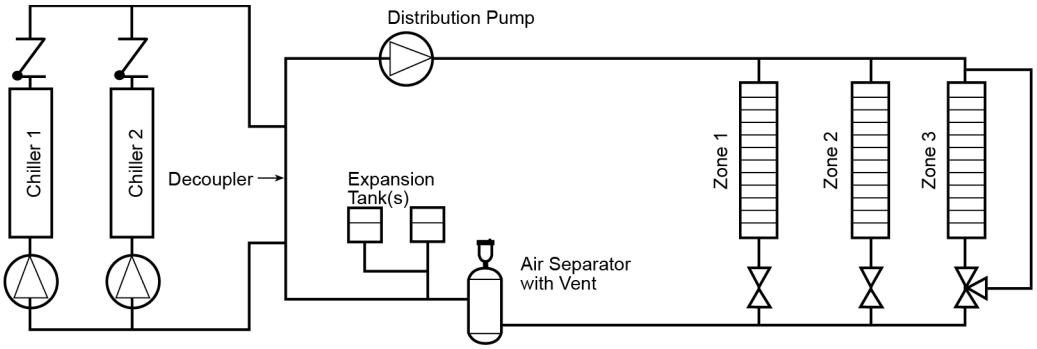
If the unit is isolated with valves, a properly sized pressure relief valve is recommended and should be installed in the piping between the unit and the valves, following all applicable local codes. For units with R-32 refrigerant, it is required that a pressure relief valve be installed at the highest point relative to the outlet of the heat exchanger. The pressure relief valve must be rated to discharge total unit refrigerant charge. See Tables 5 and 7 for refrigerant charge amount. The pressure relief valve must be installed outdoors and must not be installed within the chiller envelope.

⚠WARNING

For units with R-32 refrigerant, it is required that a pressure relief valve be installed at the highest point relative to the outlet of the heat exchanger. The pressure relief valve must be installed outdoors and must not be installed within the chiller envelope.

Air Separation

For proper system operation, it is essential that water loops be installed with proper means to manage air in the system. Free air in the system can cause noise, reduce terminal output, stop flow, or even cause pump failure due to pump cavitation. For closed systems, equipment should be provided to eliminate all air from the system.



NOTE: Expansion tanks for 30RC hydronic kits must be installed for chillers piped in parallel in the primary water loop.

Fig. 42 — Typical Air Separator and Expansion Tank Location on Primary-Secondary Systems

The amount of air that water can hold in solution depends on the pressure and temperature of the water/air mixture. Air is less soluble at higher temperatures and at lower pressures. Therefore, separation can best be done at the point of highest water temperature and lowest pressure. Typically, for the chilled water loop, this point would be on the suction side of the pump as the water is returning from the system or terminals. This is generally the optimal place to install an air separator, if possible.

1. Install automatic air vents at all high points in the system. (If the 30RC unit is located at the high point of the system, a vent can be installed on the piping leaving the heat exchanger on the 1/4 in. NPT female port.)
2. Install an air separator in the water loop, at the place where the water is at higher temperatures and lower pressures — usually in the chilled water return piping. On a primary-secondary system, the highest temperature water is normally in the secondary loop, close to the decoupler. Preference should be given to that point on the system. (See Fig. 42.) In-line or centrifugal air separators are readily available in the field.

It may not be possible to install air separators at the place of the highest temperature and lowest pressure. In such cases, preference should be given to the points of highest temperature. For instance, on the partial heat recovery loop (if desuperheaters are equipped), this point would be on the hot water supply leaving the desuperheaters. It is important that the pipe be sized correctly so that free air can be moved to the point of separation. Generally, a water velocity of at least 2 feet per second (0.6 m per second) will keep free air entrained and prevent it from forming air pockets.

Automatic vents should be installed at all physically elevated points in the system so that air can be eliminated during system operation. Provisions should also be made for manual venting during the water loop fill.

For units with R-32 refrigerant, it is required that an automatic air separator with vent be installed at the highest point relative to the outlet of the heat exchanger. This is in addition to any air separators installed for proper system operation. The air separators must be installed outdoors and must not be installed within the chiller envelope.

IMPORTANT: Automatic vents should be located in accessible locations for maintenance purposes and protected from freezing.

⚠WARNING

For units with R-32 refrigerant, it is required that an automatic air separator with vent be installed at the highest point relative to the outlet of the heat exchanger. The air separator must be installed outdoors and must not be installed within the chiller envelope.

Step 3 — Fill the Chilled Water and Partial Heat Recovery Loop

IMPORTANT: Before starting unit, be sure all of the air has been purged from the system.

The chilled water pump (if equipped) is rated for 150 psig (1034 kPa) duty. The maximum evaporator water-side pressure is 300 psig (2068 kPa). Check the pressure rating for all of the chilled water devices installed. Do not exceed the lowest pressure rated device.

WATER SYSTEM CLEANING

Proper water system cleaning is of vital importance. Excessive particulates in the water system can cause excessive pump seal wear, reduce or stop flow, and cause damage to other components. Water quality should be maintained within the limits indicated in Table 10. Failure to maintain proper water quality may result in heat exchanger failure.

Abiding by water quality limits is especially important for the BPHE evaporators and the desuperheaters in the optional partial heat recovery system. These heat exchangers are most susceptible to damage from particulates due to the tight water passages.

⚠CAUTION

Failure to properly clean all piping and components of the chilled water or partial heat recovery system before unit start-up may result in plugging of the heat exchanger, which can lead to poor performance, nuisance alarms, and/or damage from freezing. Freezing damage caused by an improperly cleaned system represents abuse and may impair or otherwise negatively affect the Carrier product warranty.

⚠CAUTION

Do not circulate water through unit without strainers in place. Failure to use the strainers represents abuse and may impair or otherwise negatively affect the Carrier product warranty.

1. Install a temporary bypass around the chiller to avoid circulating dirty water and particulates into the pump package and chiller during the flush. Use a temporary circulating pump during the cleaning process. Also, be sure that there is capability to fully drain the system after cleaning. (See Fig. 43.)
2. Be sure to use a cleaning agent that is compatible with all system materials. Be especially careful if the system contains any galvanized or aluminum components. Both detergent-dispersant and alkaline-dispersant cleaning agents are available.
3. It is recommended to fill the system(s) through a water meter. This provides a reference point for the future for loop volume readings, and it also establishes the correct quantity of cleaner needed in order to reach the required concentration.
4. Use a feeder/transfer pump to mix the solution and fill the system. Circulate the cleaning system for the length of time recommended by the cleaning agent manufacturer.
   a. After cleaning, drain the cleaning fluid and flush the system with fresh water.
   b. A slight amount of cleaning residue in the system can help keep the desired, slightly alkaline, water pH of 8 to 9. Avoid a pH greater than 10, since this will adversely affect pump seal components.
   c. A side stream filter is recommended (see Fig. 44) during the cleaning process. Filter side flow rate should be enough to filter the entire water volume every 3 to 4 hours. Change filters as often as necessary during the cleaning process.
   d. Remove temporary bypass when cleaning is complete.

Table 10 — Water System Cleaning

WATER CHARACTERISTIC	QUALITY LIMITATION
Alkalinity (HCO_3-)	70-330 ppm
Sulfate (SO_4^2-)	Less than 70 ppm
HCO_3-/SO_4^2-	Greater than 1.0
Electrical Conductivity	10-500 μS/cm
pH	7.5-9.0
Ammonia (NH_3)	Less than 2 ppm
Chlorides (Cl-)	Less than 300 ppm
Free chlorine (Cl_2)	Less than 1 ppm
Hydrogen Sulfide (H_2S)[a]	Less than 0.05 ppm
Free (Aggressive) Carbon Dioxide (CO_2)[b]	Less than 5 ppm
Total Hardness (°dH)	4.0-8.5
Nitrate (NO_3)	Less than 100 ppm
Iron (Fe)	Less than 0.2 ppm
Aluminum (Al)	Less than 0.2 ppm
Manganese (Mn)	Less than 0.1 ppm

NOTE(S):

a. Sulfides in the water quickly oxidize when exposed to air, requiring that no agitation occur as the sample is taken. Unless tested immediately at the site, the sample will require stabilization with a few drops of one Molar zinc acetate solution, allowing accurate sulfide determination up to 24 hours after sampling. A low pH and high alkalinity cause system problems, even when both values are within the ranges shown. The term pH refers to the acidity, basicity, or neutrality of the water supply. Below 7.0, the water is considered to be acidic. Above 7.0, water is considered to be basic. Neutral water has a pH of 7.0.
b. Dissolved carbon dioxide can either be calculated from the pH and total alkalinity values, shown below, or measured on the site using a test kit. Dissolved Carbon Dioxide, PPM = TA x $2^{[(6.3\text{-pH})/0.3]}$, where TA = Total Alkalinity, PPM as $CaCO_3$.

A factory-installed strainer is standard on all 30RC units equipped with BPHE. BPHE-equipped units with 3 in. water piping will have a 20 mesh strainer and those with 5 in. water piping will have a 16 mesh strainer. A suction guide with an internal strainer is standard on all 30RC units equipped with a DX cooler and optional factory-installed hydronic packages. These strainers allow removal of particulates from the chilled water loop. Using the combination valve and the field-installed isolation valve at the inlet, the strainer can be isolated from the chilled water loop to be cleaned.

30RC units equipped with DX coolers, but without the optional hydronic module, are not installed with a strainer from the factory. These units require a field-installed and supplied 20 mesh strainer within 10 ft of the cooler inlet.

DX Cooler Units

The suction guide is supplied with a permanent 0.125 in. perforated stainless steel strainer, as well as a temporary 16-mesh galvanized steel start-up strainer.

After all debris has been removed from the system, or a maximum of 24 running hours, stop the pump and close the pump isolation valves. Drain the suction guide by removing the drain plug or opening the blowdown valve, if installed. Remove the suction guide cover and remove the strainer assembly from the valve body.

The temporary 16-mesh start-up strainer is tack-welded to the permanent stainless steel strainer. The temporary strainer must be removed from the permanent strainer. The 16-mesh strainer is designed to remove small particulates from new piping systems and could easily clog with debris if left in place. This will be detrimental to the operation of the pump.

Place the permanent strainer back into the fitting body once the temporary strainer is removed.

Inspect the cover O-ring and replace if necessary. Place the cover back into the body. Ensuring that the strainer is properly seated, tighten the cover bolts diagonally, evenly and firmly.

NOTE: The 16-mesh start-up strainer must be removed from the suction guide after the first 24 hours of operation.

WATER TREATMENT

Fill the fluid loop with water and a corrosion-resistant inhibitor suitable for the water of the area. Consult the local water treatment specialist for characteristics of system water and a recommended inhibitor for the evaporator or partial heat recovery fluid loop.

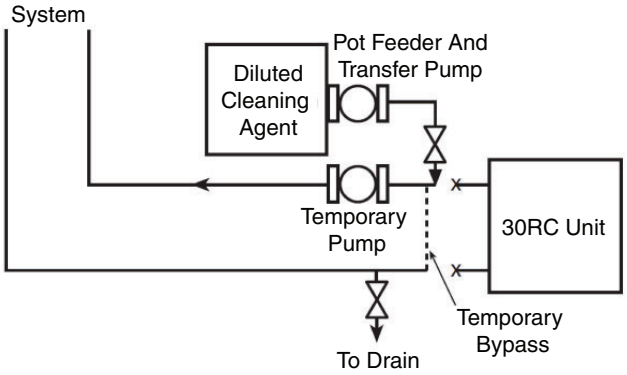


Fig. 43 — Typical Setup for Cleaning Process

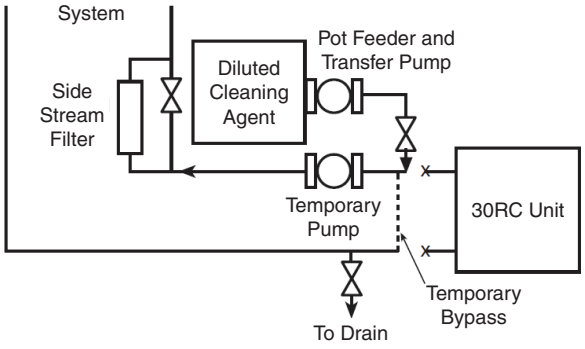


Fig. 44 — Cleaning Using a Side Stream Filter

SYSTEM PRESSURIZATION

A proper initial cold fill pressure must be established before filling the unit. The initial cold fill pressure is the pressure applied at the filling point to fill a system to its highest point, plus a minimum pressure at the top of the system (4 psig minimum [27.6 kPa]) to operate air vents and positively pressurize the system. The expansion tank is very important to system pressurization and serves several purposes:

1. Provide NPSH (net positive suction head) required for the pump to operate satisfactorily.
2. Set system pressure.
3. Accommodate expansion or contraction of water due to temperature changes.
4. Act as a pressure reference for the pump.

The expansion tank pressure must be set BEFORE the system is filled. Follow the manufacturer's recommendation for instructions on setting the pressure in the expansion tank. The net positive suction head pressure required information is provided on the pump curves in Fig. 45-57 for units with factory-installed hydronic kits. See Table 11 for pump impeller sizes.

Once the system is pressurized, the pressure at the connection point of the expansion tank to water piping will not change unless the water loop volume changes (either due to addition/subtraction of water or temperature expansion/contraction). The pressure at this point remains the same regardless of whether or not the pump is running.

Since the expansion tank acts as a reference point for the pump, there cannot be 2 reference points (2 expansion tanks) in a system, unless manifolded together. Where 2 or more 30RC chillers with the hydronic option are installed in parallel, there should not be more than one expansion tank in the system, unless manifolded together as seen in Fig. 42. It is permissible to install the expansion tank(s) in a portion of the return water line that is common to all pumps, providing that the tank is properly sized for combined system volume.

If the application involves 2 or more chillers in a primary-secondary system, a common place for mounting the expansion tank is in the chilled water return line, just before the decoupler. See Fig. 42 for placement of expansion tank in primary-secondary systems.

If a diaphragm expansion tank is utilized (a flexible diaphragm physically separates the water/air interface), then it is not recommended to have any air in the water loop. See the Air Separation section on page 53 for instructions on providing air separation equipment.

FILLING THE SYSTEM(S)

The initial fill of the chilled water or partial heat recovery system must accomplish 3 goals:

1. The entire piping system must be filled with water.
2. The pressure at the top of the system must be high enough to vent air from the system (usually 4 psig [27.6 kPa] is adequate for most vents).
3. The pressure at all points in the system must be high enough to prevent flashing in the piping or cavitation in the pump.

The pressure created by an operating pump affects system pressure at all points except one — the connection of the expansion tank to the system. This is the only location in the system where pump operation will not give erroneous pressure indications during the fill. Therefore, the best location to install the fill connection is close to the expansion tank. An air vent should be installed close by to help eliminate air that enters during the fill procedure.

When filling the system, ensure the following:

1. Remove temporary bypass piping and cleaning/flushing equipment.
2. Check to make sure all drain plugs are installed.

Normally, a closed system needs to be filled only once. The actual filling process is a fairly simple procedure. All air should be purged or vented from the system. Thorough venting at high points and circulation at room temperature for several hours is highly recommended.

NOTE: Local codes concerning backflow devices and other protection of the city water system should be consulted and followed to prevent contamination of the public water supply. This is critical when antifreeze is used in the system.

Table 11 — Pump Impeller Sizes[a]

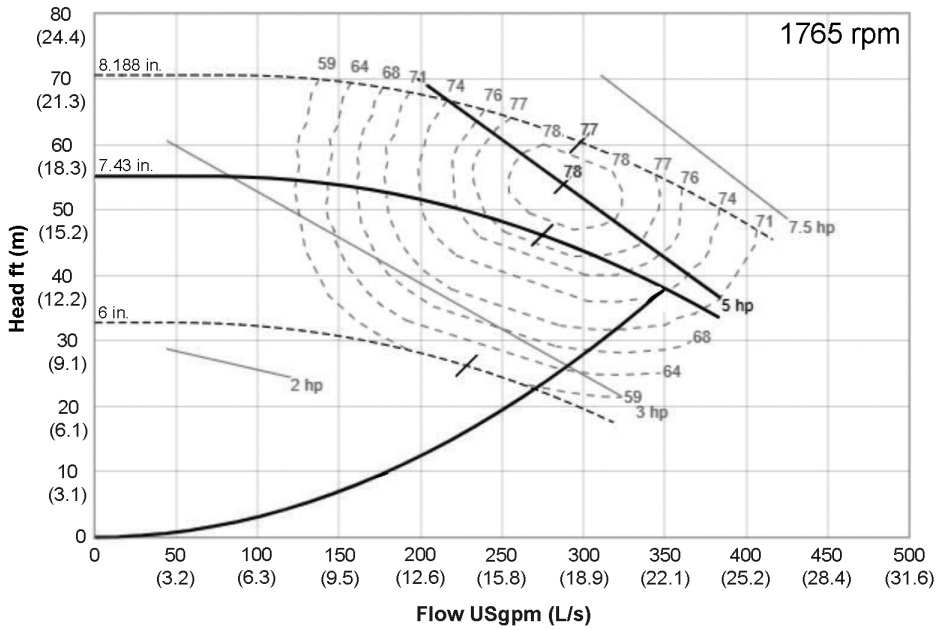
UNIT 30RC	PUMP Hp	SINGLE PUMP				DUAL PUMP			
		Option Code[b] (BPHE/DX)	RPM	Impeller Dia. (in.)	Pump Curve	Option Code[a] (BPHE/DX)	RPM	Impeller Dia. (in.)	Pump Curve
065/067 070/072	5	0/K	1765	7.43	I	5/Q	1765	7.67	VII
	7.5	1/L	1765	8.17	II	6/R	1765	8.17	VIII
	10	2/M	3540	5.27	III	7/S	3540	5.72	IX
080/082 090/092 100/102 110/112 120/122 130/132	5	0/K	1765	7.43	I	5/Q	1765	7.67	VII
	7.5	1/L	1765	8.17	II	6/R	1765	8.17	VIII
	10	2/M	3540	5.27	III	7/S	3540	5.27	X
	15	3/N	3540	5.84	IV	8/T	3540	5.91	XI
150/152	7.5	1/L	1770	7.18	V	6/R	3540	4.93	XII
	10	2/M	3540	5.27	III	7/S	3540	5.27	X
	15	3/N	3560	4.96	VI	8/T	3560	4.96	XIII

NOTE(S):

a. Pump Selections are chiller size dependent. For example, dual pump 6 on a 30RC150 chiller is not the same as dual pump 6 on a 30RC130 chiller.
b. Option Code refers to the Hydronics Option (position 14) in the model number. See model number nomenclature for option identification.

LEGEND

BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion

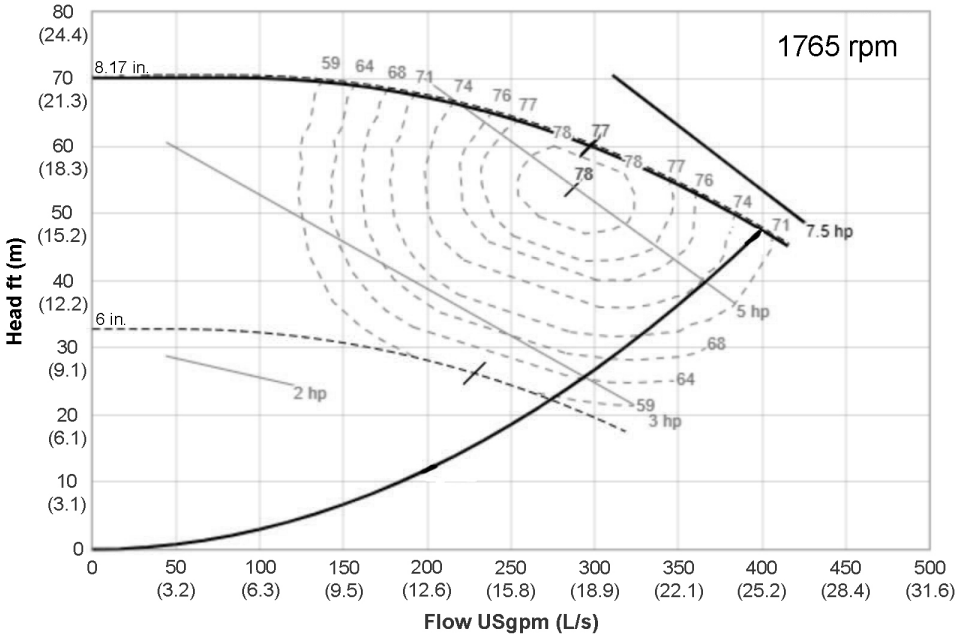


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 45 — Pump Curve I for Hydronic Package Single Pump (Fresh Water)

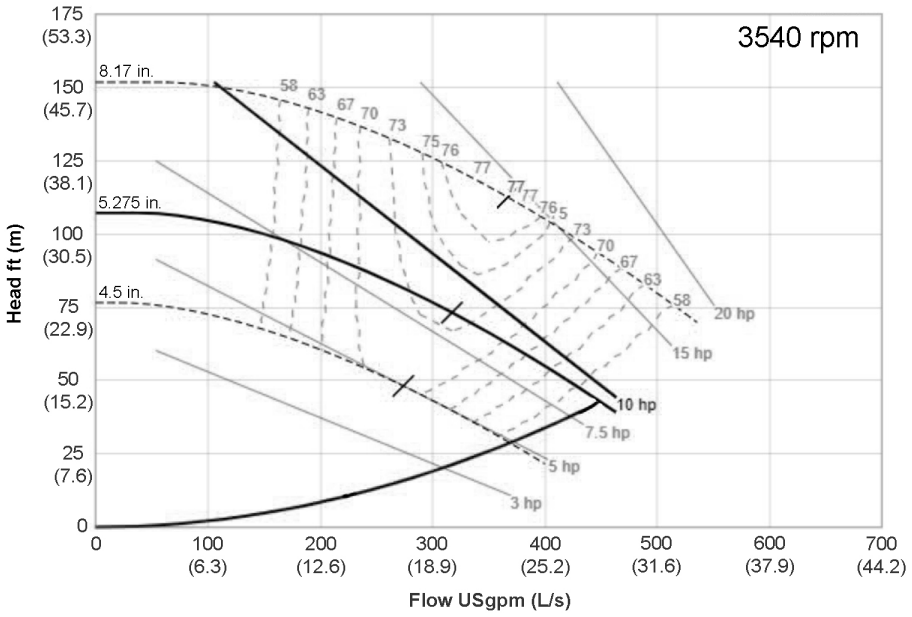


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 46 — Pump Curve II for Hydronic Package Single Pump (Fresh Water)

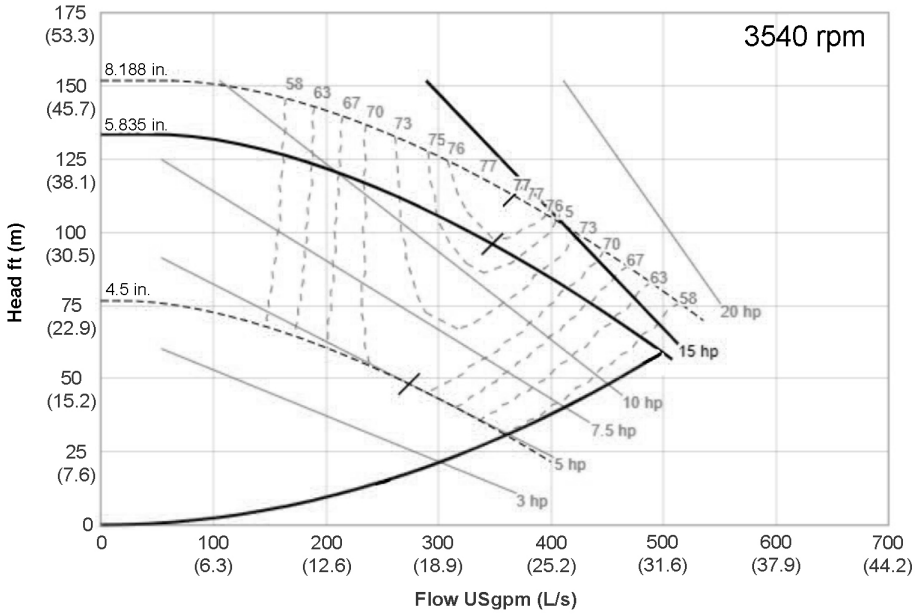


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 47 — Pump Curve III for Hydronic Package Single Pump (Fresh Water)

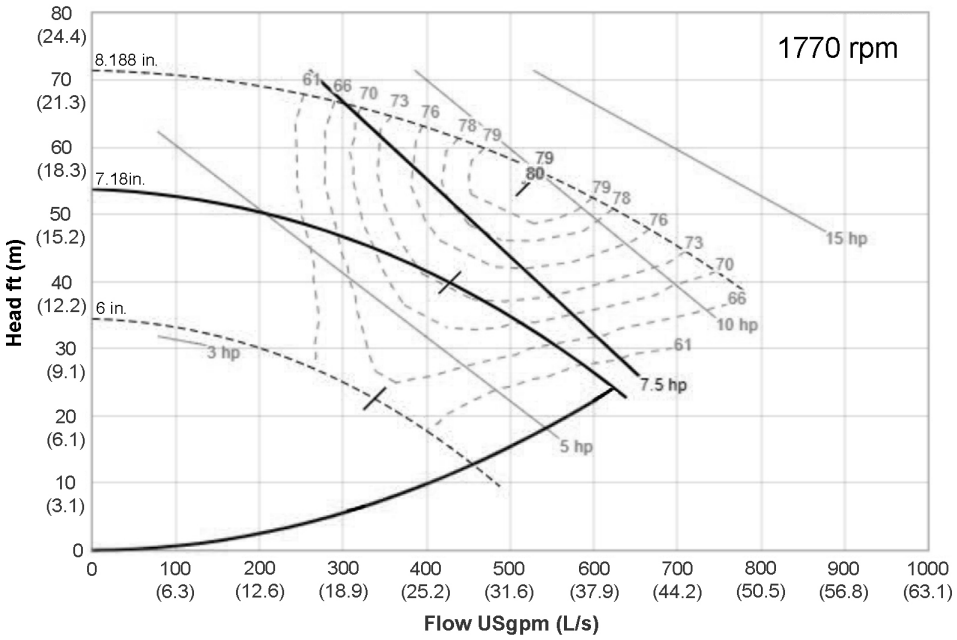


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 48 — Pump Curve IV for Hydronic Package Single Pump (Fresh Water)

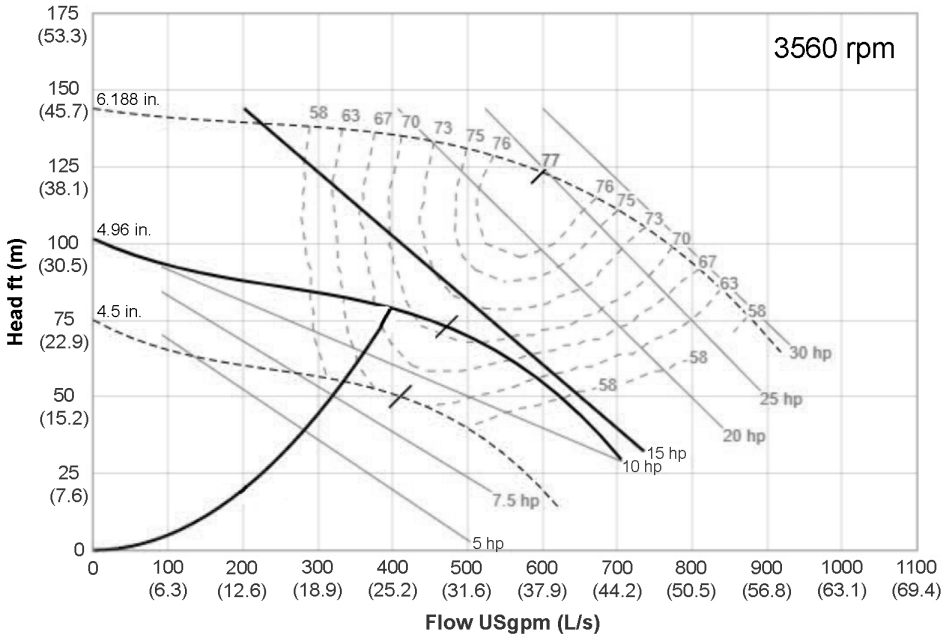


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 49 — Pump Curve V for Hydronic Package Single Pump (Fresh Water)

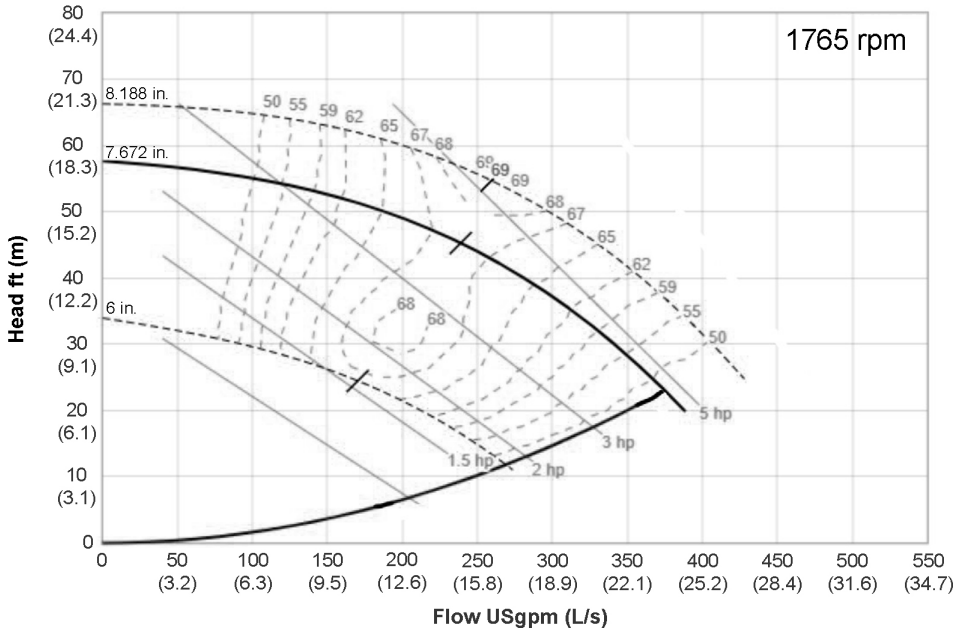


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 50 — Pump Curve VI for Hydronic Package Single Pump (Fresh Water)

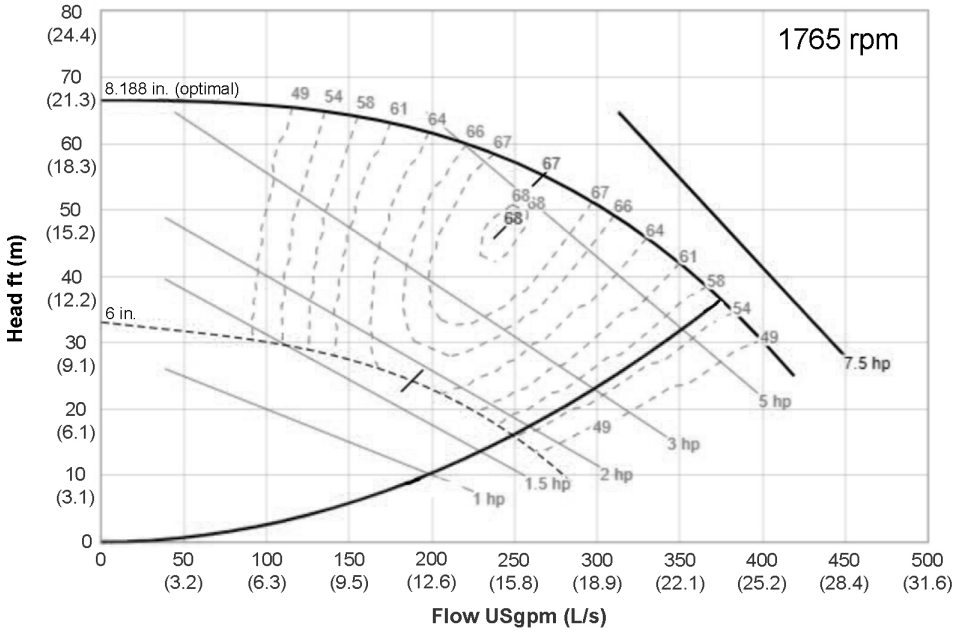


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 51 — Pump Curve VII for Hydronic Package Dual Pump (Fresh Water)

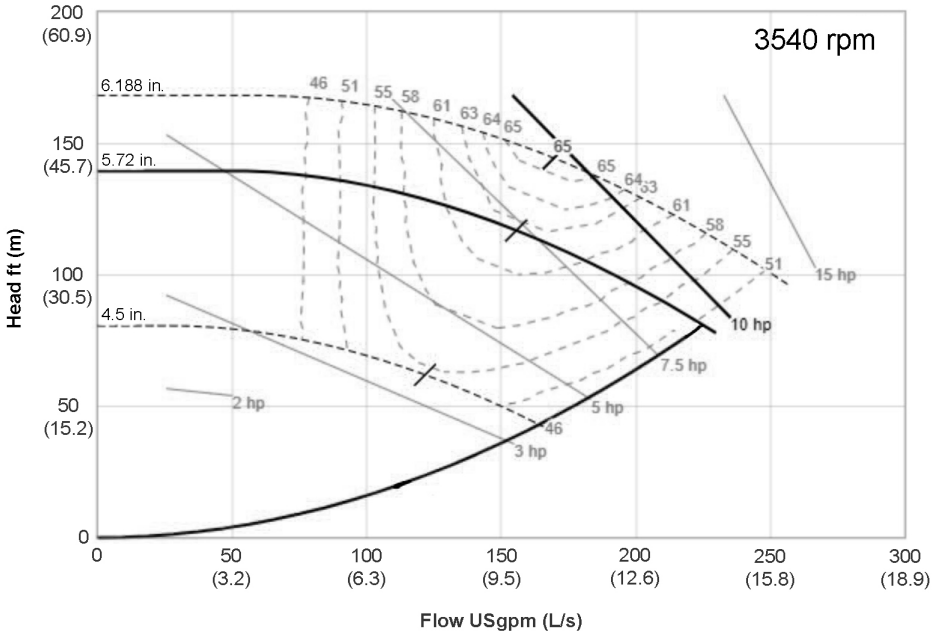


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 52 — Pump Curve VIII for Hydronic Package Dual Pump (Fresh Water)

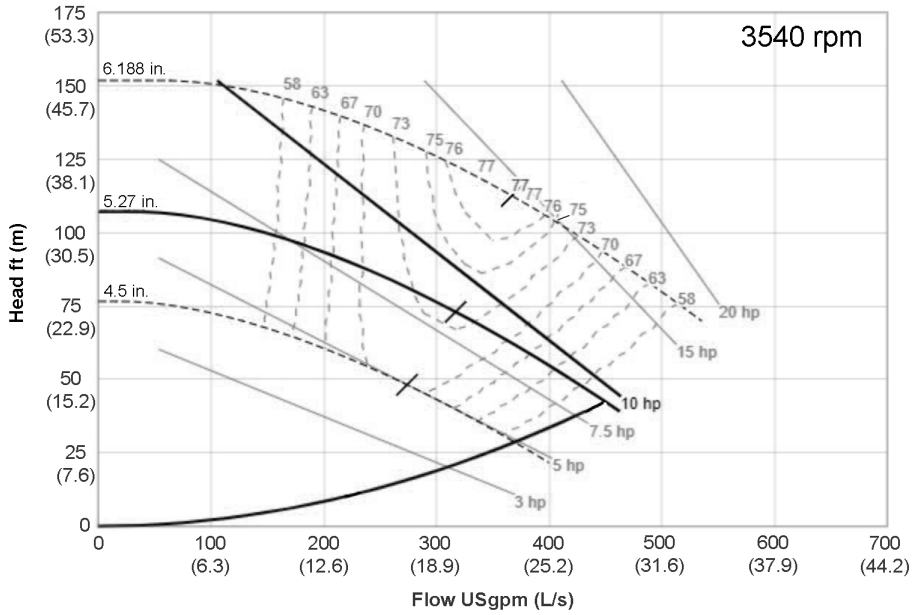


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 53 — Pump Curve IX for Hydronic Package Dual Pump (Fresh Water)

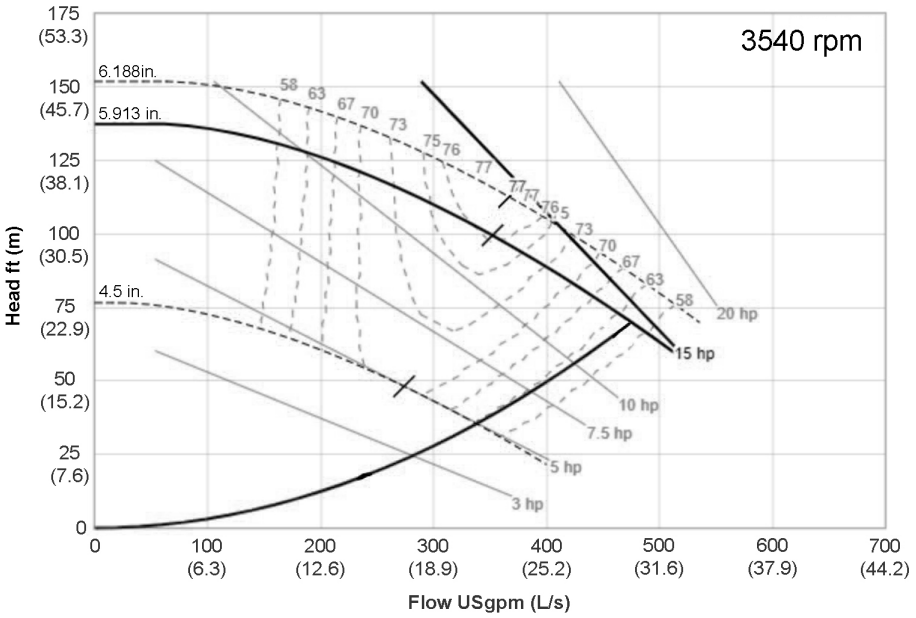


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 54 — Pump Curve X for Hydronic Package Dual Pump (Fresh Water)

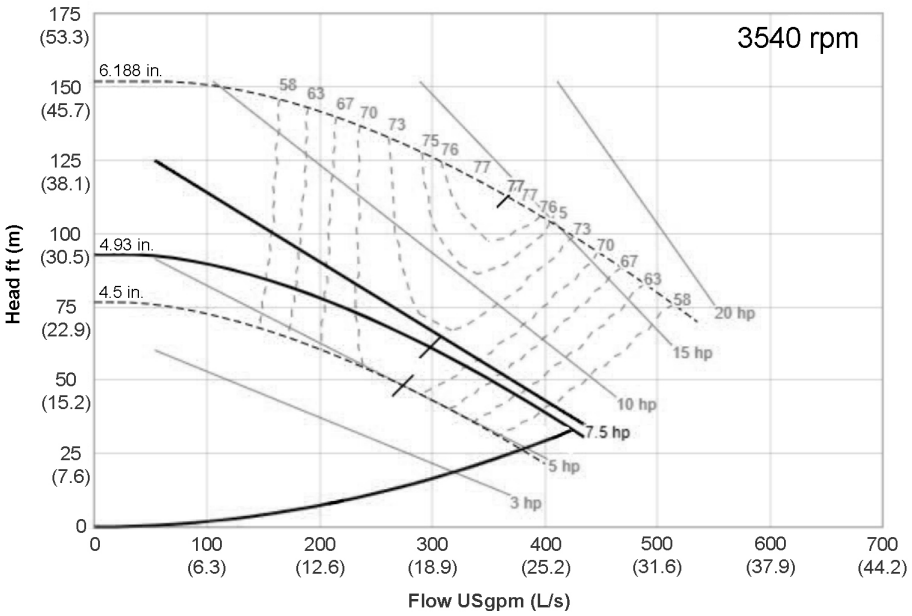


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 55 — Pump Curve XI for Hydronic Package Dual Pump (Fresh Water)

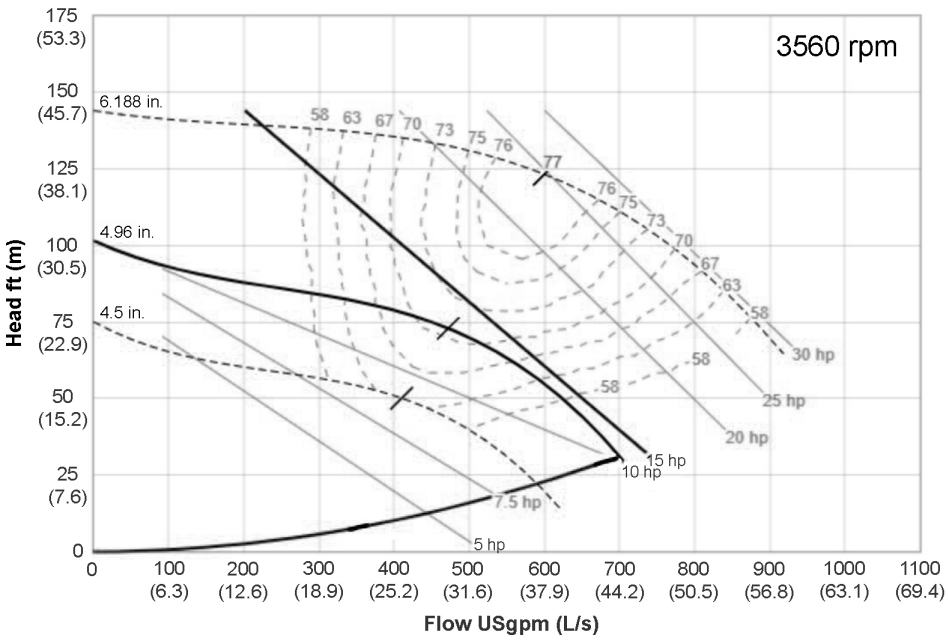


LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 56 — Pump Curve XII for Hydronic Package Dual Pump (Fresh Water)



LEGEND

NPSHr — Net Positive Suction Head (Pressure) Required

NOTE: Refer to the 30RC nomenclature, Fig. 1, for option identification. Refer to the Pump Impeller Sizes, Table 11, for more information.

Fig. 57 — Pump Curve XIII for Hydronic Package Dual Pump (Fresh Water)

SET WATER FLOW RATE

Once the system is cleaned, pressurized, and filled, the flow rate through the chiller and partial heat recovery needs to be established. Refer to the Job Submittal for flow rate requirements. See the Controls, Start-Up, Operation, Service, and Troubleshooting literature for operating limits. On units with the hydronic package, the chilled water flow rate can be accomplished by using the combination valve. Follow the manufacturer's recommendations for setting the combination valve. Local codes may prohibit restricting the amount of water using the combination valve for a given motor horsepower. In this case, use the method listed in the Pump Modification/Trimming section below. See Table 12 for the type of combination valve in 30RC units with the optional hydronic package.

Table 12 — Combination Valve Details

EVAPORATOR TYPE	30RC UNIT	SINGLE/DUAL PUMP
DX	065-100/067-102	FTV 4 in.
	110-150/112-152	FTV 6 in.
BPHE	065-090/067-092	FTV 3 in.
	100-150/102-152	FTV 5 in.

NOTE: Carrier recommends a differential pressure gauge when measuring pressures across the pumps or combination valves. This provides for greater accuracy and reduces error build-up that often occurs when subtracting pressures made by different gauges.

A rough estimate of water flow can also be obtained from the pressure gauges across the 30RC heat exchangers. This approach applies to units without the hydronic package and for the partial heat recovery loop.

Figures 58-62 show the relationship between gpm and heat exchanger pressure drop. It should be noted that these curves are for fresh water and "clean" heat exchangers; they do not apply to heat exchangers with fouling. To read the chart, subtract the readings of the 2 pressure gauges on the inlet and outlet of the heat exchanger. This number is the pressure drop across the heat exchanger. Adjust the factory-installed combination valve or field-supplied external balancing valve (in units without hydronic package or the partial heat recovery loop) until the correct pressure drop is obtained for the required gpm.

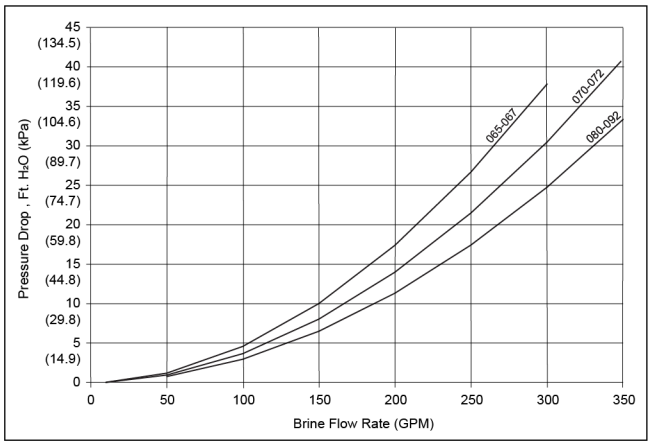


Fig. 58 — 30RC 065-092 BPHE Pressure Drop Curve

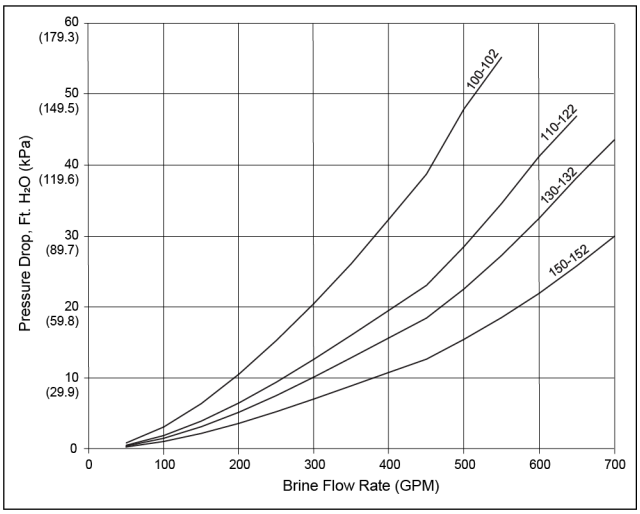


Fig. 59 — 30RC 100-152
BPHE Pressure Drop Curve

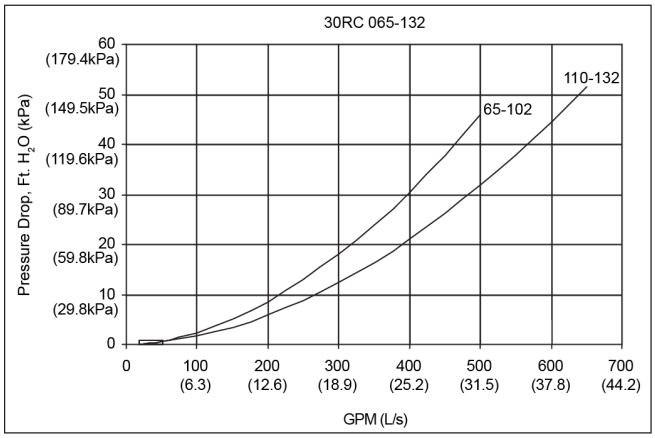


Fig. 60 — 30RC 065-132
DX Cooler Pressure Drop Curves

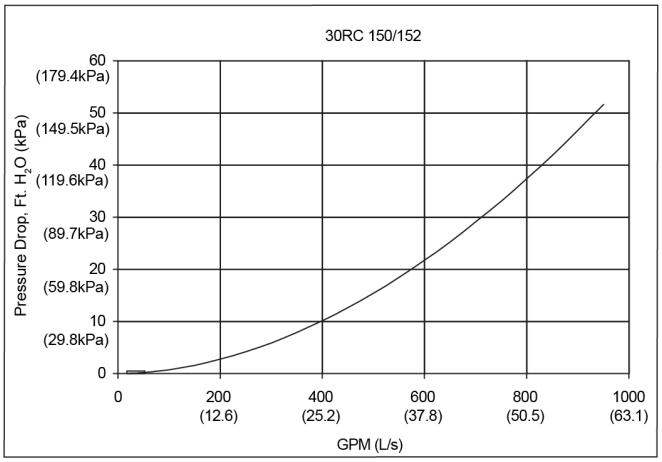


Fig. 61 — 30RC 150/152
DX Cooler Pressure Drop Curve

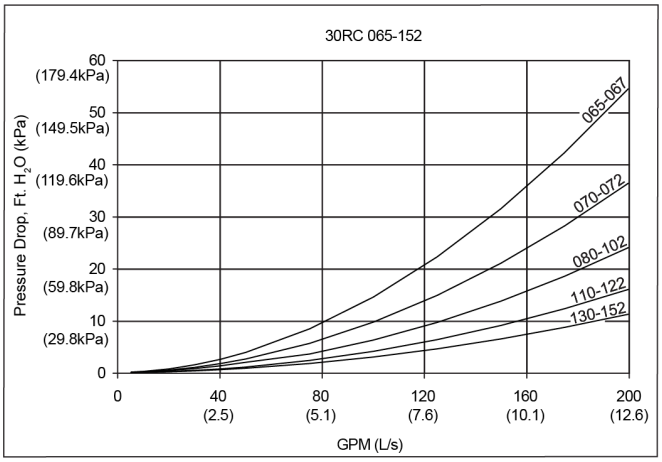


Fig. 62 — 30RC 065-152
Desuperheater Pressure Drop Curves

PUMP MODIFICATION/TRIMMING

For constant speed pumps, the only way to obtain greater flow with a given pump/impeller is to decrease system head. This will allow the pump to "ride" its curve to the right, resulting in increased flow. If greater flow is necessary, consider opening the combination valve. Also, verify that the strainer is clean and that no unnecessary system resistance is present, such as partially closed isolation valves.

Once the combination valve is set, note the stem position. If later service work requires the valve to be closed, it will be easier to re-balance the system if the original balance point is known.

Increasing system resistance by closing the combination valve will force the pump to "ride" its curve to the left, resulting in less flow. Although this does reduce power consumption slightly, it may not be the desirable method of reducing the flow, especially if a large reduction is needed.

The other method for reducing flow on a constant speed pump is impeller trimming. The impellers in the pumps provided in the 30RC hydronic kit can be easily removed for this purpose. Refer to the literature packet supplied with the hydronic package information on Seal Replacement in the Service Section, and follow instructions for impeller removal and trimming. Trimming should only be done by a qualified machine shop that has experience in this operation. Contact your local Carrier representative for a recommended machine shop.

⚠ CAUTION

After trimming, the impeller MUST be balanced. Failure to balance trimmed impellers can result in excessive vibration, noise, and premature bearing failure.

Impeller trimming has the added benefit of maximum bhp (brake horsepower) savings, which can recover the cost incurred by performing the impeller trimming.

PUMP VFD

Dual pump hydronic packages may be ordered with a variable frequency drive (VFD) for speed control.

SENSORLESS CONTROL (CLOSED LOOP) — ACTIVE SETUP 1

The VFD provided with the pumps from the factory is configured for sensorless control. Default set points are entered for the unit according to nominal tonnage of the unit. Table 13 shows the settings from the factory. For details on operating the drive display, see the pump installation and operation manual, and for more

detailed information on the drive, see IVS 102 Operating Instructions. These manuals are supplied in the control box of the chiller.

The following set points should be verified or modified for the actual installation.

Parameter 20-21 Setpoint, Hd, Ft-Wc

Parameter 22-89 Design Flow Setpoint, gpm

Parameter 22-87 Pressure at no-flow speed, Hmin, Ft-Wc (40% of Hd)

When changing set points, assure values are within the pump curve for the pump provided with the unit.

Minimum speed for the pump is set at 50 Hz, Parameter 4-12. This may be changed as long as the corresponding flow rate meets the minimum flow requirement for the chiller.

REMOTE SENSOR (CLOSED LOOP) — ACTIVE SETUP 2

The drive may be set up to use a remote sensor instead of sensorless pump control. For a remote sensor control, change Active Set-up on the drive from 1 to 2, Parameter 0-10. The drive will read a 0-10 vdc or a 0/4-20 mA signal from the sensor. Switch S2-01 must be set to Off (default setting) for 0-10 vdc or On for 0/4-20 mA. The switch is located behind the display. The cover must be removed and the display will snap off to access this switch.

The set point is defined by Parameter 20-21, Setpoint 1. This is a percentage of the maximum signal from the sensor. The default is 80%.

REMOTE CONTROLLER (OPEN LOOP) — ACTIVE SETUP 3

Drive may be controlled by external sources. For a remote control of the drive, change Active Setup on the drive to 3, Parameter 0-10. An input signal can used to control the drive speed. Input signal may be 0-10 vdc or 0/4-20 mA. The setup is the same as a remote sensor.

A BACnet™[1] card is also included with the drive. For BACnet, use Setup 3. The communication settings are in section 8 of the drive parameters. See drive manual for details.

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1. Third-party trademarks and logos are the property of their respective owners.

Table 13 — Default Settings for Sensorless Control — Setup 1

DUAL PUMP																		
Unit Size (tons)				065-070			080-100				110-130				150			
Pump				4382 4X4X8		4382 3X3X6	4382 4X4X8		4382 4X4X6		4382 4X4X8		4382 4X4X6		4382 4X4X6		4382 6X6X6	
Hp				5	7.5	10	5	7.5	10	15	5	7.5	10	15	7.5	10	15	
Impeller Dia (in.)				8.19		6.19	8.19		5.57	6.19	8.19		5.57	6.19	5	5.57	5.57	
Option Code (BPHE/DX)				B/V	C/W	D/X	B/V	C/W	D/X	F/Y	B/V	C/W	D/X	F/Y	C/W	D/X	F/Y	
Param.	Desc.																	
20-21	Setpoint 1	Hd	ft wc	40	62	140	40	62	65	100	35	45	80	115	45	60	75	
22-89	Flow at Design Point	gpm		150	200	150	200		200	250	270				360			
22-87	Press. at No Flow Speed	40% Hd	ft wc	16	24.8	56	16	24.8	26	40	14	18	32	46	18	24	30	

LEGEND

BPHE — Brazed Plate Heat Exchanger
DX — Direct Expansion

PREPARATION FOR YEAR ROUND OPERATION

If the unit is in operation year-round, add sufficient suitable inhibited antifreeze solution, such as propylene or ethylene glycol, to chilled water and partial heat recovery to prevent freezing under low-ambient temperature operating conditions. Consult local water treatment specialist on characteristics of water and recommended inhibitor.

IMPORTANT: Glycol antifreeze solutions are highly recommended since heater tapes provide no protection in the event of a power failure.

If the unit is equipped with variable speed fans for low ambient temperature head pressure control, the field-installed wind baffle accessory (30RC70003301) will be required if the wind velocity is anticipated to be greater than 5 mph (8 km/h). Refer to Wind Baffle Installation Instructions. (See Fig. 63.)

⚠WARNING

Disconnect all power to the unit before performing maintenance or service. Unit may automatically start if power is not disconnected. Electrical shock and personal injury could result.

FREEZE PROTECTION

The 30RC units are provided with a flow switch for chilled water to protect against freezing situations that occur from no water flow. For freeze protection of the chiller in case of power failure during subfreezing ambient temperatures, or for chillers that must operate during cold weather conditions, other methods must be used. Appropriate concentrations of inhibited propylene or ethylene glycol or other suitable inhibited antifreeze solution should be considered for chiller protection for both chilled water and partial heat recovery. Consult local codes for any restrictions on using inhibited antifreeze solutions in desuperheaters used in heat recovery applications. Two conditions that must be considered when determining antifreeze concentration are leaving water set point and ambient freeze conditions. These 2 conditions determine the recommended concentration level. After comparing these conditions, the condition indicating the use of a higher concentration level must be used to adequately protect the machine. Consult local water treatment specialist on characteristics of the system water and add a recommended inhibitor to the chilled water. The Carrier warranty does not cover damage due to freezing.

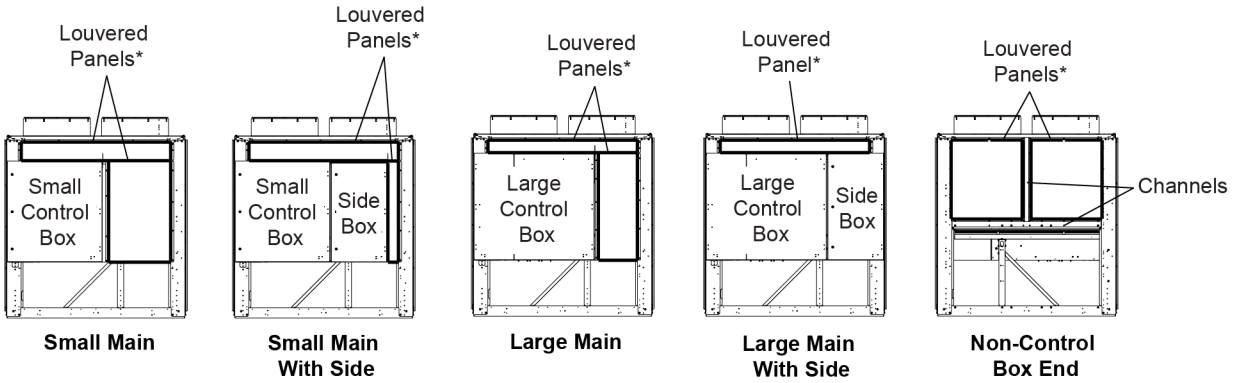
Low Temperature Brine Applications, 15 to 39.9°F (–9.4 to 4.4°C)

For applications in which the leaving water temperature set point is less than 40°F (4.4°C), a suitable inhibited antifreeze solution must be used. The solution concentration must be sufficient to protect the chilled water loop to a freeze protection (first crystals) concentration of at least 15°F (8.3°C) below the leaving water temperature set point.

Low Ambient Protection

If the chiller refrigerant or fluid lines are in an area where ambient conditions fall below 34°F (1°C), it is recommended that an antifreeze solution be added to protect the unit and fluid piping to a temperature of 15°F (8.3°C) below the lowest anticipated ambient temperature.

Select concentration based on either burst or freeze protection as dictated by the application. If the chiller does not operate during the winter, nor is a start-up expected, a burst protection concentration is recommended. This concentration may not be high enough to pump the fluid through the system. Burst protection is typically a lower concentration that will provide better performance. If the chiller does operate during winter, a freeze protection concentration is recommended. This concentration will be high enough to keep the fluid in a condition that it can be pumped at low ambient conditions.



* Wind baffle panels are louvered inward to allow airflow.

Fig. 63 — Field-Installed Wind Baffle Accessory

NOTE: Do not use automobile antifreeze, or any other fluid that is not approved for heat exchanger duty. Only use appropriately inhibited glycols, concentrated to provide adequate protection for the temperature considered.

1. Use an electric heater tape for the external piping, if unit will be exposed to freezing temperatures.
2. Ensure that power is available to the chiller at all times, even during the off-season, so that the pump and evaporator heaters have power. Also make sure that the piping tape heaters have power.
3. On units with pump packages, a heater is supplied with the hydronic package that will protect this section from freezing in outdoor-air temperatures down to –20°F (–29°C), except in the case of a power failure. If the pump will be subjected to freezing temperatures, steps must be taken to prevent freeze damage. If the pump will not be used during this time, it is recommended to drain the pump and hydronic package and these components are back-flushed with inhibited glycol. Otherwise, a glycol-water solution should be considered as the heat transfer fluid. Units without hydronic kits have drains mounted on the piping leaving the BPHE or drains mounted on the bottom of the DX cooler near the leaving water connection. In addition to evaporator drains, units with hydronic kits will have drains at the pump(s) for both BPHE and DX cooler equipped units as well as a drain at the suction guide/strainer for DX cooler equipped units. The Carrier warranty does not cover damage due to freezing.
4. Evaporator heaters that will protect components down to –20°F (–28.9°C) can be ordered as a factory-installed option. It should be noted that these heaters will not protect the evaporator from freezing in the event of a power failure. The Carrier warranty does not cover damage due to freezing.
5. On units with partial heat recovery option, additional field-supplied freeze protection beyond using suitable inhibited antifreeze solution is recommended for units subjected to operating in cold weather conditions. Recommendations include insulating the desuperheaters, providing electric heaters, using electric heat tape for external piping and utilizing field-supplied circulation pump. Controls for pump command are provided via optional Energy Management Module. The partial heat recovery pump command will be operated in conjunction with compressor status and the desuperheater switch input. In order for the pump to command ON, there must be at least one compressor running and there must be a desuperheater demand signaled by the desuperheater switch input. Control of the desuperheater switch input and hot water requirements are defined and provided by the customer. Consult the Controls, Start-Up, Operation, Service, and Troubleshooting guide. Otherwise all other controls for electric heating and pumps must be field-supplied. Again, it should be noted that the heaters and pump control will not protect the desuperheaters from freezing in the event of a power failure. The Carrier warranty does not cover damage due to freezing.

PREPARATION FOR WINTER SHUTDOWN

If the unit is not operational during the winter months, at the end of cooling season, perform the following:

⚠CAUTION

Failure to remove power before draining heater equipped evaporators, heat recovery systems, and hydronic packages can result in heater tape and insulation damage.

CHILLED WATER SYSTEM

1. If the unit has an optional heater on the evaporator and the evaporator will not be drained, do not shut off power disconnect during off-season shutdown. If the unit has an optional heater on the evaporator and the evaporator will be drained, open the fuse for the heater, FU-9, or shut off power during off-season shutdown.
2. Draining the fluid from the system is highly recommended. If the unit is equipped with a hydronic package, there are additional drains in the pump housing, as well as the strainer housing for DX cooler equipped units, that must be opened to allow for all of the water to drain.
3. Replace the drain plug and add a sufficient amount of a suitable corrosion-inhibited antifreeze solution, such as propylene glycol, to the evaporator to prevent freezing of any remaining water in system. Antifreeze can be added through the vent on top of evaporator. If the unit has a hydronic pump package, the pump must also be treated in the same manner.
4. Open one of the thermistor connections to allow air to escape the vessel and the antifreeze to enter.
5. At the beginning of the next cooling season, be sure that there is refrigerant pressure on each circuit before refilling cooler, add recommended inhibitor, and reset the FU-9 fuse heater (if opened) or restore power.

PARTIAL HEAT RECOVERY SYSTEM

1. If the partial heat recovery loop will not be drained, do not shut off power disconnect during off-season shutdown. If the partial heat recovery loop will be drained, and field-supplied heat trace was added, de-energize the heat trace to prevent

damage and possible safety hazards when draining or when there is no liquid in the system.

2. If field-supplied service valves were installed, isolate the partial heat recovery system from the rest of the system and drain the fluid from the partial heat recovery system.
3. Replace drain plug(s) and add sufficient inhibited glycol (or other suitable inhibited antifreeze) solution to partial heat recovery system to prevent freezing of residual water. Do not drain the solution. Leaving the solution in the system will aid in preventing corrosion in exposed parts (piping and desuperheaters).
4. At the beginning of the next cooling season, be sure that there is refrigerant pressure on each circuit before refilling the desuperheaters and adding recommended inhibitor.

Step 4 — Make Electrical Connections

⚠ WARNING

Electrical shock can cause personal injury and death. Shut off all power to this equipment during installation and service. There may be more than one disconnect switch. Tag all disconnect locations to alert others not to restore power until work is completed.

POWER SUPPLY

The electrical characteristics of the available power supply must agree with the unit nameplate rating. Supply voltage must be within the limits shown. Some units have options for multiple power connections. See Table 14 and Fig. 64 for electrical connection information. See Tables 15-25 for electrical requirements.

IMPORTANT: Operating unit on improper supply voltage or with excessive phase imbalance constitutes abuse and may impair or otherwise negatively affect the Carrier product warranty.

POWER WIRING

All power wiring must comply with applicable local and national codes. Install field-supplied branch circuit fused disconnect per NEC of a type that can be locked OFF or OPEN. Disconnect must be within sight and readily accessible from the unit in compliance with NEC Article 440-14. In the power box, 7/8 in. holes are provided for power entry. The holes will need to be enlarged to accept the appropriate conduit. NEC also requires all conduits from a conditioned space to the power box(es) be sealed to prevent airflow and moisture into the control box.

General Wiring Notes:

1. The control circuit does NOT require a separate power source. A step-down transformer from the main 3-phase power supply obtains control circuit power. Be sure that the appropriate connection tap is connected on all transformers for the supply voltage. Up to 3 terminal blocks are provided for field-wired control devices.
2. Pump heaters (if factory installed) are wired in the control circuit, so they are operable as long as the main power supply to the unit is ON. A factory-installed and set overload device protects them.

NOTE: The field-supplied disconnect should never be off except when unit is being serviced or is to be down for a prolonged period, in which case the evaporator and partial heat recovery desuperheaters should be drained if not properly protected.

3. Power entry depends on the size and power entry option ordered.
4. Maximum field wire sizes allowed by lugs on terminal block/non-fused disconnect are listed in Table 15-22.
5. Terminals for field power supply are suitable for copper conductors. Insulation must be rated 75°C (167°F) minimum.

IMPORTANT: To ensure power to the heaters, make sure power to the unit is always ON (except during service or a prolonged shutdown).

⚠ CAUTION

Proper rotation of condenser fan(s) and pump(s) MUST be verified before pumps or compressors are started. Consult the Controls, Start-Up, Operation, Service, and Troubleshooting guide provided with 30RC 065-150 and 30RC 067-152 units for correct procedure. Improper pump rotation can cause permanent damage to pump impeller and housing. If pump(s) have been removed for trimming, verify wiring is reconnected in the original manner.

CONTROL POWER

Control power is obtained from the main power supply and does NOT require a separate source. A toggle switch (marked SW2 on the unit label diagram and by the switch) allows the control circuit to be manually disconnected when necessary. Cooler heat reclaim condenser and pump heaters (if installed) are in an inoperable state when this switch is in the Off position.

IMPORTANT: For 208 v systems, the connection tap for all transformers must be changed. The factory default setting is for 230 v. Failure to connect to the proper tap may result in unreliable operation.

FIELD CONTROL OPTION WIRING

Install field control wiring options. (See Fig. 64 and 67.) Some options, such as 4 to 20 mA demand limit that requires the energy management module, may require that accessories be installed first if not factory installed for terminal connections.

DUAL CHILLER CONTROL OPTION

If the dual chiller algorithm is used and the machines are installed in parallel, an additional chilled water sensor must be installed for each chiller. An accessory kit, part no. 00EFN900044000A, is available. This kit includes all parts necessary for dual chiller control. Install the well in the common leaving water header. (See Fig 40.) Do not relocate the chiller's leaving water thermistors. They must remain in place for the unit to operate properly.

The thermistor well is a 1/4 in. NPT fitting for securing the well in the piping. The piping must be drilled and tapped for the well. Select a location that will allow for removal of the thermistor without any restrictions. (See Fig. 65 and 66.)

Once the well is inserted, install the thermistors. Insert the thermistor into the well until the O-ring reaches the well body. Use the nut on the thermistor to secure the thermistor in place. Once the thermistor is in place, it is recommended that a thermistor wire loop be made and secured with a wire tie to the chilled water pipe. This will aid in thermistor retention in the well. (See Fig. 65.) Attach connector (part no. HY06AM016) to thermistor lead. Plug connector into SIOBB-J25-AI01.

For units using the dual chiller algorithm, a Carrier Comfort Network® (CCN) bus must be connected between the 2 modules. See the Carrier Comfort Network Communication Bus Wiring section on page 100 for additional information.

Table 14 — Control and Power Connections, 30RC065-152

30RC UNIT SIZE	FANS	VOLTAGE	INCOMING POWER TYPE AND CONNECTION	CONTROL BOX	MAIN POWER ENTRANCE
065 STD **070 STD** **080 STD** **090 STD** **100 STD** **110 STD** **120 COMPACT** **120 STD** **067 STD** **072 STD** **082 STD** **092 STD** **102 STD** **112 STD** **122 COMPACT** **122 STD**	Fixed Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		460V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		575V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
	Variable Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		460V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		575V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side

Table 14 — Control and Power Connections, 30RC065-152 (cont)

30RC UNIT SIZE	FANS	VOLTAGE	INCOMING POWER TYPE AND CONNECTION	CONTROL BOX	MAIN POWER ENTRANCE
080 COMPACT 092 COMPACT 102 COMPACT	Fixed Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		460V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		575V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
	Variable Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Non-Fused Disconnect	Small Main	Main
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		460V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		575V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side

Table 14 — Control and Power Connections, 30RC065-152 (cont)

30RC UNIT SIZE	FANS	VOLTAGE	INCOMING POWER TYPE AND CONNECTION	CONTROL BOX	MAIN POWER ENTRANCE
130 STD 132 COMPACT 132 STD 150 STD 152 STD 152 COMPACT	Fixed Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		460V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
		575V	Single Point Power with Terminal Block	Small Main	Main
			Single Point Power with Non-Fused Disconnect	Small Main	
			Dual Point Power with Terminal Block	Small Main	
			Dual Point Power with Non-Fused Disconnect	Small Main with Side	Side
	Variable Speed Fans	208/230V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		380V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		460V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side
		575V	Single Point Power with Terminal Block	Large Main	Main
			Single Point Power with Non-Fused Disconnect	Large Main	
			Dual Point Power with Terminal Block	Large Main	
			Dual Point Power with Non-Fused Disconnect	Large Main with Side	Side

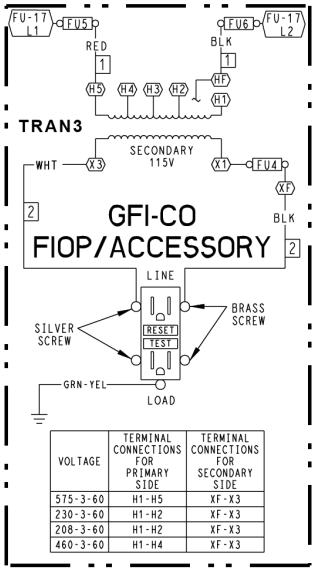
NOTES:

1. FACTORY WIRING IS IN ACCORDANCE WITH UL60335-2-40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
2. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS.
   INCOMING WIRE SIZE RANGE FOR THE TERMINAL BLOCK IS #4 AWG TO #500 KCMIL.
   INCOMING WIRE SIZE RANGE OF NON-FUSED DISCONNECT IS:
   - 400A — QTY 2, #2/0 AWG TO 250 KCMIL, OR QTY 1, #2/0 AWG TO 500 KCMIL
   - 600A — QTY 2, #2 AWG TO 500 KCMIL
   - 800A — QTY 3, #3/0 AWG TO 400 KCMIL, OR QTY 2, 500 KCMIL TO 750 KCMIL
3. TERMINALS 9 AND 10 OF TB5 ARE FOR FIELD EXTERNAL CONNECTIONS FOR REMOTE ON-OFF. THE CONTACTS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
4. TERMINALS 1 AND 2 OF TB5 ARE FOR EXTERNAL CONNECTIONS OF CHILLED WATER PUMP INTERLOCK. THE CONTACTS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
5. TERMINALS 11 AND 13 OF TB5 ARE FOR CONTROL OF CHILLED WATER PUMP 1 (PMP1) STARTER. TERMINALS 13 AND 15 OF TB5 ARE FOR CONTROL OF CHILLED WATER PUMP 2 (PMP2) STARTER. THE MAXIMUM LOAD ALLOWED FOR THE CHILLED WATER PUMP RELAY IS 5VA SEALED, 10VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
6. TERMINALS 12 AND 13 OF TB5 ARE FOR AN ALARM RELAY. THE MAXIMUM LOAD ALLOWED FOR THE ALARM RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
7. TERMINALS 8 AND 13 OF TB5 ARE FOR A RUN RELAY. THE MAXIMUM LOAD ALLOWED FOR THE RUN RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
8. MAKE APPROPRIATE CONNECTIONS TO TB6 AS SHOWN FOR ENERGY MANAGEMENT BOARD OPTIONS. THE CONTACTS FOR OCCUPANCY OVERRIDE, DEMAND LIMIT AND ICE DONE OPTIONS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
9. TERMINALS 11 AND 17 OF TB6 ARE FOR A SHUTDOWN RELAY. THE MAXIMUM LOAD ALLOWED FOR THE SHUTDOWN RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
10. TERMINALS 11 AND 16 OF TB6 ARE FOR AN ALERT RELAY. THE MAXIMUM LOAD ALLOWED FOR THE ALERT RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.

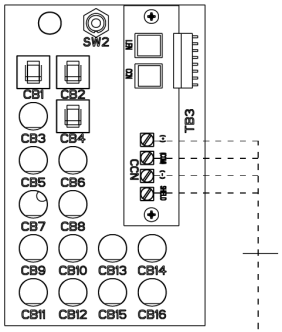
LEGEND

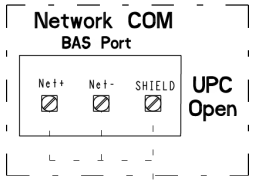
A	— ALARM
ALM R	— ALARM RELAY
BAS	— BUILDING AUTOMATION SYSTEM
EMM	— ENERGY MANAGEMENT
FIOP	— FACTORY INSTALLED OPTION
GFI-CO	— GROUND FAULT INTERCEPTOR
HGB	— HOT GAS BYPASS
MLV	— MINIMUM LOAD VALVE
NEC	— NATIONAL ELECTRICAL CODE
PMP	— CHILLED WATER PUMP
RUN R	— RUN RELAY
SHD R	— SHUTDOWN RELAY
SW	— SWITCH
TB	— TERMINAL BLOCK
UPC	— UNIVERSAL PROTOCOL CARD

■ ■ FIELD POWER WIRING
– – FIELD CONTROL WIRIING
——— FACTORY-INSTALLED WIRING



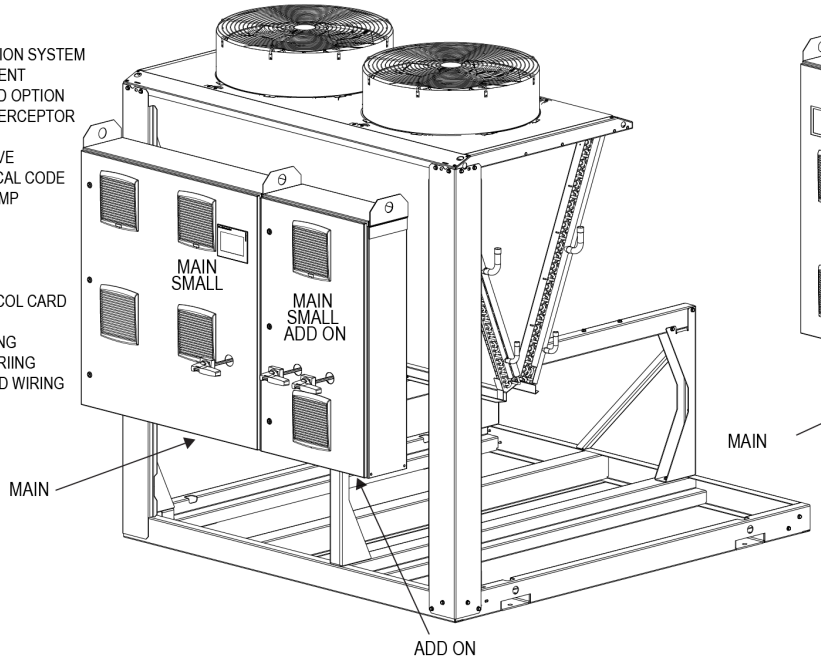
VOLTAGE	TERMINAL CONNECTIONS FOR PRIMARY SIDE	TERMINAL CONNECTIONS FOR SECONDARY SIDE
575-3-60	H1-H5	XF-X3
230-3-60	H1-H2	XF-X3
208-3-60	H1-H2	XF-X3
460-3-60	H1-H4	XF-X3





DATA COM PORT

Network Wiring



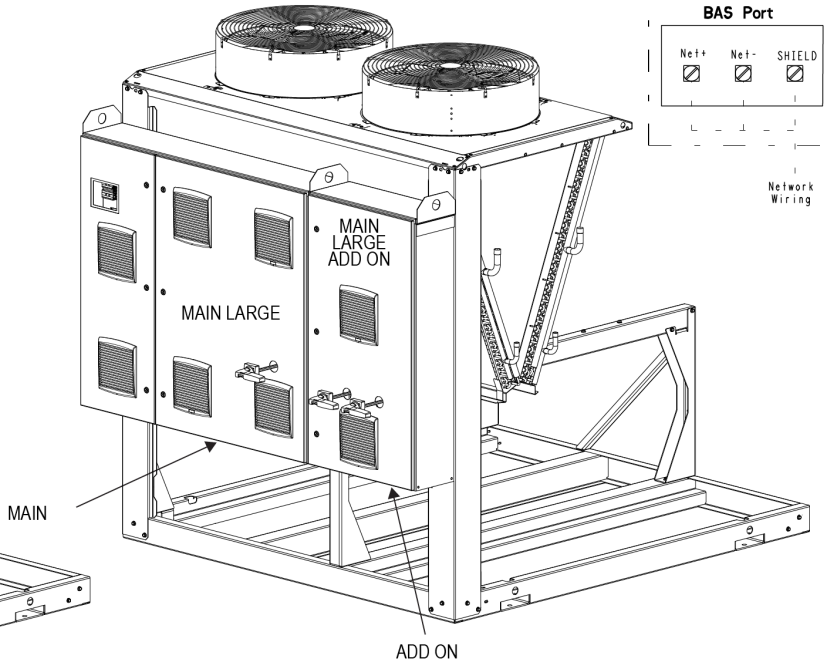


Fig. 64 — Control and Power Wiring Schematic, 30RC 065-152

NOTES:

1. FACTORY WIRING IS IN ACCORDANCE WITH UL60335-2-40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
2. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS. INCOMING WIRE SIZE RANGE FOR THE TERMINAL BLOCK IS #4 AWG TO #500 KCMIL.
   INCOMING WIRE SIZE RANGE OF NON-FUSED DISCONNECT IS:
   400A — QTY 2, #2/0 AWG TO 250 KCMIL, OR QTY 1, #2/0 AWG TO 500 KCMIL
   600A — QTY 2, #2 AWG TO 500 KCMIL
   800A — QTY 3, #3/0 AWG TO 400 KCMIL, OR QTY 2, 500 KCMIL TO 750 KCMIL
3. TERMINALS 9 AND 10 OF TB5 ARE FOR FIELD EXTERNAL CONNECTIONS FOR REMOTE ON-OFF. THE CONTACTS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
4. TERMINALS 1 AND 2 OF TB5 ARE FOR EXTERNAL CONNECTIONS OF CHILLED WATER PUMP INTERLOCK. THE CONTACTS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
5. TERMINALS 11 AND 13 OF TB5 ARE FOR CONTROL OF CHILLED WATER PUMP 1 (PMP1) STARTER. TERMINALS 13 AND 15 OF TB5 ARE FOR CONTROL OF CHILLED WATER PUMP 2 (PMP2) STARTER. THE MAXIMUM LOAD ALLOWED FOR THE CHILLED WATER PUMP RELAY IS 5VA SEALED, 10VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
6. TERMINALS 12 AND 13 OF TB5 ARE FOR AN ALARM RELAY. THE MAXIMUM LOAD ALLOWED FOR THE ALARM RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
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8. MAKE APPROPRIATE CONNECTIONS TO TB6 AS SHOWN FOR ENERGY MANAGEMENT BOARD OPTIONS. THE CONTACTS FOR OCCUPANCY OVERRIDE, DEMAND LIMIT AND ICE DONE OPTIONS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
9. TERMINALS 11 AND 17 OF TB6 ARE FOR A SHUTDOWN RELAY. THE MAXIMUM LOAD ALLOWED FOR THE SHUTDOWN RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
10. TERMINALS 11 AND 16 OF TB6 ARE FOR AN ALERT RELAY. THE MAXIMUM LOAD ALLOWED FOR THE ALERT RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.

LEGEND

A	— ALARM
ALM R	— ALARM RELAY
BAS	— BUILDING AUTOMATION SYSTEM
EMM	— ENERGY MANAGEMENT
FIOP	— FACTORY INSTALLED OPTION
GFI-CO	— GROUND FAULT INTERCEPTOR
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MLV	— MINIMUM LOAD VALVE
NEC	— NATIONAL ELECTRICAL CODE
PMP	— CHILLED WATER PUMP
RUN R	— RUN RELAY
SHD R	— SHUTDOWN RELAY
SW	— SWITCH
TB	— TERMINAL BLOCK
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▪ ▪ FIELD POWER WIRING
– – FIELD CONTROL WIRIING
——— FACTORY-INSTALLED WIRING

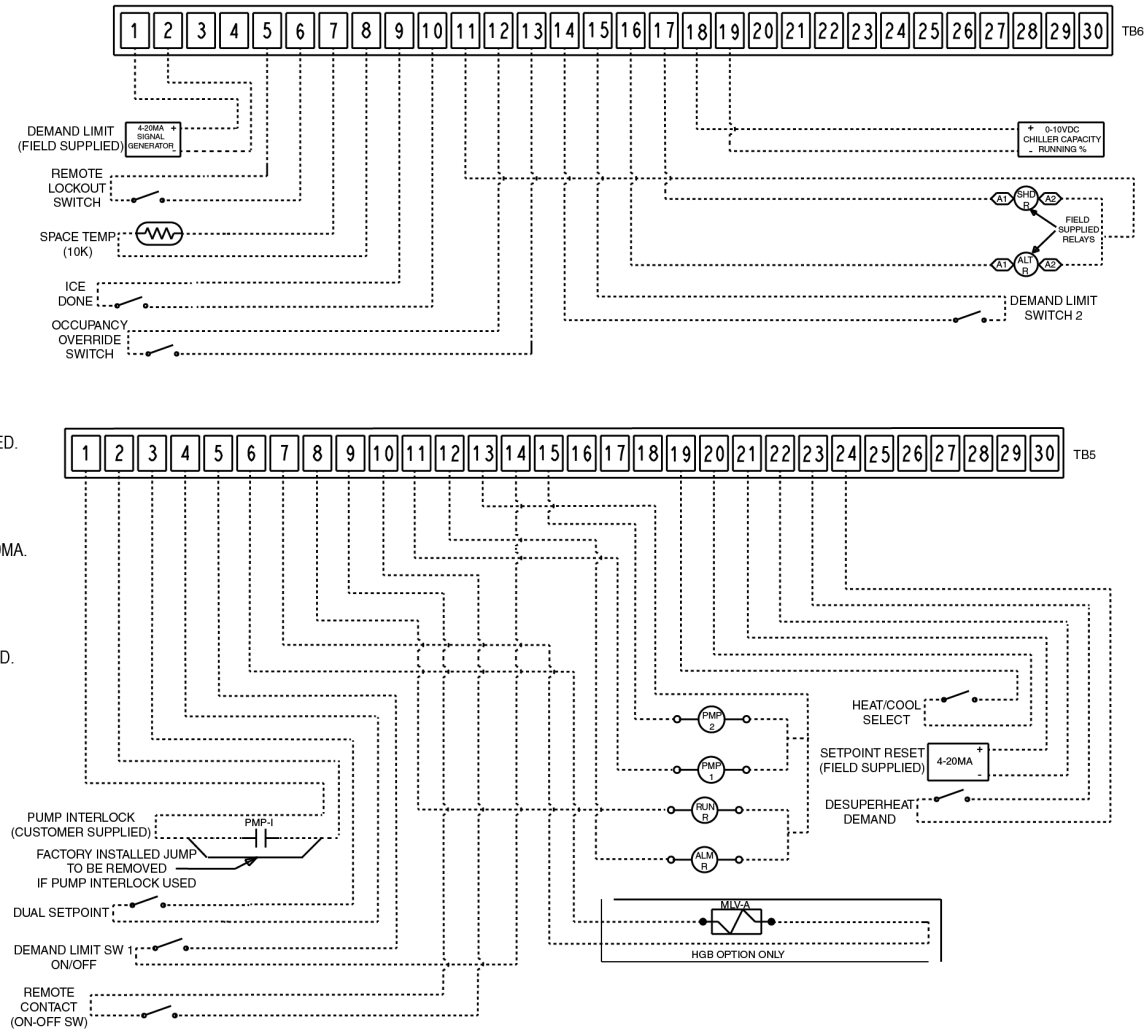

Fig. 64 — Control and Power Wiring Schematic, 30RC 065-152 (cont)

NOTES:

1. FACTORY WIRING IS IN ACCORDANCE WITH UL60335-2-40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
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7. TERMINALS 8 AND 13 OF TB5 ARE FOR A RUN RELAY. THE MAXIMUM LOAD ALLOWED FOR THE RUN RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
8. MAKE APPROPRIATE CONNECTIONS TO TB6 AS SHOWN FOR ENERGY MANAGEMENT BOARD OPTIONS. THE CONTACTS FOR OCCUPANCY OVERRIDE, DEMAND LIMIT AND ICE DONE OPTIONS MUST BE RATED FOR DRY CIRCUIT APPLICATION CAPABLE OF HANDLING A 24VAC LOAD UP TO 50MA.
9. TERMINALS 11 AND 17 OF TB6 ARE FOR A SHUTDOWN RELAY. THE MAXIMUM LOAD ALLOWED FOR THE SHUTDOWN RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.
10. TERMINALS 11 AND 16 OF TB6 ARE FOR AN ALERT RELAY. THE MAXIMUM LOAD ALLOWED FOR THE ALERT RELAY IS 10VA SEALED, 25VA INRUSH AT 24V. FIELD POWER SUPPLY IS NOT REQUIRED.

LEGEND

A	— ALARM
ALM R	— ALARM RELAY
BAS	— BUILDING AUTOMATION SYSTEM
EMM	— ENERGY MANAGEMENT
FIOP	— FACTORY INSTALLED OPTION
GFI-CO	— GROUND FAULT INTERCEPTOR
HGB	— HOT GAS BYPASS
MLV	— MINIMUM LOAD VALVE
NEC	— NATIONAL ELECTRICAL CODE
PMP	— CHILLED WATER PUMP
RUN R	— RUN RELAY
SHD R	— SHUTDOWN RELAY
SW	— SWITCH
TB	— TERMINAL BLOCK
UPC	— UNIVERSAL PROTOCOL CARD

FIELD POWER WIRING
FIELD CONTROL WIRIING
FACTORY-INSTALLED WIRING

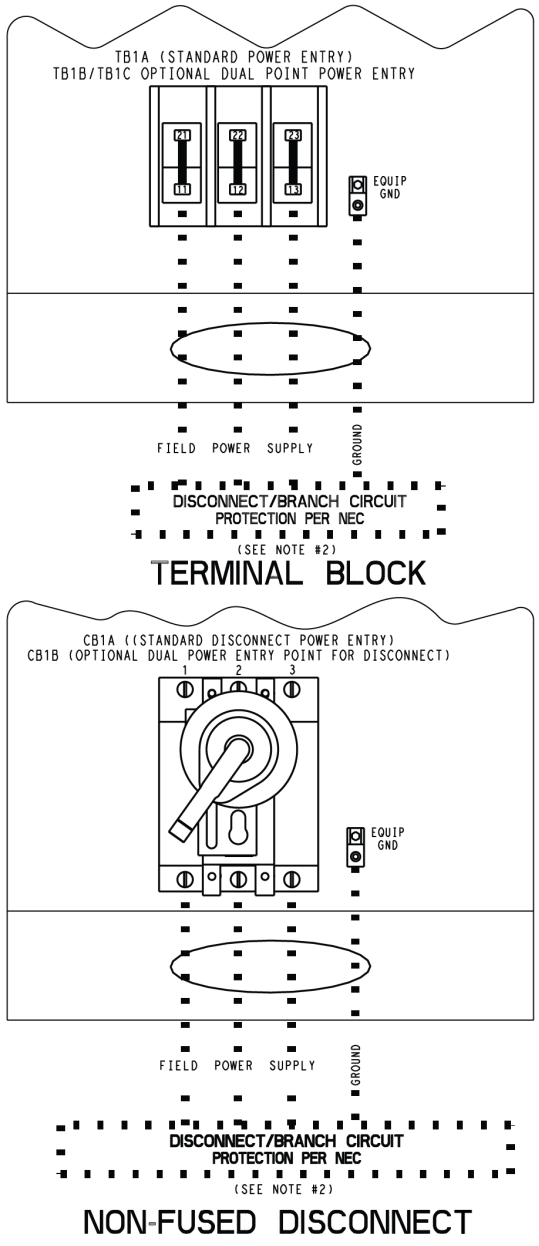

Fig. 64 — Control and Power Wiring Schematic, 30RC 065-152 (cont)

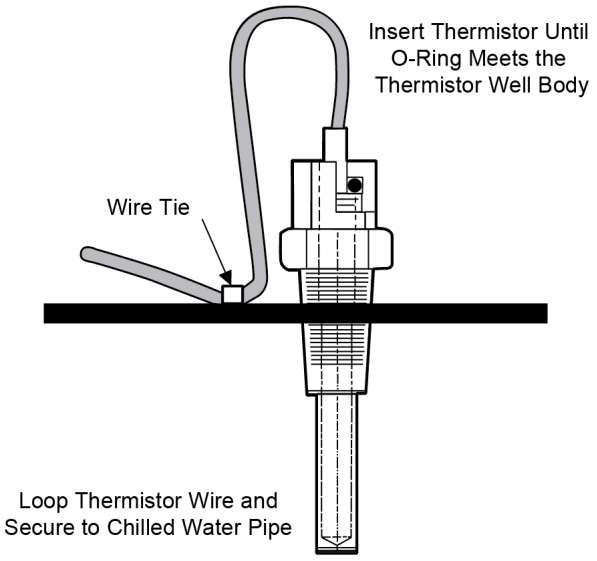

Fig. 65 — Dual Leaving Water Thermistor (Part No. 00PPG000470306A)

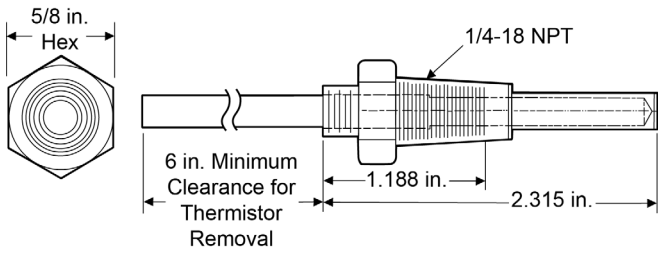

Fig. 66 — Dual Leaving Water Thermistor Well (Part No. 00PPG000008000A)

Table 15 — 30RC 065-150 (R-410A) Electrical Data — Single Point Units with Fixed Speed Fans

UNIT 30RC	UNIT VOLTAGE				NO. OF COND FANS	NO HYDRONIC PACKAGE				5HP PUMP, 1750 RPM				7.5HP PUMP, 1750 RPM			
	V (3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
65	208/230	60	187	253	4	258.0	300	540.2	300	274.5	300	556.2	300	281.7	300	563.4	300
	380	60	342	418	4	169.2	200	362.4	200	178.4	200	371.4	200	183.4	200	376.4	200
	460	60	414	506	4	132.7	150	294.0	150	140.6	150	301.7	150	144.4	150	305.5	150
	575	60	518	633	4	116.9	125	220.2	125	123.0	125	226.1	125	125.3	150	228.4	150
70	208/230	60	187	253	4	303.0	350	694.2	350	319.5	350	710.2	350	326.7	350	717.4	350
	380	60	342	418	4	180.4	200	405.4	200	189.7	225	414.4	200	194.7	225	419.4	225
	460	60	414	506	4	143.9	175	329.0	175	151.8	175	336.7	175	155.6	175	340.5	175
	575	60	518	633	4	123.7	150	263.2	150	129.7	150	269.1	150	132.0	150	271.4	150
80 C	208/230	60	187	253	4	343.0	400	734.2	400	359.5	400	750.2	400	366.7	400	757.4	400
	380	60	342	418	4	190.4	225	415.4	225	199.7	225	424.4	225	204.7	225	429.4	225
	460	60	414	506	4	153.9	175	339.0	175	161.8	175	346.7	175	165.6	175	350.5	175
	575	60	518	633	4	129.7	150	269.2	150	135.7	150	275.1	150	138.0	150	277.4	150
80	208/230	60	187	253	5	348.5	400	739.7	400	365.0	400	755.7	400	372.2	400	762.9	400
	380	60	342	418	5	193.5	225	418.5	225	202.8	225	427.5	225	207.8	225	432.5	225
	460	60	414	506	5	156.5	175	341.6	175	164.4	175	349.3	175	168.2	200	353.1	200
	575	60	518	633	5	131.8	150	271.3	150	137.8	150	277.2	150	140.1	150	279.5	150
90	208/230	60	187	253	6	381.0	450	832.2	450	397.5	450	848.2	450	404.7	450	855.4	450
	380	60	342	418	6	210.1	250	479.6	225	219.4	250	488.6	250	224.4	250	493.6	250
	460	60	414	506	6	183.9	225	388.2	200	191.8	225	395.9	225	195.6	225	399.7	225
	575	60	518	633	6	140.6	150	311.4	150	146.7	175	317.3	175	149.0	175	319.6	175
100	208/230	60	187	253	6	405.0	450	856.2	450	421.5	500	872.2	450	428.7	500	879.4	450
	380	60	342	418	6	222.1	250	491.6	250	231.4	250	500.6	250	236.4	250	505.6	250
	460	60	414	506	6	205.9	250	410.2	225	213.8	250	417.9	225	217.6	250	421.7	250
	575	60	518	633	6	146.6	175	317.4	175	152.7	175	323.3	175	155.0	175	325.6	175
110	208/230	60	187	253	6	455.5	500	906.6	500	472.0	500	922.6	500	479.2	500	929.8	500
	380	60	342	418	6	251.4	300	520.8	300	260.6	300	529.8	300	265.6	300	534.8	300
	460	60	414	506	6	217.1	250	421.4	250	225.0	250	429.1	250	228.8	250	432.9	250
	575	60	518	633	6	168.7	200	339.5	200	174.8	200	345.4	200	177.1	200	347.7	200
120 C	208/230	60	187	253	6	491.5	500	942.6	500	508.0	600	958.6	600	515.2	600	965.8	600
	380	60	342	418	6	269.4	300	538.8	300	278.6	300	547.8	300	283.6	300	552.8	300
	460	60	414	506	6	250.1	300	454.4	300	258.0	300	462.1	300	261.8	300	465.9	300
	575	60	518	633	6	177.7	200	348.5	200	183.8	200	354.4	200	186.1	200	356.7	200
120	208/230	60	187	253	7	497.0	500	948.1	500	513.5	600	964.1	600	520.7	600	971.3	600
	380	60	342	418	7	272.5	300	541.9	300	281.7	300	550.9	300	286.7	300	555.9	300
	460	60	414	506	7	252.7	300	457.0	300	260.6	300	464.7	300	264.4	300	468.5	300
	575	60	518	633	7	179.8	200	350.6	200	185.9	200	356.5	200	188.2	200	358.8	200
130	208/230	60	187	253	8	553.0	600	1004.0	600	569.5	600	1020.0	600	576.7	600	1027.2	600
	380	60	342	418	8	304.8	350	574.2	350	314.1	350	583.2	350	319.1	350	588.2	350
	460	60	414	506	8	266.6	300	470.8	300	274.5	300	478.5	300	278.3	300	482.3	300
	575	60	518	633	8	204.1	225	374.8	225	210.1	225	380.7	225	212.4	225	383.0	225
150	208/230	60	187	253	8	593.5	600	1043.6	600	—	—	—	—	617.2	700	1066.8	700
	380	60	342	418	8	325.6	350	594.4	350	—	—	—	—	339.8	350	608.4	350
	460	60	414	506	8	301.8	350	505.6	350	—	—	—	—	313.5	350	517.1	350
	575	60	518	633	8	214.8	225	385.2	225	—	—	—	—	223.2	250	393.4	250

See Legend and Notes on page 99.

Table 15 — 30RC 065-150 (R-410A) Electrical Data — Single Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. OF COND FANS	7.5HP PUMP, 3600 RPM				10HP PUMP, 3600 RPM				15HP PUMP, 3600 RPM			
	V (3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
65	208/230	60	187	253	4	—	—	—	—	285.2	300	566.9	300	—	—	—	—
	380	60	342	418	4	—	—	—	—	184.8	200	377.8	200	—	—	—	—
	460	60	414	506	4	—	—	—	—	145.5	150	306.6	150	—	—	—	—
	575	60	518	633	4	—	—	—	—	127.2	150	230.3	150	—	—	—	—
70	208/230	60	187	253	4	—	—	—	—	330.2	400	720.9	350	—	—	—	—
	380	60	342	418	4	—	—	—	—	196.1	225	420.8	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	156.7	175	341.6	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	133.9	150	273.3	150	—	—	—	—
80 C	208/230	60	187	253	4	—	—	—	—	370.2	400	760.9	400	381.7	450	772.4	400
	380	60	342	418	4	—	—	—	—	206.1	225	430.8	225	212.7	250	437.4	225
	460	60	414	506	4	—	—	—	—	166.7	175	351.6	175	171.4	200	356.3	200
	575	60	518	633	4	—	—	—	—	139.9	150	279.3	150	143.6	150	283.0	150
80	208/230	60	187	253	5	—	—	—	—	375.7	400	766.4	400	387.2	450	777.9	450
	380	60	342	418	5	—	—	—	—	209.2	250	433.9	225	215.8	250	440.5	250
	460	60	414	506	5	—	—	—	—	169.3	200	354.2	200	174.0	200	358.9	200
	575	60	518	633	5	—	—	—	—	142.0	150	281.4	150	145.7	150	285.1	150
90	208/230	60	187	253	6	—	—	—	—	408.2	450	858.9	450	419.7	500	870.4	450
	380	60	342	418	6	—	—	—	—	225.8	250	495.0	250	232.4	250	501.6	250
	460	60	414	506	6	—	—	—	—	196.7	225	400.8	225	201.4	225	405.5	225
	575	60	518	633	6	—	—	—	—	150.9	175	321.5	175	154.6	175	325.2	175
100	208/230	60	187	253	6	—	—	—	—	432.2	500	882.9	500	443.7	500	894.4	500
	380	60	342	418	6	—	—	—	—	237.8	250	507.0	250	244.4	250	513.6	250
	460	60	414	506	6	—	—	—	—	218.7	250	422.8	250	223.4	250	427.5	250
	575	60	518	633	6	—	—	—	—	156.9	175	327.5	175	160.6	175	331.2	175
110	208/230	60	187	253	6	—	—	—	—	482.7	500	933.3	500	494.2	500	944.8	500
	380	60	342	418	6	—	—	—	—	267.0	300	536.2	300	273.6	300	542.8	300
	460	60	414	506	6	—	—	—	—	229.9	250	434.0	250	234.6	250	438.7	250
	575	60	518	633	6	—	—	—	—	179.0	200	349.6	200	182.7	200	353.3	200
120 C	208/230	60	187	253	6	—	—	—	—	518.7	600	969.3	600	530.2	600	980.8	600
	380	60	342	418	6	—	—	—	—	285.0	300	554.2	300	291.6	300	560.8	300
	460	60	414	506	6	—	—	—	—	262.9	300	467.0	300	267.6	300	471.7	300
	575	60	518	633	6	—	—	—	—	188.0	200	358.6	200	191.7	200	362.3	200
120	208/230	60	187	253	7	—	—	—	—	524.2	600	974.8	600	535.7	600	986.3	600
	380	60	342	418	7	—	—	—	—	288.1	300	557.3	300	294.7	300	563.9	300
	460	60	414	506	7	—	—	—	—	265.5	300	469.6	300	270.2	300	474.3	300
	575	60	518	633	7	—	—	—	—	190.1	200	360.7	200	193.8	225	364.4	225
130	208/230	60	187	253	8	—	—	—	—	580.2	600	1030.7	600	591.7	600	1042.2	600
	380	60	342	418	8	—	—	—	—	320.5	350	589.6	350	327.1	350	596.2	350
	460	60	414	506	8	—	—	—	—	279.4	300	483.4	300	284.1	300	488.1	300
	575	60	518	633	8	—	—	—	—	214.3	225	384.9	225	218.0	225	388.6	225
150	208/230	60	187	253	8	614.3	700	1063.9	700	620.7	700	1070.3	700	632.2	700	1081.8	700
	380	60	342	418	8	337.0	350	605.6	350	341.2	350	609.8	350	347.8	350	616.4	350
	460	60	414	506	8	311.2	350	514.8	350	314.6	350	518.2	350	319.3	350	522.9	350
	575	60	518	633	8	222.4	250	392.6	250	225.1	250	395.3	250	228.8	250	399.0	250

See Legend and Notes on page 99.

Table 16 — 30RC 065-150 (R-410A) Electrical Data — Single Point Units with Greenspeed Fans

UNIT 30RC	UNIT VOLTAGE				NO. OF COND FANS	NO HYDRONIC PACKAGE				5HP PUMP, 1750 RPM				7.5HP PUMP, 1750 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
065	208/230	60	187	253	4	278.4	300	560.6	300	294.9	350	576.6	350	298.3	350	581.8	350
	380	60	342	418	4	180.0	200	373.2	200	189.2	225	382.2	225	194.2	225	388.2	225
	460	60	414	506	4	141.5	150	302.8	150	149.4	175	310.5	175	153.9	175	315.9	175
	575	60	518	633	4	123.7	125	227.0	125	129.8	150	232.9	150	134.1	150	237.8	150
070	208/230	60	187	253	4	323.4	350	714.6	350	339.9	400	730.6	400	343.3	400	735.8	400
	380	60	342	418	4	191.2	225	416.2	225	200.5	225	425.2	225	205.5	225	431.2	225
	460	60	414	506	4	152.7	175	337.8	175	160.6	175	345.5	175	165.2	175	350.9	175
	575	60	518	633	4	130.5	150	270.0	150	136.5	150	275.9	150	140.8	150	280.8	150
080 C	208/230	60	187	253	4	363.4	400	754.6	400	379.9	450	770.6	450	383.3	450	775.8	450
	380	60	342	418	4	201.2	225	426.2	225	210.5	250	435.2	225	215.5	250	441.2	250
	460	60	414	506	4	162.7	175	347.8	175	170.6	200	355.5	200	175.2	200	360.9	200
	575	60	518	633	4	136.5	150	276.0	150	142.5	150	281.9	150	146.8	175	286.8	175
080	208/230	60	187	253	5	374.0	400	765.2	400	390.5	450	781.2	450	393.9	450	786.4	450
	380	60	342	418	5	207.0	225	432.0	225	216.3	250	441.0	250	221.3	250	447.0	250
	460	60	414	506	5	167.5	200	352.6	200	175.4	200	360.3	200	180.0	200	365.7	200
	575	60	518	633	5	140.3	150	279.8	150	146.3	175	285.7	175	150.6	175	290.6	175
090	208/230	60	187	253	6	411.6	450	862.8	450	428.1	500	878.8	500	431.5	500	884.0	500
	380	60	342	418	6	226.3	250	495.8	250	235.6	250	504.8	250	240.6	250	510.8	250
	460	60	414	506	6	197.1	225	401.4	225	205.0	250	409.1	225	209.5	250	414.5	225
	575	60	518	633	6	150.8	175	321.6	175	156.9	175	327.5	175	161.2	175	332.4	175
100	208/230	60	187	253	6	435.6	500	886.8	500	452.1	500	902.8	500	455.5	500	908.0	500
	380	60	342	418	6	238.3	250	507.8	250	247.6	250	516.8	250	252.6	300	522.8	300
	460	60	414	506	6	219.1	250	423.4	250	227.0	250	431.1	250	231.5	250	436.5	250
	575	60	518	633	6	156.8	175	327.6	175	162.9	175	333.5	175	167.2	175	338.4	175
110	208/230	60	187	253	6	486.1	500	937.2	500	502.6	600	953.2	600	506.8	600	959.3	600
	380	60	342	418	6	267.6	300	537.0	300	276.8	300	546.0	300	282.8	300	553.1	300
	460	60	414	506	6	230.3	250	434.6	250	238.2	250	442.3	250	243.8	250	448.8	250
	575	60	518	633	6	178.9	200	349.7	200	185.0	200	355.6	200	190.4	200	361.7	200
120 C	208/230	60	187	253	6	522.1	600	973.2	600	538.6	600	989.2	600	542.8	600	995.3	600
	380	60	342	418	6	285.6	300	555.0	300	294.8	300	564.0	300	300.8	350	571.1	350
	460	60	414	506	6	263.3	300	467.6	300	271.2	300	475.3	300	276.8	300	481.8	300
	575	60	518	633	6	187.9	200	358.7	200	194.0	225	364.6	225	199.4	225	370.7	225
120	208/230	60	187	253	7	532.7	600	983.8	600	549.2	600	999.8	600	553.4	600	1005.9	600
	380	60	342	418	7	291.4	300	560.8	300	300.6	350	569.8	350	306.6	350	576.9	350
	460	60	414	506	7	268.1	300	472.4	300	276.0	300	480.1	300	281.6	300	486.6	300
	575	60	518	633	7	191.7	200	362.5	200	197.8	225	368.4	225	203.2	225	374.5	225
130	208/230	60	187	253	8	593.8	600	1044.8	600	610.3	700	1060.8	700	615.2	700	1067.7	700
	380	60	342	418	8	326.4	350	595.8	350	335.7	350	604.8	350	342.7	350	612.9	350
	460	60	414	506	8	284.2	300	488.4	300	292.1	300	496.1	300	298.6	300	503.6	300
	575	60	518	633	8	217.7	225	388.4	225	223.7	250	394.3	250	230.3	250	401.5	250
150	208/230	60	187	253	8	634.3	700	1084.4	700	—	—	—	—	651.2	700	1103.7	700
	380	60	342	418	8	347.2	350	616.0	350	—	—	—	—	360.7	400	630.9	400
	460	60	414	506	8	319.4	350	523.2	350	—	—	—	—	331.6	350	536.6	350
	575	60	518	633	8	228.4	250	398.8	250	—	—	—	—	239.3	250	410.5	250

See Legend and Notes on page 99.

Table 16 — 30RC 065-150 (R-410A) Electrical Data — Single Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS	7.5HP PUMP, 3600 RPM				10HP PUMP, 3600 RPM				15HP PUMP, 3600 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
065	208/230	60	187	253	4	—	—	—	—	305.6	350	587.3	350	—	—	—	—
	380	60	342	418	4	—	—	—	—	195.6	225	388.6	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	154.3	175	315.4	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	134.0	150	237.1	150	—	—	—	—
070	208/230	60	187	253	4	—	—	—	—	350.6	400	741.3	400	—	—	—	—
	380	60	342	418	4	—	—	—	—	206.9	225	431.6	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	165.5	175	350.4	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	140.7	150	280.1	150	—	—	—	—
080 C	208/230	60	187	253	4	—	—	—	—	390.6	450	781.3	450	402.1	450	792.8	450
	380	60	342	418	4	—	—	—	—	216.9	250	441.6	250	223.5	250	448.2	250
	460	60	414	506	4	—	—	—	—	175.5	200	360.4	200	180.2	200	365.1	200
	575	60	518	633	4	—	—	—	—	146.7	175	286.1	175	150.4	175	289.8	175
080	208/230	60	187	253	5	—	—	—	—	401.2	450	791.9	450	412.7	450	803.4	450
	380	60	342	418	5	—	—	—	—	222.7	250	447.4	250	229.3	250	454.0	250
	460	60	414	506	5	—	—	—	—	180.3	200	365.2	200	185.0	200	369.9	200
	575	60	518	633	5	—	—	—	—	150.5	175	289.9	175	154.2	175	293.6	175
090	208/230	60	187	253	6	—	—	—	—	438.8	500	889.5	500	450.3	500	901.0	500
	380	60	342	418	6	—	—	—	—	242.0	250	511.2	250	248.6	250	517.8	250
	460	60	414	506	6	—	—	—	—	209.9	250	414.0	225	214.6	250	418.7	250
	575	60	518	633	6	—	—	—	—	161.1	175	331.7	175	164.8	175	335.4	175
100	208/230	60	187	253	6	—	—	—	—	462.8	500	913.5	500	474.3	500	925.0	500
	380	60	342	418	6	—	—	—	—	254.0	300	523.2	300	260.6	300	529.8	300
	460	60	414	506	6	—	—	—	—	231.9	250	436.0	250	236.6	250	440.7	250
	575	60	518	633	6	—	—	—	—	167.1	175	337.7	175	170.8	200	341.4	200
110	208/230	60	187	253	6	—	—	—	—	513.3	600	963.9	600	524.8	600	975.4	600
	380	60	342	418	6	—	—	—	—	283.2	300	552.4	300	289.8	300	559.0	300
	460	60	414	506	6	—	—	—	—	243.1	250	447.2	250	247.8	250	451.9	250
	575	60	518	633	6	—	—	—	—	189.2	200	359.8	200	192.9	200	363.5	200
120 C	208/230	60	187	253	6	—	—	—	—	549.3	600	999.9	600	560.8	600	1011.4	600
	380	60	342	418	6	—	—	—	—	301.2	350	570.4	350	307.8	350	577.0	350
	460	60	414	506	6	—	—	—	—	276.1	300	480.2	300	280.8	300	484.9	300
	575	60	518	633	6	—	—	—	—	198.2	225	368.8	225	201.9	225	372.5	225
120	208/230	60	187	253	7	—	—	—	—	559.9	600	1010.5	600	571.4	600	1022.0	600
	380	60	342	418	7	—	—	—	—	307.0	350	576.2	350	313.6	350	582.8	350
	460	60	414	506	7	—	—	—	—	280.9	300	485.0	300	285.6	300	489.7	300
	575	60	518	633	7	—	—	—	—	202.0	225	372.6	225	205.7	225	376.3	225
130	208/230	60	187	253	8	—	—	—	—	621.0	700	1071.5	700	632.5	700	1083.0	700
	380	60	342	418	8	—	—	—	—	342.1	350	611.2	350	348.7	350	617.8	350
	460	60	414	506	8	—	—	—	—	297.0	300	501.0	300	301.7	350	505.7	350
	575	60	518	633	8	—	—	—	—	227.9	250	398.5	250	231.6	250	402.2	250
150	208/230	60	187	253	8	655.1	700	1104.7	700	661.5	700	1111.1	700	673.0	700	1122.6	700
	380	60	342	418	8	358.6	400	627.2	400	362.8	400	631.4	400	369.4	400	638.0	400
	460	60	414	506	8	328.8	350	532.4	350	332.2	350	535.8	350	336.9	350	540.5	350
	575	60	518	633	8	236.0	250	406.2	250	238.7	250	408.9	250	242.4	250	412.6	250

See Legend and Notes on page 99.

Table 17 — 30RC 065-150 (R-410A) Electrical Data — Dual Point Units with Fixed Speed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
065	208/230	60	187	253	2	2	132.5	137.0	175	175	416.0	419.6	150	150	146.7	139.3	200	175	430.2	421.4	175	175	153.9	139.3	200	175	437.4	421.4	175	175
	380	60	342	418	2	2	87.2	90.0	110	125	281.2	283.4	100	100	95.2	91.2	125	125	289.2	284.4	110	100	100.2	91.2	125	125	294.2	284.4	110	100
	460	60	414	506	2	2	68.2	70.5	90	90	230.2	232.0	80	80	75.1	71.5	100	90	237.1	232.8	90	80	78.9	71.5	100	90	240.9	232.8	90	80
	575	60	518	633	2	2	60.5	62.2	80	80	164.2	165.6	70	70	65.8	63.0	90	80	169.5	166.2	80	70	68.1	63.0	90	80	171.8	166.2	80	70
070	208/230	60	187	253	2	2	132.5	182.0	175	250	416.0	573.6	150	200	146.7	184.3	200	250	430.2	575.4	175	225	153.9	184.3	200	250	437.4	575.4	175	225
	380	60	342	418	2	2	87.2	101.2	110	125	281.2	326.4	100	125	95.2	102.5	125	125	289.2	327.4	110	125	100.2	102.5	125	125	294.2	327.4	110	125
	460	60	414	506	2	2	68.2	81.7	90	110	230.2	267.0	80	90	75.1	82.7	100	110	237.1	267.8	90	100	78.9	82.7	100	110	240.9	267.8	90	100
	575	60	518	633	2	2	60.5	69.0	80	90	164.2	208.6	70	80	65.8	69.7	90	90	169.5	209.2	80	80	68.1	69.7	90	90	171.8	209.2	80	80
080 C	208/230	60	187	253	2	2	177.5	182.0	250	250	570.0	573.6	200	200	191.7	184.3	250	250	584.2	575.4	225	225	198.9	184.3	250	250	591.4	575.4	225	225
	380	60	342	418	2	2	98.5	101.2	125	125	324.2	326.4	110	125	106.5	102.5	125	125	332.2	327.4	125	125	111.5	102.5	150	125	337.2	327.4	125	125
	460	60	414	506	2	2	79.5	81.7	110	110	265.2	267.0	90	90	86.4	82.7	110	110	272.1	267.8	100	100	90.2	82.7	110	110	275.9	267.8	100	100
	575	60	518	633	2	2	67.2	69.0	90	90	207.2	208.6	80	80	72.5	69.7	100	90	212.5	209.2	80	80	74.8	69.7	100	90	214.8	209.2	90	80
080	208/230	60	187	253	3	2	183.0	182.0	250	250	575.5	573.6	225	200	197.2	184.3	250	250	589.7	575.4	225	225	204.4	184.3	250	250	596.9	575.4	225	225
	380	60	342	418	3	2	101.6	101.2	125	125	327.3	326.4	125	125	109.6	102.5	150	125	335.3	327.4	125	125	114.6	102.5	150	125	340.3	327.4	125	125
	460	60	414	506	3	2	82.1	81.7	110	110	267.8	267.0	100	90	89.0	82.7	110	110	274.7	267.8	100	100	92.8	82.7	125	110	278.5	267.8	110	100
	575	60	518	633	3	2	69.3	69.0	90	90	209.3	208.6	80	80	74.6	69.7	100	90	214.6	209.2	90	80	76.9	69.7	100	90	216.9	209.2	90	80
090	208/230	60	187	253	3	3	183.0	214.5	250	250	575.5	666.1	225	250	197.2	216.8	250	300	589.7	667.9	225	250	204.4	216.8	250	300	596.9	667.9	225	250
	380	60	342	418	3	3	101.6	117.8	125	150	327.3	387.5	125	150	109.6	119.1	150	150	335.3	388.5	125	150	114.6	119.1	150	150	340.3	388.5	125	150
	460	60	414	506	3	3	82.1	109.1	110	150	267.8	313.6	100	125	89.0	110.1	110	150	274.7	314.4	100	125	92.8	110.1	125	150	278.5	314.4	110	125
	575	60	518	633	3	3	69.3	77.8	90	100	209.3	248.7	80	90	74.6	78.6	100	100	214.6	249.3	90	90	76.9	78.6	100	100	216.9	249.3	90	90
100	208/230	60	187	253	3	3	210.0	214.5	250	250	662.5	666.1	250	250	224.2	216.8	300	300	676.7	667.9	250	250	231.4	216.8	300	300	683.9	667.9	300	250
	380	60	342	418	3	3	115.1	117.8	150	150	385.3	387.5	150	150	123.1	119.1	150	150	393.3	388.5	150	150	128.1	119.1	175	150	398.3	388.5	150	150
	460	60	414	506	3	3	106.8	109.1	150	150	311.8	313.6	125	125	113.7	110.1	150	150	318.7	314.4	125	125	117.5	110.1	150	150	322.5	314.4	150	125
	575	60	518	633	3	3	76.1	77.8	100	100	247.3	248.7	90	90	81.4	78.6	110	100	252.6	249.3	90	90	83.7	78.6	110	100	254.9	249.3	100	90
110	208/230	60	187	253	3	3	257.0	214.5	300	250	649.5	666.1	300	250	271.2	216.8	300	300	663.7	667.9	300	250	278.4	216.8	350	300	670.9	667.9	300	250
	380	60	342	418	3	3	142.6	117.8	175	150	368.3	387.5	175	150	150.6	119.1	175	150	376.3	388.5	175	150	155.6	119.1	175	150	381.3	388.5	175	150
	460	60	414	506	3	3	115.1	109.1	125	150	300.8	313.6	125	125	122.0	110.1	150	150	307.7	314.4	150	125	125.8	110.1	150	150	311.5	314.4	150	125
	575	60	518	633	3	3	97.3	77.8	125	100	237.3	248.7	110	90	102.6	78.6	125	100	242.6	249.3	110	90	104.9	78.6	125	100	244.9	249.3	125	90
120 C	208/230	60	187	253	2	4	204.5	306.0	250	350	657.0	757.6	250	350	218.7	308.3	300	350	671.2	759.4	250	350	225.9	308.3	300	350	678.4	759.4	250	350
	380	60	342	418	2	4	112.0	167.9	150	200	382.2	437.6	125	200	120.0	169.2	150	200	390.2	438.6	150	200	125.0	169.2	150	200	395.2	438.6	150	200
	460	60	414	506	2	4	104.2	155.7	125	175	309.2	360.2	125	175	111.1	156.7	150	200	316.1	361.0	125	175	114.9	156.7	150	200	319.9	361.0	150	175
	575	60	518	633	2	4	74.0	110.9	100	125	245.2	281.8	90	125	79.3	111.7	110	125	250.5	282.4	90	125	81.6	111.7	110	125	252.8	282.4	90	125
120	208/230	60	187	253	3	4	210.0	306.0	250	350	662.5	757.6	250	350	224.2	308.3	300	350	676.7	759.4	250	350	231.4	308.3	300	350	683.9	759.4	300	350
	380	60	342	418	3	4	115.1	167.9	150	200	385.3	437.6	150	200	123.1	169.2	150	200	393.3	438.6	150	200	128.1	169.2	175	200	398.3	438.6	150	200
	460	60	414	506	3	4	106.8	155.7	150	175	311.8	360.2	125	175	113.7	156.7	150	200	318.7	361.0	125	175	117.5	156.7	150	200	322.5	361.0	150	175
	575	60	518	633	3	4	76.1	110.9	100	125	247.3	281.8	90	125	81.4	111.7	110	125	252.6	282.4	90	125	83.7	111.7	110	125	254.9	282.4	100	125
130	208/230	60	187	253	4	4	262.5	306.0	300	350	655.0	757.6	300	350	276.7	308.3	350	350	669.2	759.4	300	350	283.9	308.3	350	350	676.4	759.4	350	350
	380	60	342	418	4	4	145.7	167.9	175	200	371.4	437.6	175	200	153.7	169.2	175	200	379.4	438.6	175	200	158.7	169.2	175	200	384.4	438.6	175	200
	460	60	414	506	4	4	117.7	155.7	150	175	303.4	360.2	150	175	124.6	156.7	150	200	310.3	361.0	150	175	128.4	156.7	150	200	314.1	361.0	150	175
	575	60	518	633	4	4	99.4	110.9	125	125	239.4	281.8	110	125	104.7	111.7	125	125	244.7	282.4	125	125	107.0	111.7	125	125	247.0	282.4	125	125
150	208/230	60	187	253	4	4	301.5	310.5	350	350	754.0	761.2	350	350	—	—	—	—	—	—	—	—	322.9	312.8	400	350	775.4	763.0	350	350
	380	60	342	418	4	4	165.2	170.7	200	200	435.4	439.8	200	200	—	—	—	—	—	—	—	—	178.2	171.9	225	200	448.4	440.8	200	200
	460	60	414	506	4	4	153.4	157.9	175	200	358.4	362.0	175	175	—	—	—	—	—	—	—	—	164.1	158.9	200	200	369.1	362.8	200	175
	575	60	518	633	4	4	109.2	112.7	125	125	280.4	283.2	125	125	—	—	—	—	—	—	—	—	116.8	113.4	125	125	288.0	283.8	125	125

See Legend and Notes on page 99.

Table 17 — 30RC 065-150 (R-410A) Electrical Data — Dual Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
065	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	157.4	139.3	200	175	440.9	421.4	175	175	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	101.6	91.2	125	125	295.6	284.4	125	100	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	80.0	71.5	100	90	242.0	232.8	90	80	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	70.0	63.0	90	80	173.7	166.2	80	70	—	—	—	—	—	—	—	—
070	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	157.4	184.3	200	250	440.9	575.4	175	225	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	101.6	102.5	125	125	295.6	327.4	125	125	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	80.0	82.7	100	110	242.0	267.8	90	100	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	70.0	69.7	90	90	173.7	209.2	80	80	—	—	—	—	—	—	—	—
080 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	202.4	184.3	250	250	594.9	575.4	225	225	213.9	184.3	250	250	606.4	575.4	250	225
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	112.9	102.5	150	125	338.6	327.4	125	125	119.5	102.5	150	125	345.2	327.4	150	125
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	91.3	82.7	110	110	277.0	267.8	100	100	96.0	82.7	125	110	281.7	267.8	110	100
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	76.7	69.7	100	90	216.7	209.2	90	80	80.4	69.7	100	90	220.4	209.2	90	80
080	208/230	60	187	253	3	2	—	—	—	—	—	—	—	—	207.9	184.3	250	250	600.4	575.4	250	225	219.4	184.3	250	250	611.9	575.4	250	225
	380	60	342	418	3	2	—	—	—	—	—	—	—	—	116.0	102.5	150	125	341.7	327.4	150	125	122.6	102.5	150	125	348.3	327.4	150	125
	460	60	414	506	3	2	—	—	—	—	—	—	—	—	93.9	82.7	125	110	279.6	267.8	110	100	98.6	82.7	125	110	284.3	267.8	110	100
	575	60	518	633	3	2	—	—	—	—	—	—	—	—	78.8	69.7	100	90	218.8	209.2	90	80	82.5	69.7	110	90	222.5	209.2	90	80
090	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	207.9	216.8	250	300	600.4	667.9	250	250	219.4	216.8	250	300	611.9	667.9	250	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	116.0	119.1	150	150	341.7	388.5	150	150	122.6	119.1	150	150	348.3	388.5	150	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	93.9	110.1	125	150	279.6	314.4	110	125	98.6	110.1	125	150	284.3	314.4	110	125
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	78.8	78.6	100	100	218.8	249.3	90	90	82.5	78.6	110	100	222.5	249.3	90	90
100	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	234.9	216.8	300	300	687.4	667.9	300	250	246.4	216.8	300	300	698.9	667.9	300	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	129.5	119.1	175	150	399.7	388.5	150	150	136.1	119.1	175	150	406.3	388.5	150	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	118.6	110.1	150	150	323.6	314.4	150	125	123.3	110.1	150	150	328.3	314.4	150	125
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	85.6	78.6	110	100	256.8	249.3	100	90	89.3	78.6	110	100	260.5	249.3	100	90
110	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	281.9	216.8	350	300	674.4	667.9	350	250	293.4	216.8	350	300	685.9	667.9	350	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	157.0	119.1	175	150	382.7	388.5	175	150	163.6	119.1	200	150	389.3	388.5	175	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	126.9	110.1	150	150	312.6	314.4	150	125	131.6	110.1	150	150	317.3	314.4	150	125
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	106.8	78.6	125	100	246.8	249.3	125	90	110.5	78.6	125	100	250.5	249.3	125	90
120 C	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	229.4	308.3	300	350	681.9	759.4	300	350	240.9	308.3	300	350	693.4	759.4	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	126.4	169.2	150	200	396.6	438.6	150	200	133.0	169.2	175	200	403.2	438.6	150	200
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	116.0	156.7	150	200	321.0	361.0	150	175	120.7	156.7	150	200	325.7	361.0	150	175
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	83.5	111.7	110	125	254.7	282.4	100	125	87.2	111.7	110	125	258.4	282.4	100	125
120	208/230	60	187	253	3	4	—	—	—	—	—	—	—	—	234.9	308.3	300	350	687.4	759.4	300	350	246.4	308.3	300	350	698.9	759.4	300	350
	380	60	342	418	3	4	—	—	—	—	—	—	—	—	129.5	169.2	175	200	399.7	438.6	150	200	136.1	169.2	175	200	406.3	438.6	150	200
	460	60	414	506	3	4	—	—	—	—	—	—	—	—	118.6	156.7	150	200	323.6	361.0	150	175	123.3	156.7	150	200	328.3	361.0	150	175
	575	60	518	633	3	4	—	—	—	—	—	—	—	—	85.6	111.7	110	125	256.8	282.4	100	125	89.3	111.7	110	125	260.5	282.4	100	125
130	208/230	60	187	253	4	4	—	—	—	—	—	—	—	—	287.4	308.3	350	350	679.9	759.4	350	350	298.9	308.3	350	350	691.4	759.4	350	350
	380	60	342	418	4	4	—	—	—	—	—	—	—	—	160.1	169.2	200	200	385.8	438.6	175	200	166.7	169.2	200	200	392.4	438.6	200	200
	460	60	414	506	4	4	—	—	—	—	—	—	—	—	129.5	156.7	150	200	315.2	361.0	150	175	134.2	156.7	150	200	319.9	361.0	150	175
	575	60	518	633	4	4	—	—	—	—	—	—	—	—	108.9	111.7	125	125	248.9	282.4	125	125	112.6	111.7	125	125	252.6	282.4	125	125
150	208/230	60	187	253	4	4	320.0	312.8	400	350	772.5	763.0	350	350	326.4	312.8	400	350	778.9	763.0	350	350	337.9	312.8	400	350	790.4	763.0	400	350
	380	60	342	418	4	4	175.4	171.9	200	200	445.6	440.8	200	200	179.6	171.9	225	200	449.8	440.8	200	200	186.2	171.9	225	200	456.4	440.8	200	200
	460	60	414	506	4	4	161.8	158.9	200	200	366.8	362.8	175	175	165.2	158.9	200	200	370.2	362.8	200	175	169.9	158.9	200	200	374.9	362.8	200	175
	575	60	518	633	4	4	116.0	113.4	125	125	287.2	283.8	125	125	118.7	113.4	125	125	289.9	283.8	125	125	122.4	113.4	150	125	293.6	283.8	150	125

See Legend and Notes on page 99.

Table 18 — 30RC 065-150 (R-410A) Electrical Data — Dual Point Units with Greenspeed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
065	208/230	60	187	253	2	2	142.7	147.2	175	200	426.2	429.8	175	175	156.9	149.5	200	200	440.4	431.6	175	175	164.1	149.5	200	200	447.6	431.6	200	175
	380	60	342	418	2	2	92.6	95.4	125	125	286.6	288.8	110	110	100.6	96.6	125	125	294.6	289.8	125	110	105.6	96.6	125	125	299.6	289.8	125	110
	460	60	414	506	2	2	72.6	74.9	100	100	234.6	236.4	80	90	79.5	75.9	100	100	241.5	237.2	90	90	83.3	75.9	110	100	245.3	237.2	100	90
	575	60	518	633	2	2	63.9	65.6	80	90	167.6	169.0	80	80	69.2	66.4	90	90	172.9	169.6	80	80	71.5	66.4	90	90	175.2	169.6	80	80
070	208/230	60	187	253	2	2	142.7	192.2	175	250	426.2	583.8	175	225	156.9	194.5	200	250	440.4	585.6	175	225	164.1	194.5	200	250	447.6	585.6	200	225
	380	60	342	418	2	2	92.6	106.6	125	125	286.6	331.8	110	125	100.6	107.9	125	125	294.6	332.8	125	125	105.6	107.9	125	125	299.6	332.8	125	125
	460	60	414	506	2	2	72.6	86.1	100	110	234.6	271.4	80	100	79.5	87.1	100	110	241.5	272.2	90	100	83.3	87.1	110	110	245.3	272.2	100	100
	575	60	518	633	2	2	63.9	72.4	80	100	167.6	212.0	80	80	69.2	73.1	90	100	172.9	212.6	80	80	71.5	73.1	90	100	175.2	212.6	80	80
080 C	208/230	60	187	253	2	2	187.7	192.2	250	250	580.2	583.8	225	225	201.9	194.5	250	250	594.4	585.6	225	225	209.1	194.5	250	250	601.6	585.6	250	225
	380	60	342	418	2	2	103.9	106.6	125	125	329.6	331.8	125	125	111.9	107.9	150	125	337.6	332.8	125	125	116.9	107.9	150	125	342.6	332.8	150	125
	460	60	414	506	2	2	83.9	86.1	110	110	269.6	271.4	100	100	90.8	87.1	125	110	276.5	272.2	110	100	94.6	87.1	125	110	280.3	272.2	110	100
	575	60	518	633	2	2	70.6	72.4	90	100	210.6	212.0	80	80	75.9	73.1	100	100	215.9	212.6	90	80	78.2	73.1	100	100	218.2	212.6	90	80
080	208/230	60	187	253	3	2	198.3	192.2	250	250	590.8	583.8	225	225	212.5	194.5	250	250	605.0	585.6	250	225	219.7	194.5	250	250	612.2	585.6	250	225
	380	60	342	418	3	2	109.7	106.6	150	125	335.4	331.8	125	125	117.7	107.9	150	125	343.4	332.8	150	125	122.7	107.9	150	125	348.4	332.8	150	125
	460	60	414	506	3	2	88.7	86.1	110	110	274.4	271.4	100	100	95.6	87.1	125	110	281.3	272.2	110	100	99.4	87.1	125	110	285.1	272.2	110	100
	575	60	518	633	3	2	74.4	72.4	100	100	214.4	212.0	90	80	79.7	73.1	100	100	219.7	212.6	90	80	82.0	73.1	110	100	222.0	212.6	90	80
090	208/230	60	187	253	3	3	198.3	229.8	250	300	590.8	681.4	225	300	212.5	232.1	250	300	605.0	683.2	250	300	219.7	232.1	250	300	612.2	683.2	250	300
	380	60	342	418	3	3	109.7	125.9	150	150	335.4	395.6	125	150	117.7	127.2	150	150	343.4	396.6	150	150	122.7	127.2	150	150	348.4	396.6	150	150
	460	60	414	506	3	3	88.7	115.7	110	150	274.4	320.2	100	150	95.6	116.7	125	150	281.3	321.0	110	150	99.4	116.7	125	150	285.1	321.0	110	150
	575	60	518	633	3	3	74.4	82.9	100	110	214.4	253.8	90	100	79.7	83.7	100	110	219.7	254.4	90	100	82.0	83.7	110	110	222.0	254.4	90	100
100	208/230	60	187	253	3	3	225.3	229.8	300	300	677.8	681.4	250	300	239.5	232.1	300	300	692.0	683.2	300	300	246.7	232.1	300	300	699.2	683.2	300	300
	380	60	342	418	3	3	123.2	125.9	150	150	393.4	395.6	150	150	131.2	127.2	175	150	401.4	396.6	150	150	136.2	127.2	175	150	406.4	396.6	150	150
	460	60	414	506	3	3	113.4	115.7	150	150	318.4	320.2	125	150	120.3	116.7	150	150	325.3	321.0	150	150	124.1	116.7	150	150	329.1	321.0	150	150
	575	60	518	633	3	3	81.2	82.9	110	110	252.4	253.8	90	100	86.5	83.7	110	110	257.7	254.4	100	100	88.8	83.7	110	110	260.0	254.4	100	100
110	208/230	60	187	253	3	3	272.3	229.8	300	300	664.8	681.4	300	300	286.5	232.1	350	300	679.0	683.2	350	300	293.7	232.1	350	300	686.2	683.2	350	300
	380	60	342	418	3	3	150.7	125.9	175	150	376.4	395.6	175	150	158.7	127.2	200	150	384.4	396.6	175	150	163.7	127.2	200	150	389.4	396.6	175	150
	460	60	414	506	3	3	121.7	115.7	150	150	307.4	320.2	150	150	128.6	116.7	150	150	314.3	321.0	150	150	132.4	116.7	150	150	318.1	321.0	150	150
	575	60	518	633	3	3	102.4	82.9	125	110	242.4	253.8	110	100	107.7	83.7	125	110	247.7	254.4	125	100	110.0	83.7	125	110	250.0	254.4	125	100
120 C	208/230	60	187	253	2	4	214.7	326.4	300	400	667.2	778.0	250	350	228.9	328.7	300	400	681.4	779.8	300	350	236.1	328.7	300	400	688.6	779.8	300	350
	380	60	342	418	2	4	117.4	178.7	150	225	387.6	448.4	150	200	125.4	180.0	150	225	395.6	449.4	150	200	130.4	180.0	175	225	400.6	449.4	150	200
	460	60	414	506	2	4	108.6	164.5	150	200	313.6	369.0	125	200	115.5	165.5	150	200	320.5	369.8	150	200	119.3	165.5	150	200	324.3	369.8	150	200
	575	60	518	633	2	4	77.4	117.7	100	125	248.6	288.6	90	125	82.7	118.5	110	125	253.9	289.2	100	125	85.0	118.5	110	125	256.2	289.2	100	125
120	208/230	60	187	253	3	4	225.3	326.4	300	400	677.8	778.0	250	350	239.5	328.7	300	400	692.0	779.8	300	350	246.7	328.7	300	400	699.2	779.8	300	350
	380	60	342	418	3	4	123.2	178.7	150	225	393.4	448.4	150	200	131.2	180.0	175	225	401.4	449.4	150	200	136.2	180.0	175	225	406.4	449.4	150	200
	460	60	414	506	3	4	113.4	164.5	150	200	318.4	369.0	125	200	120.3	165.5	150	200	325.3	369.8	150	200	124.1	165.5	150	200	329.1	369.8	150	200
	575	60	518	633	3	4	81.2	117.7	110	125	252.4	288.6	90	125	86.5	118.5	110	125	257.7	289.2	100	125	88.8	118.5	110	125	260.0	289.2	100	125
130	208/230	60	187	253	4	4	282.9	326.4	350	400	675.4	778.0	350	350	297.1	328.7	350	400	689.6	779.8	350	350	304.3	328.7	350	400	696.8	779.8	350	350
	380	60	342	418	4	4	156.5	178.7	175	225	382.2	448.4	175	200	164.5	180.0	200	225	390.2	449.4	200	200	169.5	180.0	200	225	395.2	449.4	200	200
	460	60	414	506	4	4	126.5	164.5	150	200	312.2	369.0	150	200	133.4	165.5	150	200	319.1	369.8	150	200	137.2	165.5	150	200	322.9	369.8	150	200
	575	60	518	633	4	4	106.2	117.7	125	125	246.2	288.6	125	125	111.5	118.5	125	125	251.5	289.2	125	125	113.8	118.5	125	125	253.8	289.2	125	125
150	208/230	60	187	253	4	4	321.9	330.9	400	400	774.4	781.6	350	400	—	—	—	—	—	—	—	—	343.3	333.2	400	400	795.8	783.4	400	400
	380	60	342	418	4	4	176.0	181.5	200	225	446.2	450.6	200	200	—	—	—	—	—	—	—	—	189.0	182.7	225	225	459.2	451.6	225	200
	460	60	414	506	4	4	162.2	166.7	200	200	367.2	370.8	175	200	—	—	—	—	—	—	—	—	172.9	167.7	200	200	377.9	371.6	200	200
	575	60	518	633	4	4	116.0	119.5	125	125	287.2	290.0	125	125	—	—	—	—	—	—	—	—	123.6	120.2	150	150	294.8	290.6	150	150

See Legend and Notes on page 99.

Table 18 — 30RC 065-150 (R-410A) Electrical Data — Dual Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
065	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	167.6	149.5	200	200	451.1	431.6	200	175	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	107.0	96.6	125	125	301.0	289.8	125	110	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	84.4	75.9	110	100	246.4	237.2	100	90	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	73.4	66.4	90	90	177.1	169.6	80	80	—	—	—	—	—	—	—	—
070	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	167.6	194.5	200	250	451.1	585.6	200	225	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	107.0	107.9	125	125	301.0	332.8	125	125	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	84.4	87.1	110	110	246.4	272.2	100	100	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	73.4	73.1	90	100	177.1	212.6	80	80	—	—	—	—	—	—	—	—
080 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	212.6	194.5	250	250	605.1	585.6	250	225	224.1	194.5	250	250	616.6	585.6	250	225
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	118.3	107.9	150	125	344.0	332.8	150	125	124.9	107.9	150	125	350.6	332.8	150	125
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	95.7	87.1	125	110	281.4	272.2	110	100	100.4	87.1	125	110	286.1	272.2	110	100
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	80.1	73.1	100	100	220.1	212.6	90	80	83.8	73.1	110	100	223.8	212.6	100	80
080	208/230	60	187	253	3	2	—	—	—	—	—	—	—	—	223.2	194.5	250	250	615.7	585.6	250	225	234.7	194.5	300	250	627.2	585.6	300	225
	380	60	342	418	3	2	—	—	—	—	—	—	—	—	124.1	107.9	150	125	349.8	332.8	150	125	130.7	107.9	150	125	356.4	332.8	150	125
	460	60	414	506	3	2	—	—	—	—	—	—	—	—	100.5	87.1	125	110	286.2	272.2	110	100	105.2	87.1	125	110	290.9	272.2	125	100
	575	60	518	633	3	2	—	—	—	—	—	—	—	—	83.9	73.1	110	100	223.9	212.6	100	80	87.6	73.1	110	100	227.6	212.6	100	80
090	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	223.2	232.1	250	300	615.7	683.2	250	300	234.7	232.1	300	300	627.2	683.2	300	300
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	124.1	127.2	150	150	349.8	396.6	150	150	130.7	127.2	150	150	356.4	396.6	150	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	100.5	116.7	125	150	286.2	321.0	110	150	105.2	116.7	125	150	290.9	321.0	125	150
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	83.9	83.7	110	110	223.9	254.4	100	100	87.6	83.7	110	110	227.6	254.4	100	100
100	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	250.2	232.1	300	300	702.7	683.2	300	300	261.7	232.1	300	300	714.2	683.2	300	300
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	137.6	127.2	175	150	407.8	396.6	150	150	144.2	127.2	175	150	414.4	396.6	175	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	125.2	116.7	150	150	330.2	321.0	150	150	129.9	116.7	150	150	334.9	321.0	150	150
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	90.7	83.7	110	110	261.9	254.4	100	100	94.4	83.7	125	110	265.6	254.4	110	100
110	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	297.2	232.1	350	300	689.7	683.2	350	300	308.7	232.1	350	300	701.2	683.2	350	300
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	165.1	127.2	200	150	390.8	396.6	200	150	171.7	127.2	200	150	397.4	396.6	200	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	133.5	116.7	150	150	319.2	321.0	150	150	138.2	116.7	150	150	323.9	321.0	150	150
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	111.9	83.7	125	110	251.9	254.4	125	100	115.6	83.7	125	110	255.6	254.4	125	100
120 C	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	239.6	328.7	300	400	692.1	779.8	300	350	251.1	328.7	300	400	703.6	779.8	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	131.8	180.0	175	225	402.0	449.4	150	200	138.4	180.0	175	225	408.6	449.4	175	200
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	120.4	165.5	150	200	325.4	369.8	150	200	125.1	165.5	150	200	330.1	369.8	150	200
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	86.9	118.5	110	125	258.1	289.2	100	125	90.6	118.5	110	125	261.8	289.2	100	125
120	208/230	60	187	253	3	4	—	—	—	—	—	—	—	—	250.2	328.7	300	400	702.7	779.8	300	350	261.7	328.7	300	400	714.2	779.8	300	350
	380	60	342	418	3	4	—	—	—	—	—	—	—	—	137.6	180.0	175	225	407.8	449.4	150	200	144.2	180.0	175	225	414.4	449.4	175	200
	460	60	414	506	3	4	—	—	—	—	—	—	—	—	125.2	165.5	150	200	330.2	369.8	150	200	129.9	165.5	150	200	334.9	369.8	150	200
	575	60	518	633	3	4	—	—	—	—	—	—	—	—	90.7	118.5	110	125	261.9	289.2	100	125	94.4	118.5	125	125	265.6	289.2	110	125
130	208/230	60	187	253	4	4	—	—	—	—	—	—	—	—	307.8	328.7	350	400	700.3	779.8	350	350	319.3	328.7	350	400	711.8	779.8	350	350
	380	60	342	418	4	4	—	—	—	—	—	—	—	—	170.9	180.0	200	225	396.6	449.4	200	200	177.5	180.0	200	225	403.2	449.4	200	200
	460	60	414	506	4	4	—	—	—	—	—	—	—	—	138.3	165.5	150	200	324.0	369.8	150	200	143.0	165.5	175	200	328.7	369.8	175	200
	575	60	518	633	4	4	—	—	—	—	—	—	—	—	115.7	118.5	125	125	255.7	289.2	125	125	119.4	118.5	125	125	259.4	289.2	125	125
150	208/230	60	187	253	4	4	340.4	333.2	400	400	792.9	783.4	400	400	346.8	333.2	400	400	799.3	783.4	400	400	358.3	333.2	400	400	810.8	783.4	400	400
	380	60	342	418	4	4	186.2	182.7	225	225	456.4	451.6	200	200	190.4	182.7	225	225	460.6	451.6	225	200	197.0	182.7	225	225	467.2	451.6	225	200
	460	60	414	506	4	4	170.6	167.7	200	200	375.6	371.6	200	200	174.0	167.7	200	200	379.0	371.6	200	200	178.7	167.7	200	200	383.7	371.6	200	200
	575	60	518	633	4	4	122.8	120.2	150	150	294.0	290.6	150	150	125.5	120.2	150	150	296.7	290.6	150	150	129.2	120.2	150	150	300.4	290.6	150	150

See Legend and Notes on page 99.

Table 19 — 30RC 067-152 (R-32) Electrical Data — Single Point Units with Fixed Speed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS	NO HYDRONIC PACKAGE				5HP PUMP, 1750 RPM				7.5HP PUMP, 1750 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
067	208/230	60	187	253	4	266.5	300	546	300	283.0	300	562	300	290.2	300	569	300
	380	60	342	418	4	173.4	200	365	200	182.7	200	374	200	187.7	200	379	200
	460	60	414	506	4	136.9	150	297	150	144.8	150	305	150	148.6	175	309	175
	575	60	518	633	4	112.7	125	217	125	118.7	125	223	125	121.0	125	225	125
072	208/230	60	187	253	4	304.7	350	683	350	321.2	350	699	350	328.4	350	706	350
	380	60	342	418	4	180.0	200	405	200	189.3	225	414	200	194.3	225	419	225
	460	60	414	506	4	145.9	175	326	175	153.8	175	334	175	157.6	175	338	175
	575	60	518	633	4	118.1	125	266	125	124.1	150	272	150	126.4	150	274	150
082	208/230	60	187	253	4	338.7	400	717	400	355.1	400	733	400	362.3	400	740	400
	380	60	342	418	4	185.9	225	411	200	195.2	225	420	225	200.2	225	425	225
	460	60	414	506	4	153.9	175	334	175	161.8	175	342	175	165.6	175	346	175
	575	60	518	633	4	122.9	125	270	125	128.9	150	276	150	131.2	150	279	150
092 C	208/230	60	187	253	4	358.6	400	829	400	375.0	450	845	400	382.2	450	852	450
	380	60	342	418	4	196.8	225	457	225	206.1	250	466	225	211.1	250	471	225
	460	60	414	506	4	162.9	175	379	175	170.8	200	387	200	174.6	200	391	200
	575	60	518	633	4	130.1	150	305	150	136.1	150	311	150	138.4	150	313	150
092	208/230	60	187	253	6	369.6	450	840	400	386.0	450	856	450	393.2	450	863	450
	380	60	342	418	6	203.0	225	463	225	212.3	250	472	225	217.3	250	477	250
	460	60	414	506	6	168.1	200	384	200	176.0	200	392	200	179.8	200	396	200
	575	60	518	633	6	134.3	150	309	150	140.3	150	315	150	142.6	150	317	150
102 C	208/230	60	187	253	4	376.3	450	847	400	392.7	450	863	450	399.9	450	870	450
	380	60	342	418	4	206.5	250	467	225	215.8	250	476	250	220.8	250	481	250
	460	60	414	506	4	170.9	200	387	200	178.8	200	395	200	182.6	200	399	200
	575	60	518	633	4	136.5	150	311	150	142.5	150	317	150	144.8	150	319	150
102	208/230	60	187	253	6	387.3	450	858	450	403.7	450	874	450	410.9	450	881	450
	380	60	342	418	6	212.7	250	473	225	222.0	250	482	250	227.0	250	487	250
	460	60	414	506	6	176.1	200	392	200	184.0	200	400	200	187.8	200	404	200
	575	60	518	633	6	140.7	150	315	150	146.7	175	321	175	149.0	175	323	175
112	208/230	60	187	253	6	443.1	500	913	500	459.5	500	929	500	466.7	500	937	500
	380	60	342	418	6	243.2	250	503	250	252.5	300	512	300	257.5	300	517	300
	460	60	414	506	6	201.4	225	417	225	209.3	225	425	225	213.1	225	429	225
	575	60	518	633	6	160.8	175	335	175	166.8	175	341	175	169.1	175	344	175
122 C	208/230	60	187	253	6	469.6	500	940	500	486.0	500	956	500	493.2	500	963	500
	380	60	342	418	6	257.7	300	518	300	267.0	300	527	300	272.0	300	532	300
	460	60	414	506	6	213.4	225	429	225	221.3	250	437	250	225.1	250	441	250
	575	60	518	633	6	170.4	175	345	175	176.4	200	351	200	178.7	200	353	200
122	208/230	60	187	253	6	469.6	500	940	500	486.0	500	956	500	493.2	500	963	500
	380	60	342	418	6	257.7	300	518	300	267.0	300	527	300	272.0	300	532	300
	460	60	414	506	6	213.4	225	429	225	221.3	250	437	250	225.1	250	441	250
	575	60	518	633	6	170.4	175	345	175	176.4	200	351	200	178.7	200	353	200
132 C	208/230	60	187	253	6	525.4	600	996	600	541.8	600	1012	600	549.0	600	1019	600
	380	60	342	418	6	288.3	300	548	300	297.5	300	557	300	302.5	350	562	350
	460	60	414	506	6	238.6	250	455	250	246.5	250	462	250	250.3	300	466	300
	575	60	518	633	6	190.5	200	365	200	196.6	225	371	225	198.9	225	373	225
132	208/230	60	187	253	8	536.4	600	1007	600	552.8	600	1023	600	560.0	600	1030	600
	380	60	342	418	8	294.5	300	555	300	303.7	350	564	350	308.7	350	569	350
	460	60	414	506	8	243.8	250	460	250	251.7	300	468	300	255.5	300	471	300
	575	60	518	633	8	194.7	200	369	200	200.8	225	375	225	203.1	225	377	225
152 C	208/230	60	187	253	6	608.4	700	1253	700	—	—	—	—	632.1	700	1276	700
	380	60	342	418	6	330.7	400	713	350	—	—	—	—	345.0	400	727	400
	460	60	414	506	6	276.4	300	584	300	—	—	—	—	288.1	350	596	350
	575	60	518	633	6	220.7	250	459	250	—	—	—	—	229.1	250	467	250
152	208/230	60	187	253	8	619.4	700	1264	700	—	—	—	—	643.1	700	1287	700
	380	60	342	418	8	336.9	400	720	400	—	—	—	—	351.2	400	734	400
	460	60	414	506	8	281.6	300	589	300	—	—	—	—	293.3	350	601	350
	575	60	518	633	8	224.9	250	463	250	—	—	—	—	233.3	250	471	250

See Legend and Notes on page 99.

Table 19 — 30RC 067-152 (R-32) Electrical Data — Single Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS	7.5HP PUMP, 3600 RPM				10HP PUMP, 3600 RPM				15HP PUMP, 3600 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
067	208/230	60	187	253	4	—	—	—	—	293.7	300	573	300	—	—	—	—
	380	60	342	418	4	—	—	—	—	189.1	225	381	200	—	—	—	—
	460	60	414	506	4	—	—	—	—	149.7	175	310	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	122.9	125	227	125	—	—	—	—
072	208/230	60	187	253	4	—	—	—	—	331.9	400	710	350	—	—	—	—
	380	60	342	418	4	—	—	—	—	195.7	225	421	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	158.7	175	339	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	128.3	150	276	150	—	—	—	—
082	208/230	60	187	253	4	—	—	—	—	365.8	400	744	400	377.3	400	755	400
	380	60	342	418	4	—	—	—	—	201.6	225	427	225	208.2	225	433	225
	460	60	414	506	4	—	—	—	—	166.7	175	347	175	171.4	200	351	200
	575	60	518	633	4	—	—	—	—	133.1	150	281	150	136.8	150	284	150
092 C	208/230	60	187	253	4	—	—	—	—	385.7	450	856	450	397.2	450	867	450
	380	60	342	418	4	—	—	—	—	212.5	250	472	225	219.1	250	479	250
	460	60	414	506	4	—	—	—	—	175.7	200	392	200	180.4	200	396	200
	575	60	518	633	4	—	—	—	—	140.3	150	315	150	144.0	150	318	150
092	208/230	60	187	253	6	—	—	—	—	396.7	450	867	450	408.2	450	878	450
	380	60	342	418	6	—	—	—	—	218.7	250	479	250	225.3	250	485	250
	460	60	414	506	6	—	—	—	—	180.9	200	397	200	185.6	200	402	200
	575	60	518	633	6	—	—	—	—	144.5	150	319	150	148.2	175	323	175
102 C	208/230	60	187	253	4	—	—	—	—	403.4	450	873	450	414.9	450	885	450
	380	60	342	418	4	—	—	—	—	222.2	250	482	250	228.8	250	489	250
	460	60	414	506	4	—	—	—	—	183.7	200	400	200	188.4	200	404	200
	575	60	518	633	4	—	—	—	—	146.7	175	321	175	150.4	175	325	175
102	208/230	60	187	253	6	—	—	—	—	414.4	450	884	450	425.9	500	896	450
	380	60	342	418	6	—	—	—	—	228.4	250	488	250	235.0	250	495	250
	460	60	414	506	6	—	—	—	—	188.9	225	405	200	193.6	225	410	225
	575	60	518	633	6	—	—	—	—	150.9	175	325	175	154.6	175	329	175
112	208/230	60	187	253	6	—	—	—	—	470.2	500	940	500	481.7	500	952	500
	380	60	342	418	6	—	—	—	—	258.9	300	519	300	265.5	300	525	300
	460	60	414	506	6	—	—	—	—	214.2	250	430	225	218.9	250	435	250
	575	60	518	633	6	—	—	—	—	171.0	200	345	200	174.7	200	349	200
122 C	208/230	60	187	253	6	—	—	—	—	496.7	500	967	500	508.2	600	978	600
	380	60	342	418	6	—	—	—	—	273.4	300	533	300	280.0	300	540	300
	460	60	414	506	6	—	—	—	—	226.2	250	442	250	230.9	250	447	250
	575	60	518	633	6	—	—	—	—	180.6	200	355	200	184.3	200	359	200
122	208/230	60	187	253	6	—	—	—	—	496.7	500	967	500	508.2	600	978	600
	380	60	342	418	6	—	—	—	—	273.4	300	533	300	280.0	300	540	300
	460	60	414	506	6	—	—	—	—	226.2	250	442	250	230.9	250	447	250
	575	60	518	633	6	—	—	—	—	180.6	200	355	200	184.3	200	359	200
132 C	208/230	60	187	253	6	—	—	—	—	552.5	600	1022	600	564.0	600	1034	600
	380	60	342	418	6	—	—	—	—	303.9	350	564	350	310.5	350	570	350
	460	60	414	506	6	—	—	—	—	251.4	300	467	300	256.1	300	472	300
	575	60	518	633	6	—	—	—	—	200.8	225	375	225	204.5	225	379	225
132	208/230	60	187	253	8	—	—	—	—	563.5	600	1033	600	575.0	600	1045	600
	380	60	342	418	8	—	—	—	—	310.1	350	570	350	316.7	350	577	350
	460	60	414	506	8	—	—	—	—	256.6	300	472	300	261.3	300	477	300
	575	60	518	633	8	—	—	—	—	205.0	225	379	225	208.7	225	383	225
152 C	208/230	60	187	253	6	629.2	700	1274	700	635.6	700	1280	700	647.1	700	1291	700
	380	60	342	418	6	342.2	400	725	400	346.4	400	729	400	353.0	400	735	400
	460	60	414	506	6	285.8	300	593	300	289.2	350	597	350	293.9	350	602	350
	575	60	518	633	6	228.3	250	466	250	231.0	250	469	250	234.7	250	473	250
152	208/230	60	187	253	8	640.2	700	1285	700	646.6	700	1291	700	658.1	700	1302	700
	380	60	342	418	8	348.4	400	731	400	352.6	400	735	400	359.2	400	742	400
	460	60	414	506	8	291.0	350	599	350	294.4	350	602	350	299.1	350	607	350
	575	60	518	633	8	232.5	250	471	250	235.2	250	473	250	238.9	250	477	250

See Legend and Notes on page 99.

Table 20 — 30RC 067-152 (R-32) Electrical Data — Single Point Units with Greenspeed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS	NO HYDRONIC PACKAGE				5HP PUMP, 1750 RPM				7.5HP PUMP, 1750 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
067	208/230	60	187	253	4	286.9	300	567	300	303.4	350	583	350	310.6	350	590	350
	380	60	342	418	4	184.2	200	376	200	193.5	225	385	225	198.5	225	390	225
	460	60	414	506	4	145.7	150	306	150	153.6	175	314	175	157.4	175	317	175
	575	60	518	633	4	119.5	125	224	125	125.5	150	230	150	127.8	150	232	150
072	208/230	60	187	253	4	325.1	350	704	350	341.6	400	720	400	348.8	400	727	400
	380	60	342	418	4	190.8	225	416	225	200.1	225	425	225	205.1	225	430	225
	460	60	414	506	4	154.7	175	335	175	162.6	175	343	175	166.4	175	346	175
	575	60	518	633	4	124.9	150	272	150	130.9	150	278	150	133.2	150	281	150
082	208/230	60	187	253	4	359.1	400	738	400	375.5	400	754	400	382.7	450	761	400
	380	60	342	418	4	196.7	225	422	225	206.0	225	431	225	211.0	225	436	225
	460	60	414	506	4	162.7	175	343	175	170.6	200	351	200	174.4	200	354	200
	575	60	518	633	4	129.7	150	277	150	135.7	150	283	150	138.0	150	285	150
092 C	208/230	60	187	253	4	379.0	450	849	400	395.4	450	865	450	402.6	450	873	450
	380	60	342	418	4	207.6	250	468	225	216.9	250	477	250	221.9	250	482	250
	460	60	414	506	4	171.7	200	388	200	179.6	200	396	200	183.4	200	399	200
	575	60	518	633	4	136.9	150	311	150	142.9	150	317	150	145.2	150	320	150
092	208/230	60	187	253	6	400.2	450	871	450	416.6	450	887	450	423.8	500	894	450
	380	60	342	418	6	219.2	250	479	250	228.5	250	488	250	233.5	250	493	250
	460	60	414	506	6	181.3	200	397	200	189.2	225	405	200	193.0	225	409	225
	575	60	518	633	6	144.5	150	319	150	150.5	175	325	175	152.8	175	327	175
102 C	208/230	60	187	253	4	396.7	450	867	450	413.1	450	883	450	420.3	500	890	450
	380	60	342	418	4	217.3	250	478	250	226.6	250	487	250	231.6	250	492	250
	460	60	414	506	4	179.7	200	396	200	187.6	200	404	200	191.4	225	407	200
	575	60	518	633	4	143.3	150	318	150	149.3	175	324	175	151.6	175	326	175
102	208/230	60	187	253	6	417.9	450	888	450	434.3	500	904	500	441.5	500	911	500
	380	60	342	418	6	228.9	250	489	250	238.2	250	498	250	243.2	250	503	250
	460	60	414	506	6	189.3	225	405	200	197.2	225	413	225	201.0	225	417	225
	575	60	518	633	6	150.9	175	325	175	156.9	175	331	175	159.2	175	334	175
112	208/230	60	187	253	6	473.7	500	944	500	490.1	500	960	500	497.3	500	967	500
	380	60	342	418	6	259.4	300	520	300	268.7	300	529	300	273.7	300	534	300
	460	60	414	506	6	214.6	250	431	225	222.5	250	438	250	226.3	250	442	250
	575	60	518	633	6	171.0	200	346	200	177.0	200	351	200	179.3	200	354	200
122 C	208/230	60	187	253	6	500.2	600	971	600	516.6	600	987	600	523.8	600	994	600
	380	60	342	418	6	273.9	300	534	300	283.2	300	543	300	288.2	300	548	300
	460	60	414	506	6	226.6	250	443	250	234.5	250	450	250	238.3	250	454	250
	575	60	518	633	6	180.6	200	355	200	186.6	200	361	200	188.9	200	363	200
122	208/230	60	187	253	6	500.2	600	971	600	516.6	600	987	600	523.8	600	994	600
	380	60	342	418	6	273.9	300	534	300	283.2	300	543	300	288.2	300	548	300
	460	60	414	506	6	226.6	250	443	250	234.5	250	450	250	238.3	250	454	250
	575	60	518	633	6	180.6	200	355	200	186.6	200	361	200	188.9	200	363	200
132 C	208/230	60	187	253	6	556.0	600	1026	600	572.4	600	1042	600	579.6	600	1049	600
	380	60	342	418	6	304.5	350	565	350	313.7	350	574	350	318.7	350	579	350
	460	60	414	506	6	251.8	300	468	300	259.7	300	476	300	263.5	300	479	300
	575	60	518	633	6	200.7	225	375	225	206.8	225	381	225	209.1	225	383	225
132	208/230	60	187	253	8	577.2	600	1047	600	593.6	600	1063	600	600.8	700	1071	700
	380	60	342	418	8	316.1	350	576	350	325.3	350	585	350	330.3	350	590	350
	460	60	414	506	8	261.4	300	477	300	269.3	300	485	300	273.1	300	489	300
	575	60	518	633	8	208.3	225	383	225	214.4	225	389	225	216.7	225	391	225
152 C	208/230	60	187	253	6	639.0	700	1284	700	—	—	—	—	662.7	800	1307	700
	380	60	342	418	6	346.9	400	730	400	—	—	—	—	361.2	400	744	400
	460	60	414	506	6	289.6	350	597	350	—	—	—	—	301.3	350	609	350
	575	60	518	633	6	230.9	250	469	250	—	—	—	—	239.3	250	477	250
152	208/230	60	187	253	8	660.2	700	1305	700	—	—	—	—	683.9	800	1328	800
	380	60	342	418	8	358.5	400	741	400	—	—	—	—	372.8	400	755	400
	460	60	414	506	8	299.2	350	607	350	—	—	—	—	310.9	350	619	350
	575	60	518	633	8	238.5	250	477	250	—	—	—	—	246.9	250	485	250

See Legend and Notes on page 99.

Table 20 — 30RC 067-152 (R-32) Electrical Data — Single Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS	7.5HP PUMP, 3600 RPM				10HP PUMP, 3600 RPM				15HP PUMP, 3600 RPM			
	V(3 Ph)	Hz	Supplied			MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size	MCA	MOCP	ICF	REC Fuse Size
			Min	Max													
067	208/230	60	187	253	4	—	—	—	—	314.1	350	593	350	—	—	—	—
	380	60	342	418	4	—	—	—	—	199.9	225	392	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	158.5	175	318	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	129.7	150	234	150	—	—	—	—
072	208/230	60	187	253	4	—	—	—	—	352.3	400	730	400	—	—	—	—
	380	60	342	418	4	—	—	—	—	206.5	225	432	225	—	—	—	—
	460	60	414	506	4	—	—	—	—	167.5	175	347	175	—	—	—	—
	575	60	518	633	4	—	—	—	—	135.1	150	283	150	—	—	—	—
082	208/230	60	187	253	4	—	—	—	—	386.2	450	764	450	397.7	450	776	450
	380	60	342	418	4	—	—	—	—	212.4	250	437	225	219.0	250	444	250
	460	60	414	506	4	—	—	—	—	175.5	200	355	200	180.2	200	360	200
	575	60	518	633	4	—	—	—	—	139.9	150	287	150	143.6	150	291	150
092 C	208/230	60	187	253	4	—	—	—	—	406.1	450	876	450	417.6	450	888	450
	380	60	342	418	4	—	—	—	—	223.3	250	483	250	229.9	250	490	250
	460	60	414	506	4	—	—	—	—	184.5	200	400	200	189.2	225	405	200
	575	60	518	633	4	—	—	—	—	147.1	175	322	175	150.8	175	325	175
092	208/230	60	187	253	6	—	—	—	—	427.3	500	897	450	438.8	500	909	500
	380	60	342	418	6	—	—	—	—	234.9	250	495	250	241.5	250	501	250
	460	60	414	506	6	—	—	—	—	194.1	225	410	225	198.8	225	415	225
	575	60	518	633	6	—	—	—	—	154.7	175	329	175	158.4	175	333	175
102 C	208/230	60	187	253	4	—	—	—	—	423.8	500	894	450	435.3	500	905	500
	380	60	342	418	4	—	—	—	—	233.0	250	493	250	239.6	250	500	250
	460	60	414	506	4	—	—	—	—	192.5	225	408	225	197.2	225	413	225
	575	60	518	633	4	—	—	—	—	153.5	175	328	175	157.2	175	332	175
102	208/230	60	187	253	6	—	—	—	—	445.0	500	915	500	456.5	500	926	500
	380	60	342	418	6	—	—	—	—	244.6	250	505	250	251.2	300	511	300
	460	60	414	506	6	—	—	—	—	202.1	225	418	225	206.8	225	423	225
	575	60	518	633	6	—	—	—	—	161.1	175	336	175	164.8	175	339	175
112	208/230	60	187	253	6	—	—	—	—	500.8	600	971	600	512.3	600	982	600
	380	60	342	418	6	—	—	—	—	275.1	300	535	300	281.7	300	542	300
	460	60	414	506	6	—	—	—	—	227.4	250	443	250	232.1	250	448	250
	575	60	518	633	6	—	—	—	—	181.2	200	356	200	184.9	200	359	200
122 C	208/230	60	187	253	6	—	—	—	—	527.3	600	997	600	538.8	600	1009	500
	380	60	342	418	6	—	—	—	—	289.6	300	550	300	296.2	300	556	300
	460	60	414	506	6	—	—	—	—	239.4	250	455	250	244.1	250	460	225
	575	60	518	633	6	—	—	—	—	190.8	200	365	200	194.5	200	369	175
122	208/230	60	187	253	6	—	—	—	—	527.3	600	997	600	538.8	600	1009	500
	380	60	342	418	6	—	—	—	—	289.6	300	550	300	296.2	300	556	300
	460	60	414	506	6	—	—	—	—	239.4	250	455	250	244.1	250	460	225
	575	60	518	633	6	—	—	—	—	190.8	200	365	200	194.5	200	369	175
132 C	208/230	60	187	253	6	—	—	—	—	583.1	600	1053	600	594.6	600	1064	600
	380	60	342	418	6	—	—	—	—	320.1	350	580	350	326.7	350	587	300
	460	60	414	506	6	—	—	—	—	264.6	300	480	300	269.3	300	485	250
	575	60	518	633	6	—	—	—	—	211.0	225	385	225	214.7	225	389	200
132	208/230	60	187	253	8	—	—	—	—	604.3	700	1074	700	615.8	700	1086	600
	380	60	342	418	8	—	—	—	—	331.7	350	592	350	338.3	350	598	350
	460	60	414	506	8	—	—	—	—	274.2	300	490	300	278.9	300	495	300
	575	60	518	633	8	—	—	—	—	218.6	225	393	225	222.3	250	397	200
152 C	208/230	60	187	253	6	659.8	700	1304	700	666.2	800	1311	700	677.7	800	1322	800
	380	60	342	418	6	358.4	400	741	400	362.6	400	745	400	369.2	400	752	400
	460	60	414	506	6	299.0	350	607	350	302.4	350	610	350	307.1	350	615	350
	575	60	518	633	6	238.5	250	477	250	241.2	250	479	250	244.9	250	483	250
152	208/230	60	187	253	8	681.0	800	1325	800	687.4	800	1332	800	698.9	800	1343	800
	380	60	342	418	8	370.0	400	752	400	374.2	400	757	400	380.8	450	763	400
	460	60	414	506	8	308.6	350	616	350	312.0	350	620	350	316.7	350	624	350
	575	60	518	633	8	246.1	250	484	250	248.8	250	487	250	252.5	300	491	300

See Legend and Notes on page 99.

Table 21 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Fixed Speed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
067	208/230	60	187	253	2	2	137.0	141.5	175	175	418	422	175	175	151.2	143.8	200	175	432	423	175	175	158.4	143.8	200	175	439	423	175	175
	380	60	342	418	2	2	89.5	92.2	125	125	282	284	100	110	97.5	93.5	125	125	290	285	110	110	102.5	93.5	125	125	295	285	125	110
	460	60	414	506	2	2	70.5	72.7	90	100	231	233	80	80	77.4	73.7	100	100	238	234	90	90	81.2	73.7	110	100	242	234	90	90
	575	60	518	633	2	2	58.2	60.0	80	80	163	165	70	70	63.5	60.7	80	80	169	165	70	70	65.8	60.7	80	80	171	165	80	70
072	208/230	60	187	253	2	2	137.0	179.7	175	250	418	559	175	200	151.2	182.0	200	250	432	560	175	200	158.4	182.0	200	250	439	560	175	200
	380	60	342	418	2	2	89.5	98.8	125	125	282	324	100	110	97.5	100.1	125	125	290	325	110	110	102.5	100.1	125	125	295	325	125	110
	460	60	414	506	2	2	70.5	81.7	90	110	231	262	80	90	77.4	82.7	100	110	238	263	90	100	81.2	82.7	110	110	242	263	90	100
	575	60	518	633	2	2	58.2	65.4	80	90	163	213	70	80	63.5	66.1	80	90	169	214	70	80	65.8	66.1	80	90	171	214	80	80
082	208/230	60	187	253	2	2	175.2	179.7	225	250	555	559	200	200	189.4	182.0	250	250	569	560	225	200	196.6	182.0	250	250	576	560	225	200
	380	60	342	418	2	2	96.1	98.8	125	125	322	324	110	110	104.1	100.1	125	125	330	325	125	110	109.1	100.1	125	125	335	325	125	110
	460	60	414	506	2	2	79.5	81.7	110	110	260	262	90	90	86.4	82.7	110	110	267	263	100	100	90.2	82.7	110	110	271	263	100	100
	575	60	518	633	2	2	63.6	65.4	90	90	212	213	80	80	68.9	66.1	90	90	217	214	80	80	71.2	66.1	90	90	219	214	80	80
092 C	208/230	60	187	253	2	2	175.2	199.6	225	250	555	670	200	225	189.4	201.9	250	250	569	672	225	225	196.6	201.9	250	250	576	672	225	225
	380	60	342	418	2	2	96.1	109.7	125	150	322	370	110	125	104.1	111.0	125	150	330	371	125	125	109.1	111.0	125	150	335	371	125	125
	460	60	414	506	2	2	79.5	90.7	110	125	260	307	90	100	86.4	91.7	110	125	267	308	100	110	90.2	91.7	110	125	271	308	100	110
	575	60	518	633	2	2	63.6	72.6	90	100	212	247	80	80	68.9	73.3	90	100	217	248	80	90	71.2	73.3	90	100	219	248	80	90
092	208/230	60	187	253	3	3	180.7	205.1	250	250	560	676	200	225	194.9	207.4	250	250	575	678	225	250	202.1	207.4	250	250	582	678	225	250
	380	60	342	418	3	3	99.2	112.8	125	150	325	373	110	125	107.2	114.1	125	150	333	374	125	125	112.2	114.1	150	150	338	374	125	125
	460	60	414	506	3	3	82.1	93.3	110	125	263	310	100	110	89.0	94.3	110	125	270	310	100	110	92.8	94.3	125	125	274	310	110	110
	575	60	518	633	3	3	65.7	74.7	90	100	214	249	80	90	71.0	75.4	90	100	219	250	80	90	73.3	75.4	90	100	221	250	80	90
102 C	208/230	60	187	253	2	2	195.1	199.6	250	250	667	670	225	225	209.3	201.9	250	250	681	672	250	225	216.5	201.9	250	250	688	672	250	225
	380	60	342	418	2	2	107.0	109.7	150	150	368	370	125	125	115.0	111.0	150	150	376	371	150	125	120.0	111.0	150	150	381	371	150	125
	460	60	414	506	2	2	88.5	90.7	125	125	305	307	100	100	95.4	91.7	125	125	312	308	110	110	99.2	91.7	125	125	316	308	110	110
	575	60	518	633	2	2	70.8	72.6	100	100	246	247	80	80	76.1	73.3	100	100	251	248	90	90	78.4	73.3	100	100	253	248	90	90
102	208/230	60	187	253	3	3	200.6	205.1	250	250	672	676	225	225	214.8	207.4	250	250	687	678	250	250	222.0	207.4	300	250	694	678	250	250
	380	60	342	418	3	3	110.1	112.8	150	150	371	373	125	125	118.1	114.1	150	150	379	374	150	125	123.1	114.1	150	150	384	374	150	125
	460	60	414	506	3	3	91.1	93.3	125	125	308	310	110	110	98.0	94.3	125	125	315	310	110	110	101.8	94.3	125	125	319	310	125	110
	575	60	518	633	3	3	72.9	74.7	100	100	248	249	90	90	78.2	75.4	100	100	253	250	90	90	80.5	75.4	110	100	256	250	90	90
112	208/230	60	187	253	3	3	253.7	205.1	300	250	633	676	300	225	267.9	207.4	300	250	648	678	300	250	275.1	207.4	300	250	655	678	300	250
	380	60	342	418	3	3	139.1	112.8	175	150	365	373	150	125	147.1	114.1	175	150	373	374	175	125	152.1	114.1	175	150	378	374	175	125
	460	60	414	506	3	3	115.1	93.3	125	125	296	310	125	110	122.0	94.3	150	125	303	310	150	110	125.8	94.3	150	125	307	310	150	110
	575	60	518	633	3	3	92.1	74.7	110	100	240	249	100	90	97.4	75.4	110	100	245	250	110	90	99.7	75.4	125	100	248	250	110	90
122 C	208/230	60	187	253	2	4	195.1	292.4	250	350	667	763	225	350	209.3	294.7	250	350	681	765	250	350	216.5	294.7	250	350	688	765	250	350
	380	60	342	418	2	4	107.0	160.7	150	200	368	421	125	175	115.0	162.0	150	200	376	422	150	175	120.0	162.0	150	200	381	422	150	175
	460	60	414	506	2	4	88.5	132.9	125	150	305	349	100	150	95.4	133.9	125	150	312	350	110	150	99.2	133.9	125	150	316	350	110	150
	575	60	518	633	2	4	70.8	106.4	100	125	246	281	80	125	76.1	107.1	100	125	251	282	90	125	78.4	107.1	100	125	253	282	90	125
122	208/230	60	187	253	2	4	195.1	292.4	250	350	667	763	225	350	209.3	294.7	250	350	681	765	250	350	216.5	294.7	250	350	688	765	250	350
	380	60	342	418	2	4	107.0	160.7	150	200	368	421	125	175	115.0	162.0	150	200	376	422	150	175	120.0	162.0	150	200	381	422	150	175
	460	60	414	506	2	4	88.5	132.9	125	150	305	349	100	150	95.4	133.9	125	150	312	350	110	150	99.2	133.9	125	150	316	350	110	150
	575	60	518	633	2	4	70.8	106.4	100	125	246	281	80	125	76.1	107.1	100	125	251	282	90	125	78.4	107.1	100	125	253	282	90	125
132 C	208/230	60	187	253	3	3	253.7	286.9	300	350	633	758	300	350	267.9	289.2	300	350	648	760	300	350	275.1	289.2	300	350	655	760	300	350
	380	60	342	418	3	3	139.1	157.6	175	200	365	418	150	175	147.1	158.9	175	200	373	419	175	175	152.1	158.9	175	200	378	419	175	175
	460	60	414	506	3	3	115.1	130.3	125	150	296	347	125	150	122.0	131.3	150	150	303	347	150	150	125.8	131.3	150	150	307	347	150	150
	575	60	518	633	3	3	92.1	104.3	110	125	240	279	100	125	97.4	105.0	110	125	245	280	110	125	99.7	105.0	125	125	248	280	110	125

See Legend and Notes on page 99.

Table 21 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
132	208/230	60	187	253	4	4	259.2	292.4	300	350	639	763	300	350	273.4	294.7	300	350	653	765	300	350	280.6	294.7	350	350	660	765	300	350
	380	60	342	418	4	4	142.2	160.7	175	200	368	421	175	175	150.2	162.0	175	200	376	422	175	175	155.2	162.0	175	200	381	422	175	175
	460	60	414	506	4	4	117.7	132.9	150	150	298	349	150	150	124.6	133.9	150	150	305	350	150	150	128.4	133.9	150	150	309	350	150	150
	575	60	518	633	4	4	94.2	106.4	110	125	242	281	110	125	99.5	107.1	125	125	248	282	110	125	101.8	107.1	125	125	250	282	110	125
152 C	208/230	60	187	253	3	3	282.4	344.0	350	450	754	989	350	400	—	—	—	—	—	—	—	—	303.8	346.2	350	450	776	991	350	400
	380	60	342	418	3	3	154.9	185.8	175	250	416	569	175	225	—	—	—	—	—	—	—	—	167.9	187.1	200	250	429	570	200	225
	460	60	414	506	3	3	128.1	156.3	150	200	345	464	150	175	—	—	—	—	—	—	—	—	138.8	157.3	175	200	356	465	150	175
	575	60	518	633	3	3	102.5	125.0	125	175	278	363	110	150	—	—	—	—	—	—	—	—	110.1	125.8	125	175	285	364	125	150
152	208/230	60	187	253	4	4	287.9	349.5	350	450	760	995	350	400	—	—	—	—	—	—	—	—	309.3	351.7	350	450	781	997	350	400
	380	60	342	418	4	4	158.0	188.9	200	250	419	572	175	225	—	—	—	—	—	—	—	—	171.0	190.2	200	250	432	573	200	225
	460	60	414	506	4	4	130.7	158.9	150	200	347	467	150	175	—	—	—	—	—	—	—	—	141.4	159.9	175	200	358	468	175	175
	575	60	518	633	4	4	104.6	127.1	125	175	280	365	125	150	—	—	—	—	—	—	—	—	112.2	127.9	125	175	287	366	125	150

See Legend and Notes on page 99.

Table 21 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
067	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	161.9	143.8	200	175	443	423	200	175	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	103.9	93.5	125	125	297	285	125	110	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	82.3	73.7	110	100	243	234	90	90	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	67.7	60.7	90	80	173	165	80	70	—	—	—	—	—	—	—	—
072	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	161.9	182.0	200	250	443	560	200	200	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	103.9	100.1	125	125	297	325	125	110	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	82.3	82.7	110	110	243	263	90	100	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	67.7	66.1	90	90	173	214	80	80	—	—	—	—	—	—	—	—
082	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	200.1	182.0	250	250	580	560	225	200	211.6	182.0	250	250	591	560	250	200
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	110.5	100.1	150	125	337	325	125	110	117.1	100.1	150	125	343	325	150	110
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	91.3	82.7	110	110	272	263	100	100	96.0	82.7	125	110	277	263	110	100
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	73.1	66.1	90	90	221	214	80	80	76.8	66.1	100	90	225	214	90	80
092 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	200.1	201.9	250	250	580	672	225	225	211.6	201.9	250	250	591	672	250	225
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	110.5	111.0	150	150	337	371	125	125	117.1	111.0	150	150	343	371	150	125
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	91.3	91.7	110	125	272	308	100	110	96.0	91.7	125	125	277	308	110	110
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	73.1	73.3	90	100	221	248	80	90	76.8	73.3	100	100	225	248	90	90
092	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	205.6	207.4	250	250	585	678	225	250	217.1	207.4	250	250	597	678	250	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	113.6	114.1	150	150	340	374	125	125	120.2	114.1	150	150	346	374	150	125
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	93.9	94.3	125	125	275	310	110	110	98.6	94.3	125	125	279	310	110	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	75.2	75.4	100	100	223	250	90	90	78.9	75.4	100	100	227	250	90	90
102 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	220.0	201.9	300	250	692	672	250	225	231.5	201.9	300	250	703	672	300	225
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	121.4	111.0	150	150	382	371	150	125	128.0	111.0	150	150	389	371	150	125
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	100.3	91.7	125	125	317	308	110	110	105.0	91.7	125	125	322	308	125	110
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	80.3	73.3	100	100	255	248	90	90	84.0	73.3	110	100	259	248	100	90
102	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	225.5	207.4	300	250	697	678	250	250	237.0	207.4	300	250	709	678	300	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	124.5	114.1	150	150	385	374	150	125	131.1	114.1	175	150	392	374	150	125
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	102.9	94.3	125	125	320	310	125	110	107.6	94.3	125	125	324	310	125	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	82.4	75.4	110	100	257	250	90	90	86.1	75.4	110	100	261	250	100	90
112	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	278.6	207.4	350	250	658	678	300	250	290.1	207.4	350	250	670	678	350	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	153.5	114.1	175	150	380	374	175	125	160.1	114.1	200	150	386	374	175	125
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	126.9	94.3	150	125	308	310	150	110	131.6	94.3	150	125	312	310	150	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	101.6	75.4	125	100	250	250	110	90	105.3	75.4	125	100	253	250	125	90
122 C	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	220.0	294.7	300	350	692	765	250	350	231.5	294.7	300	350	703	765	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	121.4	162.0	150	200	382	422	150	175	128.0	162.0	150	200	389	422	150	175
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	100.3	133.9	125	150	317	350	110	150	105.0	133.9	125	150	322	350	125	150
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	80.3	107.1	100	125	255	282	90	125	84.0	107.1	110	125	259	282	100	125
122	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	220.0	294.7	300	350	692	765	250	350	231.5	294.7	300	350	703	765	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	121.4	162.0	150	200	382	422	150	175	128.0	162.0	150	200	389	422	150	175
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	100.3	133.9	125	150	317	350	110	150	105.0	133.9	125	150	322	350	125	150
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	80.3	107.1	100	125	255	282	90	125	84.0	107.1	110	125	259	282	100	125
132 C	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	278.6	289.2	350	350	658	760	300	350	290.1	289.2	350	350	670	760	350	350
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	153.5	158.9	175	200	380	419	175	175	160.1	158.9	200	200	386	419	175	175
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	126.9	131.3	150	150	308	347	150	150	131.6	131.3	150	150	312	347	150	150
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	101.6	105.0	125	125	250	280	110	125	105.3	105.0	125	125	253	280	125	125

See Legend and Notes on page 99.

Table 21 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Fixed Speed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
132	208/230	60	187	253	4	4	—	—	—	—	—	—	—	—	284.1	294.7	350	350	664	765	350	350	295.6	294.7	350	350	675	765	350	350
	380	60	342	418	4	4	—	—	—	—	—	—	—	—	156.6	162.0	175	200	383	422	175	175	163.2	162.0	200	200	389	422	175	175
	460	60	414	506	4	4	—	—	—	—	—	—	—	—	129.5	133.9	150	150	310	350	150	150	134.2	133.9	150	150	315	350	150	150
	575	60	518	633	4	4	—	—	—	—	—	—	—	—	103.7	107.1	125	125	252	282	125	125	107.4	107.1	125	125	255	282	125	125
152 C	208/230	60	187	253	3	3	300.9	346.2	350	450	773	991	350	400	307.3	346.2	350	450	779	991	350	400	318.8	346.2	400	450	791	991	350	400
	380	60	342	418	3	3	165.1	187.1	200	250	426	570	200	225	169.3	187.1	200	250	430	570	200	225	175.9	187.1	200	250	437	570	200	225
	460	60	414	506	3	3	136.5	157.3	150	200	353	465	150	175	139.9	157.3	175	200	357	465	150	175	144.6	157.3	175	200	361	465	175	175
	575	60	518	633	3	3	109.3	125.8	125	175	284	364	125	150	112.0	125.8	125	175	287	364	125	150	115.7	125.8	125	175	291	364	125	150
152	208/230	60	187	253	4	4	306.4	351.7	350	450	778	997	350	400	312.8	351.7	350	450	785	997	350	400	324.3	351.7	400	450	796	997	350	400
	380	60	342	418	4	4	168.2	190.2	200	250	429	573	200	225	172.4	190.2	200	250	433	573	200	225	179.0	190.2	200	250	440	573	200	225
	460	60	414	506	4	4	139.1	159.9	175	200	356	468	150	175	142.5	159.9	175	200	359	468	175	175	147.2	159.9	175	200	364	468	175	175
	575	60	518	633	4	4	111.4	127.9	125	175	286	366	125	150	114.1	127.9	125	175	289	366	125	150	117.8	127.9	125	175	293	366	125	150

See Legend and Notes on page 99.

Table 22 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Greenspeed Fans

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
067	208/230	60	187	253	2	2	147.2	151.7	200	200	428	432	175	175	161.4	154.0	200	200	442	434	200	175	168.6	154.0	200	200	450	434	200	175
	380	60	342	418	2	2	94.9	97.6	125	125	288	290	110	110	102.9	98.9	125	125	296	291	125	110	107.9	98.9	125	125	301	291	125	110
	460	60	414	506	2	2	74.9	77.1	100	100	236	237	90	90	81.8	78.1	110	100	243	238	90	90	85.6	78.1	110	100	246	238	100	90
	575	60	518	633	2	2	61.6	63.4	80	80	167	168	70	70	66.9	64.1	90	80	172	169	80	70	69.2	64.1	90	80	174	169	80	70
072	208/230	60	187	253	2	2	147.2	189.9	200	250	428	569	175	225	161.4	192.2	200	250	442	571	200	225	168.6	192.2	200	250	450	571	200	225
	380	60	342	418	2	2	94.9	104.2	125	125	288	330	110	125	102.9	105.5	125	125	296	331	125	125	107.9	105.5	125	125	301	331	125	125
	460	60	414	506	2	2	74.9	86.1	100	110	236	266	90	100	81.8	87.1	110	110	243	267	90	100	85.6	87.1	110	110	246	267	100	100
	575	60	518	633	2	2	61.6	68.8	80	90	167	216	70	80	66.9	69.5	90	90	172	217	80	80	69.2	69.5	90	90	174	217	80	80
082	208/230	60	187	253	2	2	185.4	189.9	250	250	565	569	225	225	199.6	192.2	250	250	579	571	225	225	206.8	192.2	250	250	587	571	250	225
	380	60	342	418	2	2	101.5	104.2	125	125	328	330	125	125	109.5	105.5	125	125	336	331	125	125	114.5	105.5	150	125	341	331	125	125
	460	60	414	506	2	2	83.9	86.1	110	110	265	266	100	100	90.8	87.1	110	110	272	267	100	100	94.6	87.1	125	110	275	267	110	100
	575	60	518	633	2	2	67.0	68.8	90	90	215	216	80	80	72.3	69.5	90	90	220	217	80	80	74.6	69.5	100	90	223	217	90	80
092 C	208/230	60	187	253	2	2	185.4	209.8	250	250	565	681	225	250	199.6	212.1	250	250	579	682	225	250	206.8	212.1	250	250	587	682	250	250
	380	60	342	418	2	2	101.5	115.1	125	150	328	376	125	150	109.5	116.4	125	150	336	377	125	150	114.5	116.4	150	150	341	377	125	150
	460	60	414	506	2	2	83.9	95.1	110	125	265	311	100	110	90.8	96.1	110	125	272	312	100	110	94.6	96.1	125	125	275	312	110	110
	575	60	518	633	2	2	67.0	76.0	90	100	215	251	80	90	72.3	76.7	90	100	220	251	80	90	74.6	76.7	100	100	223	251	90	90
092	208/230	60	187	253	3	3	196.0	220.4	250	300	576	691	225	250	210.2	222.7	250	300	590	693	250	250	217.4	222.7	250	300	597	693	250	250
	380	60	342	418	3	3	107.3	120.9	125	150	333	381	125	150	115.3	122.2	150	150	341	382	150	150	120.3	122.2	150	150	346	382	150	150
	460	60	414	506	3	3	88.7	99.9	110	125	269	316	100	110	95.6	100.9	125	125	276	317	110	110	99.4	100.9	125	125	280	317	110	110
	575	60	518	633	3	3	70.8	79.8	90	100	219	254	80	90	76.1	80.5	100	100	224	255	90	90	78.4	80.5	100	100	226	255	90	90
102 C	208/230	60	187	253	2	2	205.3	209.8	250	250	677	681	250	250	219.5	212.1	300	250	691	682	250	250	226.7	212.1	300	250	698	682	250	250
	380	60	342	418	2	2	112.4	115.1	150	150	373	376	125	150	120.4	116.4	150	150	381	377	150	150	125.4	116.4	150	150	386	377	150	150
	460	60	414	506	2	2	92.9	95.1	125	125	310	311	110	110	99.8	96.1	125	125	317	312	110	110	103.6	96.1	125	125	320	312	125	110
	575	60	518	633	2	2	74.2	76.0	100	100	249	251	90	90	79.5	76.7	100	100	255	251	90	90	81.8	76.7	110	100	257	251	90	90
102	208/230	60	187	253	3	3	215.9	220.4	250	300	688	691	250	250	230.1	222.7	300	300	702	693	300	250	237.3	222.7	300	300	709	693	300	250
	380	60	342	418	3	3	118.2	120.9	150	150	379	381	150	150	126.2	122.2	150	150	387	382	150	150	131.2	122.2	175	150	392	382	150	150
	460	60	414	506	3	3	97.7	99.9	125	125	314	316	110	110	104.6	100.9	125	125	321	317	125	110	108.4	100.9	125	125	325	317	125	110
	575	60	518	633	3	3	78.0	79.8	100	100	253	254	90	90	83.3	80.5	110	100	258	255	100	90	85.6	80.5	110	100	261	255	100	90
112	208/230	60	187	253	3	3	269.0	220.4	300	300	649	691	300	250	283.2	222.7	350	300	663	693	350	250	290.4	222.7	350	300	670	693	350	250
	380	60	342	418	3	3	147.2	120.9	175	150	373	381	175	150	155.2	122.2	175	150	381	382	175	150	160.2	122.2	200	150	386	382	175	150
	460	60	414	506	3	3	121.7	99.9	150	125	302	316	150	110	128.6	100.9	150	125	309	317	150	110	132.4	100.9	150	125	313	317	150	110
	575	60	518	633	3	3	97.2	79.8	110	100	245	254	110	90	102.5	80.5	125	100	251	255	110	90	104.8	80.5	125	100	253	255	125	90
122 C	208/230	60	187	253	2	4	205.3	312.8	250	350	677	784	250	350	219.5	315.1	300	350	691	785	250	350	226.7	315.1	300	350	698	785	250	350
	380	60	342	418	2	4	112.4	171.5	150	200	373	432	125	200	120.4	172.8	150	200	381	433	150	200	125.4	172.8	150	200	386	433	150	200
	460	60	414	506	2	4	92.9	141.7	125	175	310	358	110	175	99.8	142.7	125	175	317	359	110	175	103.6	142.7	125	175	320	359	125	175
	575	60	518	633	2	4	74.2	113.2	100	125	249	288	90	125	79.5	113.9	100	125	255	288	90	125	81.8	113.9	110	125	257	288	90	125
122	208/230	60	187	253	2	4	205.3	312.8	250	350	677	784	250	350	219.5	315.1	300	350	691	785	250	350	226.7	315.1	300	350	698	785	250	350
	380	60	342	418	2	4	112.4	171.5	150	200	373	432	125	200	120.4	172.8	150	200	381	433	150	200	125.4	172.8	150	200	386	433	150	200
	460	60	414	506	2	4	92.9	141.7	125	175	310	358	110	175	99.8	142.7	125	175	317	359	110	175	103.6	142.7	125	175	320	359	125	175
	575	60	518	633	2	4	74.2	113.2	100	125	249	288	90	125	79.5	113.9	100	125	255	288	90	125	81.8	113.9	110	125	257	288	90	125
132 C	208/230	60	187	253	3	3	269.0	302.2	300	350	649	773	300	350	283.2	304.5	350	350	663	775	350	350	290.4	304.5	350	350	670	775	350	350
	380	60	342	418	3	3	147.2	165.7	175	200	373	426	175	200	155.2	167.0	175	200	381	427	175	200	160.2	167.0	200	200	386	427	175	200
	460	60	414	506	3	3	121.7	136.9	150	150	302	353	150	150	128.6	137.9	150	150	309	354	150	150	132.4	137.9	150	150	313	354	150	150
	575	60	518	633	3	3	97.2	109.4	110	125	245	284	110	125	102.5	110.1	125	125	251	285	110	125	104.8	110.1	125	125	253	285	125	125

See Legend and Notes on page 99.

Table 22 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		NO HYDRONIC PACKAGE								5HP PUMP, 1750 RPM								7.5HP PUMP, 1750 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
132	208/230	60	187	253	4	4	279.6	312.8	350	350	659	784	300	350	293.8	315.1	350	350	674	785	350	350	301.0	315.1	350	350	681	785	350	350
	380	60	342	418	4	4	153.0	171.5	175	200	379	432	175	200	161.0	172.8	200	200	387	433	175	200	166.0	172.8	200	200	392	433	200	200
	460	60	414	506	4	4	126.5	141.7	150	175	307	358	150	175	133.4	142.7	150	175	314	359	150	175	137.2	142.7	150	175	318	359	150	175
	575	60	518	633	4	4	101.0	113.2	125	125	249	288	110	125	106.3	113.9	125	125	254	288	125	125	108.6	113.9	125	125	257	288	125	125
152 C	208/230	60	187	253	3	3	297.7	359.3	350	450	769	1005	350	400	—	—	—	—	—	—	—	—	319.1	361.5	400	500	791	1006	350	400
	380	60	342	418	3	3	163.0	193.9	200	250	424	577	175	225	—	—	—	—	—	—	—	—	176.0	195.2	200	250	437	578	200	225
	460	60	414	506	3	3	134.7	162.9	150	225	351	471	150	200	—	—	—	—	—	—	—	—	145.4	163.9	175	225	362	472	175	200
	575	60	518	633	3	3	107.6	130.1	125	175	283	368	125	150	—	—	—	—	—	—	—	—	115.2	130.9	125	175	290	369	125	150
152	208/230	60	187	253	4	4	308.3	369.9	350	500	780	1015	350	450	—	—	—	—	—	—	—	—	329.7	372.1	400	500	801	1017	400	450
	380	60	342	418	4	4	168.8	199.7	200	250	430	583	200	225	—	—	—	—	—	—	—	—	181.8	201.0	225	250	443	584	200	225
	460	60	414	506	4	4	139.5	167.7	175	225	356	476	150	200	—	—	—	—	—	—	—	—	150.2	168.7	175	225	367	477	175	200
	575	60	518	633	4	4	111.4	133.9	125	175	286	372	125	150	—	—	—	—	—	—	—	—	119.0	134.7	125	175	294	373	125	150

See Legend and Notes on page 99.

Table 22 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
067	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	172.1	154.0	225	200	453	434	200	175	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	109.3	98.9	125	125	302	291	125	110	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	86.7	78.1	110	100	247	238	100	90	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	71.1	64.1	90	80	176	169	80	70	—	—	—	—	—	—	—	—
072	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	172.1	192.2	225	250	453	571	200	225	—	—	—	—	—	—	—	—
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	109.3	105.5	125	125	302	331	125	125	—	—	—	—	—	—	—	—
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	86.7	87.1	110	110	247	267	100	100	—	—	—	—	—	—	—	—
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	71.1	69.5	90	90	176	217	80	80	—	—	—	—	—	—	—	—
082	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	210.3	192.2	250	250	590	571	250	225	221.8	192.2	250	250	602	571	250	225
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	115.9	105.5	150	125	342	331	150	125	122.5	105.5	150	125	349	331	150	125
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	95.7	87.1	125	110	276	267	110	100	100.4	87.1	125	110	281	267	110	100
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	76.5	69.5	100	90	225	217	90	80	80.2	69.5	100	90	228	217	90	80
092 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	210.3	212.1	250	250	590	682	250	250	221.8	212.1	250	250	602	682	250	250
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	115.9	116.4	150	150	342	377	150	150	122.5	116.4	150	150	349	377	150	150
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	95.7	96.1	125	125	276	312	110	110	100.4	96.1	125	125	281	312	110	110
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	76.5	76.7	100	100	225	251	90	90	80.2	76.7	100	100	228	251	90	90
092	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	220.9	222.7	250	300	601	693	250	250	232.4	222.7	300	300	612	693	300	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	121.7	122.2	150	150	348	382	150	150	128.3	122.2	150	150	354	382	150	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	100.5	100.9	125	125	281	317	110	110	105.2	100.9	125	125	286	317	125	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	80.3	80.5	100	100	228	255	90	90	84.0	80.5	110	100	232	255	100	90
102 C	208/230	60	187	253	2	2	—	—	—	—	—	—	—	—	230.2	212.1	300	250	702	682	300	250	241.7	212.1	300	250	713	682	300	250
	380	60	342	418	2	2	—	—	—	—	—	—	—	—	126.8	116.4	150	150	388	377	150	150	133.4	116.4	175	150	394	377	150	150
	460	60	414	506	2	2	—	—	—	—	—	—	—	—	104.7	96.1	125	125	321	312	125	110	109.4	96.1	125	125	326	312	125	110
	575	60	518	633	2	2	—	—	—	—	—	—	—	—	83.7	76.7	110	100	259	251	100	90	87.4	76.7	110	100	262	251	100	90
102	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	240.8	222.7	300	300	713	693	300	250	252.3	222.7	300	300	724	693	300	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	132.6	122.2	175	150	394	382	150	150	139.2	122.2	175	150	400	382	175	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	109.5	100.9	125	125	326	317	125	110	114.2	100.9	150	125	331	317	125	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	87.5	80.5	110	100	263	255	100	90	91.2	80.5	110	100	266	255	100	90
112	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	293.9	222.7	350	300	674	693	350	250	305.4	222.7	350	300	685	693	350	250
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	161.6	122.2	200	150	388	382	175	150	168.2	122.2	200	150	394	382	200	150
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	133.5	100.9	150	125	314	317	150	110	138.2	100.9	150	125	319	317	150	110
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	106.7	80.5	125	100	255	255	125	90	110.4	80.5	125	100	258	255	125	90
122 C	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	230.2	315.1	300	350	702	785	300	350	241.7	315.1	300	350	713	785	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	126.8	172.8	150	200	388	433	150	200	133.4	172.8	175	200	394	433	150	200
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	104.7	142.7	125	175	321	359	125	175	109.4	142.7	125	175	326	359	125	175
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	83.7	113.9	110	125	259	288	100	125	87.4	113.9	110	125	262	288	100	125
122	208/230	60	187	253	2	4	—	—	—	—	—	—	—	—	230.2	315.1	300	350	702	785	300	350	241.7	315.1	300	350	713	785	300	350
	380	60	342	418	2	4	—	—	—	—	—	—	—	—	126.8	172.8	150	200	388	433	150	200	133.4	172.8	175	200	394	433	150	200
	460	60	414	506	2	4	—	—	—	—	—	—	—	—	104.7	142.7	125	175	321	359	125	175	109.4	142.7	125	175	326	359	125	175
	575	60	518	633	2	4	—	—	—	—	—	—	—	—	83.7	113.9	110	125	259	288	100	125	87.4	113.9	110	125	262	288	100	125
132 C	208/230	60	187	253	3	3	—	—	—	—	—	—	—	—	293.9	304.5	350	350	674	775	350	350	305.4	304.5	350	350	685	775	350	350
	380	60	342	418	3	3	—	—	—	—	—	—	—	—	161.6	167.0	200	200	388	427	175	200	168.2	167.0	200	200	394	427	200	200
	460	60	414	506	3	3	—	—	—	—	—	—	—	—	133.5	137.9	150	150	314	354	150	150	138.2	137.9	150	150	319	354	150	150
	575	60	518	633	3	3	—	—	—	—	—	—	—	—	106.7	110.1	125	125	255	285	125	125	110.4	110.1	125	125	258	285	125	125

See Legend and Notes on page 99.

Table 22 — 30RC 067-152 (R-32) Electrical Data — Dual Point Units with Greenspeed Fans (cont)

UNIT 30RC	UNIT VOLTAGE				NO. COND FANS		7.5HP PUMP, 3600 RPM								10HP PUMP, 3600 RPM								15HP PUMP, 3600 RPM							
	V(3 Ph)	Hz	Supplied				MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size		MCA		MOCP		ICF		REC Fuse Size	
			Min	Max	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
132	208/230	60	187	253	4	4	—	—	—	—	—	—	—	—	304.5	315.1	350	350	684	785	350	350	316.0	315.1	350	350	696	785	350	350
	380	60	342	418	4	4	—	—	—	—	—	—	—	—	167.4	172.8	200	200	393	433	200	200	174.0	172.8	200	200	400	433	200	200
	460	60	414	506	4	4	—	—	—	—	—	—	—	—	138.3	142.7	150	175	319	359	150	175	143.0	142.7	175	175	324	359	175	175
	575	60	518	633	4	4	—	—	—	—	—	—	—	—	110.5	113.9	125	125	259	288	125	125	114.2	113.9	125	125	262	288	125	125
152 C	208/230	60	187	253	3	3	316.2	361.5	350	500	788	1006	350	400	322.6	361.5	400	500	794	1006	350	400	334.1	361.5	400	500	806	1006	400	400
	380	60	342	418	3	3	173.2	195.2	200	250	434	578	200	225	177.4	195.2	200	250	438	578	200	225	184.0	195.2	225	250	445	578	200	225
	460	60	414	506	3	3	143.1	163.9	175	225	360	472	175	200	146.5	163.9	175	225	363	472	175	200	151.2	163.9	175	225	368	472	175	200
	575	60	518	633	3	3	114.4	130.9	125	175	289	369	125	150	117.1	130.9	125	175	292	369	125	150	120.8	130.9	150	175	296	369	150	150
152	208/230	60	187	253	4	4	326.8	372.1	400	500	799	1017	350	450	333.2	372.1	400	500	805	1017	400	450	344.7	372.1	400	500	816	1017	400	450
	380	60	342	418	4	4	179.0	201.0	200	250	440	584	200	225	183.2	201.0	225	250	444	584	200	225	189.8	201.0	225	250	451	584	225	225
	460	60	414	506	4	4	147.9	168.7	175	225	365	477	175	200	151.3	168.7	175	225	368	477	175	200	156.0	168.7	175	225	373	477	175	200
	575	60	518	633	4	4	118.2	134.7	125	175	293	373	125	150	120.9	134.7	150	175	296	373	150	150	124.6	134.7	150	175	300	373	150	150

See Legend and Notes on page 99.

Table 23 — Condenser Fan Electrical Data

UNIT 30RC	V(3 Ph)	Hz	SINGLE POINT	DUAL POINT		FIXED SPEED CONDENSER FANS FLA	GREENSPEED CONDENSER FANS FLA
			A/B	A	B		
065, 067, 070, 072, 080 C, 082, 092 C, 102 C	208/230	60	4	2	2	5.5	10.6
	380	60	4	2	2	3.1	5.8
	460	60	4	2	2	2.6	4.8
	575	60	4	2	2	2.1	3.8
080	208/230	60	5	3	2	5.5	10.6
	380	60	5	3	2	3.1	5.8
	460	60	5	3	2	2.6	4.8
	575	60	5	3	2	2.1	3.8
090, 092, 100, 102, 110, 112, 132 C, 152 C	208/230	60	6	3	3	5.5	10.6
	380	60	6	3	3	3.1	5.8
	460	60	6	3	3	2.6	4.8
	575	60	6	3	3	2.1	3.8
120 C, 122 C, 122	208/230	60	6	2	4	5.5	10.6
	380	60	6	2	4	3.1	5.8
	460	60	6	2	4	2.6	4.8
	575	60	6	2	4	2.1	3.8
120	208/230	60	7	3	4	5.5	10.6
	380	60	7	3	4	3.1	5.8
	460	60	7	3	4	2.6	4.8
	575	60	7	3	4	2.1	3.8
130, 132, 150, 152	208/230	60	8	4	4	5.5	10.6
	380	60	8	4	4	3.1	5.8
	460	60	8	4	4	2.6	4.8
	575	60	8	4	4	2.1	3.8

See Legend and Notes on page 99.

Table 24 — Pump Electrical Data

PUMP HP	UNIT VOLTAGE V-Hz (3 Ph)	HYDRONIC SYSTEM (SINGLE/DUAL) FLA (ea)	UNIT 30RC
5	208/230-60	14.2	All units except 150/152
	380-60	8.0	
	460-60	6.9	
	575-60	5.3	
7.5 (1800 RPM)	208/230-60	21.4	All units
	380-60	13.0	
	460-60	10.7	
	575-60	7.6	
7.5 (3600 RPM)	208/230-60	18.5	Only 150/152 units
	380-60	10.2	
	460-60	8.4	
	575-60	6.8	
10	208/230-60	24.9	All units
	380-60	14.4	
	460-60	11.8	
	575-60	9.5	
15	208/230-60	36.4	All units except 065/067 and 070/072
	380-60	21.0	
	460-60	16.5	
	575-60	13.2	

See Legend and Notes on page 99.

Table 25 — Compressor Electrical Data, R-410A Units

UNIT 30RC	UNIT VOLTAGE V-Hz (3 Ph)	COMPRESSOR											
		A1		A2		A3		B1		B2		B3	
		RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA
065	208/230	54	351	54	351	—	—	54	351	54	351	—	—
	380	36	239	36	239	—	—	36	239	36	239	—	—
	460	28	197	28	197	—	—	28	197	28	197	—	—
	575	25	135	25	135	—	—	25	135	25	135	—	—
70	208/230	54	351	54	351	—	—	74	485	74	485	—	—
	380	36	239	36	239	—	—	41	277	41	277	—	—
	460	28	197	28	197	—	—	33	227	33	227	—	—
	575	25	135	25	135	—	—	28	175	28	175	—	—
080 C	208/230	74	485	74	485	—	—	74	485	74	485	—	—
	380	41	277	41	277	—	—	41	277	41	277	—	—
	460	33	227	33	227	—	—	33	227	33	227	—	—
	575	28	175	28	175	—	—	28	175	28	175	—	—
080	208/230	74	485	74	485	—	—	74	485	74	485	—	—
	380	41	277	41	277	—	—	41	277	41	277	—	—
	460	33	227	33	227	—	—	33	227	33	227	—	—
	575	28	175	28	175	—	—	28	175	28	175	—	—
090	208/230	74	485	74	485	—	—	86	560	86	560	—	—
	380	41	277	41	277	—	—	47	329	47	329	—	—
	460	33	227	33	227	—	—	44	260	44	260	—	—
	575	28	175	28	175	—	—	31	210	31	210	—	—
100	208/230	86	560	86	560	—	—	86	560	86	560	—	—
	380	47	329	47	329	—	—	47	329	47	329	—	—
	460	44	260	44	260	—	—	44	260	44	260	—	—
	575	31	210	31	210	—	—	31	210	31	210	—	—
110	208/230	74	485	74	485	74	485	86	560	86	560	—	—
	380	41	277	41	277	41	277	47	329	47	329	—	—
	460	33	227	33	227	33	227	44	260	44	260	—	—
	575	28	175	28	175	28	175	31	210	31	210	—	—
120 C	208/230	86	560	86	560	—	—	86	560	86	560	86	560
	380	47	329	47	329	—	—	47	329	47	329	47	329
	460	44	260	44	260	—	—	44	260	44	260	44	260
	575	31	210	31	210	—	—	31	210	31	210	31	210
120	208/230	86	560	86	560	—	—	86	560	86	560	86	560
	380	47	329	47	329	—	—	47	329	47	329	47	329
	460	44	260	44	260	—	—	44	260	44	260	44	260
	575	31	210	31	210	—	—	31	210	31	210	31	210
130	208/230	74	485	74	485	74	485	86	560	86	560	86	560
	380	41	277	41	277	41	277	47	329	47	329	47	329
	460	33	227	33	227	33	227	44	260	44	260	44	260
	575	28	175	28	175	28	175	31	210	31	210	31	210
150	208/230	86	560	86	560	86	560	86	560	86	560	86	560
	380	47	329	47	329	47	329	47	329	47	329	47	329
	460	44	260	44	260	44	260	44	260	44	260	44	260
	575	31	210	31	210	31	210	31	210	31	210	31	210

See Legend and Notes on page 99.

Table 25 — Compressor Electrical Data, R-32

UNIT 30RC	UNIT VOLTAGE V-Hz (3 Ph)	COMPRESSOR											
		A1		A2		A3		B1		B2		B3	
		RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA
067	208/230	56	351	56	351	—	—	56	351	56	351	—	—
	380	37	239	37	239	—	—	37	239	37	239	—	—
	460	29	197	29	197	—	—	29	197	29	197	—	—
	575	24	135	24	135	—	—	24	135	24	135	—	—
72	208/230	56	351	56	351	—	—	73	471	73	471	—	—
	380	37	239	37	239	—	—	40	276	40	276	—	—
	460	29	197	29	197	—	—	33	222	33	222	—	—
	575	24	135	24	135	—	—	26	181	26	181	—	—
082	208/230	73	471	73	471	—	—	73	471	73	471	—	—
	380	40	276	40	276	—	—	40	276	40	276	—	—
	460	33	222	33	222	—	—	33	222	33	222	—	—
	575	26	181	26	181	—	—	26	181	26	181	—	—
092 C	208/230	73	471	73	471	—	—	82	574	82	574	—	—
	380	40	276	40	276	—	—	45	317	45	317	—	—
	460	33	222	33	222	—	—	37	263	37	263	—	—
	575	26	181	26	181	—	—	30	212	30	212	—	—
092	208/230	73	471	73	471	—	—	82	574	82	574	—	—
	380	40	276	40	276	—	—	45	317	45	317	—	—
	460	33	222	33	222	—	—	37	263	37	263	—	—
	575	26	181	26	181	—	—	30	212	30	212	—	—
102 C	208/230	82	574	82	574	—	—	82	574	82	574	—	—
	380	45	317	45	317	—	—	45	317	45	317	—	—
	460	37	263	37	263	—	—	37	263	37	263	—	—
	575	30	212	30	212	—	—	30	212	30	212	—	—
102	208/230	82	574	82	574	—	—	82	574	82	574	—	—
	380	45	317	45	317	—	—	45	317	45	317	—	—
	460	37	263	37	263	—	—	37	263	37	263	—	—
	575	30	212	30	212	—	—	30	212	30	212	—	—
112	208/230	73	471	73	471	73	471	82	574	82	574	—	—
	380	40	276	40	276	40	276	45	317	45	317	—	—
	460	33	222	33	222	33	222	37	263	37	263	—	—
	575	26	181	26	181	26	181	30	212	30	212	—	—
122 C	208/230	82	574	82	574	—	—	82	574	82	574	82	574
	380	45	317	45	317	—	—	45	317	45	317	45	317
	460	37	263	37	263	—	—	37	263	37	263	37	263
	575	30	212	30	212	—	—	30	212	30	212	30	212
122	208/230	82	574	82	574	—	—	82	574	82	574	82	574
	380	45	317	45	317	—	—	45	317	45	317	45	317
	460	37	263	37	263	—	—	37	263	37	263	37	263
	575	30	212	30	212	—	—	30	212	30	212	30	212
132 C	208/230	73	471	73	471	73	471	82	574	82	574	82	574
	380	40	276	40	276	40	276	45	317	45	317	45	317
	460	33	222	33	222	33	222	37	263	37	263	37	263
	575	26	181	26	181	26	181	30	212	30	212	30	212
132	208/230	73	471	73	471	73	471	82	574	82	574	82	574
	380	40	276	40	276	40	276	45	317	45	317	45	317
	460	33	222	33	222	33	222	37	263	37	263	37	263
	575	26	181	26	181	26	181	30	212	30	212	30	212
152 C	208/230	82	574	82	574	82	574	142	824	142	824	—	—
	380	45	317	45	317	45	317	76	479	76	479	—	—
	460	37	263	37	263	37	263	64	389	64	389	—	—
	575	30	212	30	212	30	212	51	303	51	303	—	—
152	208/230	82	574	82	574	82	574	142	824	142	824	—	—
	380	45	317	45	317	45	317	76	479	76	479	—	—
	460	37	263	37	263	37	263	64	389	64	389	—	—
	575	30	212	30	212	30	212	51	303	51	303	—	—

See Legend and Notes on page 99.

Legend and notes
Applicable for Electrical Data Tables on pages 76-98

LEGEND

FLA	— Full Load Amps
ICF	— Instantaneous Current Flow
LRA	— Locked Rotor Amps
MCA	— Minimum Circuit Amps
MOCP	— Maximum Overcurrent Protection
RLA	— Rated Load Amps

NOTES:

1. When a “C” is shown in the chiller size (i.e., 080 C), this indicates a compact unit (and digit 10 of the unit model number is a “C”).
2. Units are suitable for use on electrical systems where voltage supplied to the unit terminals is not below or above the listed minimum and maximum limits. Maximum allowable phase imbalance is: voltage, 2%; amps 10%.
3. All units are either single point power or dual point power for the primary power connection. Single point power requires 1 main supply from a field-supplied disconnect. Dual point power requires 2 main supplies from field-supplied disconnects.
4. Evaporator heater is wired into the control circuit so it is always operable as long as the power supply disconnect is on, even if any safety device is open.
5. For MCA (minimum circuit amps) that is less than or equal to 380 amps, 3 conductors are required.
   For MCA between 381-760 amps, 6 conductors are required.
   For MCA between 761-1140 amps, 9 conductors are required.
   For MCA between 1141-1520 amps, 12 conductors are required.
   Calculation of conductors required is based on 75°C copper wire.
6. Wiring for main field supply must be rated 75°C minimum. Use copper for all units.
   a. Incoming wire size range for the terminal block is (2) #4 AWG (American Wire Gauge) to 500 kcmil.
   b. Incoming wire size range of 400A non-fused disconnect is (2) #2/0 AWG to 250kcmil or (1) #2/0 AWG to 500 kcmil.
   c. Incoming wire size range of 600A non-fused disconnect is (2) #2 AWG to 500 kcmil.
   d. Incoming wire size range of 800A non-fused disconnect is (3) #3/0 AWG to 400kcmil or (2) 500 kcmil to 750 kcmil.
   e. Incoming wire size range of 1200A non-fused disconnect is (4) #4/0 AWG to 500 kcmil.
7. MCA and MOCP values are inclusive of crankcase and evaporator heater loads. In some cases, MOCP values may be lower when evaporator heater option is not selected.
8. Electrical data includes heater load and may vary slightly if heater option is not selected.

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208/230-v
460-v
575-v only

CARRIER COMFORT NETWORK® (CCN) COMMUNICATION BUS WIRING

The communication bus wiring is a shielded, 3-conductor cable with drain wire and is field supplied and installed in the field.

The system elements are connected to the communication bus in a daisy chain arrangement. The positive pin of each system element communication connector must be wired to the positive pins of the system elements on either side of it. This is also required for the negative and signal ground pins of each system element. Wiring connections for CCN should be made at TB 3 (terminal block). Consult the CCN Contractor's Manual for further information. (See Fig. 67.)

NOTE: Conductors and drain wire must be 20 AWG minimum stranded, tinned copper. Individual conductors must be insulated with PVC, PVC/nylon, vinyl, Teflon®[1], or polyethylene. An aluminum/polyester 100% foil shield and an outer jacket of PVC, PVC/nylon, chrome vinyl, or Teflon with a minimum operating temperature range of –4°F (–20°C) to 140°F (60°C) is required. Refer to Table 26 for a list of manufacturers that produce CCN bus wiring that meets these requirements.

Table 26 — CCN Communication Bus Wiring

MANUFACTURER	PART NUMBER	
	Regular Wiring	Plenum Wiring
Alpha	1895	—
American	A21451	A48301
Belden	8205	884421
Columbia	D6451	—
Manhatten	M13402	M64430
Quabik	6130	—

It is important when connecting to a CCN communication bus that a color coding scheme be used for the entire network to simplify the installation. It is recommended that red be used for the signal positive, black for the signal negative, and white for the signal ground. Use a similar scheme for cables containing different colored wires. At each system element, the shields of its communication bus cables must be tied together. If the communication bus is entirely within one building, the resulting continuous shield must be connected to a ground at one point only. If the communication bus cable exits from one building and enters another, the shields must be connected to grounds at the lightning suppressor in each building where the cable enters or exits the building (one point per building only).

To connect the unit to the network:

1. Turn off power to the control box.
2. Cut the CCN wire and strip the ends of the red (+), white (ground), and black (–) conductors. Substitute appropriate colors for different colored cables.
3. Connect the red wire to the (+) terminal on TB3 of the plug, the white wire to the COM terminal, and the black wire to the (–) terminal.
4. The RJ14 CCN connector on TB3 can also be used but is only intended for temporary connection (for example, a laptop computer running Service Tool).

IMPORTANT: A shorted CCN bus cable will prevent some routines from running and may prevent the unit from starting. If abnormal conditions occur, disconnect the machine from the CCN network. If conditions return to normal, check the CCN connector and cable. Run new cable if necessary. A short in one section of the bus can cause problems with all system elements on the bus.

BACNET IP OR ETHERNET COMMUNICATION

The 30RC units come standard with BACnet IP and Ethernet communications. The cabling for this is standard CAT 5 (minimum) with RJ45 connector.

NON-CCN COMMUNICATION WIRING

The 30RC units offer several non-CCN translators. Refer to the separate installation instructions for additional wiring steps.

MS/TP WIRING RECOMMENDATIONS

Recommendations are shown in Tables 27 and 28. The wire jacket and UL (Underwriters Laboratories) temperature rating specifications list 2 acceptable alternatives. The Halar®[1] specification has a higher temperature rating and a tougher outer jacket than the SmokeGard™[1] specification, and it is appropriate for use in applications where the user is concerned about abrasion. The Halar jacket is also less likely to crack in extremely low temperatures.

NOTE: Use the specified type of wire and cable for maximum signal integrity.

1. Third-party trademarks and logos are the property of their respective owners.

Table 27 — MS/TP Wiring Recommendations

SPECIFICATION	RECOMMMENDATION
Cable	Single twisted pair, low capacitance, CL2P, 22 AWG (7x30), TC foam FEP, plenum rated cable
Conductor	22 or 24 AWG stranded copper (tin plated)
Insulation	Foamed FEP 0.015 in. (0.381 mm) wall 0.060 in. (1.524 mm) OD
Color Code	Black/White
Twist Lay	2 in. (50.8 mm) lay on pair 6 twists/foot (20 twists/meter) nominal
Shielding	Aluminum/Mylar shield with 24 AWG TC drain wire
Jacket	SmokeGard Jacket (SmokeGard PVC) 0.021 in. (0.5334 mm) wall 0.175 in. (4.445 mm) OD Halar Jacket (E-CTFE) 0.010 in. (0.254 mm) wall 0.144 in. (3.6576 mm) OD
DC Resistance	15.2 Ohms/1000 ft (50 Ohms/km) nominal
Capacitance	12.5 pF/ft (41 pF/meter) nominal conductor to conductor
Characteristic Impedance	100 Ohms nominal
Weight	12 lb/1000 ft (17.9 kg/km)
UL Temperature Rating	SmokeGard 167°F (75°C), Halar –40 to 302°F (–40 to 150°C)
Voltage	300 vac, power limited
Listing	UL: NEC CL2P or better

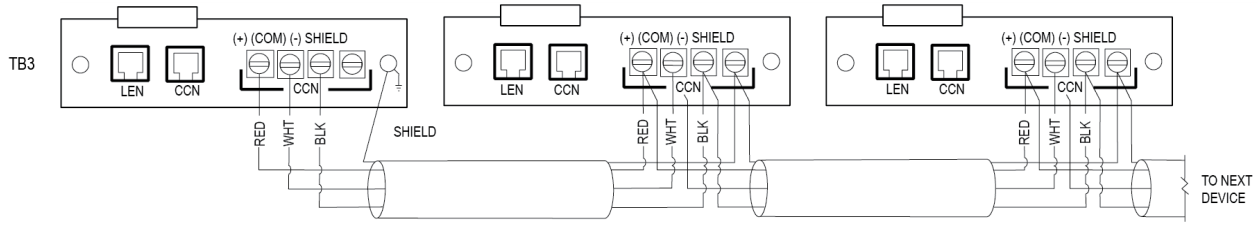
See legend below Table 28.

Table 28 — Open System Wiring Specifications and Recommended Vendors

WIRING SPECIFICATIONS		RECOMMENDED VENDORS AND PART NUMBERS			
WIRE TYPE	DESCRIPTION	CONNECT AIR INTERNATIONAL	BELDEN	RMCORP	CONTRACTORS WIRE AND CABLE
MS/TP Network (RS-485)	22 AWG, single twisted shielded pair, low capacitance, CL2P, TC foam FEP, plenum rated. See MS/TP Installation Guide for specifications.	W221P-22227	—	25160PV	CLP0520LC
	24 AWG, single twisted shielded pair, low capacitance, CL2P, TC foam FEP, plenum rated. See MS/TP Installation Guide for specifications.	W241P-2000F	82841	25120-OR	—
Rnet	4 conductor, unshielded, CMP, 18 AWG, plenum rated.	W184C-2099BLB	6302UE	21450	CLP0442

LEGEND

AWG — American Wire gauge
CL2P — Class 2 Plenum Cable
CMP — Communications Plenum Rated
DC — Direct Current
FEP — Fluorinated Ethylene Polymer
NEC — National Electrical Code
O.D. — Outside Diameter
TC — Tinned Copper
UL — Underwriters Laboratories



LEGEND

CCN — Carrier Comfort Network
LEN — Local Equipment Network

Fig. 67 — TB-3 — CCN Wiring

Step 5 — Install Accessories

A number of accessories are available to provide the following optional features (for details, refer to the Controls, Start-Up, Operation, Service, and Troubleshooting literature).

ENERGY MANAGEMENT MODULE

Energy management module (EMM) is used for any of the following types of temperature reset, demand limit, and ice features:

- 4 to 20 mA inputs for cooling set point reset and capacity limit (requires field-supplied 4 to 20 mA generator)
- 0 to 10-v output for percentage total capacity running
- 24-v discrete outputs for shutdown and running relays, as well as for customer-supplied desuperheater pumps
- 10k space temperature input

The EMM provides discrete inputs for occupancy override, demand limit switch 2 (step 1 demand limit is wired to SIOB-A, requires field-supplied dry contacts), remote lockout switch, and ice done switch (requires field-supplied dry contacts)

LOW AMBIENT TEMPERATURE OPERATION

For units equipped with Greenspeed intelligence and operating in low ambient temperatures below 32°F (0°C), with anticipated wind velocities above 5 mph (8 km/h), refer to separate installation instructions for installing wind baffle accessory.

MINIMUM LOAD ACCESSORY

If minimum load accessory is required, contact your local Carrier representative for more details. For installation details, refer to separate installation instructions supplied with the accessory package.

UNIT SECURITY/PROTECTION ACCESSORIES

For applications with unique security and/or protection requirements, several options are available for unit protection. Compressor enclosures, security grilles, coil header covers, and hail guards are available. Contact your local Carrier representative for more details. For installation details, refer to separate installation instructions supplied with the accessory package.

COMMUNICATION ACCESSORIES

A number of communication options are available to meet any requirement. Contact your local Carrier representative for more details. For installation details, refer to separate installation instructions supplied with the accessory package.

SERVICE OPTIONS

A ground fault convenience outlet (GFI-CO) accessory is available to aid in servicing 30RC units with Greenspeed intelligence. The GFI-CO is a convenience outlet with a 5 amp GFI receptacle. Contact your local Carrier representative for more details. For installation details, refer to separate installation instructions supplied with the accessory package.

Refrigerant Circuit

LEAK TESTING

Units are shipped with complete operating charge of R-410A or R-32 (see Tables 4-7) and should be under sufficient pressure to conduct a leak test.

⚠ CAUTION

This system uses either Puron® refrigerant (R-410A) or an A2L refrigerant (R-32), both of which have higher pressures than R-22 and other refrigerants. No other refrigerant can be used in this system. Failure to use gauge set, hoses, and recovery systems designed to handle Puron refrigerant (R-410A) or R-32 may result in equipment damage or personal injury. Reference UL 60335-2-40 Annex DD for guidelines on proper A2L refrigerant handling and equipment used for A2L refrigerant. If unsure about equipment, consult the equipment manufacturer.

Perform a leak test to ensure that leaks have not developed during unit shipment. If there is no pressure in the system, introduce enough nitrogen to search for the leak. Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall NOT be used.

The following leak detection methods are deemed acceptable for all refrigerant systems:

1. Electronic leak detectors may be used to detect refrigerant leaks, but in the case of A2L refrigerants, the sensitivity may not be adequate or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set to the LFL (lower flammability limit) of R-32 refrigerant, which is 14%.
2. Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided, as the chlorine may react with the refrigerant and corrode the copper pipe-work. Examples of leak detection fluids are the bubble method and fluorescent method agents.

If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found that requires brazing, all of the refrigerant shall be recovered from the system or isolated (by means of shut off valves) in a part of the system remote from the leak. Repair any leak found using good refrigerant practices.

When breaking into the refrigerant circuit to make repairs on systems with R-32, it is important that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:

1. Safely remove refrigerant following local and national regulations. The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed. For guidance on refrigerant recovery and the use of appropriate refrigerant recovery cylinders and equipment, reference UL 60335-2-40 Annex DD Clause 13.
2. Purge the circuit with inert gas, such as oxygen-free nitrogen. This process may need to be repeated several times. Compressed air or oxygen must not used for purging.
3. Open the circuit by cutting.

After leaks are repaired, the system must be evacuated and dehydrated, if it has not been already. See Controls, Start Up, Operation, Service, and Troubleshooting literature for specific torque requirements of refrigerant fittings.

DEHYDRATION

Refer to Carrier Standard Service Techniques Manual, Chapter 1, Refrigerants, Sections 6 and 7 for details. Do not use compressor to evacuate system.

REFRIGERANT CHARGE

Refer to Tables 4-7. Located on the filter drier in each circuit is a factory-installed 1/4 in. Schrader connection for charging liquid refrigerant. Refer to Controls, Start-Up, Operation, Service and Troubleshooting literature for more information.

⚠ CAUTION

When charging, circulate water through the evaporator at all times to prevent freezing. Freezing damage is considered abuse and may impair or otherwise negatively affect the Carrier warranty.

⚠ CAUTION

DO NOT OVERCHARGE system. Overcharging results in higher discharge pressure, possible compressor damage, and higher power consumption.

⚠ CAUTION

Refrigerant charge must be removed slowly to prevent loss of compressor oil that could result in compressor failure.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

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