



Submittal

Prepared For:
SSOE
320 Seven Springs Way, Suite 350
Brentwood, TN 37027

Date: February 11, 2014

Customer P.O. Number:
Customer Project Number:

Sold To:
R.K. Redding
412 Sangamore Rd
Bremen, GA 30110

Job Number:
Job Name:
Honda PPG 89ki Expansion

Trane U.S. Inc. is pleased to provide the enclosed submittal for your review and approval.

Product Summary

Qty	Product
1	BCXC Blower Coil - Belt Drive

Notes and Exclusions

- Please confirm voltage
- Please confirm piping connection sides. Unit is drawn and submitted as Right Hand Connection

Blaine Terry
Trane
4000 DEKALB TECHNOLOGY PARKWAY
SUITE 100
Doraville, GA 30340
Phone: (404) 321-7500
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The attached information describes the equipment we propose to furnish for this project, and is submitted for your approval.

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Tag Data - BCXC Blower Coil - Belt Drive (Qty: 1)

Item	Tag(s)	Qty	Description	Model Number
A1	FCU-1	1	BCXC Blower Coil - Belt Drive (BCXC)	BCHC036G2**A3N02D2050ACA0100000000 000001

Product Data - BCXC Blower Coil - Belt Drive**Item: A1 Qty: 1 Tag(s): FCU-1**

Horizontal Configuration

Unit Size 36; 3 Ton

460/60/3 Unit Voltage

Foil Faced Insulation 1"

Motor, drive & control box on Same Side as Coil & Drainpan Connection

Stainless Steel Drainpan - Right Hand Coil & Drainpan Connections

6 Row High Capacity Cooling Coil

1/2 Horsepower Motor

619-878 rpm 60 hz (513-727 rpm 50 hz)

Factory mounted electric heat

2 - Stage

5.0 kW

24 Volt Magnetic Contactors

Disconnect and heater fusing

1" Throwaway Filter + 1 extra (field installed)

Control Interface for controls by others

First year parts and labor warranty included

Performance Data - BCXC Blower Coil - Belt Drive

Tags	FCU-1
Design airflow (cfm)	500
Total cooling capacity (MBh)	20.01
Sensible capacity (MBh)	14.79
Cooling EDB (F)	72.00
Cooling EWB (F)	60.00
Cooling LDB (F)	45.00
Cooling LWB (F)	44.59
Cooling ent fluid temp (F)	42.00
Cooling leaving fluid temp (F)	49.25
Cooling flow rate (gpm)	5.60
Cooling delta T (F)	7.25
Cooling fluid PD (ft H2O)	7.38
Fluid type	Water
Fluid velocity (ft/s)	2.80
APD (in H2O)	0.152
Cooling face velocity (ft/min)	188
Auxiliary heat type	Electric Reheat
Aux EAT (F)	60.00
Aux LAT (F)	92.29
Auxiliary total capacity (MBh)	17.42
Unit length (in)	44.000
Unit width (in)	40.000
Unit height (in)	18.000
Installed weight (lb)	184.2
Rigging weight (lb)	174.2
Elevation (ft)	0.00
ESP (in H2O)	0.200
TSP (in H2O)	0.411
Fan speed (rpm)	718
Motor heat calculation	Include
Min circuit ampacity (A)	9.35
Coil design basis	Cooling
Max fuse size (A)	15.00
Main coil type	Hydronic
Actual motor power (hp)	0.063
Full load amps (A)	1.20
Lock rotor amps (A)	6.40
Outlet velocity (ft/min)	423
Outdoor cooling design temp (F)	95.00
Outdoor heating design temp (F)	47.00

Mechanical Specifications - BCXC Blower Coil - Belt Drive

Item: A1 Qty: 1 Tag(s): FCU-1

BCHC General

The product line consists of a horizontal air handling unit and mixing box. Air-handling airflow data is certified in accordance with AHRI standard 430. Acoustical data is tested in accordance with AHRI 260. The unit is UL 1995 listed in U. S. and Canada and complies with NFPA 90A. Air handlers consist of a hydronic and/or DX coil, drain pan, and centrifugal fan with motor and drive mounted in a common cabinet. Drive location and coil connections are independent for the same or opposite side location. Air handlers are provided with knockouts in all four corners for installing the unit suspended from the ceiling with threaded rods. Unit and accessories are insulated with 1" 1.5 lb/cu. ft density fiberglass insulation. 1" foil faced insulation is also available. Large motor access panels are provided on both sides of the unit and accessories.

Casing

Casings (structural components) are constructed of 18-gauge galvanized steel, insulated with 1" 1.5 lb/cu. ft density fiberglass fire resistant and odorless glass fiber material to provide thermal and acoustical insulation. Fan housing sides are directly attached to the air handler top and bottom panels strengthening the entire unit assembly. Coil access panels are located on both sides of the air handler and allow easy removal of the internal coils and drain pan. Main access panels provide generous access to the fan, motor and drive from both sides of the air handler.

Foil Faced Insulation

The interior surface of the unit is acoustically and thermally lined with 1" 2.0 lb/cu. ft R-Value of 4.3 density glass fiber with a foil facing. The insulation is UL listed and meets NFPA-90A, UL 181 and bacteriological C665 standards.

Coil #1 Hydronic Cooling Coils

Cooling coils are two, four, or six-row, chilled water. All water coils are 12 fins per inch. All water coils use highly efficient Trane Delta Flo, Type H aluminum fins, mechanically bonded to seamless copper tubes. All coils are specifically designed and circuited for water use. All coils are factory tested with 450.00 psi air under water. Maximum standard operating conditions are 300.00 psi at 200.0 F. Sweat type connections are standard. Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahrirectory.org.

Electric Heat Stages

Factory provided and mounted, UL recognized resistance open-wire heater with a disc-type automatic thermal primary safety device. Two stages of control. Single point power connection to the unit is provided. Optional line fuses and a door interlocking disconnect switch are available.

Magnetic Contactors

A 24 volt electric heater contact for use with Thermostat Control Interface.

Reset Backup Protection

Secondary Manual Reset Backup Protection is provided.

Disconnect Switch

A factory provided disconnect switch with an interlocking door on the heater control panel.

Line Fuse

A safety fuse located in the electric heater's line of power to prevent power surge damage to the electric heater.

Fan

The fans are forward curved, centrifugal blower type equipped with heavy-duty adjustable speed V-belt drives. The fan shaft is supported by heavy-duty, permanently sealed ball bearings. All fans are dynamically balanced. All air handlers have a single fan.

1" Throw-Away Filter

A 1" standard efficiency filter.

60 Hertz Motor

A 60 Hertz, 1750 RPM motor has a plus or minus 10% voltage utilization range. The motor is open drip-proof with permanently sealed ball bearings, internal overload protection, and minimum 1.15 service factor and size 56 resilient base frames. The motor is factory installed and wired to the air handler junction box.

Stainless Steel Drain Pan

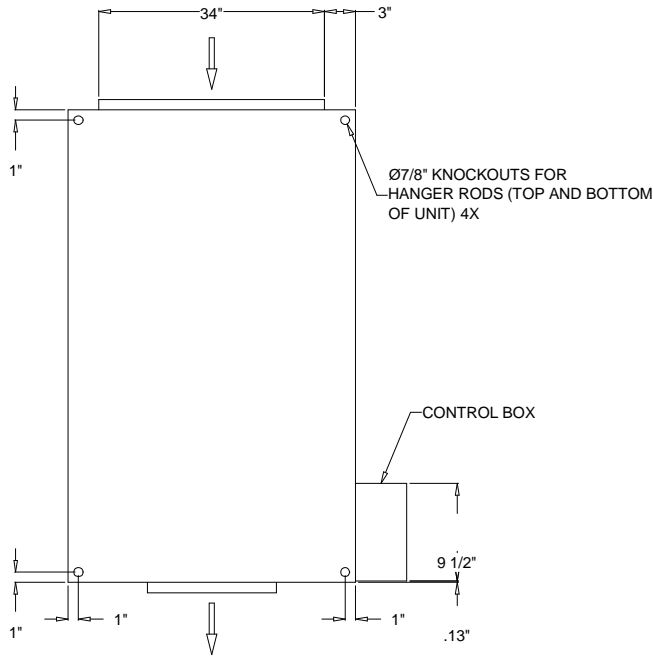
The drain pan is noncorrosive and double-sloped to allow condensate drainage. The drainpan construction is stainless steel. Coils mount above the drain pan, not in the drain pan - thus allowing the drain pan to be fully inspected and cleaned. The drain pan can also be removed for cleaning. The drain pan connections are 3/4" NPT schedule 40 stainless steel pipe. The main drain connection is at the lowest point of the drain pan. An auxiliary drain connection is provided on the same side as the main connection.

Thermostat Control Interface

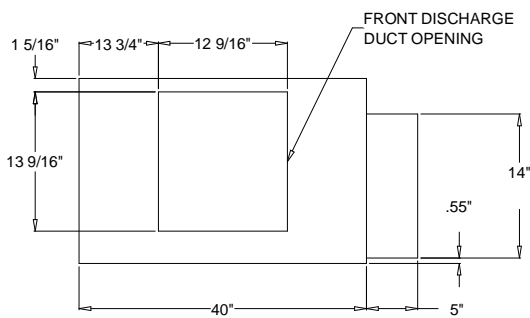
The thermostat control interface is intended to be used with a field supplied low voltage thermostat or controller. The control box contains a line voltage to 24 volt transformer and a one, two, or three-pole fan contactor. The wires from the fan contactor and the low voltage side of the transformer are pulled and terminated on the inside of the two-sided terminal strip. The end devices are mounted and the wires are pulled and terminated on the inside of the two-sided terminal strip. All customer connections other than power are on the outside of the two-sided terminal strips.

Unit Dimensions - BCXC Blower Coil - Belt Drive

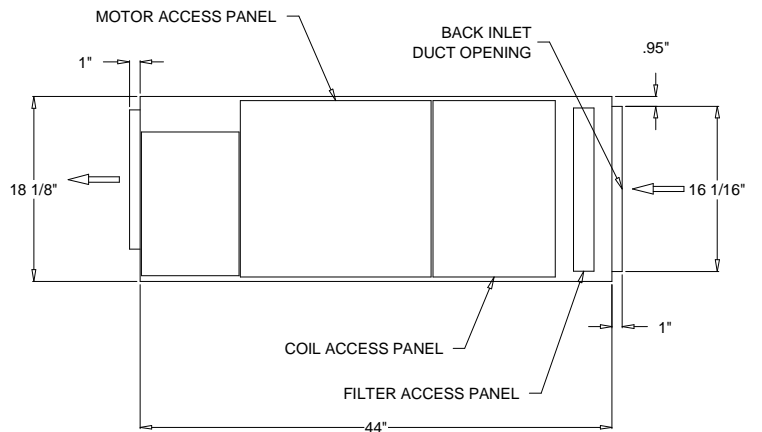
Item: A1 Qty: 1 Tag(s): FCU-1



TOP VIEW



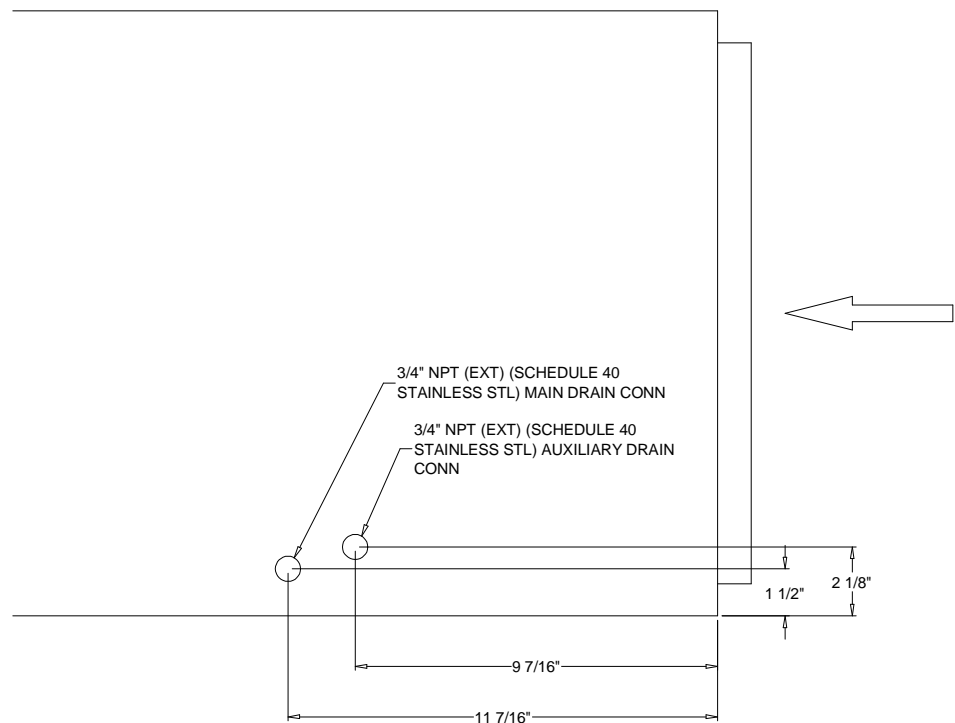
FRONT VIEW



RIGHT VIEW

NOTES:

1. ACCESS PANELS ARE LOCATED ON BOTH SIDES OF THE UNIT TO PROVIDE ACCESS TO THE UNIT'S INTERNAL COMPONENTS.
2. CONTROL BOX IS FACTORY MOUNTED ON DRIVE SIDE AND PROVIDED WITH 7/8" DIAMETER KNOCKOUTS FOR FIELD WIRING.
3. ARROWS INDICATE THE DIRECTION OF AIRFLOW.



RIGHT VIEW

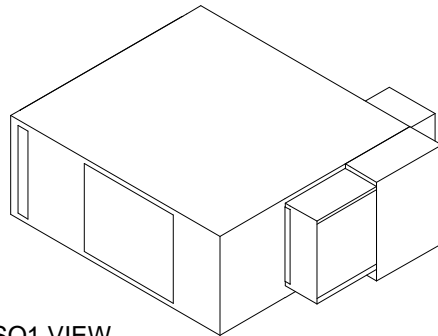
NOTES:

1. ALL DIMENSIONS ARE SHOWN FROM THE BOTTOM REAR CORNER OF UNIT.
2. STUBOUTS PROTRUDE 2 1/8" FROM EXTERIOR CASING OF UNIT.
3. ARROW INDICATES THE DIRECTION OF AIRFLOW.

Unit Dimensions - BCXC Blower Coil - Belt Drive
Item: A1 Qty: 1 Tag(s): FCU-1

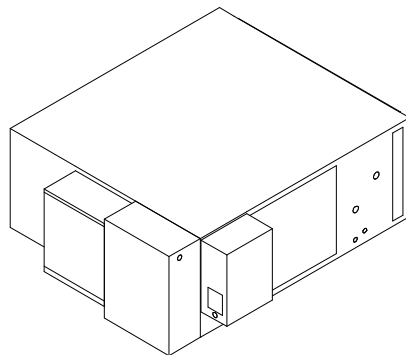
NOTES:

1. WEIGHT OF BASIC UNIT INCLUDES ONLY CABINET, FAN, AVERAGE DRIVE, WIRING AND AVERAGE FILTER.
2. WEIGHT OF STEAM COIL MODULE INCLUDES ONLY CABINET WITH AVERAGE FILTER.
3. BEFORE PREPARING ANY UNIT OR ACCESSORY MODULE FOR LIFTING, ESTIMATE THE APPROXIMATE CENTER OF GRAVITY AND TEST LIFT THE UNIT OR ACCESSORY MODULE TO DETERMINE BALANCE AND STABILITY. USE A PROPER RIGGING METHOD SUCH AS STRAPS, SLINGS OR SPREADER BARS FOR PROTECTION AND SAFETY BEFORE HOISTING THE UNIT OR ACCESSORY MODULE.
4. DO NOT LIFT UNITS OR ACCESSORY MODULES IN WINDY CONDITIONS OR ABOVE INSTALLATION PERSONNEL. FAILURE TO PROPERLY LIFT UNIT OR ACCESSORY MODULE COULD RESULT IN DEATH, SERIOUS INJURY, EQUIPMENT DAMAGE OR PROPERTY-ONLY DAMAGE.
5. DO NOT RIG OR LIFT UNITS OR ACCESSORY MODULES WITH FORK LIFT FORKS.
6. ASSEMBLY OF THE UNIT MUST BE PERFORMED AT THE INSTALLATION SITE. ALWAYS RIG UNITS AND ACCESSORY MODULES AS SHIPPED FROM THE FACTORY.



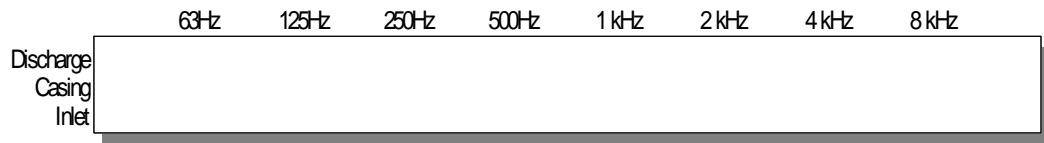
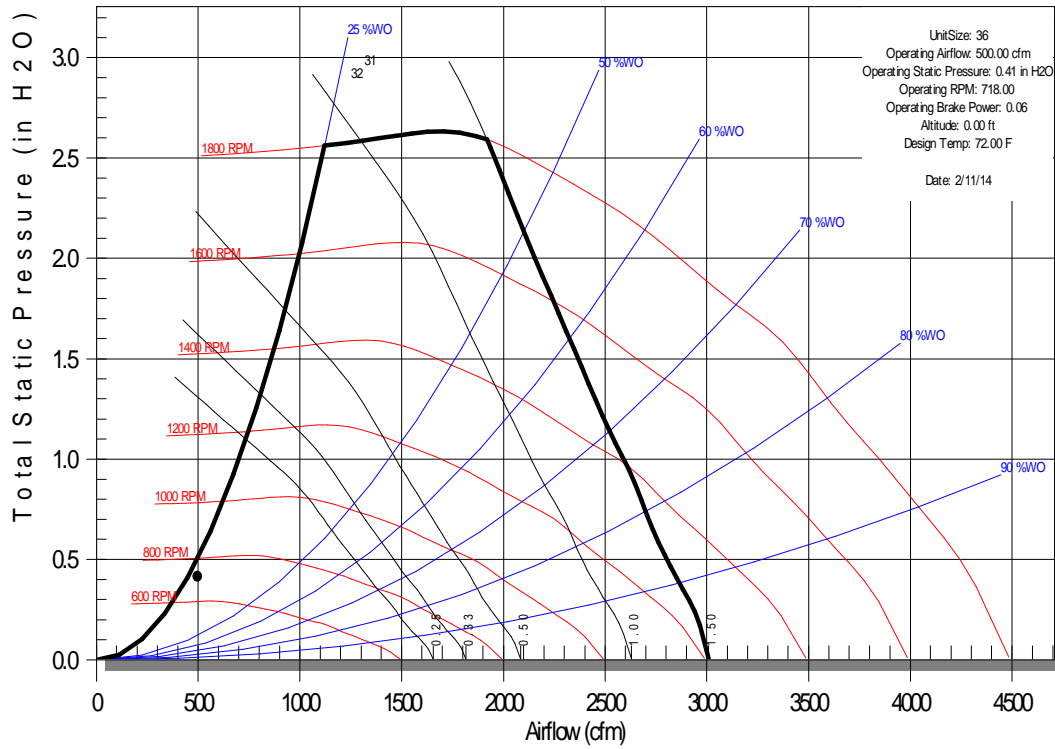
ISO1 VIEW

UNIT, COIL & ACCESSORY MODULE WEIGHTS																	
BASIC UNIT	COIL 1 DRY	COIL 1 WET	COIL 2 DRY	COIL 2 WET	MOTOR	ELECTRIC HEATER	MIXING BOX	ANGLED FILTER BOX	ANGLED FILTER MIXING BOX								
116.1 lb	36.1 lb	46.1 lb			22.0 lb	12.8 lb											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>FILTER ACCESS MODULE</th> <th>STEAM COIL MODULE</th> </tr> <tr> <td></td> <td></td> </tr> </table>		FILTER ACCESS MODULE	STEAM COIL MODULE									<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>STEAM COIL DRY</th> <th>STEAM COIL WET</th> </tr> <tr> <td></td> <td></td> </tr> </table>		STEAM COIL DRY	STEAM COIL WET		
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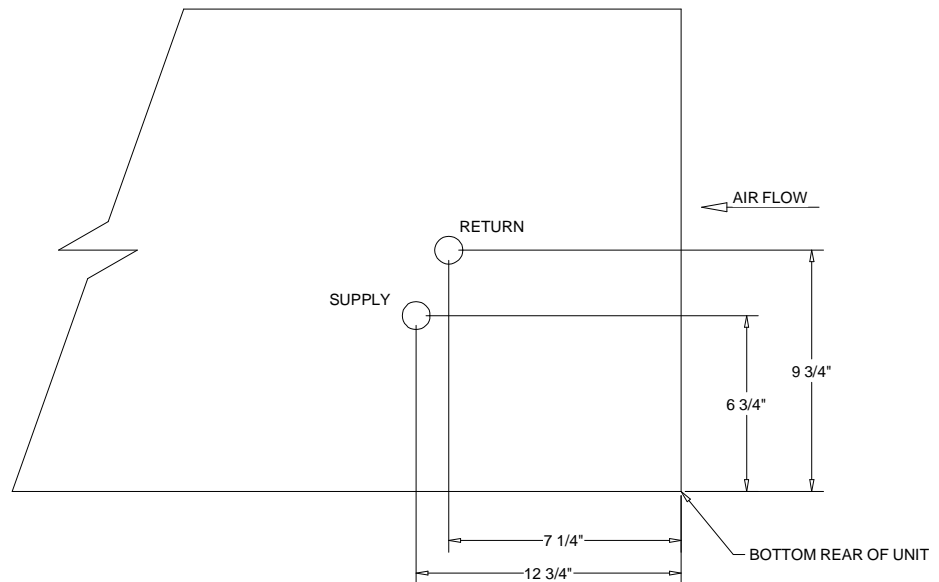
ISO2 VIEW

SIZE 24 & 36 HORIZONTAL



MAIN UNIT COIL CONNECTIONS

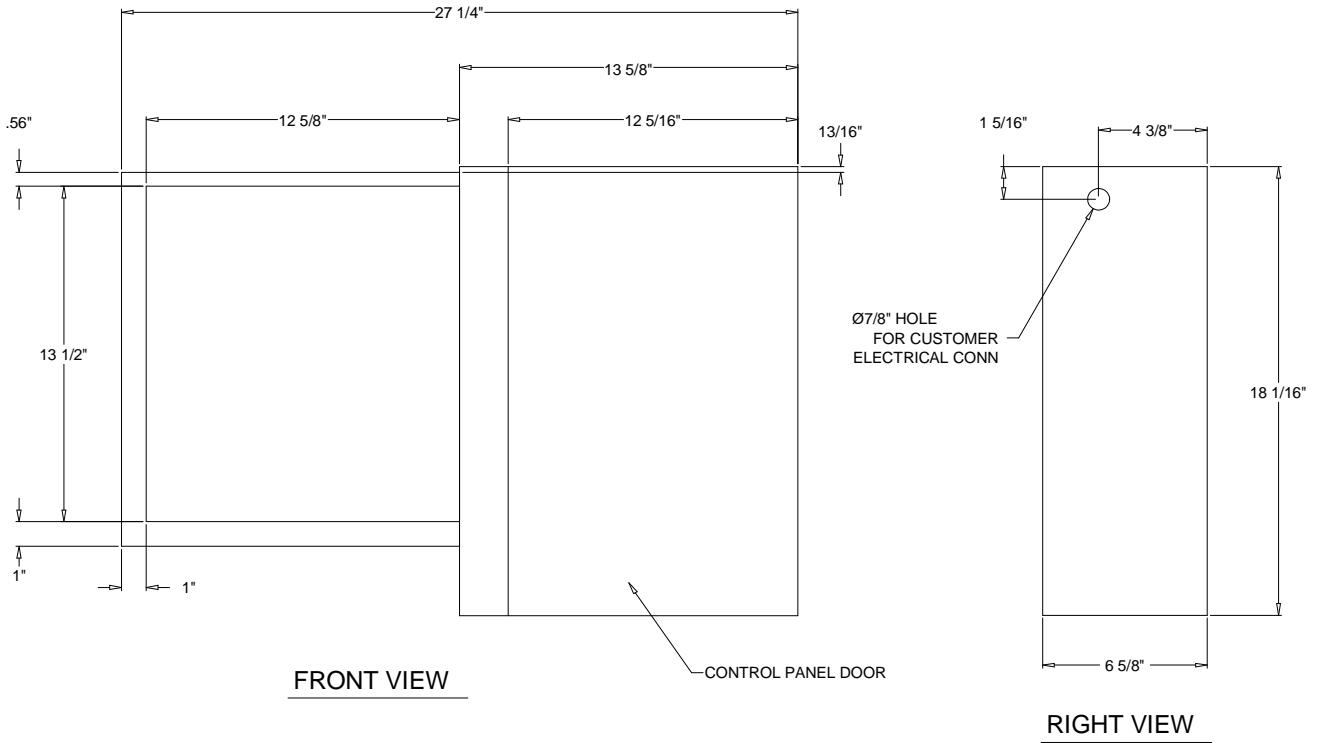
RETURN	1 1/8"
SUPPLY	1 1/8"



NOTES:

1. PICTORIAL HEADER STUBOUT LOCATIONS RELATIVE TO EACH OTHER MAY NOT BE ACCURATE.
2. LOCATING DIMENSIONS HAVE A PLUS / MINUS 2" TOLERANCE.
3. FOR UNITS WITH A FILTER ACCESS MODULE, ADD 7 3/16" TO HORIZONTAL DIMENSIONS SHOWN.
4. PIPING CONNECTIONS ARE SPECIFIED AS OUTSIDE DIAMETER (O.D.).

ELECTRIC HEAT



NOTES:

1. ELECTRIC HEATER SHIPS FACTORY MOUNTED ON UNIT DISCHARGE DUCT OPENING AND IS WIRED TO CONTROL BOX.
2. ARROW INDICATES THE DIRECTION OF AIRFLOW.

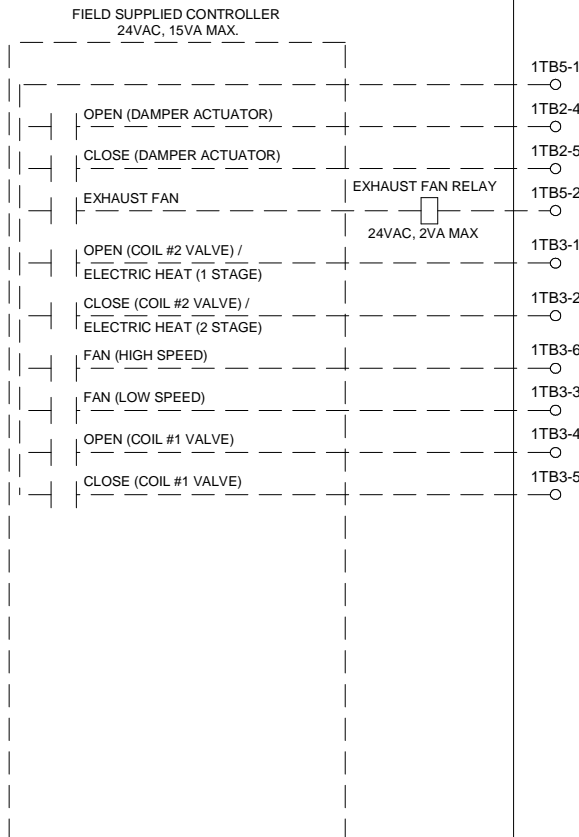
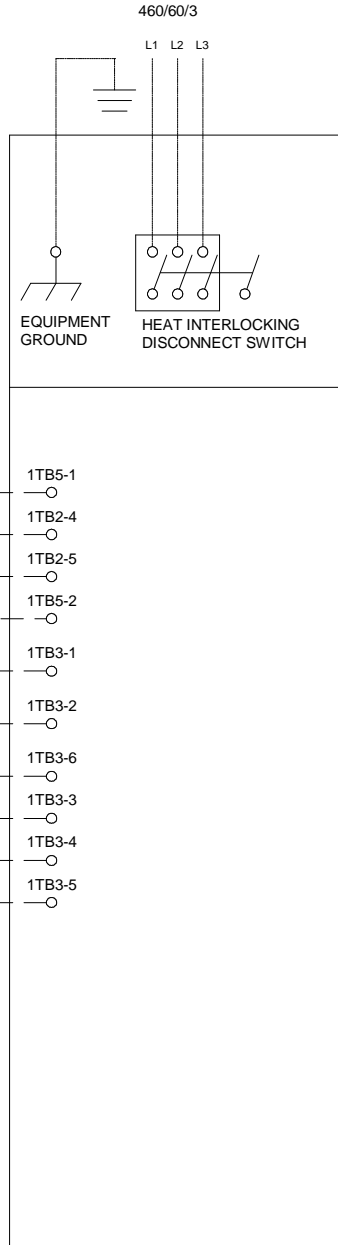
Honda PPG 89ki Expansion Additional Equipment
Field Wiring - BCXC Blower Coil - Belt Drive
Item: A1 Qty: 1 Tag(s): FCU-1

February 11, 2014

<p>⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.</p>	<p>⚠ AVERTISSEMENT TENSION DANGEREUSE! COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.</p>	<p>⚠ ADVERTENCIA ¡VOLTAJE PELIGROSO! DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGURESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.</p>
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NOTES:

- ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS.
- DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND / OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. SOLID LINES INDICATE WIRING BY TRANE CO.
- CONTROL WIRING CONNECTIONS ARE 6-32 SCREW TERMINALS LOCATED ON OUTSIDE OF CONTROL BOX.
- LINE VOLTAGE CONNECTIONS ARE TO BE SPICED TO WIRES INSIDE OF UNIT CONTROL BOX OR TERMINATED INSIDE OF ELECTRIC HEAT CONTROL BOX ON UNITS WITH ELECTRIC HEATERS.
- DIAGRAM SHOWS ALL AVAILABLE OPTIONS. DISREGARD OPTIONS NOT SELECTED.
- IF SINGLE MOTOR, DISREGARD LOW SPEED AND WIRE SINGLE SPEED TO 1TB3-6.



MCA: 9.35 A
MFS: 15.00 A

NOTICE
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO THE ABOVE COULD RESULT IN EQUIPMENT DAMAGE.

AVIS
N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
FAIRE DÉFAUT À LA PROCÉDURE CI-DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

Field Installed Options - Part/Order Number Summary

This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option, and references it to a specific product tag. It is NOT intended as a bill of material for the job.

Product Family - BCXC Blower Coil - Belt Drive

Item	Tag(s)	Qty	Description	Model Number
A1	FCU-1	1	BCXC Blower Coil - Belt Drive (BCXC)	BCHC036G2**A3N 02D2050ACA0100 000000000001

Field Installed Option Description	Part/Ordering Number
Ship Loose Extra 1" Throwaway	