Shipping and Packing List

75W90, 91, 92, 93 & 17J93, 17J98

Package 1 of 1 contains:

1- Power exhaust assembly
1- Metal box containing:
   2-K65 Relays
   1-CAV Power harness
   2-Adapter harnesses
   1-Rain shield
10-#10 Sheet metal screws
6-#6 Thread forming screws
1-Length of foam insulating tape
1-Snap bushing
1-Wire tie

75W90, 17J93, 17J98 Only:
1-Fuse block, 2-pole
2-Fuses
2-#8 Thread forming screws

Check packaging for shipping damage. Contact the last carrier immediately if any shipping damage is found.

Locate all other accessories to be installed. Install accessories in the following order:
1-Outdoor Air or Economizer Dampers
2-Sensors
3-Power Exhaust Fans
4-Gravity Exhaust Dampers
5-Exhaust Hoods
6-Intake Hoods

Application

Power exhaust fans are applied to units equipped with an economizer in downflow air discharge. The power exhaust fan option cannot be used in horizontal air discharge applications.

Use table 1 to determine appropriate kit parts used on each unit. Discard unused harnesses, relays and fuses.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Voltage</th>
<th>Part #</th>
<th>CAT. #</th>
<th>Use Harnesses</th>
<th>Install Fuses</th>
<th>No. of Relays</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAV</td>
<td>Y (208/230)</td>
<td>606761-01</td>
<td>75W90</td>
<td>105680</td>
<td>(2)Adapter 606805²</td>
<td>Yes</td>
</tr>
<tr>
<td>CAV</td>
<td>G (460) High SCCR</td>
<td>606761-05</td>
<td>17J93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAV</td>
<td>J (575) High SCCR</td>
<td>606761-06</td>
<td>17J98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAV</td>
<td>G (460)</td>
<td>606761-02</td>
<td>75W91</td>
<td>607049¹</td>
<td>(2)Adapter 606805²</td>
<td>NA</td>
</tr>
<tr>
<td>CAV</td>
<td>J (575)</td>
<td>606761-03</td>
<td>75W92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAV</td>
<td>M (380/420)</td>
<td>606761-04</td>
<td>75W93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VFD</td>
<td>Y (208/230)</td>
<td>606761-01</td>
<td>75W90</td>
<td>105679</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>VFD</td>
<td>G (460) High SCCR</td>
<td>606761-05</td>
<td>17J93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VFD</td>
<td>J (575) High SCCR</td>
<td>606761-06</td>
<td>17J98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VFD</td>
<td>G (460)</td>
<td>606761-02</td>
<td>75W91</td>
<td>606665</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>VFD</td>
<td>J (575)</td>
<td>606761-03</td>
<td>75W92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VFD</td>
<td>M (380/420)</td>
<td>606761-04</td>
<td>75W93</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹On CE Units Only - cut terminals off of two leads as shown in wiring connection figures.
²Use only on older units equipped with 3-pin J18 and J24.

Table 1
Install K65 and F6

1- Disconnect electrical power to unit.

2- Install K65 exhaust fan relay in unit control box using screws provided. On units equipped with a variable frequency drive (VFD), install K231 in addition to K65. See figure 1.

3- All Y-Volt Units and G- & J-Volt High SCCR Units - Install F6 fuse block near F10 fuse block. Insert fuses provided. See figure 1. 
   Ultra G- & J-Volt High SCCR Units - Install F6 fuse block near F58 fuse block. Insert fuses provided. See figure 2.

Harness Routing and Connections

1- Route wire harnesses; refer to figure shown in table 2. See Install PEF and Strain Relief section to install 606805 adapter harnesses (when used).

2- Harness wires are hot-stamped for identification. Make wiring connections as shown in figure referenced in table 3.

---

TABLE 2
KIT HARNESS ROUTING

<table>
<thead>
<tr>
<th>Unit</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>All CAV Units (Excluding CE Units)</td>
<td>3</td>
</tr>
<tr>
<td>KG/KC/KH VFD Units (CE not available)</td>
<td>3</td>
</tr>
<tr>
<td>All CE Units</td>
<td>4</td>
</tr>
<tr>
<td>LGH/LCH VFD (CE not available)</td>
<td>5</td>
</tr>
</tbody>
</table>

TABLE 3
HARNESS CONNECTIONS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/KC/KH</td>
<td>6</td>
</tr>
<tr>
<td>LGH/LCH CAV</td>
<td>7</td>
</tr>
<tr>
<td>LGH/LCH VFD - NO BYPASS</td>
<td>8</td>
</tr>
<tr>
<td>LGH/LCH VFD - WITH BYPASS</td>
<td>9</td>
</tr>
</tbody>
</table>

**CAUTION**

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.
FIGURE 3

KIT HARNESS ROUTING
All CAV Units (Excluding CE Units)
KG/KC/KH VFD Units (Excluding CE Units)

LOCATE WIRES MARKED K65-A, B, AND CONNECT TO K65 RELAY

CONNECT P24/J24 - USE ADAPTER IF NECESSARY

ALL Y-VOLT UNITS & HIGH SCCR UNITS

FIGURE 4

KIT HARNESS ROUTING
(All CE Units)

LOCATE WIRES MARKED K65-A, B AND CONNECT TO K65 RELAY

CONNECT P24/J24 - USE ADAPTER IF NECESSARY

FIGURE 5

KIT HARNESS ROUTING
LGH/LCH VFD Units (Excluding CE Units)

LOCATE WIRES MARKED K65-A, B AND K231-A, B, CONNECT TO K65 RELAY

CONNECT P24/J24

ALL Y-VOLT UNITS & HIGH SCCR UNITS
FIGURE 6

KG/KC/KH 156-300 WIRING - CAV & VFD

4-PIN PLUG

K65 EXHAUST FAN RELAY

24V COMMON

M-VOLT CAV CE UNITS

K3 BLOWER CONT.

K1 COMPRESSOR CONT.

ALL C BOX UNITS EXCEPT KG/KC 240/500 Y-VOLT

F6 EXH FUSE

LOAD

LINE

K1 COMPRESSOR CONT.
FIGURE 8

LGH/LCH 156-300 WIRING - VFD UNITS - NO BYPASS

Reference
537390 M2
537718 M3
FIGURE 9

LGH/LCH 156-300 WIRING - VFD UNITS - WITH BYPASS

Reference
537391 M2
537719 M3

TO K203
Install PEF and Rain Shield

1- Remove both upper and lower accessory panels from unit. Retain screws for future use. Also remove optional gravity exhaust damper if unit contains one.

2- Install the strain relief, bushing, and rain shield as shown in figure 10.

3- Apply foam insulating tape on the back of the flanged edges of the fan assembly.

4- Reach through fan orifice and connect power exhaust fan P18 plug to unit J18 jack. J18 is located on the left side underneath the fresh/exhaust air divider panel. See figure 11. Coil and wire tie excess wire away from moving parts.

Older Units Equipped With 3-Pin J18 and J24 -
Connect one 606805 adapter harness between J24 and P24 in the control area. Connect the other harness between J18 on the exhaust fan harness and P18 provided in the unit. See figure 12.

5- Lift the fan assembly into the opening and insert the top side first. Align the top of the assembly inside the flange on the division panel. Secure the bottom of the assembly to the unit with screws provided. See figure 11.

6- Install gravity exhaust damper according to instructions provided with damper.
INSTALL RAIN SHIELD
(156-300 UNITS)

SNAP BUSHING

RAIN SHIELD

WIRE TIE

FIGURE 10

POWER EXHAUST FAN ASSEMBLY

NOTE - Apply foam insulating tape to back of flanged edges before installing exhaust fan and gravity exhaust dampers.

GRAVITY EXHAUST DAMPERS
(ORDERED SEPARATELY)

POWER EXHAUST FAN ASSEMBLY

FIGURE 11
**Set Unit Controller - LG/LC Units**

Use the Unit Controller manual provided with each unit to enable the exhaust fan.

**M2 Unit Controller**

Use the following menu when installing exhaust fans in CAV units or VFD units using an ALC temperature control system:

```
Settings>Install>New M2>Exhaust Stages>
1 Exhaust Stage
```

Use the following menu when installing exhaust fans in VFD units (excluding units using an ALC temperature control system):

```
Settings>Install>New M2>Exhaust Stages>
2 Exhaust Stages
```

**M3 Unit Controller**

Go to SETUP / INSTALL and set Configuration ID 1, position 3 to (S = Single Stage or D = Dual Stage).

Go to SETUP / INSTALL and set Configuration ID 1, position 4 to A = Damper Position

**Operation**

Power exhaust fans are energized when economizer dampers reach 50% (default).

**Power Exhaust Setpoint Adjustment**

**LG/LC Units** - Refer to the Unit Controller manual provided with each rooftop unit.

**KG/KC/KH Units** - Locate the A6 enthalpy control in the economizer side panel. The EXH SET potentiometer is factory-set at approximately 50% of the dial range. See figure 13. Power exhaust fans will be energized 30 seconds after dampers are 50% open. Adjust the EXH SET potentiometer higher (clockwise toward 10V) to energize fans when dampers are further open. Adjust the EXH SET potentiometer lower (counterclockwise toward 2V) to energize fans when dampers are further closed. (Thirty-second delay allows dampers to partially open before exhaust fan starts.)
FIGURE 13

A6 ENTHALPY CONTROLLER - KG/KC/KH UNITS

ADJUST POWER
EXHAUST FAN
SETPOINT

ENERGIZED WHEN
DAMPER POSITION
IS HIGHER THAN
EXHAUST FAN
SETPOINT

EXH

Min
Pos

Open

DCV

Max
10V

2V

DCV

Set
10V

2V

Free

Cool

B

C

D

A

Set
2V 10V

Max
2V 10V

Set
2V 10V