



# HBC SERIES

*HBC • PHBC • RHBC • CHBC •  
HBCX • PHBCX • RHBCX • CHBCX •*  
Commercial Chilled Water Ceiling Fan Coil

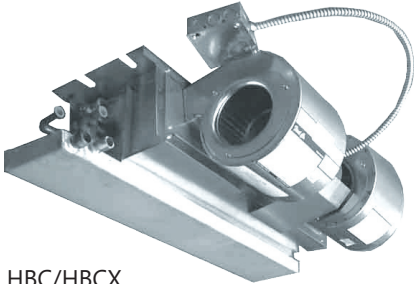
PSC or ECM Motor

Horizontal 300 – 1200 CFM

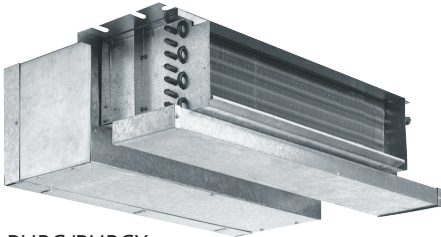
Heavy Gauge Galvanized Steel To  
Resist Corrosion

Sloped and Insulated Drain Pan

Constructed w/Seamless Copper  
Tubes and Headers



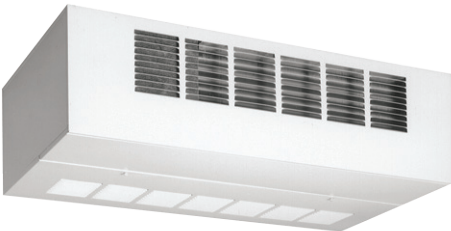
HBC/HBCX  
Ceiling Concealed



PHBC/PHBCX  
Ceiling Concealed with Plenum



RHBC/RHBCX  
Ceiling Recessed



CHBC/CHBCX  
Ceiling Exposed



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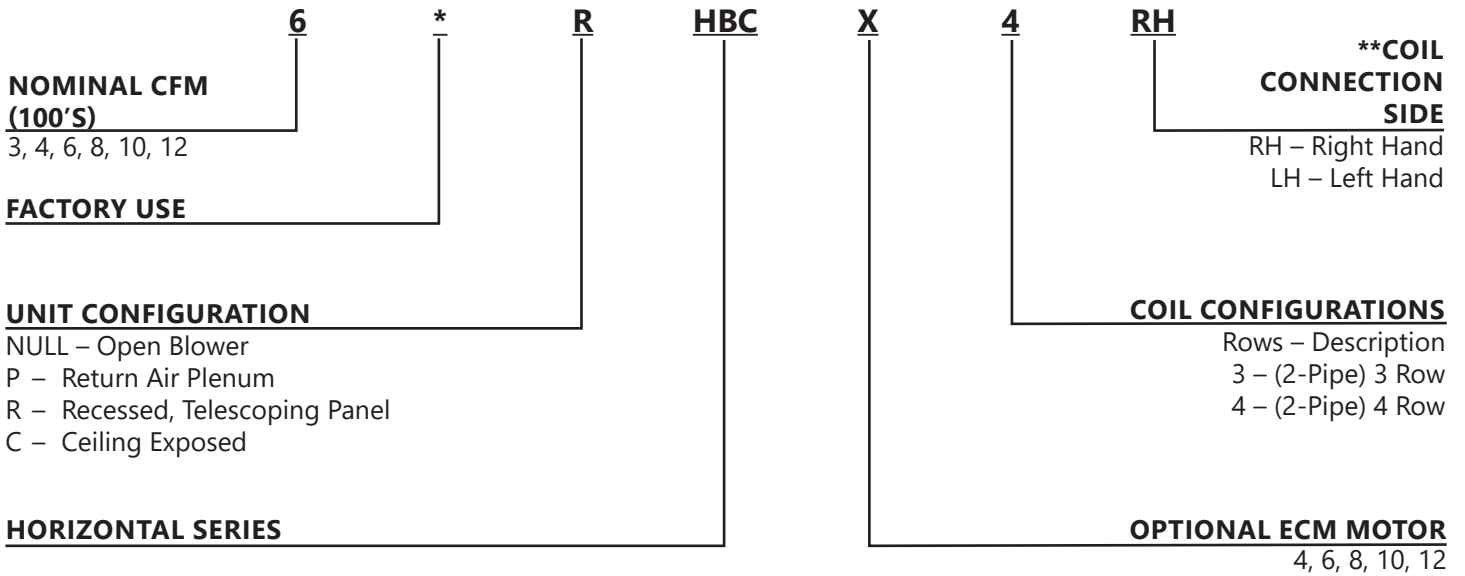
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First Co.'s customer is ultimately responsible for confirming which fan coil models are compatible with selected outdoor unit(s) and which expansion valves (if any) are required. To determine certified indoor/outdoor combinations, go to [www.firstco.com](http://www.firstco.com) or contact the factory.

In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice.

# NOMENCLATURE

## HBC • PHBC • CHBC • RHBC HBCX • PHBCX • CHBCX • RHBCX



### \*Coil Configurations

| Rows | Description                           |
|------|---------------------------------------|
| 3    | 2-Pipe 3 Row                          |
| 4    | 2-Pipe 4 Row                          |
| 31   | 4-Pipe 3 Row Cooling, 1-Row Hot Water |
| 32   | 4-Pipe 3 Row Cooling, 2-Row Hot Water |
| 41   | 4-Pipe 4 Row Cooling, 1-Row Hot Water |

### \*\*Coil Connection Side

RH – Right Hand (default)  
LH – Left Hand

Hand connection is determined by looking with airflow.

### Available Voltage (PSC Motors) - Must order HBC model

120V/1/60  
208-240V/1/60  
277V/1/60

### Available Voltage (ECM Motors)

120V/1/60  
277V/1/60

---

# HBC SERIES

## CEILING FAN COIL

### FEATURES

#### BASIC UNIT

All fan coils are manufactured with heavy gauge galvanized steel to resist corrosion. All models are approved for installation with "0" clearance to combustible material.

#### INSULATION

Plenums and cabinets are insulated with Tuf-Skin dual density fiber glass blanket insulation with an anti-microbial agent.

#### CEILING PANELS

Hinged access/return panels are manufactured with heavy gauge galvanized steel with captive mounting screws and an attractive white baked powder finish.

#### CONDENSATE PANS

Positive sloped drain pans are galvanized steel, coated on the inside surface with insulation. Pan includes both primary and secondary drain connections.

#### RETURN AIR PLENUMS

Return air plenums are manufactured from galvanized steel insulated with dual density fiber glass blanket insulation and a 1" TA fiber glass filter.

#### COILS

Constructed with seamless copper tubes and headers. The tubes are mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. Coils are tested under water at 450 PSI for operation at 300 PSI. Coils include manual air vents.

#### FAN WHEELS-HOUSING

The fan wheels are double width, double inlet (DWDI) forward curved, centrifugal type. Wheels are statically and dynamically balanced for smooth, quiet operation. The housing is constructed from heavy gauge galvanized steel with die-formed inlet cones.

#### MOTORS

Standard motors in HBC(X) are ECM, permanently lubricated type with internal thermal overload protection.

#### OPTIONS

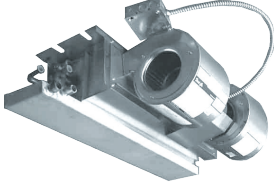
Factory mounted options include PSC motors (with HBC models), stainless steel drain pans, foil faced cabinet insulation, Multi-24 3-speed 24V control, valve packages, thermostats, aqua stats, service switches. 120V, 208V/240V, 277V, 60hz

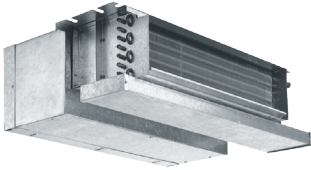
# HBC SERIES


## CEILING FAN COIL

### ECM MOTOR OPTION

This ECM motor option includes **24V controls, a constant torque, permanent magnet, brushless DC motor, with 4 discrete speed taps** that allow for precise air balancing.

| <b>*HBC / HBCX SERIES</b>   |  |
|---|--|
| <b>CEILING CONCEALED</b>  |  |
|  | The *HBC / HBCX series is designed for fully concealed applications. This 10" high space saving unit provides easy access for service and maintenance. |

| <b>*PHBC / PHBCX SERIES</b>  |  |
|--|--|
| <b>CEILING CONCEALED WITH PLENUM</b>   |  |
|  | The *HBC / HCBX series is designed for fully concealed applications. This 10" high space saving unit provides easy access for service and maintenance. |

| <b>*RHBC / RHBCX SERIES</b>   |  |
|---|--|
| <b>CEILING RECESSED</b>   |  |
|  | Includes adjustable hinged access/return panel with 1" TA fiberglass filter. The cabinet allows for a field mounted rear return duct connection by using a solid access panel. |

| <b>*CHBC / CHBCX SERIES</b>   |   |
|---|---|
| <b>CEILING EXPOSED</b>  |   |
|  | Cabinet with an attractive baked powder finish. Cabinet includes stamped discharge opening and hinged bottom panel with 1" TA fiber glass filter. |

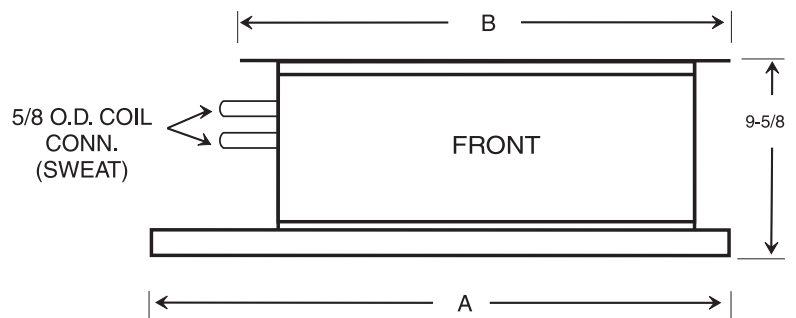
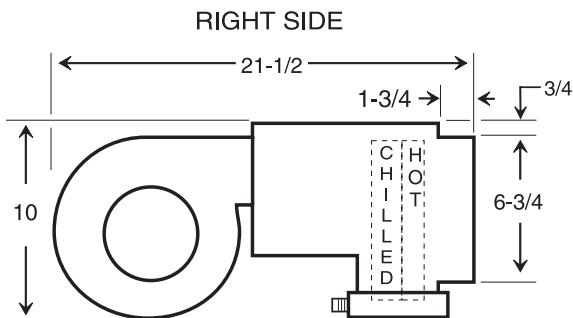
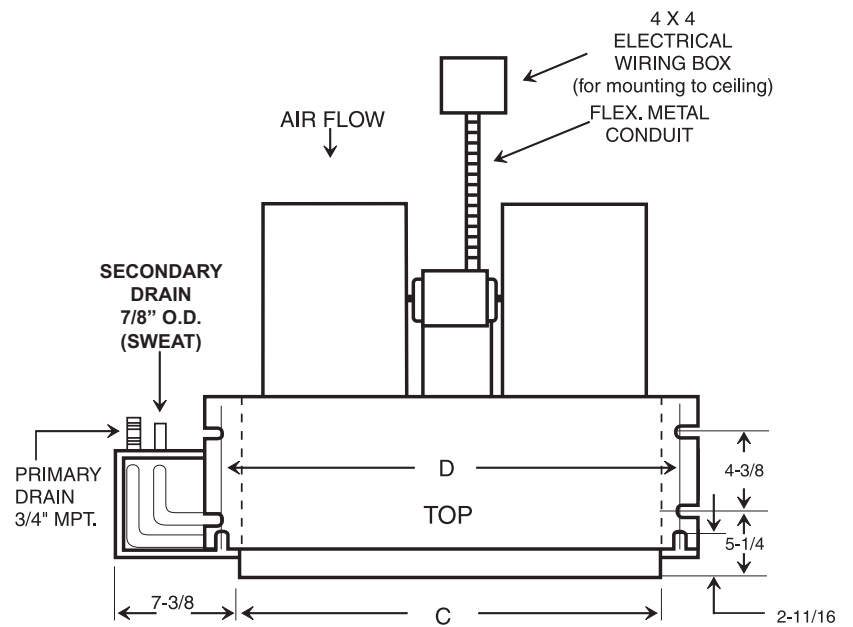
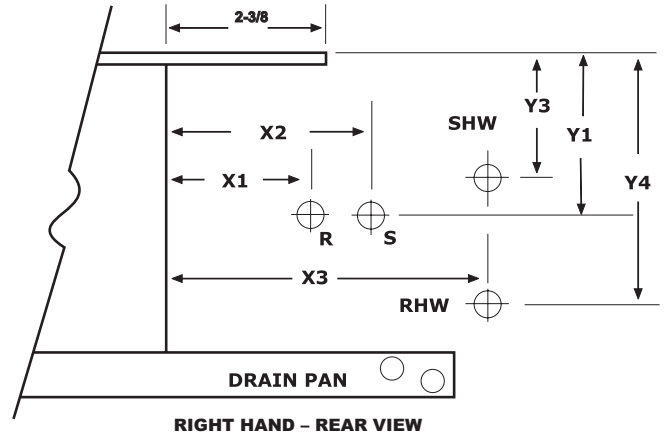
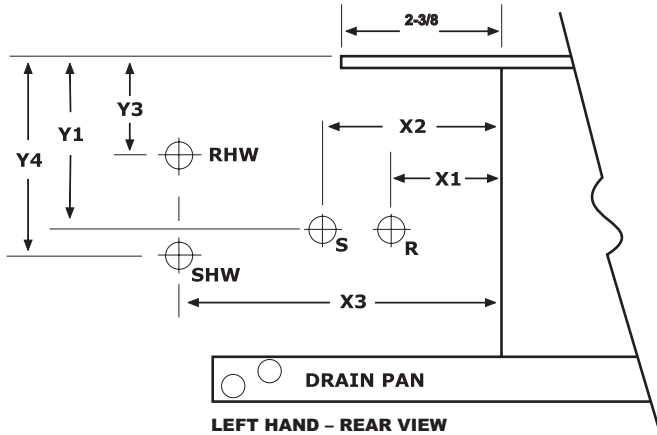
(X) Denotes with ECM motor.

# HBC SERIES

CEILING FAN COIL

# HBC / HBCX

## PHYSICAL DATA / DIMENSIONS



4 - PIPE UNIT SHOWN

**NOTE: RIGHT HAND MODEL SHOWN - LEFT HAND MODEL HAS DRAIN AND PIPING CONNECTIONS ON OPPOSITE SIDE OF FAN COIL.**

## PHYSICAL DATA / DIMENSIONS (CONT'D)

| GENERAL DIMENSIONS |        |        |        |        |
|--------------------|--------|--------|--------|--------|
| MODEL              | A      | B      | C      | D      |
| 3*HBC              | 30-1/8 | 27-1/4 | 20-1/8 | 25-1/4 |
| 4*HBC(X)           | 36-1/8 | 33-1/4 | 26-1/8 | 31-1/4 |
| 5*HBC              | 40-1/8 | 37-1/4 | 30-1/8 | 35-1/4 |
| 6*HBC(X)           | 40-1/8 | 37-1/4 | 30-1/8 | 35-1/4 |
| 8*HBC(X)           | 46-1/8 | 43-1/4 | 36-1/8 | 41-1/4 |
| 10*HBC(X)          | 52-1/8 | 49-1/4 | 42-1/8 | 47-1/4 |
| 12*HBC(X)          | 59-1/8 | 56-1/4 | 49-1/8 | 54-1/4 |
| 13*HBC             | 59-1/8 | 56-1/4 | 49-1/8 | 54-1/4 |

**NOTES:**

1. All dimensions are in inches.
2. COIL CONNECTION TOLERANCE  $\pm 1/4"$ .
3. RIGHT HAND UNIT SHOWN - Left hand model has drain and piping connections on opposite side of the fan coil.  
(Hand is determined by facing the blower end)

| HBC HEADER LOCATIONS |    |       |    |    |     |       |       |
|----------------------|----|-------|----|----|-----|-------|-------|
| LEFT HAND            | X1 | Y1    | X2 | Y2 | X3  | Y3    | Y4    |
| 3 ROW                | 3  | 3-3/4 | 5  | 4  | --- | ---   | ---   |
| 3/1 Split            | 3  | 3-3/4 | 5  | 4  | 8   | 2-1/2 | 4-1/2 |
| 3/2 Split            | 3  | 3-3/4 | 5  | 4  | 8   | 2-1/2 | 4-1/2 |
| 4 ROW                | 3  | 3-3/4 | 5  | 4  | --- | ---   | ---   |
| 4/1 Split            | 3  | 3-3/4 | 5  | 4  | 8   | 2     | 4     |

| HBC HEADER LOCATIONS |    |       |    |    |     |       |       |
|----------------------|----|-------|----|----|-----|-------|-------|
| RIGHT HAND           | X1 | Y1    | X2 | Y2 | X3  | Y3    | Y4    |
| 3 ROW                | 3  | 4-1/4 | 5  | 4  | --- | ---   | ---   |
| 3/1 Split            | 3  | 4-1/4 | 5  | 4  | 8   | 3-1/2 | 5-1/2 |
| 3/2 Split            | 3  | 4-1/4 | 5  | 4  | 8   | 3-1/2 | 5-1/2 |
| 4 ROW                | 3  | 4-1/4 | 5  | 4  | --- | ---   | ---   |
| 4/1 Split            | 3  | 4-1/4 | 5  | 4  | 8   | 4     | 6     |

| OPTIONAL FIELD MOUNTED RETURN AIR PLENUM KITS |               |                        |          |
|---|---------------|------------------------|----------|
| PART No.                                      | FOR MODEL No. | DIMENSIONS (H X W X D) | SHIP WT. |
| 916-1-STK                                     | 3*HBC         | 10 X 24 X 12-1/2       | 18       |
| 916-2-STK                                     | 4*HBC(X)      | 10 X 30 X 12-1/2       | 22       |
| 916-3-STK                                     | 5*HBC         | 10 X 34 X 12-1/2       | 22       |
| 916-3-STK                                     | 6*HBC(X)      | 10 X 34 X 12-1/2       | 22       |
| 916-4-STK                                     | 8*HBC(X)      | 10 X 40 X 12-1/2       | 24       |
| 916-5-STK                                     | 10*HBC(X)     | 10 X 46 X 12-1/2       | 27       |
| 916-6-STK                                     | 13*HBC        | 10 X 53 X 12-1/2       | 30       |

# HBC SERIES

CEILING FAN COIL

# HBCX

## HBCX 120V ECM BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR |     |           |           | HBCX SERIES (CONCEALED) – CFM VS ESP (3-ROW) |      |      |      |      |      |      |      |
|---------------------|-----|-----------|-----------|--|------|------|------|------|------|------|------|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)   |      |      |      |      |      |      |      |
|                     |     |           |           | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*HBCX-3            | 1/7 | 2         | White     | 480  | 455  | 430  | 405  | 380  | 355  | 330  | ---  |
|                     |     |           | Green     | 400  | 365  | 330  | 305  | 280  | 250  | 220  | ---  |
|                     |     |           | Orange    | 350  | 315  | 280  | 250  | 220  | 195  | 170  | ---  |
|                     |     |           | Yellow    | 280  | 235  | 190  | 155  | 120  | ---  | ---  | ---  |
| 6*HBCX-3            | 1/7 | 2         | White     | 690  | 670  | 650  | 635  | 620  | 600  | 580  | ---  |
|                     |     |           | Green     | 660  | 635  | 610  | 580  | 550  | 540  | 530  | ---  |
|                     |     |           | Orange    | 570  | 545  | 520  | 500  | 480  | 455  | 430  | ---  |
|                     |     |           | Yellow    | 480  | 455  | 430  | 410  | 390  | 365  | 340  | ---  |
| 8*HBCX-3            | 1/2 | 7         | Green     | 980  | 945  | 910  | 890  | 870  | 845  | 820  | 720  |
|                     |     |           | Orange    | 800  | 780  | 760  | 745  | 730  | 715  | 700  | 660  |
|                     |     |           | Yellow    | 680  | 660  | 640  | 620  | 600  | 580  | 560  | 530  |
|                     |     |           | Red       | 530  | 510  | 490  | 470  | 450  | 430  | 410  | 360  |
| 10*HBCX-3           | 1/2 | 7         | White     | 1120   | 1105 | 1090 | 1075 | 1060 | 1040 | 1020 | 960  |
|                     |     |           | Green     | 1010   | 995  | 980  | 960  | 940  | 925  | 910  | 880  |
|                     |     |           | Orange    | 830  | 810  | 790  | 765  | 740  | 720  | 700  | 660  |
|                     |     |           | Yellow    | 690  | 665  | 640  | 620  | 600  | 575  | 550  | 510  |
| 12*HBCX-3           | 1/2 | 7         | White     | 1380   | 1365 | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 |
|                     |     |           | Orange    | 1180   | 1165 | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 |
|                     |     |           | Yellow    | 1080   | 1070 | 1060 | 1045 | 1030 | 1010 | 990  | 960  |
|                     |     |           | Red       | 1020   | 1000 | 980  | 960  | 940  | 925  | 910  | 880  |

| 120V/1/60 ECM MOTOR |     |           |           | HBCX SERIES (CONCEALED) – CFM VS ESP (4-ROW OR 3/1 SPLIT) |      |      |      |      |      |      |      |
|---------------------|-----|-----------|-----------|---|------|------|------|------|------|------|------|
| MODE                | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)                |      |      |      |      |      |      |      |
|                     |     |           |           | 0.1   | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*HBCX-4<br>-31     | 1/7 | 2         | White     | 480   | 455  | 430  | 405  | 380  | 355  | 330  | ---  |
|                     |     |           | Green     | 400   | 365  | 330  | 305  | 280  | 250  | 220  | ---  |
|                     |     |           | Orange    | 350   | 315  | 280  | 250  | 220  | 195  | 170  | ---  |
|                     |     |           | Yellow    | 280   | 235  | 190  | 155  | 120  | ---  | ---  | ---  |
| 6*HBCX-4<br>-31     | 1/7 | 2         | White     | 690   | 670  | 650  | 635  | 620  | 600  | 580  | ---  |
|                     |     |           | Green     | 660   | 635  | 610  | 580  | 550  | 540  | 530  | ---  |
|                     |     |           | Orange    | 570   | 545  | 520  | 500  | 480  | 455  | 430  | ---  |
|                     |     |           | Yellow    | 480   | 455  | 430  | 410  | 390  | 365  | 340  | ---  |
| 8*HBCX-4<br>-31     | 1/2 | 7         | Green     | 980   | 945  | 910  | 890  | 870  | 845  | 820  | 720  |
|                     |     |           | Orange    | 800   | 780  | 760  | 745  | 730  | 715  | 700  | 660  |
|                     |     |           | Yellow    | 680   | 660  | 640  | 620  | 600  | 580  | 560  | 530  |
|                     |     |           | Red       | 530   | 510  | 490  | 470  | 450  | 430  | 410  | 360  |
| 10*HBCX-4<br>-31    | 1/2 | 7         | White     | 1120  | 1105 | 1090 | 1075 | 1060 | 1040 | 1020 | 960  |
|                     |     |           | Green     | 1010  | 995  | 980  | 960  | 940  | 925  | 910  | 880  |
|                     |     |           | Orange    | 830   | 810  | 790  | 765  | 740  | 720  | 700  | 660  |
|                     |     |           | Yellow    | 690   | 665  | 640  | 620  | 600  | 575  | 550  | 510  |
| 12*HBCX-4<br>-31    | 1/2 | 7         | White     | 1380  | 1365 | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 |
|                     |     |           | Orange    | 1180  | 1165 | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 |
|                     |     |           | Yellow    | 1080  | 1070 | 1060 | 1045 | 1030 | 1010 | 990  | 960  |
|                     |     |           | Red       | 1020  | 1000 | 980  | 960  | 940  | 925  | 910  | 880  |

# HBC SERIES

CEILING FAN COIL

# HBCX

## HBCX 120V ECM (CONT'D) BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR HBCX SERIES (CONCEALED) – CFM VS ESP (3/2 OR 4/1 SPLIT) |     |           |           |  |      |      |      |      |      |      |      |
|---|-----|-----------|-----------|--|------|------|------|------|------|------|------|
| MODEL   | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water) |      |      |      |      |      |      |      |
|   |     |           |           | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*HBCX-32<br>-41  | 1/7 | 2         | White     | 480  | 455  | 430  | 405  | 380  | 355  | 330  | ---  |
|   |     |           | Green     | 400  | 365  | 330  | 305  | 280  | 250  | 220  | ---  |
|   |     |           | Orange    | 350  | 315  | 280  | 250  | 220  | 195  | 170  | ---  |
|   |     |           | Yellow    | 280  | 235  | 190  | 155  | 120  | ---  | ---  | ---  |
| 6*HBCX-32<br>-41  | 1/7 | 2         | White     | 690  | 670  | 650  | 635  | 620  | 600  | 580  | ---  |
|   |     |           | Green     | 660  | 635  | 610  | 580  | 550  | 540  | 530  | ---  |
|   |     |           | Orange    | 570  | 545  | 520  | 500  | 480  | 455  | 430  | ---  |
|   |     |           | Yellow    | 480  | 455  | 430  | 410  | 390  | 365  | 340  | ---  |
| 8*HBCX-32<br>-41  | 1/2 | 7         | Green     | 980  | 945  | 910  | 890  | 870  | 845  | 820  | 720  |
|   |     |           | Orange    | 800  | 780  | 760  | 745  | 730  | 715  | 700  | 660  |
|   |     |           | Yellow    | 680  | 660  | 640  | 620  | 600  | 580  | 560  | 530  |
|   |     |           | Red       | 530  | 510  | 490  | 470  | 450  | 430  | 410  | 360  |
| 10*HBCX-32<br>-41   | 1/2 | 7         | White     | 1120                                       | 1105 | 1090 | 1075 | 1060 | 1040 | 1020 | 960  |
|   |     |           | Green     | 1010                                       | 995  | 980  | 960  | 940  | 925  | 910  | 880  |
|   |     |           | Orange    | 830  | 810  | 790  | 765  | 740  | 720  | 700  | 660  |
|   |     |           | Yellow    | 690  | 665  | 640  | 620  | 600  | 575  | 550  | 510  |
| 12*HBCX-32<br>-41   | 1/2 | 7         | White     | 1380                                       | 1365 | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 |
|   |     |           | Orange    | 1180                                       | 1165 | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 |
|   |     |           | Yellow    | 1080                                       | 1070 | 1060 | 1045 | 1030 | 1010 | 990  | 960  |
|   |     |           | Red       | 1020                                       | 1000 | 980  | 960  | 940  | 925  | 910  | 880  |

In attempt to maintain CFM consistency, fins per inch (FPI) vary depending on coil rows and is reflected in CFM and capacity calculations.

**INCLUDES:**

24V Transformer, Line Voltage Terminal Block, Low Voltage Terminal Strip, In Factory Mounted Control Box.

# HBC SERIES

CEILING FAN COIL

# HBCX

## HBCX 277V ECM BLOWER PERFORMANCE

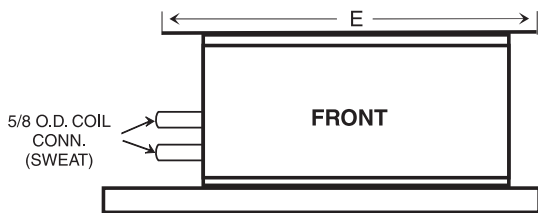
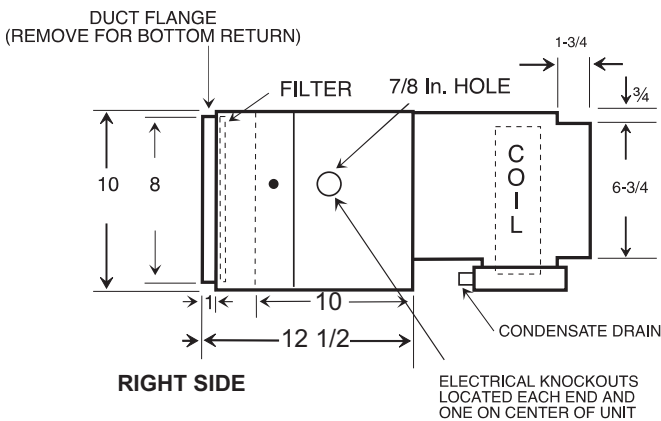
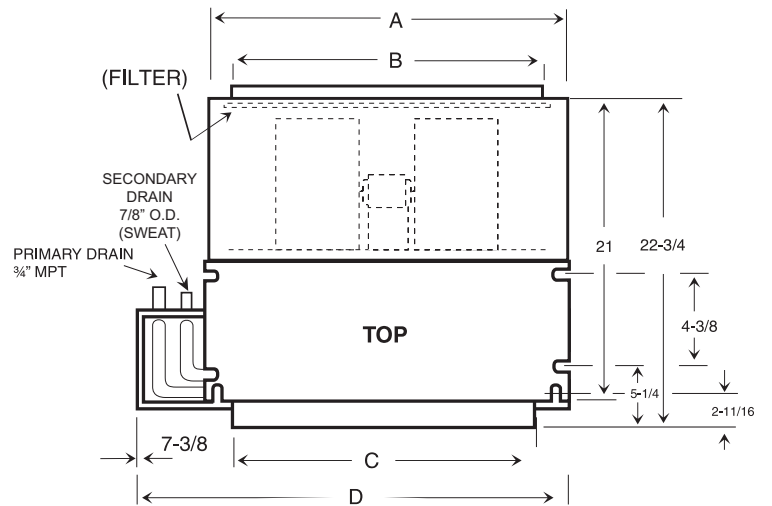
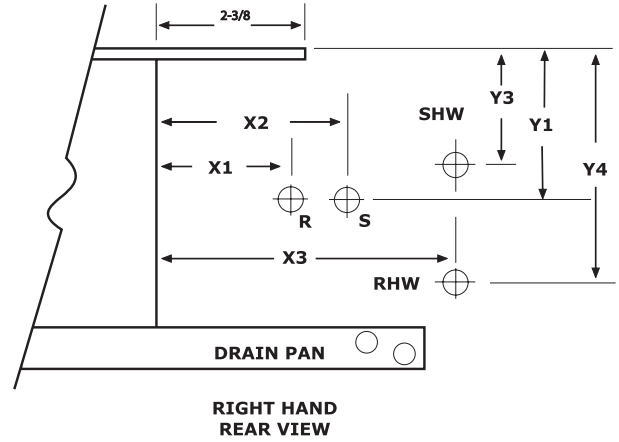
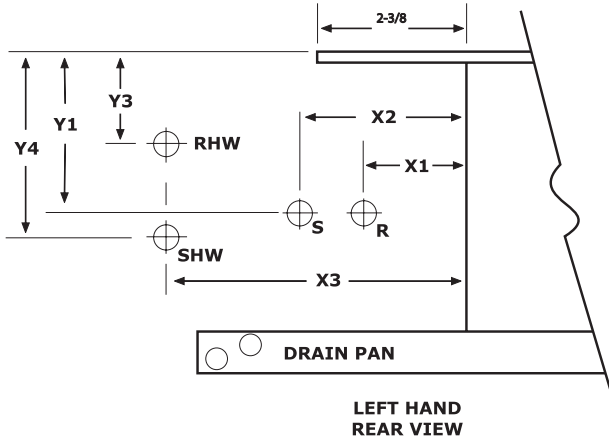
| 277V/1/60 ECM MOTOR |     |           | HBCX SERIES (CONCEALED) - CFM VS ESP (4-ROW OR 3/1 SPLIT) |  |      |      |      |      |      |      |      |
|---------------------|-----|-----------|---|--|------|------|------|------|------|------|------|
| MODEL               | HP  | AMPS/277V | SPEED TAP   | EXTERNAL STATIC PRESSURE (inches of water) |      |      |      |      |      |      |      |
|                     |     |           |   | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*HBCX-4<br>-31     | 1/7 | 1.4       | White   | 500  | 480  | 460  | 405  | 410  | 390  | 370  | ---  |
|                     |     |           | Green   | 420  | 390  | 360  | 305  | 320  | 290  | 260  | ---  |
|                     |     |           | Orange  | 370  | 340  | 310  | 250  | 250  | 220  | 190  | ---  |
|                     |     |           | Yellow  | 290  | 260  | 230  | 155  | 140  | ---  | ---  | ---  |
| 6*HBCX-4<br>-31     | 1/7 | 1.4       | White   | 690  | 670  | 650  | 635  | 610  | 585  | 560  | ---  |
|                     |     |           | Green   | 640  | 620  | 600  | 580  | 560  | 540  | 520  | ---  |
|                     |     |           | Orange  | 540  | 520  | 500  | 500  | 460  | 440  | 420  | ---  |
|                     |     |           | Yellow  | 440  | 420  | 400  | 410  | 360  | 335  | 310  | ---  |
| 8*HBCX-4<br>-31     | 1/2 | 3.6       | Green   | 990  | 960  | 930  | 890  | 860  | 825  | 790  | 720  |
|                     |     |           | Orange  | 840  | 825  | 810  | 745  | 780  | 760  | 740  | 700  |
|                     |     |           | Yellow  | 680  | 660  | 640  | 620  | 600  | 585  | 570  | 540  |
|                     |     |           | Red   | 500  | 480  | 460  | 470  | 420  | 400  | 380  | ---  |
| 10*HBCX-4<br>-31    | 1/2 | 3.6       | White   | 1140                                       | 1120 | 1100 | 1080 | 1060 | 1040 | 1020 | 980  |
|                     |     |           | Green   | 1040                                       | 1020 | 1000 | 980  | 960  | 940  | 920  | 880  |
|                     |     |           | Orange  | 860  | 840  | 820  | 800  | 780  | 760  | 740  | 700  |
|                     |     |           | Yellow  | 710  | 690  | 670  | 650  | 630  | 610  | 590  | ---  |
| 12*HBCX-4<br>-31    | 1/2 | 3.6       | White   | 1340                                       | 1320 | 1300 | 1275 | 1250 | 1225 | 1200 | 1150 |
|                     |     |           | Orange  | 1230                                       | 1220 | 1200 | 1175 | 1150 | 1125 | 1100 | 1050 |
|                     |     |           | Yellow  | 1130                                       | 1110 | 1090 | 1070 | 1050 | 1020 | 1000 | 950  |
|                     |     |           | Red   | 1040                                       | 1020 | 1000 | 970  | 940  | 920  | 900  | ---  |

# HBC SERIES

CEILING FAN COIL

# PHBC / PHBCX

## PHYSICAL DATA / DIMENSIONS



NOTE: RIGHT HAND MODEL SHOWN - LEFT HAND MODEL HAS DRAIN AND PIPING CONNECTIONS ON OPPOSITE SIDE OF FAN COIL.

## PHYSICAL DATA / DIMENSIONS (CONT'D)

| GENERAL DIMENSIONS |    |    |        |        |        |                     |                          |
|--------------------|----|----|--------|--------|--------|---------------------|--------------------------|
| MODEL              | A  | B  | C      | D      | E      | FILTER SIZE (INCL.) | CONNECTIONS PRIMARY O.D. |
| 3*PHBC             | 24 | 22 | 20-1/8 | 30-1/8 | 27-1/4 | 10 X 24             | 5/8"                     |
| 4*PHBC(X)          | 30 | 28 | 26-1/8 | 36-1/8 | 33-1/4 | 10 X 30             |                          |
| 5*PHBC             | 34 | 32 | 30-1/8 | 40-1/8 | 37-1/4 | 10 X 34             |                          |
| 6*PHBC(X)          | 34 | 32 | 30-1/8 | 40-1/8 | 37-1/4 | 10 X 34             |                          |
| 8*PHBC(X)          | 40 | 38 | 36-1/8 | 46-1/8 | 43-1/4 | 10 X 40             |                          |
| 10*PHBC(X)         | 46 | 44 | 42-1/8 | 52-1/8 | 49-1/4 | 10 X 46             |                          |
| 12*PHBX(X)         | 53 | 51 | 49-1/8 | 59-1/8 | 56-1/4 | 10 x 53             |                          |
| 13*PHBC            | 53 | 51 | 49-1/8 | 59-1/8 | 56-1/4 | 10 X 53             |                          |

(X) - Available with ECM motor

**NOTES:**

1. All dimensions in inches.
2. COIL CONNECTION TOLERANCE  $\pm 1/4"$ .
3. RIGHT HAND UNIT SHOWN - Left hand model has drain and piping connections on opposite side of the fan coil. (hand is determined by facing the blower end)

| PHBC HEADER LOCATIONS |    |       |    |    |     |       |       |
|-----------------------|----|-------|----|----|-----|-------|-------|
| LEFT HAND             | X1 | Y1    | X2 | Y2 | X3  | Y3    | Y4    |
| 3 ROW                 | 3  | 3-3/4 | 5  | 4  | --- | ---   | ---   |
| 3/1 Split             | 3  | 3-3/4 | 5  | 4  | 8   | 2-1/2 | 4-1/2 |
| 3/2 Split             | 3  | 3-3/4 | 5  | 4  | 8   | 2-1/2 | 4-1/2 |
| 4 ROW                 | 3  | 3-3/4 | 5  | 4  | --- | ---   | ---   |
| 4/1 Split             | 3  | 3-3/4 | 5  | 4  | 8   | 2     | 4     |

| PHBC HEADER LOCATIONS |    |       |    |    |     |       |       |
|-----------------------|----|-------|----|----|-----|-------|-------|
| RIGHT HAND            | X1 | Y1    | X2 | Y2 | X3  | Y3    | Y4    |
| 3 ROW                 | 3  | 4-1/4 | 5  | 4  | --- | ---   | ---   |
| 3/1 Split             | 3  | 4-1/4 | 5  | 4  | 8   | 3-1/2 | 5-1/2 |
| 3/2 Split             | 3  | 4-1/4 | 5  | 4  | 8   | 3-1/2 | 5-1/2 |
| 4 ROW                 | 3  | 4-1/4 | 5  | 4  | --- | ---   | ---   |
| 4/1 Split             | 3  | 4-1/4 | 5  | 4  | 8   | 4     | 6     |

**NOTES:**

1. Return plenums are insulated.
2. All plenums include throw-away filter.
3. Standard plenums are end return and can be field converted to bottom return.
4. Filter has separate access panel.

# HBC SERIES

CEILING FAN COIL

# PHBCX

## PHBCX 120V ECM BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR |     |           |           | PHBCX SERIES (PLENUM)- CFM VS ESP (3-ROW)  |      |      |      |      |      |      |      |
|---------------------|-----|-----------|-----------|--|------|------|------|------|------|------|------|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water) |      |      |      |      |      |      |      |
|                     |     |           |           | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*PHBCX-3           | 1/7 | 2         | White     | 455  | 430  | 405  | 380  | 355  | 330  | ---- | ---- |
|                     |     |           | Green     | 365  | 330  | 305  | 280  | 250  | 220  | ---- | ---- |
|                     |     |           | Orange    | 315  | 280  | 250  | 220  | 195  | 170  | ---- | ---- |
|                     |     |           | Yellow    | 235  | 190  | 155  | 120  | ---- | ---- | ---- | ---- |
| 6*PHBCX-3           | 1/7 | 2         | White     | 670  | 650  | 635  | 620  | 600  | 580  | ---- | ---- |
|                     |     |           | Green     | 635  | 610  | 580  | 550  | 540  | 530  | ---- | ---- |
|                     |     |           | Orange    | 545  | 520  | 500  | 480  | 455  | 430  | ---- | ---- |
|                     |     |           | Yellow    | 455  | 430  | 410  | 390  | 365  | 340  | ---- | ---- |
| 8*PHBCX-3           | 1/2 | 7         | Green     | 945  | 910  | 890  | 870  | 845  | 820  | 720  | ---- |
|                     |     |           | Orange    | 780  | 760  | 745  | 730  | 715  | 700  | 660  | ---- |
|                     |     |           | Yellow    | 660  | 640  | 620  | 600  | 580  | 560  | 530  | ---- |
|                     |     |           | Red       | 510  | 490  | 470  | 450  | 430  | 410  | 360  | ---- |
| 10*PHBCX-3          | 1/2 | 7         | White     | 1105                                       | 1090 | 1075 | 1060 | 1040 | 1020 | 960  | ---- |
|                     |     |           | Green     | 995  | 980  | 960  | 940  | 925  | 910  | 880  | ---- |
|                     |     |           | Orange    | 810  | 790  | 765  | 740  | 720  | 700  | 660  | ---- |
|                     |     |           | Yellow    | 665  | 640  | 620  | 600  | 575  | 550  | 510  | ---- |
| 12*PHBCX-3          | 1/2 | 7         | White     | 1365                                       | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 | ---- |
|                     |     |           | Orange    | 1165                                       | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 | ---- |
|                     |     |           | Yellow    | 1070                                       | 1060 | 1045 | 1030 | 1010 | 990  | 960  | ---- |
|                     |     |           | Red       | 1000                                       | 980  | 960  | 940  | 925  | 910  | 880  | ---- |

| 120V/1/60 ECM MOTOR |     |           |           | PHBCX SERIES (PLENUM)- CFM VS ESP (4-ROW OR 3/1 SPLIT) |      |      |      |      |      |      |      |
|---------------------|-----|-----------|-----------|--|------|------|------|------|------|------|------|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)             |      |      |      |      |      |      |      |
|                     |     |           |           | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5  |
| 4*PHBCX-4           | 1/7 | 2         | White     | 455  | 430  | 405  | 380  | 355  | 330  | ---- | ---- |
|                     |     |           | Green     | 365  | 330  | 305  | 280  | 250  | 220  | ---- | ---- |
|                     |     |           | Orange    | 315  | 280  | 250  | 220  | 195  | 170  | ---- | ---- |
|                     |     |           | Yellow    | 235  | 190  | 155  | 120  | ---- | ---- | ---- | ---- |
| 6*PHBCX-4           | 1/7 | 2         | White     | 670  | 650  | 635  | 620  | 600  | 580  | ---- | ---- |
|                     |     |           | Green     | 635  | 610  | 580  | 550  | 540  | 530  | ---- | ---- |
|                     |     |           | Orange    | 545  | 520  | 500  | 480  | 455  | 430  | ---- | ---- |
|                     |     |           | Yellow    | 455  | 430  | 410  | 390  | 365  | 340  | ---- | ---- |
| 8*PHBCX-4           | 1/2 | 7         | Green     | 945  | 910  | 890  | 870  | 845  | 820  | 720  | ---- |
|                     |     |           | Orange    | 780  | 760  | 745  | 730  | 715  | 700  | 660  | ---- |
|                     |     |           | Yellow    | 660  | 640  | 620  | 600  | 580  | 560  | 530  | ---- |
|                     |     |           | Red       | 510  | 490  | 470  | 450  | 430  | 410  | 360  | ---- |
| 10*PHBCX-4          | 1/2 | 7         | White     | 1105   | 1090 | 1075 | 1060 | 1040 | 1020 | 960  | ---- |
|                     |     |           | Green     | 995  | 980  | 960  | 940  | 925  | 910  | 880  | ---- |
|                     |     |           | Orange    | 810  | 790  | 765  | 740  | 720  | 700  | 660  | ---- |
|                     |     |           | Yellow    | 665  | 640  | 620  | 600  | 575  | 550  | 510  | ---- |
| 12*PHBCX-4          | 1/2 | 7         | White     | 1365   | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 | ---- |
|                     |     |           | Orange    | 1165   | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 | ---- |
|                     |     |           | Yellow    | 1070   | 1060 | 1045 | 1030 | 1010 | 990  | 960  | ---- |
|                     |     |           | Red       | 1000   | 980  | 960  | 940  | 925  | 910  | 880  | ---- |

# HBC SERIES

CEILING FAN COIL

# PHBCX

## PHBCX 120V ECM (CONT'D) BLOWER PERFORMANCE

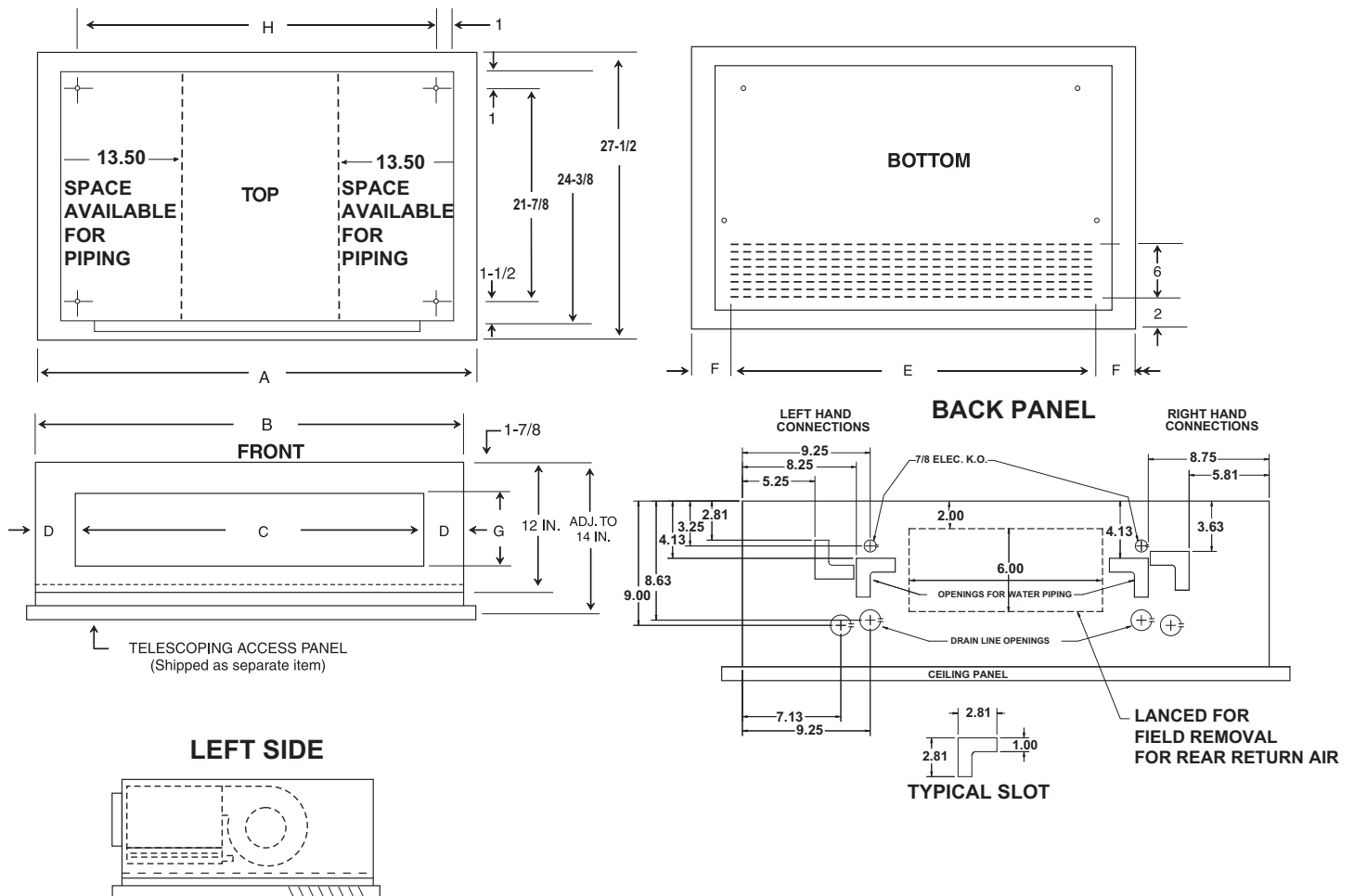
| 120V/1/60 ECM MOTOR |     |           |           | PHBCX SERIES (PLENUM)- CFM VS ESP (3/2 SPLIT) |      |      |      |      |      |      |     |
|---------------------|-----|-----------|-----------|---|------|------|------|------|------|------|-----|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)    |      |      |      |      |      |      |     |
|                     |     |           |           | 0.1   | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4  | 0.5 |
| 4*PHBCX-32          | 1/7 | 2         | White     | 455   | 430  | 405  | 380  | 355  | 330  | ---  | --- |
|                     |     |           | Green     | 365   | 330  | 305  | 280  | 250  | 220  | ---  | --- |
|                     |     |           | Orange    | 315   | 280  | 250  | 220  | 195  | 170  | ---  | --- |
|                     |     |           | Yellow    | 235   | 190  | 155  | 120  | ---  | ---  | ---  | --- |
| 6*PHBCX-32          | 1/7 | 2         | White     | 670   | 650  | 635  | 620  | 600  | 580  | ---  | --- |
|                     |     |           | Green     | 635   | 610  | 580  | 550  | 540  | 530  | ---  | --- |
|                     |     |           | Orange    | 545   | 520  | 500  | 480  | 455  | 430  | ---  | --- |
|                     |     |           | Yellow    | 455   | 430  | 410  | 390  | 365  | 340  | ---  | --- |
| 8*PHBCX-32          | 1/2 | 7         | Green     | 945   | 910  | 890  | 870  | 845  | 820  | 720  | --- |
|                     |     |           | Orange    | 780   | 760  | 745  | 730  | 715  | 700  | 660  | --- |
|                     |     |           | Yellow    | 660   | 640  | 620  | 600  | 580  | 560  | 530  | --- |
|                     |     |           | Red       | 510   | 490  | 470  | 450  | 430  | 410  | 360  | --- |
| 10*PHBCX-32         | 1/2 | 7         | White     | 1105  | 1090 | 1075 | 1060 | 1040 | 1020 | 960  | --- |
|                     |     |           | Green     | 995   | 980  | 960  | 940  | 925  | 910  | 880  | --- |
|                     |     |           | Orange    | 810   | 790  | 765  | 740  | 720  | 700  | 660  | --- |
|                     |     |           | Yellow    | 665   | 640  | 620  | 600  | 575  | 550  | 510  | --- |
| 12*PHBCX-32         | 1/2 | 7         | White     | 1365  | 1350 | 1325 | 1300 | 1285 | 1270 | 1230 | --- |
|                     |     |           | Orange    | 1165  | 1150 | 1130 | 1110 | 1090 | 1070 | 1030 | --- |
|                     |     |           | Yellow    | 1070  | 1060 | 1045 | 1030 | 1010 | 990  | 960  | --- |
|                     |     |           | Red       | 1000  | 980  | 960  | 940  | 925  | 910  | 880  | --- |

In attempt to maintain CFM consistency, fins per inch (FPI) vary depending on coil rows and is reflected in CFM and capacity calculations.

**INCLUDES:**

24V Transformer, Line Voltage Terminal Block, Low Voltage Terminal Strip, In Factory Mounted Control Box.

## PHYSICAL DATA / DIMENSIONS



### NOTES:

1. All dimensions are in inches.
2. Coil connection tolerance  $\pm 1/4"$ .
3. Left hand unit shown, tight hand mirror image. (Hand is determined by facing the blower end).

### NOTES:

1. Telescoping panel allows the cabinet to be installed to within 2 inches of the ceiling line. The adjustable panel frame ensures a flush installation.
2. Louvered access panel (bottom return) is standard. Specify solid panel if ducted rear return air is required.

### GENERAL DIMENSIONS

| MODEL      | A  | B      | C  | D     | E      | F      | G     | H  | I  | TELESCOPING LOUVERED ACCESS PANEL | TELESCOPING SOLID ACCESS PANEL | FILTER SIZE (INCL) |
|------------|----|--------|----|-------|--------|--------|-------|----|----|-----------------------------------|--------------------------------|--------------------|
| 3*RHBC     | 41 | 38-1/8 | 29 | 4-1/2 | 36-5/8 | 2-3/16 | 5-1/2 | 36 | 14 | 968-1                             | 968-1S                         | 10 X 37            |
| 4*RHBC(X)  | 47 | 44-1/8 | 35 | 4-1/2 | 42     | 2-1/2  | 5-1/2 | 42 | 20 | 968-2                             | 968-2S                         | 10 X 43            |
| 5*RHBC     | 51 | 48-1/8 | 39 | 4-1/2 | 47-1/4 | 1-7/8  | 5-1/2 | 46 | 24 | 968-3                             | 968-3S                         | 10 X 47.5          |
| 6*RHBC(X)  | 51 | 48-1/8 | 39 | 4-1/2 | 47-1/4 | 1-7/8  | 5-1/2 | 46 | 24 | 968-3                             | 968-3S                         | 10 X 47.5          |
| 8*RHBC(X)  | 57 | 54-1/8 | 45 | 4-1/2 | 52-1/2 | 2-1/4  | 5-1/2 | 52 | 30 | 968-4                             | 968-4S                         | 10 X 53            |
| 10*RHBC(X) | 63 | 60-1/8 | 51 | 4-1/2 | 57-7/8 | 2-9/16 | 5-1/2 | 58 | 36 | 968-5                             | 968-5S                         | 10 X 59            |
| 12*RHBC(X) | 70 | 67-1/8 | 58 | 4-1/2 | 63-1/8 | 3-7/16 | 5-1/2 | 65 | 42 | 968-6                             | 968-6S                         | 10 X 65            |
| 13*RHBC    | 70 | 67-1/8 | 58 | 4-1/2 | 63-1/8 | 3-7/16 | 5-1/2 | 65 | 42 | 968-6                             | 968-6S                         | 10 X 65            |

(X) - Available with ECM motor

# HBC SERIES

CEILING FAN COIL

# RHBCX

## RHBCX 120V ECM

BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR |     |           |           | RHBCX SERIES (RECESSED) - CFM VS ESP (3-ROW) |      |      |      |      |      |     |     |
|---------------------|-----|-----------|-----------|--|------|------|------|------|------|-----|-----|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)   |      |      |      |      |      |     |     |
|                     |     |           |           | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4 | 0.5 |
| 4RHBCX-3            | 1/7 | 2         | White     | 430  | 405  | 380  | 355  | 330  | ---  | --- | --- |
|                     |     |           | Green     | 330  | 305  | 280  | 250  | 220  | ---  | --- | --- |
|                     |     |           | Orange    | 280  | 250  | 220  | 195  | 170  | ---  | --- | --- |
|                     |     |           | Yellow    | 190  | 155  | 120  | ---  | ---  | ---  | --- | --- |
| 6RHBCX-3            | 1/7 | 2         | White     | 650  | 635  | 620  | 600  | 580  | ---  | --- | --- |
|                     |     |           | Green     | 610  | 580  | 550  | 540  | 530  | ---  | --- | --- |
|                     |     |           | Orange    | 520  | 500  | 480  | 455  | 430  | ---  | --- | --- |
|                     |     |           | Yellow    | 430  | 410  | 390  | 365  | 340  | ---  | --- | --- |
| 8RHBCX-3            | 1/2 | 7         | Green     | 910  | 890  | 870  | 845  | 820  | 720  | --- | --- |
|                     |     |           | Orange    | 760  | 745  | 730  | 715  | 700  | 660  | --- | --- |
|                     |     |           | Yellow    | 640  | 620  | 600  | 580  | 560  | 530  | --- | --- |
|                     |     |           | Red       | 490  | 470  | 450  | 430  | 410  | 360  | --- | --- |
| 10RHBCX-3           | 1/2 | 7         | White     | 1090   | 1075 | 1060 | 1040 | 1020 | 960  | --- | --- |
|                     |     |           | Green     | 980  | 960  | 940  | 925  | 910  | 880  | --- | --- |
|                     |     |           | Orange    | 790  | 765  | 740  | 720  | 700  | 660  | --- | --- |
|                     |     |           | Yellow    | 640  | 620  | 600  | 575  | 550  | 510  | --- | --- |
| 12RHBCX-3           | 1/2 | 7         | White     | 1350   | 1325 | 1300 | 1285 | 1270 | 1230 | --- | --- |
|                     |     |           | Orange    | 1150   | 1130 | 1110 | 1090 | 1070 | 1030 | --- | --- |
|                     |     |           | Yellow    | 1060   | 1045 | 1030 | 1010 | 990  | 960  | --- | --- |
|                     |     |           | Red       | 980  | 960  | 940  | 925  | 910  | 880  | --- | --- |

| 120V/1/60 ECM MOTOR |     |           |           | RHBCX SERIES (RECESSED) - CFM VS ESP (4-ROW OR 3/1 SPLIT) |      |      |      |      |      |     |     |
|---------------------|-----|-----------|-----------|---|------|------|------|------|------|-----|-----|
| MODEL               | HP  | AMPS/120V | SPEED TAP | EXTERNAL STATIC PRESSURE (inches of water)                |      |      |      |      |      |     |     |
|                     |     |           |           | 0.1   | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4 | 0.5 |
| 4RHBCX-4            | 1/7 | 2         | White     | 430   | 405  | 380  | 355  | 330  | ---  | --- | --- |
|                     |     |           | Green     | 330   | 305  | 280  | 250  | 220  | ---  | --- | --- |
|                     |     |           | Orange    | 280   | 250  | 220  | 195  | 170  | ---  | --- | --- |
|                     |     |           | Yellow    | 190   | 155  | 120  | ---  | ---  | ---  | --- | --- |
| 6RHBCX-4            | 1/7 | 2         | White     | 650   | 635  | 620  | 600  | 580  | ---  | --- | --- |
|                     |     |           | Green     | 610   | 580  | 550  | 540  | 530  | ---  | --- | --- |
|                     |     |           | Orange    | 520   | 500  | 480  | 455  | 430  | ---  | --- | --- |
|                     |     |           | Yellow    | 430   | 410  | 390  | 365  | 340  | ---  | --- | --- |
| 8RHBCX-4            | 1/2 | 7         | Green     | 910   | 890  | 870  | 845  | 820  | 720  | --- | --- |
|                     |     |           | Orange    | 760   | 745  | 730  | 715  | 700  | 660  | --- | --- |
|                     |     |           | Yellow    | 640   | 620  | 600  | 580  | 560  | 530  | --- | --- |
|                     |     |           | Red       | 490   | 470  | 450  | 430  | 410  | 360  | --- | --- |
| 10RHBCX-4           | 1/2 | 7         | White     | 1090  | 1075 | 1060 | 1040 | 1020 | 960  | --- | --- |
|                     |     |           | Green     | 980   | 960  | 940  | 925  | 910  | 880  | --- | --- |
|                     |     |           | Orange    | 790   | 765  | 740  | 720  | 700  | 660  | --- | --- |
|                     |     |           | Yellow    | 640   | 620  | 600  | 575  | 550  | 510  | --- | --- |
| 12RHBCX-4           | 1/2 | 7         | White     | 1350  | 1325 | 1300 | 1285 | 1270 | 1230 | --- | --- |
|                     |     |           | Orange    | 1150  | 1130 | 1110 | 1090 | 1070 | 1030 | --- | --- |
|                     |     |           | Yellow    | 1060  | 1045 | 1030 | 1010 | 990  | 960  | --- | --- |
|                     |     |           | Red       | 980   | 960  | 940  | 925  | 910  | 880  | --- | --- |

# HBC SERIES

CEILING FAN COIL

# RHBCX

## RHBCX 120V ECM BLOWER PERFORMANCE

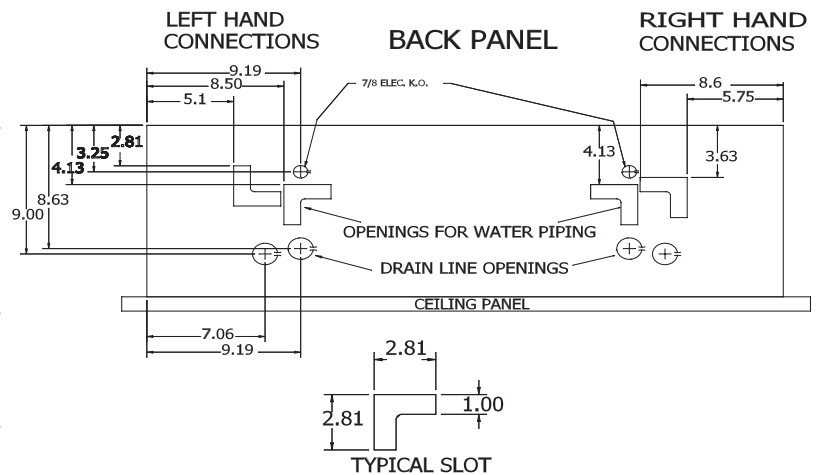
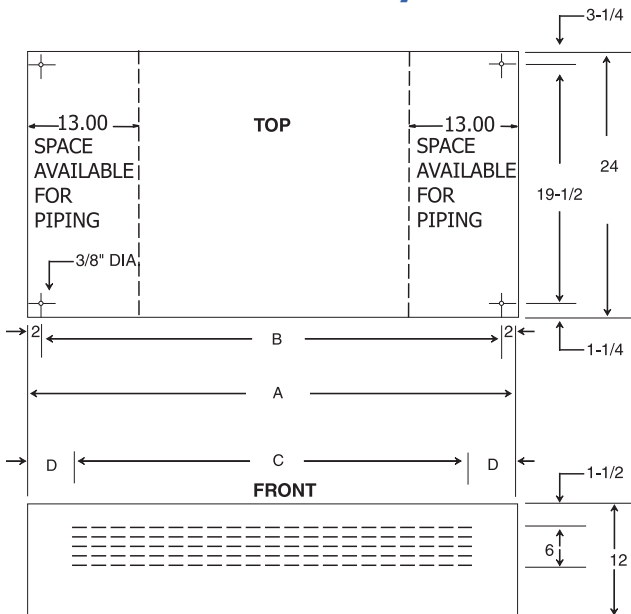
| 120V/1/60 ECM MOTOR |     |           | RHBCX SERIES (RECESSED) - CFM VS ESP (3/2 SPLIT) |  |      |      |      |      |      |     |     |
|---------------------|-----|-----------|--|--|------|------|------|------|------|-----|-----|
| MODEL               | HP  | AMPS/120V | SPEED TAP  | EXTERNAL STATIC PRESSURE (inches of water) |      |      |      |      |      |     |     |
|                     |     |           |  | 0.1  | 0.15 | 0.2  | 0.25 | 0.3  | 0.35 | 0.4 | 0.5 |
| 4RHBCX-32           | 1/7 | 2         | White  | 430  | 405  | 380  | 355  | 330  | ---  | --- | --- |
|                     |     |           | Green  | 330  | 305  | 280  | 250  | 220  | ---  | --- | --- |
|                     |     |           | Orange   | 280  | 250  | 220  | 195  | 170  | ---  | --- | --- |
|                     |     |           | Yellow   | 190  | 155  | 120  | ---  | ---  | ---  | --- | --- |
| 6RHBCX-32           | 1/7 | 2         | White  | 650  | 635  | 620  | 600  | 580  | ---  | --- | --- |
|                     |     |           | Green  | 610  | 580  | 550  | 540  | 530  | ---  | --- | --- |
|                     |     |           | Orange   | 520  | 500  | 480  | 455  | 430  | ---  | --- | --- |
|                     |     |           | Yellow   | 430  | 410  | 390  | 365  | 340  | ---  | --- | --- |
| 8RHBCX-32           | 1/2 | 7         | Green  | 910  | 890  | 870  | 845  | 820  | 720  | --- | --- |
|                     |     |           | Orange   | 760  | 745  | 730  | 715  | 700  | 660  | --- | --- |
|                     |     |           | Yellow   | 640  | 620  | 600  | 580  | 560  | 530  | --- | --- |
|                     |     |           | Red  | 490  | 470  | 450  | 430  | 410  | 360  | --- | --- |
| 10RHBCX-32          | 1/2 | 7         | White  | 1090                                       | 1075 | 1060 | 1040 | 1020 | 960  | --- | --- |
|                     |     |           | Green  | 980  | 960  | 940  | 925  | 910  | 880  | --- | --- |
|                     |     |           | Orange   | 790  | 765  | 740  | 720  | 700  | 660  | --- | --- |
|                     |     |           | Yellow   | 640  | 620  | 600  | 575  | 550  | 510  | --- | --- |
| 12RHBCX-32          | 1/2 | 7         | White  | 1350                                       | 1325 | 1300 | 1285 | 1270 | 1230 | --- | --- |
|                     |     |           | Orange   | 1150                                       | 1130 | 1110 | 1090 | 1070 | 1030 | --- | --- |
|                     |     |           | Yellow   | 1060                                       | 1045 | 1030 | 1010 | 990  | 960  | --- | --- |
|                     |     |           | Red  | 980  | 960  | 940  | 925  | 910  | 880  | --- | --- |

In attempt to maintain CFM consistency, fins per inch (FPI) vary depending on coil rows and is reflected in CFM and capacity calculations.

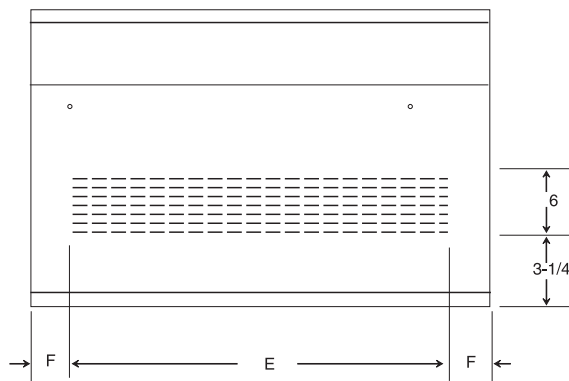
**INCLUDES:**

24V Transformer, Line Voltage Terminal Block, Low Voltage Terminal Strip, In Factory Mounted Control Box.

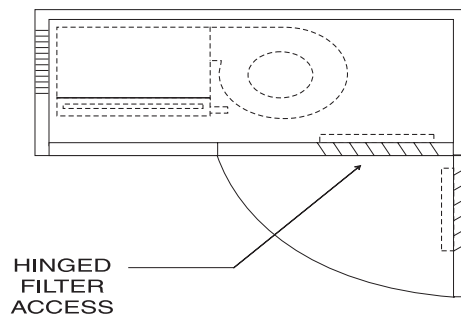
## PHYSICAL DATA / DIMENSIONS



**BOTTOM**



**LEFT SIDE**



**NOTES:**

1. All dimensions are in inches.
2. Coil connection tolerance  $\pm 1/4"$ .
3. Left hand unit shown, tight hand mirror image. (Hand is determined by facing the blower end).

**NOTES:**

1. Telescoping panel allows the cabinet to be installed to within 2 inches of the ceiling line. The adjustable panel frame ensures a flush installation.
2. Louvered access panel (bottom return) is standard. Specify solid panel if ducted rear return air is required.

### GENERAL DIMENSIONS

| MODEL      | A  | B  | C      | D     | E      | F     | FILTER SIZE (INCL) | CONNECTIONS PRIMARY O.D. |
|------------|----|----|--------|-------|--------|-------|--------------------|--------------------------|
| 3*CHBC     | 38 | 34 | 26     | 6     | 31-1/2 | 3-1/2 | 10 X 37            | 5/8"                     |
| 4*CHBC(X)  | 44 | 40 | 31-1/2 | 6     | 37     | 3-1/2 | 10 X 43            |                          |
| 5*CHBC     | 48 | 44 | 37     | 5-1/2 | 42-1/2 | 3     | 10 X 46            |                          |
| 6*CHBC(X)  | 48 | 44 | 37     | 5-1/2 | 42-1/2 | 3     | 10 X 46            |                          |
| 8*CHBC(X)  | 54 | 50 | 42-1/2 | 6     | 48     | 3     | 10 X 53            |                          |
| 10*CHBC(X) | 60 | 56 | 48     | 6     | 53     | 3-1/2 | 10 X 59            |                          |
| 12*CHBC(X) | 67 | 63 | 53     | 7     | 58-1/2 | 4     | 10 X 65            |                          |
| 13*CHBC    | 67 | 63 | 53     | 7     | 58-1/2 | 4     | 10 X 65            |                          |

(X) - Available with ECM motor

# HBC SERIES

CEILING FAN COIL

# CHBCX

## CHBCX 120V ECM

BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR CHBCX SERIES (EXPOSED) - CFM (3-ROW) |     |           |           |      |
|--|-----|-----------|-----------|------|
| MODEL  | HP  | AMPS/120V | SPEED TAP | CFM  |
| 4*CHBCX-3  | 1/7 | 2         | White     | 480  |
|  |     |           | Green     | 400  |
|  |     |           | Orange    | 350  |
|  |     |           | Yellow    | 280  |
| 6*CHBCX-3  | 1/7 | 2         | White     | 690  |
|  |     |           | Green     | 660  |
|  |     |           | Orange    | 570  |
|  |     |           | Yellow    | 480  |
| 8*CHBCX-3  | 1/2 | 7         | Green     | 980  |
|  |     |           | Orange    | 800  |
|  |     |           | Yellow    | 680  |
|  |     |           | Red       | 530  |
| 10*CHBCX-3   | 1/2 | 7         | White     | 1120 |
|  |     |           | Green     | 1010 |
|  |     |           | Orange    | 830  |
|  |     |           | Yellow    | 690  |
| 12*CHBCX-3   | 1/2 | 7         | White     | 1380 |
|  |     |           | Orange    | 1180 |
|  |     |           | Yellow    | 1080 |
|  |     |           | Red       | 1020 |

| 120V/1/60 ECM MOTOR CHBCX SERIES (EXPOSED) - CFM (4-ROW OR 3/1 SPLIT) |     |           |           |      |
|---|-----|-----------|-----------|------|
| MODEL   | HP  | AMPS/120V | SPEED TAP | CFM  |
| 4*CHBCX-4   | 1/7 | 2         | White     | 480  |
|   |     |           | Green     | 400  |
|   |     |           | Orange    | 350  |
|   |     |           | Yellow    | 280  |
| 6*CHBCX-4   | 1/7 | 2         | White     | 690  |
|   |     |           | Green     | 660  |
|   |     |           | Orange    | 570  |
|   |     |           | Yellow    | 480  |
| 8*CHBCX-4   | 1/2 | 7         | Green     | 980  |
|   |     |           | Orange    | 800  |
|   |     |           | Yellow    | 680  |
|   |     |           | Red       | 530  |
| 10*CHBCX-4  | 1/2 | 7         | White     | 1120 |
|   |     |           | Green     | 1010 |
|   |     |           | Orange    | 830  |
|   |     |           | Yellow    | 690  |
| 12*CHBCX-4  | 1/2 | 7         | White     | 1380 |
|   |     |           | Orange    | 1180 |
|   |     |           | Yellow    | 1080 |
|   |     |           | Red       | 1020 |

In attempt to maintain CFM consistency, fins per inch (FPI) vary depending on coil rows and is reflected in CFM and capacity calculations.

**INCLUDES:**

24V Transformer, Line Voltage Terminal Block, Low Voltage Terminal Strip, In Factory Mounted Control Box.

# HBC SERIES

CEILING FAN COIL

# CHBCX

## CHBCX 120V ECM (CONT'D) BLOWER PERFORMANCE

| 120V/1/60 ECM MOTOR |     | CHBCX SERIES (EXPOSED) - CFM (3/2 SPLIT) |           |      |
|---------------------|-----|--|-----------|------|
| MODEL               | HP  | AMPS/120V                                | SPEED TAP | CFM  |
| 4*CHBCX-32          | 1/7 | 2  | White     | 480  |
|                     |     |  | Green     | 400  |
|                     |     |  | Orange    | 350  |
|                     |     |  | Yellow    | 280  |
| 6*CHBCX-32          | 1/7 | 2  | White     | 690  |
|                     |     |  | Green     | 660  |
|                     |     |  | Orange    | 570  |
|                     |     |  | Yellow    | 480  |
| 8*CHBCX-32          | 1/2 | 7  | Green     | 980  |
|                     |     |  | Orange    | 800  |
|                     |     |  | Yellow    | 680  |
|                     |     |  | Red       | 530  |
| 10*CHBCX-32         | 1/2 | 7  | White     | 1120 |
|                     |     |  | Green     | 1010 |
|                     |     |  | Orange    | 830  |
|                     |     |  | Yellow    | 690  |
| 12*CHBCX-32         | 1/2 | 7  | White     | 1380 |
|                     |     |  | Orange    | 1180 |
|                     |     |  | Yellow    | 1080 |
|                     |     |  | Red       | 1020 |

In attempt to maintain CFM consistency, fins per inch (FPI) vary depending on coil rows and is reflected in CFM and capacity calculations.

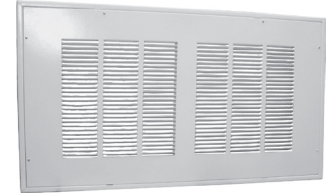
**INCLUDES:**

24V Transformer, Line Voltage Terminal Block, Low Voltage Terminal Strip, In Factory Mounted Control Box.

# HBC SERIES

## CEILING FAN COIL

### ACCESS PANELS/FILTER



| *STANDARD PANEL OPTIONS FOR HBC SERIES |           |            |                  |              |
|--|-----------|------------|------------------|--------------|
| PART #                                 | UNIT SIZE | PANEL TYPE | FRAME DIMENSIONS | *FILTER SIZE |
| 965                                    | 3,4,5,6   | LOUVERED   | 27-1/2 X 43      | 20X20X1 (1)  |
| 965-1                                  |           | SOLID      |                  |              |
| 966                                    | 8         | LOUVERED   | 27-1/2 X 49      | 20X20X1 (1)  |
| 966-1                                  |           | SOLID      |                  |              |
| 967                                    | 10        | LOUVERED   | 27-1/2 X 55-1/2  | 20X20X1 (1)  |
| 967-1                                  |           | SOLID      |                  |              |
| 967-4                                  | 12/13     | LOUVERED   | 27-5/8 X 70-1/8  | 10X65X1 (1)  |
| 967-5                                  |           | SOLID      |                  |              |

| *IAQ MERV 10 PANEL OPTIONS FOR HBC SERIES |           |            |                  |              |
|---|-----------|------------|------------------|--------------|
| PART #                                    | UNIT SIZE | PANEL TYPE | FRAME DIMENSIONS | *FILTER SIZE |
| 965-M8                                    | 3,4,5,6   | LOUVERED   | 27-1/2 X 43      | 20X30X1 (1)  |
| 966-M8                                    | 8         | LOUVERED   | 27-1/2 X 49      | 20X20X1 (2)  |
| 967-M8                                    | 10        | LOUVERED   | 27-1/2 X 55-1/2  | 20X20X1 (2)  |
| 967-8M8                                   | 12/13     | LOUVERED   | 27-5/8 X 70-1/2  | 20X30X1 (2)  |

NOTE: \* Filters not included

| IAQ PANEL PERFORMANCE DATA (4) (CLEAN FILTER)           |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|
| PART NUMBER   | CFM  |      |      |      |      |      |      |      |      |      |
|   | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1500 |
| 965-M8 with AF2030110 (20 x 030, MERV 10) Filters (2)   | 0.04 | 0.06 | 0.06 | 0.08 | 0.09 | 0.10 | ---  | ---  | ---  | ---  |
| 966-M8 with AF2020110 (20 x 020, MERV 10) Filters (2)   | 0.04 | 0.06 | 0.06 | 0.08 | 0.09 | 0.10 | ---  | ---  | ---  | ---  |
| 967-M8 with AF2020110 (20 x 020, MERV 10) Filters (2)   | ---  | 0.05 | 0.05 | 0.07 | 0.08 | 0.10 | ---  | ---  | ---  | ---  |
| 967-6-M8 with AF2025110 (20 x 025, MERV 10) Filters (2) | ---  | ---  | ---  | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | ---  | ---  |
| 967-8-M8 with AF2030110 (20 x 30, MERV 10) Filters (2)  | ---  | ---  | ---  | ---  | ---  | 0.06 | 0.06 | 0.08 | 0.08 | 0.10 |

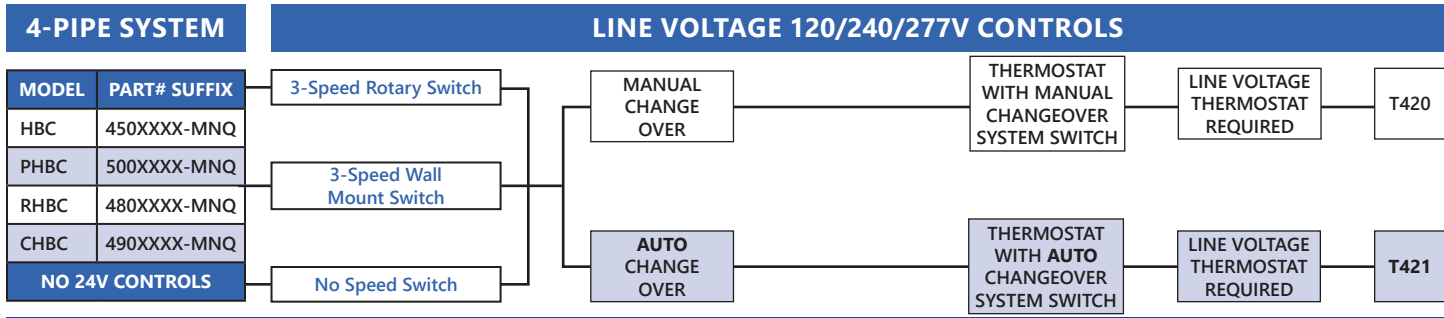
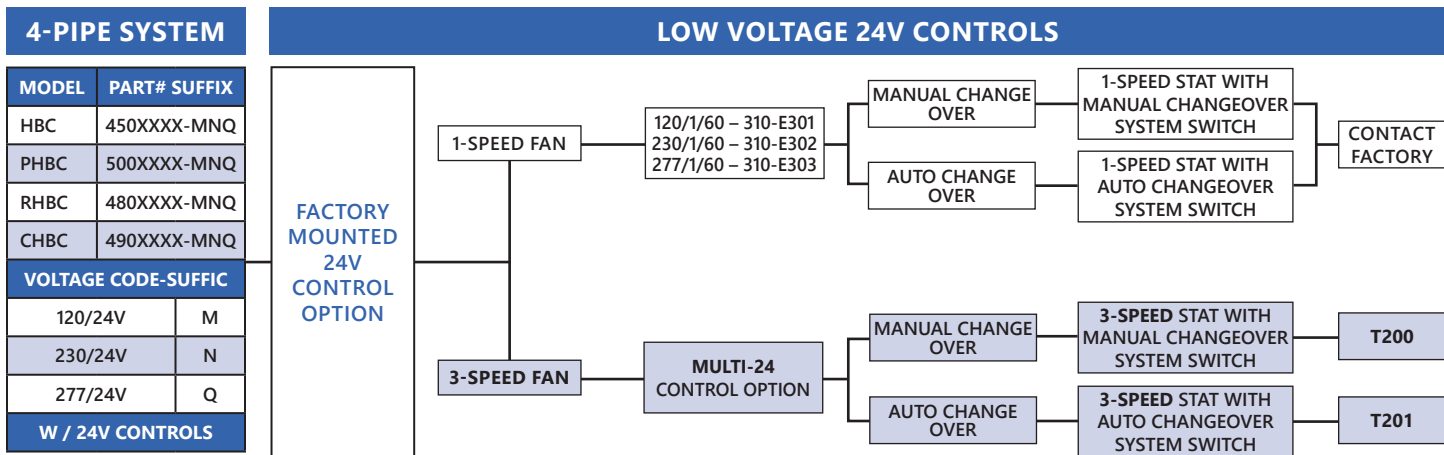
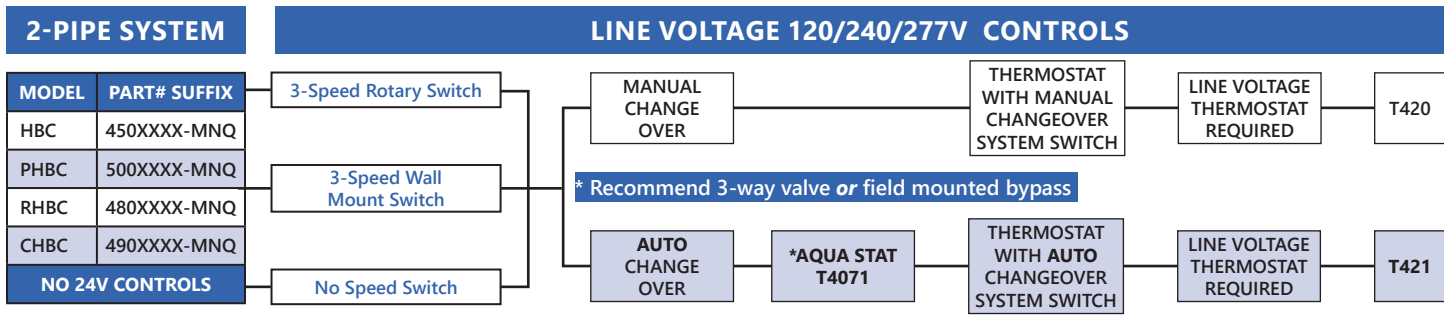
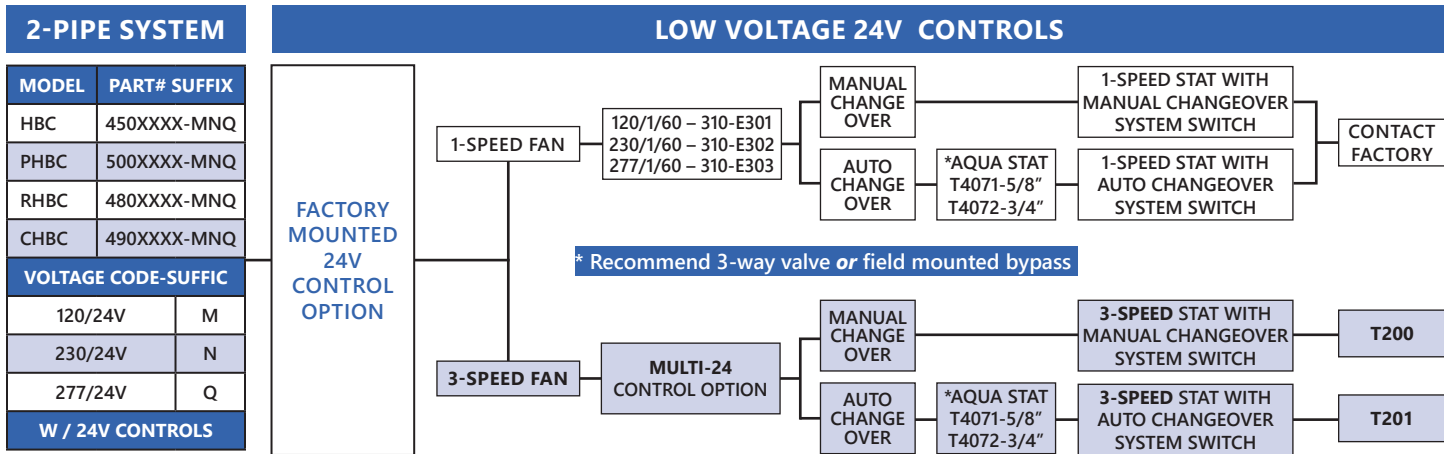
**NOTES:**

- (1) The above is the actual laboratory test data on these panels.
- (2) Glassfloss® Industries HV series MERV 10 filters were used to generate above data (filters must be field supplied)
- (3) Alternate MERV 10 filters would be acceptable provided they have equal or less resistance.
- (4) Refer to fan coil specification sheets for fan coil blower data.

# HBC SERIES

## CEILING FAN COIL


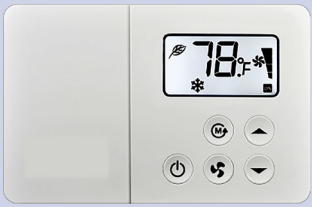
### LOW VOLTAGE / LINE VOLTAGE DATA






# HBC SERIES

## CEILING FAN COIL

### ACCESSORIES


| THERMOSTATS – 3 SPEED FAN SWITCHING   |  |   |
|---|--|---|
| MODEL   | DESCRIPTION  | RENDER  |
| <p><b>T420 - Manual Changeover with 3 speed fan switch</b></p> <p><b>T421 - Auto Changeover with 3 speed fan switch</b></p>   | <p><b>HEAT-OFF-COOL System Switch</b><br/>           Accepts 24 to 277 VAC., 50 or 60 Hz<br/>           Maximum Ambient: 130°F<br/>           Optional Remote Thermistor Probe<br/>           Set Point Range: 50-90°F<br/>           Agency Approvals: ETL, UL Canada CE<br/>           Mounting: Installs to a standard 2" x 4" devise box</p> |  |
| <p><b>T200 - Manual Changeover with Digital Display with Auto Speed Fan Switch</b></p> <p><b>T201 - **Auto Changeover with Digital Display with Auto Speed Fan Switch</b></p> | <p><b>HEAT/COOL System Switch, Manual or Auto</b><br/>           3-Speed Fan switch with Auto Speed Feature<br/>           Separate On-Off Switch<br/>           18-30 VAC, 50/60 Hz<br/>           Temperature Accuracy: ± 1.8°F<br/>           Ambient Temperature: 50-122°F<br/>           Set Point Range: 64-88°F</p>                       |  |


| SINGLE SPEED THERMOSTATS – 1 SPEED FAN (ON-AUTO)  |   |   |
|---|---|---|
| MODEL   | DESCRIPTION   | RENDER  |
| <p><b>T630 - Manual Changeover Digital Display, Single Speed Fan</b></p>  | <p><b>HEAT-OFF-COOL System Switch Manual Changeover</b><br/>           18-30 VAC, 50/60 Hz<br/>           Temperature Accuracy: ± 1.0°F<br/>           Ambient Temperature: 14-140°F<br/>           Set Point Range: 45-90°F<br/>           DC Power: 3.0 Volt DC<br/>           (2 AA Alkaline batteries included)</p>   |  |
| <p><b>T832</b><br/> <b>7-Day Programmable</b><br/> <b>1 heat, 1 cool,</b><br/> <b>Single Speed,</b><br/> <b>Touch Screen display,</b><br/> <b>C7189 Remote sensor available</b></p> | <p><b>HEAT-OFF-COOL-AUTO</b><br/>           Fan Options: Auto-on Circ<br/>           20 - 30 Vac, 50/60 Hz<br/>           Ambient Temperature: 0-120o F<br/>           Set Point Range: Clg. 50-99°F Htg. 40-90°F<br/>           Powering methods:<br/>           – Battery only<br/>           – Common wire only<br/>           – Common wire with battery backup</p> |  |
| <p><b>T4071 5/8</b><br/> <b>T4072 7/8</b><br/> <b>Auto Changeover Requires Aquastat</b><br/> <b>(2-pipe applications)</b></p>   | <p><b>Strap-on Aquastat</b><br/>           5/8" O.D. Tubing<br/>           10 amps induction<br/>           60 amps locked rotor<br/>           25 amps resistive<br/>           Temperature Changes at 95°F + 10°F<br/>           Resets at 65°F + 5°F</p>   |  |


# HBC SERIES


## CEILING FAN COIL


## ACCESSORIES

| 3 SPEED ROTARY SWITCH |   |                 |   |
|-----------------------|---|-----------------|---|
| MODEL                 | DESCRIPTION   | OPTIONS         | RENDER  |
| E332                  | <b>Resistive Load (Switching Capacity) Rating</b><br>10 Amps at 125 VAC<br>5 Amps at 250/277 VAC<br><b>Inductive (Motorload) Ratings</b><br>1/4 HP at 125/277 VAC<br>1/2 HP at 250 VAC          | W/OFF POSITION  |  |
| E332-1                | <b>Standard Switch and Shaft Dimensions</b><br>2" x 1-1/2" x 11/16"<br>3/16" Square Shaft with 13/32" Extension<br>15/32" Double D 32 Threaded Bushing with 1/4" Extension<br>6-1/2" Long Leads | NO OFF POSITION |   |

| WALL MOUNT 3 SPEED SWITCH |   |  |  |
|---------------------------|---|--|--|
| MODEL                     | DESCRIPTION   | OPTIONS                                | RENDER   |
| T422                      | <b>Resistive Load (Switching Capacity) Rating</b><br>6 Amps at 125 VAC<br>5 Amps at 230 VAC<br>4.2 Amps at 277 VAC<br><b>Inductive (Motorload) Ratings</b><br>1/4 HP at 125/277 VAC<br>1/2 HP at 250 VAC<br><br>Horizontal mount with manual on/off switch and manual three speed fan switch. Operation with system switch in on position, fan operation is continuous, can be set at one of three speeds. With system switch in off position, all outputs are off. | 3-SPEED SWITCH<br>ON/OFF<br>WALL MOUNT |  |

| OPTIONAL SERVICE SWITCH (15 AMP) |          |                                       |   |
|----------------------------------|----------|---------------------------------------|---|
| PART #                           | VOLTAGE  | DESCRIPTION                           | RENDER  |
| 945-6                            | 120/1/60 | 2 x 4 Service Switch                  |  |
| 945-7                            | 240/1/60 | Toggle Switch 15 Amp                  |   |
| 945-7                            | 277/1/60 | Single Pole                           |   |
| 945-7                            | 220/1/50 | 2 X 4 J-Box                           |   |
|                                  |          | 2 X 4 Switch Cover - Galvanized Steel |   |

| SINGLE SPEED FAN (24V CONTROL CIRCUIT) |          |  |   |
|--|----------|--|---|
| PART #                                 | VOLTAGE  | DESCRIPTION  | RENDER  |
| 310-E301                               | 120/1/60 | Relay Transformer Assembly                                       |  |
| 310-E302                               | 240/1/60 | 30 Amp, single pole, normally open, 24v coil                     |   |
| 310-E303                               | 277/1/60 | 18 GA. 4.25 X 4.25 mounting plate<br>Factory assembled and wired |   |

| THREE SPEED FAN (24V CONTROL CIRCUIT) |   |                              |   |
|---------------------------------------|---|------------------------------|---|
| VOLTAGE                               | DESCRIPTION   | OPTIONS                      | RENDER  |
| Multi - 24                            | 3-Speed Control Option<br>For HBC Series Fan Coils<br>Factory mounted controls include;<br>CB500 relay board, 24V transformer,<br>(15 AMP) service switch | Factory mounted option only. |  |

# HBC SERIES

## CEILING FAN COIL

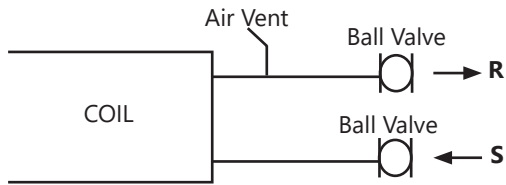
### PIPING PACKAGE OPTIONS

#### TWO POSITION OR MODULATING

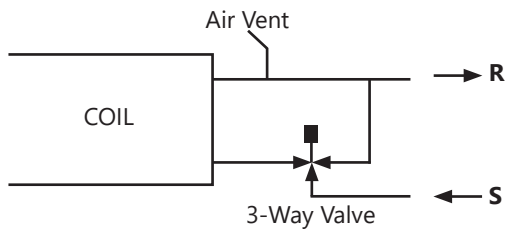
Manual air vents are standard and are factory mounted on all chilled water and hot water coils.

All pre-piped on/off or modulating valve packages are factory assembled with sweat connections.

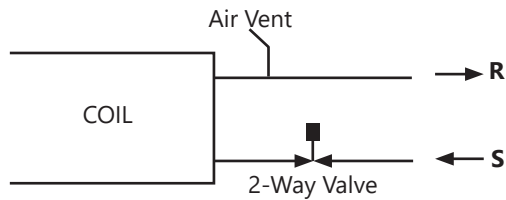
**Ball Valves only, No Control Valve**



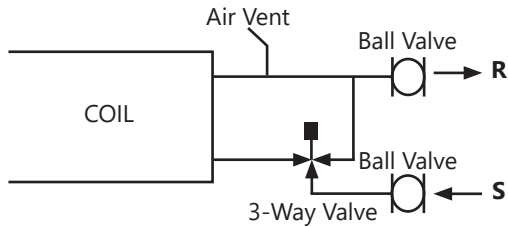
**3-Way Valve, No Ball Valves**



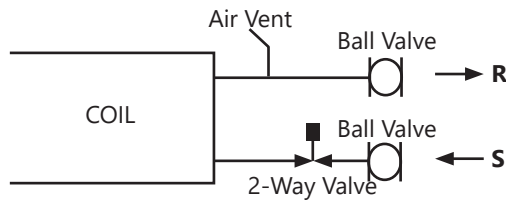
**2-Way Valve, No Ball Valves**



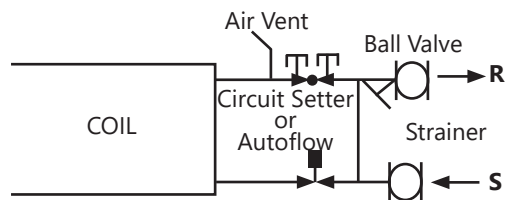
**3-Way Valve, with 2-Ball Valves**



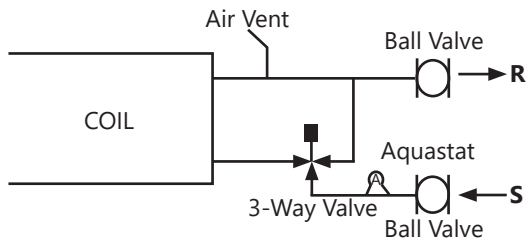
**2-Way Valve with 2-Ball Valves**



**3-Way Valve, with 2-Ball valve and Manual Circuit Setter or Automatic Flow Control, Y-Strainer, PT's**



**3-Way Valve with 2-Ball Valves and Aquastat**



**Add Options:**

Y-Strainers, Pete's Plugs, Cleanout Blow-down, SS hose kits, Aquastats


**Additional options and configurations may be available. Contact factory for availability.**

**Valve packages are available as kits or factory mounted on certain products. Contact factory for availability.**



# HBC SERIES






## CEILING FAN COIL

### ACCESSORIES – VALVE PACKAGES AND ACCESSORIES

| ACTUATOR                    |           |   |
|-----------------------------|-----------|---|
| 2-POSITION (ON-OFF) 50/60HZ |           |   |
| VOLTAGE                     | PART #    | 2-WAY VALVE AND ACTUATOR  |
| 24V                         | E50131180 |  |
| 120/1/60                    | E50132180 |   |

| ACTUATOR – MATERIALS |                |            |                |            |                     |              |                    |              |
|----------------------|----------------|------------|----------------|------------|---------------------|--------------|--------------------|--------------|
| BASE                 | COVER          | BASE PLATE | LEAD LENGTH    | POWER REQ. | AMBIENT TEMP. RANGE | MICRO SWITCH | HUMIDITY           | APPROVALS    |
| POLY-CARBONATE       | POLY-CARBONATE | ALUMINUM   | 6" - (24V 18") | 6.5W, 7 VA | 32°F TO 170°F       | 5 A, 250 V   | 95% NON-CONDENSING | ETL, CuI, CE |

| VALVE BODIES (2-POSITION) / MATERIALS   |                 |                   |        |   |                  |               |                      |                |
|---|-----------------|-------------------|--------|---|------------------|---------------|----------------------|----------------|
| BODY  | STEM            | (2) O-RINGS SEALS | PADDLE | FLUID   | MAX. % OF GLYCOL | TEMP. RANGE   | MAX. STATIC PRESSURE | SWEAT CONN.    |
| BRASS   | STAINLESS STEEL | EPDM              | EPDM   | WATER / GLYCOL  | 50%              | 32°F TO 230°F | 300 PSI              | 1/2", 3/4", 1" |
| E43XXXX 3-WAY   |                 |                   |        | E42XXXX 2-WAY   |                  |               |                      |                |
|  |                 |                   |        |  |                  |               |                      |                |

| VALVE PACKAGE ACCESSORIES   |                         |       |   |
|---|-------------------------|-------|---|
| AUTOMATIC FIXED FLOW CONTROL  |                         |       |   |
| 1/2"  |                         | 3/4"  |   |
| CP654XXXXX  | CP655XXXXX              |       |  |
| PETE'S PLUG   | REQUIRES CP6025 CP61712 |       |   |
| MANUAL ADJUSTMENT FLOW SETTER   |                         |       |   |
| 1/2"  |                         | 3/4"  |   |
| CP601   | CP6011                  |       |  |
| Y-STRAINER (SWEAT)  |                         |       |   |
| 1/2"  |                         | 3/4"  |   |
| CP603   | CP6031                  |       |  |
| BALL VALVES (SWEAT) FULL PORT (T-HANDLE)  |                         |       |   |
| 1/2"  | 3/4"                    | 1"    |   |
| CP9   | CP90                    | CP905 |   |
|  |                         |       |   |
| EXTENDED DRIP LIPS  |                         |       |   |
| 919-1 15"<br>919-1X1ss 15"<br>919-1EXT 19"  |                         |       |  |

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# HBC SERIES

## CEILING FAN COIL

### SPECIFICATION GUIDE

#### PART 1 — GENERAL

##### 1.01 SECTION INCLUDES

A. Fan Coil Units

##### 1.02 REFERENCES

- AMCA 99 – Standards Handbook
- AMCA 210 – Laboratory Methods for Testing Fans for Rating Purposes
- AMCA 300 – Test Code for Sound Rating Air Moving Devices
- ARI 440 – Room Fan-Coil Unit
- ASTMB117 – Standard Practice for Operating Salt Spray Apparatus
- NEMA MGI – Motors and Generators
- NFPA 70 – National Electric Code
- SMACNA – HVAC Duct Construction Standards – Metal and Flexible
- UL 723 – Test for Surface Burning Characteristics of Building Materials
- UL 900 – Test Performance of Air Filter Units
- UL 1995 – Standard for Heating and Cooling Equipment
- UL 94 – Test for Flammability of Plastic Materials for Parts in Devices and Appliances

##### 1.03 SUBMITTALS

A. Shop drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, and electrical characteristics and connection requirements. A computer generated capacity selection shall be submitted for each cooling coil with design points and final operating point clearly noted.

B. Product Data:

1. Provide literature that indicates dimensions, weights, capacities, ratings, fan performance, finishes of materials, and electrical characteristics and connection requirements.
2. Provide data of filter media, filter performance data.
3. Manufacturer's installation instructions.

##### 1.04 OPERATION AND MAINTENANCE DATA

A. Maintenance Data: Include instructions for lubrication, filter replacement and motor and drive replacement.

##### 1.05 QUALIFICATIONS

A. Maintenance Data: Include instructions for lubrication, filter replacement and motor and drive replacement.

##### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Accept products on site on factory-installed shipping skids. Inspect for damage.

B. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.

##### 1.07 ENVIRONMENTAL REQUIREMENTS

A. Do not operate units for any purpose, temporary or permanent, until ductwork is clean, filters are in place, and fan has been test run under observation.

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# HBC SERIES

## CEILING FAN COIL

### SPECIFICATION GUIDE (CONT'D)

#### PART 2 — PRODUCTS

##### 2.01 MANUFACTURERS

A. The following manufacturers are approved for use. No substitutions will be permitted.

1. First Company, Dallas TX

##### 2.02 CASING

A. Unit shall have corrosion resistant casing consisting of galvanized steel panels. Unit panels shall be fully insulated with 1.5lb fiberglass insulation with anti-microbial agent. Removable panels shall provide full access to unit components.

B. Drain pans shall be heavy gauge galvanized steel with an insulating coating. Optional stainless steel drain pan shall include an insulating coating. Drain pans shall be removable for cleaning or replacement without removing coils or disturbing coil connections.

##### 2.03 SUPPLY FAN

A. Provide DWDI forward-curved supply fans. Fan assemblies shall be statically and dynamically balanced by manufacturer. The housings are constructed from heavy gauge galvanized steel with die-formed inlet cones.

B. Fan and motor mounting platform shall be a minimum of 12 gauge LFQ galvanized steel.

##### 2.04 MOTORS

A. Direct drive motors to be PSC or ECM type, permanently lubricated type with internal thermal overload protection and mounted with rubber isolation bushings.

##### 2.05 ELECTRICAL

A. Provide units with 115, 208-240V, or 277V, 3-speed with 24v control transformer, and 15 amp service switch or optional ECM motor with 120/24V control transformer, 15 amp service switch, 3 speed taps. Controls to be factory mounted and tested.

##### 2.07 COOLING AND HEATING COIL SECTIONS

A. Provide access to coils for service and cleaning.

B. Water Coils: fins shall have full drawn collars to provide a continuous surface cover over the entire tube for maximum heat transfer. Tubes shall be mechanically expanded into the fins to provide a continuous primary-to-secondary compression bond over the entire finned length for maximum heat transfer rates. Bare copper tube shall not be visible between fins. Coil tubes shall be seamless copper, expanded into fins, and brazed at joints. Coil connections shall be copper with sweat connection size to be determined by manufacturer based upon the most efficient coil circuiting. Manual air vent connections shall be provided at the highest point to assure proper venting. Coils shall be tested with 350 pounds air pressure and suitable for 300 psig working pressure. Coil casings shall be a formed channel frame of galvanized steel.

##### 2.08 FILTERS

A. Filter to be disposable type and media shall be UL 900 listed, Class I or Class II.

B. MERV 10 can be used as an option, will increase static by 0.25

#### PART 3 — EXECUTION

##### 3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.





*AMERICAN-MADE. FAMILY OWNED.*



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