

"AUTOSPEED 24V" CONTROL



Product Specifications

HYB Series
PHYB Series

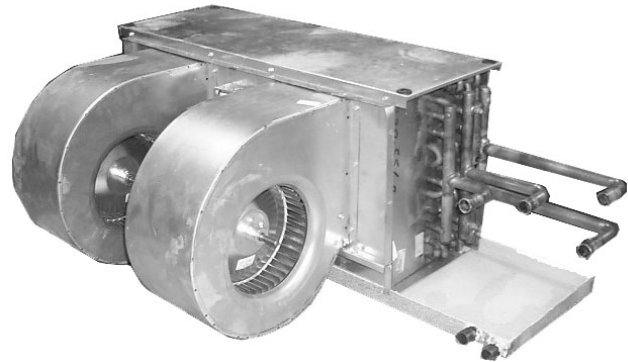
**Lo Boy Horizontal
Hydronic
Fan Coils**
500-2000 CFM

120V/1/60Hz
220-240V/1/50/60Hz
Available in 3, 4, and 5 ton

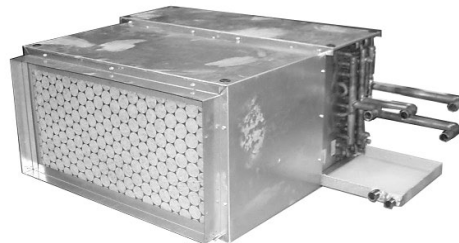
HYB Series Horizontal Concealed
PHYB Series - Horizontal Concealed w/Plenum

"AUTOSPEED 24V" CONTROL PACKAGE (With 24V, Automatic 3-speed fan selection)

- Quiet Operation
- Low Silhouette (16-1/2")
- Compact Design
- Durable Construction
- 4 speed direct drive motors



HYB Series



PHYB Series

TABLE OF CONTENTS

| | |
|--|----|
| Cooling Data..... | 3 |
| Heating Data..... | 4 |
| Capacity Factors..... | 4 |
| HYB Blower Data 120V/1/60Hz..... | 5 |
| PHYB Blower Data 120V/1/60Hz | 5 |
| HYB Blower Data 220-240/1/50/60Hz..... | 6 |
| PHYB Blower Data 220-240/1/50/60Hz | 6 |
| HYB Dimensions / Submittal Data..... | 8 |
| PHYB Dimensions / Submittal Data..... | 8 |
| Valves & Individual Components..... | 9 |
| Optional 24V Control Package..... | 10 |
| Guide Specifications | 11 |

In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice. Maintenance for all First Co. products is available under "Product Maintenance" at www.firstco.com.

COOLING DATA

(P)HYB-3 (3-Row Coil) All capacities are based on nominal CFM.

| COOLING CAPACITY (1000 BTUH) | | | | | | | | | | | | | | | | |
|------------------------------|--------------------|--------------------|------------------|------|------|------------------|------|------|--------------------|--------------------|------------------|------|------|------------------|------|-----|
| MODEL (CFM) | 45° ENTERING WATER | | | | | | | | 42° ENTERING WATER | | | | | | | |
| | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | |
| | | | TH | SH | TR | TH | SH | TR | | | TH | SH | TR | TH | SH | TR |
| 12HYB-3 (1200) | 5 | 2.6 | 30.1 | 24.2 | 12.0 | 23.0 | 21.4 | 9.2 | 6 | 3.6 | 35.5 | 26.2 | 11.8 | 27.1 | 23.0 | 9.0 |
| | 7 | 4.7 | 34.5 | 25.8 | 10.0 | 26.4 | 22.7 | 7.5 | 8 | 6.0 | 39.3 | 27.6 | 9.8 | 30.0 | 24.1 | 7.5 |
| | 9 | 7.4 | 37.3 | 26.9 | 8.3 | 28.5 | 23.5 | 6.3 | 10 | 9.0 | 41.7 | 28.5 | 8.3 | 31.8 | 24.8 | 6.4 |
| 16HYB-3 (1600) | 6 | 1.8 | 37.6 | 31.4 | 12.5 | 32.5 | 32.5 | 10.8 | 7 | 2.4 | 44.1 | 33.8 | 12.6 | 33.7 | 29.8 | 9.6 |
| | 9 | 3.7 | 44.9 | 34.1 | 10.0 | 34.3 | 30.0 | 7.6 | 10 | 4.5 | 50.9 | 36.3 | 10.2 | 38.9 | 31.8 | 7.8 |
| | 12 | 6.3 | 49.4 | 35.8 | 8.2 | 37.8 | 31.3 | 6.3 | 13 | 7.3 | 55.1 | 37.9 | 8.5 | 42.1 | 33.0 | 6.5 |
| 20HYB-3 (2000) | 8 | 2.1 | 54.8 | 39.5 | 11.9 | 35.0 | 35.0 | 8.5 | 10 | 3.2 | 57.5 | 43.1 | 11.5 | 43.9 | 37.9 | 8.8 |
| | 11 | 3.8 | 57.7 | 42.1 | 10.0 | 41.9 | 37.1 | 7.6 | 13 | 5.2 | 63.5 | 45.3 | 9.8 | 48.5 | 39.6 | 7.5 |
| | 14 | 5.9 | 59.7 | 43.9 | 8.5 | 45.6 | 38.5 | 6.5 | 16 | 7.6 | 67.7 | 46.9 | 8.5 | 51.7 | 40.9 | 6.5 |

TH - Total Heat

SH - Sensible Heat

TR - Water Temperature Rise

(P)HYB-4 (4-Row Coil) All capacities are based on nominal CFM.

| COOLING CAPACITY (1000 BTUH) | | | | | | | | | | | | | | | | |
|------------------------------|--------------------|--------------------|------------------|------|------|------------------|------|-----|--------------------|--------------------|------------------|------|------|------------------|------|-----|
| MODEL (CFM) | 45° ENTERING WATER | | | | | | | | 42° ENTERING WATER | | | | | | | |
| | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | |
| | | | TH | SH | TR | TH | SH | TR | | | TH | SH | TR | TH | SH | TR |
| 12HYB-4 (1200) | 6.5 | 5.2 | 39.3 | 29.5 | 12.1 | 30.0 | 25.8 | 9.2 | 7.5 | 6.7 | 45.0 | 31.7 | 12.0 | 34.4 | 27.6 | 9.2 |
| | 8.5 | 8.5 | 42.9 | 30.8 | 10.1 | 32.8 | 26.9 | 7.7 | 9.5 | 10.4 | 48.2 | 32.9 | 10.1 | 36.8 | 28.5 | 7.7 |
| | 11.5 | 14.7 | 45.9 | 32.0 | 8.0 | 35.1 | 27.8 | 6.1 | 13.0 | 18.4 | 51.0 | 34.0 | 8.0 | 39.0 | 29.4 | 6.0 |
| 16HYB-4 (1600) | 8.5 | 4.2 | 51.3 | 38.9 | 12.1 | 39.2 | 34.1 | 9.2 | 10.0 | 5.6 | 59.4 | 41.9 | 11.9 | 45.4 | 36.6 | 9.1 |
| | 11.5 | 7.3 | 57.0 | 41.1 | 9.9 | 43.5 | 35.9 | 7.6 | 13.0 | 9.1 | 64.3 | 43.9 | 9.9 | 49.1 | 38.1 | 7.6 |
| | 15.0 | 11.8 | 61.0 | 42.6 | 8.1 | 46.6 | 37.1 | 6.2 | 17.0 | 14.9 | 68.0 | 45.3 | 8.0 | 51.9 | 39.2 | 6.1 |
| 20HYB-4 (2000) | 10.5 | 4.6 | 62.8 | 48.1 | 12.0 | 48.0 | 42.3 | 9.1 | 12.0 | 5.9 | 72.1 | 51.7 | 12.0 | 55.1 | 45.1 | 9.2 |
| | 14.0 | 7.7 | 69.8 | 50.7 | 10.0 | 53.3 | 44.4 | 7.7 | 16.0 | 9.8 | 79.1 | 54.3 | 9.9 | 60.4 | 47.2 | 7.6 |
| | 19.0 | 13.4 | 75.7 | 53.0 | 8.0 | 57.8 | 46.1 | 6.1 | 21.0 | 16.0 | 84.1 | 56.3 | 8.0 | 64.3 | 48.7 | 6.1 |

TH - Total Heat

SH - Sensible Heat

TR - Water Temperature Rise

(P)HYB-6 (6-Row Coil) All capacities are based on nominal CFM.

| COOLING CAPACITY (1000 BTUH) | | | | | | | | | | | | | | | | |
|------------------------------|--------------------|--------------------|------------------|------|------|------------------|------|-----|--------------------|--------------------|------------------|------|------|------------------|------|-----|
| MODEL (CFM) | 45° ENTERING WATER | | | | | | | | 42° ENTERING WATER | | | | | | | |
| | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | | GPM | P.D. (FT. WTR.) | 80° DB 67° WB | | | 75° DB 63° WB | | |
| | | | TH | SH | TR | TH | SH | TR | | | TH | SH | TR | TH | SH | TR |
| 12HYB-6 (1200) | 8.0 | 10.2 | 48.0 | 33.0 | 12.0 | 36.7 | 28.6 | 9.2 | 9.0 | 12.6 | 54.1 | 35.4 | 12.0 | 41.3 | 30.5 | 9.2 |
| | 10.0 | 15.3 | 50.9 | 34.1 | 10.2 | 38.9 | 29.5 | 7.8 | 11.5 | 19.1 | 57.0 | 36.6 | 9.9 | 43.6 | 31.4 | 7.6 |
| | 13.0 | 24.6 | 53.3 | 35.1 | 8.2 | 40.7 | 30.3 | 6.3 | 14.5 | 30.1 | 59.0 | 37.4 | 8.1 | 45.1 | 32.1 | 6.2 |
| 16HYB-6 (1600) | 10.5 | 7.3 | 63.0 | 43.6 | 12.0 | 48.1 | 37.9 | 9.2 | 12.0 | 9.2 | 71.6 | 47.0 | 11.9 | 54.7 | 40.5 | 9.1 |
| | 13.5 | 11.4 | 67.7 | 45.0 | 10.0 | 51.7 | 39.3 | 7.7 | 15.0 | 13.8 | 75.6 | 48.6 | 10.1 | 57.7 | 41.8 | 7.7 |
| | 18.0 | 19.2 | 71.6 | 47.0 | 8.0 | 54.7 | 40.5 | 6.1 | 20.0 | 23.2 | 79.2 | 50.1 | 7.9 | 60.5 | 42.9 | 6.0 |
| 20HYB-6 (2000) | 12.0 | 9.1 | 77.5 | 54.0 | 11.9 | 59.2 | 46.9 | 9.1 | 14.5 | 11.1 | 87.5 | 58.0 | 12.1 | 66.8 | 50.0 | 9.2 |
| | 17.0 | 14.9 | 83.9 | 56.5 | 9.9 | 64.1 | 48.9 | 7.5 | 19.0 | 18.2 | 93.9 | 60.5 | 9.9 | 71.7 | 52.0 | 7.5 |
| | 22.0 | 23.8 | 88.6 | 58.4 | 8.1 | 67.6 | 50.4 | 6.1 | 24.5 | 29.0 | 98.1 | 62.3 | 8.0 | 74.9 | 53.4 | 6.1 |

TH - Total Heat

SH - Sensible Heat

TR - Water Temperature Rise

HEATING DATA

(P)HYB-3 (3-Row Coil / 2-Pipe)

| HEATING CAPACITY (1000 BTUH) | | | | | | |
|------------------------------|-----|-----------------|----------------------|-------|-------|-------|
| MODEL (CFM) | GPM | P.D. (FT. WTR.) | ENTERING WATER TEMP. | | | |
| | | | 180°F | 160°F | 140°F | 120°F |
| 12HYB-3 (1200) | 7 | 4.7 | 96 | 78 | 61 | 43 |
| | 10 | 9.0 | 100 | 82 | 63 | 45 |
| | 13 | 14.4 | 101 | 83 | 64 | 46 |
| 16HYB-3 (1600) | 10 | 4.5 | 129 | 105 | 82 | 59 |
| | 13 | 7.3 | 133 | 109 | 85 | 60 |
| | 15 | 9.5 | 135 | 110 | 86 | 61 |
| 20HYB-3 (2000) | 12 | 4.5 | 159 | 130 | 101 | 72 |
| | 16 | 7.6 | 165 | 135 | 105 | 75 |
| | 20 | 11.5 | 168 | 137 | 107 | 76 |

NOTES:

1. Ratings at 70 degree entering air temp.
2. Contact factory for capacities at other conditions

(P)HYB-1 (1-Row Coil / 4-Pipe)

| HEATING CAPACITY (1000 BTUH) | | | | | | |
|------------------------------|-----|-----------------|----------------------|-------|-------|-------|
| MODEL (CFM) | GPM | P.D. (FT. WTR.) | ENTERING WATER TEMP. | | | |
| | | | 180°F | 160°F | 140°F | 120°F |
| 12HYB (1200) | 1.0 | 1.8 | 30 | 24 | 19 | 14 |
| | 2.5 | 8.7 | 39 | 32 | 25 | 18 |
| | 4.0 | 19.8 | 42 | 34 | 27 | 19 |
| 16HYB (1600) | 1.0 | 2.5 | 38 | 31 | 24 | 17 |
| | 2.5 | 11.8 | 49 | 40 | 31 | 22 |
| | 4.0 | 26.1 | 54 | 44 | 34 | 24 |
| 20HYB (2000) | 1.0 | 3.1 | 45 | 37 | 29 | 20 |
| | 2.5 | 14.6 | 58 | 47 | 37 | 26 |
| | 4.0 | 32.4 | 65 | 53 | 41 | 30 |

NOTES:

1. Ratings at 70 degree entering air temp.
2. Contact factory for capacities at other conditions

(P)HYB-4 (4-Row Coil / 2-Pipe)

| HEATING CAPACITY (1000 BTUH) | | | | | | |
|------------------------------|-----|-----------------|----------------------|-------|-------|-------|
| MODEL (CFM) | GPM | P.D. (FT. WTR.) | ENTERING WATER TEMP. | | | |
| | | | 180°F | 160°F | 140°F | 120°F |
| 12HYB-4 (1200) | 6 | 4.5 | 107 | 88 | 68 | 49 |
| | 8 | 7.6 | 111 | 91 | 71 | 50 |
| | 10 | 15.9 | 115 | 94 | 73 | 52 |
| 16HYB-4 (1600) | 8 | 3.7 | 142 | 116 | 90 | 64 |
| | 12 | 7.9 | 150 | 123 | 95 | 68 |
| | 15 | 11.8 | 153 | 125 | 97 | 70 |
| 20HYB-4 (2000) | 10 | 4.2 | 176 | 144 | 112 | 80 |
| | 14 | 7.7 | 185 | 151 | 118 | 84 |
| | 18 | 12.2 | 190 | 155 | 121 | 86 |

NOTES:

1. Ratings at 70 degree entering air temp.
2. Contact factory for capacities at other conditions

(P)HYB-2 (2-Row Coil / 4-Pipe)

| HEATING CAPACITY (1000 BTUH) | | | | | | |
|------------------------------|-----|-----------------|----------------------|-------|-------|-------|
| MODEL (CFM) | GPM | P.D. (FT. WTR.) | ENTERING WATER TEMP. | | | |
| | | | 180°F | 160°F | 140°F | 120°F |
| 12HYB (1200) | 4 | 1.5 | 69 | 56 | 44 | 31 |
| | 8 | 5.2 | 77 | 63 | 49 | 35 |
| | 12 | 11.0 | 80 | 65 | 51 | 36 |
| 16HYB (1600) | 8 | 2.7 | 99 | 81 | 63 | 45 |
| | 12 | 5.5 | 105 | 86 | 67 | 48 |
| | 16 | 9.3 | 108 | 88 | 69 | 49 |
| 20HYB (2000) | 12 | 4.1 | 126 | 103 | 80 | 57 |
| | 16 | 6.7 | 131 | 107 | 83 | 60 |
| | 20 | 10.0 | 134 | 110 | 85 | 61 |

NOTES:

1. Ratings at 70 degree entering air temp.
2. Contact factory for capacities at other conditions

(P)HYB-6 (6-Row Coil / 2-Pipe)

| HEATING CAPACITY (1000 BTUH) | | | | | | |
|------------------------------|-----|-----------------|----------------------|-------|-------|-------|
| MODEL (CFM) | GPM | P.D. (FT. WTR.) | ENTERING WATER TEMP. | | | |
| | | | 180°F | 160°F | 140°F | 120°F |
| 12HYB-6 (1200) | 8 | 10.2 | 124 | 101 | 79 | 56 |
| | 10 | 15.3 | 127 | 104 | 81 | 58 |
| | 14 | 28.2 | 130 | 106 | 83 | 59 |
| 16HYB-6 (1600) | 10 | 6.7 | 165 | 135 | 105 | 75 |
| | 14 | 12.2 | 171 | 140 | 109 | 78 |
| | 18 | 19.2 | 174 | 142 | 111 | 79 |
| 20HYB-6 (2000) | 12 | 7.9 | 203 | 166 | 129 | 92 |
| | 17 | 14.9 | 212 | 173 | 135 | 96 |
| | 22 | 23.8 | 216 | 177 | 137 | 98 |

NOTES:

1. Ratings at 70 degree entering air temp.
2. Contact factory for capacities at other conditions

| CFM FACTORS | | | |
|---------------|---------------|------------------|---------|
| % NOMINAL CFM | TOTAL COOLING | SENSIBLE COOLING | HEATING |
| 50 | 0.68 | 0.60 | 0.58 |
| 75 | 0.85 | 0.81 | 0.81 |
| 100 | 1.00 | 1.00 | 1.00 |
| 125 | 1.12 | 1.17 | 1.16 |
| 150 | 1.21 | 1.33 | 1.18 |

HYB Series

| HYB BLOWER DATA (4-row coil) | | | | | | | | | | | |
|------------------------------|-----|-------|--------------------|----------------------|----------------------------------|------|------|------|------|------|------|
| UNIT MODEL | HP | AMPS* | MIN. CKT. AMPACITY | MAX. CKT. PROTECTION | CFM vs. EXTERNAL STATIC PRESSURE | | | | | | |
| | | | | | BLOWER SPEED | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 |
| 12HYB4 | 1/5 | 5.2 | 7 | 15 | HIGH | 1595 | 1510 | 1410 | 1310 | 1180 | 1010 |
| | | | | | MED. HI | 1310 | 1250 | 1190 | 1100 | 1000 | 850 |
| | | | | | MED. LOW | 1010 | 980 | 940 | 860 | 760 | 640 |
| | | | | | LOW | 690 | 640 | 580 | 510 | 440 | 340 |
| 16HYB4 | 1/5 | 5.2 | 7 | 15 | HIGH | 1820 | 1740 | 1660 | 1560 | 1440 | 1300 |
| | | | | | MED. HI | 1420 | 1380 | 1320 | 1260 | 1160 | 1040 |
| | | | | | MED. LOW | 1060 | 1020 | 960 | 900 | 800 | 700 |
| | | | | | LOW | 720 | 660 | 580 | 500 | 400 | 260 |
| 20HYB4 | 1/4 | 8.8 | 12 | 15 | HIGH | 2510 | 2240 | 2260 | 2120 | 1960 | 1760 |
| | | | | | MED. HI | 2040 | 2040 | 1960 | 1850 | 1720 | 1540 |
| | | | | | MED. LOW | 1580 | 1580 | 1540 | 1480 | 1380 | 1180 |
| | | | | | LOW | 1200 | 1190 | 1160 | 1100 | 1010 | 880 |

120V-1PH-60HZ

* Amps is total for (2) motors

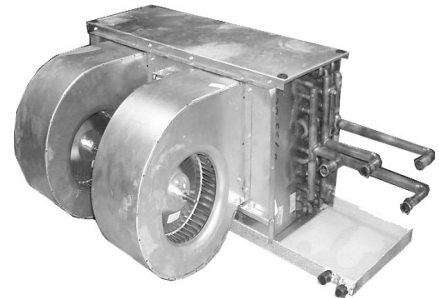
3-row coil - add 0.05 to ESP shown

6-row coil - deduct 0.10 from ESP shown



FEATURES:

1. Manual air vents
2. 4-speed direct drive motors
3. 1/2" copper tubing
4. Primary and secondary condensate drains on one end
5. 120/1/60Hz. motors (2)
6. 3-row and 6-row models available
7. Rubber isolation grommets
8. Insulated and coated drain pan



PHYB Series

| PHYB BLOWER DATA (4-row coil) | | | | | | | | | | | |
|-------------------------------|-----|-------|--------------------|----------------------|----------------------------------|------|------|------|------|------|------|
| UNIT MODEL | HP | AMPS* | MIN. CKT. AMPACITY | MAX. CKT. PROTECTION | CFM vs. EXTERNAL STATIC PRESSURE | | | | | | |
| | | | | | BLOWER SPEED | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 |
| 12PHYB4 | 1/5 | 5.2 | 7 | 15 | HIGH | 1400 | 1320 | 1220 | 1110 | 980 | 820 |
| | | | | | MED. HI | 1220 | 1150 | 1080 | 980 | 860 | 710 |
| | | | | | MED. LOW | 980 | 930 | 860 | 790 | 680 | 560 |
| | | | | | LOW | 600 | 600 | 550 | 490 | 420 | 340 |
| 16PHYB4 | 1/5 | 5.2 | 7 | 15 | HIGH | 1700 | 1620 | 1520 | 1420 | 1290 | 1130 |
| | | | | | MED. HI | 1370 | 1320 | 1260 | 1180 | 1060 | 910 |
| | | | | | MED. LOW | 1030 | 980 | 920 | 850 | 760 | 640 |
| | | | | | LOW | 690 | 630 | 560 | 480 | 380 | 230 |
| 20PHYB4 | 1/4 | 8.8 | 12 | 15 | HIGH | 2160 | 2160 | 2020 | 1880 | 1720 | 1520 |
| | | | | | MED. HI | 2000 | 1900 | 1800 | 1680 | 1520 | 1310 |
| | | | | | MED. LOW | 1570 | 1520 | 1470 | 1380 | 1240 | 1000 |
| | | | | | LOW | 1170 | 1140 | 1100 | 1040 | 940 | 800 |

120V-1PH-60HZ

* Amps is total for (2) motors

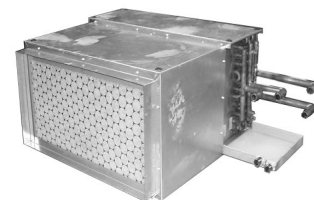
3-row coil - add 0.05 to ESP shown

6-row coil - deduct 0.10 from ESP shown



FEATURES:

1. Manual air vents
2. 4-speed direct drive motors
3. 1/2" copper tubing
4. Primary and secondary condensate drains on one end
5. Return air plenum - field convertible from end return to bottom return
6. Throw away filter
7. 120/1/60Hz. motors (2)
8. 3-row and 6-row models available
9. Rubber isolation grommets
10. Insulated and coated drain pan



HYB Series (50/60Hz.)

| HYB50 BLOWER DATA (4-row coil) | | | | | | | | | | | |
|--------------------------------|-----|-------|----------------------------------|----------------------|--------------|------|------|------|------|------|------|
| UNIT MODEL | HP | AMPS* | CFM vs. EXTERNAL STATIC PRESSURE | | | | | | | | |
| | | | MIN. CKT. AMPACITY | MAX. CKT. PROTECTION | BLOWER SPEED | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 |
| 12HYB-4 | 1/5 | 4.4 | 7 | 15 | HIGH | 1600 | 1540 | 1470 | 1410 | 1340 | 1250 |
| | | | | | MED. HI | 1280 | 1220 | 1170 | 1110 | 1040 | 970 |
| | | | | | MED. LOW | 1000 | 940 | 880 | 820 | 750 | 680 |
| | | | | | LOW | 670 | 610 | 540 | 470 | 400 | 320 |
| 16HYB-4 | 1/5 | 4.4 | 7 | 15 | HIGH | 1820 | 1770 | 1710 | 1650 | 1580 | 1480 |
| | | | | | MED. HI | 1350 | 1300 | 1230 | 1150 | 1060 | |
| | | | | | MED. LOW | 1040 | 960 | 890 | 810 | 720 | |
| | | | | | LOW | 640 | 550 | 460 | 360 | 260 | |
| 20HYB-4 | 1/4 | 6.0 | 12 | 15 | HIGH | 2340 | 2340 | 2250 | 2150 | 2040 | 1920 |
| | | | | | MED. HI | 1830 | 1830 | 1760 | 1680 | 1580 | 1480 |
| | | | | | MED. LOW | 1500 | 1500 | 1440 | 1360 | 1260 | 1160 |
| | | | | | LOW | 1140 | 1140 | 1060 | 960 | 880 | 760 |

220-240V-1PH-50/60Hz

3-row coil - add 0.05 to ESP shown

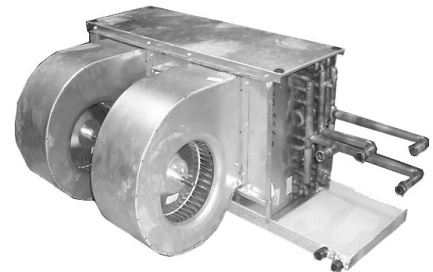
* Amps is total for (2) motors

6-row coil - deduct 0.10 from ESP shown



FEATURES:

1. Manual air vents
2. 4-speed direct drive motors
3. 1/2" copper tubing
4. Primary and secondary condensate drains on one end
5. 220-240/1/50/60Hz. motors (2)
6. 3-row and 6-row models available
7. Rubber isolation grommets
8. Insulated and coated drain pan



PHYB Series (50/60Hz. with plenum)

| HYB50 BLOWER DATA (4-row coil) | | | | | | | | | | | |
|--------------------------------|-----|-------|--------------------|----------------------|----------------------------------|------|------|------|------|------|------|
| UNIT MODEL | HP | AMPS* | MIN. CKT. AMPACITY | MAX. CKT. PROTECTION | CFM vs. EXTERNAL STATIC PRESSURE | | | | | | |
| | | | | | BLOWER SPEED | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 |
| 12PHYB-4 | 1/5 | 4.4 | 7 | 15 | HIGH | 1500 | 1440 | 1370 | 1300 | 1220 | 1130 |
| | | | | | MED. HI | 1230 | 1180 | 1120 | 1060 | 990 | 900 |
| | | | | | MED. LOW | 970 | 920 | 860 | 800 | 720 | 650 |
| | | | | | LOW | 650 | 580 | 520 | 450 | 390 | 320 |
| 16PHYB-4 | 1/5 | 4.4 | 7 | 15 | HIGH | 1730 | 1690 | 1610 | 1530 | 1440 | 1330 |
| | | | | | MED. HI | 1350 | 1300 | 1220 | 1150 | 1070 | 960 |
| | | | | | MED. LOW | 1050 | 990 | 920 | 850 | 770 | 670 |
| | | | | | LOW | 700 | 630 | 540 | 460 | 370 | 290 |
| 20PHYB-4 | 1/4 | 6.0 | 12 | 15 | HIGH | 2240 | 2140 | 2030 | 1930 | 1810 | 1680 |
| | | | | | MED. HI | 1830 | 1740 | 1650 | 1550 | 1430 | 1300 |
| | | | | | MED. LOW | 1530 | 1450 | 1370 | 1280 | 1180 | 1070 |
| | | | | | LOW | 1160 | 1080 | 990 | 900 | 800 | 680 |

220-240V-1PH-50/60Hz

3-row coil - add 0.05 to ESP shown

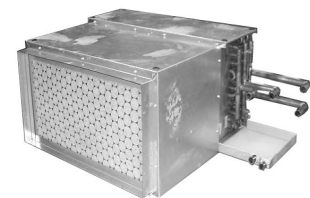
* Amps is total for (2) motors

6-row coil - deduct 0.10 from ESP shown



FEATURES:

1. Manual air vents
2. 4-speed direct drive motors
3. 1/2" copper tubing
4. Primary and secondary condensate drains on one end
5. Return air plenum - field convertible from end return to bottom return
6. Throw away filter
7. 220-240V/1/50/60Hz. motors (2)
8. 3-row and 6-row models available
9. Rubber isolation grommets
10. Insulated and coated drain pan



NOTES:

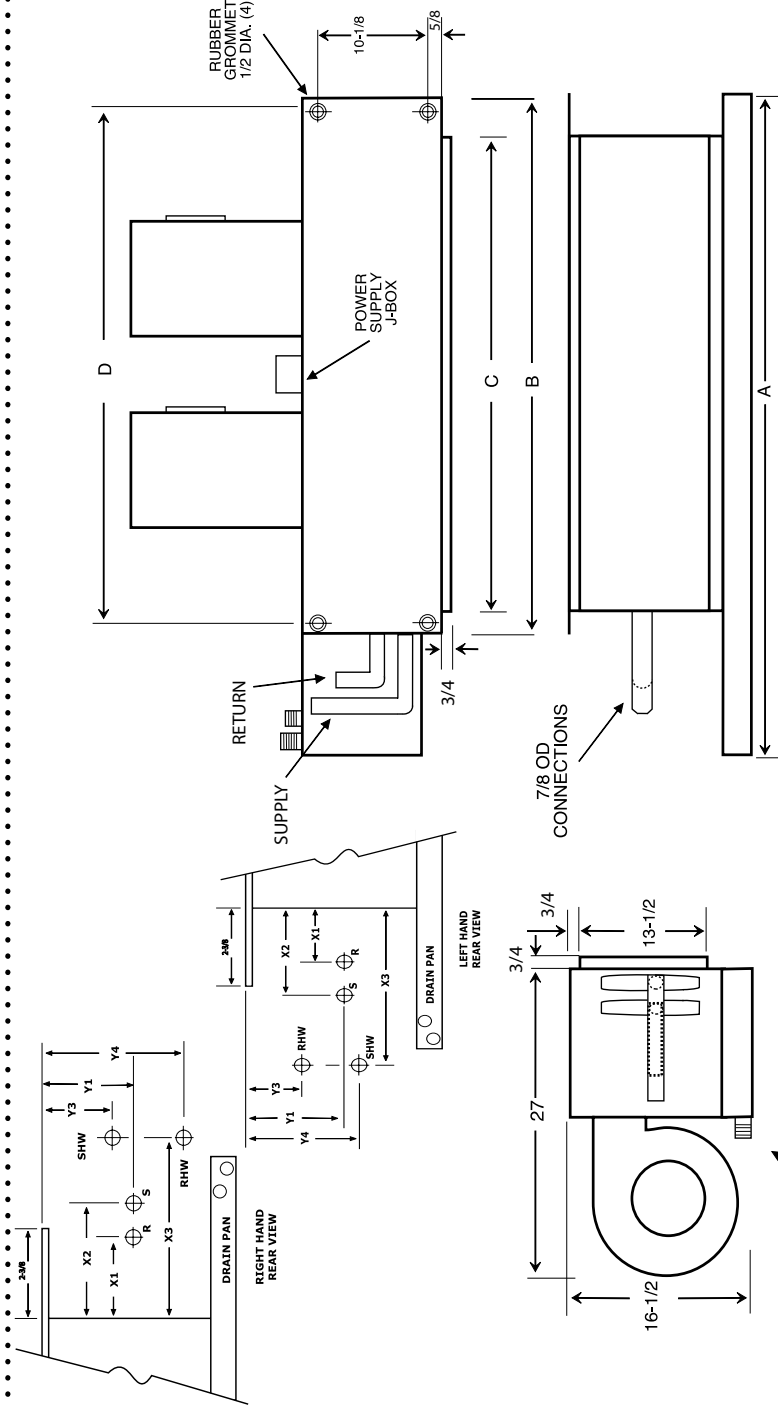
- 1) ALL DIMENSIONS IN INCHES.
- 2) COIL CONNECTION TOLERANCE $\pm 1/4"$.
- 3) RIGHT HAND UNIT SHOWN, LEFT HAND MIRROR IMAGE.

- 1. Manual air vents
- 2. 4-speed direct drive motors
- 3. 1/2" copper tubing
- 4. Primary and secondary condensate drains on one end
- 5. 3-row and 6-row models available
- 6. Rubber isolation grommets
- 7. Insulated and coated drain pan



| SHIPPING WEIGHTS | |
|------------------|---------------|
| MODEL | WEIGHT (lbs.) |
| 12HYB | 105 |
| 16HYB | 150 |
| 20HYB | 160 |

| GENERAL DIMENSIONS | | | | |
|--------------------|----|--------|----|--------|
| MODEL | A | B | C | D |
| 12HYB | 41 | 32-1/2 | 28 | 31-1/4 |
| 16HYB | 51 | 42-1/2 | 38 | 41-1/4 |
| 20HYB | 60 | 51-1/2 | 47 | 50-1/4 |



| HYB PIPE LOCATIONS | | | | | |
|--------------------|-------|--------|-------|--------|--------|
| RIGHT HAND | X1 | Y1 | X2 | Y3 | Y4 |
| 3 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 4 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 6 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 3/1 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 5-7/16 |
| 3/2 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |
| 4/1 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |
| 4/2 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |

| HYB PIPE LOCATIONS | | | | | |
|--------------------|-------|--------|-------|--------|--------|
| LEFT HAND | X1 | Y1 | X2 | Y3 | Y4 |
| 3 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 4 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 6 ROW | 5-1/4 | 7-9/16 | 8-1/4 | --- | --- |
| 3/1 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 5-7/16 |
| 3/2 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |
| 4/1 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |
| 4/2 ROW | 5-1/4 | 7-9/16 | 8-1/4 | 13-1/4 | 6-1/16 |

PRODUCT DRAWING
 FAN COIL UNITS
 MODEL **HYB**
 NOT FOR CONSTRUCTION

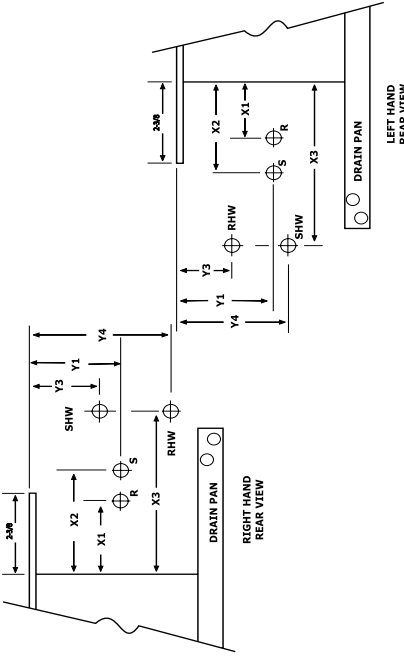
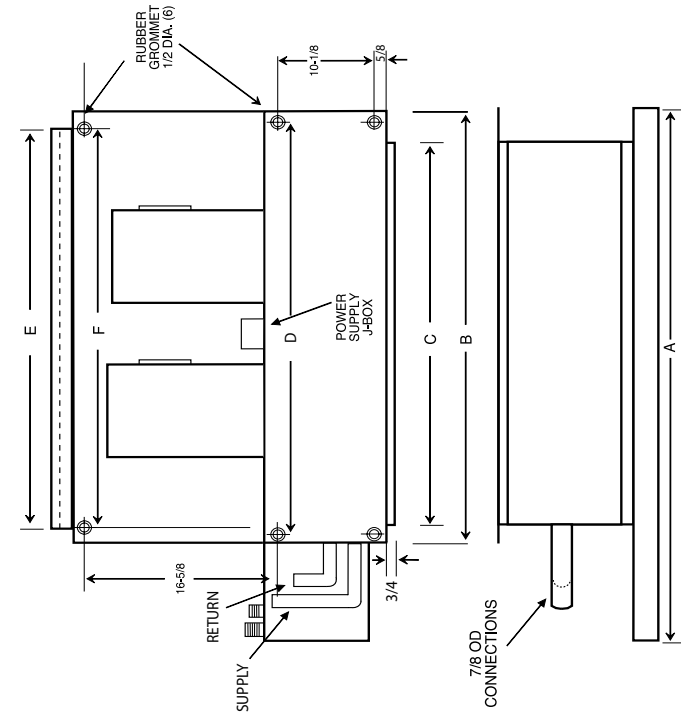
Project Name: _____
 Location: _____
 Engineer: _____
 Contractor: _____
 For: REFERENCE

Sold To: _____
 Cust Purch Order #: _____

Quote Date: _____
 Rev. Date: _____
 Form No.: _____
 Dwg. Lev.: _____
 Dwg. Scale: NTS



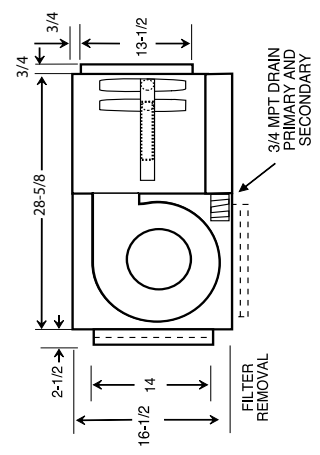
- NOTES:**
 1) ALL DIMENSIONS IN INCHES.
 2) COIL CONNECTION TOLERANCE $\pm 1/4"$.
 3) RIGHT HAND UNIT SHOWN, LEFT HAND MIRROR IMAGE.



| GENERAL DIMENSIONS | | | | | | |
|--------------------|----|--------|----|--------|--------|----|
| MODEL | A | B | C | D | E | F |
| 12PHYB | 41 | 32-1/2 | 28 | 31-1/4 | 28-1/4 | 28 |
| 16PHYB | 51 | 42-1/2 | 38 | 41-1/4 | 38-1/4 | 38 |
| 20PHYB | 60 | 51-1/2 | 47 | 50-1/4 | 47-1/4 | 47 |

| SHIPPING WEIGHTS | |
|------------------|---------------|
| MODEL | WEIGHT (lbs.) |
| 12PHYB | 125 |
| 16PHYB | 170 |
| 20PHYB | 180 |

- Manual air vents
- 4-speed direct drive motors
- 1/2" copper tubing
- Primary and secondary condensate drains on one end
- Return air plenum - field convertible from end return to bottom return
- Throwaway filter
- 3-row and 6-row models available
- Rubber isolation grommets
- Insulated and coated drain pan



| PHYB PIPE LOCATIONS | | | | | | |
|---------------------|-------|-------|--------|--------|---------|--|
| RIGHT HAND | X1 | X2 | X3 | Y3 | Y4 | |
| 3 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 4 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 6 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 3/1 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 5-7/16 | 9-11/16 | |
| 3/2 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |
| 4/1 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |
| 4/2 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |

| PHYB PIPE LOCATIONS | | | | | | |
|---------------------|-------|-------|--------|--------|--------|--|
| LEFT HAND | X1 | X2 | X3 | Y3 | Y4 | |
| 3 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 4 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 6 ROW | 5-1/4 | 8-1/4 | --- | --- | --- | |
| 3/1 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 5-7/16 | 8-7/16 | |
| 3/2 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |
| 4/1 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |
| 4/2 ROW | 5-1/4 | 8-1/4 | 13-1/4 | 6-1/16 | 9-1/16 | |

- Project Name:
- Location:
- Engineer:
- Contractor:
- For: REFERENCE

- Sold To:
- Cust Purch Order #:

- Quote Date:
- Rev. Date:
- Form No.:
- Dwg. Lev.:
- Dwg. Scale: NTS

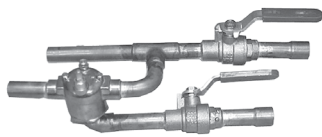
PRODUCT DRAWING
 FAN COIL UNITS
 MODEL PHYB
 NOT FOR CONSTRUCTION



VALVE CLUSTERS AND INDIVIDUAL COMPONENTS: (field installed)

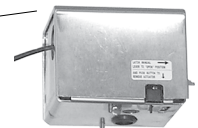
Assembled Valve Clusters: (factory-assembled and field installed) Components are factory piped together (**order power heads separately**). Contact factory for other valve clusters.

| | Right Hand | Left Hand | Description (all 3/4") - For HYB,PHYB |
|---|--|--|--|
| 2 pipe | 9VBR2BV | 9VBL2BV | 2-pipe, 2 hand valves only |
| | 9VBR2BC | 9VBL2BC | 2-pipe, 1 hand valve and circuit setter |
| | 9VBR22B | 9VBL22B | 2-pipe, one 2-way valve body and 2 hand valves |
| | 9VBR22C | 9VBL22C | 2-pipe, one 2-way valve body, 1 hand valve and circuit setter |
| | 9VBR23B | 9VBL23B | 2-pipe, one 3-way valve body and 2 hand valves |
| | 9VBR23D | 9VBL23D | 2-pipe, one 3-way valve body, 2 hand valves and aquastat |
| | 9VBR23C | 9VBL23C | 2-pipe, one 3-way valve body, 1 hand valve and circuit setter |
| | 9VBR23BC | 9VBL23BC | 2-pipe, one 3-way valve body and 3 hand valves |
| | 9VBR23DC | 9VBL23DC | 2-pipe, one 3-way valve body, 3 hand valves and aquastat |
| 4 pipe | 9VBR4BV | 9VBL4BV | 4-pipe, 4 hand valves only |
| | 9VBR42B | 9VBL42B | 4-pipe, two 2-way valve bodies and 4 hand valves |
| | 9VBL42C | 9VBL42C | 4-pipe, two 2-way valve bodies, 2 hand valves and 2 circuit setters |
| | 9VBR43B | 9VBL43B | 4-pipe, two 3-way valve bodies and 4 hand valves |
| | 9VBR43BC | 9VBL43BC | 4-pipe, two 3-way valve bodies and 6 hand valves |
| Power Heads: (two power heads required for 4-pipe) - For all units | | | |
| E50131180 E50132180 E50137180 E50138180 | | 24V 110V/50Hz - 120V/60 Hz 277V 220V/50 Hz – 230V/60 Hz | |
| Separate Valve Bodies: (order power heads separately) | | | |
| E421317 E431317 | 3/4" 2-way - For HYB, PHYB 3/4" 3-way - For HYB, PHYB | | |
| Hand Valves: (Combination balance / shut-off) (2 usually req'd per coil) | | | |
| CP90 | 3/4" | | |
| Circuit setters and Strainers | | | |
| CP6011 CP6031 | 3/4" Circuit setter (Taco) 3/4" Strainer (Kitz) | | |
| 945-8 | Disconnect (120V) | | |



Assembled Valve Cluster (3-way)

Power Head



Valve Body



CP90

The “Autospeed 24V™ “ Control Package

All HBC/PHBC/RHBC/CHBC fan coils are now available with the “Autospeed 24V™ “ control package option.

The new Autospeed 24V™ thermostat (part #'s **T200** and **T201**) provides 24V AC single stage temperature control of 2 pipe and 4 pipe fan coil applications. The **T200/T201** thermostat offers maximum comfort and efficiency by automatically selecting the appropriate High, Medium, or Low fan speed, depending on room temperature and thermostat temperature setting. This automatic fan speed control not only brings the room temperature to the desired set point quickly, it maintains the room temperature with the most efficient fan speed selection. Once the desired room temperature is achieved the fan coil operates on low speed for extremely quiet operation.

The fan coil **control board** is a circuit board that provides control of a 3-speed line voltage (120, 208-240, or 277V), (50 or 60 cycle) fan motor. The control board allows the thermostat to control the fan motor even though, by itself, the thermostat does not have the current or voltage rating capability to control the fan motor.

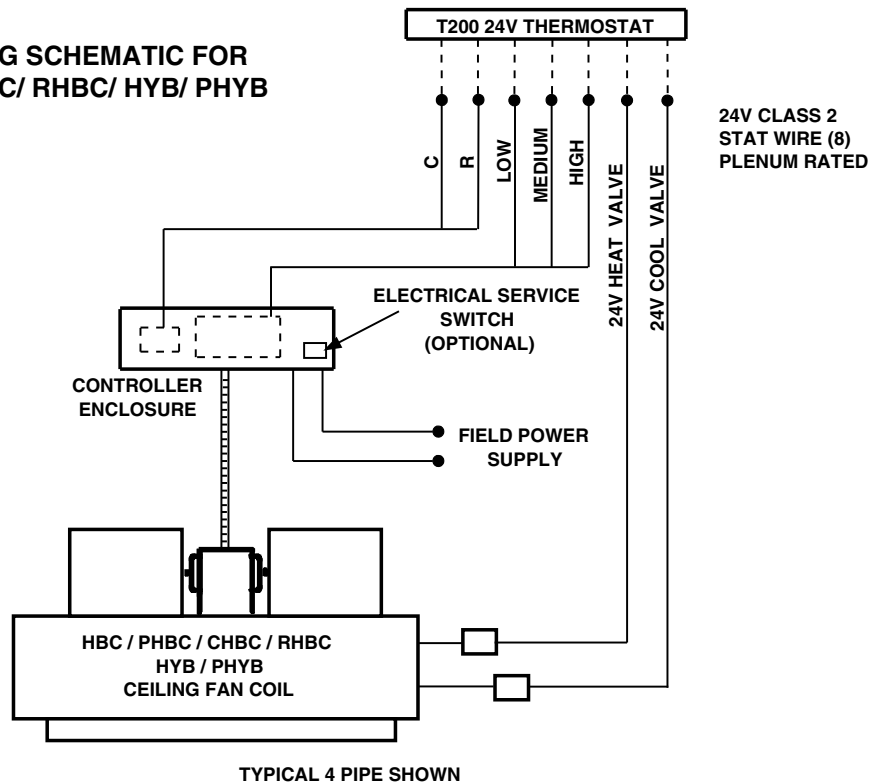
With the “Autospeed 24V™ “ option, a “Controller Enclosure” is factory installed on each fan coil, which includes the control board, transformer, and service switch.

Continuous or Fan-Cycle operation

T200 = Manual Changeover

T201 = Automatic Changeover

TYPICAL WIRING SCHEMATIC FOR HBC/ PHBC/ CHBC/ RHBC/ HYB/ PHYB



Guide Specifications - Lo Boy Fan Coils

Furnish and install First Co. horizontal fan coils as indicated on the plans and specifications. Types, sizes, and performance shall be as indicated in the schedule.

Basic Unit

All units shall be manufactured with heavy gauge galvanized steel to resist corrosion.

All piping, drain, and wiring connections shall be readily accessible. Mounting holes with rubber grommets shall be provided to save installation time and expense.

Electrical Box

Unit shall have an electrical box providing a single location for line voltage field wiring connections.

Coils

Coils shall have high efficiency aluminum fins with mechanically expanded 1/2" O.D. copper tubes. All coils shall have a manual air vent. Coil performance shall be as indicated in the schedule.

Fan Assembly

Fans shall be centrifugal, forward curved, and dynamically balanced for smooth, quiet operation. Fan housings shall be fabricated of heavy gauge galvanized steel and be easily removed, thus allowing complete service access to the fans and motors.

Motors

All units shall have (120/1/60) (220-240V/1/50/60Hz) four speed motors with permanently lubricated sleeve bearings, permanent split capacitor, inherent thermal overload protection with automatic reset, and resilient rubber motor mounts.

Drain Pan

Drain pans shall be insulated to prevent sweating. Drain pans shall be coated to reduce corrosion. Threaded primary and secondary drain connections shall be factory installed.

Return Plenum / Filter

All **PHYB** models shall have factory installed return air plenums. These plenums shall be capable of being field converted from end return to bottom return. One inch throwaway filters shall be installed within the plenums.

