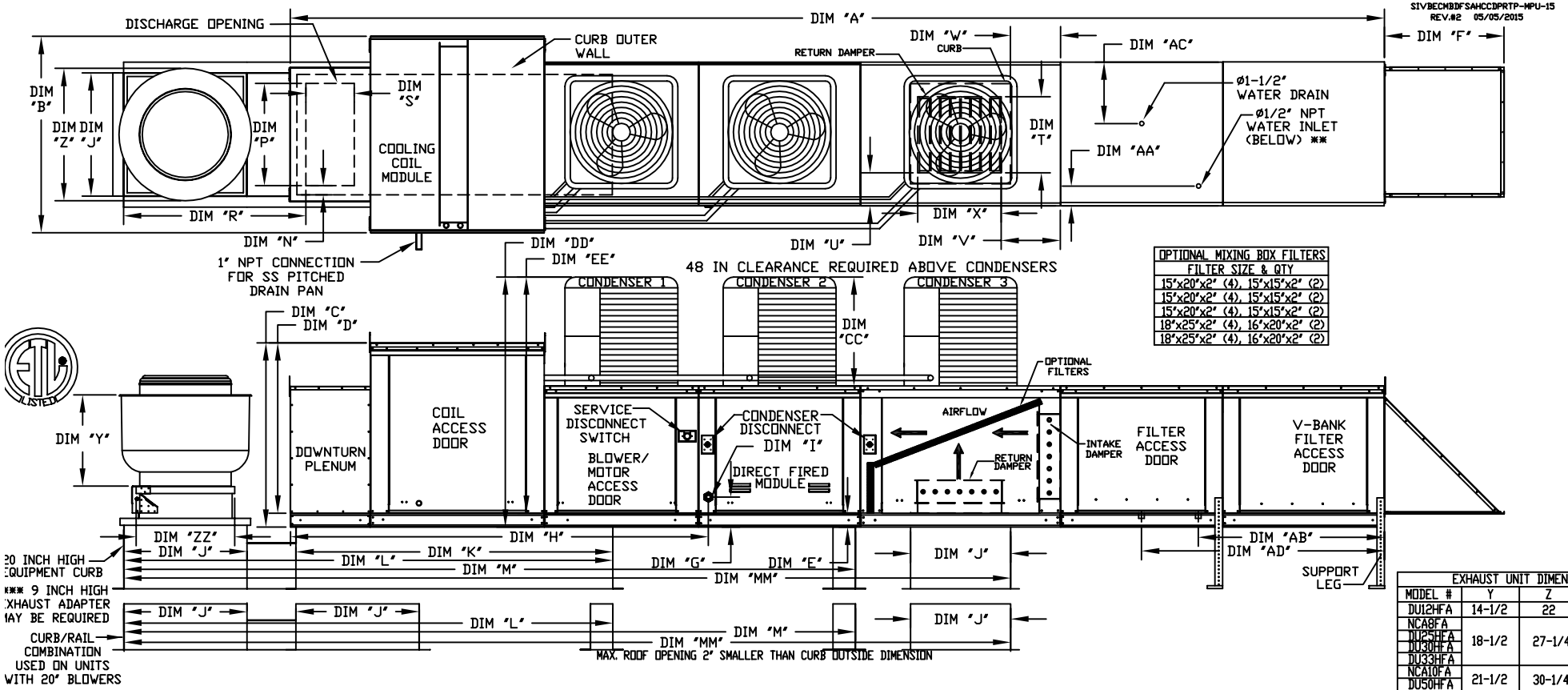
# MODULAR OUTDOOR DOWN DISCHARGE DIRECT FIRED RECIRCULATING HEATER-ROOF TOP PACKAGE WITH COOLING, EVAPORATIVE COOLER INTAKE, V-BANK AND SCREEN INTAKE

SIVBECMBIDFSAHCCDPRTP-MPU-15
REV.#2 05/05/2015




| OPTIONAL MIXING BOX FILTERS |
|---|
| FILTER SIZE & QTY |
| 15"x20"x2" (4), 15"x15"x2" (2) |
| 15"x20"x2" (4), 15"x15"x2" (2) |
| 15"x20"x2" (4), 15"x15"x2" (2) |
| 18"x25"x2" (4), 16"x20"x2" (2) |
| 18"x25"x2" (4), 16"x20"x2" (2) |

| EXHAUST UNIT DIMENSIONS | | | |
|---|---|---|---|
| MODEL # | Y | Z | ZZ *** |
| DU12HFA | 14-1/2 | 22 | 19 |
| NCA8FA<br>DU25HFA<br>DU30HFA<br>DU33HFA | 18-1/2 | 27-1/4 | 21 |
| NCA10FA<br>DU50HFA | 21-1/2 | 30-1/4 | 21 |
| NCA14FA<br>DU75HFA<br>DU85HFA | 23 | 33-3/4 | 24-3/4 |
| NCA16FA | 23-1/2 | 39-3/8 | 28 |
| NCA18FA | 29-1/2 | 38-7/8 | 28 |
| NCA24FA | 30-5/8 | 43-3/8 | 33 |
| NCA30FA | 33-1/2 | 52-3/4 | 40 |

| | UNIT DIMENSIONS | | | | | | | CURB/RAIL | | | | | DISCHARGE OPENING | | | | RETURN DAMPER OPENING | | | | | WATER INLET | | DRAIN OPENING | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | A | B | C | D | E | F | G | H | J | K | L | M | MM | N | P | R | S | T | U | V | W | X | AA | AB | AC | AD |
| D.500-G18 | 272-3/4 | 54-3/8 | 56-3/8 | 51-1/8 | 5-1/4 | 34-3/16 | 9-1/2 | 114-7/16 | 35 | 84 | 133 | 199-5/8 | 239-1/16 | 6-5/16 | 22-3/8 | 49-1/2 | 18 | 28 | 8 | 7 | 4-1/2 | 30 | 4-1/2 | 44 | 20 | 57-1/4 |
| D.750-G18 | 272-3/4 | 54-3/8 | 56-3/8 | 51-1/8 | 5-1/4 | 34-3/16 | 9-1/2 | 114-7/16 | 35 | 84 | 133 | 199-5/8 | 239-1/16 | 6-5/16 | 22-3/8 | 49-1/2 | 18 | 28 | 8 | 7 | 4-1/2 | 30 | 4-1/2 | 44 | 20 | 57-1/4 |
| D.1000-G18 | 272-3/4 | 54-3/8 | 56-3/8 | 51-1/8 | 5-1/4 | 34-3/16 | 9-1/2 | 114-7/16 | 35 | 84 | 133 | 199-5/8 | 239-1/16 | 6-5/16 | 22-3/8 | 49-1/2 | 18 | 28 | 8 | 7 | 4-1/2 | 30 | 4-1/2 | 44 | 20 | 57-1/4 |
| D.1000-920 | 327-1/4 | 60-7/16 | 64-3/8 | 59-1/8 | 5-1/4 | 47-1/4 | 13-9/16 | 151 | 42 | 115-3/16 | 171-3/16 | 255-7/8 | 303-7/8 | 5-1/4 | 31-1/2 | 56-13/16 | 23-1/2 | 33 | 10 | 11 | 8 | 36 | 4-1/2 | 41-1/8 | 23-1/2 | 52-7/8 |
| D.1500-920 | 327-1/4 | 60-7/16 | 64-3/8 | 59-1/8 | 5-1/4 | 47-1/4 | 13-9/16 | 151 | 42 | 115-3/16 | 171-3/16 | 255-7/8 | 303-7/8 | 5-1/4 | 31-1/2 | 56-13/16 | 23-1/2 | 33 | 10 | 11 | 8 | 36 | 4-1/2 | 41-1/8 | 23-1/2 | 52-7/8 |

UNIT INFORMATION.

| | BTU RANGE (MBH) | | | GAS PRESSURE | | GAS CONNECTION | TONNAGE RANGE | | FILTERS | |
|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | BURNER LENGTH | BTU LOW | BTU HIGH | MIN | MAX | "I" (NPT) | MIN | MAX | FILTER SIZE & QTY | MAX. FILTER VELOCITY |
| D.500-G18 | 12" | 18 | 550 | 7" WC | 14" WC | 1 | 15 Ton | 15 Ton | 20"x25"x2" (8) | @8000 CFM = 348 FPM |
| D.750-G18 | 18" | 27.5 | 825 | 7" WC | 14" WC | 1 | 15 Ton | 15 Ton | 20"x25"x2" (8) | @8000 CFM = 348 FPM |
| D.1000-G18 | 24" | 36.6 | 1100 | 7" WC | 14" WC | 1 | 15 Ton | 15 Ton | 20"x25"x2" (8) | @8000 CFM = 348 FPM |
| D.1000-920 | 24" | 36.6 | 1100 | 7" WC | 5 PSI | 1-1/4 | 15 Ton | 15 Ton | 16"x20"x2" (15) | @13000 CFM = 495 FPM |
| D.1500-920 | 30" | 45.8 | 1375 | 7" WC | 5 PSI | 1-1/4 | 15 Ton | 15 Ton | 16"x20"x2" (15) | @13000 CFM = 495 FPM |

ALL DIMENSIONS ARE NOMINAL AND GIVEN IN INCHES.

| STANDARD EVAPORATIVE COOLING UNIT | | | | | |
|---|---|---|---|---|---|
| TOT. WEIGHT | MEDIA SIZE & QTY | VEL. @ MAX. CFM | NOZZLES | MAX. FLOW RATE |
| 2260 LBS | 20"x25"x2" (8) | 348 FPM | 14 | 7 GPH |
| 2265 LBS | 20"x25"x2" (8) | 348 FPM | 14 | 7 GPH |
| 2270 LBS | 20"x25"x2" (8) | 348 FPM | 14 | 7 GPH |
| 3535 LBS | 16"x20"x2" (15) | 572 FPM | 24 | 12 GPH |
| 3550 LBS | 16"x20"x2" (15) | 572 FPM | 24 | 12 GPH |

*ADD CONDENSING UNIT WEIGHT TO WEIGHT IN TABLE ABOVE

| CELDEK EVAPORATIVE COOLING UNIT | | | | |
|---|---|---|---|---|
| TOT. WEIGHT | MEDIA SIZE & QTY | VEL. @ MAX. CFM | NOZZLES | MAX. FLOW RATE |
| 2250 LBS | 30"x36"x12" | 1067 FPM | 28 | 8.4 GPH |
| 2255 LBS | 30"x36"x12" | 1067 FPM | 28 | 8.4 GPH |
| 2260 LBS | 30"x36"x12" | 1067 FPM | 28 | 8.4 GPH |
| 3505 LBS | 38"x43"x12" | 1322 FPM | 35 | 10.15 GPH |
| 3520 LBS | 38"x43"x12" | 1322 FPM | 35 | 10.15 GPH |

**MAX. EVAP WATER PRESSURE = 50 PSI @ 70 DEG. F

| CONDENSER INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|
| MODEL | WEIGHT* | TONNAGE | | | CC | DD | EE |
| | | #1 | #2 | #3 | | | |
| 15 TON-G18 | 588 LBS | 5 TON | 5 TON | 5 TON | 29-15/16 | 73-5/16 | 68-1/16 |
| 15 TON-920 | 588 LBS | 5 TON | 5 TON | 5 TON | 29-15/16 | 94-5/16 | 89-1/16 |

R410A REFRIGERANT

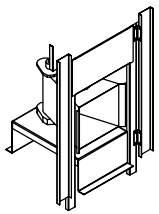
**Direct Fired Profile Plate Specifications:**

**Description:**
Direct fired burners shall have patented (US Patent No: US6629523B2), self-adjusting profile plates designed to ensure proper air velocity and pressure drop across the burner. Profile plates shall allow burners to achieve clean combustion by limiting by-product levels to a maximum of 5ppm of carbon monoxide (CO), and 0.5ppm of nitrogen dioxide (NO2).

**Application:**
Spring-loaded burner profile plates are engineered to automatically react to the momentum of a fresh air stream, without the need for any motors or actuators to mechanically adjust them. With this feature, all DF units are designed for demand control ventilation (DCV) requirements.

**Certifications:**
All profile plate assemblies shall be included in the DF unit's ETL listing and comply with combined safety standards ANSI Z83.4 and CSA 3.7 (non-recirculating DF heaters) and ANSI Z83.18 (recirculating DF heaters).

**General Construction:**
-Profile plates shall be formed from G90 galvanized steel.
-Profile plates shall vary in size per unit.
-Profile plates shall be mounted along the same plane as the discharge of the burner.
-Design shall incorporate properly torqued, permanently mounted spring hinges.
-Spring hinges shall be made from plated steel.



Direct Fired (DF) Profile Plate Assembly