

# AIR HANDLER DESIGN WORK SHEET

JOB \_\_\_\_\_ Project: \_\_\_\_\_ Date \_\_\_\_\_

Representative \_\_\_\_\_

Unit Model \_\_\_\_\_ No. of Units \_\_\_\_\_ Unit Tag(s) \_\_\_\_\_

## UNIT CONSTRUCTION

UNIT ARRANGEMENT: [HORIZ VERT] [INDOOR OUTDOOR] [BASE MTD CEILING HUNG CURB MTD]

CURB: BY OTHERS BY THERMAL CURB STYLE: STD DWL W/ INS SEISMIC (OUTSOURCED) CURB HEIGHT: \_\_\_\_\_

UNIT CONSTRUCTION: CF-SERIES (WELDED & FORMED FRAME, NO THERMAL BREAK)

F-SERIES (SCREWED & FORMED FRAME, THERMAL BREAK)

T-SERIES (WELDED & STRUCTURAL FRAME, THERMAL BREAK)

TS-SERIES (SCREWED & EXTRUDED FRAME, 100% THERMAL BREAK)

D-SERIES (LIMITED SCREWS ON EXTERIOR, FORMED FRAME, THERMAL BREAK)

SPECIAL (EXPLAIN) \_\_\_\_\_

EXTERIOR PANEL: 18 GA. 16 GA. 14 GA. OTHER \_\_\_\_\_

EXTERIOR METAL TYPE: G90 GALV. [STAINLESS STEEL: 304 316] ALUMINUM

INSULATION: R VALUE \_\_\_\_\_ INCHES THICK \_\_\_\_\_ TYPE: [FIBERGLASS: 1.5# 3#] FOAM NONE

FLOOR: MIN \_\_\_\_\_ GA STEEL CHECKER PLATE ALUMINUM CHECKER PLATE OTHER \_\_\_\_\_

LINER: NONE (CF-SERIES ONLY) SOLID (20 GA) LOCATION (SECTION) \_\_\_\_\_ PERF. (20 GA) LOCATION \_\_\_\_\_

EXTERIOR PAINT FINISH: NONE EPOXY POLYURETHANE OTHER \_\_\_\_\_ SPECIAL COLOR \_\_\_\_\_

INTERNAL PAINT FINISH: NONE EPOXY POLYURETHANE OTHER \_\_\_\_\_ SPECIAL COLOR \_\_\_\_\_

## INLET/OUTLETS

SUPPLY AIR DISCHARGE: UNIT END FLOOR TOP/ROOF OTHER \_\_\_\_\_

OPTIONS: HOOD LOUVER: [GALV. ALUM.] OTHER \_\_\_\_\_

DAMPER (STD LOW LEAK GALV. VEE BLADE DESIGN) GALV. AIRFOIL BLADES AL. AIRFOIL BLADES

STYLE: PARALLEL OPPOSED DRIVE SIDE: LEFT SIDE RIGHT SIDE POWDER COATED

S.S. HARDWARE

RETURN AIR INLET: UNIT END FLOOR TOP/ROOF SIDE OTHER \_\_\_\_\_

OPTIONS: HOOD LOUVER: [GALV. ALUM.] OTHER \_\_\_\_\_

DAMPER (STD LOW LEAK GALV. VEE BLADE DESIGN)  GALV. AIRFOIL BLADES  AL. AIRFOIL BLADES  
STYLE:  PARALLEL  OPPOSED DRIVE SIDE:  LEFT SIDE  RIGHT SIDE  POWDER COATED  
 S.S. HARDWARE

EXHAUST AIR DISCHARGE:  UNIT END  FLOOR  TOP/ROOF  SIDE  OTHER \_\_\_\_\_

OPTIONS:  HOOD  LOUVER: [ GALV.  ALUM.]  OTHER \_\_\_\_\_

DAMPER (STD LOW LEAK GALV. VEE BLADE DESIGN)  GALV. AIRFOIL BLADES  AL. AIRFOIL BLADES  
STYLE:  PARALLEL  OPPOSED DRIVE SIDE:  LEFT SIDE  RIGHT SIDE  POWDER COATED  
 S.S. HARDWARE

OUTSIDE AIR INLET:  UNIT END  FLOOR  TOP/ROOF  SIDE  OTHER \_\_\_\_\_

OPTIONS:  HOOD  LOUVER: [ GALV.  ALUM.]  OTHER \_\_\_\_\_

DAMPER (STD LOW LEAK GALV. VEE BLADE DESIGN)  GALV. AIRFOIL BLADES  AL. AIRFOIL BLADES  
STYLE:  PARALLEL  OPPOSED DRIVE SIDE:  LEFT SIDE  RIGHT SIDE  POWDER COATED  
 S.S. HARDWARE

AIR BLENDER

**ACCESS DOORS**

NOTE: MINIMUM DOOR WIDTH FOR VIEW WINDOW IS xx", ALL DOORS SMALLER THEN THIS WILL NOT GET A WINDOW.

(AIRSIDE)  LIFT OFF  HINGED HANDLES: CAMLOCKS STD  TOOL OPERATED  KEY OPERATED

WINDOWS \_\_\_\_\_ (SIDE LOADING FILTER ACCESS DOORS CANNOT HAVE WINDOWS)

(SERVICE) (ELEC./GAS)  LIFT OFF  HINGED HANDLES: CAMLOCKS STD  TOOL OPERATED  KEY OPERATED

WINDOWS \_\_\_\_\_  OTHER \_\_\_\_\_

**BLOWER**

S/A BLOWER: VOLUME \_\_\_\_\_ SCFM ESP \_\_\_\_\_ " W.C. BLOWER ACCESS:  R.H.S.  L.H.S.

TYPE:  FC  BI  AF  BELT DRIVE PLEN  DIRECT DRIVE PLEN  FAN ARRAY  EBM EC (SELECT SIZE BELOW)

SIZE \_\_\_\_\_ QTY \_\_\_\_\_ CLASS \_\_\_\_\_

SCREENS:  INLET  OUTLET

MOTOR: HP \_\_\_\_\_  ODP  TEFC  EXP PROOF  SHAFT GROUNDING RING  OTHER \_\_\_\_\_

VOLTAGE: \_\_\_\_\_ PHASE: \_\_\_\_\_ HZ: \_\_\_\_\_

VFD: ENCLOSURE:  NEMA 1  NEMA 3R DRIVE TYPE:  DRIVE ONLY  W/ DISCONNECT  W/ DISC. & BYPASS

DISCONNECT OPTIONS:  CIRCUIT BREAKER BYPASS OPTIONS:  2 CONTACTOR  3 CONTACTOR

NEMA 3R OPTIONS:  SURGE PROTECTOR  SPACE HEATER

COMMUNICATION OPTIONS:  MODBUS  BACNET  APOGEE  METSYS  ETHERNET/IP  LONWORKS

EXTENDED WARRANTY (VFD ONLY): TOTAL YEARS \_\_\_\_\_ (FIVE YEARS MAX, STD ONE YEAR)

ON SITE START UP (VFD ONLY)

R/A BLOWER: VOLUME \_\_\_\_\_ SCFM ESP \_\_\_\_\_ " W.C. BLOWER ACCESS:  R.H.S.  L.H.S.

TYPE:  FC  BI  AF  BELT DRIVE PLEN  DIRECT DRIVE PLEN  FAN ARRAY  EBM EC (SELECT SIZE BELOW)

SIZE \_\_\_\_\_ QTY \_\_\_\_\_ CLASS \_\_\_\_\_

SCREENS:  INLET  OUTLET

MOTOR: HP \_\_\_\_\_  ODP  TEFC  EXP PROOF  SHAFT GROUNDING RING  OTHER \_\_\_\_\_

VOLTAGE: \_\_\_\_\_ PHASE: \_\_\_\_\_ HZ: \_\_\_\_\_

VFD: ENCLOSURE:  NEMA 1  NEMA 3R DRIVE TYPE:  DRIVE ONLY  W/ DISCONNECT  W/ DISC. & BYPASS

DISCONNECT OPTIONS:  CIRCUIT BREAKER BYPASS OPTIONS:  2 CONTACTOR  3 CONTACTOR

NEMA 3R OPTIONS:  SURGE PROTECTOR  SPACE HEATER

COMMUNICATION OPTIONS:  MODBUS  BACNET  APOGEE  METSYS  ETHERNET/IP  LONWORKS

EXTENDED WARRANTY (VFD ONLY): TOTAL YEARS \_\_\_\_\_ (FIVE YEARS MAX, STD ONE YEAR)

ON SITE START UP (VFD ONLY)

**ISOLATED BASE OPTIONS:**

ISOLATION:  NONE  INTERNAL  SEISMIC  SPECIAL \_\_\_\_\_  INERTIA BASE(S) DETAIL \_\_\_\_\_  S/A  R/A

DRIVES:  STD.  SPECIAL \_\_\_\_\_ SERVICE FACTOR \_\_\_\_\_ BELT GUARD:  STD.  OSHA

BEARINGS:  STD.  OTHER \_\_\_\_\_ EXT. LUBE LINES:  NONE  TO ACCESS SIDE  OTHER \_\_\_\_\_

**FILTERS**

PRE: MERV \_\_\_\_\_  ANGLE  FLAT  SIDE LOAD  FACE LOAD  METAL FRAME  FILTER GAUGE \_\_\_\_\_

SPARE SET(S) QUANTITY \_\_\_\_\_  S/A  R/A

FINAL: MERV \_\_\_\_\_  ANGLE  FLAT  SIDE LOAD  FACE LOAD  METAL FRAME  BOLT LOCK  CRANK LOCK

FILTER GAUGE \_\_\_\_\_  SPARE SET(S) QUANTITY \_\_\_\_\_  S/A  R/A

**HEATING**

PREHEAT COIL

CFM: \_\_\_\_\_ MAX FACE VEL: \_\_\_\_\_ SPECIFIED COND. EA \_\_\_\_\_ °F DB LA \_\_\_\_\_ °F DB MBH \_\_\_\_\_

FLUID:  WATER  GLYCOL [ ETHYLENE  PROPYLENE] \_\_\_\_\_ %

EWT: \_\_\_\_\_ °F LWT: \_\_\_\_\_ °F MAX GPM: \_\_\_\_\_ MAX WATER PRESSURE DROP: \_\_\_\_\_

STEAM:  DISTRIBUTING (TUBE IN TUBE DESIGN)  NON-DISTRIBUTING PSI: \_\_\_\_\_

TUBE MATL: CU SS TUBE SIZE: 1/2" 5/8" 1" (FOR DISTRIBUTING COILS ONLY)

TUBE WALL: \_\_\_\_\_ NOTE: TUBE WALL VARIES BASED ON TUBE SIZE

FIN MATERIAL: AL CU SS FIN THICKNESS: \_\_\_\_\_ MAX FPI: \_\_\_\_\_

CONNECTIONS: THREADED FLANGED VICTAULIC SWEAT

COATING: NONE HERESITE ELECTROFIN OTHER: \_\_\_\_\_

REHEAT COIL

CFM: \_\_\_\_\_ MAX FACE VEL: \_\_\_\_\_ SPECIFIED COND. EA \_\_\_\_\_ °F DB LA \_\_\_\_\_ °F DB MBH \_\_\_\_\_

FLUID: WATER GLYCOL [ETHYLENE PROPYLENE] \_\_\_\_\_ %

EWT: \_\_\_\_\_ °F LWT: \_\_\_\_\_ °F MAX GPM: \_\_\_\_\_ MAX WATER PRESSURE DROP: \_\_\_\_\_

STEAM: DISTRIBUTING (TUBE IN TUBE DESIGN) NON-DISTRIBUTING PSI: \_\_\_\_\_

TUBE MATL: CU SS TUBE SIZE: 1/2" 5/8" 1" (FOR DISTRIBUTING COILS ONLY)

TUBE WALL: \_\_\_\_\_ NOTE: TUBE WALL VARIES BASED ON TUBE SIZE

FIN MATERIAL: AL CU SS FIN THICKNESS: \_\_\_\_\_ MAX FPI: \_\_\_\_\_

CONNECTIONS: THREADED FLANGED VICTAULIC SWEAT

COATING: NONE HERESITE ELECTROFIN OTHER: \_\_\_\_\_

**ELECTRIC HEATER**

ELECTRIC HEATER KW: \_\_\_\_\_ POWER: VOLTAGE: \_\_\_\_\_ PH: \_\_\_\_\_ HZ: \_\_\_\_\_

CONTROL TYPE: STAGED: # OF STAGES: \_\_\_\_\_ SCR: [0-10VDC 4-20MA] OTHER \_\_\_\_\_

NOTES: \_\_\_\_\_

**COOLING**

COOLING COIL

CFM: \_\_\_\_\_ MAX FACE VEL: \_\_\_\_\_

SPECIFIED COND. EA \_\_\_\_\_ °F DB/WB LA \_\_\_\_\_ °F DB/WB MBH \_\_\_\_\_

FLUID: WATER GLYCOL [ETHYLENE PROPYLENE] \_\_\_\_\_ %

EWT: \_\_\_\_\_ °F LWT: \_\_\_\_\_ °F MAX GPM: \_\_\_\_\_ MAX WATER PRESSURE DROP: \_\_\_\_\_

DX (EVAPORATOR) REFRIGERANT: \_\_\_\_\_ SUPER HEAT TEMP: \_\_\_\_\_ °F SUCTION TEMP: \_\_\_\_\_ °F LIQUID TEMP: \_\_\_\_\_ °F

TUBE MATL: CU SS TUBE SIZE: 1/2" 5/8"

TUBE WALL: \_\_\_\_\_ NOTE: TUBE WALL VARIES BASED ON TUBE SIZE

FIN MATERIAL: AL CU SS FIN THICKNESS: \_\_\_\_\_ MAX FPI: \_\_\_\_\_

CONNECTIONS: THREADED FLANGED VICTAULIC SWEAT (DX ONLY HAS SWEAT TYPE CONNECTIONS)

COATING:  NONE  HERESITE  ELECTROFIN  OTHER: \_\_\_\_\_

**GAS HEAT**

INDIRECT GAS HEATER: 304 SS TUBES STD CONTROL BOX TYPICALLY EXTERIOR TO UNIT

FUEL:  NAT. GAS  PROPANE PRESSURE \_\_\_\_\_ "W.C.

TEMP. RISE \_\_\_\_\_ °F BTUH IN \_\_\_\_\_ BTUH OUT \_\_\_\_\_ TURNDOWN \_\_\_\_\_ REQ.

**ENERGY/HEAT RECOVERY**

HEATPIPE  HEATWHEEL  PLATE HEAT EXCHANGER  OTHER: \_\_\_\_\_

WINTER COND.: SUPPLY AIR EAT DB/WB \_\_\_\_\_ °F LAT DB/WB \_\_\_\_\_ °F OR RH \_\_\_\_\_ %

EXHAUST AIR EAT DB/WB \_\_\_\_\_ °F LAT DB/WB \_\_\_\_\_ °F OR RH \_\_\_\_\_ %

TOTAL/SENSIBLE MBH RECOVERED \_\_\_\_\_

WINTER COND.: SUPPLY AIR EAT DB/WB \_\_\_\_\_ °F LAT DB/WB \_\_\_\_\_ °F OR RH \_\_\_\_\_ %

EXHAUST AIR EAT DB/WB \_\_\_\_\_ °F LAT DB/WB \_\_\_\_\_ °F OR RH \_\_\_\_\_ %

TOTAL/SENSIBLE MBH RECOVERED \_\_\_\_\_

**STEAM HUMIDIFIER**

HUMIDIFIER GRID (DISPERSION TUBE)  DRAIN PAN  DESIRED SECTION LENGTH \_\_\_\_\_

INSULATED GRID  STRAINER  TRAP

VALVE  W/ ACTUATOR: SPECIFY TYPE (2 POS./MOD./SPRING RTN/PWR VOLT/CNTR VOLT) \_\_\_\_\_

STEAM BY OTHERS  ELEC. STEAM GENERATOR  GAS STEAM GEN  STEAM TO STEAM GEN (EXGR TYPE)

**ELECTRICAL**

PRIMARY SUPPLY (BROUGHT TO UNIT) VOLTAGE: \_\_\_\_\_ PHASE: \_\_\_\_\_ HZ: \_\_\_\_\_

SECOND POINT SUPPLY (BROUGHT TO UNIT) VOLTAGE: \_\_\_\_\_ PHASE: \_\_\_\_\_ HZ: \_\_\_\_\_

SINGLE POINT POWER (STEP DOWN TRANSFORMER FOR 120V)  UNIT DISCONNECT

CONVENIENCE LIGHTS AND RECEPTACLES WIRED BY FACTORY TO SINGLE POINT

CONVENIENCE OUTLETS: \_\_\_\_\_  UNIT EXT.  UNIT INT.

MARINE LIGHTS (STD ONE SWITCH AT FAN DOOR) QTY \_\_\_\_\_  SWITCH PER LIGHT  WITH PILOT LIGHT

NOTES: \_\_\_\_\_

**ACCESSORIES**

AIR MONITOR STATION TYPE: \_\_\_\_\_

