

4

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PRIMARY

SECONDARY

SERVICE ACCESS DOOR

SERVICE ACCESS DOOR

FRONT

FRONT

B

B

BUILDING WATER CONNECTIONS

SEE NOTES

SKID PIPING CONNECTIONS
(SEE PG. 3/5 FOR DETAILS)

CO2 HEAT PUMP
WATER HEATERS (X8)

PRIMARY BUILDING POWER
CONNECTION PANEL

SECONDARY BUILDING POWER
CONNECTION PANEL

PIPING TO DRAIN

HP CONTROL
TERMINAL BOXES

PIPING TO DRAIN

A

A

NOTES:
ALL INTERSKID PIPING AND ELECTRICAL
CONNECTIONS TO BE FIELD INSTALLED
BY OTHERS

REQUIRED SERVICE CLEARANCES:
36" MIN. BEYOND SIDES
72" MIN. BEYOND FRONT & REAR

MIN. INTERSKID SPACING: 36 IN.
MAX. INTERSKID SPACING: ≤ 10 FT.

SMALL PLANET SUPPLY
TUMWATER, WA
TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A

SCALE: 1:40	SHEET 1 OF 9
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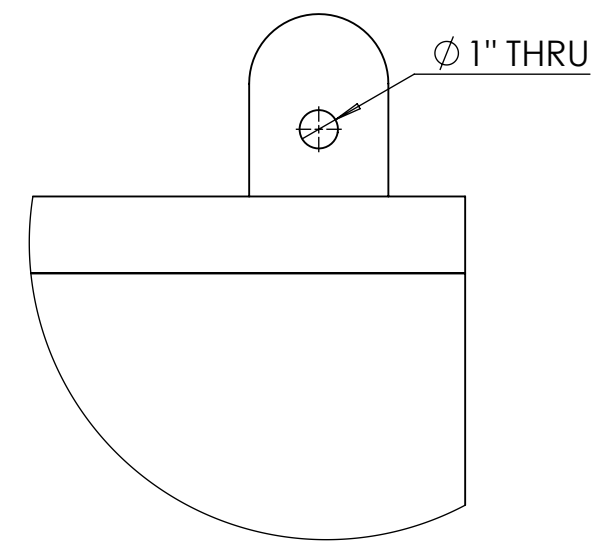
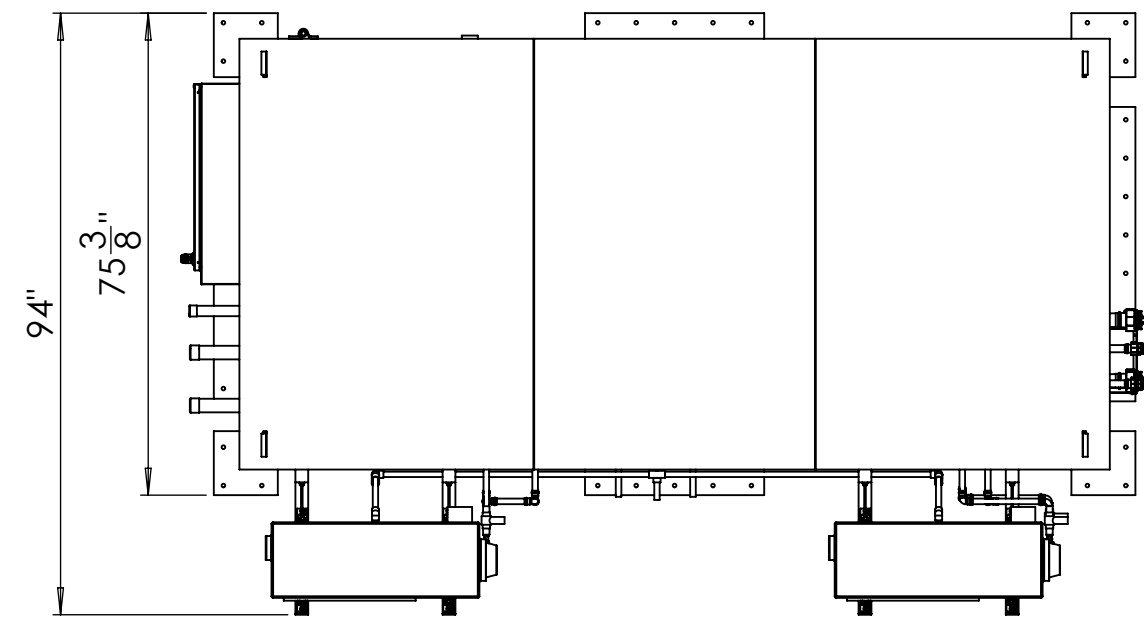
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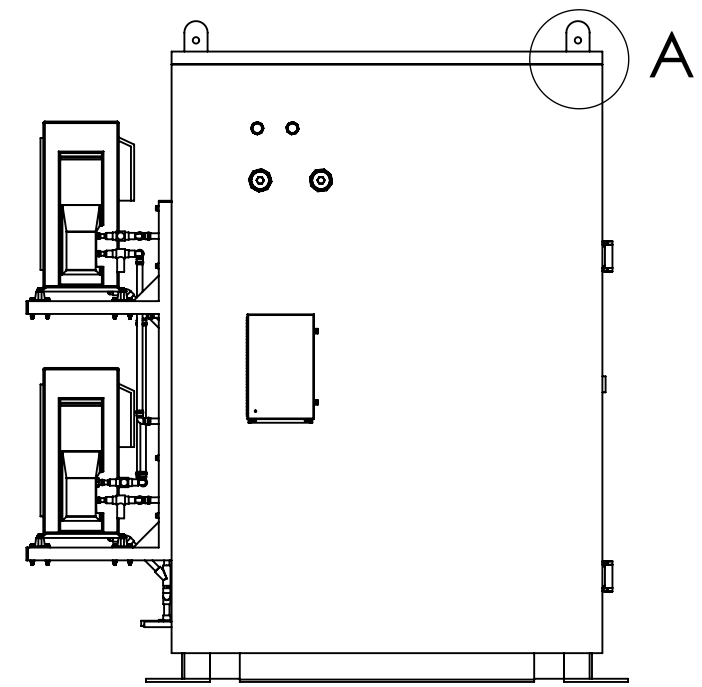
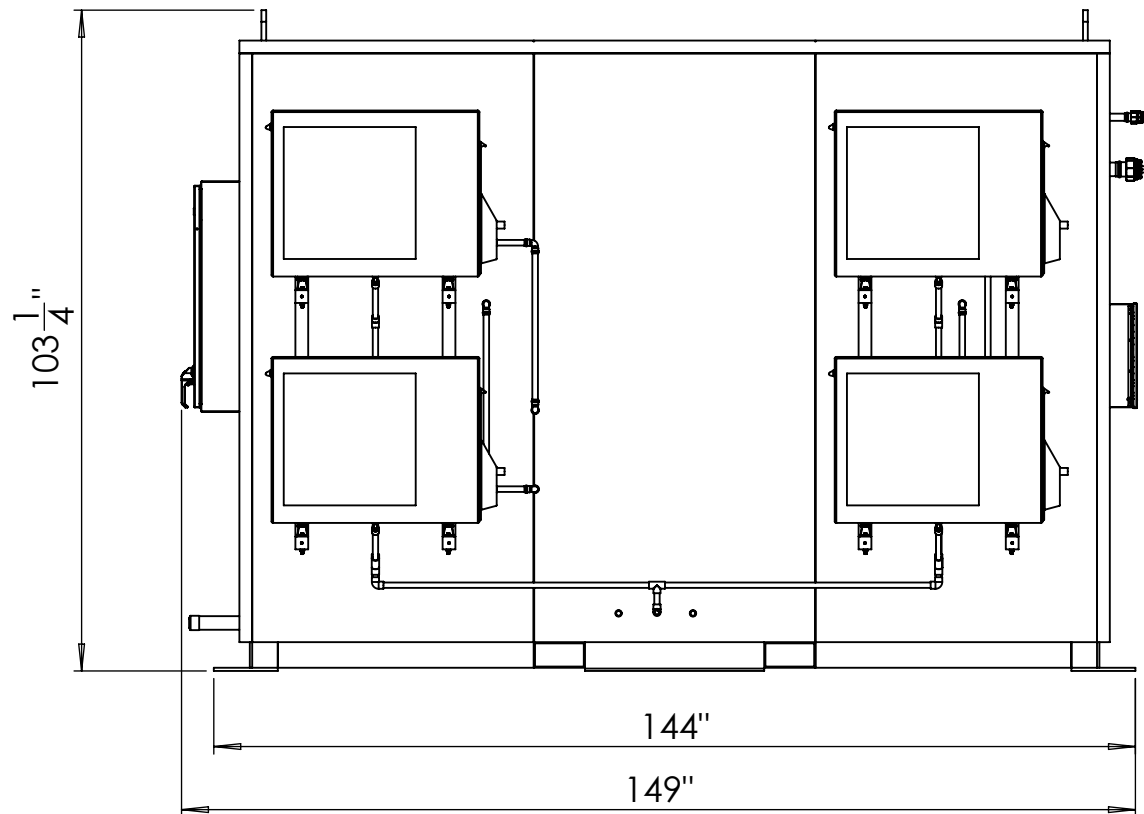
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B

B



DETAIL A
RIGGING EYELET (X4)
SCALE 1 : 5



A

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NOTES:
PRIMARY SKID

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY
TUMWATER, WA
TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A
SCALE: 1:30		SHEET 2 OF 9

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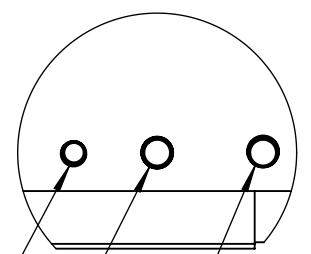
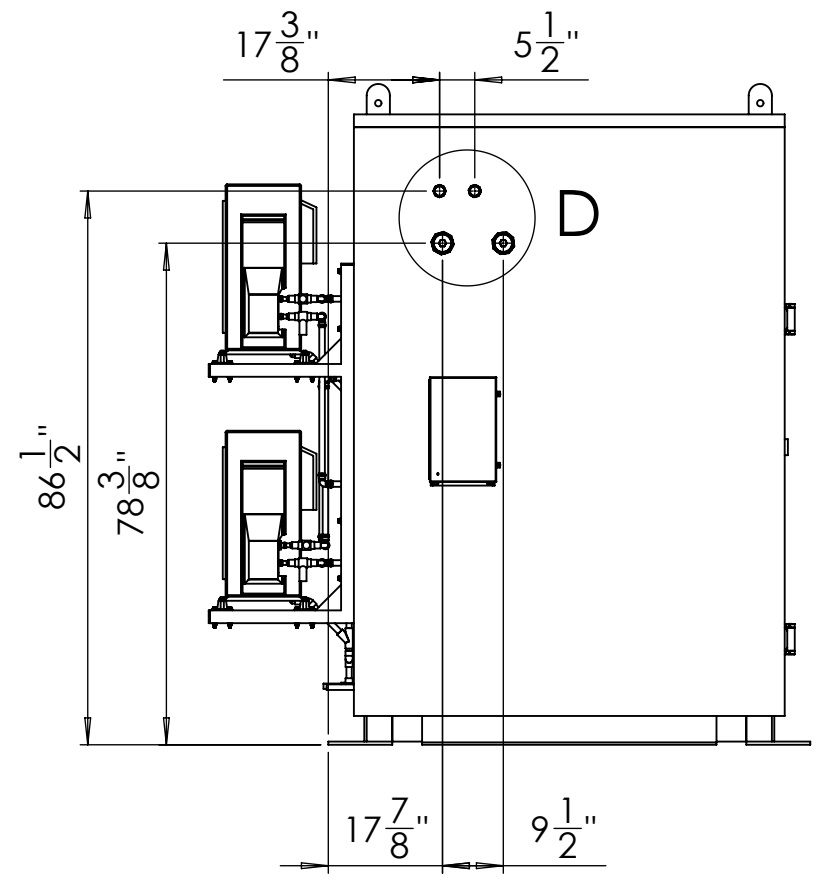
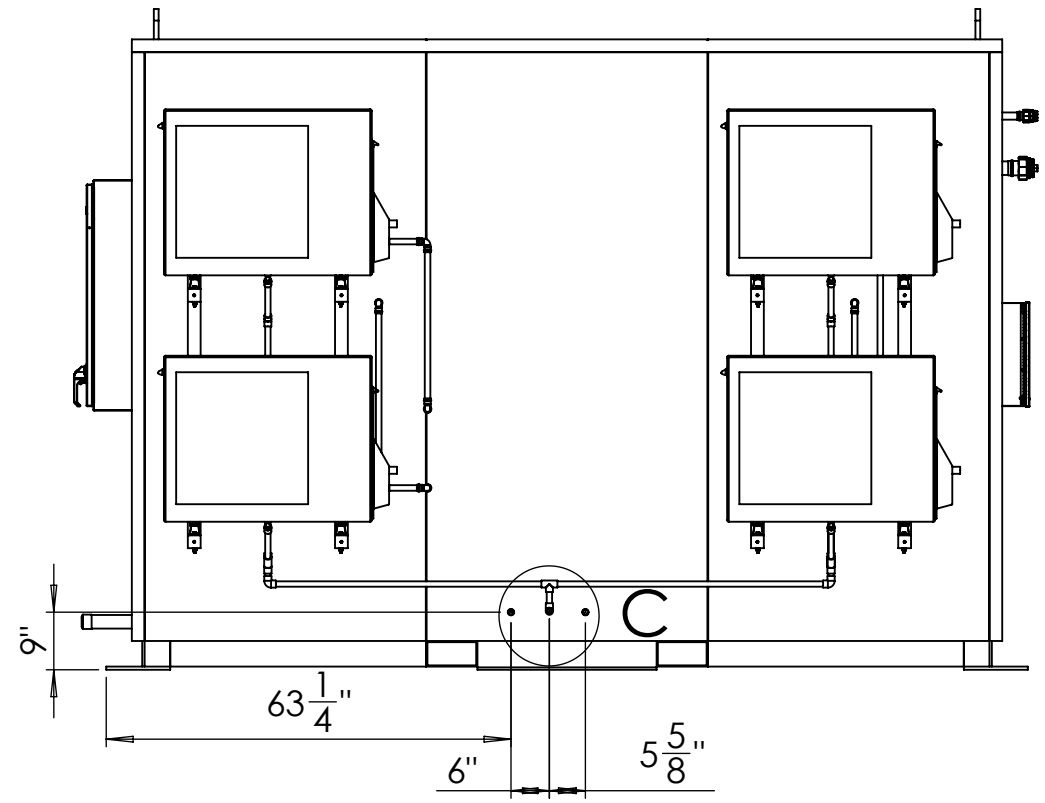
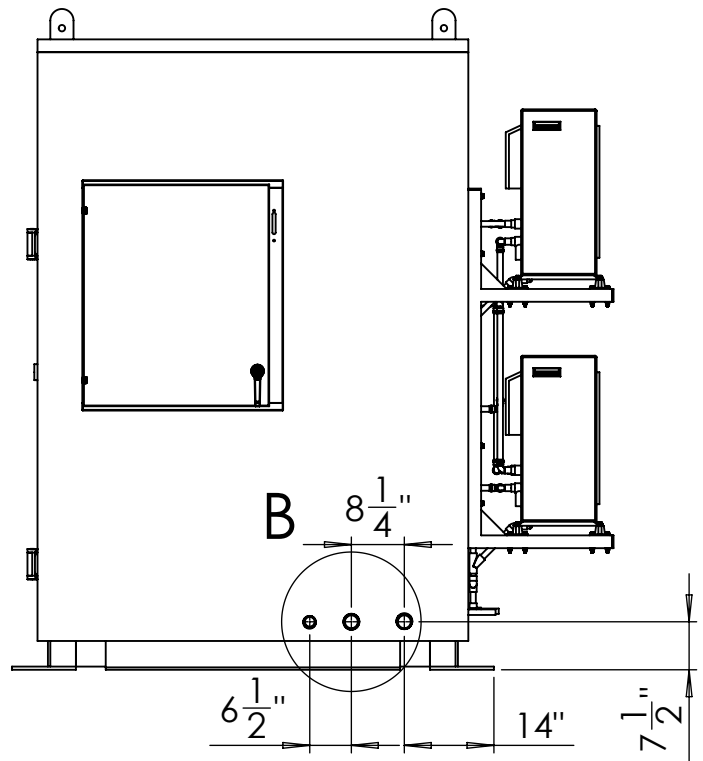
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B

B



HOT WATER OUTLET
2" COPPER STUB

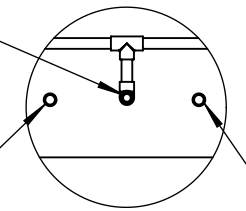
COLD WATER INLET
2" COPPER STUB

HOT WATER RECIRCULATION RETURN
1-1/2" COPPER STUB

DETAIL B

BUILDING WATER CONNECTIONS
SCALE 1 : 15

HEAT PUMP CONDENSATE DRAIN
1/2" PVC STUB



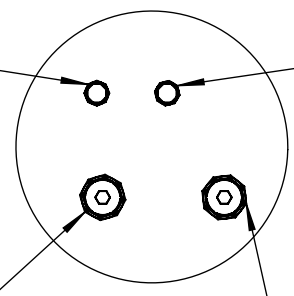
TANK TEMP. & PRESS. DRAIN
3/4" COPPER STUB

DETAIL C

DRAIN CONNECTIONS
SCALE 1 : 15

HEAT PUMP MANIFOLD CONNECTION,
COLD WATER
1" FNPT UNION

HEAT PUMP MANIFOLD
CONNECTION, HOT WATER
1" FNPT UNION



COLD WATER SUPPLY
TO SECONDARY SKID
2" FNPT UNION

STORAGE TANK
MID-ARRAY CONNECTION
2" FNPT UNION

DETAIL D

INTERSKID CONNECTIONS
SCALE 1 : 15

NOTES:
PRIMARY SKID

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY
TUMWATER, WA
TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A
SCALE: 1:30		SHEET 3 OF 9

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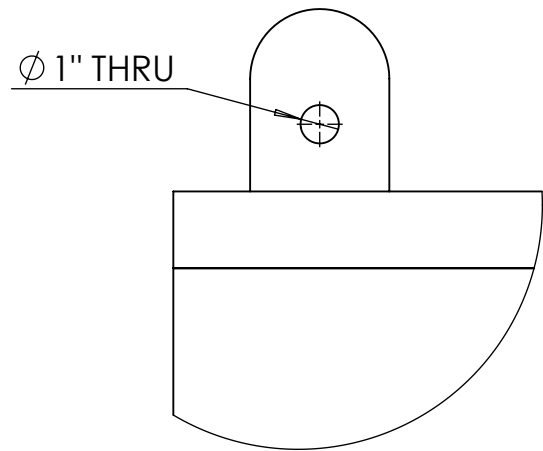
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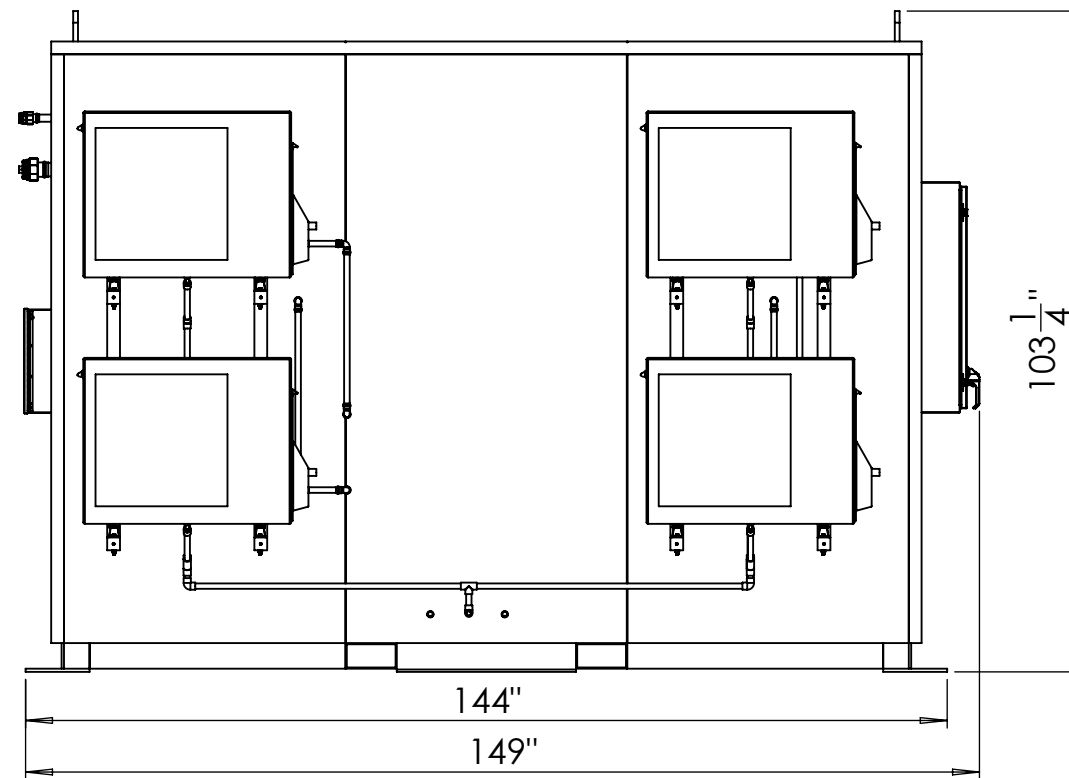
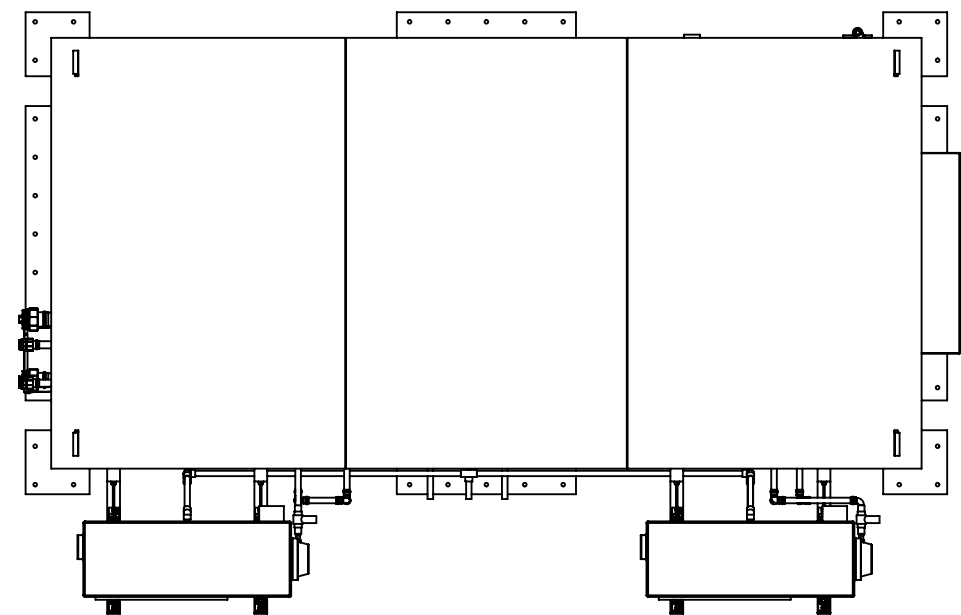
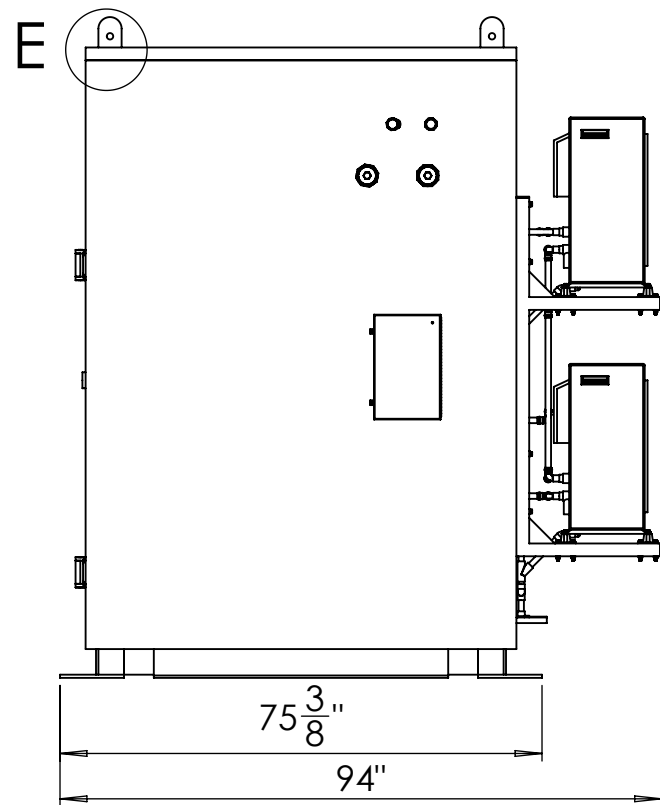
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A

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DETAIL E
RIGGING EYELET (X4)
SCALE 1 : 5



NOTES:
SECONDARY SKID

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY
TUMWATER, WA
TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A
SCALE: 1:30		SHEET 4 OF 9

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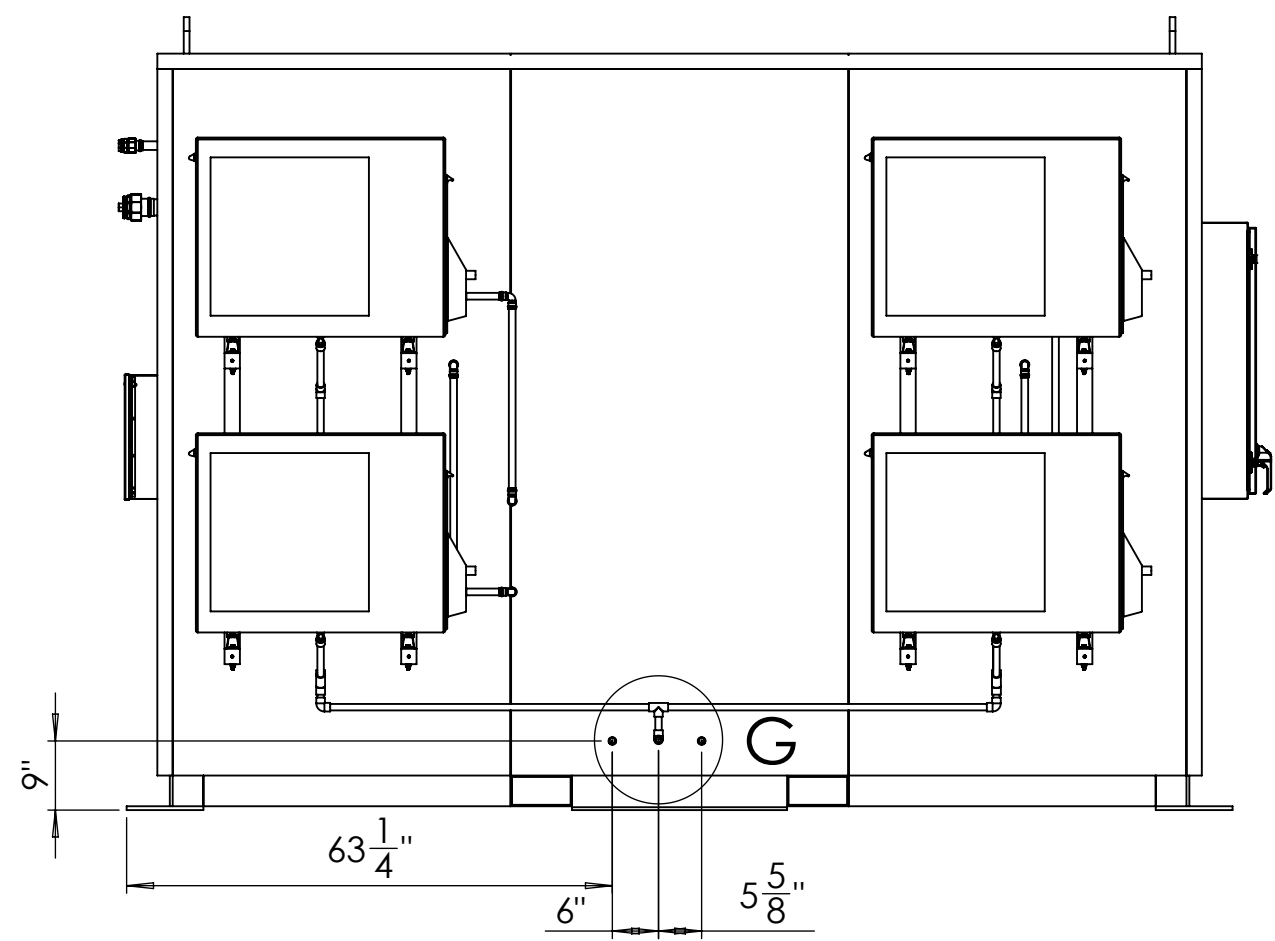
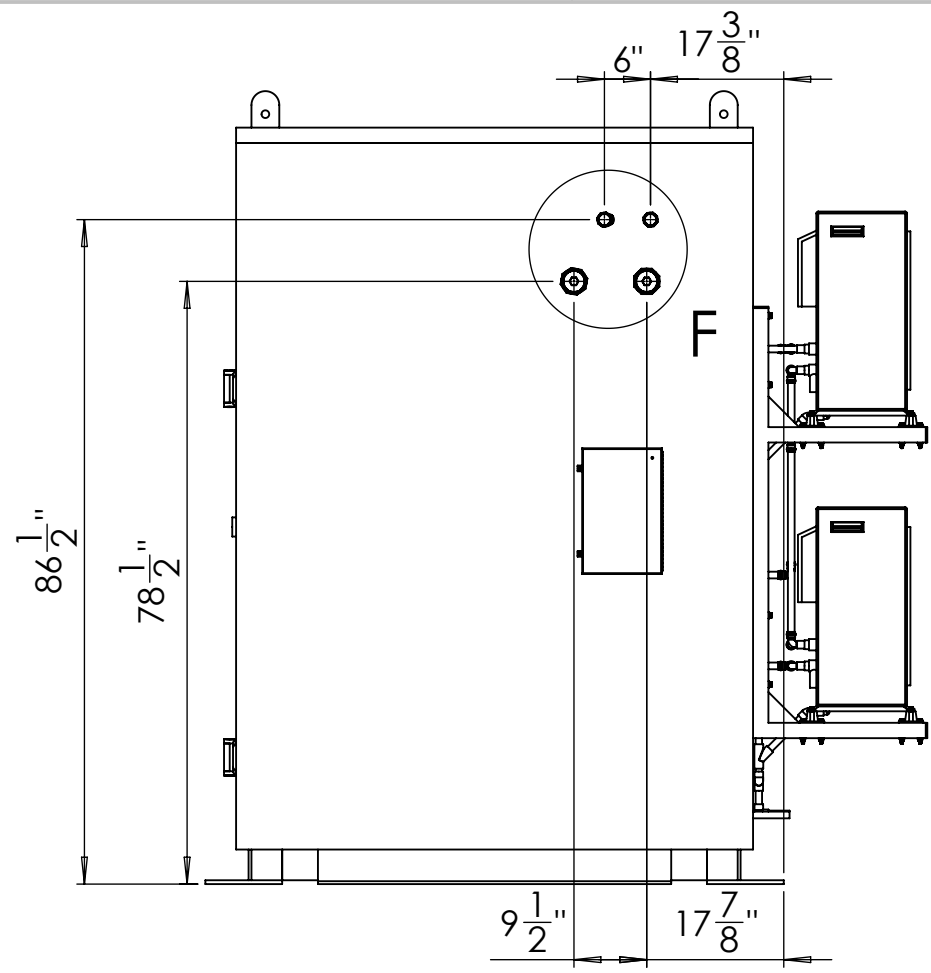
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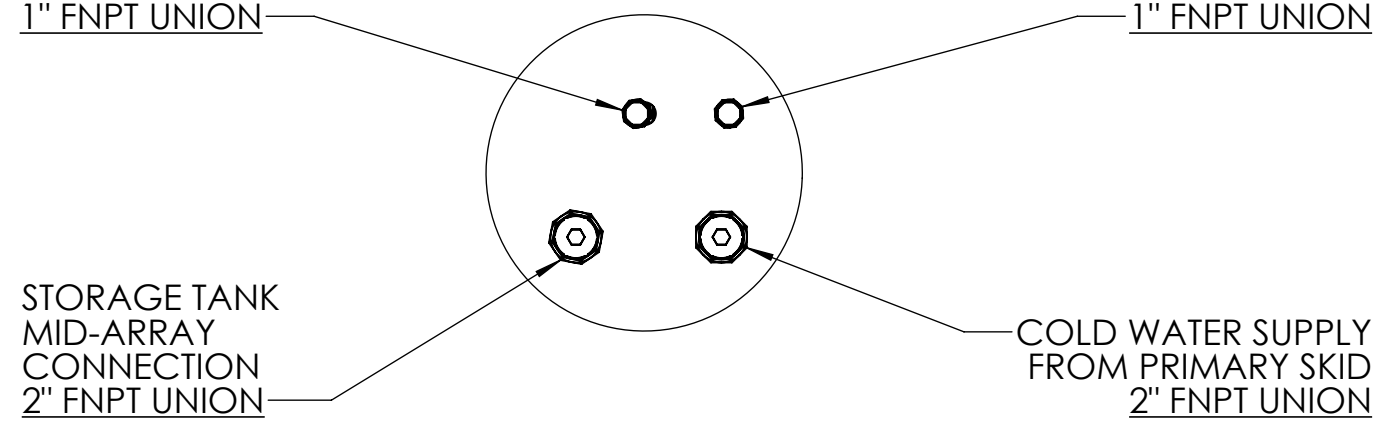
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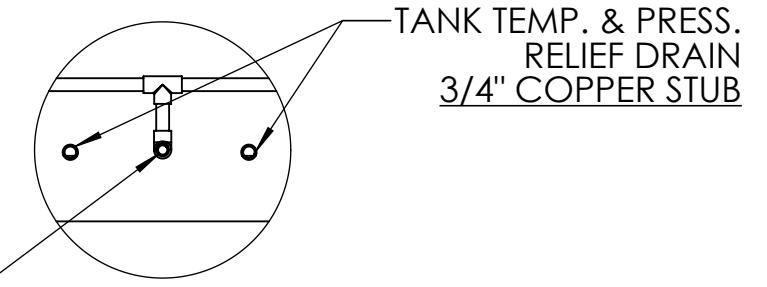
HEAT PUMP MANIFOLD CONNECTION, HOT WATER
1" FNPT UNION

HEAT PUMP MANIFOLD CONNECTION, COLD WATER
1" FNPT UNION



DETAIL F
INTERSKID CONNECTIONS
SCALE 2 : 25

HEAT PUMP CONDENSATE DRAIN
1/2" PVC STUB



DETAIL G
DRAIN CONNECTIONS
SCALE 2 : 25

NOTES:
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY TUMWATER, WA		
TITLE: WD2S-120-0650-119-12 SUBMITTAL		
SIZE B	DWG. NO. 003-00004	REV A
SCALE: 1:25		SHEET 5 OF 9

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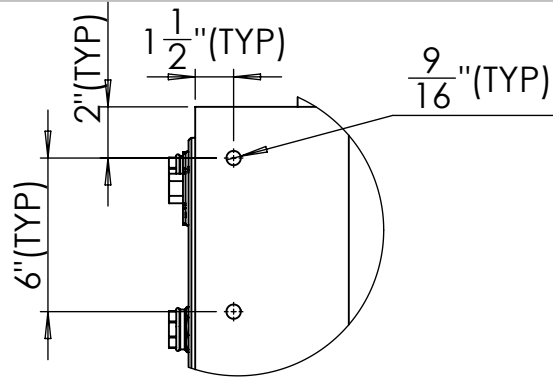
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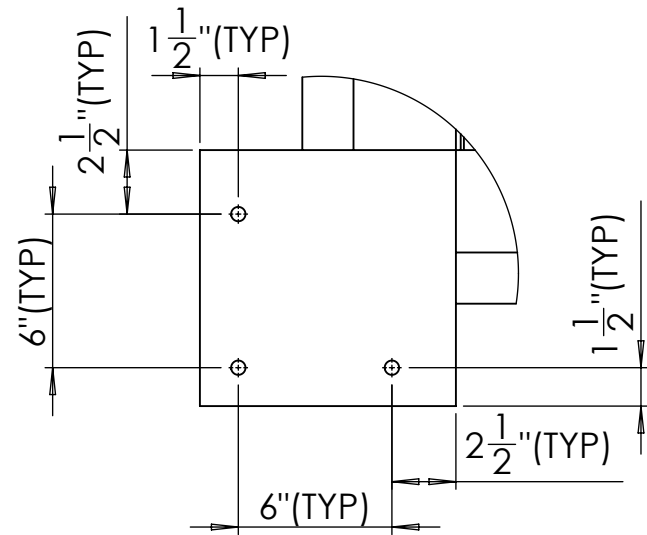
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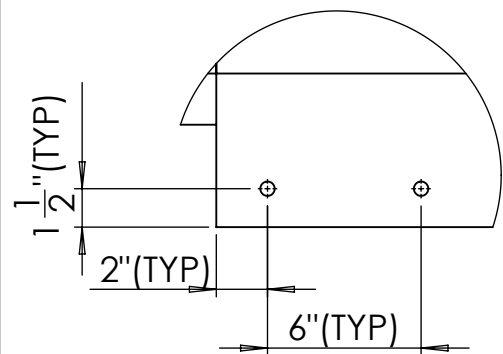
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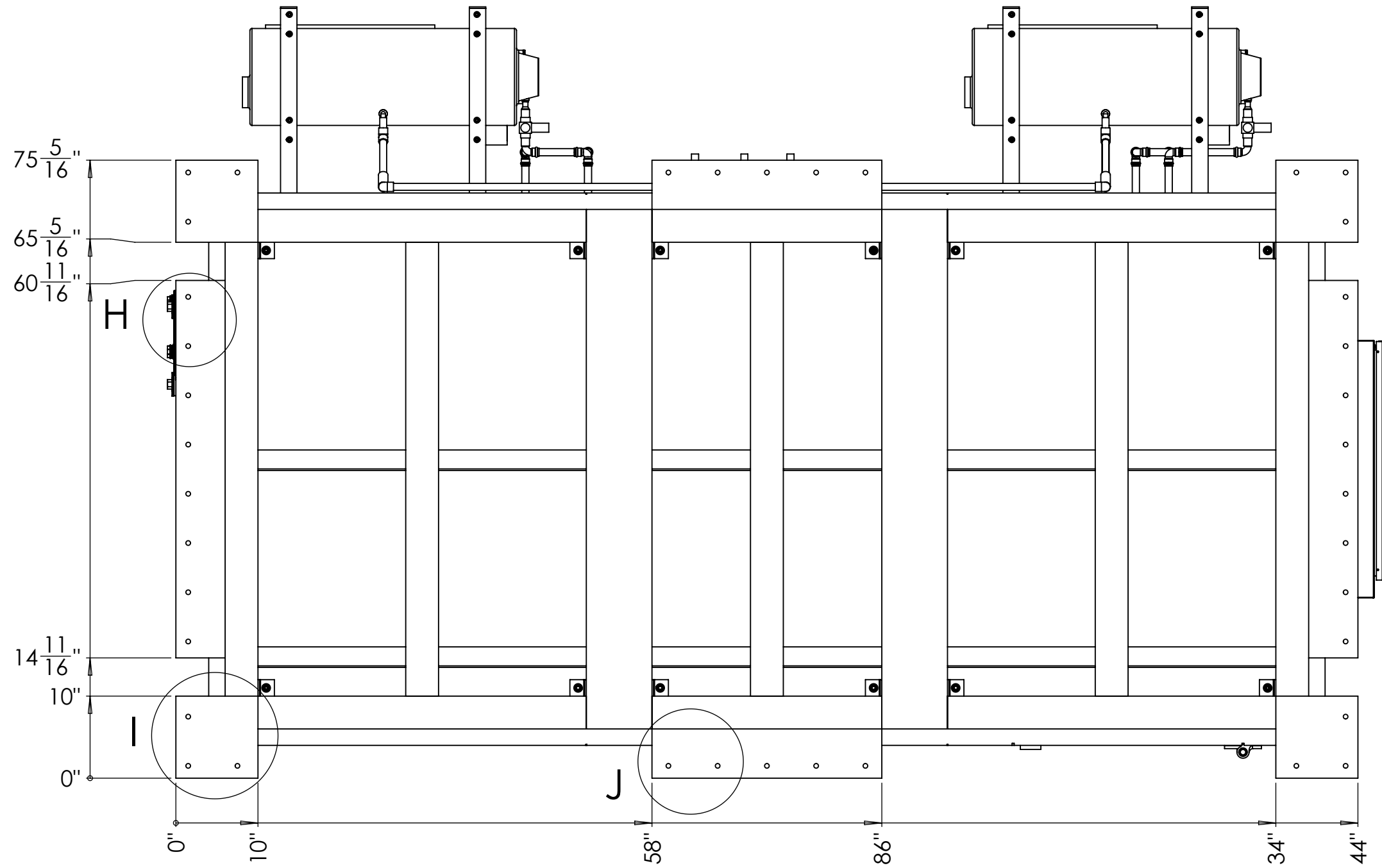
DETAIL H
SCALE 2 : 15



DETAIL I
SCALE 2 : 15



DETAIL J
SCALE 2 : 15



SIDE MOUNT ANCHOR BOLTS TO BE SPECIFIED BY LICENSED PROFESSIONAL ENGINEER TO WITHSTAND (PER ANCHOR):

- CONCRETE AND MASONRY:
 - a. IF 2,500# PULLOUT LOAD AND 1,250# SHEAR LOAD ANCHORS INSTALLED THROUGH CORNER BASE PLATES, NO ANCHORS REQUIRED.
 - b. 500# PULLOUT LOAD AND 250# SHEAR LOAD OTHERWISE
- WOOD FRAMING:
 - 250# PULLOUT LOAD AND 125# SHEAR LOAD

CORNER ANCHOR BOLTS TO BE SPECIFIED BY LICENSED PROFESSIONAL ENGINEER TO WITHSTAND (PER ANCHOR)

- CONCRETE AND MASONRY:
 - a. 2,500# PULLOUT LOAD AND 1,250# SHEAR LOAD ANCHORS INSTALLED THROUGH SIDE MOUNTS
 - b. 500# PULLOUT LOAD AND 250# SHEAR LOAD OTHERWISE
- WOOD FRAMING:
 - 250# PULLOUT LOAD AND 125# SHEAR LOAD

NOTES:
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY
TUMWATER, WA
TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A
SCALE: 1:15		SHEET 6 OF 9

4

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PERFORMANCE

TOTAL HEAT PUMP CAPACITY [MBH]	123
TOTAL PRIMARY STORAGE VOLUME (GAL.)	660
MAX. DAILY HW OUTPUT (GAL. / DAY)*	2,560
MAX. DAILY RUNTIME (hr. / DAY)	16
NOMINAL HOURLY HOT WATER OUTPUT (GAL. / hr.)	160
RECIRCULATION PUMP OUTPUT (HP)	1/2
RECIRC. PUMP MAX. HEAD (FT. - H2O)	55
NOMINAL OPERATING SOUND PRESSURE LEVEL (dBA)	40
MAX. SYSTEM WATER PRESSURE (PSI)	94

*100°F LIFT AND 16 hr./DAY MAX. COMPRESSOR RUNTIME

COMPONENTS

(8) HEAT PUMP WATER HEATERS	REFRIGERANT TYPE: R-744 (CO2) TOTAL CHARGE: 203 OZ. AIRFLOW (CFM): 4,800 EXTERNAL STATIC PRESSURE (IN.-H2O): 0
(3) 220 GAL. STORAGE TANKS	
(1) SWING TANK, 119 GAL. / 12 kW	
(2) EXPANSION TANKS, 45 GAL. / 30 GAL. ACCEPTANCE	
(1) ELECTRONIC MIXING VALVE	1 IN. BODY: 3-94 GPM RECOMMENDED FLOW RANGE
(1) RECIRCULATION PUMP, ECM	
(1) HEAT PUMP STAGING CONTROLLER	
(1) INCOMING COLD WATER WYE-STRAINER, 20-MESH	

CONSTRUCTION

ENCLOSURE PANELS	R8 INSULATION POWDER COAT FINISH
PIPING	TYPE K COPPER DIELECTRIC CONNECTIONS WHERE REQUIRED 1-1/2" INSULATION, MIN. R-VALUE: 8.6
UL508A - LISTED ELECTRICAL PANELS	POWER DISTRIBUTION EQUIPMENT / STAGING CONTROLLER
PAINTED CARBON STEEL FRAME	
ELECTRICAL DISTRIBUTION PANEL WITH MAIN DISCONNECT	
INDIVIDUAL COMPONENT DISCONNECTS ON HEAT PUMPS AND SWING TANK	
HEAT PUMPS MOUNTED WITH VIBRATION ISOLATORS	
INSULATED BASE NOT PROVIDED BELOW STORAGE AND SWING TANKS	
REVERSE-RETURN HEAT PUMP MANIFOLD PIPING CONFIGURATION	
INDIVIDUAL HEAT PUMP ISOLATION, DRAIN AND CHECK VALVE	

ELECTRICAL

	PRIMARY SKID PANEL	SECONDARY SKID PANEL
SUPPLY	208V/3Ph/60Hz	208V/3Ph/60Hz
TOTAL CONNECTED LOAD [kVA]	24.7	8.0
FULL LOAD AMPS [A]	68.4	22.0
MINIMUM CIRCUIT AMPACITY [A]	89.4	32.1
MAXIMUM OVERCURRENT PROTECTION [A]	90	35

WEIGHT (APPROX.)

PRIMARY / SECONDARY DRY (LBS.)	5,500 / 4,900
PRIMARY / SECONDARY WETTED (LBS.)	8,400 / 8,700

NOTES:
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A

SCALE: 1:30 SHEET 7 OF 9

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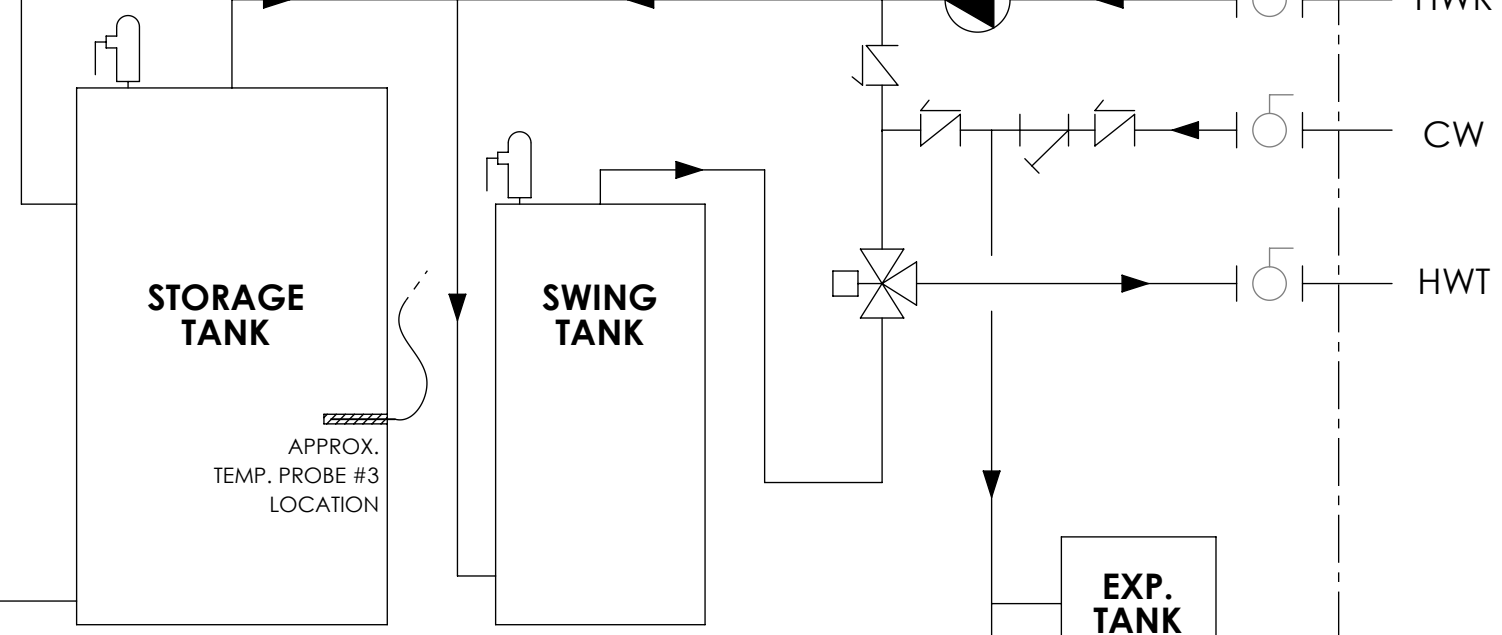
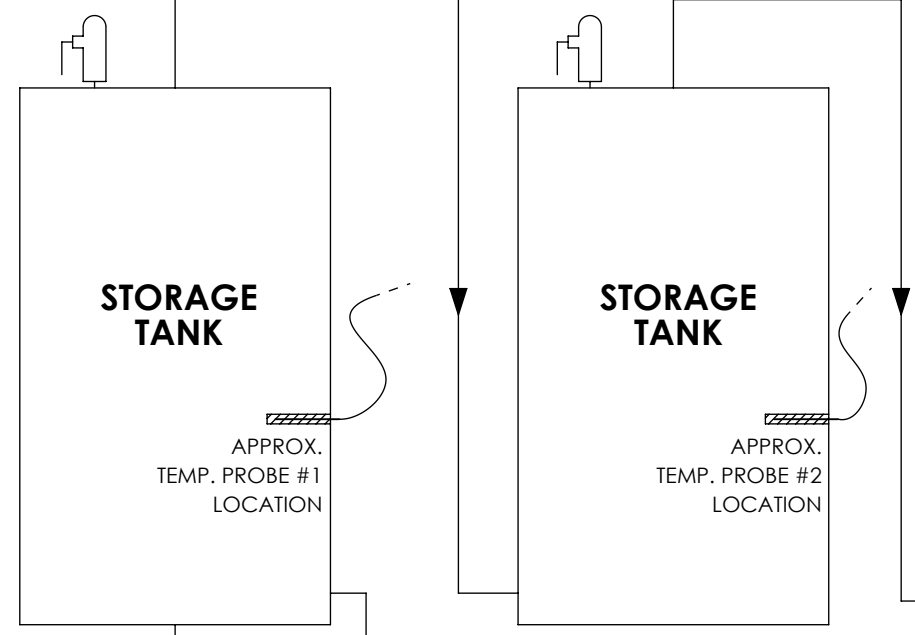
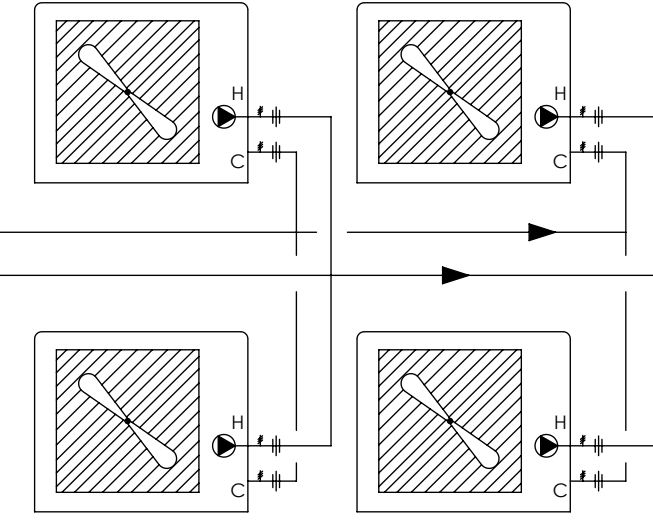
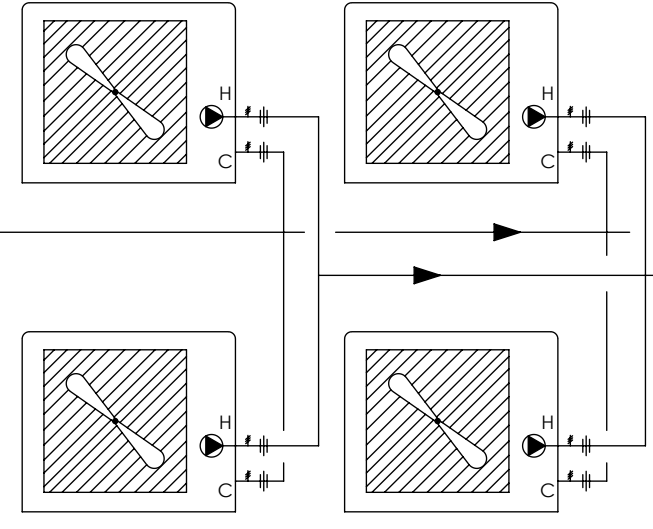
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FIELD CONNECTIONS



SECONDARY

PRIMARY

SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
WD2S-120-0650-119-12
SUBMITTAL

SIZE	DWG. NO.	REV
B	003-00004	A

SHEET 8 OF 9

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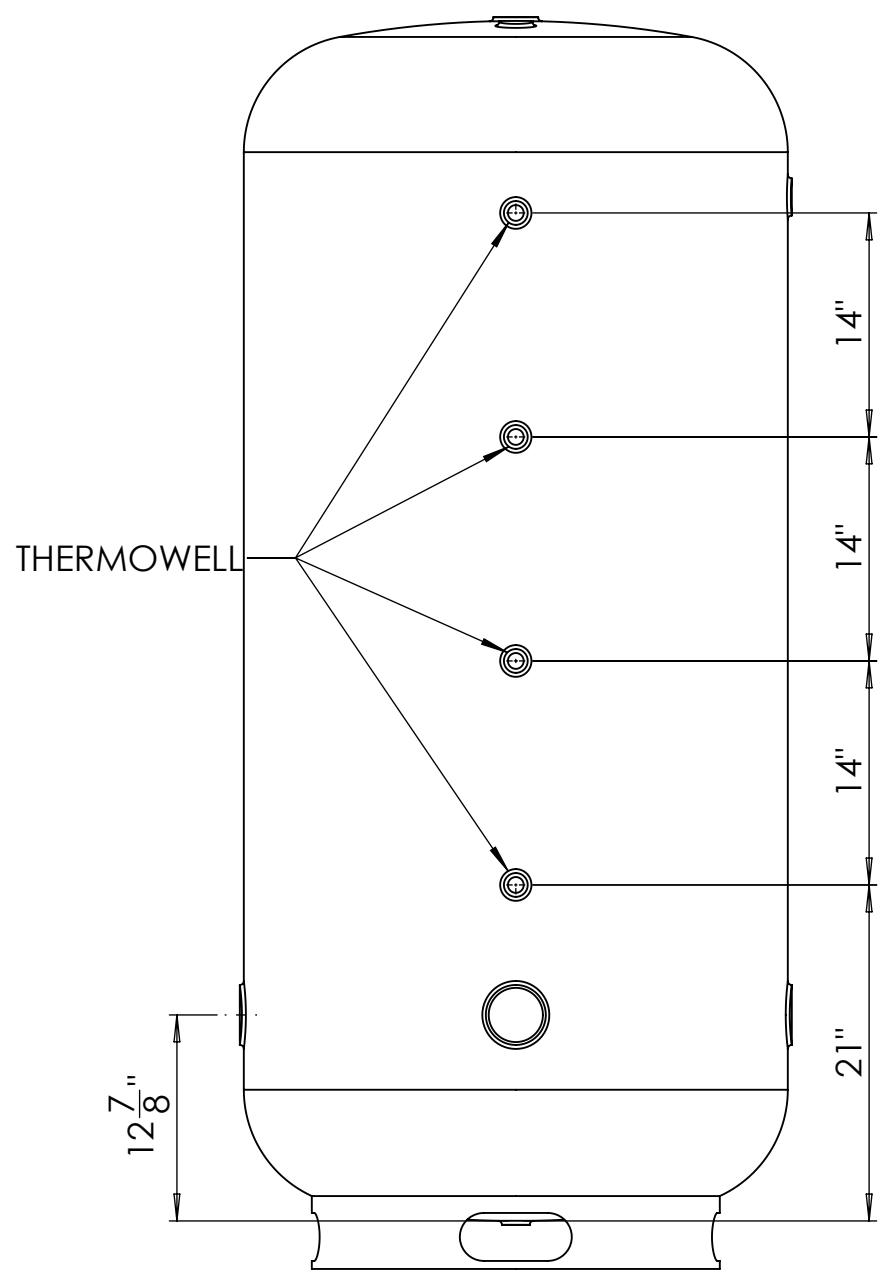
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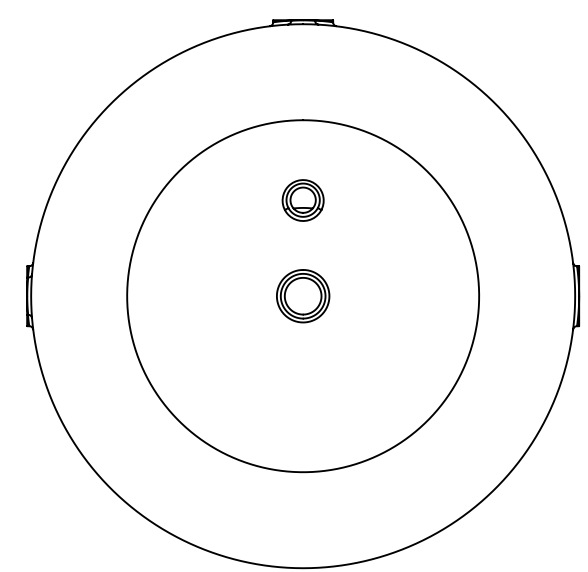
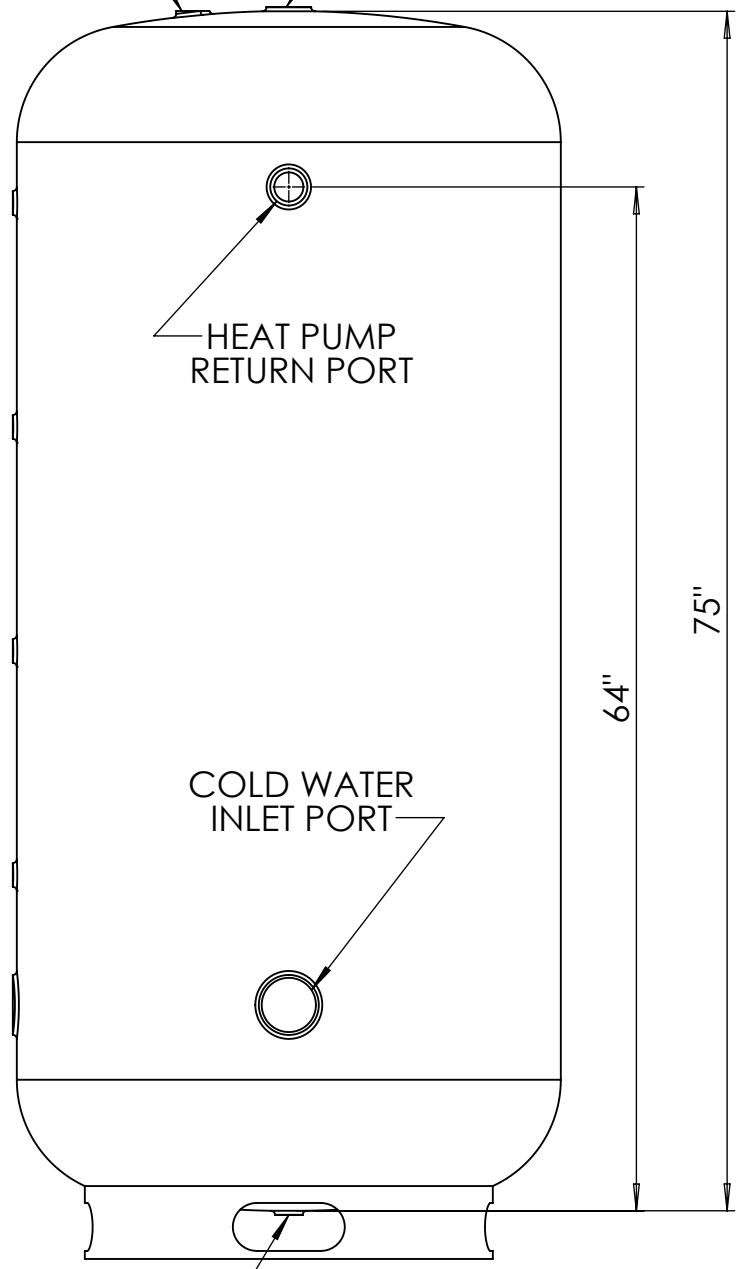
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TEMPERATURE & PRESSURE RELIEF PORT
HOT WATER OUTLET PORT



NOTES:			SMALL PLANET SUPPLY		
ALL DIMENSIONS IN INCHES			TUMWATER, WA		
INSULATION R12.5 MIN.			TITLE:		
VOLUME: 220 GAL. (US)			WD2S-120-0650-119-12		
			SUBMITTAL		
SIZE	DWG. NO.	REV			
B	003-00004	A			
SCALE: 1:12		WEIGHT:	SHEET 9 OF 9		

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