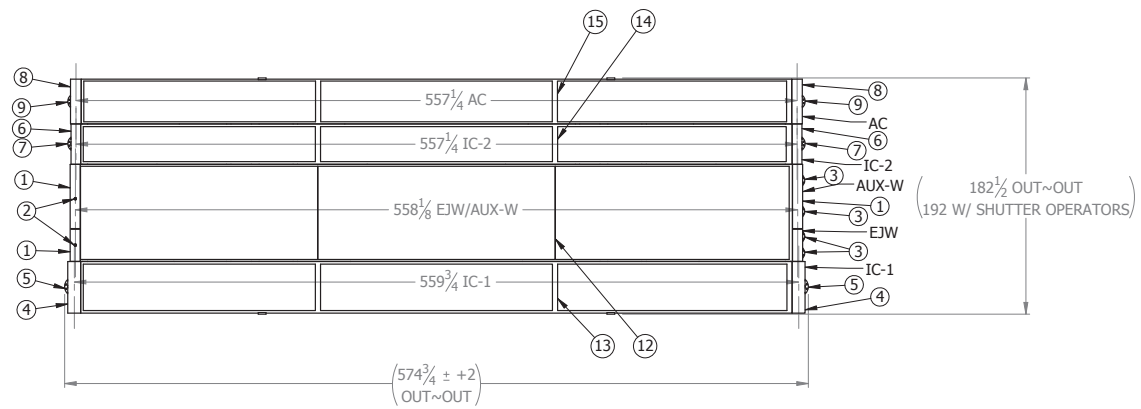
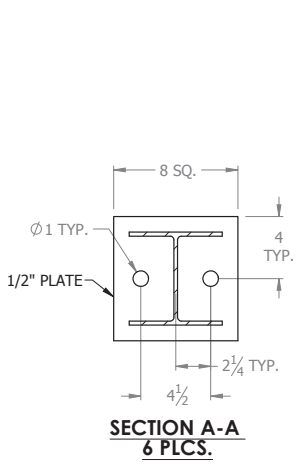
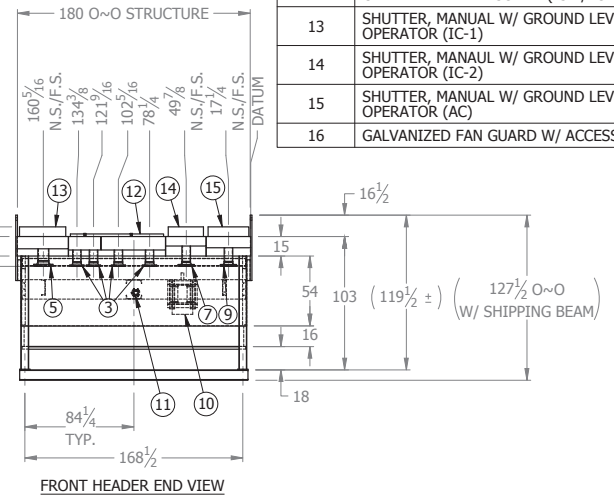
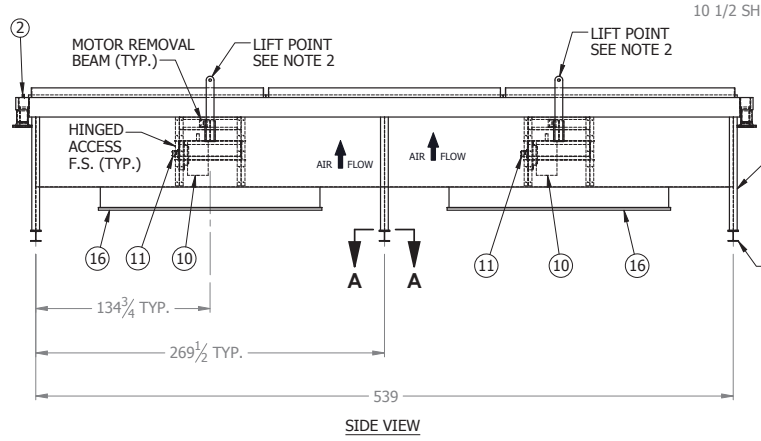
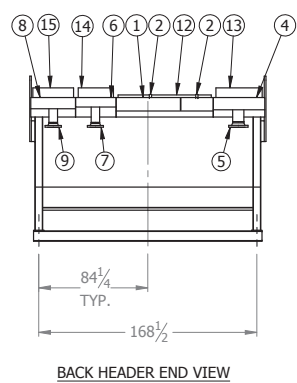


8 7 6 5 4 3 2 1



PLAN VIEW OF FAN ROTATION



NOTES:
 1) FINISH: GALVANIZED STRUCTURE & FRAME; METALIZED HEADERS.
 2) SPREADER BARS REQUIRED FOR TRUE VERTICAL LIFTING.
 3) DRIVE GUARDS OMITTED FOR CLARITY.

ITEM NO	DESCRIPTION	QTY
1	SECTION .1 / EJW (135 GALLONS) D.P. 150 PSI @ 300/-20°F SECTION .2 / AUX-W (150 GALLONS) D.P. 150 PSI @ 300/-20°F	1
2	COUPLING, 1"	2
3	6-150RFWN	4
4	SECTION .3 / IC-1 (ASME STAMP) D.P. 645 PSI @ 350/-20°F	1
5	8-300RFWN	2
6	SECTION .4 / IC-2 (ASME STAMP) D.P. 1287 PSI @ 350/-20°F	1
7	6-600RFWN	2
8	SECTION .5 / AC (ASME STAMP) D.P. 1700 PSI @ 350/-20°F	1
9	6-900RFWN	2
10	MOTOR, 50 HP, 1800 RPM, 230/460-3-60 V/PH/HZ, TEFC CHEM DUTY (VFD COMPATIBLE)	2
11	VIBRATION SWITCH, MURPHY VS-2EX, XP	2
12	GALVANIZED HAIL GUARD (EJW/AUX-W)	1
13	SHUTTER, MANUAL W/ GROUND LEVEL OPERATOR (IC-1)	1
14	SHUTTER, MANUAL W/ GROUND LEVEL OPERATOR (IC-2)	1
15	SHUTTER, MANUAL W/ GROUND LEVEL OPERATOR (AC)	1
16	GALVANIZED FAN GUARD W/ ACCESS	2

UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS IN INCHES
 REMOVE BURRS & SHARP EDGES
 MACHINE FINISH: 125 MICRO

FRACTIONAL ±1/4
 X.X ±0.062
 X.XX ±0.031
 X.XXX ±0.010
 ANGULAR ±0.5°

THIRD ANGLE PROJ MATERIAL N/A
 JOB NO. 130907 ESTIMATED GROSS WEIGHT (LBS) 50,800
 CUSTOMER EXTERTRAN ENERGY SOLUTIONS, LP TAG SEE SHEET 2
 CUSTOMER PROJECT P.O. NO. SEE SHEET 2

DRAWN BY MM DATE 10/4/2013 STATUS RELEASED
 CHECKED BY BB DATE 10/4/2013 SHEET 1 OF 2

DO NOT SCALE

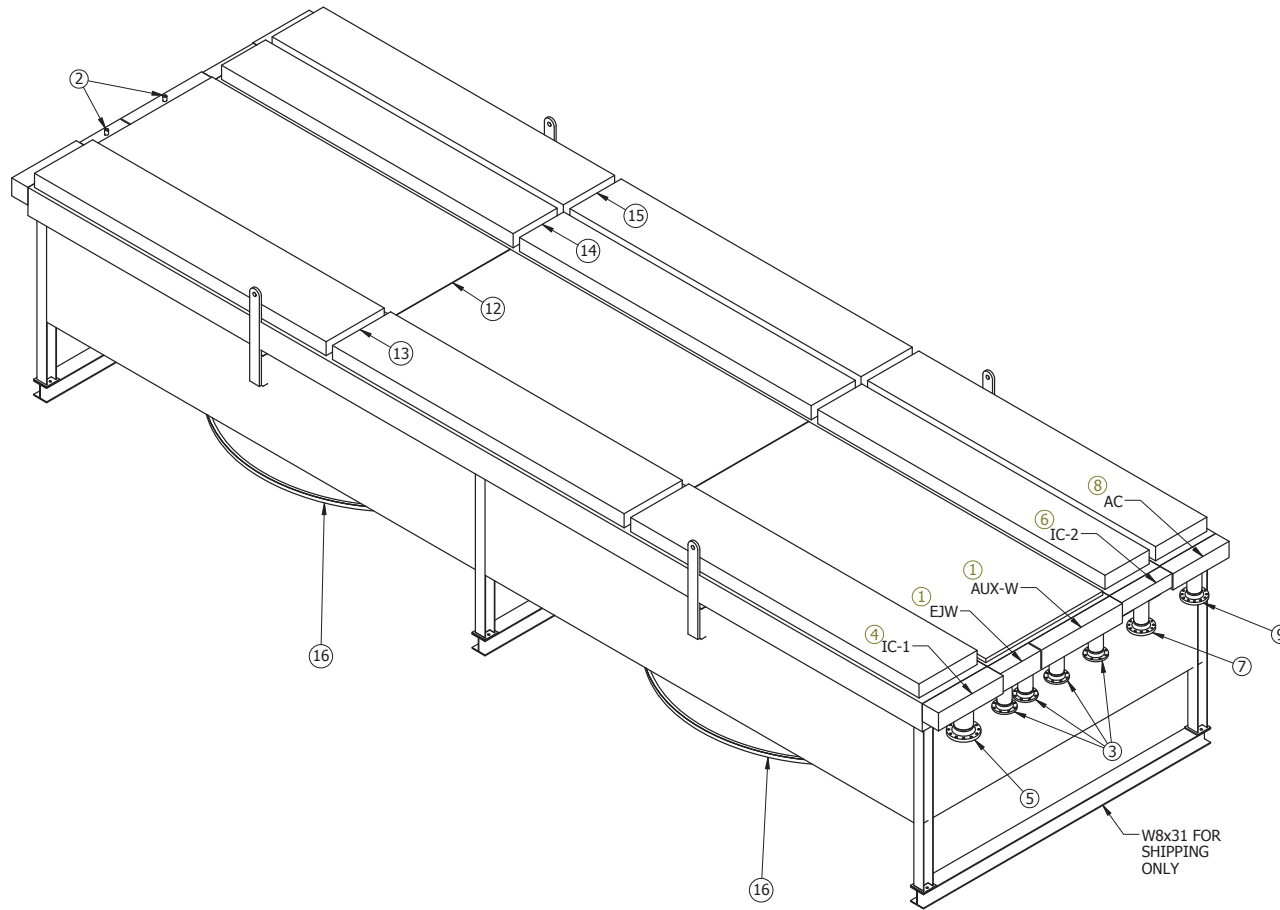
HARSCO INDUSTRIAL
 Air-X-Changers
 MODEL 168-2Z

ZONE	REV.	REV. DESCRIPTION	BY	DATE	APP'D	DATE
1		RE-RATED COOLER	MM	10/31/2013	BB	11/01/2013

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8 7 6 5 4 3 2 1

JOB #	13090701	13090702
PO #	5573869	5573870
TAG #	USS-805367-01	USS-805368-01
STATUS	APPROVAL	APPROVAL



UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS IN INCHES
 REMOVE BURRS & SHARP EDGES
 MACHINE FINISH: 125 MICRO

FRACTIONAL ±1/4
 X.X ±0.062
 X.XX ±0.031
 X.XXX ±0.010
 ANGULAR ±0.5°

DO NOT SCALE

THIRD ANGLE PROJ	MATERIAL	
	N/A	
JOB NO.	ESTIMATED GROSS WEIGHT (LBS)	
130907	50,800	
CUSTOMER	TAG	
EXTERRAN ENERGY SOLUTIONS, LP	SEE SHEET 2	
CUSTOMER PROJECT	P.O. NO.	
	SEE SHEET 2	
DRAWN BY	DATE	STATUS
MM	10/4/2013	RELEASED
CHECKED BY	DATE	
BB	10/4/2013	

HARSCO INDUSTRIAL	
Air-X-Changers	
TITLE / UNIT / SECTION	
MODEL 168-2Z	
SIZE	DRAWING NO.
B	CRT
SHEET 2 OF 2	REV
	1

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Air-X-Changers
Harsco

PO BOX 1804
TULSA, OK 74101-1804
PHONE: 918-619-8000
FAX: 918-384-5202

Job Number

130907

Initial Release Date

12/19/13

Page

1 of 1

1	Purchaser	EXTERRAN, INC	Ultimate User	ENERGY XXL	
2	Inquiry / PO#	NEW BUILD	Destination	WD FIELD	
3	Number of Units ²	Model 168-22	Reference	G3612-IE - KBZ/4 @ 3461 BHP	
4	Assembly	PACKAGED	Overall Size (WLH)	~15.00x47.00x11.42	Est. Weight 47950

PERFORMANCE

		EJM	AUX-W	IC1	IC2	AC
5	Service					
6	Flow	575GPM	500GPM	18.3MMSCFD	18.3MMSCFD	25.5MMSCFD
7	Fluid	50%GLY	50%GLY	0.65SPGR	0.65SPGR	0.6485SPGR
8	Temp. In / Out, F	190.0 / 180.2	147.1 / 130.0	278.0 / 120.0	251.0 / 120.0	232.0 / 120.0
9	Pressure, psia			259.7	582.6	1277.4
10	Pressure Drop, psi	11.1	13.7	3.2	5.9	5.8
11	Heat Load, btu/hr	2,638,020	3,826,196	3,473,648	2,976,003	3,878,520
12	True IMTD, F	35.9	22.3	54.4	45.7	38.9
13	Overall Rate, U, btu/hr sq ft F	156.8	166.6	83.4	105.2	123.7
14	Fouling Factor, sq ft hr h / btu	0.0005	0.0005	0.0010	0.0010	0.0010
15	Surface, Bare / Extended, sq. ft	611 / 11423	1030 / 22043	791 / 16917	629 / 9369	808 / 12855
16	Sections, Number/Connected	(1) COMBINED w/2	(1) COMBINED w/1	(1) SINGLY	(1) SINGLY	(1) SINGLY
17	Design Temp (Max / Min), F	300/-20	300/-20	350/-20	350/-20	350/-20
18	Design / Test Pressure, psig	150 / 195	150 / 195	645 / 839	1287 / 1674	1700 / 2210
19	Pass Arrangement	CROSSFLOW	CROSSFLOW	CROSSFLOW	CROSSFLOW	CROSSFLOW
20	Number Tube Rows / Tube Passes	4 / 2	4 / 2	4 / 1	4 / 1	5 / 1
21	Section Weight, lbs	10700	Combined w/1	6500	5100	6150
22	Tubes, OD x BWG	1-1/2X16(.060MTN)	1X16(.060MTN)	1X16(.060MTN)	3/4X16(.060MTN)	5/8X16(.060MTN)
23	Material	SA214	SA214	SA214	SA214	SA214
24	Number per section / Length, Ft	34 / 46	86 / 46	66 / 46	70 / 46	108 / 46
25	Retarders					
26	Accelerators					
27	Fins, Type	L-TENSION/WHEEL	L-TENSION/WHEEL	L-TENSION/WHEEL	L-TENSION/WHEEL	L-TENSION/WHEEL
28	Material	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
29	Nozzles, Rating / Type	150 RF	150 RF	300 RF	600 RF	900 RF
30	Material / Bore	SA105 / SCH-40	SA105 / SCH-40	SA105 / SCH-80	SA105 / SCH-80	SA105 / SCH-80
31	(Number of Inlets) / Size, in	(1) / 6 Inch	(1) / 6 Inch	(1) / 8 Inch	(1) / 6 Inch	(1) / 6 Inch
32	(Number of Outlets) / Size, in	(1) / 6 Inch	(1) / 6 Inch	(1) / 8 Inch	(1) / 6 Inch	(1) / 6 Inch
33	Headers, Type	BOX W/PLUGS	BOX W/PLUGS	BOX W/PLUGS	BOX W/PLUGS	BOX W/PLUGS
34	Material	SA516 70	SA516 70	SA516 70	SA516 70	SA516 70(N)
35	Corrosion Allowance, in					
36	Grooved Tubesheet	YES	YES	YES	YES	YES
37	Plugs, Type	SHOULDER	SHOULDER	SHOULDER	SHOULDER	SHOULDER
38	Material	SA105	SA105	SA105	SA105	SA105
39	Industry Specifications	AXC-STD	AXC-STD	AXC-STD	AXC-STD	AXC-STD
40	ASME Code Stamp / National Board			YES	YES	YES
41	Canadian Registration Number					
42	PMHT					
43	NACE					
44	Inspection / NDT					
<p>F = 100% R.T. of all header seam & nozzle butt welds plus 100% U.T. of all attachment welds S = Spot R.T. of one long seam and one end closure, per header U = 100% U.T. of all header seam, attachment and nozzle butt welds B = 100% R.T. of all nozzle butt welds SB = S PLUS B as each are described above UB = U PLUS B as each are described above</p>						

AIR SIDE PERFORMANCE

	FAN DATA	DRIVER DATA	REDUCER DATA				
44	Ambient Air Temp., In, F	100	No. Fans / Make	2 / MOORE-CL10K	Type		
45	Elevation, ft	50	Blade Material	ALUMINUM	Make	AXC STANDARD	
46	Air Flow, SCFM	404983.5	HP@RPM	40.48 @ 245	HP / SF	50 / 1.15	V-BELTS/SHEAVES
48	Air Temp., Out, F	137.7	Dia., in / No. Blades	168 / 8	RPM	1800	
49	Min. Ambient, F	-20	Blade Angle, Deg	6.4 @ Clevis	Enclosure	TEFC CHEM DUTY	
50			Series/Blade Adj.	60-HDVT/Manual	Volt/Ph/Hz	230/460-3-60	
51			Fan Hub Bushing	TAPER	Speed	1-SPD (VFD Compatible)	

REV	DATE	BY	DESCRIPTION