



Product Data

Project Name: CVG Industrial Rehabilitation and Efficiency Program, Hebron, KY
Document Set: Bid/Construction
KLH Project #: 26944.00
Section Name: 235700.00
Section Number: 235700.00
Submitted By: Triton Services, Inc
Authored By: CVG Airport
Client Name: Cincinnati/Northern Kentucky International Airport

Submittal Code: 235700.00-PD-01 **REV:** 0

Received Date: 10/02/2025

Submittal Review	
<input checked="" type="checkbox"/>	No Exceptions
By:	David . Sosa Date: 10/09/2025

ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. COMMENTS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR REMAINS RESPONSIBLE FOR ACCURACY OF QUANTITIES, DIMENSIONS, DETAILS AND COORDINATION WITH OTHER TRADES.

General

1.1 No exceptions taken.

End of Submittal Review

Note: Review is for general conformance only. Submittal reviews featuring the "No Exceptions" designation shall not be interpreted as permission to deviate from the contract. Modifications to the contract are based on express written request and approval and submittal reviews do not satisfy this requirement.

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Triton Services, Inc.
 8162 Duke Blvd
 Mason, Ohio 45040
 P: +15136796800

Project: 250034 CVG HVAC Rehabilitation
 3087 Terminal Drive
 Hebron, Kentucky 41048

Submittal #235700-2.0 - 24 - 235700_REVISIED HEAT EXCHANGER_PRODUCT INFORMATION 235700 - Heat Exchangers for HVAC

Revision	0	Submittal Manager	Bryce Ernsthause (Triton Services, Inc.)
Status	Open	Date Created	Oct 1, 2025
Issue Date	Oct 1, 2025	Spec Section	235700 - Heat Exchangers for HVAC
Responsible Contractor	Stoermer-Anderson, Inc.	Received From	Mike Robinson (Stoermer-Anderson, Inc.)
Received Date	Oct 1, 2025	Submit By	Oct 1, 2025
Final Due Date		Lead Time	
		Cost Code	001-0511 - Piping
Location		Type	Product Information
Approvers			
Ball in Court	Bryce Ernsthause (Triton Services, Inc.)		
Distribution	Alonzo Allen (CVG Airport), Bryce Ernsthause (Triton Services, Inc.), Chris Mehaffie (KLH ENGINEERS), Chris Zurmehly (KLH ENGINEERS), Gina Andriola (Triton Services, Inc.), KLH RFI/SUBMITTAL MANAGER (KLH ENGINEERS), Linda White (Stoermer-Anderson, Inc.), Mike Robinson (Stoermer-Anderson, Inc.), Nick Ollila (Triton Services, Inc.)		
Description	Please see the attached file for the revised Heat exchanger we would like to use for the project.		

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					56c21460-fab0-4423-9f8a-01c087f60f4d.pdf

Review does not relieve supplier from compliance with requirements of the drawings and specifications or conformance with contract documents.



Equipment Submittal

Project Name: CVG Industrial Rehabilitation **Spec Section:** 235700.00
Manufacturer: Armstrong Fluid Technologies **Date Submitted:** 09/30/2025
Description: Heat Exchanger **Original or Revision #:** Rev. 1

PROJECT INFO: Cincinnati & Northern Kentucky International Airport
3087 Terminal Drive
Hebron, KY 41048

MECHANICAL ENGINEER: KLH Engineers
1538 Alexandria Pike, Ste. 11
Fort Thomas, KY 41075

MECHANICAL CONTRACTOR: Triton Services
8162 Duke Boulevard
Mason, OH 45040

EQUIPMENT SUPPLIER: Stoermer-Anderson, Inc.
5481 A Creek Road
Cincinnati, OH 45242

Area below reserved for approval stamps:

09/30/25 - SAI

Note:

1. Revised Heat Exchanger dimensions: 123" (H) x 50" (W) x 251" (L)

CINCINNATI 5481A Creek Road
Cincinnati, OH 45242
(513) 527-2300

COLUMBUS 1335 Dublin Rd Ste 112B
Columbus, OH 43215
(614) 486-0358

LOUISVILLE 220 Production Ct
Louisville, KY 40299
(502) 226-9050



Calculation	#3566-250930133440	Reference	3566-250930133440	AHRI 18.9I-A
Engineer		Date	9/30/2025	
Customer		Contact Person		
Project		E-mail		
HEX Type	A211-150-820-6000			

Calculated Parameters	Unit	Hot Side	Cold Side
Fluid		Water	Water
Flow Type			CounterCurrent
Heat Load	BTU/h		38405636.07
Inlet Temperature	°F	55.0	42.0
Outlet Temperature	°F	45.0	52.0
Mass Flow Rate	lb/h	3830933.05	3829350.60
Volumetric Flow Rate	GPM (US)	7654.86	7650.00
Total Pressure Drop	psi(g)	7.95	7.99
Fouling Factor	Hrft ² °F/KBTU	0.0000	0.0000
Surface Margin	%		0.0
LMTD	°F		3.0
HTC (Available/Required)	BTU/ft ² ·hr·°F		625 / 625

Properties of Fluid	Unit	Hot Side	Cold Side
Fluid		Water	Water
Liquid Viscosity	cP	1.3188	1.3924
Wall Viscosity	cP	1.3924	1.3188
Liquid Density	lb/ft ³	62.39	62.41
Liquid Heat Capacity	BTU/lb·°F	1.0025	1.0030
Liquid Thermal Conductivity	BTU/h·ft·°F	0.3363	0.3343

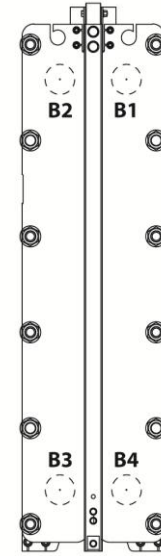
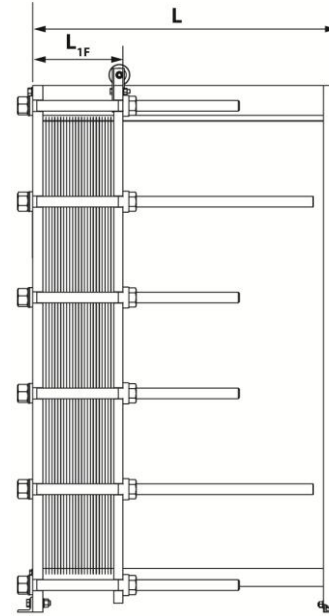
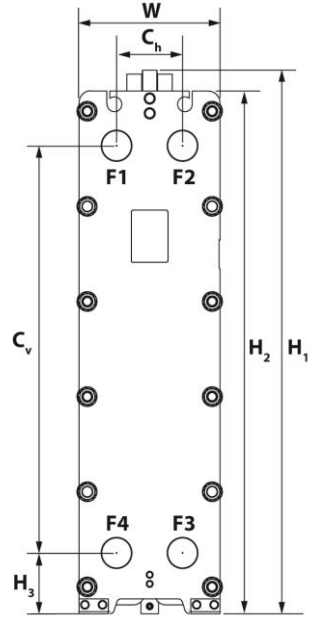
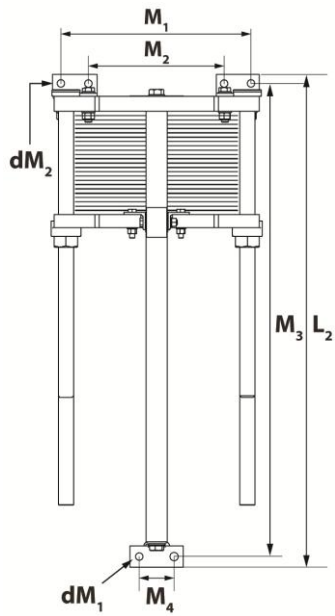
Specifications	Unit	Hot Side	Cold Side
HEX Type			A211-150-820-6000
Number of Plates			820 / TMTL91
Grouping			1x410 + 0x0 / 1x409 + 0x0
Plate Thickness	in		0.0197
Plate Material			AISI304
Effective Area	ft ²		20480.16
Gasket Material			NBRH 5/302 °F
Frame	Type		IS, painted frame
	Length	ft	20.47
	Maximum Number of Plates		824
	Assembly Measurement	in	136.3976
Volume	ft ³	120.18	119.88
Weight, empty/operating	lb	35529	50509
Paint Category			Category C2L
Paint Color			Armstrong Red
Connection	Inlet	F1: 16 INCH studded end connection ANSI B16.5 #150	F3: 16 INCH studded end connection ANSI B16.5 #150
	Outlet	F4: 16 INCH studded end connection ANSI B16.5 #150	F2: 16 INCH studded end connection ANSI B16.5 #150
Pressure Vessel Code			ASME
Minimum Design Temperature	°F		32.0
Maximum Design Temperature	°F		210.0
Maximum Differential Pressure	psi(g)		150.0
Maximum Test Pressure	psi(g)		195.0
Maximum Design Pressure	psi(g)	150.0	150.0

H1.24-1.5.2

This Heat exchanger is certified by the AHRI Liquid to Liquid Heat Exchangers Certification Program, based on AHRI standard 400. AHRI certified units are subject to rigorous and continuous testing, have performance ratings independently measured and are third party verified. Certified units may be found in the AHRI Directory at www.ahridirectory.com



HIGH LEVEL SCHEMATIC DRAWING - ONLY FOR ILLUSTRATIVE PURPOSES (VALUES IN TABLE BELOW ARE CORRECT)



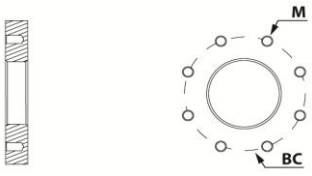
Dimensions			
Cv	74.8425 [in]	L1f	143.1476 [in]
Ch	25.9843 [in]	L	245.6260 [in]
H1	122.3425 [in]	L2	250.5472 [in]
H2	105.0197 [in]	M1	43.7008 [in]
H3	15.7480 [in]	M2	N/A
W	49.6063 [in]	M3	241.8858 [in]
dM1/dM2	0.9843 / 0.9843 [in]	M4	N/A
Tie Bolts	26 pcs. (22 Short, 4 Long)		

Data	Hot Side	Cold Side
Inlet Temp.	55.0 [°F]	42.0 [°F]
Outlet Temp.	45.0 [°F]	52.0 [°F]
Flow Rate	7654.86 [GPM (US)]	7650.00 [GPM (US)]
Pressure Loss	7.95 [psi(g)]	7.99 [psi(g)]
Fluid Media	Water	Water
Heat Load	38405636.07 [BTU/h]	
Weight, empty/operating	35529 [lb] / 50509 [lb]	

US Projection	ARMSTRONG
Tolerances:	acc. to ISO 2768-c
Customer Name:	
Calculation:	3566-250930133440
Date of quotation:	9/30/2025
Armstrong P-F-X Select Version:	AHRI 18.9I-A
HEX Type:	A211-150
Design Code	ASME
Design Temperature:	210.0 [°F]
Design Pressure:	150.0 [psi(g)]
Test Pressure:	195.0 [psi(g)]

Connections

Hot Side: Inlet

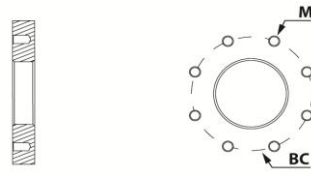


F1: 16 INCH studded end connection ANSI B16.5 #150

M:	1
BC:	1.77
No. of bolts:	16

Connections

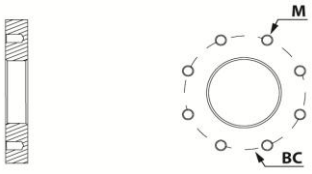
Cold Side: Inlet



F3: 16 INCH studded end connection ANSI B16.5 #150

M:	1
BC:	1.77
No. of bolts:	16

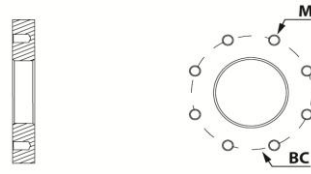
Hot Side: Outlet



F4: 16 INCH studded end connection ANSI B16.5 #150

M:	1
BC:	1.77
No. of bolts:	16

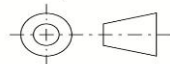
Cold Side: Outlet



F2: 16 INCH studded end connection ANSI B16.5 #150

M:	1
BC:	1.77
No. of bolts:	16

US Projection



HEX Type:	A211-150
Design Code	ASME
Design Temperature:	210.0 [°F]
Design Pressure:	150.0 [psi(g)]
Test Pressure:	195.0 [psi(g)]

Tolerances:	acc. to ISO 2768-c
Customer Name:	
Calculation:	3566-250930133440
Date of quotation:	9/30/2025
Armstrong PFX Select Version:	AHRI 18.9I-A