

EJECTOR MECHANICAL SPECIFICATIONS

All Hot-Dip Galvanized Components with BALTIBOND® Corrosion Protection System Polymerized Metal

- UNIT TYPE** Unit is factory assembled, forced draft, cooling tower with no moving parts. Air is induced into and through the tower by a water injection process.
- WATER DISTRIBUTION** Water enters the tower and is distributed uniformly through a hot-dip galvanized steel spray tree comprised of a header with built-in, removable strainer, distribution branches with provision for clean-out, and brass spray nozzles. The entire distribution system is accessible from the front of the unit for inspection and maintenance.
- PAN SECTION** The pan section is constructed of hot-dip galvanized steel, finished with the BALTIBOND system. Pan includes a sump with drain and clean-out connections. Suction connection is provided with an anti-vortexing device and large-area, hot-dip galvanized steel strainer screens, finished with the BALTIBOND system, easily removed for cleaning.
- CASING SECTION** The casing section is constructed of hot-dip galvanized steel, finished with the BALTIBOND system. Standard accessories include large diameter, circular access doors.
- INLET AIR STABILIZERS** Inlet air stabilizers are provided on the intake side of the tower to insure uniform, smooth, eddy-free air flow into the unit. They are removable in easily handled sections for access to the spray distribution system.
- ELIMINATORS** Eliminators are constructed of self-extinguishing polyvinyl chloride (PVC). Provided on the discharge side of the tower to remove entrained moisture from the discharge air stream.
- DISCHARGE LOUVERS** Discharge louvers, constructed of hot-dip galvanized steel, finished with the BALTIBOND system, are mounted on the discharge side of the tower to direct a high velocity discharge airstream up and away from the tower.
- STRAINER SYSTEM** A double filtration system is included as an integral part of the tower to remove particulate matter and debris from the circulating water. It consists of:
 1. Large-area, lift-out type, hot-dip galvanized steel strainer screens, finished with the BALTIBOND system, with perforated openings, mounted in the tower basin.
 2. A large-area, removable, hot-dip galvanized steel cylindrical strainer, finished with the BALTIBOND system, with perforated openings smaller than the spray nozzle orifices, mounted in the water inlet header. A blow-down connection is provided at the bottom of the header/strainer assembly.
- BALTIBOND SYSTEM** Designated metal parts are supplied with the BALTIBOND system applied by Baltimore Aircoil Company, consisting of:
 - 1) hot-dip galvanized steel.
 - 2) parts prepared in four part (clean, pretreat, rinse, dry) process.
 - 3) electrostatically sprayed thermosetting hybrid polymer, fuse-bonded to the hot-dip galvanized substrate during the thermally activated curing stage.
 - 4) quality assurance inspection program including 23 steps throughout polymer application and unit fabrication.

Unit (parts) are assembled with phenolic-epoxy coated, cadmium-plated, washerhead fasteners.

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Model No.	Shipping Wgt. (lbs.)	Operating Wgt. (lbs.)	A	B	C	Connection Sizes (1)				
						Inlet	Suction	0' Flow	Drain	Make Up
J0305B	750	1500	34"	4'-0 1/2"	26 1/2"	4"	4"	2"	2"	1"
J0405B	950	2100	4'-4"	5'-6 1/2"	3'-0 1/2"	4"	4"	2"	2"	1"
J0605B33R	1210	2970	6'-2"	7'-4 1/2"	5'-6 1/2"	4"	4"	2"	2"	1"

1. All Connections are MPT.
2. For weight loading and suggested steel support see drawing BAC-4083B.

PRMH20240371

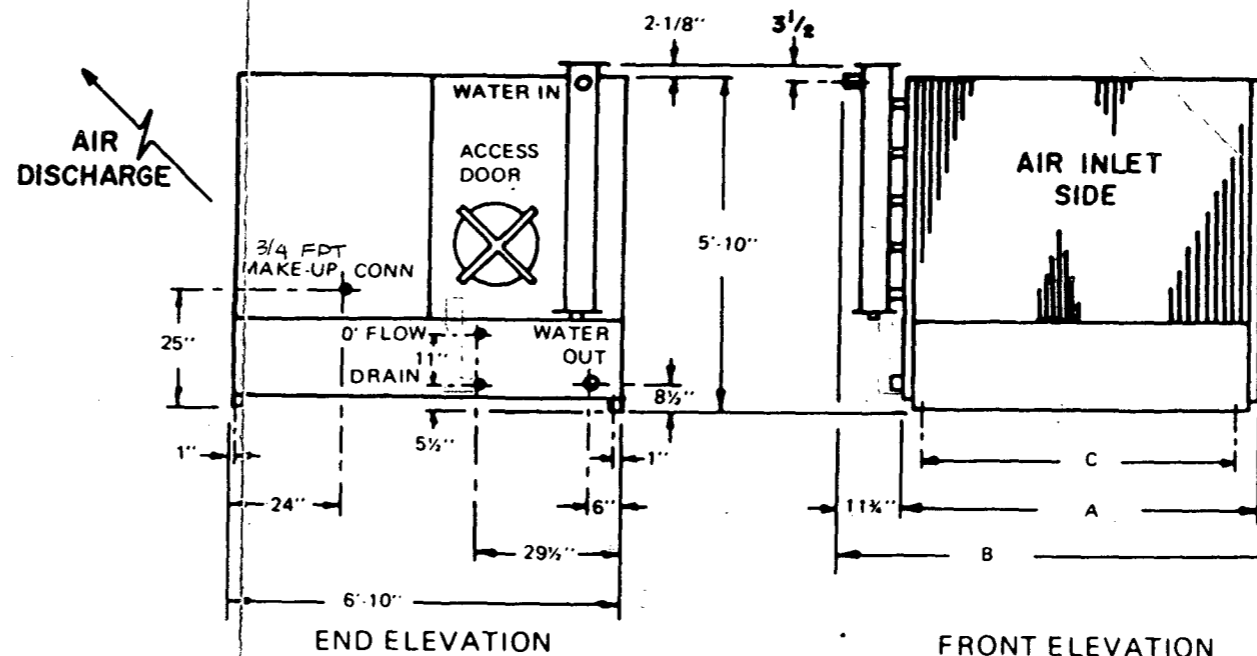
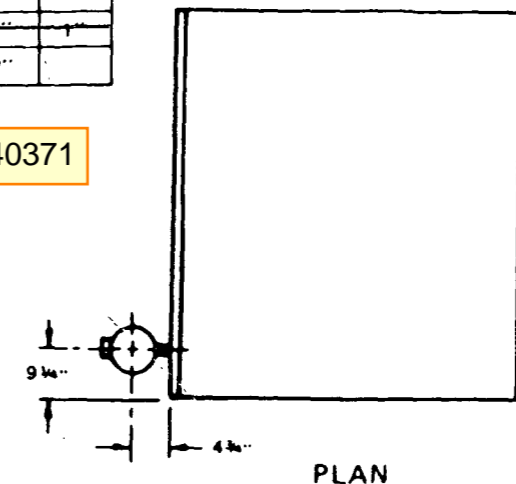
**INFORMATIONAL ONLY
SEE MECH PLANS FOR REFURBISH DETAILS**

FULL SIZED LEDGIBLE COLOR REPORT IS REQUIRED TO BE PROVIDED BY THE PERMITTEE ON SITE FOR ALL INSPECTIONS

J-0305 THRU J-0605

City of Puyallup
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MODIFICATIONS AND ACCESSORIES

- | | |
|--|---|
| <input checked="" type="checkbox"/> Electric Pan Heater Package. Refer to Dwg. BAC-4129B-1. | <input type="checkbox"/> Bottom Connection for Remote Sump Application (Make-up Valve Assembly Omitted). Refer to Dwg. BAC-4131B |
| <input type="checkbox"/> Steam Coil in Pan. Refer to Dwg. BAC-4132A | <input type="checkbox"/> Bottom Suction Connection in lieu of Standard (Make-up Valve and Strainer Included). Refer to Dwg. BAC-4131B |
| <input type="checkbox"/> Electric Water Level Control Package in lieu of Standard Make-up Valve. Refer to Dwg. BAC-4130A-1 and BAC-5682A-1 | |

REMARKS: Unit to be provided with the above marked accessories, pressure gauges, floatless water level control package and the BALTIBOND® Corrosion Protection System.

CERTIFIED FOR: Pease & Sons, Inc. - Tacoma, WA CUSTOMER P.O. 2234
 PROJECT: Puyallup High School - Puyallup, WA
 ARCHITECT/ENGINEER: Tres West Engineering - Tacoma, WA
 CERTIFIED PERFORMANCE: MODEL (1) J0605-B33R TO COOL 180 U.S. GPM OF WATER FROM 87 °F TO 77 °F AT 65 °F ENTERING WET BULB AND 25.5 PSIG SPRAY PRESSURE.

- SUBMITTED FOR:
- APPROVAL
 - CONSTRUCTION
 - REVISION
 - DESTROY PREVIOUS PRINTS

REVISIONS:

NO.	DATE	REMARKS
1	3/17/89	Revised elec water level pkg

EJECTOR COOLING TOWER
Dwg. No. BAC-4120B

BALTIMORE AIRCOIL

B.A.C. ORDER NO. 89200936
September 19, 1988



CUSTOMER	Pease & Sons, Inc. Post Office Box 44100 Tacoma, Washington 98444	DATE P.O. NO. B.A.C. NO. MODEL NO.	September 19, 1988 2234 89200937 (1) EC5-030-1M
	Attention: Mr. Darrin Pease	Rep Order	

PROJECT: Puyallup High School - Puyallup, Washington
 ENGINEER: Tres West Engineering - Tacoma, WA
 B.A.C. REP: G. J. Campbell & Associates, Inc. - Seattle, Washington

ENERCHANGER™ HEAT EXCHANGER

CERTIFIED CAPACITY: Hot Side: 90 GPM of water from 102°F to 82°F at 2.75°F psi fluid pressure drop.
 Cold Side: 180 GPM of water from 77°F to 87°F at 9.3°F psi fluid pressure drop.

EVAPORATIVE EQUIPMENT MODEL NUMBER: _____

EVAPORATIVE EQUIPMENT SERIAL NUMBER: _____

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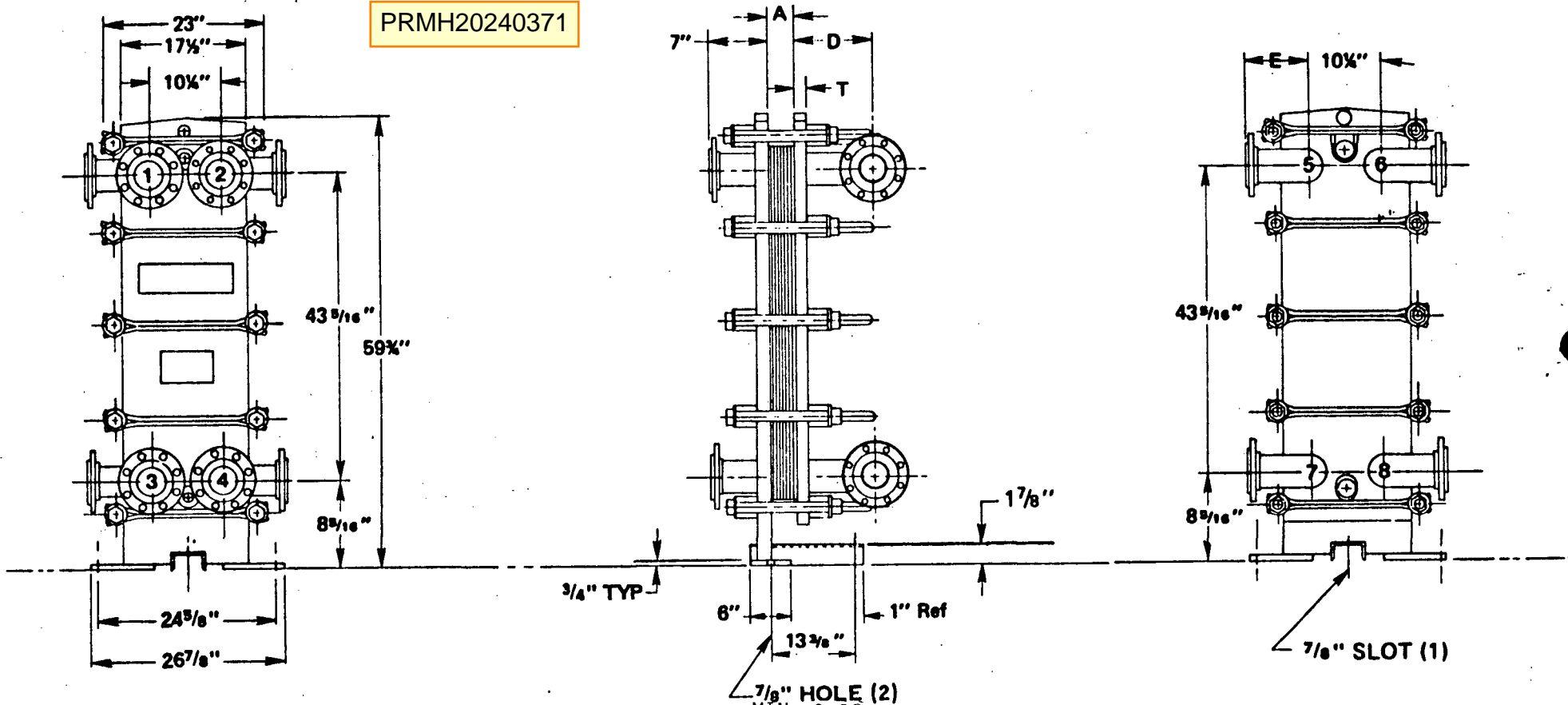
NOTE: Two speed fan motors require a starter that incorporates a 15 second time delay when switching from high to low speed.

Submittal Data: 4 copies For Approval For Record

ITEM	ITEM
Unit dimensions	VE5100H
Mechanical specifications	
ASME Code const.	

FOR FACTORY USE ONLY

PRMH20240371



A=	MIN= 3.92
B=	13.38
C=	N/A
T=	.88(Min.)

Heat transfer area = 113.0 sq. ft.

No. of Plates:	30
Shipping Weight:	1320 lbs.
Operating Weight:	1410 lbs.
Nozzle Mat'l:	316 L Stainless Steel
Plate Mat'l:	304 Stainless Steel
Gasket Mat'l:	Nitrile Butyl Rubber
Flange Mat'l:	150 lb. A.S.A. C.S. loose Flange with Lap Joint Stub End
Max. Allowable Pressure:	100 psig
Max. Allowable Temperature:	200 °F

NOZZLE SIZE	DIMENSIONS	
	D	E
2"	6"	9 1/2"
4"	9"	9"

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NOZZLE FUNCTION	LOCATION*	SIZE
Hot Side IN	1	2"
Hot Side OUT	3	2"
Cold Side IN	4	2"
Cold Side OUT	2	2"

ALL DIMENSIONS APPROXIMATE
NOT TO BE USED FOR
CONSTRUCTION PURPOSES

BALTIMORE AIRCOIL COMPANY

ENER-CHANGER

MODEL EC5-030 -1 M

B.A.C. ORDER NO: 89200937	DWG NO: YE 5100H
DATE: September 19, 1988	INQ NO: 21760

*Nozzles are provided at these four locations only.



CUSTOMER	Pease & Sons, Inc. Post Office Box 44100 Tacoma, Washington 98444	DATE P.O. NO. B.A.C. NO. MODEL NO. Rep Order	September 19, 1988 2234 89200938 (1) EC2-032-2
	Attention: Mr. Darron Pease		

PROJECT ► Puyallup High School - Puyallup, Washington
 ENGINEER ► Tres West Engineering - Tacoma, Washington
 B.A.C. REP: ► G. J. Campbell & Associates, Inc. - Seattle, Washington

ENERCHANGER™ HEAT EXCHANGER

CERTIFIED CAPACITY: Hot Side: 130 GPM of water from 80°F to 70°F at 9.64°F psi fluid pressure drop.
 Cold Side: 130 GPM of water from 60°F to 70°F at 8.88°F psi fluid pressure drop.

EVAPORATIVE EQUIPMENT MODEL NUMBER:
 EVAPORATIVE EQUIPMENT SERIAL NUMBER:

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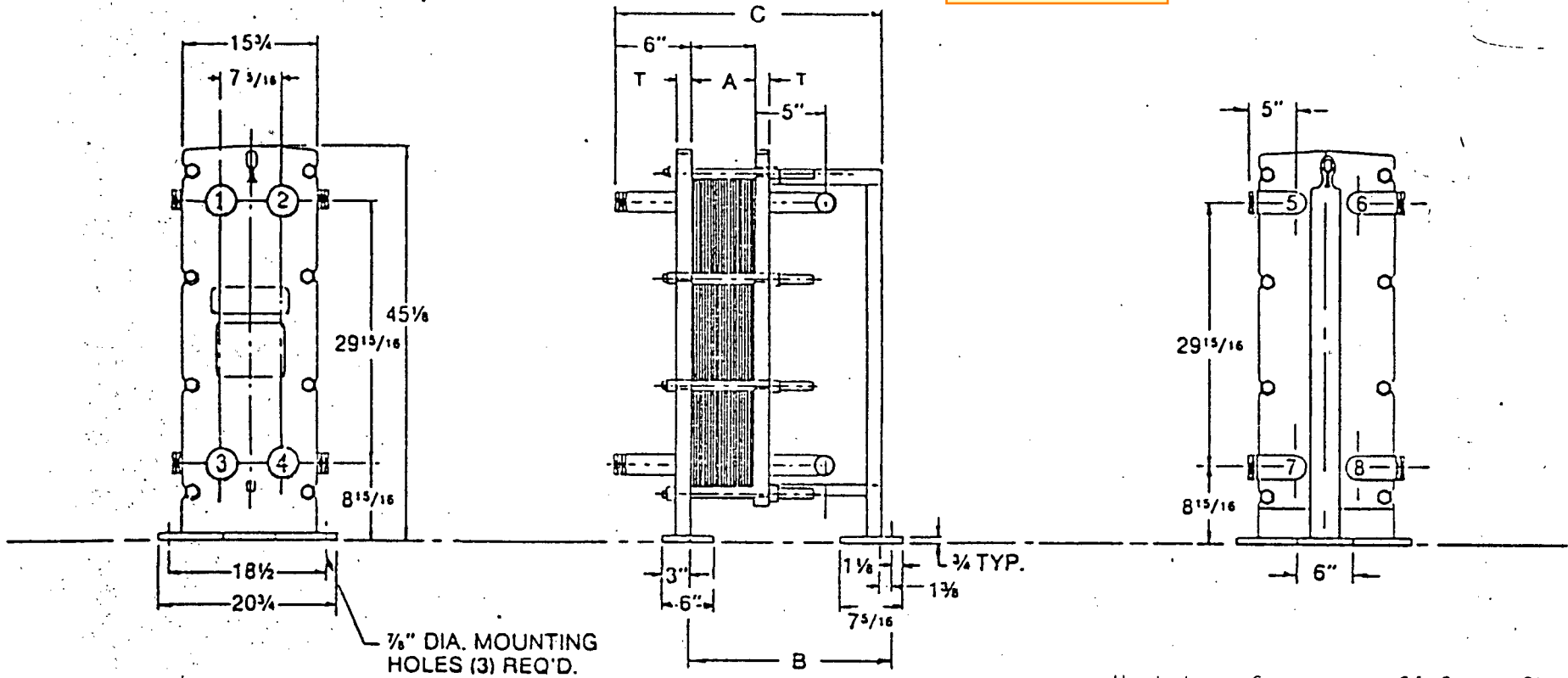
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NOTE: Two speed fan motors require a starter that incorporates a 15 second time delay when switching from high to low speed.

Submittal Data: 4 copies For Approval For Record

ITEM	ITEM
Unit dimensions VE1200U	
Mechanical specifications	
ASME Code const.	

FOR APPROVAL



Heat transfer area = 64.6 sq. ft.

MIN=	3.23
A=	MAX= 3.58
B=	23.38
C=	28.00
T=	1.5 (Min.)

No. of Plates:	32
Shipping Weight:	780 lbs.
Operating Weight:	820 lbs.
Nozzle Mat'l:	316 L Stainless Steel
Plate Mat'l:	304 Stainless Steel
Gasket Mat'l:	Nitrile Butyl Rubber
Max. Allowable Pressure:	100 psig
Max. Allowable Temperature:	200 °F

NOZZLE FUNCTION	LOCATION*	SIZE
Hot Side IN	1	2"
Hot Side OUT	3	2"
Cold Side IN	4	2"
Cold Side OUT	2	2"

*Nozzles are provided at these four locations only.

ALL DIMENSIONS APPROXIMATE
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CONSTRUCTION PURPOSES

City of Puyallup
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Building	Planning
Engineering	Public Works
Fire	Traffic

BALTIMORE AIRCOIL COMPANY	
ENER-CHANGER	
MODEL EC2-032 -2	
B.A.C. ORDER NO: 89200938	DWG NO: VE12604
DATE: September 19, 1988	INQ NO: 21760

PRMH20240371

DATE September 19, 1988

MECHANICAL SPECIFICATIONS

BALTIMORE AIRCOIL ENERCHANGER™ Plate and Frame Heat Exchanger

PROJECT Puyallup High School -Puyallup, WA
CUSTOMER Pease & Sons, Inc. - Tacoma, WA P.O. 2234
B.A.C. SERIAL NO. 89200937/8 ENGINEER Tres West Engineering - Tacoma, WA

UNIT TYPE Factory-assembled, plate and frame type heat exchanger of counterflow design. Plate and frame heat exchanger is free-standing, unitized frame and multi-plate. It is complete, pre-assembled, pressure tested at the factory and flushed clean, ready for connection to customer's piping. All materials and manufacturing are of U.S. origin.
CODES AND STANDARDS The ENERCHANGER™ is designed, fabricated and tested for operation in accordance with the ASME Unfired Pressure Vessel Code, Section VIII, Division 1, including latest addenda, and code stamped where required.
FRAME Frame is adequately sized to allow for opening and cleaning the plates. Frame is provided with top and bottom guide bars for support and alignment of plates. Top guide bar is smooth finished stainless steel surface for roller bearing support of movable end frame and ease of transport for plate suspension. Bottom guide bar is also smooth finished stainless steel. Fixed and movable end frames are reinforced, flat plate SA-516-70 carbon steel design. Movable frame is supported from the top guide bar by a roller bearing and guided by the bottom guide bar. End frames are provided with holes to facilitate lifting. Three heavy steel floor base plates for anchor bolts are provided.
PLATES Plates are fabricated of 304 stainless steel. All plates are provided for attaching to the upper guide bar. Plate designs are herringbone or washboard with alternate plates rotated 180 degrees. All plates have internal metal to metal contact points (a minimum of 150/square foot). Perforated flat plates between corrugated plates are not used. Plate thickness is selected to withstand full operating pressure in one channel with zero pressure in the adjoining channel. Plate thickness is not less than .024 inches (.6mm). Plate design includes an enclosing groove for the entire gasket. The gasket groove has tapered sides to assure positive seating of the compressed gasket. The gasket groove is configured to assure that the compressed gasket does not extend above the top of the groove to preclude blow-out of the gasket. End plates are provided at the fixed and movable frames.
GASKETS Gaskets are molded, one piece NBR securely cemented into the continuous gasket groove in each plate. Inactive port gasket areas are vented to the exterior in such a manner that no mixing can occur between fluids. Gaskets are designed to be sealed by compression until metal to metal contact between plates is secured after tightening of the pack. All gaskets are similar except special end gaskets between end plates and frames.
NOZZLES Each nozzle consists of a lap joint flanged connection in 150 or 300 psig rating, as required (except EC4 unit which has MPT connections as standard, with flanged connections as option).
BOLTS Tightening bolts are SA-193-B7 zinc-plated carbon steel with fixed SA-194-2H carbon steel nut. Free nuts are heavy SA-194-2H carbon steel with heavy-duty carbon steel washer.
SHROUD (Models EC1 - EC8 only) The plate pack is completely enclosed in a removable, painted, rust-protected carbon steel metal shroud designed to protect the plate pack from debris and damage.
FINISH All exterior steel surfaces are sharp steel shot-blasted to SSPC-6-63, followed by one coat of two-part epoxy spray enamel baked at 250°F.

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