



Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 3/13/2024

Return Request: 3/23/2024

Project: Stone Bank HQ - Chenal

Supplier: Woodbury Beach

Manufacturer: SPX Technology

Submittal: Cooling Tower

Submittal Number: 23 65 00-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

WDD Architects
5050 Northshore Lane
N. Little Rock, AR 72118
501-376-6681

ENGINEER

Batson Inc.
1300 Brookwood Dr.
Little Rock, AR 72202
501-664-3311

GENERAL CONTRACTOR

East Harding
2230 Cottondale Lane #3
Little Rock, AR 72202
501-661-1646

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

--

dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

Submittal to:
Comfort Systems USA (Arkansas)
9924 Landers Road
North Little Rock, AR 72117

Project:
Stone Bank
Replace Recold JW115 Tower
Spec 23-65-00

Engineer:
Batson Firm
Little Rock, AR

Quote No. DAIN MATTHEY_240118_095315464

February 28, 2024

TOWER MODEL	PERFORMANCE CONDITIONS	MECHANICAL DATA PER CELL	TOWER DIMENSIONS	WEIGHTS
One (1) Recold Model JWH-115C factory assembled 1-Cell forced draft counterflow fluid cooler	Per 1-cell tower: 570 gpm 97°F Hot Water 87°F Cold Water 79.6°F Entering WB 1.3 psi press drop 30% Glycol	Main motor: 1 @ 50 HP Premium Efficiency TEFC 3 phase / 60 Hz / 460 Volts 1.15sf / TEFC 1800 RPM Pump(s): 1 @ 5 HP	Each cell: (without options) Length 8' - 4 1/2" Width 20' - 9" Height 9' - 4"	Per cell: Shipping: 11,672 lb Per 1-cell tower: Shipping: 11,672 lb

Quantities shown below are per cooler.

Base Tower Construction/Equipment:

Galvanized steel base construction.
Stainless steel sump pan sides, floor panels, coil supports, anti-cavitation swirl arrestor hood and external float box.
Belt drive centrifugal fan.
Triple-pass 17 mil PVC drift eliminators designed and manufactured by Marley.
Motor(s) will meet or exceed the EISA 2007 government efficiency standards
Greaselines will be included outside of the tower's casing for ease of maintenance.

Coil Section:

Corrosion resistant copper tube bundle constructed with 5/8 in O.D. copper tubing.
(4) 3 inch 150 lbs cast brass flange inlet connections per cell for process fluid.
(4) 3 inch 150 lbs cast brass flange outlet connections per cell for process fluid.
Standard Wall Tubes, Top 4 Rows.
Standard Wall Tube, Rest of Coil.
Tube bundles water immersion tested to 350 psi .
Factory installed positive closure dampers which help protect the coil from freezing during shutdown.

Collection Basin Connections and Accessories:

Mechanical type water make-up float valve.
Electric immersion heater complete with thermostat for freeze protection of the collection basin during cold weather system shutdown.

Spray System and Accessories:

PVC distribution header pipe and branch arms with polypropylene spray nozzles.
(1) spray pump installed and piped in the factory.

Maintenance & Maintenance Access Features:

Large removable access doors in sump section and coil section.
Fan and motor are located out of the wet area, for ease of access and maintenance.

Control Systems:

(1) Factory mounted and wired VFD control panel NEMA3R with pump starter package
Factory wired sump pan heater control.
Wire positive closure dampers control.
Low level water cut-off for protection of the pump.
Pump heat trace and insulation.

Startup Service and One Day Owner Training

SUBMITTAL DOCUMENTS

Drawings & Data

<i>Transmittal Code</i>	<i>Approval Code</i>	<i>No. of Copies</i>	<i>Drawing Number /Rev/Date</i>	<i>Description</i>
E	SFA	1	Z0908221	Schematic
E	SFA	1	Z0908255	Discharge Air Dampers
E	SFA	1	Z0908258	Basin Heat
E	SFA	1	Z0908246	Control Detail
E	SFA	1		Vibration Switch
E	SFA	1		Selection Data
E	SFA	1		Sound Data
E	SFA	1	Z0908311	Hoisting Detail
E	SFA	1		Warranty

Transmittal Codes:

E = Enclosed Herewith
S = Sent Separately

Approval Codes:

SFA = Approval Document. Equipment is held for Approval and Release.
AFC = Certified Document. Equipment has been Approved for Construction.
Changes made after this point may result in price adds and/or delays.
INF = Information Document. Submitted for Information only.

Estimated Shipment Lead-Time After Drawing Approval: 90 business days.

Lead times are estimates and are subject to change at time of release

February 28, 2024

For: SPX Cooling Tech, LLC
By: Woodbury Beach Company

Dain Matthey

**CoolSpec™ Version 7.3.25**

Product Data: 8/28/2023 (Current)

11/27/2023 3:27:42 PM

Job Information

Replacement JWH115C Tower
Stone Bank
Little Rock, AR

Selected by

Woodbury-Beach Company
6329 Crystal Hill Road
North Little Rock, AR 72118 US

Dain Matthey
Tel 501-753-8323
dmatthey@woodburybeach.com

Fluid Cooler Definition

Manufacturer	Recold	Fan Motor Speed	1800 rpm
Product	JW	Required Fan Motor Output per cell *	40.00 BHp
Model	JWH-115C	Required Fan Motor Output total *	40.00 BHp
Cells	1	Fan Motor Capacity per cell	40.00 Hp
		Fan Motor Output per cell	40.00 BHp
Coil Material	Copper	Fan Motor Output total	40.00 BHp
Fan	Centrifugal, Fan Standard	Air Flow per cell	69000 cfm
Fan Speed	290 rpm	Air Flow total	69000 cfm
Fans per cell	1	Pump Motor Output per cell	5.00 BHp
Pumps per cell	1	Pump Water Flow per cell	400.0 gpm
Model Group	Standard		

* Required Fan Motor Output assumes VFD operation

Conditions

Tower Water Flow	570.0 gpm	Air Density In	0.07065 lb/ft³
Hot Water Temperature	97.00 °F	Air Density Out	0.07123 lb/ft³
Range	10.00 °F	Humidity Ratio In	0.01820
Cold Water Temperature	87.00 °F	Humidity Ratio Out	0.02899
Approach	7.40 °F	Wet-Bulb Temp. Out	87.79 °F
Wet-Bulb Temperature	79.60 °F	Estimated Evaporation	6.2 gpm
Relative Humidity	50 %	Coil Pressure Drop	1.3 psi
Additive Content	0.0 %	Total Heat Rejection	2839000 Btu/h
Capacity	100.0 %		

- This selection satisfies your design conditions.

Weights & Dimensions

	Per Cell	Total
Shipping Weight	10670 lb	10670 lb
Heaviest Section	10670 lb	
Max Operating Weight	20170 lb	20170 lb
Width	20' - 9"	20' - 9"
Length	8' - 4 ½"	8' - 4 ½"
Height	9' - 4"	

Weights and dimensions do not include options; refer to sales drawings.

SPX COOLING TECH, LLC | 913 664 7400 | spxcooling@spx.com | spxcooling.com

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Job Information

Replacement Fluidcooler
Stone Bank
Little Rock, AR

Selected by

Woodbury-Beach Company
6329 Crystal Hill Road
North Little Rock, AR 72118 US
dmatthey@woodburybeach.com

Dain Matthey
Tel 501-753-8323

Fluid Cooler Definition

Manufacturer	Recold	Fan Speed (100.0 %)	290 rpm
Product	JW	Fan Motor Speed (100.0 %)	1800 rpm
Model	JW-115C	Fan Motor Capacity per cell	40.00 Hp
Cells	1	Fan Motor Output per cell	40.00 BHp
Fan	Centrifugal, Fan Standard	Fan Motor Output total	40.00 BHp
Fans per cell	1		
Model Group	Standard		

Sound

1 - Cell sound data for an unobstructed environment.

Sound Pressure Level (SPL) expressed in dB (re: 20x10⁻⁶ Pa)

Sound Power Level (PWL) expressed in dB (re: 1x10⁻¹² watts)

Distance	Location	Octave		Band	Center Frequency (Hz)					Overall
		63	125		500	1000	2000	4000	8000	
5.00 ft	Blower End SPL	81	74	74	71	70	63	75	56	78
5.00 ft	Cased Side SPL	76	76	76	72	73	65	65	54	76
5.00 ft	Cased End SPL	82	81	75	69	65	56	57	50	72
5.00 ft	Air Discharge SPL	80	80	83	79	75	72	66	53	81
50.00 ft	Blower End SPL	72	64	64	57	53	47	53	37	61
50.00 ft	Cased Side SPL	66	66	60	55	54	50	49	40	59
50.00 ft	Cased End SPL	68	66	57	54	51	46	49	35	58
50.00 ft	Air Discharge SPL	64	62	66	62	57	54	48	36	64
	Fluid Cooler PWL	98	95	98	94	89	86	81	69	95

Notes

- Sound Pressure Levels at Air Discharge are measured on the cased face side opposite the motor, far enough outside the air stream to prevent air noise from affecting the reading.
- Sound pressure levels were measured and recorded in full conformance with CTI ATC-128 test code November 2019 revision published by the Cooling Technology Institute (CTI).

Other Resources

For additional information on sound-related topics please see:

Sound Power Impacts Per CTI Code Revision

<https://spxcooling.com/library/sound-power-impacts-per-cti-code-revision/>

Understanding and Evaluating Cooling Tower Sound Levels Among Manufacturers

<https://spxcooling.com/library/understanding-and-evaluating-cooling-tower-sound-levels-among-manufacturers/>

SPX Cooling Technologies Certification of Limited Warranty

Version 07-1253

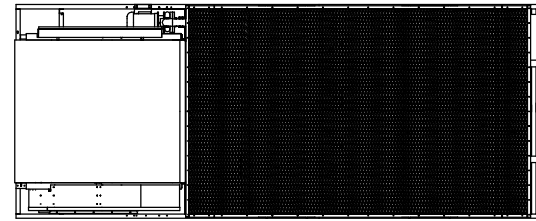
SPX Cooling Technologies, Inc. ("SPX Cooling") hereby warrants the Recold JW® fluid cooler will be free from all defects in materials and workmanship for a period of eighteen (18) months from the date of shipment by SPX Cooling to the original installation.

The obligation under this warranty is limited to the repair or the replacement of defective materials, at SPX Cooling's option, F.O.B. original shipping point or EXWORKS plant. Warranty on repaired or replaced equipment will be for the time remaining under the terms of the original warranty. This warranty is non transferable.

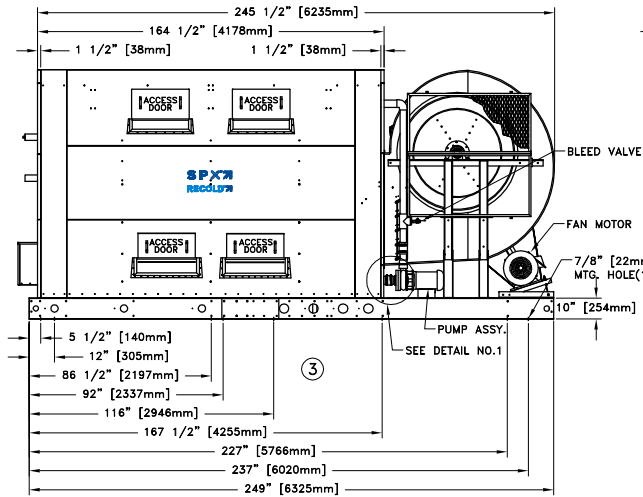
This warranty does not obligate SPX Cooling to bear the cost of labor, transportation charges, or other costs incurred in connection with the repair or replacement of defective parts; nor does this warranty apply to normal wear and tear nor to damage resulting from operations not conforming with the JW's operation and maintenance instructions, accident, alteration, misuse or an abnormally corrosive or abrasive use environment.

SPX Cooling's total liability for damages related to the performance of or failure to perform shall be limited to the amount of the contract price and in no event shall either party hereto be responsible or held liable to the other for any special, punitive, indirect, incidental, or consequential damages.

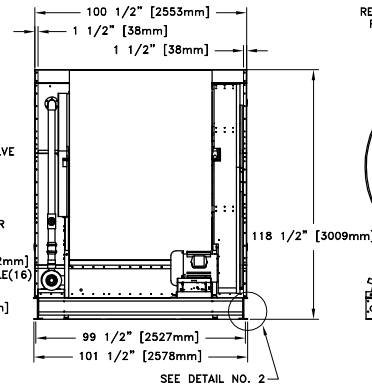
The above warranties are in lieu of all other warranties expressed or implied, and all implied warranties of merchantability and fitness for a particular purpose are hereby disclaimed and excluded from this agreement.



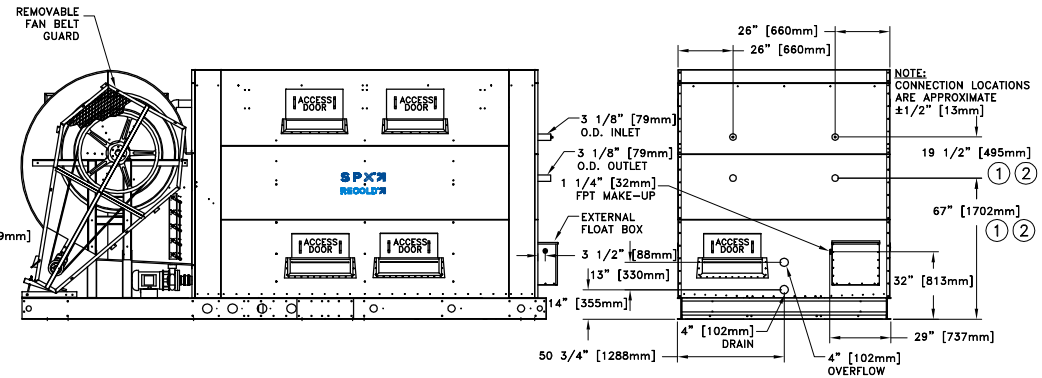
PLAN VIEW



ALL DOORS ARE NOMINAL 19" [483mm] X 27" [686mm] AND INTERCHANGEABLE



FAN END

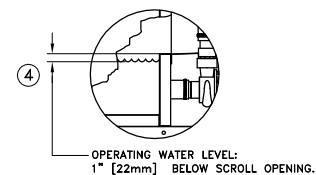


LEFT SIDE ELEVATION

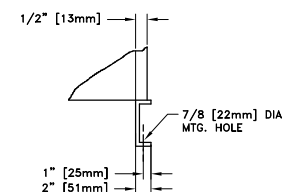
CONNECTION SIDE

NOTES:

- ① CONSULT FACTORY FOR SIZE AND LOCATION OF CONNECTIONS FOR HIGH FLOW (JWH) MODELS.
- ② DIMENSIONS APPLY TO LOW FLOW (JWL), STANDARD FLOW (JW) AND HIGH FLOW (JWH) MODELS EXCEPT AS INDICATED IN NOTE NO. 1.
- ③ IF SUPPORTING THE UNIT ON BEAMS, REFER TO THE RECOLD SUGGESTED SUPPORTING STEEL DRAWING FOR REQUIRED MOUNTING HOLE LOCATIONS.
- ④ OPERATING WATER LEVEL: 1" BELOW SCROLL OPENING OF FAN. DETAIL NO. 1



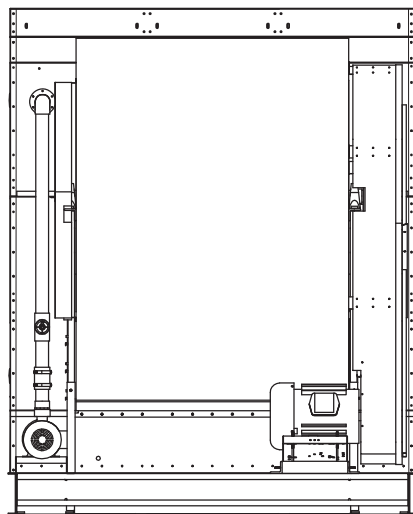
DETAIL NO. 1



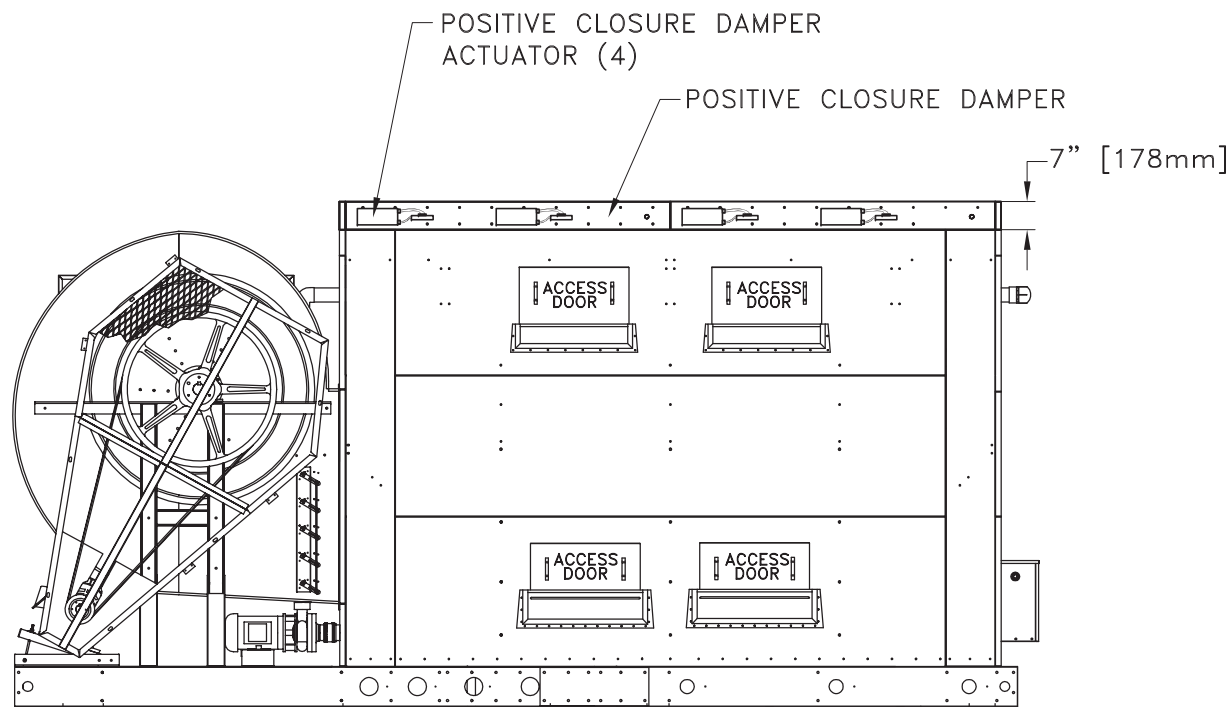
DETAIL NO. 2

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DRAWN BY TRINH	DRAWN DATE 12/10/2019	QTC DRAWING BASE UNIT JW-115				RECOLD 	
CHECKED BY ABRAHAM_STD	CHECKED DATE 12/11/2019						
RELEASED BY ABRAHAM_STD	RELEASED DATE 12/11/2019	ECM NUMBER 25360	ORDER NUMBER -/-	FORMAT ANSI A	PLOT 1=1	DRAWING NUMBER Z0908221	REV. A



FAN END



LEFT SIDE ELEVATION

NOTES:

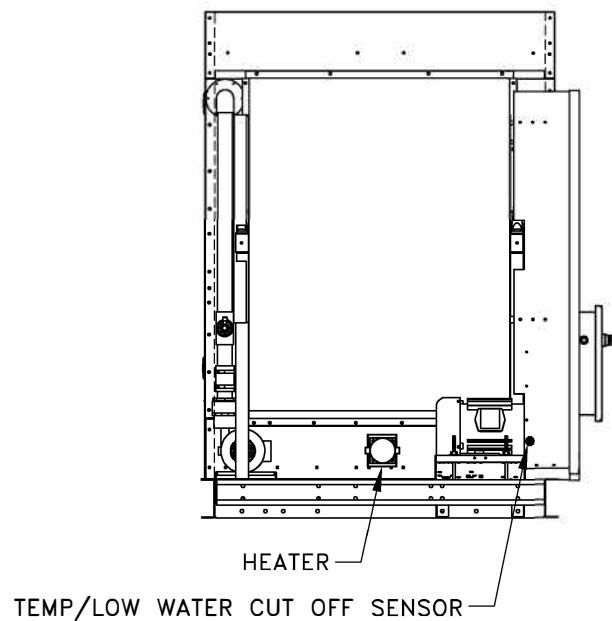
- ① UNIT SHOWN IS GENERIC J-SERIES

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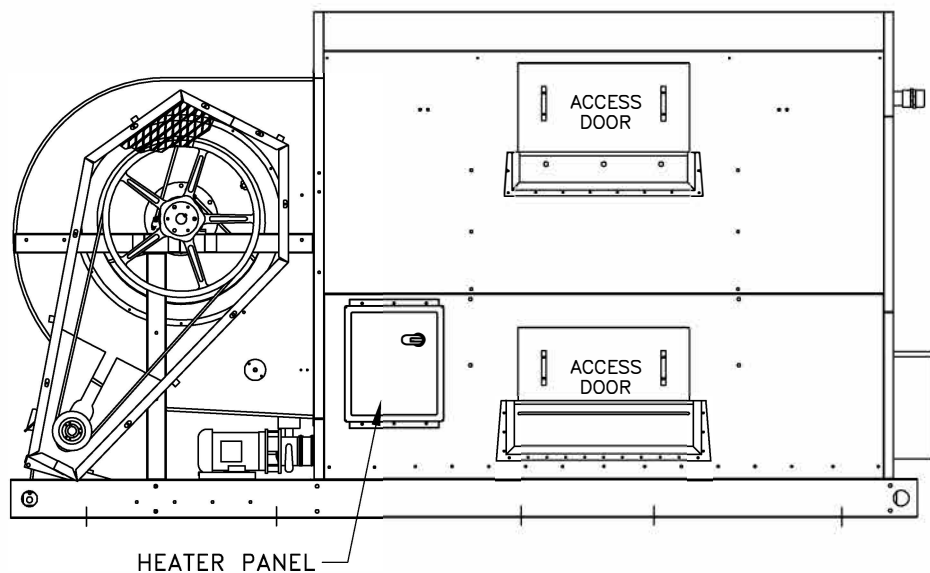
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Recold Item No:

DRAWN BY TRINH	DRAWN DATE 12/16/2014	QTC DRAWING—POSITIVE CLOSURE DAMPER JW—115 JC 425—450 JT 49340—49360					
CHECKED BY ABRAHAM_STD	CHECKED DATE 02/17/2015						
RELEASED BY ABRAHAM_STD	RELEASED DATE 02/17/2015	ECM NUMBER	ORDER NUMBER —/—	FORMAT ANSI A	PLOT 1=1	DRAWING NUMBER Z0908255	REV.



FAN END



LEFT SIDE ELEVATION

NOTES:

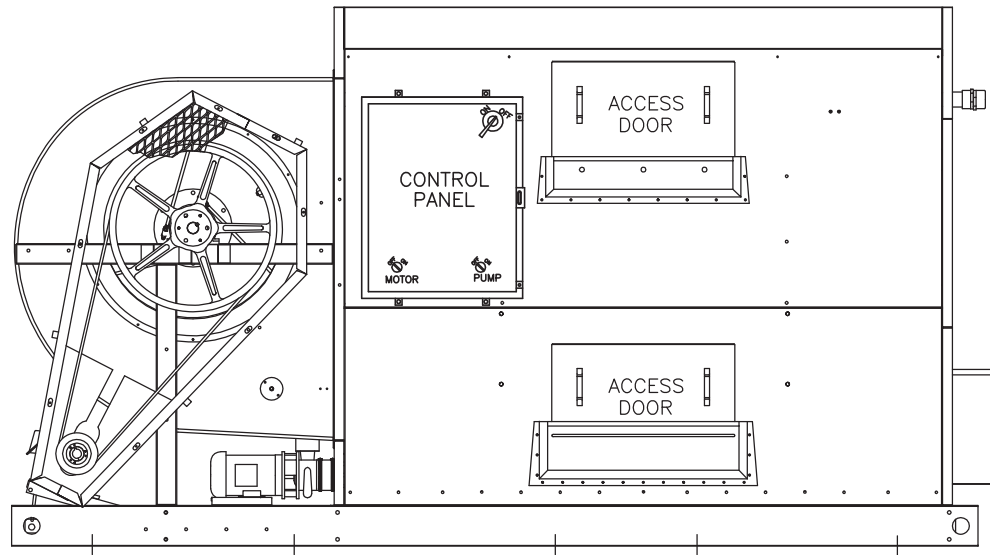
- ① UNIT SHOWN IS GENERIC J-SERIES WITH A INDEECO HEATER AND PANEL

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Recold Item No:

DRAWN BY TRINH	DRAWN DATE 12/16/2014	QTC DRAWING SUMP PAN HEATER INDEECO, J-SERIES					
CHECKED BY ABRAHAM_STD	CHECKED DATE 03/05/2015						
RELEASED BY ABRAHAM_STD	RELEASED DATE 03/05/2015	ECM NUMBER	ORDER NUMBER -/-	FORMAT ANSI A	PLOT 1=1	DRAWING NUMBER Z0908258	REV.



LEFT SIDE ELEVATION

NOTES:

- ① CONTROL PANEL LOCATION SHOWN IS STANDARD FOR ALL J-SERIES MODELS
- ② CONTROL PANEL EXACT LOCATION CAN VARY DEPENDING ON THE SPACE AVAILABLE

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Recold Item No:

DRAWN BY TRINH	DRAWN DATE 12/16/2014	QTC DRAWING CONTROL PANEL STANDARD LOCATION J-SERIES					
CHECKED BY ABRAHAM_STD	CHECKED DATE 02/16/2015						
RELEASED BY ABRAHAM_STD	RELEASED DATE 02/16/2015	ECM NUMBER	ORDER NUMBER -/-	FORMAT ANSI A	PLOT 1=1	DRAWING NUMBER Z0908246	REV.

Product Benefits

- Unique patented, spring loaded, magnetically coupled sensor, requiring no power
- Offers cost effective protection for critical situations
- Provides better control over trip sensitivity
- Remote reset models available
- 30' cord set

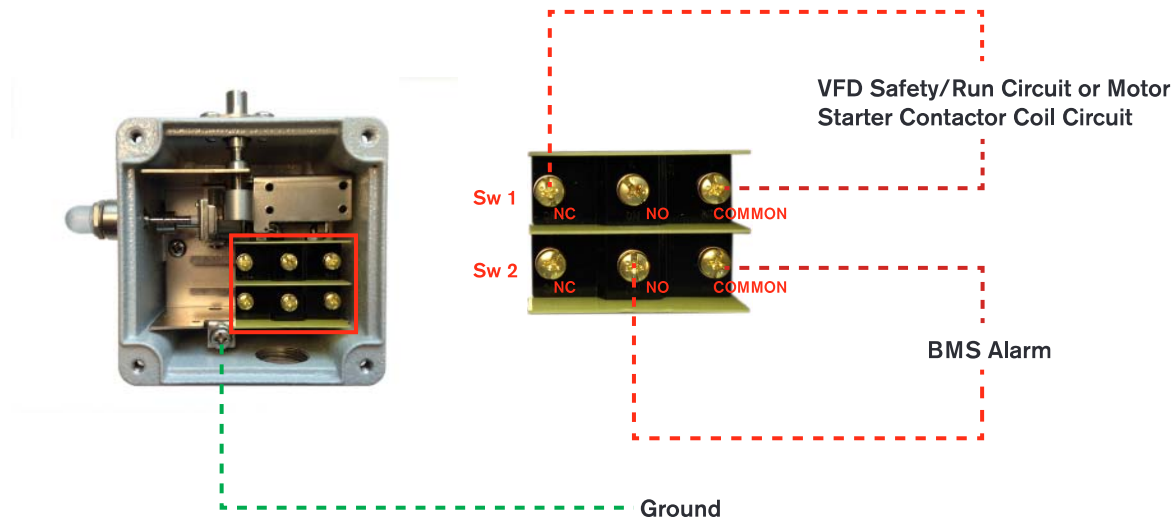


Model	Reset	Relay Contact Output	Measurement Range	Frequency Range
2558910	Manual external reset button	One - DPDT form "C" 15 amp at 120 VAC	Inertial 1-7 g pk 0-68.7 m/s ² pk adjustable	0 to 6000 cpm 0-100 Hz
2558911	Manual external reset button and 24 VDC remote reset solenoid			
2558912	Manual external reset button and 120 VAC 60 Hz remote reset solenoid			
2558913	Manual external reset button and 240 VAC 50 Hz remote reset solenoid			

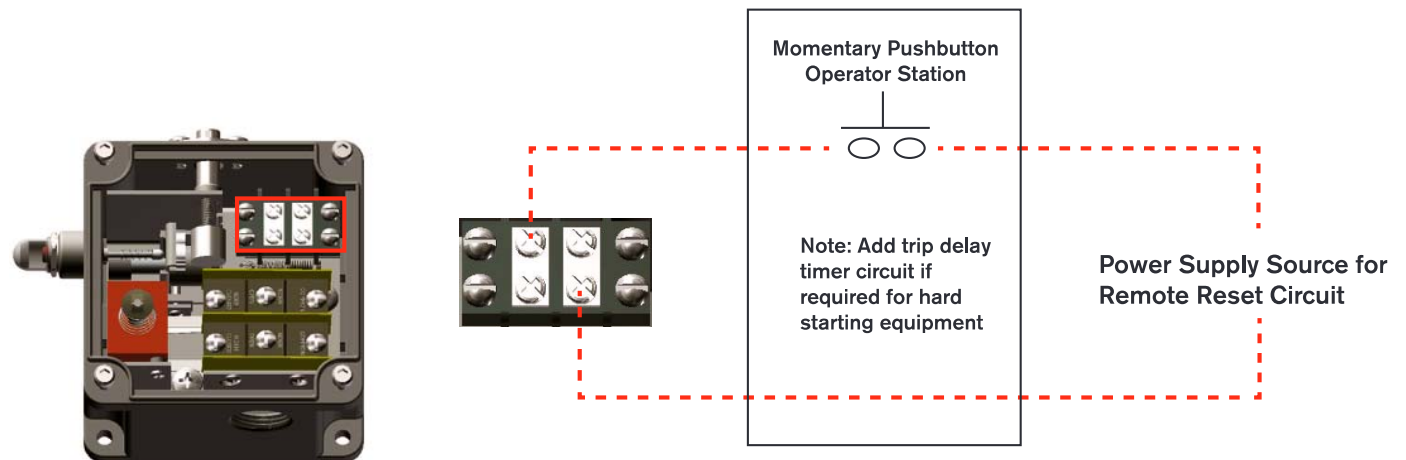
Model	Startup Delay	Trip indication	Enclosure type	Conduit fitting*	Electrical Certification
2558910	No	External red indicator	NEMA 4X / IP56 epoxy painted aluminum	One - 3/4 inch NPT threaded female connection with liquid tight fitting and cord provided	
2558911	Timer required in customer's start circuit				
2558912					
2558913					

*If using conduit, seal the inside of the switch with a vapor barrier. Refer to the Vibration Switch User Manual for additional details.

Typical output contact wiring



Typical remote reset wiring



SPX COOLING TECHNOLOGIES, INC.

7401 WEST 129 STREET
OVERLAND PARK, KS 66213 USA
913 664 7400 | spxcooling@spx.com
spxcooling.com

SPEC-IMI-17A | ISSUED 06/2017
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In the interest of technological progress, all products are subject to design and/or material change without notice.



Overview

Copper heat-exchange coils, used in every Recold Fluid Cooler and Evaporative Condenser, provide many distinct advantages.

Primary Benefits

- Half the corrosion rate of carbon steel in closed systems, translates into potentially longer product life
- Seven times greater thermal conductivity than carbon steel, allows for smaller equipment size and less equipment weight
- Easier system circuit changes or repairs, with no welding required
- Greener product

Benefit Detail

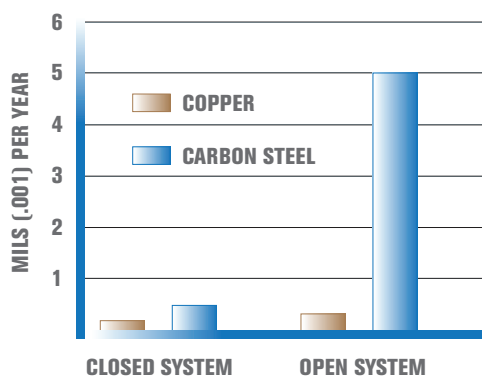
Longer Equipment Life:

- Copper provides superior corrosion resistance, extending equipment life
- Copper maintains system efficiency better with time
- Coils can be drained as often as necessary

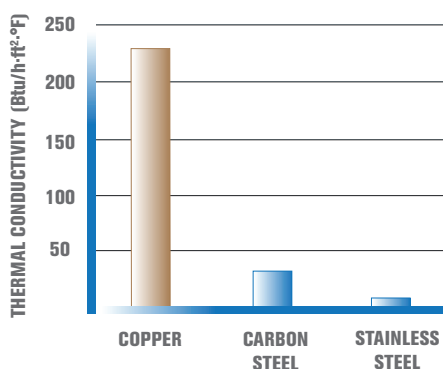
Greater Thermal Efficiency:

- Thermal conductivity of copper is more than seven times that of carbon steel, enhancing heat transfer
- Smaller equipment size
- Lower equipment weight

[more](#) 



Adapted from *Standards for Corrosion Rates*, Bennett P. Boffardi, Ph.D., FNACE



Copper Coil INSIGHT

Benefit Detail

Easier to work with:

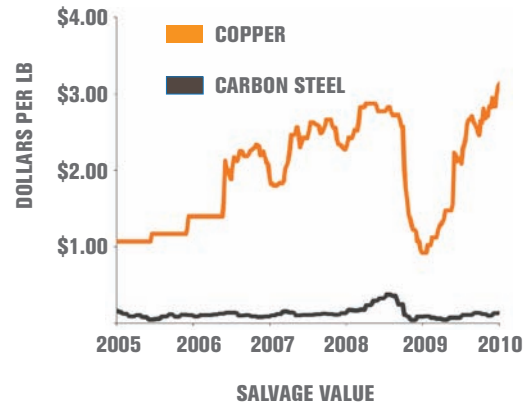
- Copper can be brazed, unlike steel which has to be welded
- Copper coils can easily be circuited to separate multiple loads within the same unit if desired

Green material:

- Recyclable at the end of its useful life, potentially resulting in a higher salvage value per pound than steel
- Copper is naturally bacteriostatic (inhibits bacteria growth)
- Less process fluids required because less heat transfer surface is needed for the same amount of cooling

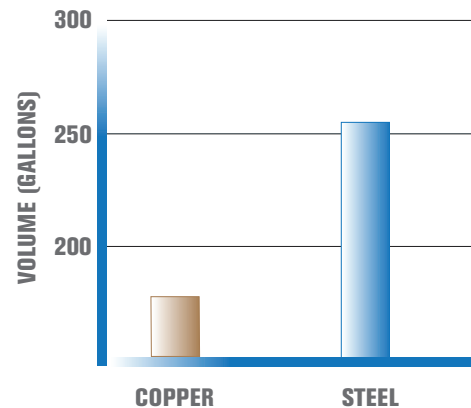
History

- Recold has manufactured heat exchange equipment serving refrigeration, HVAC, and industrial applications for over 75 years. For the best value in evaporative cooling equipment, insist on a Recold heat transfer coil made from copper.



Key Contacts

- Refrigeration applications: Mike Lloyd
mike.lloyd@spx.com
- HVAC applications: Jon Walker
jon.walker@spx.com



Internal coil volume typical of a 100 ton forced-draft fluid cooler

SPX

COOLING TECHNOLOGIES

7401 WEST 129 STREET | OVERLAND PARK, KANSAS 66213 UNITED STATES | 913 664 7400 | spxcooling@spx.com | spxcooling.com

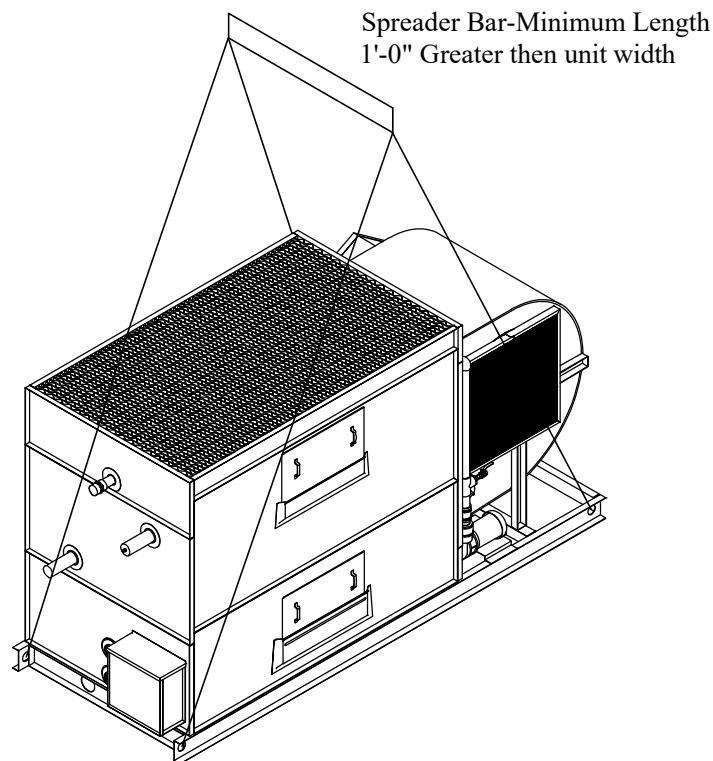
Contact your Marley Sales Representative at spxcooling.com/en/sales/

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IN-RC-10

HOISTING INSTRUCTIONS J-SERIES

This instruction is published as a guide for the rigging of JC, JW, and JT products. Rigger should always follow appropriate safety precautions. For extended lifts or where additional safety precautions are required, add safety slings beneath the tower.



JW			JC			JT			
MODEL	WEIGHT (lbs)	WIDTH (inches)	MODEL	WEIGHT (lbs)	WIDTH (inches)	MODEL	WEIGHT (lbs)	WIDTH (inches)	
10A	910	31	20	810	31	1830	853	31	
10B	955		25	910		2140	1142	37	
10C	1005		30	960		2550	1597	45	
15B	1365	37	38	1280	37	2565	1616	56	
15C	1435		46	1350		3175	2504		
25A	1850	45	52	1360		3185	2528		67
25B	1955		58	1435	31100	2557			
25C	2075		63	1940	37110	3906			
35A	2955	56	72	1955	45	37130	3943	94	
35B	3140		80	2075		37140	3988		
35C	3305		90	2955	40160	5133	101		
50A	4380	67	110	3090	56	40180		5194	
50B	4635		120	3305		40215		5579	
50C	4885		135	4355	67	40240	5675	101	
70B	6685	94	165	4610		40265	5709		
70C	7085		180	4860	49290	7886			
85B	7725		200	4880	94	49310	7916	101	
85C	8185	240	6675	49340		8486			
100B	9170	101	270	7045		49360	8624		
100C	9675		285	7075	49390	8978			
115B	10080		320	7725	49415	9028			
115C	10670	101	350	8180	101				
130B	11025		375	9160					
130C	11720		400	9660					
			425	10070					
			450	10660					
			475	11005					
			525	11700					

WEIGHTS SHOWN ARE FOR STANDARD UNITS
WEIGHTS FOR OPTIONS NOT INCLUDED

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Recold Item No:

DRAWN BY TRINH	DRAWN DATE 12/16/2014	QTC DRAWING HOISTING INSTRUCTIONS, J-SERIES					
CHECKED BY ABRAHAM_STD	CHECKED DATE 03/05/2015						
RELEASED BY ABRAHAM_STD	RELEASED DATE 03/05/2015	ECM NUMBER	ORDER NUMBER -/-	FORMAT ANSI A	PLOT 1=1	DRAWING NUMBER Z0908311	REV.