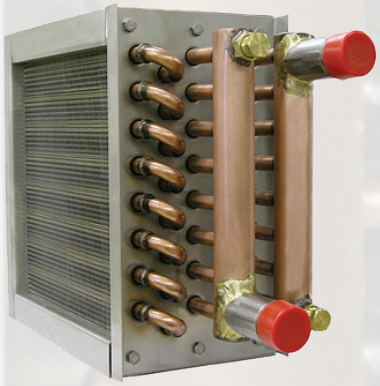
MAIOCCO & ASSOCIATES INCORPORATED

HEAT TRANSFER SOLUTIONS | WWW.MCACOILS.COM



DESATURATION COILS | BY HEATCRAFT / LUVATA

FIELD TAKE OFF

Maiocco & Associates DeSaturation Coils are actually two coils in one. Engineered for low cooling applications, it is a combination cooling/reheating coil in one common case that both dehumidifies and reheats the same air to the designed 'leaving air' temperature and humidity level. This DeSaturation Coil can be used anywhere low air temperature is required and low temperature water is available. Various coil circuits are available so that the depth of the coil (in the direction of air flow) can be adjusted to achieve the designed results. The DeSaturation Coil is ARI tested and labeled.

ADVANTAGES

- By eliminating two headers, the water pressure drop is reduced which reduces pump horsepower.
- The DeSaturation Coil is engineered to use the "leaving water" from the cooling portion of the coil. 180°F water is not necessary and minimum reheat is required to reach the desired 'leaving air' temperature.
- Water carry over is eliminated as the reheat portion of the coil also serves as a plate fin eliminator.
- The two different fin patterns in the coil-pack reduce the air pressure drop – reducing fan horsepower and related costs.
- Not having a second coil eliminates extra piping, control valves and piping components, saves on air handling space, and helps with coil accessibility

OPERATING CONDITIONS	
Scfm Acfm	
ALTITUDE FACE VELOCITY = xxx.xx (XCFM)	
ENTERING AIR DB	
ENTERING AIR WB	
LEAVING AIR DB	
LEAVING AIR WB	
ENTERING FLUID TEMP.	
FLUID TYPE	
PERCENT GLYCOL	
FLUID FLOW	

DID YOU KNOW...

The water pressure through a coil header can account for as much as 30% of the total water pressure drop through the coil. In a normal two-coil arrangement, each coil has two headers, one for the supply and one for the return of each coil.

To reduce the overall water pressure drop through the coil, the DeSaturation Coil is designed with just two headers. It uses extended return bends on the backside of the coil. Because the coil has an opposite end circuit, the last two rows of the return bends are rotated in the 10 row cooling coil directly into the two rows of the reheat coil – eliminating the need for 2 headers on the backside of the coil. The water pressure drop through the return bends is considerably less than what it is with the two headers.

FIELD TAKE OFF

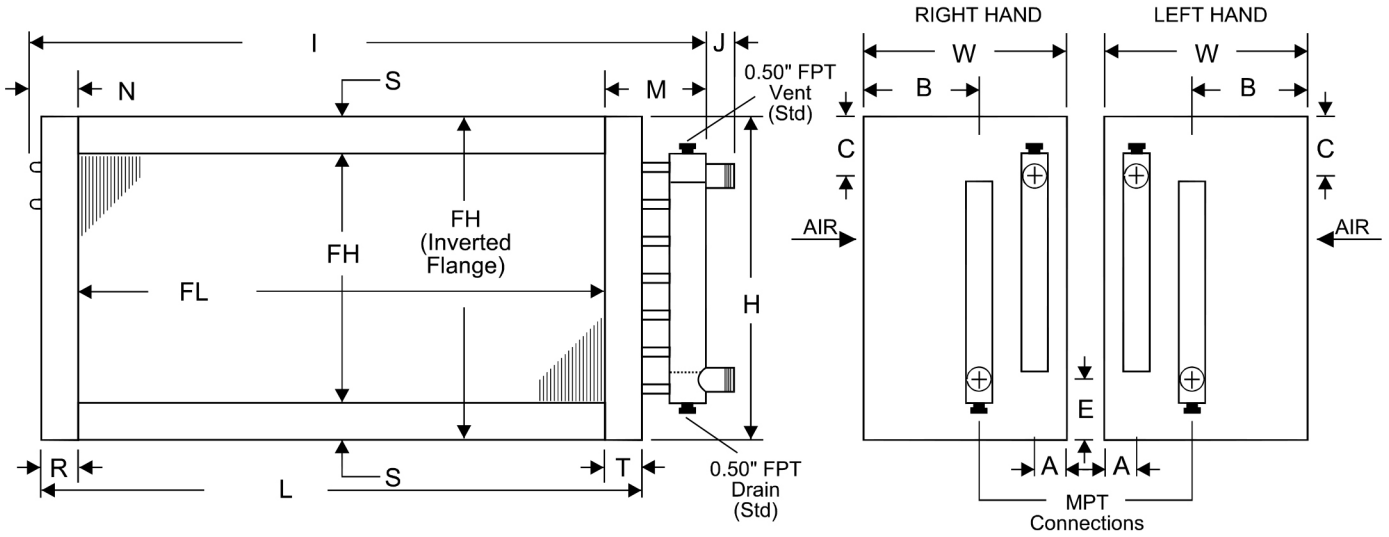
DIMENSIONAL DATA														
SIZE	A	B	C	E	H	I	J	L	M	N	R	S	T	W
CONNECTION											FLANGES			

MATERIALS OF CONSTRUCTION			
FINS 1	AL	CU	
FINS 2	AL	CU	
TUBES	CU	CuNi	ADM BRASS
HEADERS	CU	CuNi	CARBON STL
CONN	CS	RED BRASS	Cu SWEAT
CASING	AL CU	GALVANIZED STEEL STAINLESS STEEL	

GENERAL OPTIONS	
❑	INVERTED FLANGES
❑	END PLATES ONLY
❑	LABEL KIT
❑	MOUNTING HOLES
❑	CORROSION RESISTANT COATING
❑	TURBOSPIRALS

CONN. & V / D OPTIONS	
❑	END CAP 0.125" TEE
❑	FACE 0.50" FPT CPL.
❑	FACE 0.25" TEE
❑	FACE 0.50" MPT 7" EXT.
❑	SIDE 0.50" FPT
❑	FPT CONNECTIONS

❑ END CAP
❑ FACE
❑ SIDE



GENERAL NOTES FROM HEATCRAFT / LUVATA

1. All dimensions are in inches.
2. Coils will vent and drain through factory-installed vent and drain fittings when mounted level for horizontal flow.
3. If S < 1" or End Plates Only Case, vents and drains will be located on the face or side of the header. Connection locations other than standard could affect vent and drain locations. Consult Maiocco & Associates.
4. Mounting holes are optional. 0.375" diameter holes on 6" centers from the centerline of the fin height and finned length are typical for all flanges. Not available with Inverted Flanges or when S < 0.75".
5. The supply line should be connected to the lower connection on the entering air side for counterflow operation.
6. With Inverted Flanges or End Plates Only Case construction, headers will extend to a maximum of 0.375" above and below the casing. Vents and drains will be located on the face of the headers.
7. Intermediate tube supports are fabricated from heavy gauge stock and supplied per the table below:

FINNED LENGTH (FL)	≤ 48	>48 ≤ 96	>96 ≤ 144	>144
TUBE SUPPORTS	0	1	2	4

MAIOCCO & ASSOCIATES INCORPORATED
HEAT TRANSFER SOLUTIONS | WWW.MCACOILS.COM

HEATCRAFT / LUVATA

P.O. BOX 576 | SWARTHMORE, PA 19081 | 610.328.4711 | FAX 610.328.2142 | WWW.MCACOILS.COM | MCACOILS@COMCAST.NET