



PRICE[®]

CHILLED SAIL INSTALLATION, OPERATION AND MAINTENANCE MANUAL

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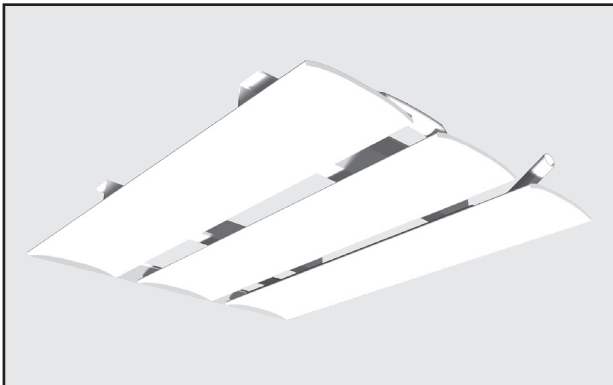
Chilled Sail – Installation Instructions

These installation instructions apply to Price chilled sails – models CSC and CSA.

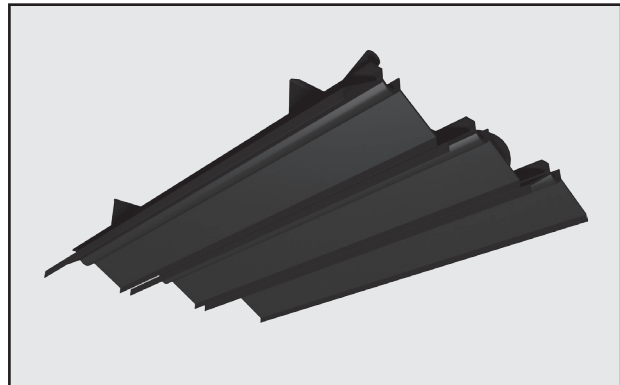
To avoid dirt smudging, scratching or discoloration while handling, the use of clean white cotton gloves when handling units is recommended.

1. Identify Sails

- A. CSA:** Architectural chilled sails have a smooth extrusion with copper piping mechanically compressed into the extrusion. Pictured below:



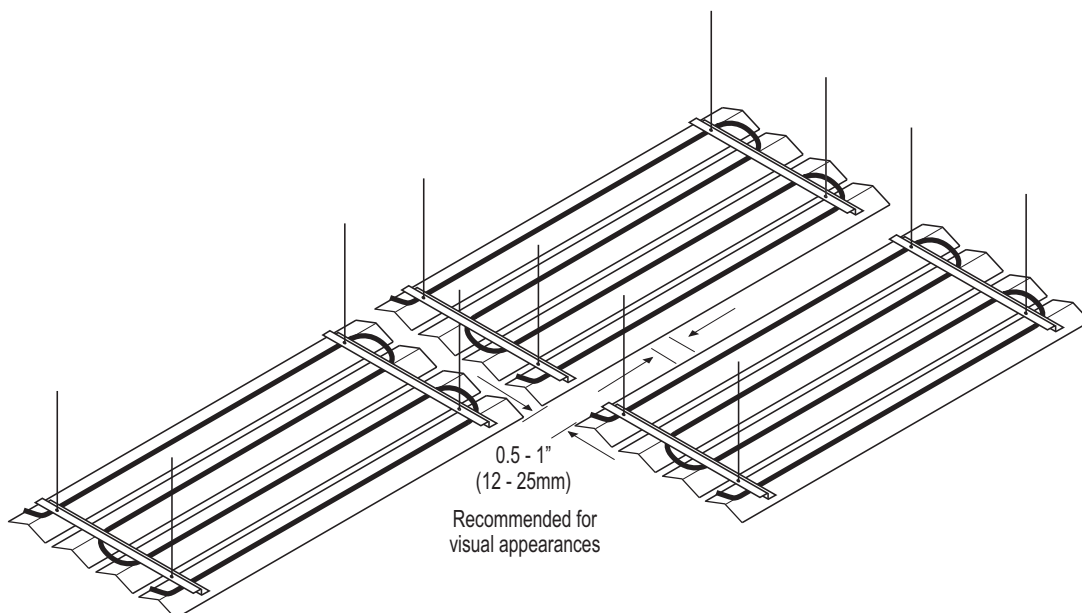
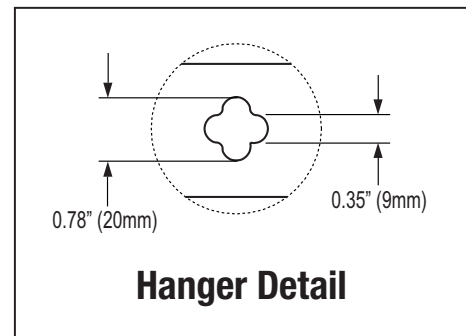
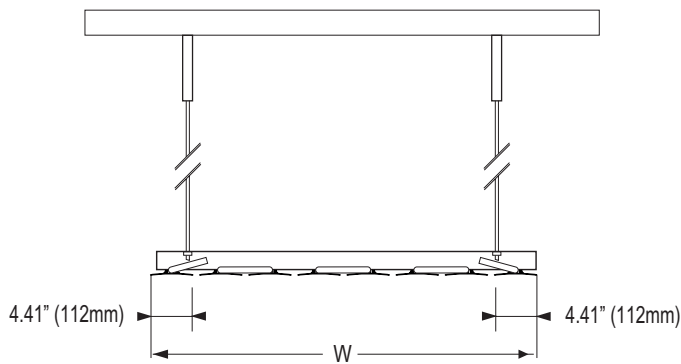
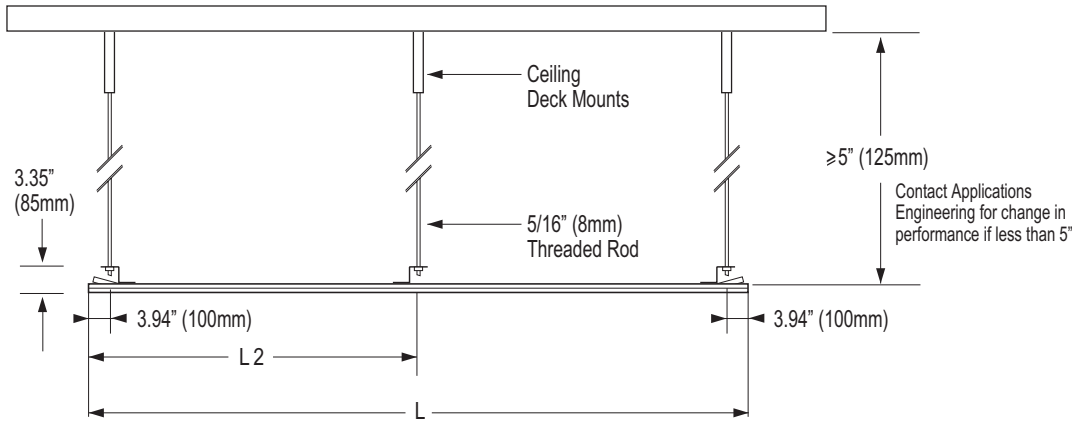
- B. CSC:** Concealed chilled sails has an aggressive triangular extrusion with copper piping mechanically compressed into the extrusion. Pictured below:



2. Installing CSA & CSC

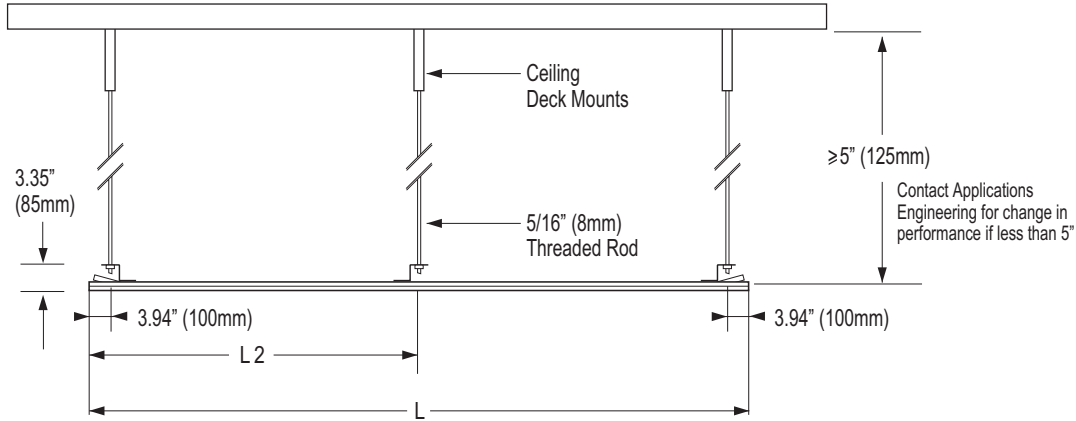
- A.** Storage of the units should be protected by roof cover, in dry conditions and in dust free spaces. Leave sails in packaging until mounted.
- B.** If ready to be installed, verify the plumbed location of the water connections are correct in relation to the sail water connections.
- C.** Locate and attach the mounting points for the sail in the ceiling. Mounts hold 5/16" (M8) threaded rod.
 - i. Mounts for other services (ie: lighting) located within the sail footprint should be mounted at the same time. No services should be hung from the sail elements.
 - ii. Visible Sail sections should be separated horizontally on the ends by 1/2" – 1" (12 -25mm) between sections to absorb dimensional tolerances in manufacturing and installation.
- D.** Raise the sail into location, passing the threaded rod through the mounting points. Thread on the bottom nut.
 - i. For ceiling grid installations, initially mount the unit above the grid level by 1" - 2" (25-50mm). Install the grid below and lower the sail into final position in the grid.
 - ii. Sails require a 5" gap between the ceiling surface above and the top of the sail's surface. Smaller gaps will result in lower performance. Consult Price Applications Engineering for changes in performance with reduced space.
 - iii. Attach end rails if the option applies. The use of clean, uncolored cotton gloves is recommended to avoid handling damage and smudging of visibility installed elements.
 - iii. Do not install during dust generating or raising conditions. It is recommended the space be cleared of dust before handling the units.
- E.** Connect water lines to the inlet and outlet of the panel. Sails use 1/2" OD copper tube. Optionally, 1/2" female threaded fittings have been provided by the factory and shipped loose to be soldered in place on tubing.
- F.** If dewpoint sensors (supplied by others) are required, install them on the entering water supply tube, located as per the building design and installed according to the sensor manufacturer's instructions. Locate the sensor in a location on the tube where free convection is available around it. Sensor operation should be checked according to sensor manufacturer's instructions.

CSA Chilled Sail – Installation Instructions

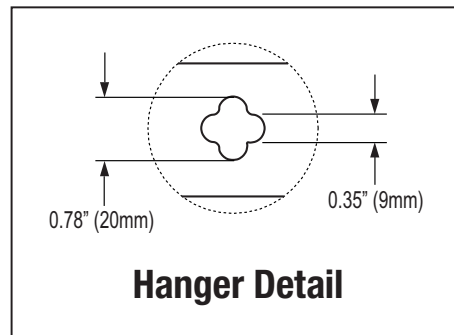
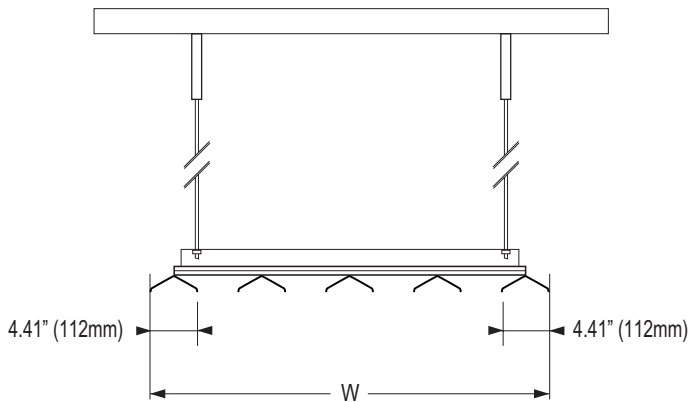
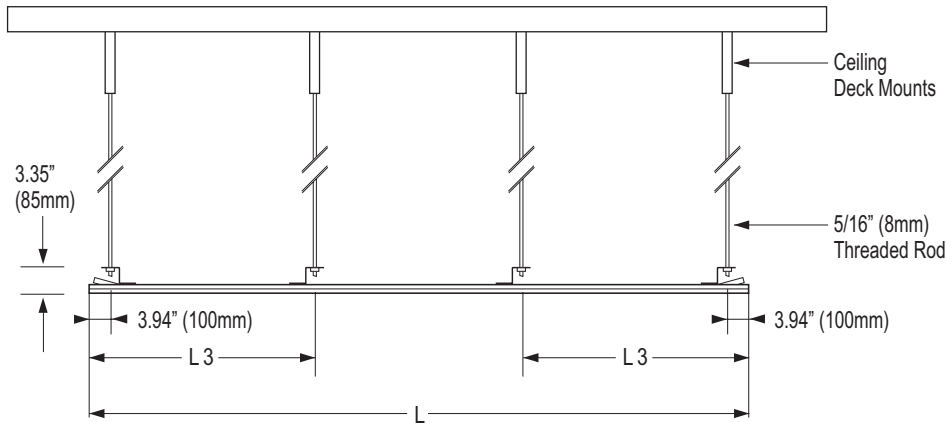


CSC Chilled Sail – Installation Instructions

L < 10' (3000mm)








L > 10' (3000mm)



3. Water System

Design the water system with air removal devices at the highest point, strainers to remove and avoiding the introduction of oxygen into the water system.

- A. Before connecting the panels, flush and drain the water main system to remove excess particulates in the water lines from the construction processes.
- B. Connect water lines to the inlet and outlet of the panel. Sails use 1/2" OD copper tube. Standard product is supplied with sweat (bare) ends. Optionally, 1/2" NPT female fittings have been provided by the factory and shipped loose. These are to be soldered on the ends of the inlet and outlet tubing in the field.

<p>SH: SINGLE HOSE</p>	
<p>DH: DOUBLE HOSE</p>	
<p>DHSO: DOUBLE HOSE W/ SHUT OFFS</p>	
<p>DHMB: DOUBLE HOSE W/ MANUAL BALANCER</p>	
<p>DHAB: DOUBLE HOSE W/ AUTO BALANCER</p>	

- i. If the hose and valve packages are required, the first step is to identify the package that has been provided.
- ii. Install the hose and valve package by making the necessary NPT connections following standard industry practices.
- C. Pressure test the system for leaks and isolate and fix any leaks that are found.
- D. Circulate water through the hydronic system at or above 0.5 gpm (112 l/hr) per sail to remove air from the sails. If 0.5 gpm per panel is not normally available, shut off flow through other sails to divert more water through the panels being flushed.

4. Maintenance

- A. Clean strainers as per the building maintenance schedule.
- B. Sail pipe descaling will be accomplished with the building descaling flush as required by the building maintenance schedule.
- C. Clean the surface of the sails with water and mild detergent for smudging. Use a vacuum with soft bristle end or dust cloth if dust attaches to the surface.
- D. Condensation sensor: test according to the sensor manufacturer's method and schedule.
- E. Inspect water connections per building maintenance schedule, yearly check is recommended.



PRICE
INDUSTRIES

2975 Shawnee Ridge Court
Suwanee, Georgia USA 30024
Ph: 770.623.8050 Fax: 770.623.6404



PRICE
INDUSTRIES

1290 Barrow Industrial Parkway
Auburn, Georgia USA 30011



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999 North Thornton Road
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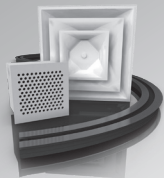
638 Raleigh Street
Winnipeg, Manitoba Canada R2K 3Z9
Ph: 204.669.4220 Fax: 204.663.2715

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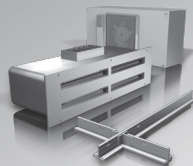
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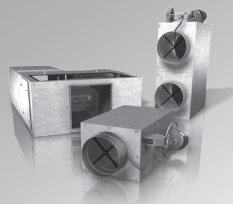
Grilles & Diffusers



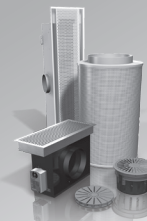
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