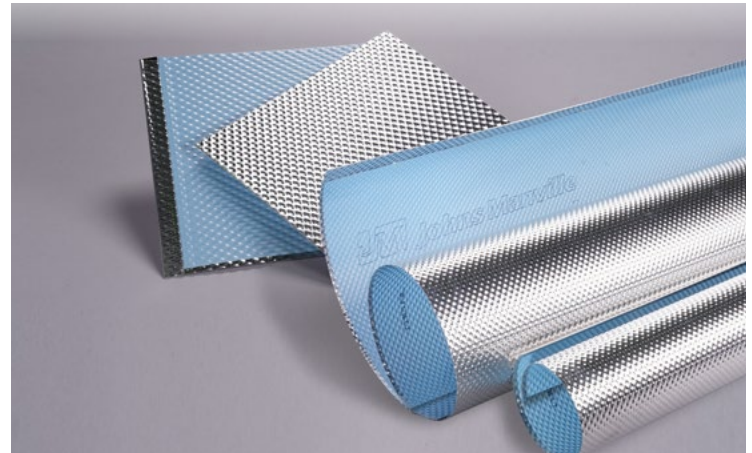




Cross-Flo® Jacketing is the first metal jacketing innovation designed to mitigate corrosion under insulation (CUI). Its embossed pattern is engineered to promote cross-directional flow (CDF) towards the low point of a system, thereby providing a path for liquid to exit the system through an egress point.



CUI

What is CUI and how does it happen?

Corrosion under insulation (CUI) refers to the degradation of metal occurring due to insulation trapping water in contact with the pipe or equipment. Moisture can enter a system during startup, maintenance, improper installation, extreme weather, or as a result of damage after installation. Properly installed jacketing is tightly fitted to the insulation and over time, moisture can absorb into non-hydrophobic insulation or seep through the seams of any insulation type. The trapped moisture can then corrode the metal, and since it is covered by insulation and jacketing, CUI can go undetected indefinitely, potentially leading to catastrophic failure. Taking preventative measures against CUI can lead to system cost savings over time.

BENEFITS

What are the benefits of Cross-Flo jacketing?

- Excellent drainage performance compared to other jacketing patterns
- CUI prevention when installed with a weep hole
- Unique aesthetic appearance, which is distinguishable from afar
- No additional product required or installation steps
- Prolongs the lifespan of a system by protecting underlying metal, reducing overall cost

How does it reduce the risk of CUI?

Cross-Flo jacketing's innovative embossed design creates multi-directional channels between the jacketing and the insulation, so any moisture that may enter the system has an efficient path to exit. Since the time moisture is in contact with the insulation is minimized, there is significantly less opportunity for it to reach the metal pipe surface and cause corrosion. Additionally, the distinctive aesthetic appearance is visible from a distance, making it easy to identify systems designed for CUI prevention.

What is cross-directional flow and why is it important?

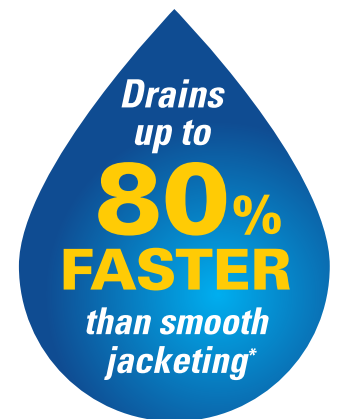
Cross-directional flow (CDF) refers to the patent-pending diamond shaped pattern on Cross-Flo jacketing that allows water to drain towards a low point, regardless of the pipe orientation.

Why is Cross-Flo jacketing better than other jacketing patterns?

- Stucco-embossed patterns are not deep enough to allow for effective water drainage.
- Unlike cross-crimped jacketing, CDF promotes drainage almost equally well in any installed direction. Cross-crimped jacketing drains quickly when the open space between the jacketing and the insulation is oriented vertically, but halts water drainage when oriented horizontally.

Why are hydrophobic or water-repellent insulations alone insufficient to protect against CUI?

Although hydrophobic materials themselves repel water, all insulation types have seams, and water may ingress through system damage over time. Additionally, water-repellent treatments may be susceptible to degradation over time, due to burn-off or other factors. Regardless of the type of insulation used, the longer water is allowed to remain in the system, the higher the likelihood it will reach the metal surface of the pipe and result in CUI.



*Cross-Flo reduced the time to drain 100mL of water by up to 80% in small simulation testing over a 3" insulated pipe

FREQUENTLY ASKED QUESTIONS

SYSTEM DESIGN**Does Cross-Flo jacketing require any changes to overall system design?**

In systems at risk of CUI, JM strongly recommends that Cross-Flo jacketing is installed in conjunction with weep holes, to provide an egress point for moisture. JM's internal testing was completed with 3/4" circular weep holes; specific system configurations should be designed by a qualified engineer.

Can I use Cross-Flo jacketing solely for aesthetics, i.e. without a weep hole?

Where CUI is not a concern, Cross-Flo jacketing can be used without a weep hole for aesthetic purposes.

How should Cross-Flo jacketing be installed adjacent to elbows, fittings, and other embossing patterns?

Cross-Flo jacketing should follow normal installation guidelines, with seams configured to shed water and/or face away from prevailing winds.

Which insulation types can Cross-Flo jacketing be used with?

Cross-Flo jacketing is effective over all insulation types, rigid and non-rigid.

Does it require any specific installation techniques or tools?

No. Cross-Flo jacketing fabricates and installs the same way as other metal jacketing patterns. It does not require any special tools.

What happens when Cross-Flo is exposed to the elements, such as rain or outside moisture?

Cross-Flo jacketing is comprised of standard industry metals which comply with the existing ASTM metal jacketing standards. Current metal jacketing products endure standard wear and tear from human and environmental exposure with minimal issues, and Cross-Flo's embossed pattern has been designed to perform similarly to existing jacketing in these applications.

PRODUCT AVAILABILITY**Does it still have a polyfilm moisture barrier?**

Yes, Cross-Flo jacketing comes standard with the same 3mm polyfilm moisture barrier present on all JM metal jacketing products.

Does it come coated or painted?

Currently, coated or painted Cross-Flo jacketing is not available.

Can I get it with or without a safety hem?

Yes, Cross-Flo jacketing is available with and without a safety hem.

How will it be packaged? How many boxes per pallet?

Cross-Flo is available in 50' and 100' rolls, as well as all standard cut and roll sizes. 100 ft rolls will be packaged in 11.5" x 11.5" boxes with 12 boxes per pallet. 50 ft rolls will be packaged in 9.5" x 9.5" boxes with 20 boxes per pallet. See data sheet for more information.

What locations will it ship from?

Initially, Cross-Flo Jacketing will be shipping from our metal facility in Houston, TX. Our Canadian facilities are to be determined.

What are the available thicknesses?

Cross-Flo is available in .016, .020 and .024 aluminum.

Patent Pending



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