

CONTAINMENT



IMS Engineered Products is
ISO 9001 Certified



Hot/Cold Aisle Containment Solutions



AMCO[®]
ENCLOSURES
an IMS Engineered Products Brand

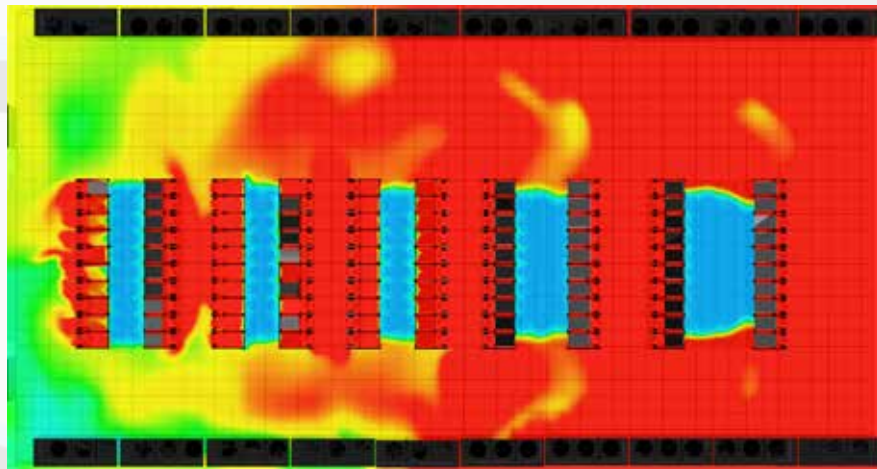
Aisle Containment Solutions

AMCO Enclosures New Scalable Containment System for Hot/Cold Containment in Today's Data Centers

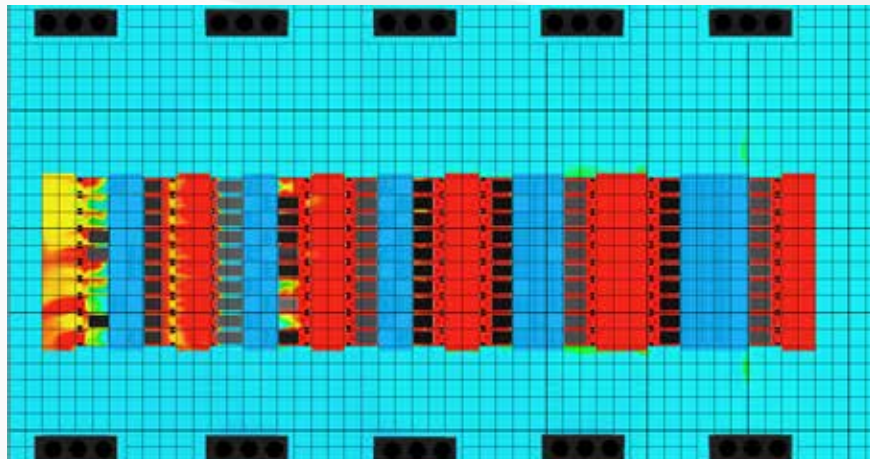
- Flexible design
- Cools the equipment and not the room
- No need for piping of water/coolants to racks
- Reduce your TCO and increase energy efficiency in the data center
- Stop hot/cold air mixing
- Reduce capital expenditures and operational costs
- Limit inefficient oversupply of cold air
- Aluminum framing system and UL Rated PVC insert panels let in natural lighting into the containment aisles
- Works for both legacy and new data racks

AMCO's Hot Aisle and Cold Aisle Containment System prevents air mixing and establishes separation of hot, exhausted air and cold supplied air- resulting in efficiently cooling the equipment-not the room. With these air separation paths in place, the system can then deliver a consistent inlet temperature within ASHRAE A1 recommended ranges that is not affected by the hotter exhaust temperatures. This also results in dramatic savings in capital and operational costs over time.

Before (Overhead View)



After (Overhead View)



Single Rack Chimney Solution



Top Duct Exhaust Kit (20" - 35")



Top Duct Exhaust Kit (35" - 60")

Overhead Chimney Solution

Isolating and containing the heat within the rack and directing it back into the overhead CRAC system is an effective passive cooling solution for high-density racks. Chimney solutions prevent hot and cold air mixing in the cabinet, as well as hot air recirculation to the front of the rack. These systems are cost-effective and efficient, reducing the cost of over-cooling your data center. Kit includes top panel, air deflector and top exhaust duct.

20" - 35" Height

24" Width
TP-AFD3-24-45
TP-AFD3-24-42
TP-AFD3-24-36

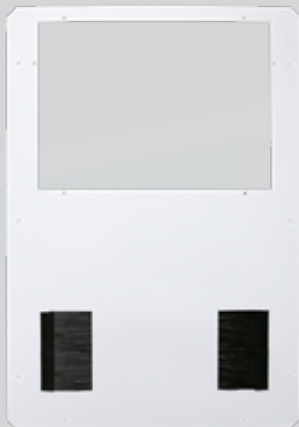
35" - 60" Height

24" Width
TP-AFD6-24-45
TP-AFD6-24-42
TP-AFD6-24-36

*Note: For 29" width, change "24" to "29" in part number.
(i.e. TP-AFD6-24-45 becomes TP-AFD6-29-45)*

*For 32" width, change "24" to "32" in part number.
(i.e. TP-AFD6-24-45 becomes TP-AFD6-32-45)*

Included with Overhead Chimney Solution:



Top Panel without Cover Plate



Air Deflector



Top Duct Exhaust
(Heights of 20" - 35" or 35" - 60")

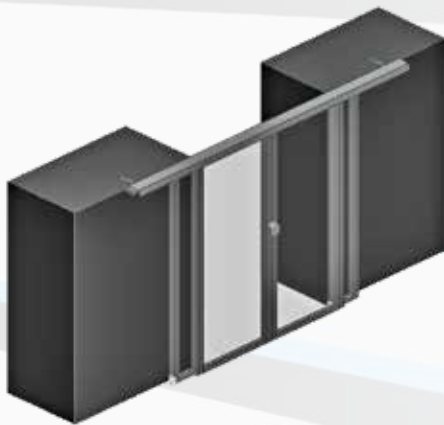


Hot Aisle Solution



Pivot Doors

Single Pivot Door
Double Pivot Door



Sliding Doors

Single Sliding Door (auto or manual close)
Double Sliding Door (auto or manual close)



Hot Aisle Solution



Exhaust Duct - Hot Air Containment

Rigid Walls

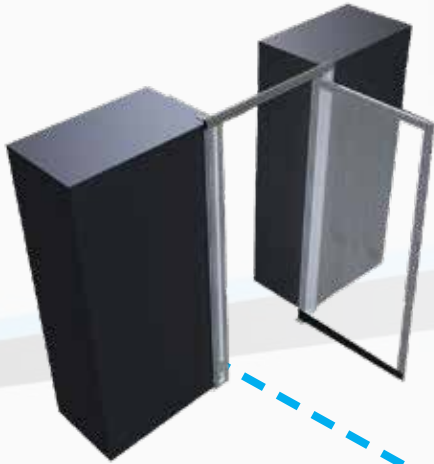
Size	
Max Size	50" x 98"
Profile Width	1 3/16"
Standard Finish	Clear/Black anodize
Door & Frame	
Material	6560 T-6 Temper Aluminum
Tensile Strength	30,000 psi

Panel Options	Test	Result
3 mm Polycarbonate	ASTM E-84	Class B
	ASTM D635	CC1
	ASTM D2843	<75
4.5 mm Polycarbonate	UL 94	V-0
	ASTM D635	CC1
	ASTM D2843	Passed
3 mm Clear PVC	UL 94	V-0
	ASTM E-84	Class A
6 mm Twin-Wall Polycarbonate	ASTM E-84	Class A
	ASTM D635	CC1

* Rigid walls with height and width exceeding 30" will get a 4.5mm thick panel that meets the same ratings as the 3mm polycarbonate



Cold Aisle Solution



Pivot Doors

Single Pivot Door
Double Pivot Door

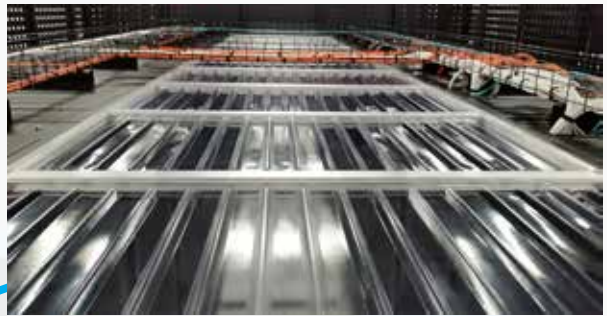


Sliding Doors

Single Sliding Door (auto or manual close)
Double Sliding Door (auto or manual close)



Cold Aisle Solution



Ceiling Tiles - Heat Activated



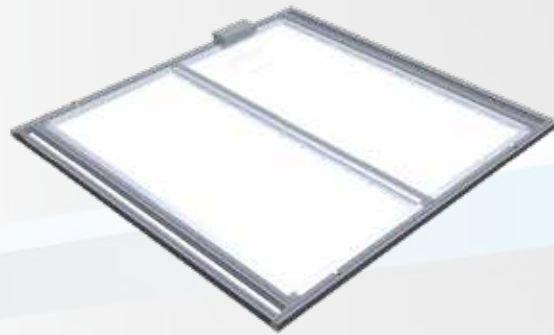
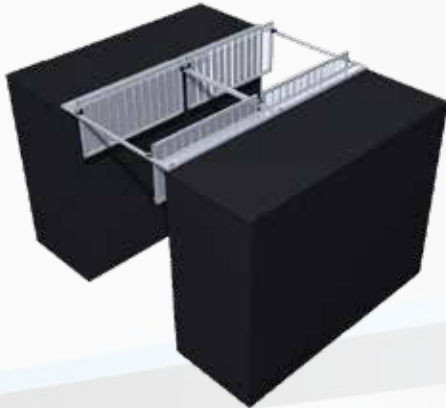
Ceiling Panels - Heat Activated

Size	
Width	Up to 26"
Length	Up to 96"
Profile Width	1"
Door & Frame	
Material	6560 T-6 Temper Aluminum
Tensile Strength	30,000 psi

Panel Options	
Material	15 mil Clear Polyvinyl Chloride
Color	Clear
Smoke Deviation	ASTM E84
Flame Spread ASTM E84	15 Test Result
UL-R4036 rated for use under 165 degree F. fire suppression systems	



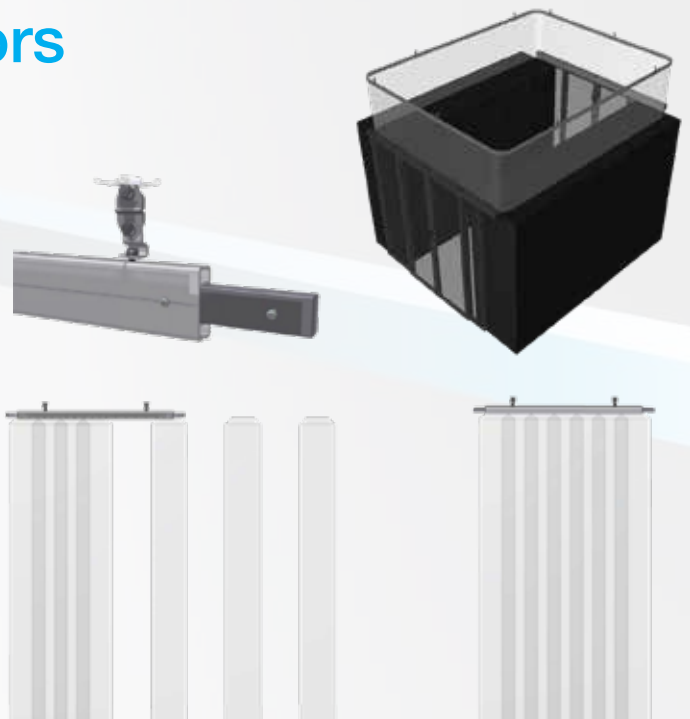
Mechanical Ceiling



Size		Frame	
Width	Up to 64"	Material	6560 T-6 Temper Aluminum
Length	Up to 53"	Tensile Strength	30,000 psi
Profile Height	2 1/2"	Paneling	
Control Box	1 per aisle for full activation. Multiple needed for individual activation.	Material	6560 T-6 Temper Aluminum
		15 mil Clear Polyvinyl Chloride	30,000 psi
		Color	Clear
Fire suppression panel/actuation system	One relay contact required at suppression/activation panel.	Smoke Deviation ASTM E84	125 Test Result
		Flame Spread ASTM E84	15 Test Result
		UL-R4036 rated for use under 165 degree F. fire suppression systems	

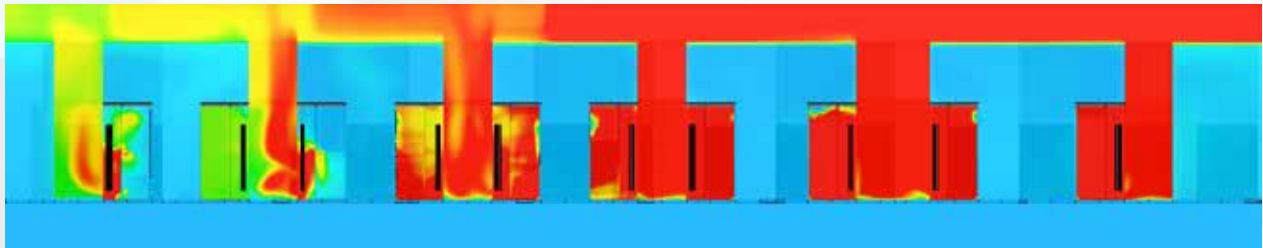
Thermal Walls and Doors

Clear Vinyl		
NFPA 701 passed		
UL listed Fire Suppression Fusible Links		
Heat Activated	135° F	165° F
Maximum Load	40 lbs	45 lbs
Minimum Load	3 lbs	3 lbs
Track		
Material	6091 T-5 Temper Aluminum	

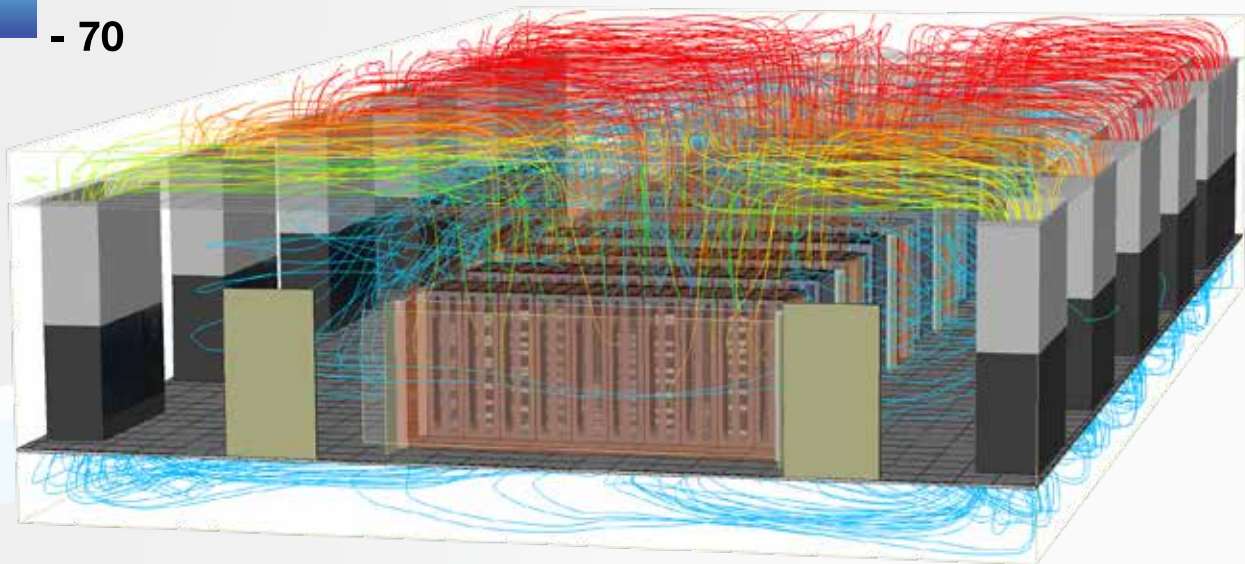
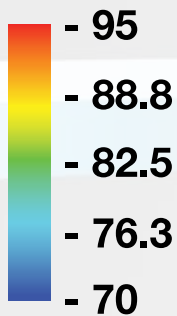


Hot Aisle Solution

The most effective way to capture hot exhaust air is at the aisle level. AMCO Enclosures hot aisle containment solution has been designed to utilize our proprietary extrusion and casting framing system along with poly carbonate panels that extend from the top of our racks to the exhaust plenum. The aisle solution prevents hot air from mixing anywhere in the room. Sliding or swing door options for the hot/cold aisles provide row access while preventing air mixing.

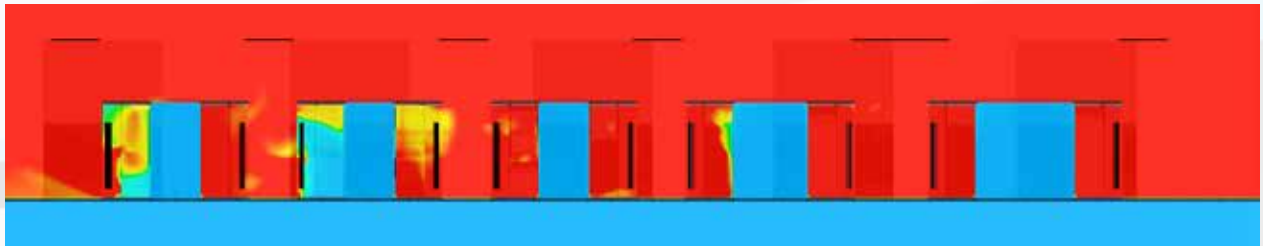


Temperature (F)

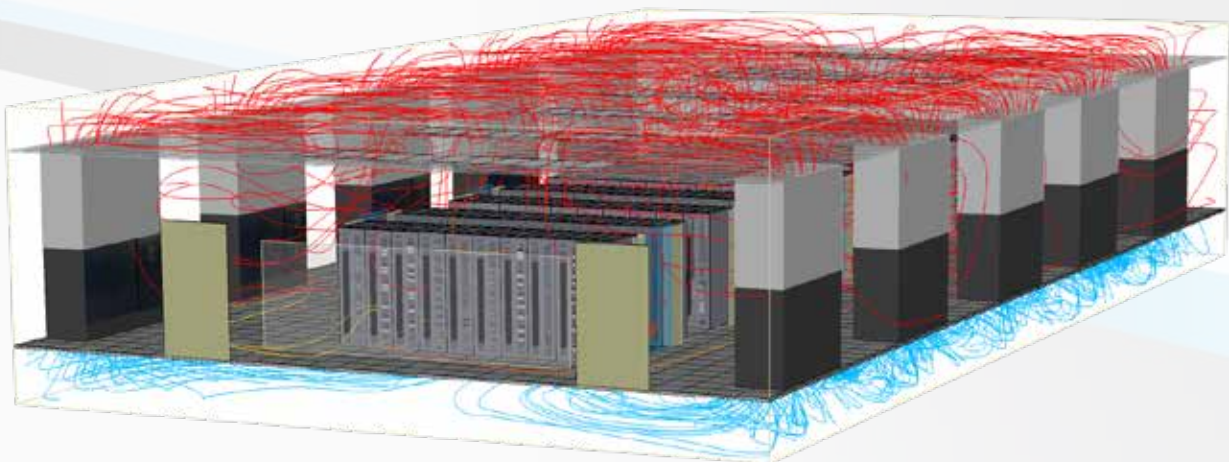
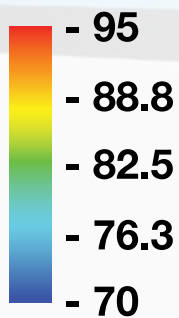


Cold Aisle Solution

Utilizing our aluminum framing system and UL Rated PVC panels that soften and release at 135 degrees, a ceiling completely encloses the cold aisle. This solution forces all of the cold air to pass through the electronic components in the rack, ensuring that the cold air does not mix with the hot air which is exhausted into the hot aisle. Sliding/swing doors are available to contain the row(s).

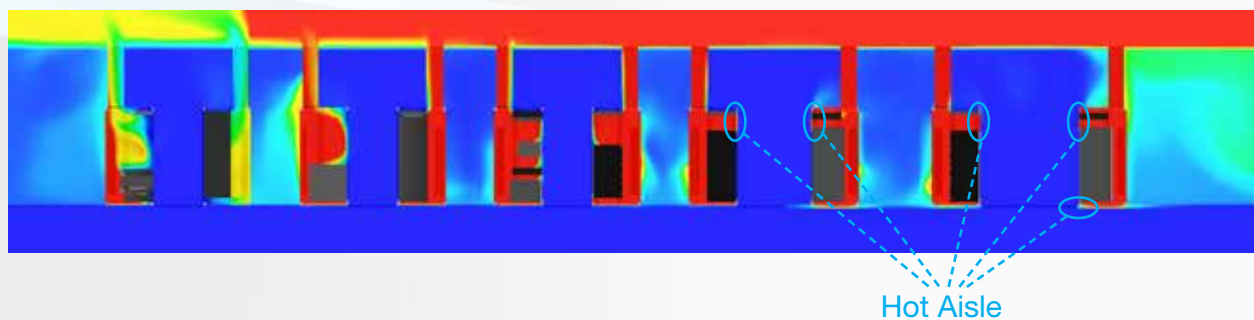


Temperature (F)

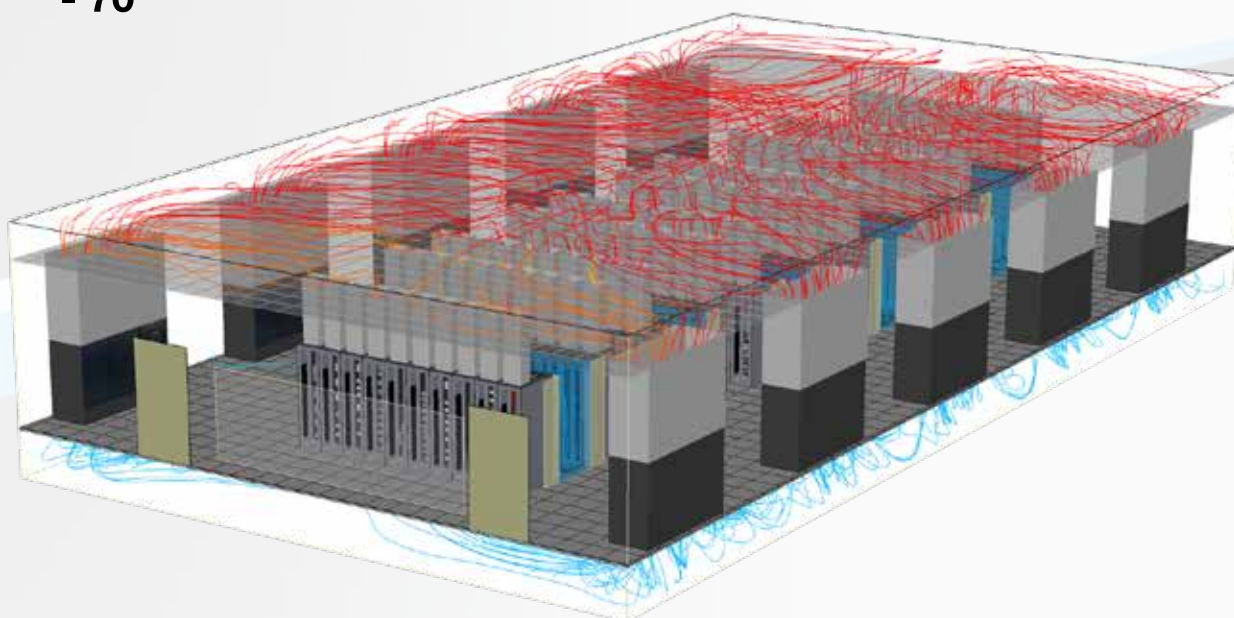
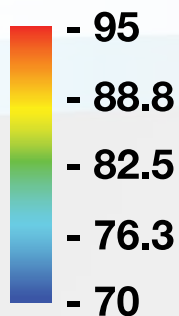


Single Rack Chimney Solution

Rack chimneys provide an alternative solution to complete aisle containment. These chimney heights can be adjusted and can be added at the time the racks are installed or at any time they are in the live environment. The retrofit is fast and affordable using solid door inserts, an air deflector and the adjustable chimney.



Temperature (F)

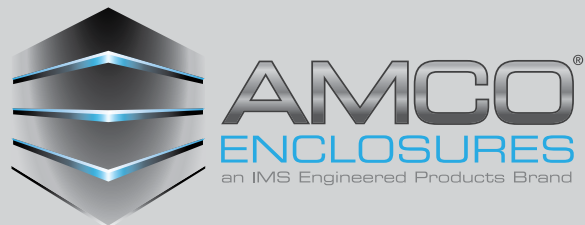


Warranty & Policies

AMCO Enclosures warrants this product and its parts against defects in materials or workmanship for **three years** from the original ship date under normal use and conditions. During this period, AMCO Enclosures will repair or replace defective parts with new or reconditioned parts at AMCO Enclosures' discretion, without charge. The warranty and remedies set forth below are exclusive and in lieu of all others, oral or written, expressed or implied. No reseller, agent or employee is authorized to make any modification, extension or addition to this warranty.

Warranty Conditions

1. This warranty extends only to products distributed and/or sold by AMCO Enclosures.
2. This warranty covers only normal use of the product. AMCO Enclosures shall not be liable under this warranty if any damage or defect results from (i) misuse, abuse, neglect, improper shipping or installation; (ii) disasters such as fire, flood, or improper electric current; or (iii) service or alteration by anyone other than an authorized WindChill Engineering representative; (iv) damages incurred through irresponsible use or abuse.
3. To qualify for warranty all products must be installed by Certified Installers per manufacturer's instructions. To be considered "certified"; the installer must be qualified by AMCO Enclosures and be in contact with the AMCO Enclosures distributor or directly with AMCO Enclosures during the install. If a certified installer is not available AMCO Enclosures can send a representative to train and assist in the installation process to certify an installation.
4. Damage of this product through use of harsh chemicals, cleaning products, or improper maintenance is not covered.
5. Labor costs associated with the removal and return of this product are not covered.
6. AMCO Enclosures will not be responsible to refund the original shipping cost, or the shipping and handling fees incurred from the return of products and material.
7. All issues with compliance to local code requirements are the responsibility of the consumer and are excluded from this warranty.
8. You must retain your Bill of Sale or other proof of purchase to receive warranty service.



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