Piping. Systems. Solutions.

FOR OVER 80 YEARS



Corrosion

Victaulic

GENERAL AIR PRODUCTS

Important Change to NFPA-13 for Air Compressors in Dry and Pre-Action Systems

8.2.7.5.2 Compressed Air (NEW)

Where an air compressor is dedicated for the sprinkler system, the air compressor **shall be listed** for fire protection.



Nitrogen Generator



Air 98% Nitrogen



20 Månader

Remember:

- 95% or less Purity Nitrogen: Completely Ineffective for Fire Sprinkler application
- 98% Purity Nitrogen: Effective, but difficult to maintain long term

VAPOR Pipe Shield

C UL US LISTED

Vapor Phase Corrosion Inhibitor (VpCI®) Delivery System

The next innovation in corrosion prevention technology for dry & pre-action fire sprinkler systems



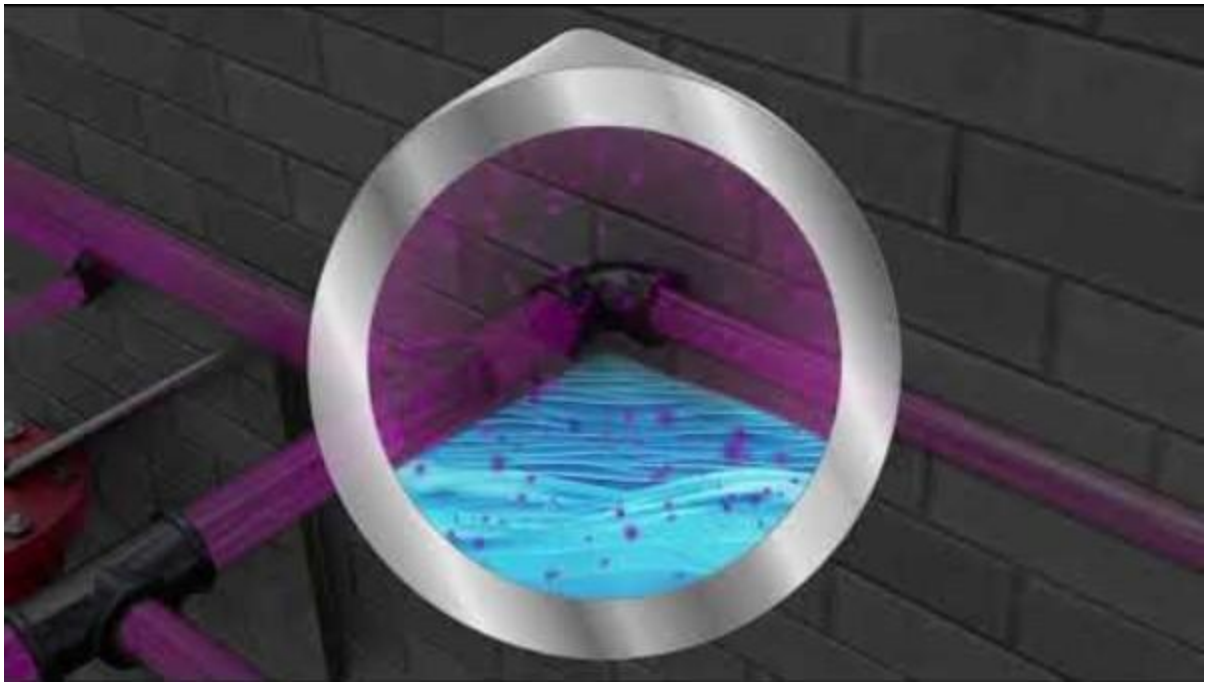


Compressed Air with Vapor Pipe Shield



Air Flow provided by the air compressor runs through the Vapor Pipe Shield cannister and picks up VpCI® molecules that are carried into the sprinkler system and attracted to all metal surfaces.

VPS Vapor Shield



VAPOR Pipe Shield

Vapor Phase Corrosion Inhibitor (VpCI®) Delivery System



VPS-500
(20" x 22" x 6.5")
Up to 500 Gallon Fill Capacity
Up to 2,000 Gallon Total Capacity

VPS-1000
(28" x 22" x 6.5")
Up to 1,000 Gallon Fill Capacity
Up to 4,000 Gallon Total Capacity

VPS-1500
(36" x 22" x 6.5")
Up to 1,500 Gallon Fill Capacity
Up to 6,000 Gallon Total Capacity

VPS-2000
(42" x 22" x 6.5")
Up to 2,000 Gallon Fill Capacity
Up to 8,000 Gallon Total Capacity

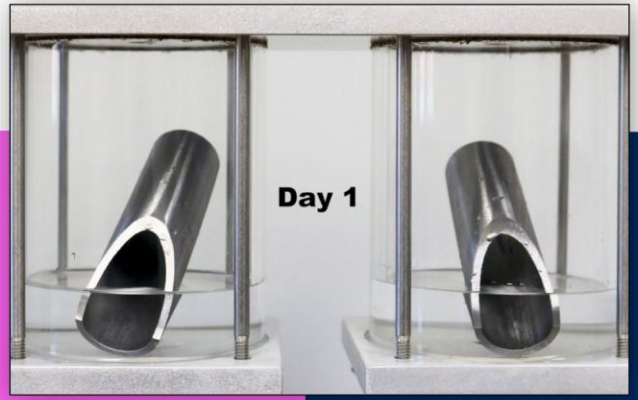
Vapor Phase Corrosion Inhibitor (VpCI®)Delivery System

GENERAL AIR PRODUCTS

Compressed Air with Vapor Pipe Shield

VAPOR Pipe Shield

VpCI Effectiveness Demonstration on Partially Submerged Bare Carbon Steel



VAPOR Pipe Shield

Standard

Compressed Air

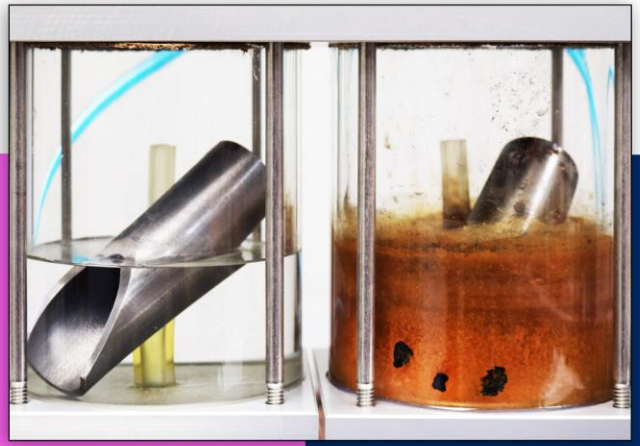
Vapor Phase Corrosion Inhibitor (VpCI®)Delivery System

GENERAL AIR PRODUCTS

Compressed Air with Vapor Pipe Shield

VAPOR Pipe Shield

VpCI Effectiveness Demonstration on Partially Submerged Bare Carbon Steel



VAPOR Pipe Shield

5 Years Later…

Standard

Compressed Air

Vapor Phase Corrosion Inhibitor (VpCI®)Delivery System

GENERAL AIR PRODUCTS

Compressed Air with Vapor Pipe Shield

VAPOR Pipe Shield

VpCI Effectiveness Demonstration on Partially Submerged Bare Carbon Steel



VAPOR Pipe Shield

5 Years Later…

Standard

Compressed Air

Vapor Phase Corrosion Inhibitor (VpCI®)Delivery System

GENERAL AIR PRODUCTS

Compressed Air with Vapor Pipe Shield

VAPOR Pipe Shield

VpCI Effectiveness Demonstration on Partially Submerged Galvanized Steel

VAPOR Pipe Shield



Submerged
5 Years



Corrosion Efficacy Testing: Compressed Air vs. N2 vs. VCI

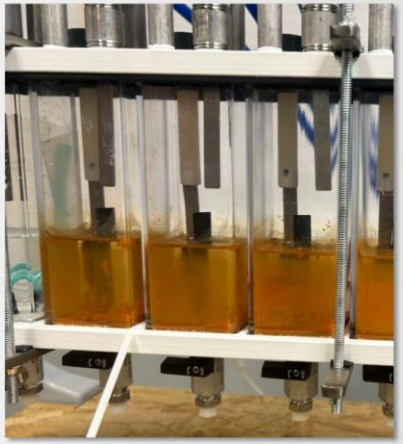
IMPORTANT NOTE: coupon or “mil loss” testing assumes 98% pure nitrogen is maintained for the entirety of the test.

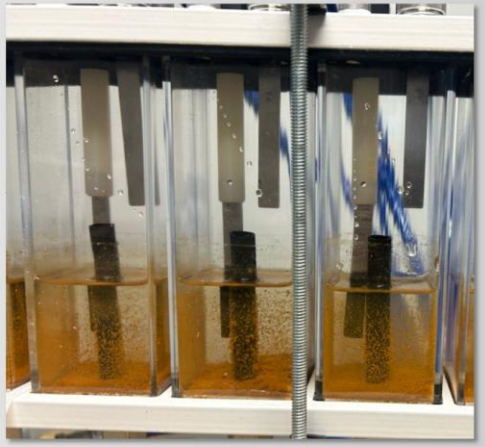
In the field, if your nitrogen generator is running below 98%, you are likely experiencing significant corrosion in the piping system. If the system indicates 95% or less pure nitrogen, you are not realizing any notable corrosion protection.

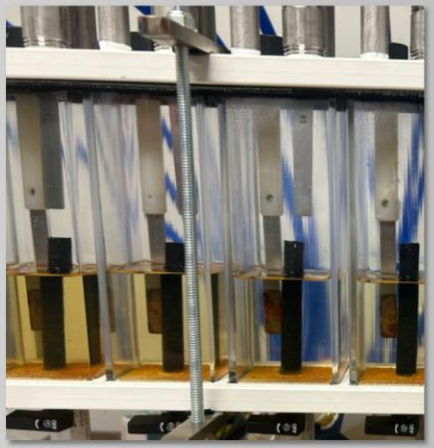
When was the last time you checked purity levels?

Where did you check your system?

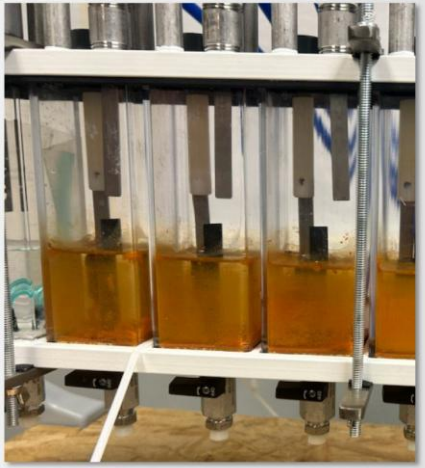








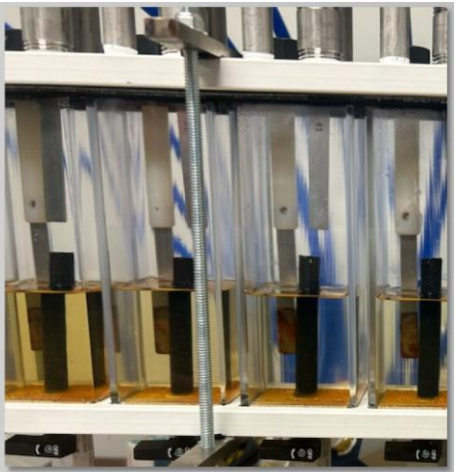
Which one is which?



Compressed Air



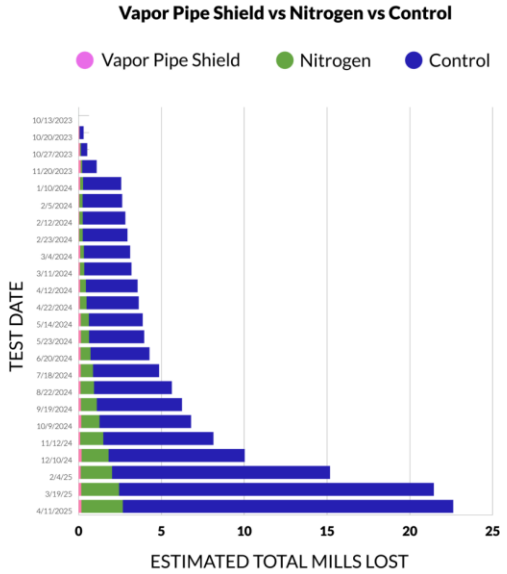
98% Purity Nitrogen

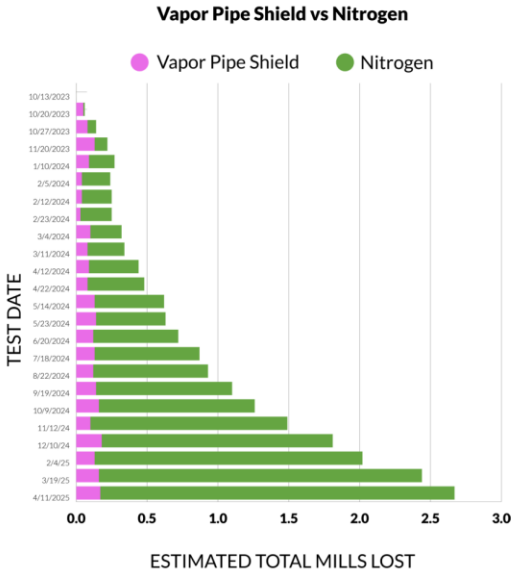


Vapor Corrosion Inhibitor

GENERAL AIR PRODUCTS

Amount of Corrosion Over Time





GENERAL AIR PRODUCTS

Amount of Corrosion Over Time

Vapor Corrosion Inhibitor	
Date of Test	Estimated Total Mills Lost
6 months	**0.08**
12 months	**0.16**
18 months	**0.17**

98% Purity Nitrogen	
Date of Test	Estimated Total Mills Lost
6 months	**0.4**
12 months	**1.1**
18 months	**2.5**

Compressed Air	
Date of Test	Estimated Total Mills Lost
6 months	**3.15**
12 months	**5.53**
18 months	**19.95**

GENERAL AIR PRODUCTS

How long will my pipe last when protected with Vapor Pipe Shield?

As long as you continue to change the replacement cartridge annually.

Annual cartridge replacement is vital for the success of mitigating corrosion with Vapor Pipe Shield.

You should replace the cartridge each year. Each year that you do, your corrosion mitigation will last another year.

Register your unit on day 1.

VAPOR Pipe Shield

GENERAL AIR PRODUCTS

Meet the Digital Maintenance Timer

The Digital Maintenance Timer (DMT-1) acts as a notifying device for required annual maintenance on **select fire protection air supply equipment, including Vapor Pipe Shield.**

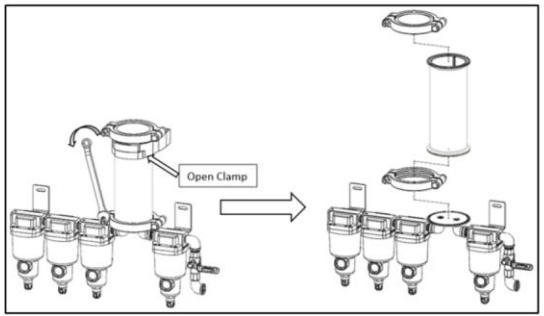
- Set it and forget it — it reminds you at just the right time. Alerts include: buzzer, red LED, and alarm contact terminal.
- Activates after 11 months of use.
- Battery powered — no external power needed.
- Quick QR Code to order the proper Maintenance Kit.

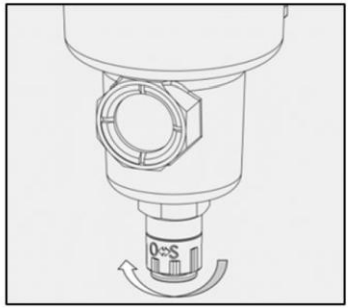


GENERAL AIR PRODUCTS

Annual Maintenance

VAPOR Pipe Shield







Annual Maintenance Kit

Annual Maintenance only takes a matter of **5-10 minutes for a 500 gallon unit**, and **10-20 minutes for a larger capacity unit.** Replacement of Vapor Pipe Shield cartridge(s), and two filters.

GENERAL AIR PRODUCTS

VAPOR Pipe Shield

Maintenance Kits



VPS-500 Annual Maintenance Kit



VPS-2000 Annual Maintenance Kit

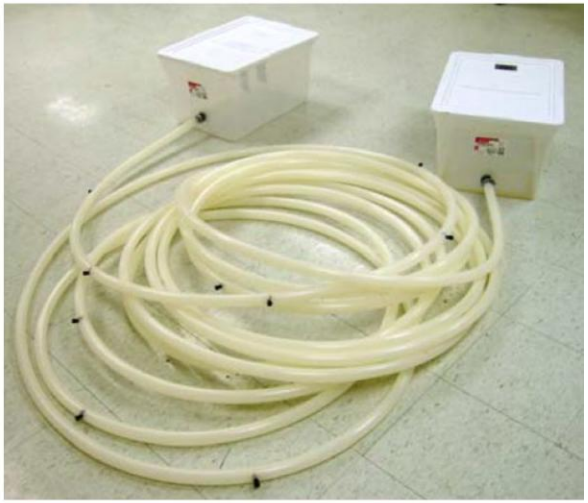
**System Installation & Maintenance videos are available on generalairproducts.com.*

GENERAL AIR PRODUCTS

Vapor Corrosion Inhibitor Testing: What did we learn?

To purge, or not to purge?

Because VpCI® is physically attracted to metal, it will naturally migrate on its own, even without air flow.



GENERAL AIR PRODUCTS

Does VpCI work on existing (NFPA 25) systems?

Absolutely, yes.

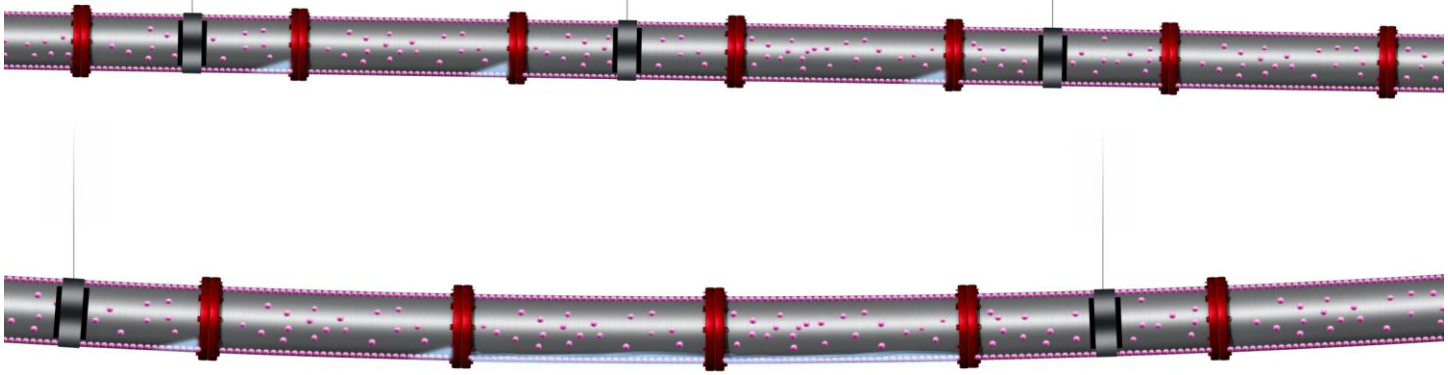
Sprinkler system piping will always last longer with the inclusion of VpCI than without it.

Further, the Vapor Pipe Shield UL 2901B Listing includes all NFPA 13 and NFPA 25 applications.

There is more to understand about existing sprinkler systems and the amount of corrosion that has taken place!

VAPOR Pipe Shield

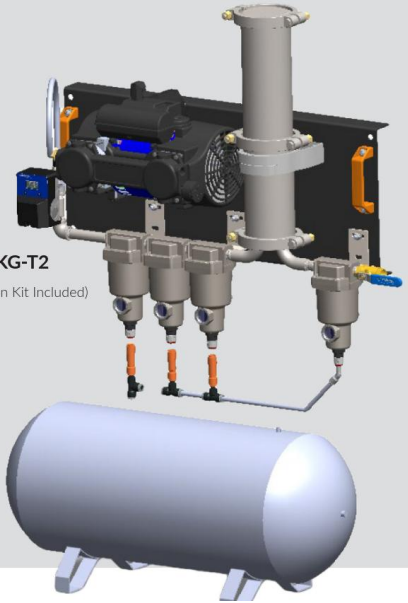
Does VpCI work where there is standing water?



Yes, VpCI ® molecules will penetrate standing water in the sprinkler system and protect the pipe beneath it. VpCI® molecules are water soluble which means that they easily dissolve in water due to their hydrophilic nature, making the exiting water a saturated VpCi solution.

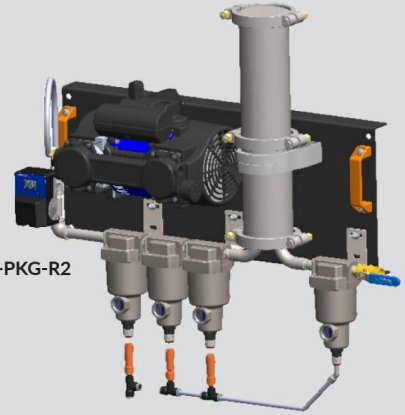
VAPOR PIPE SHIELD™ & OIL-LESS AIR COMPRESSOR PACKAGE

FOR DRY & PRE-ACTION FIRE SPRINKLER SYSTEMS



VPS-PKG-T2

(Tank Connection Kit Included)



VPS-PKG-R2

CE UK CA