



BRINK® FUMING ACID VENT SYSTEM (FAVS)

BRINK® FAVS PROVIDES SAFE AND EFFICIENT COLLECTION OF OLEUM, LIQUID SO₃ AND CHLOROSULFONIC ACID SMOKE.

The Brink® Fuming Acid Vent System (FAVS) by MECS, Inc. (MECS) is an engineered, skid-mounted submicron smoke removal device that is designed to control problems created by fuming acids that are vented to the atmosphere. Typically the application is related to these fuming acids being pumped into storage tanks, tank cars or tank trucks. The atmospheric vents on these tanks are ducted to a Brink® FAVS to avoid the dense, highly corrosive and toxic smoke that would otherwise result. Systems are available in pre-engineered capacities from 10–1 500 ACFM (170–2548 Am³/hr). Other sizes available upon request.

SYSTEM CAPACITIES

Model	Max. gas flow		Max. SO ₃ , CSA rate	
	ACFM	AM ³ /HR	LBS/HR	KG/HR
FAVS-100	100	170	11	4.99
FAVS-200	200	340	22	9.98
FAVS-500	500	849	54	24.49
FAVS-1000	1,000	1,698	108	48.98
FAVS-1500	1,500	2,548	162	73.48

Other sizes can be designed and built upon request.

ACTUAL PERFORMANCE RESULTS

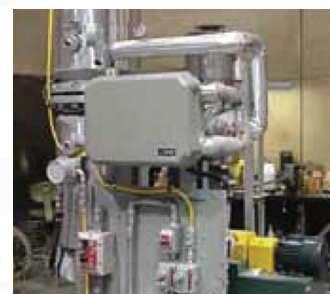
EPA METHOD AND RESULTS

Oleum vent inlet	0.282 lb./hr. (.128 kg/hr.)
Oleum vent out	<0.001 lb./hr. (<.00045 kg/hr.)
Collection efficiency	>99.75%
Opacity by EPA method	0%

Brink® FAVS OVP-200 Radford Army Ammunition Plant, Radford, VA, USA

FEATURES AND BENEFITS:

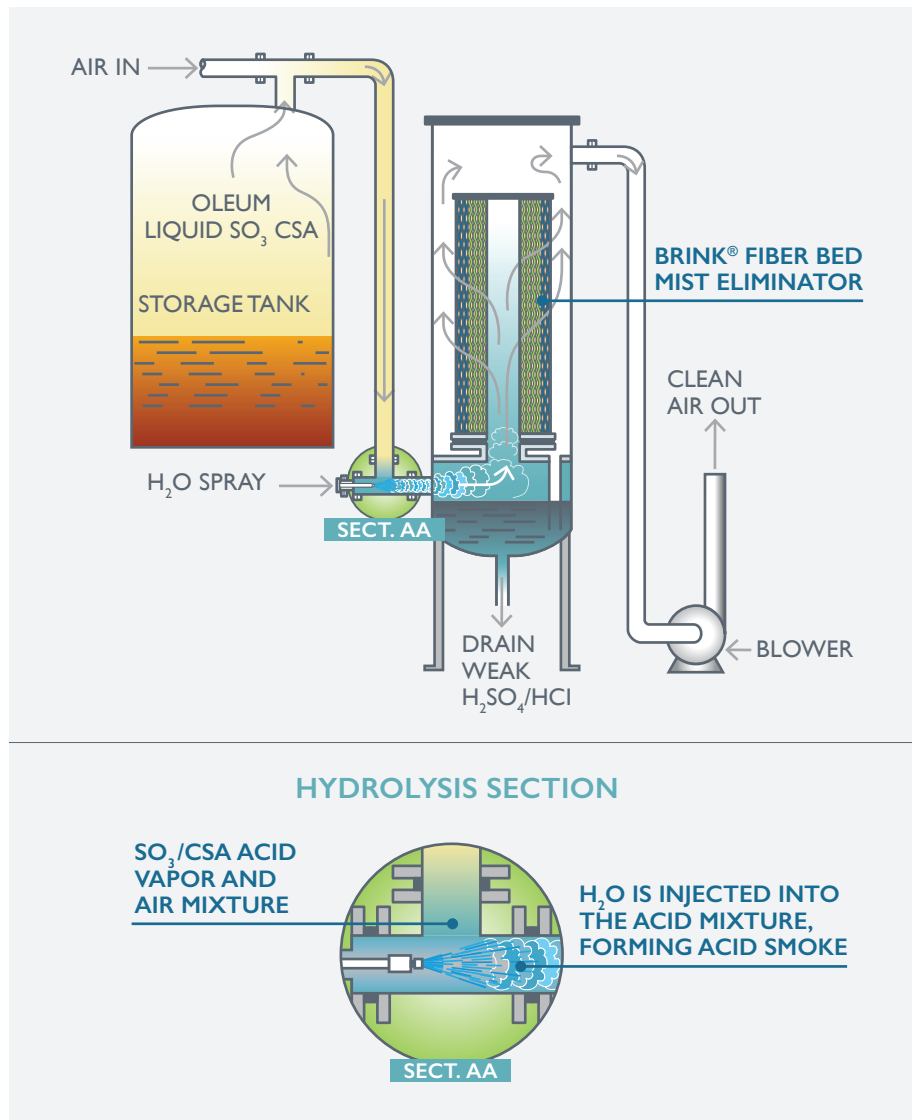
- Pre-engineered, self-contained, skid-mounted package ready to install and operate
- Brink® fiber bed mist eliminator for a minimum of 99.5% mist collection efficiency
- Value-engineered to utilize high-alloy and FRP materials only where needed
- Hydrolysis–water injection manifold and “T” ensure complete conversion to dilute H₂SO₄–sulfuric acid and/or HCl–hydrochloric acid smoke
- Simple operation with basic operator-friendly controls
- Robust chemical duty motor, blower and general construction for low maintenance and high on-stream reliability
- Insulated and heat-traced for all-weather outdoor use
- Portable wheeled, rolling systems can be designed for emergency spill/fuming acid control



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HOW THE BRINK® FAVS WORKS

With the blower motor running, dilution air and the fuming acid vapor emissions are drawn through the storage tank vent and ducted to the hydrolysis section, where water is injected at a controlled rate within the manifold to hydrolyze the SO_3 and/or CSA vapor into aerosol acid smoke. This submicron smoke travels through the throat of the standing Brink® mist eliminator, which is mounted on a tube sheet within the Brink® FAVS vessel. The mist is collected within the deep-bed cross section of the Brink® fiber bed, and the weak acid liquid is drained off the outside onto the tube sheet, then drained into the bottom of the vessel and eventually pumped away. The now clean air is drawn out of the top of the vessel through the Brink® FAVS ducting/blower and exhausted to the atmosphere.



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