DUPONT
The miracles of science™

BRINK® CGF
COMPRESSED GAS FILTER

Remove oil and water from compressed air and gas.

SIZE RANGE
8in. to 12 ft.
CGF-01 CGF-12

FLOW RANGE (ACFM)
1 to 1200
CGF-01 CGF-12

THE PROBLEM

Submicron oil and water particles are present in gas streams following industrial compressors. These mist particles are formed by evaporation and condensation due to the heat of compression and from lubricant blow-by, if lubricated compressors are used.

The water can accumulate in air lines and freeze in cold weather. The water and oil can damage downstream instruments, tools, airveying membranes and contaminate final product. If a desiccant dryer is used, the oil and water particles will over load and reduce the life of the desiccant.

THE SOLUTION

The MECS® Compressed Gas Filter (CGF) utilizes a combination of low operating velocities, deep beds, and Brownian diffusion as the predominant collecting mechanism to achieve high efficiency with very long operating life and low pressure drops. With the standard CGF, 99.5% of the submicron mists are removed. *(Models are available to achieve 99.95+% removal)*. In typical compressed air service, CGF operates 10-15 years, which is much longer than replaceable coalescing filters. Pressure drop is typically less than 0.5 PSIG which provides appreciable operating power savings over coalescing filters. The CGF can also tolerate high inlet loadings caused by temporary upsets or surges.

HOW IT WORKS

The MECS Compressed Gas Filter consists of special glass fibers packed between screens or perforated plates. As the compressed air *(or other gas)* containing oil and water particles passes through the fiber bed filter, the particles collect on the fibers by impaction and Brownian diffusion. These particles agglomerate and form into liquid films which are moved to the outside surface of the filter by gas drag. Gravity moves the collected liquid down the filter and into the sump where it is drained off by a liquid trap or timed solenoids.

FEATURES AND BENEFITS:

- Up to 99.95+% submicron particle mist removal
- Efficiency remains above 99% at significantly turned down flow rates.
- Cost reductions through energy savings over coalescing filters – payback as soon as 1 year.
- Can tolerate high inlet loadings caused by temporary upsets or surges
- Extended desiccant life
- Robust construction for long service life
- Stable and uniform fiber pack, for consistent performance

The MECS® Compressed Gas Filter in typical compressed air service, operates 10–15 years, which is much longer than replaceable coalescing filters.

NOTE: While the CGF will provide reliable and very high efficiency collection of the smallest liquid particles, no filter will collect oil or water that remains as a gas due to vapor pressure. In some situations, removal of gases, oil or water by desiccant dryers or carbon absorption will be necessary.

MECS®
BRINK®

Learn more at www.mecsglobal.com

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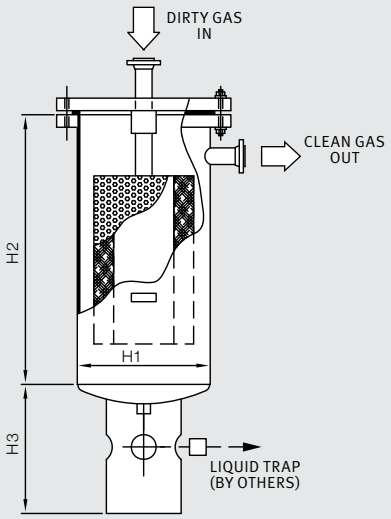
COMPRESSED GAS FILTER

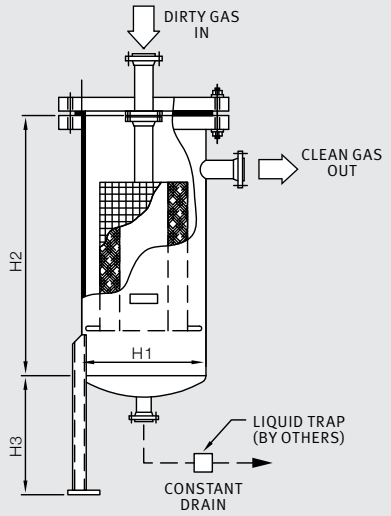
MECS® COMPRESSED GAS FILTER WILL PROVIDE RELIABLE AND VERY HIGH COLLECTION EFFICIENCY OF THE SMALLEST LIQUID PARTICLES.

MODEL	ACFM	MAX. SCFM* CAP RANGE	NOZZLE SIZE		FILTER SIZE	VESSEL DIMENSIONS		
			A & B	C		H1	H2	H3
CGF-01	1-12	0-85	2”	1”	10508	14”	1’-1”	18”
CGF-02	13-25	86-180	2”	1”	10512	14”	1’-5”	18”
CGF-03	26-60	181-435	2.5”	1”	10524	14”	2’-5”	18”
CGF-04	61-140	436-1015	4”	1”	1242	16”	3’-11”	18”
CGF-04A	141-180	1016-1305	4”	1”	1442	18”	3’-11”	18”
CGF-05	181-200	1306-1450	4”	1”	2032	24”	3’-1”	18”
CGF-06	201-300	1451-2175	6”	1”	2045	24”	4’-2”	18”
CGF-07	301-400	2176-2900	6”	1”	2058	24”	5’-3”	18”
CGF-08	401-600	2901-4350	6”	1.5”	1896	24”	9’-9”	30”
CGF-09	601-850	4351-6160	8”	2”	2496	30”	9’-11”	30”
CGF-10	851-1000	6161-7250	8”	2”	24120	30”	11’-11”	30”
CGF-12	1001-1200	7251-8700	10”	2”	24144	30”	13’-11”	30”

*SCFM shown equates to ACFM at 100 PSIG 100°(F) SCFM at 60°(F), 14.7 PSIA.

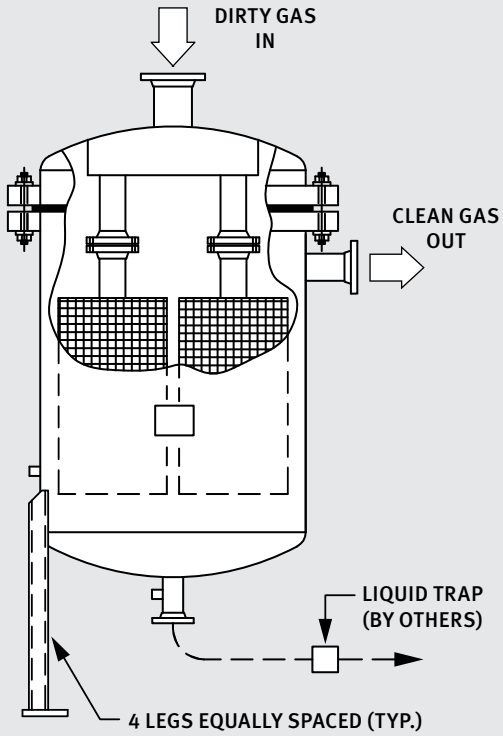


CGF-01 THRU CGF-07



CGF-08 THRU CGF-12

MULTIPLE CGF UNIT



CUSTOM CGF SYSTEMS

For larger flows outside the range of the standard CGF-01 through 12 or where height limitations in retrofit installations exist, custom, multiple CGF element vessels can be designed. In many cases, customers group several compressors together with a common CGF System, resulting in capital cost savings and allows for greater operational flexibity without affecting efficiency of the CGF System. MECS® has extensive experience in a full range of aerosol mists, be it mineral oil spray or submicron sulfuric acid mist. To compliment this, MECS mechanical engineers and designers are specialists in corrosion resistant materials of construction and high reliability, heavy duty vessel and CGF fabrication techniques.

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