



CX Mist Eliminators



Intelligent Air Technology

CX Range of Mist Eliminators

The CompAir range of CX Mist Eliminators offers the ideal solution to ever increasing demands from the industry for clean, high quality compressed air, efficient removal of oil-mist carryover from piston or oil-flooded rotary compressors.

Compressed air processing equipment must have a very low pressure drop, long service life, and be strong enough to withstand the most arduous operating conditions. Protection from oil slugs or compressor air/oil separator failure is essential.

The NEW CX range of Mist Eliminators is specifically designed to meet these demands and will optimize oil removal while ensuring extremely low pressure drop and long service life.

Features / Benefits

ELEMENT

- Long service life (10 - 15 years before element change)
- Ultra low pressure drop 0.5 psi d
- Special machine pleated construction
 - Provides 9 - 10 times greater filtration surface area
 - Eliminates migration of airflow to area of least resistance, also known as “channeling”
 - Eliminates shedding of media
- Strong stainless steel support sleeve construction
 - Eliminates rust and corrosion which can contaminate the air system
 - Integral support of the filtration media to eliminate bypass of contaminants
- Tie-rod construction for complete mechanical protection against compressor air/oil separator failure
- Positive gasket seals eliminate media bypass

SPECIAL MACHINE PLEATED ELEMENT CONSTRUCTION

The machined pleating of the filter media increases its stability under changing loads and reduces the specific surface tension. This results in a high load factor when compared to conventional hand packed media, which is prone to inconsistent performance under varying load conditions. Also known as “channeling” the airflow through a medium, which is not consistently packed, can migrate to areas of least resistance over time as the element begins retaining dirt particles, allowing the filtration efficiency to be reduced. Utilizing a machined pleating process increases the flow and dirt holding capacity across the full area of the media, resulting in lower differential pressure and better energy savings from your compressed air system.

HOUSING

- Optimum protection against catastrophic air/oil separator failure by containing large slugs of oil and condensate, up to 50% of compressor sump capacity, without re-entrainment
- Incremental differential pressure gauge supplied for field installation (Standard)
- Condensate drain (Optional)
- Built per ASME Code
- Internal Corrosion Protection (Optional)



CX Range of MIST Eliminators

How it works

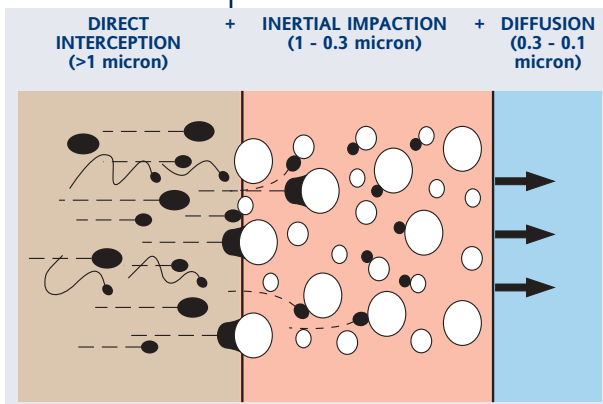
Filtration Mechanisms

The CompAir CX Mist Eliminators utilize a combination of depth filtration and low airflow velocities. This achieves high efficiency filtration with very long operating life and a low pressure drop. Essentially, CX Mist Eliminators rely on what is known as mechanical filtration for their effectiveness. The three main mechanisms of mechanical filtration are direct interception, inertial impaction and diffusion or Brownian Movement.

Direct Interception occurs when a particle collides with a fiber of the filter material without deviating out of the streamline flow. This mechanism tends to take place on the surface of the filter material affecting mainly the larger particles over 1 micron in size.

Inertial Impaction occurs when a particle is unable to follow the torturous path around the filter fibers and eventually collides with and adheres to one of the fibers. Typically affecting particles in the 0.3 micron - 1 micron size range.

Diffusion or Brownian Movement, as it is commonly referred to, occurs with very small particles which tend to wander within the gas stream, increasing their chances of colliding with and adhering to a fiber. This usually affects particles below 0.3 micron in size. Obviously a degree of overlap takes place with the mechanisms, the extent varying on the conditions.



LOW PRESSURE DROP & RUNNING COSTS

The CX Mist Eliminators pressure drop is one of the lowest available at 0.5 psi, which is typically 8 psi lower than conventional filters. This provides significant energy savings as, on average, every 2 psi pressure drop in the system equals a 1% loss in compressor horsepower.

Therefore annual energy savings would be:

8 psi = 4% Savings in Lost Compressor Power

Annual Energy Savings on a 100 HP System (74.6 kw)

\$0.05/kwh x 8760 hours x 74.6 kw x 4% = \$1,307

\$0.08/kwh x 8760 hours x 74.6 kw x 4% = \$2,091

\$0.10/kwh x 8760 hours x 74.6 kw x 4% = \$2,614

Technical Specifications

Maximum Operating Pressure: 260 psi g (17 bar g)

Maximum Operating Temperature: 200°F (93°C)

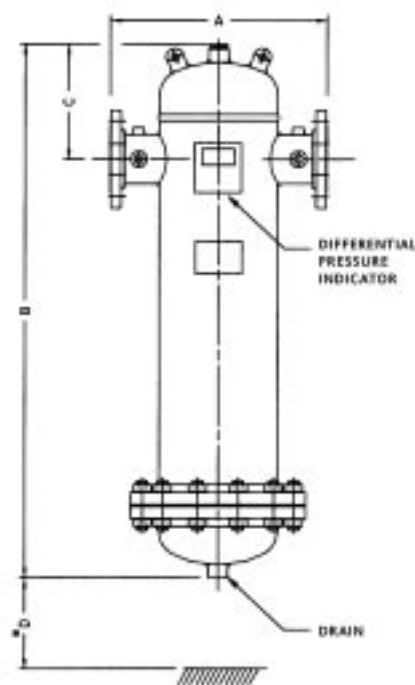
High Efficiency General Purpose Protection

For the removal of particles down to 1 micron including coalesced liquid water and oil, providing a maximum remaining oil aerosol content of 0.5 ppm.

FILTER TYPE	PIPE SIZE	Flow Rates @100 psi g (scfm)	Dimensions (ins)				Drain Connection NPT	Weight (lbs)	Replacement Element
			A	B	C	D			
CX150	2" Flg	150	17-3/4	26	8-3/4	10	1/2"	165	CF150X
CX300	2" Flg	300	17-3/4	33	8-3/4	16	1/2"	175	CF300X
CX600	2" Flg	600	17-3/4	48	8-3/4	27	1/2"	330	CF600X
CX800	3" Flg	800	19-3/4	40	8-3/4	20	1/2"	340	CF800X
CX1250	3" Flg	1,250	19-3/4	50	10-1/4	27	1/2"	457	CF1250X
CX2000	4" Flg	2,000	24	56	12-5/8	25	1/2"	674	CF2000X
CX2800	4" Flg	2,800	24	56	12-5/8	25	1/2"	674	CF2800X
CX4000	6" Flg	4,000	31-1/8	55-5/8	10-5/8	26	1/2"	809	CF4000X

For flow rates at other pressures, apply the factor shown to the above flow rates:

Line Pressure psi g	20	30	40	60	80	100	120	150
Correction Factor	0.45	0.55	0.63	0.77	0.89	1.0	1.1	1.22



5 year
PERFORMANCE PLUS
ELEMENT WARRANTY

**PERFORMANCE
GUARANTEE**

5 Year Performance Guarantee That
the Differential Pressure Will Not
Exceed 1 psi d

Intelligent Air Technology

Compressed air solutions for every application

Compressors

3 - 2500 cfm
1 - 500 HP

Lubricated

Rotary Vane
Single Stage Screw
Speed Regulated Screw
Piston
Portable

Oil-Free

Two Stage Screw
Water-Sealed Screw
Piston
Portable

Complete Accessories Program

Filters and Dryers
Cooling Systems
Heat Recovery
Condensate Management
Air Receivers
Multi-Set Controllers
Lubricants

Value Added Services

Air Audit
Performance Reporting
Utility Air
Performance Contracting

Complete Service for Compressed Air Technology

Engineering of Complete Compressor Stations
Local Service Centers
Guaranteed Parts Availability



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CompAir policy is one of continuous improvement and we therefore reserve the right to alter specifications and prices without prior notice. All products are sold subject to the Company's conditions of sale.

COM0224_3000_05/02



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