

Air Line Filters

Solid, simple and smart:
advanced reliability in compressed air



People.
Passion.
Performance.



Chicago
Pneumatic

Compressed Air Line Filters

Quality air solutions

Boost your air quality

- Purify your compressed air by eliminating oil, dust and other contaminants
- Optimize your compressed air installation
- Achieve a higher final product quality

Save costs

- Less potential downtime and longer lifetime of your installation
- Easy installation
- Great serviceability

Undemanding maintenance

- Compatible with any compressor technology
- Can easily be installed into an existing installation
- Optional pressure drop device (indicator or gauge)
- Easy cartridge replacement

Risks you avoid

Impurities in the compressed air can cause:

- Damage to the distribution lines increasing potential downtime
- Considerable increase in maintenance costs
- Reduction in the efficiency and life span of the pneumatic devices
- Deterioration of the final product quality
- Limitations to the reliability of the production process and all its components
- Reduction of your overall profitability

Technology you can trust



- High quality product offering you **technology you can trust.**
- Our products are easy to use and highly reliable.
- Distributors are always nearby ensuring availability of both products and support.
- High performance products and a partnership that will boost your business.
- Safeguarding long-term productivity through optimal serviceability and use of original parts.

How clean is your compressed air?

Atmospheric air naturally contains several impurities such as dust, various forms of hydrocarbons and water in the form of humidity. Once the air is compressed, their concentration is increased. As a result, these contaminants find their way to the compressed air circuit, causing wear and corrosion to the downstream equipment. Chicago Pneumatic air line filters remove these contaminants from the compressed air.

Protect your compressed air installation against:



moisture



oil



bacteria



viruses



carbon



particles

Chicago Pneumatic filters keep your air distribution network in optimal shape!

In any compressed air net distribution it is a must to install one or more filters. As a result, an improved air quality is achieved which benefits your complete compressed air network, including the downstream dryers, air pipes and pneumatic tools. Depending on the application you may need to filter your air in different stages to prevent saturation of the elements, keep your air quality and avoid pressure drops.



Compressed Air Line Filters

An all-inclusive offer



Chicago Pneumatic is your one-stop-shop when it comes to compressed air installations. Our range of air line filters has been carefully designed and manufactured to flawlessly integrate with our compressors, drying equipment and pipework, guaranteeing the highest air quality possible.

Customer benefits

1. Energy Efficiency

Chicago Pneumatic air line filters are designed to optimize air flow, leading to a reduction in differential pressure and a strong increase in energy efficiency.

2. Reliable Filtration

A unique, in-house design protects your air quality by guaranteeing a reliable and efficient filtration process.

3. Safe Operations

Safety is the most important aspect of your operation process. Features like the single start thread, fixed thread engagement and stop-and-lock indication arrows prevent over-tightening and ensure effective sealing requirements.

4. User-Friendly

The corrosion resistant end caps were color-coded for easy filtration grade differentiation. Differential pressure indicators and gauges are available.

5. Undemanding Maintenance

Maintenance becomes extremely easy with the external accessible, manual & automatic drains supplied as standard.

6. Proven Performance

The housings and elements are manufactured using high quality components, tested and validated in accordance with ISO12500-1 & ISO 8573-1 2010.

7. Flexible Installation

The filters can easily be installed both in new or existing compressed air installations, available in 1/8" to 3" threaded BSP and NPT port sizes and flow rates from 10-2550 m³/h (6 - 1500 scfm.)

8. Easy Fitting

Low-cost connecting kits, wall mounting brackets and a new filter head design enable easy and simple fitting of the filters into your installation.

Important guidelines

When selecting line filters for your compressed air system, these are some useful guidelines to consider.



1. Depending on the application, each point of use in the system may require a different compressed air quality.
2. Ensure that the purification equipment which is being chosen will actually provide the required air purity in accordance with ISO 8573-1:2010 standards.
3. When comparing filters to one another, make sure they have been tested in accordance with ISO 8573 and ISO 12500 standards.
4. Whenever you compare different filtration solutions, it is crucial to keep in mind that the filter performance is highly dependent on the inlet conditions.
5. When taking into account the operational cost of oil coalescence filters, make sure you compare the initial saturated wet pressure loss. Dry pressure loss is not a representative metric for performance..
6. For dust filters on the other hand, one can expect the pressure drop to rise over time. A low starting pressure drop does not mean it will remain as such throughout the filter element's lifetime.
7. Consider the total cost of ownership for purification equipment (purchase, operational and maintenance costs).



Compressed Air Line Filters

Filtration Grades

	P	G	S	C	D	V
Particle removal (micron) ■	5	-	1	-	0,01	-
Outlet oil aerosol concentration (mg/m ³) ■	1	0,3	-	0,01	-	0,003
Total mass efficiency (%)	>90	>99,25	-	>99,9	-	-
Quality class of air at outlet (particles / oil) ▲	4 / 3	- / 3	3 / -	- / 2	1 / -	- / 1
Initial pressure drop over filter in dry applications (bar)	0,05	0,055	0,055	0,085	0,085	0,115
Initial pressure drop over filter in wet applications (bar) ✱	0,08	0,125	-	0,125	-	-

■ Referred to an absolute pressure of 1 bar and temperature of 20 °C

▲ According to ISO 8573-1:2010 in a typical installation

✱ According to ISO 12500-1 at oil concentration upstream of the filter of 10 mg/m³ (Grade G = 40 mg/m³)

Correction Factors										
For maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure										
Operating pressure barg (psig)	4 (58)	5 (72)	6 (87)	7 (100)	8 (115)	10 (145)	12 (174)	14 (203)	16 (232)	20 (290)
Correction factor	0,76	0,84	0,92	1,00	1,07	1,19	1,31	1,41	1,51	1,6

High quality components



1 Push Fit Elements
ensure perfect sealing within the filter housing and assist with easy removal

2 Corrosion resistant end caps
Injection moulded from glass filled nylon for added durability

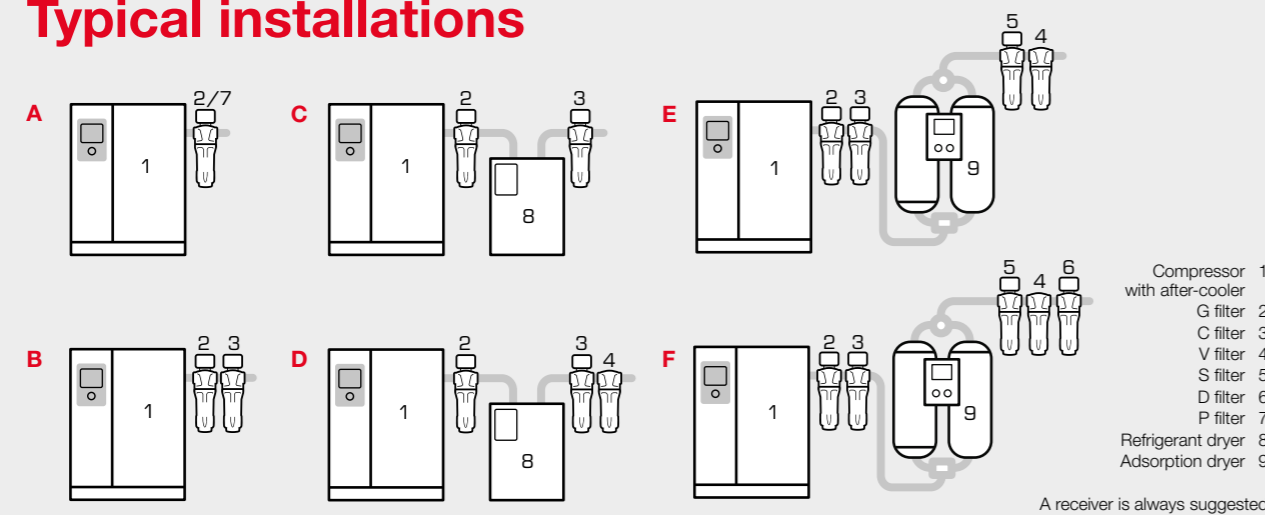
3 High quality stainless steel cylinders
provide corrosion resistance and deliver strength and stability to the element

4 Custom engineered
hydrophobic & oleophobic borosilicate media specifically developed to deliver consistently low pressure drop, combined with pleated element construction for high dust retention capacity and an increased filtration surface area

5 Custom outer drainage layer
prevents oil carryover and improves coalescence performance

6 Unique Element end cap
colour coding system for quick and simple grade identification

Typical installations



A. General purpose protection
air purity to ISO 8573-1:2010
G filter [3 : - : 3]
P filter [4 : - : 3]

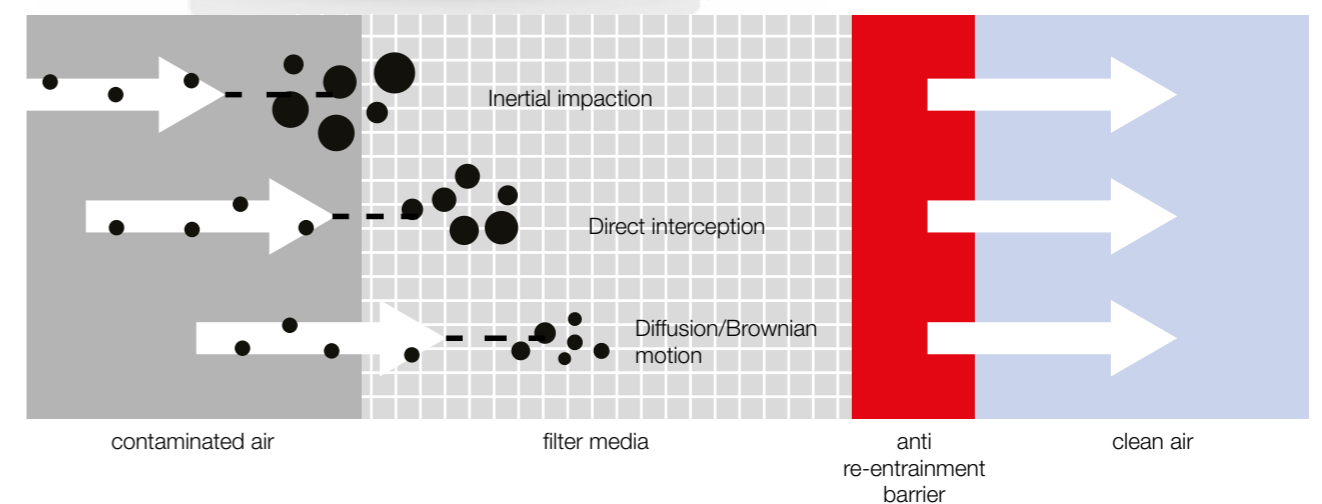
C. High quality air with reduced dew point
air purity to ISO 8573-1:2010
[1 : 4 : 2]

E. High quality air with extremely low dew point
air purity to ISO 8573-1:2010
[2 : 2 : 1]

B. General purpose protection and reduced oil concentration
air purity to ISO 8573-1:2010
[1 : - : 2]

D. High quality air with reduced dew point and oil concentration
air purity to ISO 8573-1:2010
[1 : 4 : 1]

F. High quality air with extremely low dew point
air purity to ISO 8573-1:2010
[1 : 2 : 1]



Compressed Air Line Filters

Extensive Filter Range for your Industry

Water separators

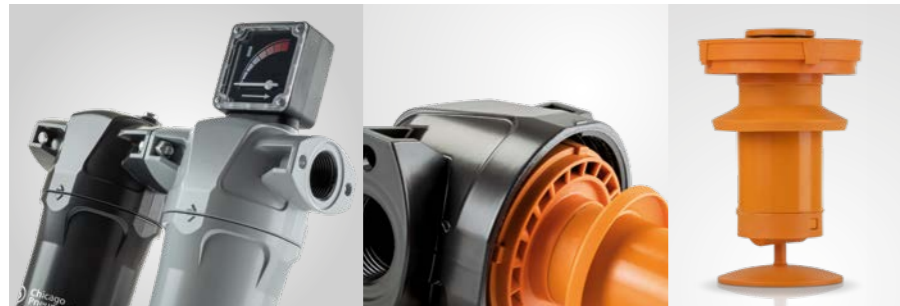
The new water separators combine proven centrifugal technology with a new innovative housing design to deliver market leading water removal efficiencies, eliminating 99% bulk water and guaranteeing continuously low differential pressure.

Integrated into the compressed air filtration range, the new water separators combine proven centrifugal technology with a new innovative housing design to deliver market leading

water removal efficiencies, eliminating 99% bulk water and guaranteeing continuously low differential pressure.

The custom-engineered centrifugal module features unique vanes to eliminate points of low efficiency and a vortex arrestor to stop entrainment.

This ensures minimal operating pressure drop and maintains excellent liquid removal even at low velocities.



Extensive filtration range

Chicago Pneumatic's range of coalescent, dust and oil vapor compressed air filters come in six filtration grades, with several options and certifications to complement them.

Flow-optimized design

- New deep-pleated media
- Improved air flow characteristics
- Reduced energy consumption
- Reduced cost of ownership

Increased performance

- Exceptional aerosol and particle removal
- Extremely low pressure drop (< 125 mbar)
- Operating temperature of up to 120°C (248°F)
- Operating pressure of up to 20.7 bar (300 psig)

Improved serviceability

- Dead-stop head to bowl connection
- Push-fit filter elements
- Profiled bowl design and hexagonal spanner locator
- New externally accessible drain



Accessories

Differential pressure equipment



Differential pressure Indicator



Differential pressure gauge



Differential pressure gauge incl. potential-free contact

Drains



Manual drain with adapter



Automatic drain (float) with adapter



Level-controlled drain

Installation kits



Serial connecting and wall-mounting kits



Compressed Air Line Filters

Performance assured

Filter housing design

The ISO 8573 group of International Standards is used for the classification of compressed air.

- ✓ 1000 hour neutral salt spray test for corrosion to ISO 9227: 2006
- ✓ Burst pressure tested in excess of 100 barg for a 5:1 safety factor
- ✓ Housings are pressure decay tested before despatch. Fine filters are 100% aerosol integrity tested

Element technology

The new series is available in a complete range of contaminant removal grades designed to meet the compressed air purity requirements throughout industry.

- ✓ **ISO 8573-1: 2010**
Compressed air purity standard

- ✓ **ISO 12500 Series**
International standard for compressed air filter testing

Independent validation

Housings are approved to international standards including:

- ✓ **Pressure Equipment Directive 2014/68/EU** – Lloyd's Register EMEA – Notified Body No. 0038

- ✓ **ISO 9001 Quality Systems – LRQ0930553** – Lloyd's Register EMEA – Notified Body No. 0038

- ✓ **CRN Approved - CRN0E19418**
For use within Canada



Laser cutting
Packaging and bottling
Optical industry
Automotive

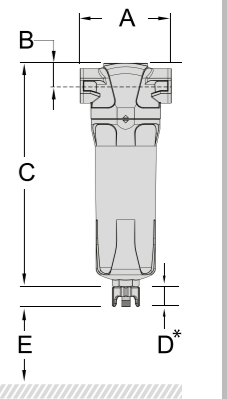
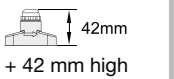
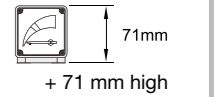
Energy
Electronic component manufacturing
Glass / crystal
Gas generation

In any compressed air system, impurities are inevitable. Dust, dirt, water and oil contaminants can reduce air quality and significantly affect system efficiency. Inadequate or incorrect filtration can negatively impact performance and end user equipment, and cause potential costly system downtime. With over 30 years' experience, extensive industry know-how that supports our customers to meet the varying demands and standards required in delivering high performance compressed air.

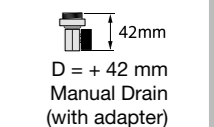
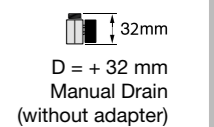
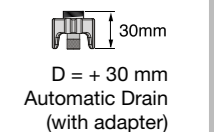
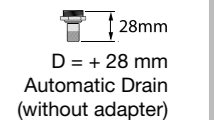
Technical specifications

	Filter Size	Flow Rate / Size ●			Conn. Size	Dimensions (mm)				Weight (KG) Approx.	Element Model
		m ³ /h	lt/min.	SCFM		A	B	C	E		
Coalescing & Particulate	1	10	168	6	(G1/8)	50	17	157	60	0.25	F (Grade) 1
	2	25	414	15	(G1/4)	50	17	157	60	0.25	F (Grade) 2
	3	42	702	25	(G1/4)	70	24	231	70	0.6	F (Grade) 3
	4	54	900	32	(G3/8)	70	24	231	70	0.6	F (Grade) 4
	5	85	1,416	50	(G1/2)	70	24	231	70	0.6	F (Grade) 5
	6	119	1,986	70	(G1/2)	127	32	285	80	1.7	F (Grade) 6
	7	144	2,400	85	(G3/4)	127	32	285	80	1.7	F (Grade) 7
	8	178	2,964	105	(G1)	127	32	285	80	1.7	F (Grade) 8
	9	212	3,534	125	(G3/4)	127	32	371	80	2	F (Grade) 9
	10	297	4,950	175	(G1)	127	32	371	80	2	F (Grade) 10
	11	476	7,932	280	(G1 1/4)	140	40	475	80	3	F (Grade) 11
	12	545	9,084	321	(G1 1/2)	140	40	475	80	3	F (Grade) 12
	13	765	12,750	450	(G2)	170	53	508	100	4.9	F (Grade) 13
	14	1189	19,818	700	(G2)	170	53	708	100	5.5	F (Grade) 14
	15	1444	24,066	850	(G2 1/2)	220	70	736	100	10.5	F (Grade) 15
	16	1529	25,482	900	(G3)	220	70	736	100	10.5	F (Grade) 16
	17	2125	35,418	1250	(G3)	220	70	857	100	11.5	F (Grade) 17
	18	2550	42,498	1500	(G3)	220	70	1005	100	12.5	F (Grade) 18
Water Separators	1	10	168	6	(G1/8)	50	17	157	60	0.25	NA
	2	25	414	15	(G1/4)	50	17	157	60	0.25	NA
	3	42	702	25	(G1/4)	70	24	231	70	0.6	NA
	4	59	984	35	(G3/8)	70	24	231	70	0.6	NA
	5	85	1,416	50	(G1/2)	70	24	231	70	0.6	NA
	6	119	1,986	70	(G1/2)	127	32	285	80	1.7	NA
	7	212	3,534	125	(G3/4)	127	32	285	80	1.7	NA
	8	297	4,950	175	(G1)	127	32	285	80	1.7	NA
	9	476	7,932	280	(G1 1/4)	140	40	475	80	3	NA
	10	545	9,084	321	(G1 1/2)	140	40	475	80	3	NA
	11	1189	19,818	700	(G2)	170	53	508	100	4.9	NA
	12	1444	24,066	850	(G2 1/2)	220	70	413	100	8	NA
	13	2550	42,498	1500	(G3)	220	70	413	100	8	NA

DIFFERENTIAL PRESSURE EQUIPMENT



*DRAINS



See data sheet for standard scope of delivery

● At reference conditions, unless otherwise stated and according to ISO 1217, third edition, annex C.

Chicago Pneumatic: full offer, global presence



Piston compressors



Screw compressors



Industrial & vehicle service tools



Portable compressors & generators



Construction equipment



Care. Trust. Efficiency.

Care.

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

Trust.

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

Efficiency.

Equipment efficiency is ensured by regular maintenance. Efficiency of the service organization is how Original Parts and Service make the difference.

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