



Compressed Air Filters



Why filter compressed air?

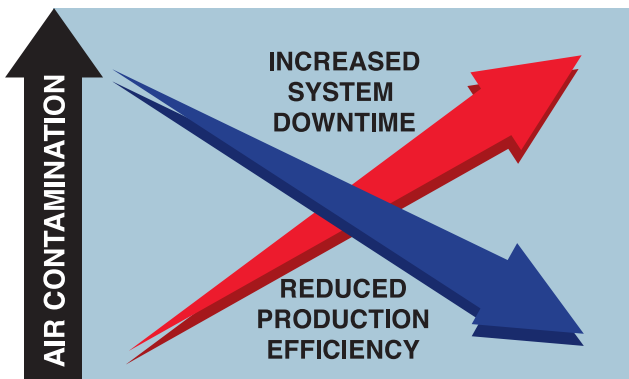
Contamination reduces efficiency

The air we breathe contains contamination in the form of water vapour and airborne particles.

During the compression process an air compressor concentrates these contaminants and depending on the design and age will even add to the contamination in the form of oil carry over.

Modern air compressors generally have built in aftercoolers that reduce the discharge temperature of the compressed air and with the help of water separators, remove the bulk of liquid water.

In some applications this may be sufficient, but the remaining dirt and moisture content suspended in aerosol form, will, if not removed, damage the compressed air system and cause product spoilage.



The result - higher overall cost of operation from:

- Increased system downtime
- Reduced production efficiency

These problems can be avoided with the correct selection and application of compressed air filters and dryers from Ingersoll-Rand.

The Air Solutions Group at Ingersoll-Rand has the widest selection of products and application knowledge to protect your investment and your compressed air system.

- Filters
- Condensate management
- Cooling systems
- Refrigeration dryers
- Desiccant dryers
- Piping systems

Benefits

- ✓ Quickest, simplest maintenance of any filter design
- ✓ Built in safety protection
- ✓ Lowest pressure drop available
- ✓ Corrosion resistant alocrom treatment
- ✓ 10 year housing guarantee

Compressed Air Quality & Product Selection

The international standard for compressed air quality provides a simple system of classification for the three main contaminants present in any compressed air system - DIRT, WATER and OIL. To specify the quality class required for a particular application, simply list the class for each contaminant in turn.

Compressed Air Quality ISO 8573.1

Class	Solid Particle Maximum number of particles per m ³			Water Pressure Dewpoint °C	Oil (incl. vapour) mg/m ³
	0.1-0.5micron	0.5-1.0 micron	1.0-5.0 micron		
1	100	1	0	-70	0.01
2	100,000	1,000	10	-40	0.1
3	Not specified	10,000	500	-20	1
4	Not specified	Not specified	1,000	3	5
5	Not specified	Not specified	20,000	7	Not specified
6	Not specified	Not specified	Not specified	10	Not specified

IR Ingersoll-Rand Filters - The 'Class' Solution



A Perfect Seal Every Time
Moulded seal cannot be lost or mis-aligned.

Full Flow Inlet
Gives maximum capacity and lowest pressure drop.



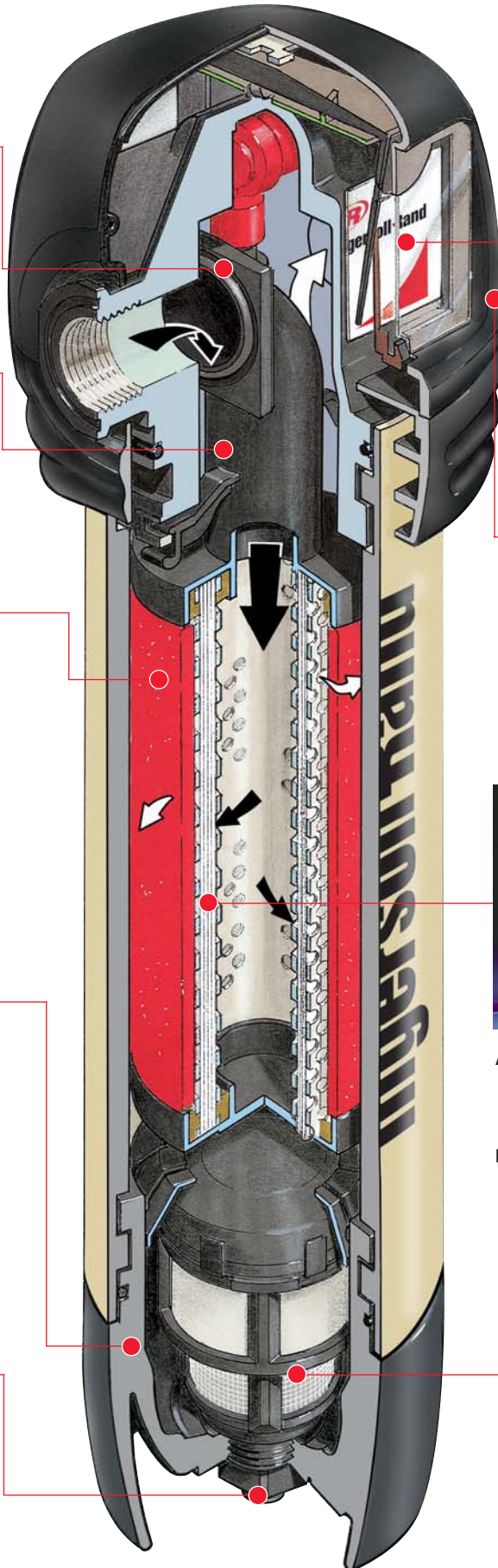
Unique Filter Element
Is available in four filtration grades.



Rapid Maintenance
Lift and twist design is quick and easy.



Built in Safety
Simply push for autodrain check and bowl depressurisation.



Differential Pressure Indicator
Gives a reminder of filter element life from both sides.



Fixing Clamp
Joins two filters and is a wall mounting bracket in one!



- A. Ingersoll-Rand Oleophobic filter media actively repels oil and water to reduce pressure drop and running costs to an absolute minimum.
- B. Typical filter media soaks up oil and water increasing pressure drop, reducing efficiency and giving higher running costs.



Self Cleaning Drain Screen
Reduces maintenance and increases reliability.

Technical Specifications

Filter Grade GP, HE AC, DP	Pipe Size	Flow Rates @ 7 bar g (100 psi g)		Dimensions (mm)				Weight Kg	Replacement Element Kit				
		m³/min	cfm	A	B	C	D		Grade GP CPN No.	Grade HE CPN No.	Grade AC CPN No.	Grade DP CPN No.	No.
IR (Grade) 19	G¼	0.53	19	89	53	250	100	1.0	88342977	88343009	88343066	88343033	1
IR (Grade) 40	G¾	1.12	40	89	53	265	100	1.03	88342985	88343017	88343074	88343041	1
IR (Grade) 64	G½	1.80	64	89	53	288	100	1.1	88342993	88343025	88343082	88343058	1
IR (Grade) 123	G¾	3.45	123	130	66	353	140	2.3	88343124	88343157	88343215	88343181	1
IR (Grade) 216	G1	6.05	216	130	66	446	140	2.6	88343132	88343165	88343223	88343199	1
IR (Grade) 275	G1¼	7.70	275	130	66	504	140	2.9	88343140	88343173	88343231	88343207	1
IR (Grade) 350	G1½	9.80	350	160	90	580	175	5.4	88344239	88344247	88344262	88344254	1
IR (Grade) 481	G1½	13.46	481	160	90	685	175	6.5	88343272	88343306	88343363	88343330	1
IR (Grade) 563	G2	15.76	563	160	90	750	175	7.2	88343280	88343314	88343371	88343348	1
IR (Grade) 706	G2	19.76	706	160	90	864	175	7.9	88343298	88343322	88343389	88343355	1
IR (Grade) 850	G2½	23.80	850	210	104	939	250	14.2	88343421	88343454	88343512	88343488	1
IR (Grade) 1100	G3	30.80	1100	210	104	1038	250	15.2	88343439	88343462	88343520	88343496	1
IR (Grade) 1380	G3	38.63	1380	210	104	1111	250	16.5	88343447	88343470	88343538	88343504	1
IR (Grade) 424	DN40	12.0	424	304	172	727	350	32	92452812	92452903	92452994	92452812	1
IR (Grade) 699	DN50	19.8	699	304	180	1040	650	40	92452820	92452911	92453000	92452820	1
IR (Grade) 1314	DN80	37.2	1314	370	225	1199	650	70	92452846	92452937	92453026	92452846	1
IR (Grade) 2119	DN100	60.0	2119	450	248	1241	650	105	92452820	92452911	92453000	92452820	3
IR (Grade) 2755	DN100	78.0	2755	500	273	1325	650	150	92452820	92452911	92453000	92452820	4
IR (Grade) 4132	DN150	117	4132	580	334	1424	650	200	92452820	92452911	92453000	92452820	6
IR (Grade) 6886	DN200	195	6886	750	410	1687	650	400	92452820	92452911	92453000	92452820	10
IR (Grade) 11018	DN250	312	11018	862	469	1821	800	540	92452820	92452911	92453000	92452820	16
IR (Grade) 16527	DN300	468	16527	1000	533	1910	850	700	92452820	92452911	92453000	92452820	24

Grade GP - General Purpose Protection

Particle removal down to 1 micron including coalesced liquid water and oil, providing a maximum remaining oil aerosol content of 0.6 mg/m³ (<0.5 ppm) @ 21°C.

Grade HE - High Efficiency Oil Removal Filtration

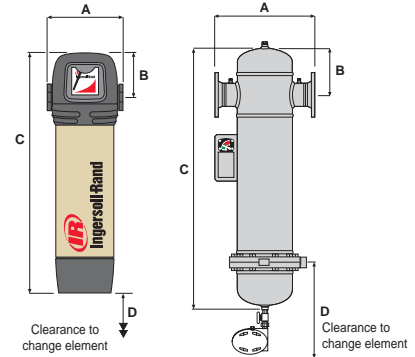
Particle removal down to 0.01 micron including water and oil aerosols, providing a maximum remaining oil aerosol content of 0.01 mg/m³ (<0.01 ppm) @ 21°C. (Precede with Grade GP filter).

Grade AC - Activated Carbon Filtration

Oil vapour and hydrocarbon odour removal, giving a maximum remaining oil content of <0.003 mg/m³ (<0.003 ppm) (excluding methane) @ 21°C. (Precede Grade AC with Grade HE filter).

Grade DP - General Purpose Dust Filtration

Dust particle removal down to 1 micron.



Operating Limitations

Maximum operating pressure	16 bar g (232 psi g)	Maximum recommended operating temperature (Grade AC)	30°C (86°F)
Maximum recommended operating temperature (Grade GP/HE/DP)	66°C (150 °F)	Minimum recommended operating temperature	1.0°C (34°F)

Filter Selection:

To order a 0.01 micron filter flowing 3m³/min at 7 bar g specify filter type IRHE123. Replacement element is CPN 88343157.

For flowrates at other pressures, apply the factor shown:

Line	bar g	1	2	3	5	7	9	11	13	15	16
Pressure	psi g	15	29	44	73	100	131	160	189	218	232
Correction Factor		0.38	0.53	0.65	0.85	1.0	1.13	1.25	1.36	1.46	1.51

Ingersoll-Rand air compressors are not designed, intended, or approved for breathing air. Compressed air should not be used for breathing air applications.

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