COMPRESSED AIR FILTERS



AIR QUALITY STANDARDS

Certain applications and processes require very high air quality standards. This is true in food processing industries, where compressed air may come into contact with food (during processing, curing, packaging, and other steps). Water or contaminants in the air can lead to pneumatic equipment failing and bacteria proliferating in compressed air lines.

The International Organization for Standardization (ISO) established the ISO 8573 Series of standards to make it easier to select, design and measure air treatment components. ISO 8573.1 identifies three main types of contaminants in a compressed air system: **solid particles**, **water**, and **oil** (in the form of aerosol and vapor). Each is categorized and assigned a purity class ranging from Class 0 (the most stringent) to Class 9 (the least stringent). Air use determines the required purity level based on industry standards and applications.

Class ISO 8573.1 (2010)	Solid particles				Water		Oil
	Maximum no. of particles per m^3			Concentration	Vapor	Liquid	Total Oil(1)
	0.1 – 0.5 micron	0.5 – 1 micron	1 – 5 microns	mg/m^3	Pressure dew point	g/m^3	mg/m^3
0	As specified by the equipment user or supplier						
1	≤ 20 000	≤ 400	≤ 10	---	≤ -94°F	---	≤ 0.01
2	≤ 400 000	≤ 6 000	≤ 100	---	≤ -40°F	---	≤ 0.1
3	---	≤ 90 000	≤ 1 000	---	≤ -4°F	---	≤ 1
4	---	---	≤ 10 000	---	≤ 37°F	---	≤ 5
5	---	---	≤ 100 000	---	≤ 45°F	---	---
6	---	---	---	≤ 5	≤ 50°F	---	---
7	---	---	---	5 – 10	---	≤ 0.5	---
8	---	---	---	---	---	0.5 – 10	---
9	---	---	---	---	---	5 – 10	---

(1) All forms of oil including liquids, aerosols and vapor

For example, the illustration below shows that Class 1.4.1 applies to the food industry (Level 4). This corresponds to Class 1 filtration for solid particles, Class 4 for water, and Class 1 for oil.



Level 1
Compressed air without specification

ISO 8573.1
Class 5.6.5



Level 2
General shop air: air tools (sand blasting, grinding)

ISO 8573.1
Class 3.6.4



Level 3
Air instrument, spray painting, powder coating, packing machines

ISO 8573.1
Class 1.5.3.



Level 4
Food industry pharmaceutical and chemical industries, laboratories

ISO 8573.1
Class 1.4.1



Level 5
Food industry (breweries, dairies), pharmaceutical and chemical industries, laboratories

ISO 8573.1
Class 1.1.1

AIRFLO

FILTRATION QUALITY LEVELS

Filtration M3

- For coarse pre-filtration
- Particle removal down to 3 micron

Filtration M1

- For general filtration
- Particle removal down to 1 micron
- Maximum residual oil content (aerosol): 0.1 mg/m³ at 20 °C

Filtration M01

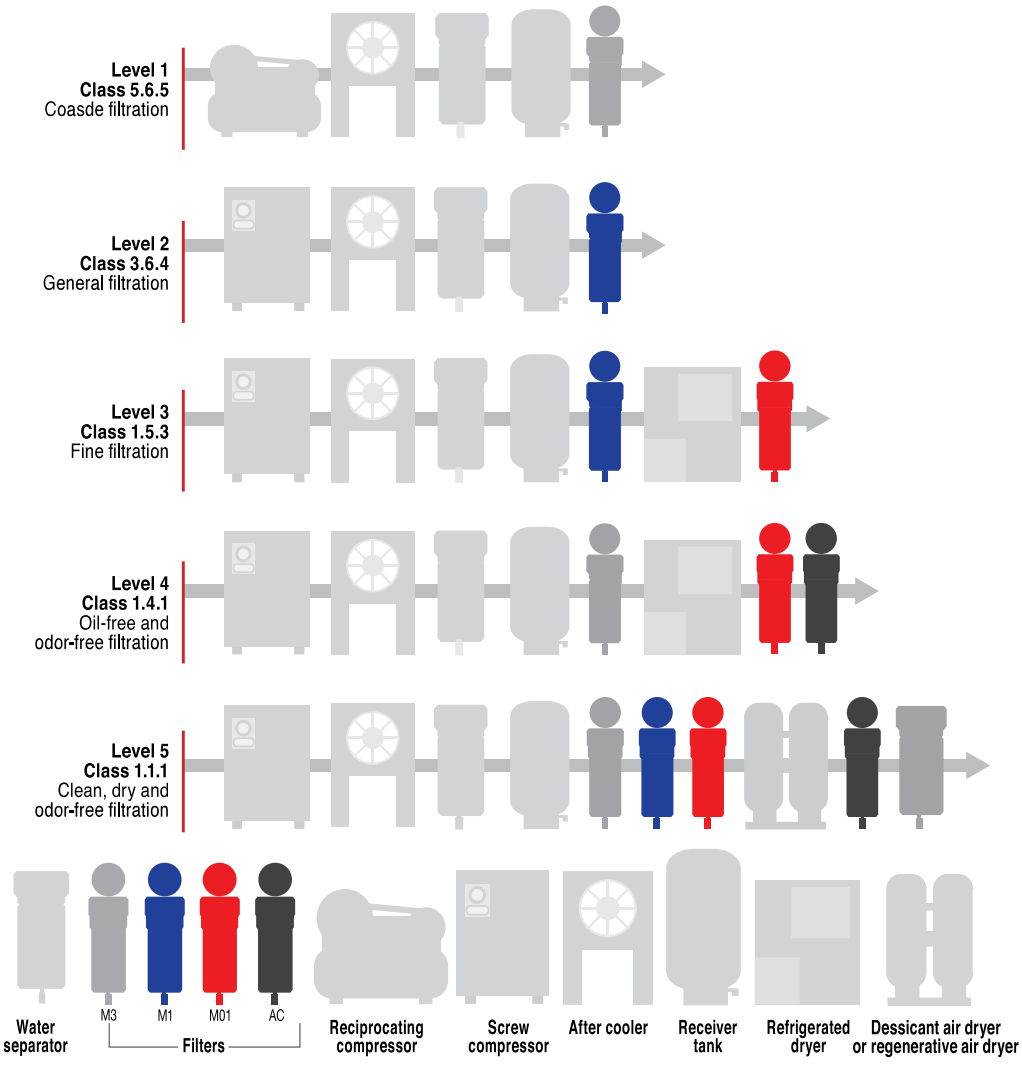
- For high performance filtration
- Particle removal down to 0.01 micron
- Maximum residual oil content (aerosol): 0.01 mg/m³ at 20 °C

Filtration AC

- Activated carbon filter for odor removed (applicable for oil lubricated compressors)
- For removal of oil content down to 0.003 mg/m³ at 20 °C in conjunction with filter grade M01

TYPICAL FILTRATION CONFIGURATION PER FILTRATION QUALITY LEVELS

Specified air quality (purity) in accordance with ISO 8573.1, standard for compressed air quality. Refrigerated dryer air treatment at 3 °C.



AIRFLO
COMPRESSED AIR FILTERS

AIRFLO filters and filtration elements meet the air quality levels required for different applications. They allow to properly remove solid particles, oil and water vapor.

CE

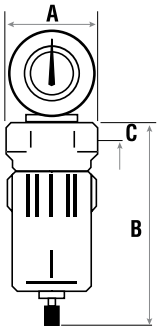
CRN CANADIAN REGISTRATION NUMBER



29 to 41 SCFM



47 to 1324 SCFM



Features and benefits

- Four different grades of filtration available
- Epoxy powder coated (exterior) for added durability and corrosion resistance
- Chromatised housing for better paint adhesion and better protection against corrosion and harsh substances
- Tie-rod insert allows easy installation and secures elements in the housing
- Differential pressure indicator included with the 1/2 to 3 NPT models
- Automatic drain included

Material

Housing: Aluminium

Specifications

Maximum Working Pressure: 232 PSI
Working Temperature: 1 to 60 °C

THREE-COLOR INDICATOR



GREEN (clean) 0-5 PSI

YELLOW (change) 6-9 PSI

RED (dirty) Over 10 PSI

PUSH-TO-CONNECT FITTING



Included for draining tube connection

Port (F) NPT	Airflow SCFM	Filtration				Dimensions (mm)		
		M3	M1	M01	AC	A	B	C
1/4	29	53.613	53.611	53.612	53.614	86	224	64
3/8	41	53.623	53.621	53.622	53.624	86	224	64
1/2*	47	53.633	53.631	53.632	53.634	86	224	84
3/4*	70	53.643	53.641	53.642	53.644	86	305	115
1*	116	53.663	53.661	53.662	53.664	130	312	115
1-1/2*	318	53.673	53.671	53.672	53.674	130	523	115
1-1/2*	470	53.683	53.681	53.682	53.684	130	784	156
2*	616	53.703	53.701	53.702	53.704	163	831	156
2-1/2 *	923	53.713	53.711	53.712	53.714	163	1082	156
3*	1324	53.723	53.721	53.722	53.724	251	1054	181

* Models with 1/2 to 3 (F) NPT port available with canadian registration number (CRN)

INSTALLATION TIP

The direction of the airflow is marked with an arrow on the surface of the filter.

For the proper functioning of the filter, it is essential to comply with this installation tip.



AIRFLO
FILTER ELEMENTS

Features and benefits

- More effective filtration area
- Higher capacity for holding dirt
- Minimizes pressure drops
- Allows a higher airflow



FILTRATION	M3	M1	M01	AC
Description	General protection	Oil removal	Dust filtration	Oil vapor and odor removal
Particle (µm)	3	1	0.01	---
Oil (mg/m³) at 20°C	---	0.1	0.01	0.003

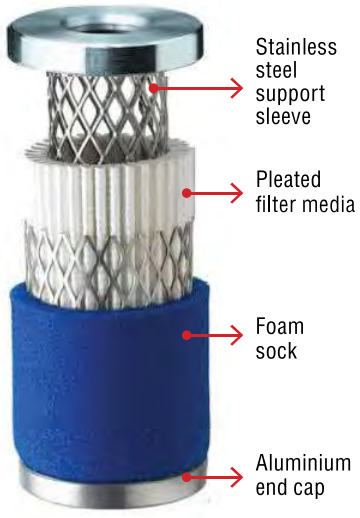
REPLACEMENT FILTER ELEMENTS

Port (F) NPT	Airflow SCFM	FILTRATION			
		M3	M1	M01	AC
1/4	29	53.813	53.811	53.812	53.814
3/8	41	53.823	53.821	53.822	53.824
1/2	47	53.833	53.831	53.832	53.834
3/4	70	53.843	53.841	53.842	53.844
1	116	53.863	53.861	53.862	53.864
1-1/2	318	53.873	53.871	53.872	53.874
1-1/2	470	53.883	53.881	53.882	53.884
2	616	53.903	53.901	53.902	53.904
2-1/2	923	53.913	53.911	53.912	53.910
3	1324	53.923	53.921	53.922	53.924

HOW IT WORKS

The pleated filter offers 3 to 5 times more filtration surface area when compared to a non pleated filter.

1. Stainless steel sleeve for stronger support
2. Hydrophobic foam socks for better drainage and coalescing effect
3. Robust and non-corrosive aluminium end caps
4. Color coded standard element for easy identification



AIRFLO
FILTER ACCESSORIES

DIFFERENTIAL PRESSURE INDICATOR

Indicates when it is time to change the filtration element.

The indicator can be installed to the filter body without de-pressurizing the system.



Product No
53.920

MAINTENANCE KIT



Product No
53.929

SWIVEL FITTINGS

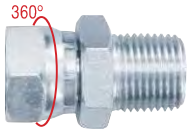
Allows quick and simple connection of multiple filter housings. Made in steel.

SWIVEL FITTING KIT



Product No	Thread (M) NPT
41.704	1/2
41.705	3/4
41.706	1
41.707	1-1/2
41.708	2
41.709	2-1/2

SWIVEL FITTING



Product No	Thread (F/M) NPT
41.772	1/4
41.773	3/8

ADAPTER FOR AIRFLO AUTOMATIC DRAIN

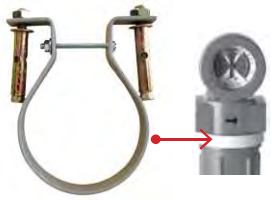
For the connection to an external drain to replace the internal drain



Product No
53.933

FILTER MOUNTING BRACKET

Mounting bracket provides additional support to filter



Product No	For models
53.900	53.611 to 53.644
53.905	53.661 to 53.684

INTERNAL AUTOMATIC DRAIN



Product No	For models
53.930	53.611 to 53.684

EXTERNAL AUTOMATIC DRAIN



Product No	For models
53.935	53.701 to 53.724

OPTIONAL:
EXTERNAL CONDENSATE DRAINS



59.465
MAXDRAIN
Mechanical automatic drain



59.250
TOPDRAIN
Zero air loss automatic drain



TOPDRY

FILTRATION QUALITY LEVELS

Filtration M5
- General purpose dust filtration
- Dry particle removal down to 5 microns

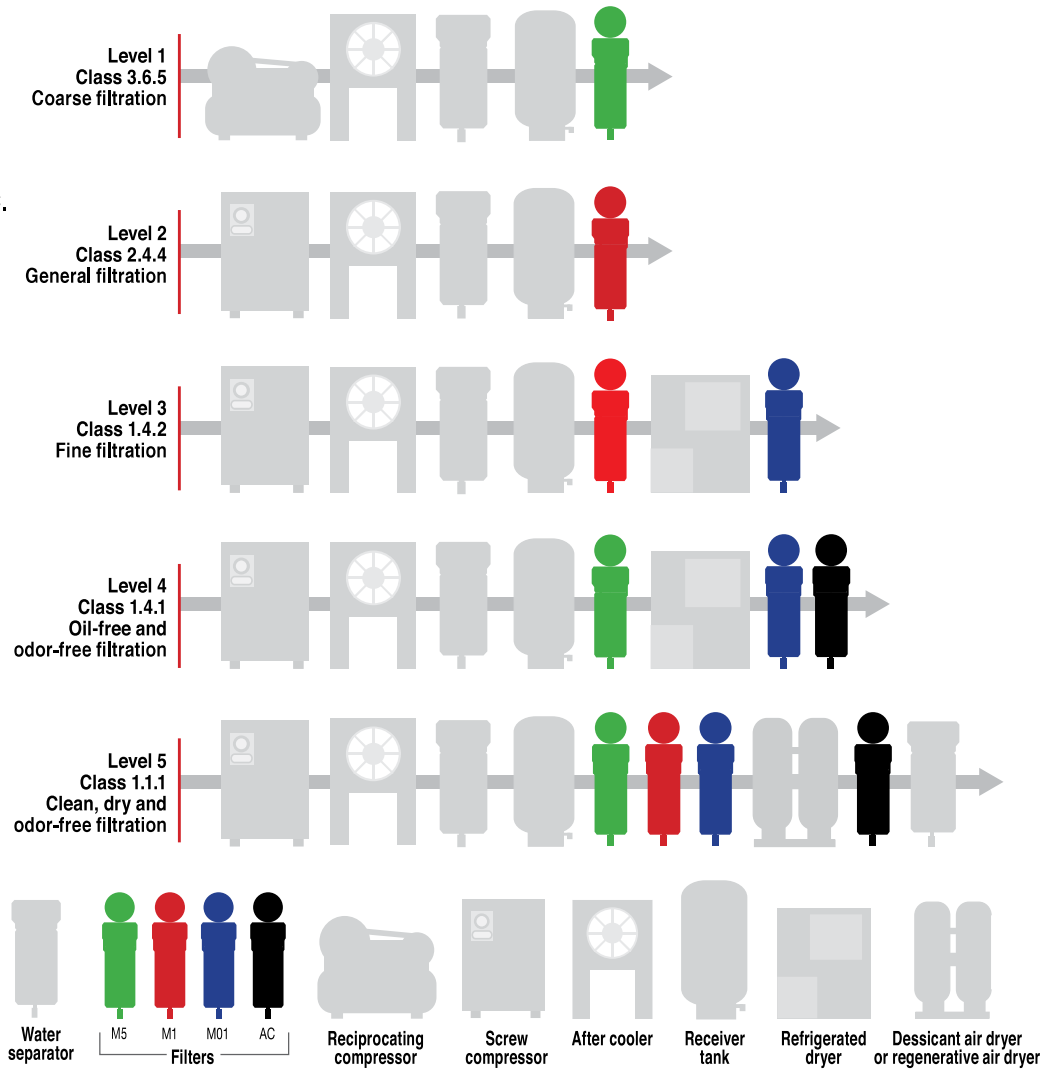
Filtration M1
- High efficiency general purpose protection
- Particle removal down to 1 micron, including water and oil aerosols
- Maximum remaining oil aerosol down to 0.1 mg/m3 to 20 °C

Filtration M01
- High efficiency oil removal filtration
- Particle removal down to 0.01 micron, including water and oil aerosols
- Maximum remaining oil aerosol down to 0.01mg/m3 to 20 °C

Filtration AC
- Activated carbon for oil vapor and odor removal
- Maximum remaining oil vapor down to 0.003mg/m3 to 20 °C in conjunction with filter grade M01

TYPICAL FILTRATION CONFIGURATION PER FILTRATION QUALITY LEVELS

Specified air quality (purity) in accordance with ISO 8573.1, standard for compressed air quality. Refrigerated dryer air treatment at 3 °C.



TOPDRY
COMPRESSED AIR FILTERS

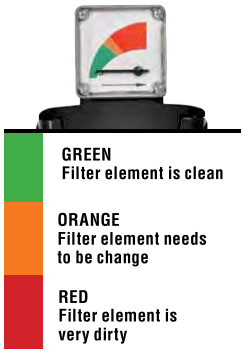
CRN CANADIAN REGISTRATION NUMBER

TOPRING offers a complete range of filters and filter elements for higher filtration performance. Oils, water vapors and solid particles must be properly removed from the air of the compressed air system. Clean, dry, oil-free compressed air is essential to optimize compressor filtration, reduce pressure losses, increase efficiency levels and reduce energy costs.



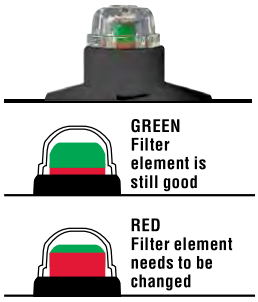
Differential pressure indicator

Indicates when it is time to change the filtration element



Pop-up indicator

Indicates when it is time to change the filtration element



Features and benefits

- Four grades of filtration available
- Reliable and efficient removal of liquid and solid contaminants
- Large condensate reservoir for bulk oil collection
- Advanced airflow design for optimum performance and reducing pressure drops
- External powder coated surface for enhanced abrasion and corrosion resistance
- Compact, modular design for quick and easy installation
- No tie-rod insert minimizing maintenance needs
- Automatic drain with manual override for testing and depressurization

Applications

Food and beverage, chemical, laboratory, medical and natural gas applications
Suitable for use with all compressor oils including mineral and synthetic oil

Material

Housing: Aluminium die cast

Specifications

Maximum Working Pressure: 232 PSI

Working Temperature:
M5/M1/M01: 1 to 100 °C / AC: 1 to 25 °C

INSTALLATION TIP

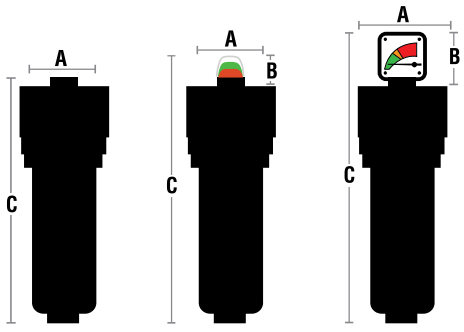
The direction of the airflow is marked with an arrow on the surface of the filter (1), the Pop-up indicator (2) or the differential pressure indicator (3).

For the proper functioning of the filter, it is essential to comply with this installation tip.



Port (F) NPT	Airflow SCFM	Filtration				Dimensions (mm)		
		M5	M1	M01	AC	A	B	C
1/4	15	53.203	53.201	53.202	53.204	50	---	151
1/4	25	---	---	53.262	---	50	40	151
1/2	30	53.208	53.206	53.207	53.209	70	40	191
1/2	50	53.213	53.211	53.212	53.214	70	40	231
1/2	70	53.218	53.216	53.217	53.219	100	70	276
3/4	85	53.223	53.221	53.222	53.224	100	70	276
1	90	---	53.266	53.267	---	100	70	276
1	135	53.228	53.226	53.227	53.229	100	70	398
1	175	53.233	53.231	53.232	53.234	100	70	398
1-1/2	290	53.238	53.236	53.237	53.239	121	70	460
1-1/2	325	53.243	53.241	53.242	53.244	121	70	460
2	450	53.248	53.246	53.247	53.249	146	70	482
2-1/2	850	53.253	53.251	53.252	53.254	210	70	595

15 SCFM and AC filtration | 25 to 50 SCFM | 70 to 850 SCFM



TOPDRY
FILTER ELEMENTS

Features and benefits

- Color coded for easy and accurate identification of filtration level
- Easily accessible for parts replacement
- Deep filter: media provides low differential pressure for better energy efficiency and extended service life
- Ultrasonic welded seam increases strength and durability
- Stainless steel support increases rigidity and corrosion resistance

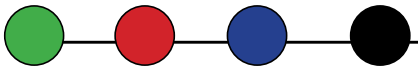
Applications

Suitable for use with all compressor oils including mineral and synthetic oil

Materials

M5/M1/M01: Borosilicate glass microfiber
AC: Activated carbon





FILTRATION	M5	M1	M01	AC
Description	Dust filtration	General protection	Oil removal and dust filtration	Oil vapor and odor removal
Particle (µm)	5	1	0.01	---
Oil (mg/m³) at 20 °C	5	0.1	0.01	0.003

Filtration level identification simplified with the color association



REPLACEMENT FILTER ELEMENTS

Port (F) NPT	Airflow SCFM	FILTRATION			
		M5	M1	M01	AC
1/4	15	53.503	53.501	53.502	53.504
1/4	25	---	---	53.505	---
1/2	30	53.508	53.506	53.507	53.509
1/2	50	53.513	53.511	53.512	53.514
1/2	70	53.518	53.516	53.517	53.519
3/4	85	53.518	53.516	53.517	53.519
1	90	---	53.516	53.517	---
1	135	53.523	53.521	53.522	53.524
1	175	53.528	53.526	53.527	53.529
1-1/2	290	53.533	53.531	53.532	53.534
1-1/2	325	53.533	53.531	53.532	53.534
2	450	53.538	53.536	53.537	53.539
2-1/2	850	53.543	53.541	53.542	53.544

TOPDRY
FILTER ACCESSORIES

WALL MOUNTING BRACKET





Product No	For filter model
53.950	53.201 to 53.204
53.951	53.206 to 53.214
53.952	53.216 to 53.234
53.953	53.236 to 53.244
53.954	53.246 to 53.249
53.955	53.251 to 53.254

FIXING BRACKET





Product No	For filter model
53.960	53.201 to 53.204
53.961	53.206 to 53.214
53.962	53.216 to 53.234
53.963	53.236 to 53.244
53.964	53.246 to 53.249
53.965	53.251 to 53.254

DIFFERENTIAL PRESSURE INDICATOR



Indicates when it is time to change the filtration element.

The indicator can be installed to the filter body without de-pressurizing the system.

Product No	For filter models
53.973	15 to 50 SCFM
53.974	70 to 850 SCFM

INTERNAL AUTOMATIC DRAIN



53.970



53.971

Product No	For filter models
53.970	15 to 50 SCFM
53.971	70 to 850 SCFM

OPTIONAL:
EXTERNAL CONDENSATE DRAINS



59.465
MAXDRAIN
Mechanical automatic drain



59.250
TOPDRAIN
Zero air loss automatic drain

