

Mainline Air Filtration

Compressed air is one of the essential power sources for many industries. Unfortunately, compressed air/gas contains a vast amount of contamination which often has detrimental effects on the various components and equipment using it.

Contaminants that cause the most problems in compressed air systems are oil and water aerosols, rust, scale, hydrocarbon vapors, and dirt particles that are ingested by the compressor. The results of this contamination in your compressed air system are product rejects, lost production time, and high maintenance and replacement costs.

Wilkerson standard, nominal 5 micron in-line filter will remove most of the solid contaminants 2 microns and larger.

Wilkerson mainline coalescing filters then remove aerosols and solid contaminants down to 0.01 micron with a maximum remaining oil content of 0.01 ppm/wt. Our filter housing and element design provide high flow capacity, low pressure drop (1.5 psid), high dirt holding capacity, and long service life (over 6,000 hours).

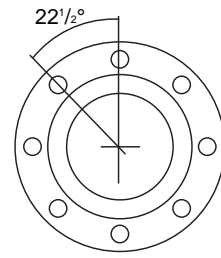
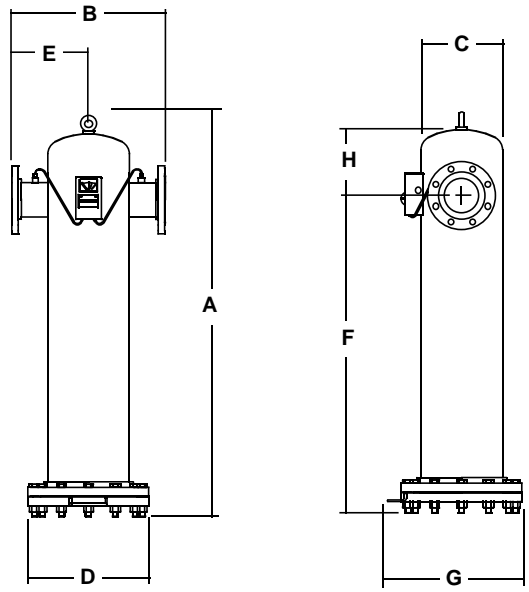
Wilkerson offers a choice of sizes, element efficiencies, and flow ranges to match your specific needs. Each model is shipped complete and ready to install. Additionally, each model comes with a differential pressure gauge to easily monitor the filter element service life.

To reduce equipment down-time and improve your productivity, specify and order a Wilkerson mainline filter today. For more details on how to protect and enhance your compressed air system while saving money, contact us at:

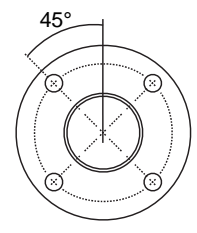


WILKERSON®

Dimensions



8 Hole
4" and 6" Flanges



4 Hole
3" Flange

Particulate Filters Models	Inches mm	A	B	C	D	E	F	G	H
Flange, 2" Port F50-0C-000		27.89 708	10.75 273	5.56 141	10.0 254	7.06 179	19.80 503	10.19 259	5.75 146
Flange, 3" Port F50-0E-000		27.89 708	14.12 359	5.56 141	10.0 254	7.06 179	19.80 503	10.19 259	5.75 146
Flange, 4" Port F50-0F-000		27.89 708	15.12 384	5.56 141	10.0 254	7.06 179	19.80 503	10.19 259	5.75 146
Flange, 2" Port F51-0C-000		39.89 1013	10.75 273	5.56 141	10.0 254	7.06 179	31.8 808	10.19 259	5.75 146
Flange, 3" Port F51-0E-000		39.89 1013	14.12 359	5.56 141	10.0 254	7.06 179	31.8 808	10.19 259	5.75 146
Flange, 4" Port F51-0F-000		39.89 1013	15.12 384	5.56 141	10.0 254	7.06 179	31.8 808	10.19 259	5.75 146
Flange, 3" Port F52-0E-000		41.1 1044	18.25 464	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 4" Port F52-0F-000		41.1 1044	20.38 518	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 6" Port F52-0H-000		41.1 1044	23.37 594	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 4" Port F53-0F-000		53.07 1348	20.38 518	10.75 273	16.0 406	10.19 259	42.01 1067	17.85 453	8.72 221.5
Flange, 6" Port F53-0H-000		53.07 1348	23.37 594	10.75 273	16.0 406	10.19 259	42.01 1067	17.85 453	8.72 221.5

Coalescing Filters

Models	A	B	C	D	E	F	G	H
Flange, 2" Port M51-0C-000	39.89 1013	10.75 273	5.56 141	10.0 254	7.06 179	31.8 808	10.19 259	5.75 146
Flange, 3" Port M51-0E-000	39.89 1013	14.12 359	5.56 141	10.0 254	7.06 179	31.8 808	10.19 259	5.75 146
Flange, 2" Port M52-0C-000	41.1 1044	15.75 400	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 3" Port M52-0E-000	41.1 1044	18.25 464	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 4" Port M52-0F-000	41.1 1044	20.38 518	10.75 273	16.0 406	10.19 259	30.0 762	17.85 453	8.72 221.5
Flange, 3" Port M53-0E-000	53.07 1348	18.25 464	10.75 273	16.0 406	10.19 259	42.01 1067	17.85 453	8.72 221.5
Flange, 4" Port M53-0F-000	53.07 1348	20.38 518	10.75 273	16.0 406	10.19 259	42.01 1067	17.85 453	8.72 221.5
Flange, 6" Port M53-0H-000	53.07 1348	23.37 594	10.75 273	16.0 406	10.19 259	42.01 1067	17.85 453	8.72 221.5
Flange, 4" Port M55-0F-000	56.6 1438	20.38 518	12.75 324	19.0 483	10.19 259	46.01 1169	20.85 530	8.22 209
Flange, 6" Port M55-0H-000	56.6 1438	23.37 594	12.75 324	19.0 483	10.19 259	46.01 1169	20.85 530	8.22 209

Lower end removable for element replacement minimum swing clearance 20.00" (508 mm). Minimum hinge to wall clearance with drain installed 10.75" (273 mm).
All mainline filters have 1/2" NPT Drain connection on bottom plate.

Mainline Filters

Particulate Filters

Part Number	Pipe Connection	Flow Capacity SCFM (dm3/s)	Weight lbs. (kg)	Replacement Element Type A
F50-0C-000	2" NPT	1400 (661)	80 (36)	FRP-95-212
F50-0E-000	3" FLG	1640 (774)	80 (36)	FRP-95-212
F50-0F-000	4" FLG	1640 (774)	80 (36)	FRP-95-212
F51-0C-000	2" NPT	1850 (873)	130 (59)	FRP-95-213
F51-0E-000	3" FLG	2100 (991)	130 (59)	FRP-95-213
F51-0F-000	4" FLG	2100 (991)	130 (59)	FRP-95-213
F52-0E-000	3" FLG	3625 (1710)	325 (147)	FRP-95-212 *
F52-0F-000	4" FLG	3625 (1710)	325 (147)	FRP-95-212 *
F52-0H-000	6" FLG	3625 (1710)	325 (147)	FRP-95-212 *
F53-0F-000	4" FLG	4150 (1959)	350 (159)	FRP-95-213 *
F53-0H-000	6" FLG	4150 (1959)	350 (159)	FRP-95-213 *

Standard Filtration 5 Micron

Flow capacity determined at 100 psig (7 bar) inlet pressure and 5 psig (0,3 bar) differential pressure.

* Requires 3 replacement elements, order 3 replacement elements for each filter. Applies to F52 and F53.

Coalescing Filters

Part Number	Pipe Connection	Flow Capacity SCFM (dm3/s)	Weight lbs. (kg)	Element Type	Replacement Element
M51-0C-S00	2" NPT	650 (307)	130 (59)	B1	MSP-95-557
M51-0C-000	2" NPT	650 (307)	130 (59)	C	MTP-95-555
M51-0C-X00	2" NPT	650 (307)	130 (59)	D	MXP-95-534
M51-0E-S00	3" FLG	650 (307)	130 (59)	B1	MSP-95-557
M51-0E-000	3" FLG	650 (307)	130 (59)	C	MTP-95-555
M51-0E-X00	3" FLG	650 (307)	130 (59)	D	MXP-95-534
M52-0C-S00	2" NPT	900 (425)	325 (147)	B1	MSP-95-556 *
M52-0C-000	2" NPT	900 (425)	325 (147)	C	MTP-95-554 *
M52-0C-X00	2" NPT	900 (425)	325 (147)	D	MXP-95-533 *
M52-0E-S00	3" FLG	1070 (505)	325 (147)	B1	MSP-95-556 *
M52-0E-000	3" FLG	1070 (505)	325 (147)	C	MTP-95-554 *
M52-0E-X00	3" FLG	1070 (505)	325 (147)	D	MXP-95-533 *
M52-0F-S00	4" FLG	1070 (505)	325 (147)	B1	MSP-95-556 *
M52-0F-000	4" FLG	1070 (505)	325 (147)	C	MTP-95-554 *
M52-0F-X00	4" FLG	1070 (505)	325 (147)	D	MXP-95-533 *
M53-0E-S00	3" FLG	2000 (944)	350 (159)	B1	MSP-95-557 *
M53-0E-000	3" FLG	2000 (944)	350 (159)	C	MTP-95-555 *
M53-0E-X00	3" FLG	2000 (944)	350 (159)	D	MXP-95-534 *
M53-0F-S00	4" FLG	2000 (944)	350 (159)	B1	MSP-95-557 *
M53-0F-000	4" FLG	2000 (944)	350 (159)	C	MTP-95-555 *
M53-0F-X00	4" FLG	2000 (944)	350 (159)	D	MXP-95-534 *
M53-0H-S00	6" FLG	2000 (944)	350 (159)	B1	MSP-95-557 *
M53-0H-000	6" FLG	2000 (944)	350 (159)	C	MTP-95-555 *
M53-0H-X00	6" FLG	2000 (944)	350 (159)	D	MXP-95-534 *
M55-0F-S00	4" FLG	3200 (1510)	375 (170)	B1	MSP-95-557 **
M55-0F-000	4" FLG	3200 (1510)	375 (170)	C	MTP-95-555 **
M55-0F-X00	4" FLG	3200 (1510)	375 (170)	D	MXP-95-534 **
M55-0H-S00	6" FLG	3200 (1510)	375 (170)	B1	MSP-95-557 **
M55-0H-000	6" FLG	3200 (1510)	375 (170)	C	MTP-95-555 **
M55-0H-X00	6" FLG	3200 (1510)	375 (170)	D	MXP-95-534 **

Flow capacity – Rated at 100 psig (7 bar). See Operating Conditions/Technical Data for ΔP.

* Requires 3 replacement elements, order 3 replacement elements for each filter. Applies to M52 and M53.

** Requires 6 replacement elements, order 6 replacement elements for each filter. Applies to M55.

Filter Types

All Wilkerson filters and filter elements are suitable for use in either compressed air or nitrogen applications.

Type A General Purpose Particulate Filter

Specifications— Particle removal down to 5.0 microns. Separation of liquid water and aerosols > 95% at rated flows. Separation of bulk liquid only.

Purpose— For removal of solid contaminants and bulk liquids. The Type A can be used alone as a general purpose filter or as a pre-filter for Types B, B1 and C elements to extend their service life.

Type B1 Prime Efficiency Coalescer

Specifications— Oil aerosol and particle removal down to 1.0 micron. Maximum downstream remaining oil content 0.5 ppm/wt*. Retention on DOP test > 99.97%.*1

Purpose— For removal of aerosols and solid particles. Can be used alone as a coalescing filter or as a pre-filter to the Type C elements to extend their service life. Usage proves most economical when preceded by a Type A filter.

Type C Extremely High Efficiency Coalescer

Specifications— Oil aerosol and particle removal down to 0.01 micron. Maximum downstream remaining oil content 0.01 ppm/wt*. Retention on DOP*1 and Sodium Flame Test*2 > 99.9999% (limit of measurability).

Purpose— For removal of extremely fine oil mists, oil aerosols and microscopic particles. The Type C is extremely efficient in the coalescing of remaining oil mists and oil aerosols as well as the retention of solid particles. It is recommended the Type C filter be installed downstream of a Type A and/or Type B or B1. This is very cost effective as it prevents buildup of solid contaminants of the Type C element and extends service life. The Type C element should always be installed upstream of a Type D filter element to prevent liquid oil and solid particles from contaminating the Type D element.

Type D Critical Application Adsorption Filter

Specifications— Activated carbon element for removal of oil vapor and associated odors whether petroleum or synthetic base. Maximum downstream remaining oil content 0.003 ppm/wt.*

Purpose— For elimination of oil vapor, oil associated odors whether petroleum or synthetic base. Type D elements utilize selected grades of activated carbon and rely on adsorption to remove oil associated vapor and odors. The Type D filter should be used as the final filter for critical applications. It should always have a Type C filter element installed upstream to remove oil aerosols and solid particles.

Note: The Type D element will not remove carbon dioxide, carbon monoxide, ethane, methane or other toxic gases.

* Filtration temperature of 70°F (21°C) at 100 psig (7 bar g) with typical compressor lubricating.

*1 Dioctyl phthalate (DOP) particles 0.1 to 0.3 micron. Based on U.S. Federal Standard 209B.

*2 Sodium Flame Test using particles with a mean diameter of 0.65 micron based on British Standards Institute BS3928.

Materials of Construction

Description	Particulate Filters	Coalescing Filters
Body	Steel	Steel
Bowl	Steel	Steel
Deflector	Steel	Steel
Element Retainer	Steel Stud	Steel
Baffle	Steel	N/A
Filter Element	Fiber	Type B, C Borosilicate Cloth Type D Activated Carbon
Seals	Fluorocarbon Flange Gasket	Fluorocarbon

Note: Manufactured to ASME Unfired Pressure Code, Section VIII specifications. Certificate of Compliance will be furnished as standard.

Operating Conditions/Technical Data

Maximum Operating Pressure	200 psig (13.8 bar)
Maximum Operating Temperature	200° F (93.3°C)
Maximum Recommended Operating Temperature	
Type D	86° F (30°C)
Type B and C	130° F (55°C)
Minimum Recommended Operating Temperature	
For above units	35° F (1.5°C)
Initial Pressure Differential (Dry) at 100 PSIG (7 bar)	
Type B	1.5–2.0 psi (~100 to ~140 m bar)
Type B1	1.0–1.5 psi (~70 to ~100 m bar)
Type C	1.25–1.5 psi (~85 to ~100 m bar)
Type D	1.0–1.5 psi (~70 to ~100 m bar)
Operating Pressure Differential when in wetted condition, 100 PSIG (7 bar)	
Type B	2.5–3.0 psi (~172 to ~206 m bar)
Type B1	2.0–2.5 psi (~137 to ~172 m bar)
Type C	2.25–2.5 psi (~155 to ~172 m bar)
Type D	4.0–4.5 psi (~275 to ~310 m bar)
Maximum Recommended Pressure Differential for element change	
Types B, B1 and C elements	10 psi (~680 m bar)

WILKERSON
CORPORATION

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9CW-UK-210 • 11/94 • Printed in the U.S.A.



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