

LOW PRESSURE MACHINE TOOL COOLANT APPLICATIONS

Filter: Coolant Filter Selection Guide

Rosedale Products has installed a wide variety of filtration systems throughout the metalworking and manufacturing industries. Our industrial filters prevent metal chips, fines, and other debris from contaminating cutting oils and coolants. Pre-selected systems include the housing, appropriate seals and a filter bag.

GENERAL REQUIREMENTS & MEASUREMENTS

There are important factors in specifying the level of coolant cleanliness that will improve the surface finish and extend tool life. Variables that affect coolants include: full or partial filtration, single pass or re-circulating flow, dirt loading, pressure drop through all components of the filter systems, coolant temperature, flow rate, system pressure, and the presence of tramp oil.

TYPICAL APPLICATIONS

Our schematics illustrate how Rosedale filters can be easily installed in any coolant circuit. They can be used in all metalworking machines, including milling, boring, broaching, grinding, drilling, turning, and more.

Rosedale offers a wide range of filters, including oil-adsorbing, high temperature, high-capacity bags, high-efficiency liquid filter bags and Beta Bag® filter bags. The term Beta Ratio or Beta Rating refers to the reduction ratio of the number of particles upstream to the number of particles downstream, in a given particle size. For example, if there are 100 five micron particles upstream and 50 five micron particles downstream of the filter bag, then the Beta Rating for this filter in the five micron size is 100/50, or 2; a reduction ratio of 2:1. In other words, the filter bag is said to have a Beta 5 of 2. The efficiency is 50% in the five micron range.



Recommended Clarity Levels of Filtered Coolant Filtered coolant shall meet or exceed the following average clarity levels.	Average Particle Size	Concentration: PPM
Ultra Fine: Honing, micro-sizing, lapping, and polishing	Larger than 8 microns Between 1 to 8 microns	Less than 10 microns 5 PPM to 10 PPM 25 PPM to 50 PPM
Very Fine: Grinding, gun-drilling, gun-reaming (with tool diameters of 0.125 inch or less)	Larger than 8 microns Between 1 to 8 microns	Less than 15 microns 10 PPM to 15 PPM 50 PPM to 100 PPM
Fine: Tapping, milling, lathe, hobbing, drilling, boring, general machining	Larger than 8 microns Between 1 to 8 microns	Less than 20 microns 15 PPM to 30 PPM 100 PPM to 200 PPM

SINGLE BAG FILTERS

Filter: Model 4 Coolant Filter – For Flows to 5 GPM

Flows can be higher. These flows are selected to optimize dirt holding capacity.

These rugged and reliable bag filters are tailored to high-capacity applications yet are relatively low in cost, making these durable filtration devices one of the best values on the market. Choose from the pre-selected ordering codes listed on the next page for filter flows to 5 GPM with a 200 PSI rated housing.





Model 4 Coolant Filter

CONFIGURE YOUR PART NUMBER (EXAMPLE: LCO4-12-1P-2-200-C-B-N-PB)

MODEL	HOUSING SIZE	PIPE SIZE	OUTLET STYLE	PRESSURE RATING	HOUSING MATERIAL	COVER GASKET	BASKET SEAL	BASKET TYPE
LCO4	12	1P 1" Female NPT	2 Side Outlet	200 200 PSI	C Carbon Steel	B Buna N	N No Seal	PB Filter Bag Basket, 9/64 perforations

CONFIGURE YOUR PART NUMBER (EXAMPLE: PE-5-P4S)

MODEL 4 SUGGESTED BAG				
FIBER RATING	MICRON RATING	BAG FINISH	BAG SIZE & DIMENSIONS	BAG STYLE
PE Polyester Felt	5, 25 General Use	P Plain Finish	4 4-1/8 x 14	S Carbon Steel Plated Ring
	BB-12 Fine			
	BB-10 Very Fine			
	BB-1 Ultra Fine			

Technical Specifications	
Bag Size:	Any Standard Size 4 Bag
Drain Connection:	1" NPT
Piping Connection:	1" NPT
Construction Material:	Carbon Steel
Pressure Rating:	200 psi
Weight:	20 lbs
Surface Area:	1 Ft ²

SINGLE BAG FILTERS

Filter: Model 8 Coolant Filter – For Flows to 25 GPM

Flows can be higher. These flows are selected to optimize dirt holding capacity.

These rugged and reliable bag filters are tailored to high-capacity applications yet are relatively low in cost, making these durable filtration devices one of the best values on the market. Choose from the pre-selected ordering codes listed below for filter flows to 25 GPM with a 125 PSI rated housing.


CONFIGURE YOUR PART NUMBER (EXAMPLE: LCO8-30-2P-*-125-C-B-PB)

MODEL	HOUSING SIZE	PIPE SIZE	OUTLET STYLE	PRESSURE RATING	HOUSING MATERIAL	COVER SEAL	BASKET TYPE
LCO8	30	2P 2" Female NPT	* Side/Bottom Uni-style	125 125 psi	C Carbon Steel	B Buna N	PB Filter Bag Basket

CONFIGURE YOUR PART NUMBER (EXAMPLE: PE-5-P12S)

MODEL 8 SUGGESTED BAG				
FIBER RATING	MICRON RATING	BAG FINISH	BAG SIZE & DIMENSIONS	BAG STYLE
PE Polyester Felt	5, 25 General Use	P Plain Finish	12 8-3/8 x 32	S Carbon Steel Plated Ring

Filter: Portable Filter Cart for Coolants and Metalworking Fluids

This versatile portable filter cart (PFC), is easily movable from machine to machine, holding tank to reservoir, or drum to tank. These two wheel hand truck systems provide a means for pre-filtering and transferring fluids. They are most effective controlling particulate problems before they cause damage to critical production equipment. Rosedale's PFCs' high-flow, industrial quality centrifugal pumps transfer fluids quickly and economically.

APPLICATIONS

With a ½ horsepower motor and bag filter housing, this two wheel portable filter system can be used with coolants and other fluids with viscosities of 300 ssu or less that are compatible with aluminum and steel. Most new fluids are unfit for use in hydraulic and lube systems. Contamination enters the fluid during processing, mixing, handling and storage. Solid particulate may be present in unacceptable levels. Portable filter carts are the ideal means of pre-filtering and transferring these fluids.



CONFIGURE YOUR PART NUMBER (EXAMPLE: PFC8-30-1P-125-C-B-PB)

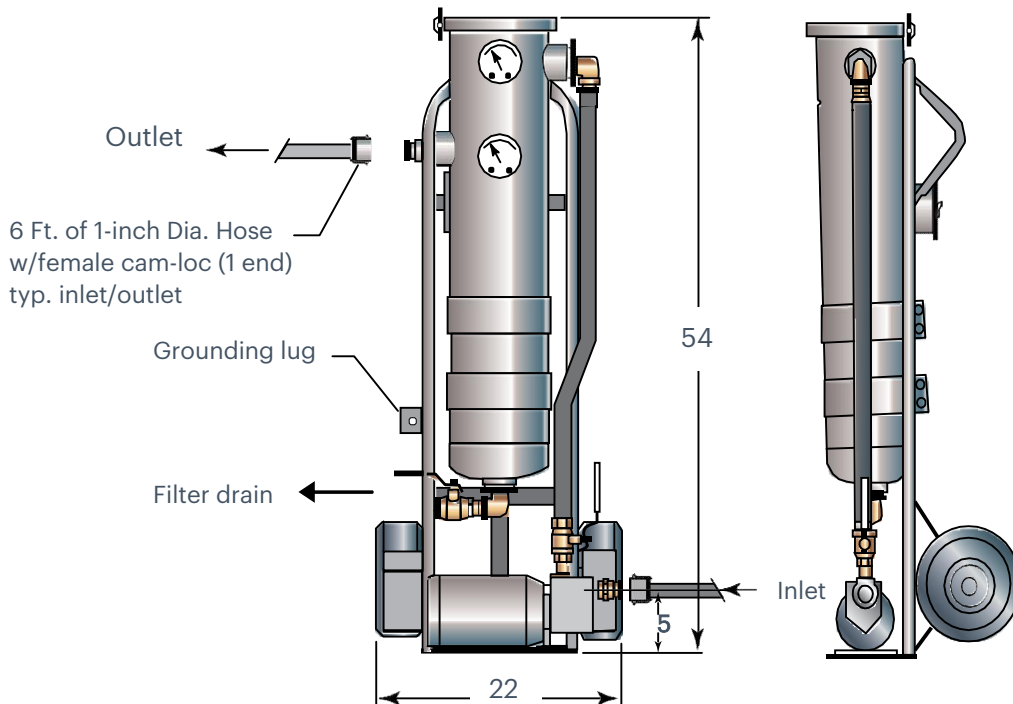
MODEL	HOUSING SIZE	PIPE SIZE	PRESSURE RATING	HOUSING MATERIAL	COVER SEAL	BASKET TYPE
PFC8	30 30 Inch	1P 1" Female NPT	125 125 psi	C Carbon Steel	B Buna N	PB Filter Bag Basket

CONFIGURE YOUR PART NUMBER (EXAMPLE: PE-5-P12S)

MODEL 8 SUGGESTED BAG				
FIBER RATING	MICRON RATING	BAG FINISH	BAG SIZE & DIMENSIONS	BAG STYLE
PE Polyester Felt	5, 25 General Use	P Plain Finish	12 8-3/8 x 32	S Carbon Steel Plated Ring
	BB-12 Fine			
	BB-10 Very Fine			
	BB-1 Ultra Fine			

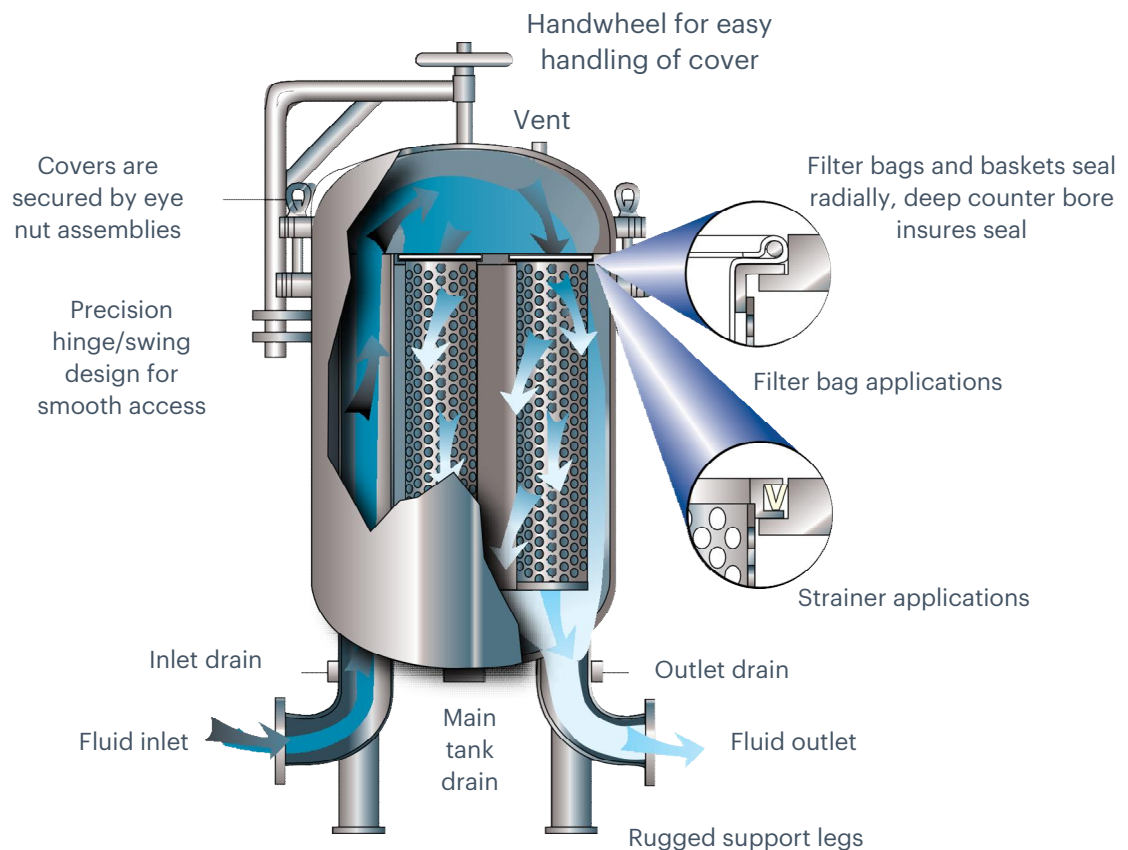
1" Self-Priming Centrifugal Pump Specs						
GPH of Water at Total Feet of Head*					Max. Head	
10ft.	20ft.	30ft.	40ft.	50ft.	Ft.	PSI
2280	1920	1440	900	360	57	25

*Flow rate based on 1" pipe: flow rate and pressure will decrease with smaller pipe and/or base.



Filter: Multi-Bag Filters

These multi-bag filters offer the widest range of flow capacities and contaminant holding capabilities. With anywhere from 2-23 perforated stainless-steel baskets specially fitted to hold disposable or cleanable filter bags, these high-capacity multi-bag filtration devices are extremely versatile. Bag sizes meet industry-wide standards; conventional 30-inch baskets take bag size 2 while optional 15-inch baskets take bag size 1. The standard pressure rating for all models is 150 PSI and all housing units can be supplied with an ASME code stamp, if required. Choose from the pre-selected ordering codes listed on the next page.





Model Selection (30-inch deep baskets)				
Model No. (& diameter in inches)	Number of Baskets	Straining, Filtering Area (ft ²)	Standard Pipe Sizes Avail. (in.)	Suggested Flow Rate ³ (gpm)
16	2	8.8	2	50
18	3	13.2	2	75
22	4	17.6	2,3	100
24	6	26.4	3	150
30	8	35.2	4	200
36	12	52.8	4	300
42	17	74.8	6	425
48	23	101.2	6	575

CONFIGURE YOUR PART NUMBER (EXAMPLE: 24-30-4F-1-150-C-B-N-PB)

MODEL	BASKET DEPTH	PIPE SIZE	OUTLET STYLE	PRESSURE RATING	HOUSING MATERIAL	COVER SEAL	BASKET SEAL	BASKET TYPE
See above	30 30 inch (std.)	2F 2 in. (models 16, 18)	1 In-line, Bottom (std.)	150 150 PSI	C Carbon Steel	B Buna N	N No Seal	PB Filter Bag Basket
		3F 3 in. (models 16, 18, 22, 24)						
		4F 4 in. (models 16, 18, 22, 24, 30)						
		6F 6 in. (models 22, 24, 30, 36)						
		8F 8 in. (models 30, 36, 42, 48)						
		10F 10 in. (models 36, 42, 48)						
		12F 12 in. (models 42, 48)						