

EFFECTIVE MACHINE TOOL COOLANT CLARIFICATION WITH LIQUID VACUUM FILTER

In various metal working operations, water-soluble coolants and oil is used to remove heat and swarf from the tool and workpiece. Over time, the coolant becomes contaminated resulting in reduced product quality and tool life and frequent coolant changes.

The Filtertech Liquid Vacuum Filter Model LVF provides effective solids removal through media filtration which is vacuum assisted to minimize media usage and improve filtrate clarity. The filter comes equipped with its own clean and dirty reservoir tanks which minimize floor space requirements.



Model LVF4-800 Liquid Vacuum Filter



Optional Bubbler System for Continuous Level Control

EQUIPMENT FEATURES

Standard

- Heavy-duty hot rolled steel construction.
- Automatic vacuum/time interval switch.
- Self-cleaning heavy-duty chain and sludge conveyor.
- Shear pin protected conveyor drive motor.
- Deep operating liquid level (High static head).
- Specially-designed vacuum chamber minimizes solids build-up.
- Side inlet connection for shallow invert applications.
- End-of-media sensor.
- Inspection hatch and removable covers.
- 460V/3Ø/60Hz prewired control panel.
- Protective paint coating with primer and machinery enamel finish coat.
- Roll of disposable filter media.

Optional

- COR-TEN® steel wetted surfaces.
- Stainless steel wetted surfaces.
- Stainless steel conveyor components.
- Epoxy coated wetted surfaces.
- Various pump styles.
- Wedge-wire platen.

TYPICAL APPLICATIONS

Machining • Grinding • Honing • Drilling

Reaming • Deep Hole Drilling • Broaching

Cast Iron • Steel • Aluminum • Die Cast

Ferrous and Non-Ferrous Materials

FILTERTECH

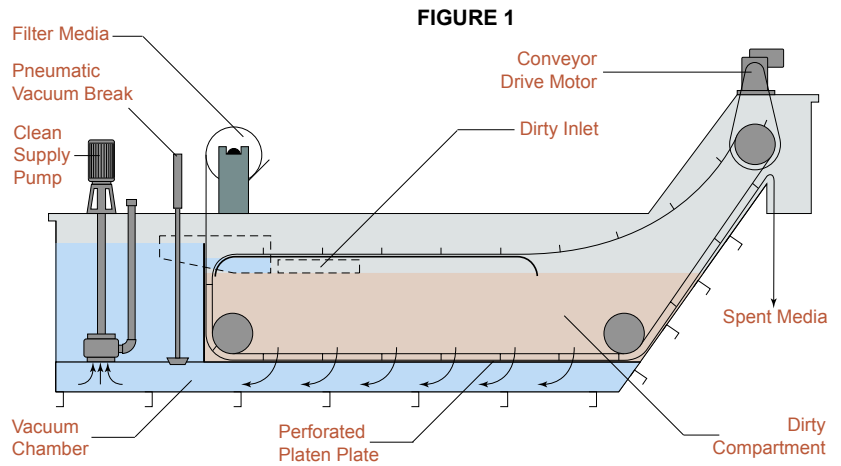
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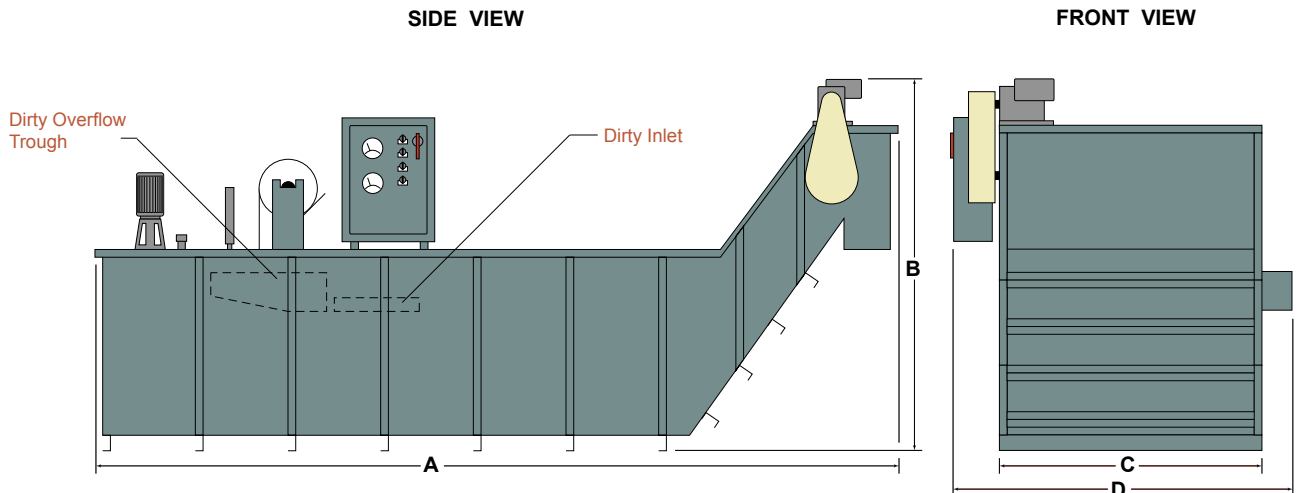
MODE OF OPERATION

Dirty liquid enters the filter through the side inlet header and is discharged into the dirty compartment. The dirty compartment is separated from the vacuum chamber located below by a filter media barrier through which clean liquid must pass while the solids are retained by the media (see figure 1). Solids accumulate on the media surface forming a filter “cake” which further improves filtrate clarity by removing finer particulates than would be removed by the media alone.

To promote thicker “cake” formation, an increased pressure differential is created across the filter media by the clean supply pump which takes suction from the vacuum chamber. As the solids accumulate on the surface of the media, the vacuum created in the chamber below increases. When sufficient vacuum has been created, an indexing cycle is initiated in which the vacuum is released by a pneumatic vacuum break allowing the liquid in the clean tank to be fed into the vacuum chamber during media



indexing to ensure uninterrupted flow to the work. The spent media and accumulated solids are removed by the automatic drag chain conveyor and discharged into a collection receptacle for disposal. When indexing is complete, the pneumatic vacuum break is closed, and the clean tank is refilled from a side stream of the clean supply line with the excess liquid draining by gravity back to the dirty compartment.



SPECIFICATIONS

Model †	Dimensions ft-in (cm)				Drive Hp	Est. Weight lbs. (kgs.)	
	A	B	C	D		Dry	Wet
LVF2-200	13'-5" (409)	6'-5" (196)	3'-2" (97)	3'-10" (117)	½	4,560 (2,068)	8,400 (3,810)
LVF2-400	15'-11" (485)	6'-5" (196)	3'-2" (97)	3'-10" (117)	½	5,130 (2,327)	11,000 (4,989)
LVF2-600	18'-5" (561)	6'-5" (196)	3'-2" (97)	3'-10" (117)	½	5,700 (2,585)	13,300 (6,032)
LVF3-300	13'-5" (409)	6'-5" (196)	4'-2" (127)	4'-10" (147)	½	6,080 (2,757)	11,200 (5,079)
LVF3-600	15'-11" (485)	6'-5" (196)	4'-2" (127)	4'-10" (147)	½	6,840 (3,102)	14,600 (6,621)
LVF3-900	18'-5" (561)	6'-5" (196)	4'-2" (127)	4'-10" (147)	½	7,600 (3,447)	18,000 (8,163)
LVF4-800	15'-11" (485)	6'-5" (196)	5'-2" (157)	5'-10" (178)	½	8,550 (3,878)	18,285 (8,293)
LVF4-1200	18'-5" (561)	6'-5" (196)	5'-2" (157)	5'-10" (178)	½	9,500 (4,308)	22,600 (10,249)
LVF4-1600	20'-11" (638)	6'-5" (196)	5'-2" (157)	5'-10" (178)	½	10,450 (4,739)	25,500 (11,565)
LVF6-1200	15'-11" (485)	6'-5" (196)	7'-2" (218)	7'-10" (239)	½	10,260 (4,653)	22,000 (9,977)
LVF6-1800	18'-5" (561)	6'-5" (196)	7'-2" (218)	7'-10" (239)	½	11,400 (5,170)	27,120 (12,299)
LVF6-2400	20'-11" (638)	6'-5" (196)	7'-2" (218)	7'-10" (239)	½	12,540 (5,687)	30,600 (13,878)

† Other filters are available on a custom basis.

Specifications subject to change without notice.

LIQUID VACUUM FILTER (LVF)