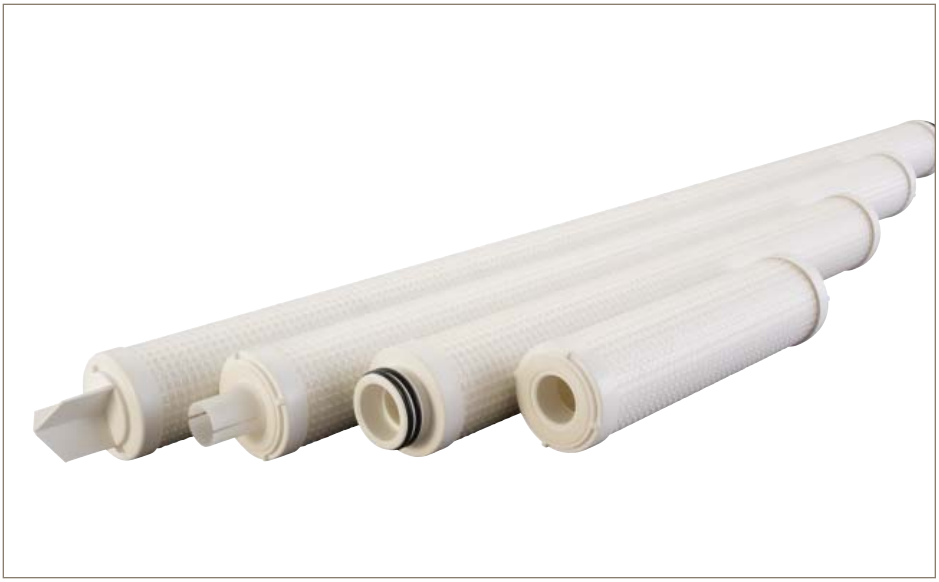
Fulflo® TruBind™ 400 Filter Cartridge

Effective & economical hydrocarbon removal with enhanced polymeric absorbent cartridges

Parker Fulflo® TruBind™ absorbent cartridges utilize a modified polymeric absorbent that economically and effectively reduces trace hydrocarbon contamination in aqueous fluids. The enhanced polymer, configured in a radial-flow-design cartridge, provides maximum utilization of available surface area. This product can be used alone or as an enhancement to other systems. Whether process fluid reclamation or meeting disposal requirements is the goal, TruBind™ can solve many demanding hydrocarbon-contaminated aqueous fluid problems.



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Benefits

- Increases machine tool life when installed at point-of-use
- Increases working life of valuable process fluids
- Reduces hydrocarbon levels to meet EPA discharge regulations
- Absorbed hydrocarbon is chemically bound by polymer and is not leachable
- Absorbent polymer is enhanced to maximize utilization of surface area
- Radial flow design of cartridge allows maximum flow with minimal pressure drop
- High integrity construction withstands harsh process environment
- TruBind cartridges are completely incinerable
- ISO 9001 registered company

Applications

- Water Soluble Machine Tool Coolants
- Alkaline Parts Washing
- Industrial Discharge
- Car & Truck Wash Water
- Gas & Oil Facility Wastewater
- Tanker Ballast Water
- Bilge Water
- Surface Water Runoff
- Produced Water Disposal (Truck stops, airports, auto service stations)
- Pre Carbon Bed
- Post Oil/Water Separator
- E-Coat Paint
- Compressor Condensate
- Pre R.O. Membrane Water
- Plating Bath
- Aerosol Mists

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SPECIFICATIONS

Materials of Construction:

Absorbent: Proprietary polymer
Support Construction: 100% polyolefin
Seal Material: Polyethylene Foam

Cartridge Dimensions (nominal)

Lengths:
9 13/16 in (249mm)
19 15/16 in (506mm)
Outside Diameter:
4 ½ in (114 mm)
Inside Diameter:
1 1/16 in (27 mm)

Maximum Recommended Operating Conditions:

Temperature:
150°F (65°C) @20psid (1.4bar);
180°F (82°C) @10psid (0.7bar)
Pressure:
40psid (2.8bar) @ 75°F (24°C)
Flow Rate:
3.0gpm per 10-inch cartridge
Change-out Pressure Drop (net):
10psi (0.7bar)
Flow Factor:
0.1psid per 1gpm at 1cks viscosity per 10 in cartridge
pH Range: 2 - 12

Bio-safety:

The TruBind cartridge is classified as non-hazardous and incinerable. Disposal must be dictated by local regulations pertaining to the absorbed contaminant.

Recommended Vessels:

Parker LTG10 and LTG20 polymeric vessels and equivalent competitive vessels.

Technology

Unlike competitive technologies in which hydrocarbons are removed through surface adsorption onto the medium, TruBind cartridges utilize a proprietary modified polymer that both absorbs and chemically binds the hydrocarbon molecules into its interior matrices. The affinity of the polymeric absorbent for hydrocarbon contaminant is so great that accelerated testing by the Toxic Characteristics Leachate Procedure (TCLP) indicated the effluent hydrocarbon level in water to be below current and proposed EPA limits. The modified polymer was formulated to control the speed of hydrocarbon absorption by eliminating the potential for skin formation at the polymer/hydrocarbon interface. Consequently this polymer, when incorporated into a radial-flow-design cartridge, insures maximum utilization of surface area. The nature of the polymer makes it an effective absorbent for free, emulsified and dissolved oils, synthetic lubricants, grease and a multitude of organic solvents.

Performance

TruBind absorbent cartridge efficiency depends upon the residence time of the fluid within the cartridge, which is a function of the volumetric flow rate.

1. Hydrocarbon Removal Efficiency: At an equivalent flow rate of 3.0gpm per 10-inch cartridge the TruBind cartridge typically reduces trace hydrocarbon contaminant in excess of 95% in single pass mode. This efficiency level can be maintained only to a net differential pressure of 10psi. Series or multipass filtration can virtually eliminate hydrocarbon contamination.
2. Hydrocarbon Absorbent Capacity: The TruBind cartridge medium has the potential to remove up to 500 grams (approximately one pint) of low density hydrocarbon contaminant. On this basis, the table below provides expected life data in hours orgallons at several trace contaminant levels based on a 3.0gpm flow rate per 10-inch cartridge. Absorbent capacity will decrease as density of hydrocarbon increases.
3. Flow Rate Capability: A maximum flow rate of 3.0gpm per 10-inch length cartridge is recommended for the most effective removal of trace hydrocarbon contaminant.

Use the following equations to calculate performance:
Life (Hrs.) = 800/PPM
Removal Rate (Grams/Min) = PPM/90

Hydrocarbon (ppm)	Concentration % by weight	Hydrocarbon removal per minute (grams)	Estimated life in hours	Gallons fluid treated	Estimated cost per gallon of treated fluid
10	.001	0.11	80.0	14, 400	$.002
100	.01	1.10	8.0	1,400	$.025
1,000	.1	11.00	0.8	144	$.24

Note: Cost per gallon decreases significantly with longer cartridges.

Ordering Information

TBC [ ] [ ] [ ] – [ ] – [ ]

Cartridge Series
TruBind Absorbent Cartridge

Outside Diameter		
Code	Inches	mm
4	4 ½	114

Cartridge Length		
Code	Inches	mm
10	9 13/16	249
20	19 15/16	506

Support Core	
Code	End cap Material
A	Standard Wall Polypropylene Core

End Cap Configuration	
Code	Description
DO	Double open end (gasket seal)

Seal Material	
Code	Description
A	Polyolefin foam gasket (Std. for DO seal design)