

## Performance Data

### Loading Capacity

Product Number	522	525	527	529
Dirt – Grams at 25 gpm (5.6 cu m/hr)	308	489	755	980
Dirt – Grams at 50 gpm (11.2 cu m/hr)	215	430	645	925
Oil – Grams at saturation**	4725	5025	6675	3595

\*\*mineral oil

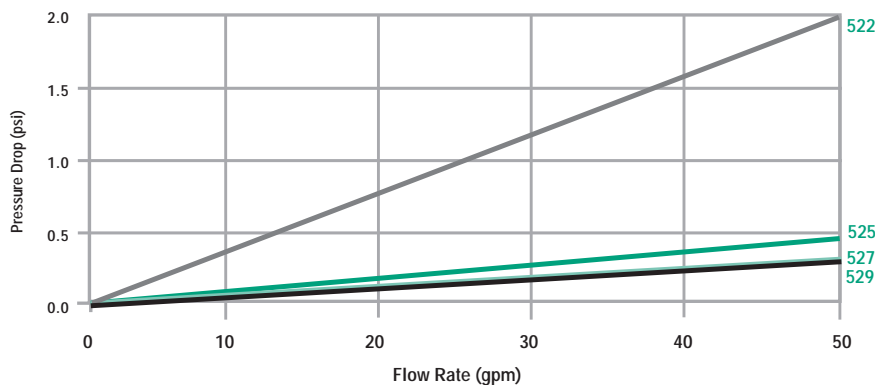
**Loading:** Loading capacity is extremely high due to the large amount of surface area available. The data above shows typical loading capacities of the different micron rated filters. Loading capacity is determined by challenging a filter with a dispersion of silica test dust in water at the recommended flow rate. Pressure drop is monitored and testing is terminated at 35 psid (2.4 bar). The loading capacity reported is the dry weight gain of the bag.

### Particle Removal Efficiency

Product Number	522	525	527	529
Efficiency @99%	2.5	5.0	15	48
Efficiency @95%	1.5	3.0	9	35
Efficiency @90%	0.9	1.5	8	30
Efficiency @75%	<0.7	1.0	7	22
Efficiency @50%	<0.7	<1.0	4	8

**Efficiency:** The 3M™ High Performance Filter Bags are rated using a silica test challenge in water at 25 gpm (5.7 cu m/hr). The results reported are typical initial efficiencies taken within ten minutes of the start of the test and are cumulative data. For more information on how 3M conducts its filter efficiency testing, please see “Defining Filter Efficiency”, a 3M Technical Report available from your local distributor.

### Clean Pressure Drop Versus Flow Rate (psid)



**Pressure Drop:** The 3M High Flow Filter Cartridges have low initial pressure drop ( $\Delta p$ ) in water as the chart indicates. The chart does include the pressure drop of a typical single vessel to assist you in sizing your filter system.

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### Filtration Products

3M Center, Building 60-1S-16  
St. Paul, MN 55144-1000  
800-648-3550



85% Pre-consumer waste paper  
15% Post-consumer waste paper

## Product Specifications

### Micron Ratings:

Product Number	Initial Efficiency
522	2.5 micron @ 99%
525	5.0 micron @ 99%
527	15 micron @ 99%
529	48 micron @ 99%

### Dimensions (Nominal):

#### Outer Diameter:

7 inches 17.8 cm

#### Length:

32 inches (#2 size) 81 cm

### A & D Sealing Ring:

Available in “A” ring and “D” ring sizes. Check with your local distributor for proper size to fit your vessel.

### Operating Conditions:

#### Maximum Operating Temperature:

180F 82C

#### Recommended Flow:

(for normal loading in water)

25 gpm 5.7 cu m/hr

#### Suggested Maximum Flow: (in water)

50 gpm 11 cu m/hr

#### Suggested Maximum Differential Pressure:

35 psid 2.4 bar

### Order Information

To order contact your local 3M Filtration Products distributor or call toll free 1-800-648-3550.



# High Performance Liquid Filter Bag Series 500

## Technical Data



### Features, Advantages and Benefits

The 3M™ Series 500 High Performance Liquid Filter Bag which incorporates the patented bypass and transport layer design that maximizes the amount of surface area in each bag. The result is a unique filter designed to improve performance and reduce operating costs. The 3M filter contains up to 38 ft<sup>2</sup> of usable filter media. Compare this with only 4.4 ft<sup>2</sup> for most competitive filter bags and 0.65 ft<sup>2</sup> for most competitive cartridges.

To make use of this entire surface area, the Series 500 Liquid Filter Bag is constructed using the patented Bypass/Transport concept invented by 3M researchers. Specially designed bypass holes are cut into certain areas of the filter media to prevent premature blinding of the filter. In conjunction with the bypass design, a second media called a transport layer helps to distribute fluid flow evenly through the filter. The outer layers of the filter provide a highly uniform barrier for final particle filtration. This construction results in very high dirt loading capacity, even at high flow rates. There are no sewn seams used in any of the filtering layers, thus allowing high filtration efficiencies for fine particles.

The 3M Bypass/Transport filter technology is manufactured in a filter bag form to provide additional operational advantages:

- Changeout time – easier and faster, less labor required
- Bag compressibility – easier and less costly disposal
- Contaminant captured inside the bag – easier handling

### Materials of Construction

#### Filter Media:

Meltblown polypropylene microfiber filter media provides high particle removal efficiency for high quality filtration with broad chemical compatibility and is silicone free.

The filter complies with FDA regulations governing food grade materials allowed for direct food contact in food and beverage processing.

#### Ring and Bottom Clamp:

Stainless Steel

### Applications

#### Prefilters or final filters for:

- Acids and bases
- Amines
- Beer and wine
- Carbon beds
- Completion fluids
- Deep wells
- Desalination
- DI resins
- Edible oils
- EDM fluids
- Fructose
- Glycol
- Groundwater clean-up
- Laundry water
- Liquor
- Machine coolants
- Magnetic media
- Makeup water
- Organic solvents
- Photo chemicals
- Plating solutions
- RO membranes
- Storm water
- UF membranes
- Ultrapure water
- Wastewater
- Waterflood
- Workover fluids