US ecology

3277 County Road 69, P.O. Box 307, Robstown, TX 78380
P 800.242.3209 F 361.387.0794

February 4, 2020

Mr. Srinath Venkat, P.E.
Industrial and Hazardous Waste Permits Section
Texas Commission on Environmental Quality
12100 Park 35 Circle, MC-130
Austin, Texas 78573

RE: Notification of Proposed Activity- 30 TAC 335.6 Notification
US Ecology Texas, Inc. - Robstown, Texas
TCEQ Permit No. HW-50052-001
EPA ID: TXD069452340-1
RN101445666/CN603247974

Dear Mr. Venkat,

U.S. Ecology Texas, Inc. (USET) is providing additional information as requested for the items below that were sent via email on 1/24/2020. USET intends to conduct this trail run for a period of less than 90 days.

1. Clarify whether the frac tanks will be classified as tanks and whether these units will be covered under the Wastewater Unit Treatment Unit (WWTU) system exemption for the future permanent installation. Note that if the frac tanks are classified as portable containers, you may not be able to claim WWTU exemption under 40 CFR 260.10. Based on your request, it appears that the frac tanks are to be classified as portable containers during the trial run and will only manage on-site generated wastes under the 90-day accumulation unit exemption under 30 TAC 335.69. Clarify if this would continue after the trial run is completed. Note that if information provided in notification changes, additional notifications may need to be submitted.

   Response: Yes, the frac tanks will be classified as portable containers during the trial run and will only manage on-site generated wastes under the 90-day accumulation unit exemption under 30 TAC 335.69. USET would like to continue to classify the frac tanks as portable containers if the trial run proves to be effective. USET has noted that if any information in the notification changes additional notifications will be submitted. USET does not intend to utilize the Wastewater Unit Treatment Unit (WWTU) exemption for this activity.

2. Note that if USET claims WWTU exemption in the future, the units including filtration units (unless they are ancillary to tanks) may be considered tanks, and, any tank that is not part of the wastewater treatment system will be subject to applicable requirements of 40 CFR 262 (if managed as less than 90 day accumulation time exempt units), 264 Subpart J (Permitting Standards if permitted), and 265 Subpart J (Accumulation time exempt units requirements under in 40 CFR 262.17 and 30 TAC 335.69).

   Response: USET has noted this comment. Currently, USET does not intend to claim the WWTU exemption in the future.

3. Clarify whether storage pads storing container that manage wastes under 30 TAC 335.69 accumulation time exemption will have any secondary containment or any stable base (concrete, clay, etc.) to prevent any releases or contain any spills or leaks. These units may not be subject to secondary containment requirements. However, if units are considered as tanks, they are subject to applicable secondary containment requirements of 40 CFR 265 Subpart J unless they are exempt.

   Response: Containers storing waste under 30 TAC 335.69 are on secondary containments comprised of a liner (woven coated reinforced polyethylene frac tank liner) that has sufficient strength and thickness to capture any potential leaks or spills and prevent making physical contact with the soil/ground. These containments are on a stable clay/caliche base capable of providing support. USET does not intend to claim these units as tanks.

4. Note that the management of hazardous wastes are subject to applicable requirements in Chapter 335 and 40 CFR Parts 260-265 and 268 unless they are exempt from some of these requirements. It appears that the proposed activity would manage both hazardous and nonhazardous wastes that may include wastewater, contaminated and non-contaminated stormwater, leachate, etc.

   Response: The proposed activity would manage both hazardous and nonhazardous waste and the management of hazardous waste will be in accordance with those applicable requirements in 30 TAC § 335 and 40 CFR Parts §260-265 and 268 unless they are exempt from some of these requirements.

5. Note that if the filtration units are not part of the wastewater treatment units and the activity is considered as treatment and is not exempt under the 30 TAC 335.69 accumulation time exemption requirements, the unit may be subject to permitting requirements.

   Response: In accordance with 40 CFR §262.17, USET intends to perform this activity (filtering out solids from onsite generated wastewater) in container units complying with Subpart I of 265. EPA has noted that generators could treat such waste in containers without a permit provided that treatment conformed to established management standards for containers (81 Federal Register 85792.)

6. Provide detailed information on the filtration system such as drawings, storage capacity, etc. not just basic information. In addition, note that any new less than 90-day units may need to be listed in the facility's Notice of Registration (NOR).

   Response: Please see attached for detailed information including the process flow diagram, filtration system main features, specifications, operation manual, and filter bags specifications. The size of filter bas will change as needed and will be dependent on the water quality. USET will utilize 25, 15, 10, and 5-micron filter bags. USET has noted that any new less than 90-day units will be listed in the facility's NOR

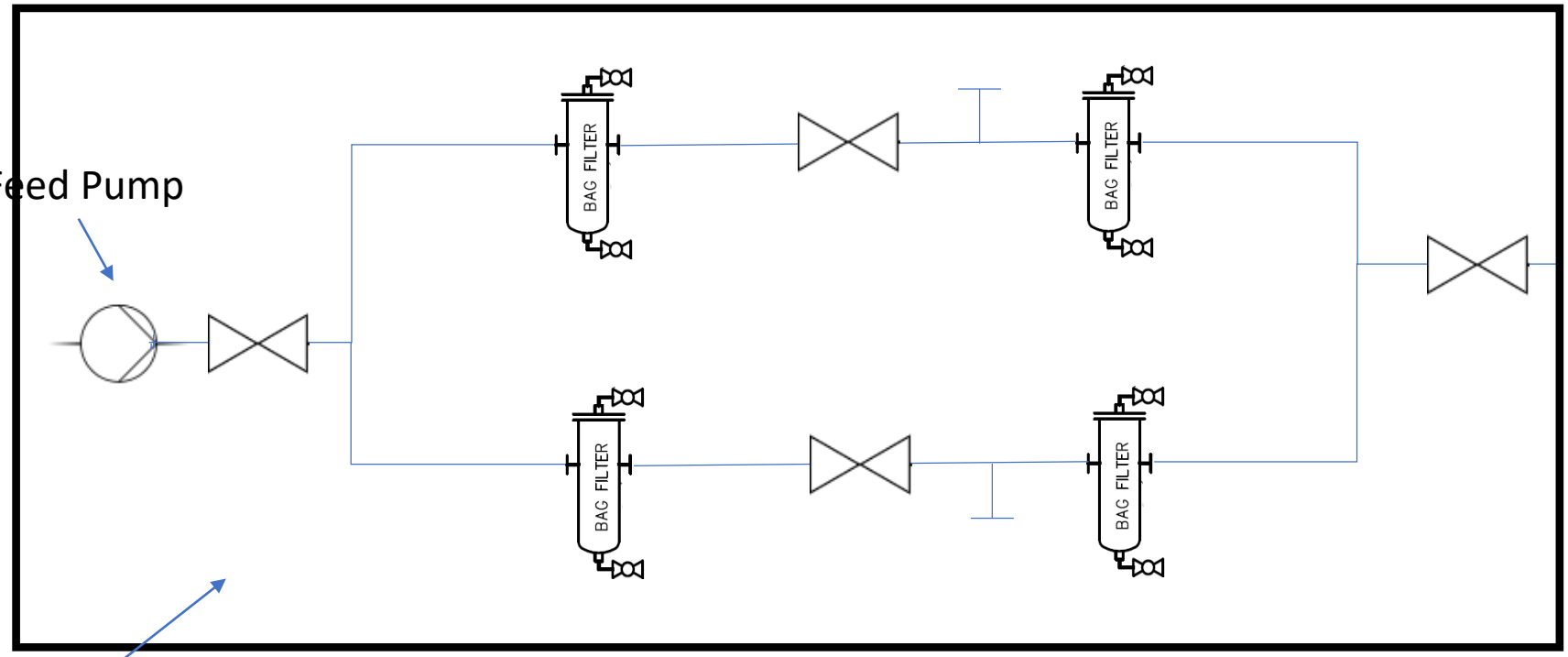
If there are any questions concerning this information, please feel free to contact me at (361) 387-3518 extension 2223 or e-mail me at [redacted].

Sincerely,

Celina Camarena
Environmental Manager

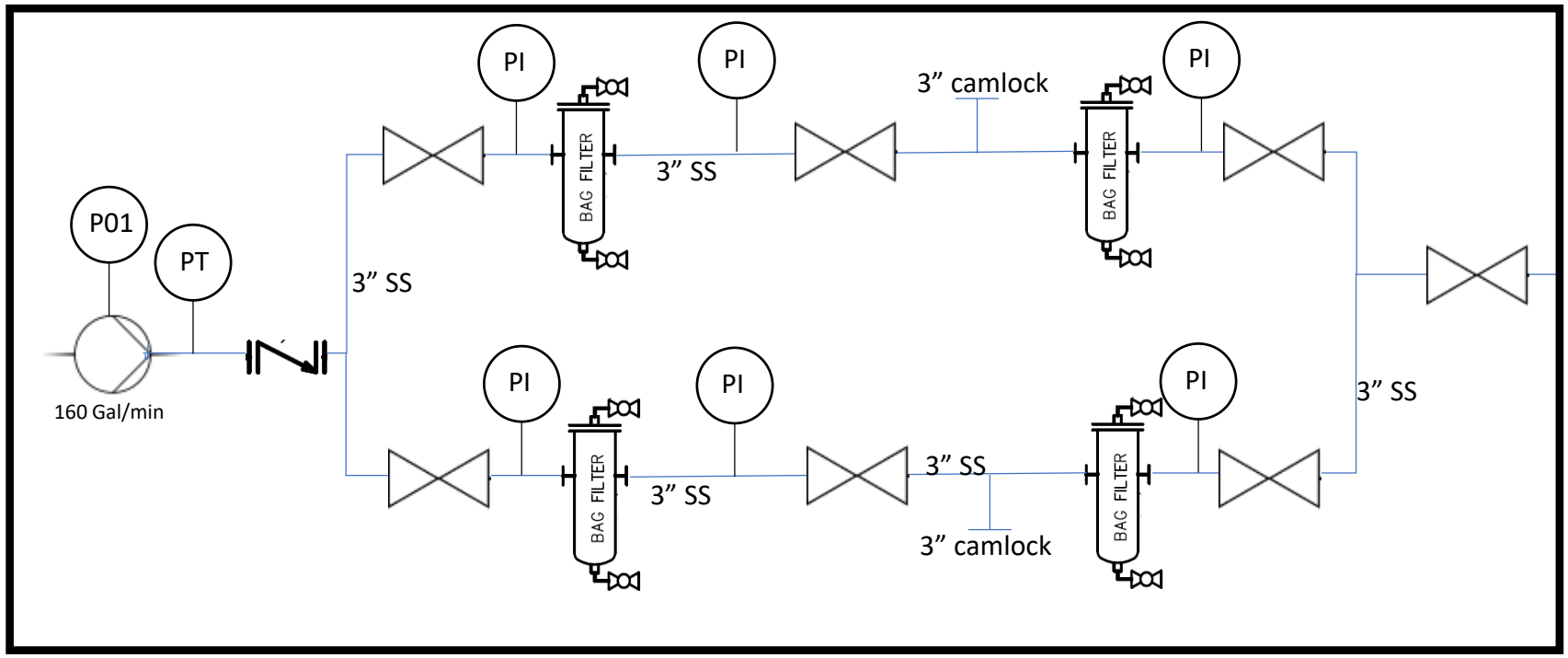
cc: Tim Purdue, TCEQ Region 14 (Corpus Christi) Waste Section Manager

Water Filtration System - PFD



Galvanized steel platform. No Secondary containment. Containment will be similar to what we do for Fracs

Water Filtration System – P&ID



Centrifugal Pump

In-line check valve

PI — Pressure gauge

PT — Pressure Transmitter

Ball Valve

BAG FILTER — Filter Cartridge

Major System Features

- No moving parts
- Skid mounted
- Fitted with bleed valves and pressure gauges
- Chambers constructed of Stainless Steel
- Piping constructed of stainless steel
- Stainless Steel inlet and outlet manifolds
- System can stand alone for sediment removal or be used in combination with filter equipment

System Specifications

Max. Flow	160 GPM
Material	304 Stainless Steel
Maximum Pressure	200 PSI
Inlet X Outlet	3” X 3” Camlock

Item	*Model or Specification*	*Other Description*
Transfer Pump	Grundfos CR32-2-1	7.5 horsepower (hp), 3 Phase motor (160 US gpm. @ 130 feet)
Bag Filter Housings	4 x Rosedale 8-30-3F-2-150-CBSPB	Model 8, 30-inch housing size, 3 inch 150 class ANSI flange, side outlet, 150 pounds per square inch (psi) pressure rating, carbon steel
Isolation Valves	7 x 3-inch butterfly valve	Seven (7) valves, at influent and effluent locations.
Pressure Transmitter	Wika E-10	Explosion Proof Pressure Transmitter, 0 to 60 psig Wika – Mfr # 4365042 – Item # UX-68446-53
Pressure Gauge	Wika M932.25 2.5"	Sanitary Pressure Gauge, 0 to 60 psi, 3/4 Tri-Clamp Wika – Mfr # 4324005 – Item # UX-68056-74
In-line check valve		Compact Flange-Mount Check Valve

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

ROSEDALE PRODUCTS, INC.

MODEL 8

150 PSIG RATED FILTER UNIT

Table of Contents

I. Installation

Please remove all shipping and crating materials carefully. Be sure to remove the plugs from the inlet and outlet openings. Dispose of all crating materials safely.

The Model 8 Filter unit is capable of having several different piping variations based upon the outlet style of your unit. The inlet service line should be connected to the inlet flange or NPT coupling located near the top of the unit (above the basket level).

The outlet service line should be connected to the outlet flange or coupling, located near the middle or bottom of the unit depending upon the style of your unit (below basket level).

There are two 1/4" NPT ports on the shell and one 1/4" NPT port on the cover of the Model 8 Filter unit. These ports can remain plugged or used for pressure gauges or special fittings as your application requires.

Some installations require electrical grounding of all equipment, be sure to provide adequate grounding where necessary.

After completing installation be sure to double check connections for integrity. Your Model 8 Filter unit has been factory pressure tested leak free, therefore, any seepage problems usually occur from improper installation connections.

You are now ready to install the filter basket and bag. Remove cover by loosening the cover eyenuts. The eyenuts in the slotted corners should be loosened sufficiently to swing free. Loosen the third eyenut sufficiently to allow the top cover and closure assembly to swing away from the top of the unit.

If your application requires a basket seal, insert the basket seal into the basket collar groove. Refer to Figure 1 or Figure 2 in the Spare Parts Diagram for installation position of your seal.

Place the basket into the filter housing, make sure the basket flange is firmly seated into the basket collar.

Insert bag into the bag basket making sure filter bag ring is firmly seated inside the basket flange. For best results, be sure filter bag is installed fully extended to the bottom of the basket.

Before replacing cover assembly, inspect cover seal gasket (replacing as necessary). Close cover and alternately tighten the three clamp assemblies evenly to ensure a leak proof seal between the cover and housing body. Torque closure assemblies to a maximum of 60-90$^{ft\text{-}lbs}$. Each installation may have different closure bolting torque requirements to effectively seal the filter vessel cover. Many installations require significantly lower closure bolting torque due to the variables explained below. The suggested torque values are for reference only. They are to be used as a guideline by maintenance personnel. These values are meant as a guideline for safe operation of the filter system at its maximum rated pressure. Many variables affect the torque required to operate the filter vessel without leaks. These variables include the diameter of the bolt, type and number of threads, material type and grade, condition of the nut bearing surface and lubrication of bolt threads and nut bearing surfaces. Other factors such as the condition of the o-ring, o-ring material, viscosity of the fluid being filtered, operating pressures, temperature, and the closure assembly tightening procedure must also be considered.

Your Rosedale Model 8 is now ready for operation!

II. Operation

Filter System Start-Up Procedure:

Prior to turning on the flow to the inlet service, please make the following checks:

1. Check inside filter unit to be sure basket and filter bag (if applicable) are in housing and do not require cleaning or replacement. If necessary install a clean filter basket and bag (if applicable).

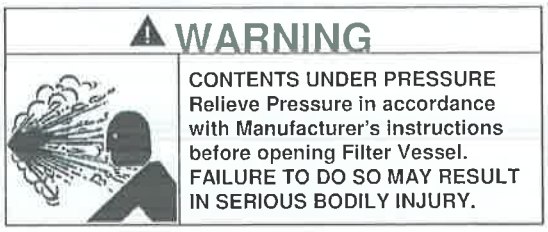
2. Check that filter unit cover is securely fastened to housing. You are now ready to open the flow to the inlet service line. Slowly open the inlet service line approximately 25% of normal operational flow (open slowly as not to displace filter bag inside the housing). After filter unit is pressurized and vented, slowly open outlet service line unit valve until completely open. Complete opening of inlet service line until desired flow rate is reached.

Once the desired service flow has been established, the filter will operate efficiently until dirty. However, under no circumstances should more than *15 PSI Differential Pressure* through the filter be obtained. Operating the filter unit with a high differential may cause filter bags to rupture and/or cause damage to filter system and downstream equipment.

To prevent excessive drop through the filter unit, regular inspection of the filter media is required. Monitoring of differential pressure through the housing can be utilized as a means of determining whether or not the filter media needs cleaning or replacement.

When it becomes necessary to clean or replace filter media, follow the procedure outlined below:

1. First close the flow from the inlet service line.
2. Close the flow to the outlet service line. (In some applications closing flow to outlet is not required.)
3. Relieve the pressure from the filter unit.



4. Drain housing sufficiently to access filter basket.
5. Remove cover by loosening the cover eyenuts. The eyenuts in the slotted corners should be loosened sufficiently to swing free. Loosen the third eyenut sufficiently to allow the top cover and closure assembly to swing away from the top of the unit.
6. Remove filter basket and clean thoroughly, remove the filter bag (if applicable) and throw away. (Cleaning and reusing the filter bag is not recommended.)
7. Remove debris and sludge from inside the inlet portion of housing to avoid interference with cover seal or flow of fluid being filtered.
8. Remove basket seal and inspect, replace if necessary. Clean basket seal groove and replace

basket seal (see spare parts diagram for location of basket seal).

9. Install clean filter basket and filter bag (if applicable). Place the basket into the filter housing, make sure the basket flange is firmly seated into the basket collar. If applicable, insert bag into the bag basket making sure filter bag ring is firmly seated inside the basket flange. For best results, be sure filter bag is installed fully extended to the bottom of the basket.
10. Inspect cover gasket for cuts or other signs of failure and make sure it is properly seated.
11. Move cover back into position, and alternately tighten the three clamp assemblies evenly to ensure a leak proof seal between cover and housing body. Torque closure assemblies to a maximum of 60-90 ft-lbs. Many installations require significantly lower closure bolting torque due to the variables previously explained in Section I.

Your Rosedale Model 8 Filter unit is now ready for operation. Refer to filter system start-up procedure.

III. Spare Parts List

Your Rosedale Model 8 Filter unit will give you many years of reliable service provided periodic inspections are made of various components and replacement of worn parts are made promptly. The following is meant to be a recommended spare parts list, these parts are illustrated on the following page.

SPARE PARTS LIST

Balloon	Description	Part Number	Time-Frame
1	Cover Seal	8150CG-*	as needed
2	Basket Seal	8BG-*	as needed
3	Cover	8*150	as needed
4	Eye Nut	8ENNI	as needed
5	Rod End	8RENI	as needed
6	Clevis Pin Assembly	8CPNI	as needed
7	Filter Bag	(See Order)	as needed
8	Filter Basket	(See Order)	as needed
9	Tripod Legs	8T22*S	as needed

* Select Material Designation:

C=Carbon Steel
S=304 Stainless Steel
S316=316 Stainless Steel

B=Buna N
E=Ethylene Propylene
V=Viton
TEV=Teflon Encapsulated Viton
TSW=Teflon Solid White

IV. Spare Parts Diagram

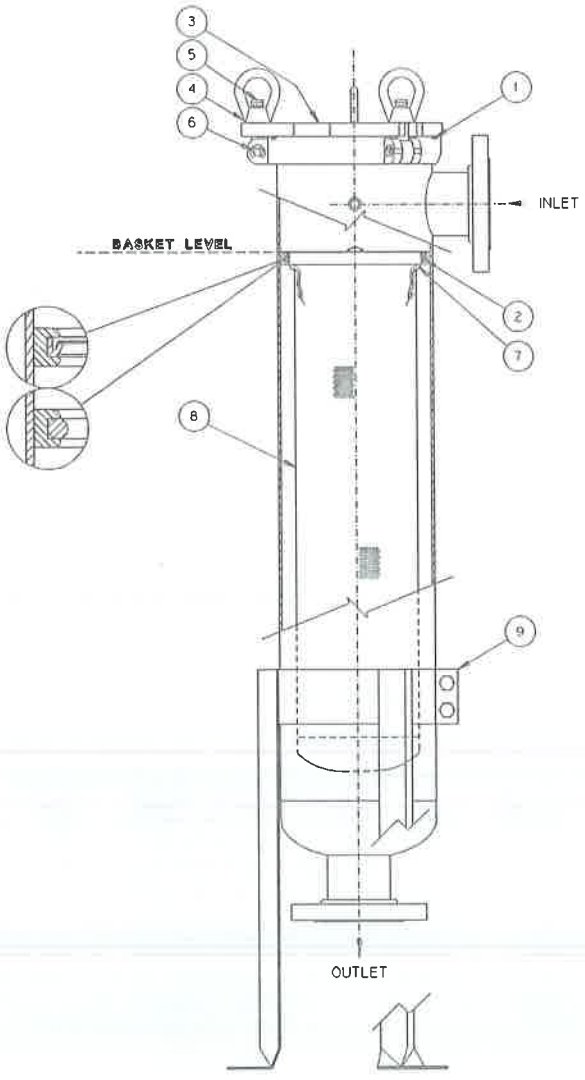


Figure 1
'V'-seal

Figure 2
O-ring

Important Notice

Warranty: In the event any Rosedale Products, Inc. filtration product is found to be defective in material, workmanship, or not in conformance with any express warranty for a specific purpose, Rosedale's only obligation and your exclusive remedy, shall be to repair, replace or refund the purchase price of such parts or products upon timely notification thereof and substantiation that the product has been stored, maintained and used in accordance with Rosedale's written instructions.

EXCLUSIONS TO WARRANTY: THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENT.

LIMITATION OF LIABILITY: Except as provided above, Rosedale shall not be liable or responsible for any loss or damage, whether direct, indirect, incidental, special or consequential, arising out of sale, use or misuse of Rosedale filtration products, or the user's inability to use such products.

THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.

Rosedale Products, Inc.
3730 West Liberty Road
Ann Arbor, MI 48103 USA
734-665-8201
800-821-5373
Fax. 734-665-2214
filters@rosedaleproducts.com
http://www.rosedaleproducts.com

Rosedale High Efficiency Filter Bags

Our HI-E series of bag filters meets the most stringent needs for fine process, hydraulic fluid, and lubricant filtration. All are made of unique microfiber materials, designed to increase the efficiency and dirt-holding capacities of these bags.

Microfiber Material Construction

Polyester or polypropylene microfibers and standard fibers are variably calendered to produce a single layer of microfiber material. Our unique construction can provide filtration to a 1 micron rating. Polyester microfiber material should be used where oil adsorption is not desirable or where higher temperatures are required.

Filtration Level

These bags have been tested by an independent laboratory to determine the filtration efficiency and dirt holding capabilities for each. They have been manufactured so that the efficiencies for both polyester and polypropylene are identical. See Filtration Efficiency Chart below.

HI-E Series Filter Bags Using Microfiber Construction

PEMF/POMF BAGS: High Efficiency Filtration using a single layer of microfiber material. Excellent for general polishing applications with low dirt load.

GRADED DENSITY BAGS: High Efficiency Filtration with multiple layers of microfiber material and pre-filtration layers. Has 4 times the dirt holding capacity of the PEMF/POMF series bags.

BAG-SIZE PLEATED CARTRIDGES: High Efficiency Filtration with 12 times the dirt holding capacity and microfiber material supported by flow-enhancing mesh. The extra surface area greatly increases the dirt holding capacity.

Filtration Efficiency

Model Number	PEMF 1 POMF 1 523 PL PEMF 1 PL POMF 1	PEMF 3 POMF 3 525 PL PEMF 3 PL POMF 3	PEMF 8 POMF 8 527 PL PEMF 8 PL POMF 8	PEMF 19 POMF 19 529 PL PEMF 19 PL POMF 19
EFFICIENCY	MICRON RATING			
95%	1.0	3.0	8.0	19.0
99%	2.0	5.0	19.0	25.0

* This test was conducted using AC Fine Test dirt interfaced into water at 10 GPM, Single-Pass.

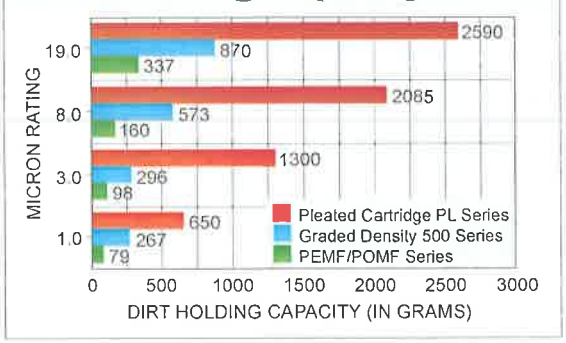
PEMF/POMF Series

The microfiber bag is encased in spun-bonded material inside and out to prevent bag material migration into the fluid stream. Heavy-duty handles for ease in removal are a standard feature. The fully shaped bottoms enhance the pressure capacities of these bags. **THE PEMF/POMF SERIES HAS 4.4 SQ. FT. OF SURFACE AREA.**

Bag-Sized Pleated Cartridges

With the PL Series pleated cartridges, we've combined the best features of bags and cartridges into one. It has the advantages of a bag; low in cost, easy to handle, and contaminant is trapped inside, but with the greater surface area and dirt-loading capabilities of pleated cartridges. The seams in these filter elements are ultrasonically welded, eliminating the problems associated with sewn seams. The microfiber material is sandwiched between two flow-enhancing polypropylene mesh screens, then pleated. The cartridge bottom and top sealing ring are made of solid molded polypropylene and are welded to the ends of the pleated cylinder without the use of adhesive. The sealing ring is a pliable gasket, increasing the efficiency and integrity of the seal. **THE PL SERIES HAS 25 SQ. FT. OF SURFACE AREA.**

Dirt Holding Capacity



500 Series, Graded Density Bags

The 500 Series FAT BAGS® have approximately four times the dirt-holding capacity of our PEMF/POMF series bags at equivalent filtrtion levels. You can now use bags, where performance levels previously required cartridges. These Graded Density Bags are made of multiple layers of microfibers and standard fibers variably calendered, providing filtration to 1 micron. Heavy-duty handles for ease in removal are a standard feature. The fully shaped bottoms enhance the pressure capacities of the bag. **THE 500 SERIES HAS 9 LAYERS OF MICROFIBER MATERIAL, EACH WITH 4.4 SQ. FT. OF SURFACE AREA.**

Chemical Compatibilities

EXCELLENT | GOOD | FAIR | POOR

	Bag Material (Fiber)		
	Nylon	Polyester	Polypropylene
Organic Solvents			
Animal Vegetable and Petro Oils			
Microorganisms			
Alkalies			
Organic Acids			
Oxidizing Agents			
Mineral Acids			

Temperature Limitations, 325°F for Nylon and Polyester, 225°F for Polypropylene.

Note: For more complete information on chemical compatibilities, refer to pages 222 through 231.

Pressure Drop

Total pressure drop is the sum of the filter housing pressure drop plus the pressure drop through the bag, and is a function of viscosity as well as flow rate.

Using water as the test media, the pressure drop for these high-efficiency bags is less than 0.5 psi.

Little or no pressure drop across the filter element at rated flow yields maximum dirt holding capacity (element life). Increases in the pressure drop are then due solely to the particulate accumulation.

How To Order

Build an ordering code as shown in these examples

PEMF/POMF SERIES FILTER BAGS

Example: PEMF - 3 - 2

MICROFIBER MATERIAL

Polyester	= **PEMF**
Polypropylene	= **POMF**

MICRON RATING (95%)

1.0 micron	= **1**
3.0 micron	= **3**
8.0 micron	= **8**
19.0 micron	= **19**

BAG SIZE
(dimensions in inches)

Symbol	Dia.	x	Length
1 =	7-1/16	x	16
2 =	7-1/16	x	32
3 =	4-1/8	x	8
4 =	4-1/8	x	14
7 =	5-5/8	x	15
8 =	5-5/8	x	21
9 =	5-5/8	x	32

500 SERIES GRADED DENSITY BAGS

Example: GD - PO - 523 - 1

Graded Density Bag

MICROFIBER MATERIAL

Polyester	= **PE**
Polypropylene	= **PO**

MICRON RATING (95%)

1.0 micron	= **523**
3.0 micron	= **525**
8.0 micron	= **527**
19.0 micron	= **529**

BAG SIZE
(dimensions in inches)

Symbol	Dia.	x	Length
1 =	7-1/16	x	16
2 =	7-1/16	x	32

PLEATED CARTRIDGES

Example: PL- PEMF - R1 - 1 - P1

MICROFIBER MATERIAL

Polyester	= **PL-PEMF**
Polypropylene	= **PL-POMF**

TOP SEALING RING DESIGN

Flared Polypropylene (P1-P2)	= **R1**
Solid Polypropylene (P3-P9)	= **R2**

MICRON RATING (95%)

1.0 micron	= **1**
3.0 micron	= **3**
8.0 micron	= **8**
19.0 micron	= **19**

BAG SIZE
(dimensions in inches)

Symbol	Dia.	x	Length
P1 =	7-1/16	x	11-1/8
P2 =	7-1/16	x	26-1/8
P3 =	4-1/8	x	5-1/16
P4 =	4-1/8	x	11-1/16
P7 =	5-5/8	x	10-3/4
P8 =	5-5/8	x	16-1/8
P9 =	5-5/8	x	26-3/4

Wika E-10 Explosion Proof Pressure Transmitter, 0 to 60 psig

Wika - Mfr # 4365042 - Item # UX-68446-53

No Reviews Write the First Review

- FEATURES
- Explosion proof rating approvals
- Available with 4-20mA 2-wire or 1-5 Volt, or 0.5-4.5 ratiometric 3-wire output signals (voltage output at an additional cost)
- Engineered to meet the harsh demands of industrial applications
- NACE approved wetted parts

$540.00 USD / EACH

Call 1-888-358-4705 for Availability

☐ **Include InnoCal Calibration Services**
$175.00 USD / each

PRODUCT OPTIONS

Specifications & Description

Accuracy	±0.25% full-scale (BFSL)
Min Pressure (PSI)	0
Max Pressure (PSI)	60
Min Temperature (° F)	-22
Max Temperature (° F)	212
Min Temperature (° C)	-30
[illegible]	100

KEY FEATURES

- FEATURES
- Explosion proof rating approvals
- Available with 4-20mA 2-wire or 1-5 Volt, or 0.5-4.5 ratiometric 3-wire output signals (voltage output at an additional cost)
- Engineered to meet the harsh demands of industrial applications

Battery Type	10 to 30 VDC
Electrical Connections	1/2" male conduit
Electrical termination	6-ft (1.8-m) cable
Output	4 to 20 mA (2-wire)
Enclosure Rating	NEMA 4, IP67
Media Compatibility	Gases and liquids compatible with wetted materials
Description	Explosion Proof Pressure Transmitter, 0 to 60 psig

These explosion proof pressure transmitters are specifically designed to meet the durability and performance requirements of industrial applications. These pressure transmitters feature an industry standard 4-20 mA 2-wire signal output, NEMA 4 (IP 67) weather protection, and are extremely resistant to pressure spikes, vibration, and moisture intrusion. The NACE approved wetted parts materials provide extra resistance against sulfide stress cracking when exposed to gases containing sulphur.

Cole-Parmer | 625 East Bunker Ct Vernon Hills , IL 60061 United States
Telephone: 1-800-323-4340 , 1-847-549-7600 | Fax: 1-847-247-2929 | Email: sales@coleparmer.com

Cole-Parmer
scientific experts

Wika M932.25 2.5" Sanitary Pressure Gauge, 0 to 60 psi, 3/4 Tri-Clamp

Wika - Mfr # 4324005 - Item # UX-68056-74

No Reviews Write the First Review

Manufactured for clean-in-place (CIP) applications

- Glycerin-fill reduces fluctuations for easier reading of gauge
- Autoclavable gauges are available

ALWAYS IN STOCK

$555.00 USD / EACH

In Stock

Include InnoCal Calibration Services

$128.00 USD / each

PRODUCT OPTIONS

OFTEN BOUGHT WITH...

Wika 213.53DW 2 NSF-Certified Pressure Gauge, 0 to 30 PSI, 1/4" NPT(M) Connection, Glycerin Fill

$27.25 USD / EACH

Specifications & Description

Accuracy	±2%-1%-2% full-scale

MORE ABOUT THIS ITEM

Min Temperature (° F)	50
Max Temperature (° F)	257
Min Temperature (° C)	10
Max Temperature (° C)	125
Liquid Fill	Glycerin
Wetted Materials	316L SS
Case	304 SS
Lens Material	Polycarbonate
Process Connection	3/4" Tri-Clamp®, lower
Unit Of Measurement	psi
Display	Analog dial
Media Compatibility	Gases and liquids compatible with wetted materials
Resolution	1 psi
Description	2.5" Sanitary Pressure Gauge, 0 to 60 psi, 3/4 Tri-Clamp

process connection welded to the gauge. Assembly meets the criteria set forth by 3A standards. Gauge case and ring are 304 stainless steel and has a polycarbonate window.

Warning: This product is not approved or intended for, and should not be used for medical, clinical, surgical or other patient oriented applications.

Cole-Parmer | 625 East Bunker Ct Vernon Hills , IL 60061 United States
Telephone: 1-800-323-4340 , 1-847-549-7600 | Fax: 1-847-247-2929 | Email: sales@coleparmer.com

McMASTER-CARR®

Compact Flange-Mount Check Valve

3 Pipe Size

$343.76 Each
1969N18

Shown with Flanges (Not Included)

Valve Type	Check
Check Valve Type	Spring-Loaded Piston
Valve Function	Backflow Prevention
For Use With	Air, Argon, Helium, Krypton, Neon, Water, Xenon
Actuation	Pressure, Vacuum
Fitting Type	Insert
Inlet/Outlet Connection Type	Pipe
Connection Style	Flanged
Pipe Size	3
Flow Coefficient (Cv)	89
Maximum Pressure	720 psi @ 100° F
Min. Opening Pressure	0.5 psi
Temperature Range	-10° to 400° F
Body Material	316 Stainless Steel
Spring Material	316 Stainless Steel
Piston Material	316 Stainless Steel
Seal Material	Viton® Fluoroelastomer
Shape	Straight
End-to-End Length	5/16"
For Flange Class	150, 300
Mounting Orientation	Any Position, Horizontal, Vertical
Chemical	

Resistance	
Excellent	Air, Argon, Beverage, Butane, Citric Acid (100% Concentration), Citric Acid (25% Concentration), Citric Acid (50% Concentration), Deionized Water, Diesel Fuel, Ethanol, Food, Fuel Oil, Gasoline, Helium, Kerosene, Krypton, Mineral Spirits, Natural Gas, Neon, Nitric Acid (100% Concentration), Nitric Acid (25% Concentration), Nitric Acid (50% Concentration), Nitrogen, Oil, Oxygen, Propane, Soap Solutions, Water, Xenon
Moderate	Chlorine, Ethylene Glycol, Isopropyl Alcohol, Methanol, Potable Water, Salt Water, Sodium Hydroxide (25% Concentration), Sulfuric Acid, Toluene
Poor	Acetone, Ammonia, Carbon Dioxide, Hydrochloric Acid (100% Concentration), Hydrochloric Acid (25% Compensation), Hydrochloric Acid (37% Concentration), Liquid Argon, Liquid Carbon Dioxide, Liquid Nitrogen, Liquid Oxygen, Methyl Ethyl Ketone, Phosphoric Acid (100% Concentration), Phosphoric Acid (25% Concentration), Phosphoric Acid (50% Concentration), Sodium Hydroxide (100% Concentration), Sodium Hydroxide (50% Concentration), Sodium Hydroxide (75% Concentration), Sodium Hypochlorite (100% Concentration), Sodium Hypochlorite (25% Concentration), Sodium Hypochlorite (50% Concentration)
Warning Message	Chemical compatibility must be determined by the customer based on the conditions in which the product is being used, including the presence of other chemicals, temperature, and consistency.
REACH	REACH (EC 1907/2006) (07/16/2019, 201 SVHC) Compliant

RoHS	RoHS 3 (2015/863/EU) Compliant

Less than half the end-to-end length of standard flange-mount check valves, these can be installed between ANSI flanges in pipelines with limited clearance. ANSI flanges are sold separately. Valves open to allow flow in one direction and close when flow stops or reverses. All have a 316 stainless steel body for excellent corrosion resistance.

Flow coefficient (Cv) is the amount of water (in gallons per minute) at 60° F that will flow through a fully open valve with a difference of 1 psi between the inlet and the outlet.