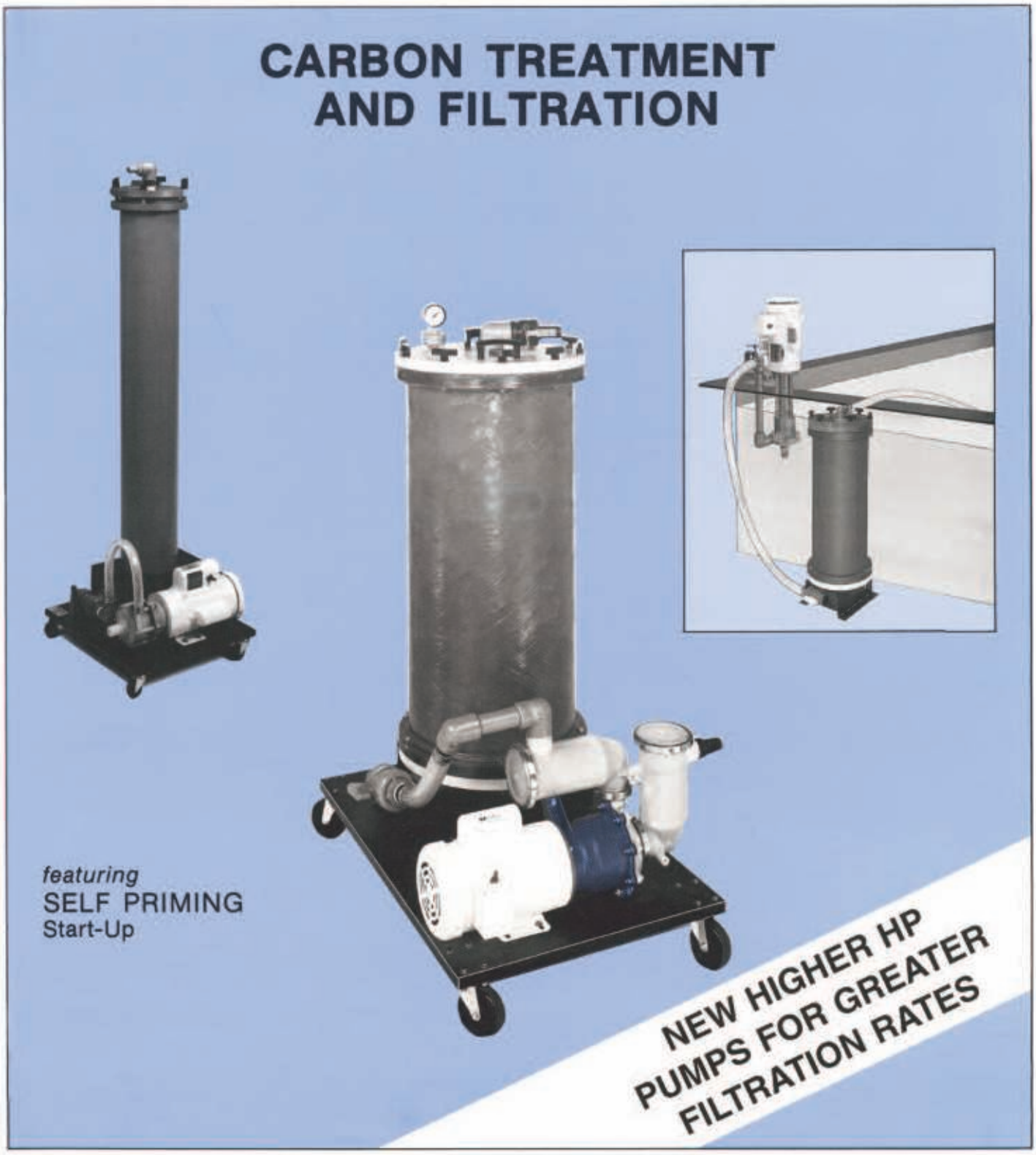
BULLETIN 452

SETHCO DOUBLE-DUTY IN-FILTRATOR SYSTEMS

FOR SIMULTANEOUS CARBON TREATMENT & FILTRATION OF CORROSIVE SOLUTIONS

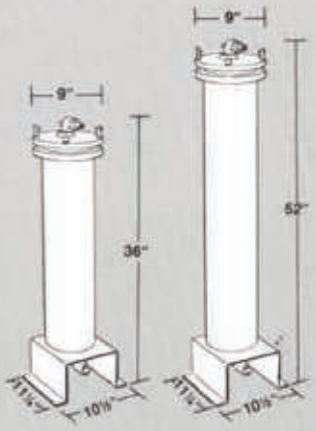
CECO Mefiag

A Division of CECO Environmental



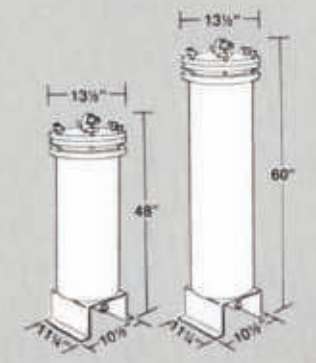
SPECIFICATIONS

AVAILABLE CHAMBERS AND DIMENSIONS



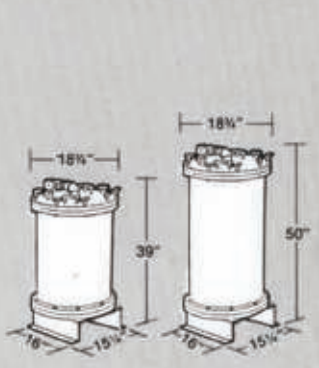
Model VC-11
Model DC-11

Model VC-12
Model DC-12



Model VC-23
Model DC-23

Model VC-24
Model DC-24



Model AFC-3

Model AFC-4

CARBON AND FILTRATION CHAMBERS

STYLE	CHAMBER MODEL NO. (MATERIAL)	MAX. RECOMMENDED FLOWS (GPH / LPH) FOR OPTIMUM... FILTRATION	MAX. RECOMMENDED FLOWS (GPH / LPH) FOR OPTIMUM... CARBON TREATMENT	FILTER AREA (SQ. FT.)	FILTER TUBES (QTY. SIZE)	CARBON CAPACITY (LBS.)	PORTS (INCHES) INLET (NPT)	PORTS (INCHES) OUTLET (NPT)	WT (LBS / KILO)
 ALL CARBON	VCA-11 (PVC) DCA-11 (CPVC)	—	300 / 1100	—	—	6 (1)	1-1/2"	1"	29 (13)
	VCA-12 (PVC) DCA-12 (CPVC)	—	600 / 2250	—	—	12 (2)			41 (18)
	VCA-11A (PVC) DCA-11A (CPVC)	450 / 1700	150 / 550	10.5	3 #10A	3			28 (12.5)
 CARBON AND FILTRATION	VCA-12A (PVC) DCA-12A (CPVC)	450 / 1700	450 / 1700	10.5	3 #10A	9			41 (18.5)
	VCA-11B (PVC) DCA-11B (CPVC)	900 / 3400	—	21	3 #20A	—			26 (12)
	VCA-12B (PVC) DCA-12B (CPVC)	900 / 3400	300 / 1100	21	3 #20A	6 (3)			38 (17)
 ALL FILTRATION	VCA-12C (PVC) DCA-12C (CPVC)	1350 / 5100	—	31.5	3 #30A	—			33 (15)
 ALL CARBON	VCA-23 (PVC) DCA-23 (CPVC)	—	1500 / 5600	—	—	30 (4)	1-1/2"	1"	68 (31)
	VCA-24 (PVC) DCA-24 (CPVC)	—	2250 / 8500	—	—	45 (4)			126 (57)
	VCA-23A (PVC) DCA-23A (CPVC)	1050 / 4000	750 / 2800	24.5	7 #10A	15			91 (141)
 CARBON AND FILTRATION	VCA-24A (PVC) DCA-24A (CPVC)	1050 / 4000	1500 / 5600	24.5	7 #10A	30 (4)			118 (54)
	VCA-23B (PVC) DCA-23B (CPVC)	2100 / 7950	—	49	7 #20A	—			79 (35)
	VCA-24B (PVC) DCA-24B (CPVC)	2100 / 7950	750 / 2800	49	7 #20A	15			106 (48)
 ALL FILTRATION	VCA-24C (PVC) DCA-24C (CPVC)	3150 / 11,900	—	73.5	7 #30A	—			95 (43)
 ALL CARBON	AFC-3 (Vinyl Ester)	—	2500 / 19,500	—	—	50	1"	1"	125 (57)
	AFC-4 (Vinyl Ester)	—	3750 / 14,200	—	—	75	1-1/4"	1-1/4"	160 (73)
	AFC-3A (Vinyl Ester)	2100 / 7950	1250 / 4700	49	14 #10A	25	1"	1"	135 (61)
 CARBON AND FILTRATION	AFC-4A (Vinyl Ester)	2100 / 7950	2500 / 9450	49	14 #10A	50	1-1/4"	1-1/4"	170 (77)
	AFC-3B (Vinyl Ester)	4200 / 15,900	—	98	14 #20A	—	1"	1"	145 (66)
 ALL FILTRATION	AFC-4B (Vinyl Ester)	4200 / 15,900	1250 / 4700	98	14 #20A	25	1-1/4"	1-1/4"	180 (82)
	AFC-4C (Vinyl Ester)	6300 / 23,800	—	147	14 #30A	—	1-1/4"	1-1/4"	190 (86)

(1) Two 3 lb. charges (2) One 9 lb. and one 3 lb. charge (3) Two 15 lb. charges (4) Three 15 lb. charges (5) See back page for pump specifications

With Self Priming Magnetic Drive, Sealless Centrifugal Pump			With Magnetic Drive, Sealless Centrifugal Pump		
SYSTEM MODEL NUMBER	**MAXIMUM OPERATING TEMP. (°F / °C)**	**PUMP[5] MODEL NUMBER**	**SYSTEM MODEL NUMBER**	**MAXIMUM OPERATING TEMP. (°F / °C)**	**PUMP[5] MODEL NUMBER**
PMSPVCA-11	140°F / 60°C	PMSP-510	PMVCA-11	140°F / 60°C	PM-510
PMSPDCA-11	180°F / 82°C	PMSP-510	PMDCA-11	180°F / 82°C	PM-510
PMSPVCA-12	140°F / 60°C	PMSP-510	PMVCA-12	140°F / 60°C	PM-510
PMSPDCA-12	180°F / 82°C	PMSP-510	PMDCA-12	180°F / 82°C	PM-510
PMSPVCA-11A	140°F / 60°C	PMSP-510	PMVCA-11A	140°F / 60°C	PM-510
PMSPDCA-11A	180°F / 82°C	PMSP-510	PMDCA-11A	180°F / 82°C	PM-510
PMSPVCA-12A	140°F / 60°C	PMSP-510	PMVCA-12A	140°F / 60°C	PM-510
PMSPDCA-12A	180°F / 82°C	PMSP-510	PMDCA-12A	180°F / 82°C	PM-510
PMSPVCA-11B	140°F / 60°C	PMSP-1035NT	PMVCA-11B	140°F / 60°C	PM-1035NT
PMSPDCA-11B	180°F / 82°C	PMSP-1035NT	PMDCA-11B	180°F / 82°C	PM-1035NT
PMSPVCA-12B	140°F / 60°C	PMSP-1035NT	PMVCA-12B	140°F / 60°C	PM-1035NT
PMSPDCA-12B	180°F / 82°C	PMSP-1035NT	PMDCA-12B	180°F / 82°C	PM-1035NT
PMSPVCA-12C	140°F / 60°C	PMSP-1035NT	PMVCA-12C	140°F / 60°C	PM-1035NT
PMSPDCA-12C	180°F / 82°C	PMSP-1035NT	PMDCA-12C	180°F / 82°C	PM-1035NT
PMSPVCA-23	110°F / 43°C	PMSP-1035NT	PMVCA-23	110°F / 43°C	PM-1035NT
PMSPDCA-23	180°F / 82°C	PMSP-1035NT	PMDCA-23	180°F / 82°C	PM-1035NT
PMSPVCA-24	110°F / 43°C	PMSP-1040NT	PMVCA-24	110°F / 43°C	PM-1040NT
PMSPDCA-24	180°F / 82°C	PMSP-1040NT	PMDCA-24	180°F / 82°C	PM-1040NT
PMSPVCA-23A	110°F / 43°C	PMSP-1035NT	PMVCA-23A	110°F / 43°C	PM-1035NT
PMSPDCA-23A	180°F / 82°C	PMSP-1035NT	PMDCA-23A	180°F / 82°C	PM-1035NT
PMSPVCA-24A	110°F / 43°C	PMSP-1035NT	PMVCA-24A	110°F / 43°C	PM-1035NT
PMSPDCA-24A	180°F / 82°C	PMSP-1035NT	PMDCA-24A	180°F / 82°C	PM-1035NT
PMSPVCA-23B	110°F / 43°C	PMSP-1040NT	PMVCA-23B	110°F / 43°C	PM-1040NT
PMSPDCA-23B	180°F / 82°C	PMSP-1040NT	PMDCA-23B	180°F / 82°C	PM-1040NT
PMSPVCA-24B	110°F / 43°C	PMSP-1040NT	PMVCA-24B	110°F / 43°C	PM-1040NT
PMSPDCA-24B	180°F / 82°C	PMSP-1040NT	PMDCA-24B	180°F / 82°C	PM-1040NT
PMSPVCA-24C	110°F / 43°C	PMSP-1040NT	PMVCA-24C	110°F / 43°C	PM-1040NT
PMSPDCA-24C	180°F / 82°C	PMSP-1040NT	PMDCA-24C	180°F / 82°C	PM-1040NT
PMSPFC-3	180°F / 82°C	PMSP-1040NT	PMFC-3	180°F / 82°C	PM-1040NT
PMSPFC-4	180°F / 82°C	PMSP-1040WT	PMFC-4	180°F / 82°C	PM-1040WT
PMSPFC-3A	180°F / 82°C	PMSP-1040NT	PMFC-3A	180°F / 82°C	PM-1040NT
PMSPFC-4A	180°F / 82°C	PMSP-1040NT	PMFC-4A	180°F / 82°C	PM-1040NT
PMSPFC-3B	180°F / 82°C	PMSP-1040WT	PMFC-3B	180°F / 82°C	PM-1040WT
PMSPFC-3B-HF	180°F / 82°C	PMSP-1500	PMFC-3B-HF	180°F / 82°C	PM-1500
PMSPFC-4B	180°F / 82°C	PMSP-1040WT	PMFC-4B	180°F / 82°C	PM-1040WT
PMSPFC-4C	180°F / 82°C	PMSP-1040WT	PMFC-4C	180°F / 82°C	PM-1040WT
PMSPFC-4C-HF	180°F / 82°C	PMSP-1500	PMFC-4C-HF	180°F / 82°C	PM-1500

With Self Priming, Sealless, Vertical, In-Tank Pump			With Direct Drive, Centrifugal Pump		
SYSTEM MODEL NUMBER	MAXIMUM OPERATING TEMP. (°F / °C)	PUMP[5] MODEL NUMBER	SYSTEM MODEL NUMBER	MAXIMUM OPERATING TEMP. (°F / °C)	PUMP[5] MODEL NUMBER
ZDVCA-11	140°F / 60°C	ZDX-1/3C	–	–	–
ZDDCA-11	200°F / 93°C	ZDX-1/3C	–	–	–
ZDVCA-12	140°F / 60°C	ZDX-1/3C	–	–	–
ZDDCA-12	200°F / 93°C	ZDX-1/3C	–	–	–
ZDVCA-11A	140°F / 60°C	ZDX-1/3C	–	–	–
ZDDCA-11A	200°F / 93°C	ZDX-1/3C	–	–	–
ZDVCA-12A	140°F / 60°C	ZDX-1/3C	–	–	–
ZDDCA-12A	200°F / 93°C	ZDX-1/3C	–	–	–
ZDVCA-11B	140°F / 60°C	ZDX-1/2B	–	–	–
ZDDCA-11B	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-12B	140°F / 60°C	ZDX-1/2B	–	–	–
ZDDCA-12B	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-12C	140°F / 60°C	ZDX-1F	–	–	–
ZDDCA-12C	200°F / 93°C	ZDX-1F	–	–	–
ZDVCA-23	110°F / 43°C	ZDX-1/2B	–	–	–
ZDDCA-23	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-24	110°F / 43°C	ZDX-1/2B	–	–	–
ZDDCA-24	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-23A	110°F / 43°C	ZDX-1/2B	–	–	–
ZDDCA-23A	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-24A	110°F / 43°C	ZDX-1/2B	–	–	–
ZDDCA-24A	200°F / 93°C	ZDX-1/2B	–	–	–
ZDVCA-23B	110°F / 43°C	ZDX-1F	–	–	–
ZDDCA-23B	200°F / 93°C	ZDX-1F	–	–	–
ZDVCA-24B	110°F / 43°C	ZDX-1F	–	–	–
ZDDCA-24B	200°F / 93°C	ZDX-1F	–	–	–
ZDVCA-24C	110°F / 43°C	ZDX-1F	–	–	–
ZDDCA-24C	200°F / 93°C	ZDX-1F	–	–	–
ZDFC-3	190°F / 88°C	ZDX-1F	–	–	–
ZDFC-4	190°F / 88°C	ZDX-1F	–	–	–
ZDFC-3A	190°F / 88°C	ZDX-1F	–	–	–
ZDFC-4A	190°F / 88°C	ZDX-1F	–	–	–
ZDFC-3B	190°F / 88°C	ZDX-1F	CRS-3B	180°F / 82°C	CRS-110PP
ZDFC-4B	190°F / 88°C	ZDX-1F	CRS-4B	180°F / 82°C	CRS-110PP
ZDFC-4C	190°F / 88°C	ZDX-2D	CRS-4C	180°F / 82°C	CRS-110PP
ZDFCA-4C-HF	165°F / 74°C	ZDX-3A			

Note: 10 feet inlet and outlet reinforced vinyl hose is supplied with each system.
For additional hose consult factory. (Systems using CDC pumps are not provided with inlet hose)

Sethco IN-FILTRATOR

for **Total Carbon Treatment** *or* **Simultaneous Carbon Treatment and Filtration** *or* **Total Depth Filtration**

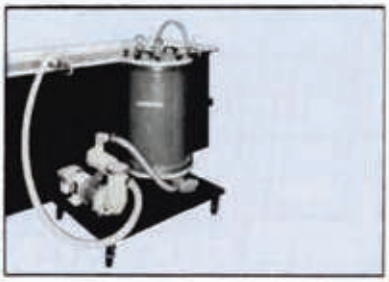
Sethco In-Filtrator chambers and systems are designed for fast, economical, convenient, efficient carbon treatment and filtration. No separate treatment tanks are needed. No plating downtime is required.

The contaminated liquid is pumped first through a dense bed of specially selected activated granular carbon to remove organic impurities. Then the liquid is passed through Sethco depth filter tubes to remove all solid dirt contaminants assuring that only clean, contaminant-free liquid is returned to your process tank.

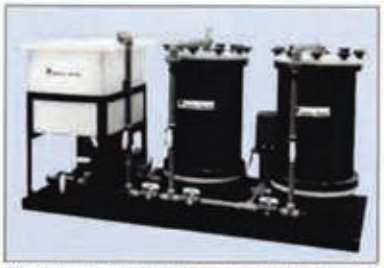
Sethco In-Filtrators can be used for all carbon treatment, all depth filtration or simultaneous carbon treatment and depth filtration as required. Changeover is fast and simple.

The portable compact Sethco In-Filtrator is the most versatile and economical automatic single-chamber system designed to decontaminate bright nickel, acid copper, copper pyrophosphate, ferrous chloride, acid tin and zinc, cyanide copper and zinc and all your other plating solutions.

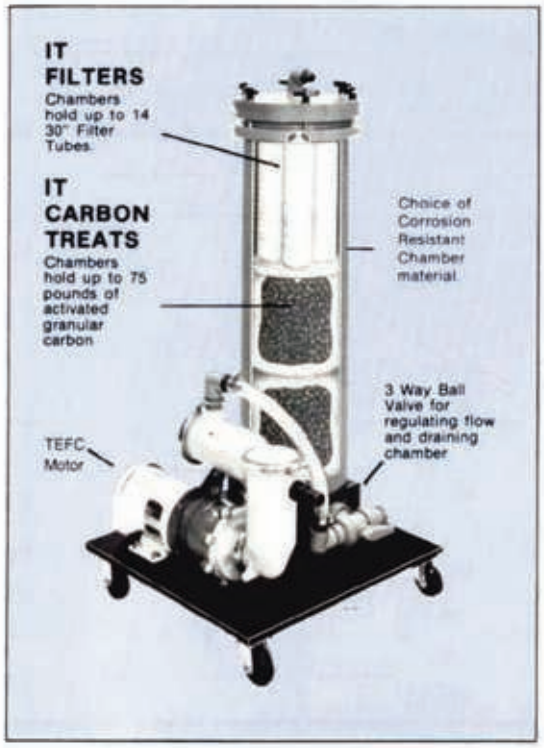
Dye contaminants from nickel acetate sealing solutions and crack detection liquids as well as taste, color, or odors can also be removed.



MODEL PMSPFC-3A In-Filtrator System with powerful Self-Priming, Magnetic Drive, Sealless Pump can be positioned anywhere outside tank even above it.



Mefiag will custom design a carbon treatment system to meet your specific requirements. The custom built unit in the photo above shows two large in-filtrator chambers, a holding tank and a high volume Mefiag pump all mounted corrosion resistant panel.



The Sethco In-Filtrator is designed for fast and easy tube and carbon replacement. The entire chamber can be disassembled and reassembled in minutes.

MODEL ZDVC-24B In-Filtrator System with Self-Priming, Bearing-Free, Sealless Pump. Pump positioned in-tank and chamber placed out-of-tank.

Solid Impurities Removed With Mefiag Depth Filter Tubes

Mefiag has designed its depth filter tubes with O-ring seals to make replacement quick and easy. This patented feature provides 100% depth filtration with no possibility of liquid bypassing, assures no leakage and takes full advantage of maximum filtration area.

Advantages of Mefiag Filter Tubes

- Solids are trapped throughout the entire filter tube depth.
- Higher filtration rate in compact chamber.
- No channeling or rupture of media.
- No filter aid needed.
- No surface blinding.

High Filter Tube Contaminant Capacity

- Each No. 10A Tube collects up to 3/4 lb. of contaminants.
- Each No. 20A Tube collects up to 1½ lbs. of contaminants.
- Each No. 30A Tube collects up to 2¼ lbs. of contaminants.

Fast Filter Tube Replacement

Simply remove cover. The assembly of filter tubes is attached to the under side of the cover. Pull out clogged tubes and push in new ones. Replacement takes only a few minutes.

Organic Impurities Removed With Mefiag Activated Granular Carbon

Mefiag Inexpensive Efficient Carbon Charge ... Costs Less to Carbon Treat Better.

A specially processed carbon has been designed for purification of plating solutions. The granules have much greater surface area than conventional carbons.

This carbon is extremely adsorptive yet highly selective. It quickly and completely removes organic impurities. Dye contaminants from nickel acetate sealing solutions and crack detection liquids are easily removed.

The low cost, carbon charge eliminates all mess. No slurries, no time lost, no solution lost, a minimum of handling, and best of all no expensive cartridge to buy.

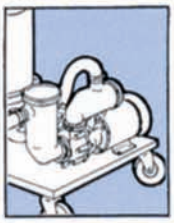
Advantages of Mefiag Activated Carbon

- Less carbon required.
- More easily wetted by solution.
- High adsorption of impurities, not brighteners.
- Excellent abrasive resistance/low fines.
- Does not contaminate atmosphere.
- Cost less per pound/does more per pound.

Sethco In-Filtrator Systems can hold up to 75 pounds of carbon.

To assure quality results, we recommend purchasing replacement O-ring sealed filter tubes and activated granular carbon from Mefiag or your Mefiag distributor.

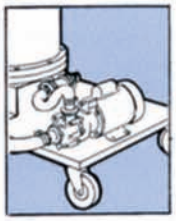
PUMP SELECTION GUIDE



Self-Priming Sealless Magnetic Drive Pumps

Features polypropylene sealless construction with lifetime encapsulated impeller-magnet. It can run dry without pump damage. Shaft wear and replacement problems are minimized. For temperatures to 180ºF.

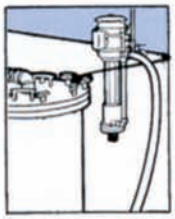
Visit Sethco's website at www.sethco.com for complete information.



Sealless Magnetic Drive Pumps

Features sealless, polypropylene construction with lifetime encapsulated magnet. Shaft wear and replacement problems are minimized. For temperatures to 180ºF.

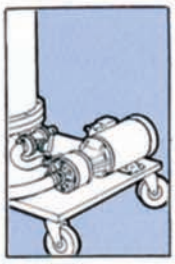
Visit Sethco's website at www.sethco.com for complete information.



Self-Priming Sealless Vertical In-Tank Pumps

Features bearing-free sealless CPVC casing and solid stainless steel drive shaft covered with a CPVC sleeve. Vertical design uses minimum space. Can be positioned anywhere on the tank side. For temperatures to 200ºF.

Visit Sethco's website at www.sethco.com for complete information.



Model CRS-10PP (not shown)

Solid PP with SS shaft. No metal contact with solution.

See pumps under Mefiag's website at www.mefiag.com.

PUMP MODEL NUMBER	MAX. PUMP TEMP. F. / C.	MAX. PUMP FLOW - 60 Hz GPH / LPH	MAX. PUMP PRESSURE 60 Hz (water)	MOTOR HP
SELF PRIMING SEALLESS MAGNETIC DRIVE PUMP				
PMSP - 510	180°F / 82°C	690 / 2600	13	1/3
PMSP - 1035NT	180°F / 82°C	2640 / 10,000	17	3/4
PMSP - 1040NT	180°F / 82°C	3120 / 11,800	24	1
PMSP - 1040WT	180°F / 82°C	3600 / 13,600	26	1
PMSP - 1500	180°F / 82°C	4980 / 18,850	32	3
END SUCTION SEALLESS MAGNETIC DRIVE PUMPS				
PM - 510	180°F / 82°C	750 / 2800	13	1/3
PM - 1035NT	180°F / 82°C	2640 / 10,000	17	3/4
PM - 1040NT	180°F / 82°C	3360 / 12,700	24	1
PM - 1040WT	180°F / 82°C	3800 / 14,400	26	1
PM - 1500	180°F / 82°C	5760 / 21,800	34	3
SELF PRIMING SEALLESS VERTICAL IN-TANK PUMPS				
ZDX-1/3C	200°F / 93°C	1080 / 4100	8	1/5
ZDX-1/2B	200°F / 93°C	2600 / 9800	10	1/3
ZDX-1FS	200°F / 93°C	4500 / 17,000	21	1
ZDX-2D	200°F / 93°C	6000 / 22,700	21	2
ZDX-3AS	200°F / 93°C	6600 / 25,000	36	3
DIRECT DRIVE CENTRIFUGAL PUMPS				
CRS-110PP**	160°F / 71°C	7600 / 28,500	34	3

**Inlet hose is not provided for systems using this pump.

WARRANTY: One year warranty against defective parts and workmanship. See Form TC-01 for full warranty details. Always be specific about your application in order that proper materials may be furnished. Let Mefiag or an authorized distributor know: liquids being handled, gallons, temperature and pH.
The standard warranty does not apply when equipment is used contrary to factory recommendations.
Since the policy of Mefiag is one of continual improvement, were reserve the right to change design or materials at any time, without giving notice or creating any obligation to previous or future customers.

CECO Mefiag

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