

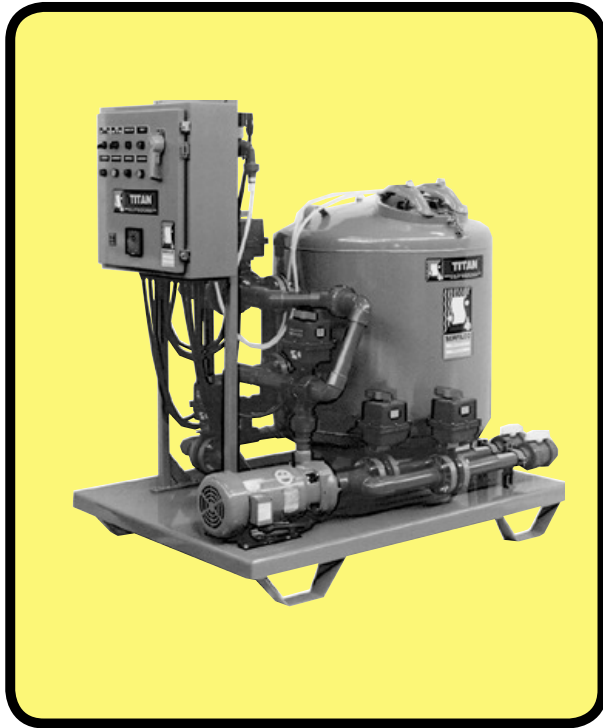


TITAN FILTRATION SYSTEMS

337

F-455N

Automatic, Permanent media, High flow systems for —
**Filtering Metal Finishing Process Solutions and Cleaners,
and for Polishing Clarified Treated Waste Treatment Streams**



FEATURES

- **Produces sparkling clean solutions**
- **Automatic, microprocessor controlled** — Markedly reduces operating and maintenance costs
- **Permanent media** — Eliminates media disposal and replacement
- **High flows** — 50 to 500 GPM
- **Corrosion resistant** — Chambers are PVC lined or hard rubber lined steel with PVC or CPVC piping and pumps for process solutions. Systems for non-corrosive solutions are suitably designed with high quality materials as well.

● **CE Conforming**

BENEFITS

- **Dramatically reduces media and disposal costs.**
- **Improves finished goods and process quality, significantly increases yields, practically eliminates scrap and rework.**
- **Reduces chemical consumption by maintaining solution quality.**
- **Minimizes solution maintenance with high flow, continuous particle removal.**
- **Satisfy regulatory requirements by polishing clarifier overflow.**

Unique to any other filtration system available, the TITAN series is the result of SERFILCO's ongoing commitment to developing "up flow" and "down flow" permanent media filtration technology.

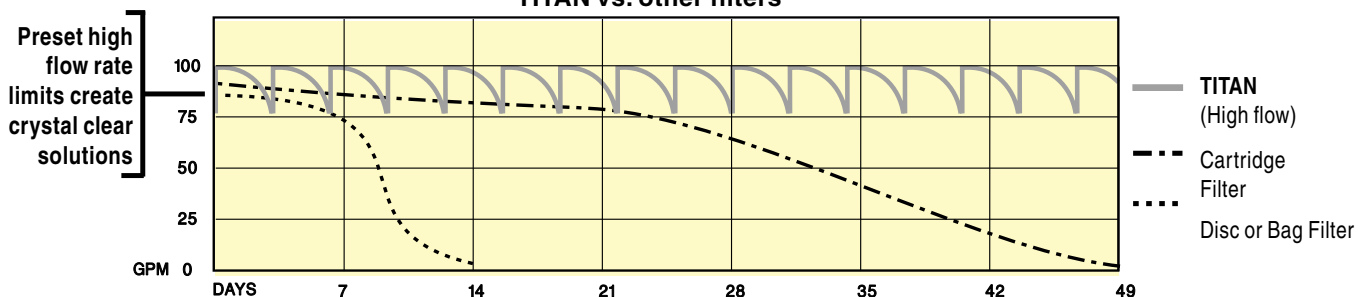
The combination of high flow permanent media, automatic operation and proven success makes the SERFILCO TITAN superior to any other filter available.

Easy to install and operate, manufactured with high quality corrosion resistant materials, TITAN systems will provide years of trouble-free operation.

Hundreds of customers around the world have achieved dramatic improvement in quality while reducing costs using the automatic permanent media TITAN.

16

TITAN vs. other filters



SERFILCO — worldwide leader in service, dependability and design for over 40 years!



The SERFILCO TITAN is a series of automatic backwash systems which use permanent filter media of a specific size, shape and density that creates a filter bed through which contaminated solution is fed at controlled limits of flow and pressure. Microprocessor control automatically maintains constant design flow without compacting particles onto the media bed.

The automatic cycle, programmed for optimum use of backwash fluid, responds automatically to a preset minimum flow rate. Prior to the automatic backwash cycle, process solutions are purged from the system with low pressure air. During the backwash cycle, particles exit the chamber without media migration. The process occurs within minutes, resulting in an extremely efficient backwash for each filter cycle. Re-establishment of the filtration cycle returns the system to design flow.

TITAN systems are specifically designed for use with most aqueous process solutions including cleaners, plating and other metal finishing solutions, and treated final effluents.

Each TITAN system incorporates a corrosion resistant filter chamber for use with permanent media and has electrically actuated valves, an efficient centrifugal pump,

a digital electronic flow meter, pre-wired control panel and pre-programmed microprocessor. Automatic control components are housed in a NEMA 12 enclosure, factory wired and test cycled for all microprocessor programs.

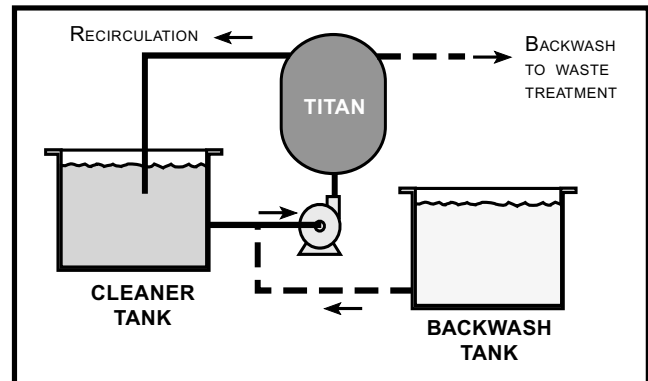
Cleaner models have a steel chamber, piping and valves and a cast iron single seal pump. Metal finishing models have PVC lined or hard rubber lined steel chambers with PVC piping and valves. Models designated ALK have single seal cast iron pumps; models designated AC have double seal CPVC pumps. Treated waste models have PVC lined steel chambers with PVC piping and valves. Models W-50, W-100, W-150 have double seal CPVC pumps. Models W-200 and larger have single seal cast iron pumps.

All units are skid-mounted, though large sizes have the chamber located separately. External metallic surfaces are painted with two coats of a two-part epoxy enamel. All fasteners are stainless steel. Prior to shipment, all units are wet tested to insure piping integrity, flow rate and complete system operation. Media is purchased and shipped separately. If required, backwash and recirculation tanks are also available from SERFILCO.

FILTRATION SYSTEMS FOR CLEANERS

Designed specifically for cleaners and parts washers.

- **AQUEOUS SOLUTIONS and CLEANERS to 190°F**
Extend cleaner life almost indefinitely
Drastically decrease costly dumps



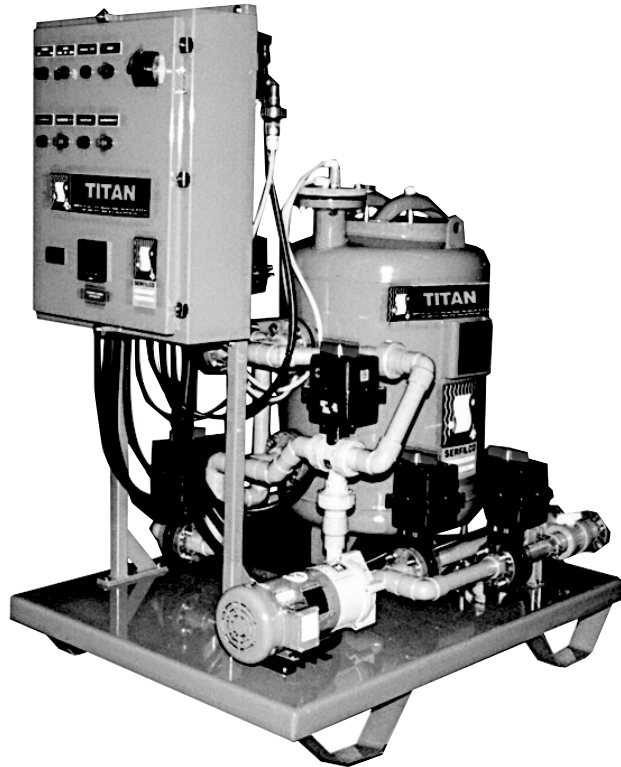
SEQUENCE OF OPERATION

- A. Filtration
- B. Air purge solution back to cleaner tank
- C. Backwash with clean water
- D. Air purge backwash to waste treatment

MODEL	MAX. FLOW* GPM	HP	SYSTEM DIMENSIONS (In.)		CONNS. IN & OUT (NPT)	SHIP. WT. (Lbs.)	PRICE CODE NO.
			L x W x H	FILTER DIA. **			
CLN50	50	1.0	42 x 54 x 78	24	1½"	950	S-2934 1
CLN100	100	3.0		36			1250

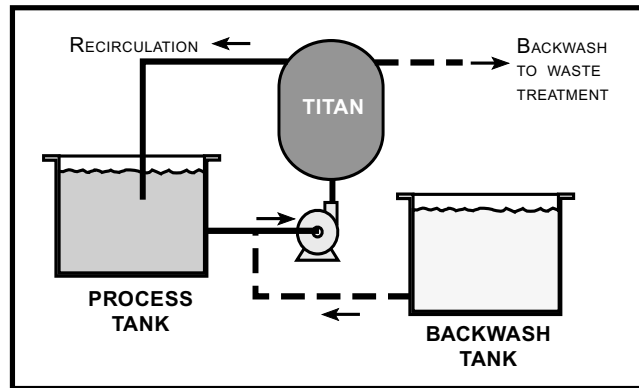
* Full flow, flooded suction, no discharge restriction (U.S. GPM @ 60 Hz)

** Chamber is mounted on system base.



- **FOR ACID OR ALKALINE SOLUTIONS –** acid or alkaline zinc, and bright nickel plating solutions, anodizing and phosphating solutions
- **OPTIONAL CARBON PURIFICATION**

Designed specifically for metal finishing solutions. Improve finished goods quality, minimize scrap and rework, reduce chemical consumption and maintain a crystal clear bath, with high flow, automatic, permanent media TITAN systems.



16

SEQUENCE OF OPERATION

- Filtration
- Air purge solution back to process tank
- Backwash with clean water
- Air purge backwash to waste treatment

MODEL	MAX. FLOW* GPM	HP	SYSTEM DIMENSIONS (Inches)		CONNS. IN & OUT (NPT)	SHIP. WT. (Lbs.)	PRICE CODE NO.
			L x W x H	FILTER DIA.			
P50 AC P50 ALK	50	1.5	42 x 54 x 78	24 **	1½"	900	S-2926 1 S-2926 2
P70 AC P70 ALK	70	3.0	48 x 64 x 78	36 **	2"	1250	S-2933 1 S-2933 2
P150 AC P150 ALK	150	5.0	48 x 64 x 78	42 ***	3"	1650	S-2930 1 S-2930 2
P200 AC P200 ALK	200	7.5	48 x 64 x 78	48 ***	3"	1900	S-2931 1 S-2931 2
P300 AC P300 ALK	300	10.0	48 x 64 x 78	60 ***	4"	2800	Consult Sales Dept.

* Full flow, flooded suction, no discharge restriction (U.S. GPM @ 60 Hz)
 ** Filter chamber mounted on system base
 *** Free standing chamber

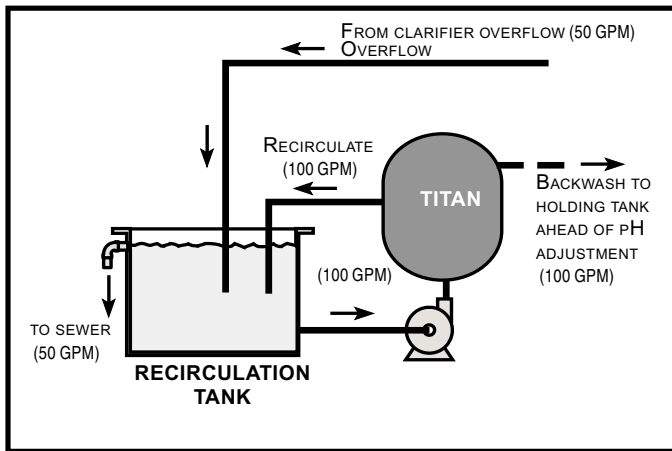
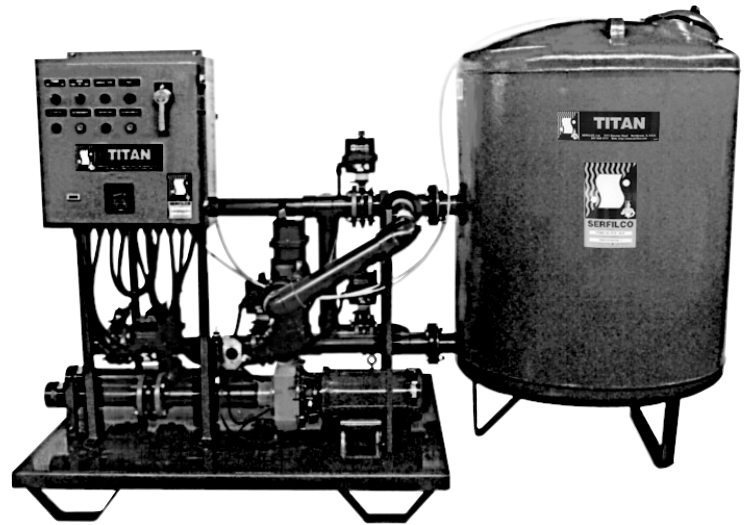


TITAN FILTRATION SYSTEMS FOR TREATED WASTE

F-455N

- **TREATED WASTE**
Flow rates to 500 GPM
 Capture low ppm suspended solids exiting in clarifier overflow.
- **OPTIONAL CARBON PURIFICATION**

Designed specifically for aqueous and treated waste applications. Satisfy regulatory requirements easily and economically with flow rates to 500 GPM. A TITAN filtration system continuously recirculating clarifier overflow will capture escaping solids and can achieve 0.5 ppm with proper recirculation. In fact, polished water can be re-used in non-critical rinses.



SEQUENCE OF OPERATION

- Filtration
- Air scrub
- Backwash to waste treat with polished water from recirculation tank

MODEL	MAX. FLOW* GPM	FLOW FROM CLARIFIER (GPM)	HP	SYSTEM DIMENSIONS (In.)		CONNS. IN & OUT	SHIP. WT. (Lbs.)	PRICE CODE NO.
				L x W x H	FILTER DIA.			
W50	50	10 - 25	1.5	42 x 54 x 78	24 **	1½" NPT	850	S-2920
W100	100	26 - 50	3.0		36 **	2" NPT	1150	S-2921
W150	150	51 - 75	5.0	42 x 54 x 78	42 ***	3" NPT	1600	S-2931
W200	200	76 - 100			48 ***	3" NPT	1850	S-2922
W300	300	101 - 150	7.5	42 x 54 x 78	60 ***	4" Flange†	2400	S-2923
W400	400	151 - 200	10.0		66 ***	4" Flange†	2800	S-2924
W500	500	201 - 250	15.0	48 x 64 x 78	72 ***	6" Flange	3300	S-2925

* Full flow, flooded suction, no discharge restriction (U.S. GPM @ 60 Hz)
 ** Filter chamber mounted on system base
 *** Free standing filter chamber
 † 4" flanges also have interior 4" NPT threads.

16



'EXCEL' AUTOMATIC BACKWASH FILTRATION SYSTEMS

341

F-450E

To meet critical filtration requirements for:



INDUSTRIAL WASTE TREATMENT
PREFILTRATION ON R/O AND
DESALINATION PROCESSING
CPI AND FOOD INDUSTRY APPLICATIONS

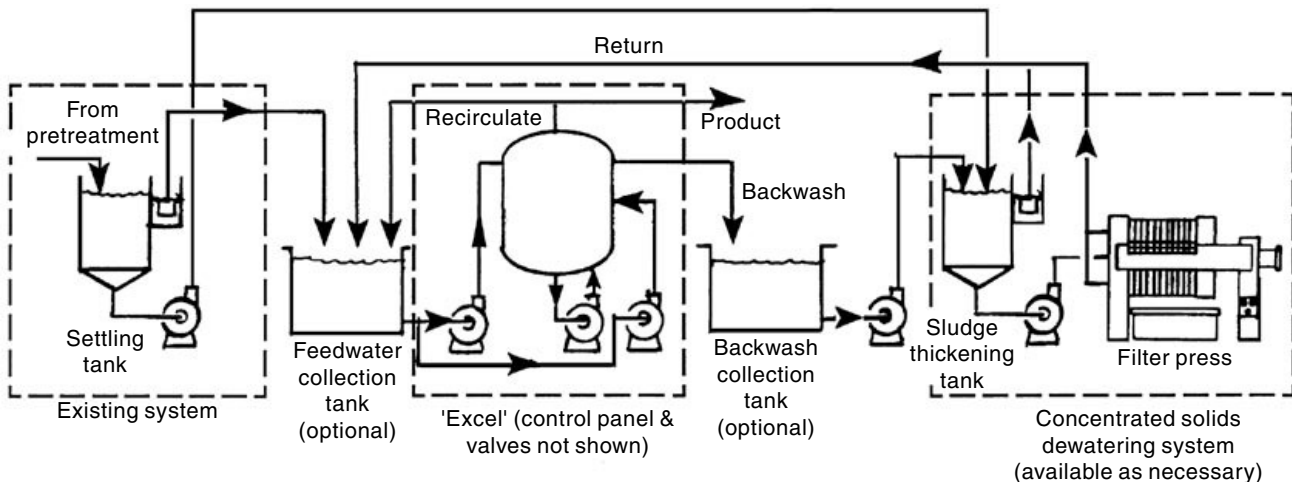
- Completely automatic microprocessor controlled
- Patented "up flow" design utilizing permanent floating media
- Corrosion resistant construction
- Large solids holding capacity
- Submicron particle retention
- Follows other pre-filters
- Does not require external, clean backwash fluid

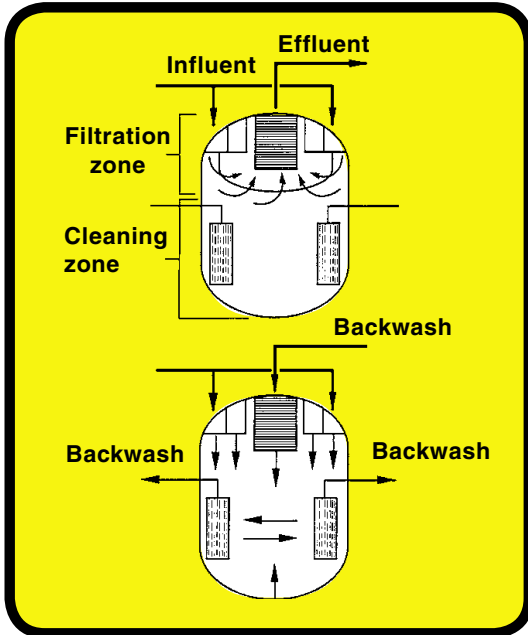
16

The 'Excel' Filtration System is an automatic backwash filter which utilizes a floating permanent media and unique "up flow" design to achieve sub-micron particle retention with single pass filtration. The 'Excel' Filtration System is specifically designed for final particulate entrapment in critical applications that cannot be met with other filtration methods.

The 'Excel' does not require disposable filter media, since it cleans itself automatically by means of a controlled backwash cycle which scrubs the unique floating media and discharges the concentrated residue to a receiving tank.

SINGLE FILTRATION SYSTEM





Filtration is accomplished by a floating bed of ground polyethylene creating a dense filter media for retention of submicron particles, assuring a high degree of clarity. The flow pattern produces a high square footage of filtering area and results in high solids holding capacity, assuring a long filtration cycle.

The 'Excel' Filtration System automatically enters the backwash mode on a differential pressure signal. The filter media is scrubbed clean and free of all solids which exit the chamber through barrier screens that retain the filter media. The system automatically returns to the filtration mode with the floating media bed surrounding the discharge retention screen. All modes are pre-programmed for time duration and flow rate to achieve optimum performance of each. Feed water and backwash tanks are required of the approximate size shown and are available independent of the filtration system.

16

FEATURES - SPECIFICATIONS

- Epoxy lined chamber with polyethylene filter media
- Panel with programmable microprocessor
- Electrically actuated valves (eight)
- Manually adjustable isolation and throttling valves (seven)
- Pump-motor assemblies (three)
- Level controls for feedwater and backwash tanks
- Flow meter
- Pressure switches and gauges
- Air regulator
- Skid mounted, completely assembled, pre-wired and tested to fit your application
- Unit supplied with PVC or CPVC pipe, valves and fittings



Pilot unit available for rental. Consult Sales Dept.

MODEL NUMBER	FILTER MEDIA VOLUME		PIPE SIZE NPT	MAXIMUM FLOW RATE		FILTER CHAMBER SIZE dia. x ht.	*COLLECTION TANKS		PRICE CODE NUMBER
	cu. ft.	cu. m		GPM	LPM		Gal.	Liters	
EXCEL25	16	.45	2"	75	284	36" x 72"	960	3634	2854
EXCEL30	20	.57	2½"	100	378	42" x 72"	1300	4921	2855
EXCEL48	40	1.13	4"	200	757	60" x 72"	2660	10069	2857

Plant air supply and electrical service required.

* Separate feedwater and backwash collection tanks required and optionally supplied as necessary.