

INDUSTRIAL WATER FILTERS

LWTFF Series



“Water Filtration Systems for Industrial Applications”

LWTFF INDUSTRIAL WATER FILTERS

Lwtff Series filtration equipment can be engineered to solve complex commercial and industrial water treatment problems. Multiple tank systems often utilize the pressure differential package to trigger regeneration.

Pressure Differential Systems are a frequently requested design for the Multi-Media Systems, removing turbidity and suspended particles down to nominal 10 microns. This feature has two pressure connections, on the inlet pipe and one connected on the outlet pipe. When a 10-15 lb. differential in operating pressure occurs, the indicating pressure switch sends a signal to the controller for immediate regeneration to clean the media bed. The correct backwash duration is critical to prevent premature bed failure. **This can be accomplished by observing the backwash water at the end of the cycle and verifying the water is clear, ensuring a clean media bed for peak performance.**

The Standard Lakeside 2001 Programmable Microprocessor automatically controls the regeneration cycles by utilizing a pilot valve to operate the diaphragm valves. These valves can be hydraulically or pneumatically operated for your operational requirements. The 2001 microprocessor can be set for time clock, delay or pressure differential regeneration.



Carbon Filtration - Chlorine, chloramine and dissolved organic material removal is accomplished by using a carbon media matched to your application. Contact time and bed depth are very critical in the adsorption process and have a direct impact on the effectiveness of the equipment. To achieve the proper contact time, correct equipment sizing and an outlet flow control are critical. The water supply should be tested with complete water analysis for proper application and engineering. Elevated concentrations of oil, turbidity or iron can foul and prevent optimal performance of the equipment. Pre-treatment equipment would be a recommended solution.

Greensand Filtration - Iron, manganese and hydrogen sulfide problems require the pH between the 6.8 - 8.0 ranges for optimum filtration. The manganese greensand media has an oxide coating that oxidizes the residual iron, manganese and hydrogen sulfide which precipitate on contact. The external chemical feed system oxidizes Fe, Mn and H₂S and the precipitates are filtered down to 30 microns by the media bed and then expelled during the regeneration process. The media can be regenerated using a continuous feed of chlorine, potassium permanganate or both. The correct chemical feed and backwash duration are critical to prevent premature bed failure. This can be accomplished by observing the backwash water at the end of the cycle and verifying the water is clear, ensuring a clean media bed.

Multi-Media Filtration provides filtration down to nominal 10 microns utilizing filter sand, garnet and anthracite combinations designed to increase service flow rates per square foot of bed area, compared to traditional sand filtration systems. Re-stratification of the media layer automatically occurs and is based on their density and particle size, which reduces rinse time and water costs.

FRP/Composite Pressure Vessel (Non-code & ASME) Industrial grade composite vessel with polyethylene inner lining provide outstanding durability and higher corrosion resistance than carbon steel vessels (Chemical resistant Vinylester resins are available). Composite vessel weights are about 1/3 less than steel tank vessels and cost less.

Underdrain - The radial hub underdrain construction uses high quality schedule 80 PVC pipe and fittings, delivering high performance standards. The .010" PVC slotted laterals provide high flow rates and reliable service.



Thermoplastic Y-pattern diaphragm valve nest design allows each valve to be exactly designed and sized for the required function, providing the most cost effective, efficient and serviceable corrosion proof system in the market. These valves can be hydraulically or pneumatically operated for your operational requirements. Numerous piping and valve configurations are available. **Boiler drain valves and rack style pressure gauge packages are standard for fast and easy diagnostics.**

Operating Parameters: Pressure 30-100psi. Temperature range 35F-100F Electrical: 120vac-60Hz
Electrical enclosures rated NEMA 12/4X

Drain piping limits: Discharged to an atmospheric floor drain sized to handle the backwash rate of the system.

OPTIONS AVAILABLE:

- Skid mounted, pre-piped, pre-wired for faster and cost effective installations
- ASME code vessels are available 18" – 63"
- Separate source back wash systems / free standing systems
- Raw water by-pass (single units)
- Chemical injection (pre-treatment)
- Custom controls, programming, pre-engineered and custom engineered systems available



*“Designed, Tested and Approved for Shipment
by LWT Engineering Staff”*

LWTFF SERIES SPECIFICATIONS

MODEL	MINERAL TANK SIZE (Diameter & height)	IN/OUT PIPE SIZE (inches)	BACKWASH PIPE SIZE IN /OUT (INCHES)	SERVICE GPM	PSI-D @ 15lbs	PEAK GPM	PSI-D @ 25lbs	BWF RATE GPM	MINERAL QTY. CU.FT.
LWTFF-ML-21	21 x 62	1	1	20	1	30	5	30	8
LWTFF-ML-24	24 x 72	1-1/2	1-1/2	30	1	45	8	45	10
LWTFF-ML-30	30 x 72	1-1/2	1-1/2	50	2	65	9	75	14.7
LWTFF-ML-36	36 x 72	2	2	70	2	105	9	105	22.75
LWTFF-ML-42	42 X 72	2-1/2	2-1/2	95	2	140	12	150	29.9
LWTFF-ML-48	48 X 72	2-1/2	2-1/2	120	1	170	6	180	40

MODEL	MINERAL TANK SIZE	IN/OUT Pipe Size Inches	BACKWASH PIPE IN /OUT Inches	SERVICE GPM	PSI-D @ 15lbs	PEAK GPM	PSI-D @ 25lbs	BWF RATE	MINERAL QTY. CU.FT.
LWTFF-MG-21	21 x 62	1	1	8	3	13	6	25	6
LWTFF-MG-24	24 x 72	1	1-1/2	10	4	17	6	40	9
LWTFF-MG-30	30 x 72	1	1-1/2	15	3	25	5	60	14
LWTFF-MG-36	36 x 72	1-1/2	2	21	2	35	3	85	20
LWTFF-MG-42	42 X 72	1-1/2	2	29	3	48	7	110	27
LWTFF-MG-48	48 X 72	1-1/2	2	40	2	63	4	140	35

MODEL	MINERAL TANK SIZE	IN/OUT PIPE SIZE Inches	BACKWASH PIPE IN /OUT Inches	SERVICE GPM	PSI-D @ 15lbs	PEAK GPM	PSI-D @ 25lbs	BWF RATE	MINERAL QTY. CU.FT.
LWTFF-AC-21	21 x 62	1	1	8	1	22	5	20	7
LWTFF-AC-24	24 x 72	1	1	10	1	22	5	30	10
LWTFF-AC-30	30 x 72	1-1/2	1-1/2	15	2	49	9	45	15
LWTFF-AC-36	36 x 72	1-1/2	1-1/2	21	2	65	9	70	18
LWTFF-AC-42	42 X 72	1-1/2	2	29	2	96	12	90	24
LWTFF-AC-48	48 X 72	2	2	40	1	120	6	110	35

Please consult factory for optional media

LWTF SERIES DIMENSIONS

MODEL NO.	MEDIA TANK	OAH	WIDTH	SINGLE	TWIN	TRIPLE
LWTF-X-24	24" X 72"	100	37	79	118	157
LWTF-X-30	30" X 72"	101	42	73	115	157
LWTF-X-36	36" X 72"	102	48	88	136	184
LWTF-X-42	42" X 72"	102	54	98	152	206
LWTF-X-48	48" X 72"	105	60	113	173	233

Dimensions are approximate. Add 6" for skid mounted. OAL includes 12"-15" clearance between tanks. Clearance above tanks required to load resin. ASME tanks require additional height.

LWTF SERIES DIAGRAM

