

INDUSTRIAL FILTRATION EQUIPMENT

LWS Filter Series



(Single, Twin, Triple or Quadruple Demand Systems)

LWS Series filtration equipment can be engineered to solve complex commercial and industrial water treatment problems. Our catalog filtration equipment comes standard with a 2001 electronic cycle controller. Multiple tank systems often utilize the pressure differential package to trigger regeneration.

An Optional 3214 Microprocessor provides single, twin, triple or quadruple system capabilities. **The controller features single, twin alternating, progressive demand or parallel application options.** Multiple tank applications with sequential regeneration and user friendly programming are the premiere features of this controller. Five programmable cycle adjustments are standard for those problem water applications.



Optional Allen Bradley PLC control packages come with HMI EZ color touch screen and are extremely user friendly. **Lakeside PLC solenoid system features a hold, advance, resume, termination or close of all valves function, for fast, easy field service.** The main screen can be programmed to display a variety of parameters such as current flow rates, online tank status and remaining gallons of each vessel. **The AB 10/100 IP Ethernet Network Connection port is standard for building management capabilities. Custom Programming and alternate communication protocols are available.**

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, one on the inlet pipe and one connected on the outlet pipe. When operator selected or a 10-15 lb. differential in operating pressure occurs, the indicating pressure switch sends a signal to the controller for immediate or delayed 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.**

Carbon Steel Pressure Vessels Standard working pressure options are 100PSI. Higher pressures are available with custom engineered systems. A standard epoxy lining of 10-12 DFT mil is applied internally and 6-8 mils DFT safety blue finish coating applied over the exterior of the vessel. The vessels can be fabricated in non-code or ASME certified. Stainless steel or fiberglass vessels are available.



Underdrain The radial hub underdrain uses high quality PVC pipe and fittings, delivering high performance standards. The .010” PVC slotted laterals are installed to utilize the entire bed area minimizing channeling during low flow. This design provides high flow rates, reliability and quality assurance. **Lakeside’s four point header inlet baffle on 48” and larger vessels increases even flow distribution.**

Cast Iron diaphragm valve nest design allows each valve to be exactly designed and sized for the required functions, providing the most cost effective, efficient and serviceable system in the market. These valves can be hydraulically or pneumatically operated for your operational requirements. Numerous piping and valve configurations such as Copper, PVC or Stainless steel are available. **Boiler drain valves and rack style pressure gauge packages are standard for fast and easy diagnostics.**



Filter Media

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 has a direct impact on the effectiveness of the equipment. To achieve the proper contact time, correct equipment sizing and an outlet flow control is 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 iron, manganese and hydrogen sulfide and precipitates on contact. The precipitates are filtered down to nominal 30 microns by the media bed and then expelled during the regeneration process. The media can be regenerated using a continuous feed of chlorine or potassium permanganate or both. 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.



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

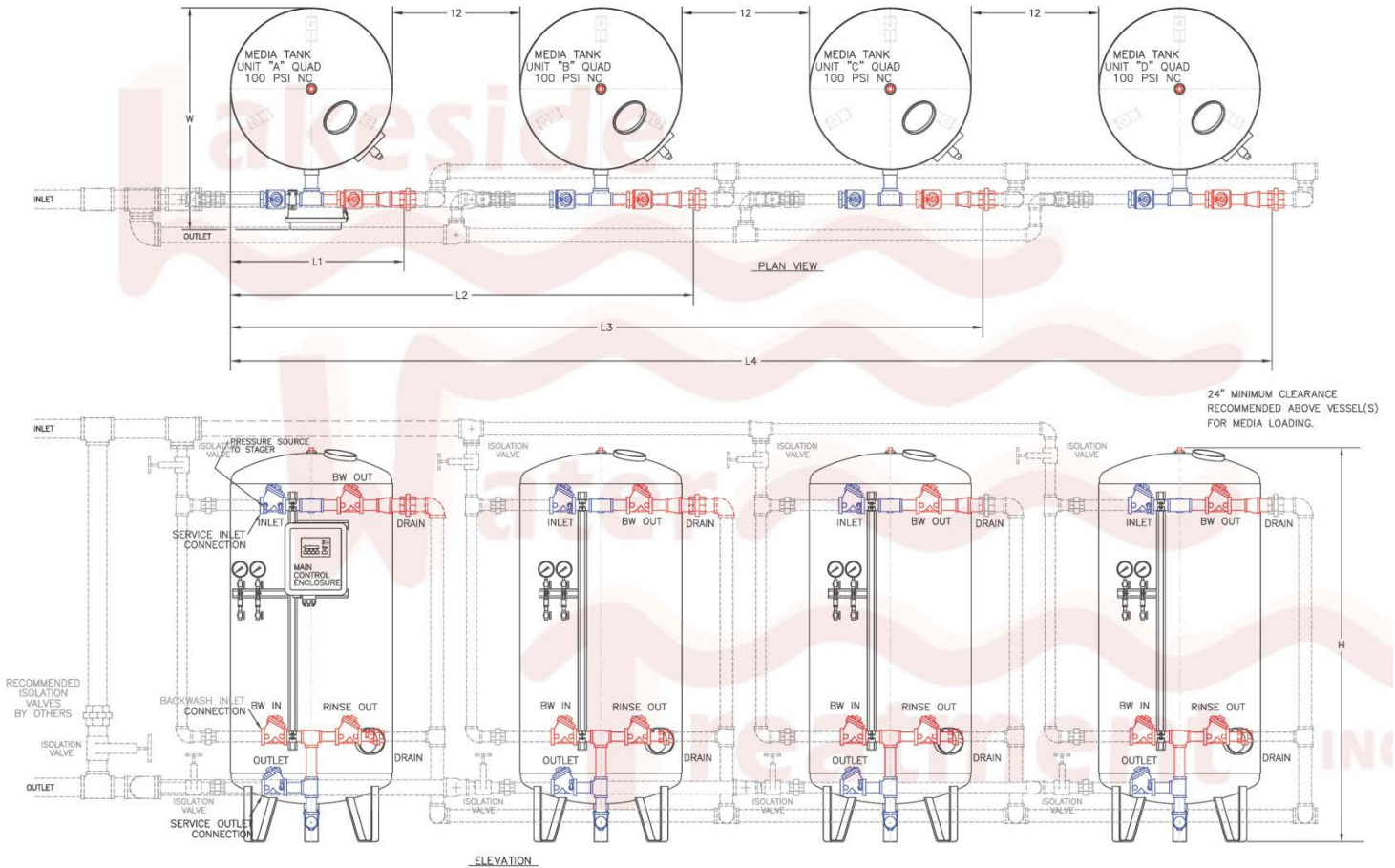
Multi-Media Filtration provides filtration down to nominal 10 microns utilizing quartz sand, garnet and anthracite combinations designed to increase service flow rates per square foot of bed area, compared to traditional sand filtration systems. Restratification of the media layer automatically occurs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

Operating Parameters Pressure 30-100psi. Temperature range 35F-100F Electrical: 120vac, 60Hz Electrical enclosures rated NEMA 12/4x **Drain piping limits:** 10ft vertical and discharged to an atmospheric floor drain sized to handle the backwash rate of the system (Max proven length is 25ft).

OPTIONS AVAILABLE:

- Skid mounted, pre-piped, pre-wired for faster and cost effective installations
- PVC, Copper and Stainless Steel Piping Options
- Non-code and ASME code vessels with custom linings available
- Separate source back wash systems
- Sanitized hot water or steam systems available
- Chemical injection (pre-treatment)
- Custom controls, programming, pre-engineered and custom engineered systems available

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MODEL NO.	MEDIA TANK	L1 L x W x H	L2 L x W x H	L3 L x W x H	L4 L x W x H
LWS-X-20	20" x 54"	25" x 30" x 69"	57" x 30" x 69"	89" x 30" x 69"	57" x 30" x 69"
LWS-X-24	24" x 54"	27" x 36" x 70"	63" x 36" x 70"	99" x 36" x 70"	63" x 36" x 70"
LWS-X-30	30" x 60"	34" x 42" x 81"	76" x 42" x 81"	118" x 42" x 81"	76" x 42" x 81"
LWS-X-36	36" x 60"	40" x 48" x 89"	88" x 48" x 89"	136" x 48" x 89"	88" x 48" x 89"
LWS-X-42	42" x 60"	44" x 54" x 90"	98" x 54" x 90"	152" x 54" x 90"	98" x 54" x 90"
LWS-X-48	48" x 60"	52" x 61" x 103"	116" x 61" x 103"	180" x 61" x 103"	116" x 61" x 103"
LWS-X-54	54" x 60"	58" x 66" x 100"	128" x 66" x 100"	198" x 66" x 100"	128" x 66" x 100"
LWS-X-60	60" x 60"	64" x 72" x 102"	140" x 72" x 102"	216" x 72" x 102"	140" x 72" x 102"
LWS-X-66	66" x 60"	70" x 79" x 104"	152" x 79" x 104"	234" x 79" x 104"	152" x 79" x 104"
LWS-X-72	72" x 60"	76" x 86" x 106"	164" x 86" x 106"	252" x 86" x 106"	164" x 86" x 106"

LWS Multi-Media Filter Model Specifications

MODEL	MINERAL TANK SIZE (Diameter & height)	IN/OUT PIPE SIZE (inches)	BACKWASH PIPE SIZE IN /OUT	SERVICE GPM	PSI-D	PEAK GPM	PSI-D	BWF RATE GPM	MINERAL QTY. CU.FT.
LWS-ML-20	20 x 54	1	1	20	1	30	5	30	7
LWS-ML-24	24 x 54	1 ¼	1 ¼	30	1	45	8	45	10
LWS-ML-30	30 x 54	1 ½	1 ½	50	2	65	9	75	16
LWS-ML-36	36 x 60	2	2	70	2	105	9	105	22
LWS-ML-42	42 X 60	2 ½	2 ½	95	2	140	12	150	30
LWS-ML-48	48 X 60	2 ½	2 ½	120	1	170	6	180	40
LWS-ML-54	54 x 60	3	3	160	2	230	8	240	52
LWS-ML-60	60 x 60	3	3	200	2	260	10	300	63
LWS-ML-66	66 x 60	4	4	235	2	350	15	350	75
LWS-ML-72	72 x 60	4	4	275	3	415	7	415	91

LWS Manganese Greensand Filter Model Specifications

MODEL	MINERAL TANK SIZE	IN/OUT PIPE SIZE	BACKWASH PIPE IN /OUT	SERVIC E GPM	PSI-D	PEAK GPM	PSI-D	BWF RATE	MINERAL QTY. CU.FT.
LWS-MG-20	20 x 54	¾	1	8	3	3	6	25	6
LWS-MG-24	24 x 54	¾	1 ¼	10	4	17	6	40	9
LWS-MG-30	30 x 54	1	1 ¼	15	3	25	5	60	14
LWS-MG-36	36 x 60	1 ¼	2	21	2	35	3	85	22
LWS-MG-42	42 X 60	1 ¼	2	29	3	48	7	110	30
LWS-MG-48	48 X 60	1 ½	2	40	2	63	4	140	40
LWS-MG-54	54 x 60	2	2 ½	55	3	80	5	190	51
LWS-MG-60	60 x 60	2	3	69	3	99	5	235	62
LWS-MG-66	66 x 60	2 ½	3	90	3	130	7	285	75
LWS-MG-72	72 x 60	2 ½	4	100	3	141	7	340	90

LWS Carbon Filter Model Specifications

MODEL	MINERAL TANK SIZE	IN/OUT PIPE SIZE	BACKWASH PIPE IN /OUT	SERVIC E GPM	PSI-D	PEAK GPM	PSI-D	BWF RATE	MINERAL QTY. CU.FT.
LWS-AC-20	20 x 54	1	1	8	1	22	5	20	5
LWS-AC-24	24 x 54	1	1	10	1	22	5	30	5
LWS-AC-30	30 x 54	1 ¼	1 ¼	15	2	49	9	45	12
LWS-AC-36	36 x 60	1 ½	1 ½	21	2	65	9	70	18
LWS-AC-42	42 X 60	1 ½	2	29	2	96	12	90	24
LWS-AC-48	48 X 60	2	2	40	1	120	6	110	32
LWS-AC-54	54 x 60	2	2 ½	55	2	159	8	150	40
LWS-AC-60	60 x 60	2 ½	2 ½	69	2	175	10	190	50
LWS-AC-66	66 x 60	3	3	90	2	210	15	245	60
LWS-AC-72	72 x 60	3	3	100	3	250	7	270	75