KOVALUS
Separation Solutions™



PULSION® MBR Systems

PULSION Powered: High Flux. Low Energy.
Maximum Impact Hollow Fiber Ultrafiltration

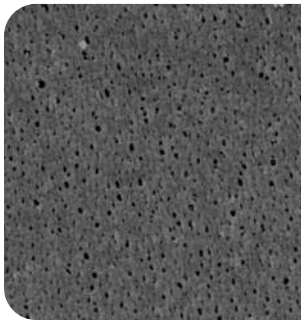
Smarter Filtration. Superior Results.

Over 25 Years of Membrane Bioreactor (MBR) Experience

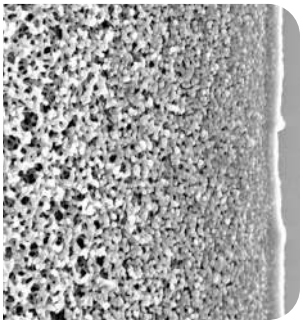
KOVALUS SEPARATION SOLUTIONS™ (KSS), formerly Koch Separation Solutions, is a global leader in designing and supplying MBR membranes and systems. The PURON® product line has been satisfying customers for over 25 years and has over 450 installations worldwide. The PULSION® MBR is the next-generation PURON MBR, featuring reduced energy requirements, a smaller footprint, and simplified design and operation. Suited for both municipal and industrial wastewater applications, the PULSION MBR is our cost-effective, compact, and automated solution.

PURON Membrane

The uniquely designed PURON membrane is a 0.03 micron reinforced PVDF ultrafiltration membrane that acts as an excellent barrier to suspended solids, bacteria, and other pathogens. The narrow pore size distribution ensures high permeability and sustainable, operation with reduced maintenance and cleaning requirements.



High Resolution Surface



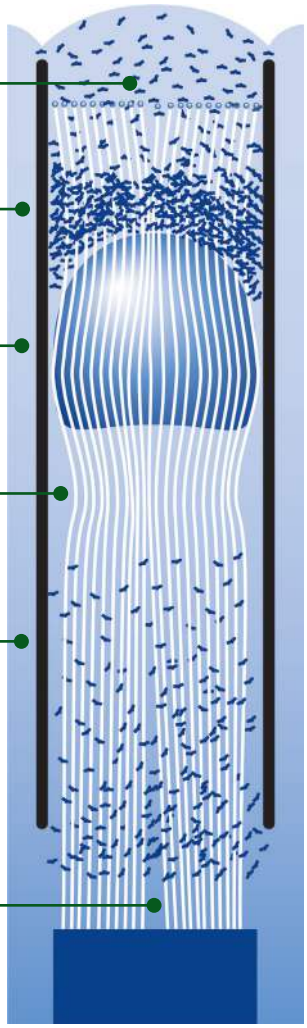
Cross-Section

PULSION MBR Module

The PULSION ultrafiltration module is designed for maximum efficiency and cost savings. Its unique single-header design allows fibers to float freely, preventing clogging and buildup. The patented air scour method uses pulsed air bubbles to create a geyser-like pumping action, dramatically reducing air and energy requirements. This innovative design improves mixed liquor recirculation, increases flux rates, and reduces membrane tank size, cutting the system's overall footprint. With up to 50% smaller air delivery equipment and simplified blower arrangements, PULSION MBR reduces operational and capital costs while boosting productivity and performance.



PULSION MBR



High-Efficiency, Low-Energy Submerged Hollow Fiber Ultrafiltration

PULSION MBR Benefits

- Pulsing large bubbles through chambered fiber bundles creates a geyser-like action, reducing air and energy requirements
- Enhanced mixed liquor recirculation improves flux and boosts overall system performance
- 25% reduction in system footprint for more compact installations
- Superior throughput and energy efficiency
- Simplified design and operation

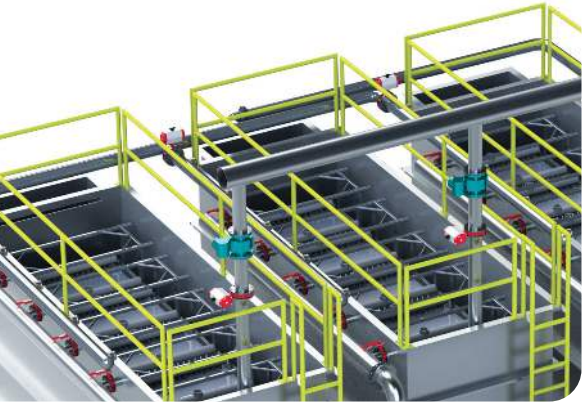


PULSION LE16

PULSION LE8

Modules for Every Application

Parameter	Unit	LE8	LE16	LE44
Membrane Area	ft^2 (m^2)	3,746 (348)	7,492 (696)	20,602 (1,914)
Average Capacity, Industrial	gpd (m^3/d)	34,000 (125)	67,000 (251)	183,000 (689)
Average Capacity, Municipal	gpd (m^3/d)	54,000 (202)	107,000 (404)	294,000 (1,112)
Average Air Flow	scfm (Nm^3/h)	20 (34)	40 (69)	111 (189)
Peak Air Flow	scfm (Nm^3/h)	40 (69)	81 (138)	223 (378)



Modular MBR Systems

KSS pre-engineered modular MBR trains allow for optimal wastewater treatment within a compact, skid-mounted package. These standard modular trains come complete with all necessary equipment for quick and easy installation. These trains are designed to be grouped together to provide systems with a variety of capacities with redundancy and easy expansion capability. Our team of highly experienced engineers can also design and build custom systems to meet the specific needs of your site, providing optimized solutions precisely tailored to meet your expectations.

Parameter	Unit	M4S 4xLE16	M2L 2xLE44	M3L 3xLE44	M4L 4xLE44	M5L 5xLE44	M6L 6xLE44
Membrane Area	ft^2 (m^2)	29,967 (2,784)	41,204 (3,828)	61,806 (5,742)	82,408 (7,656)	103,011 (9,570)	123,613 (11,484)
Average Capacity, Industrial	mgd (m^3/d)	0.26 (1,002)	0.36 (1,378)	0.55 (2,067)	0.73 (2,756)	0.91 (3,445)	1.09 (4,134)
Average Capacity, Municipal	mgd (m^3/d)	0.43 (1,617)	0.59 (2,223)	0.88 (3,335)	1.17 (4,447)	1.47 (5,558)	1.76 (6,670)
Average Air Flow	scfm (Nm^3/h)	162 (275)	223 (378)	334 (568)	445 (757)	557 (946)	668 (1135)
Peak Air Flow	scfm (Nm^3/h)	324 (550)	445 (757)	668 (1,135)	891 (1,514)	1,114 (1,892)	1,336 (2,270)

Kovalus Separation Solutions™

We are excited to introduce Kovalus Separation Solutions, formerly Koch Separation Solutions. This evolution marks a pivotal moment for us as we continue our journey of pioneering advancements in separations technology. We're revolutionizing the field of separations through cutting-edge technologies like membrane filtration, ion exchange, evaporation, and drying. With over six decades of expertise, we provide comprehensive solutions for demanding applications in dairy, food and beverage, life sciences, and general industry sectors. Our extensive membrane portfolio features a range of pore sizes, enabling us to handle diverse process fluids, water, and wastewaters effectively. Collaborating with clients worldwide, we specialize in recovering high-value products, minimizing waste, reducing environmental footprint, enhancing productivity, and optimizing costs.

Kovalus Customer Support

We've got you covered with Kovalus support

With Kovalus-qualified personnel, we offer tailored expertise throughout the life cycle of your membrane filtration system, ensuring optimal performance, protecting your investment, and maximizing process efficiency. Our KSS ASSIST ™ program provides proactive site visits, remote monitoring, and operator training to keep your system running at peak levels, backed by global service and support. We're dedicated to delivering faster, more efficient solutions, forming lasting partnerships, and exceeding your expectations.

Additionally, we offer

The SepTrac™ Smart System which seamlessly integrates with any KSS system to collect live data, send notifications and alerts, store documentation, and manage influent logs, all while offering easy access to our customer service teams.

REACH US

WWW.KOVALUS.COM

GETINFO@KSS-SEP.COM

KOVALUS
Separation Solutions™

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