The Culligan® Portable Exchange Deionizers

DEIONIZER SYSTEM

High Quality Water for Specialized Applications

Culligan® Portable Exchange Deionizers (PEDI) are a part of a multiple-process treatment system that produces high-purity water required for many specialized applications. Portable Exchange Deionizers from Culligan® is a safe, convenient and economical way to obtain consistent high-purity water from potable water sources. Our reliable PEDI systems consist of activated carbon and a selection of high quality ion exchange resins in portable exchange tanks. They connect directly to your tap water supply or for polishing to RO for high-purity water production. When the PEDI tanks are exhausted, a Culligan® service technician delivers, exchanges and maintains the equipment, thus providing continuous and uninterrupted supply of high-purity water to your operation. This system reduces capital investment, on-site labor, maintenance hassles or handling of hazardous regeneration chemicals and conserves you in water and energy resources.

Markets Served:

Clinics
Educational Facilities
Laboratories
Healthcare / Hospitals
Bio-Pharmaceutical & Cosmetics
Electronics
Food & Beverage Production
Chemical Production
Manufacturing
Boiler Feed
Humidification
Pulp & Paper
Ice Making
Plating / Anodizing
Glass & Mirrors
Oil & Gas
Vehicle Wash

Culligan® PEDI Systems are part of Culligan® Commercial & Industrial systems that combine durable and efficient equipment, system experience, and technical experts who understand your unique requirements. From planning your system to installing your water treatment equipment, Culligan® offers options that help deliver the quality of water to meet your needs. Contact Culligan® and your local Culligan® dealer to learn more about PEDI systems.

CULLIGAN® PEDI IS THE IDEAL ANSWER IF YOU:

- Want a continuous source of high-purity water
- Need a system just designed for your application
- Have limited maintenance resources
- Have limited capital equipment budget
- Use small volumes of water and do not want a permanent system
- Want an adjustable system for changing water usage or temporary applications
- Local water restrictions or other ordinances
- Eliminate handling of chemicals and hazardous waste

Culligan® High Purity Water Advantage:

NO CAPITAL INVESTMENT

You rent instead of buy and conserve your capital. Rental fees are part of your operating costs, spread out over the time you use the service. Rental charges can be arranged to suit your needs - per tank, per gallon, or per regeneration.

REDUCE LABOR AND MAINTENANCE COSTS

There is no equipment to operate, repair and no equipment downtime. Your local Culligan® dealer installs and maintains the equipment. System regenerations are handled off site by a Culligan® regeneration facility. Your personnel do not need to handle chemicals, dispose of any waste or perform any routine maintenance or service work.

CULLIGAN® GLOBAL NETWORK - GLOBAL SCOPE, LOCAL SERVICE AND KNOWLEDGE

With over 800 plus dealers and international licensees in over 90 countries, your local Culligan® dealer can provide quick, professional and efficient services and knowledge to address your water treatment requirements.

CULLIGAN® DESIGNED REGENERATION PROCESS ENSURES CONSISTENT QUALITY

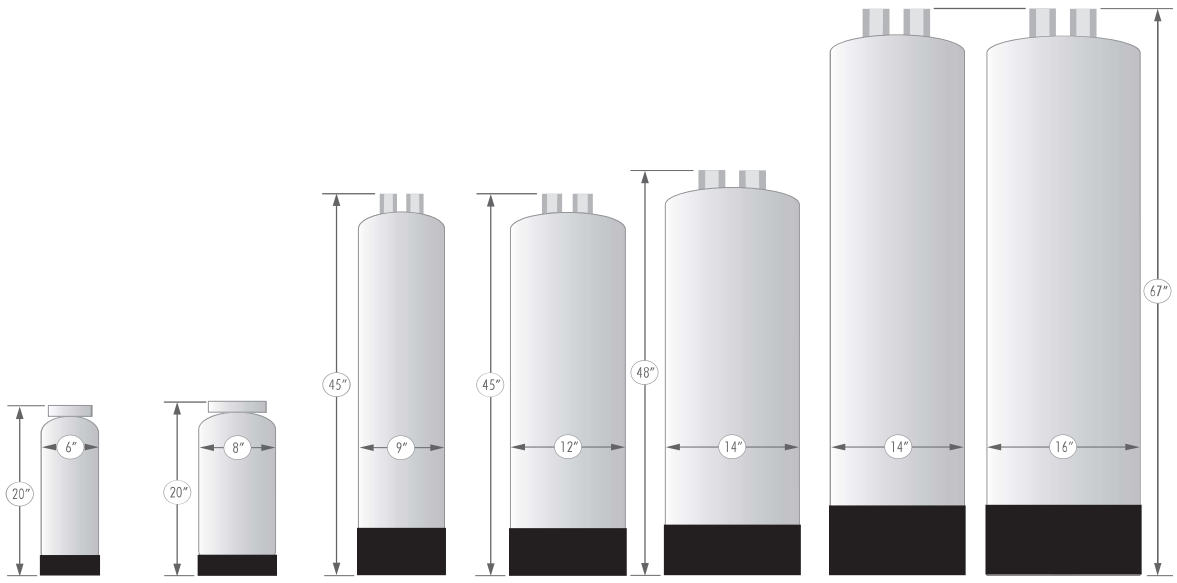
Culligan® dealers use proprietary regeneration systems for maximum quality, efficiency and economy in resin regeneration and fast turnaround of PEDI tanks. This type of systems provide strict Quality Control processes, sanitization of each service unit, document control and tank and resin traceability.

DESIGNED JUST FOR YOU!

Our engineers work with you to determine what system configuration and design is best for your current and future needs. The system is designed based on your feed water quality, flow rate, product water quality requirements and application. Your Culligan® dealer can also provide water treatment systems such as filtration, softening, RO, sterilization and other accessories to meet your particular water treatment needs.

ADVANCED MONITORING AND CONTROL CAPABILITIES WITH THE CULLIGAN® SMART CONTROLLER

The exclusive Culligan® GBE Smart Controller monitors and control the functions of your PEDI system including: current flow rate, daily usage, total usage since new, monitor water quality, auto bank switching, remote monitoring capabilities.



Tank Specifications

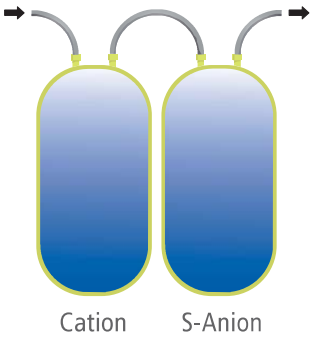
Tank Size (in)	6" x 18"	8" x 18"	9" x 44"	12" x 44"	14" x 47"	14" x 65"	16" x 65"
Media (Ft^3)	0.25 Ft^3	0.45 Ft^3	1.4 Ft^3	2.5 Ft^3	3.5 Ft^3	5.0 Ft^3	6.5 Ft^3
Max Flow (GPM)	0.75 GPM	1.0 GPM	5.0 GPM	8.0 GPM	12.0 GPM	18.0 GPM	22.0 GPM
Min Flow (GPM)	0.25 GPM	0.5 GPM	1.0 GPM	1.5 GPM	2.0 GPM	2.0 GPM	3.0 GPM
In / Out (in)	3/8"Tube	3/8"Tube	3/4"NPT	1"NPT	1"NPT	1"NPT	1"NPT

High Purity Water System – From a Single Tank to a Complete Solution.

Culligan® PEDI high purity water systems are available in several system configurations. Your system is customized for size, capacity, system configuration to help meet your water quality and quantity needs in the most efficient and economical operation.

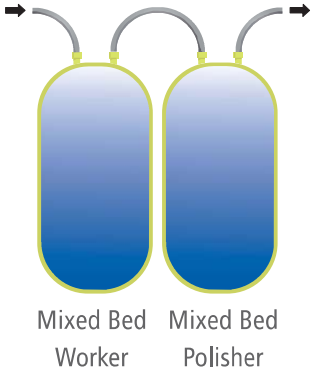
TWO-BED PEDI SYSTEM

This is a typical Ion Exchange DI System where the Cation and Anion Exchangers are connected in series as two separate columns. The Cation column/tank reduces positively charged ions (calcium, sodium, magnesium, potassium, iron, etc). The Anion column/tank reduces negatively charged ions (sulfates, chlorides, carbonates, bicarbonates, nitrate and silica). Strong Base Anion units typically produce deionized water with quality of <0.5 megaohms-cm at a pH of 8-9. Weak Base Anion units produce lower quality water (50 kohms-cm nominal), at pH of 6-7, and do not remove silica and CO_2.



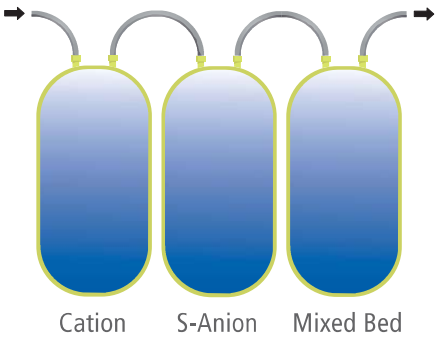
MIXED-BED PEDI SYSTEM

Cation and Anion resins are combined typically in a 40/60 by volume proportion and mixed in a single column/tank. Mixed Bed Deionizers are used in the production of high purity water of >2 megohms-cm resistivity with a more neutral pH than two-bed systems. Typical installation includes two columns in series (worker – polisher) to provide continuous high purity water and back up contingency. Mixed Bed PEDI is used with tap water or as polishing systems downstream from RO water purifiers for the production of ultrapure water of >10 megohms-cm. Up to 18.2 megaohms-cm ultrapure water can be produced.



MULTIPLE-TANK PEDI SYSTEMS

Three tanks or more are connected in series or parallel or a combination of the two. Produces high purity water in any desired quantity. Systems typically consist of a Strong Acid Cation (SAC) column, a Strong Base Anion (SBA) and a Mixed Bed (MB) Polisher column in a number of varying combinations to produce the water quality and quantity required. High-purity water quality of >15 Megaohms-cm, with a more neutral pH can be attained.



SYSTEM ACCESSORIES:

- **Water Quality Instrumentation –** Monitor water quality or control poor quality end points.
- **Recirculation Systems –** Keep high purity water in motion to maintain water purity and sterility.
- **UV Light Sterilizers –** Typical post treatment for continuous bacteria control.
- **Final Filters –** Sub-micron membrane cartridges for final filtration for high purity water production.
- **Automatic Bank Controller –** Operate parallel banks for continuous operation. Switches automatically the exhausted bank to the stand-by bank, provides uninterrupted supply of DI water.
- **Alarm System –** Alerts of the need to call for service.
- **Automatic Safety Shut-off –** Prevents delivery of low quality water.
- **Pre & Post Treatment –** Carbon pre-filters and sediment post filters.

Culligan® Specifications & Operating Data

Model	Tank Size	Resin Qty Ft³	Capacity (Grains)[1]			Flow Rate @ ΔP		Approximate Ship Weight[3] (lbs)
			MB[2]	SBA 2-Bed[2]	WBA 2-Bed[2]	MIN gpm @ psi	MAX gpm @ psi	
D25P	6″ x 18″	0.25	2,500	N/A	N/A	0.25 @ 2	1.0 @ 15	20
D45P	8″ x 18″	0.45	4,500	N/A	N/A	0.25 @ 2	1.0 @ 15	31
D-140-*	9″ x 44″	1.4	12,600	28,000	32,200	1.0 @ 1	5.0 @ 8	75
D-250-*	12″ x 44″	2.5	22,500	50,000	57,500	1.5 @ 1	8.0 @ 8	132
D-350-*	14″ x 47″	3.5	31,500	70,000	80,500	2.0 @ 2	15.0 @ 12	180
D-500-*	14″ x 65″	5.0	45,000	100,000	115,000	2.0 @ 2	18.0 @ 15	280
D-650-*	16″ x 65″	6.5	58,500	130,000	149,500	3.0 @ 2	22.0 @ 15	365

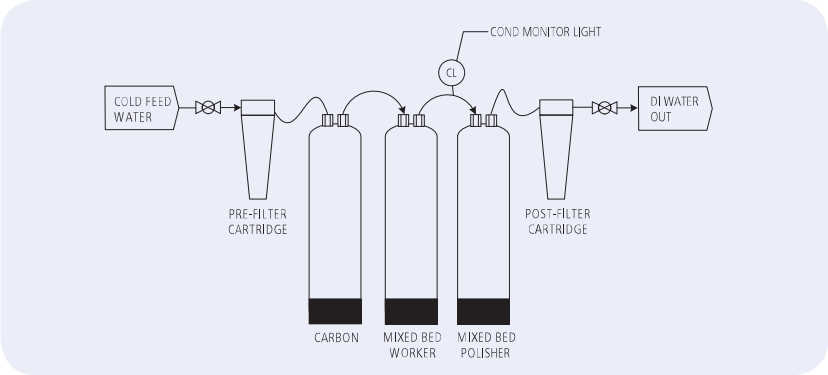
* Model designation is as follows:
MB = Mixed Bed
SB = Strong Base
WB = Weak Base

[1] Capacities based on feed water with 10 gpg (171 mg/l) TDS with 25% Na, 50% alkalinity, free of color, turbidity and organics, at 77° F. These are nominal capacities and will vary with different feed water characteristics, temperature and other factors. For proper sizing a complete water analysis is required.

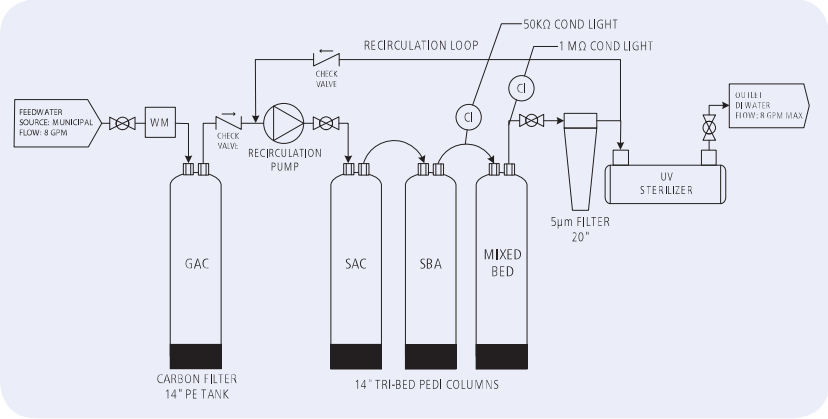
[2] MB = Mixed Bed, SBA 2-Bed = Strong Base Dual Bed, WBA 2-Bed = Weak Base Dual Bed

[3] Shipping weight is per tank

NOTE: The above specifications are for FRP tanks with standard openings.



Typical Mixed Bed PEDI Water System – Where water quality >1 megohms and low to medium water volume is needed.



High Capacity Tri-Bed PEDI System – For quality of >1 megohms with UV Sterilizer for bacteria control and continuous recirculation.

Maximum Operating Parameters:	
Pressure	80 psig
Temperature	95° F (35° C)
Turbidity	<5 NTU
Color	<5 units
Organics	<3 mg/l
Iron & Manganese	<0.3 mg/l
Free Chlorine	<0.2 mg/l
TDS	<600 mg/l
No Hydrogen Sulfide	
No Oil	

Contact your Culligan® Dealer for proper pretreatment

Culligan®

www.culligan.com • 866-787-4293

For over 80 years, Culligan® has made better water. Our global network, comprised of 800+ dealers and international licensees in over 90 countries, is dedicated to addressing your water-related problems. As a worldwide leader in water treatment, our sales representatives and service technicians are familiar with the local water conditions in your area. Being global and local position us to deliver customized solutions to commercial and industrial water issues that affect your business and your bottom line.

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