

# Industrial / Commercial Portable Deionization Tanks The Standard Mixed Bed System



## A HIGH QUALITY WATER SYSTEM

This service is our standard mixed bed system for chemically pure water in the 200,000 to 15meg ohm/cm range. High quality and greater mixed bed capacity are the main features of this resin system.

Model No.	Resin	Flow Rate	Tank Size
4844	1Cu. Ft.	3 GPM	8" x 44"
4447	3.5Cu. Ft.	10 GPM	14" x 47"
4653	5 Cu. Ft.	15 GPM	16" x 53"

ADVANCED **WATER** SOLUTIONS SINCE 1939



430 Leo St, Dayton, Ohio 45404  
800-424-9250 • fax 937-461-0308  
[www.daytonwatersystems.com](http://www.daytonwatersystems.com)

# Standard Mixed Bed Deionizer Exchange Tanks

## Specifications

### Model 4844

Resin Quantity (Cu.Ft.):	1
Resin Type:	Strong Acid Cation & Strong Base Anion Type II
Capacity (Grains Removal):	12,000
Mineral Tank Size (dia x height):	8" x 44"
Quality Deionized Water Product:	50,000 - 5,000,000 ohms
Service Flow Rate (gpm):	up to 5 gpm
Inlet/Outlet Fittings:	3/4" Noryl

### Model 4447

Resin Quantity (Cu.Ft.):	3.5
Resin Type:	Strong Acid Cation & Strong Base Anion Type II
Capacity (Grains Removal):	42,000
Mineral Tank Size (dia x height):	14" x 47"
Quality Deionized Water Product:	50,000 - 5,000,000 ohms
Service Flow Rate (gmp):	up to 10 gpm
Inlet/Outlet Fittings:	1" Noryl

### Model 4653

Resin Quantity (Cu.Ft.):	5
Resin Type:	Strong Acid Cation & Strong Base Anion Type II
Capacity (Grains Removal):	60,000
Mineral Tank Size (dia x height):	16" x 53"
Quality Deionized Water Product:	50,000 - 5,000,000 ohms
Service Flow Rate (gmp):	up to 10 gpm
Inlet/Outlet Fittings:	1" Noryl

### **OPERATING REQUIREMENTS FOR STANDARD DI:**

Operating Temperature Min./Max: 40°F/100°F  
Operating Pressure Min./Max: 25/120 psi  
Chlorine: 0ppm  
Iron: less than 2 ppm  
Turbidity: 5 NTU Maximum  
Exchange Frequency: As required by quality indicating device or BI-Annually

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Dayton Water Systems' Standard DI tanks are identified by model and batch numbers beginning with the number 4. These tanks are readily identifiable by blue tanks or the blue tape at the top of the tank.

Standard resin is a mix of 40% strong acid cation resin in the hydrogen form and 60% strong base Type II anion resin in the hydroxyl form. This resin mixture produces a high quality of deionized water. However, Type II resin is not as effective as Type I at removing silica from the influent water supply. Silica can be problematic in metal or automotive body painting applications.

Standard resin can produce high quality deionized water, up to 16 meg ohm, depending upon certain conditions. These conditions include flow rate, feed water quality, the system set up, condition of the resin, and the amount of time the system sets idle. We guarantee Standard resins in the 1 and 3 Cu. Ft. vessels will produce at least 5 meg ohm initially before exhaustion of the resin bed begins.

Capacity of Standard resin is a maximum of 12,000 grains removal per Cu. Fu. High quality cut off of 200,000 ohms and above has an affect on the capacity of the DI exchange tank. Generally, we reduce the capacity by approximately 20% or 10,000 grains removal per Cu. Ft. when the quality cut-off is 200K and above. As resin begins to exhaust, the quality gradually declines. For this reason, about 20% of the resin's capacity which will produce deionized water of quality below 200,000ohms.

Recirculating systems will also have an affect on the capacity of the exchange tank. A recirculating system is set up to maintain high quality process waters. Water enters the recirculating loop from a RO system or even a raw water supply. The loop contains DI exchange tanks and a recirculating pump to continually pump water through the loop. As the water recirculates through a plumbing loop it returns to the deionizers with some contaminants which will be removed by the deionizers.

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