

*A Hydroflo Household Nitrate  
Removal System*



**N**itrate levels in water above 10 ppm (as nitrogen) are considered a major health hazard for infants under six months of age. These nitrates, once ingested, are broken down in the gastrointestinal system to become the more dangerous “nitrate”. This will inhibit the infant’s blood to transform the oxygen supply in a normal function. The resulting condition is known as “Blue Baby Syndrome” or Cyanosis.

A method of treating this nitrate bearing water is with a system like a water softener. This treatment system contains a strong base anion exchange resin instead of cation resin. The system is regenerated with salt in much the same manner a water softener operates. It would be installed at the point-of-entry not point of use. The Model NSR844MPT will remove nearly 100% of nitrates throughout the entire home.

**Pretreatment Requirements**

Unit pretreatment may be required, we recommend the hardness level not exceed 10 gpg or the iron to exceed 0.3 mg/l raw water pH levels must be between 7.5-8.0 due to the inherent characteristics of the resin.

**Features Include:**

- Non-Corrosive—poly mineral tank, thermo plastic brine tank-Noryl valve reinforced with fiberglass.
- Automatic Bypass—water available even during regeneration.
- High Capacity Resin.
- Turbulator Distribution System.

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## **N** SR 844 MPT Control

The two key components of the “Commander” Electronic Demand System are the microprocessor, a miniature computer located on the circuit board, and a water meter located at the valve outlet. The flow of treated water through the meter causes electrical impulses to be generated, which in turn, are sent to the computer. The computer takes this information and determines the amount of treated water being used. Every night, at 2 A.M.; the past 7 days’ water usage is statistically averaged to anticipate next day. The computer then determines if the nitrate unit has enough remaining capacity to supply the next day’s needs. If not, the unit will regenerate. If the water usage pattern changes, the computer automatically compensates for the change and regenerates only when needed.

During a power outage, all of the data in the microprocessors’ memory is stored in a special electronic chip called NOVRAM, Nonvolatile random Access Memory. This data includes the time-of-day, water usage amount, and the number of days since the last regeneration.

The NOVRAM will maintain the data in its memory. When power is restored the NOVRAM returns the data to the microprocessor and operation resumes as if an outage never occurred.



NSR MPT Control Valve



256 Noryl Bypass is included

## Specifications

## NSR 844 MPT

Mineral (Cu. Ft./Lbs.)	1/45
Mineral Tank Size	8" x 44"
Brine Tank Size	15" x 17" x 33"
Service Flow (gpm)	6
Backwash Rate (gpm)	2.0
Max. Pressure Drop (psi)	10
Pipe Size	3/4"
Max. Pressure (psi)	125
Max. Temperature, F°	100°
Floor Space	15" x 25"

## Capacity

Capacity for Nitrate/Sulfate removal of strong base, type II, Anion exchange Resin	
NO3 + SO4 as percent of	Grains Capacity
Total Anions	per Cu. Ft.
80%	16,800
70%	16,000
60%	14,000
50%	13,500
40%	12,000
30%	11,000
20%	9,000
10%	6,000

Note: Based on 5 Lb. NaCl/Cu.Ft.: 24 inch bed depth: Regeneration flow rate of 0.5 gpm: service exhaustion flow at 2 U.S. gpm per Cu. Ft.