



The Professionals' Choice

North Star[®]
WATER CONDITIONING

A Marmon Water/Berkshire Hathaway Company

The Science Behind Better Water[®]



Water softeners
make your life better
and your pipes and appliances
last longer.

North Star Water Softeners: ***The Professionals' Choice***

Water is your home's most precious resource. You rely on it every day for drinking, cooking, cleaning, washing and bathing. Your water heater, washer, dishwasher, and other appliances all need the best water to work smoothly and efficiently. That's why a quality water softener is so important.

Why Do You Need a Water Softener?

Removing minerals like calcium and magnesium from your water will protect the investment you've made in your home, add to your quality of life and save you time and money. That's because soft water:

- Protects your plumbing, dishwasher, clothes washer, water heater, faucets and fixtures and washbasins from damaging hard water deposits.
- Leaves less soap residue so your showers, tubs and sinks are easier to clean.
- Gives you cleaner dishes with less spotting.
- Provides softer, cleaner, brighter clothes—using $1\frac{1}{4}$ less detergent.
- Helps your clothes last longer.
- Increases the heating efficiency of your water heater up to 29%.
- Makes your skin feel smoother.
- Pays for itself through savings on energy, water, salt, and soaps and detergents.

In short, water softeners make your life better and your pipes and appliances last longer.



Your home is most likely your largest investment.
Protect that investment
with softened water.

How a Water Softener Protects Your Investment:

- Protects your plumbing, dishwasher, clothes washer, water heater, faucets and fixtures and washbasins from damaging hard water deposits.



- Better lathering of shampoos and soaps.
- Makes your skin feel smoother.
- Makes cleaning the shower easy.



- Provides softer, cleaner, brighter clothes—using $\frac{1}{4}$ less detergent.
- Helps your clothes last longer.



- Leaves less soap residue so your showers, tubs and sinks are easier to clean.



- Less spotting on glassware.
- Can improve ice quality.



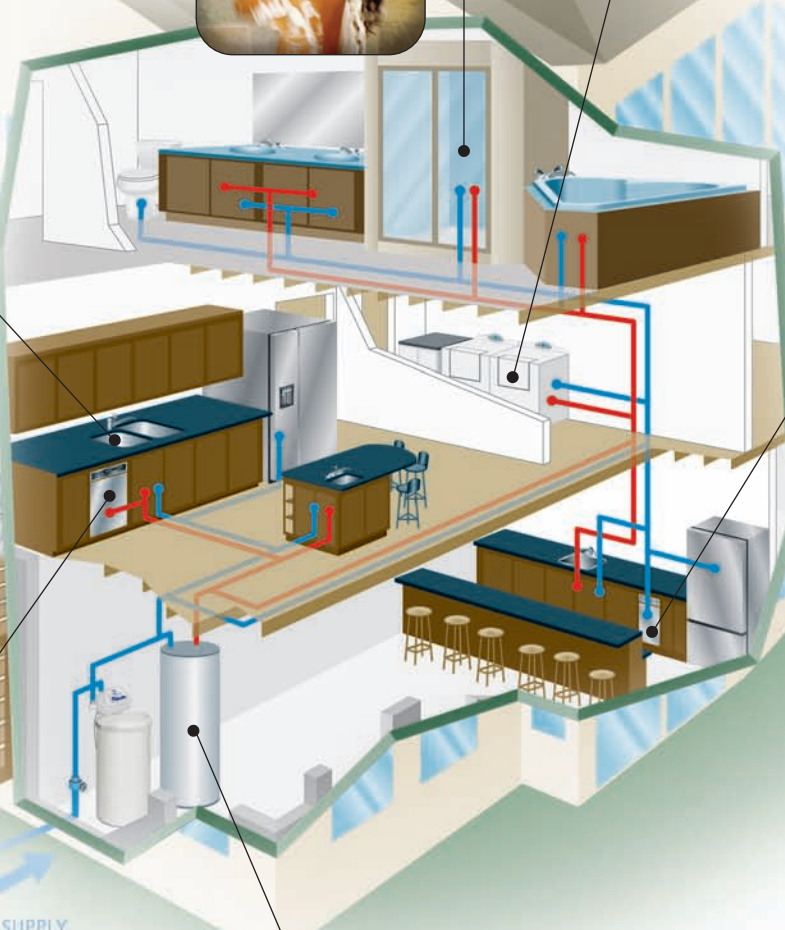
- Gives you cleaner dishes with less spotting.



Increases
the heating efficiency
of your **water heater**
up to **29%.**



Example of mineral buildup in an unprotected water heater.





Water is your home's
most **precious**
resource.

Why Choose North Star?

North Star is the choice of professionals for four reasons: Experience, quality, innovation and service.

Experience

North Star is an established company with a reputation for quality, reliability and service. The company has been manufacturing quality water treatment products since 1925. Today, they're the world's largest manufacturer of residential water treatment systems. *That's experience.*

Quality

Quality is built into every North Star water softener. North Star manufactures 95% of every water softener part, including salt tanks, mineral tanks, valves and controls. North Star's manufacturing facility is ISO 9001-2000 certified to ensure the highest level of quality. In addition, North Star water softeners are designed and built with fewer moving parts—and no metallic parts to become rusted or corroded. The result is a solidly constructed, reliable water softener that gives you precisely conditioned water day after day. *That's quality.*

Innovation

North Star uses advanced filtration technology and state-of-the-art computer controls to give you uniformly consistent softened water—together with the greatest salt and water savings possible. *That's innovation.*

Service

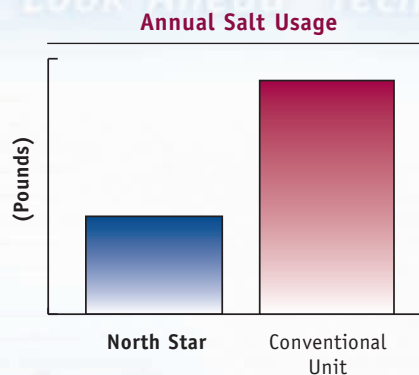
North Star water softeners are The Professionals' Choice and are sold exclusively through professional contractors so you know the job will be done right the first time. Also, each North Star water softener is backed by an industry-leading warranty ensuring quality and reliability. If there's a problem with the water softener, they will fix it. *That's service.*

Up To 60% Less Salt Use

With Patented **North Star "Look Ahead" Technology**

Our softeners have a maximum efficiency of about **5300 grains removed per pound of salt used.**

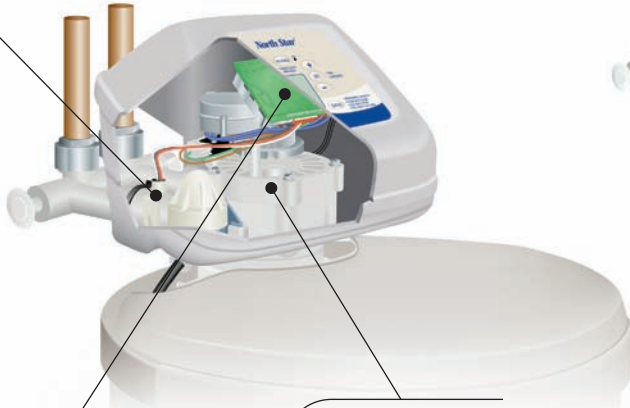
Many mechanical timer **units use over twice the amount of salt** that a North Star unit uses.



Why Choose North Star Water Softeners?

North Star water softeners are the professionals' choice. Here's why.

Turbine Water Meter: Accurately measures the amount of water being softened down to 0.2 gallons per minute.



Heavy-Duty Valve: Has fewer moving parts than other valves—so there's less to go wrong. With our proven valve design there are over 2 million systems in operation today.

"Look Ahead" Technology: The brains of the softener! Our patented programming monitors your water use and determines when a regeneration of the softener is needed. The system learns your water use patterns and actually gets more efficient as it learns. "Look Ahead" also calculates the precise amount of salt and water to use to regenerate only the portion of the resin beads that have been used (depleted). This saves you salt and water and is why North Star softeners lead the industry in rated efficiencies.

Super Cap® Time Keeper: In the event of a loss of power, North Star water softeners maintain accurate time for up to 72 hours—without batteries. For longer power outages, only the current time needs to be re-entered, the system remembers the rest.

Environseal™ Circuitry Protection: North Star water softeners are securely sealed to protect circuitry from salt corrosion and high humidity so your water softener lasts longer.

No-Worry Setting: No vacation setting is required. If you're not using water, it does not regenerate. That saves salt and water.

Counter-Current Regeneration: North Star pioneered this method where brine water is drawn into the bottom of our resin tanks which enhances the regeneration process. This is the preferred method but practiced by only select manufacturers.

Learn How It Works

Go to www.northstar.conditioning.com to see an animated water softener.

24 Volt Electrical System: Reduces electrical hazards.

High Impact Salt Storage Tank:

The high-density polyethylene tank is designed to withstand impacts and retains its shape even when full of salt.

Brine Valve Assembly:

Proven design ensures precise brining for the life of the softener.



High Capacity Resin: North Star uses a special long-life resin for the most efficient use of salt and water.

Double-Lined, Reinforced Mineral Tank: All North Star water softeners are double-lined for strength and durability.

Resin Bed Agitator:

North Star water softeners use water pressure to constantly agitate the resin bed. This keeps the bed free of iron, dirt and other solids so the softener runs at peak efficiency and capacity.



*North Star is the
choice of
professionals*

North Star Ultra Phone Diagnostics

If you ever have a problem with a North Star Ultra-equipped water softener, just touch the ESP phone symbol on the control panel, call the toll-free number on the display, answer a few questions, and hold the phone to the face plate. The Ultra electronics will then transmit its operating history and current operating data. A service technician will analyze the data and determine whether an adjustment is needed. This saves you service calls, time and money.

**ELECTRONIC
SYSTEM PROFILE**

Which North Star Water Softener is Right for You?

All North Star water softeners are built with the same quality and efficiency and are designed to save you time and money. Which model is right for you? Use the steps below to help guide you in your decision.

Step 1—Capacity

Determine the grain capacity of the unit for you. Family size, peak flow rate needs, hardness and iron minerals in water, and desired regeneration frequency, are some of the considerations to use when sizing the proper system. The chart below is a general reference.

MINIMUM CAPACITY NEEDED

Number of People in House	Grains of Hardness in Water			
	3-6	5-11	10-21	21+
2	15,000–30,000			
3		25,000–30,000		
4				
5+			40,000+	

Step 2—Style

Choose between the space saving cabinet models or the versatile two-tank models.

Step 3—Electronics

With some models you can choose the electronic package.



(Ultra Demand-UD)



(Electronic Demand-ED)

Ultra Demand-UD

- Backlit LCD Display—Easier to read.
- Perfect for basement or poorly lit locations.
- Features patented “Look Ahead” technology for peak performance.
- Quick Set-up. Set the time and hardness and you are done.
- Display shows:
Time, Hardness, Regeneration Time
% Remaining Capacity, Current Flow
Total Daily Usage and Average Daily Usage
- Efficiency Selector—Choose either normal or high efficiency mode.
- Diagnostics:
Electronic Self Diagnosis, Days in Service
Total Number of Regenerations, Turbine Check and Switches Check
- Gallons/Liters choice
- 12 or 24 hour choice
- Selectable Fixed Recharge Frequency
- Adjustable Backwash Setting

Electronic Demand-ED

- Standard LCD Display.
- Features patented “Look Ahead” technology for peak performance.
- Quick Set-up. Set the time and hardness and you are done.
- Display shows:
Time, Hardness and Regeneration Time
- Efficiency Selector—Choose either normal or high efficiency mode.

Specifications

CABINET MODELS (All-in-one construction)

Model	Max Capacity (Grains)	Resin (ft³)	Standard Connection Size	Valve	Rated Service Flow Rate (gpm)	Intermittent Flow Rate (gpm @ 15 psi drop)	Rated Clearwater Iron Removal (ppm)	Electronics	Efficiency (grains removed per lb of salt)
NSC15ED	15,700	0.5	*3/4"	Standard	6	8.5	3	ED	4680
NSC25ED	26,600	0.7	*3/4"	Standard	6	8.4	7	ED	5000
NSC30UD	30,200	0.78	*3/4"	Standard	7.5	7.9	8	UD	5120
NSC30UD1	34,300	0.97	**1"	High Flow	7.5	9.0	5	UD	5030
NSC40UD1	39,000	1.08	**1"	High Flow	10	10.2	5	UD	5100

TWO-TANK MODELS (Separate resin tank and brine tank, Versatile installation options)

Model	Max Capacity (Grains)	Resin (ft³)	Standard Connection Size	Valve	Rated Service Flow Rate (gpm)	Intermittent Flow Rate (gpm @ 15 psi drop)	Rated Clearwater Iron Removal (ppm)	Electronics	Efficiency (grains removed per lb of salt)
NST25ED‡	26,600	0.7	*3/4"	Standard	6	8.4	7	ED	5000
NST30UD	30,200	0.78	*3/4"	Standard	7.5	7.9	8	UD	5120
NST45UD1	45,400	1.26	**1"	High Flow	10	11.0	12	UD	5120
NST70UD1	70,000	1.94	**1"	High Flow	14‡‡	14.5	19	UD	5110

*1" adapters available

**1 1/4" and 1 1/2" adapters available

‡ Comes with Clear-Vu™ tank wrap in place of resin tank shroud

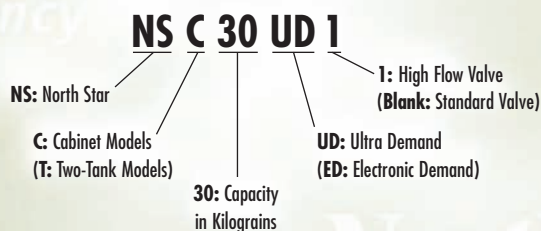
‡‡ Peak flow is 22.7 @ 30 psi drop

Dimensions

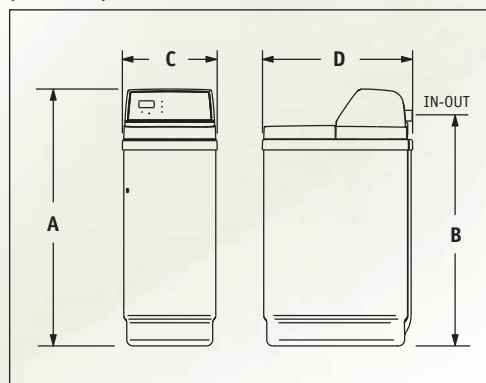
Model	A	B	C	D	E
Cabinet Models					
NSC15ED	32"	27 1/4"	11 1/2"	18 3/4"	—
NSC25ED	48 3/4"	41 1/4"	18 1/4"	—	—
NSC30UD	48 3/4"	41 1/4"	18 1/4"	—	—
NSC30UD1	50 3/8"	41 5/8"	18 1/4"	—	—
NSC40UD1	50 3/8"	41 5/8"	18 1/4"	—	—
Two-Tank Models					
NST25ED	48 3/4"	41 1/4"	11 1/2"	39"	18"
NST30UD	48 3/4"	41 1/4"	11 1/2"	39"	18"
NST45UD1	50 3/8"	41 5/8"	14"	39"	18"
NST70UD1	64"	55 1/2"	14"	39"	18"

Note: All models include by-pass valve, manual, transformer, drain tubing and installation parts bag.

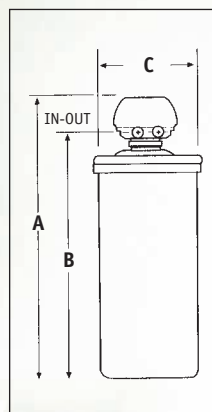
SAMPLE NORTH STAR MODEL NUMBER BREAKDOWN:



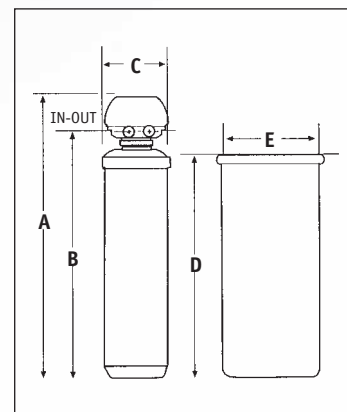
SPACE SAVER MODEL (NSC15ED)



CABINET MODEL



TWO-TANK MODEL

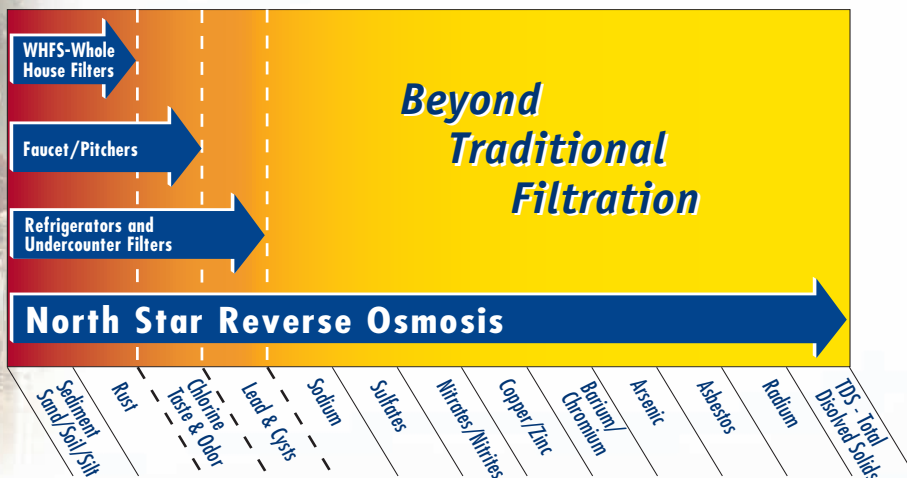


North Star® Reverse Osmosis System

The Professionals' Choice



North Star Reverse Osmosis *drinking water system*
provides the ultimate
in purified drinking water...



North Star Reverse Osmosis Features and Benefits:

- Easy-to-change filters
- Auto shutoff valve to prevent waste
- NSF tested and certified
- Long-reach, ceramic disc design with adjustable flow rate faucet in chrome is included
- Brushed Nickel and Oil-Rubbed Bronze faucet finishes are also available
- Water quality monitor indicates RO performance and when it's time to change filters
- No electricity required
- 15 gallons of water per day
- 2.4 gallon storage tank provides plenty of water when needed
- Reduces Lead, Cysts, Sodium, Nitrates, Radium, Selenium, TDS and more
- Ultimate drinking water right at your sink
- Provides clear ice cubes, more flavorful beverages, and easier baby formula mixing
- Use for drinking, cooking, washing produce, pet water, watering indoor plants, aquariums and irons
- Water the way it is meant to be...from North Star

Specifications

Model	NSRO42C4
Daily Production Rate	15 gallons
Storage Tank Size/Capacity	4/2.4 gallons
Flow Rate at Faucet	Up to 1.0 gpm
Pre/Post Carbon Filter Life	750 gal./6 months
Membrane Life	1 – 3 years

Warranty (See Owner's manual for specifics)

1 year on parts

90 days on membrane

Designer Faucet—Three Faucet Finishes

Ceramic disc design with adjustable flow rate.

Polished Chrome (*comes standard*)

Oil-Rubbed Bronze (*purchased separately*)

Brushed Nickel (*purchased separately*)

Water Quality Monitor

When the faucet is IN USE indicator lights show RO performance and when to change filters.

North Star Drinking Water Systems



PRE/POST FILTERS O.K.



CHANGE PRE/POST FILTERS



CHANGE MEMBRANE

Model	NSR042C4	Typical Refrigerator and Undercounter Filters	Typical Faucet/Pitcher Pitcher Filters	WHFS
Reduces:				
Sediment (Sand, Soil, Silt)	✓	✓	✓	✓
Rust	✓	✓	✓	✓
Chlorine (Taste & Odor)	✓	✓	✓	
Lead and Cysts	✓	✓		
Sodium	✓			
Sulfates	✓			
Nitrates/Nitrites	✓			
Copper/Zinc	✓			
Barium/Chromium	✓			
Arsenic	✓			
Asbestos	✓			
Radium	✓			
TDS (Total Dissolved Solids)	✓			

WHOLE HOME CENTRAL WATER SYSTEM

Model # EPWHCW



A PROVEN SYSTEM FOR REMOVING CHLORINE TASTE AND ODOR

- Delivers clean, filtered premium water to every faucet in your home, including your shower!
- Removes unpleasant chlorine taste and odor, leaving great-tasting water.
- Eco-friendly
 - No salt is used.
 - Low energy usage. 24V power supply.
 - No plastic bottles in the landfill.
- Designed for high performance and maximum efficiency
 - Sediment, chlorine and other adverse contaminants that affect taste and odor are removed.
 - Automatically cleans itself. No filter cartridges to change or replace, saving you time and money.
 - High flow rate of 9.6 gpm.
 - High-tech LED display with push button controls.
 - Space-saver. Less than 1 sq. ft. footprint.



WHOLE HOME AUTOMATIC SEDIMENT FILTER

Model # EPASF1



PRODUCT FEATURES

- Point of Entry
Intended to filter water for entire home
- Self-Cleaning
Effectively rinses loose particulate from the filter screen
Minimal pressure drop due to dirty/plugged filters
Programmable cleaning
Backlit LCD display shows number of days until next clean cycle
- Battery Operated - 9V
Optional 110 volt transformer
Low battery indicator
- Brass Threaded Inserts
1" NPT pipe thread
Avoid stripping plastic threads
Universal connections
- Large Capacity Filter Screen
More screen area for less pressure drop
Longer interval between cleaning
Filter can be manually cleaned by using the Clean Now button
- Filter Screens
Heavy-duty stainless steel screen
Three mesh sizes available to fit all applications
60 micron standard
- Clear Sump
Allows viewing flow, sediment removal and auto clean feature

Includes All Necessary Installation Equipment

Drain Line - 3/8" I.D. x 10 ft.

Battery

Bracket

Want to Know More?

Additional information and detailed specifications about North Star water softeners are available online at www.northstarconditioning.com.

Warranty:

Our industry leading warranty demonstrates how North Star backs the quality and dependability of each softener.

From date of installation:

- 1 year on complete unit
- 3 years on electronic control board
- 3 years on valve
- 5 years on salt storage tank
- 10 years on mineral tank

Dear Valued Customer,

Thank you for considering North Star products. As the world's largest manufacturer of water treatment products – manufactured in the United States – our goal is to get it right the first time by offering innovative, efficient, reliable and affordable equipment. Since 1925, North Star has been driven by a desire to provide our customers quality products and leading-edge performance. The same holds true today.



North Star®
WATER CONDITIONING

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www.northstarconditioning.com



For further information contact:

**MORTON®
SYSTEM SAVER®
PELLETS**

**RECOMMENDED
FOR THIS
WATER
SOFTENER**

