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› North Star NST30ED1-30,200GR Two Tank Water Softener User Manual

## North Star NST30ED1

# North Star NST30ED1-30,200GR Two Tank Water Softener User Manual

Model: NST30ED1

## 1. INTRODUCTION

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This manual provides essential information for the installation, operation, and maintenance of your North Star NST30ED1-30,200GR Two Tank Water Softener. Please read these instructions carefully before operating the unit to ensure proper function, safety, and longevity. Retain this manual for future reference.



Image 1: General view of the North Star NST30ED1 Two Tank Water Softener.

## 2. SPECIFICATIONS

The following table details the key specifications for the North Star NST30ED1 Two Tank Water Softener.

| Feature               | Value (NST30ED1) |
|-----------------------|------------------|
| Model Number          | NST30ED          |
| Part Number           | 7366431          |
| Household Size        | 1-5+ people      |
| Max Capacity (Grains) | 30,200           |
| Resin (cu. ft.)       | 0.78             |

| Feature                                            | Value (NST30ED1) |
|----------------------------------------------------|------------------|
| Activated Carbon                                   | No               |
| Standard Connection Size                           | 1" NPT           |
| Valve                                              | 3/4"             |
| Rated Service Flow Rate (gpm)                      | 7.3              |
| Intermittent Flow Rate (gpm @ 30 psi drop)         | 11.0             |
| Clear Water Iron Removal (ppm)                     | 8                |
| Electronic Demand                                  | Yes              |
| Maximum Efficiency (grains removed per lb of salt) | 5,090            |

# CHOOSE THE WATER SOFTENER THAT'S **RIGHT FOR YOU**



| SPECIFICATIONS                                                                                                                | CABINET MODELS |         |         |         | TWO-TANK MODELS |          |          |
|-------------------------------------------------------------------------------------------------------------------------------|----------------|---------|---------|---------|-----------------|----------|----------|
| Model Number                                                                                                                  | NSC22          | NSC31   | NSC42   | NSCWHC  | NST30ED         | NST45ED1 | NST70ED1 |
| Part Number                                                                                                                   | NSC2218        | NSC3118 | NSC4218 | NSCWHC1 | 7366431         | 7366449  | 7366457  |
| Household Size                                                                                                                | 1-4            | 1-5+    | All     | All     | 1-5+            | 1-6+     | All      |
| Max Capacity (Grains)                                                                                                         | 22,100         | 31,300  | 42,100  | 31,100  | 30,200          | 45,300   | 70,000   |
| Resin (cu. ft.)                                                                                                               | 0.65           | 0.81    | 1.20    | 0.98    | 0.78            | 1.26     | 1.94     |
| Activated Carbon                                                                                                              | No             | No      | No      | Yes     | No              | No       | No       |
| Standard Connection Size                                                                                                      | 1" NPT         | 1" NPT  | 1" NPT  | 1" NPT  | 1" NPT          | 1" NPT   | 1" NPT   |
| Valve                                                                                                                         | 3/4"           | 3/4"    | 1"      | 1"      | 3/4"            | 1"       | 1"       |
| Rated Service Flow Rate (gpm)                                                                                                 | 7.2            | 7.2     | 9.9     | 8.0     | 7.3             | 10.0     | 13.5     |
| Intermittent Flow Rate (gpm @ 30 psi drop)                                                                                    | 11.3           | 11.8    | 17.8    | 17.8    | 11.0            | 18.6     | 21.0     |
| Clear Water Iron Removal (ppm)                                                                                                | 6              | 8       | 11      | 3       | 8               | 12       | 19       |
| Electronic Demand                                                                                                             | Yes            | Yes     | Yes     | Yes     | Yes             | Yes      | Yes      |
| Maximum Efficiency (grains removed per lb of salt)                                                                            | 4,474          | 5,090   | 4,940   | 4,780   | 5,090           | 5,070    | 5,080    |
| DIMENSIONS                                                                                                                    |                |         |         |         |                 |          |          |
| Dimension A                                                                                                                   | 47.75"         | 47.75"  | 48"     | 48"     | 48.75"          | 50"      | 65.75"   |
| Dimension B                                                                                                                   | 41.5"          | 41.5"   | 41.5"   | 41.5"   | 41.25"          | 41.25"   | 57"      |
| Dimension C                                                                                                                   | 16.5"          | 16.5"   | 17"     | 17"     | 8.25"           | 10.5"    | 12.25"   |
| Dimension D                                                                                                                   | 19.75"         | 19.75"  | 21"     | 21"     | 11.5"           | 14"      | 14"      |
| Dimension E                                                                                                                   | 3.375"         | 3.375"  | 3.75"   | 3.75"   | 3.375"          | 3.75"    | 3.75"    |
| WARRANTY                                                                                                                      |                |         |         |         |                 |          |          |
| 1 year on complete unit   3 years on electronic control board and valve body   10 years on salt storage tank and mineral tank |                |         |         |         |                 |          |          |

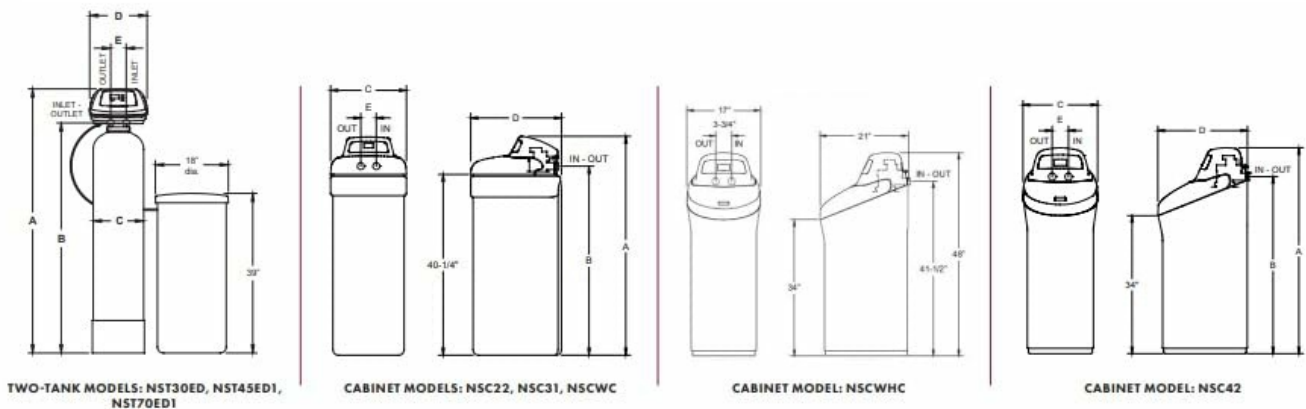


Image 2: Comprehensive specifications for various North Star water softener models, including NST30ED.

## 3. DIMENSIONS

The physical dimensions of the NST30ED1 model are crucial for installation planning. Refer to the table and diagram

below.

| Dimension   | Value (NST30ED1) |
|-------------|------------------|
| Dimension A | 48.75"           |
| Dimension B | 41.25"           |
| Dimension C | 8.25"            |
| Dimension D | 11.5"            |
| Dimension E | 3.375"           |

# CHOOSE THE WATER SOFTENER THAT'S **RIGHT FOR YOU**



| SPECIFICATIONS                                                                                                                | CABINET MODELS |         |         |         | TWO-TANK MODELS |          |          |
|-------------------------------------------------------------------------------------------------------------------------------|----------------|---------|---------|---------|-----------------|----------|----------|
| Model Number                                                                                                                  | NSC22          | NSC31   | NSC42   | NSCWHC  | NST30ED         | NST45ED1 | NST70ED1 |
| Part Number                                                                                                                   | NSC2218        | NSC3118 | NSC4218 | NSCWHC1 | 7366431         | 7366449  | 7366457  |
| Household Size                                                                                                                | 1-4            | 1-5+    | All     | All     | 1-5+            | 1-6+     | All      |
| Max Capacity (Grains)                                                                                                         | 22,100         | 31,300  | 42,100  | 31,100  | 30,200          | 45,300   | 70,000   |
| Resin (cu. ft.)                                                                                                               | 0.65           | 0.81    | 1.20    | 0.98    | 0.78            | 1.26     | 1.94     |
| Activated Carbon                                                                                                              | No             | No      | No      | Yes     | No              | No       | No       |
| Standard Connection Size                                                                                                      | 1" NPT         | 1" NPT  | 1" NPT  | 1" NPT  | 1" NPT          | 1" NPT   | 1" NPT   |
| Valve                                                                                                                         | 3/4"           | 3/4"    | 1"      | 1"      | 3/4"            | 1"       | 1"       |
| Rated Service Flow Rate (gpm)                                                                                                 | 7.2            | 7.2     | 9.9     | 8.0     | 7.3             | 10.0     | 13.5     |
| Intermittent Flow Rate (gpm @ 30 psi drop)                                                                                    | 11.3           | 11.8    | 17.8    | 17.8    | 11.0            | 18.6     | 21.0     |
| Clear Water Iron Removal (ppm)                                                                                                | 6              | 8       | 11      | 3       | 8               | 12       | 19       |
| Electronic Demand                                                                                                             | Yes            | Yes     | Yes     | Yes     | Yes             | Yes      | Yes      |
| Maximum Efficiency (grains removed per lb of salt)                                                                            | 4,474          | 5,090   | 4,940   | 4,780   | 5,090           | 5,070    | 5,080    |
| DIMENSIONS                                                                                                                    |                |         |         |         |                 |          |          |
| Dimension A                                                                                                                   | 47.75"         | 47.75"  | 48"     | 48"     | 48.75"          | 50"      | 65.75"   |
| Dimension B                                                                                                                   | 41.5"          | 41.5"   | 41.5"   | 41.5"   | 41.25"          | 41.25"   | 57"      |
| Dimension C                                                                                                                   | 16.5"          | 16.5"   | 17"     | 17"     | 8.25"           | 10.5"    | 12.25"   |
| Dimension D                                                                                                                   | 19.75"         | 19.75"  | 21"     | 21"     | 11.5"           | 14"      | 14"      |
| Dimension E                                                                                                                   | 3.375"         | 3.375"  | 3.75"   | 3.75"   | 3.375"          | 3.75"    | 3.75"    |
| WARRANTY                                                                                                                      |                |         |         |         |                 |          |          |
| 1 year on complete unit   3 years on electronic control board and valve body   10 years on salt storage tank and mineral tank |                |         |         |         |                 |          |          |

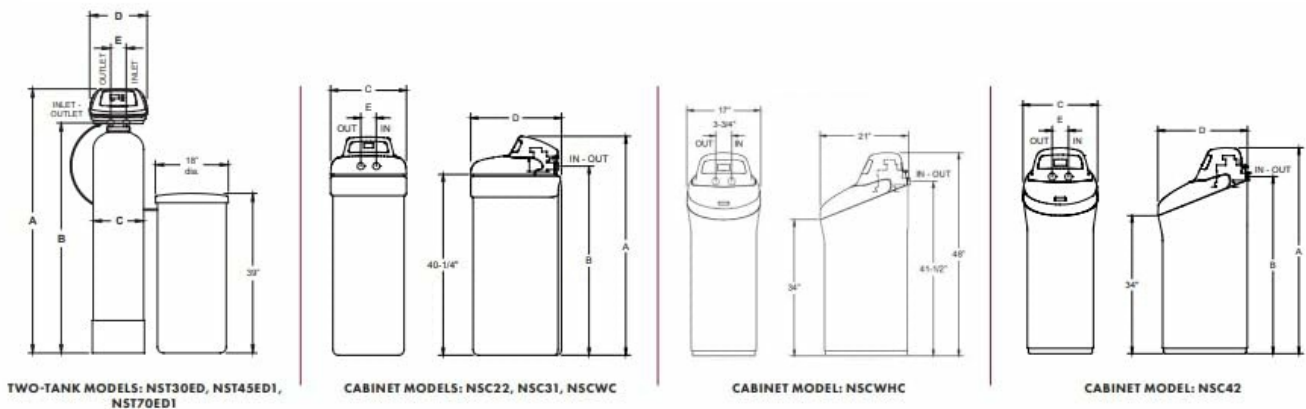


Image 3: Dimension diagram for two-tank models (NST30ED, NST45ED1, NST70ED1), illustrating points A, B, C, D, E for measurement reference.

## 4. SETUP AND INSTALLATION

Proper installation is critical for the optimal performance of your water softener. It is recommended that installation be performed by a qualified plumber or technician.

- **Location:** Choose a dry, level location near a drain and your main water supply. Ensure adequate space for maintenance and salt replenishment.
- **Bypass Valve:** The installation kit includes a custom-fit bypass valve. This valve allows you to bypass the softener for outdoor watering or in case of maintenance. Ensure it is installed correctly according to the plumbing diagram.
- **Plumbing Connections:** Connect the water softener to your main water line using appropriate plumbing fittings. The unit features a 1" NPT standard connection size and a 3/4" valve.
- **Drain Line:** Connect the drain line to an appropriate drain, ensuring it has an air gap to prevent back-siphonage.
- **Electrical Connection:** Plug the power cord into a grounded electrical outlet. The unit requires electronic demand for operation.
- **Initial Startup:** Follow the specific instructions in the full product manual for initial system flushing and programming.

## 5. OPERATING INSTRUCTIONS

The North Star NST30ED1 water softener is designed for efficient and automatic operation.

- **AutoSense Technology:** The system utilizes AutoSense Technology to continuously monitor your household's water usage. This intelligent feature automatically determines the optimal frequency and timing for regeneration cycles, minimizing both salt and water consumption.
- **Reverse Flow Regeneration:** During regeneration, the system employs reverse flow regeneration. This method is highly effective in cleaning the resin bed, ensuring maximum softening capacity and efficiency.
- **Electronic Demand:** The unit operates on an electronic demand system, meaning it regenerates only when necessary, based on actual water usage, rather than on a fixed timer. This optimizes efficiency and reduces waste.
- **Control Panel:** Refer to the full product manual for detailed instructions on setting the time, hardness level, and other programmable features via the electronic control panel.

## 6. MAINTENANCE

Regular maintenance ensures the continued efficient operation of your water softener.

- **Salt Level:** Periodically check the salt level in the brine tank. Ensure it remains above the water level, ideally at least halfway full. Use high-quality water softener salt (pellets or crystals).
- **Brine Tank Cleaning:** It is recommended to clean the brine tank annually to remove any sediment or salt bridges that may form.
- **System Checks:** Occasionally inspect the system for any leaks, unusual noises, or error codes on the control panel.
- **Bypass Valve:** Ensure the bypass valve is in the correct position for normal operation.

## 7. TROUBLESHOOTING

If you encounter issues with your water softener, consult the following basic troubleshooting guide. For complex problems, contact customer support.

| Problem | Possible Cause | Solution |
|---------|----------------|----------|
|---------|----------------|----------|

| Problem                   | Possible Cause                                                              | Solution                                                            |
|---------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------|
| No soft water             | Bypass valve open; no salt in brine tank; power outage; incorrect settings. | Close bypass valve; add salt; check power supply; verify settings.  |
| Low water pressure        | Clogged resin bed (rare); system in regeneration cycle.                     | Wait for regeneration to complete; contact support if persistent.   |
| Excessive salt usage      | Incorrect hardness setting; frequent regeneration cycles.                   | Adjust hardness setting; ensure AutoSense is functioning correctly. |
| Salt bridge in brine tank | Salt caked together, preventing water from dissolving it.                   | Break up the salt bridge with a broom handle or similar tool.       |

## 8. WARRANTY INFORMATION

The North Star NST30ED1 water softener comes with the following warranty:

- **1 year** on the complete unit.
- **3 years** on the electronic control board and valve body.
- **10 years** on the salt storage tank and mineral tank.

Please retain your proof of purchase for warranty claims. Refer to the full warranty document included with your product for complete terms and conditions.

## 9. CUSTOMER SUPPORT

For technical assistance, replacement parts, or further information, please contact North Star customer support. Have your model number (NST30ED1) and part number (7366431) ready when you call.

*Contact information is typically found on the manufacturer's website or in the packaging materials.*

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### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

**Details**

Model number, symptoms, what you tried, or the section of the manual you are using.

**Submit question**