

The Nelsen NRO4-50 is a 4-stage Reverse Osmosis (RO) system designed for residential drinking water applications. Here are the detailed specifications:

Nelsen RO Sys 4-Stage, 50 gpd RO (NRO4-50)

General:

- **System Type:** 4-Stage Reverse Osmosis Drinking Water System
- **Manufacturer:** Nelsen Corporation
- **Daily Flow Rate:** 50 Gallons Per Day (GPD)
- **Application:** Under-sink residential drinking water purification

Stages of Filtration:

1. Stage 1: Sediment Pre-Filter

- **Function:** Removes sediment, rust, dirt, and other solid debris.
- **Type:** 5 Micron Polypropylene Sediment Cartridge Filter.
- **Housing:** Clear pre-filter housing for visual inspection.

2. Stage 2: Carbon Block Pre-Filter

- **Function:** Removes chlorine, chloramines, VOCs, and other contaminants that cause bad taste and odor, protecting the RO membrane.
- **Type:** Solid Block Carbon (e.g., 5 or 10 Micron Carbon Block).

3. Stage 3: Reverse Osmosis Membrane

- **Function:** The heart of the RO system. A semi-permeable membrane that rejects a high percentage (typically 95-98%) of dissolved solids, including lead, copper, barium, chromium, mercury, sodium, cadmium, fluoride, nitrite, nitrate, selenium, and other harmful contaminants.
- **Type:** Thin Film Composite (TFC) membrane.
- **Capacity:** 50 GPD.

4. Stage 4: Post-Carbon Filter (Inline Granular Activated Carbon - GAC)

- **Function:** Provides a final "polishing" of the water after it leaves the storage tank, removing any residual tastes or odors.
- **Type:** Inline Granular Activated Carbon (GAC) cartridge.

System Components & Features:

- **Storage Tank:** 3.2 Gallon NSF approved storage tank (typically white).
- **Fittings:** Utilizes push-connect fittings for easy installation. Includes both 1/4" and 3/8" quick connect fittings (3/8" tubing often used for tank and faucet).
- **Faucet:** Chrome long-reach, lead-free faucet.
- **Valves:**
 - Automatic Shut-Off valve.
 - Angle Stop Adapter Valve for connecting to the cold water line.
 - Drain Saddle Valve for connection to the drain.
- **Included Accessories:** Filter wrench for easy cartridge changes, all necessary tubing (e.g., yellow for production, red for waste, white for source).
- **Housings:** Double O-ring housings for leak prevention.
- **Mounting:** Typically mounted on a single bracket for compactness and ease of installation.

Operating Conditions (Recommended):

- **Minimum Water Pressure:** 30 psi (some sources indicate 50 psi for optimal performance).
- **Maximum Water Pressure:** 100 psi.
- **Maximum Water Operating Temperature:** 40° - 100°F (4° - 38°C)
- **Recommended Max TDS (Total Dissolved Solids):** <300 ppm (some sources state up to 2,000 ppm maximum, but lower TDS will result in better performance and membrane life).
- **Iron (Max):** 0.3 ppm
- **Hardness (Max):** <15 gpg (grains per gallon)
- **Hydrogen Sulfide:** 0.0 ppm
- **Manganese (Max):** <0.05 ppm
- **Turbidity (Max):** <1 NTU
- **pH Range:** 3-11

Dimensions (Approximate - Main Unit without tank):

- "Footprint" space roughly 5" deep x 16" long x 18" high.
- Storage tank is approximately 11" wide x 14" high.

Maintenance (General Guidelines):

- **Sediment & Carbon Pre-Filters (Stages 1 & 2):** Recommended change every 6-12 months, or as needed based on water quality and usage.
- **RO Membrane (Stage 3):** Recommended change every 24 months (2 years) or based on periodic TDS rejection tests.
- **Post-Carbon Filter (Stage 4):** Recommended change every 6-12 months.

Warranty:

- Components typically warranted for three year from installation (excluding membrane, pre & post filters).
- Holding tank typically has a five-year warranty.

This information is compiled from various sources and represents typical specifications for the Nelsen NRO4-50 RO system. Specific details might vary slightly based on the exact model year or distributor. Always refer to the product's official user manual for the most accurate and up-to-date specifications.

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