MODEL NB/FHWR-3S1-20 · 3-STAGE POINT-OF-ENTRY

Whole-Home Filtration System

Point-of-entry water refinement — pure water at every tap in the home

300,000 L	50-60 L/min	1-Micron	600 kPa
SYSTEM CAPACITY	PEAK FLOW RATE	ABSOLUTE RATING	MAX. PRESSURE

Housing & Enclosure

Point-of-entry system hardware

Integrated Gauge Housing

All pressure gauges are fully enclosed within a protective cover, shielding them from accidental impact and enabling accurate system monitoring without requiring panel removal during routine inspections.

Snap-Fit Panel System

Front panels attach via a hold-and-press clip mechanism — no screws, no tools, no risk of corroded fasteners. Panels release cleanly for fast filter access and re-seat securely every time.

304 Stainless Steel Enclosure

Marine-grade 304 stainless outer casing resists UV degradation, surface corrosion, and humidity — suitable for both indoor utility rooms and sheltered outdoor installations.

Optional Ground-Mount Back Plate

A full-enclosure rear panel for floor-level or wall-restricted installations. Provides complete housing protection for the plumbing and filter vessels. Available as a nominal-cost add-on.

All-Metal Pressure Gauges

Stainless steel body with glass face. UV-stabilised and corrosion-resistant for the long service life expected of a permanently installed system. Reads pre- and post-filter pressure differential.

Brass Inlet & Outlet Fittings

Heavy-gauge brass connectors rated for elevated line pressures. Resist deformation and corrosion under sustained high-pressure supply — eliminating the secondary contamination risk of plastic fittings that crack over time.

Dual O-Ring Vessel Seal

Each filter vessel uses a two-stage O-ring at the housing joint, providing redundant leak protection. Double-layer sealing means a single O-ring failure does not result in bypass flow or water wastage.

20" × 4.5" High-Capacity Vessels

Oversized Big Blue-format vessels with food-grade internal surfaces and no restrictive internal fittings, allowing filter media from any qualified supplier — giving owners ongoing cost and choice flexibility.

Steel-Reinforced Vessel Frame

A stainless steel enforce plate bonds the vessel bodies to the mounting bracket frame, preventing housing rotation and pipe-stress fracture during filter changes. Provides superior structural integrity versus plastic-only frames, particularly important when servicing under line pressure.

Filtration Stages

3-stage point-of-entry sequence

STAGE 1

Sediment Barrier Filter

Three-layer polypropylene depth filter rated to 1-micron absolute. Captures suspended solids, silt, sand, rust particles, and fine sediment before water contacts downstream media — protecting stage 2 and 3 from premature loading. Graduated-density construction maximises dirt-holding capacity across the full 19.5" media depth.

- 1-micron absolute rating
- 3-layer graduated density
- 19.5" effective media depth
- Food-grade polypropylene

Replace: 12 months recommended · 18 months maximum

STAGE 2

Heavy Metal & Carbon Composite Filter

Dual-media cartridge combining KDF-55 electrochemical alloy (converts soluble heavy metals and chlorine by-products into insoluble compounds via redox reaction) with KDF-85 for biological growth inhibition in the media bed. Supported by premium coconut-shell activated carbon for residual taste and odour reduction.

- KDF-55: lead, mercury, copper, chromium
- KDF-85: anti-microbial biofilm control
- Coconut-shell carbon: taste & odour
- Free chlorine reduction >99%

Replace: 12 months recommended · 18 months maximum

STAGE 3

Scale Inhibition & Polishing Carbon Filter

Scale-inhibiting media matrix — more efficient than conventional polyphosphate methods — combined with 1-micron activated coconut-shell carbon. Controls calcium carbonate deposition in pipes, appliances, and hot water systems, then delivers the final taste and clarity polish to whole-home supply.

- Scale inhibition media — no polyphosphate
- 1-micron polishing carbon stage
- Protects appliances from limescale build-up
- Final taste & clarity polish

Replace: 12 months recommended · 18 months maximum

System Requirements at a Glance

Water Supply Parameters

Supply type	Cold mains water only
Min. inlet pressure	100 kPa
Max. inlet pressure	600 kPa
Max. input TDS	1,800 ppm
Max. iron content	0.2 ppm
Operating temperature	5°C – 35°C

Installation Requirements

Connection size	¾" or 1" BSP
Front clearance for filter access	Min. 250 mm
Mounting	Wall or floor (back plate req.)
Installation	Licensed plumber recommended
Post-install commissioning flush	Min. 20 litres
Filter supply	Neeru #S1/S2/S3-20 series

System Specifications

PARAMETER	SPECIFICATION
Model Number	NB/FHWR-3S1-20
System Type	Whole-Home Point-of-Entry (POE) Water Refinement System
Installed Dimensions	740 mm (H) × 590 mm (W) × 210 mm (D)
Operating Pressure Range	100–600 kPa (0.1–0.6 MPa)
Operating Temperature Range	5°C – 35°C
Maximum Input Iron	0.2 ppm
Maximum Input TDS	1,800 ppm
Total System Capacity	300,000 litres
Peak Flow Rate	50–60 L/min
Filter Vessel Format	20" × 4.5" Big Blue standard
Vessel Material	Food-grade polypropylene, steel-reinforced frame
Connection Fittings	Heavy-gauge brass, anti-corrosion rated
Enclosure Material	304 marine-grade stainless steel

Filter Replacement Schedule

STAGE	FILTER MEDIA	RECOMMENDED	MAXIMUM
Stage 1 — Sediment	3-layer polypropylene depth filter	**12 months**	18 months
Stage 2 — Heavy Metal & Carbon	KDF-55 / KDF-85 + coconut carbon	**12 months**	18 months
Stage 3 — Scale & Polish	Scale inhibition media + coconut carbon	**12 months**	18 months

Stage 2 KDF Media — Published Reduction Performance

Heavy Metals

Lead	**>99%**
Mercury	**>98%**
Copper	**>99%**
Chromium VI	**>97%**
Cadmium	**>97%**
Arsenic	**>95%**
Iron (soluble)	**>98%**
Zinc	**>97%**

Disinfectants & By-products

Free Chlorine	**>99%**
Chloramines	**>95%**
Chlorine by-products	**>95%**
Hydrogen sulphide	**>99%**
THMs (trihalomethanes)	**>95%**
Iron (oxidised)	**>95%**
Manganese	**>95%**
Radon	**>90%**

Biological & Taste

Taste improvement	✓
Odour reduction	✓
H_2S (rotten-egg) odour	**Removed**
Bacterial growth inhibition	✓
(KDF-85 anti-microbial media)	
Algae growth control	✓
Fungi growth control	✓

KDF performance data is sourced from published KDF Fluid Treatment industry literature and independent laboratory testing under controlled conditions. Actual system performance varies with source water chemistry, input TDS, flow rate, temperature, and filter service age. This datasheet covers the NB/FHWR-3S1-20 Point-of-Entry system only. Specifications subject to change without notice. Contact Neeru Pure Water Systems for current technical data.