

TurboClean® Food & Dairy

NP030 XT Series



TurboClean® XT elements feature a membrane cast on a polypropylene support material capable of being cleaned at high temperature and high pH conditions. To optimize system performance, these elements feature TurboClean technology, a patented sanitary hard-shell design that delivers better system performance due to about 60% less bypass flow than other sanitary elements. Lower bypass flow results in energy savings and/or higher flux rates as more of the feed flows across the membrane surface instead of around the outside of the element. Higher cross-flow velocity also results in the most effective membrane cleaning. TurboClean elements are stronger than net-wrapped sanitary elements and are able to withstand higher pressure drops. And with the tightest OD tolerance and optimal circularity, TurboClean elements are the easiest elements to load and unload.

- Strongest Sanitary Element
- Most Effective Cleaning
- Longer Operating Life
- Easiest Installation
- Better Performance

MEMBRANE CHARACTERISTICS

Membrane	NP030 XT
Membrane Type	Polyethersulfone (PES)
Nominal M.W.C.O. (Da)	500 – 600
Na₂SO₄ Salt Rejection (%)^a	80 – 95

DESIGN INFORMATION

Model	Membrane Area - m ² (ft ²)	Feed Spacer Thickness - (mil) ^a
TurboClean® NF 8038-NP030XT-46	23.7 (255)	46

^a This model has a TurboClean sanitary outer wrap and diamond shaped feed spacers.

OPERATING PARAMETERS

Maximum Operating Pressure	41 bar (600 psi)
Maximum Operating Temperature	60°C (140°F)
Maximum Cleaning Temperature	75°C (167°F)
Maximum Sanitization Temperature	85°C (185°F) at 1.7 bar max pressure, pH 6.0 – 8.0
Cleaning pH Range¹	1.0 – 13.0
Cleaning Chlorine Tolerance	200 ppm for sanitization at pH ≥ 10.5
Maximum Pressure Drop	1.4 bar (20 psi) per element; 6 bar (80 psi) per housing

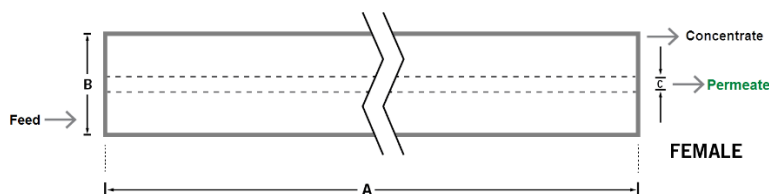
¹ Refer to temperature and pH limits in Membrane Cleaning Guide – Food & Dairy: XT Elements (TSG-C-007).

PHYSICAL DIMENSIONS

Model	Element Weight kg (lb) ^b	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C ^c mm (inches)	Permeate Tube
TurboClean® NF 8038-NP030XT-46	16 (36)	965 (38.0)	201 (7.9)	28.6 (1.125)	Female

^b Shipping weight is dependent on packaging material and quantity shipped.

^c Dimension "C" is the Inner Diameter.



IMPORTANT INFORMATION

- Start-up:** MANN+HUMMEL Water & Fluid Solutions recommends flushing elements for 30 minutes at low pressure and discarding permeate during the flush prior to operation. For a more detailed start-up procedure, please see Element Start-Up Guide – System Start-Up (TSG-O-005).
- Cleaning:** TurboClean® membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see Membrane Cleaning Guide – Food & Dairy: XT Elements (TSG-C-007).
- Storage:** TurboClean membrane elements must be stored appropriately to ensure proper operation and to prevent membrane damage. Please see Element Storage Guides (TSG-O-009 & TSG-O-010).
- Regulatory:** This model conforms to USDA 3A sanitary standard 45-03, uses FDA (CFR Title 21) compliant materials, complies with EU regulation (EC) No. 1935/2004 and No. 10/2011, and has Halal and Kosher certifications.

CUSTOMIZABLE SPECIALTY ELEMENTS

MANN+HUMMEL Water & Fluid Solutions offers a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling RO, submerged UF, continuous high temperature, ultra-high pressure, unique sanitary designs and more. Contact us to customize a product that satisfies your specific requirements.

Contact

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