TurboClean® High Temp UF Elements

MANN+HUMMEL Water & Fluid Solutions offers TurboClean® High Temperature elements for all of our membranes capable of continuous operation at temperature up to 80°C. These elements feature a patented sanitary hard-shell design that delivers better system performance due to about 60% less bypass flow than other sanitary elements. 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
- Longer Operating Life
- Better Performance
- Most Effective Cleaning
- Easiest Installation

MEMBRANE CHARACTERISTICS

Membrane	Membrane Type	Nominal M.W.C.O (Da)
UF5	Polyethersulfone (PES)	5,000
UF10	Polyethersulfone (PES)	10,000

DESIGN INFORMATION

Model	Membrane Area m^2 (ft^2)	Feed Spacer Thickness (mil)[a]
TurboClean® HT 3838-UF5-46	5.2 (54)	46
TurboClean® HT 4040-UF5-47P	5.6 (60)	47
TurboClean® HT 8040-UF5-47P	26.5 (285)	47
TurboClean® HT 4040-UF10-47P	5.6 (60)	47
TurboClean® HT 8040-UF10-47P	26.5 (285)	47

a All models on this sheet have TurboClean sanitary outer wrap. The 47 mil spacer is a parallel shaped feed spacer; the 46 mil spacer is a diamond shaped feed spacer. All 4040 and 8040 models include anti-telescoping devices (ATDs) attached to the ends of the element and one interconnector.

OPERATING PARAMETERS

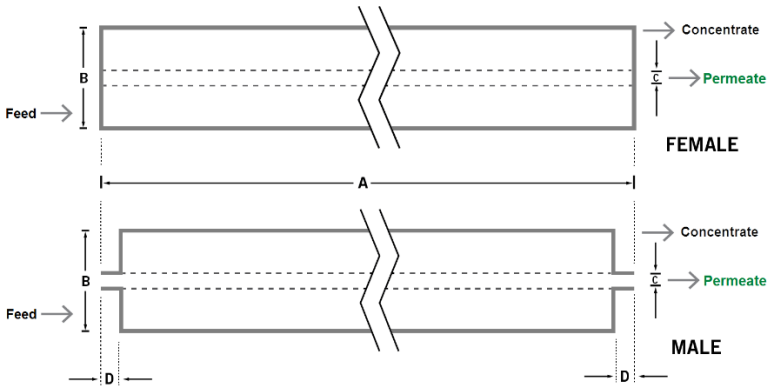
Maximum Operating Temperature	80°C (176°F)
Maximum Operating Pressure	6.9 bar (100 psi) at 80°C (176°F)
Cleaning pH Range[1]	1.0 – 12.0
Chlorine Tolerance	200 ppm (sanitization) at pH ≥ 10.5
Maximum Pressure Drop at 30°C	1.4 bar (20 psi) per element; 6 bar (80 psi) per housing
Maximum Pressure Drop at 70°C	0.3 bar (5 psi) per element; 1.4 bar (20 psi) per housing

1 Refer to temperature and pH limits in our Membrane Cleaning Guides.

PHYSICAL DIMENSIONS

Model	Element Weight kg (lb)[b]	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C[c] mm (inches)	Permeate Tube[d]
TurboClean® HT 3838-UF5-46	4 (9)	965 (38.0)	96 (3.8)	21.2 (0.83)	Female
TurboClean® HT 4040-UF5-47P	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Male
TurboClean® HT 8040-UF5-47P	16 (36)	1,016 (40.0)	201 (7.9)	28.6 (1.125)	Female
TurboClean® HT 4040-UF10-47P	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Male
TurboClean® HT 8040-UF10-47P	16 (36)	1,016 (40.0)	201 (7.9)	28.6 (1.125)	Female

b Shipping weight is dependent on packaging material and quantity shipped.
c Diameters for Dimension "C" are as follows. For Female elements, "C" is the Inner Diameter. For Male elements, "C" is the Outer Diameter.
d Male elements have a protruding permeate tube, indicated as "D" in the diagram. Dimension "D" is 25.4 mm (1.0 in).



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 our Membrane Cleaning Guides.

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: All models on this sheet use FDA (CFR Title 21) compliant materials, comply with EU regulation (EC) No. 1935/2004 and No. 10/2011, and have Halal and Kosher certifications. All 38 inch long models conform to USDA 3A sanitary standard 45-03.

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.

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