

Dairy Processing USDA Accepted Sanitary RO8038C

The A-Series family of proprietary thin film reverse osmosis membrane elements are characterized by high flux and excellent sodium chloride rejection. This membrane has an average rejection of 99.5% on 2000 ppm NaCl at 25°C and 225 psig.

The USDA Accepted Sanitary RO8038C Durasan* Elements provide ultra-high rejection of dissolved solids and low molecular weight organic constituents at operating pressures up to 600 psi. They are typically used for lactose recovery in food-related processes requiring stringent sanitary procedures. Applications include whey and milk concentration, sugar concentration and lactose recovery.

The USDA Accepted Sanitary RO8038C Durasan Elements feature a Durasan patented outerwrap, a selection of feed spacers, and polysulfone parts. These elements comply with the USDA guidelines for the sanitary design and fabrication of dairy processing equipment or applicable 3-A sanitary standards.

Table 1: Element Specification

Model	Spacer Mil (mm)	Active Area ft ² (m ²)	Part Number
Sanitary RO8038C-30D	30 (0.76)	412 (38.3)	1221893
Sanitary RO8038C-50D	50 (1.27)	290 (26.9)	1227202

Table 2: Pressure Drops

Maximum Pressure Drop	Elements per Pressure Vessel				
	1	2	3	4	5
ΔP - psig (kPa)	15 (103)	30 (207)	45 (310)	60 (414)	60 (414)

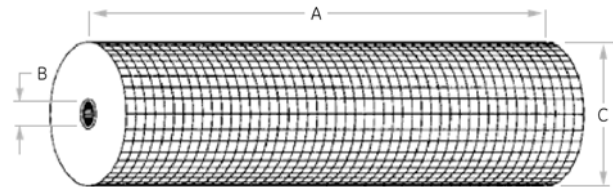


Figure 1: Element Dimensions Diagram

Table 3: Dimensions and Weight

Model	Dimensions, inches (cm)			Dry Boxed
	A	B	C	Weight lbs (kg)
Sanitary RO8038C-30D	38.00 (96.5)	1.125 (2.857)	7.91 (20.1) ¹	32 (14.5)
Sanitary RO8038C-50D	38.00 (96.5)	1.125 (2.857)	7.91 (20.1) ¹	32 (14.5)

¹The element diameter (dimension C) is designed for optimum performance in GE Water & Process Technologies pressure vessels. Other pressure vessel dimension and tolerance may result in excessive bypass and loss of capacity.

Table 4: Operating and Design Parameters

Membrane	A-Series, Thin-film membrane (TFM*)
Typical Operating Pressure	200-500 psig (1,379-3,447 kPa)
Typical Operating Process Flux	7-20 GFD (12-34 LMH)
Clean Water Flux (CWF) ²	14 GFD (24 LMH) @ 225 psig
Maximum Pressure	600 psig (4,137)
Maximum Temperature	122°F (50°C)
Recommended pH	Operating Range 3.0-10.0, Cleaning Range 2.0-11.5
Chlorine Tolerance	1000 ppm-hours, dechlorination recommended

²Clean water flux (CWF) is the rate of water permeability through the membrane after cleaning (CIP) at reproducible temperature and pressure. It is important to monitor CWF after each cleaning cycle to determine if the system is being cleaned effectively. CWF can vary ±25%.

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FS1222EN Mar-08