

CeraQ™

Ceramic Membrane Data Sheet



Robust Filtration

QUA's CeraQ™ is ideal for challenging water applications where conditions are not well-suited for polymeric membranes, such as wastewater with high fouling and/or high process temperatures. CeraQ™ yields superior performance for wastewater recycle/reuse in a wide range of industries, including upstream oil & gas, petrochemicals, refinery, food & beverage, manufacturing, and textiles.

CeraQ™ modules consist of ceramic tubular elements potted into bundles for various surface area requirements. The module is capable of removing virus, bacteria, colloidal matter, submicron or micron sized suspended particles, oil and organics from a wide range of fluids, including drinking water and industrial wastewater to economically meet variety of treatment objectives or to recycle and reuse wastewater.

Applications

- **Drinking Water Filtration**
Achieves 10-log Bacteria and 4-log Virus Removal
- **Industrial Process Water**
Recycle/Reuse for Challenging Applications
- **RO Pretreatment Filtration:**
Reduce Unit Processes and Chemical Pretreatment
- **Food and Beverage Processing**
Filtration and Clarification
- **Oily Wasterwater Treatment**
For Heavy Fouling Applications

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Standard Features

- **Well-defined pore size distribution** results in a high degree of particulate removal at higher flux. This is especially suitable for treating difficult wastewater
- **Tubular configuration** eliminates possibility of dead pockets and lowers fouling potential
- **Alumina-based** ceramic membranes with proprietary coating ensure a long service life and a high degree of permeance recovery
- **Material stability** in harsh environments and compatible with aggressive cleaning chemicals (if necessary), as well as hot water cleaning
- **Various pore sizes** address diverse applications covering microfiltration, ultrafiltration and nanofiltration
- **Can reduce unit processes** in the oil and water separation process
- **Simplified cleaning** through backpulsing
- **High temperature operation ability**, allowing feed water flexibility



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Product Specifications

MODEL	MEMBRANE AREA FT ² (M ²)	HOUSING MATERIAL	TUBE DIAMETER (OUT X IN MM)	NUMBER OF TUBES	MODULE DIAMETER (A)	FEED/REJECT CONNECTION
CQ-4	4.2 (0.4)	PVC/SS	8.6 x 6.1	21	2" OD	2" 150# Flange
CQ-5	5.4 (0.5)	PVC/SS	5.7 x 3.5	53	2" OD	2" 150# Flange
CQ-10	10.8 (1.0)	PVC/SS	5.7 x 3.5	105	3" OD	3" 150# Flange
CQ-20	21.6 (2.0)	PVC/SS	5.7 x 3.5	211	4" OD	4" 150# Flange
CQ-40 PVC	34.4 (3.2)	PVC Sch 80	8.6 x 6.1	173	6" OD	6" 150# Flange
CQ-40 SS	45.8 (4.3)	SS 316	8.6 x 6.1	230	6" OD	6" 150# Flange
CQ-50 PVC	42.6 (4.0)	PVC Sch 80	5.7 x 3.5	417	6" OD	6" 150# Flange
CQ-50 SS	55.2 (5.1)	SS 316	5.7 x 3.5	540	6" OD	6" 150# Flange
CQ-60 PVC	47.6 (4.4)	PVC Sch 80	5.7 x 3.5	417	6" OD	6" 150# Flange
CQ-60 SS	59.2 (5.5)	SS 316	5.7 x 3.5	540	6" OD	6" 150# Flange

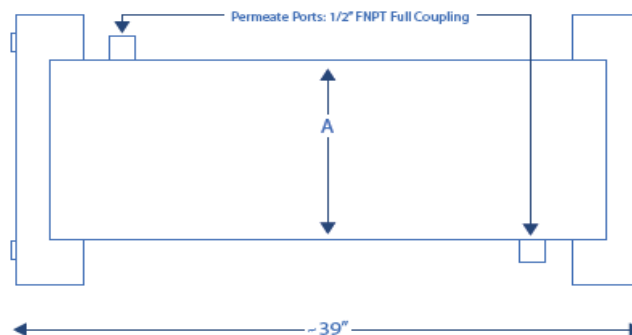
MATERIAL OF CONSTRUCTION

Housing: PVC Sch 80, SS 304, SS 316, CPVC*
Seals: Buna or Viton O-Rings
Pore Size: 0.4*, 0.1, 0.05, 0.01, 0.005* µm
Mounting: Horizontal or Vertical

OPERATING CONDITIONS

Operating Pressure: 30 to 70 psi
ΔP Terminal: 20 to 70 psi
Operating Temp: up to 90°C (194°F)
Maximum Temp: 110°C (230°F)
pH: 2-11

CHEMICAL CLEANING: Hydrochloric Acid (HCl) or Sulfuric Acid (H₂SO₄): 2-3 pH or 50% Citric Acid (C₆H₈O₇)
 Sodium Hydroxide (Caustic Soda, NaOH): 10.5 – 11 pH
 Sodium Hypochlorite (Bleach solution, NaOCl): 200 – 400 ppm free chlorine



*Offered upon consultation with QUA for select applications