

Causti-COR Nanofiltration Membrane Systems

The Causti-COR® nanofiltration membrane system offers a best-in-class solution for caustic recovery for a variety of applications. This system is available in six configurations, including three small modified batch systems for feed flow rates up to 100,000 GPD (gallons per day) or 16 m³/hr and three larger continuously operated systems for feed flow rates between 25,000 to 200,000 GPD (4 - 32 m³/hr). Up to 95% caustic recovery can be achieved through the removal of low molecular weight organic and inorganic contaminants.

Caustic solutions are used to clean process equipment and are expensive. KOVALUS SEPARATION SOLUTIONS™' highly crosslinked polymer SelRO® spiral membranes used in the Causti-COR systems are designed to withstand pH levels from 0 to 14 and high concentrations of acids and bases, making them a reliable and long-lasting solution to recover, purify, and reuse caustic. The Causti-COR system promotes operating and caustic savings in food, beverage, and industrial markets.

Recovering and reusing caustic can provide environmental benefit and operational savings. Pre-engineered Causti-COR systems allow for easy startup at your facility and a quick return on your investment. The typical payback period of a Causti-COR system is less than 18 months and depends on a number of factors. Please contact KSS if you are interested in exploring the return on investment for your specific opportunity.

BENEFITS

- Less spending on caustic and acid materials
- Reduction in effluent volume
- Reduced waste treatment costs
- Lower energy consumption
- Decreased wastewater TDS/Sodium

Special Features

	Causti-COR 1	Causti-COR 2	Causti-COR 3	Causti-COR 4	Causti-COR 5	Causti-COR 6
Operating Mode	Modified Batch / Batch Mode			Continuous Mode		
Automation	Semi-Auto			Automatic		
Design Recovery	80 – 90%					
Operating Conditions	30 bar (450 psi) max / 70 °C (160 °F) max					

System Models

	Max. Number of SeIRO® 8" Elements	Feed Flow Rate		Membrane Area	
		1,000 GPD	m³/hr	ft²	m²
Causti-COR® 1	5	6.5 – 25	1 – 4	1,050	97.5
Causti-COR 2	10	13 – 50	2 – 8	2,100	195
Causti-COR 3	20	25 – 100	4 – 16	4,200	390
Causti-COR 4	20	25 – 100	4 – 16	4,200	390
Causti-COR 5	30	37.5 – 150	6 – 24	6,300	585
Causti-COR 6	40	50 – 200	8 – 32	8,400	780

Note: Custom-engineered solutions can be developed for larger feed flow rates.

Installation

Model	Footprint (L x W x H)	Shipping Weight	Operating Weight	Total Connected HP (460V)	Feed Pump Skid		
					Footprint (L x W x H)	Shipping Weight	Operating Weight
Causti-COR 1	19.75' x 7.75' x 7' / 6.02m x 2.36m x 2.13m	3,250 lbs / 1,474 kg	5,000 lbs / 2,268 kg	70 HP / 52 kw	N/A	N/A	N/A
Causti-COR 2	19.75' x 7.75' x 7' / 6.02m x 2.36m x 2.13m	3,660 lbs / 1,660 kg	5,800 lbs / 2,631 kg	80 HP / 60 kw	N/A	N/A	N/A
Causti-COR 3	19.75' x 7.75' x 7' / 6.02m x 2.44m x 2.13m	5,050 lbs / 2,291 kg	8,750 lbs / 3,969 kg	120 HP / 89 kw	N/A	N/A	N/A
Causti-COR 4	19.75' x 4.5' x 6.67' / 6.02m x 1.37m x 2.03m	4,200 lbs / 1,905 kg	5,900 lbs / 2,676 kg	105 HP / 78 kw	6.5' x 6.67' x 6.33' / 1.98m x 2.03m x 1.93m	2,450 lbs / 1,111 kg	2,500 lbs / 1,134 kg
Causti-COR 5	19.75' x 4.5' x 6.67' / 6.02m x 1.37m x 2.03m	4,820 lbs / 2,186 kg	7,250 lbs / 3,289 kg	105 HP / 78 kw			
Causti-COR 6	19.75' x 4.5' x 7.25' / 6.02m x 1.37m x 2.21m	5,450 lbs / 2,472 kg	8,600 lbs / 3,901 kg	105 HP / 78 kw	9' x 9' x 6' / 2.7m x 2.7m x 1.8m	1,650 lb / 750 kg	6,700 lb / 3,040 kg

Note: Shipping and operating weights are approximations.



Separation Technologies for a Better Future™