KOVALUS Separation Solutions™

Pre-Startup Cleaning Procedure for Hollow Fiber TARGA® and TARGA II Cartridges

The following cleaning procedure must be performed prior to initial use of cartridges. This procedure will remove storage solution and condition the membrane for production. Failure to follow this recommendation may lead to poor performance and will void cartridge warranty.

PRE-STARTUP CLEANING PROCEDURE			
Step 1	**Rinse:**	**Ambient Temp**	**10 min.**
	Fill system with clean water (50-85°F/10-30°C). Water should have less than 60 mg/liter $CaCO_3$ hardness.		
	Circulate water at standard pressure and flow conditions for 10 minutes, with permeate valve open and permeate returning to CIP tank.		
	Drain system and CIP tank.		
Step 2	**Alkaline Cycle:**	**pH 12/Max.110ºF**	**30 min.**
	Heat clean water (85-110°F/30-43°C) using water with less than 60 mg/liter $CaCO_3$ hardness.		
	Circulate heated water through system under standard pressure and flow conditions.		
	Add caustic slowly to achieve pH 12.0 using sodium hydroxide solution (e.g. 50% v/v).		
	Circulate caustic solution for 20-30 minutes.		
	Drain, then rinse and drain per Step 1.		
Step 3	**Alkaline/Chlorine Cycle:**	**pH 12/200 ppm NaOCl**	**30 min.**
	Heat clean water (85-110°F/30-43°C) using water with less than 60 mg/liter $CaCO_3$ hardness.		
	Circulate heated water through system under standard pressure and flow conditions.		
	Add caustic slowly to achieve pH 12.0 using sodium hydroxide solution (e.g. 50% v/v).		
	Add liquid sodium hypochlorite (NaOCl) to achieve 150-200 mg/liter total chlorine concentration.		
	Circulate caustic/chlorine solution for 20-30 minutes. Check chlorine concentration and add NaOCl as needed to maintain at 150-200 mg/liter during this time.		
	Drain, then rinse and drain per Step 1.		
Step 4	**Rinse:**	**Ambient Temp**	**10 min.**
	Repeat Step 1 until pH of water in system and CIP tanks is equal to pH of incoming feed water.		

NOTE: ALWAYS ADD CAUSTIC BEFORE CHLORINE. NEVER ADD CHLORINE TO A NEUTRAL OR ACID SOLUTION.

New cartridges should be kept in their original shipping containers and crates until ready for installation. Cartridges should be stored as follows:

Store cartridges indoors and out of direct sunlight.
Store cartridges at temperatures between 50-85°F/10-30°C.
Store cartridges at relative humidity below 70%.
Store cartridges in a horizontal position.

For technical assistance, please contact a Cleaning Specialist at +1-978-694-7050.
To place an order, please contact our Customer Service Department at +1-978-694-7000.

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