



**TREATMENT  
PRODUCTS  
CORPORATION**

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# CROSS-FLOW ULTRA-FILTRATION



Model CFUF-053-DLCP-custom Shown

## PROCESS DESCRIPTION

When the removal of high molecular weight dissolved solids and/or, micron, and submicron sized particles is required, cross-flow ultra-filtration systems are capable of virtually complete removal. The cross-flow ultra-filtration process also breaks oil water emulsions without chemical addition.

Cross-flow ultra-filtration, unlike conventional dead-end filtration, has a filtration surface that is continuously swept by flowing liquid. The shear of the flowing liquid along the tube wall minimizes the buildup of the solids on the filtration surface; thus, cross-flow filtration affords the possibility of nearly steady state operation. With conventional dead-end filtration, the filtrate rate decays as the solids layer builds up. In cross-flow ultra-filtration, the direction of the feed flow is parallel to the filter surface so that accumulated solids are continuously swept away by the force of the flow.

The cross-flow ultra-filter modules each contain a single tubular ultra-filter membrane of PVDF or Copolymer construction. The membranes are available in two nominal molecular weight cut-off ranges 20,000, and 100,00. These units remove not only colloidal particles, but also high molecular weight dissolved solids, and bacteria. These units are excellent for the removal of chemically and mechanically emulsified oil and grease. The molecular weight cutoff allows the removal or reduction of surfactants, detergents and other chemical compounds contributing to BOD and COD.

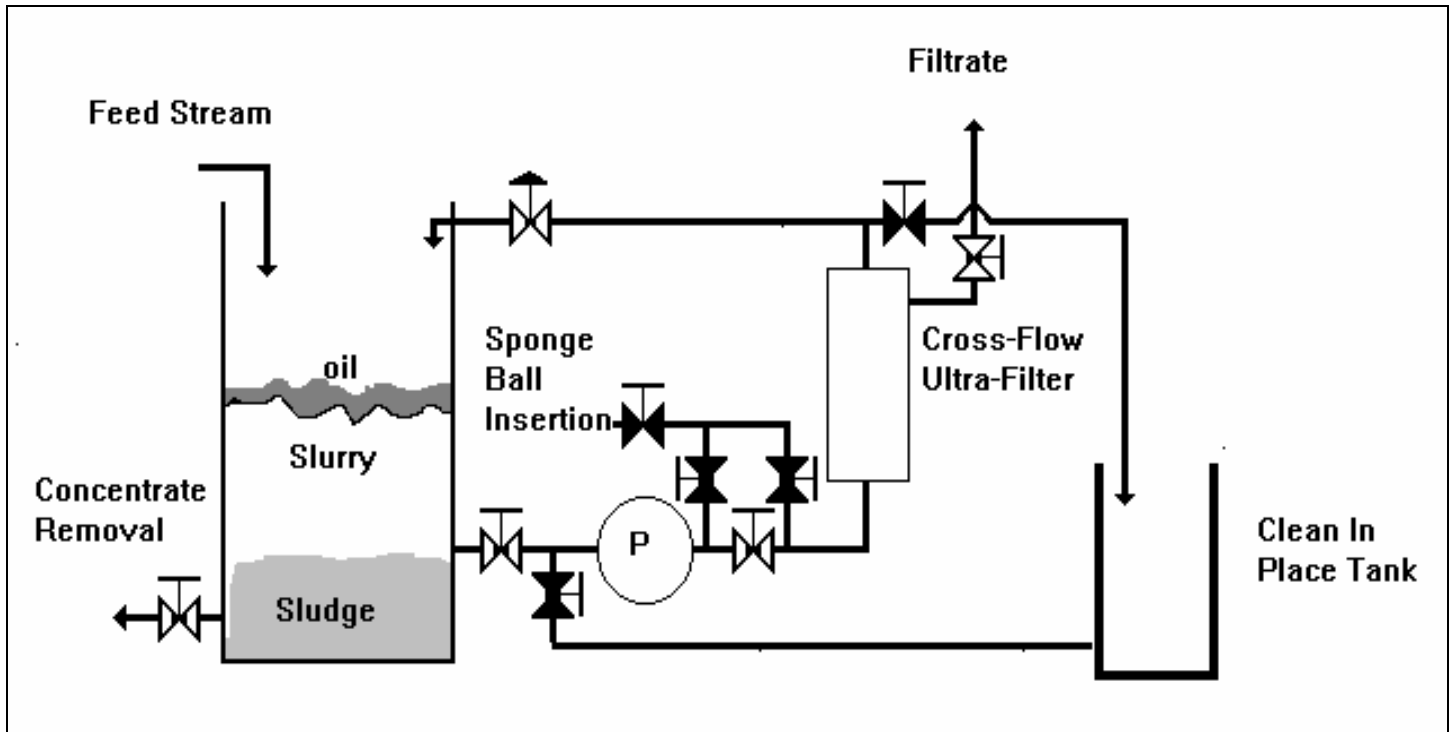
The maximum pressure used for processing a liquid stream is generally 30-40 PSID with cross-flow ultra-filtration systems.

## APPLICATIONS

- |                            |                    |
|----------------------------|--------------------|
| • Heavy Metals Removal     | • Metal Finishing  |
| • Compressor Condensate    | • Cosmetics Waste  |
| • Water Soluble Coolants   | • Die Casting      |
| • Drawing Compounds        | • Dye Penetrant    |
| • Flexographic Ink Waste   | • Groundwater      |
| • Landfill Leachate        | • Pigments Waste   |
| • Vibratory Finishing      | • Latex Processing |
| • Emulsion Splitting       | • Bilge Water      |
| • Aqueous Cleaner Recovery |                    |
| • Suspended Solids Removal |                    |
| • Grinding and Tumbling    |                    |

## BENEFITS

- |  |                               |
|--|-------------------------------|
| • Easy to Install                          | • Positive physical barrier   |
| • Simple Operation                         | • Low Operating Pressure      |
| • Low Operating Cost                       | • No Pre Treatment Required   |
| • Rugged Construction                      | • Consistent Effluent Quality |
| • Automatic Controls                       | • Semi -Automatic Cleaning    |
| • Removes High Molecular Weight Substances |                               |



Schematic Representation of Typical Cross-Flow Ultra-Filtration System

#### GENERAL SPECIFICATIONS

MODEL	TYPICAL FLOW GPD			PUMP TYPE	UNIT DIMENSIONS Inches				SHIPPING WEIGHT
	COOLANT, OILY WASTE	CHEMICAL WASTE	FINE SOLIDS WASTE		Length	Width	Height	Pounds	
CFUF-0004	125	300	645	air	66	24	84	400	
CFUF-0009	250	600	1,300	air	66	24	144	650	
CFUF-0018	550	1,200	2,600	air	138	36	96	1,000	
CFUF-0036	1,000	2,400	5,200	electric	138	48	96	1,100	
CFUF-0053	1,500	3,600	7,800	electric	138	48	96	1,100	
CFUF-0070	2,000	4,800	10,400	electric	138	48	96	1,900	
CFUF-0158	4,500	10,800	23,400	electric	168	48	96	4,800	
CFUF-0264	7,900	17,600	39,000	electric	158	120	96	8,000	
CFUF-0545	15,500	37,200	80,600	electric	210	78	138	10,000	
CFUF-0776	22,000	49,200	114,400	electric	198	138	138	12,500	
CFUF-1200	34,000	81,600	176,800	electric	252	120	108	10,500	

**MATERIALS OF CONSTRUCTION:** Units are fabricated completely of corrosion resistant materials. The cross-flow ultra-filter housings are of PVC or CPVC construction. Piping is schedule 80 PVC or CPVC. The structural steel skid is coated with epoxy phenolic paint. The controls are housed in a NEMA-4X fiberglass enclosure.

For further information contact.

Represented By:



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