

VARI-PAC CF Series

Cross Flow Media



Structured PVC and PP Media for Biological Fixed Film Wastewater Treatment Systems

Introducing VARI-PAC, fixed film products for attached growth wastewater treatment applications, new construction or repacking, including:

- ✦ Trickling Filters / Oxidation Towers / Roughing Towers / Biotowers
- ✦ Nitrification and Denitrification towers
- ✦ Submerged Fixed Bed systems
- ✦ Anaerobic reactors
- ✦ Biofilters

In business since 1957, CE Shepherd Co. has been manufacturing VARI-PAC since the 1970's. Our staff has over 75 years of experience in wastewater applications.

VARI-PAC CF Series is a modular, corrugated sheet media specifically designed for fixed film (attached growth), biological treatment systems. We offer a full range of geometries and structural designs ideally suited for any application.



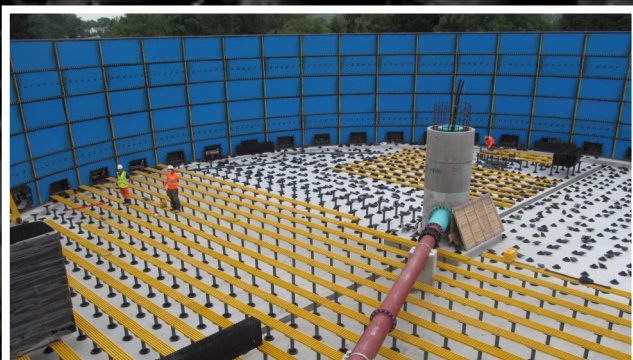
Key Features and Characteristics:

- ✦ Available in PP or PVC materials, various surface areas and dimensions
- ✦ Durable/Proven Solvent Bonds, Heat Bonding available
- ✦ Industry Standard - Conforms to municipal trickling filter media specifications
- ✦ Temperature/Chemical resistant
- ✦ Alignment locator pins ensure proper sheet-to-sheet alignment
- ✦ UV protected for long life
- ✦ Rigid modules have high compressive strength capacity
- ✦ Easily cuts for fitting around tank walls

Available Complementary Product Lines:

VARI-PIER - Engineered Support System with adjustable pier height, infinite slope correcting base (up to 8%), corrosion resistant construction.

VARI-DEK - Protective Surface Grating, self-interlocking panels.





C. E. Shepherd Company

VARI-PAC - CF Series PVC/PP Cross Flow Media

CE Shepherd's VARI-PAC **CF Series Cross Flow Media** is specifically designed for biological attached growth (fixed film) wastewater treatment systems. The cross flow design provides a highly efficient design for organic removal, nitrification, denitrification, and anaerobic treatment systems treating both municipal, industrial or combined wastewaters. CF Series media is resistant to rot, fungi, bacteria, acids, and alkalis commonly present in municipal/industrial wastewaters.

Applications

CF Series modules are effective for circular and rectangular systems which utilize either rotary distributors or fixed nozzle distribution systems.

- Ideal for new construction or replacement media for existing trickling filters, biotowers, nitrification towers, bio-filters, anaerobic reactors.
- Easily replaces rock, wood, or random dump style media.
- Increases retention time and improves performance by increasing overall surface area, extending wastewater-biomass contact time and improved wastewater distribution and overall ventilation.
- Ideally suited for submerged bed / fixed - film systems, aerobic or anaerobic. Cross fluted design improves liquid mixing throughout the media bed and high void areas reduce excess solids retention while maximizing air and liquid mixing within the bed.

Why Cross Flow?

CF - Series Cross Flow Media incorporates completely corrugated PP sheets, corrugated at a 60 degree angle from horizontal, then factory assembled in a cross-corrugated pattern with adjacent sheets. CF-Series is available in surface areas ranging from 31 to 68 ft²/ft³ for various applications. The cross-corrugated pattern ensures continuous and even horizontal redistribution of the wastewater and air throughout the media bed.

Media Features

CE Shepherd's direct inline sheet forming process results in exact sheet-to-sheet alignment and high strength solvent sheet bonding resulting in a high quality, robust finished module. The bonding points create mixing points for each sheet pair, allowing the wastewater to better distribute during operation. High quality thermoforming and bonding result in uniform openings throughout the media modules resulting in superior structural integrity.

CE Shepherd also offers pre-engineered support systems for trickling filter and submerged fixed bed systems and protective surface grating for trickling filter applications, where required.

VARI-PAC CF Series PVC/PP Product Code	Surface Area ft ² /ft ³ (m ² /m ³)	Mixing Points	Typical Module Dimensions
CF 300 PVC / PP	31 (102)	220	1' or 2'H x 1' or 2'W x 4', 6', 8', or 10' lengths
CF 270 PVC / PP	38 (125)	270	1' or 2'H x 1' or 2'W x 4', 6', 8', or 10' lengths
CF 190 PVC / PP	48 (157)	720	1' or 2'H x 1' or 2'W x 4', 6', 8', or 10' lengths
CF 120 PVC / PP	68 (223)	2,457	1' or 2'H x 1' or 2'W x 4', 6', 8', or 10' lengths

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