CREATIVE COMPOSITES GROUP®

TECHNICAL SPECIFICATIONS

PULTEX® FIBER REINFORCED SLUDGE FLIGHTS

1500 Series - Thermoset Polyester – Light Gray

WASTEWATER SLUDGE FLIGHTS MADE OF FRP

Fiberglass Reinforced Polymer (FRP) sludge flights are specialized components used in wastewater treatment processes. CCG's composite sludge flights represent a modern solution in wastewater treatment, contributing to more efficient and durable components for managing sludge. PulTex flights and scraper blades are made of pultruded fiberglass reinforced polyester. Flights are supplied to any length and predrilled per customer specifications. They are UV resistant and have excellent deflection and twist strength. Filler Blocks and hardware are also provided. The benefits of using composites include best-in-class mechanical properties and corrosion resistance.

ADVANTAGES OVER TRADITIONAL MATERIALS

Durability: FRP can withstand chemical exposure without rusting or degrading, unlike steel options.

Installation Efficiency: The lightweight nature makes handling and installation easier, often reducing labor costs.

Operational Efficiency: The low friction surface can improve the movement of sludge, enhancing overall process efficiency.

Customization: The availability of multiple profiles allows for optimized designs specific to the treatment plant's needs.

CreativeCompositesGroup.com

USES

- Clarifiers
- Digesters
- Thickeners

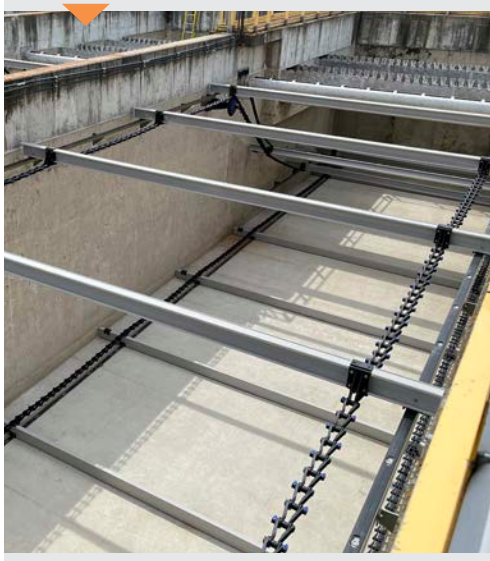
FEATURES

- Integral Scraping Lip
- Versatile

BENEFITS

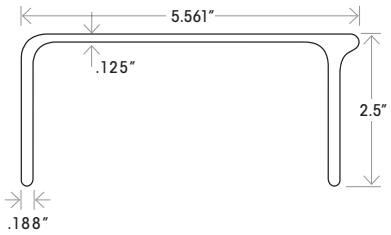
- Lowest Lifetime Cost of Ownership
- Low Maintenance

Sludge flights installed in a Clarifier Tank.

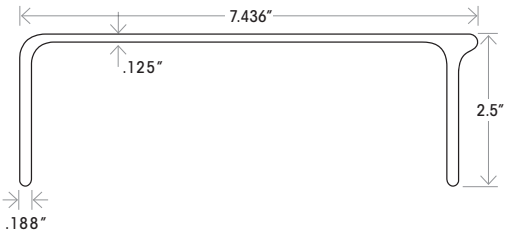


Profiles & Dimensions

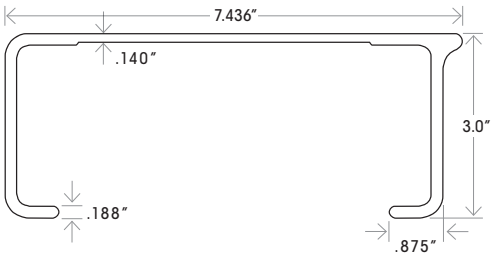
3" x 6" Channel



3" x 8" Channel



3" x 8" Ultra



General Properties

Flight Profile/Size	Full Section Weak-Axis Flexural Modulus per ASTM D8069	Full Section Weak-Axis Flexural Strength per ASTM D8069	Strong-Axis Moment of Inertia in^4	Weak-Axis Moment of Inertia in^4	Density lbs/in^3 (nominal, +/- 0.005 lbs/in^3)	Specific Gravity	Weak-Axis Stiffness ($lb\text{-}in^2$)
3″ x 6″ Channel	5.1E+06 psi	30,000 psi	7.813	1.02	0.07	1.80-2.08	5.20E+06
3″ x 8″ Channel	5.1E+06 psi	30,000 psi	15.589	1.114	0.07	1.80-2.08	5.68E+06
3″ x 8″ Ultra	4.0E+06 psi	30,000 psi	20.601	2.79	0.067	1.72-1.99	1.12E+07

Other minimum properties applicable to all sizes of flights, based on coupon testing values. All material properties listed in the table below are characteristic values following ASTM D7290 statistical analysis, based on mechanical testing performed by the CCG Quality Assurance Laboratory.

Property	Specification	Units	Value
Tensile Strength (Longitudinal)	ASTM D638	psi	43,000
Tensile Strength (Transverse)	ASTM D638	psi	4,500
Tensile Modulus (Longitudinal)	ASTM D638	psi	3.20E+06
Flexural Strength (Longitudinal)	ASTM D790	psi	38,000
Flexural Strength (Transverse)	ASTM D790	psi	9,500
Flexural Modulus (Longitudinal)	ASTM D638	psi	1.70E+06
Compressive Strength (Longitudinal)	ASTM D695	psi	17,000
Compressive Strength (Transverse)	ASTM D695	psi	8,900
Water Absorption – maximum, 73° F, 24 hrs.	ASTM D570	%	0.60%
Minimum Glass Content, by weight %	ASTM D2584	%	55%
Shear Strength (by punch tool)	ASTM D732	psi	8,500
Barcol Hardness, min.	ASTM D2583-81	Barcol	46

Tolerances:

Squareness of end cut: Maximum deviation is 1°

Angularity: ±2°

Length: ±1/8" up to 20'-0" lg.

Flatness: Maximum deviation from flat is .008" x inch of width.

Twist: 3° maximum up to 20'-0" lg.

Warpage: .030"/ft. of part length for parts 20 ft. and under. For parts longer than 20 ft., .050"/ft. of part length with a maximum deviation of 1.250". The non-lip side is a maximum of .375" for all part lengths. All warpage is checked with no weight minimizing the warp.

(814) 839-4186
214 Industrial Lane • Alum Bank, PA 15522