

# Tuff Span Tank Cover System & Enclosures

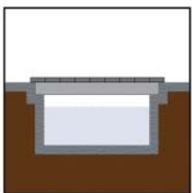
## System Overview

Constructed with Tuff Span FRP building panels and FRP structural components, Tuff Span tank covers provide versatile configurations including low-profile, roof-type covers or raised, building-type covers.

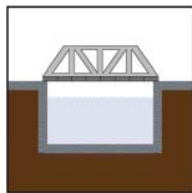
The Tuff Span low-profile covers are installed over storage and process tanks for UV screens and debris protection. Tuff Span raised covers and enclosures can provide walk-in access to processes.

Tuff Span cover components include Tuff Span FRP building panels, FRP beams, access hatches and stainless steel hardware.

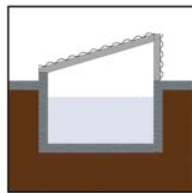
Configurations available for Tuff Span tank covers:



Flat, Beam-Supported



Flat, Truss-Supported



Walk-in & Enclosures



Tuff Span low-profile tank cover system with FRP beams  
UV Disinfection Process

## Key Tuff Span System Features & Benefits



Tuff Span walk-in cover with FRP beams  
15 year-old installation



Tuff Span truss-supported cover

- **Walk-in Access Option**  
For maximum process viewing, Tuff Span walk-in covers offer an ideal solution.
- **Translucent or Opaque Cover Panels**  
Tuff Span Cover panels can be furnished in opaque color or translucent, which transmit natural lighting and can reduce energy bills.
- **Easy to Install**  
Enduro's complete solution includes delivering pre-cut structural members and finished panel lengths for easy installation.
- **Custom Design & Specifications**  
With our full line of Tuff Span FRP structural building panels and shapes, the Enduro engineering and design team can assist with developing customized solutions for a broad range of conditions

*Please contact us for assistance with developing a tank cover or enclosure design and specification for your application and requirements.*

- Corrosion Resistant
- High Strength
- Lightweight
- UV Protection
- Turn Key Solutions
- Customized System
- Low Profile

# Tuff Span Tank Cover System & Enclosures

## Applications

- UV Screens
- Sludge Drying Beds
- Water Storage
- Chlorine Contact Basins
- Filtrate Storage Tanks
- Chemical Process Tanks



Tuff Span removable enclosure with FRP panels, beams and louvers over floating aeration. SureGrip beam-supported cover - Aeration Basin



Tuff Span walk-in tank cover system with FRP translucent panels, beams, platforms and doors. Left photo shows the inside and right photo shows the outside. Aeration Basin



Tuff Span roof cover system  
Sludge Drying Bed

# Tuff Span Tank Cover System & Enclosures

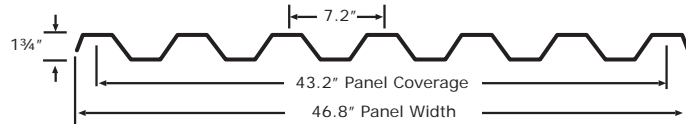
## Tuff Span FRP Structural Components

Long recognized as leading FRP structural materials, Tuff Span building panels and beams are used as primary components in Tuff Span tank covers and walk-in enclosures.

The innovative structural shapes are also used as framing components in Enduro XL6 and SureGrip covers plus Enduro baffle wall. Utilizing cavity shapes for increased stability, lateral bracing needs for these beams can be eliminated. The sections have winged-flanges for easy-access, fastening locations.

In addition to the single profile and shapes shown below, Enduro offers a full line of Tuff Span FRP building panels along with FRP pultruded angles, channels, shapes, and flat sheet. Many of these sections are used in the Enduro tank cover and baffle wall systems. For additional information on Tuff Span building panels or our structural shapes, please contact us for a brochure or visit our website at [www.endurocomposites.com](http://www.endurocomposites.com).

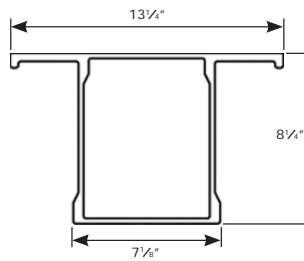
### Tuff Span Panel 7.2D x 1.75 FR 450



Uniform Load PSF	20	30	40	50	60
Maximum 3 Span	10'6"	9'2"	8'4"	7'8"	7'3"

Maximum spans shown represent three span condition.  
Deflection Limit = L/60; Factor of Safety = 2.5

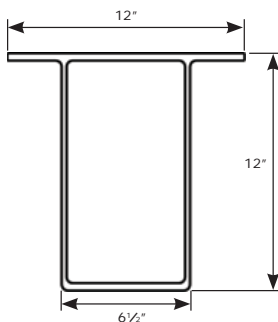
### 8F6 Beam



Span	Wind L/120		Wind L/180	
	Pos	Wind	Pos	Wind
18 ft.	258	499	258	437
20 ft.	232	404	232	319
22 ft.	211	334	211	239
24 ft.	193	277	184	184
26 ft.	178	218	145	145
28 ft.	155	174	116	116
30 ft.	135	142	94	94

Maximum spans shown represent two span condition.  
Deflection Limit = L/120 & L/180;  
Positive Load FOS = 2.5; Wind Load FOS = 1.88

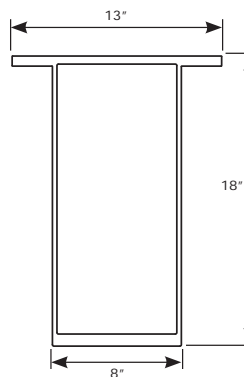
### 12F12 Beam



Span	Wt = 12 lbs/ft		Column Load	
	Lbs/LF L/180	Lbs/LF L/180	Lth (Ft)	Axial (Lbs)
20 ft.	660	440	8	47,249
22 ft.	496	331	10	41,792
24 ft.	382	255	12	37,804
26 ft.	300	200	14	34,731
28 ft.	241	160	16	32,272
30 ft.	196	130	18	30,248
32 ft.	161	107	20	28,545

Maximum spans shown represent single span condition.  
Deflection Limit = L/120 & L/180;  
Factor of Safety = 2.5

### 18F17 Beam



Span	Wt = 16.75 lbs/ft		Column Load	
	Lbs/LF L/180	Lbs/LF L/180	Lth (Ft)	Axial (Lbs)
30 ft.	593	521	12	69,013
32 ft.	521	429	14	63,403
34 ft.	461	358	16	58,914
36 ft.	412	302	18	55,218
38 ft.	369	256	20	52,109
40 ft.	330	220	22	49,448
42 ft.	285	190	24	47,137

Maximum spans shown represent single span condition.  
Deflection Limit = L/120 & L/180;  
Factor of Safety = 2.5

## Enduro FRP Structural Shapes

### Flanged Beams

6" x 6" x 3/8" Wide Flange  
8F6 Purlin/Girt  
12F12 Flanged Tube  
12S12 Flanged Tube  
18F17 Flanged Tube

### Flat Sheet

3' x 10' x 1/8" Thick  
3' x 10' x 3/16" Thick  
3' x 10' x 1/4" Thick  
3' x 10' x 3/8" Thick  
3' x 10' x 1/2" Thick  
4 5/8' x 10' x 1/4" Strip

### Channel

2" x 1" x 3/16"  
3" x 1" x 3/16"  
4" x 1 3/8" x 5/32"  
4" x 1 1/8" x 1/4"  
4 3/4" x 3 1/4" x 1/4"  
6" x 1 5/8" x 5/32"  
6" x 1 5/8" x 3/16"  
6" x 2" x 3/16"  
6" x 1 5/8" x 1/4"  
6 7/8" x 5 3/8" x 1/4"  
8" x 1 3/4" x 5/16"  
10" x 2 3/4" x 3/8"

### Angle

2" x 2" x 1/4"  
3" x 3" x 1/4"  
3" x 3" x 3/8"  
4" x 4" x 3/8"  
6" x 6" x 3/8"

### Solid Rod

1" x 1/8" Square  
1" x 1/8" Round

### Square Tube

1 5/8" x 1 5/8" x 1/8"  
2" x 2" x 1/4"  
3" x 3" x 1/4"  
4" x 4" x 1/4"

### Round Tube

2 3/8" x 1/4"

### Rectangular Tube

3" x 4" x 1/4"  
14B10 Tube