

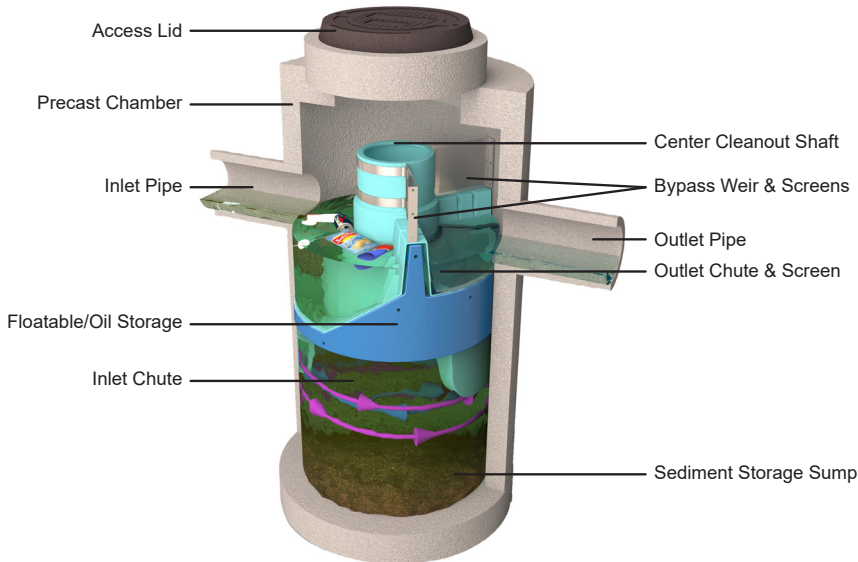
# First Defense® FTC

## Full Trash Capture Hydrodynamic Separator

### Product Summary

First Defense Full Trash Capture (FTC) is an advanced hydrodynamic separator that combines enhanced vortex technology for total suspended solids (TSS) removal with a 5mm screen to meet full trash capture requirements set by the California Water Boards.\*

### Features



\*One-hour, one-year design storm.

### Applications

- » Removal of Total Suspended Solids (TSS), floatable trash, and petroleum products from stormwater runoff
- » New construction or redevelopment of commercial and residential sites
- » Pre-treatment for green infrastructure and ponds
- » Pollutant hotspots such as maintenance yards, parking lots, gas stations, streets, highways, airports and transportation hubs
- » LEED® development projects
- » Retrofitting existing systems

### How It Works

1. Stormwater enters the Inlet Chute, where water is directed downwards and into a rotational motion around the Sediment Storage Sump.
2. Free floating trash is retained in the Inlet Chute area. Sediment and other settleable solids are retained in the Sediment Storage Sump as water follows a rotational path to the screened Outlet Chute.
3. Water then exits upward in the Outlet Chute where a horizontal screen prevents the loss of any suspended debris larger than 5mm. High flows can bypass directly to the outlet via the Bypass Weirs.
4. Two Bypass Screens continue to treat and retain the free floating debris. In extreme events water can crest the bypass screen and go directly to the outlet to prevent upstream flooding.

Model Number	Diameter	Maximum Pipe Diameter <sup>1</sup>	Trash Storage Capacity <sup>2</sup>	Flow Rate (cfs) for Screen Blinding Percentage <sup>3</sup>				Bypass Capacity	Typical TSS Treatment Rates
				0%	25%	50%	75%		
Model	(ft / m)	(in / mm)	(yd <sup>3</sup> / m <sup>3</sup> )					(cfs)	(cfs / L/s)
FD-3 FTC	3 / 0.9	18 / 450	0.4 / 0.3	2.93	2.33	1.75	1.17	15	1.06 / 30.0
FD-4 FTC	4 / 1.2	24 / 600	0.83 / 0.63	7.94	7.10	5.27	3.43	18	1.88 / 53.2
FD-5 FTC	5 / 1.5	24 / 600	1.54 / 1.18	13.02	10.51	7.87	6.07	20	2.94 / 83.2
FD-6 FTC	6 / 1.8	30 / 750	2.22 / 1.70	25.60	21.50	16.01	10.66	32	4.23 / 119.8
FD-8 FTC	8 / 2.4	48 / 1219	5.28 / 4.00	34.16	33.75	26.29	16.88	50	7.52 / 212.9
FD-10 FTC	10 / 3	48 / 1219	5.28 / 4.00	34.16	33.75	26.29	16.88	50	7.52 / 212.9

<sup>1</sup>Contact Hydro International when larger pipe sizes are required.

<sup>2</sup>Trash storage volume estimated as half the chamber volume from the base of the Inlet Chute to top of Bypass Weirs (not bypass screens). Actual volume of material stored will vary with size, density, and type. Larger volumes of trash may be retained.

<sup>3</sup>Calculated using HydroCAD modelling. A lower blinding factor can be applied to sites with lower anticipated loads.

### Download Drawings:

→ [hydro-int.com/fddrawings](http://hydro-int.com/fddrawings)

### Operation & Maintenance Manual:

→ [hydro-int.com/fd-om](http://hydro-int.com/fd-om)