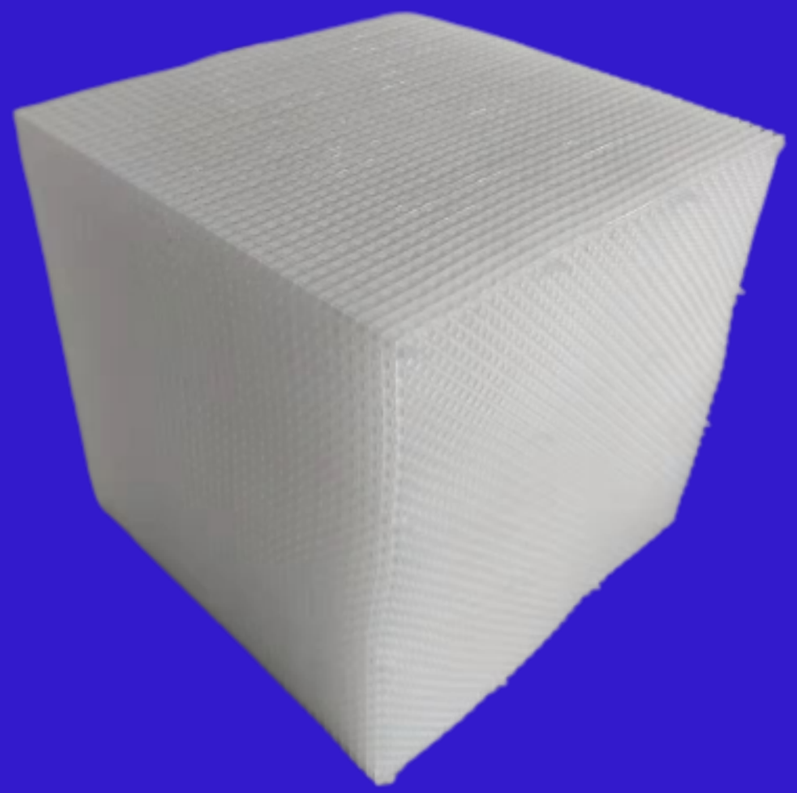
OIL SEPARATION MEDIA

POLYPROPYLENE S-CUBE® MODEL FOR OIL SEPARATION MEDIA



United International
HYDRO TECHNOLOGIES

MADE IN U.S.A.

S-Cube Oil Separation Media:

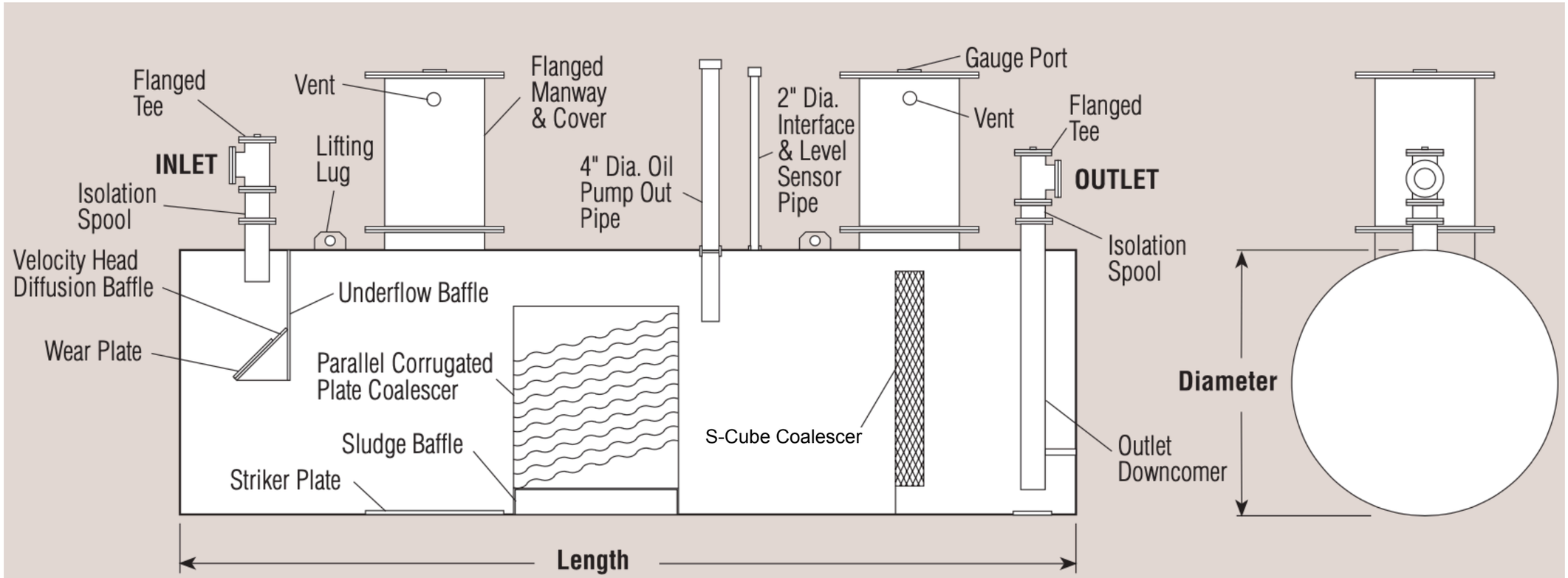
S-Cube® Patented Media for Oil Water Separators.

Innovative coalescing media can separate oil from water containing suspended particles. The large surface area makes it very suitable as a biological support media. Each layer densely poring distribution and interlocking will promote small oil-free molecular rapid contacts with the lipophilic surface, finally form a big oil droplet. It will large shorten oil & water separating time. The vertical distributed rods at the bottom of each layer will speed up the oil & waterfall off quickly and would not create any blocking. The special design above makes S-Cube® a kind of ideal carrier used in odor-control scrubbers & oil-water separators.

Working Principle:

Using corrugated plate technology in parallel causes an increase of oil droplets size, and separate more quickly. We offer a unique design of inclined plate which is called S-Cube®. The S-Cube® is manufactured from a structure of interconnecting plates with many crossing points. As the oil/ water mixture flows through the separator, new droplets coalesce with retained droplets and form larger droplets. The enlarged droplets rise to the surface and decant from the separator.

Installation Scheme:



How it Works?

After wastewater passes through filters to separate the largest solids, it is funneled into the oil-water separator to undergo treatment. In most cases, the wastewater travels across a series of plates, generally on an incline.

These plates help to separate oil, water, and sludge into three distinct spaces. The heavy sludge and suspended solids drop to the bottom. Because oil particulars can be very tiny, however, the plates perform a specific function.

As wastewater passes over the plates, oil particles are tumbled over the surface, allowing them to collect and form larger globules, increasing buoyancy. In turn, it helps more oil to separate and rise to the top of the water.

Characteristics:

Dimensions	305 x 305 x 305 mm (12” x 12” x 12”)
Color	White
Specific Surface Area	433 m^2/m^3 (132 ft^2/ft^3)
Drip Points	2,648,600 /m^3 (75,000 /ft^3)
Bulk Density	120 kg/m^3 (7.5 lb/ft^3)
Void Fraction	87.8%
Smallest Grid Opening	4 mm x 4 mm (0.16″ x 0.16″)
Thickness of layer	1.8 - 2.0 mm (0.07″ x 0.079″)

Test Procedure:

European Union's EN 858-1 Test Method for Class I Coalescing Separators	
Light Liquid	Density 0.85 g/cm^3 (Fuel oil, per ISO 8217, designation ISO-F-DMA)
Water Quality	Potable or Purified surface water
Solubility of Light Liquid	Nil, Non-emulsified
Water Turn Over	minimum of four volumes of test unit
Liquid Flux	25 – 40 m^3/hr-m^2 (10 – 15 gpm/ft^2)
Maximum Residual Light Liquid	5 mg/L (Hydrocarbon content analysis with prescribed Infrared Spectroscopy procedure.)

Results:

Results using S-Cube®	
Depth S-Cube	610 mm (24 inches)
Inlet Oil Concentration	4,250 mg/L
Liquid Flux	31.1 m^3/hr-m^2 (12.7 gpm/ft^2)
Outlet Oil Concentration	0.90 to 1.10 mg/L
Oil Droplets > 20µ	None observed

United International
HYDRO TECHNOLOGIES

www.uihydro.com - eng@uihydro.com