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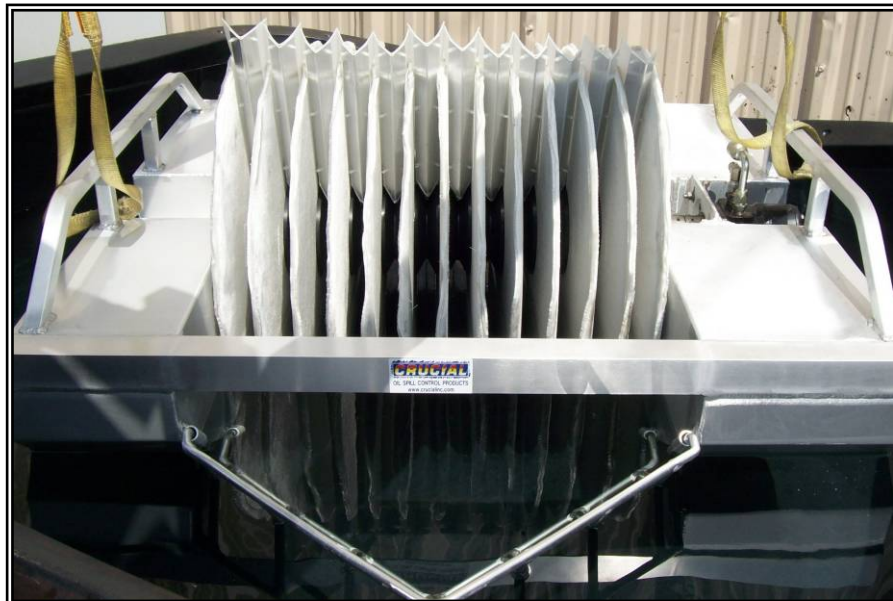
# MODEL C-DISC 13/24 (Patent No. US 8,388,839 B1)

The **C-DISC 13/24** is designed as an extremely durable but portable disc skimmer. Thirteen 24" diameter oleophilic discs are capable of recovering hydrocarbons at a rate of up to 85 gallons per minute with efficiencies up to 95%. These outstanding figures are achieved by rotating the disc as slow as 20 rpm. The special coating attached to the disc is a special blend of polymers that attract and hold the oils while the water has ample time to shed off of the oil saturated disc and return to the pond. The oil is removed from the coated disc by being rotated thru a set of aggressive scrapers. The scraped oil is then funneled into a rear mounted sump area where a 3" cam loc adapter is installed for simple transfer pump connection.

The C-DISC 13/24 is ideal for permanent installations and emergency response applications. Aluminum construction offers reliable operation in the most demanding installations. The patent pending design offers recovery rates of up to five times more than that of conventional uncoated apparatuses including but not limited to smooth or grooved plastic, aluminum, and stainless steel .

Components of the **C-DISC 13/24** system are detailed as follows:

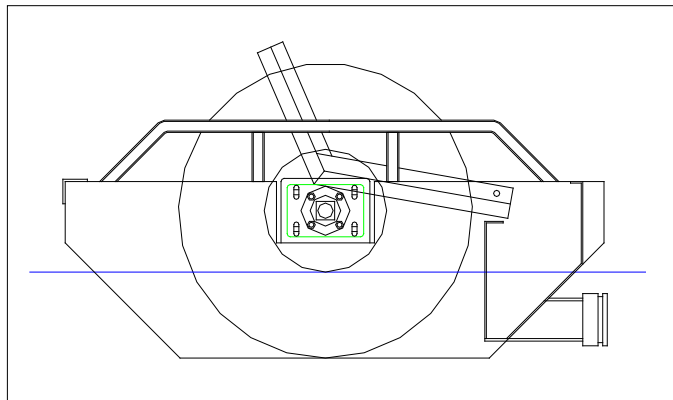
The skimmer is constructed of marine grade aluminum and 100% welded. Power is generated by a durable and efficient Danfoss geroller motor. Unit consists of a series of rotating uniquely covered aluminum discs that are wiped clean by an aggressive set of scrapers.



\*Specifications subject to change without notice

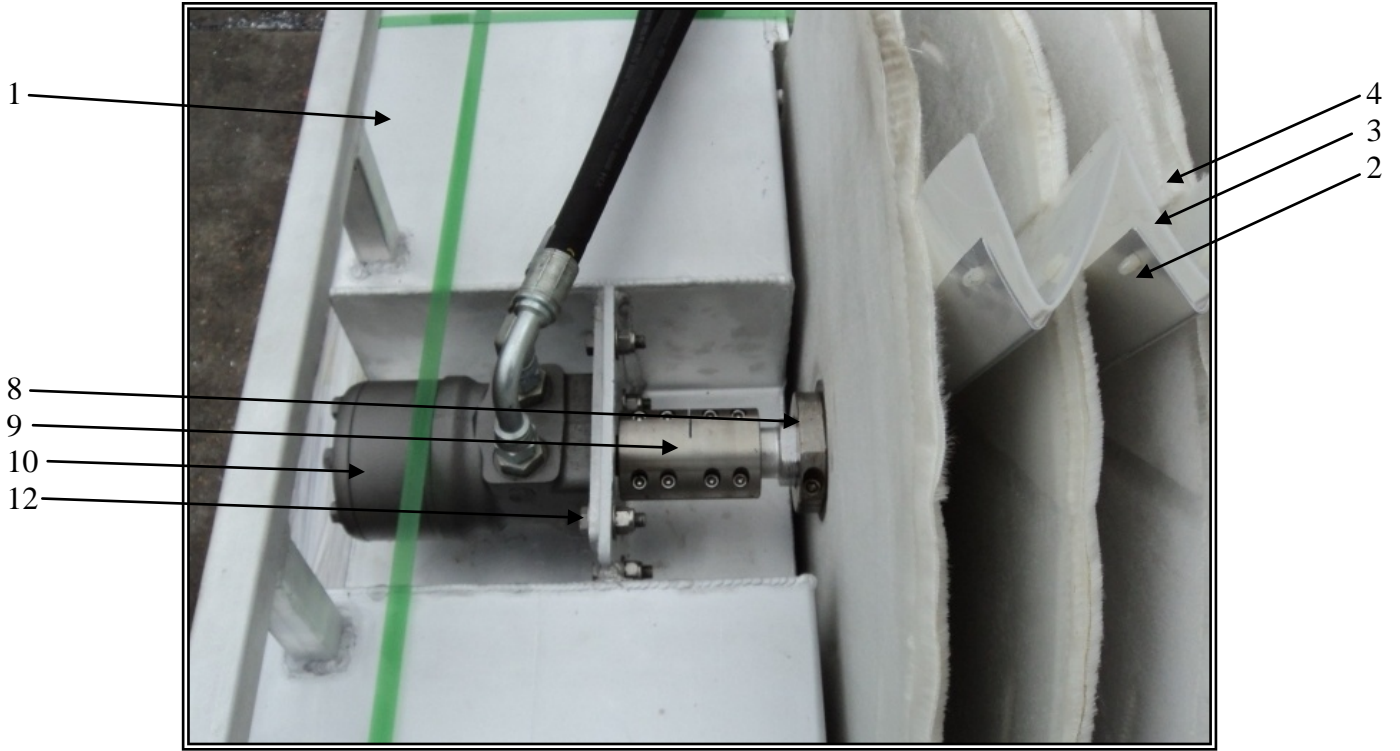
**SPECIFICATIONS:**

<b>FRAME-</b>	Marine Grade Aluminum 5086
<b>Dims-</b>	44"x47"x26" High
<b>Disc-</b>	13 each, 24" Diameter (Coated)
<b>Hydraulics-</b>	0-1 GPM @ 500-2500 PSI
<b>Recovery Rate-</b>	85 GPM at 95% Efficiency
<b>Connections-</b>	Hydraulic- Aeroquip Style Push Pull 5600 Series Connectors 1/2" Discharge- 3" Male Cam Loc



## C-DISC 13/24 DISC SKIMMER PARTS LIST

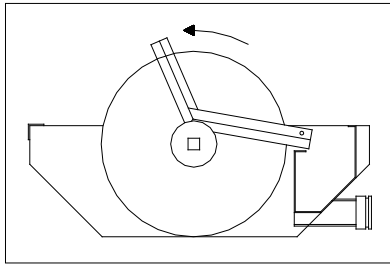
<u>PARTS NO.:</u>	<u>DESCRIPTION:</u>	<u>QUANTITY:</u>
C-DISC 13/24-001	Frame	1 ea.
C-DISC 13/24-002	Scraper Fingers	12 ea.
C-DISC 13/24-103	Scraper Blades w/Rivets ("V" shaped 2-sided)	12 ea.
C-DISC 13/24-004	Oil Recovery Discs	13 ea.
C-DISC 13/24-005	Disc Spacers	12 ea.
C-DISC 13/24-006	Disc Shaft	1 ea.
C-DISC 13/24-007	Disc Shaft Bearings	1 ea.
C-DISC 13/24-008	Compression Nut & Washers	2 ea.
C-DISC 13/24-009	Shaft/Motor Coupling	1 ea.
C-DISC 13/24-010	Hydraulic Motor	1 ea.
C-DISC 13/24-012	Hydraulic Motor Mount	1 ea.
C-DISC 13/24-014	Hydraulic Quick Connects	1 pair
C-DISC 13/24-025	Hydraulic Motor Fittings	2 ea.
C-DISC 13/24-044	Scraper Blade Connecting Rod	1 ea.
C-DISC 13/24-045	Scraper Blade Lock Collars	2 ea.
C-DISC 13/24-046	Scraper Blade Mounting Brackets	2 ea.
C-DISC 13/24-050	Fastener Kit	1 ea.



## **SKIMMER SET UP**

After unpacking the skimmer, be sure that there is no packing material or debris in the sump area. Lay the skimmer on flat ground where there is nothing contacting the disc.

Connect a hydraulic power unit to the skimmer by using the 1/2" quick disconnects. Start the hydraulic flow to the skimmer. The unit only requires 1.5 GPM to achieve 20 RPM. Check the rotation of the disc, see figure below for proper direction of the disc travel.



Connect a 3" rigid suction hose to the back of the skimmer sump. A 2" hose may be used but an adapter will be necessary. Connect the opposite end of the suction hose to any suitable transfer pump (a positive displacement pump is strongly recommended). Connect at discharge hose to any suitable waste oil storage container. The Suction hose and hydraulic line can be paired together into one bundle for a neater installation. Attach the provided hose floats to the hose bundle in any position to aid the skimmer to float as level as possible.

### **OPERATION OF SKIMMING SYSTEM;**

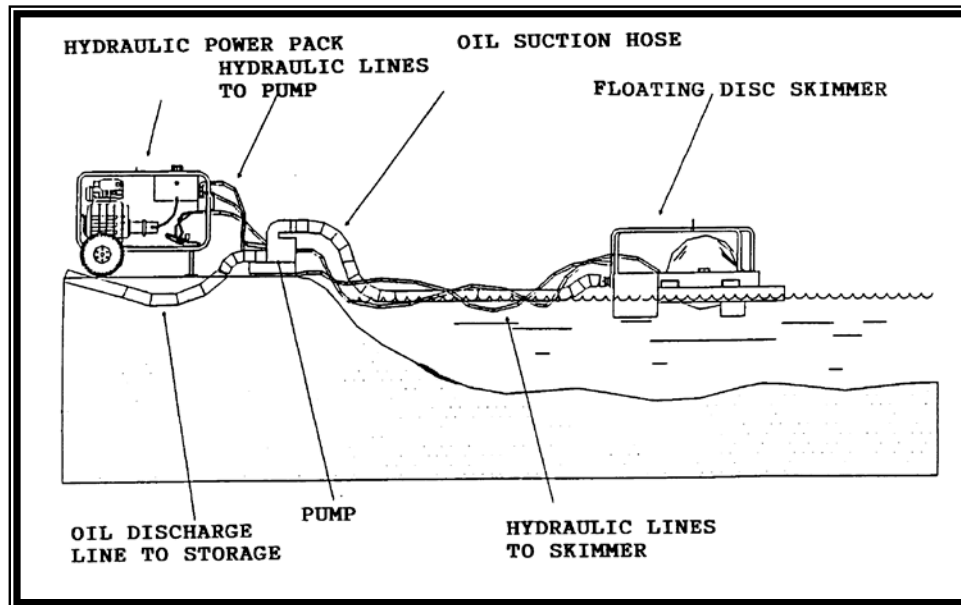
The disc skimmer is designed to skim floating oil(s) from the top of settling ponds and/or API separators. Under normal conditions the operator can observe the disc rotating speed and monitor the percentage of oil to water being collected. Since of course we don't want to pick up the water, the disc should be rotated at a slow as possible speed. The speed will take a little time to get just right. The slower the disc turn the more time the water has to shed off and flow back into the pond. The disc speed will need to set by observing the collected oil/water discharging from the pump.

Weekly inspection of the floating disc skimmer is recommended for the initial skimming period. The skimmer should be checked for premature scraper wear, hydraulic oil leaks, and solids build up in the oil collection trough. The hydraulic hose ends need to be inspected also for corrosion as they are a plated steel.

The hydraulic power pack should be inspected at the same time as the disc skimmer. Here you are looking for hydraulic oil leaks, low hydraulic oil level, above normal pressure reading, fasteners that may have become loose, and trash or debris around the motor. Keeping direct sunlight off of the hydraulic power pack will extend the life of the components as well as the hydraulic lines.

Do not do any hydraulic work to any part of the system with the hydraulic power unit running. Be sure to have the unit locked out before any work is to be performed.

Do not use “Teflon Tape” on hydraulic lines on any part of the system, the use of a liquid high pressure sealant is strongly recommended. One strand of Teflon tape allowed to enter the hydraulic system can cause catastrophic failure to the hydraulic pump.



**SCRAPER BLADES ARE VERY SHARP!**  
**USE EXTREME CAUTION WHEN SERVICING THIS**  
**PART OF THE SKIMMER!!**

#### A. Clean-up

Prior to shutting down the system, Lift the unit out of the oil and run it for a few minutes. This will remove as much of the oil from the disc as possible. If the disc is coated with heavy oil then that oil can be cut with lighter oil. It should be noted that the disc, once used, will never be completely oil-free. CRUCIAL, INC. does not recommend cleaning the disc with detergents, as this will severely limit the belts ability to attract oil. Used disc should be considered a flammable material, and should be stored accordingly.

For Decon, remove the scraper finger assembly and disc bank. The finger assembly has two cotter pins that pull free then the fingers lift out. The disc bank require the removal of the two bolts that hold the shaft bearing and hydraulic motor then the disc can be lifted out. The skimmer now can be wiped down with oil sorbent pads and cleaned with any commercially available detergent. Steam cleaning will not harm the equipment. The coated disc should be pressure washed with cold or hot water. After reassembly, grease the pillow block bearing, the rigid motor to disc shaft coupling including the screws, a light coat of grease or spray oil (WD-40) to the motor and hydraulic connectors.

#### B. Storage

Sorbents may be used to line the floor of the base. This will catch any oil that may remain in any component.

Do not store the wringer so that the discs are exposed to direct sunlight.

Grease all bearings that have grease fittings.

Keep the hydraulic hoses out of direct sunlight.