

# skim-pak™

## SURFACE SKIMMER SYSTEMS

### The Proven Automatic Skimmer Technology for Industrial Process Systems

A Douglas Engineering **skim-pak** system is specifically designed for reliable performance in almost any size or shape of industrial process containment tank, above or below grade, closed, floating or open top; new or retrofit.

The dependable, uncomplicated system removes floating product from liquid surfaces with virtually no maintenance or monitoring.

#### **skim-pak** removes:

- Surface oil, kerosene, gasoline or MTBE in process water or coolant tanks.
- Specific gravity differentiated chemical layers in storage tanks.
- Surface scums, dust, fly ash or plastic particulate.
- Foam and flocculent layers from clarifiers.

With 25 years of experience Douglas Engineering has the knowledge and capability to design and build economical, efficient and reliable skimming systems.

Douglas Engineering will also design systems for unique environments including specific weir configurations to control the laminar flow and velocity.

**Douglas Engineering**

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### The **skim-pak** Advantage

Douglas Engineering's in-tank skimmer systems are designed to handle the specific requirements of industrial process water with these important advantages.

- **Reliable Operation:** **skim-paks** work consistently and reliably for years. No reoccurring costs and long down times as with Disc and Belt skimmers.
- **Surface Attraction:** **skim-paks** attract the surface recovering the oil from the entire tank surface. Disc, belt and rope units only recover the oil they happen to touch.
- **Automatic Operation:** Optional control systems virtually eliminate operator monitoring.
- **Versatile Deployment:** Swiveled swing arm, flexible hose and telescoping options allow the skimmer systems to be application specific.
- **Rugged Construction:** System components are made of stainless steel, aluminum or ABS for maximum reliability and long service life in the harshest closed top tank environments.
- **Complete, One-Source Systems Packages:** Application-matched pumps, separators, and other accessories are available direct from Douglas Engineering.

### The **skim-pak** difference- how the system works.

In the tank, the skimmer head follows the liquid level removing accumulated floating product on demand. Designed with virtually no moving parts, the **skim-pak** system works by gravity flow or pump with a 360° removal action as shown in FIGURE 1.



FIGURE 1. **skim-pak** 360° removal action

#### Types of skimmer heads available:

- **Flow-controlled weir heads** are designed to remove 100% of the surface product with minimal underlying liquid.
- **Fixed weir heads** remove only surface product leaving a user specified product layer depth in place on the underlying liquid.
- **Smart Skimmer** will detect, engage, accumulate and off load oil. No additional separator required.
- **Floating Decanters** remove supernate from SBR and other water treatment processes. The flow-controlled weir provide for the quickest possible removal of supernatant without sludge or scum.

*Skimmers that really work!*

**skim-pak**

## FLOATING DECANTERS



### **Solids Excluding Doors:**

Eliminates solids from entering the decanter head during the fill and aeration cycles. (System may require back pressurization)

### **Predictable Decanting Can Save Cycle Time.**

Sludge settling time, and decanting time can be combined to save total cycle time. This can extend the capability of the physical plant up to 20%.

### **Uniform Withdrawal:**

Selected units can maintain a consistent withdrawal rate over the entire range of decant.

### **Self Adjusting Weirs:**

Create a definable flow rate, moving the super-critical acceleration into the decanter, leaving sub-critical flow outside of the decanter giving the highest possible flow rate without disruption of the sludge layer.

### **Floating Decanter**

No need to determine the settled sludge level, since the decanter floats. It is not rotated into the fluid on a predetermined arc.



### **No Electrical-Mechanical Devices Required.**

This floating decanter self adjusts all variables to produce un-loaded supernatant throughout the decant.



### **Single Point Control**

Effluent control valve automatically controls adjustments and operations in the decanter head to the demands of the decant rate.

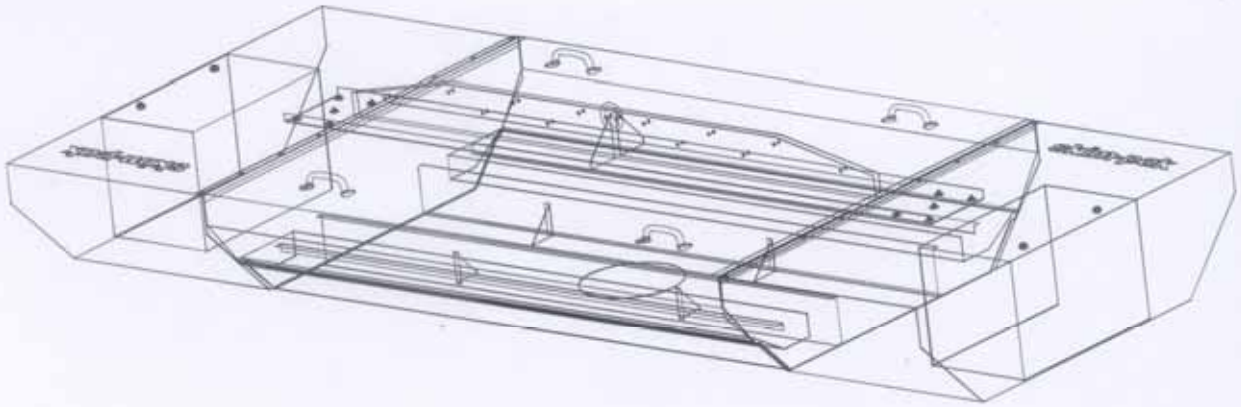


Our technology *separates* us from the rest



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### 11840-DH Decanter

- Cost effective retrofit
- Quality without compromise
- Comprehensive product support
- Industry leading patented technology
- Numerous deployment configurations
- Designed for long term reliability
- Each decanter is specifically designed for the application

	Total Meters of Weir	Max Flow Rate*		Dimensions L x W x H	Weight	Standard Port Size
		m <sup>3</sup> /min	Gal/min			
11800-DH	.5m	1.4	370	34" x 60" x 20"	160 lbs	4"
11810-DH	1m	2.8	740	44" x 60" x 20"	380 lbs	6"
11820-DH	2m	5.6	1,480	76" x 60" x 20"	440 lbs	8"
11830-DH	3m	8.4	2,220	108" x 60" x 20"	510 lbs	10"
11840-DH	4m	11.2	2,958	140" x 60" x 20"	640 lbs	12"

Higher flow rates achieved with multiple heads

304 Stainless Steel Construction, Sump and Lifting Bracket 12 gage, Float and Weir 18 gage

Flow Rate set to a desired rate of decanting normally **2.8 cubic meters per minute per meter of weir**

ANSI Flange Bolt Pattern Standard

\*Flow Rate assumes a least a 18" head

Dimensions and Specifics subject to change without notice

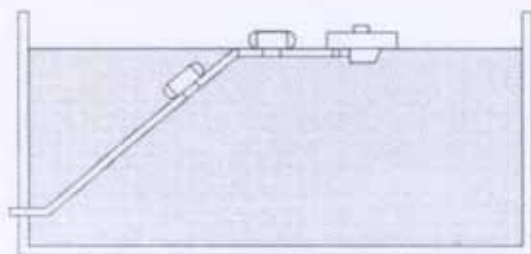


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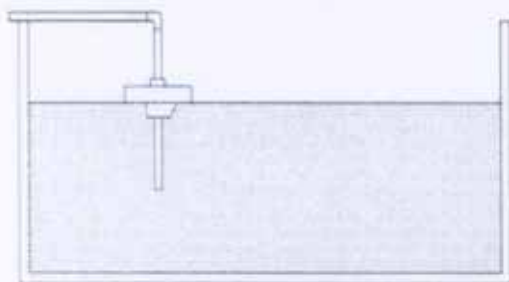
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# skim-pak Application Worksheet

Indicate most probable deployment



SWING ARM DEPLOYMENT



EXTENDED SUMP DEPLOYMENT

APPLICATION NAME OR REFERENCE NO. \_\_\_\_\_

SITE LOCATION \_\_\_\_\_

NAME \_\_\_\_\_

DATE \_\_\_\_\_

COMPANY \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

FAX to: 925-827-4999 OR

E-MAIL to: sales@douglaseng.com

- TANK/SUMP SIZE  
 H        D         
 H        W        L         
 Open Top  Closed Top
- ABOVE OR BELOW GRADE  
 Above  Below
- ACCESS  
 Opening Size        Location
- LIQUID LEVEL CHANGE  
 High         
 Low         
 Normal
- DESIRED SKIMMER CAPACITY
- PRODUCT TO BE REMOVED: \_\_\_\_\_
- CAN WATER BE INCLUDED WITH SKIMMED PRODUCT  
 Yes  No
- DESCRIBE DEBRIS \_\_\_\_\_  None
- IS A PUMP REQUIRED?  
 Yes  No  On Hand  
 Describe the Pump to be used \_\_\_\_\_  
 Air  Electric: Voltage        Phase
- IS A SEPARATOR REQUIRED?  
 Yes  No  On Hand
- WHAT TYPE OF SEPARATOR WILL BE USED?  
 Coalescing  Gravity gpm
- ARE CONTROLS REQUIRED  Yes  No Please describe intended operation: \_\_\_\_\_

## PLEASE DESCRIBE APPLICATION

- INCLUDE A SKETCH ON A SEPARATE SHEET IF NEEDED
- PROVIDE ANY WRITTEN SPECIFICATIONS
- NOTES OF SPECIAL CONDITIONS, (TEMP, PH, PRESSURE, OTHER IN-TANK STRUCTURES, EXPLOSIVE ATMOSPHERE)



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