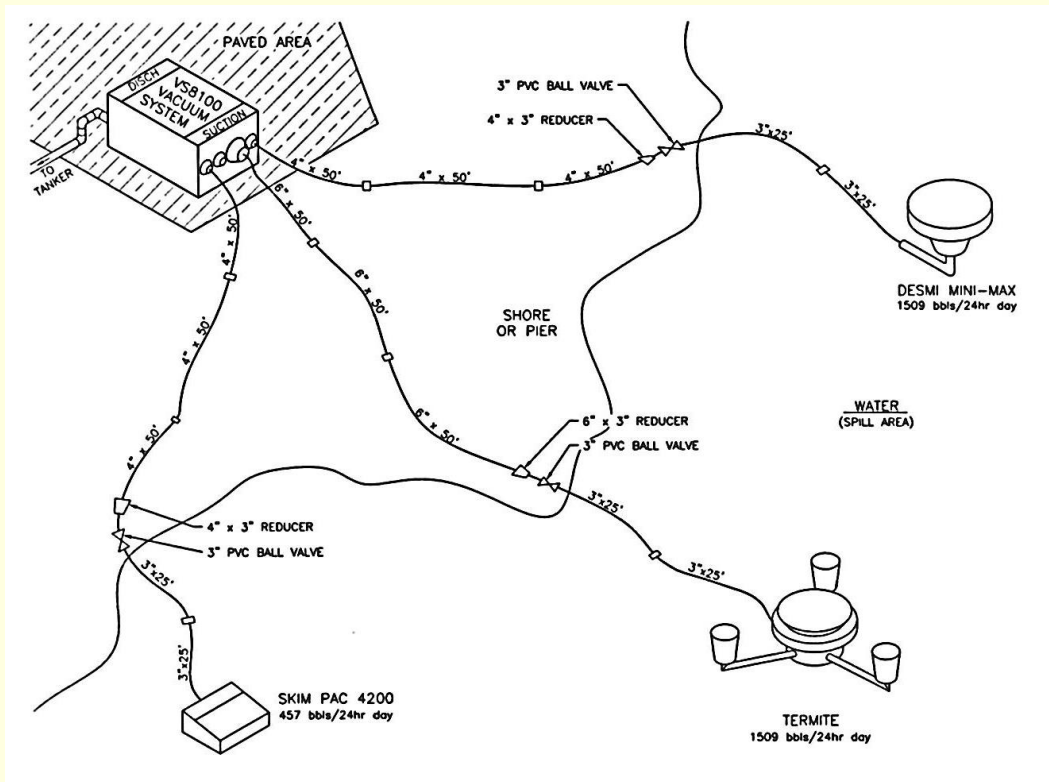


# S0300-BV-CAT-020

VACUUM PUMP/SKIMMER SYSTEM

System - P18100



Vacuum Pump/Skimmer System P18100

# S0300-BV-CAT-020

## VACUUM PUMP/SKIMMER SYSTEM

System - P18100

The Vacuum Pump/Skimmer System P18100 is a stationary vacuum pump specifically developed for oil spill countermeasures. The system uses a vacuum pump to provide a strong skimming capability, and a compressor pump to provide discharge and transfer capabilities to a temporary or permanent containment area. The unique two-tank design provides for a continuous, smooth operation. The unit is self-contained and may be operated in automatic or manual modes. The system is intended primarily for oil spill recovery, but may subsequently be used to transfer oil from temporary containment areas to permanent storage facilities. A major feature of the unit is the capability of operating in debris-laden oil conditions without interruption. The vacuum system may be deployed for ocean or coastal beach spill situations. The airflow capacity of the system enables suction techniques to be used for beach situations. Because the system readily tolerates debris, rapid spill recovery is possible. Once the spill is recovered the debris can be separated if desired. The unit operates via a diesel driven vacuum/tank system fitted with a variety of hoses and suction heads. The large vacuum pump skimmer system is supported by two harbor type skimmers and a 2-inch, Skim-Pak unit. These smaller units support the larger vacuum system in oil spill cleanup in and around confined spaces.

## System Components for P18100

Alternates

ESSM No	Nomenclature	Type	Qty	NS	Cont
<b>VA2250</b>	VAN, HIGH PRESSURE VACUUM SYSTEM	BL	1		Y
SK0620	SKIM-PAK, 2", 4000-GPH	Contents	1		
SK0900	SKIMMER, HARBOR, MINI-MAX	Contents	1		
SK0905	SKIMMER, TERMITE	Contents	1		
<b>VS8100</b>	VACUUM PUMP/SKIMMER SYSTEM	BL OPTL	1		

Baseline verified on 9/11/2017, \* Not shown in catalog.

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## ESSM - VA2250 VAN, HIGH PRESSURE VACUUM SYSTEM



High Pressure Vacuum System Van VA2250

The High Pressure Vacuum System Van VA2250 is used to store and ship ancillary equipment for the vacuum pump/skimmer system. The van contains adapters, safety cables, flange couplings, various size hoses, spare parts kit for the two-tank vacuum pump unit, various fittings and other ancillary items necessary to set up, operate, and maintain the system.

### Specifications

Type	Description	Qty
Manufacturer	ESSM Facility	
Model	VA2250	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	20 ft, 0 in		
Width	8 ft, 0 in		
Height	8 ft, 0 in		
Cube	1280 cu ft		
Footprint	160 sq ft		
Weight	12158 lb		

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## References

Ref No	Reference
1	None

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## ESSM - SK0620 SKIM-PAK, 2", 4000-GPH



2" Skim-Pak SK0620

The 2-Inch Skim-Pak SK0620 is a complete emergency response skimmer system ready for rapid deployment. The unit includes a separator, hose, and control wand. The Skim-Pak unit is designed as a general purpose skimmer for oil recovery on lakes, harbors, rivers, streams, and calm water applications. The unit has a maximum flow rate of 68 gpm and an Effective Daily Recovery Capacity (EDRC) of 466 bbl/24-hr day.

### Specifications

Type	Description	Qty
Manufacturer	Douglas Engineering	
Series	4000	
Model	4200	
Flow rate	5 to 68 gpm	
Port size	2"	
Draft	5"	
Weir width	12"	
Type	Flow control	
Material	Fiberglass	

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## Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	2 ft, 3 in		
Width	2 ft, 1 in		
Height	0 ft, 11 in		
Cube	5 cu ft		
Footprint	5 sq ft		
Weight	18 lb		

## References

Ref No	Reference
1	Douglas Engineering Brochure; "The Skimmer That Really Works"

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## ESSM - SK0900 SKIMMER, HARBOR, MINI-MAX



Mini-Max Harbor Skimmer SK0900

The Mini-Max Harbor Skimmer SK0900 is a center float weir skimmer with 100% unobstructed flow into the collection hopper. The skimmer incorporates a self-adjusting lip adapter. This adapter adjusts the weir automatically, allowing unattended operation, and it maintains correct weir position relative to the oil-water interface, even in choppy waves. By adjusting weir height to match oil layer thickness, water content is reduced and recovery efficiency increased. The skimmer head may be connected to a self-priming pump or vacuum. The unit has a maximum flow rate of 220 gpm and an Effective Daily Recovery Capacity (EDRC) of 1509 bbl/24-hr day.

### Specifications

Type	Description	Qty
Manufacturer	Desmi Environmental	
Model	Mini-Max	
Flow rate	135-220 gpm (dependant on pmp/vac cap)	
Inlet weir	24" diameter	
Outlet	Hinged bend with swivel joint and 3" camlocking type coupling (male)	
Materials:		
Center float, hopper, and floating collar	Polyethylene	
Bellows	Oil resistant neoprene rubber	
Discharge system	Stainless steel	

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## Specifications

Type	Description	Qty
Draft	12"	
Suction hose	3" diameter corrugated suction hose with 3" camlock male/female couplings	
Discharge hose	3" diameter layflat hose with 3" camlock female coupling at one end	

## Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	3 ft, 7 in		
Width	2 ft, 11 in		
Height	1 ft, 3 in		
Cube	14 cu ft		
Footprint	11 sq ft		
Weight	55 lb		

## References

Ref No	Reference
1	None



**ESSM - SK0905  
SKIMMER, TERMITE**

Termite Skimmer SK0905

The Termite Skimmer SK0905 utilizes a large free-floating weir lip-type skimmer. The flexible, high buoyancy weir system allows for nearly 6 inches of vertical travel for excellent wave following, even in choppy seas. The weir height automatically adjusts to match the discharge rate of the pump, ensuring high recovery efficiency at all flow rates. The Termite's shallow draft allows for operation in very shallow water. The skimmer's high buoyancy-to-weight ratio and low inertial mass ensures excellent seakeeping characteristics in offshore conditions.

The Termite Skimmer is uniquely versatile because it can be used in four modes of operation to fit the operating conditions:

1. Free-floating and offloaded by DOP-160 screw pump. This provides for a nameplate capacity of 189 bbl/hr (approximately). The EDRC is 905 bbl/24-hr day.
2. Free-floating and offloaded through a separate 3- or 4-in suction port by a diaphragm pump, peristaltic pump, or self-priming centrifugal pump. It is also ideal for offloading with the RO-VAC or vacuum truck. This provides a nameplate capacity of 315 bbl/hr (approximately). The EDRC is 1509 bbl/24-hr day.
3. Free-floating and offloaded simultaneously by DOP-160 and suction pump. This provides a nameplate capacity of 500 bbl/hr (approximately). The EDRC is 2400 bbl/24-hr day.
4. Suspended without floats from a crane. No nameplate capacity. The Termite Skimmer uses a DOP-160 modified Archimedes screw design, which provides many benefits over other types of pumps. The DOP-160 easily cuts and processes debris, does not emulsify oil when pumping, and has a low weight relative to its capacity and discharge pressure.

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## Specifications

Type	Description	Qty
Manufacturer	Desmi	
Model	SUC0001	
Capacity (pumping version)	132 gpm w/DOP-160 pump	
Capacity (suction version)	220 gpm	
Pump discharge	3 in camlock	

## Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	2 ft, 10 in		
Width	2 ft, 10 in		
Height	1 ft, 1 in		
Cube	9 cu ft		
Footprint	9 sq ft		
Weight	140 lb		

## References

Ref No	Reference
1	Hyde Instruction Manual for Desmi-Termite Skimmer

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## ESSM - VS8100 VACUUM PUMP/SKIMMER SYSTEM



Vacuum Pump/Skimmer System VS8100

The Vacuum Pump/Skimmer System VS8100 is a skid-mounted, diesel-powered vacuum pump. The unit uses positive and negative air pressure developed by two rotary vane type vacuum pumps to draw in and discharge water, oil, emulsions, and debris in a spill response scenario. The vacuum system can skim oil from the water surface or it can be used as a rapid transfer pump for oil and debris. The system is effective in confined areas such as under piers, in shallow water, and in areas with heavy floating debris.

### Specifications

Type	Description	Qty
Manufacturer	Environmental Tech Inc.	
Model	HVSC 3335	
Engine:		
Manufacturer	Perkins Engines	
Model	4.236	
Cylinders	4	
Displacement	235.9 cu in	
Rpm (full load)	2400	
Starting	Electric	
Battery	12 V dc	

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## Specifications

Type	Description	Qty
Horsepower	78.5 @ 2400 rpm	
Fuel	Diesel	
Fuel source	20-gal internal fuel tank	
Fuel consumption	5 gph	
<b>Vacuum pump:</b>		
Manufacturer	Fruitland Tool & Mfg.	
Model	RCF800	
Rated capacity	476 cfm @ 18 in Hg	
Max. vacuum	28 in Hg	
Horsepower draw	27 hp @ rated capacity	
<b>Pressure pump:</b>		
Manufacturer	Fruitland Tool & Mfg.	
Model	RDF500	
Rated capacity	320 scfm @ 15 psig	
Max. pressure	35 psig	
Max. flow rate	380 scfm	
Horsepower draw	27 hp @ rated capacity	

## Physical Characteristics

Type .....	Descriptions .....		
	Shipping	Operating	
Length	10 ft, 9 in	10 ft, 9 in	
Width	7 ft, 4 in	7 ft, 4 in	
Height	8 ft, 2 in	8 ft, 2 in	
Cube	644 cu ft	644 cu ft	
Footprint	79 sq ft	79 sq ft	
Weight	8770 lb	8770 lb	

## References

Ref No	Reference
1	Vacuum System VS8100 Field Use Information Guide
2	Perkins User's Handbook and Supplements