



Seal-Less

Sliding Vane Pumps
for **Full Chemical
Containment**

Recognizing the need for full containment of expensive and hard-to-seal high-value and/or dangerous chemicals, Blackmer®, a product brand of PSG®, a Dover company, has combined its proven sliding vane pump technology with a seal-less magnetic coupling to create the SMVP Series Seal-Less Mag-Drive Sliding Vane Pump.

The safe, reliable and efficient handling of acids, caustics and solvents is a key concern for a wide range of industrial-manufacturing applications and the seal-less SMVP pump helps ease those concerns by offering completely leak-free operation. The absence of shaft leakage increases both personal and environmental safety as it not only means no loss of liquids, but also no release of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).



CHEMICAL
Seal-Less Solutions

Features & Benefits:

- 316 stainless-steel construction/metallized carbon graphite sleeve bearings/non-metallic vanes
- Self-lubricating sleeve bearings eliminate metal-to-metal contact
- Pumpage cools containment can and bearing surfaces for increased bearing life
- Samarium-cobalt magnets prevent magnet degradation
- Replaceable end discs for easy pump rebuild without removal from piping
- Sliding vane design self-adjusts for wear
- Self-priming, low-shear operation
- Adjustable relief valve protects against excessive pressures



Where Innovation Flows



Product Recovery Equals Big Savings

Now is the time to install Blackmer Seal-Less SMVP Sliding Vane Pumps to minimize product waste and dramatically improve production yield.

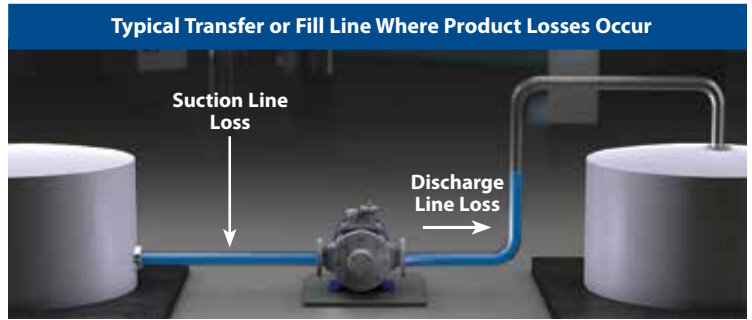


Table 1

Size		Volume	
OD inch	OD mm	Gallon/ Foot	Liters/ Meter
1.0	25	0.03	0.38
1.5	38	0.08	0.95
2.0	51	0.14	1.77
2.5	63	0.23	2.85
3.0	76	0.34	4.17

Calculate the Value of Your Fluid

Estimated Product Cost* per gallon or liter = _____

* Ideally to include sale value and disposal cost

Inlet / Suction Line		Discharge Line	
Length of Inlet Tube		Length of Outlet Tube	
Volume (Multiply from Table 1)		Volume (Multiply from Table 1)	
% Nominal Recovery* 95%		% Nominal Recovery* 80%	
Cost (Volume x % x Cost/Unit)		+	Cost (Volume x % x Cost/Unit)

*Typical recovery on suction is 90-98%+

*Typical recovery on discharge 50%-90%+

_____ / time x _____ $\frac{\text{times}}{\text{year}}$ = \$ _____ / year

Additional Savings

- Seal Replacement Costs:** _____ times per year x _____ /seal set = _____
 Blackmer seal-less design will assist with difficult to seal applications. (typical \$1,000-\$2000+ per set)
- Seal Water Flush Costs:** _____ volume/hour x \$ _____ /volume x _____ hours/year = _____
 Blackmer seal-less design does not require/use water or other flush. (volume is liters or gallons) (typical US\$10K-20K/year in USA per pump)
- Pump Rebuild Cost:** _____ times per year x _____ cost = _____
 For Blackmer, the self-compensating, sliding vanes are auto adjusting for wear. Blackmer replaces some pumps that have to be rebuilt as much as twice per year at 70% the cost of new.
- Power Consumed:** _____ extra kW x \$ _____ kW/hr _____ hours/year = _____
 Because of essentially no slip, Blackmer power is not wasted. (For typical low viscosity applications, Blackmer uses 0.2kW to 1.5kW+ less power for applications that produce slip with lobe or ECP pumps) (1 hp = 0.75 kW)
- Compliance and Clean Up Costs:** _____ times per year x _____ labor costs = _____
 Seal-less pumps prevent leaks. What is the cost to clean a spill or pay a fine to a government agency for dangerous spill events?

Subtotal Reduction in Cost of Ownership = _____



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Authorized PSG® Partner: