Blackmer
A DOVER COMPANY



Experts in

MISSION CRITICAL

Transfer and Process Flow Solutions For



Biodiesel

- Production
- Processing
- Blending
- Terminals
- Transportation

Biodiesel Process & Transfer Flow Solutions

Blackmer is the global leader in flow solutions for light petroleum and biofuels. Blackmer pumps have earned this distinction because of their high efficiency and reliability, low life cycle cost, and operational advantages in handling thin liquids. In fact, the world's largest consumer of diesel fuel – the U.S. Navy – has specified Blackmer pumps on every ship for the past 50 years for its mission-critical fuel service.

In biodiesel production, processes and transfer, nothing beats a Blackmer for reliability, volumetric consistency, efficiency and energy savings in moving anything from feedstocks to catalysts to blended fuels, including:

- Soy, palm and other virgin vegetable oils
- Animal fats
- Recycled cooking oils
- Alcohols
- Sodium Hydroxide (NaOH)
- Potassium Hydroxide (KOH)
- Sulfuric Acid (H_2SO_4)
- Citric Acid
- Methanol
- Glycerin
- Biodiesel (B100 – All Blends)
- Anti-Gel Agents
- No.1 and No. 2 Diesel
- Ultra Low Sulfur Diesel (ULSD)
- Fuel Oils
- Lube Oils
- Gasoline
- Ethanol

When it comes to optimizing flow performance, reducing costs and increasing profitability, the world's most productive operations share a common demand –

Better Get Blackmer.

Blackmer® A DOVER COMPANY

ISO 9001 Certified

Blackmer Pumps are Designed to Help Biodiesel Producers:

- Improve operational efficiencies on thin liquid transfer
- Control quality by ensuring volumetric output consistency to meet blending specifications
- Significantly reduce maintenance costs by providing highly reliable, easy-to-maintain pumps
- Save energy while making fuel – through power-efficient pump designs
- Improve uptime performance – pumps are engineered to eliminate most problematic areas: seal and bearing failures

Blackmer positive displacement sliding vane pumps:

- Are designed specifically for reliable continuous duty operation
- Set the industry standard for low and medium viscosity process and transfer applications
- Improve production yields – self-priming, high suction pumps strip lines clean of residual product

Blackmer centrifugal pumps:

- Are built specifically for the toughest, hard-to-seal applications in liquid processing
- Set the industry standard for seal integrity and extended bearing life

Pump Type	Oil Producer			
	Cracking, Collecting, Loading/Unloading	Preparation: Clean/Heat Filter	Mixing: Alcohol & Catalyst	Combining: Methanol/Caustic with Oils
ProVane®		■	■	■
System One®	■	■		
NP/SNP Series	■	■	■	■
ML/HXL Series	■	■		
GX/X Series		■	■	■
TX(S)D Series				



ProVane® Motor Speed Vane Pumps

Designed for production, process and blending applications, ProVane® delivers volumetric output consistency to ensure batch quality compliance. This pump provides continuous duty operation with no preventative maintenance required. Motor speed design results in energy savings while you're making fuel.



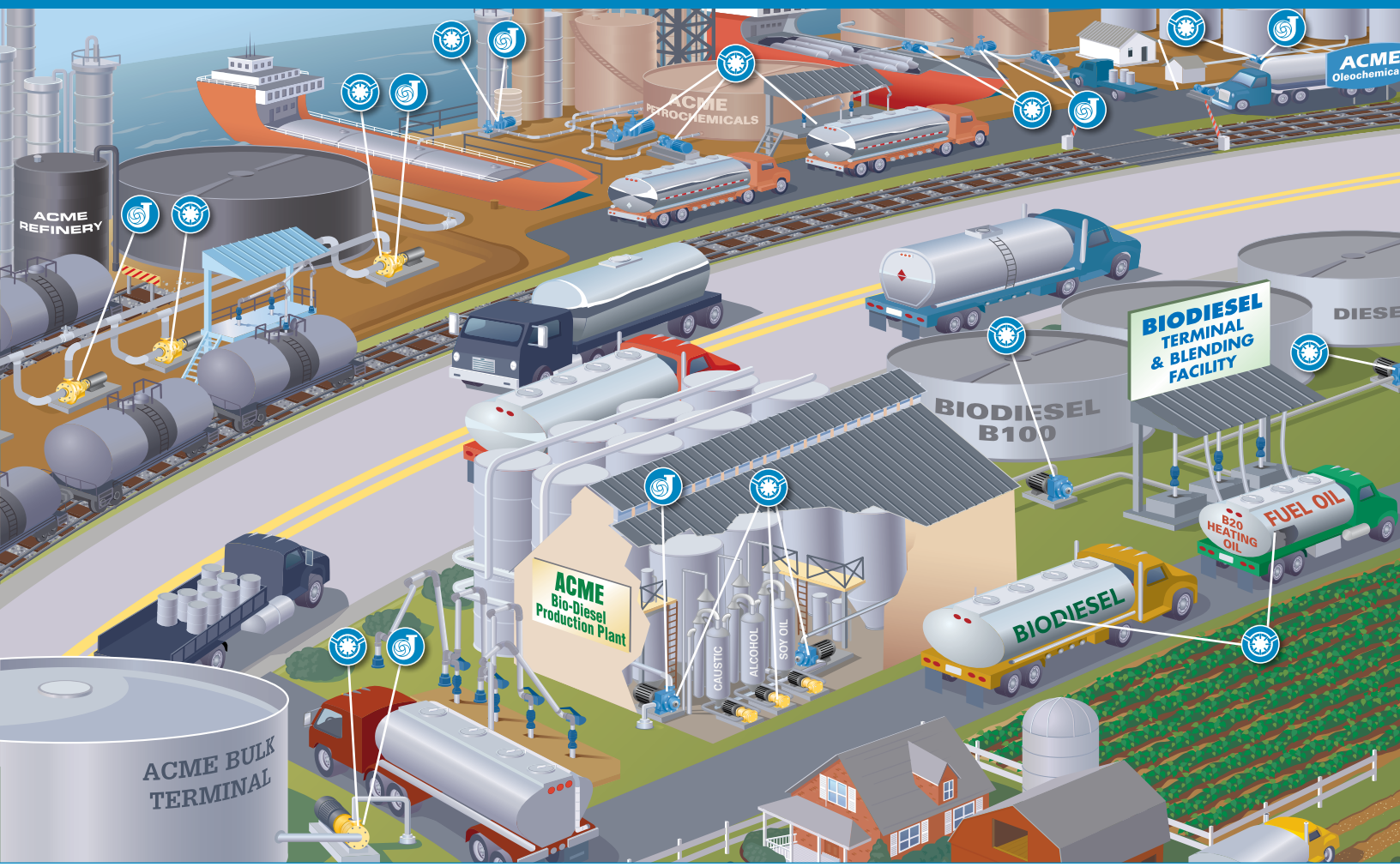
System One® LD17 Centrifugal Pumps

Designed for high volume, severe duty applications such as unloading barges, ships and railcars, and transferring liquids from terminal tanks to loading platforms. Ideal for slurries and abrasives.



NP/SNP Series Sliding Vane Pumps

NP Series pumps are designed for loading and unloading operations including top-unloading of railcars. The pump's superior suction capability increases efficiency in removing the "heel" out of a railcar or tank truck. NP pumps are also available in a 316 stainless steel SNP Series.



Biodiesel Production & Processing					Terminal Transfer		Transportation
Processing: Transesterification	Separation: Biodiesel & Glycerin	Recovery: Methanol & Glycerin	Purification Wash/Dry	In-Line Blending	Blending	Loading/ Unloading	Transport & Tank Truck
■	■	■	■	■	■		
	■		■		■	■	
■	■	■	■	■	■	■	
■	■				■	■	
■	■	■		■	■	■	
						■	■



ML/HXL Series Sliding Vane Pumps

Designed for high capacity transfer, top or bottom loading/unloading and blending at the rack. ML and HXL pumps are ideally suited for barge, ship, UST and terminal transfers where their self-priming and high suction capabilities enable them to strip tanks, barges and rail cars clean.



GX/X Series Sliding Vane Pumps

Designed for transfer and loading/ unloading of feed stocks and end products. Offering high suction capabilities, this pump is especially suited for pumping from bulk plants, USTs, stripping lines and completely removing the heel from rail and transport tankers.



TX(S)D Series Sliding Vane Pumps

Fast, quiet and highly reliable, the TX(S)D Series is a truck-mounted transfer pump specifically designed for use on tank trucks and transports for the transfer of Ultra Low Sulfur Diesel (ULSD), B100 and all biodiesel blends.

High Volumetric Efficiency & Consistency, Energy Savings and Reliability by Design

Blackmer Positive Displacement Sliding Vane Pumps

All Blackmer vane pumps begin with seal and bearing life as the primary design criteria to ensure elimination of the most problematic challenges of light liquid transfer. Other vane pump advantages include:

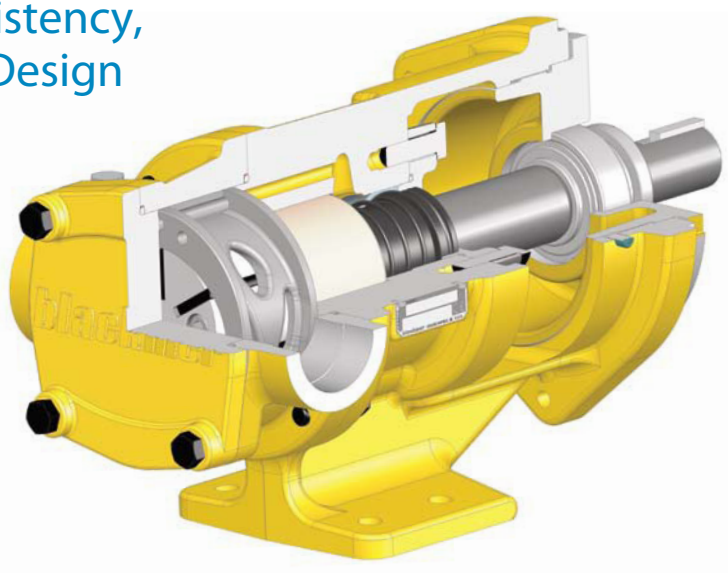
Volumetric Output Consistency – self-adjusting vanes eliminate efficiency robbing "slip" to maintain near original volumetric output capacity and consistency even after significant wear; ideal for blending processes – something you can't achieve with gear pumps

Seal and Bearing Integrity – designed for maximum seal and bearing life

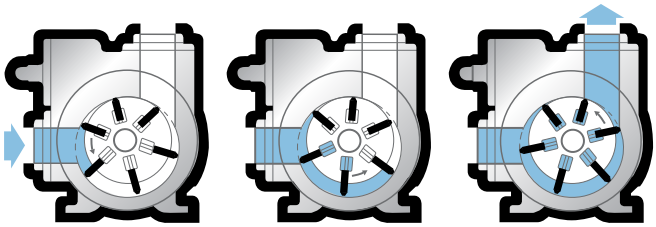
Flow Capacity Flexibility – ranges from 1 gpm to 2,300 gpm

Superior priming and suction capabilities – exceptional for line stripping, complete evacuation of heels and superior lift from USTs

Easy Maintenance – pump can be completely rebuilt with piping attached



How Blackmer's Sliding Vane Pumps Work



High Volume, Severe-Duty, Reliable, Leak-Free Flow by Design

Blackmer System One® Centrifugal Pumps

Designed around the seal where 90% of pump failures occur, to move hard-to-seal thin liquids, as well as slurries and abrasives that typically plague other centrifugal pumps. Other System One® advantages include:

Heavy-Duty Shaft – eliminates vibration for a larger operational window off the BEP (Best Efficiency Point) for greater reliability

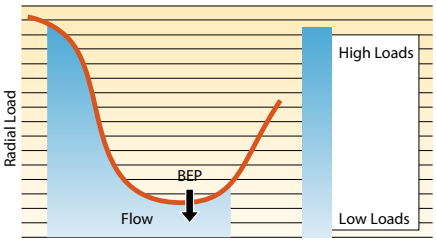
Shorter Shaft Overhang – reduces bearing load to extend bearing life

Seal Integrity – low deflection shaft provides greater stability at seal area to improve seal life

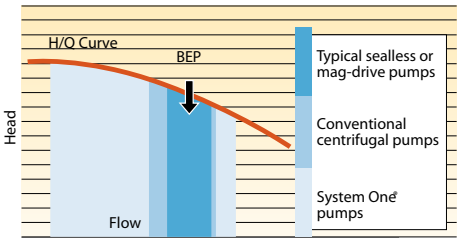
Best Guarantee in the Industry – 5-Year Power End Performance Assurance and One Year Mechanical Seal Performance Assurance



Wider Window of Operation Off the BEP (Best Efficiency Point)



Many processes demand operation off the BEP where higher loads can create damaging vibration.



System One® pumps resist vibration for a larger operational window off the BEP and greater reliability.

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