



Expert
Solutions
for Critical
Applications

BRAND
Portfolio



Where Innovation Flows.

www.envirogearpump.com

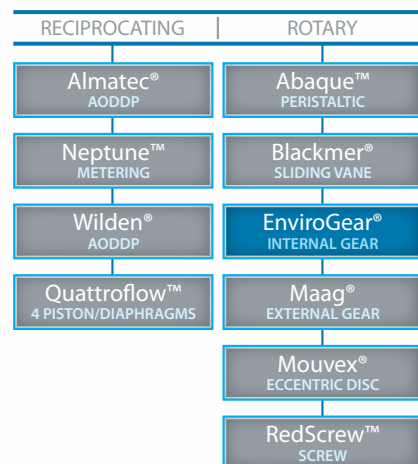
INTERNAL SEAL-LESS GEAR PUMPS



Dover's **Pump Solutions Group (PSG®)**, a global leader in positive displacement pump and supporting technologies, delivers value-added pumps and systems that serve customers requiring the safe and efficient transfer of critical and valuable materials. PSG features world-class pump brands and has multiple facilities on three continents (North America, Europe and Asia) that are ISO certified. We are passionately committed to innovative technologies that will positively impact the world. Our priority is providing the market expertise you need by delivering tomorrow's innovative fluid and material transfer solutions today.

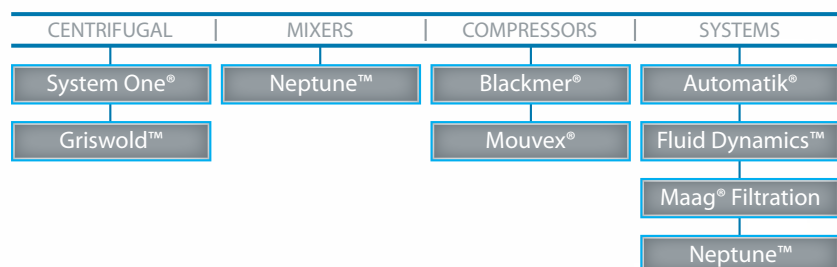
Where Innovation Flows.

POSITIVE DISPLACEMENT PUMPS



PSG® Technologies:

PUMPS & SYSTEMS TECHNOLOGIES





Who We Are



EnviroGear®, part of Pump Solutions Group (PSG®), is a premier manufacturer of seal-less gear pumps and baseplate systems. *EnviroGear Internal Gear Pumps* save you money by providing a low initial cost, high performance, and low maintenance costs. Our revolutionary seal-less design with patented between-the-bearing support system effectively eliminates leaks and mechanical wear, helping to increase personnel and environmental safety for a variety of industries. *EnviroGear* is an operating company within Dover Corporation's Pump Solutions Group, Oakbrook Terrace, IL, USA. PSG features a broad array of leading pump technologies as well as world-class facilities in the U.S., Germany, China, India and France. PSG's leading infrastructure, knowledge base and intellectual capital truly make it the power behind fluid transfer.



Grand Terrace, California (USA) – EnviroGear is based in Grand Terrace, California (USA) in the same headquarters as Wilden® Pump & Engineering. The facility occupies more than 170,000 square feet, incorporating a world-class manufacturing facility. EnviroGear also has a fully equipped R&D laboratory, Clean Room, Test facility, QC department, CAD department, Injection Molding center and customer satisfaction department.

EnviroGear provides solutions for many of the world's largest chemical companies. Leveraging unique patented design features, EnviroGear is not just a magnetically coupled, mechanically sealed, or traditional internal gear pump. EnviroGear has completely reinvented internal gear pump technology with a true engineered solution specifically designed from the inside-out for environmentally conscious fluid handling, both for thin fluids, as well as, hard-to-seal viscous fluids.

EnviroGear® combines the durability and reliability that's needed for pumps operating with any kind of liquid, regardless of viscosity, with the value of reduced maintenance, reduced downtime and reduced environmental costs that users demand. EnviroGear protects both the environment and those that work with it by minimizing leakage. This makes EnviroGear the single-best pumping solution for a wide variety of fluid transfer needs.

PROCESS / HYGIENIC

EnviroGear® manufacturers leading internal gear pumps for the broad process industries, including the chemical, food and beverage, printing, and paint and coating industry. When the process industries need environmentally friendly seal-less internal gear pumping solutions, they turn to EnviroGear first.

Typical Applications Handled:

- Adhesives
- Biofuel
- Petrochemical
- Petroleum Additives
- Chemical
- Polyurethane
- Food Processing
- Printing
- Lube Oil and Grease
- Resin
- Paint and Coating
- Soap

Proven Success

EnviroGear has a proven track record for success with many successful installations around the world. Companies such as Unilever®, H. B. Fuller® and Ashland® Performance Materials have improved performance and reduced costs with EnviroGear's leading internal gear pump technology.

UNILEVER

Problem: Unilever's soap production required non-stop operation but maintenance problems were forcing production to shut down. Dynamic shaft leakage was also causing environmental, health and safety problems.

Solution: Unilever replaced its existing pump with an EnviroGear Model S1-55-CS Seal-Less Gear Pump and experienced maintenance-free service for 10 months. There was no downtime or process disruptions due to pump performance, while the environmental and safety concerns were eliminated.

H.B. FULLER

Problem: H. B. Fuller needed 10 pumps for a major tank farm expansion that would provide the highest return on investment, eliminate maintenance costs associated with shaft seal leakage and eliminate exposure to high temperature and hazardous materials.

Solution: H. B. Fuller installed EnviroGear Seal-Less Gear Pumps mounted on EnviroBase Baseplate Systems and experienced maintenance-free operation for two years. The seal-less design eliminated maintenance costs associated with leakage and eliminated environmental and safety concerns. There was also no downtime or process interruptions due to pump performance.

ASHLAND PERFORMANCE MATERIALS

Problem: An Ashland resin-manufacturing facility sought to improve the reliability of a hazardous product transfer service. The polyester resin being pumped contained three chemical components considered regulated pollutants by the EPA. All three chemicals are considered flammable and hazardous to health.

Solution: Ashland replaced its existing pumps with EnviroGear Pump model S1-82-CS. The interchangeability of the pump eliminated expensive piping or drive changes. The pumps have experienced no maintenance issues for over two years, and the maintenance and safety concerns have been eliminated. The payback for the pump was 16 months.

MARKETS SERVED







S1-Series: EnviroGear Seal-Less Internal Gear Pump

TECHNOLOGY: INTERNAL GEAR

S1 Seal-less Gear Pumps

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Applications

- Adhesives
- Biofuel
- Petrochemical
- Petroleum additives
- Chemical
- Polyurethane
- Food processing
- Printing
- Lube oil and grease
- Resin
- Paint and coating
- Soap

Features and Benefits:

- Unparalleled reliability
- Environmental protection
- Long wear life
- Run-dry capability
- Broad chemical compatibility
- Suitable for all viscosities
- Eliminating premature wear
- Reduces maintenance costs up to 50 percent
- Increases durability
- Increases safety
- Low overall cost of ownership
- Eliminates leaks
- Patented between-the-bearing support system technology
- Single-fluid-chamber seal-less design eliminates leaks
- Increased environmental and fluid handling safety
- High reliability and durability
- 50% reduction in maintenance costs
- Interchangeable with mechanically sealed and packed gear pumps

Technical Data:

- Size availability: 38 mm (1-1/2"), 51 mm (2") & 76 mm (3")
- Liquid port options: NPT (1-1/2" & 2" only) ANSI & DIN
- Material availability: carbon steel, ductile iron & stainless steel

Performance Data:

- Max. flow: 45.4 m³/hr (200 gpm)
- Max. discharge pressure: 13.8 bar (200 psig)
- Max. temperature: 260° C (500° F)
- Max. viscosity: 50,000 cst

Certifications & Associations:



TECHNOLOGY: INTERNAL GEAR

EnviroBase™ Pump Baseplate Systems

EnviroBase™ pump baseplate systems are designed to minimize deflection and vibration to maximize the life of the pump, motor and gear reducer. In addition, they are designed for easy and accurate shaft alignment.

Features and Benefits:

- Rigid construction
- Alignment features
- Innovative coupling guard



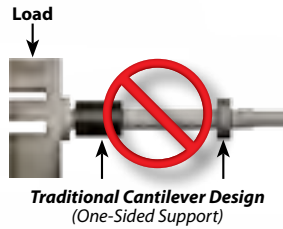
SD Series
(Standard Duty)

HD Series
(Heavy Duty)

Between-the-Bearing Support System For Increased Durability

Other Pumps Technologies

Traditional internal gear pumps support the rotor and idler gears using a performance-robbing, one-sided support found in cantilevered-load design.



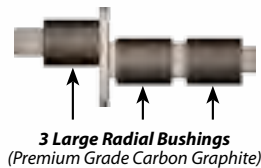
The EnviroGear Design

The patented EnviroGear design supports the rotor and idler gears at three crucial locations.



An Eccentric Spindle that is supported in the head, the crescent location and the back of the containment canister, eliminating much of the effects of cantilevered load.

Larger diameter, harder materials provide more rigid support for less shaft deflection and bearing wear. Materials are 4140 carbon steel or 17-4 PH stainless steel.

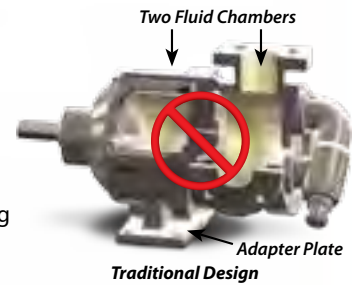


Large, long radial bushings support the entire length of the rotating element, which spreads out the hydraulic forces and allows the bushings to last longer.

One-Fluid-Chamber For Enhanced Reliability, Fluid Safety

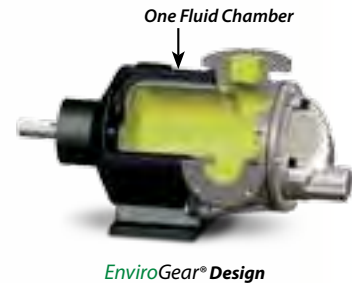
Other Pumps Technologies

Traditional magnetically-coupled positive displacement pumps are designed with two fluid chambers separated by an adapter plate, resulting in product entrapment and poor reliability when moving high viscosity fluids.



The EnviroGear Design

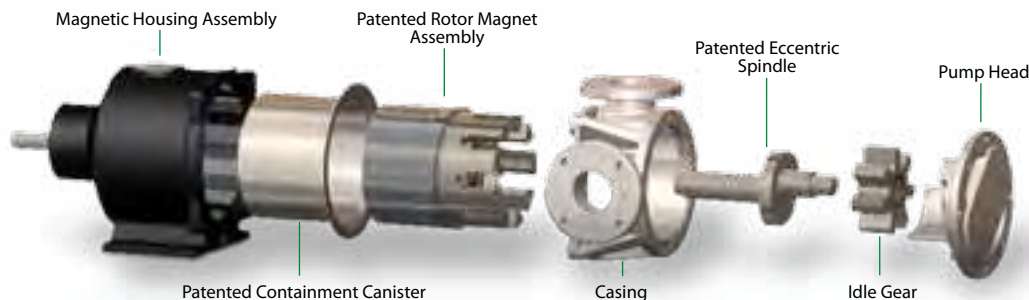
EnviroGear uses magnets mounted directly to the rotor, eliminating the adapter plate, allowing for a single fluid chamber. This single-fluid-chamber design results in a much shorter, simpler flow path and allows the pump to easily handle fluids with high viscosities up to 50,000 cps while increasing bearing life and cleanability.



Brilliantly Designed, With Only Seven Primary Parts

Interchangability Allows Upgrading Existing Gear Pumps With Minimal Installation Costs

EnviroGear pumps have been designed to be interchangeable with up to 95% of the internal gear pumps that are currently available in the market. That means no piping changes, no driver changes, no coupling changes, no flow-rate changes, and no baseplate changes. The EnviroGear side-ported casing is also interchangeable with a number of lobe pumps.



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22069 Van Buren St.
Grand Terrace, CA 92313-5607 USA
T: +1 (909) 422-1731
F: +1 (909) 783-3440
www.envirogearpump.com

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