

The Benchmark for *Environmentally* Conscious Fluid-Transfer.



**EnviroGear**<sup>®</sup>  
INTERNAL GEAR PUMPS  
A **DOVER** COMPANY



## The EnviroGear® Vision: A Safer, Greener, More Cost-Effective Pumping Solution

EnviroGear®, part of Dover Corporation's Pump Solution Group (PSG™), is proud to offer this innovative, durable and environmentally friendly positive displacement gear pump. 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.

- ▶ Patented between-the-bearing support system technology
- ▶ High reliability and durability
- ▶ 50% reduction in maintenance costs
- ▶ Lowest overall cost of ownership

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.

- ▶ Increased environmental and fluid handling safety
- ▶ Single-fluid-chamber seal-less design eliminates leaks
- ▶ Interchangeable with mechanically sealed and packed gear pumps

### EnviroGear® Applications:

ADHESIVE  
BIOFUEL  
CHEMICAL  
FOOD PROCESS  
LUBE OIL AND GREASE  
PAINT AND COATING

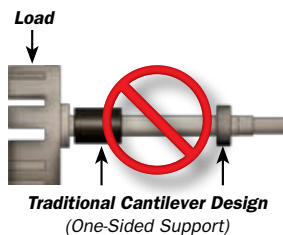
PETROCHEMICAL  
PETROLEUM ADDITIVES  
POLYURETHANE  
PRINTING  
RESIN  
SOAP



### 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.



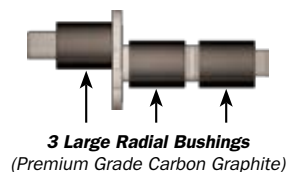
#### EnviroGear® Spindle Diameters



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.

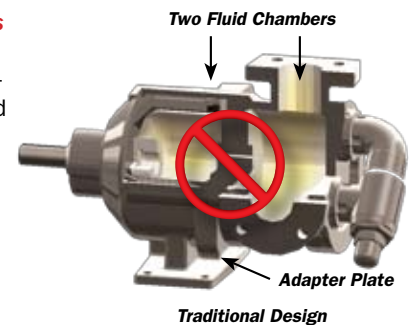
Large, long radial bushings support the entire length of the rotating element, which spreads out the hydraulic forces and allows the bushings to last longer.



### One-Fluid-Chamber For Enhanced Reliability, Fluid Safety

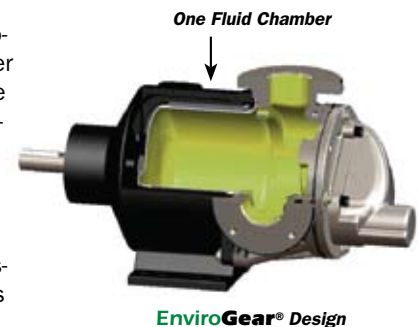
#### Other Pumps Technologies

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

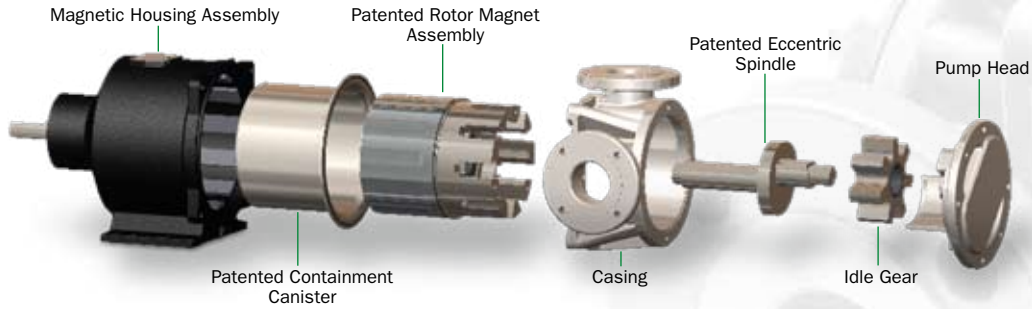
EnviroGear uses magnets mounted directly to the rotor, eliminating the adapter plate, allowing for a single fluid chamber. This single-fluid-chamber design results in a much shorter, simpler flow path and allows the pump to easily handle fluids with high viscosities up to 50,000 cps while increasing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



**EnviroGear's seal-less design eliminates leaks, resulting in lowered maintenance and environmental costs!**



**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.

**EnviroGear®** Performance & Technical Information:

Ductile Iron, Carbon Steel		
Model	Max RPM	Flow @ Max Speed
S1-2-CS	1800	15 gpm
S1-4-CS	1800	30 gpm
S1-24-DI or CS	780	75 gpm
S1-32-DI or CS	780	100 gpm
S1-55-DI or CS	640	135 gpm
S1-69-DI or CS	640	170 gpm
S1-82-DI or CS	640	200 gpm

Stainless Steel		
Model	Max RPM	Flow @ Max Speed
S1-2-SS	1200	10 gpm
S1-4-SS	1200	20 gpm
S1-24-SS	640	55 gpm
S1-32-SS	640	80 gpm
S1-55-SS	520	110 gpm
S1-69-SS	520	140 gpm
S1-82-SS	520	160 gpm

Parameter	Configuration	Rating
* Differential Pressure	Ductile iron, carbon steel	* 20 to 200 psi (0 to 13.8 bar)
	Stainless steel	* 20 to 150 psi (0 to 10.3 bar)
Temperature	Ductile iron, carbon steel	-40 to 500° F (-40 to 260° C)
	Stainless steel	-40 to 500° F (-40 to 260° C)
Viscosity	All	0.5 to 50,000 cst

\* Consult factory for differential pressures below 20 psi.

Description	Part	Ductile Iron Models	Carbon Steel Models	Stainless Steel Models
Pressure Containing	Casing, Head	Ductile Iron	Carbon Steel	Stainless Steel (CF8M)
	RV Body	Carbon Steel		Stainless Steel (CF8M)
	Canister	Stainless Steel (316)		
Product Contact	Rotor, Idler	Carbon Steel		Stainless Steel (17-4PH)
	Spindle	Alloy Carbon Steel (4140) (opt. abrasion-resistant version is surface hardened)		Stainless Steel (17-4PH)
	Rotor Sleeve	Stainless Steel (316)		
	RV Spring	Stainless Steel (302)		
	Bushings	Carbon-Graphite, Bronze or Tungsten Carbide		Carbon-Graphite or Bronze
	O-Rings	Viton (DuPont Type A), Teflon encapsulated Viton, Teflon encapsulated Silicone or any commercially available o-ring		
Non-Product Contact	Magnet Housing	Ductile Iron		
	Shaft	Alloy Carbon Steel (4140)		



## EnviroBase™

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.



- RIGID CONSTRUCTION
- ALIGNMENT FEATURES
- INNOVATIVE COUPLING GUARD



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