

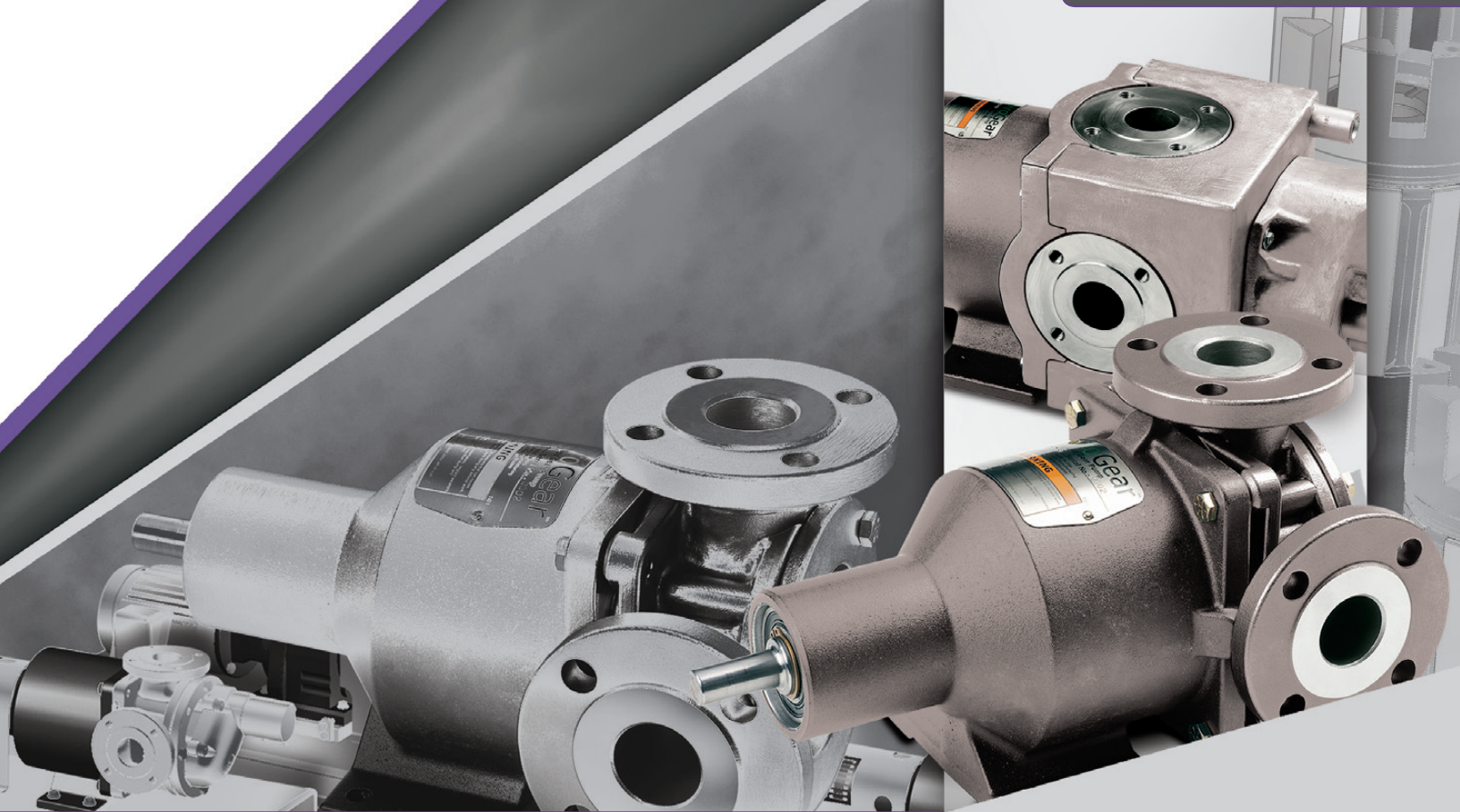
# maag

 industrial  
pumps

Part of Pump Solutions Group

A  DOVER™ COMPANY

**EnviroGear®**  
Seal-less Internal  
Gear Pumps



*Where Innovation Flows*

[www.maag.com](http://www.maag.com)



# Seal-less Internal Gear Pump S E R I E S

## A Safer, Greener, More Cost-Effective Pumping Solution

Maag, part of Dover Corporation's Pump Solutions Group (PSG®), is a leading global provider of innovative, high-quality industrial gear pumps for the safe and efficient transfer of liquids. Maag is proud to offer EnviroGear®, a durable and environmentally friendly positive displacement seal-less gear pump. EnviroGear pumps save you money by providing a low initial cost, high performance and low maintenance costs.

Our world-class distributor network ensures that you will have access to the pump you need when you need it. We are devoted to your business's success, servicing your needs with world-class products, delivery and best-in-class expertise. EnviroGear combines all of this while offering some of the shortest gear pump lead times in the industry. Put us to the test today and contact your local distributor at [www.maag.com](http://www.maag.com)

## EnviroGear Pumps are Ideally Suited For...

- Adhesives
- Biofuels
- Chemicals
- Food processing
- Lube oil and grease
- Paint and coatings
- Petrochemical
- Petroleum additives
- Polyurethane
- Printing
- Resins
- Soaps

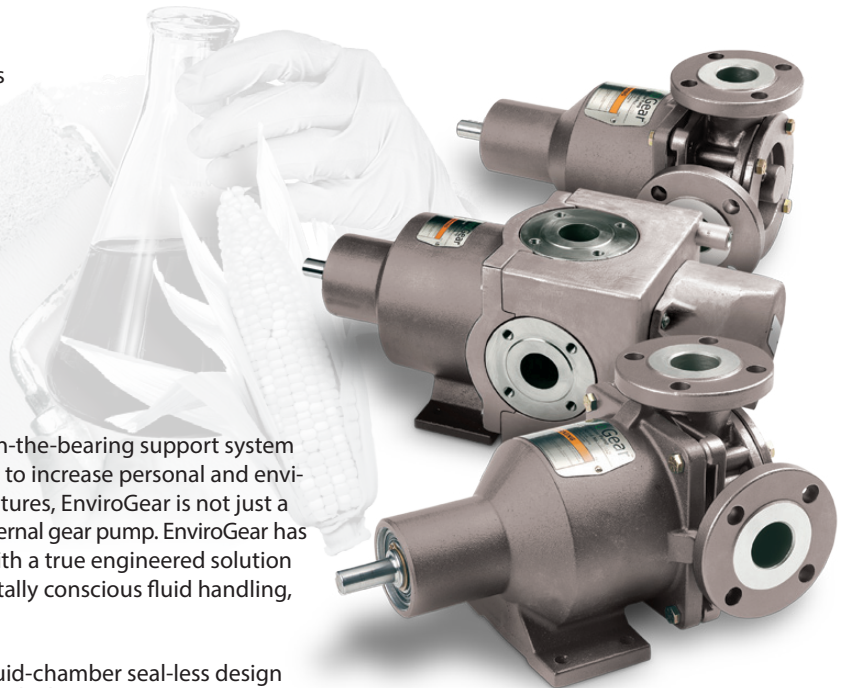
## EnviroGear Features

Our revolutionary seal-less design with patented between-the-bearing support system effectively eliminates leaks and mechanical wear, helping to increase personal and environmental safety. 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.

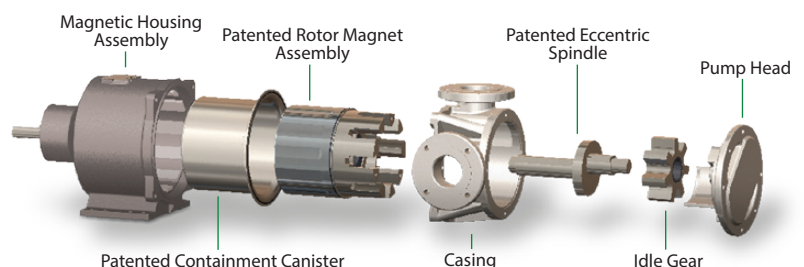
- Patented between-the-bearing support system technology
- High reliability and durability
- 50% reduction in maintenance costs
- Lowest overall cost of ownership
- Increased environmental and fluid-handling safety
- Single-fluid-chamber seal-less design eliminates leaks
- Interchangeable with mechanically sealed and packed gear pumps

## Interchangeability Allows Upgrading Existing Gear Pumps With Minimal Installation Costs

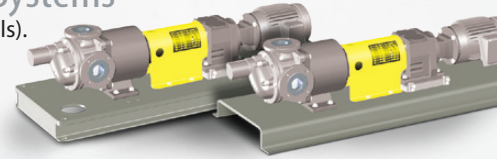
EnviroGear pumps have been designed to be interchangeable with up to 95% of the internal gear pumps that are currently available in the market. That means no piping changes, no driver changes, no coupling changes, no flow-rate changes and no baseplate changes. The EnviroGear side-ported casing is also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



E1-Series: EnviroGear  
Seal-Less Internal Gear Pump



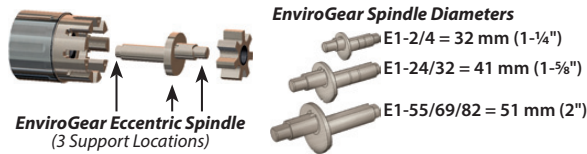




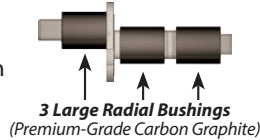
## Between-the-Bearing Support System For Increased Durability

### The EnviroGear Design

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



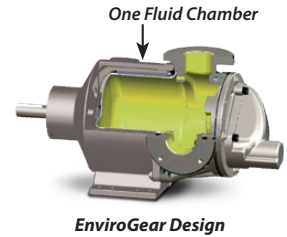
more rigid support for less shaft deflection and bearing wear. Materials are 4140 carbon steel or 17-4 PH stainless steel. Large, long radial bushings support the entire length of the rotating element, which spreads out the hydraulic forces and allows the bushings to last longer.



## One Fluid Chamber For Enhanced Reliability, Fluid Safety

### The EnviroGear Design

The 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 cSt while increasing bearing life and cleanability.



Ductile Iron, Carbon Steel		
Model	Max. RPM	Flow @ Max. Speed
E1-2-CS	1800	3.4 m <sup>3</sup> /hr (15 gpm)
E1-4-CS	1800	6.8 m <sup>3</sup> /hr (30 gpm)
E1-24-DI or CS	780	17.0 m <sup>3</sup> /hr (75 gpm)
E1-32-DI or CS	780	22.7 m <sup>3</sup> /hr (100 gpm)
E1-55-DI or CS	640	30.7 m <sup>3</sup> /hr (135 gpm)
E1-69-DI or CS	640	38.6 m <sup>3</sup> /hr (170 gpm)
E1-82-DI or CS	640	45.4 m <sup>3</sup> /hr (200 gpm)

Stainless Steel		
Model	Max. RPM	Flow @ Max. Speed
E1-2-SS	1200	2.3 m <sup>3</sup> /hr (10 gpm)
E1-4-SS	1200	4.5 m <sup>3</sup> /hr (20 gpm)
E1-24-SS	640	12.5 m <sup>3</sup> /hr (55 gpm)
E1-32-SS	640	18.2 m <sup>3</sup> /hr (80 gpm)
E1-55-SS	520	25.0 m <sup>3</sup> /hr (110 gpm)
E1-69-SS	520	31.8 m <sup>3</sup> /hr (140 gpm)
E1-82-SS	520	36.3 m <sup>3</sup> /hr (160 gpm)

Parameter	Configuration	Rating
* Differential Pressure	Ductile iron, carbon steel stainless steel	* 1.4 to 13.8 bar (20 to 200 psi) * 1.4 to 10.3 bar (20 to 150 psi)
Temperature	Ductile iron, carbon steel stainless steel	-40 to 260°C (-40 to 500°F) -40 to 260°C (-40 to 500°F)
Viscosity	All	0.5 to 50,000 cSt

\* Consult factory for differential pressures below 1.4 bar (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)	Stainless Steel (316)
	RV Spring		Stainless Steel (302)	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)	

## PSG Brands

**ABAQUE™**  
PERISTALTIC PUMPS  
[mouvex.com](http://mouvex.com)

**ALMATEC®**  
AIR-OPERATED  
DOUBLE-DIAPHRAGM PUMPS  
[almatec.de](http://almatec.de)

**AUTOMATIK**  
PELLETIZING SYSTEMS  
[maag.com](http://maag.com)

**BLACKMER®**  
VANE PUMPS & COMPRESSORS  
[blackmer.com](http://blackmer.com)

**FLUID DYNAMICS™**  
POLYMER BLENDING SYSTEMS  
[fluidynamics1.com](http://fluidynamics1.com)

**GRISWOLD™**  
CENTRIFUGAL PUMPS  
[griswoldpump.com](http://griswoldpump.com)

**MAAG  
FILTRATION**  
PLASTIC MANUFACTURING &  
PROCESSING FILTRATION  
[maag.com](http://maag.com)

**MAAG  
INDUSTRIAL PUMPS**  
GEAR & SCREW PUMPS  
[maag.com](http://maag.com)

**MAAG  
PUMP SYSTEMS**  
EXTRUSION PUMPS & SYSTEMS  
[maag.com](http://maag.com)

**MOUVEX®**  
ECCENTRIC DISC PUMPS,  
VANE PUMPS &  
COMPRESSORS  
[mouvex.com](http://mouvex.com)

**NEPTUNE™**  
DIAPHRAGM (METERING) PUMPS,  
POLYMER SYSTEMS & MIXERS  
[neptune1.com](http://neptune1.com)

**QUATTROFLOW™**  
QUATERNARY DIAPHRAGM  
PUMP TECHNOLOGY  
[quattroflow.com](http://quattroflow.com)

**REDSCREW™**  
SCREW PUMPS  
[redscrewpump.com](http://redscrewpump.com)

**SYSTEM ONE®**  
CENTRIFUGAL PUMPS  
[blackmer.com](http://blackmer.com)

**WILDEN®**  
AIR-OPERATED  
DOUBLE-DIAPHRAGM PUMPS  
[wildenpump.com](http://wildenpump.com)

## Where Innovation Flows



PSG® reserves the right to modify the information and illustrations contained in this document without prior notice. This is a non-contractual document. 01-2013



22069 Van Buren Street  
Grand Terrace, CA 92313-5651  
T: 909-422-1731 • F: 909-783-3440  
[www.maag.com](http://www.maag.com)

Authorized Partner: