

# Seal-Less

Internal Gear Pumps  
for **Full Chemical  
Containment**

EnviroGear®, a product brand of PSG®, a Dover company, has taken the safe, efficient and reliable handling of high value, dangerous or hazardous chemicals to the next level of full containment with its family of Seal-Less Internal Gear Pumps. Traditional magnetically coupled internal gear pumps utilize two fluid chambers that are separated by an adapter plate, which can result in product entrapment and poor reliability when transferring high-viscosity fluids.

The EnviroGear E Series pumps, however, features a revolutionary between-the-bearings design that places magnets directly on the rotor, eliminating the need for an adapter plate and allowing for a single fluid chamber. The result is a pump that features a simpler flow path, which allows the pump to handle both water-like liquids and those with viscosities to 50,000 cSt, while providing leak-free product containment.



## CHEMICAL Seal-Less Solutions

### Features & Benefits:

- Stainless-steel, ductile-iron or carbon-steel construction
- Rotor and idler supported at three locations, eliminating cantilever load
- Large, long radial bushings support entire length of rotating element
- Interchangeable with 95% of competitive mechanically sealed or packed-gear pump brands
- Constructed with only seven parts
- Consistent flow when handling either water-like or highly viscous liquids
- 50% reduction in maintenance costs

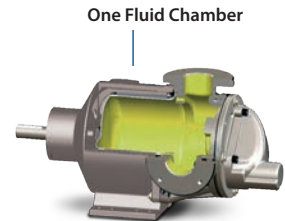


# Seal-Less Technology Makes This Internal Gear Pump a Natural Choice for Safety

## One Fluid Chamber For Enhanced Reliability, Fluid Safety

### The E Series Design

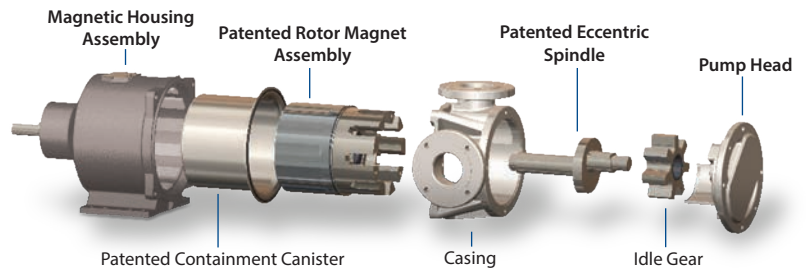
The E Series uses magnets mounted directly to the rotor, eliminating the adapter plate, allowing for a single-fluid chamber. This single fluid-chamber design results in a much shorter, simpler flow path and allows the pump to easily handle fluids with high viscosities up to 50,000 cSt while increasing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



## Brilliantly Designed, With Only Seven Primary Parts

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

E Series 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 E Series side-ported casing is also interchangeable with a number of lobe pumps.



## Additional Savings

### ☐ Seal Replacement Costs:

E Series seal-less design will assist with difficult to seal applications.

$$\text{_____ times per year} \times \text{_____ /seal set} = \text{_____}$$

(typical \$1,000-\$2000+ per set)

### ☐ Seal Water Flush Costs:

E Series seal-less design does not require/use water or other flush.

$$\text{_____ volume/hour} \times \$ \text{_____ /volume} \times \text{_____ hours/year} = \text{_____}$$

(volume is liters or gallons) (typical US\$10K-20K/year in USA per pump)

### ☐ Pump Rebuild Cost:

Fewer wear parts and simple design reduce down time.

$$\text{_____ times per year} \times \text{_____ cost} = \text{_____}$$

### ☐ Compliance and Clean Up 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?

$$\text{_____ times per year} \times \text{_____ labor costs} = \text{_____}$$

$$\text{Subtotal Reduction in Cost of Ownership} = \text{_____}$$



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