

EnviroGear™

SEALLESS GEAR PUMPS



Not Just For thin fluids

But Also For hard to seal viscous fluids

Not Just For leak-free performance

But Also For breakthroughs in pump reliability

Not Just For hazardous applications

But Also Affordable enough for “housekeeping” headaches

About PeopleFlo

Product Vision

Why use sealless pumps just on hazardous applications? Why not use sealless pumps on benign fluids to lower costs associated with shaft seal leakage?

Why apply sealless pumps only on thin fluids? Why not develop a sealless pump for thin fluids as well as hard-to-seal viscous fluids?

Why are sealless PD pumps so expensive? Why not make them more affordable?

Inspired by these questions, PeopleFlo was founded based on a challenge: Develop a sealless pump uniquely designed for a wide range of viscosities that will enable customers to:

*Reduce maintenance costs by at least 50%
and
eliminate environmental costs
for
an affordable up-front investment.*

Service Vision

Why does it take 6 to 8 weeks to deliver a sealless PD pump? Why not develop processes capable of delivering in days not weeks?

Why are sealless PD pump repairs expensive, complex and time consuming? Why not make servicing them simple and affordable?

These questions inspired the following:

Delivery:

EnviroGear® Pumps: 10 days or less

EnviroBase® drives: 20 days or less

Ease of Maintenance:

Simple design with only 7 primary parts to enable pump disassembly in about 10 minutes.

Spare Parts:

Fair parts pricing.

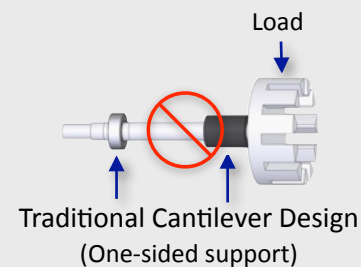
The PeopleFlo Way

Our vision is built upon a passion for applying "lean" philosophy and tools - pioneered by people like Henry Ford, W. Edwards Deming, Shigeo Shingo and Taiichi Ohno - to every core business process in unique ways.

Between-the-Bearing Support System

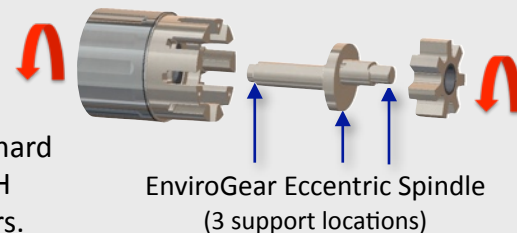
Traditional Design

Traditional internal gear pumps support the rotor and idler gears on one side with a cantilever design. This design is susceptible to shaft deflection that causes premature wear and shaft seal leakage.



EnviroGear Design

The patented eccentric spindle supports the rotor and idler gears on both sides, and in the middle, like a *between-the-bearing* design.



EnviroGear spindles are designed with hard materials - 4140 carbon steel or 17-4 PH stainless steel - and with large diameters.

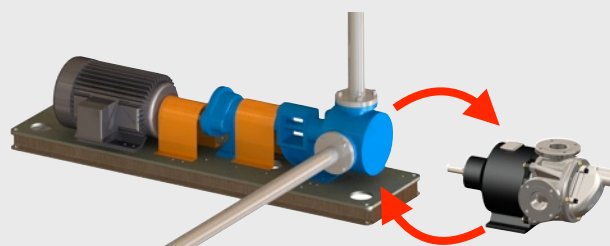
The result is a sealless gear pump design that cuts deflection by an estimated 10 to 1.

The benefits are lower maintenance costs by reducing contact wear to rotor, casing, idler and head on top of lower costs by eliminating shaft seal leakage.



Dimensional Interchangeability

EnviroGear® sealless pumps are dimensionally interchangeable with Tuthill, Gorman-Rupp and Viking packed and sealed gear pumps. That means you can upgrade to sealless technology for minimal installation costs.



No piping changes:

Port size and locations match

No driver changes:

Nominal input power matches

No coupling changes:

Drive shaft size matches

No flow rate changes:

Nominal flow rate matches

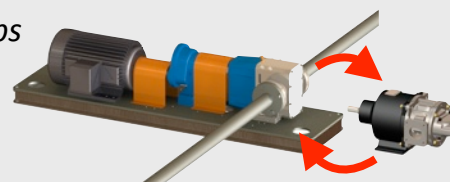
No baseplate changes:

Mounting foot hole patterns match

New!

Interchangeability with Lobe Pumps

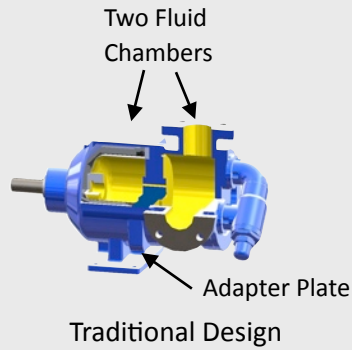
The EnviroGear side-ported casing is interchangeable with select lobe pumps. Consult PeopleFlo for details.



One-Fluid-Chamber Design

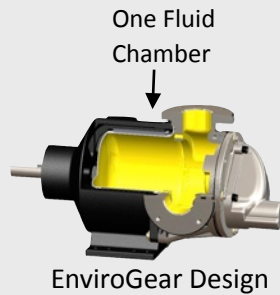
Traditional Design

Traditional magnetically-coupled PD pumps have two fluid chambers – one for the pumping elements and one for the magnet coupling. The two fluid chambers are separated by an adapter plate which acts as a barrier between fluid chambers making it difficult to reliably pump viscous fluids.



EnviroGear Design

With magnets mounted directly on the rotor and without an adapter plate, EnviroGear® has a one-fluid-chamber design. This design enables reliable cooling and circulation even on fluids that “set up” or are viscous.

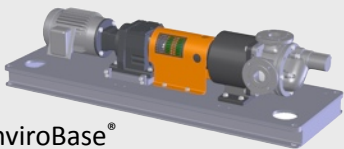


The result is a sealless design capable of pumping a range of viscosities from solvents to 50,000 cps resins. The benefit is no leaks on hard-to-seal fluids which means lower maintenance and environmental costs.

EnviroBase Pump Baseplates

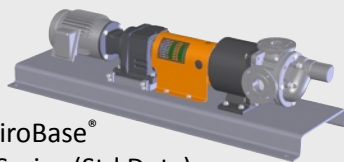
EnviroBase™
PUMP BASEPLATE SYSTEMS

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.



EnviroBase®
HD Series (Heavy Duty)

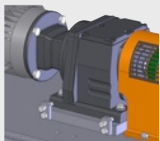
Designed to the needs of API-type requirements. Features include 1/2" (12.7mm) steel top surface plate continuously welded and ground flat to 0.002"/foot (.17 mm/m). Includes three grout holes.



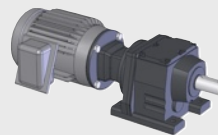
EnviroBase®
SD Series (Std Duty)

Designed as an economical solution for less demanding applications. Features include a 3/8" (9.5mm) rolled carbon steel baseplate and one grout hole.

Standard alignment bolts enable quick alignment.



Close coupled motor to heavy duty SEW gear reducer ensures alignment.



Market Snapshot

Adhesive	Petroleum additives
Biofuel	Polyurethane
Chemical	Printing ink
Confectionary	Pulp & paper
Food process	Resin
Lube oil & grease	Soap
Paint and coating	Surface active agent
Petrochemical	Vegetable fat and oil

Customer Snapshot

ASHLAND
ASHLAND SPECIALTY CHEMICAL

3M

PPG PPG Industries

ADM

DUPONT

H.B. Fuller

Cargill

Henkel

corn products SPECIALTY INGREDIENTS

SHERWIN-WILLIAMS

Lubrizol

HEXION
Specialty Chemicals

DOW CORNING

SunChemical

BUNGE

ICM the energy of innovation™

Simple Design - Only 7 Primary Parts

Magnet Housing Assembly

Sealed bearings operate under light radial and axial load. Skid pads protect canister if bearings fail.

Casing

Statically sealed with only two industry standard o-rings and assembled with grade 8 bolts.

Eccentric Spindle

Patented stationary design provides unprecedented pumping element support.

Head

Innovative pump design eliminates end clearance adjustment and related problems.

Containment Canister

Patented design maximizes strength to wall thickness ratio and minimizes eddy current heat generation.

Rotor Magnet Assembly

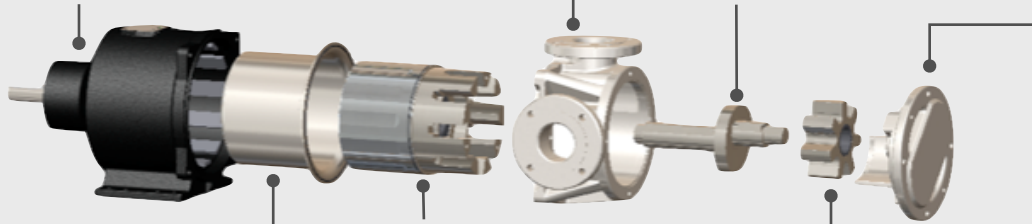
Patented design enables quick disassembly and magnet replacement. Carbon steel rotors are standard in iron and steel models.

Idler Gear

Carbon steel idler gears are standard in iron and steel models.

Integral Relief Valve

Only three parts to improve reliability. Internal adjustment to prevent tampering and improve pump safety.



Performance Specifications

Parameter	Configuration	Rating
Differential pressure	Ductile iron, carbon steel	0 to 200 psi (0 to 13.8 bar)
	Stainless steel	0 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 300° F (-40 to 149° C)
Viscosity	All	0.5 to 50,000 cst

Consult PeopleFlo for conditions above or below the standard.

Flow Specifications

Ductile Iron, Carbon Steel

Model	Max ¹ RPM	Flow ² @ 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 ¹ RPM	Flow ² @ 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

¹ Pump speeds may be lower than max based on specific application conditions.

² PeopleFlo will supply specific flow rates for application conditions upon request.

Materials of Construction

	Part	Ductile Iron Models	Carbon Steel Models	Stainless Steel Models
Pressure containing	Casing, head	Ductile iron ¹	Carbon steel ¹	Stainless steel (CF8M)
	RV body	Carbon steel		Stainless steel (CF8M)
	Canister	Stainless Steel (316)		
Product contact	Rotor, idler, RV poppet	Carbon steel ¹		Stainless steel (316, CF8M or 17-4PH)
	Spindle	Alloy carbon steel ¹ (4140)		Stainless steel ² (17-4PH)
	Rotor sleeve	Stainless steel (316)		
	RV spring	Stainless steel (302)		
	Bushings	Carbon-graphite, tungsten carbide or bronze		
	O-rings	Viton® (DuPont type A), Teflon® enc. Viton, Teflon enc. silicone, Kalrez® or any available o-ring		
Non-product contact	Magnet housing	Ductile iron or aluminum (A356-T6)		
	Shaft	Alloy carbon steel (4140)		

¹ Optional abrasion-resistant versions are surface hardened.

² Optional abrasion-resistant versions are hard-chrome plated.

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MANUFACTURING

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