

ARO[®]



ARO GEAR PUMP – PRECISION, LUBRICATION & PROCESS PUMP SOLUTIONS

Gear Pumps for Every Application

October 2026

AROzone.com

Heritage of ARO Gear Pumps

The ARO gear pump portfolio, engineered and built in Alsip, Illinois, USA and Ilkeston, Derbyshire, UK, has served industry for generations – first under the Tuthill name and later as part of Ingersoll Rand, following the 2021 acquisition of Tuthill Pumps.

Today, this proven portfolio is part of the ARO® fluid management family.

Leveraging more than 125 years of engineering and manufacturing excellence, our trusted products, including GlobalGear, Heavy Duty, LubeTech, and TechnaFlo, will meet your application demands.



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How to use this guide

Pages 3–6 route you to the right family:

- Know the technologies.
- Match your fluid and duty.
- Find your flow and pressure on the family map.

Each family profile ends with the detail catalog to request for full engineering data, dimensions and performance curves.

Pump technology taxonomy

Every pump in this catalog belongs to one of three positive-displacement technologies. Start here: the technology defines what the pump can do; the family pages that follow set how much.

ARO GEAR PUMP TECHNOLOGIES

External Gear

Precise, efficient pumping for thin fluids and high differential pressures.

Applications

Chemical dosing, Electronics cooling, Medical & OEM systems

Benefits

- Leak-free with magnetically driven and seal-less construction
- Precise, pulse-free flow
- Metering accuracy within $\pm 1\%$
- Handles thin and aggressive fluids
- Compact design for easy system integration

Series

TechnaFlo (D, T, W)

Internal Gear

Smooth, consistent flow for lubrication and high-viscosity fluids.

Applications

Compressor lubrication, Gearboxes, Fuel & oil circulation

Benefits

- Compact installation
- Stable flow for lubricating fluids
- Easy OEM integration

Series

LubeTech (1000, L, C, CC,) OEM - TR, LFD, and RFD

Applications

Asphalt & bitumen, Adhesives & sealants, Viscous process fluids

Benefits

- Handles high viscosities & temperatures
- Back pull-out design reduces downtime
- Flexible materials, seals & jacket options

Series

GlobalGear

Circumferential Piston

Low-shear handling of viscous, solids-laden and challenging fluids.

Applications

Solids & slurries, Food processing, Sludge & wastewater

Benefits

- Run-dry capability
- Handles solids and extreme viscosities
- Low-shear, no metal-to-metal contact

Series

Heavy Duty (HD)

Which one do I need?

Viscosity and pressure determine the technology; your fluid determines the materials; flow and pressure determine the family.

Find the best fit for your application

A side-by-side comparison of External Gear, Internal Gear and Circumferential Piston pump technologies.

Characteristic	External Gear	Internal Gear	Circumferential Piston
Reversible Flow	No	Yes	No
Run-Dry Capability	Not rated for dry running	Not rated for dry running	Yes
Soft Solids Handling	No	Limited / application dependent	Yes – up to 1¼ in. (31.75 mm)
Max. Viscosity	45,500 SSU / 10,000 cSt	1,000,000 SSU / 220,000 cSt	≈20,000,000 SSU / 4,400,000 cSt
Min Flow	0.008 GPM / 0.03 LPM	0.18 GPM / 0.67 LPM	25 GPM / 94.6 LPM
Max Flow	10.8 GPM / 40.9 LPM	550 GPM / 2.082 LPM	520 GPM / 1.968 LPM
Max. Differential Pressure	250 psi / 17.2 bar	300 psi / 20.7 bar	450 psi / 31 bar
Max Temperature	350°F / 177°C	600°F / 316°C	550°F / 288°C
Metering Accuracy	Within ±1%	Not specified	Not specified
Sealless	Yes	Selected models	No
Number of Shaft Seals	0	0–1, depending on model	4
Other Features	• Magnetic drive • Chemical-resistant materials • Compact, high-speed design	• Wide flow & viscosity range • Reversing options • Multiple materials, seals & jackets	• Excellent slurry handling • Large solids capability • Multiple sealing & clearance options
Certifications	  	  	  
Technology			

Pump series capability matrix

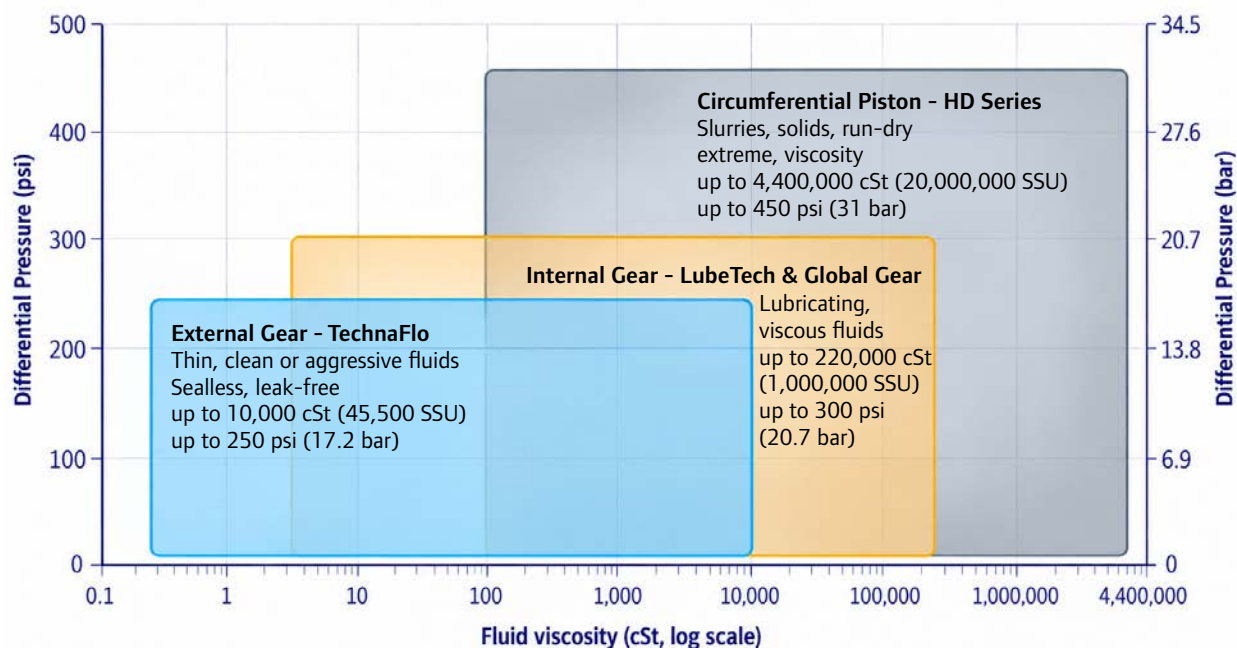
Compare flow, differential pressure and viscosity across pump series.

	Flow (log scale)	Differential Pressure (linear scale)	Viscosity (log scale)
TECHNAFLO (D, T, W Series)	0.008 - 10.8 GPM (0.03 - 41 LPM)	0 - 250 psi (0 - 17.2 bar)	0.3 - 10,000 cSt (1.4 - 45,500 SSU)
LUBETECH (1000, L, C, CC Series)	0.18 - 190 GPM (0.7 - 719 LPM)	0 - 300 psi (0 - 20.7 bar)	4 - 10,000 cSt (18 - 45,500 SSU)
GLOBALGEAR SERIES	15 - 550 GPM (57 - 2,082 LPM)	0 - 200 psi (0 - 13.8 bar)	1 - 220,000 cSt (4.6 - 1,000,000 SSU)
HEAVY DUTY (HD) SERIES	25 - 520 GPM (95 - 1,968 LPM)	0 - 450 psi (0 - 31.0 bar)	120 - 4,400,000 cSt (546 - 20,000,000 SSU)

Note: Ranges shown represent family capabilities and may vary by pump size, configuration and operating conditions.

Viscosity and pressure determine the technology

Flow is deliberately absent: it is not the differentiator. Find your fluid viscosity and differential pressure; the envelope you land in is your technology.



Fluid compatibility

Your Fluid	Route To	Why
Oils, lubricants, fuels (self-lubricating, non-corrosive)	LubeTech	Best for self-lubricating, non-corrosive fluids. Pump material: cast iron only.
Viscous process fluids, mild chemistry, food oils, asphalt	GlobalGear	Designed for viscous process fluids and hot-duty service; abrasion trim available for filled fluids. Pump materials: cast iron, Tutrided cast iron, 316 stainless steel, or cast steel.
Corrosive / aggressive chemistry	GlobalGear TechnaFlo	For chemistry beyond oils. Use GlobalGear for viscous process duties and TechnaFlo for thin, clean, aggressive fluids. Pump materials: GlobalGear – 316 stainless steel; TechnaFlo – 316 stainless steel, Hastelloy C.
Hazardous, high purity or precious fluids (zero leakage)	TechnaFlo	Sealless magnetic-drive design helps prevent leakage and contamination because there are no dynamic seals. Pump materials: 316 stainless steel, Hastelloy C.
Slurries, solids, sludge, run-dry risk	HD Series	Best choice for solids, sludge, and run-dry risk. Circumferential piston design excels where other pump types struggle. Pump materials: ductile iron or stainless steel, with Tutrided options available.



Chemical and Dosing Mag Drive Gear Pumps

When fluid containment, precision and compact design matter, TechnaFlo magnetic drive gear pumps provide a dependable solution. Their sealless magnetic coupling helps reduce leakage risk while delivering smooth, controlled flow across a broad range of industrial, OEM, water and wastewater applications. Multiple materials and configurations make TechnaFlo pumps suitable for handling fluids ranging from thin process liquids to aggressive chemicals.



TechnaFlo D / T / W Series

The TechnaFlo D, T and W Series are compact, magnetically coupled external gear pumps designed for transfer, circulation, and precision dosing and metering. Their sealless design helps reduce leakage risk, while a broad operating range supports demanding industrial and OEM applications. TechnaFlo pumps are built with enhanced material options to handle aggressive chemicals commonly found in wastewater treatment applications.



EXCEPTIONAL PUMP LIFE

Five bearings support the shaft reducing deflection, improving durability and reliability. The sealless design eliminates dynamic seals for leak-free operation, while the pump delivers a service life of up to 20,000 hours.

OUTSTANDING PERFORMANCE

With metering accuracy within 1%, the pump ensures precise and dependable dosing. Pulse-free flow minimizes process fluctuations, while consistent flow delivery is maintained even under high differential pressure conditions.

WIDE COMPATIBILITY

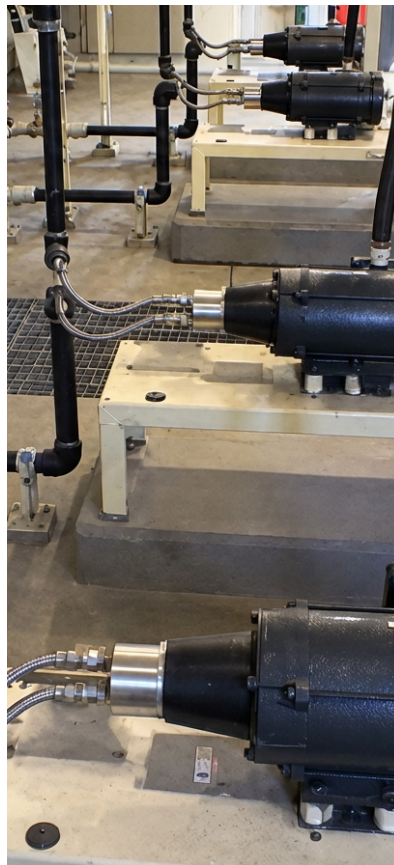
Available in 316 stainless steel or Hastelloy C, the pump is built for challenging operating environments. Engineered plastics in the gears and bearings support long service life and reliable performance across a wide range of applications.

D/T/W Series - Key Specifications

Attribute	Value
Pump type	Magnetic Drive External Gear Pump
Materials of Construction	316 Stainless Steel, Hastelloy C276 PPS, PEEK or PTFE gears and bearings
Flow range	0.008 - 10.8 GPM (0.03 - 40.9 LPM)
Differential pressure	Up to 250 psi (17.2 bar)
System pressure	Up to 500 psi (34.5 bar)
Viscosity	Up to 45,500 SSU (10,000 cSt)
Temperature range	-50°F to 350°F (-46°C to 177°C)
Benefits	Extended Pump Life • Accurate & Repeatable Flow • Leak-Free Sealless Design • Chemical Compatibility

Application and Industries:

- Agriculture • Biodiesel • Chemical • Electronics Cooling • Food & Beverage • Imaging Cooling • Medical Equipment
- Oil & Gas • Paints, Coating, & Printing Inks • Personal Products • Pulp & Paper Additives
- Semiconductor Equipment • Transportation • Water & Wastewater Treatment



Lubrication and Circulation Gear Pumps

LubeTech internal gear pumps provide reliable lubrication, circulation and OEM fluid-handling solutions across a broad range of industrial equipment.

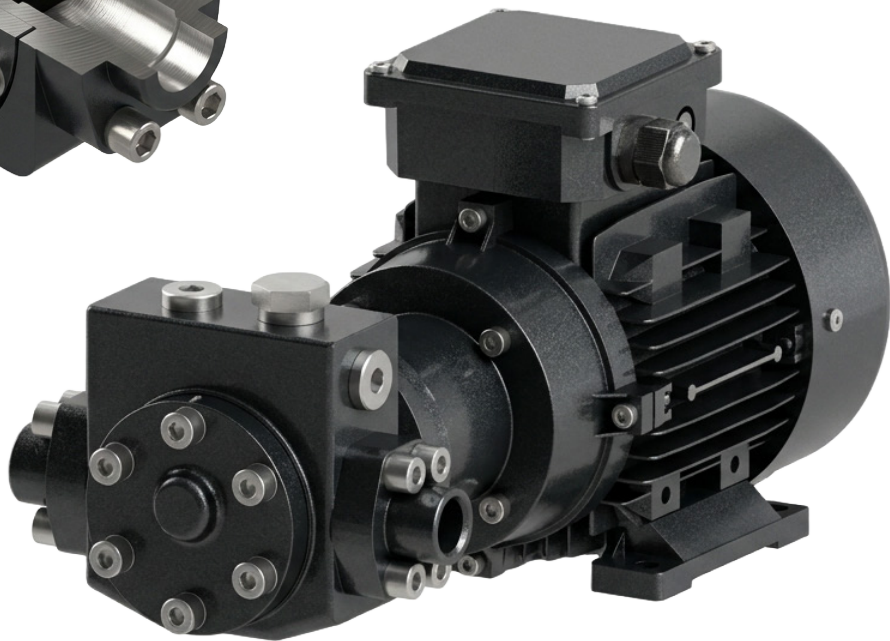
LUBETECH



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LubeTech 1000 Series

Originally developed for demanding compressor lubrication applications, the LubeTech 1000 Series is also well suited for fluid transfer, fuel and lubricating oils, gearboxes, power transmission systems, and other industrial lubrication duties. The pumps feature 180° bolt-on ports and a range of seal options, including balanced seals for high-pressure applications. The pump can be mounted vertically when footprint size is a concern. Its modular design allows it to be supplied as a pump head only, with motor mounting kits, or as a complete pump-motor assembly.



BRED FOR REFRIGERATION COMPRESSORS

Available with balanced seals and vertical mounting options, and capable of handling system pressures up to 800 psi (55 bar).

MODULAR BY DESIGN

Available as a pump head only, with motor mounting kits, or as complete pump-motor assemblies with carbon bushings.

PORTING YOUR WAY

Bolt-on flanged ports from 3/4 in to 4 in – threaded, butt-weld, socket-weld or blank flange options, with multiple choices to meet your specification.

LubeTech 1000 Series - Key Specifications

Attribute	Value
Pump type	Internal Rotary Gear
Materials of Construction	Cast Iron Housing & Cover, Steel Rotor & Idler, Carbon / Carbon Graphite Bushings, Viton Seals
Flow range	2.4 - 173 GPM (9.2 - 654 LPM) at 1500 RPM / 50 Hz
Differential pressure	Up to 260 psi (18 bar)
Viscosity	Up to 9,400 SSU (2,000 cSt)
Temperature range	-13°F to 392°F (-25°C to 200°C)
Benefits	Easy Pump Head Maintenance • Modular Design • Flexible Porting • Proven Compressor Lubrication

Application and Industries:

- Air Compressors & Pumping Equipment • Diesel Fuel • Energy & Power • Fluid Transfer • Fuel Oils
- Gear Box & Power Transmission • Glycols & Coolants • Heavy Machinery & Equipment
- Natural Gas Compressors • Oil & Gas • Refrigeration & AC Compressors



LubeTech L & C Series

The L and C Series provide compact, versatile solutions for lubrication, circulation and OEM applications. Featuring an optional unique automatic reversing design that maintains constant flow direction even when shaft rotation changes. The C Series offers flexible flange-mounted, close-coupled and built-in configurations. Together, they deliver reliable performance across a wide range of machine and system designs.



UNIQUE REVERSING FEATURE

The idler carrier rotates 180° automatically, so flow direction never changes with shaft rotation and the U-shaped chamber stays primed.

BUILT TO LAST

Single-piece, precision-ground steel rotor for consistent flow at high differential pressure; mechanical seals standard.

BUILT AROUND THE OEM

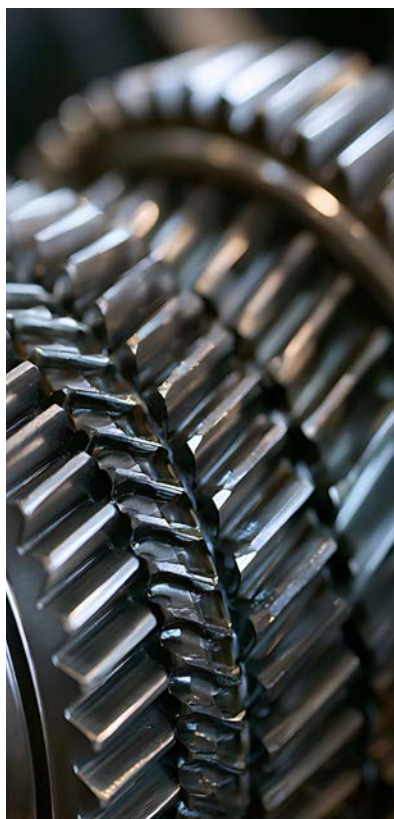
Flange-mounted for extremely compact combinations; seal-less and stripped pump assemblies for built-in designs.

LubeTech L & C Series - Key Specifications

Attribute	L Series	C Series
Pump type	Internal Rotary Gear	
Materials of Construction	Cast Iron Housing & Cover, Steel Rotor & Idler, Bronze / Carbon Graphite Bushings, Viton Seals	
Flow range	0.9 - 13.0 GPM (3.4 - 49.2 LPM) at 1,750 RPM	3 - 84.0 GPM (11 - 318 LPM) at 1,750 RPM
Differential pressure	Up to 300 psi (20.7 bar)	Up to 200 psi (13.8 bar)
Viscosity range	40 - 5,000 SSU (4 - 1,078 cSt)	40 - 25,000 SSU (4 - 5,394 cSt)
Temperature range	-13°F to 375°F (-25°C to 190°C)	-13°F to 375°F (-25°C to 190°C)
Options	• Reversing Feature • Internal Relief Valve Available • Adapter Kit for NEMA and IEC • Shaft Modification for Close Coupled Mounting	
Benefits	Automatic Reversing • Compact OEM Integration • Consistent Flow • Flexible Configuration	

Application and Industries:

- Air Compressors & Pumping Equipment • Energy & Power • Fluid Oils • Fluid Transfer
- Gearbox & Power Transmission • Heavy Machinery & Equipment • Natural Gas Compressors
- Oil & Gas • Paints & Coatings • Refrigeration & AC



LubeTech CC Series

With lots of pump performance in a small space, the CC Series is ideal for package pumping skids or applications where space is limited. By eliminating the need for adapters, reducers, couplings, bases and guards, the CC Series eliminates the need for maintenance of these components, saving on the total cost of ownership.



SIMPLICITY

Mounts directly to a NEMA C-face motor, with no additional mounting components required. Designed to operate at standard motor speeds.

DURABILITY

Robust cast-iron construction with ductile iron rotor and idler gears provides excellent durability and long service life.

STANDARD FEATURES

Carbon idler gear bushing, single Viton mechanical seal, internal relief valve and NPT-threaded side ports.

LubeTech CC Series - Key Specifications

Attribute	Value
Pump type	Internal Rotary Gear
Materials of Construction	Cast Iron Housing & Cover, Ductile Iron Rotor & Idler, Steel Pin, Carbon Graphite Bushing, Viton Seal
Flow range	3.7 - 33 GPM (14 - 127 LPM) at 1,750 RPM
Differential pressure	Up to 100 psi (6.9 bar)
Viscosity	Up to 10,000 SSU (10,000 cSt)
Temperature range	-13°F to 375°F (-25°C to 190°C)
Benefits	Smooth Close-Coupled Design • Compact Footprint • Easy Motor Integration • Built-In Protection

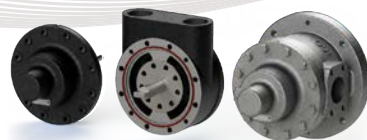
Application and Industries:

- Drilling chemicals • Filtering waste oil • Fuel oil • Glycol solutions (antifreeze) • Lube oil
- Machine tool coolants



OEM & Cartridge Solutions

When the pump lives inside your product, our pump becomes part of your design. These cartridge and built-in lines put a proven ARO gear set directly into your housing or application — sized by displacement, supplied ready to drop into your application.



CARTRIDGE PUMPS

- Cast iron, internal gear design
- Flow up to 5.5 GPM (22 LPM)
- Differential pressures up to 150 psi (10 bar)
- Compact design mounts directly to OEM equipment
- Multiple porting and driving options

GEROTOR PUMPS

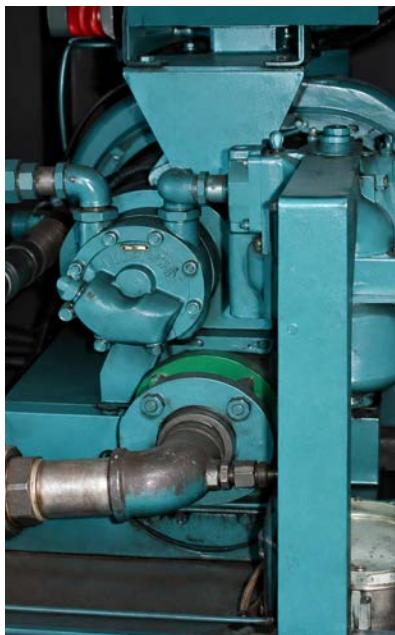
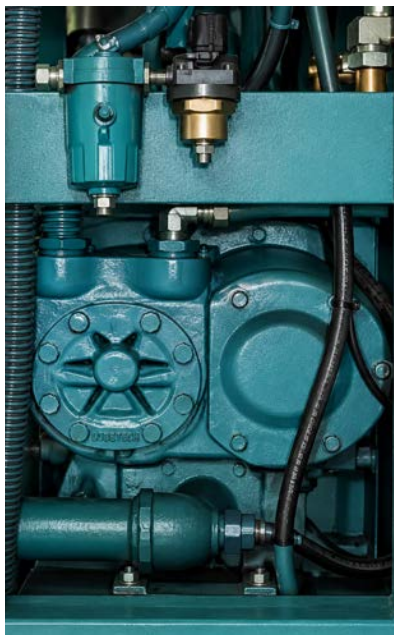
- Gerotor pump design
- Flow up to 20 GPM (75 LPM)
- Differential pressures up to 300 psi (20.7 bar)
- Shaft speeds up to 4000 RPM
- Multiple integration options for OEM equipment

CUSTOM SOLUTIONS

- Cast iron, internal gear design
- Flow rates up to 84 GPM (318 LPM)
- Differential pressures up to 250 psi (17.2 bar)
- Engineered into OEM equipment

Application and Industries:

Compressor lubrication (air, gas, refrigeration), gearboxes & power transmission, fuel oil, turbines & power generation, heavy machinery, railroad prelubrication, machine tool, cranes & hoists, ink & paint, duplex generator fuel systems, oil & gas



Industrial Process Gear Pumps

ARO Industrial Process Pumps are designed for demanding applications requiring reliable transfer of viscous, high-temperature and process-critical fluids. With robust construction, flexible sealing and material options, and configurations tailored to challenging operating conditions, GlobalGear delivers reliable performance across a wide range of industrial processes.



GlobalGear

Capable of tackling the toughest high-viscosity applications, the ARO GlobalGear uses a robust pump design along with stronger and more reliable materials to extend pump life, reducing the total cost of ownership. The result - An unbeatable pump that offers unparalleled performance and handles the most difficult applications worry free.

Robust Bearing

Maintenance-free lubrication

Strong Shaft Design

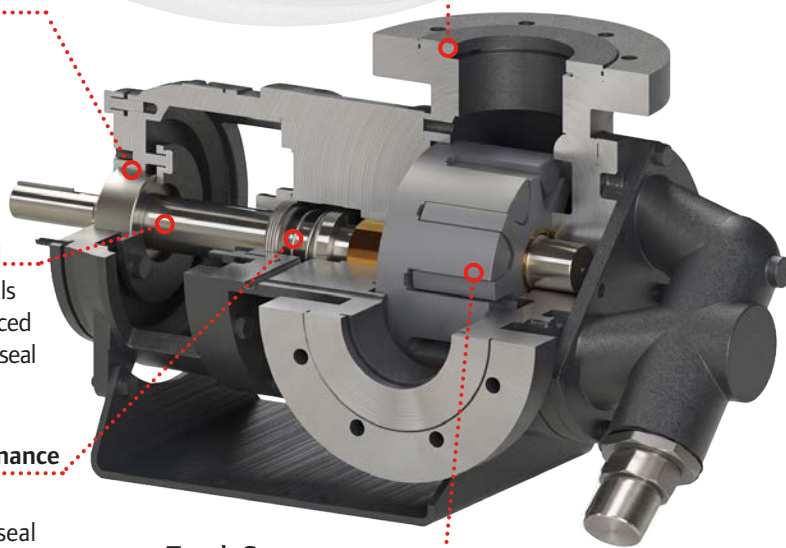
High-strength materials ensure reliability, reduced deflection, and longer seal life

In-Line Seal Maintenance

Easily convert from cartridge to packing seal

Modular Ports

Oversized, high-pressure, NPT & BSPT plus ANSI flanged options



Tough Gears

Rotor and idler gear handle high-viscosity, high-pressure operation; no need for steel rotor upgrade

• Direct Drop-In

Convenient footprint allows for easy upgrade to Global-Gear from other brands

• Bi-Directional

Flexible design suits your needs

SEAL OPTIONS



Cartridge Seal



Mechanical Seal



Packing Seal



Slurry Seal



Tuffseal

BACK PULL-OUT DESIGN

Reduce service downtime with easy access to internal components. The pump can be maintained without disturbing piping or shaft alignment, while a single drive module simplifies inventory management.

CUSTOMIZED OPTIONS

Available options include relief valves, multiple seal arrangements, oversized or high-pressure flanges, and modular ports. Tuffriding surface hardening, high-temperature constructions, and jacketing can be added for demanding applications.

DESIGN FEATURES EXTEND SEAL LIFE

Oversized shafts and bearings minimize shaft deflection and seal wear. Large-bore stuffing boxes and internal venting improve circulation and cooling, while proven sealing solutions support reliable operation and easier maintenance.

GlobalGear – Key Specifications

Attribute	Value
Pump type	Internal Gear Pump
Materials of Construction	Cast Iron, Stainless Steel, Cast Steel (API 676 configurations available)
Flow range	15 – 550 GPM (57 – 2.082 LPM)
Differential pressure	Up to 200 psi (13.8 bar)
Viscosity range	Up to 1,000,000 SSU (220,000 cSt)
Temperature range	-100°F to 600°F (-73°C to 316°C)
Benefits	Designed for Serviceability • Built for Long Service Life • Reduced Shaft Deflection • Flexible Process Configuration

Application and Industries:

• Petroleum Products • Asphalt • Chemical Processing • Corrugated Box (Starch) • Energy & Power • Bulk Transfer
• Foam (Polyol & Isocyanates) • Food & Beverage Processing • Lubes, Greases, & Blending • Oil & Gas • Inks & Pigments • Pulp & Paper • Refined Food Oils • Resins, Paints, & Coatings • Soaps & Surfactants • Adhesives & Sealants



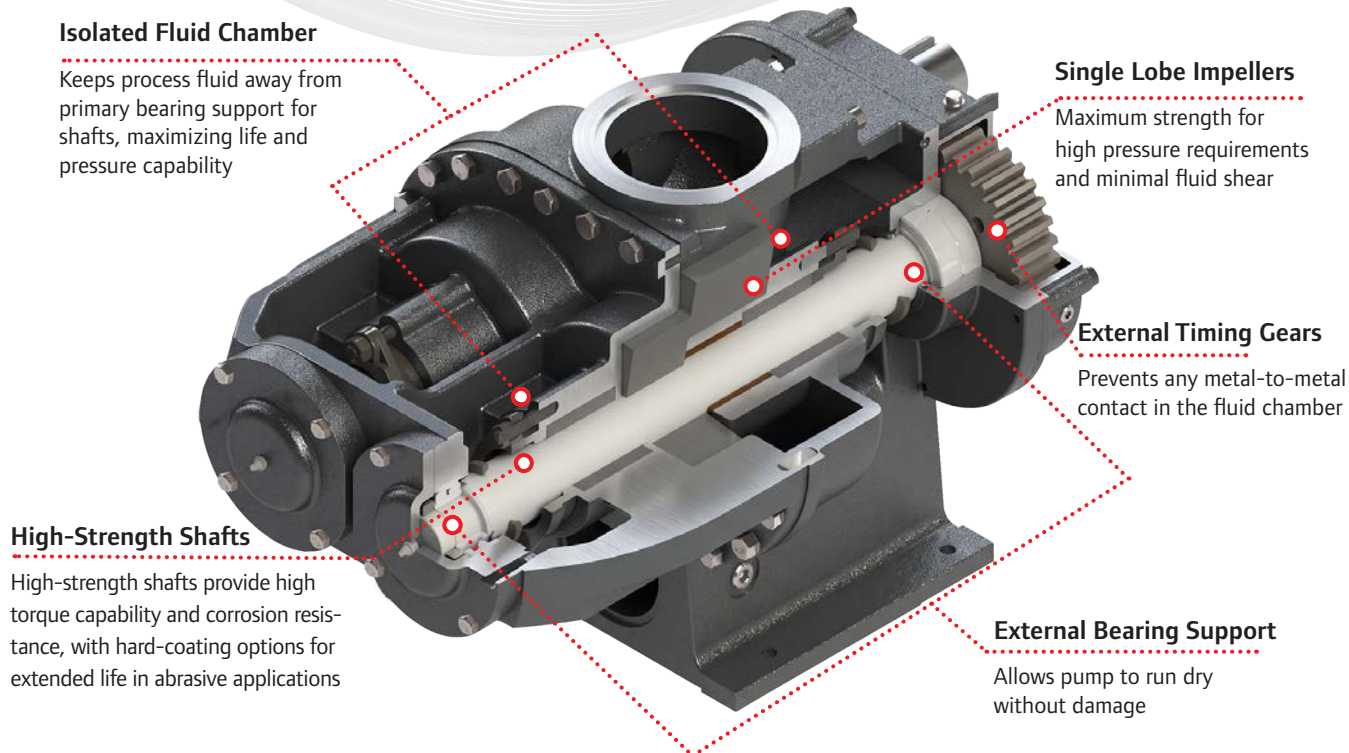
Circumferential Piston Pumps

Built for the toughest fluid-handling applications, ARO Heavy Duty Series provide reliable transfer of highly viscous fluids, slurries and solids-laden media. Their robust, low-shear design delivers dependable performance in demanding industrial processes.



Heavy Duty (HD)

The Heavy Duty Series pumps are more resistant to abrasives and air entrainment, can withstand high and variable viscosities, and can run dry without damage. The HD Series is rated to 450 psi (31 bar) differential pressure, outperforming most other rotary positive displacement pumps. This is a true workhorse known to last 30 years in the field!



BUILT FOR DEMANDING APPLICATIONS

The pump handles solids, highly viscous fluids and elevated temperatures while delivering reliable performance under high differential pressures. Its self-priming design adds further flexibility in challenging process conditions.

CUSTOMIZED OPTIONS

A wide range of customization options allows the pump to be tailored to specific process requirements. Available enhancements include Tutriding surface hardening for abrasive applications, multiple flange configurations, special internal clearances, high-temperature constructions, and bolt-on heating or cooling jackets for improved process control.

ENGINEERED SEALING OPTIONS

The pump is available with a variety of sealing solutions to match different operating conditions. Options include standard PTFE/graphite packing, food-grade PTFE packing, engineered packing configurations such as Wedgee packing, cartridge lip seals for leak-free operation, and single or double mechanical seals, including slurry seal designs.

Heavy Duty - Key Specifications

Attribute	Value
Pump type	Circumferential Piston Pump
Materials of Construction	Ductile Iron or 316 Stainless Steel
Flow range	25 – 520 GPM (95 – 1.968 LPM)
Differential pressure	Up to 450 psi (31 bar)
Viscosity	Up to 20,000,000 SSU (4,400,000 cSt)
Temperature range	-40°F to 550°F (-40°C to 290°C)
Benefits	Run-Dry Capability • Solids & Slurry Handling • Low-Shear Operation • Built for Harsh Service

Application and Industries:

- Adhesive & Sealants • Chemical Processing • Confectionery • Construction Materials • Energy & Power
- Filled Asphalt • Food & Beverage • Meat Processing • Resins, Paints, & Coatings • Soaps & Surfactants
- Pulp & Paper • Water & Wastewater





Engineered for Every Gear Pump Application

From precision metering and lubrication to high-viscosity process transfer, ARO pump technologies are engineered to deliver reliable performance across a wide range of industrial applications.

TechnaFlo • LubeTech • GlobalGear • Heavy Duty

Proven designs. Application-focused solutions. One trusted portfolio.



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