GlobalGear was introduced in 2001, and since then more than 9,000 pumps have been shipped to locations all over the world.

# INDUSTRIES AND APPLICATIONS Where GlobalGear Pumps Have Been Applied

**Chemical Processing:** Polymers, resins, adhesives, glues, solvents, sodium hydroxide, magnesium hydroxide, phosphoric acid, plasticizers, pigments, catalysts, additives, polyvinyl alcohol, silicone oils

**Petrochemical:** API 676 rotary pumps, asphalt, grease, lube oil, motor oil, turbine oil, fuel oil, bunker C heavy fuel oil, diesel fuel, synthetic oils, odorant, additives, drilling support systems

**Printing:** Inks and pigments

**Personal Products:** Soap, detergents, surfactants, perfume, paraffin wax **Polyurethane Foam Manufacturing:** Polyol, isocyanate, fire retardants

Pulp & Paper: Starch, clay coatings, tall oil

Paints & Coatings: Paint, stains, varnish, enamel, solvents

Construction Materials: Asphalt, filled asphalt, caulk, concrete additives

Agricultural Chemicals: Biocides, herbicides, urea

Aviation: Kerosene, Skydrol, glycol

Food & Beverage: Soybean oil, canola oil, hot fry oil, high fructose corn syrup, sucrose, glucose, molasses,

honey, liquid sugars, chocolate, tallow, lard, peanut butter, caramel coloring, mustard

Energy & Power: Biodiesel, glycerin, waste oil

Package Systems: Hydraulic oil, compressor oil, heat transfer fluids, hot oil, glycol

## **CUSTOMIZING** Your Global Gear Pump

GlobalGear Pumps are versatile and can be customized to meet the requirements of specific applications.

#### **Optional Features:**

- · Relief Valves
- Seal Choices
- · Heat Jackets
- Oversized and High Pressure Flanges
- Abrasive FluidSpecial Construction
- High Temperature Construction







GlobalGear® builds on a time-tested design and more than 80 years of gear pump engineering experience. Capable of tackling the toughest highviscosity applications, the GlobalGear® Process Pump handles everything from bulk transfer, chocolate and asphalt, to hightemperature fluids and chemical processing. GlobalGear® uses robust pump design together with tougher and

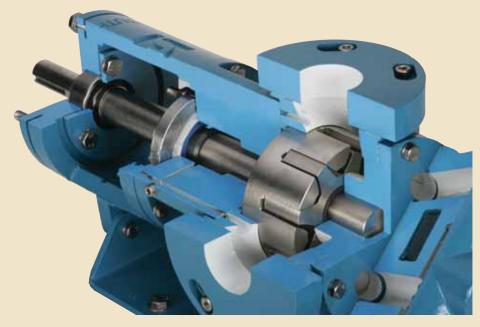
JLOBAL GEAR®

robust pump design together with tougher and stronger materials to make the pump last longer. When maintenance is required, in-line seal maintenance and back pull-out features are available to make the servicing of the pumps quicker and easier. The result?

An unbeatable pump

performance.

that offers unparalleled



The Inside Reliability Story Behind GLOBALGEAR®

The Pump designed for you!

Tuthill's GlobalGear® was developed based on customer input, and customer input in the process industries clearly points to the need for better gear pump reliability and specifically better seal reliability. The opportunity for better reliability is created by the situation that many pumps applied on viscous liquids are fundamentally designed for packing and later adapted to mechanical seals. In many cases, the seals being selected were designed for use with water-like liquids. Pumps designed for packing combined with mechanical seals designed for thin liquids are no match to offer extended reliability with demanding viscous liquid applications.

GlobalGear® design features for extended seal life include:

- Oversized shaft and bearing diameters in sizes 120 thru  $550\,$
- Large bore size for stuffing boxes
- · Pressurized fluid paths for seal lubrication
- · Options for viscous liquid duty seals





TUFFSEALL™

**HEAVY DUTY SLURRY SEAL** 

# GlobalGear® Materials and Size Address a WIDER RANGE OF APPLICATIONS.

## **SPECIFICATIONS**

### CAST IRON AND CARBON STEEL

Model	Max	Nominal Flow Rate							
	RPM	USGPN	Л			M <sup>3</sup> /HR			
GG015	1800	15	@	1750	RPM	2.8	@	1450	RPM
GG030	1800	30	@	1750	RPM	5.7	@	1450	RPM
GG050	1500	38	@	1150	RPM	6.9	@	920	RPM
GG070	1500	50	@	1150	RPM	9.1	@	920	RPM
GG080	1500	60	@	1150	RPM	10.9	@	920	RPM
GG090	1500	75	@	1150	RPM	13.7	@	920	RPM
GG120	1200	75	@	780	RPM	20.0	@	920	RPM
GG130	1000	100	@	780	RPM	27.0	@	920	RPM
GG200	1000	135	@	640	RPM	31.0	@	640	RPM
GG210	800	140	@	520	RPM	32.0	@	520	RPM
GG250	640	200	@	640	RPM	45.4	@	640	RPM
GG550*	500	550	@	500	RPM	124.5	@	500	RPM

Pressures to 200 psi (13.8 bar) Temperatures to 600°F (316°C) Viscosities to 1,000,000 ssu (220,000 cst)

### **CAST STEEL**

Model	Max	Nominal Flow Rate							
	RPM	USGPN	Λ			M <sup>3</sup> /HR			
GG130	1000	100	@	780	RPM	27.0	@	920	RPM
GG250	640	200	@	640	RPM	45.4	@	640	RPM
GG550*	500	550	@	500	RPM	124.5	@	500	RPM

Pressures to 200 psi (13.8 bar) Temperatures to 500°F (316°C)

Viscosities to 1,000,000 ssu (220,000 cst)

\*Pressures to 150 PSI (10 bar)
\*Temperatures to 400°F (204°C)

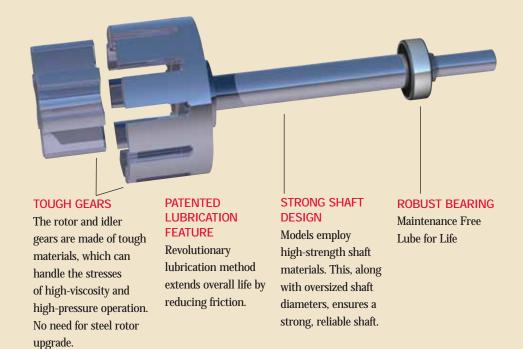
### STAINLESS STEEL

Model	Max	Nominal Flow Rate							
	RPM	USGPN	V						
GG015	1200	10	@	1150	RPM	1.8	@	920	RPM
GG030	1200	20	@	1150	RPM	3.7	@	920	RPM
GG080	1000	40	@	780	RPM	9.1	@	780	RPM
GG130	640	65	@	520	RPM	14.8	@	520	RPM
GG210	520	110	@	420	RPM	25.0	@	420	RPM
GG250**	520	160	@	520	RPM	36.3	@	520	RPM

Pressures to 150 psi (10.3 bar) Temperatures to 500°F (260°C) \*\*Pressures to 100 psi (6.9 bar)

Viscosities to 1,000,000 ssu (220,000 cst)

# GlobalGear® Pumps are TOUGHER AND MORE RELIABLE.



<sup>\*</sup>Pressures to 150 PSI (10 bar)
\*Temperatures to 400°F (204°C)

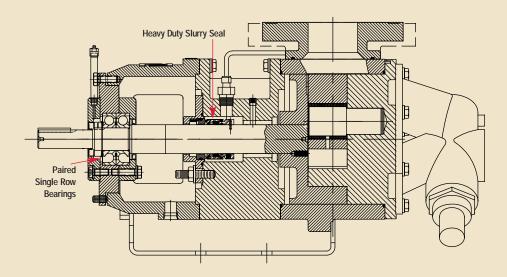
## Introducing the HG VERSION GLOBALGEAR, for the toughest of tough services.

## THE CHALLENGE...Provide a pump that will:

- · Handle side loads of belt drive and allow for the sheave to be mounted directly on the pump input shaft
- · Handle thrust loads associated with high system pressure
- Handle cold starts where the temperature drops to minus 20°F
- · Withstand operation in a high vibration environment
- Design for five year life with only scheduled preventative maintenance lubrication

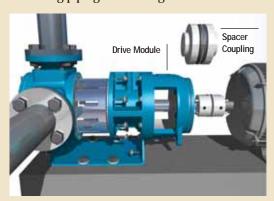
### Tuthill answers with the HG set of severe services upgrades:

- Interference fit, paired single row bearings capable of 80,000 hours B-10 life
- · Heavy duty hard face slurry type seals
- · Extra shaft length to accommodate belt sheave
- Cartridge style drive module for bearing and seal renewal in minutes by a non-specialized crew



#### **BACK PULL-OUT**

The back pull-out design greatly reduces down-time for service—the pump can be repaired without disturbing piping or shaft alignment.



#### **Downtime**

- A. Typical time to replace complete pump
- B. Typical time to replace GlobalGear® drive module







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For additional information, please visit the online GlobalGear Technical Library at: www.tuthill.com/GlobalGear

Online Technical Library Includes

- Performance Curves
- · Service Manual
- · Sample Guide Specifications
- Engineering Data Pack with Dimensions and Design Information

To find an authorized distributor, visit www.tuthill.com

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