# **GlobalGear**<sup>®</sup> Series





# Process Pumps



Pump Your Heart Into It

# **>>>** BUILT ON A TIME-TESTED DESIGN & MORE THAN 90 YEARS OF GEAR PUMP ENGINEERING EXPERIENCE

Capable of tackling the toughest high-viscosity applications, GlobalGear<sup>®</sup> uses robust pump design together with tougher, stronger, and more reliable materials to extend the pump's life, reducing total cost of ownership. The result? An unbeatable pump that offers unparalleled performance.

#### **STRONG SHAFT DESIGN**

Models employ high-strength materials. This, along with oversized diameters, ensures a strong, reliable shaft with less deflection and longer seal life.

#### **TOUGH GEARS**

The rotor and idler gears are made of tough materials, which can handle the stresses of high-viscosity and high-pressure operation. No need for steel rotor upgrade.

#### **ROBUST BEARING** Maintenance free lube for life.

API PLAN 13

Vent to suction mechanical seal flush.

# >>>> THE INSIDE RELIABILITY STORY BEHIND GLOBALGEAR®

#### THE PUMP DESIGNED FOR YOU!

Tuthill's GlobalGear<sup>®</sup> 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.

GlobalGear<sup>®</sup> was designed to accommodate a range of engineered sealing solutions with demanding, viscous applications in mind. Other pumps designed for packing combined with mechanical seals cannot compete with Tuthill's extended reliability.

#### **GLOBALGEAR® DESIGN FEATURES FOR EXTENDED SEAL LIFE INCLUDE**

- Oversized Shaft & Bearing Diameters on Models GG130 GG550
- Large Bore Size for Stuffing Boxes
- Pressurized Fluid Paths for Seal Lubrication
- Options for Viscous Liquid Duty Seals
- In-Line Seal Maintenance



# >>> CUSTOMIZING YOUR GLOBALGEAR® PUMP

GlobalGear<sup>®</sup> pumps are versatile and can be customized to meet the requirements of specific applications.

#### **OPTIONAL FEATURES**

- Relief Valve
- Seal Choices
- Heat Jackets
- Oversized and High Pressure Flanges
- Abrasive Fluid Special Construction
- High Temperature Construction
- Modular Port Options



# >>> THE BACK PULL-OUT DESIGN GREATLY REDUCES DOWN-TIME FOR SERVICE



### **BACK PULL-OUT**

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

# TYPICAL DOWNTIME

- A. Replacing Complete Pump
- B. Replacing GlobalGear® Drive Module



# >>> API 676 PACKAGES

Tuthill designs GlobalGear<sup>®</sup> pump packages to satisfy a growing customer base of large, international Oil & Gas end users with API 676 standard requirements\*. This standard is set forth by the American Petroleum Institute to establish guideline specifications for the use of rotary positive displacement pumps in petroleum, petrochemical, and gas industry services.

Tuthill can offer API 682 mechanical seals for API 676 configured pumps and allowable nozzle loads that are two times or more greater than the minimum allowable nozzle loads specified in API 676. Tuthill also offers the complete package of baseplate, electric motor, gear reducer, coupling, and guard that addresses API 676 features and specifications, along with other project specific requirements.



\* Tuthill's GlobalGear<sup>®</sup> series pumps meet the intent of API Standard 676 specifications in all cases with the exception of some specific points which are outlined on www.TuthillPump.com

# **>>>** GLOBALGEAR<sup>®</sup> MATERIALS AND SIZES ADDRESS A WIDER RANGE OF APPLICATIONS

#### **CAST IRON**



- Standard Carbon Steel Rotor Shaft
- Differential Pressures to 200 PSI (13.8 BAR)
- •Temperatures to 600 °F (316 °C)
- Viscosities to 1,000,000 ssu (220,000 cst)

#### **STAINLESS STEEL**



- Standard Gall Resistant, Nitronic 60 Rotor Head & Idler Gear
- Differential Pressures to 150 PSI (10.3 BAR)
- •Temperatures to 500 °F (260 °C)
- Viscosities to 1,000,000 ssu (220,000 cst)
- Max Differential Pressure is 100 PSI
- if fluid is < 100 ssu

• Differential Pressures to 200 PSI (13.8 BAR)

•Temperatures to 600 °F (316 °C)

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

MODEL	MAX RPM	GPM				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

\* Differential Pressures to 150 PSI (10.3 BAR)

NOMINAL FLOW RATE

MODEL	MAX RPM	GPM				M <sup>3</sup> /HR			
GG015	1200	10	@	1150	RPM	2.8	@	1450	RPM
GG030	1200	20	@	1150	RPM	5.7	@	1450	RPM
GG080	1000	40	@	780	RPM	6.9	@	920	RPM
GG130	640	65	@	520	RPM	9.1	@	920	RPM
GG210	520	110	@	420	RPM	10.9	@	920	RPM
GG250	520	160	@	520	RPM	36.3	@	520	RPM
GG550**	* 350	350	@	350	RPM	80.0	@	350	RPM

\*\* Differential Pressures to 125 PSI (8.6 BAR)

MODEL	MAX RPM	GPM				M <sup>3</sup> /HR			
GG015	1800	15	@	1750	RPM	2.8	@	1450	RPM
GG030	1800	30	@	1750	RPM	5.7	@	1450	RPM
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

\* Differential Pressures to 150 PSI (10.3 BAR)



Tuthill GlobalGear<sup>®</sup> pumps are a preferred solution to support lubrication applications in large natural gas compressors.

# >>> INDUSTRIES AND APPLICATIONS

#### **CHEMICAL PROCESSING**

- ADDITIVES
- ADHESIVES
- CATALYSTS
- FIRE RETARDANTS
- GLUES
- MAGNESIUM HYDROXIDE
- PHOSPHORIC ACID
- PIGMENTS
- PLASTICIZERS
- POLYMERS
- POLYOL
- POLYVINYL ALCOHOL
- RESINS
- SILICONE OILS
- SODIUM HYDROXIDE

#### **CONSTRUCTION MATERIALS**

- ASPHALT
- CAULK
- CONCRETE ADDITIVES
- FILLED ASPHALT

#### OIL & GAS

- API 676 ROTARY PUMPS
- DIESEL FUEL
- DRILLING SUPPORT SYSTEMS
- FUEL OIL
- GREASE
- LUBE OIL
- MOTOR OIL
- ODORANT
- SYNTHETIC OILS
- TURBINE OIL

#### AGRICULTURAL CHEMICALS

- BIOCIDES
- HERBICIDES
- UREA
- UREA

#### **ENERGY & POWER**

- BIODIESEL
- GLYCERIN
- WASTE OIL

#### PAINTS, COATINGS, & INKS

- ENAMEL
- INKS
- PAINT
- PIGMENTS
- SOLVENTS
- STAINS
- VARNISH

#### PACKAGE SYSTEMS

- COMPRESSOR OIL
- GLYCOL
- HEAT TRANSFER FLUIDS
- HOT OIL
- HYDRAULIC OIL

#### **PULP & PAPER**

- BLACK LIQUOR SOAP
- CLAY COATINGS
- STARCH
- TALL OIL

#### **PERSONAL PRODUCTS**

- DETERGENTS
- PARAFFIN WAX
- PERFUME
- SOAP
- SURFACTANTS

#### FOOD & BEVERAGE

- CANOLA OIL
- CARAMEL COLORING
- CHOCOLATE
- GLUCOSE
- HIGH FRUCTOSE
- CORN SYRUP
- HONEY
- HOT FRY OIL
- LARD • LIQUID SUGARS
- MOLASSES
- MUSTARD
- PEANUT BUTTER
- SOYBEAN OIL
- SUCROSE
- TALLOW

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Conveniently access Tuthill's knowledge and experience while learning more about who we are.

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- Notifications to download updated information
- •Easily share content and customizable knowledge packs
- Keep personal notes and share valuable feedback to further support Tuthill's continuous improvement
- The story about Tuthill, our culture, and our products will be available at any time

#### **AVAILABLE AT APPLE APP STORE**

Simply visit the Apple App store on your iPad and search for "Tuthill" to download the app for any iPad running iOS 6.0 or greater.

### >>> VISIT US AT WWW.TUTHILLPUMP.COM

#### **OUR LIBRARY INCLUDES**

- Experience & Reputation
- Product Information
- Service Manuals
- Technical Information

# >>> LOCATIONS

#### **TUTHILL PUMP GROUP**

12500 South Pulaski Road Alsip, Illinois 60803 USA phone: 1.708.389.2500

#### **TUTHILL UNITED KINGDOM**

Birkdale Close Manners Industrial Estate Ilkeston, Derbyshire DE7 8YA UK phone: 44.0.115.932.5226

## TUTHILL CHINA

88 Jia Xiu Road Nan Xiang Town Jia Ding District Shanghai, P.R.C. 201802 China phone: 86.21.6917.1999



# THE HEART IS THE ORIGINAL PUMP

All of us are born with a pump inside – our hearts. At Tuthill, we don't just make pumps, blowers, and vacuum systems & blowers we make an invitation for the original pump – the heart – to come alive.

We've always been a company with heart. From our beginnings as a brick maker, we made the bricks that made Chicago. As the horses hauled clay from the quarry, it was too much for their hearts to bear. So Tuthill created an oil pump to power a truck, an innovation that saved horses and led to our first manufactured pump – made from the heart.

Today, we pump our hearts into everything we do: every cut, drill, and cycle, and everything we bring to you. We invite you to join us and find what makes your heart beat a little faster. Because when we all come alive, the world comes along.



