

GORMAN-RUPP G SERIES™

Positive Displacement Rotary Gear Pumps



Engineered for  
Unparalleled Performance.

RATING	200 PSI (13.8 BAR)					400 PSI (27.6 BAR)			
	Medium		Heavy		Extreme	Heavy			
MODEL	GMC	GMS	GHC SST	GHS SST	GHA	GHC	GHC STL	GHS	GHS STL
OPERATING RANGE									
Max Capacity GPM	38	450	107	295	146	107	107	600	295
Max Capacity (LPM)	(144)	(1703)	(405)	(1116)	(552)	(405)	(405)	(2271)	(1116)
Max Pressure PSI	200	200	200	200	200	400	400	400	400
Max Pressure (bar)	(13.8)	(13.8)	(13.8)	(13.8)	(13.8)	(27.6)	(27.6)	(27.6)	(27.6)
Max Viscosity SSU	250,000	250,000	250,000	2,000,000	250,000	250,000	250,000	2,000,000	2,000,000
Max Viscosity (Cst)	(54,000)	(54,000)	(54,000)	(440,000)	(54,000)	(54,000)	(54,000)	(440,000)	(440,000)
Temperature °F	-40° to 300°	-40° to 350°	-40° to 350°	-40° to 675°	-60° to 500°	-40° to 350°	-40° to 350°	-60° to 675°	-40° to 675°
Temperature (°C)	(-40° to 149°)	(-40° to 177°)	(-40° to 177°)	(-40° to 357°)	(-51° to 260°)	(-40° to 177°)	(-40° to 177°)	(-51° to 357°)	(-40° to 357°)
STANDARD CONSTRUCTION Exterior	Gray Iron	Gray Iron	Wet End 316 Stainless Steel	Wet End 316 Stainless Steel	Hardened Gray Iron	Gray Iron	Wet End Steel	Gray Iron	Wet End Steel
Rotor & Idler	Ductile Iron	Ductile Iron	316 Stainless Steel	316 Stainless Steel	Austempered Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron
Housing Ports (Optional ports available)	180° Tapped	90° Tapped/FLG	180° FLG	90° Tapped/FLG	90° Tapped/FLG	180° Tapped	180° FLG	90° Tapped/FLG	90° FLG
Bushings	TBS	TBS	Carbon Graphite	Carbon Graphite	Carbide	TBS	TBS	TBS	TBS
Idler Pin	Hardened Steel	Hardened Steel	Coated 316 Stainless Steel	Coated 316 Stainless Steel	Tungsten Carbide	Hardened Steel	Hardened Steel	Hardened Steel	Hardened Steel
Shaft	Steel	Steel	Stainless Steel	Stainless Steel	Hardened Steel	Steel	Steel	Steel	Steel
Shaft Sealing (Numerous optional seals available)	Mechanical Seal: Viton, Carbon, Ni-resist	Mechanical Seal: Viton, Carbon, Ni-resist	Mechanical Seal: Cartridge Metal Bellows, Carbon, SiC, Teflon Encap.	Mechanical Seal: Cartridge Metal Bellows, Carbon, SiC, Teflon Encap.	Mechanical Seal: Viton, SiC, SiC	Mechanical Seal: Viton, Carbon, Ni-resist	Mechanical Seal: Viton, Carbon, Ni-resist	Mechanical Seal: Viton, Carbon, Ni-resist	Mechanical Seal: Viton, Carbon, Ni-resist
	Lip Seal: Buna-N	Lip Seal: Buna-N		Packing: Teflon/Graphite	Packing: Aramid Fiber	Lip Seal: Buna-N	Lip Seal: Buna-N	Lip Seal: Buna-N	Lip Seal: Buna-N
								Packing: Teflon/Graphite	Packing: Teflon/Graphite

**G Series Options:**

- Various port sizes and styles
- 180°/90°
  - 1" - 6"
  - NPT, ANSI FLANGE, BSP, DIN FLANGE

- Bi-directional operation
- Various bushing materials
- TBS (STD)
  - Carbon graphite (low & high temp.)
  - Siliconized graphite (low & high temp.)
  - Tungsten carbide

- Various idler pin materials
- Hardened alloy steel (STD)
  - Hardened tool steel
  - Colmonoy coated
  - Chromium oxide coated
  - Tungsten carbide

Hardened wear-resistant heads and housings  
Interchange shafts/housing ports/mounting feet

- O-rings of various elastomers
- Viton® (STD)
  - Buna
  - EPDM
  - PTFE encapsulated
  - Kalrez®
- Gear materials
- Ductile iron (STD)
  - Hardened austempered ductile iron
  - Bronze gears

- Relief valve options
- Low/high pressure springs
  - Return to tank style
  - Various elastomers
  - High temperature

Jacketed heads & backheads  
Multiple centerline foot brackets

- Sealing options
- Single
  - Double
  - Tandem
  - Various elastomers
  - Hard faced
  - Quench
  - Flush
  - Metal bellows
  - High temperature
  - Corrosion resistant
  - Cartridge style
  - Heavy duty lip
  - Cartridge PTFE lip
  - Packing
  - Seal pot
  - Jacketed

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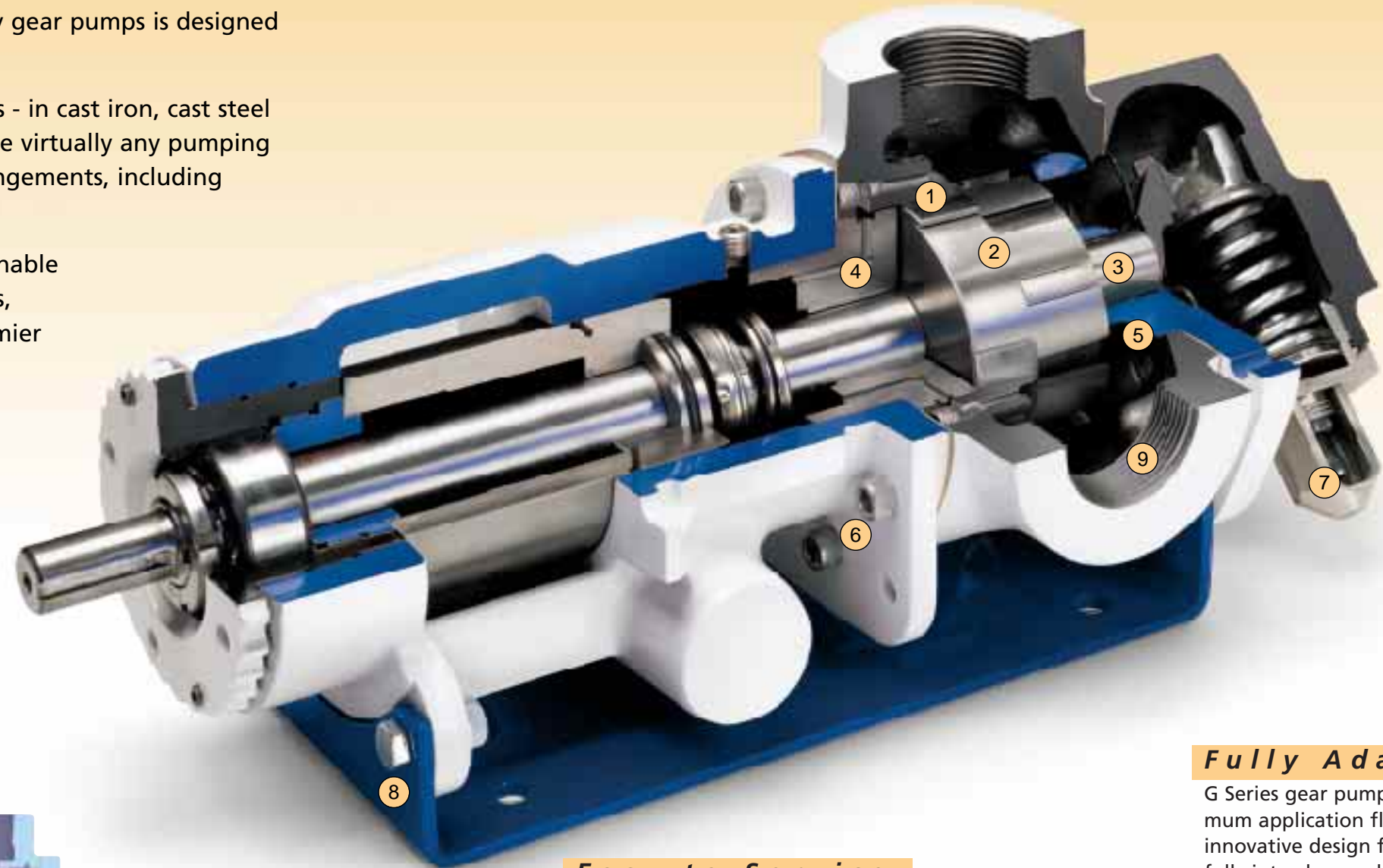
GORMAN-RUPP G SERIES™

*Designed and Built for Longevity, Serviceability and Adaptability.*

The Gorman-Rupp G Series™ line of positive displacement rotary gear pumps is designed to provide performance no other gear pumps can match.

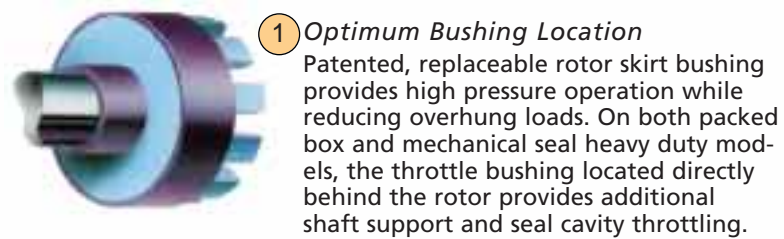
Available in Medium Duty, Heavy Duty and Extreme Duty models - in cast iron, cast steel and stainless steel. G Series pumps are versatile enough to handle virtually any pumping application and liquid type. They come in a variety of drive arrangements, including close-coupled, flex-coupled, gear reducer and v-belt drive.

G Series pumps are manufactured with patented features that enable them to perform better and last longer on countless applications, providing quality and reliability that makes the G Series the premier gear pump in the industry.

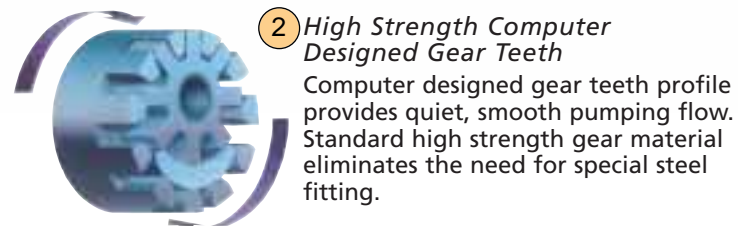


**Longer Lasting.**

All Gorman-Rupp G Series pumps are designed with numerous features that you'll find on no other gear pumps, allowing them to outlast and outperform the competition.



**1 Optimum Bushing Location**  
Patented, replaceable rotor skirt bushing provides high pressure operation while reducing overhung loads. On both packed box and mechanical seal heavy duty models, the throttle bushing located directly behind the rotor provides additional shaft support and seal cavity throttling.



**2 High Strength Computer Designed Gear Teeth**  
Computer designed gear teeth profile provides quiet, smooth pumping flow. Standard high strength gear material eliminates the need for special steel fitting.



**3 Unique Idler Pin Lubrication System**  
Unique internal pressure lubricated idler pin reduces wear by continuously cooling and lubricating the idler pin and bushing.



**4 Internal Seal Vent**  
Seal cavity venting provides continuous flow of liquid through seal cavity, ensuring cooling. Maintains seal cavity at low pressure reducing seal face load and increasing seal life.



**5 Deep End Feed Area**  
Deep end feed area offers improved performance under low inlet pressure conditions and/or high viscosity liquids.

**Easy to Service.**

G Series' intelligent design makes servicing faster, easier and more cost effective with unique features that are common to all of our medium, heavy and extreme duty gear pumps.



**6 Unique Back Pull-Out Design**  
Unique back pull-out design allows service and maintenance without disconnecting pump housing from piping.



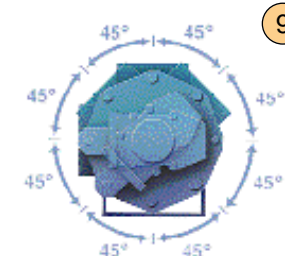
**7 No-Leak Pressure Relief Valve**  
O-ring design on relief valve allows for adjustment during operation, without leakage.

**Fully Adaptable.**

G Series gear pumps are designed for maximum application flexibility and contain innovative design features that make them fully interchangeable with most other gear pump manufacturers.



**8 Easy Motor Center Height Adjustment**  
Foot brackets are centrally located under pump ports, providing better pump and piping support. Multiple center line height enables simple and inexpensive bases.



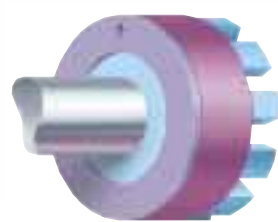
**9 Multiple Port Positioning**  
Interchangeable 90° or 180° housings with multiple port sizes on most models. Eight different port positions in 45° increments make installation faster and easier.

## MEDIUM DUTY GEAR PUMPS

*The Flexible, Economical Solution for Many Demanding Applications.*

Gorman-Rupp G Series Medium Duty pumps are designed to handle clean liquid applications usually reserved for more expensive, "heavy duty" pumps.

Available in two styles — the compact, close coupled GMC and the stub shaft, flex coupled GMS — Medium Duty G Series pumps offer the quality features found on all G Series pumps, as well as performance and adaptability features that are unique to our medium duty line.



**High Strength Thrust Washer**  
Large, replaceable thrust washer supports higher loads and extends pump life.



**Compact, C-Face Mounted GMC**  
For high performance in a small package, the GMC can be close coupled to motors as large as the NEMA 215TC frame.

**Typical Medium Duty Applications**  
Hydrocarbons, Petrochemicals and Similar:  
• Oils  
• Fuels  
Viscous Liquids and Polymers:  
• Grease  
• Asphalt  
Thermosensitive Liquids:  
• Resins  
• Tar

MODEL	GMC	GMS
<b>OPERATING RANGE</b>		
Max Capacity GPM	38	450
Max Capacity (LPM)	(144)	(1703)
Max Pressure PSI	200	200
Max Pressure (bar)	(13.8)	(13.8)
Max Viscosity SSU	250,000	250,000
Max Viscosity (Cst)	(54,000)	(54,000)
Temperature °F	-40° to 300°	-75° to 350°
Temperature (°C)	(-40° to 149°)	(-59° to 177°)
<b>STANDARD CONSTRUCTION</b>		
Exterior	Gray Iron	Gray Iron

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## HEAVY DUTY GEAR PUMPS

*The Most Capable, Versatile Gear Pump in the Industry.*

Designed for the most demanding clean liquid applications, Gorman-Rupp G Series Heavy Duty pumps combine high performance materials and innovative design to outperform all other pumps of their type.

Available in two styles — the stub shaft GHS and the compact stub shaft GHC — Heavy Duty G Series are available in cast iron, shock-resistant cast steel and corrosion-resistant 316 stainless steel to provide superior performance in countless pumping applications. They offer the premium quality features found on all G Series pumps, as well as performance and serviceability features that are unique to our heavy duty line.



**Oversize Seal Chamber with Seal Vent System**  
Large seal cavity design allows easy conversion to a wide variety of single and multiple seal types and configurations. Internal seal vent system reduces seal face load and provides continuous cooling for extended service life.



**Simple and Precise Rotor Adjustment**

Simple, rugged, double-piloted design provides easy and precise rotor adjustment. Sealed double row bearings are maintenance-free.

MODEL	GHC	GHC STL	GHC SST	GHS	GHS STL	GHS SST
<b>OPERATING RANGE</b>						
Max Capacity GPM	107	107	107	600	295	295
Max Capacity (LPM)	(405)	(405)	(405)	(2271)	(1116)	(1116)
Max Pressure PSI	400	400	200	400	400	200
Max Pressure (bar)	(27.6)	(27.6)	(13.8)	(27.6)	(27.6)	(13.8)
Max Viscosity SSU	250,000	250,000	250,000	2,000,000	2,000,000	2,000,000
Max Viscosity (Cst)	(54,000)	(54,000)	(54,000)	(440,000)	(440,000)	(440,000)
Temperature °F	-75° to 350°	-75° to 350°	-75° to 350°	-75° to 675°	-75° to 675°	-75° to 675°
Temperature (°C)	(-59° to 177°)	(-59° to 177°)	(-59° to 177°)	(-59° to 357°)	(-59° to 357°)	(-59° to 357°)
<b>STANDARD CONSTRUCTION</b>						
Exterior	Gray Iron	Wet End Steel	Wet End 316 Stainless Steel	Gray Iron	Wet End Steel	Wet End 316 Stainless Steel

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### Typical Heavy Duty Applications

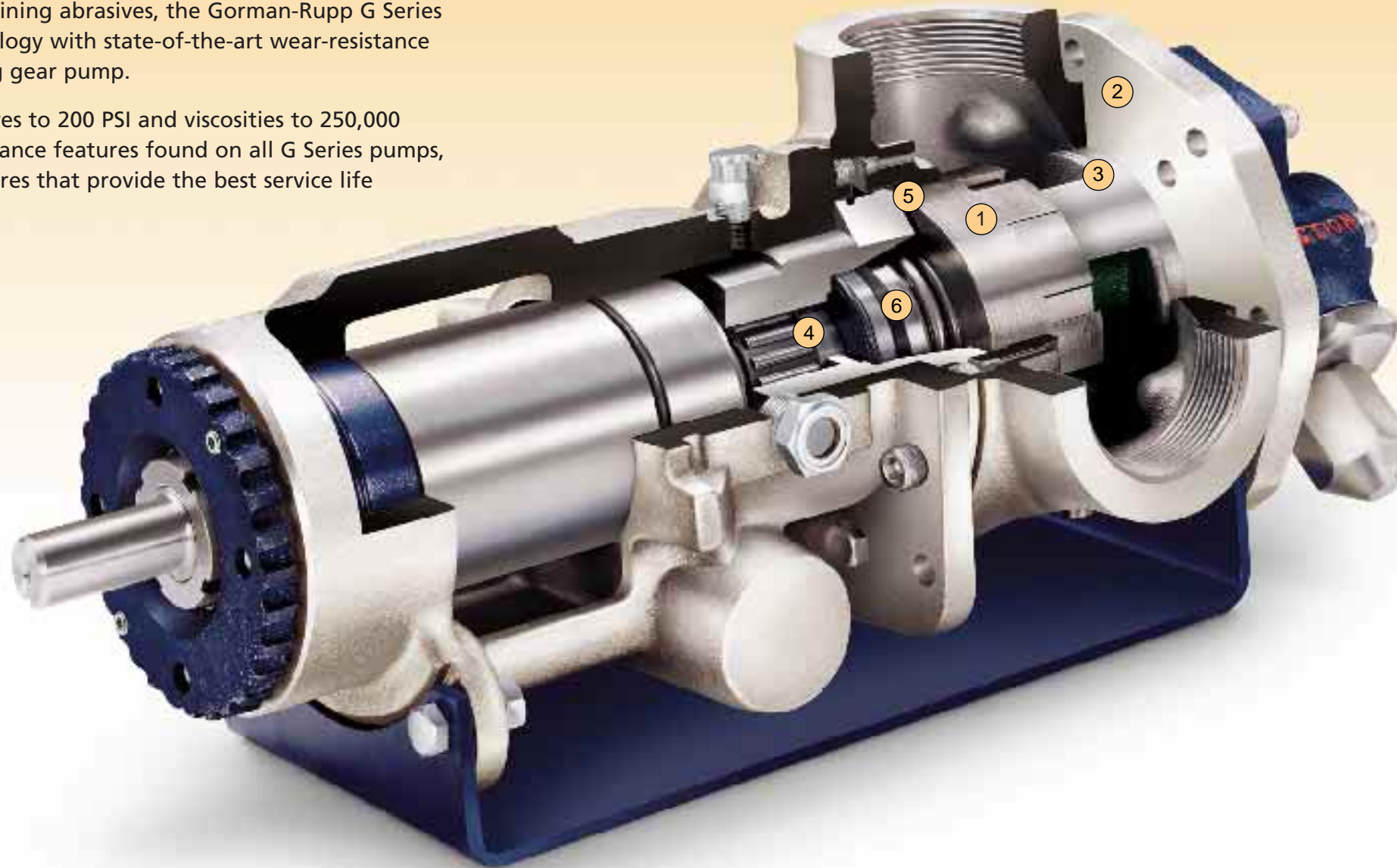
Hydrocarbons, Petrochemicals and Similar:  
• Oils • Fuels  
• Fats • LPG  
Viscous Liquids and Polymers:  
• Glue, Adhesives  
• Grease • Varnish  
• Asphalt • Styrenes  
Thermosensitive Liquids:  
• Resins • Tar  
Acids:  
• Acetic • Phosphoric  
Solvents:  
• Ketones • Acetone  
Salts and Caustics:  
• Soda Ash • Viscose  
Papermill Liquids:  
• Black Liquor  
• Kaolin • Tall Oil  
Heat Transfer Liquids:  
• MobilTherm, DowTherm  
Food Products:  
• Chocolate • Glucose  
• Vegetable Oil  
• Syrups

EXTREME DUTY GEAR PUMPS

*The Most Rugged, Wear Resistant Gear Pump in the World.*

Designed to survive the severe challenge of liquids containing abrasives, the Gorman-Rupp G Series Extreme Duty pump combines proven gear pump technology with state-of-the-art wear-resistance processes, making it the world's toughest, longest-lasting gear pump.

Available in cast iron with capacities to 146 GPM, pressures to 200 PSI and viscosities to 250,000 SSU, the extreme duty pump offers many of the performance features found on all G Series pumps, as well as innovative and unique abrasion-resistant features that provide the best service life possible under many extreme wear applications.



**4**  
**Needle Bearing Shaft Support**  
Unique, precision needle bearing provides exceptionally reliable high-load shaft support and better rotor shaft stability, extending the seal life and operational life of the pump.



**5**  
**Exclusive Seal Cavity Design**  
State-of-the-art mechanical seal sits in a tapered seal bore and extends seal life by directing abrasives away from the seal faces and out of the pump.



**1**  
**Wear-Resistant Rotor and Idler**  
Hard, austempered ductile iron gears resist abrasive wear, extending pump life. Computer designed gear tooth profile provides smooth, quiet pumping flow.



**2**  
**Wear-Resistant Pump Head and Housing**  
Critical wear areas of both the head and housing are hardened to resist wear and maintain maximum pump efficiency.



**3**  
**Carbide Idler Pin and Idler Bushing**  
Extremely hard carbide pin and bushing provide excellent wear resistance under the most severe abrasive applications.



**6**  
**Hard Face Mechanical Seal**  
Silicone carbide seal faces mounted in a highly engineered mechanical seal, ensure maximum life and reliability with minimal wear.

MODEL	GHA
<b>OPERATING RANGE</b>	
Max Capacity GPM	146
Max Capacity (LPM)	(552)
Max Pressure PSI	200
Max Pressure (bar)	(13.8)
Max Viscosity SSU	250,000
Max Viscosity (Cst)	(54,000)
Temperature °F	-60° to 500°
Temperature (°C)	(-51° to 260°)
<b>STANDARD CONSTRUCTION</b>	
Exterior	Gray Iron

**Typical Extreme Duty Applications**  
**Abrasive Liquids:**

- Paint, Enamels
- Printing Ink
- Titanium Dioxide, Iron Oxide, Zinc Oxide
- Diatomaceous Earth
- Paper Coatings
- Pitch
- Fish Solubles
- Barium Sulfate
- Wax
- Waste Oils