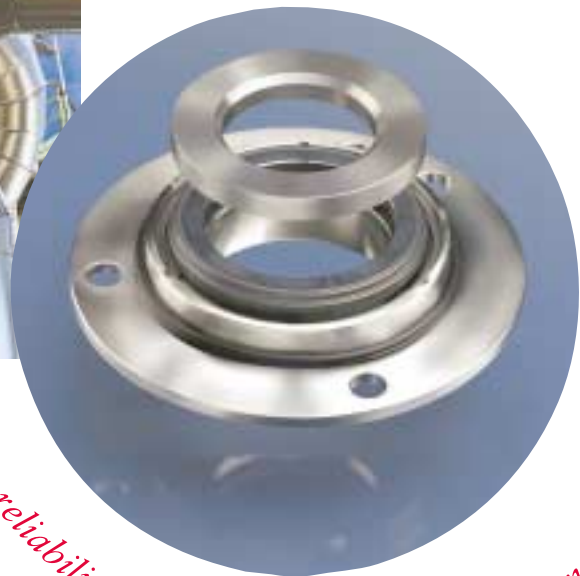
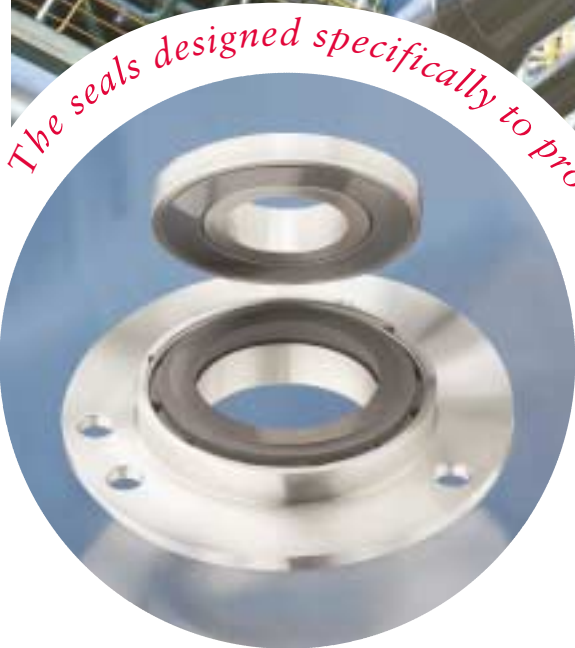
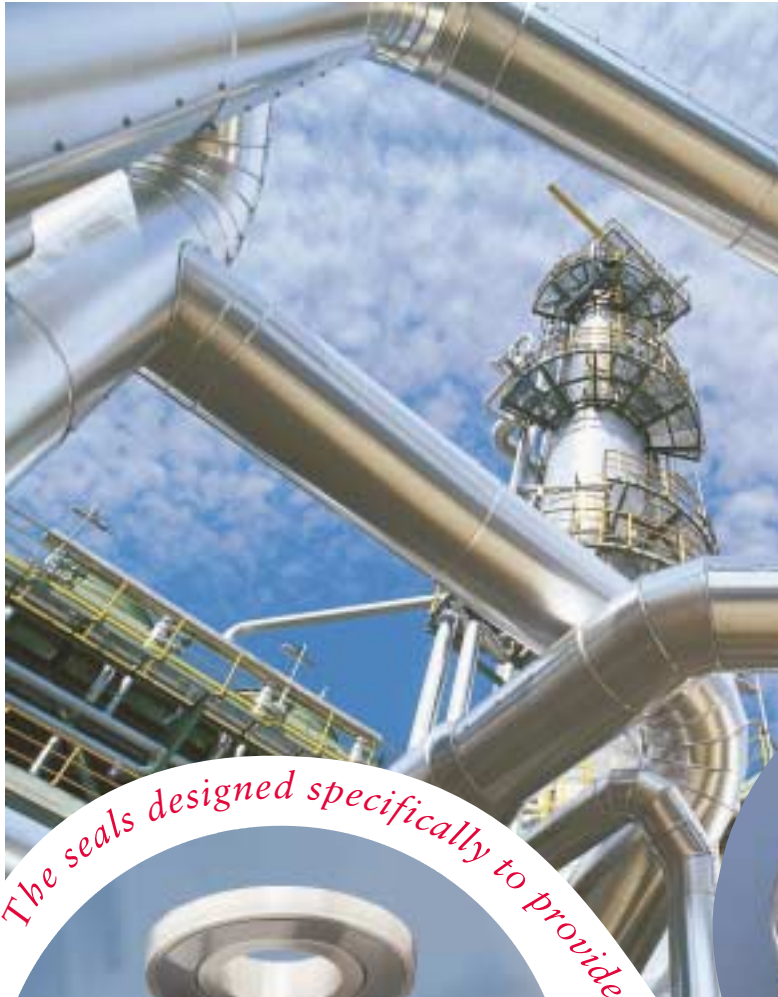


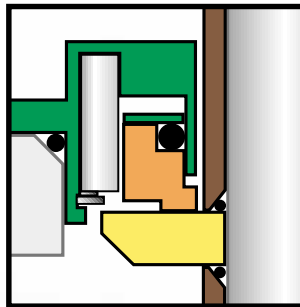
GLS, GSS & GSG

Seals for
integrally
geared
API
pumps and
compressors



The seals designed specifically to provide superior reliability in high head, low flow equipment.

The **GLS** & **GSS** Sealing Innovation *The latest fluid sealing technologies that enhance equipment*



Conventional is just not

Conventional seals to date have been utilizing solid tungsten carbide block rotors. In addition to providing a sealing face, tungsten carbide rotors were part of the rotating assembly stack-up.

With the conventional arrangement, clamping forces could not be isolated from the sealing faces, resulting in rotating face distortion; hence enhanced reliability was not achievable.

Innovative designs for dependable operation

- nonclamped rotating Silicon Carbide face in holder for reduced face distortion
- common cartridge and rotating assemblies for liquid and gas applications
- two carbon face designs, one for light hydrocarbons and the other for heavier liquids

GLS Liquid Seal Features

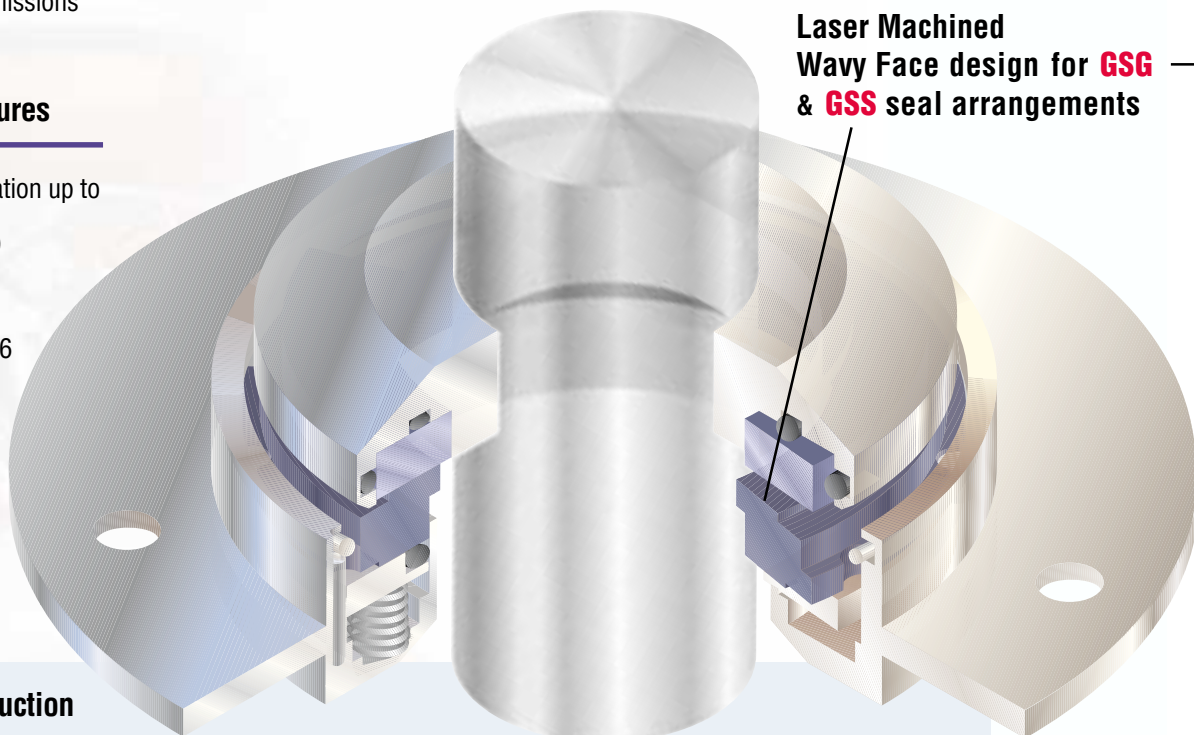
- successful operation up to 1250 psi (8619 kPa) in flashing hydrocarbons
- no measureable face wear or worn taper
- minimal emissions



Laser Machined Wavy Face design for **GSG** & **GSS** seal arrangements

GSS Gas Seal Features

- noncontacting operation up to 1250 psi (8619 kPa)
- low gas leakage
- low emission Plan 76 containment seal



Materials of Construction

Metal Parts	Corrosion Resistant Stainless Steel with Alloy C-276 Springs	Stationary Face	Premium Grade Carbon
Rotating Face	Silicon Carbide	Gaskets	Fluoroelastomer, Perfluoroelastomer, Teflon "Tec-ring"

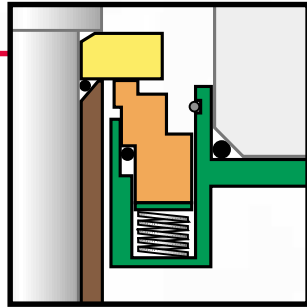
reliability and increase MTBF of high speed machines.

The GSG Sealing Innovation

good enough anymore

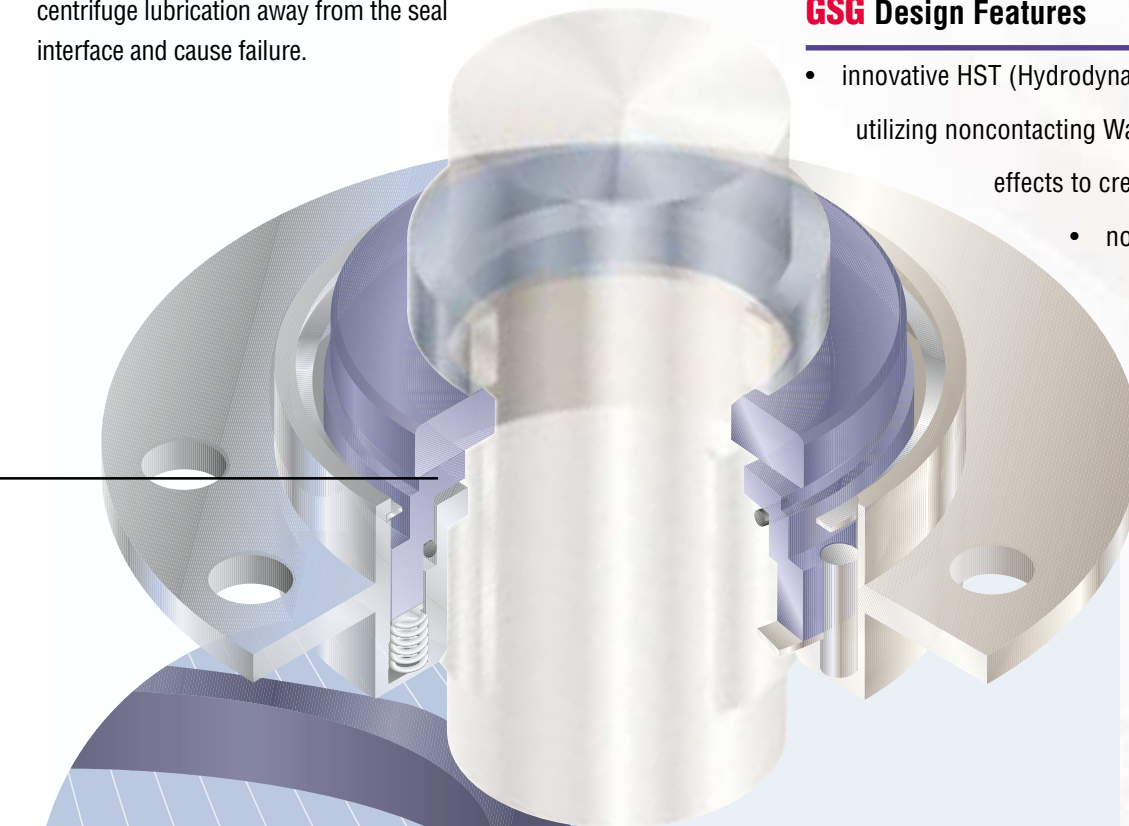
For decades, operators could only apply traditional contacting mechanical seal designs to seal the gearbox on integrally geared pumps and compressors. Traditional designs can be unreliable when subjected to frequent starts and stops that lead to carbon blistering.

The high speed and zero sealed pressure common to gearbox seal applications can centrifuge lubrication away from the seal interface and cause failure.

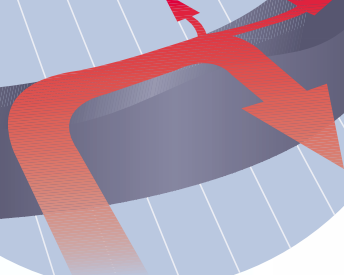


GSG Design Features

- innovative HST (Hydrodynamic Surface Tension) technology utilizing noncontacting Wavy Face and surface tension effects to create a near-zero leakage seal
- no equipment modifications required to replace any other design



circulation effect of Wavy Face design



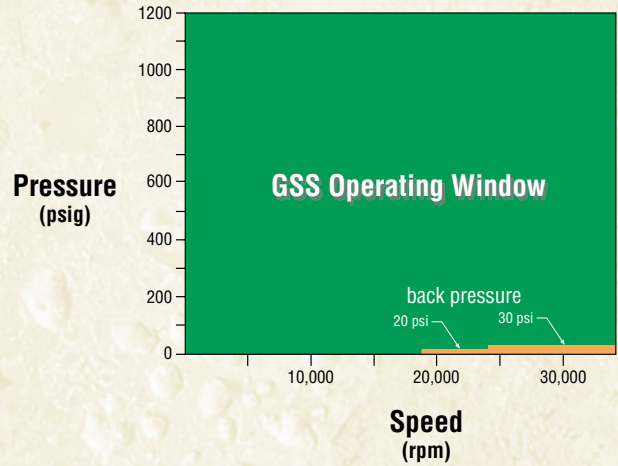
Materials of Construction

Metal Parts	Corrosion Resistant Stainless Steel with Alloy C-276 Springs
Rotating Face	Tungsten Carbide
Stationary Face	Silicon Carbide
Gaskets	Fluoroelastomer

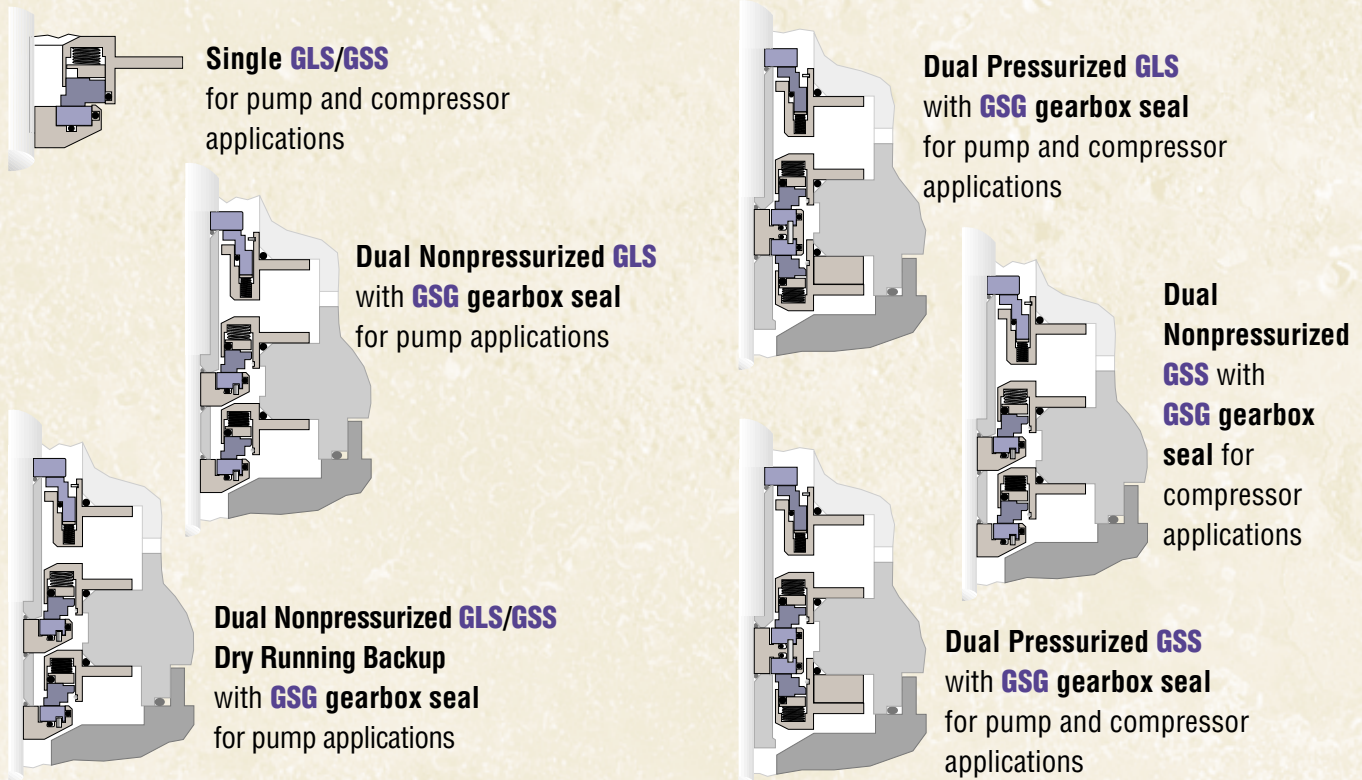
*BW Seals
Durametallic Seals
Pacific Wietz Seals
Pac-Seal*

Operating Parameters

Maximum Dynamic Pressure	Gas	0 to 1250 psi (0 to 8619 kPa)
	Liquid	0 to 1250 psi (0 to 8619 kPa)
Seal Chamber Temperature		-80°F to 400°F (-62°C to 204°C)
Speed	GSS	up to 36,000 rpm
	GLS	up to 26,000 rpm
	GSG	up to 36,000 rpm
Seal Size		1.5 inch (38 mm)



Typical Configurations



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