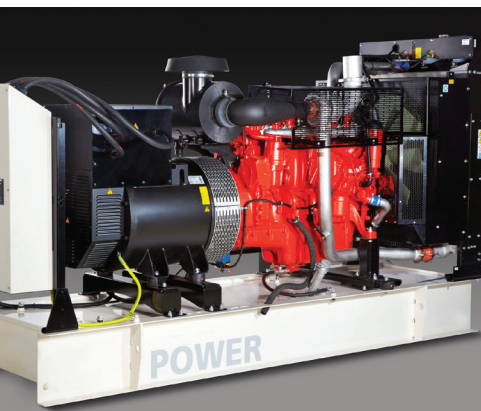


ANY ENGINE. ANY SIZE. ANY TYPE.

TOTAL SEAL[®]

PISTON RINGS

If It Takes A Piston Ring,
We Can Build It.



RACE | REBUILD | DIESEL | VINTAGE | SPECIALTY | MARINE | AVIATION

EFFICIENCY for Any Engine

Whether it's a stand-alone compressor, an OTR diesel, or simply improving the efficiency of your engine, Total Seal® provides a wide selection of ring sets and custom piston rings for nearly every type of engine on the planet.

Over 50 years ago we invented the Gapless® piston ring that changed the industry. Today, we are much more than Gapless®. We design and manufacture piston rings for every type of internal combustion engine.

Conventional Gap, Gas-Ported, Total Conform™, Diamond Finish™, Gapless® and so many more. Our leading piston ring designs are made from Ductile Iron, Cast Iron, Stainless Steel or Tool Steel. We offer a variety of face coatings including Molybdenum, DLC and multiple PVD coatings.

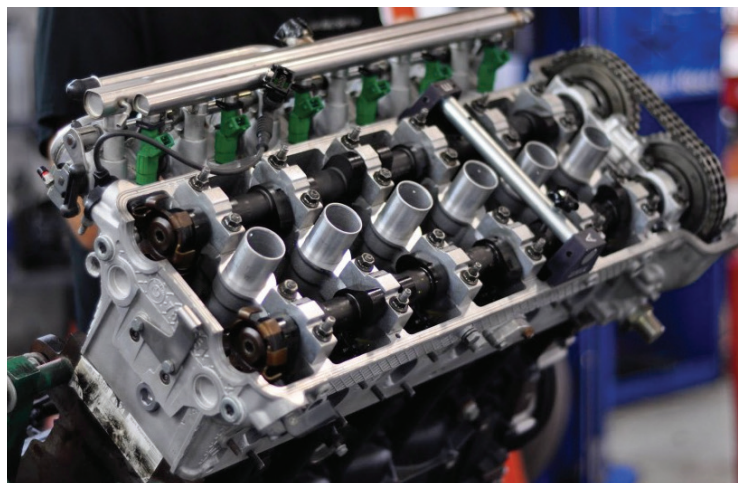
These design and content options allow us to tailor ring sets to the specific needs of an engine. As a result, that engine runs more efficiently.

Our piston rings have been improving the efficiency of race engines in every form of motorsports for decades, but we also do it for compressors and aviation engines. Utilizing piston ring design to greatly increase engine efficiency is what we do best.

If engines work to make profit for your company, we can help those engines make more money for you. We'd love to discuss any of the options presented in this catalog with you.



A piston can only perform as well as the rings surrounding it do.



CUSTOM RING Production

Custom Rings - Made To Order

If our inventory of over 10,000 ring sizes doesn't fit your application, we can produce rings specific to your needs, and we don't require minimum runs of 100,000 pieces.

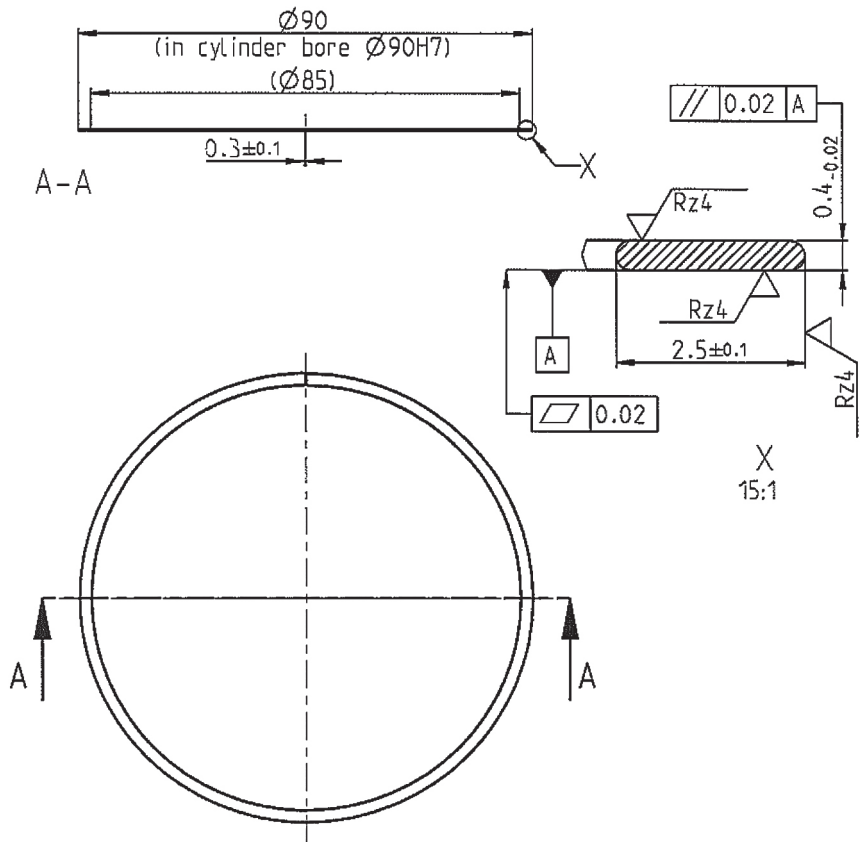
Our in-house engineering, design and manufacturing on our own custom machinery allows us to turn your order quickly, efficiently and perfectly - every time.

Total Seal® supplies Made To Order rings to keep your equipment not only running, but running more efficiently.

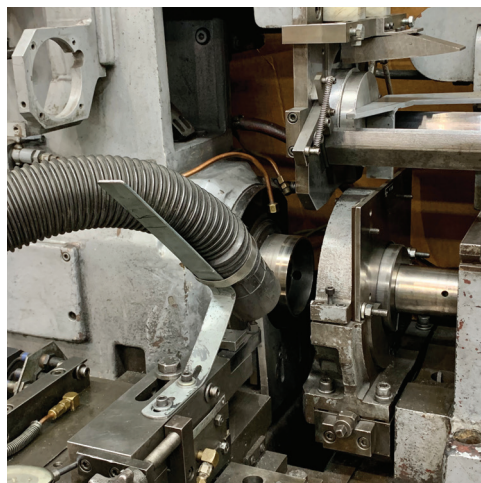
We Offer:

- Reproduction of existing rings
- Production from drawings
- Designed from scratch

Contact us today to get a free quote.
info@totalseal.com or 623-587-7400



Our state-of-the-art production equipment allows precision manufacturing of short runs of custom rings



GAS-PORTED Piston Rings

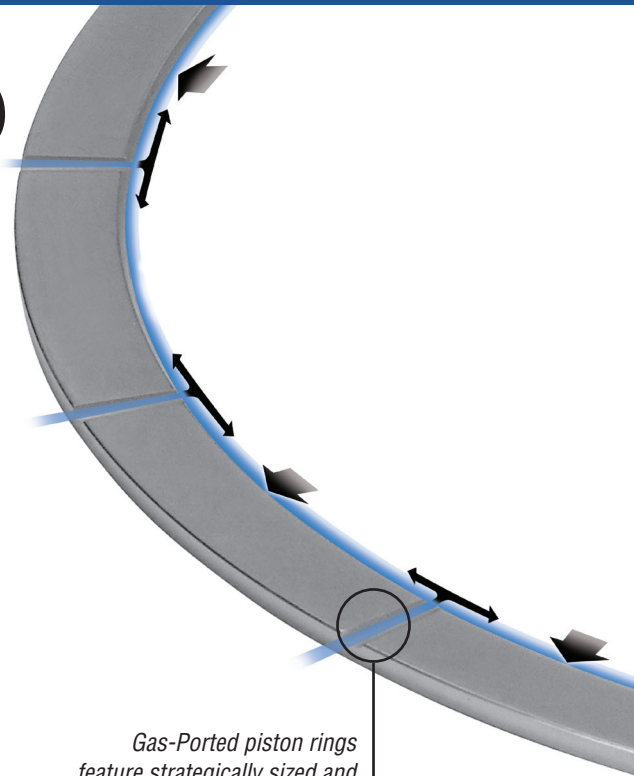
The Next Evolution in Piston Ring Technology

The primary job of the piston ring is to create the seal between the piston and the cylinder wall. Our new Gas-Ported piston rings represent an evolution in ring seal. The conventional practice of thick, heavy, high tension rings that fought against cylinder pressure to maintain seal has been revolutionized. Instead of fighting cylinder pressure, gas ported rings harness those forces and use them to improve ring seal. These advanced rings benefit all engines, especially turbocharged and supercharged engines.

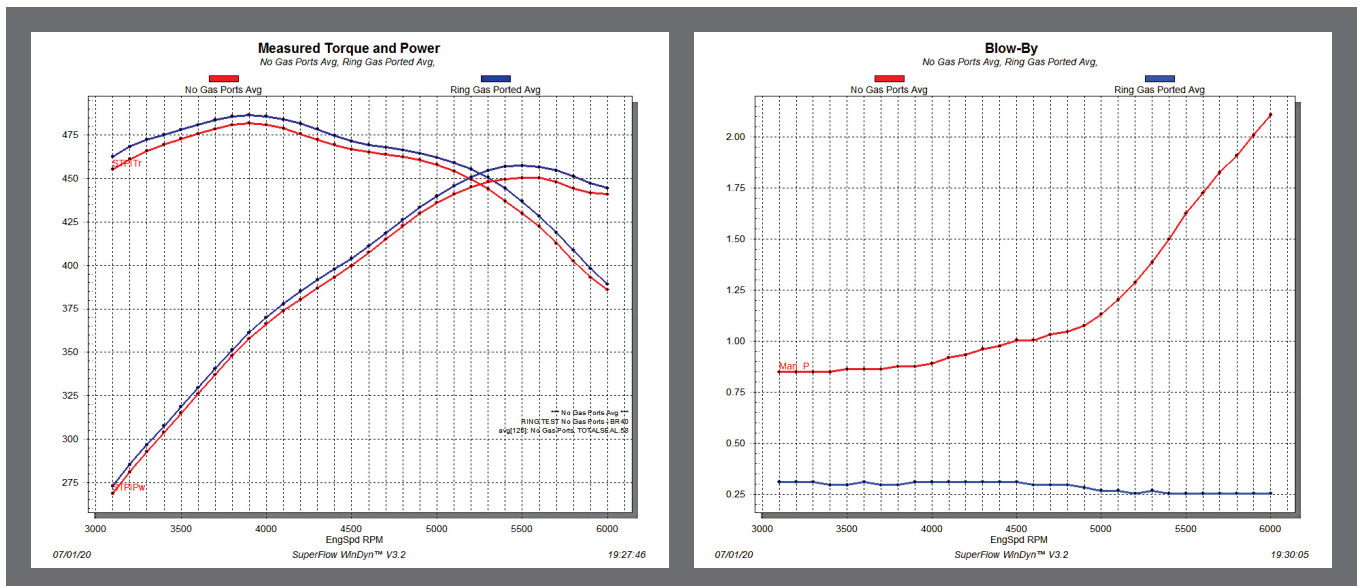
- Gas-ported performance without gas-ported pistons
- Features strategically sized and placed horizontal slots in the ring allowing combustion gas to enter through the groove and behind the ring to gas-load the ring providing greatly improved ring sealing.
- Extensively tested in virtually every form of engine with the same increases in ring sealing time after time.
- Applications are available in both steel and ductile iron for top ring placements. When ordering simply ask for Gas-Ported on your top ring sets.

Available in all popular standard and metric bore sizes:

- Including 1.0mm x 1.0mm x 2.0mm ring combinations
- Including 1.0mm x 1.2mm x 2.8mm ring combinations
- Including 1.2mm x 1.2mm x 3.0mm ring combinations



Gas-Ported piston rings feature strategically sized and placed horizontal slots in the ring allowing combustion gas to enter through the groove and behind the ring to gas-load the ring providing greatly improved ring sealing



Proven increased horsepower and reduction in blow-by

GAPLESS[®] DIESEL Piston Rings

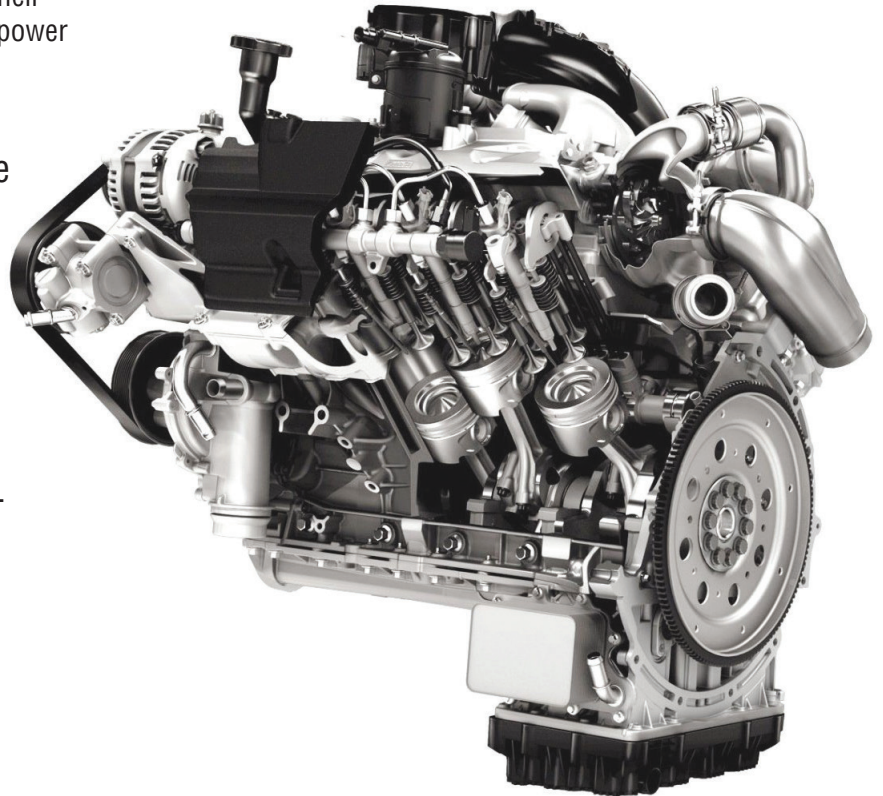
Gapless[®] Piston Ring Technology Isn't Just For Racing

Soot contamination increases engine wear and decreases oil life. Closing the gap on the 2nd ring stops soot contamination and reduces blow-by. Since diesel engines utilize high compression ratios, Total Seal[®] Gapless[®] second rings help these engines unleash their full potential, turning them into true horsepower and torque monsters.

- Better Sealing = More Boost
- Increased Horsepower & Torque
- Reduced Oil Contamination
- Cooler Running Engine Oil

Sets available for:

- 5.9L Cummins
- 6.6L Duramax
- 6.7L Cummins
- Ford Powerstroke - 6.4L to 7.3L
- Custom sets also available



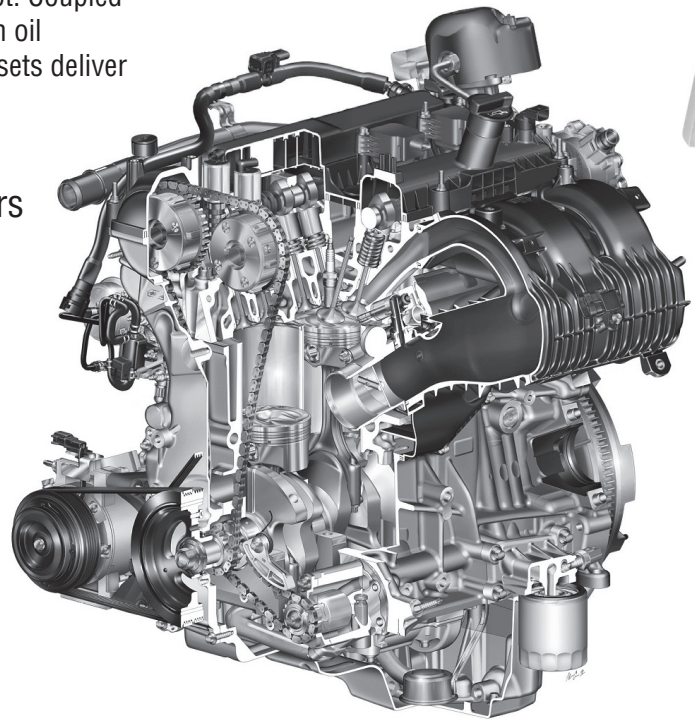
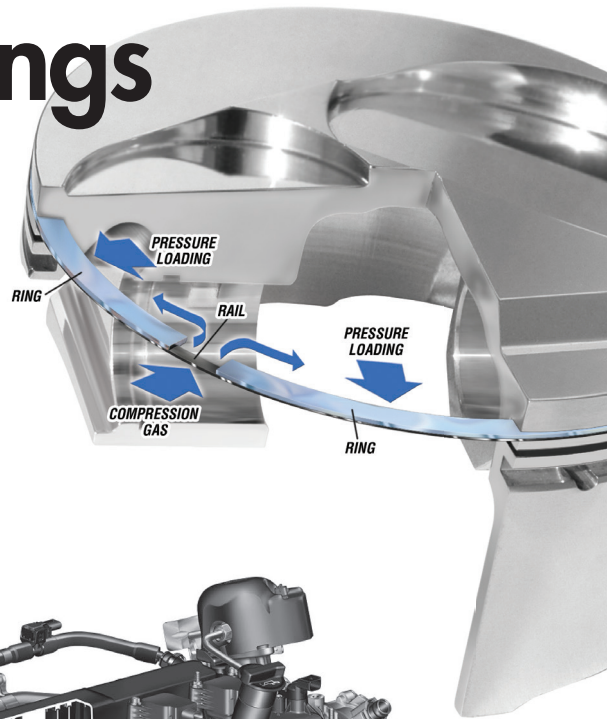
DIRECT INJECTION Gapless® Piston Rings

The Extra Level Of Sealing To Protect Turbocharged, Direct Injection Engines

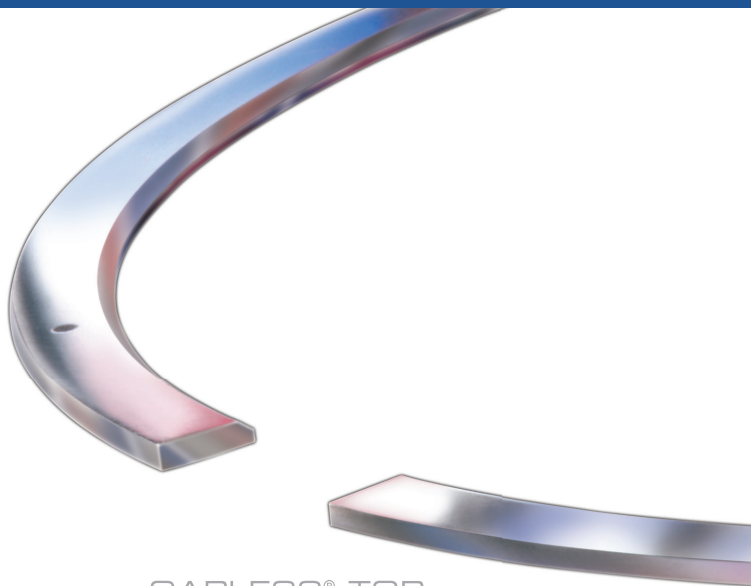
Today's turbocharged, direct injection engines generate high cylinder pressures, and these engines suffer from a unique type of detonation called Low Speed Pre-Ignition.

Since the piston ring creates the seal between the piston and the cylinder wall, our Gapless® ring technology provides the extra level of sealing needed to protect turbocharged, direct injection engines from LSPI, high blow-by and soot. Coupled with a ductile, napier 2nd ring and a higher tension oil control ring, our new direct injection gapless ring sets deliver excellent ring seal and oil control.

- Available in Metric bore sizes – Subaru, Mitsubishi, Porsche and others
- Available in Ford EcoBoost bore sizes
- Available in GM LT bore sizes



SELECTION Diamond Finish™ Total Conform™ M2 Tool Steel



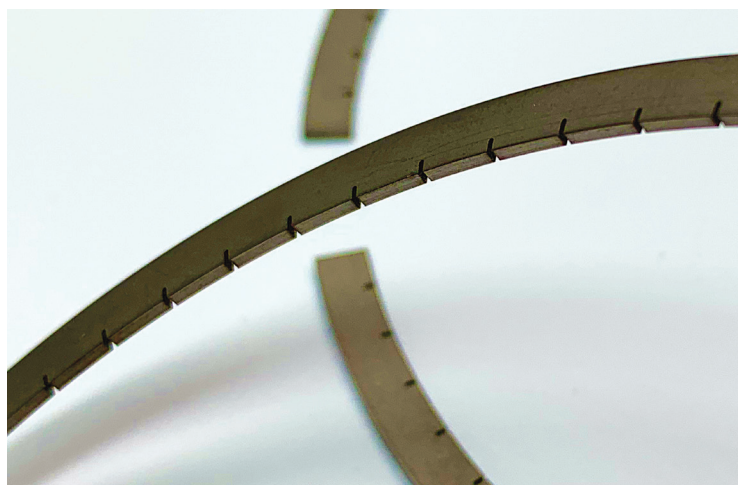
Total Seal® Has The Right Piston Rings For Your Application And Requirements

Beyond our Gapless® and Gas-Ported ring sets, we also provide a wide array of unique rings that improve engine performance and durability.

Our patented Diamond Finishing process yields surface finish measurements below 3 Ra, which provides maximum ring to groove sealing. These designs are not mutually exclusive. These technologies can be combined to produce the ultimate in efficiency and longevity.

- M2 Tool Steel -
Conventional, Gapless® & Gas Ported
- Diamond Finish™ - From 2.6 in bore to 5 in bores
- Total Conform™ - From .5mm to 2mm thickness
- Plus many more

GAPLESS® TOP
GAPLESS® 2ND
AP ADVANCED PROFILING™
DIAMOND FINISH™
DIAMOND FINISH™ 2.0
TOTAL CONFORM™
GAS-PORTED
AP™ ULTRA THIN
GOLD FINISH
GAPLESS® DIESEL
DIESEL HSS
TNT
ADVANTAGE
CONVENTIONAL
M2 STEEL
NAPIER 2ND
CLAIMER
CUSTOM
SPECIALTY



ASSEMBLY TOOLS

At Total Seal®, Precision and Selection Doesn't Stop With Our Piston Rings

We don't just make the world's most efficient piston rings. We are with you all the way to the completed, running engine.

From Ring Squaring Tools to Leak Down Testers, from Profilometers to our Power Ring Filer, we source the finest, or build our own design tools to finish the job right.

- Power Ring Filer
- Custom Sized Ring Compressors
- Adjustable Ring Compressors
- 2-piece design Split Ring Compressors
- Ring Squaring Tools
- Ring Installation Pliers
- Leak Down Tester
- Profilometer
- Quick Seat Assembly Lube



DIGITAL Resources

Total Seal® not only makes piston rings tailored to meet all your needs, we also provide tech support for the way you work. Besides an outstanding tech support phone line manned by seasoned engine specialists, we also produce a variety of digital tech resources:

- Highly acclaimed Hidden Horsepower podcast
- Newly redesigned website w/online catalog
- YouTube Channel w/tech videos
- Social Media accounts - Instagram, Facebook, LinkedIn



Please fill out the Request a Ring Form on our web site and tell us all about your needs. We will get back to you right away.

Or call us now at 1-623-587-7400 and speak directly to our Tech Department.

TOTAL SEAL®

PISTON RINGS

Phone: 623-587-7400
Email: info@TotalSeal.com
Web: www.TotalSeal.com