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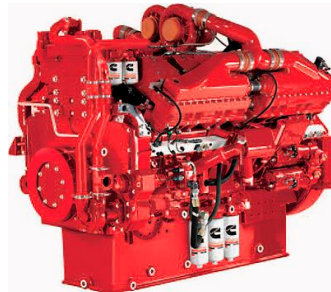
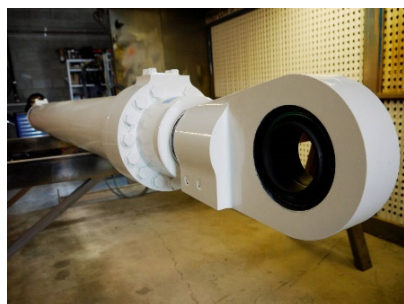
## AD Piston Ring

AD Piston Ring has specialized in manufacturing custom cast iron, steel, stainless steel and bronze compression and contraction piston rings and seals since 1921. We custom build piston rings and seals ranging in size from 1" to 30" to your print or dimensions and provide metric sizes as well. AD Piston Ring manufactures for a variety of industries and applications. We manufacture piston rings and seals for industrial repair shops for hydraulics, compressors, steam engine, turbine, mobile hydraulics, hydroelectric, diesel engines, rail road, marine, truck and automotive etc. and for major multinational OEM's for new product development and production.

**We offer rush and expedited service for mission critical repairs.**



## Common Applications



## Cast Iron Piston Rings and Seals



We custom build cast iron rings ranging in size from 1" to 30" as well as metric sizes. AD Piston Ring manufactures cast iron rings with a variety of joint configurations for various applications and designing for critical fluid leakage concerns including compression and contraction rings and seals. In addition, all rings are wax coated for protection from corrosion. Cast iron rings are ideal for high temperature and high speed engine applications. When using iron piston rings it is crucial to use the correct groove design for proper performance of the cylinder. Please call us to help you match your application to the right ring or seal.

## Stainless Steel Piston Rings and Seals



AD Piston Ring is the premier manufacturer of stainless steel rings, for use in high stress, high output applications. Whether it be turbochargers or die cast plunger uses, we manufacture the highest in quality for repair facilities or OEM's. Ranging in size from  $\frac{3}{4}$ " to 7", we produce rings in 420, 416, and 17-7 PH grades. Stainless steel piston rings are selected for their lack of corrosion and thinner and lighter designs at higher RPM's.

## Bronze Piston Rings and Seals



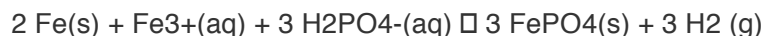
AD Piston Ring manufactures bronze aluminum piston rings and seals or bronze insert rings and seals for applications where the ring may come in contact with corrosive materials or in applications that could have condensation. Typical applications are for manufacturers of water pumps and valves etc., where cast iron rings might corrode. AD Piston Ring manufactures and, in some cases, has stock of common sizes. The aluminum bronze rings also have excellent thermodynamic characteristics for heat transfer.

## Coatings for Piston Ring and Seals

[AD Piston Ring](#) offers custom coatings and plating for [piston rings and seals](#). Coatings and plating's for [piston rings](#) can extend the product life and performance of [piston rings and seals](#) as well as, aid in the release, minimize galling, overall better wear and offer anticorrosion.

Proprietary processes and licenses can be made with you to protect your interests, giving you a competitive advantage. AD Piston Ring is dedicated to providing the best and most cost effective surface treatment. We can develop the proper coating on the substrate, extending the life of the [piston rings](#) and improving the performance and operational efficiency of your products.

The chemistry behind the phosphate coating is as follows:



All piston rings at [AD Piston Ring](#) if no special coating is required, are shipped with a wax coating to prevent corrosion prior to piston rings being installed.

**Manganese Phosphate** - Offers improved break-in and better wear resistance. Often goes by the name trade name, Parco Lubrite. Zinc and manganese coatings are used to help break in

components subject to wear and help prevent galling. Manganese phosphate is primarily used on [cast iron piston rings](#) and seals extending life and offering better wear characteristics and help prevent galling. [Cast Iron piston rings](#) can have manganese phosphate applied as a protective coating per SAE AMS2481.0 thermal coatings and plating's designed to improve lubrication efficiency and to increase wear resistance for your sealing applications. Not applicable to [stainless steel piston rings](#) or [bronze piston rings](#).

**Nitride** – Nitride coatings are more environmentally friendly than chrome plating and offers a hard coating on your [piston ring](#), superior wear resistance and lower coefficient of friction for [cast iron piston rings](#). Nitride coating hardens all surfaces of the [piston ring or seal](#) for increased wear resistance.

**Zinc Phosphate** – Zinc Phosphate coating on [cast iron piston rings](#) are used to help break in components subject to wear and help prevent galling. Not applicable to [stainless steel piston rings](#) or [bronze piston rings](#).

**Black Coating** - also known as manganese phosphate coating.

**Nickle Plating** – as dimensioned, could flake off, not always recommended.

**Moly Coating** – Offers some lubricity and some transfer to the mating surface. Good for dry starts.

**Oil Coating** – Rust preventative.

**Wax Coating** – Standard rust preventative coating applied to all [piston rings and seals](#) if no special coatings or plating's are asked for.

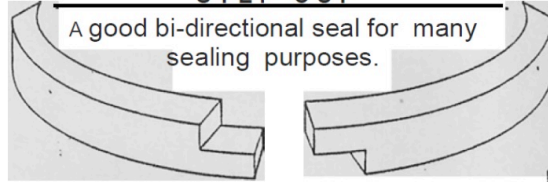
**Chrome Plating** – Chrome plating on [cast iron piston rings](#) and seals is hard, prevents galling and wears very well. Primarily used on [cast iron piston rings](#) and seals.



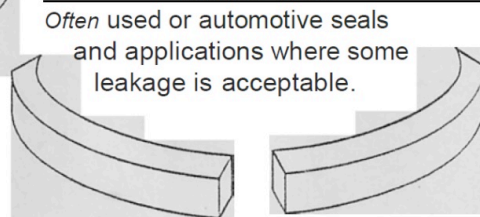


# Joint Configurations

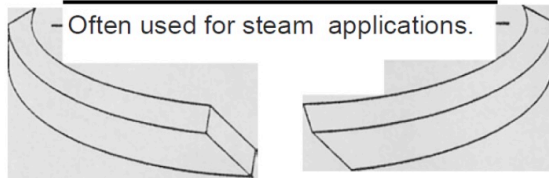
## STEP CUT



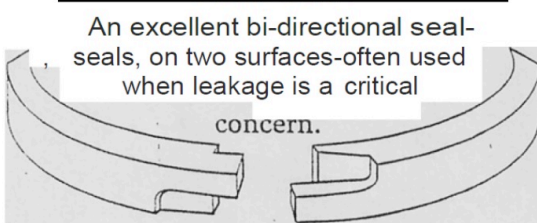
## BUTT CUT



## ANGLE CUT

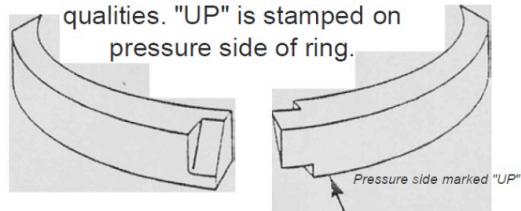


## SHURSEAL



## STEP-SEAL

A ring which seals in ONE direction and has very good sealing qualities. "UP" is stamped on pressure side of ring.

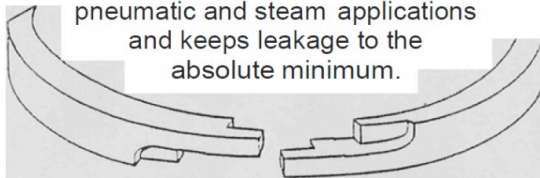


## HOOK-TYPE



## TRI-LAP SEAL

Seals on three surfaces. This ring is an excellent seal for hydraulic, pneumatic and steam applications and keeps leakage to the absolute minimum.



Stainless steel rings available in STEP and BUTT only.

Cast iron and bronze rings available from 1" to 30" diameter in all joint configurations with the exception of a 2" minimum diameter for SHURSEAL and TRI-LAP SEAL rings.



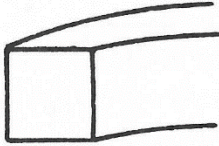
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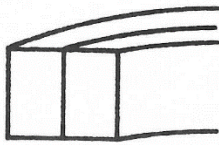


## STANDARD RING STYLES



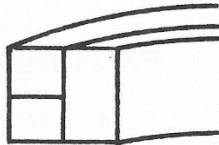
### COMPRESSION RING

One-piece, turned face quick seating, for combustion engines, compressors, pumps, hydraulic and pneumatic cylinders. Sizes to 35".



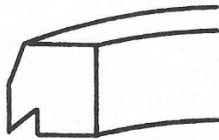
### TWO-PIECE COMPRESSION

For high pressure service in air, steam and hydraulic cylinders, etc. Retards wear and gives superior sealing action. Sizes to 35".



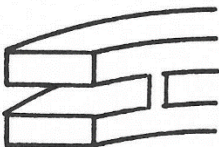
### THREE-PIECE COMPRESSION

Same general applications as two-piece ring. The double outer ring improves sealing properties. Sizes to 35" diameter.



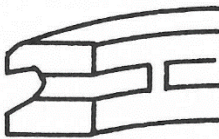
### OIL WIPER

An efficient wiper ring for air, ammonia, gas compressors, low speed engines, etc. Drains below oil ring groove. Sizes to 35" diameter.



### MOTOR SEAL

A ventilated oil control ring, for combustion engines, compressors, etc. Drains through face of ring and back of groove.



### OIL KING

A heavy-duty ventilated scraper affording high unit pressure in high speed, high compression engines, and for efficient oil control under severe operating conditions.



### SUPER-DIESEL

A combination ventilated scraper ring, for combustion engines, compressors, etc. Drains through and below oil ring groove.