

Carrillo's popular features for the rod designs:



Annular Grooves

A radial groove in the pin end bushing.

PE and/or BE Lapped Finish

Instead of a standard finish, the pin end and big end thrust face are lapped to obtain a finer finish.

Super Hone Finish

A mirror finish with less than 4 RA on the wristpin bore.

Bolts

Carrillo offers a variety of fasteners, in various sizes, including metric and materials such as H-11 steel (WMC) and multiphase (CARR).



Lipped Cap and Lipped Cap Relief

When tension loads on connecting rods reach the higher limits of today's automotive engines we have seen an improvement in the big-end integrity by slightly increasing the contact area between the cap and the connecting rod itself. Carrillo's Lipped-Cap design achieves this goal with minimal additional weight. Because tension load is a product of stroke, piston weight and RPM, this feature is only necessary in very extreme applications.



Tapered Pin End

To reduce reciprocating mass or accommodate piston design, the pin end width could be tapered.



Grooves in Thrust Face

For weight reduction, grooves are machined on the big end thrust faces.



Double Locks

To provide flexibility for a rod with different bearing configurations or for rods that required double bearings.

Oil Reservoir on PE

A larger "funnel" at the top oil hole gives a better chance to collect oil for the PE lubrication. It is often combined with a PE bump out.



FPO (force feed oiling)

Force Feed Oiling, or Forced Pin Oiling (FPO), in actuality does not offer forced or pressurized oiling. However, by installing a slot behind the bearing and a hole through the center of the rod we have established a reservoir that supplies oil underneath the wrist pin when the connecting rod is pulling mass down the cylinder. It certainly contributes to the longevity; however it is only effectual on one of the four strokes of the engine cycle.



Bushings and Split Bushing

Carrillo's bushings are generally manufactured from Aluminum/ Silicon/ Bronze. As a custom connecting rod manufacturer we also offer a variety of other material such as Nickel/Tin/Copper and Beryllium Copper. In special and limited applications Carrillo offers the option to run rods without bushings. This option requires the use of a special coated pin. Please consult our technical sales engineers for application information.



Custom Laser Mark/Serialization

Carrillo offers custom laser marking such as serialization, barcodes, text, including any TrueType font, alphanumeric serial numbers, date codes, logos, part numbers, graphics, and data matrix codes.

Con Rod Materials

In addition to our standard proprietary blend of steel, Carrilloloy, Carrillo offers other connecting rod materials, such as Aluminum and Gen4. We constantly research and test potential materials to improve product offerings.



Ribbed PE

This feature has the H-Beam design extended around the PE-strap for increased stiffness / minimum PE distortion under inertia load. An option that is used for high engine speed applications.



BE Oil Squirters

This oil hole in the Big End neck allows pressure fed oil to squirt up to the piston and rod Pin End for additional cooling and improved lubrication. This option can be considered for engines without oil squirters.



Arc Groove

The arc grooves guide oil from the 10&2 o'clock positions towards the 6 o'clock position of the PE. Since the grooves are running out before reaching the 5 & 7 o'clock position, the full bearing surface under compression load is effective.



Dowel Pin

The dowel pin is the alternative option to ring dowels for locating the rod cap. It allows the bolts to be positioned closer to the big end bore for improved big end stability. However, this design is less robust in assembly and



PE Radius

All Carrillo non-bushed rods are manufactured with a 0.020" radius as a standard. This option gives the opportunity to increase the radius if required for reduced edge loading.



disassembly than the standard ring dowel.



Radius Slot

The radius slot represents the well-known and durable standard Carrillo H-Beam Rod design.

Square Slot

A reduced radius in the H-beam slot allows for additional weight saving with minimum compromise of rod rigidity. Ideal for applications that are critical on meeting a low target weight.



Tapered H-Beam

The strong H-beam configuration can handle extreme engine loads. The tapered beam allows for some weight saving on the reciprocation end and gives increased clearance for fully boxed pistons.



Straight H-Beam

The stoutest beam configuration available. It is capable of handling the most abusive forces in an engine.



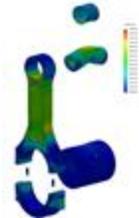
A-Beam

A light weight rod design for high engine speeds and limited cylinder pressures.



Super A-Beam

With an increased beam thickness, the Super A-Beam design has a higher load capacity than the regular A-beam design.



Finite Element Analysis FEA

Computer generated stress analysis of con rods.