

# Rod Bolts, & Nuts

## ROD BOLTS

Available in three unique styles, depending on your rod design and horsepower requirement. All Crower Sportsman feature high strength steel alloy bolts (180,000 p.s.i.), while all Crower steel billet and titanium rods come standard with H-11 tool steel bolts (220,000 p.s.i.). But for extreme rpm and endurance applications, Crower offers the new AMS5844 bolt (285,000 p.s.i.) available as an upgrade option. Both feature a 12-point head and rolled fillets, thread rolled after heat-treat. To determine which bolts are required for a particular rod, contact Crower. Sold by the piece or set. Bolt lengths are measured from under the head to the end of the threaded portion.



Part No.	Description	Torque Specs	Dimension
<b>8740 STEEL ALLOY (180,000 p.s.i.)</b>			
90800-1	Cap Screw 12-pt	70 ft lbs	7/16 x 2.000"
90802-1	Thru-bolt (SB, F)	65 ft lbs	7/16 x 1.715"
90803-1	Thru-bolt (F)	65 ft lbs	7/16 x 1.940"
90804-1	Thru-bolt (F)	65 ft lbs	7/16 x 2.320"
90805-1	Thru-bolt (B, SP <sup>SB</sup> )	50 ft lbs	3/8 x 1.920"
90807-1	Thru-bolt (SB)	65 ft lbs	7/16 x 2.070"
90828-1	Cap Screw bolt 12-pt (SP <sup>SB</sup> )	50 ft lbs	3/8 x 1.600"
90829-1	Cap Screw bolt 12-pt (SP <sup>BB</sup> )	70 ft lbs	7/16 x 1.800"
90846-1	Cap Screw (SSP)	70 ft lbs	7/16 x 1.440"
<b>H-11 TOOL STEEL ALLOY (220,000 p.s.i.)</b>			
90820-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.800"
90824-1	Cap Screw bolt 12-pt	25 ft lbs	5/16 x 1.500"
90825-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.700"
90826-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.540"
90827-1	Cap Screw bolt 12-pt	45 ft lbs	3/8 x 1.600"
<b>AMS5844 STEEL ALLOY (280,000 p.s.i.)</b>			
90830-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.540"
90831-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.700"
90832-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.800"
90842-1	Cap Screw bolt 12-pt	60 ft lbs	3/8 x 1.600"
90845-1	Cap Screw bolt 12-pt	30 ft lbs	5/16 x 1.500"
90847-1	Cap Screw bolt 12-pt	275 in. lbs	1/4 x 1.375"

## ROD NUTS

Crower offers two grades of quality rod nuts. The H-11 tool steel nuts are rated at 220,000 p.s.i., while the high strength steel alloy nuts are rated at 180,000 p.s.i. Sold separately, by the piece.



Part No.	Description	Dimension
90811-1	Billet or Forged Rods	7/16
90813-1	Billet Rods	11/32
90814-1	Billet & Sportsman Rods, 12-point Alloy	3/8

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

- \*Thru-bolt torque specs based on steel rods using motor oil.
- \*Cap Screw 8740 torque specs based on steel rods using oil
- \*Cap Screw H-11 torque specs based on steel rods using anti-seize.
- \*AMS5844 torque specs based on steel rods using anti-seize.
- \* Bolts for titanium rods require special lubricant available from Crower.

Specify -8 after part number if four cylinder, -12 if six or -16 in eight cyl.  
**Note: If using stretch method, Crower recommends .004" to .006".**

## STRETCH GAUGE

Crower highly recommends using a stretch gauge to tighten rod bolts to their recommended stretch figures. This tool will provide accurate and repeatable results every time if used correctly. Includes dial indicator, fixture and instructions.



Part No.	Description
90700	Rod bolt stretch gauge indicator

# Bushings

## ROD BUSHINGS

Crower uses premium aluminum-bronze one piece billet bushings in all of the rods we manufacture. These high quality bushings are sold separately, by the piece.



Part No.	Description	Dimension
90912-1	Ford, Aluminum-Bronze	.912"
90922-1	Custom, Aluminum-Bronze	-
90926-1	Import, Aluminum-Bronze	.826"
90927-1	SB Chevrolet, Aluminum-Bronze	.927"
90927N-1	SB Chevrolet, Alum-Bronze (small O.D.)	.927"
90940-1	Ford, Aluminum-Bronze	1.040"
90944-1	Ford, Aluminum-Bronze	.944"
90947-1	Import, Aluminum-Bronze	.748"
90966-1	VW, Chrysler, Honda, Alum-Bronze	.866"
90975-1	Ford, Aluminum-Bronze	.975"
90980-1	Pontiac, Aluminum-Bronze	.980"
90984-1	Mopar, Aluminum-Bronze	.984"
90990-1	BB Chevrolet, Aluminum-Bronze	.990"
90994-1	Mopar, Aluminum-Bronze	1.094"

Note: Custom orders available, specify bore, pin dia and length.

Customer needs to specify width or overall length.

## ALIGNMENT SLEEVES

Crower hollow dowel connecting rod alignment sleeves are precision ground from high grade alloy. Sold by the piece.

Part No.	Description	Dimension
90850-1	Rod alignment sleeve (1 only)	5/16
90851-1	Rod alignment sleeve (1 only)	3/8
90852-1	Rod alignment sleeve (1 only)	7/16

## ROD BOLT LUBRICANT

In order to achieve proper preload during rod bolt installation, it is important to use the lubricant that is recommended for that particular bolt and rod combination.

- Steel rods with 8740 bolts must use straight motor oil as lubricant.
- Steel rods with H-11 or upgraded AMS5844 bolts must use Anti-Seize (#90898).
- Titanium rods with H-11 or AMS5844 bolts must use special Crower titanium lube (#90897).



Part No.	Description
90897	Crower Titanium Lube (Titanium rods) 1/2 oz tub
90897C	Crower Titanium Lube (Titanium rods) 2 lb, 10 oz container
90898	Heavy-Duty Anti-Seize (Steel rods w/H-11 or AMS5844)

**Note:** For steel rods with 8740 or H-11 bolts use straight motor oil.

**Note:** Crower #90898 is same as Loctite #51609

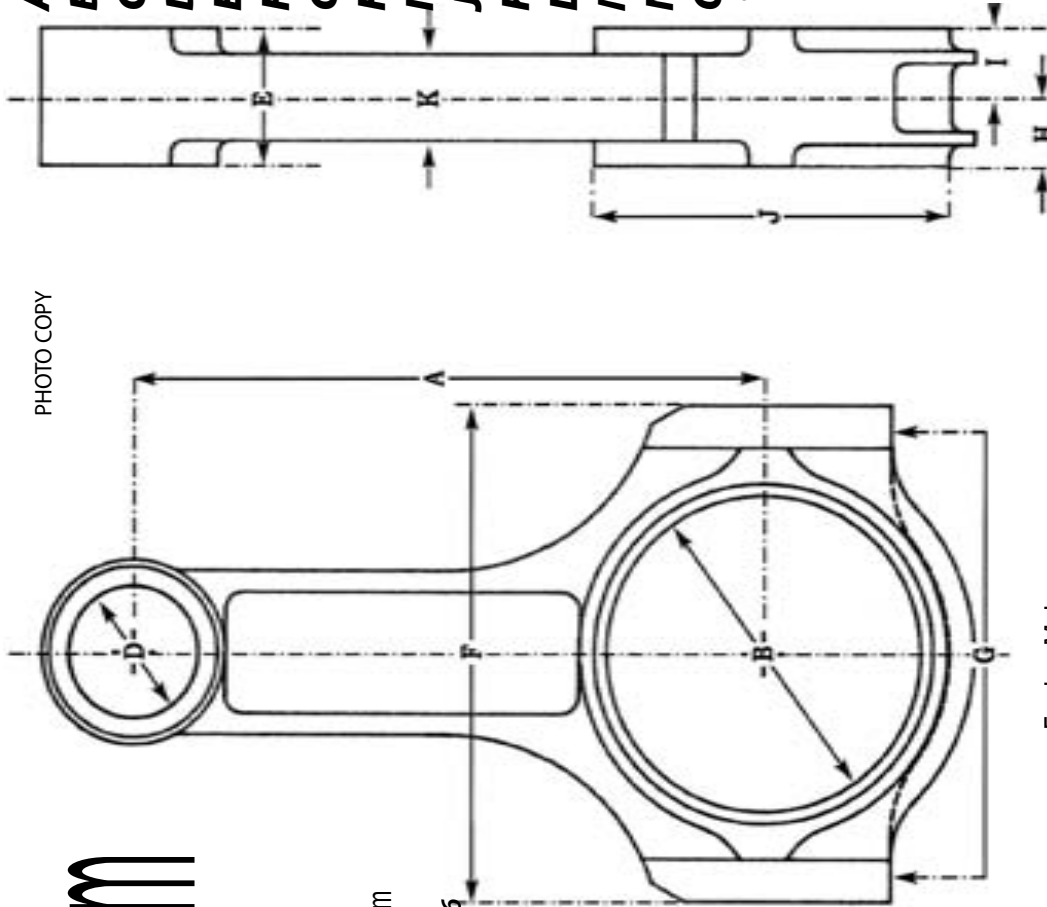
# Crower Form

Quantity Desired: \_\_\_\_\_

- I-Beam     H-Beam  
 Premium Steel     94 Series     Titanium

FAX COMPLETED FORM TO 619-661-6466  
 EMAIL: engr@crower.com

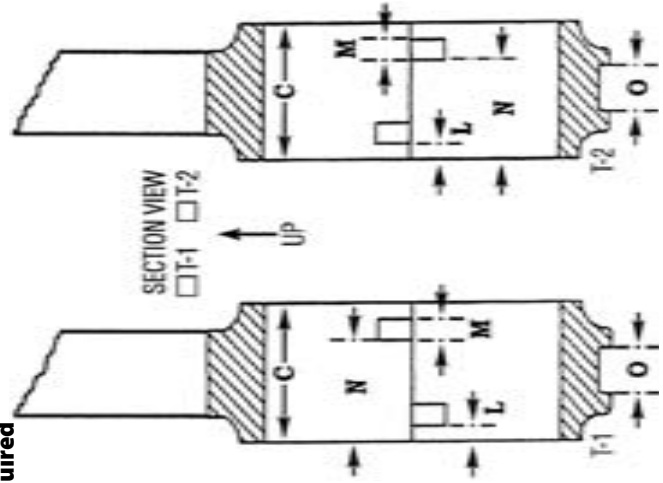
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- A.\*** \_\_\_\_\_ Center to Center Length  
**B.\*** \_\_\_\_\_ Big End Housing Bore  
**C.\*** \_\_\_\_\_ Big End Width  
**D.\*** \_\_\_\_\_ Pin End Bore  
**E.\*** \_\_\_\_\_ Pin End Width  
**F.** \_\_\_\_\_ Overall BE Width  
**G.** \_\_\_\_\_ Bolt to Bolt Width  
**H.** \_\_\_\_\_ BE Offset  
**I.** \_\_\_\_\_ BE Offset  
**J.** \_\_\_\_\_ Big End Ring Diameter  
**K.** \_\_\_\_\_ Beam Width  
**L.** \_\_\_\_\_ Tang Positioning  
**M.** \_\_\_\_\_ Tang Width  
**N.** \_\_\_\_\_ Tang Dimension  
**O.** \_\_\_\_\_ Rib to Rib Width

\*Required

SECTION VIEW  
 T-1     T-2



**Measurement in inches or millimeters**

Previous W.O. No.: \_\_\_\_\_  
 Customer: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Engine Make: \_\_\_\_\_  
 No. of Cylinders: \_\_\_\_\_  
 Cylinder Bore Size: \_\_\_\_\_  
 Target Weight: \_\_\_\_\_  
 Max RPM: \_\_\_\_\_  
 Max Horsepower: \_\_\_\_\_  
 Turbo/Boost: \_\_\_\_\_ p.s.i./bar  
 Nitrous Oxide: \_\_\_\_\_ HP Shot