



CPA/CBA Series, Standard Force Sensing Clevis Pins/Bolts

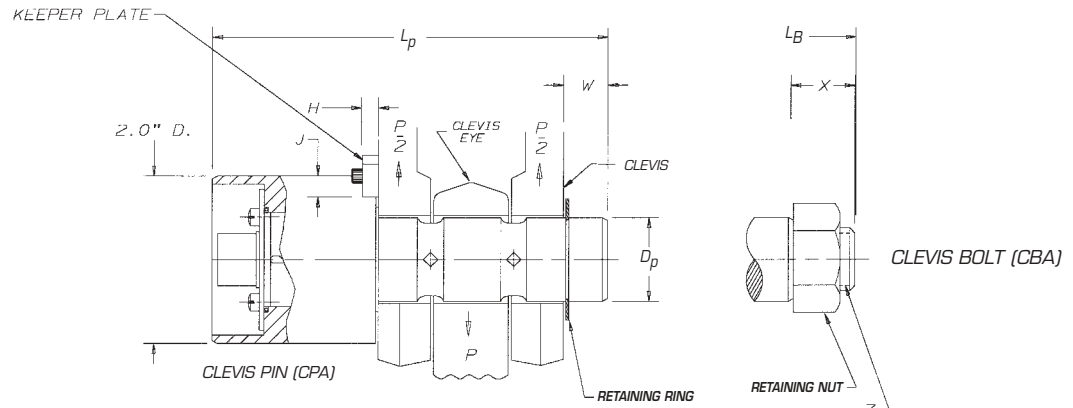


Figure 1
(Pin Diameter < 2")

MINIMUM
CLEARANCE
90° CABLE
ASSEMBLY
(STANDARD DIRECTION IS DOWN)

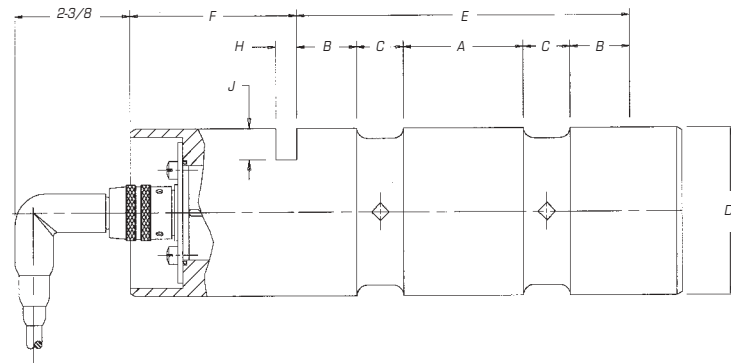


Figure 2
(Pin Diameter > 2")

U.S. Patent No. 3,695,096

NOMENCLATURE

| | | | |
|----------------------|---|----------------------|---|
| A | Width of Center Loading Section | J | Depth of Keeper Plate Slot |
| B | Width of Clevis Support Section | L_B | Overall Length of Bolt (CBA Series) |
| C | Length of Pin/Bolt Reduced Section, Instrumented Zone | L_p | Overall Length of Pin |
| D_c | Clevis Bore Diameter, Eye Bore Diameter | P | Load Capacity |
| D_p | Nominal Pin/Bolt Diameter | W | Allowance for Retaining Ring Installation |
| E | Active Length of Pin/Bolt | X | Thread Length |
| F | Clevis Pin/Bolt Head Length | (◄) | Location of Internal Strain Gage Installation |
| H | Width of Keeper Plate Slot | Z | Thread Size (CBA Series) |

FEATURES

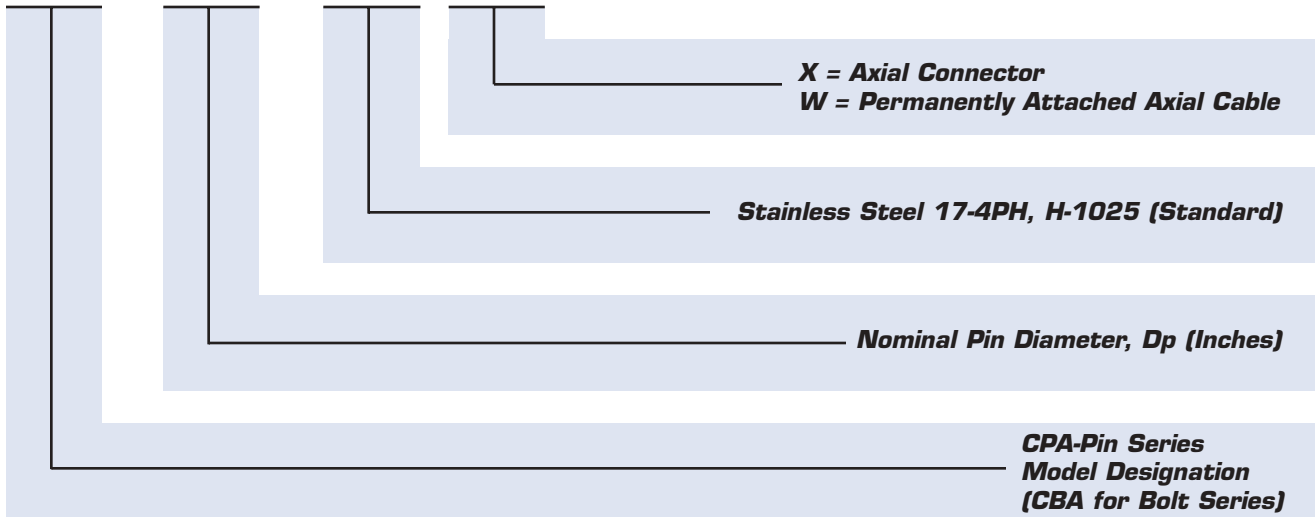
- Precision Load Sensing
- Easy Installation
- Rugged
- Bolt Series, CBA
- Direct Force Measurement
- Internally Sealed Strain Gages
- High Strength Stainless Steel

CPA/CBA SERIES, STANDARD FORCE SENSING CLEVIS PINS/BOLTS

| MODEL NO. | P CAPACITY LBS. | A | B | C | Dp DIA. | E | F | H | J | Lp | Lg | W | X | Z | KEEPER PLATES |
|-------------|-----------------|--------|---------|-------|---------|--------|-------|-------|-------|---------|--------|-------|-------|-------------|------------------|
| CPA-0.375-1 | 1,500 | 3/8 | 5/16 | 3/16 | 0.375 | 1-3/8 | 2 | 13/64 | 1/4 | 3-11/16 | 3-3/4 | 5/16 | 3/8 | 5/16-24UNF | SPA-12.5-112-1-A |
| CPA-0.5-1 | 3,000 | 1/2 | 3/8 | 1/4 | 0.500 | 1-3/4 | 2 | 13/64 | 1/4 | 4 | 4-1/4 | 1/4 | 1/2 | 3/8-24UNF | SPA-12.5-112-1-A |
| CPA-0.75-1 | 6,000 | 11/16 | 7/16 | 5/16 | 0.750 | 2-3/16 | 2 | 13/64 | 1/4 | 4-1/2 | 4-7/8 | 5/16 | 11/16 | 1/2-20UNF | SPA-12.5-112-1-A |
| CPA-1 | 12,500 | 11/16 | 15/32 | 5/16 | 1.000 | 2-1/4 | 2 | 13/64 | 1/4 | 4-3/4 | 5 | 1/2 | 3/4 | 3/4-16UNF | SPA-12.5-112-1-A |
| CPA-1.25 | 18,000 | 1 | 5/8 | 3/8 | 1.250 | 3 | 2 | 17/64 | 1/4 | 5-5/8 | 5-7/8 | 5/8 | 7/8 | 1-14UNF | SPA-16-112-1-A |
| CPA-1.5 | 30,000 | 1-1/8 | 11/16 | 1/2 | 1.500 | 3-1/2 | 2 | 17/64 | 1/4 | 6-1/8 | 6-1/2 | 5/8 | 1 | 1-1/4-12UNF | SPA-25-112-1-A |
| CPA-2 | 50,000 | 1-7/16 | 23/32 | 9/16 | 2.000 | 4 | 2 | 17/64 | 3/8 | 6-5/8 | 7 | 5/8 | 1 | 1-1/2-12UN | SPA-50-112-1-A |
| CPA-2.5 | 75,000 | 1-7/8 | 15/16 | 5/8 | 2.500 | 5 | 2 | 17/64 | 1/2 | 7-5/8 | 8 | 5/8 | 1 | 1-3/4-16UN | SPA-75-112-1-A |
| CPA-2.75 | 100,000 | 2 | 1-1/8 | 11/16 | 2.750 | 5-5/8 | 2 | 13/32 | 1/2 | 8-3/8 | 8-3/4 | 3/4 | 1-1/8 | 2-12UN | SPA-100-112-1-A |
| CPA-3 | 125,000 | 2-5/16 | 1-3/32 | 11/16 | 3.000 | 5-7/8 | 2 | 13/32 | 5/8 | 8-3/4 | 9 | 7/8 | 1-1/8 | 2-1/4-12UN | SPA-125-112-1-A |
| CPA-3.5 | 160,000 | 2-5/8 | 1-5/16 | 7/8 | 3.500 | 7 | 2 | 17/32 | 5/8 | 10 | 10-1/4 | 1 | 1-1/4 | 2-1/2-12UN | SPA-160-112-1-A |
| CPA-4 | 200,000 | 3 | 1-3/4 | 1 | 4.000 | 8-1/2 | 2 | 17/32 | 3/4 | 11-3/4 | 12 | 1-1/4 | 1-1/2 | 2-3/4-12UN | SPA-200-112-1-A |
| CPA-5 | 300,000 | 3-7/8 | 2-11/16 | 1-1/8 | 5.000 | 11-1/2 | 2-1/4 | 25/32 | 1 | 15-1/4 | 15-1/4 | 1-1/2 | 1-1/2 | 3-12UN | SPA-300-112-1-A |
| CPA-6 | 400,000 | 4-5/8 | 3-3/16 | 1-3/8 | 6.000 | 13-3/4 | 2-1/4 | 25/32 | 1-1/8 | 17-3/4 | - | 1-3/4 | - | - | SPA-400-112-1-A |
| CPA-7 | 600,000 | 5-3/8 | 3-3/16 | 1-5/8 | 7.000 | 15 | 2-1/4 | 25/32 | 1-1/4 | 19 | - | 1-3/4 | - | - | SPA-600-112-1-A |
| CPA-8 | 800,000 | 6-1/4 | 3-1/2 | 1-3/4 | 8.000 | 16-3/4 | 2-1/4 | 25/32 | 1-3/8 | 20-3/4 | - | 1-3/4 | - | - | SPA-600-112-1-A |

ORDERING INFORMATION

CPA-2.5 (SS) X



Standard Models include Modulus & Temperature Compensation, and Detailed Calibration Data (LO) (See Calibration Section) up to 500,000-lbs. Higher capacity Calibration Data is available at an additional charge, consult factory.