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AEROSPACE**

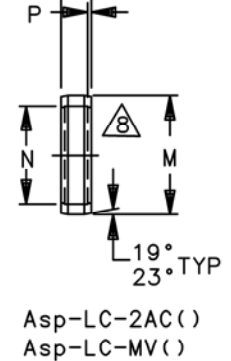
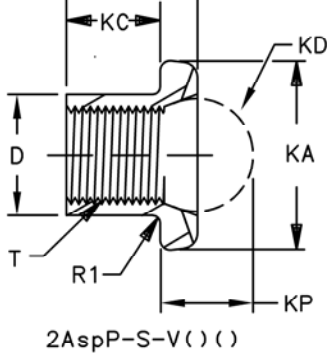
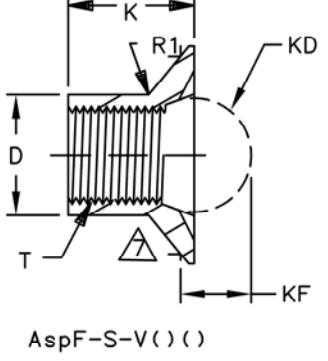
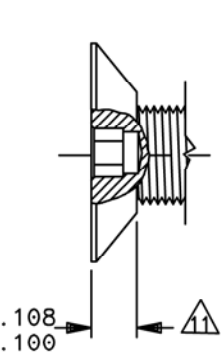
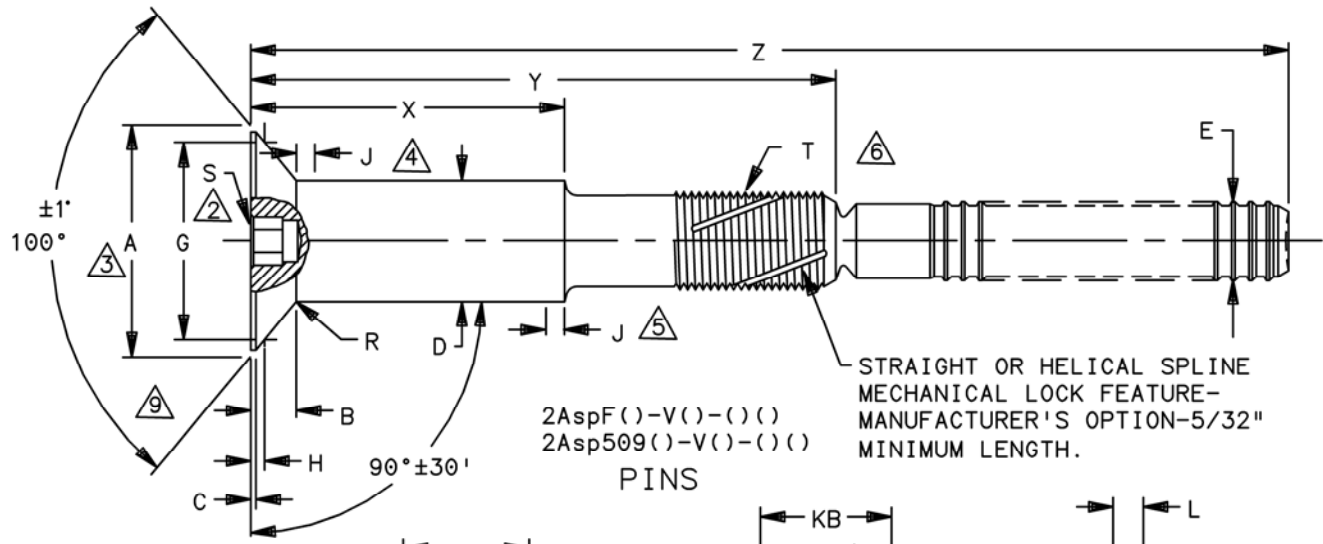
Howmet Fastening Systems  
Carson Operations  
900 E. Watson Center Road  
Carson, California 90745 U.S.A.

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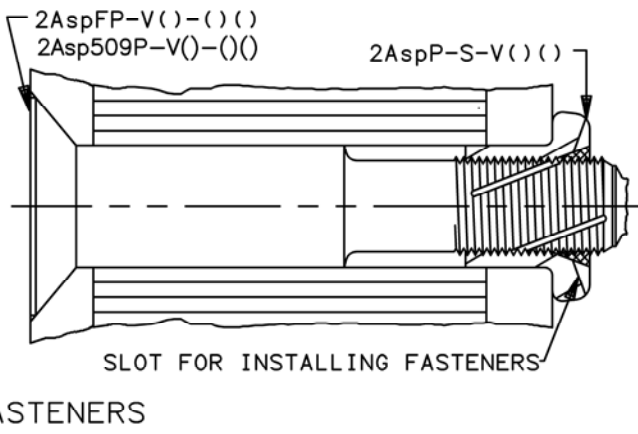
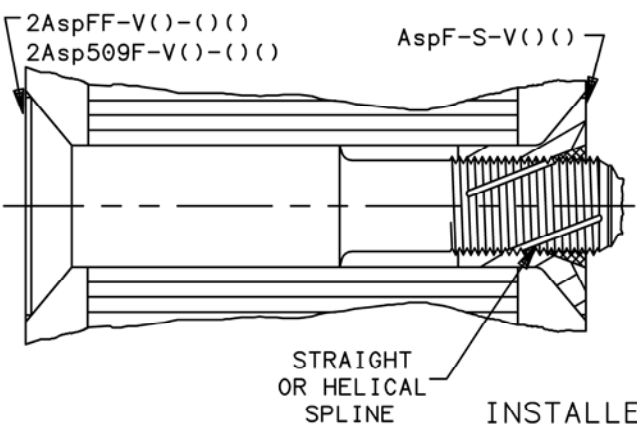
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SLEEVES

LOCK COLLARS



DIMENSIONS IN INCHES

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|            |       |
|------------|-------|
| DRAWN BY   | DH    |
| CHECKED BY | MM/HJ |

FSCM (Cage Code) 17446 - Carson

G7 REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION.  
CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2 & 4. (REF. ECR2670)

|         |            |
|---------|------------|
| ISSUED  | 05/01/87   |
| REVISED | 04/01/2020 |
| PAGE    | 1 OF 6     |

2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
SUSTAINING- POSITIVE MECHANICAL LOCK,  
6AL-4V TITANIUM (95 KSI SHEAR)

|  |
|--|
| 2Asp()-V()-()-() PINS<br>AspF-S-V()-()-() &<br>2AspP-S-V()-()-() SLEEVES<br>Asp-LC-2AC &<br>Asp-LC-MV LOCK COLLARS |
| <b>ASP106</b>  |

G7



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| Asp PIN<br>PART<br>NUMBER   | NOM<br>SIZE | A<br>DIA<br>MAX<br>△ | B<br>HEAD<br>HEIGHT<br>MAX | C<br>MAX | D<br>DIA<br>BARE<br>+.0020<br>-.0000 | D<br>DIA<br>COATED<br>+.0025<br>-.0000 | E<br>MAX<br>DIA | G<br>GAGE<br>DIA<br>±.0001 | H<br>GAGE<br>HEIGHT |             |               | SLEEVES       |            |           |             |             |
|-----------------------------|-------------|----------------------|----------------------------|----------|--------------------------------------|--|-----------------|----------------------------|---------------------|-------------|---------------|---------------|------------|-----------|-------------|-------------|
|                             |             |                      |                            |          |                                      |  |                 |                            | MIN                 | MAX<br>BARE | MAX<br>COATED | J<br>MAX<br>△ | K<br>±.005 | KA<br>DIA | KB<br>±.005 | KC<br>±.005 |
|                             |             |                      |                            |          |                                      |  |                 |                            |                     |             |               |               |            |           |             |             |
| 2AspFF-V06 & 2AspFP-V06     | 13/64       | .302                 | .042                       | .013     | .2005                                | .2005                                  | .132            | .2440                      | .0210               | .0250       | .0260         | .031          | .175       | .332      | .263        | .200        |
| 2Asp509F-V06 & 2Asp509P-V06 |             | .386                 | .078                       |          |                                      |  |                 |                            |                     |             |               |               |            |           |             |             |
| 2AspFF-V08 & 2AspFP-V08     | 17/64       | .399                 | .057                       | .017     | .2630                                | .2630                                  | .174            | .3314                      | .0232               | .0278       | .0284         | .042          | .229       | .432      | .324        | .229        |
| 2Asp509F-V08 & 2Asp509P-V08 |             | .507                 | .104                       |          |                                      |  |                 |                            |                     |             |               |               |            |           |             |             |
| 2AspFF-V10 & 2AspFP-V10     | 21/64       | .479                 | .064                       | .020     | .3255                                | .3255                                  | .194            | .4046                      | .0255               | .0305       | .0309         | .052          | .285       | .522      | .410        | .285        |
| 2Asp509F-V10 & 2Asp509P-V10 |             | .634                 | .131                       |          |                                      |  |                 |                            |                     |             |               |               |            |           |             |             |

| NOM<br>SIZE | SLEEVE     |              |              | LOCK COLLAR |          |              |              |                  |                   |              | R<br>RAD | R1<br>RAD    | S<br>HEX<br>△ | MIN. ULT. TENSILE △ |      | T<br>MODIFIED<br>THREAD | MIN<br>SHEAR<br>STRENGTH<br>△ | HOLE<br>LIMITS<br>+.0045<br>-.0000 |
|-------------|------------|--------------|--------------|-------------|----------|--------------|--------------|------------------|-------------------|--------------|----------|--------------|---------------|---------------------|------|-------------------------|-------------------------------|------------------------------------|
|             | KD<br>BALL | KF<br>±.0040 | KP<br>±.0040 | L ±.005     | M<br>DIA | N<br>DIA     | P<br>TYP     | WITH<br>AspF-S-V | WITH<br>2AspP-S-V |              |          |              |               |                     |      |                         |                               |                                    |
| 13/64       | 13/64      | .1430        | .1835        | .050        | .050     | .200<br>.195 | .164<br>.161 | .015<br>.008     | .025<br>.015      | .025<br>.015 | 5/64     | 1400<br>2210 | 1400<br>1800  | .1640-56<br>UNS-3   | 1320 | .2035                   |                               |                                    |
| 17/64       | 17/64      | .1837        | .2505        | .065        | .065     | .262<br>.256 | .216<br>.213 | .022<br>.013     | .025<br>.015      | .030<br>.020 | 3/32     | 2550<br>4080 | 2550<br>4080  | .2160-48<br>UNS-3   | 2550 | .2660                   |                               |                                    |
| 21/64       | 5/16       | .2133        | .3045        | .083        | .072     | .314<br>.304 | .253<br>.248 | .028<br>.018     | .025<br>.015      | .040<br>.030 | 1/8      | 4000<br>5350 | 4000<br>5350  | .2500-40<br>UNS-3   | 3520 | .3285                   |                               |                                    |

- △ MINIMUM ULTIMATE TENSILE STRENGTH, OF INSTALLED FASTENER. (IN POUNDS)  
(UPPER VALUES - 2AspF & 2AspP; LOWER VALUES - 2Asp509).
- △ HEX SOCKET.
- △ MAXIMUM THEORETICAL INTERSECTION DIAMETER.
- △ MAXIMUM LENGTH OF PERMISSIBLE TAPER. DIAMETER MAY BE .002 GREATER THAN "D"  
WHEN MEASURED FROM TANGENCY OF HEAD TO SHANK DIAMETER RADIUS.
- △ MAXIMUM LENGTH OF PERMISSIBLE UNDERFILL.
- △ SUFFICIENT THREAD LENGTH FOR PROPER INSTALLATION THROUGH COMPLETE GRIP RANGE.  
A VARIABLE LENGTH VOID MAY EXIST BETWEEN THE "X" LENGTH AND THREAD.
- △ FLUSH SLEEVE HEAD DIMENSIONS SAME AS 2Asp509F & 2Asp509P PINS.
- △ MANUFACTURER'S OPTION TO SUPPLY SOLID OR SPLIT LOCK COLLAR.
- △ CONICAL SURFACE OF HEAD TO BE CONCENTRIC WITH "D" DIAMETER WITHIN .003 FIR.
- △ MINIMUM SHEAR STRENGTH OF INSTALLED FASTENER TESTED IN SINGLE SHEAR, WHEN  
SHEAR PLANE FALLS IN PIN THREADED SECTION ONLY.
- △ .108/.100 HEAD CONFIGURATION FOR Ø8 DIA, -.07 GRIP ONLY (SEE SHEET 5).

MATERIAL: PIN & SLEEVE - V - 6AL-4V TITANIUM ALLOY PER CHEMISTRY OF AMS4967.  
 LOCK COLLAR - 2AC - 2219-T6 ALUMINUM ALLOY PER CHEMISTRY OF QQ-A-430.  
 - MV - COMMERCIAL PURE (CP) TITANIUM PER CHEMISTRY OF ASTM B348.

HEAT TREATMENT: PIN & SLEEVE - MINIMUM SHEAR STRENGTH 95 KSI.

FINISH: PIN & SLEEVE - NO SUFFIX - NONE.  
 - SUFFIX "AC" - ALUMINUM COATED PER KAL-GARD 2242 ON HEAD AND SHANK ONLY.

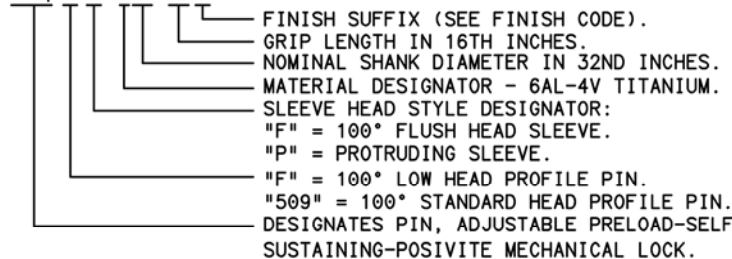
LOCK COLLAR - 2AC - CHEMICAL SURFACE TREAT PER MIL-C-5541.  
 - MV - NONE.

LUBRICATION: PIN & SLEEVE - CETYL ALCOHOL (CHLORINE FREE) PER MIL-L-87132.

IDENTIFICATION: SLEEVE: HUCK SYMBOL (X) & "V"  
 PIN: HUCK SYMBOL (X) & "V".

PART NO. EXAMPLE

2Asp( ) ( ) -V06-06( )



DIMENSIONS IN INCHES

|         |  |        |  |   |
|---------|--|--------|--|---|
| G7      | REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION.<br>CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2 & 4. (REF. ECR2670) |        | 2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF<br>SUSTAINING- POSITIVE MECHANICAL LOCK,<br>6AL-4V TITANIUM (95 KSI SHEAR) | 2Asp( ) ( ) -V( ) ( ) PINS<br>AspF-S-V( ) ( ) &<br>2AspP-S-V( ) ( ) SLEEVES<br>Asp-LC-2AC &<br>Asp-LC-MV LOCK COLLARS |
| ISSUED  | 05/01/87   | ASP106 |  |   |
| REVISED | 04/01/2020   |        |  |   |
| PAGE    | 2 OF 6   |        |  |   |



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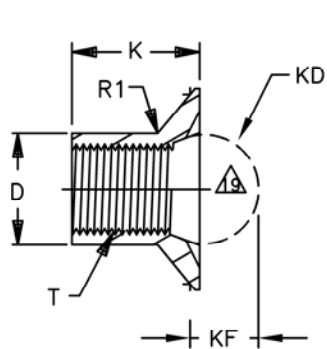
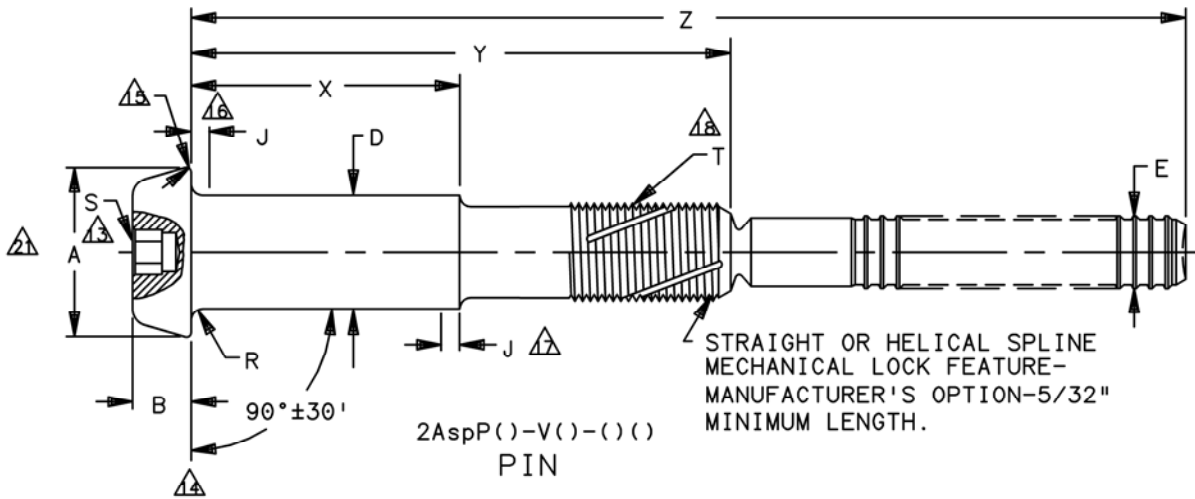
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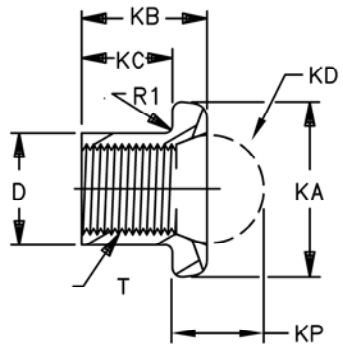
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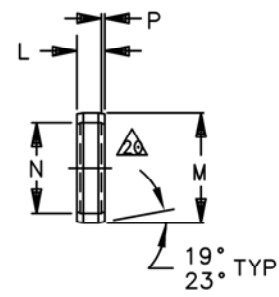
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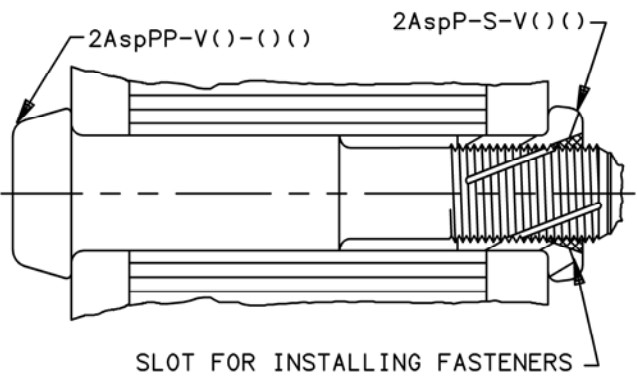
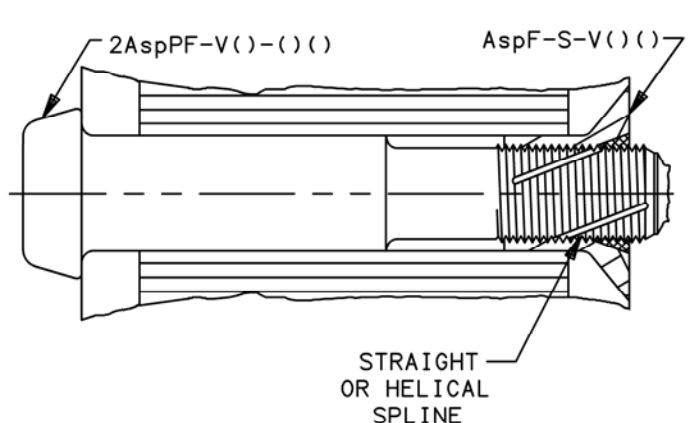
AspF-S-V()  
SLEEVES



2AspP-S-V()  
SLEEVES



Asp-LC-2AC()  
Asp-LC-MV()  
LOCK COLLARS



INSTALLED FASTENERS

DIMENSIONS IN INCHES

G7

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| ISSUED  | 05/01/87   |
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| PAGE    | 3 OF 6     |

2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
SUSTAINING- POSITIVE MECHANICAL LOCK,  
6AL-4V TITANIUM (95 KSI SHEAR)

2Asp()()-V()()-() PINS  
AspF-S-V()() &  
2AspP-S-V()() SLEEVES  
Asp-LC-2AC &  
Asp-LC-MV LOCK COLLARS

ASP106



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| Asp PIN<br>PART<br>NUMBER   | NOM<br>SIZE | A<br>DIA     | B<br>HEAD<br>HEIGHT | D<br>DIA<br>BARE<br>+.0020<br>-.0000 | D<br>DIA<br>COATED<br>+.0025<br>-.0000 | E<br>MAX<br>DIA | J<br>MAX | SLEEVES    |              |             |             |
|-----------------------------|-------------|--------------|---------------------|--------------------------------------|--|-----------------|----------|------------|--------------|-------------|-------------|
|                             |             |              |                     |                                      |  |                 |          | K<br>±.005 | KA<br>DIA    | KB<br>±.005 | KC<br>±.005 |
| 2AspPF-V06() & 2AspPP-V06() | 13/64       | .302<br>.288 | .063<br>.056        | .2005                                | .2005                                  | .132            | .031     | .175       | .332<br>.305 | .263        | .200        |
| 2AspPF-V08() & 2AspPP-V08() | 17/64       | .377<br>.363 | .081<br>.074        | .2630                                | .2630                                  | .174            | .042     | .229       | .432<br>.400 | .324        | .229        |
| 2AspPF-V10() & 2AspPP-V10() | 21/64       | .471<br>.455 | .100<br>.094        | .3255                                | .3255                                  | .194            | .052     | .285       | .522<br>.480 | .410        | .285        |

| NOM<br>SIZE | SLEEVE     |              |              | LOCK COLLAR |          |              |              | R<br>RAD     | R1<br>RAD    | S<br>HEX<br>▲ | ▲<br>MIN<br>ULT<br>TENSILE | T<br>MODIFIED<br>THREAD | ▲<br>MIN<br>SHEAR<br>STRENGTH | HOLE<br>LIMITS<br>+.0045<br>-.0000 |       |
|-------------|------------|--------------|--------------|-------------|----------|--------------|--------------|--------------|--------------|---------------|----------------------------|-------------------------|-------------------------------|------------------------------------|-------|
|             | KD<br>BALL | KF<br>±.0040 | KP<br>±.0040 | L ±.0040    | M<br>DIA | N<br>DIA     | P<br>TYP     |              |              |               |                            |                         |                               |                                    |       |
| 13/64       | 13/64      | .1430        | .1835        | .050        | .050     | .200<br>.195 | .164<br>.161 | .015<br>.008 | .025<br>.015 | .025<br>.015  | 5/64                       | 1400                    | .1640-56<br>UNS-3             | 1320                               | .2035 |
| 17/64       | 17/64      | .1837        | .2505        | .065        | .065     | .262<br>.256 | .216<br>.213 | .022<br>.013 | .025<br>.015 | .030<br>.020  | 3/32                       | 2550                    | .2160-48<br>UNS-3             | 2550                               | .2660 |
| 21/64       | 5/16       | .2133        | .3045        | .083        | .072     | .314<br>.304 | .253<br>.248 | .028<br>.018 | .025<br>.015 | .040<br>.030  | 1/8                        | 4000                    | .2500-40<br>UNS-3             | 3520                               | .3285 |

- ▲2 MINIMUM ULTIMATE TENSILE STRENGTH, OF INSTALLED FASTENER. (IN POUNDS)
- ▲3 HEX SOCKET
- ▲4 SQUARENESS BETWEEN BOTTOM OF PROTRUDING HEAD AND "D" DIAMETER TO BE WITHIN 90°±30'.
- ▲5 NATURAL FLOW OF MATERIAL PERMITTED.
- ▲6 MAXIMUM LENGTH OF PERMISSIBLE TAPER. DIAMETER MAY BE .002 GREATER THAN "D" WHEN MEASURED FROM TANGENCY OF HEAD TO SHANK DIAMETER RADIUS.
- ▲7 MAXIMUM LENGTH OF PERMISSIBLE UNDERFILL.
- ▲8 SUFFICIENT THREAD LENGTH FOR PROPER INSTALLATION THROUGH COMPLETE GRIP RANGE. A VARIABLE LENGTH VOID MAY EXIST BETWEEN THE "X" LENGTH AND THREAD.
- ▲9 FLUSH SLEEVE HEAD DIMENSIONS SAME AS 2Asp509F & 2Asp509P PINS.
- ▲10 MANUFACTURER'S OPTION TO SUPPLY SOLID OR SPLIT LOCK COLLAR.
- ▲11 CONICAL SURFACE OF HEAD TO BE CONCENTRIC WITH "D" DIAMETER WITHIN 5% OF "D" DIAMETER FIR.
- ▲12 MINIMUM SHEAR STRENGTH OF INSTALLED FASTENER TESTED IN SINGLE SHEAR, WHEN SHEAR PLANE FALLS IN PIN THREADED SECTION ONLY.

MATERIAL: PIN & SLEEVE - V - 6AL-4V TITANIUM ALLOY PER CHEMISTRY OF AMS4967.  
 LOCK COLLAR - 2AC - 2219-T6 ALUMINUM ALLOY PER CHEMISTRY OF QQ-A-430.  
 - MV - CP TITANIUM PER CHEMISTRY OF ASTM B348.

HEAT TREATMENT: PIN & SLEEVE - MINIMUM SHEAR STRENGTH 95 KSI.

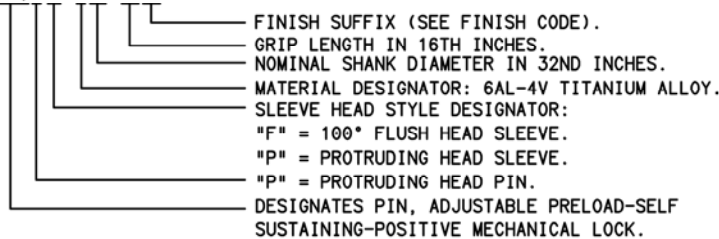
FINISH: PIN & SLEEVE - NO SUFFIX - NONE.  
 - SUFFIX "AC" - ALUMINUM COATED PER KAL-GARD 2242 ON HEAD AND SHANK ONLY.

LOCK COLLAR - 2AC - CHEMICAL SURFACE TREAT PER SPECIFICATION MIL-C-5541.  
 - MV - NONE.

LUBRICATION: PIN & SLEEVE - CETYL ALCOHOL (CHLORINE FREE) PER MIL-L-87132.

IDENTIFICATION: SLEEVE: HUCK SYMBOL (X) & "V",  
 PIN: HUCK SYMBOL (X) & "V".

PART NO. EXAMPLE 2AspP()-V06-06()



DIMENSIONS IN INCHES

G7

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| ISSUED  | 05/01/87   |
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| PAGE    | 4 OF 6     |

2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
 SUSTAINING- POSITIVE MECHANICAL LOCK,  
 6AL-4V TITANIUM (95 KSI SHEAR)

2AspP()-V()-()-() PINS  
 AspF-S-V()-() &  
 2AspP-S-V()-() SLEEVES  
 Asp-LC-2AC &  
 Asp-LC-MV LOCK COLLARS

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2AspFF-V()-()-(), 2Asp509F-V()-()-() & 2AspPF-V()-()-()  
 THESE DIMENSIONS ARE FOR PINS USING FLUSH SLEEVES.  
 FOR PINS USING PROTRUDING SLEEVES SEE SHEET 6 OF 6.

| GRIP NUMBER TABULATION |            |       |                  |        |                  |                  |        |                  |                  |        |                  |
|------------------------|------------|-------|------------------|--------|------------------|------------------|--------|------------------|------------------|--------|------------------|
| GRIP<br>DASH<br>NO.    | GRIP RANGE |       | 06 (13/64) DIA   |        |                  | 08 (17/64) DIA   |        |                  | 10 (21/64) DIA   |        |                  |
|                        | MIN.       | MAX.  | X                | Y      | Z                | X                | Y      | Z                | X                | Y      | Z                |
|                        |            |       | + .005<br>- .010 | ± .010 | + .125<br>- .000 | + .005<br>- .010 | ± .010 | + .125<br>- .000 | + .005<br>- .010 | ± .010 | + .125<br>- .000 |
| 05 <sup>23</sup>       | .251       | .312  |                  | .342   | 1.09             |                  |        |                  |                  |        |                  |
| 06                     | .313       | .375  | .090             | .405   | 1.16             |                  |        |                  |                  |        |                  |
| 07                     | .376       | .438  | .150             | .468   | 1.22             | .090             | .478   | 1.38             |                  |        |                  |
| 08                     | .439       | .500  | .180             | .530   | 1.28             | .150             | .540   | 1.44             |                  |        |                  |
| 09                     | .501       | .562  | .180             | .592   | 1.34             | .180             | .602   | 1.50             | .156             | .607   | 1.63             |
| 10                     | .563       | .625  | .180             | .655   | 1.41             | .180             | .665   | 1.57             | .218             | .670   | 1.69             |
| 11                     | .626       | .688  | .180             | .718   | 1.47             | .180             | .728   | 1.63             | .281             | .732   | 1.75             |
| 12                     | .689       | .750  | .180             | .780   | 1.53             | .180             | .790   | 1.69             | .312             | .795   | 1.82             |
| 13                     | .751       | .812  | .180             | .842   | 1.59             | .180             | .852   | 1.75             | .312             | .857   | 1.88             |
| 14                     | .813       | .875  | .180             | .905   | 1.66             | .180             | .915   | 1.82             | .312             | .920   | 1.94             |
| 15                     | .876       | .938  | .180             | .968   | 1.72             | .180             | .978   | 1.88             | .312             | .982   | 2.00             |
| 16                     | .939       | 1.000 | .180             | 1.030  | 1.78             | .180             | 1.040  | 1.94             | .312             | 1.045  | 2.07             |
| 17                     | 1.001      | 1.062 | .180             | 1.092  | 1.84             | .180             | 1.102  | 2.00             | .312             | 1.107  | 2.13             |
| 18                     | 1.063      | 1.125 | .180             | 1.155  | 1.91             | .180             | 1.165  | 2.07             | .312             | 1.170  | 2.19             |
| 19                     | 1.126      | 1.188 | .180             | 1.218  | 1.97             | .180             | 1.228  | 2.13             | .312             | 1.232  | 2.25             |
| 20                     | 1.189      | 1.250 | .180             | 1.280  | 2.03             | .180             | 1.290  | 2.19             | .312             | 1.295  | 2.32             |
| 21                     | 1.251      | 1.312 | .180             | 1.342  | 2.09             | .180             | 1.352  | 2.25             | .312             | 1.357  | 2.38             |
| 22                     | 1.313      | 1.375 | .180             | 1.405  | 2.16             | .180             | 1.415  | 2.32             | .312             | 1.420  | 2.44             |
| 23                     | 1.376      | 1.438 | .180             | 1.468  | 2.22             | .180             | 1.478  | 2.38             | .312             | 1.482  | 2.50             |
| 24                     | 1.439      | 1.500 | .180             | 1.530  | 2.28             | .180             | 1.540  | 2.44             | .312             | 1.545  | 2.57             |
| 25                     | 1.501      | 1.562 | .180             | 1.592  | 2.34             | .180             | 1.602  | 2.50             | .312             | 1.607  | 2.63             |
| 26                     | 1.563      | 1.625 | .180             | 1.655  | 2.41             | .180             | 1.665  | 2.57             | .312             | 1.670  | 2.69             |
| 27                     | 1.626      | 1.688 | .180             | 1.718  | 2.47             | .180             | 1.728  | 2.63             | .312             | 1.732  | 2.75             |
| 28                     | 1.689      | 1.750 | .180             | 1.780  | 2.53             | .180             | 1.790  | 2.69             | .312             | 1.795  | 2.82             |
| 29                     | 1.751      | 1.812 | .180             | 1.842  | 2.59             | .180             | 1.852  | 2.75             | .312             | 1.857  | 2.88             |
| 30                     | 1.813      | 1.875 | .180             | 1.905  | 2.66             | .180             | 1.915  | 2.82             | .312             | 1.920  | 2.94             |
| 31                     | 1.876      | 1.938 | .180             | 1.968  | 2.72             | .180             | 1.978  | 2.88             | .312             | 1.982  | 3.00             |
| 32                     | 1.939      | 2.000 | .180             | 2.030  | 2.78             | .180             | 2.040  | 2.94             | .312             | 2.045  | 3.07             |

<sup>23</sup> NOT AVAILABLE IN 2Asp509F-V06-05(). OMIT "X" SHOULDER FOR  
 2AspFF-V06-05() AND 2Asp509F-V06-06().

DIMENSIONS IN INCHES

G7

REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION.  
 CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2 & 4. (REF. ECR2670)

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| ISSUED  | 05/01/87   |
| REVISED | 04/01/2020 |
| PAGE    | 5 OF 6     |

2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
 SUSTAINING- POSITIVE MECHANICAL LOCK,  
 6AL-4V TITANIUM (95 KSI SHEAR)

2Asp()-V()-()-() PINS  
 AspF-S-V()-()-() &  
 2AspP-S-V()-()-() SLEEVES  
 Asp-LC-2AC &  
 Asp-LC-MV LOCK COLLARS

ASP106



Howmet Fastening Systems  
 Carson Operations  
 900 E. Watson Center Road  
 Carson, California 90745 U.S.A.

Phone (310) 830-8200  
 HFS\_Carson\_Engineering@howmet.com

ASP®

ENGINEERING  
 STANDARD

THIS DRAWING, THE STRUCTURAL DESIGN DISCLOSED THEREIN AND THE TECHNICAL DATA AND ENGINEERING SERVICE REPRESENTED THEREBY ARE THE EXCLUSIVE PROPERTY OF HUCK INTERNATIONAL INCORPORATED.

2AspFP-V()-()-(), 2Asp509P-V( )-( )() & 2AspPP-V()-()-()  
 THESE DIMENSIONS ARE FOR PINS USING PROTRUDING SLEEVES.  
 FOR PINS USING FLUSH SLEEVES SEE SHEET 5 OF 6.

| GRIP NUMBER TABULATION |            |       |                  |        |                  |                  |        |                  |                  |        |                  |
|------------------------|------------|-------|------------------|--------|------------------|------------------|--------|------------------|------------------|--------|------------------|
| GRIP<br>DASH<br>NO.    | GRIP RANGE |       | 06 (13/64) DIA   |        |                  | 08 (17/64) DIA   |        |                  | 10 (21/64) DIA   |        |                  |
|                        | MIN.       | MAX.  | X                | Y      | Z                | X                | Y      | Z                | X                | Y      | Z                |
|                        |            |       | + .005<br>- .010 | ± .010 | + .125<br>- .000 | + .005<br>- .010 | ± .010 | + .125<br>- .000 | + .005<br>- .010 | ± .010 | + .125<br>- .000 |
| 05                     | .251       | .312  | .090             | .405   | 1.16             |                  |        |                  |                  |        |                  |
| 06                     | .313       | .375  | .090             | .468   | 1.22             |                  |        |                  |                  |        |                  |
| 07                     | .376       | .438  | .150             | .530   | 1.28             | .090             | .572   | 1.47             |                  |        |                  |
| 08                     | .439       | .500  | .180             | .592   | 1.34             | .150             | .635   | 1.53             |                  |        |                  |
| 09                     | .501       | .562  | .180             | .655   | 1.41             | .180             | .697   | 1.59             | .156             | .732   | 1.75             |
| 10                     | .563       | .625  | .180             | .718   | 1.47             | .180             | .760   | 1.65             | .218             | .795   | 1.82             |
| 11                     | .626       | .688  | .180             | .780   | 1.53             | .180             | .822   | 1.72             | .281             | .857   | 1.88             |
| 12                     | .689       | .750  | .180             | .842   | 1.59             | .180             | .885   | 1.78             | .312             | .920   | 1.94             |
| 13                     | .751       | .812  | .180             | .905   | 1.66             | .180             | .947   | 1.84             | .312             | .982   | 2.00             |
| 14                     | .813       | .875  | .180             | .968   | 1.72             | .180             | 1.010  | 1.90             | .312             | 1.045  | 2.07             |
| 15                     | .876       | .938  | .180             | 1.030  | 1.78             | .180             | 1.072  | 1.97             | .312             | 1.107  | 2.13             |
| 16                     | .939       | 1.000 | .180             | 1.092  | 1.84             | .180             | 1.135  | 2.03             | .312             | 1.170  | 2.19             |
| 17                     | 1.001      | 1.062 | .180             | 1.155  | 1.91             |                  | 1.197  | 2.09             | .312             | 1.232  | 2.25             |
| 18                     | 1.063      | 1.125 | .180             | 1.218  | 1.97             | .180             | 1.260  | 2.15             | .312             | 1.295  | 2.32             |
| 19                     | 1.126      | 1.188 | .180             | 1.280  | 2.03             | .180             | 1.322  | 2.22             | .312             | 1.357  | 2.38             |
| 20                     | 1.189      | 1.250 | .180             | 1.342  | 2.09             | .180             | 1.385  | 2.28             | .312             | 1.420  | 2.44             |
| 21                     | 1.251      | 1.312 | .180             | 1.405  | 2.16             | .180             | 1.447  | 2.34             | .312             | 1.482  | 2.50             |
| 22                     | 1.313      | 1.375 | .180             | 1.468  | 2.22             | .180             | 1.510  | 2.40             | .312             | 1.545  | 2.57             |
| 23                     | 1.376      | 1.438 | .180             | 1.530  | 2.28             | .180             | 1.572  | 2.47             | .312             | 1.607  | 2.63             |
| 24                     | 1.439      | 1.500 | .180             | 1.592  | 2.34             | .180             | 1.635  | 2.53             | .312             | 1.670  | 2.69             |
| 25                     | 1.501      | 1.562 | .180             | 1.655  | 2.41             | .180             | 1.697  | 2.59             | .312             | 1.732  | 2.75             |
| 26                     | 1.563      | 1.625 | .180             | 1.718  | 2.47             | .180             | 1.760  | 2.65             | .312             | 1.795  | 2.82             |
| 27                     | 1.626      | 1.688 | .180             | 1.780  | 2.53             | .180             | 1.822  | 2.72             | .312             | 1.857  | 2.88             |
| 28                     | 1.689      | 1.750 | .180             | 1.842  | 2.59             | .180             | 1.885  | 2.78             | .312             | 1.920  | 2.94             |
| 29                     | 1.751      | 1.812 | .180             | 1.905  | 2.66             | .180             | 1.947  | 2.84             | .312             | 1.982  | 3.00             |
| 30                     | 1.813      | 1.875 | .180             | 1.968  | 2.72             | .180             | 2.010  | 2.90             | .312             | 2.045  | 3.07             |
| 31                     | 1.876      | 1.938 | .180             | 2.030  | 2.78             | .180             | 2.072  | 2.97             | .312             | 2.107  | 3.13             |
| 32                     | 1.939      | 2.000 | .180             | 2.092  | 2.84             | .180             | 2.135  | 3.03             | .312             | 2.170  | 3.19             |

△24 OMIT "X" SHOULDER FOR 2AspFP-V06-05(). NOT AVAILABLE AS  
 2Asp509P-V06-05() AND 2ASP509P-V06-06().

DIMENSIONS IN INCHES

G7

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|         |            |
|---------|------------|
| ISSUED  | 05/01/87   |
| REVISED | 04/01/2020 |
| PAGE    | 6 OF 6     |

2Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
 SUSTAINING- POSITIVE MECHANICAL LOCK,  
 6AL-4V TITANIUM (95 KSI SHEAR)

2Asp()-V()-()-() PINS  
 AspF-S-V()-()-() &  
 2AspP-S-V()-()-() SLEEVES  
 Asp-LC-2AC &  
 Asp-LC-MV LOCK COLLARS

ASP106