

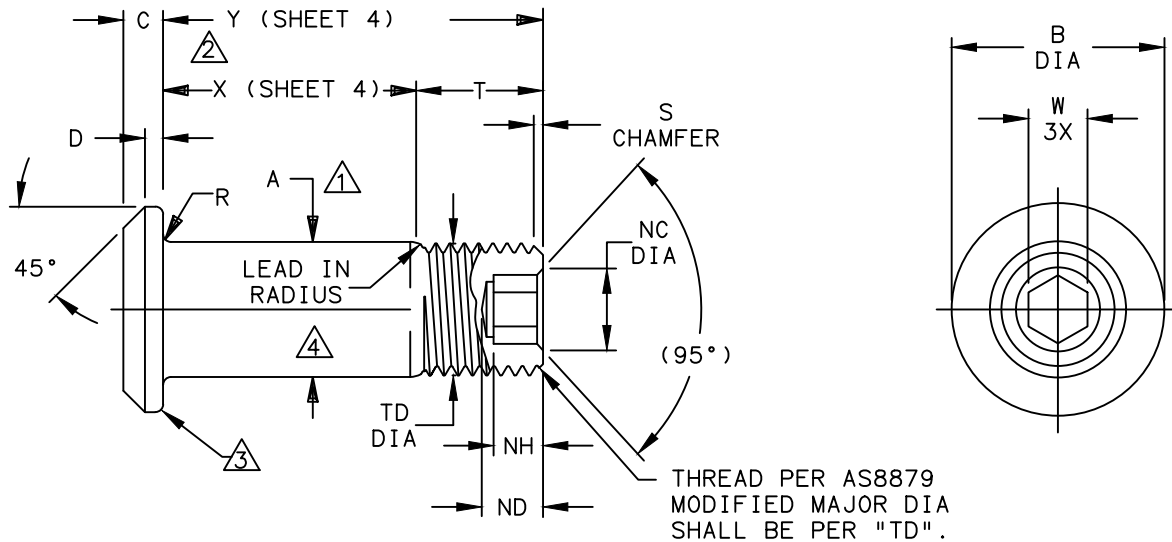


**HOWMET  
AEROSPACE**

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

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**AERO-LITE®  
ENGINEERING  
STANDARD**



AL PIN FAMILY NUMBER	NOM SIZE	THREAD (MODIFIED)	A SHANK DIA BARE +.0005 - .0000	A SHANK DIA COATED ±.0005	B HEAD DIA	C HEAD HEIGHT	D REF	NC CHAMFER DIA	ND DRILL DEPTH MAX	NH HEX DEPTH	R RAD ±.005	S CHAMFER	T REF	TD DIA	W HEX 3X	DOUBLE SHEAR LBS MIN	TENSION LBS MIN
AL756()-14-()	.4375	.4375-20 UNJF-3A	.4365	.4365	.676 .641	.160 .150	.095	.253 .233	.275	.190 .170	.025	3/64"	.485	.4310 .4260	.1930 .1895	28600	17670
AL756()-16-()	.5000	.5000-20 UNJF-3A	.4990	.4990	.770 .735	.188 .178	.095	.289 .269	.315	.220 .200	.025	3/64"	.525	.4930 .4880	.2242 .2207	37300	23940
AL756()-18-()	.5625	.5625-18 UNJF-3A	.5610	.5610	.877 .842	.210 .200	.125	.326 .306	.365	.260 .240	.035	1/16"	.600	.5550 .5500	.2555 .2520	47200	28350
AL756()-20-()	.6250	.6250-18 UNJF-3A	.6235	.6235	.953 .918	.238 .228	.140	.326 .306	.365	.260 .240	.035	1/16"	.640	.6180 .6120	.2555 .2520	58300	38350

⑤

- ① CONCENTRICITY: "B" HEAD DIAMETER TO "A" SHANK DIAMETER TO BE WITHIN .010 TIR.
- ② GRIP LENGTH IS MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE MAXIMUM GRIP PLANE. TRANSITION AREA AND THREAD FORM WILL ALLOW MATING COLLAR TO ACHIEVE MINIMUM GRIP CONDITION WITHOUT INTERFERENCE. (SEE DESIGN GRIP RANGE AND DIMENSION "X" SHEET 4).
- ③ PERMISSIBLE NATURAL FLOW OF MATERIAL. MUST BE FREE FROM SHARP CORNERS.
- ④ MAXIMUM "A" DIAMETER MAY BE INCREASED BY .0002 TO ALLOW FOR DRY FILM LUBE (SUFFIX "UV" FINISH ONLY).
- ⑤ SEE AL12( )-( )-( ) DRAWING FOR DIAMETERS 5 THRU 12.

MATERIAL: 6AL-4V TITANIUM ALLOY PER AMS4967 OR AMS4928.  
 MINIMUM SHEAR STRENGTH: 95 KSI.  
 SURFACE TEXTURE: Ra MAX PER ANSI-B46.1 BEFORE COATING. BEARING SURFACE OF HEAD, HEAD TO SHANK FILLET RADIUS, SHANK AND LEAD-IN RADIUS, -32, OTHER SURFACES -125.

DIMENSIONS IN INCHES AFTER FINISH

PROCUREMENT SPECIFICATION: C380

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DRAWN BY	DH	FSCM (Cage Code) 17446 - Carson
CHECKED BY	MM	

A <sub>6</sub>	REMOVE HI-KOTE I AND KAL-GARD 2242 FROM PAGE 2, EXCEPT FOR "AP" AND "KM": CHANGE "HI-KOTE I" TO "HI-KOTE 1 ONLY" AND REMOVE KAL-GARD 2242. (REF. ECR 2906)
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ISSUED	02/19/99	PIN, AERO-LITE® LIGHTWEIGHT PROTRUDING 756 TENSION HEAD, 6AL-4V TITANIUM. (95 KSI SHEAR)	AL756( )-( )-( )
REVISED	09/12/2022		
PAGE	1 OF 4		

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



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- FINISH: SUFFIX "AP" = ALUMINUM COATING (HI-KOTE 1 ONLY) PER NAS4006 PLUS CETYL ALCOHOL LUBE PER MIL-L-87132 "B".
- SUFFIX "AT" = ALUMINUM COATING PER NAS4006.
- SUFFIX "BJ" = ION VAPOR DEPOSITED ALUMINUM COATING PER MIL-C-83488, TYPE II, CLASS 3 PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- SUFFIX "BL" = ION VAPOR DEPOSITED ALUMINUM COATING PER MIL-C-83488 TYPE II, CLASS 3 WITH BLACK COLOR ON THREAD END PLUS CETYL ALCOHOL LUBE PER MIL-L-87132 "B".
- SUFFIX "CF" = ION VAPOR DEPOSITED ALUMINUM COATING PER MIL-C-83488, TYPE II, CLASS 3 WITH BLACK COLOR ON THREAD END.
- SUFFIX "KM" = ALUMINUM COATING (HI-KOTE 1 ONLY) PER NAS4006 WITH WHITE COLOR ON THREAD END PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- SUFFIX "KN" = ALUMINUM COATING PER NAS4006 WITH WHITE COLOR ON THREAD END.
- SUFFIX "RP" = PHOSPHATE FLUORIDE TREAT PER AMS2486 WITH ORANGE COLOR ON THREAD END PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- SUFFIX "UV" = SULFURIC ACID ANODIZE (BLUE) PER ISO 8080 AND DRY FILM LUBE PER AS5272 PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- SUFFIX "VF" = SULFURIC ACID ANODIZE (BLUE) PER ISO 8080 PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- SUFFIX "WF" = SULFURIC ACID ANODIZE (BLUE) PER ISO 8080 WITH BLACK COLOR ON THREAD END PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.
- NO LETTER = UNCOATED PIN PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

A<sub>6</sub>

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HEAD MARKING: HEADS SHALL BE MARKED WITH THE MANUFACTURER'S SYMBOL, THE BASIC NUMBER (AL756) AND DASH NUMBER DESIGNATING DIAMETER, DEPRESSED .006 MAX DEPTH ARRANGEMENT OPTIONAL.

CODING: THE FIRST SET OF LETTERS DESIGNATE THE FAMILY OF LIGHTWEIGHT AERO-LITE® PINS FOR AEROSPACE APPLICATIONS (AL).  
THE NEXT SET OF NUMBERS DESIGNATE HEAD SIZE, STYLE, MATERIAL AND LOAD APPLICATION (756).  
THE NEXT SET OF LETTERS DESIGNATE FINISH (SEE FINISH CODE FOR SUFFIX INFORMATION).  
THE FOLLOWING NUMBERS DESIGNATE THE NOMINAL PIN SHANK DIAMETER IN .03125 INCH INCREMENTS.  
THE FINAL NUMBERS DESIGNATE THE GRIP LENGTH NUMBER OR THE NOMINAL PIN SHANK LENGTH IN .0625 INCH INCREMENTS.

EXAMPLE: AL756()-14-6  
GRIP LENGTH IN .0625 INCH INCREMENTS.  
SHANK DIA IN .03125 INCH INCREMENTS.  
FINISH SUFFIX (SEE FINISH CODE).  
TITANIUM PROTRUDING 756 TENSION HEAD FOR TENSION APPLICATIONS.  
AL FAMILY OF AERO-LITE® LIGHTWEIGHT PINS FOR AEROSPACE APPLICATIONS.

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GRIP NUMBER TABULATION							
GRIP DASH NO.	DESIGN GRIP RANGE		X  ±.005	14	16	18	20
	MIN.	MAX.		Y  ±.010	Y  ±.010	Y  ±.010	Y  ±.010
2	.063	.125	.125	—	—	—	—
3	.126	.188	.188	—	—	—	—
4	.189	.250	.250	.735	—	—	—
5	.251	.312	.312	.797	.837	.912	—
6	.313	.375	.375	.860	.900	.975	1.015
7	.376	.438	.438	.923	.963	1.038	1.078
8	.439	.500	.500	.985	1.025	1.100	1.140
9	.501	.562	.562	1.047	1.087	1.162	1.202
10	.563	.625	.625	1.110	1.150	1.225	1.265
11	.626	.688	.688	1.173	1.213	1.288	1.328
12	.689	.750	.750	1.235	1.275	1.350	1.390
13	.751	.812	.812	1.297	1.337	1.412	1.452
14	.813	.875	.875	1.360	1.400	1.475	1.515
15	.876	.938	.938	1.423	1.463	1.538	1.578
16	.939	1.000	1.000	1.485	1.525	1.600	1.640
17	1.001	1.062	1.062	1.547	1.587	1.662	1.702
18	1.063	1.125	1.125	1.610	1.650	1.725	1.765
19	1.126	1.188	1.188	1.673	1.713	1.788	1.828
20	1.189	1.250	1.250	1.735	1.775	1.850	1.890
21	1.251	1.312	1.312	1.797	1.837	1.912	1.952
22	1.313	1.375	1.375	1.860	1.900	1.975	2.015
23	1.376	1.438	1.438	1.923	1.963	2.038	2.078
24	1.439	1.500	1.500	1.985	2.025	2.100	2.140
25	1.501	1.562	1.562	2.047	2.087	2.162	2.202
26	1.563	1.625	1.625	2.110	2.150	2.225	2.265
27	1.626	1.688	1.688	2.173	2.213	2.288	2.328
28	1.689	1.750	1.750	2.235	2.275	2.350	2.390
29	1.751	1.812	1.812	2.297	2.337	2.412	2.452
30	1.813	1.875	1.875	2.360	2.400	2.475	2.515
31	1.876	1.938	1.938	2.423	2.463	2.538	2.578
32	1.939	2.000	2.000	2.485	2.525	2.600	2.640

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PIN, AERO-LITE<sup>®</sup> LIGHTWEIGHT  
PROTRUDING 756 TENSION HEAD,  
6AL-4V TITANIUM. (95 KSI SHEAR)

AL756( )-( )-( )

AL112