



**HOWMET  
AEROSPACE**

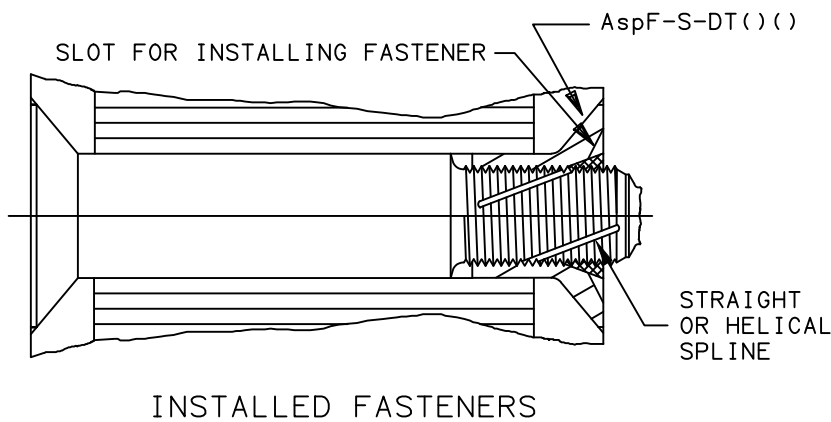
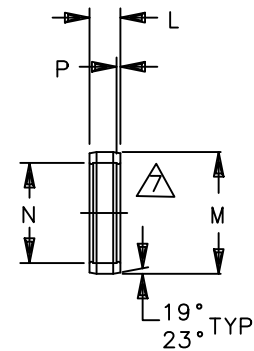
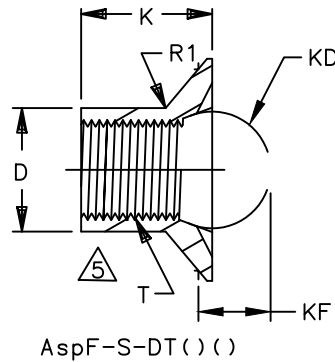
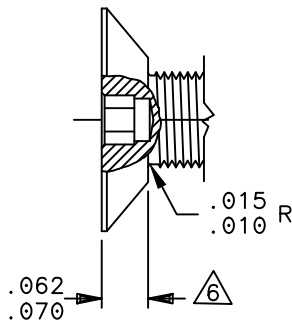
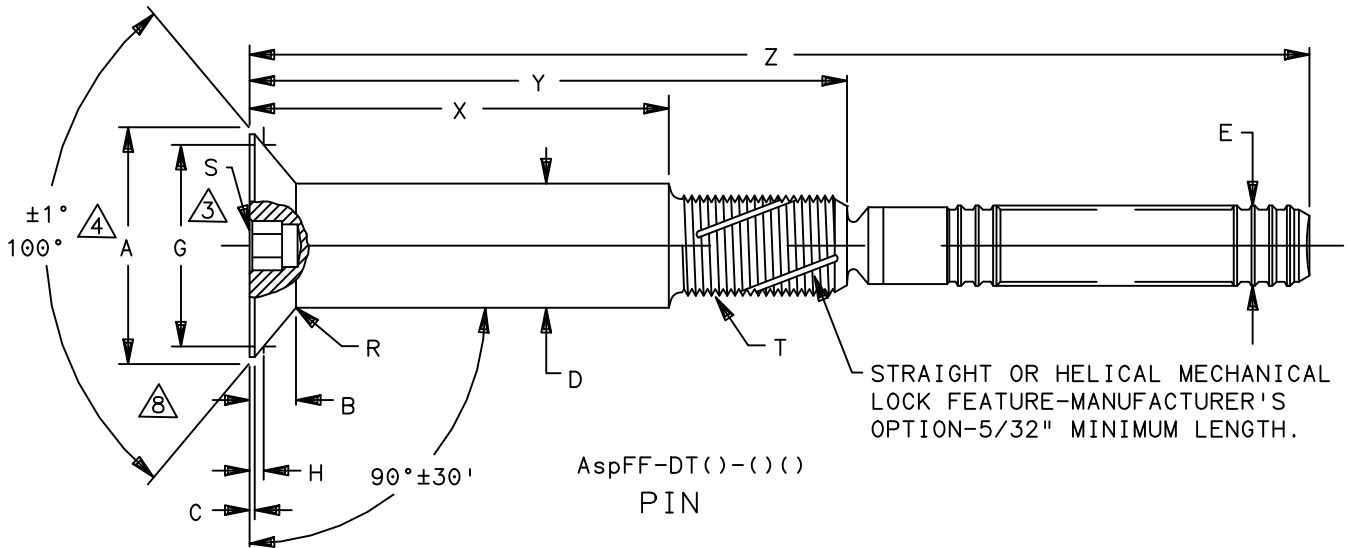
Howmet Fastening Systems  
Carson Operations  
900 E. Watson Center Road  
Carson, California 90745 U.S.A.

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.



DIMENSIONS IN INCHES

PROCUREMENT SPECIFICATION: C2005  
©1966, 2020 HUCK INTERNATIONAL, INC., ALL RIGHTS RESERVED.

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

REMOVE NOTE 5 & 6 (MISTAKENLY NOT REMOVED), RE-NUMBER REMAINING NOTES.  
ADD ASSEMBLY PART NUMBER CROSS REFERENCE

ISSUED	12/01/66
REVISED	03/29/23
PAGE	1 OF 4

ASP® FASTENER, ADJUSTABLE PRELOAD-SELF  
SUSTAINING-POSITIVE MECHANICAL LOCK, 100°  
FLUSH HEAD INSTALLED WITH FLUSH SLEEVE.  
8740 ALLOY STEEL (108 KSI SHEAR)

AspFF-DT()-(()) PIN  
AspF-S-DT()() SLEEVE  
Asp-LC-2AC LOCK COLLAR  
ASP101



**HOWMET  
AEROSPACE**

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.

ASP PART NUMBER	NOM SIZE	A DIA MAX	B HEAD HEIGHT MAX	C MAX	D DIA +.0020 -.0000	E MAX DIA	G GAGE DIA ±.0001	H GAGE HEIGHT		SLEEVES			LOCK COLLAR L ±.005
								MAX	MIN	K ±.005	KD BALL	KF ±.0040	
AspFF-DT06-()	13/64	.386	.078	.013	.2005	.132	.3271	.0243	.0205	.175	.2031	.1430	.050
AspFF-DT08-()	17/64	.507	.104	.017	.2630	.174	.4319	.0310	.0270	.229	.2656	.1837	.065
AspFF-DT10-()	21/64	.634	.131	.020	.3255	.194	.5450	.0367	.0325	.285	.3125	.2133	.083

NOM SIZE	M	N	P TYP	R RAD	R1 RAD		S △	T MODIFIED THREAD	U △	△	HOLE LIMITS +.005 -.000
					MAX	MIN					
13/64	.200 .195	.164 .161	.015 .008	.020 .010	.025	.015	5/64	.1640-56 UNS-3	1500	2210	.203
17/64	.262 .256	.216 .213	.022 .013	.025 .010	.030	.020	3/32	.2160-48 UNS-3	2900	4080	.266
21/64	.314 .304	.253 .248	.028 .018	.030 .010	.040	.030	1/8	.2500-40 UNS-3	4000	5350	.328

- △ MINIMUM ULTIMATE TENSILE STRENGTH, OF INSTALLED FASTENER. (IN POUNDS)
- △ MINIMUM SHEAR STRENGTH OF INSTALLED FASTENER TESTED IN SINGLE SHEAR, WHEN SHEAR PLANE FALLS IN PIN THREADED SECTION ONLY.
- △ SOCKET HEX FOR INSTALLING FASTENER.
- △ MAXIMUM THEORETICAL INTERSECTION DIAMETER
- △ FLUSH HEAD DIMENSIONS SAME AS PIN.
- △ .062/.070 HEAD CONFIGURATION FOR GRIP 6-5 ONLY (SEE SHEET 3).
- △ MANUFACTURER'S OPTION TO SUPPLY SOLID OR SPLIT LOCK COLLAR.
- △ CONICAL SURFACE OF HEAD TO "D" DIAMETER TO BE WITHIN .003 TIR.

**MATERIAL:**

PIN & SLEEVE - AISI 8740 ALLOY STEEL PER CHEMISTRY OF MIL-S-6049.  
LOCK COLLAR: - 2219-T6 ALUMINUM ALLOY PER CHEMISTRY OF QQ-A-430.

**HEAT TREATMENT:**

PIN & SLEEVE - 180/200 KSI TENSILE. MINIMUM SHEAR STRENGTH 108 KSI.

**FINISH:**

PIN & SLEEVE - NO SUFFIX - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2.  
- SUFFIX "DG" - IVD (HIGH PURITY ALUMINUM) COATING PER MIL-DTL-83488, TYPE II CLASS 3. IDENTIFIED BY LIGHT GREEN COLOR.  
- SUFFIX "NL" - NICKEL PLATE PER QQ-N-290.

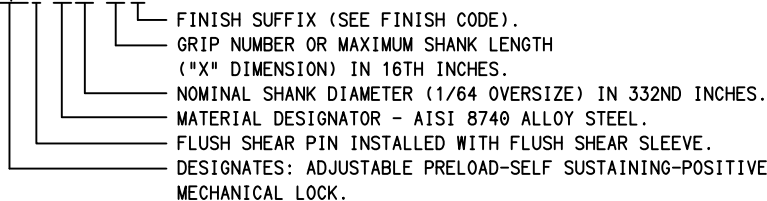
LOCK COLLAR - CHEMICAL SURFACE TREAT PER SPECIFICATION MIL-C-5541.

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

IDENTIFICATION: SLEEVE: HUCK SYMBOL (X)

PIN: HUCK SYMBOL (X), SLEEVE TYPE ("F") AND GRIP DASH NUMBER.

PART NO. EXAMPLE: AspFF-DT06-06()



DIMENSIONS IN INCHES

ISSUED	12/01/66	Asp® FASTENER, ADJUSTABLE PRELOAD-SELF SUSTAINING-POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH SLEEVE. 8740 ALLOY STEEL (108 KSI SHEAR)	AspFF-DT()-()-() PIN AspF-S-DT()-() SLEEVE Asp-LC-2AC LOCK COLLAR  ASP101	
	REVISD			03/29/23
	PAGE			2 OF 4



**HOWMET  
AEROSPACE**

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.

GRIP NUMBER TABULATION											
GRIP DASH NO.	DESIGN 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 - .010	± .010	+ .125 - .000	+ .005 - .010	± .010	+ .125 - .000	+ .005 - .010	± .010	+ .125 - .000
05	.251	.312	△	.342	1.09						
06	.313	.375	.125	.405	1.16						
07	.376	.438	.188	.468	1.22	.125	.477	1.38			
08	.439	.500	.250	.530	1.28	.188	.540	1.44			
09	.501	.562	.312	.592	1.34	.250	.602	1.50	.188	.607	1.63
10	.563	.625	.375	.655	1.41	.313	.665	1.56	.250	.670	1.69
11	.626	.688	.438	.718	1.47	.375	.727	1.63	.313	.732	1.75
12	.689	.750	.500	.780	1.53	.438	.790	1.69	.375	.795	1.82
13	.751	.812	.562	.842	1.59	.500	.852	1.75	.438	.857	1.88
14	.813	.875	.625	.905	1.66	.562	.915	1.81	.500	.920	1.94
15	.876	.938	.688	.968	1.72	.625	.977	1.88	.562	.982	2.00
16	.939	1.000	.750	1.030	1.78	.688	1.040	1.94	.625	1.045	2.07
17	1.001	1.062	.812	1.092	1.84	.750	1.102	2.00	.688	1.107	2.13
18	1.063	1.125	.875	1.155	1.91	.812	1.165	2.06	.750	1.170	2.19
19	1.126	1.188	.938	1.218	1.97	.875	1.227	2.13	.812	1.232	2.25
20	1.189	1.250	1.000	1.280	2.03	.938	1.290	2.19	.875	1.295	2.32
21	1.251	1.312	1.062	1.342	2.09	1.000	1.352	2.25	.938	1.357	2.38
22	1.313	1.375	1.125	1.405	2.16	1.062	1.415	2.31	1.000	1.420	2.44
23	1.376	1.438	1.188	1.468	2.22	1.125	1.477	2.38	1.062	1.482	2.50
24	1.439	1.500	1.250	1.530	2.28	1.188	1.540	2.44	1.125	1.545	2.57
25	1.501	1.562	1.312	1.592	2.34	1.250	1.602	2.50	1.188	1.607	2.63
26	1.563	1.625	1.375	1.655	2.41	1.312	1.665	2.56	1.250	1.670	2.69
27	1.626	1.688	1.438	1.718	2.47	1.375	1.727	2.63	1.312	1.732	2.75
28	1.689	1.750	1.500	1.780	2.53	1.438	1.790	2.69	1.375	1.795	2.82
29	1.751	1.812	1.562	1.842	2.59	1.500	1.852	2.75	1.438	1.857	2.88
30	1.813	1.875	1.625	1.905	2.66	1.562	1.915	2.81	1.500	1.920	2.94
31	1.876	1.938	1.688	1.968	2.72	1.625	1.977	2.88	1.562	1.982	3.00
32	1.939	2.000	1.750	2.030	2.78	1.688	2.040	2.94	1.625	2.045	3.07
33	2.001	2.062	1.812	2.092	2.84	1.750	2.102	3.00	1.688	2.107	3.13
34	2.063	2.125	1.875	2.155	2.91	1.812	2.165	3.06	1.750	2.170	3.19
35	2.126	2.188	1.938	2.218	2.97	1.875	2.227	3.13	1.812	2.232	3.25
36	2.189	2.250	2.000	2.280	3.03	1.938	2.290	3.19	1.875	2.295	3.32
37	2.251	2.312	2.062	2.342	3.09						

DIMENSIONS IN INCHES

E			
ISSUED	12/01/66	Asp® FASTENER, ADJUSTABLE PRELOAD-SELF SUSTAINING-POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH SLEEVE. 8740 ALLOY STEEL (108 KSI SHEAR)	AspFF-DT()-()-() PIN
REVISED	03/29/23		AspF-S-DT()-()-() SLEEVE
PAGE	3 OF 4		Asp-LC-2AC LOCK COLLAR
			ASP101



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

KIT COMPONENT PART NUMBERS

KIT PART NUMBER	PIN	SLEEVE	LOCK COLLAR
Asp17-DT06-()	AspFF-DT06-()	AspF-S-DT06	Asp-LC-2AC06
Asp17-DT08-()	AspFF-DT08-()	AspF-S-DT08	Asp-LC-2AC08
Asp17-DT10-()	AspFF-DT10-()	AspF-S-DT10	Asp-LC-2AC10
Asp17-DT06-()NL	AspFF-DT06-()NL	AspF-S-DT06NL	Asp-LC-2AC06
Asp17-DT06-()NL	AspFF-DT08-()NL	AspF-S-DT08NL	Asp-LC-2AC08
Asp17-DT06-()NL	AspFF-DT10-()NL	AspF-S-DT10NL	Asp-LC-2AC10

DIMENSIONS IN INCHES

E

ISSUED	12/01/66	Asp® FASTENER, ADJUSTABLE PRELOAD-SELF SUSTAINING-POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH SLEEVE. 8740 ALLOY STEEL (108 KSI SHEAR)	AspFF-DT()-()-() PIN AspF-S-DT()-() SLEEVE Asp-LC-2AC LOCK COLLAR
REVISED	03/29/23		
PAGE	4 OF 4		ASP101

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