

DIMENSIONS IN INCHES

PROCUREMENT SPECIFICATION: HUCK C2005.  
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DRAWN BY	DH	FSCM (Cage Code) 17446 - Carson
CHECKED BY	MM/HJ	

G<sub>4</sub> ADDED KD, KF & KP SLEEVE DIMENSIONS SHTS. 1 & 2.  
REVISED "L" LOCK COLLAR DIMENSIONS PER MATERIAL CALLOUT SHT. 2.

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REVISED	12/16/98
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ASP® FASTENER, ADJUSTABLE PRELOAD—SELF  
SUSTAINING—POSITIVE MECHANICAL LOCK, 100°  
FLUSH HEAD INSTALLED WITH FLUSH & PROTRUDING  
SLEEVES. 6AL-4V TITANIUM (95 KSI SHEAR)

AspF()-V()-()- AspF-S-V()-() 2AspP-S-V()-() Asp-LC-2AC & Asp-LC-MV
ASP105



**Huck International, Inc.**  
**Advanced Fastening Systems**  
**Aerospace Fastener Division**  
**Carson Operations**  
**900 Watsoncenter Road**  
**Carson, California 90745**  
**U.S.A.**

**Aerospace Fastener Division**

**Phone (310) 830-8200**  
**Fax (310) 830-1436**




**ASP®**

**ENGINEERING  
STANDARD**

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Asp PIN PART NUMBER	NOM SIZE	A DIA MAX	B HEAD HEIGHT MAX	C MAX	D DIA BARE +.0020 -.0000	D DIA COATED +.0025 -.0000	E MAX DIA	G GAGE DIA ±.0001	H GAGE HEIGHT			MIN ULT TENSILE 		HOLE LIMITS +.0045 -.0000			
									MIN	MAX BARE	MAX COATED	WITH AspF-S-V	WITH 2AspP-S-V				
AspF()-V05-()()	11/64	.332	.069	.010	.1692	.1692	.092	.2831	.0165	.0201	.0213	1000	—	.1720			
AspF()-V06-()()	13/64	.386	.078	.013	.2005	.2005	.132	.3271	.0205	.0243	.0255	1950	1950	.2035			
AspF()-V08-()()	17/64	.507	.104	.017	.2630	.2630	.174	.4319	.0270	.0310	.0322	3590	3590	.2660			
AspF()-V10-()()	21/64	.634	.131	.020	.3255	.3255	.194	.5450	.0325	.0367	.0379	4700	4700	.3285			
NOM SIZE	SLEEVES							LOCK COLLAR				R RAD	R1 RAD	S HEX 	T MODIFIED THREAD	MIN ULT SHEAR 	
	K ±.005	KA DIA	KB ±.005	KC ±.005	KD BALL	KF ±.0040	KP ±.0040	L ±.005		M DIA MAX	N DIA MAX						P MAX
								2AC	MV								
11/64	.200	—	—	—	—	—	—	.050	.050	.164	.128	.015	.025 .010	.025 .010	5/64	1250-48 UNS-3	550
13/64	.175	.332 .305	.263	.200	13/64	.1430	.1835	.050	.050	.200	.164	.015	.025 .015	.025 .015	5/64	1640-56 UNS-3	1320
17/64	.229	.432 .400	.324	.229	17/64	.1837	.2505	.065	.060	.262	.216	.022	.025 .015	.030 .020	3/32	2160-48 UNS-3	2550
21/64	.285	.522 .480	.410	.285	5/16	.2133	.3045	.083	.072	.314	.253	.028	.025 .015	.040 .030	1/8	2500-40 UNS-3	3520

- 1 MINIMUM ULTIMATE TENSILE STRENGTH, OF INSTALLED FASTENER. (IN POUNDS)
- 2 MINIMUM SHEAR STRENGTH OF INSTALLED FASTENER TESTED IN SINGLE SHEAR. WHEN SHEAR PLANE FALLS IN PIN THREADED SECTION ONLY.
- 3 HEX SOCKET.
- 4 MAXIMUM THEORETICAL INTERSECTION DIAMETER.
- 5 FLUSH HEAD DIMENSIONS SAME AS PIN.
- 6 .062/.070 HEAD FOR AspFF-V06-05().
- 7 MANUFACTURER'S OPTION TO SUPPLY SOLID OR SPLIT LOCK COLLAR.
- 8 CONICAL SURFACE OF HEAD TO BE CONCENTRIC WITH "D" DIAMETER WITHIN .003 FIR.
- 9 .072 FOR MV MATERIAL AND .083 FOR 2AC MATERIAL.

MATERIAL: PIN & SLEEVE - V - 6AL-4V TITANIUM ALLOY PER CHEMISTRY OF AMS 4967.  
 LOCK COLLAR - 2AC - 2219-T6 ALUMINUM ALLOY PER CHEMISTRY OF QQ-A-430.  
 - MV - COMMERCIALLY PURE (CP) TITANIUM PER CHEMISTRY OF ASTM B348.

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

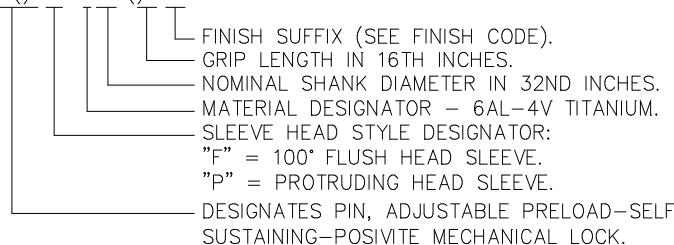
FINISH: PIN & SLEEVE - NO SUFFIX - NONE.  
 - SUFFIX "AC" - ALUMINUM COATED PER KALGARD 2242 ON HEAD AND SHANK ONLY.  
 LOCK COLLAR - 2AC - CHEMICAL SURFACE TREAT PER MIL-C-5541.  
 - MV - NONE.

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

IDENTIFICATION: SLEEVE: HUCK SYMBOL ( ) & "V"  
 PIN: HUCK SYMBOL ( ) & "V", SLEEVE TYPE: ("F" OR "P:") AND GRIP DASH NUMBER.

INSTALLATION: IN ACCORDANCE WITH HUCK BROCHURE HCB-135.

PART NO. EXAMPLE AspF()-V06-06()



DIMENSIONS IN INCHES

G4

ISSUED	11/01/67	Asp® FASTENER, ADJUSTABLE PRELOAD-SELF SUSTAINING-POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH & PROTRUDING SLEEVES. 6AL-4V TITANIUM (95 KSI SHEAR).	AspF()-V0-()() PIN AspF-S-V()() & AspP-S-V()() SLEEVES Asp-LC-2AC Asp-LC-MV LOCK COLLARS
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
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THESE DIMENSIONS ARE FOR AspFF-V()-()-() PIN USING FLUSH SLEEVE.  
FOR PIN USING PROTRUDING SLEEVE SEE SHEET 4 OF 4.

GRIP NUMBER TABULATION														
GRIP DASH NO.	DESIGN GRIP RANGE		05 (11/64) DIA			06 (13/64) DIA			08 (17/64) DIA			10 (21/64) DIA		
	MIN	MAX	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
			+ .005 − .010	± .010	+ .125 − .000	+ .005 − .010	± .010	+ .125 − .000	+ .005 − .010	± .010	+ .125 − .000	+ .005 − .010	± .010	+ .125 − .000
05	.251	.312	—	—	—	 .125	.342	1.09	—	—	—	—	—	—
06	.313	.375	.100	.405	1.16	.125	.405	1.16	—	—	—	—	—	—
07	.376	.438	.163	.468	1.22	.188	.468	1.22	.125	.477	1.38	—	—	—
08	.439	.500	.225	.530	1.28	.250	.530	1.28	.188	.540	1.44	—	—	—
09	.501	.562	.287	.592	1.34	.312	.592	1.34	.250	.602	1.50	.188	.607	1.63
10	.563	.625	.350	.655	1.41	.375	.655	1.41	.313	.665	1.56	.250	.670	1.69
11	.626	.688	.413	.718	1.47	.438	.718	1.47	.375	.727	1.63	.313	.732	1.75
12	.689	.750	.475	.780	1.53	.500	.780	1.53	.438	.790	1.69	.375	.795	1.82
13	.751	.812	.537	.842	1.59	.562	.842	1.59	.500	.852	1.75	.438	.857	1.88
14	.813	.875	.600	.905	1.66	.625	.905	1.66	.562	.915	1.81	.500	.920	1.94
15	.876	.938	.663	.968	1.72	.688	.968	1.72	.625	.977	1.88	.562	.982	2.00
16	.939	1.000	.725	1.030	1.78	.750	1.030	1.78	.688	1.040	1.94	.625	1.045	2.07
17	1.001	1.062	.787	1.092	1.84	.812	1.092	1.84	.750	1.102	2.00	.688	1.107	2.13
18	1.063	1.125	.850	1.155	1.91	.875	1.155	1.91	.812	1.165	2.06	.750	1.170	2.19
19	1.126	1.188	.913	1.218	1.97	.938	1.218	1.97	.875	1.227	2.13	.812	1.232	2.25
20	1.189	1.250	.975	1.280	2.03	1.000	1.280	2.03	.938	1.290	2.19	.875	1.295	2.32
21	1.251	1.312	1.037	1.342	2.09	1.062	1.342	2.09	1.000	1.352	2.25	.938	1.357	2.38
22	1.313	1.375	1.100	1.405	2.16	1.125	1.405	2.16	1.062	1.415	2.31	1.000	1.420	2.44
23	1.376	1.438	1.163	1.468	2.22	1.188	1.468	2.22	1.125	1.477	2.38	1.062	1.482	2.50
24	1.439	1.500	1.225	1.530	2.28	1.250	1.530	2.28	1.188	1.540	2.44	1.125	1.545	2.57
25	1.501	1.562	1.287	1.592	2.34	1.312	1.592	2.34	1.250	1.602	2.50	1.188	1.607	2.63
26	1.563	1.625	1.350	1.655	2.41	1.375	1.655	2.41	1.312	1.665	2.56	1.250	1.670	2.69
27	1.626	1.688	1.413	1.718	2.47	1.438	1.718	2.47	1.375	1.727	2.63	1.312	1.732	2.75
28	1.689	1.750	1.475	1.780	2.53	1.500	1.780	2.53	1.438	1.790	2.69	1.375	1.795	2.82
29	1.751	1.812	1.537	1.842	2.59	1.562	1.842	2.59	1.500	1.852	2.75	1.438	1.857	2.88
30	1.813	1.875	1.600	1.905	2.66	1.625	1.905	2.66	1.562	1.915	2.81	1.500	1.920	2.94
31	1.876	1.938	1.663	1.968	2.72	1.688	1.968	2.72	1.625	1.977	2.88	1.562	1.982	3.00
32	1.939	2.000	1.725	2.030	2.78	1.750	2.030	2.78	1.688	2.040	2.94	1.625	2.045	3.07
33	2.001	2.062	1.787	2.092	2.84	1.812	2.092	2.84	1.750	2.102	3.00	1.688	2.107	3.13
34	2.063	2.125	1.850	2.155	2.91	1.875	2.155	2.91	1.812	2.165	3.06	1.750	2.170	3.19
35	2.126	2.188	1.913	2.218	2.97	1.938	2.218	2.97	1.875	2.227	3.13	1.812	2.232	3.25
36	2.189	2.250	1.975	2.280	3.03	2.000	2.280	3.03	1.938	2.290	3.19	1.875	2.295	3.32

DIMENSIONS IN INCHES

G<sub>4</sub>

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
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FOR PIN USING FLUSH SLEEVE SEE SHEET 3 OF 4.

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
06	.313	.375					.468	1.22	—	—	—	—	—	—
07	.376	.438				.156	.530	1.28	.125	.572	1.47	—	—	—
08	.439	.500				.218	.592	1.34	.188	.635	1.53	—	—	—
09	.501	.562				.281	.655	1.41	.250	.697	1.59	.188	.732	1.75
10	.563	.625				.343	.718	1.47	.313	.760	1.65	.250	.795	1.82
11	.626	.688				.406	.780	1.53	.375	.822	1.72	.313	.857	1.88
12	.689	.750				.468	.842	1.59	.438	.885	1.78	.375	.920	1.94
13	.751	.812				.531	.905	1.66	.500	.947	1.84	.438	.982	2.00
14	.813	.875				.593	.968	1.72	.562	1.010	1.90	.500	1.045	2.07
15	.876	.938				.656	1.030	1.78	.625	1.072	1.97	.562	1.107	2.13
16	.939	1.000				.718	1.092	1.84	.688	1.135	2.03	.625	1.170	2.19
17	1.001	1.062				.781	1.155	1.91	.750	1.197	2.09	.688	1.232	2.25
18	1.063	1.125				.843	1.218	1.97	.812	1.260	2.15	.750	1.295	2.32
19	1.126	1.188				.906	1.280	2.03	.875	1.322	2.22	.812	1.357	2.38
20	1.189	1.250				.968	1.342	2.09	.938	1.385	2.28	.875	1.420	2.44
21	1.251	1.312				1.031	1.405	2.16	1.000	1.447	2.34	.938	1.482	2.50
22	1.313	1.375				1.093	1.468	2.22	1.062	1.510	2.40	1.000	1.545	2.57
23	1.376	1.438				1.156	1.530	2.28	1.125	1.572	2.47	1.062	1.607	2.63
24	1.439	1.500				1.218	1.592	2.34	1.188	1.635	2.53	1.125	1.670	2.69
25	1.501	1.562				1.281	1.655	2.41	1.250	1.697	2.59	1.188	1.732	2.75
26	1.563	1.625				1.343	1.718	2.47	1.312	1.760	2.65	1.250	1.795	2.82
27	1.626	1.688				1.406	1.780	2.53	1.375	1.822	2.72	1.312	1.857	2.88
28	1.689	1.750				1.468	1.842	2.59	1.438	1.885	2.78	1.375	1.920	2.94
29	1.751	1.812				1.531	1.905	2.66	1.500	1.947	2.84	1.438	1.982	3.00
30	1.813	1.875				1.593	1.968	2.72	1.562	2.010	2.90	1.500	2.045	3.07
31	1.876	1.938				1.656	2.030	2.78	1.625	2.072	2.97	1.562	2.107	3.13
32	1.939	2.000				1.718	2.092	2.84	1.688	2.135	3.03	1.625	2.170	3.19
33	2.001	2.062				1.781	2.155	2.91	1.750	2.197	3.09	1.688	2.232	3.25
34	2.063	2.125				1.843	2.218	2.97	1.812	2.260	3.15	1.750	2.295	3.32
35	2.126	2.188				1.906	2.280	3.03	1.875	2.322	3.22	1.812	2.357	3.38
36	2.189	2.250				1.968	2.342	3.09	1.938	2.385	3.28	1.875	2.420	3.44

DIMENSIONS IN INCHES

G<sub>4</sub>

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Asp® FASTENER, ADJUSTABLE PRELOAD-SELF  
SUSTAINING-POSITIVE MECHANICAL LOCK, 100"  
FLUSH HEAD INSTALLED WITH FLUSH & PROTRUDING  
SLEEVES, 6AL-4V TITANIUM (95 KSI SHEAR)

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

ASP105

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