



**HOWMET
AEROSPACE**

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

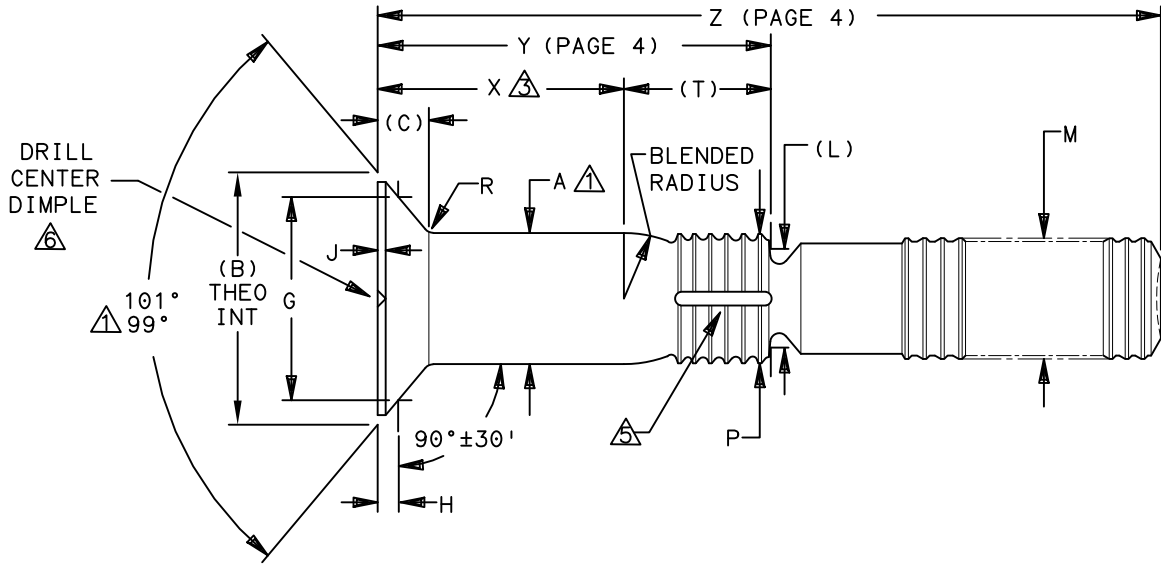
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LGP®
Composite
**ENGINEERING
STANDARD**

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LGP PIN FAMILY NUMBER	NOM SIZE	A SHANK DIA +.0005 -.0000	A SHANK DIA COATED ±.0005	(B) THEO DIA NOM	(C) HEAD HEIGHT NOM	G GAGE DIA ±.0001	H GAGE HEIGHT		J MAX	(L) REF	M MAX	P DIA MAX	R RAD ±.0005	S	(T) REF
							MAX	MIN							
(H)LGPL8SC-V05B()	.1640	.1630	.1630	.3279	.0692	.2831	.0202	.0174	.011	.126	.156	.156	.020	.0045	.175
(H)LGPL8SC-V06B()	.1900	.1890	.1890	.3788	.0796	.3271	.0234	.0200	.013	.150	.184	.184	.025	.0045	.176
(H)LGPL8SC-V08B()	.2500	.2490	.2490	.5041	.1070	.4319	.0322	.0284	.017	.187	.244	.244	.025	.0045	.244
(H)LGPL8SC-V10B()	.3125	.3115	.3115	.6310	.1341	.5450	.0380	.0342	.020	.244	.306	.306	.035	.0045	.313
(H)LGPL8SC-V12B()	.3750	.3740	.3740	.7580	.1611	.6581	.0439	.0399	.023	.298	.370	.370	.035	.0060	.374
(H)LGPL8SC-V14B()	.4375	.4365	.4365	.8848	.1881	.7783	.0472	.0422	.025	.312	.431	.431	.045	.0060	.437
(H)LGPL8SC-V16B()	.5000	.4990	.4990	1.0136	.2159	.8901	.0548	.0488	.026	.375	.492	.492	.045	.0060	.503

- CONCENTRICITY: CONICAL SURFACE OF COUNTERSUNK HEAD TO "A" DIAMETER TO BE WITHIN .005 TIR.
- SHANK STRAIGHTNESS: WITHIN "S" VALUES TIR PER INCH OF SHANK LENGTH.
- GRIP LENGTH IS MEASURED FROM THE TOP OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK. (SEE DIMENSION X ON PAGE 4).
- 4 DIMENSIONS B AND C ARE FOR REFERENCE ONLY, NOT FOR INSPECTION PURPOSES.
- SEALANT ESCAPE GROOVE (SEE PAGE 4).
- DRILL CENTER DIMPLE IN TOP IN HEAD .035 MAX DIA, .010 MAX DEPTH AND CONCENTRIC TO "A" WITHIN .008.

DIMENSIONS IN INCHES

PROCUREMENT SPECIFICATION: C2022
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DRAWN BY	DH	FSCM (Cage Code) 17446 - Carson FSCM (Cage Code) F6167 - France
CHECKED BY	MM	

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F6 REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2779)		PIN COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, 100° COUNTERSUNK HEAD, SWAGE LOCKING, 6AL-4V TITANIUM, (95 KSI SHEAR)	(H)LGPL8SC-V()B()()
ISSUED	06/09/81		
REVISID	08/06/21		
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MATERIAL: 6AL-4V TITANIUM ALLOY PER AMS4967.
 MINIMUM SHEAR STRENGTH: 95 KSI.
 SURFACE TEXTURE: Ra MAX PER ANSI/ASME B46.1 BEFORE COATING. CONICAL SURFACE OF HEAD, HEAD TO SHANK FILLET RADIUS, SHANK AND TRANSITION RADIUS, 32, OTHER SURFACES -125.

FINISH: SUFFIX "AC" = ALUMINUM COATING KAL-GARD 2240C (EU ONLY) / HI-KOTE™1 PER NAS4006 OR KAL-GARD 2242 / HI-KOTE™1NC PER NAS4006NC, OPTIONAL ON PINTAIL END. PLUS CETYL ALCOHOL LUBE PER AS87132.

SUFFIX "AD" = ALUMINUM COAT (KAL-GARD 2245) PER NAS4006 OPTIONAL TO COLOR PINTAIL END WHITE, PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

SUFFIX "AS" = SULFURIC ACID ANODIZE (BLUE) PER ISO 8080 PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

SUFFIX "B" = UNCOATED PIN AND NO LUBRICATION.

SUFFIX "D" = ION VAPOR DEPOSITED ALUMINUM COATING PER MIL-C-83488 TYPE II CLASS 3, OPTIONAL TO COLOR PINTAIL END BLACK, PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

SUFFIX "EP" = PHOSPHATE FLUORIDE TREAT PER AMS 2486.

SUFFIX "EPR" = PHOSPHATE FLUORIDE PER BAC5861, WITH RED IDENTIFICATION DYE ON PINTAIL END, PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

SUFFIX "PB" = POWDER BLASTED TOP SURFACE OF HEAD PLUS CETYL ALCOHOL LUBE PER MIL-L-87132 (Ra 50/80 SURFACE ROUGHNESS).

NO SUFFIX = UNCOATED PIN PLUS CETYL ALCOHOL LUBE PER MIL-L-87132.

HEAD MARKING: HEAD SHALL BE MARKED WITH THE MANUFACTURER'S SYMBOL, THE BASIC NUMBER (LGP8) AND VB DEPRESSED .006 MAX DEPTH ARRANGEMENT OPTIONAL. FOR PINS WITH A SEALANT ESCAPE GROOVE, AN "H" WILL BE INCLUDED ON THE HEAD IDENTIFICATION CALLOUT.

CODING: THE FIRST SET OF LETTERS DESIGNATE THE FAMILY OF LIGHTWEIGHT LGP PINS FOR SHEAR APPLICATIONS (LGPL) (SEE PART NUMBER EXAMPLE PAGE 4).
 THE SECOND SET OF LETTERS & NUMBER 8SC DESIGNATE HEAD SIZE, STYLE, AND LOAD APPLICATION (SEE PART NUMBER EXAMPLE PAGE 4).
 THE NEXT LETTER "V", IS THE MATERIAL DESIGNATOR FOR 6AL-4V TITANIUM ALLOY, MIN SHEAR STRENGTH: 95 KSI (SEE PART NUMBER EXAMPLE PAGE 4).
 THE NUMBERS FOLLOWING THE MATERIAL DESIGNATE THE NOMINAL PIN SHANK DIAMETER IN .03125 INCH INCREMENTS (SEE PART NUMBER EXAMPLE PAGE 4).
 THE LETTER "B" REPRESENTS COMPOSITE INSTALLATION LOAD (SEE PART NUMBER EXAMPLE PAGE 4).
 THE FINAL NUMBERS DESIGNATE THE GRIP LENGTH NUMBER OR THE NOMINAL PIN SHANK LENGTH IN .0625 INCH INCREMENTS (SEE PART NUMBER EXAMPLE PAGE 4).
 SEE FINISH CODE FOR SUFFIX INFORMATION (SEE PART NUMBER EXAMPLE PAGE 4).

DIMENSIONS IN INCHES

F6		REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2779)	
ISSUED	06/09/81	PIN COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, 100° COUNTERSUNK HEAD, SWAGE LOCKING, 6AL-4V TITANIUM, (95 KSI SHEAR)	
REVISED	08/06/21		(H)LGPL8SC-V()B() ()
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MECHANICAL PROPERTIES						
LGP PIN PART NUMBER	PIN NOM SIZE	MINIMUM DOUBLE SHEAR POUNDS	COLLAR PART NUMBER	MIN ULTIMATE TENSILE LBS WITH LISTED COLLAR	PIN POSITION SWAGE GAGE	STANDARD COMPOSITE APPLICATIONS
(H)LGPL8SC-V05B() ()	.1640	4010	SLFC-MV05	1500	HG118-05	
(H)LGPL8SC-V06B() ()	.1900	5380	SLFC-MV06	1900	HG118-06	
(H)LGPL8SC-V08B() ()	.2500	9300	SLFC-MV08	3450	HG118-08	
(H)LGPL8SC-V10B() ()	.3125	14600	SLFC-MV10	6000	HG118-10	
(H)LGPL8SC-V12B() ()	.3750	21000	SLFC-MV12	8000	HG118-12	
(H)LGPL8SC-V14B() ()	.4375	28600	SLFC-MV14	12100	HG118-14	
(H)LGPL8SC-V16B() ()	.5000	37300	SLFC-MV16	15300	HG118-16	

MECHANICAL PROPERTIES						
LGP PIN PART NUMBER	PIN NOM SIZE	MINIMUM DOUBLE SHEAR POUNDS	COLLAR PART NUMBER	MIN ULTIMATE TENSILE LBS WITH LISTED COLLAR	PIN POSITION SWAGE GAGE	OPTIONAL COMPOSITE/METALLIC APPLICATIONS
(H)LGPL8SC-V05B() ()	.1640	4010	3SLC-C05	1400	HG131-05	
(H)LGPL8SC-V06B() ()	.1900	5380	3SLC-C06	1600	HG131-06	
(H)LGPL8SC-V08B() ()	.2500	9300	3SLC-C08	3000	HG131-08	
(H)LGPL8SC-V10B() ()	.3125	14600	3SLC-C10	5000	HG131-10	
(H)LGPL8SC-V12B() ()	.3750	21000	3SLC-C12	7000	HG131-12	
(H)LGPL8SC-V14B() ()	.4375	28600	3SLC-C14	9500	HG131-14	
(H)LGPL8SC-V16B() ()	.5000	37300	3SLC-C16	12500	HG131-16	

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	REVISED	08/06/21	
PAGE	3 OF 4		(H)LGPL8SC-V()B() () COM101



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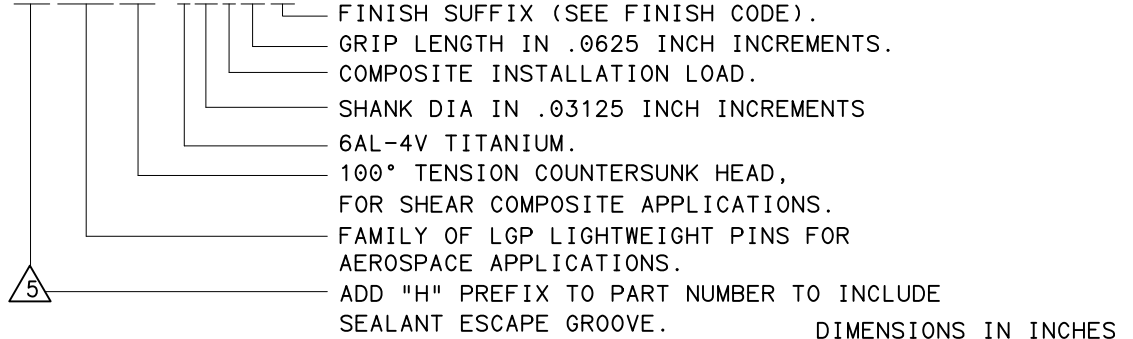
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GRIP NUMBER TABULATION

GRIP DASH NO.	PERMISSIBLE MINIMUM GRIP OVERLAP	DESIGN GRIP RANGE		PERMISSIBLE MAXIMUM GRIP OVERLAP	X ±.005	05		06		08		10		12		14		16			
		MIN	MAX			Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000	Y ±.010	Z +.060 -.000
02	.047	.063	.125	.141	.125	.300	.827	.301	.899	—	—	—	—	—	—	—	—	—	—		
03	.109	.126	.188	.203	.188	.363	.890	.364	.962	.432	1.085	.501	1.199	—	—	—	—	—	—		
04	.172	.189	.250	.266	.250	.425	.952	.426	1.024	.494	1.147	.563	1.261	.624	1.391	.687	1.559	—	—		
05	.234	.251	.312	.328	.312	.487	1.014	.488	1.086	.556	1.209	.625	1.323	.686	1.453	.749	1.621	.815	1.777		
06	.297	.313	.375	.391	.375	.550	1.077	.551	1.149	.619	1.272	.688	1.386	.749	1.516	.812	1.684	.878	1.840		
07	.359	.376	.438	.453	.438	.613	1.140	.614	1.212	.682	1.335	.751	1.449	.812	1.579	.875	1.747	.941	1.903		
08	.422	.439	.500	.516	.500	.675	1.202	.676	1.274	.744	1.397	.813	1.511	.874	1.641	.937	1.809	1.003	1.965		
09	.484	.501	.562	.578	.562	.737	1.264	.738	1.336	.806	1.459	.875	1.573	.936	1.703	.999	1.871	1.065	2.027		
10	.547	.563	.625	.641	.625	.800	1.327	.801	1.399	.869	1.522	.938	1.636	.999	1.766	1.062	1.934	1.128	2.090		
11	.609	.626	.688	.703	.688	.863	1.390	.864	1.462	.932	1.585	1.001	1.699	1.062	1.829	1.125	1.997	1.191	2.153		
12	.672	.689	.750	.766	.750	.925	1.452	.926	1.524	.994	1.647	1.063	1.761	1.124	1.891	1.187	2.059	1.253	2.215		
13	.734	.751	.812	.828	.812	.987	1.514	.988	1.586	1.056	1.709	1.125	1.823	1.186	1.953	1.249	2.121	1.315	2.277		
14	.797	.813	.875	.891	.875	1.050	1.577	1.051	1.649	1.119	1.772	1.188	1.886	1.249	2.016	1.312	2.184	1.378	2.340		
15	.859	.876	.938	.953	.938	1.113	1.640	1.114	1.712	1.182	1.835	1.251	1.949	1.312	2.079	1.375	2.247	1.441	2.403		
16	.922	.939	1.000	1.016	1.000	1.175	1.702	1.176	1.774	1.244	1.897	1.313	2.011	1.374	2.141	1.437	2.309	1.503	2.465		
17	.984	1.001	1.062	1.078	1.062	1.237	1.764	1.238	1.836	1.306	1.959	1.375	2.073	1.436	2.203	1.499	2.371	1.565	2.527		
18	1.047	1.063	1.125	1.141	1.125	1.300	1.827	1.301	1.899	1.369	2.022	1.438	2.136	1.499	2.266	1.562	2.434	1.628	2.590		
19	1.109	1.126	1.188	1.203	1.188	1.363	1.890	1.364	1.962	1.432	2.085	1.501	2.199	1.562	2.329	1.625	2.497	1.691	2.653		
20	1.172	1.189	1.250	1.266	1.250	1.425	1.952	1.426	2.024	1.494	2.147	1.563	2.261	1.624	2.391	1.687	2.559	1.753	2.715		
21	1.234	1.251	1.312	1.328	1.312	1.487	2.014	1.488	2.086	1.556	2.209	1.625	2.323	1.686	2.453	1.749	2.621	1.815	2.777		
22	1.297	1.313	1.375	1.391	1.375	1.550	2.077	1.551	2.149	1.619	2.272	1.688	2.386	1.749	2.516	1.812	2.684	1.878	2.840		
23	1.359	1.376	1.438	1.453	1.438	1.613	2.140	1.614	2.212	1.682	2.335	1.751	2.449	1.812	2.579	1.875	2.747	1.941	2.903		
24	1.422	1.439	1.500	1.516	1.500	1.675	2.202	1.676	2.274	1.744	2.397	1.813	2.511	1.874	2.641	1.937	2.809	2.003	2.965		
25	1.484	1.501	1.562	1.578	1.562	1.737	2.264	1.738	2.336	1.806	2.459	1.875	2.573	1.936	2.703	1.999	2.871	2.065	3.027		
26	1.547	1.563	1.625	1.641	1.625	1.800	2.327	1.801	2.399	1.869	2.522	1.938	2.636	1.999	2.766	2.062	2.934	2.128	3.090		
27	1.609	1.626	1.688	1.703	1.688	1.863	2.390	1.864	2.462	1.932	2.585	2.001	2.699	2.062	2.829	2.125	2.997	2.191	3.153		
28	1.672	1.689	1.750	1.766	1.750	1.925	2.452	1.926	2.524	1.994	2.647	2.063	2.761	2.124	2.891	2.187	3.059	2.253	3.215		
29	1.734	1.751	1.812	1.828	1.812	1.987	2.514	1.988	2.586	2.056	2.709	2.125	2.823	2.186	2.953	2.249	3.121	2.315	3.277		
30	1.797	1.813	1.875	1.891	1.875	2.050	2.577	2.051	2.649	2.119	2.772	2.188	2.886	2.249	3.016	2.312	3.184	2.378	3.340		
31	1.859	1.876	1.938	1.953	1.938	2.113	2.640	2.114	2.712	2.182	2.835	2.251	2.949	2.312	3.079	2.375	3.247	2.441	3.403		
32	1.922	1.939	2.000	2.016	2.000	2.175	2.702	2.176	2.774	2.244	2.897	2.313	3.011	2.374	3.141	2.437	3.309	2.503	3.465		

PART NUMBER

EXAMPLE: (H)LGPL8SC-V08B06()



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