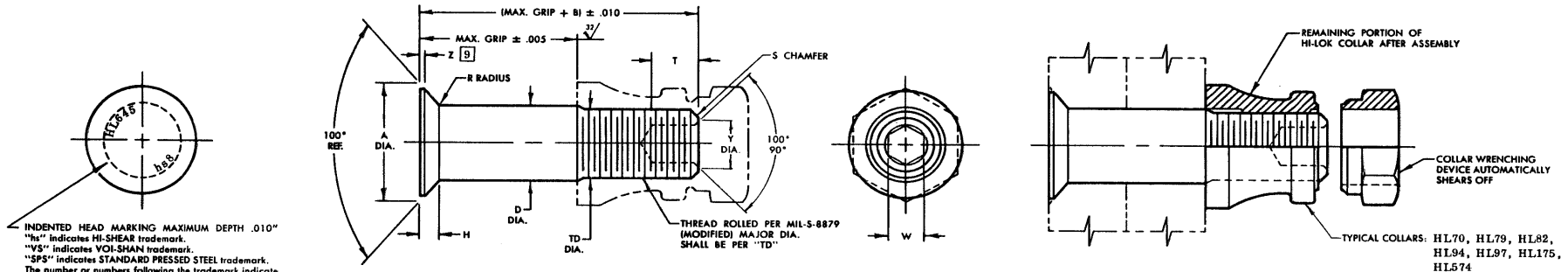


**STANDARDS COMMITTEE
FOR HI-LOK® PRODUCTS**
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509

HI-SHEAR CORPORATION, U.S.A. (Patent Holder) U.S. Federal Code I.D. No. 73197	HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee)
Division of HI-Shear Industries Inc., U.S.A.	Division of HI-Shear Industries Inc., U.S.A.
AKS INDUSTRIES CO., INC. (Licensee) U.S. Federal Code I.D. No. 66729	KAWAS-WESSE, Germany (Licensee-EEC Countries)
DEUTSCH FASTENER CO., INC. (Licensee) U.S. Federal Code I.D. No. 67825	Rudolph Kahrstrom GmbH & Co. (Licensee-EEC Countries)
SPS TECHNOLOGIES, U.S.A. (Licensee) U.S. Federal Code I.D. No. 66876	ST. CHAMOND GRANAT, S.A. France (Licensee-EEC Countries)
YOS-SHEAR, Division of YOI Corp., U.S.A. (Licensee) U.S. Federal Code I.D. No. 62216	SINWONDS, S.A. France (Licensee-EEC Countries-Collars)
WEST COAST AEROSPACE INC., U.S.A. (Licensee) U.S. Federal Code I.D. No. 60516	TOKYO SCREW COMPANY, Japan (Licensee-Japan)
Pin & Steel Collars	



INDENTED HEAD MARKING MAXIMUM DEPTH .010"
"hs" indicates HI-SHEAR trademark.
"VS" indicates VOI-SHAN trademark.
"SPS" indicates STANDARD PRESSED STEEL trademark.
The number or numbers following the trademark indicate first dash number. Arrangement optional.

FIRST DASH NO.	NOM. DIA.	A DIA.	B REF.	D DIA. [7]		TD DIA.	F	H	R RAD.	Z MAX.	S CHAMFER REF.	THREAD	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT COATING OR SOLID FILM LUBE	WITH COATING OR SOLID FILM LUBE								W HEX.	T DEPTH	Y DIA.		
-5	5/32	.2612 .2564	.312	.1635 .1630	.1635 .1625	.1595 .1570	.004	.0410 .0390	.025 .015	.010	1/32" x 45°	8-32UNJC-3A Modified	.0645 .0635	.135 .115	.090 .075	5,280	1,700
-6	3/16	.3016 .2966	.325	.1895 .1890	.1895 .1885	.1840 .1810	.005	.0470 .0450	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0806 .0791	.135 .115	.119 .104	7,060	2,600
-8	1/4	.3948 .3898	.395	.2495 .2490	.2495 .2485	.2440 .2410	.006	.0610 .0590	.030 .020	.015	1/32" x 45°	1/4-28UNJF-3A Modified	.0967 .0947	.150 .130	.142 .122	12,260	4,400
-10	5/16	.4739 .4689	.500	.3120 .3115	.3120 .3110	.3060 .3020	.007	.0680 .0660	.040 .030	.015	3/64" x 45°	5/16-24UNJF-3A Modified	.1295 .1270	.170 .150	.180 .160	19,160	7,000
-12	3/8	.5604 .5554	.545	.3745 .3740	.3745 .3735	.3680 .3640	.008	.0780 .0760	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1582	.200 .180	.217 .197	27,600	10,000
-14	7/16	.6680 .6620	.635	.4370 .4365	.4370 .4360	.4310 .4260	.009	.0969 .0944	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	37,500	12,500
-16	1/2	.7540 .7480	.685	.4995 .4990	.4995 .4985	.4930 .4880	.010	.1068 .1043	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	49,100	18,000
-18	9/16	.8380 .8310	.770	.5615 .5610	.5615 .5605	.5550 .5500	.010	.1160 .1131	.050 .040	.022	1/16" x 45°	9/16-18UNJF-3A Modified	.2555 .2520	.260 .240	.326 .306	62,100	22,500
-20	5/8	.9250 .9180	.825	.6240 .6235	.6240 .6230	.6180 .6120	.010	.1260 .1230	.050 .040	.022	1/16" x 45°	5/8-18UNJF-3A Modified	.2555 .2520	.260 .240	.326 .306	76,700	28,000
-24	3/4	1.0970 1.0850	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.012	.1460 .1410	.050 .040	.022	1/16" x 45°	3/4-16UNJF-3A Modified	.3185 .3150	.330 .300	.398 .378	110,400	40,200
-28	7/8	1.3197 1.3030	1.210	.8740 .8735	.8740 .8730	.8680 .8610	.014	.1870 .1800	.050 .040	.022	5/64" x 45°	7/8-14UNJF-3A Modified	.3820 .3780	.400 .370	.471 .451	150,300	54,000
-32	1	1.5186 1.4995	1.390	.9990 .9985	.9990 .9980	.9930 .9860	.014	.2180 .2100	.050 .040	.022	5/64" x 45°	1-12UNJF-3A Modified	.5100 .5040	.520 .490	.618 .598	196,300	72,000

SEE COLLAR STANDARDS FOR COLLAR STRENGTHS. LOWER STRENGTH (PIN OR COLLAR) DETERMINES SYSTEM STRENGTH.

- GENERAL NOTES:**
- Head edge out of roundness shall not exceed "F".
 - Concentricity: Conical surface of head to "D" diameter within .005 FIR.
 - "H" is dimensioned from maximum "D" diameter.
 - Dimensions to be met after finish.
 - Surface texture per ANSI B46.1.
 - Hole preparation per NAS618.
 - Maximum "D" diameter may be increased by .0002 to allow for solid film or coating application.
 - Use HL751 for oversize replacement.
 - Curved or flat edge manufacturer's option.
- MATERIAL:** PH13-8Mo stainless steel per Spec. AMS5629.
HEAT TREAT: 125,000 psi shear minimum.
FINISH:
- HL645(-)(-) = Solid film lube per Spec. MIL-L-46010, Type 1.
 - HL645AP(-)(-) = Hi-Kote 1 aluminum coating per Hi-Shear Spec. 294 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL645LL(-)(-) = Passivate per Hi-Shear Spec. 258 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL645TB(-)(-) = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL645YE(-)(-) = Passivate per Hi-Shear Spec. 258, white paint on head, and cetyl alcohol lube per Hi-Shear Spec. 305.
- SPECIFICATION:** Hi-Lok Product Specification 342.

HOW TO ORDER
EXAMPLES:

Pin Part Number Only
HL645-8-8
 |—— 8/16 or 1/2 Maximum Grip Length
 |—— 8/32 or 1/4 Nominal Diameter Pin
 |—— Pin Part Number

Pin and Collar Assembly Part Number Combination
HL64579-8-8
 |—— Size and Grip Length, See Above Example
 |—— Collar Part Number
 |—— Pin Part Number

"Hi-Lok" and "HL" are Internationally registered trademarks of Hi-Shear Corporation

DRAWN Van	DATE 12-20-69	PIN 100° FLUSH SHEAR HEAD PH13-8Mo STAINLESS STEEL 1/16" GRIP VARIATION
APPROVED J.M.	DATE 12-23-69	
REVISION (11)	DATE D.P.S. 4-16-91	DRAWING NUMBER HL645

HL645