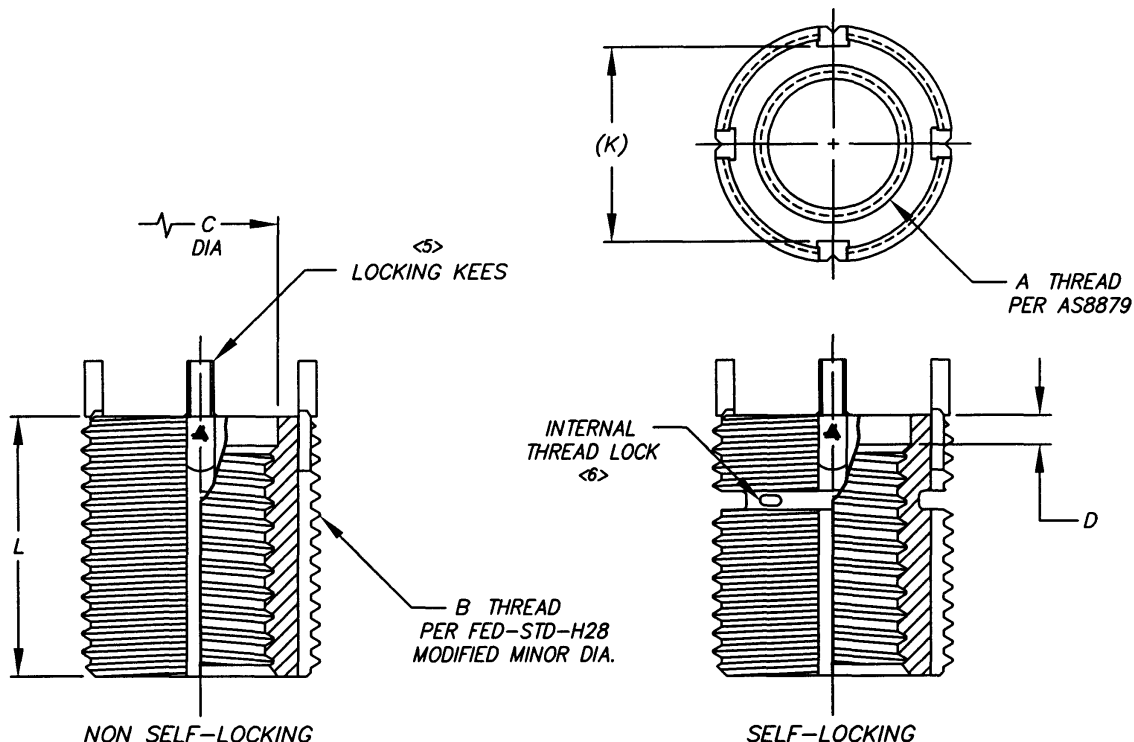


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NOTES:

<1> MATERIAL CODES:

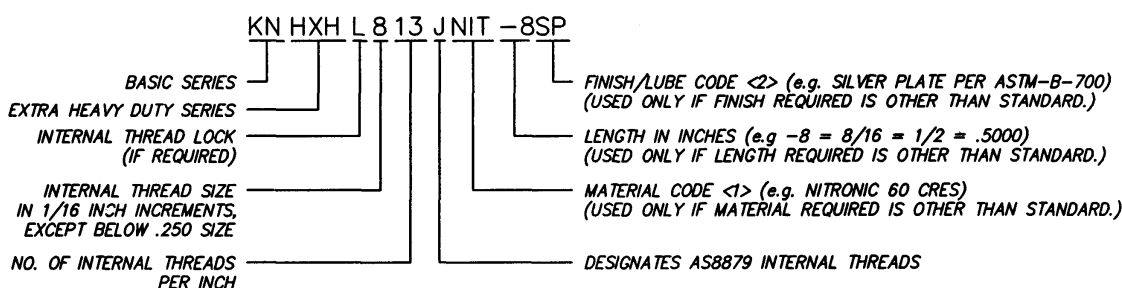
- 1.1 STANDARD MATERIAL IS 303 CRES PER AMS 5640 OR ASTM-A-582, OR 303SE PER AMS 5640, AMS 5738 OR ASTM-A-582.
- 1.2 OPTIONAL MATERIALS WITH THEIR DESIGNATED FINISH:
 - F = C1215 CARBON STEEL OR EQUIVALENT. COATED WITH PARKERIZE.
 - M = CHROME MOLY STEEL, TYPE 4140 PER AMS 6382 OR TYPE 8740 PER AMS 6322. 125 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY TWO NON-PARALLEL DASH MARKS ON TOP OF INSERT. CAD PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.
 - MX = CHROME MOLY STEEL, TYPE 4140 PER AMS 6382 OR TYPE 8740 PER AMS 6322. 160 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY TWO PARALLEL DASH MARKS ON TOP OF INSERT. CAD PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.
 - NIT = ARMC0, NITRONIC 60 CRES PER ASTM-A-479 OR AMS 5848. PASSIVATE PER AMS 2700. IDENTIFIED BY FOUR (4) DASH MARKS APPROXIMATELY 90° APART.
 - T = A286 CRES PER AMS 5731, AMS 5732 OR AMS 5737. 140 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY ONE DASH MARK ON TOP OF INSERT. PASSIVATE PER AMS 2700.
 - TX = A286 CRES PER AMS 5731. 160 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY LETTER "H" ON TOP OF INSERT. PASSIVATE PER AMS 2700.
- 1.3 KEE MATERIAL FOR ALL STANDARD AND SPECIAL MATERIAL INSERTS IS 302 CRES PER ASTM-A-580 (CHEMISTRY ONLY) CONTACT ENGINEERING FOR OPTIONAL MATERIALS.

<2> FINISH CODES:

- NO CODE = PASSIVATE PER AMS 2700.
- SP = SILVER PLATE PER ASTM-B-700, TYPE I, GRADE A, CLASS N.
- SX = CAD PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.
- SY = CAD PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3.
- SZ = CAD PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.

DRY FILM LUBRICANT ON ALL LOCKING INSERTS UNLESS SPECIFIED BY ADDING "NE" TO FINISH CODE.

3. PART NUMBER EXAMPLE: KNHXHL813JNIT-8SP



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APPROVED DATE 18 FEB 99	CURRENT DESIGN ACTIVITY: ARCONIC	TITLE: - KEENSERT INSERT - EXTRA HEAVY DUTY INSERTS KNHXH SERIES	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE G 11/15/06	Arconic Fastening Systems Tridair Products 3000 W. Lomita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO. KNHXH(L)
DAF NUMBER 75951		ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	SHEET 1 OF 5

Camloc . Delron . Deutsch . Huck . K-Fast . Kaynar . Microdot . RAM . Rosan . Screwcorp . Tridair . Voi-Shan


TABLE 1

PART NUMBER	DIMENSIONS							
	A INTERNAL THREAD CLASS 3B	B EXTERNAL THREAD		MIN. SHEAR ENGAG. AREA in ²	C DIA ±.005	D	(K)	L ±.015
		CLASS 2A	MOD. MINOR DIA.					
KNHXH0632J	.1380-32 UNJC	.3125-18 UNC	.256 .249	.0855	.144	.040	.220	.250
KNHXHL0632J				.0542				
KNHXH0832J	.1640-32 UNJC	.3750-16 UNC	.320 .312	.1901	.172		.283	
KNHXHL0832J				.1156				
KNHXH1032J	.1900-32 UNJF	.4375-14 UNC	.383 .375	.2299	.196		.344	.312
KNHXHL1032J				.1403				
KNHXH1024J	.1900-24 UNJC			.2299				
KNHXHL1024J				.1403				
KNHXH428J	.2500-28 UNJF	.5000-13 UNC	.440 .432	.2997	.257		.407	.375
KNHXHL428J				.2005				
KNHXH420J	.2500-20 UNJC			.2997		.070	.407	.375
KNHXHL420J				.2005				
KNHXH524J	.3125-24 UNJF	.5625-12 UNC	.503 .495	.4163	.316		.469	.437
KNHXHL524J				.3029				
KNHXH518J	.3125-18 UNJC			.4163			.469	.437
KNHXHL518J				.3029				
KNHXH624J	.3750-24 UNJF	.6250-11 UNC	.565 .551	.5584	.380		.532	.500
KNHXHL624J				.4243				
KNHXH616J	.3750-16 UNJC			.5584			.532	.500
KNHXHL616J				.4243				
KNHXH720J	.4375-20 UNJF	.6875-11 NS	.625 .615	.8000	.445		.595	.625
KNHXHL720J				.6498				
KNHXH714J	.4375-14 UNJC			.8000			.595	.625
KNHXHL714J				.6498				
KNHXH820J	.5000-20 UNJF	.8125-16 UN	.752 .744	1.0293	.507		.720	.688
KNHXHL820J				.8642				
KNHXH813J	.5000-13 UNJC			1.0293			.720	.688
KNHXHL813J				.8642				
KNHXH918J	.5625-18 UNJF	.8750-14 UNF	.815 .807	1.3761	.580		.782	.812
KNHXHL918J				1.1131				
KNHXH912J	.5625-12 UNJC			1.3761			.782	.812
KNHXHL912J				1.1131				
KNHXH1018J	.6250-18 UNJF	1.0000-12 UNF	.924 .916	1.6420	.640	.100	.850	.875
KNHXHL1018J				1.2770				
KNHXH1011J	.6250-11 UNJC			1.6420			.850	.875
KNHXHL1011J				1.2770				
KNHXH1216J	.7500-16 UNJF	1.2500-12 UNF	1.175 1.165	2.7966	.763		1.100	1.125
KNHXHL1216J				2.5505				
KNHXH1210J	.7500-10 UNJC			2.7966			1.100	1.125
KNHXHL1210J				2.5505				
KNHXH1414J	.8750-14 UNJF	1.3750-12 UNF	1.300 1.290	3.4652	.888		1.225	1.250
KNHXHL1414J				3.2769				
KNHXH1409J	.8750-9 UNJC			3.4652			1.225	1.250
KNHXHL1409J				3.2769				
KNHXH1612J	1.0000-12 UNJF	1.5000-12 UNF	1.424 1.416	4.2374	1.015		1.350	1.375
KNHXHL1612J				4.2135				
KNHXH1608J	1.0000-8 UNJC			4.2374			1.350	1.375
KNHXHL1608J				4.2135				

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APPROVED DATE 18 FEB 99	CURRENT DESIGN ACTIVITY:  ARCONIC	TITLE: - KEENSERT INSERT - EXTRA HEAVY DUTY INSERTS KNHXH SERIES	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE G 11/15/06 CA	Arconic Fastening Systems		SALES DRAWING NO.
DAF NUMBER 75951	Tridair Products 3000 W. Lomita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	KNHXH(L)
		ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	SHEET 2 OF 5

Camloc . Delron . Deutsch . Huck . K-Fast . Kaynar . Microdot . RAM . Rosan . Screwcorp . Tridair . Voi-Shan

TABLE I (CONTINUED)

PART NUMBER	DIMENSIONS							
	A INTERNAL THREAD CLASS 3B	B EXTERNAL THREAD		MIN. SHEAR ENGAG. AREA in ²	C DIA ±.005	D	(K)	L ±.015
		CLASS 2A	MOD. MINOR DIA.					
KNHXH1812J	1.125-12 UNJF	1.625-12 UN	N/A	5.117	1.140	.100	1.475	1.625
KNHXHL1812J				5.219				1.750
KNHXH1807J	1.125-7 UNJ		N/A	5.117				1.625
KNHXHL1807J				5.219				1.750
KNHXH2012J	1.250-12 UNJF	1.750-12 UN	N/A	5.991	1.265	.100	1.596	1.750
KNHXHL2012J				6.065				1.875
KNHXH2007J	1.250-7 UNJ		N/A	5.991				1.750
KNHXHL2007J				6.065				1.875


TABLE II

PART NUMBER	INSTALLATION DATA					REMOVAL DATA		
	TAP DRILL DIA	C'SINK DIA +.010 -.000	THREAD TAP		INSTALLATION TOOL PART NUMBER	DRILL		
			SIZE CLASS 2B	MIN. DEPTH		SIZE	DEPTH	
KNHXH0632J	.276	.323	.3125-18 UNC	.31	THXHD 0632L	7/32	1/8	
KNHXHL0632J	.271							
KNHXH0832J	.336	.385	.3750-16 UNC	.37	THXHD 0832L	9/32		
KNHXHL0832J	.331							
KNHXH1032J	.401 .396	.447	.4375-14 UNC	.44	THXHD 1032L	11/32		
KNHXHL1032J							THXHD 1024L	
KNHXH1024J					THXHD 1024L			
KNHXHL1024J	THXHD 428L					13/32		
KNHXH428J		.457 .452	.510	.5000-13 UNC	.50		THXHD 420L	
KNHXHL428J	THXHD 524L					15/32		
KNHXH420J		.521 .515					.572	.5625-12 UNC
KNHXHL420J	THXHD 624L					17/32		
KNHXH524J		.583 .577	.635	.6250-11 UNC	.68			
KNHXHL524J	THXHD 720L					19/32		
KNHXH518J		.646 .640					.700	.6875-11 NS
KNHXHL518J	THXHD 820L					23/32		
KNHXH624J		.771 .765	.822	.8125-16 UNF	.75			
KNHXHL624J	THXHD 813L							
KNHXH616J		THXHD 813L						
KNHXHL616J	THXHD 813L							
KNHXH720J		.646 .640	.700	.6875-11 NS	.68	THXHD 720L		
KNHXHL720J	THXHD 714L							
KNHXH714J		THXHD 820L						
KNHXHL714J	THXHD 813L							
KNHXH820J		.771 .765	.822	.8125-16 UNF	.75	THXHD 820L		
KNHXHL820J	THXHD 813L							
KNHXH813J		THXHD 813L						
KNHXHL813J	THXHD 813L							

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REV. LETTER AND DATE G-11/15/06 SJD		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	SALES DRAWING NO.
DAF NUMBER 75951				KNHXH(L) SHEET 3 OF 5

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TABLE II (CONTINUED)

PART NUMBER	INSTALLATION DATA				REMOVAL DATA		
	TAP DRILL DIA	C'SINK DIA +.010 -.000	THREAD TAP		INSTALLATION TOOL PART NUMBER	DRILL	
			SIZE CLASS 2B	MIN. DEPTH		SIZE	DEPTH
KNHXXH918J	.833 .827	.885	.8750-14 UNF	.94	THXHD 918L	25/32	3/16
KNHXXHL918J					THXHD 912L		
KNHXXH912J							
KNHXXHL912J							
KNHXXH1018J	.942 .936	1.020	1.0000-12 UNF	1.00	THXHD 1018L	27/32	
KNHXXHL1018J							
KNHXXH1011J							
KNHXXHL1011J							
KNHXXH1216J	1.192 1.186	1.270	1.2500-12 UNF	1.31	THXHD 1216L	1-3/32	
KNHXXHL1216J				1.44			
KNHXXH1210J				1.31	THXHD 1210L		
KNHXXHL1210J				1.44			
KNHXXH1414J	1.317 1.311	1.395	1.3750-12 UNF	1.44	THXHD 1414L	1-7/32	
KNHXXHL1414J				1.56			
KNHXXH1409J				1.44	THXHD 1409L		
KNHXXHL1409J				1.56			
KNHXXH1612J	1.442 1.436	1.520	1.5000-12 UNF	1.56	THXHD 1612L	1-11/32	
KNHXXHL1612J				1.68			
KNHXXH1608J				1.56	THXHD 1608L		
KNHXXHL1608J				1.68			
KNHXXH1812J	1.567 1.561	1.640	1.625-12 UN	1.810	THXHD 1812L	1.468	
KNHXXHL1812J				1.935			
KNHXXH1807J				1.810	THXHD 1807L		
KNHXXHL1807J				1.935			
KNHXXH2012J	1.677 1.671	1.760	1.750-12 UN	1.935	THXHD 2012L	1.579	
KNHXXHL2012J				2.060			
KNHXXH2007J				1.935	THXHD 2007L		
KNHXXHL2007J				2.060			

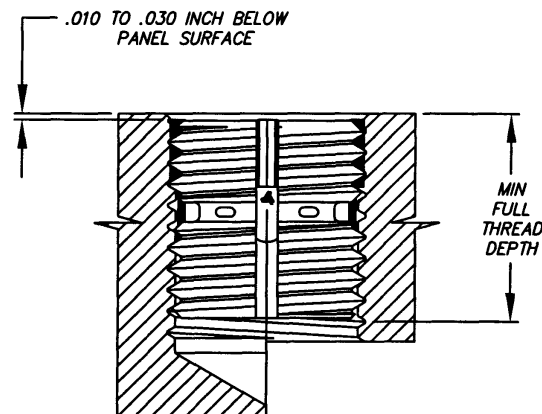
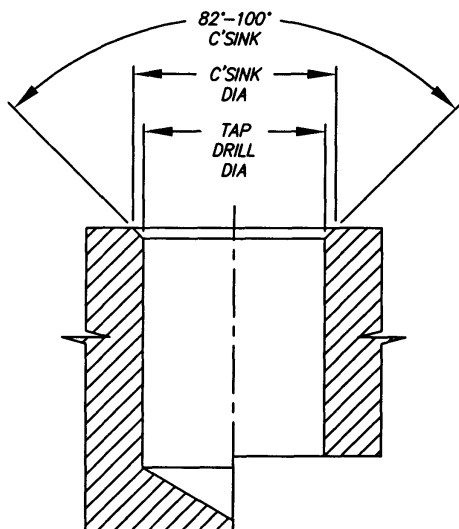
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DAF NUMBER 75551			KNHXXH(L)
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010
			SHEET 4 OF 5

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BLIND HOLE INSTALLATION THRU HOLE INSTALLATION

4. REFER TO SPECIFICATION S-70248 FOR ADDITIONAL INFORMATION REGARDING MATERIAL, FINISH, ETC CODES.
- <5> INSERTS WITH INTERNAL THREAD SIZE .1900 AND UNDER ARE FURNISHED WITH TWO (2) LOCKING KEES. SIZE .2500 AND ABOVE ARE FURNISHED WITH FOUR (4) LOCKING KEES.
- <6> INTERNAL THREAD LOCK PERFORMANCE IS PER MIL-I-45914 SPECIFICATION.
7. CONTACT FAIRCHILD ENGINEERING FOR MORE OPTIONAL MATERIAL, FINISH, ETC CODES.
8. ALL DIMENSIONS APPLY AFTER PLATING BUT PRIOR TO LUBRICATION.
9. INSTALLATION PROCEDURES:
 - 9.1 PREPARE PANEL IN ACCORDANCE WITH THE DIMENSIONS SHOWN IN TABLE II.
 - 9.2 SCREW IN INSERT WITH FINGERS OR INSTALLATION TOOL. INSERT IS DESIGNED TO STOP AT CORRECT DEPTH.
 - 9.3 DRIVE LOCKING KEES DOWN USING THE INSTALLATION TOOL.
10. REMOVAL PROCEDURES:
 - 10.1 USE THE DRILL SIZES AND DEPTHS SPECIFIED IN TABLE II TO REMOVE MATERIAL BETWEEN THE KEES.
 - 10.2 DEFLECT KEES INWARD AND BREAK OFF.
 - 10.3 REMOVE INSERT WITH AN "EASY OUT" TYPE TOOL.

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REV. LETTER AND DATE G 11/15/06 CA		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ± ASME Y14.5M TOLERANCES:	
DAF NUMBER 73951		ANGLES = ±3' DECIMALS .XX = ±.02 .XXX = ±.010	