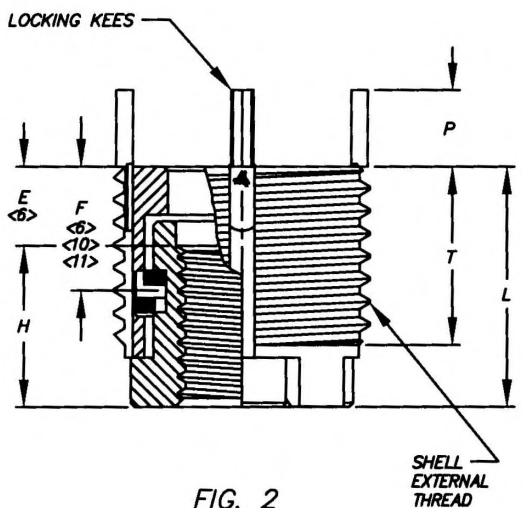
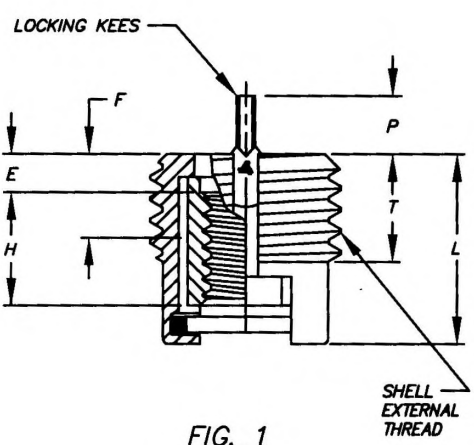
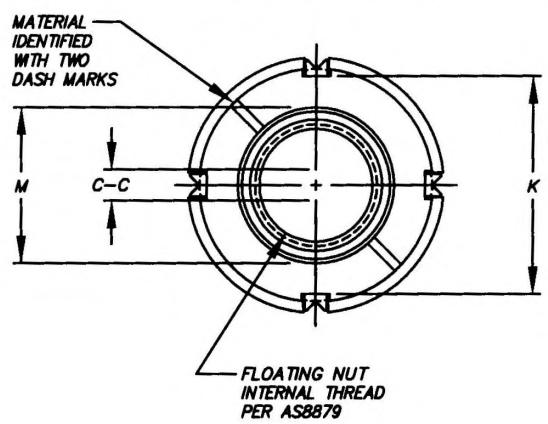
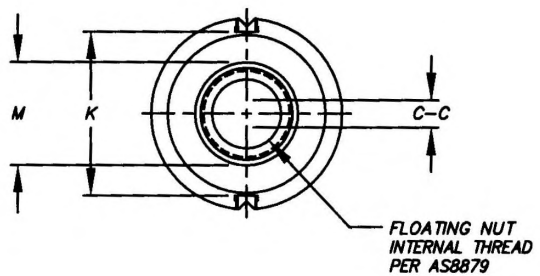




MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE WITHOUT WRITTEN CONSENT OF HOWMET FASTENING SYSTEMS IS ABSOLUTELY PROHIBITED.

THIS DRAWING EMBODIES A CONFIDENTIAL, PROPRIETARY DESIGN & ALL DESIGN, MANUFACTURING, PRODUCTION, USE & SALE RIGHTS REGARDING SAME ARE EXPRESSLY RESERVED.



**FIG. 1**  
FOR SIZE CODES  
0256 THRU 0832  
(KNK SERIES)

**FIG. 2**  
FOR SIZE CODES  
1032 THRU 616  
(KNKD SERIES EXCEPT 524 & 518  
SHALL BE KNK SERIES BUT FIG. 2)

**TABLE I**

SIZE CODE	FIG NO	INTERNAL THREAD ASB879	EXTERNAL THREAD	MODIFIED MINOR DIA ±.004	L ±.015	E TO 1ST THREAD <6>	H INTERNAL THREAD LENGTH	C-C FLOAT MIN	T EXTERNAL THREAD LENGTH	KEES		K	F TO LOCK CENTER <6>	M +.005 - .001
										QTY	P			
0256	1	.086-56UNJC-3B	.2500-28UNF-2A (MOD)	.213	.19	.05	.10	.015	.11	2	.060	.196	.11	N/A
0440	1	.112-40UNJC-3B	.3125-24UNF-2A	STD	.32	.07	.21	.020	.19	2	.110	.220	.16	.135
0632	1	.138-32UNJC-3B	.3750-24UNF-2A	STD	.36	.08	.22	.030	.21	2	.125	.286	.19	.199
0832	1	.164-32UNJC-3B	.3750-24UNF-2A	STD	.36	.08	.22	.030	.21	2	.125	.286	.19	.199
1032	2	.190-32UNJF-3B	.4375-20UNF-2A (MOD)	.396	.40	.15	.25	.040	.29	2	.156	.356	.24	.234
1024	2	.190-24UNJC-3B	.4375-20UNF-2A (MOD)	.396	.40	.15	.25	.040	.29	2	.156	.356	.24	.234
428	2	.250-28UNJF-3B	.5000-20UNF-2A (MOD)	.458	.40	.15	.25	.040	.29	2	.156	.416	<11> .27	.292
420	2	.250-20UNJC-3B	.5000-20UNF-2A (MOD)	.458	.40	.15	.25	.040	.29	2	.156	.416	<11> .27	.292
524	1	.3125-24UNJF-3B	.6250-18UNF-2A (MOD)	.570	.53	.13	.39	.040	.38	4	.187	.532	.26	.358
518	1	.3125-18UNJC-3B	.6250-18UNF-2A (MOD)	.570	.53	.13	.39	.040	.38	4	.187	.532	.26	.358
624	2	.375-24UNJF-3B	.7500-16UNF-2A (MOD)	.686	.65	.20	.45	.040	.51	4	.187	.659	.39	.422
616	2	.375-16UNJC-3B	.7500-16UNF-2A (MOD)	.686	.65	.20	.45	.040	.51	4	.187	.659	.39	.422

APPROVED DATE 05/03/95	CURRENT DESIGN ACTIVITY: Howmet Fastening Systems (HFS)	TITLE: KEENSERT FLOATING INSERT	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE AD 04/02/20	TORRANCE OPERATIONS		SALES DRAWING NO.
DAF NUMBER 119239	Tridair Products 3000 W. Lamita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	KNK(D)(L)(J)( SHEET 1 OF 2

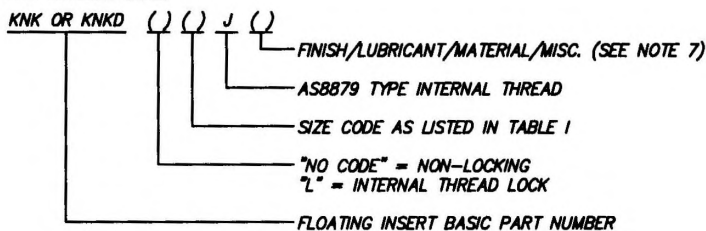
ANGLES = ±3°  
DECIMALS .XX = ±.02  
.XXX = ±.010



TABLE II

SIZE CODE	INSTALLATION DATA					REMOVAL DATA	
	TAP DRILL DIA	C'SINK DIA +.010 -.000	THREAD TAP		INSTALLATION TOOL PART NUMBER	DRILL	
			SIZE UNF-2B	MIN DEPTH FULL THD		SIZE	DEPTH
0256	.227-.231	.250	.2500-28	.12	TK 02	#8 (.199)	3/32
0440	.270-.276	.323	.3125-24	.31	TK 04	7/32	1/8
0632	.331-.336	.385	.3750-24	.38	TK 06	9/32	1/8
0832	.331-.336	.385	.3750-24	.38	TK 08	9/32	1/8
1032	.405-.410	.447	.4375-20	.39	TK 010	11/32	5/32
1024	.405-.410	.447	.4375-20	.39	TK 010	11/32	5/32
428	.467-.472	.510	.5000-20	.39	TK 4	13/32	5/32
420	.467-.472	.510	.5000-20	.39	TK 4	13/32	5/32
524	.577-.583	.635	.6250-18	.50	TK 5	17/32	3/16
518	.577-.583	.635	.6250-18	.50	TK 5	17/32	3/16
624	.702-.708	.760	.7500-16	.62	TK 6	21/32	3/16
616	.702-.708	.760	.7500-16	.62	TK 6	21/32	3/16

PART NUMBER CODE:



NOTES:

1. MATERIAL:
  - 1.1 NUT AND SHELL: FIG. 1 PARTS: 303 CRES PER ASTM A582 OR AMS 5640.  
FIG. 2 PARTS: 4140 PER AMS 5626 OR AMS 6382.
  - 1.2 LOCKING KEES: 302 CRES PER ASTM A580 (CHEMISTRY ONLY).
  - 1.3 RETAINING RINGS: 302 CRES PER ASTM A580 OR ASTM A313 (CHEMISTRY ONLY).
2. HEAT TREAT:
  - 2.1 FIG. 1 PARTS: SHELL & NUT: NONE.
  - 2.2 FIG. 2 PARTS: NUT: 160 KSI MIN PER AMS 2759.  
SHELL: 160 KSI MIN PER AMS 2759.
3. FINISH:
  - 3.1 FIG. 1 PARTS: SHELL & NUT: PASSIVATE PER AMS 2700.
  - 3.2 FIG. 2 PARTS: SHELL & NUT: CAD PLATE PER AMS-QQ-P-416; TYPE I, CLASS 3 (FOR STANDARD FINISH AND SX CODE), TYPE II, CLASS 3 (FINISH CODE SY) AND TYPE II, CLASS 2 (FINISH CODE SZ).
  - 3.3 ALL LOCKING KEES & RETAINING RINGS: PASSIVATE PER AMS 2700.
4. LUBRICATION: DRY FILM LUBRICANT PER ASS272, TYPE I (APPLIED TO NUT COMPONENT OF SELF-LOCKING INSERTS).
5. INTERNAL THREAD LOCK, TENSILE, PUSH-OUT AND TORQUE-OUT SHALL BE PER NASM25027.
- <6> DISTANCE TO FIRST INTERNAL THREAD AND DISTANCE TO INTERNAL THREAD LOCK MEASURED WITH NUT IN RETAINED POSITION.
- <7> FOR VARIOUS MATERIALS, CONTACT HFS ENGINEERING DEPARTMENT.  
NO CODE AFTER "J" IN PART NUMBER INDICATES STANDARD MATERIAL AND FINISH PER NOTE 1 AND 3 ABOVE.
8. FOR ADDITIONAL CODES, REFER TO S-70248.
9. INSTALLATION PROCEDURE:
  - 9.1 PREPARE PANEL PER THE DIMENSIONS IN TABLE II. COUNTERSINK ANGLE IS 82°-100°.
  - 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 PROCEDURE:
  - 10.1 USE DRILL SIZE AND DEPTH SPECIFIED IN TABLE TO REMOVE MATERIAL BETWEEN LOCKING KEES.
  - 10.2 DEFLECT LOCKING KEES INWARD AND BREAK OFF.
  - 10.3 REMOVE INSERT WITH AN "EASY-OUT" TYPE TOOL.
- <11> EXCEPTION: LOCKING FEATURE FOR KNKDL428 AND KNKDL420 ONLY ARE LOCATED ON NUT O.D. INSTEAD OF NUT GROOVE AS SHOWN.

MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE WITHOUT WRITTEN CONSENT OF HOWMET FASTENING SYSTEMS IS ABSOLUTELY PROHIBITED.

THIS DRAWING EMBODIES A CONFIDENTIAL, PROPRIETARY DESIGN & ALL DESIGN, MANUFACTURING PRODUCTION, USE & SALE RIGHTS REGARDING SAME ARE EXPRESSLY RESERVED.

APPROVED DATE 05/03/95	CURRENT DESIGN ACTIVITY: Howmet Fastening Systems (HFS) TORRANCE OPERATIONS	TITLE: KEENSERT FLOATING INSERT	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE AD 04/03/20	Tridair Products 3000 W. Lomita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO.
DAF NUMBER 119239		ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	KNK(D)(L)( J )  SHEET 2 OF 2