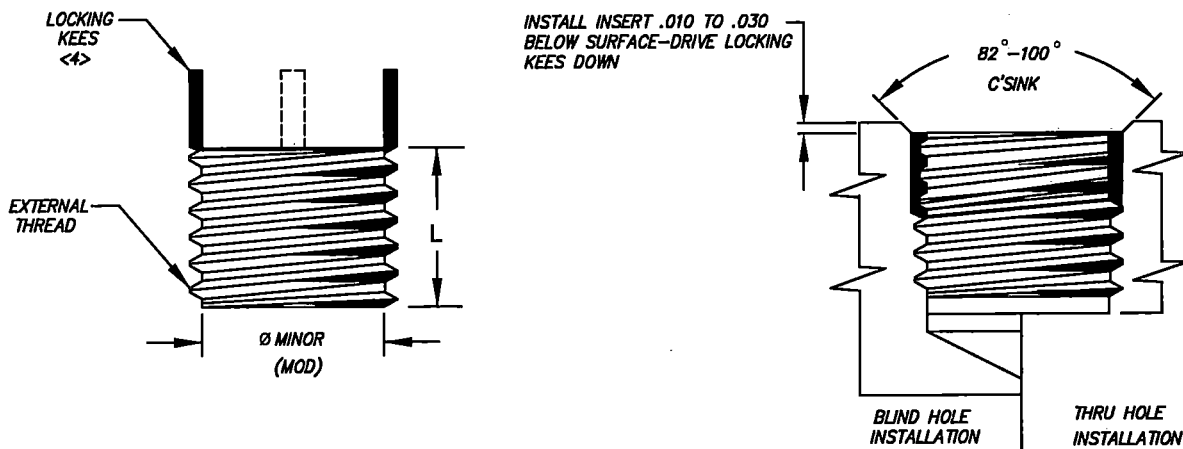




HOWMET
AEROSPACE

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

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TABLE

PART NO.	DIMENSIONS			INSTALLATION DATA					REMOVAL DATA	
	EXTERNAL THREAD		L	TAP DRILL DIA.	C'SINK DIA. +.010 - .000	THREAD TAP		INSTALLATION TOOL PART NUMBER	DRILL	
	SIZE CLASS A	SHEAR ENGAG.				SIZE UNF-2B	MIN. DEPTH. FULL THD.		SIZE	DEPTH
KNJ5	.3125-18	.1517	.31	.272	.323	.3125-18	.37	TJ5	.2187	.125
KNJ6	.3750-16	.1901	.31	.332	.385	.3750-16	.37	TJ6	.2812	
KNJ7	.4375-14	.2842	.37	.397	.447	.4375-14	.43	TJ7	.3437	
KNJ8	.500-13	.3588	.43	.453	.510	.500-13	.50	TJ8	.4062	
KNJ9	.5625-12	.4975	.50	.516	.572	.5625-12	.56	TJ9	.4687	.1875
KNJ10	.625-11	.7172	.62	.578	.635	.625-11	.68	TJ10	.5312	
KNJ11	.6875-11 NS	.8884	.68	.641	.700	.6875-11 NS	.75	TJ11	.5937	
KNJ13	.8125-16	.2493	.81	.766	.822	.8125-16	.94	TJ13	.7187	
KNJ14	.875-14	1.4866	.87	.828	.885	.8750-12	1.00	TJ14	.7812	.3125
KNJ18	1.125-12	2.4901	1.12	1.062	1.145	1.125-12	1.31	TJ18	.9687	
KNJ20	1.250-12	3.1370	1.25	1.187	1.270	1.250-12	1.44	TJ20	1.0937	
KNJ22	1.375-12	3.8381	1.37	1.312	1.395	1.375-12	1.56	TJ22	1.2187	

NOTES:

<1> MATERIAL CODES:

- 1.1 STANDARD MATERIAL IS 303 CRES PER AMS5640 OR ASTM A582, OR 303SE PER AMS5640, AMS5738 OR ASTM A582.
- 1.2 OPTIONAL MATERIALS WITH THEIR DESIGNATED FINISH:
 - E = 7075-T6 ALUMINUM PER AMS-QQ-A-225/9.
 - EX = 5083-0 OR 5083-H111 PER AMS-QQ-A-200/4 ALUMINUM ALLOY
 - F = C1215 CARBON STEEL OR EQUIVALENT. COATED WITH PARKERIZE.
 - M = CHROME MOLY STEEL, TYPE 4140 PER AMS6382 OR TYPE 8740 PER AMS6322. 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 AMS6382 OR TYPE 8740 PER AMS6322. 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 = ARMCO, NITRONIC 60 CRES PER ASTM A479 OR AMS5848. PASSIVATE PER AMS 2700. IDENTIFIED BY FOUR (4) DASH MARKS APPROXIMATELY 90° APART.
 - N = 718 INCONEL PER AMS5662 OR AMS5663. 180 KSI MINIMUM TENSILE STRENGTH.
 - T = A286 CRES PER AMS5731, AMS5732 OR AMS5737. 140 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY ONE DASH MARK ON TOP OF INSERT. PASSIVATE PER AMS2700.
 - TX = A286 CRES PER AMS5731. 160 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY LETTER "H" ON TOP OF INSERT. PASSIVATE PER AMS2700.

1.3 KEE MATERIAL FOR ALL STANDARD AND SPECIAL MATERIAL INSERTS IS 302 CRES PER ASTM A580 (CHEMISTRY ONLY). CONTACT ENGINEERING FOR OPTIONAL KEE MATERIALS.

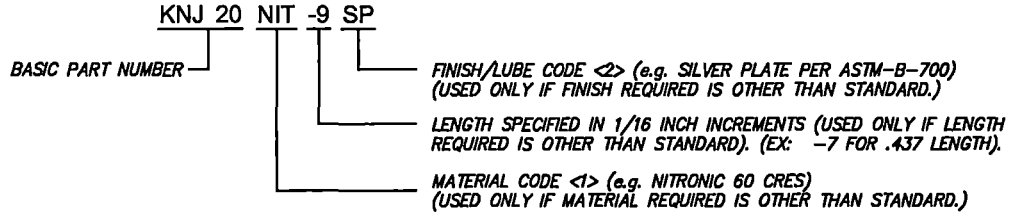
APPROVED DATE 08/21/13	CURRENT DESIGN ACTIVITY: Howmet Fastening Systems (HFS)	TITLE: - KEENSERT INSERT - SOLID INSERTS KNJ SERIES	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE C 06/01/20 CA	TORRANCE OPERATIONS		SALES DRAWING NO.
DAF NUMBER 119437	Tridair Products 3000 W. Lomita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	KNJ SERIES
		ANGLES = ±3° DECIMALS .XX = ±.02 XXX = ±.010	SHEET 1 OF 2



<2> FINISH CODES:

- NO CODE = PASSIVATE PER AMS2700.
- SP = SILVER PLATE PER ASTM B700, 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.

3. PART NUMBER EXAMPLE: KNJ20NIT-9SP



<4> INSERTS WITH EXTERNAL THREAD .4375 AND ABOVE FURNISHED WITH 4 LOCKING KEES.

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REV. LETTER AND DATE C 06/01/20 <i>CA</i>	TORRANCE OPERATIONS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO.
DAF NUMBER 119437	Tridair Products 3000 W. Lomita Blvd. Torrance, California 90505	ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	KNJ SERIES SHEET 2 OF 2