

TABLE I

PART NUMBER	DIMENSIONS				
	A INTERNAL THREAD <2> CLASS 5H	B EXTERNAL THREAD <2> CLASS 4h	MIN. SHEAR ENGAG. AREA mm <sup>2</sup>	L ± 0,3	C REF
KNM5x0,8	M5x0,8	M8x1,25	104,9	8,0	7,6
KNML5x0,8			83,1		
KNM5x0,5	M5x0,5	M8x1,25	104,9	8,0	7,0
KNML5x0,5			83,1		
KNM6x1,0	M6x1,0	M10x1,25	177,7	10,0	8,2
KNML6x1,0			152,7		
KNM6x0,75	M6x0,75	M10x1,25	177,7	10,0	7,3
KNML6x0,75			152,7		
KNM8x1,25	M8x1,25	M12x1,25	266,7	12,0	9,5
KNML8x1,25			242,5		
KNM8x1,0	M8x1,0	M12x1,25	266,7	12,0	9,0
KNML8x1,0			242,5		
KNM10x1,5	M10x1,5	M14x1,5	341,6	14,0	10,0
KNML10x1,5			316,4		
KNM10x1,25	M10x1,25	M14x1,5	341,6	14,0	9,5
KNML10x1,25			316,4		
KNM12x1,75	M12x1,75	M16x1,5	470,2	16,0	11,20
KNML12x1,75			441,4		
KNM12x1,25	M12x1,25	M16x1,5	470,2	16,0	10,20
KNML12x1,25			441,4		
KNM14x1,5	M14x1,5	M18x1,5	608,5	18,0	10,7
KNML14x1,5			561,8		
KNM16x1,5	M16x1,5	M20x1,5	770,5	20,0	12,4
KNML16x1,5			724,4		

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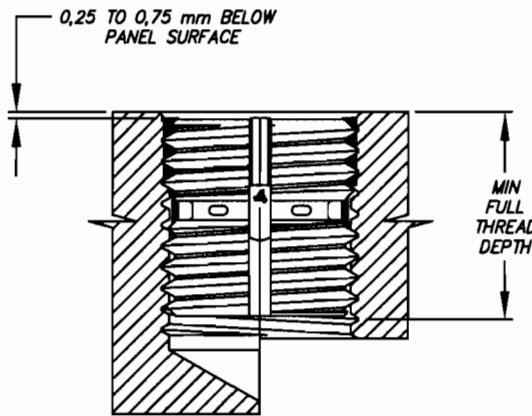
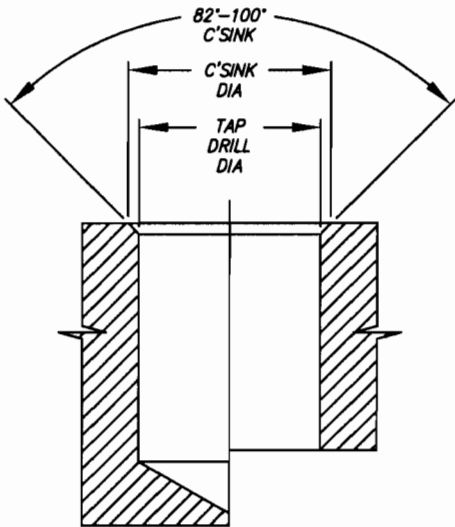
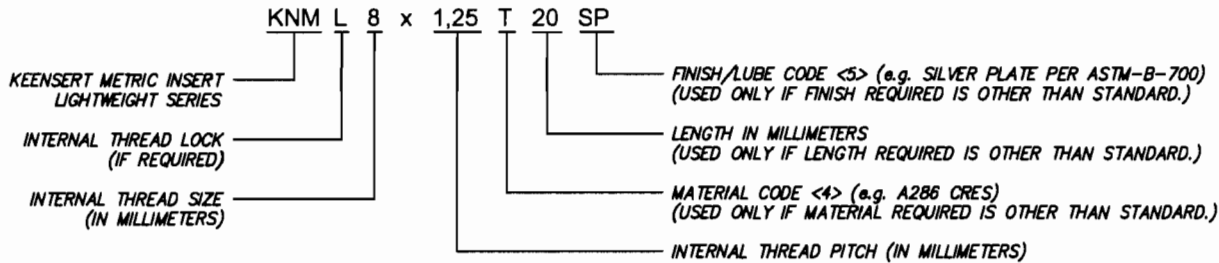
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APPROVED DATE 24 FEB 99	CURRENT DESIGN ACTIVITY: <b>Alcoa Fastening Systems</b> 	TITLE: - KEENSERT INSERT - LIGHTWEIGHT, METRIC	CURRENT DESIGN ACTIVITY: CAGE CODE: 29372
REV. LETTER AND DATE H 10/20/10	<b>Tridair Products</b> 3000 W. Lomita Blvd. Torrance, California 90505	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO.
DAF NUMBER 94282		ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	KNM(L)
			SHEET 1 OF 3

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
- <2> THREADS ARE PER BRITISH STANDARD 3643. (I.S.O.)
- <3> INSERTS WITH INTERNAL THREAD SIZE 6 AND UNDER ARE FURNISHED WITH 2 LOCKING KEES. SIZE 8 AND ABOVE SIZES ARE FURNISHED WITH 4 LOCKING KEES.
- <4> MATERIAL CODES:
  - 4.1 STANDARD MATERIAL IS 303 CRES PER AMS 5640 OR ASTM-A-582, OR 303SE PER AMS 5640, AMS 5738 OR ASTM-A-582.
  - 4.2 OPTIONAL MATERIALS WITH THEIR DESIGNATED FINISH:
    - M = CHROME MOLY STEEL, TYPE 4140 PER AMS 5626 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 5626 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 = ARMCO, NITRONIC 60 CRES PER ASTM-A-479 OR AMS 5848. PASSIVATE PER AMS 2700. IDENTIFIED BY FOUR (4) DASH MARKS APPROXIMATELY 90° APART.
    - SE = 316 CRES PER AMS 5648 OR ASTM A320. IDENTIFIED BY 3 PUNCH MARKS.
    - 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, AMS 5732 OR AMS 5737. 160 KSI MINIMUM TENSILE STRENGTH. IDENTIFIED BY LETTER "H" ON TOP OF INSERT. PASSIVATE PER AMS 2700.
    - TB = 6Al-4V TITANIUM ALLOY PER AMS 4930 OR AMS 4967. 160 KSI MINIMUM TENSILE STRENGTH. THIS MATERIAL CODE IS ONLY AVAILABLE FOR NON-LOCKING PARTS.
    - F = CARBON STEEL, C1215, C1214 OR 83-420 PER ASTM A108. FINISH SHALL BE PARKERIZE.
  - 4.3 KEE MATERIAL FOR ALL STANDARD AND SPECIAL MATERIAL INSERTS IS 302 CRES PER ASTM-A-580 (CHEMISTRY ONLY). CONTACT AFS ENGINEERING FOR OPTIONAL KEE MATERIALS.
- <5> FINISH CODES:
  - NO CODE= PASSIVATE PER AMS 2700.
  - SP = SILVER PLATE PER ASTM-B-700, TYPE 1, 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.
  - ZB = ZINC PLATE (BLUE BRITE)
  - DRY FILM LUBRICANT ON ALL LOCKING INSERTS UNLESS SPECIFIED BY ADDING "NE" TO FINISH CODE.

6. PART NUMBER EXAMPLE: KNML8x1,25T20SP



BLIND HOLE INSTALLATION THRU HOLE INSTALLATION

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			SHEET 2 OF 3

TABLE II

PART NUMBER	INSTALLATION DATA				REMOVAL DATA		
	TAP DRILL DIA	C'SINK DIA	THREAD TAP		INSTALLATION TOOL PART NUMBER	DRILL	
			SIZE CLASS 6H	MIN. DEPTH		SIZE	DEPTH
KNM5x0,8	7,000	8,50	M8x1,25	9,5	TM-5	5,50	4,00
KNML5x0,8	6,875	8,25					
KNM5x0,5	7,000	8,50	M8x1,25	9,5	TM-5	5,50	
KNML5x0,5	6,875	8,25					
KNM6x1,0	8,900	10,50	M10x1,25	11,5	TM-6	7,50	4,75
KNML6x1,0	8,775	10,25					
KNM6x0,75	8,900	10,50	M10x1,25	11,5	TM-6	7,50	
KNML6x0,75	8,775	10,25					
KNM8x1,25	10,900	12,50	M12x1,25	13,5	TM-8	9,50	
KNML8x1,25	10,775	12,25					
KNM8x1,0	10,900	12,50	M12x1,25	13,5	TM-8	9,50	
KNML8x1,0	10,775	12,25					
KNM10x1,5	12,930	14,50	M14x1,5	15,5	TM-10	11,50	
KNML10x1,5	12,775	14,25					
KNM10x1,25	12,930	14,50	M14x1,5	15,5	TM-10	11,50	
KNML10x1,25	12,775	14,25					
KNM12x1,75	14,880	16,50	M16x1,5	17,5	TM-12	13,50	
KNML12x1,75	14,725	16,25					
KNM12x1,25	14,880	16,50	M16x1,5	17,5	TM-12	13,50	
KNML12x1,25	14,725	16,25					
KNM14x1,5	16,865	18,491	M18x1,5	20,5	TM-14	15,49	
KNML14x1,5	16,713	18,237					
KNM16x1,5	18,877	20,500	M20x1,5	22,5	TM-20	17,50	
KNML16x1,5	18,725	20,250					

7. CONTACT AFS ENGINEERING FOR MORE OPTIONAL MATERIAL, FINISH, ETC CODES.


8. INSTALLATION PROCEDURES:

- 8.1 PREPARE PANEL PER THE DIMENSIONS SHOWN IN TABLE II.
- 8.2 SCREW IN INSERT WITH FINGERS OR INSTALLATION TOOL. INSERT IS DESIGNED TO STOP AT CORRECT DEPTH.
- 8.3 DRIVE LOCKING KEES DOWN USING THE INSTALLATION TOOL.

9. REMOVAL PROCEDURES:

- 9.1 USE THE DRILL SIZES AND DEPTHS SPECIFIED IN TABLE II TO REMOVE MATERIAL BETWEEN THE KEES.
- 9.2 DEFLECT KEES INWARD AND BREAK OFF.
- 9.3 REMOVE INSERT WITH AN "EASY OUT" TYPE TOOL.

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