



## A-K SERIES INSERT PROFILE

The **A-K Series** Insert features a knurled body and a reduced profile head to allow for virtually flush installation. Countersink drilling or dimpling of the parent material can be eliminated. The A-K Series is designed to be used with Grade 5 or Metric Class 8.8/9.8 mating screws.

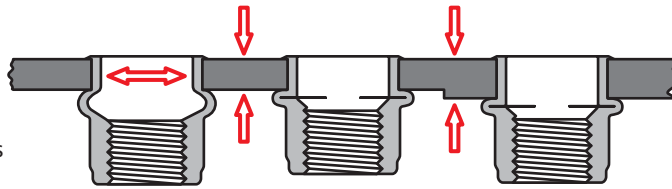
The A-K Series Insert can be installed using AVK's ARO brand pneumatic tools or AVK's SPP™ pneumatic/hydraulic tooling. These tools can be located at any position on your assembly line. The A-K Series Insert can be installed either before or after finish.



## SPINWALL TECHNOLOGY™

### HOW HOLE FILL WORKS FOR YOU

As the A-K Series is installed, the knurled body expands 360° **FILLING THE HOLE**. This feature provides exceptional torque strength and vibration resistance.



The installation tool then continues to install the insert forming a backside flange even in multiple or variable thickness materials **WITHOUT ADJUSTMENT**.

## DESIGN BENEFITS

- **VIRTUALLY FLUSH INSTALLATIONS** are achieved without special hole preparation due to the A-K Series minimal head profile.
- **EXCEPTIONAL TORQUE STRENGTH** is achieved as the insert's knurled body expands **FILLING THE HOLE**.
- **QUALITY INSTALLATIONS** even in variable thickness materials are assured by AVK's spin/spin ARO pneumatic tools and our pneumatic/hydraulic SPP2 Tool™.
- **SUPERIOR THREAD STRENGTH** is provided due to our internal rolled thread manufacturing process.
- **THREADS GAUGE** before and after installation due to the increased cross-sectional thickness of the thread area. Thread dilation is prevented.
- **INVENTORY REDUCTION** is possible because of the A-K Series' wide grip range capacity. It is 2.5 times greater than conventional rivet nuts.
- **SUPERIOR CORROSION RESISTANCE** is provided by our standard zinc/yellow trivalent finish (120 hours. Salt spray to white corrosion). For exceptional corrosion protection we offer a trivalent tin/zinc alloy finish.
- **AVAILABLE** in steel. Additional materials such as aluminum, brass and monel are available by special order. Contact an AVK Sales Representative for details.

## ADDITIONAL DESIGN TYPES

### CLOSED END

Thread area is enclosed eliminating leakage past the threads from either side of the application. See page 13.

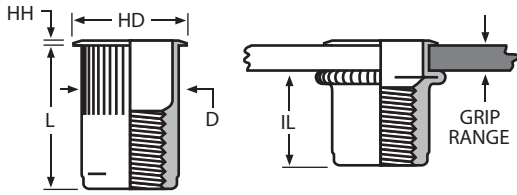


# UNIFIED (INCH) AND METRIC THREAD SIZES

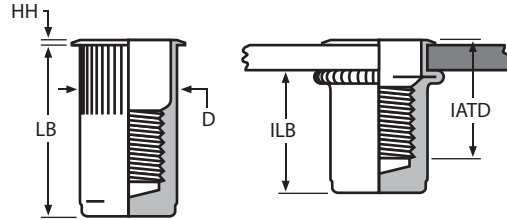


**INSERT**  
KNURLED THREADED INSERTS

## OPEN END TYPE



## CLOSED END TYPE



Thread Specifications: Unified 2B/21 per ASME B1.1  
Metric 6H/21 per ASME B1.13M

THREAD SIZE	THREAD CALL OUT	GRIP RANGE	GRIP CALL OUT	HOLE SIZE +.006 / -.000	HD ±.015	HH ±.003	L ±.015	D MAX.	IL MAX.	LB MAX.	ILB MAX.	IATD* MAX.
6-32 UNC	632	.020 - .080	80	17/64 (.2656)	.310	.019	.420	.265	.305	.755	.640	.610
6-32 UNC	632	.080 - .130	130	17/64 (.2656)	.310	.019	.470	.265	.305	.755	.580	.670
8-32 UNC	832	.020 - .080	80	17/64 (.2656)	.310	.019	.420	.265	.305	.755	.640	.610
8-32 UNC	832	.080 - .130	130	17/64 (.2656)	.310	.019	.470	.265	.305	.755	.580	.670
10-24 UNC	1024	.020 - .130	130	19/64 (.2969)	.340	.019	.475	.296	.315	1.005	.845	.730
10-24 UNC	1024	.130 - .225	225	19/64 (.2969)	.340	.019	.585	.296	.315	1.005	.735	.840
10-32 UNF	1032	.020 - .130	130	19/64 (.2969)	.340	.019	.475	.296	.315	1.005	.845	.730
10-32 UNF	1032	.130 - .225	225	19/64 (.2969)	.340	.019	.585	.296	.315	1.005	.735	.840
1/4-20 UNC	420	.027 - .165	165	25/64 (.3906)	.455	.023	.580	.390	.380	1.205	1.005	.895
1/4-20 UNC	420	.165 - .260	260	25/64 (.3906)	.455	.023	.680	.390	.380	1.205	.905	1.035
5/16-18 UNC	518	.027 - .150	150	17/32 (.5312)	.595	.023	.690	.530	.470	1.405	1.175	.995
5/16-18 UNC	518	.150 - .312	312	17/32 (.5312)	.595	.023	.805	.530	.425	1.405	1.025	1.120
3/8-16 UNC	616	.027 - .150	150	17/32 (.5312)	.595	.023	.690	.530	.470	1.405	1.175	.995
3/8-16 UNC	616	.150 - .312	312	17/32 (.5312)	.595	.023	.805	.530	.425	1.405	1.025	1.120

THREAD SIZE	THREAD CALL OUT	GRIP RANGE	GRIP CALL OUT	HOLE SIZE +.015 / -.000	HD ±.038	HH ±.008	L ±.038	D MAX.	IL MAX.	LB MAX.	ILB MAX.	IATD* MAX.
M4 x 0,7 ISO	470	0,50 - 2,00	2,0	6,75	7,87	0,48	10,67	6,73	7,75	19,18	16,26	15,49
M4 x 0,7 ISO	470	2,00 - 3,30	3,3	6,75	7,87	0,48	11,94	6,73	7,75	19,18	14,73	17,02
M5 x 0,8 ISO	580	0,50 - 3,30	3,3	7,60	8,64	0,48	12,07	7,52	8,00	25,53	21,46	18,54
M5 x 0,8 ISO	580	3,30 - 5,70	5,7	7,60	8,64	0,48	14,86	7,52	8,00	25,53	18,67	21,34
M6 x 1,0 ISO	610	0,70 - 4,20	4,2	10,00	11,56	0,58	14,73	9,91	9,65	30,61	25,53	22,73
M6 x 1,0 ISO	610	4,20 - 6,60	6,6	10,00	11,56	0,58	17,27	9,91	9,65	30,61	22,99	26,29
M8 x 1,25 ISO	8125	0,70 - 3,80	3,8	13,50	15,11	0,58	17,53	13,46	11,94	35,69	29,85	25,27
M8 x 1,25 ISO	8125	3,80 - 7,90	7,9	13,50	15,11	0,58	20,45	13,46	10,80	35,69	26,04	28,45
M10 x 1,5 ISO	1015	0,70 - 3,80	3,8	13,50	15,11	0,58	17,53	13,46	11,94	35,69	29,85	25,27
M10 x 1,5 ISO	1015	3,80 - 7,90	7,9	13,50	15,11	0,58	20,45	13,46	10,80	35,69	26,04	28,45

NOTE 1: Grip range can be affected by parent material density and actual hole size. AVK suggests trial installations to determine optimum grip.

NOTE 2: Additional UNF fine threads are available. Contact an AVK Sales Representative for details.

NOTE 3: Additional grip lengths are available. Contact an AVK Sales Representative for details. \*Dimensions in minimum grip condition.

NOTE 4: Contact an AVK Sales Representative regarding optional materials.

# PART NUMBERING SYSTEM

SAMPLE NUMBER: AKS3T-420-165

AK	( )	( )	-( )	-( )	( )
PRODUCT SERIES	MATERIAL	FINISH	THREAD CALL OUT	GRIP CALL OUT	TYPE
S	Steel 1010/1008	3T			BLANK
A	Aluminum 5056	4T			B
B	Brass 270/260	9T			
M	Monel 400				

CALL OUT      GRADE      SPECIFICATION      TYPE

3T      ZINC TRIVALENT PER ASTM-B-633, FE/ZN .0003 (8µ) WITH CLEAR PROTECTIVE COATING

4T      YELLOW ZINC TRIVALENT PER ASTM-B-633, FE/ZN .0003 (8µ) WITH CLEAR PROTECTIVE COATING

9T      TIN ZINC TRIVALENT PER ESP-P-004, .0003 (8µ) WITH CLEAR PROTECTIVE COATING

Note: For Additional Plating See Chart on Page 46

For air tool selection see pages 30 and 31