

# **A-R SERIES INSERT PROFILE**

The **A-R Series** threaded insert has been designed for use in plastics and thin gauge sheet metal applications where increased pull-out resistance is required.

The A-R Series features a PreSet<sup>™</sup> slotted body design that when installed folds into four segments gripping the backside of the parent material. This design feature allows the A-R Series to be installed into single, variable or multiple thickness materials using AVK's ARO torque-stall pneumatic tools or AVK's pneumatic/hydraulic SPP2 Tool<sup>™</sup>.

### A-R Series PreSet<sup>™</sup> Design

How it works for you: The Preset slightly expanded slotted body design of the A-R Series enables it to be installed using torque type tools.



Hand or pneumatic torque tools will install the A-R Series in single, variable or multiple thickness.

### **DESIGN BENEFITS**

- INSTALLS USING TORQUE stall type tooling due to the slightly expanded slotted body design. This is important when working with plastics that vary in thickness. No adjustment of the tool is necessary when installing the part into variable thickness materials.
- INSTALLS USING HAND WRENCHED TORQUE type tools.
  Ideal for use in kits and consumer installation applications.
- PROVIDES EXCEPTIONAL pull out resistance in soft plastics or thin sheet metal applications even if holes are hand drilled and oversized.
- SUPERIOR CORROSION RESISTANCE because all surfaces of the slotted body are plated. Standard plating is zinc/yellow trivalent finish (120 hours to white corrosion). For exceptional corrosion protection we offer a trivalent tin/zinc alloy finish.
- Superior thread strength due to AVK's internal roll threading process.
- AVAILABLE IN STEEL.

### **AIR TOOL SELECTION - SPP2 TOOL™**

The A-R Series has been designed to install with either the SPP2 Tool<sup>™</sup> or the ARO type tool. The SPP2 Tool<sup>™</sup> will install the A-R Series per the suggested grip ranges shown on page 17. See page 36 and 37 for SPP2 Tool<sup>™</sup> information.

### **AIR TOOL SELECTION - ARO TOOL**

The ARO pneumatic tool shown on pages 30 and 34 will install the A-R Series threaded insert. It will affect the published grip range of the part based on the tools' RPM and the density of the parent material. See the chart on page 17 for grip range information. AVK suggests trial installations in the actual application before specifying the optimum ARO tool.

### **ADDITIONAL DESIGN TYPES**

#### A-R STUDS

An A-R blind side, petaled footprint produces exceptional pull-out combined with a stud for component attachment. Contact an AVK Sales Representative for availability.

#### SPECIAL HEAD DESIGNS

Special head configurations such as square or wedge head can increase the inserts holding resistance in the parent material. Contact an AVK Sales Representative for availability.



#### STRAIGHT BODY DESIGN

A straight body A-R Series insert is ideal for thin sheet metals, tubing & plastic applications where high pull-out is required. Contact an AVK Sales Representative for availability.



## **UNIFIED (INCH) AND METRIC THREAD SIZES**







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	HD	нн	L	D	IL MAX.	GRIP ID MARK
1/4-20 UNC	420	.020280	.280	.396 .390	.645 .610	.063 .053	1.015 .985	.382 .368	.520	Blank
1/4-20 UNC	420	.280500	.500	.396 .390	.645 .610	.063 .053	1.249 1.219	.382 .368	.520	1 Rad
5/16-18 UNC	518	.020280	.280	.506 .500	.770 .740	.067 .057	1.156 1.126	.495 .490	.775	Blank
5/16-18 UNC	518	.280500	.500	.506 .500	.770 .740	.067 .057	1.390 1.360	.495 .490	.775	1 Rad
3/8-16 UNC	616	.020280	.280	.600 .594	.895 .865	.093 .083	1.233 1.205	.587 .582	.775	Blank

THREAD SIZE	THREAD CALL OUT	GRIP RANGE	GRIP CALL OUT	HOLE SIZE	HD	нн	L	D	IL MAX.	GRIP ID MARK
M6 x 1,0 ISO	610	0,5 - 7,1	7.1	10,15 10,00	16,38 15,49	1,60 1,35	25,78 25,02	9,80 9,35	13,21	Blank
M6 x 1,0 ISO	610	7,1 - 12,7	12.7	10,15 10,00	16,38 15,49	1,60 1,35	31,72 30,96	9,80 9,35	13,21	1 Rad
M8 x 1,25 ISO	8125	0,5 - 7,1	7.1	12,85 12,70	19,56 18,80	1,70 1,45	29,63 28,60	12,57 12,47	19,69	Blank
M8 x 1,25 ISO	8125	7,1 - 12,7	12.7	12,85 12,70	19,56 18,80	1,70 1,45	35,31 34,54	12,57 12,47	19,69	1 Rad
M10 x 1,5 ISO	1015	0,5 - 7,1	7.1	15,24 15,09	22,73 21,97	2,36 2,11	31,32 30,61	14,91 14,78	19,69	Blank

NOTE 1: Grip range stated in the dimensional chart above can be achieved using pull type installation tools and may be variable based on hole size and parent material density. AVK recommends trial installations to determine actual grip range in the application.

NOTE 2: Grip ranges will be less than stated above when using torque type installation tools. Grip range will be affected by the tool RPM speed, stall torque, hole size and parent material density. AVK recommends trial installations to determine actual grip. See page 34 for torque tool selection guidelines

# PART NUMBERING SYSTEM

### SAMPLE NUMBER: ARS3T-420-280

