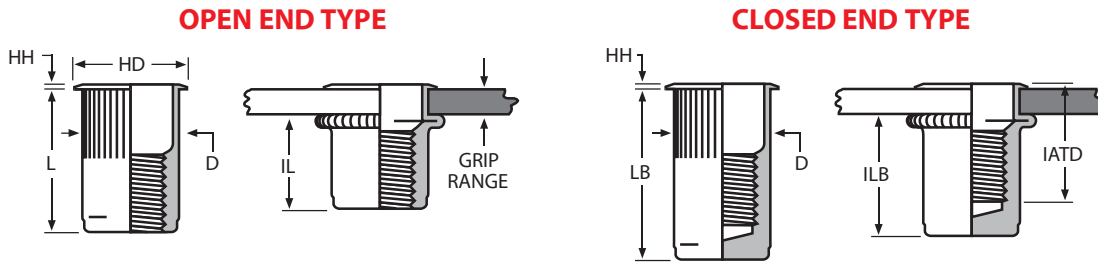


# UNIFIED (INCH) AND METRIC THREAD SIZES



**INSERT**  
KNURLED THREADED INSERTS



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            |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
|                | <table><tr><th>CALL OUT</th><th>GRADE</th></tr><tr><td>S</td><td>Steel 1010/1008</td></tr><tr><td>A</td><td>Aluminum 5056</td></tr><tr><td>B</td><td>Brass 270/260</td></tr><tr><td>M</td><td>Monel 400</td></tr></table> | CALL OUT | GRADE           | S             | Steel 1010/1008 | A | Aluminum 5056 | B | Brass 270/260 | M | Monel 400 | <table><tr><th>CALL OUT</th><th>SPECIFICATION</th></tr><tr><td>3T</td><td>ZINC TRIVALENT PER ASTM-B-633, FE/ZN .0003 (8μ) WITH CLEAR PROTECTIVE COATING</td></tr><tr><td>4T</td><td>YELLOW ZINC TRIVALENT PER ASTM-B-633, FE/ZN .0003 (8μ) WITH CLEAR PROTECTIVE COATING</td></tr><tr><td>9T</td><td>TIN ZINC TRIVALENT PER ESP-P-004, .0003 (8μ) WITH CLEAR PROTECTIVE COATING</td></tr></table> <p>Note: For Additional Plating See Chart on Page 46</p> | CALL OUT | SPECIFICATION | 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 |  |  | <table><tr><th>CALL OUT</th><th>TYPE</th></tr><tr><td>BLANK</td><td>Open End</td></tr><tr><td>B</td><td>Closed End</td></tr></table> | CALL OUT | TYPE | BLANK | Open End | B | Closed End |
| CALL OUT       | GRADE                                                                                                                                                                                                                     |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| S              | Steel 1010/1008                                                                                                                                                                                                           |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| A              | Aluminum 5056                                                                                                                                                                                                             |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| B              | Brass 270/260                                                                                                                                                                                                             |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| M              | Monel 400                                                                                                                                                                                                                 |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| CALL OUT       | SPECIFICATION                                                                                                                                                                                                             |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| 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                                                                                                                                                |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| CALL OUT       | TYPE                                                                                                                                                                                                                      |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| BLANK          | Open End                                                                                                                                                                                                                  |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |
| B              | Closed End                                                                                                                                                                                                                |          |                 |               |                 |   |               |   |               |   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |    |                                                                               |    |                                                                                      |    |                                                                            |  |  |                                                                                                                                      |          |      |       |          |   |            |

Note: For Additional Plating See Chart on Page 46

For air tool selection see pages 30 and 31