

Alcoa
Fastening
Systems



Recoil® KEYSERT® Products

Solid Threaded Inserts, Tooling, & Kits





Contents

| | |
|---|-----------|
| Description, Features, Typical Applications | 1 |
| Installation and Removal | 1 |
| Thinwall and Heavy Duty Inch Series Carbon Steel Bulk Inserts | 2 |
| Thinwall and Heavy Duty Metric Carbon Steel Bulk Inserts | 3 |
| Solid Inch Series and Metric Carbon Steel Bulk Inserts | 4 |
| Extra Heavy Duty Inch Series Carbon Steel Bulk Inserts | 5 |
| Carbon Steel Cross-Reference Index | 6 |
| Thinwall and Heavy Duty Inch Series Stainless Steel Bulk Inserts | 7 |
| Thinwall and Heavy Duty Metric Stainless Steel Bulk Inserts | 8 |
| Tooling and 4-Piece Range Kits Carbon Steel and Stainless Steel | 9 |
| 6-Piece and Master Range Kits Carbon Steel and Stainless Steel | 10 |

Introduction

KEYSERT®

Thread Repair Inserts

The Solid Alternative for Thread Repair

Keyserts are solid, one-piece, key-locking inserts used to repair damaged threads or for use in original equipment. The Keysert locking keys provide a positive mechanical lock which prevents rotation due to vibration or torsion. Keyserts are available in carbon or stainless steel, both in inch and metric series. Thinwall, Heavy Duty, Extra Heavy Duty, and Solid insert styles are available separately or in kits containing a range of sizes. Installation tools are also available separately or in a range kit.

Requests for more information are welcome. The user assumes full responsibility for his or her applications. THERE IS NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. No one is authorized by our company to make oral warranties.

Features

- Installed with standard drills and taps
- Easy installation
- May be used in many materials; aluminum, magnesium, and cold rolled steel
- Easy to remove

Typical Applications

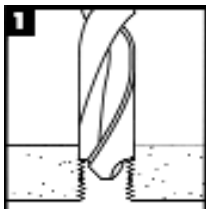
- Trucks, RV's
- Machinery, Small Engine
- Molds, Tool and Die
- MRO Tasks

Important Note

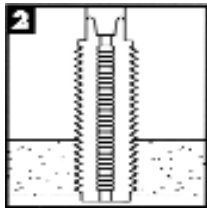
- Keyserts are not recommended for use in brittle materials, like cast iron or plastic

Installation and Removal

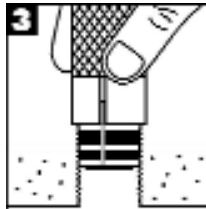
Installation



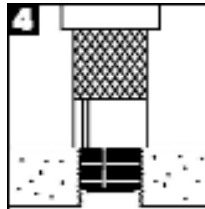
Drill out old threads with a standard drill. **Note: Drill is oversize - see charts for proper dimensions.** Chamfer the hole with a standard countersink (82°-100°).



Tap new threads with a standard tap. See charts for proper size and depth.

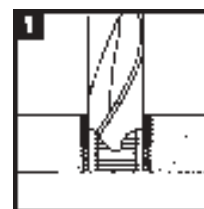


Screw in the insert until slightly below surface.

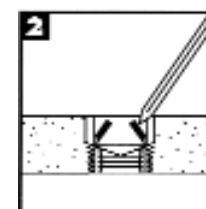


Drive keys down with several hammer taps on the proper installation tool.

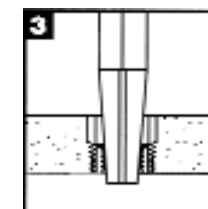
Removal



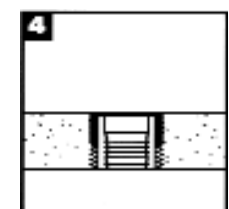
Drill out material between keys and internal thread with standard drill to specified depth (refer to charts for proper dimensions).



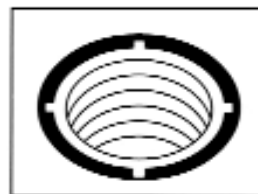
Deflect keys inward and break off.



Remove insert using an E-Z Out or similar type tool.



Same size replacement insert may be installed in the original hole.



Carbon Steel Bulk Keyserts

Thinwall - Inch Series - Carbon Steel

| Insert Part No. | INSERT | | | INSTALLATION | | | REMOVAL | | | |
|-----------------|---------------------------------------|---------------------------------|--------|----------------------------|----------------|-----------------------------|---------------|------------|-------|-------|
| | Internal Thread Class 2B or 3B | External Thread (Mod.) Class 2A | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.010/-.000 | Thread Tap | | Drill | |
| | | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| *73601 | 10-24 | 5/16-18 | 0.31 | 72190 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| *74601 | 10-32 | | | | | | | | | |
| *73041 | 1/4-20 | 3/8-16 | 0.37 | 72250 | Q | 0.38 | 3/8-16 | 0.43 | 9/32 | 3/16 |
| *74041 | 1/4-28 | | | | | | | | | |
| *73051 | 5/16-18 | 7/16-14 | 0.43 | 72312 | X | 0.44 | 7/16-14 | 0.50 | 11/32 | 3/16 |
| *74051 | 5/16-24 | | | | | | | | | |
| *73061 | 3/8-16 | 1/2-13 | 0.50 | 72375 | 29/64 | 0.51 | 1/2-13 | 0.56 | 13/32 | 3/16 |
| *74061 | 3/8-24 | | | | | | | | | |
| *73071 | 7/16-14 | 9/16-12 | 0.56 | 72375 | 33/64 | 0.57 | 9/16-12 | 0.62 | 15/32 | 3/16 |
| *74071 | 7/16-20 | | | | | | | | | |
| *73081 | 1/2-13 | 5/8-11 | 0.62 | 72500 | 37/64 | 0.63 | 5/8-11 | 0.68 | 17/32 | 3/16 |
| *74081 | 1/2-20 | | | | | | | | | |

Heavy Duty - Inch Series - Carbon Steel

| Insert Part No. | INSERT | | | INSTALLATION | | | REMOVAL | | | |
|-----------------|---------------------------------------|---------------------------------|--------|----------------------------|----------------|-----------------------------|---------------|------------|---------|-------|
| | Internal Thread Class 2B or 3B | External Thread (Mod.) Class 2A | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.010/-.000 | Thread Tap | | Drill | |
| | | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| *73582 | 8-32 | 5/16-18 | 0.31 | 70582 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| *73602 | 10-24 | 3/8-16 | 0.31 | 72190 | Q | 0.38 | 3/8-16 | 0.37 | 9/32 | 1/8 |
| *74602 | 10-32 | | | | | | | | | |
| *73042 | 1/4-20 | 7/16-14 | 0.37 | 72250 | X | 0.44 | 7/16-14 | 0.43 | 11/32 | 3/16 |
| *74042 | 1/4-28 | | | | | | | | | |
| *73052 | 5/16-18 | 1/2-13 | 0.43 | 72312 | 29/64 | 0.51 | 1/2-13 | 0.50 | 13/32 | 3/16 |
| *74052 | 5/16-24 | | | | | | | | | |
| *73062 | 3/8-16 | 9/16-12 | 0.50 | 72375 | 33/64 | 0.57 | 9/16-12 | 0.56 | 15/32 | 3/16 |
| *74062 | 3/8-24 | | | | | | | | | |
| *73072 | 7/16-14 | 5/8-11 | 0.62 | 72375 | 37/64 | 0.63 | 5/8-11 | 0.68 | 17/32 | 3/16 |
| *74072 | 7/16-20 | | | | | | | | | |
| *73082 | 1/2-13 | 3/4-16 | 0.62 | 72500 | 45/64 | 0.76 | 3/4-16 | 0.68 | 21/32 | 3/16 |
| *74082 | 1/2-20 | | | | | | | | | |
| *73092 | 9/16-12 | 3/4-16 | 0.81 | 72500 | 45/64 | 0.76 | 3/4-16 | 0.94 | 21/32 | 3/16 |
| *74092 | 9/16-18 | | | | | | | | | |
| *73102 | 5/8-11 | 7/8-14 | 0.87 | 72625 | 53/64 | 0.88 | 7/8-14 | 1.00 | 25/32 | 5/16 |
| *74102 | 5/8-18 | | | | | | | | | |
| 73122 | 3/4-10 | 1 1/8-12 | 1.12 | 72875 | 1 1/16 | 1.14 | 1 1/8-12 | 1.31 | 31/32 | 5/16 |
| 74122 | 3/4-16 | | | | | | | | | |
| 73142 | 7/8-9 | 1 1/4-12 | 1.25 | 72875 | 1 3/16 | 1.27 | 1 1/4-12 | 1.44 | 1 3/32 | 5/16 |
| 74142 | 7/8-14 | | | | | | | | | |
| 73162 | 1-8 | 1 3/8-12 | 1.37 | 72100 | 1 5/16 | 1.39 | 1 3/8-12 | 1.56 | 1 7/32 | 5/16 |
| 74162 | 1-12 | | | | | | | | | |
| 74162-14 | 1-14 | | | | | | | | | |
| 73182 | 1 1/8-7 | 1 1/2-12 | 1.62 | 70182 | 1 7/16 | 1.52 | 1 1/2-12 | 1.84 | 1 11/32 | 5/16 |
| 74182 | 1 1/8-12 | | | | | | | | | |
| 73202 | 1 1/4-7 | 1 5/8-12 | 1.81 | 70202 | 1 9/16 | 1.64 | 1 5/8-12 | 2.06 | 1 15/32 | 5/16 |
| 74202 | 1 1/4-12 | | | | | | | | | |
| 73242 | 1 1/2-6 | 1 7/8-12 | 2.00 | 70242 | 1 13/16 | 1.89 | 1 7/8-12 | 2.28 | 1 23/32 | 5/16 |
| 74242 | 1 1/2-12 | | | | | | | | | |

* INDICATES PARTS NORMALLY AVAILABLE FROM STOCK.

LEAD TIMES AND MINIMUMS MAY APPLY ON ALL OTHER SIZES.

BOLD ITEMS HAVE A 3B INTERNAL THREAD CLASS, ALL OTHERS HAVE A 2B INTERNAL THREAD CLASS

www.newmantools.com

Carbon Steel Bulk Keyserts

Technical Notes:

Material: Inserts - C1215 or equivalent

Keys - 302 Stainless Steel

Finish: Carbon Steel Inserts - Zinc Phosphate and

Ferrocoat 364-3 Oil

Stainless Steel Inserts - Passivated

Tolerances: ±0.10 inch or ±.25 mm unless specified otherwise.

Dimensions: Inch sizes are in inches.

Metric sizes are in millimeters.

Keys: Inserts with internal thread size 5/16 or M7 and larger are furnished with 4 locking keys.



Thinwall - Metric - Carbon Steel

| Insert Part No. | INSERT | | | Installation Tool Part No. | INSTALLATION | | | REMOVAL | | |
|-----------------|--------------------------|--------------------------|--------|----------------------------|----------------|----------------------------|--------------------------|---------|-------|------|
| | Internal Thread Class 6H | External Thread Class 6g | Length | | Tap Drill Size | C'Sink Diameter +.25/- .00 | Thread Tap Size Class 6H | | Drill | |
| | | | | | | | Min. Depth | Size | Depth | |
| *75051 | M5-8 | M8-1.25 | 8.0 | 72190 | 6.9 | 8.25 | M8-1.25 | 9.5 | 5.50 | 4.00 |
| *75061 | M6-1 | M10-1.25 | 10.0 | 72250 | 8.8 | 10.25 | M10-1.25 | 11.5 | 7.50 | 4.75 |
| *75081 | M8-1.25 | M12-1.25 | 12.0 | 72312 | 10.8 | 12.25 | M12-1.25 | 13.5 | 9.50 | 4.75 |
| 77081 | M8-1 | | | | | | | | | |
| *75101 | M10-1.5 | M14-1.5 | 14.0 | 72375 | 12.8 | 14.25 | M14-1.5 | 15.5 | 11.50 | 4.75 |
| 77101 | M10-1.25 | | | | | | | | | |
| *75121 | M12-1.75 | M16-1.5 | 16.0 | 72500 | 14.75 | 16.25 | M16-1.5 | 17.5 | 13.50 | 4.75 |
| 78121 | M12-1.25 | | | | | | | | | |

Heavy Duty - Metric - Carbon Steel

| Insert Part No. | INSERT | | | Installation Tool Part No. | INSTALLATION | | | REMOVAL | | |
|-----------------|--------------------------|--------------------------|--------|----------------------------|----------------|----------------------------|--------------------------|---------|-------|------|
| | Internal Thread Class 6H | External Thread Class 6g | Length | | Tap Drill Size | C'Sink Diameter +.25/- .00 | Thread Tap Size Class 6H | | Drill | |
| | | | | | | | Min. Depth | Size | Depth | |
| 75042 | M4-7 | M8-1.25 | 8.0 | 71042 | 6.90 | 8.25 | M8-1.25 | 9.5 | 5.50 | 4.00 |
| 75052 | M5-8 | M10-1.25 | 10.0 | 72190 | 8.80 | 10.25 | M10-1.25 | 12.5 | 7.50 | 4.75 |
| 75062 | M6-1 | M12-1.25 | 12.0 | 72250 | 10.80 | 12.25 | M12-1.25 | 14.5 | 9.50 | 4.75 |
| 75082 | M8-1.25 | M14-1.5 | 14.0 | 72312 | 12.80 | 14.25 | M14-1.5 | 16.5 | 11.50 | 4.75 |
| 77082 | M8-1 | | | | | | | | | |
| 75102 | M10-1.5 | M16-1.5 | 16.0 | 72375 | 14.75 | 16.25 | M16-1.5 | 18.5 | 13.50 | 4.75 |
| 77102 | M10-1.25 | | | | | | | | | |
| 75122 | M12-1.75 | M18-1.5 | 18.0 | 72500 | 16.75 | 18.25 | M18-1.5 | 20.5 | 15.50 | 4.75 |
| 78122 | M12-1.25 | | | | | | | | | |
| 75142 | M14-2 | M20-1.5 | 20.0 | 71142 | 18.75 | 20.25 | M20-1.5 | 22.5 | 17.50 | 4.75 |
| 77142 | M14-1.5 | | | | | | | | | |
| 75162 | M16-2 | M22-1.5 | 22.0 | 72625 | 20.50 | 22.25 | M22-1.5 | 24.5 | 17.75 | 6.35 |
| 77162 | M16-1.5 | | | | | | | | | |
| 78182 | M18-1.5 | M24-1.5 | 24.0 | 71182 | 22.50 | 24.25 | M24-1.5 | 26.5 | 19.75 | 6.35 |
| 75202 | M20-2.5 | M30-2 | 30.0 | 72875 | 28.00 | 30.25 | M30-2 | 34.5 | 25.75 | 6.35 |
| 78202 | M20-1.5 | | | | | | | | | |
| 78222 | M22-1.5 | M32-2 | 32.0 | 72875 | 30.00 | 32.25 | M32-2 | 36.5 | 27.75 | 6.35 |
| 75242 | M24-3 | M33-2 | 33.0 | 71242 | 31.00 | 33.25 | M33-2 | 37.5 | 28.75 | 6.35 |
| 77242 | M24-2 | | | | | | | | | |

* INDICATES PARTS NORMALLY AVAILABLE FROM STOCK.

LEAD TIMES AND MINIMUMS MAY APPLY ON ALL OTHER SIZES.

Carbon Steel Bulk Keyserts

Solid threaded inserts are perfect for:

- relocating holes that have been drilled or tapped in the wrong place
- plugging holes or filling in holes that are too big

Technical Notes:

Material: Inserts - C1215 or equivalent

Keys - 302 Stainless Steel

Finish: Carbon Steel Inserts - Zinc Phosphate and
Ferrocate 364-3 Oil

Stainless Steel Inserts - Passivated

Tolerances: ±0.10 inch or ±.25 mm unless
specified otherwise.

Dimensions: Inch sizes are in inches.

Metric sizes are in millimeters.

Keys: Inserts with internal thread size 5/16 or M7
and larger are furnished with 4 locking keys.

Solid - Inch Series - Carbon Steel

| Insert Part No. | External Thread (Mod.) Class 2A | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.010/-.000 | INSTALLATION | | REMOVAL | |
|--------------------|---------------------------------------|--------|----------------------------------|----------------------|-----------------------------------|------------------|---------------|---------|-------|
| | | | | | | Thread Tap | | Drill | |
| | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| 73054 | 5/16-18 | 0.31 | 70054 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| 73064 | 3/8-16 | 0.31 | 70064 | Q | 0.38 | 3/8-16 | 0.37 | 9/32 | 1/8 |
| 73074 | 7/16-14 | 0.37 | 70074 | X | 0.44 | 7/16-14 | 0.43 | 11/32 | 3/16 |
| 73084 | 1/2-13 | 0.43 | 70084 | 29/64 | 0.51 | 1/2-13 | 0.50 | 13/32 | 3/16 |
| 73094 | 9/16-12 | 0.50 | 70094 | 33/64 | 0.57 | 9/16-12 | 0.56 | 15/32 | 3/16 |
| 73104 | 5/8-11 | 0.62 | 70104 | 37/64 | 0.63 | 5/8-11 | 0.68 | 17/32 | 3/16 |
| 73124 | 3/4-16 | 0.68 | 70124 | 45/64 | 0.76 | 3/4-16 | 0.68 | 21/32 | 3/16 |
| 73144 | 7/8-14 | 0.87 | 70144 | 53/64 | 0.88 | 7/8-14 | 1.00 | 25/32 | 5/16 |
| 74164 | 1-12 | 0.87 | 70164 | 15/16 | 1.02 | 1-12 | 1.00 | 27/32 | 5/16 |
| 74184 | 1 1/8-12 | 1.12 | 70184 | 1 1/16 | 1.14 | 1 1/8-12 | 1.31 | 31/32 | 5/16 |
| 74204 | 1 1/4-12 | 1.25 | 70204 | 1 3/16 | 1.27 | 1 1/4-12 | 1.44 | 1 3/32 | 5/16 |
| 74224 | 1 3/8-12 | 1.37 | 70224 | 1 5/16 | 1.39 | 1 3/8-12 | 1.56 | 1 7/32 | 5/16 |

Solid - Metric - Carbon Steel

| Insert Part No. | External Thread Class 6g | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.25/-.00 | INSTALLATION | | REMOVAL | |
|--------------------|--------------------------------|--------|----------------------------------|----------------------|---------------------------------|------------------|---------------|---------|-------|
| | | | | | | Thread Tap | | Drill | |
| | | | | | | Size Class 6H | Min. Depth | Size | Depth |
| 75084 | M8-1.25 | 8.0 | 71084 | 6.90 | 8.25 | M8-1.25 | 9.5 | 5.50 | 4.00 |
| 77104 | M10-1.25 | 10.0 | 71104 | 8.80 | 10.25 | M10-1.25 | 12.5 | 7.50 | 4.75 |
| 78124 | M12-1.25 | 12.0 | 71124 | 10.80 | 12.25 | M12-1.25 | 14.5 | 9.50 | 4.75 |
| 77144 | M14-1.5 | 14.0 | 71144 | 12.80 | 14.25 | M14-1.5 | 16.5 | 11.50 | 4.75 |
| 77164 | M16-1.5 | 16.0 | 71164 | 14.75 | 16.25 | M16-1.5 | 18.5 | 13.50 | 4.75 |
| 78184 | M18-1.5 | 18.0 | 71184 | 16.75 | 18.25 | M18-1.5 | 20.5 | 15.50 | 4.75 |
| 78204 | M20-1.5 | 20.0 | 71204 | 18.75 | 20.25 | M20-1.5 | 22.5 | 17.50 | 4.75 |
| 78224 | M22-1.5 | 22.0 | 71224 | 20.50 | 22.25 | M22-1.5 | 24.5 | 17.75 | 6.35 |
| 78244 | M24-1.5 | 24.0 | 71244 | 22.50 | 24.25 | M24-1.5 | 26.5 | 19.75 | 6.35 |
| 77304 | M30-2 | 30.0 | 71304 | 28.00 | 30.25 | M30-2 | 34.5 | 25.75 | 6.35 |
| 77322 | M32-2 | 32.0 | 71322 | 30.00 | 32.25 | M32-2 | 36.5 | 27.75 | 6.35 |
| 77332 | M33-2 | 33.0 | 71332 | 31.00 | 33.25 | M33-2 | 37.5 | 28.75 | 6.35 |

ALL ITEMS ON THIS PAGE ARE CONSIDERED NON-STOCK ITEMS. LEAD TIMES AND MINIMUMS MAY APPLY.



Carbon Steel Bulk Keyserts

Extra Heavy Duty - Inch Series - Carbon Steel

| Insert Part No. | INSERT | | | INSTALLATION | | | REMOVAL | | | |
|--------------------|--------------------------------|---------------------------------------|--------|----------------------------------|----------------------|-----------------------------------|------------------|---------------|---------|-------|
| | Internal Thread Class 2B | External Thread (Mod.) Class 2A | Length | Installation Tool Part No. | Tap Drill Size | C/Sink Diameter +.010/-.000 | Thread Tap | | Drill | |
| | | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| 73563 | 6-32 | 5/16-18 | 0.31 | 70563 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| 73583 | 8-32 | 3/8-16 | 0.31 | 70583 | Q | 0.38 | 3/8-16 | 0.37 | 9/32 | 1/8 |
| 73603 | 10-24 | 7/16-14 | 0.31 | 70603 | X | 0.44 | 7/16-14 | 0.37 | 11/32 | 3/16 |
| 74603 | 10-32 | | | | | | | | | |
| 73043 | 1/4-20 | 1/2-13 | 0.37 | 70043 | 29/64 | 0.51 | 1/2-13 | 0.43 | 13/32 | 3/16 |
| 74043 | 1/4-28 | | | | | | | | | |
| 73053 | 5/16-18 | 9/16-12 | 0.43 | 70053 | 33/64 | 0.57 | 9/16-12 | 0.50 | 15/32 | 3/16 |
| 74053 | 5/16-24 | | | | | | | | | |
| 73063 | 3/8-16 | 5/8-11 | 0.50 | 70063 | 37/64 | 0.63 | 5/8-11 | 0.56 | 17/32 | 3/16 |
| 74063 | 3/8-24 | | | | | | | | | |
| 73073 | 7/16-14 | 3/4-16 | 0.62 | 70073 | 45/64 | 0.76 | 3/4-16 | 0.68 | 21/32 | 3/16 |
| 74073 | 7/16-20 | | | | | | | | | |
| 73083 | 1/2-13 | 7/8-14 | 0.68 | 70083 | 53/64 | 0.88 | 7/8-14 | 0.75 | 25/32 | 5/16 |
| 74083 | 1/2-20 | | | | | | | | | |
| 73093 | 9/16-12 | 7/8-14 | 0.81 | 70093 | 53/64 | 0.88 | 7/8-14 | 0.94 | 25/32 | 5/16 |
| 74093 | 9/16-18 | | | | | | | | | |
| 73103 | 5/8-11 | 1-12 | 0.87 | 70103 | 15/16 | 1.02 | 1-12 | 1.00 | 27/32 | 5/16 |
| 74103 | 5/8-18 | | | | | | | | | |
| 73123 | 3/4-10 | 1 1/4-12 | 1.12 | 70123 | 1 3/16 | 1.27 | 1 1/4-12 | 1.31 | 1 3/32 | 5/16 |
| 74123 | 3/4-16 | | | | | | | | | |
| 73143 | 7/8-9 | 1 3/8-12 | 1.25 | 70143 | 1 5/16 | 1.39 | 1 3/8-12 | 1.44 | 1 7/32 | 5/16 |
| 74143 | 7/8-14 | | | | | | | | | |
| 73163 | 1-8 | 1 1/2-12 | 1.37 | 70163 | 1 7/16 | 1.52 | 1 1/2-12 | 1.56 | 1 11/32 | 5/16 |
| 74163 | 1-12 | | | | | | | | | |

ALL ITEMS ON THIS PAGE ARE CONSIDERED NON-STOCK ITEMS. LEAD TIMES AND MINIMUMS MAY APPLY.

Carbon Steel Bulk Keyserts

Carbon Steel Cross-Reference Index

| Keysert Part No. | Alternate Part No. | Keysert Part No. | Alternate Part No. | Keysert Part No. | Alternate Part No. |
|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|
| 73041 | RKKA 1/4-20 | 73601 | RKKA 10-24 | 74202 | RKK 1 1/4-12 |
| 73042 | RKK 1/4-20 | 73602 | RKK 10-24 | 74242 | RKK 1 1/2-12 |
| 73051 | RKKA 5/16-18 | 74041 | RKKA 1/4-28 | 74601 | RKKA 10-32 |
| 73052 | RKK 5/16-18 | 74042 | RKK 1/4-28 | 74602 | RKK 10-32 |
| 73061 | RKKA 3/8-16 | 74051 | RKKA 5/16-24 | 75051 | KNM 5x0.8F |
| 73062 | RKK 3/8-16 | 74052 | RKK 5/16-24 | 75061 | KNM 6x1F |
| 73071 | RKKA 7/16-14 | 74061 | RKKA 3/8-24 | 75081 | KNM 8x1.25F |
| 73072 | RKK 7/16-14 | 74062 | RKK 3/8-24 | 75101 | KNM 10x1.5F |
| 73081 | RKKA 1/2-13 | 74071 | RKKA 7/16-20 | 75121 | KNM 12x1.75F |
| 73082 | RKK 1/2-13 | 74072 | RKK 7/16-20 | 77081 | KNM 8x1F |
| 73092 | RKK 9/16-12 | 74081 | RKKA 1/2-20 | 77101 | KNM 10x1.25F |
| 73102 | RKK 5/8-11 | 74082 | RKK 1/2-20 | 78121 | KNM 12x1.25F |
| 73122 | RKK 3/4-10 | 74092 | RKK 9/16-18 | 75142 | KNHM 14x2F |
| 73142 | RKK 7/8-9 | 74102 | RKK 5/8-18 | 77142 | KNHM 14x1.5F |
| 73162 | RKK 1-8 | 74122 | RKK 3/4-16 | 77162 | KNHM 16x1.5F |
| 73182 | RKK 1 1/8-7 | 74142 | RKK 7/8-14 | 78182 | KNHM 18x1.5F |
| 73202 | RKK 1 1/4-7 | 74162-14 | RKK 1-14 | 78202 | KNHM 20x1.5F |
| 73242 | RKK 1 1/2-6 | 74162 | RKK 1-12 | 78222 | KNHM 22x1.5F |
| 73582 | RKK 8-32 | 74182 | RKK 1 1/8-12 | 77242 | KNHM 24x2F |

Stainless Steel Bulk Keyserts

Thinwall - Inch Series - Stainless Steel

| Insert Part No. | INSERT | | | INSTALLATION | | | REMOVAL | | | |
|-----------------|--------------------------|--------------------------------|--------|----------------------------|----------------|-----------------------------|---------------|------------|-------|-------|
| | Internal Thread Class 3B | External Thread (Mod) Class 2A | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.010/-.000 | Thread Tap | | Drill | |
| | | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| *73606 | 10-24 | 5/16-18 | 0.31 | 72190 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| *74606 | 10-32 | | | | | | | | | |
| *73046 | 1/4-20 | 3/8-16 | 0.37 | 72250 | Q | 0.38 | 3/8-16 | 0.43 | 9/32 | 3/16 |
| *74046 | 1/4-28 | | | | | | | | | |
| *73056 | 5/16-18 | 7/16-14 | 0.43 | 72312 | X | 0.44 | 7/16-14 | 0.50 | 11/32 | 3/16 |
| *74056 | 5/16-24 | | | | | | | | | |
| *73066 | 3/8-16 | 1/2-13 | 0.50 | 72375 | 29/64 | 0.51 | 1/2-13 | 0.56 | 13/32 | 3/16 |
| *74066 | 3/8-24 | | | | | | | | | |
| *73076 | 7/16-14 | 9/16-12 | 0.56 | 72375 | 33/64 | 0.57 | 9/16-12 | 0.62 | 15/32 | 3/16 |
| 74076 | 7/16-20 | | | | | | | | | |
| *73086 | 1/2-13 | 5/8-11 | 0.62 | 72500 | 37/64 | 0.63 | 5/8-11 | 0.68 | 17/32 | 3/16 |
| *74086 | 1/2-20 | | | | | | | | | |

Heavy Duty - Inch Series - Stainless Steel

| Insert Part No. | INSERT | | | INSTALLATION | | | REMOVAL | | | |
|-----------------|--------------------------|--------------------------------------|--------|----------------------------|----------------|-----------------------------|---------------|------------|--------|-------|
| | Internal Thread Class 3B | External Thread (Mod) Class 2A or 3A | Length | Installation Tool Part No. | Tap Drill Size | C'Sink Diameter +.010/-.000 | Thread Tap | | Drill | |
| | | | | | | | Size Class 2B | Min. Depth | Size | Depth |
| *73587 | 8-32 | 5/16-18 | 0.31 | 70582 | I | 0.32 | 5/16-18 | 0.37 | 7/32 | 1/8 |
| *73607 | 10-24 | 3/8-16 | 0.31 | 72190 | Q | 0.38 | 3/8-16 | 0.37 | 9/32 | 1/8 |
| *74607 | 10-32 | | | | | | | | | |
| *73047 | 1/4-20 | 7/16-14 | 0.37 | 72250 | X | 0.44 | 7/16-14 | 0.43 | 11/32 | 3/16 |
| *74047 | 1/4-28 | | | | | | | | | |
| *73057 | 5/16-18 | 1/2-13 | 0.43 | 72312 | 29/64 | 0.51 | 1/2-13 | 0.50 | 13/32 | 3/16 |
| *74057 | 5/16-24 | | | | | | | | | |
| *73067 | 3/8-16 | 9/16-12 | 0.50 | 72375 | 33/64 | 0.57 | 9/16-12 | 0.56 | 15/32 | 3/16 |
| *74067 | 3/8-24 | | | | | | | | | |
| *73077 | 7/16-14 | 5/8-11 | 0.62 | 72375 | 37/64 | 0.63 | 5/8-11 | 0.68 | 17/32 | 3/16 |
| 74077 | 7/16-20 | | | | | | | | | |
| *73087 | 1/2-13 | 3/4-16 | 0.62 | 72500 | 45/64 | 0.76 | 3/4-16 | 0.68 | 21/32 | 3/16 |
| *74087 | 1/2-20 | | | | | | | | | |
| 73097 | 9/16-12 | 3/4-16 | 0.81 | 72500 | 45/64 | 0.76 | 3/4-16 | 0.94 | 21/32 | 3/16 |
| 74097 | 9/16-18 | | | | | | | | | |
| 73107 | 5/8-11 | 7/8-14 | 0.87 | 72625 | 53/64 | 0.88 | 7/8-14 | 1.00 | 25/32 | 5/16 |
| 74107 | 5/8-18 | | | | | | | | | |
| 73127 | 3/4-10 | 1 1/8-12 | 1.12 | 72875 | 1 1/16 | 1.14 | 1 1/8-12 | 1.31 | 31/32 | 5/16 |
| 74127 | 3/4-16 | | | | | | | | | |
| 73147 | 7/8-9 | 1 1/4-12 | 1.25 | 72875 | 1 3/16 | 1.27 | 1 1/4-12 | 1.44 | 1 3/32 | 5/16 |
| 74147 | 7/8-14 | | | | | | | | | |
| 73167 | 1-8 | 1 3/8-12 | 1.37 | 72100 | 1 5/16 | 1.39 | 1 3/8-12 | 1.56 | 1 7/32 | 5/16 |
| 74167 | 1-12 | | | | | | | | | |

* INDICATES PARTS NORMALLY AVAILABLE FROM STOCK AND INTERNAL THREAD CLASS 3B.

LEAD TIMES AND MINIMUMS MAY APPLY ON ALL OTHER SIZES.

BOLD ITEMS HAVE A 3A EXTERNAL THREAD CLASS, ALL OTHERS HAVE A 2A EXTERNAL THREAD CLASS

Stainless Steel Bulk Keyserts

Technical Notes:

Material: Inserts - 303 Stainless Steel
 Keys - 302 Stainless Steel
 Finish: Carbon Steel Inserts - Zinc Phosphate and
 Ferrocate 364-3 Oil
 Stainless Steel Inserts - Passivated
 Tolerances: ± 0.10 inch or $\pm .25$ mm unless
 specified otherwise.
 Dimensions: Inch sizes are in inches.
 Metric sizes are in millimeters.
 Keys: Inserts with internal thread size 5/16 or M7
 and larger are furnished with 4 locking keys.

Thinwall - Metric - Stainless Steel

| Insert Part No. | INSERT | | | Installation Tool Part No. | INSTALLATION | | REMOVAL | | REMOVAL | |
|--------------------|--------------------------------|--------------------------------|--------|----------------------------------|----------------------|----------------------------------|------------------|---------------|---------|-------|
| | Internal Thread Class 6H | External Thread Class 6g | Length | | Top Drill Size | C'Sink Diameter +.25/- .00 | Thread Top | | Drill | |
| | | | | | | | Size Class 6H | Min. Depth | Size | Depth |
| *75056 | M5-.8 | M8-1.25 | 8.0 | 72190 | 6.9 | 8.25 | M8-1.25 | 9.5 | 5.50 | 4.00 |
| *75066 | M6-1 | M10-1.25 | 10.0 | 72250 | 8.8 | 10.25 | M10-1.25 | 11.5 | 7.50 | 4.75 |
| *75086 | M8-1.25 | M12-1.25 | 12.0 | 72312 | 10.8 | 12.25 | M12-1.25 | 13.5 | 9.50 | 4.75 |
| 77086 | M8-1 | | | | | | | | | |
| *75106 | M10-1.5 | M14-1.5 | 14.0 | 72375 | 12.8 | 14.25 | M14-1.5 | 15.5 | 11.50 | 4.75 |
| 77106 | M10-1.25 | | | | | | | | | |
| *75126 | M12-1.75 | M16-1.5 | 16.0 | 72500 | 14.75 | 16.25 | M16-1.5 | 17.5 | 13.50 | 4.75 |
| 78126 | M12-1.25 | | | | | | | | | |

Heavy Duty - Metric - Stainless Steel

| Insert Part No. | INSERT | | | Installation Tool Part No. | INSTALLATION | | REMOVAL | | REMOVAL | |
|--------------------|--------------------------------|--------------------------------|--------|----------------------------------|----------------------|----------------------------------|------------------|---------------|---------|-------|
| | Internal Thread Class 6H | External Thread Class 6g | Length | | Top Drill Size | C'Sink Diameter +.25/- .00 | Thread Top | | Drill | |
| | | | | | | | Size Class 6H | Min. Depth | Size | Depth |
| 75047 | M4-.7 | M8-1.25 | 8.0 | 71042 | 6.90 | 8.25 | M8-1.25 | 9.5 | 5.50 | 4.00 |
| 75057 | M5-.8 | M10-1.25 | 10.0 | 72190 | 8.80 | 10.25 | M10-1.25 | 12.5 | 7.50 | 4.75 |
| 75067 | M6-1 | M12-1.25 | 12.0 | 72250 | 10.80 | 12.25 | M12-1.25 | 14.5 | 9.50 | 4.75 |
| 75087 | M8-1.25 | M14-1.5 | 14.0 | 72312 | 12.80 | 14.25 | M14-1.5 | 16.5 | 11.50 | 4.75 |
| 77087 | M8-1 | | | | | | | | | |
| 75107 | M10-1.5 | M16-1.5 | 16.0 | 72375 | 14.75 | 16.25 | M16-1.5 | 18.5 | 13.50 | 4.75 |
| 77107 | M10-1.25 | | | | | | | | | |
| 75127 | M12-1.75 | M18-1.5 | 18.0 | 72500 | 16.75 | 18.25 | M18-1.5 | 20.5 | 15.50 | 4.75 |
| 78127 | M12-1.25 | | | | | | | | | |
| 75147 | M14-2 | M20-1.5 | 20.0 | 71142 | 18.75 | 20.25 | M20-1.5 | 22.5 | 17.50 | 4.75 |
| 77147 | M14-1.5 | | | | | | | | | |
| 75167 | M16-2 | M22-1.5 | 22.0 | 72625 | 20.50 | 22.25 | M22-1.5 | 24.5 | 17.75 | 6.35 |
| 77167 | M16-1.5 | | | | | | | | | |
| 78187 | M18-1.5 | M24-1.5 | 24.0 | 71182 | 22.50 | 24.25 | M24-1.5 | 26.5 | 19.75 | 6.35 |
| 75207 | M20-2.5 | M30-2 | 30.0 | 72875 | 28.00 | 30.25 | M30-2 | 34.5 | 25.75 | 6.35 |
| 78207 | M20-1.5 | | | | | | | | | |
| 78227 | M22-1.5 | M32-2 | 32.0 | 72875 | 30.00 | 32.25 | M32-2 | 36.5 | 27.75 | 6.35 |
| 75247 | M24-3 | M33-2 | 33.0 | 71242 | 31.00 | 33.25 | M33-2 | 37.5 | 28.75 | 6.35 |
| 77247 | M24-2 | | | | | | | | | |

* INDICATES PARTS NORMALLY AVAILABLE FROM STOCK.

LEAD TIMES AND MINIMUMS MAY APPLY ON ALL OTHER SIZES.



Tooling & 4-Piece Range Kits

TOOLING-ONLY RANGE KIT

Keysert Tooling Range Kit

Part No. 72000

| Keysert Tool No. | Installs Inch Series (TW & HD) | Installs Metric Series (TW & HD) |
|------------------|--------------------------------|----------------------------------|
| 72190 | #10 | M5 |
| 72250 | 1/4" | M6 |
| 72312 | 5/16" | M8 |
| 72375 | 3/8"-7/16" | M10 |
| 72500 | 1/2"-9/16" | M12 |
| 72625 | 5/8" | M16 |
| 72875 | 3/4"-7/8" | M20-22 |
| 72100 | 1" | N/A |



4-PIECE RANGE KITS

UNC Carbon Steel Thinwall Range Kit

Part No. 76003

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|--------------------|---------------|------------------|---------------|
| 1/4-20 | 73041 | 12 | 72250 | 1 |
| 5/16-18 | 73051 | 12 | 72312 | 1 |
| 3/8-16 | 73061 | 12 | 72375 | 1 |
| 1/2-13 | 73081 | 6 | 72500 | 1 |

UNC Stainless Steel Thinwall Range Kit

Part No. 76004

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|--------------------|---------------|------------------|---------------|
| 1/4-20 | 73046 | 12 | 72250 | 1 |
| 5/16-18 | 73056 | 12 | 72312 | 1 |
| 3/8-16 | 73066 | 12 | 72375 | 1 |
| 1/2-13 | 73086 | 6 | 72500 | 1 |

Metric Coarse Carbon Steel Thinwall Range Kit

Part No. 75003

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|--------------------|---------------|------------------|---------------|
| M5-0.8 | 75051 | 12 | 72190 | 1 |
| M6-1.0 | 75061 | 12 | 72250 | 1 |
| M8-1.25 | 75081 | 12 | 72312 | 1 |
| M10-1.5 | 75101 | 12 | 72375 | 1 |

Metric Coarse Stainless Steel Thinwall Range Kit

Part No. 75004

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|--------------------|---------------|------------------|---------------|
| M5-0.8 | 75056 | 12 | 72190 | 1 |
| M6-1.0 | 75066 | 12 | 72250 | 1 |
| M8-1.25 | 75086 | 12 | 72312 | 1 |
| M10-1.5 | 75106 | 12 | 72375 | 1 |



6-Piece & Master Range Kits

6-PIECE RANGE KITS

**UNC Carbon Steel Heavy-Duty Range Kit
Part No. 70003**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-20 | 73042 | 20 | 70042 | 1 |
| 5/16-18 | 73052 | 15 | 70052 | 1 |
| 3/8-16 | 73062 | 10 | 70062 | 1 |
| 1/2-13 | 73082 | 6 | 70082 | 1 |
| 5/8-11 | 73102 | 3 | 70102 | 1 |
| 3/4-10 | 73122 | 3 | 70122 | 1 |

**UNF Carbon Steel Heavy-Duty Range Kit
Part No. 71003**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-28 | 74042 | 20 | 70042 | 1 |
| 5/16-24 | 74052 | 15 | 70052 | 1 |
| 3/8-24 | 74062 | 10 | 70062 | 1 |
| 1/2-20 | 74082 | 6 | 70082 | 1 |
| 5/8-18 | 74102 | 3 | 70102 | 1 |
| 3/4-16 | 74122 | 3 | 70122 | 1 |

**UNC Stainless Steel Heavy-Duty Range Kit
Part No. 70004**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-20 | 73047 | 20 | 70042 | 1 |
| 5/16-18 | 73057 | 15 | 70052 | 1 |
| 3/8-16 | 73067 | 10 | 70062 | 1 |
| 1/2-13 | 73087 | 6 | 70082 | 1 |
| 5/8-11 | 73107 | 3 | 70102 | 1 |
| 3/4-10 | 73127 | 3 | 70122 | 1 |

**UNF Stainless Steel Heavy-Duty Range Kit
Part No. 71004**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-28 | 74047 | 20 | 70042 | 1 |
| 5/16-24 | 74057 | 15 | 70052 | 1 |
| 3/8-24 | 74067 | 10 | 70062 | 1 |
| 1/2-20 | 74087 | 6 | 70082 | 1 |
| 5/8-18 | 74107 | 3 | 70102 | 1 |
| 3/4-16 | 74127 | 3 | 70122 | 1 |

6-Piece & Master Range Kits

MASTER RANGE KITS

**UNC Carbon Steel Heavy-Duty Range Kit
Part No. 73003**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-20 | 73042 | 20 | 70042 | 1 |
| 5/16-18 | 73052 | 15 | 70052 | 1 |
| 3/8-16 | 73062 | 10 | 70062 | 1 |
| 7/16-14 | 73072 | 10 | 70072 | 1 |
| 1/2-13 | 73082 | 6 | 70082 | 1 |
| 9/16-12 | 73092 | 5 | 70092 | 1 |
| 5/8-11 | 73102 | 3 | 70102 | 1 |
| 3/4-10 | 73122 | 3 | 70122 | 1 |
| 7/8-9 | 73142 | 3 | 70142 | 1 |
| 1-8 | 73162 | 2 | 70162 | 1 |

**UNF Carbon Steel Heavy-Duty Range Kit
Part No. 74003**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-28 | 74042 | 20 | 70042 | 1 |
| 5/16-24 | 74052 | 15 | 70052 | 1 |
| 3/8-24 | 74062 | 10 | 70062 | 1 |
| 7/16-20 | 74072 | 10 | 70072 | 1 |
| 1/2-20 | 74082 | 6 | 70082 | 1 |
| 9/16-18 | 74092 | 5 | 70092 | 1 |
| 5/8-18 | 74102 | 3 | 70102 | 1 |
| 3/4-16 | 74122 | 3 | 70122 | 1 |
| 7/8-14 | 74142 | 3 | 70142 | 1 |
| 1-12 | 74162 | 2 | 70162 | 1 |

**UNC Stainless Steel Heavy-Duty Range Kit
Part No. 73004**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-20 | 73047 | 20 | 70042 | 1 |
| 5/16-18 | 73057 | 15 | 70052 | 1 |
| 3/8-16 | 73067 | 10 | 70062 | 1 |
| 7/16-14 | 73077 | 10 | 70072 | 1 |
| 1/2-13 | 73087 | 6 | 70082 | 1 |
| 9/16-12 | 73097 | 5 | 70092 | 1 |
| 5/8-11 | 73107 | 3 | 70102 | 1 |
| 3/4-10 | 73127 | 3 | 70122 | 1 |
| 7/8-9 | 73147 | 3 | 70142 | 1 |
| 1-8 | 73167 | 2 | 70162 | 1 |

**UNF Stainless Steel Heavy-Duty Range Kit
Part No. 74004**

| Size | Keysert Insert No. | No. of Pieces | Keysert Tool No. | No. of Pieces |
|---------|-----------------------|------------------|---------------------|------------------|
| 1/4-28 | 74047 | 20 | 70042 | 1 |
| 5/16-24 | 74057 | 15 | 70052 | 1 |
| 3/8-24 | 74067 | 10 | 70062 | 1 |
| 7/16-20 | 74077 | 10 | 70072 | 1 |
| 1/2-20 | 74087 | 6 | 70082 | 1 |
| 9/16-18 | 74097 | 5 | 70092 | 1 |
| 5/8-18 | 74107 | 3 | 70102 | 1 |
| 3/4-16 | 74127 | 3 | 70122 | 1 |
| 7/8-14 | 74147 | 3 | 70142 | 1 |
| 1-12 | 74167 | 2 | 70162 | 1 |



Newman Tools Inc.
185 Iber Rd.
Ottawa, Ontario, Canada K2S 1E7

**Alcoa
Fastening
Systems**

