

GROOVE 'N TURN[®] INSERTS

U.S. PATENT NOS. 6,688,816 and 6,824,333

PRODUCT INFORMATION

- For Dovetail O-Ring face grooving and OD/ID grooving.
- Groove Widths .030", .050", .060", .070", .080", .090", .100", .125" & .150".
- Major diameters from .300".
- Sub-micron grain **DURA-MAX[®] 2000** and **5000** Carbides.
- Inserts available with TiN, TiCN, TiAlN or Diamond film coating.



MODIFICATIONS

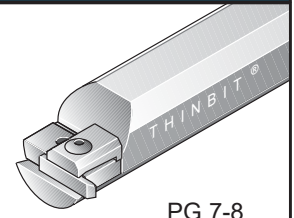
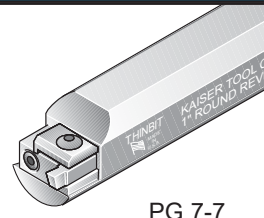
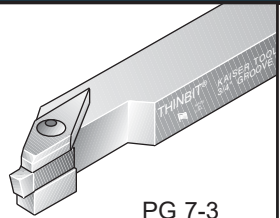
SEE PAGES
8-2 & 8-3
FOR ADDITIONAL
INFORMATION

| | | | |
|---------------------------------|-----------------------------------|------------------------------------|-------------------------------------|
| RADII (TOP VIEW) | DEPTH OF CUT (TOP VIEW) | SIZING (TOP VIEW) | BACK CLEARANCE (TOP VIEW) |
| | | | |
| LEAD ANGLE (TOP VIEW) | TOP RAKE (SIDE VIEW) | CHIP BREAKER (SIDE VIEW) | SIDE CLEARANCE (END VIEW) |
| | | | |

TOOLHOLDER SELECTIONS

CNC, SWISS, CONVENTIONAL STYLE

ROUND STYLE



45° STYLE

SWISS FACE STYLE



TECHNICAL SECTIONS

PRODUCT DEMONSTRATION



www.thinbit.com/qr2-11

SPEEDS AND FEEDS

PG 9-12

APPLICATION REFERENCE

PGS 9-3 & 9-4

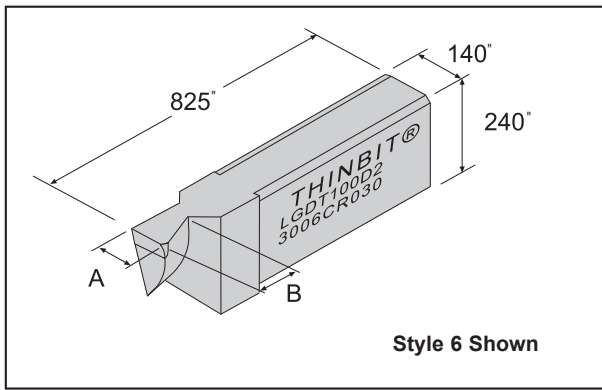
TROUBLESHOOTING

PG 9-7

KAISER TOOL COMPANY, INC.

Phone: 888-THINBIT (888-844-6248) or (260) 484-3620 • Fax: 888-THINFAX (888-844-6329) or (260) 482-1881
www.thinbit.com • General E-mail: thinbit@kaisertool.com • Orders: orders@thinbit.com • Quotes: quotes@thinbit.com

DOVETAIL O-RING FACE GROOVING INSERTS



Style 6 Shown

FRONT RAKE: Primary 10° honed, Secondary 15°
 BACK CLEARANCE: 24° one side
 SIDE CLEARANCE: Depends on major diameter
 RADIUS: On 24° side only
 TOP RAKE: 0°
 LEAD ANGLE: 0°

Notes:

- For best performance, form undercut by profiling.
- If using on either an ID Bore or OD Shaft contact us for assistance.
- Half dovetail form requires a radius on both corners.

DOVE TAIL FACE GROOVING

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of groove width and insert grade.

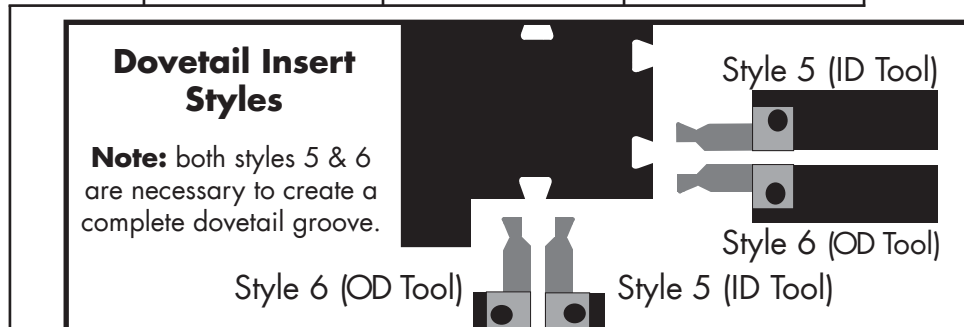
EXAMPLE:

The **ORDER CODE** for a left hand/counter-clockwise, .100" wide OD side insert in **DURA-MAX® 2000**, with a .300" major diameter and a .030" corner radius is:
LGDT100D23006CR030

| SPECIFICATIONS | | | | ORDER CODE | | | | INFO. | |
|---------------------------------|---------------------|---------------------|--------|---|----------------------|--|----------------------|---|---|
| Insert Orientation & Radius | Insert Width 'A' | Depth of Cut 'B' | Radius | Insert Grades See Page 9-5 for expanded material descriptions and Page 9-12 for Speeds and Feeds information | | | | Add-ons Use 'Order Code' and Add Coating Page 9-6 | Toolholder Catalog Section 7 Use Toolholders Beginning With |
| | | | | DURA-MAX® 2000 Carbide For Steel & Interrupted Cutting | | DURA-MAX® 5000 Carbide For Aluminum & Nonferrous | | | |
| | ± .001" | | | Style 5 (ID Tool) | Style 6 (OD Tool) | Style 5 (ID Tool) | Style 6 (OD Tool) | | |
| Left Hand/ Counter-Clockwise | .030" | .030" | .015" | LGDT030D2__5CR015 | LGDT030D2__6CR015 | LGDT030D5__5CR015 | LGDT030D5__6CR015 | TIN add 'C' TiCN add 'D' TiAIN add 'E' Diamond add 'F' | 'L' |
| | .050" | .070" | .015" | LGDT050D2__5CR015 | LGDT050D2__6CR015 | LGDT050D5__5CR015 | LGDT050D5__6CR015 | | |
| | .060" | .070" | .015" | LGDT060D2__5CR015 | LGDT060D2__6CR015 | LGDT060D5__5CR015 | LGDT060D5__6CR015 | | |
| | .070" | .100" | .015" | LGDT070D2__5CR015 | LGDT070D2__6CR015 | LGDT070D5__5CR015 | LGDT070D5__6CR015 | | |
| | .080" | .100" | .015" | LGDT080D2__5CR015 | LGDT080D2__6CR015 | LGDT080D5__5CR015 | LGDT080D5__6CR015 | | |
| | .090" | .115" | .015" | LGDT090D2__5CR015 | LGDT090D2__6CR015 | LGDT090D5__5CR015 | LGDT090D5__6CR015 | | |
| | .100" | .125" | .015" | LGDT100D2__5CR015 | LGDT100D2__6CR015 | LGDT100D5__5CR015 | LGDT100D5__6CR015 | | |
| | .100" | .125" | .030" | LGDT100D2__5CR030 | LGDT100D2__6CR030 | LGDT100D5__5CR030 | LGDT100D5__6CR030 | | |
| | .125" | .190" | .030" | LGDT125D2__5CR030 | LGDT125D2__6CR030 | LGDT125D5__5CR030 | LGDT125D5__6CR030 | | |
| | .150" | .200" | .030" | LGDT150D2__5CR030 | LGDT150D2__6CR030 | LGDT150D5__5CR030 | LGDT150D5__6CR030 | | |

Major Diameter Code

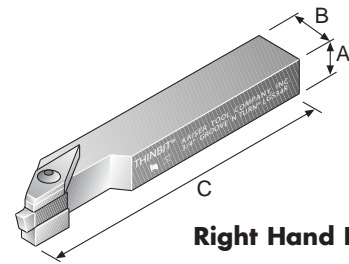
| Major Diameter | Code |
|----------------|------|
| .300" | 300 |
| .500" | 500 |
| 1.000" | 1000 |
| 1.500" | 1500 |
| 2.000" | 2000 |
| 3.000" | 3000 |



KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

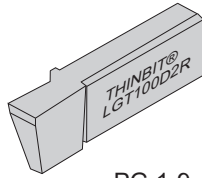
- Designed for CNC, conventional and top slide position on Swiss screw machines.
- Shank sizes 5/16", 3/8", 1/2", 5/8", 3/4", 1" and 1-1/4". Metric sizes also available.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



Right Hand Illustrated

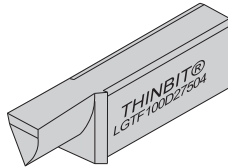
INSERT SELECTIONS

GROOVING



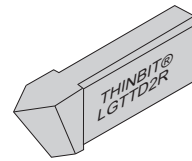
PG 1-9

FACE GROOVING



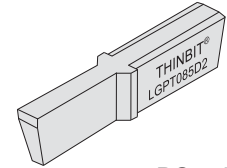
PG 2-9

THREADING



PG 4-9

PARTING



PG 5-3



Scan this code for additional information.

www.thinbit.com/qr7-3

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank dimensions.

EXAMPLE:

The **ORDER CODE** for a .750" Right Hand square shank for inserts beginning with 'L' is:

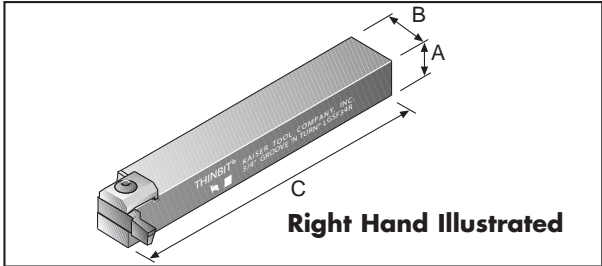
LGS34R

| SPECIFICATIONS | | | | ORDER CODE | | | | | |
|--|------------------|--------|---------|--|---------|---|-------|--------|-------|
| Shank Orientation | Shank Dimensions | | | Toolholder Package Includes Shank, Clamp and Hardware | | Replacement Parts | | | |
| | 'A' | 'B' | 'C' | For Inserts Beginning With 'L' | | Clamp | Screw | Wrench | Pin |
| RIGHT HAND | LEFT HAND | | | | | | | | |
| Straight Use right hand holder with right hand inserts Use left hand holder with left hand inserts | .312" | .500" | 4.840" | LGS56R | LGS56L | Right Hand: Clamp X Left Hand: Clamp Y | S3808 | W1005 | P0206 |
| | .375" | .500" | 4.840" | LGS38R | LGS38L | | | | |
| | .500" | .500" | 4.840" | LGS12R | LGS12L | | | | |
| | .625" | .625" | 4.840" | LGS58R | LGS58L | | | | |
| | .750" | .750" | 4.840" | LGS34R | LGS34L | | | | |
| | 1.000" | 1.000" | 4.840" | LGS01R | LGS01L | | | | |
| | 1.250" | 1.250" | 4.840" | LGS14R | LGS14L | | | | |
| | 8mm | .500" | 4.840" | LGS08RM | LGS08LM | | | | |
| | 10mm | .500" | 4.840" | LGS10RM | LGS10LM | | | | |
| | 12mm | .500" | 4.840" | LGS12RM | LGS12LM | | | | |
| | 16mm | .750" | 4.840" | LGS16RM | LGS16LM | | | | |
| | 20mm | 1.000" | 4.840" | LGS20RM | LGS20LM | | | | |
| 25mm | 1.000" | 4.840" | LGS25RM | LGS25LM | | | | | |

KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

- Designed for CNC and conventional machines.
- Shank sizes 5/16", 3/8", 1/2", 5/8", 3/4", 1" and 1-1/4". Metric sizes also available.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



INSERT SELECTIONS

| GROOVING | FACE GROOVING | THREADING | PARTING |
|------------|---------------|------------|------------|
| PG 1-9 | PG 2-9 | PG 4-9 | PG 5-3 |



Scan this code for additional information.

www.thinbit.com/qr7-4

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank orientation and dimensions.

EXAMPLE:

The **ORDER CODE** for a .750" right hand shank for inserts beginning with 'L' is:
LGSF34R

| SPECIFICATIONS | | | | ORDER CODE | | | | | |
|---|------------------|--------|--------|--|-----------|-------------------|-------|--------|-------|
| Shank Orientation | Shank Dimensions | | | Toolholder Package <small>Includes Shank, Clamp and Hardware For Inserts Beginning With 'L'</small> | | Replacement Parts | | | |
| | 'A' | 'B' | 'C' | RIGHT HAND | LEFT HAND | Clamp | Screw | Wrench | Pin |
| 90° Use right hand holder with left hand inserts | .312" | .500" | 4.840" | LGSF56R | | Clamp C | S3808 | W1005 | P0312 |
| | .375" | .500" | 4.840" | LGSF38R | | | | | |
| | .500" | .500" | 4.840" | LGSF12R | | | | | |
| | .625" | .625" | 4.840" | LGSF58R | LGSF58L | | | | |
| | .750" | .750" | 4.840" | LGSF34R | LGSF34L | | | | |
| | 1.000" | 1.000" | 4.840" | LGSF01R | LGSF01L | | | | |
| | 1.250" | 1.250" | 4.840" | LGSF14R | LGSF14L | | | | |
| Use left hand holder with right hand inserts | 8mm | .500" | 4.840" | LGSF08RM | | | | | |
| | 10mm | .500" | 4.840" | LGSF10RM | | | | | |
| | 12mm | .500" | 4.840" | LGSF12RM | | | | | |
| | 16mm | .750" | 4.840" | LGSF16RM | LGSF16LM | | | | |
| | 20mm | 1.000" | 4.840" | LGSF20RM | LGSF20LM | | | | |
| | 25mm | 1.000" | 4.840" | LGSF25RM | LGSF25LM | | | | |

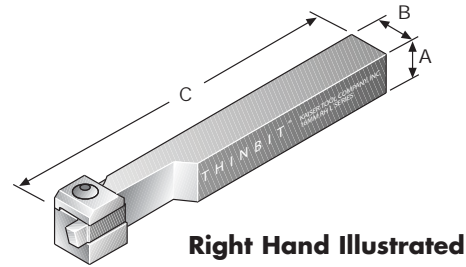
GROOVE 'N TURN®
TOOLHOLDERS

KAISER TOOL COMPANY, INC.

Phone: 888-THINBIT (888-844-6248) or (260) 484-3620 • Fax: 888-THINFAX (888-844-6329) or (260) 482-1881
www.thinbit.com • General E-mail: thinbit@kaisertool.com • Orders: orders@thinbit.com • Quotes: quotes@thinbit.com

PRODUCT INFORMATION

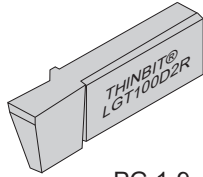
- Designed for top slide position on Swiss screw machines.
- Shank sizes 1/2", 12mm and 16mm in right hand orientation.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



Right Hand Illustrated

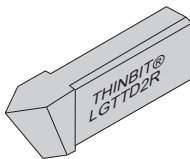
INSERT SELECTIONS

GROOVING



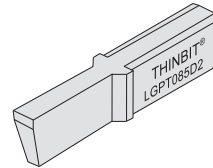
PG 1-9

THREADING



PG 4-9

PARTING



PG 5-3



Scan this code for additional information.

www.thinbit.com/qr7-5

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank orientation and dimensions.

EXAMPLE:

The **ORDER CODE** for a .500" shank, right hand tool for inserts beginning with 'L' is:

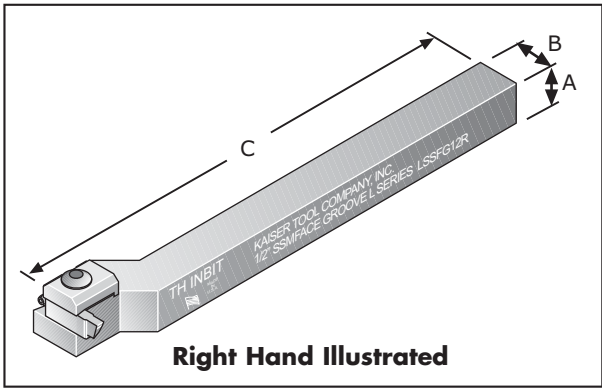
LSS12R

| SPECIFICATIONS | | | | ORDER CODE | | | | |
|--|------------------|-------|--------|---|-------------------|-------|--------|-------|
| Shank Orientation | Shank Dimensions | | | Toolholder Package Includes Shank, Clamp and Hardware For Inserts Beginning With 'L' | Replacement Parts | | | |
| | 'A' | 'B' | 'C' | | Clamp | Screw | Wrench | Pin |
| Right Hand | .500" | .500" | 4.840" | LSS12R | Clamp C | S3808 | W1005 | P0305 |
| Use with right hand and centered inserts | 12mm | 12mm | | LSS12RM | | | | |
| | 16mm | 16mm | | LSS16RM | | | | |
| Left Hand | .500" | .500" | 4.840" | LSS12L | | | | |
| Use with left hand and centered inserts | 12mm | 12mm | | LSS12LM | | | | |
| | 16mm | 16mm | | LSS16LM | | | | |

KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

- Designed for top slide position on Swiss screw machines.
- Shank sizes 3/8", 1/2", 10mm, 12mm and 16mm in right hand orientation.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



INSERT SELECTIONS

FACE GROOVING

PG 2-9



Scan this code for additional information.

www.thinbit.com/qr7-6

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank orientation and dimensions.

EXAMPLE:

The **ORDER CODE** for a .375" Right Hand shank for inserts beginning with 'L' is:

LSSFG38R

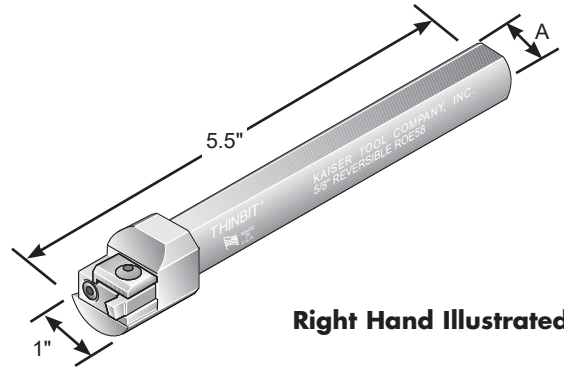
| SPECIFICATIONS | | | | ORDER CODE | | | | |
|--|------------------|-------|--------|---|-------------------|-------|--------|-------|
| Shank Orientation | Shank Dimensions | | | Toolholder Package Includes Shank, Clamp and Hardware For Inserts Beginning With 'L' | Replacement Parts | | | |
| | 'A' | 'B' | 'C' | | Clamp | Screw | Wrench | Pin |
| Right Hand Use with left hand and centered inserts for counter-clockwise rotation | .375" | .375" | 4.840" | LSSFG38R | Clamp C | S3808 | W1005 | P0203 |
| | .500" | .500" | 4.840" | LSSFG12R | | | | |
| | 10mm | 10mm | 4.840" | LSSFG10RM | | | | |
| | 12mm | 12mm | 4.840" | LSSFG12RM | | | | |
| | 16mm | 16mm | 4.840" | LSSFG16RM | | | | |

SWISS TOOLHOLDERS

KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

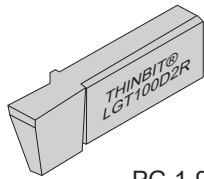
- Designed for boring bar positions on all machines.
- Can be used with a boring head to trepan on a mill. Shank may need to be shortened.
- Toolholder reversible by removing face and bottom screws and rotating head 1/2 turn.
- Shank sizes 1/2", 5/8", 3/4" and 1".
- All 1/2", 5/8" and 3/4" shanks are made from 1" shank.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



Right Hand Illustrated

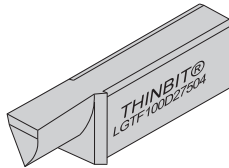
INSERT SELECTIONS

GROOVING



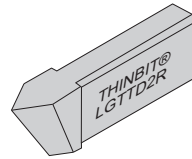
PG 1-9

FACE GROOVING



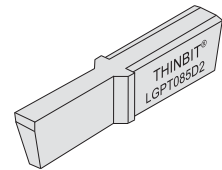
PG 2-9

THREADING



PG 4-9

PARTING



PG 5-3



Scan this code for additional information.

www.thinbit.com/qr7-7

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank dimensions.

EXAMPLE:

The **ORDER CODE** for a .625" round shank for inserts beginning with 'L' is:

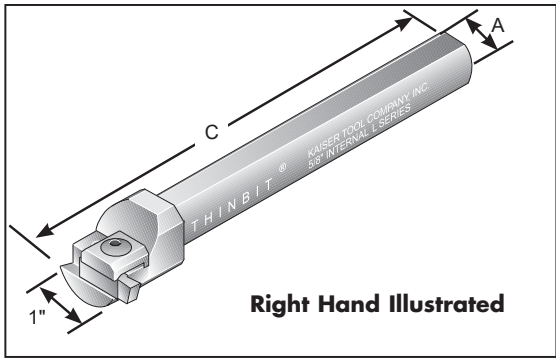
LROE58

| SPECIFICATIONS | | ORDER CODE | | | | | | |
|--|-----------------------------|---|---|---------------------------|---------------------------|--------|---------|---|
| Shank Orientation | Shank Dimensions 'A' | Toolholder Package Includes Shank, Head, Clamp and Hardware For Inserts Beginning With 'L' | Replacement Parts | | | | | Clamp Hardware |
| | | | Head Only Includes Clamp and Hardware For Inserts Beginning With 'L' | Head Screws | Head Wrenches | Shank | Clamp | |
| Right Hand or Left Hand Use as right hand with right hand inserts; Use as left hand with left hand inserts; Use as either hand with centered inserts. | .500" | LROE12 | LROEH | 1 each: S5806 S2810 | 1 each: W1006 W1009 | RROE12 | Clamp C | Screw: S3808 Wrench: W1005 |
| | .625" | LROE58 | | | | RROE58 | | |
| | .750" | LROE34 | | | | RROE34 | | |
| | 1.000" | LROE01 | | | | RROE01 | | |

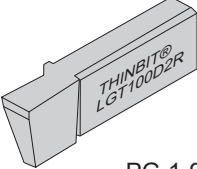
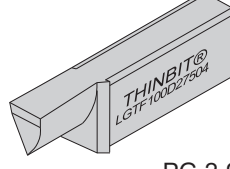
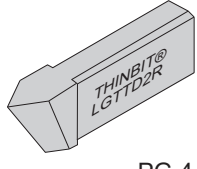
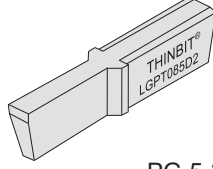
KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

- Designed for boring bar positions on all machines.
- Toolholder reversible for left and right hand orientation.
- Shank sizes 1/2", 5/8", 3/4" and 1".
- All 1/2", 5/8" and 3/4" shanks are made from 1" shank.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



INSERT SELECTIONS

| GROOVING | FACE GROOVING | THREADING | PARTING |
|---|---|--|---|
|  PG 1-9 |  PG 2-9 |  PG 4-9 |  PG 5-3 |



Scan this code for additional information.

www.thinbit.com/qr7-8

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank orientation and dimensions.

EXAMPLE:

The **ORDER CODE** for a .625" right hand shank for inserts beginning with 'L' is:

LR5806

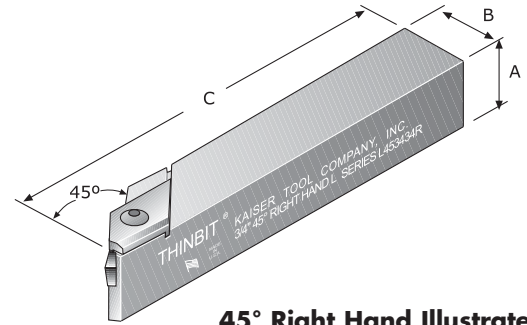
| SPECIFICATIONS | | | ORDER CODE | | | | | |
|--|-----------------------|------------------|------------|---|-------------------|-------|--------|-------|
| Shank Orientation | Minimum Bore Diameter | Shank Dimensions | | Toolholder Package Includes Shank, Clamp and Hardware For Inserts Beginning With 'L' | Replacement Parts | | | |
| | | 'A' | 'C' | | Clamp | Screw | Wrench | Pin |
| Right Hand or Left Hand Use as right hand with left hand inserts; Use as left hand with right hand inserts; Use as either hand with centered inserts. | 1.250" | .500" | 5.500" | LR1206 | Clamp C | S3808 | W1005 | P0305 |
| | | .625" | | LR5806 | | | | |
| | | .750" | | LR3406 | | | | |
| | | 1.000" | 5.500" | LR0106 | | | | |
| | | | 11.875" | LR0112 | | | | |

ROUND TOOLHOLDERS

KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

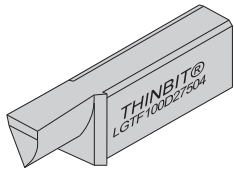
- Designed for making angled undercuts.
- Toolholder must be used with inserts that have radial relief.
- Groove widths less than .080" may require a special insert.
- Shank sizes 3/8", 1/2", 5/8", 3/4" and 1".
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



45° Right Hand Illustrated

INSERT SELECTIONS

FACE GROOVING



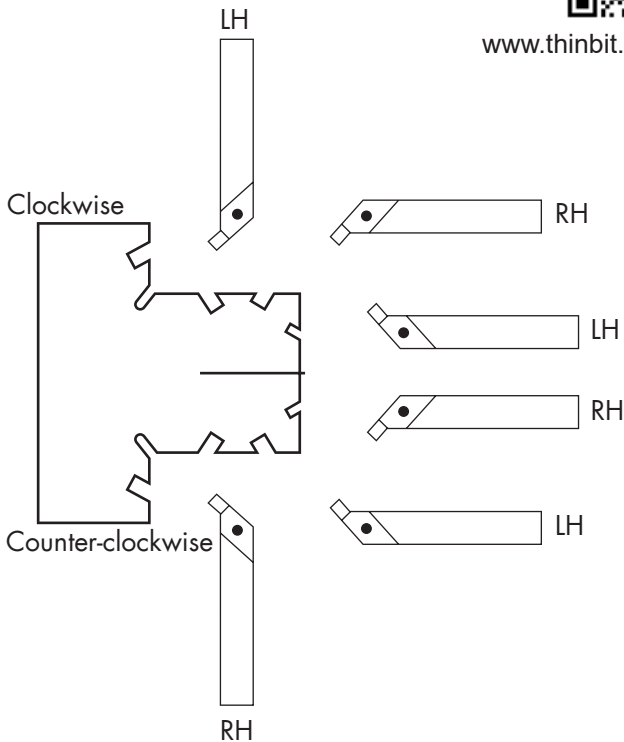
PG 2-9

Due to the potential complexity of configuring these toolholders, we recommend calling for assistance.

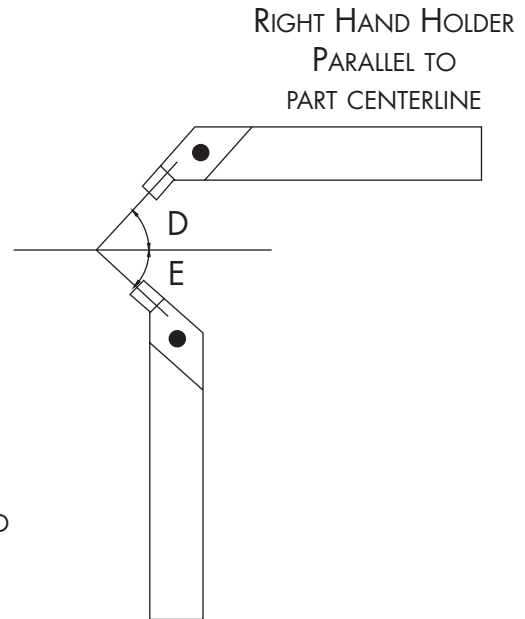


Scan this code for additional information

www.thinbit.com/qr7-11



APPLICATION EXAMPLES
 TOP VIEW, CUTTING EDGE UP



45° ILLUSTRATED

RIGHT HAND HOLDER
 PERPENDICULAR TO
 PART CENTERLINE

KAISER TOOL COMPANY, INC.

ORDERING INSTRUCTIONS

Select the **ORDER CODE** in the table below that represents your selection of shank orientation and dimensions.

EXAMPLE:

The **ORDER CODE** for a 45° holder with a .750" right hand shank is:

L453434R

| SPECIFICATIONS (Page 7-11) | | | | | | ORDER CODE | | | | |
|--|---|--|------------------|----------|---------|---|-------------------|-------|--------|---------|
| Shank Angle | | Shank Orientation | Shank Dimensions | | | Toolholder Package Includes Shank, Clamp and Hardware For Inserts Beginning With 'L' | Replacement Parts | | | |
| 'D' <small>Toolholder parallel to part centerline</small> | 'E' <small>Toolholder perpendicular to part centerline</small> | | 'A' | 'B' | 'C' | | Clamp | Screw | Wrench | Pin |
| 45° | 45° | Right Hand Use with left hand and centered inserts for counter-clockwise rotation | .375" | .750" | 4.840" | L453438R | Clamp Q | S3808 | W1005 | * C0509 |
| | | | .500" | | | L453412R | | | | |
| | | | .625" | | | L453458R | | | | |
| | | | .750" | | | L453434R | | | | |
| | | | 1.000" | | | L450101R | | | | |
| | | Left Hand Use with right hand and centered inserts for clockwise rotation | .375" | L453438L | Clamp R | | | | | |
| | | | .500" | L453412L | | | | | | |
| | | | .625" | L453458L | | | | | | |
| | | | .750" | L453434L | | | | | | |
| | | | 1.000" | L450101L | | | | | | |
| 60° | 30° | Right Hand Use with left hand and centered inserts for counter-clockwise rotation | .375" | .750" | 4.840" | L363438R | Clamp Y | | | |
| | | | .500" | | | L363412R | | | | |
| | | | .625" | | | L363458R | | | | |
| | | | .750" | | | L363434R | | | | |
| | | | 1.000" | | | L360101R | | | | |
| | | Left Hand Use with right hand and centered inserts for clockwise rotation | .375" | L363438L | Clamp X | | | | | |
| | | | .500" | L363412L | | | | | | |
| | | | .625" | L363458L | | | | | | |
| | | | .750" | L363434L | | | | | | |
| | | | 1.000" | L360101L | | | | | | |

45° & 30°/60° TOOLHOLDERS

* Roll Pin sizes may have changed due to manufacturing updates. Toolholders will be shipped with the correct item. Replacement pin (C0509) will contain two items (P0204 & P0305) to accommodate either revision.

KAISER TOOL COMPANY, INC.