

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

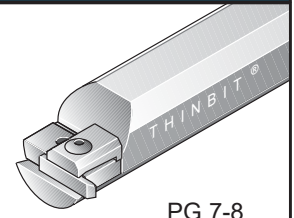
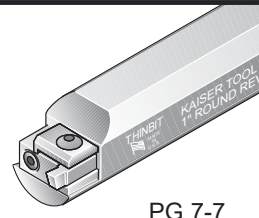
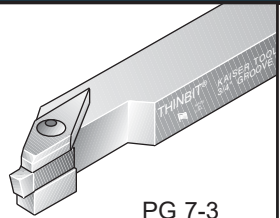
SEE PAGES
8-2 & 8-3
FOR ADDITIONAL
INFORMATION

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

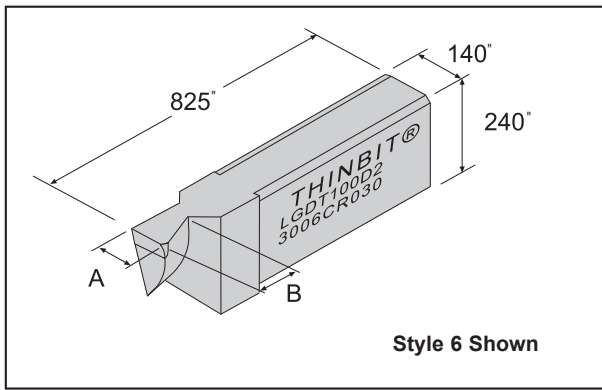
TROUBLESHOOTING

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.

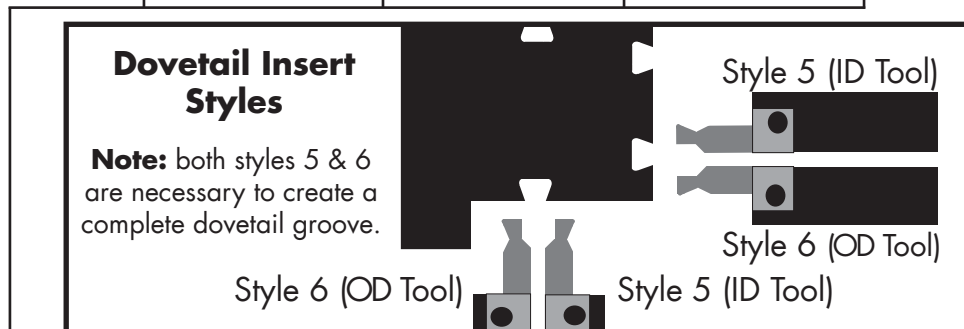
EXAMPLE:

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

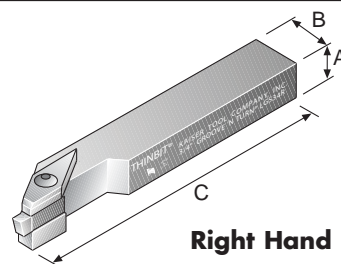
Major Diameter	Code
.300"	300
.500"	500
1.000"	1000
1.500"	1500
2.000"	2000
3.000"	3000



KAISER TOOL COMPANY, INC.

PRODUCT INFORMATION

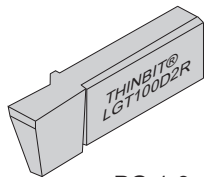
- Designed for CNC, conventional and top slide position on Swiss screw machines.
- Shank sizes 5/16", 3/8", 1/2", 5/8", 3/4", 1" and 1-1/4". Metric sizes also available.
- Modifications can be provided on any of our tooling. Please contact us with your application requirements.



Right Hand Illustrated

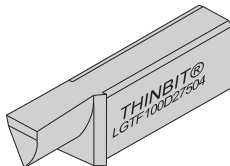
INSERT SELECTIONS

GROOVING



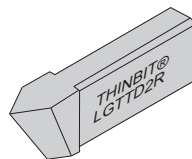
PG 1-9

FACE GROOVING



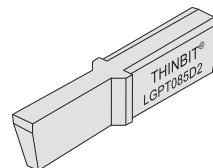
PG 2-9

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:

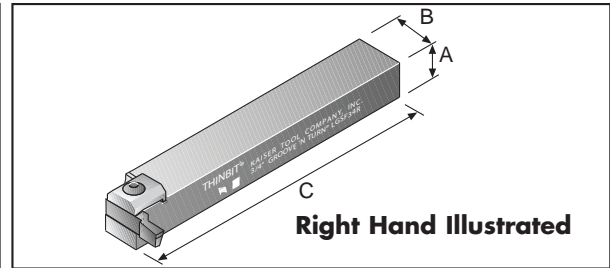
LGS34R

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					

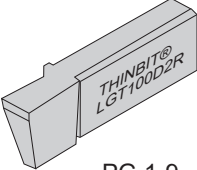
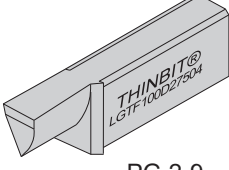
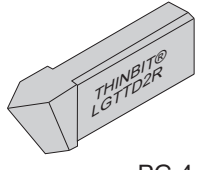
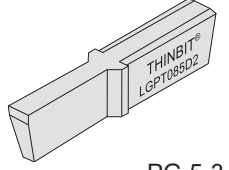
KAISER TOOL COMPANY, INC.

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

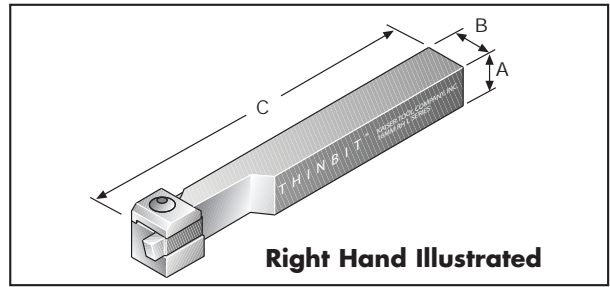
SPECIFICATIONS				ORDER CODE					
Shank Orientation	Shank Dimensions			Toolholder Package Includes Shank, Clamp and Hardware For Inserts Beginning With 'L'		Replacement Parts			
	'A'	'B'	'C'	RIGHT HAND	LEFT HAND	Clamp	Screw	Wrench	Pin
90° Use right hand holder with left hand inserts	.312"	.500"	4.840"	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				

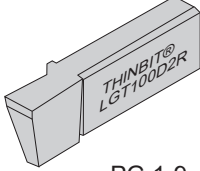
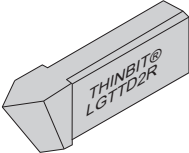
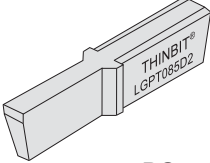
KAISER TOOL COMPANY, INC.

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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.



INSERT SELECTIONS	GROOVING	THREADING	PARTING
	 PG 1-9	 PG 4-9	 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:

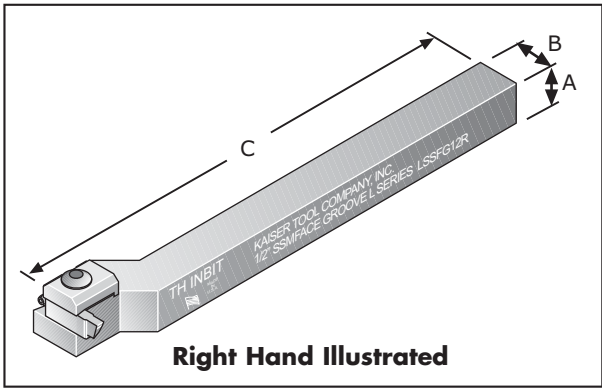
The **ORDER CODE** for a .500" shank, right hand tool for inserts beginning with 'L' is:
LSS12R

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.

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ORDERING INSTRUCTIONS

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

EXAMPLE:

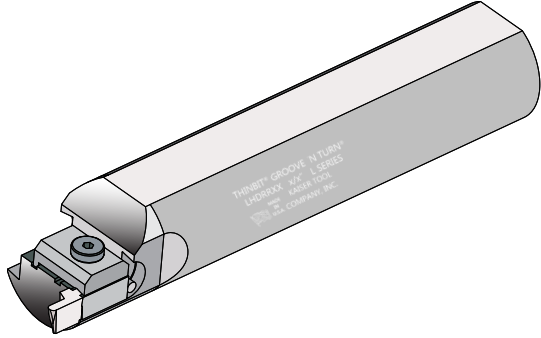
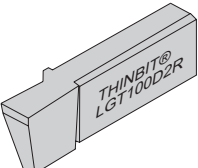
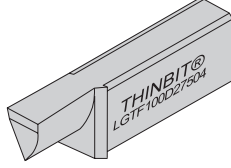
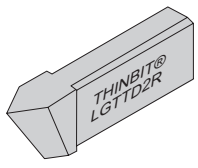
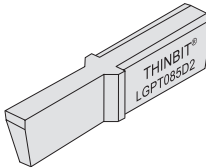
The **ORDER CODE** for a .375" Right Hand shank for inserts beginning with 'L' is:

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	<ul style="list-style-type: none"> 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 changing clamp to other side. Shank sizes 12mm, 1/2", 5/8", 16mm, 3/4" 20mm, 22mm, 25mm and 1". All 1/2", 5/8" and 3/4" shanks are made from 1" shank. For a shortened shank see page 11-2. Modifications can be provided on any of our tooling. Please contact us with your application requirements. 				 <p>Heavy Duty Round Reversible Toolholder</p>		
	INSERT SELECTIONS	GROOVING	FACE GROOVING	THREADING	PARTING		
 PG 1-9		 PG 2-9		 PG 4-9		 PG 5-3	

ORDERING INSTRUCTIONS

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

EXAMPLE:

The **ORDER CODE** for a 3/4" round shank for inserts beginning with 'L' is:

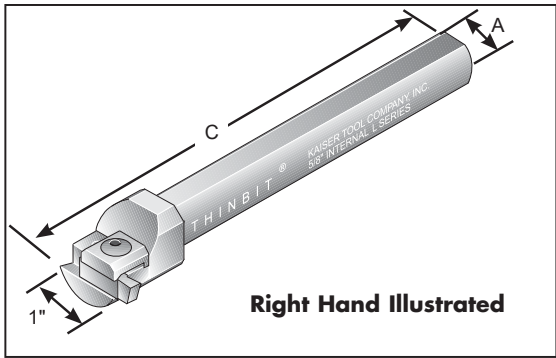
LHDRR34

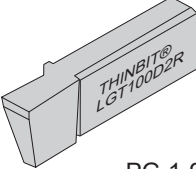
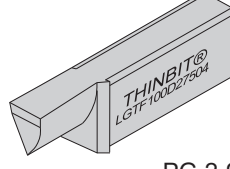
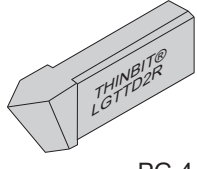
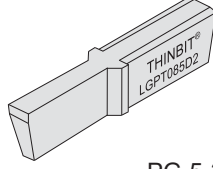
SPECIFICATIONS		ORDER CODE		
Shank Orientation	Shank Dimensions	Toolholder Package Includes Shank, Clamp and Hardware		
		For Inserts Beginning With 'L'	Clamp	Clamp Hardware
<p style="text-align: center;">Right Hand or Left Hand</p> <p>Use as right hand with right hand inserts</p> <p>Use as left hand with left hand inserts</p> <p>Use as either hand with centered inserts</p>	1/2"	LHDRR12	Clamp C	Screw: S3808 Wrench: W1005 Pin: P0305
	5/8"	LHDRR58		
	3/4"	LHDRR34		
	1"	LHDRR01		
	12 mm	LHDRR12M		
	16 mm	LHDRR16M		
	20 mm	LHDRR20M		
	22 mm	LHDRR22M		
25 mm	LHDRR25M			

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

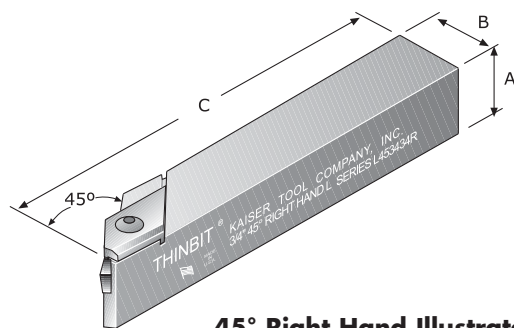
SPECIFICATIONS				ORDER CODE				
Shank Orientation	Minimum Bore Diameter	Shank Dimensions		Toolholder Package Includes Shank, Clamp and Hardware	Replacement Parts			
		'A'	'C'		For Inserts Beginning With 'L'			
	without pin				Clamp	Screw	Wrench	Pin
Right Hand or Left Hand Use as right hand with left 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

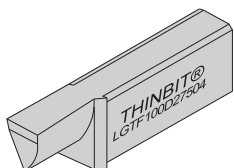
- Designed for making angled undercuts.
- Toolholder must be used with inserts that have radial relief.
- Groove widths less than .080" may require a special insert.
- Shank sizes 3/8", 1/2", 5/8", 3/4" and 1".
- Modifications can be provided on any of our tooling. Please contact us with your application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



45° Right Hand Illustrated

INSERT SELECTIONS

FACE GROOVING



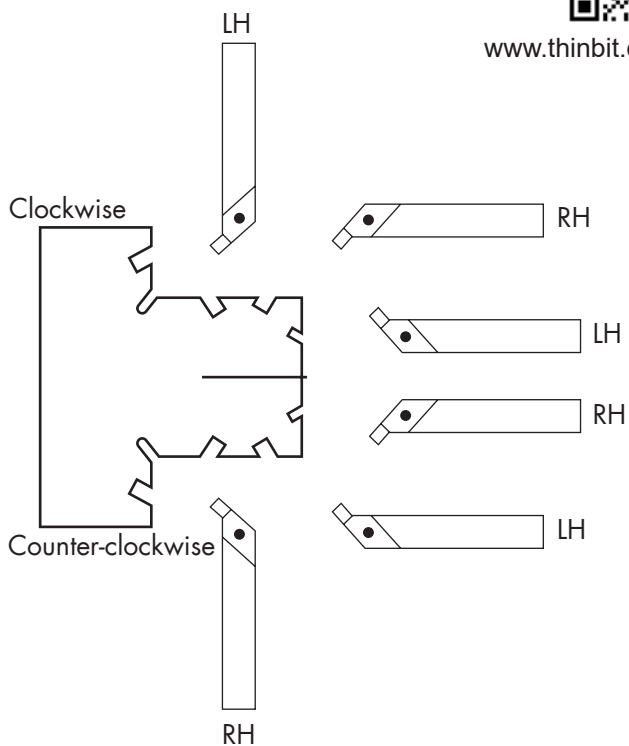
PG 2-9

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

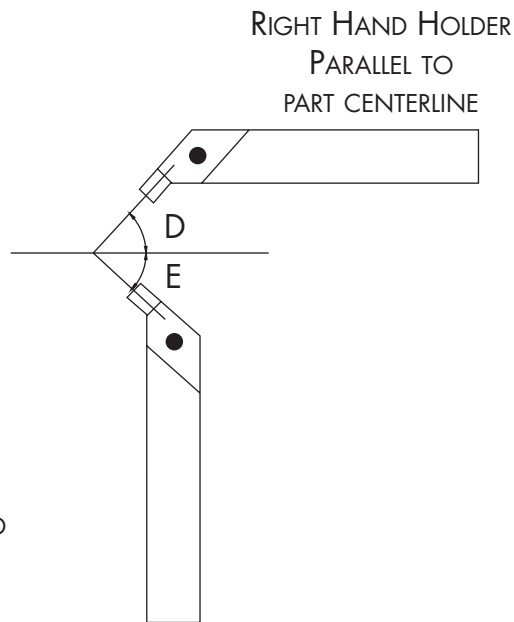


Scan this code for additional information

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						
			.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						
			.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.