

HCG - HORN Catalog Guide

INTERNAL GROOVING

Bore Ø	Product line									
	217	264	S274	S223	S224	231	S229/229	S312/312	315	S316
.625" (15.87 mm)				•						
.709" (18 mm)				•						
.787 - 1.102" (20-28 mm)	•			•						
1.102 - 1.496" (28-38 mm)	•			•	•					
> 1.496" (38 mm)	•			•	•	•	•	•	•	
Operation Type										
Grooving	•			•	•	•	•	•	•	
Threading					•	•			•	
Profiling				•	•		•	•	•	
Width of groove inch	.022-.209			.049-.118	.079-.236	.098-.394	.098-.394	.020-.250	.049-.169	
Width of groove mm	0.56-5.3			1.25-3.0	2.0-6.0	2.5-10.0	2.5-10.0	0.5-6.35	1.25-4.29	
Chapter	A	B	C	D	E	F	G	H	J	K

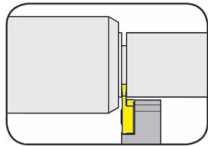
EXTERNAL GROOVING

Depth of groove up to	Product line									
	217	264	S274	S223	S224	231	S229/229	S312/312	315	S316
.157" (4 mm)	•	•	•	•	•	•	•	•	•	•
.236" (6 mm)		•	•	•	•	•	•	•	•	•
.315" (8 mm)		•	•	•	•	•	•	•		•
.394" (10 mm)		•	•	•	•	•	•			
.433" (11 mm)		•	•	•	•	•	•			
.551" (14 mm)		•	•	•	•		•			
.630" (16 mm)		•	•	•	•		•			
.709" (18 mm)			•	•	•		•			
.984" (25 mm)			•	•			•			
1.000" (25.4 mm)			•				•			
Operation Type										
Grooving	•	•	•	•	•	•	•	•	•	•
Side Turning		•	•	•	•		•	•		
Parting Off	•	•	•	•	•		•	•		•
Threading		•	•			•	•		•	
Profiling			•		•		•	•	•	•
Axial Grooving						•			•	
Width of groove inch	.022-.209	.059-.118	.020-.118	.049-.118	.079-.236	.098-.394	.098-.394	.020-.250	.022-.169	.059-.118
Width of groove mm	0.56-5.3	1.5-3.0	0.5-3.0	1.25-3.0	2.0-6.0	2.5-10.0	2.5-10.0	0.5-6.35	0.56-4.29	1.5-3.0
Chapter	A	B	C	D	E	F	G	H	J	K

Special tools upon request

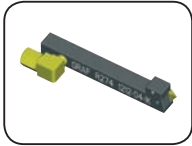
TOOLING SYSTEMS S274 **C**

Toolholder

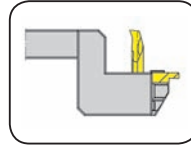


Page C2-C5

Toolholder
- machine-specific -



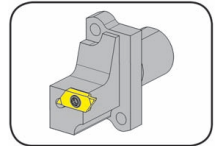
Page C6



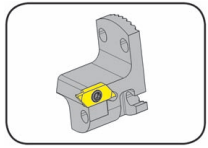
Page C7



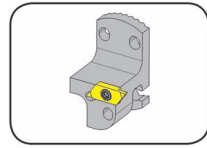
Page C8



Page C9

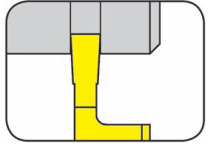


Page C10

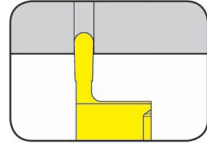


Page C11

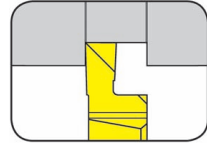
Indexable inserts
Type
274



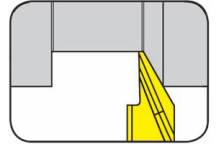
Page C12



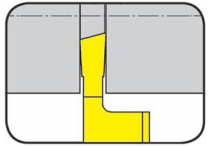
Page C13



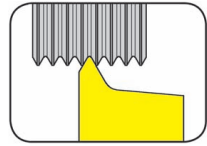
Page C14



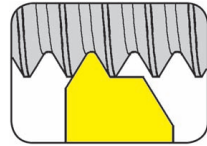
Page C15



Page C16-C17



Partial profile
Page C18



Full profile
Page C19

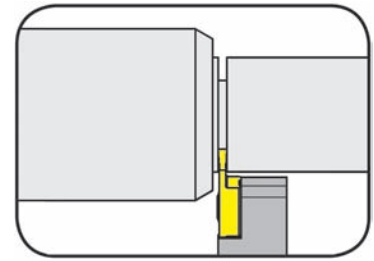
For Technical Information please see chapter Q

C

TOOLHOLDER Type

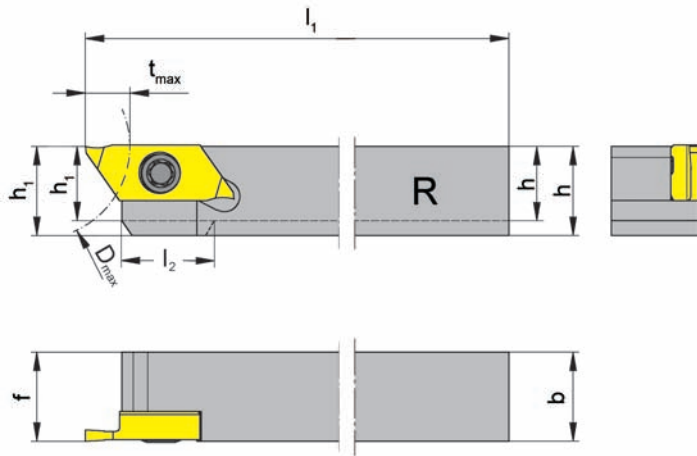
HU274

Depth of groove up to .236"
Width of groove up to .118"



for use with Indexable insert

Type S274



R = right hand version shown

L = left hand version

Part number	h	b	l ₁	h ₁	f	t _{max}	D _{max}	Size
R/LHU274.0312.04	.312	.312	3.996	.312	.312			
R/LHU274.0375.04	.375	.375	3.996	.375	.375			
R/LHU274.0500.04	.500	.500	3.996	.500	.500	.236	.984	04
R/LHU274.0625.04	.625	.625	5.118	.625	.625			
R/LHU274.0750.04	.750	.750	5.000	.750	.750			

State R or L version

Dimensions in inch

Further sizes upon request

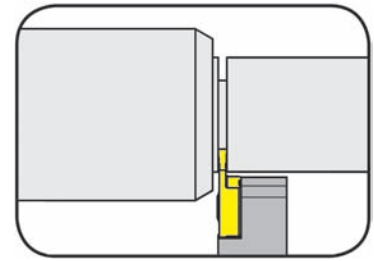
Spare parts

Toolholder	Screw	TORX PLUS® Wrench
R/LHU274.0...	030.3509.T15P	T15PQ

TOOLHOLDER Type

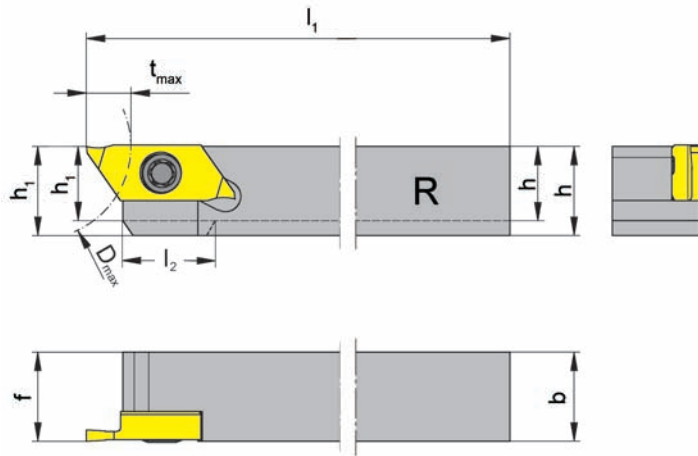
H274

Depth of groove up to .236" (6.0 mm)
Width of groove up to .118" (3.0 mm)



for use with Indexable insert

Type S274



R = right hand version shown

L = left hand version

Part number	h	b	l ₁	h ₁	f	t _{max}	D _{max}	Size
R/LH274.0808.04	8	8	100	8	8	6	25	04
R/LH274.1010.04	10	10	100	10	10			
R/LH274.1212.04	12	12	100	12	12			
R/LH274.1414.04	14	14	100	14	14			
R/LH274.1616.04	16	16	125	16	16			
R/LH274.2020.04	20	20	125	20	20			

State R or L version

Dimensions in mm

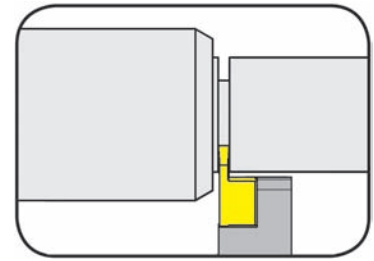
Further sizes upon request

Spare parts

Toolholder	Screw	TORX PLUS® Wrench
R/LH274....	030.3509.T15P	T15PQ

TOOLHOLDER Type

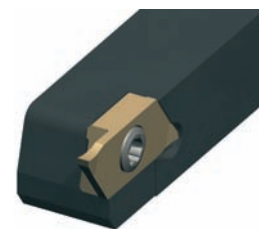
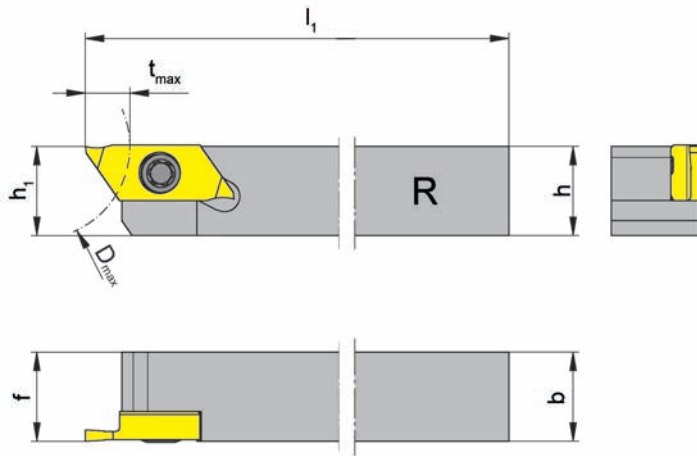
HU274



Depth of groove up to .236"
Width of groove up to .276"

for use with Indexable insert

Type S274



for special widths

R = right hand version shown

L = left hand version

Part number	h	b	l ₁	h ₁	f	t _{max}	D _{max}	Size
R/LHU274.0500.07	.500	.551	3.996	.500	.551	.236	.984	07

State R or L version

Dimensions in inch

Further sizes upon request

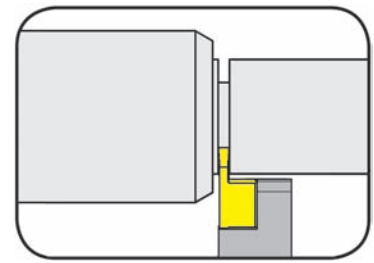
Spare parts

Toolholder	Screw	TORX PLUS® Wrench
R/LHU274.0500.07	030.3509.T15P	T15PQ

TOOLHOLDER Type

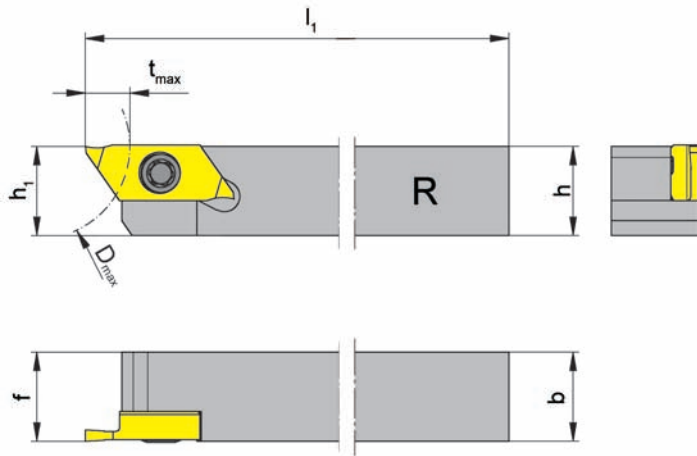
H274

Depth of groove up to .236" (6.0 mm)
Width of groove up to .276" (7.0 mm)



for use with Indexable insert

Type S274



for special widths

R = right hand version shown

L = left hand version

Part number	h	b	l ₁	h ₁	f	t _{max}	D _{max}	Size
R/LH274.1214.07	12	14	100	12	14	6	25	07
R/LH274.1616.07	16	16	125	16	16	6	25	07

State R or L version

Dimensions in mm

Further sizes upon request

Spare parts

Toolholder	Screw	TORX PLUS® Wrench
R/LH274.1...	030.3513.T15P	T15PQ

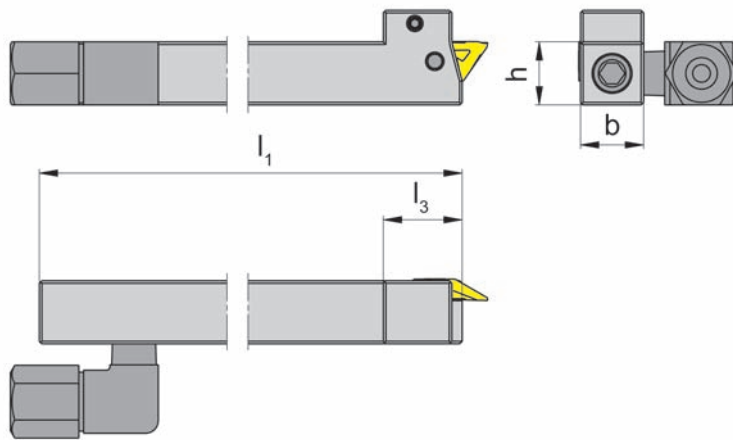
TOOLHOLDER GRAF Type

974

with through coolant supply

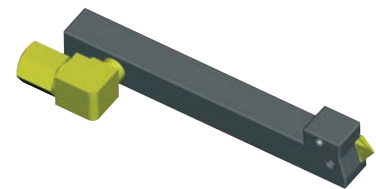


Depth of groove up to .236" (6.0 mm)
Width of groove up to .118" (3.0 mm)



for use with Indexable insert

Type S274



R = right hand version shown

L = left hand version

Part number	h	b	l ₁	l ₃	Size
974.R/L1010.04IK	10	10	100	15	04
974.R/L1212.04IK	12	12			
974.R/L1616.04IK	16	16			
974.R/L2020.04IK	20	20			

State R or L version

Dimensions in mm

Further sizes upon request

Spare parts

Cartridge Graf	Screw	TORX PLUS®-Wrench	Coolant supply
974.R/L...	030.3509.T15P	T15PQ	004.00.22

TOOLHOLDER Type

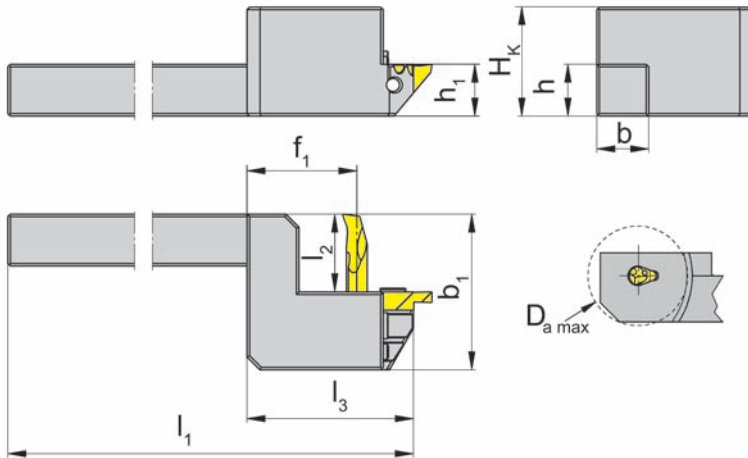
AIH

C

Bore Ø from .008" (0.2 mm)

for use with Insert

Type 105
U105
S274



R = right hand version shown

L = left hand version

Part number	l_1	l_2	h	h_1	f_1	l_3	b	b_1	$D_{a\ max}$	H_k	Remark
AIH.974.R/L1010.K04			10	10	23	35	10		20	17	
AIH.974.R/L1212.K04	130	15	12	12	23	35	12	30	20	19	*
AIH.974.R/L1616.K04			16	16	26	38	16		26	23	
AIH.974.R/L2020.K04			20	20	29	38	20		32	23	
AIH.R/L1010.K08			10	10	21		10		20	17	
AIH.R/L1212.K08	130	15	12	12	21	30	12	30	20	19	**
AIH.R/L1616.K08			16	16	24		16		26	23	
AIH.R/L2020.K08			20	20	27		20		32	23	

State R or L version

Dimensions in mm

Note:

* These toolholders can be equipped with HORN inserts type 105 and S274

** These toolholders can be equipped with HORN inserts type 105 and Graf inserts CS08

Further sizes upon request

Spare parts

Toolholder	Screw	Screw	TORX PLUS® Wrench
AIH....	030.3509.T15P	6.075T15P	T15PQ

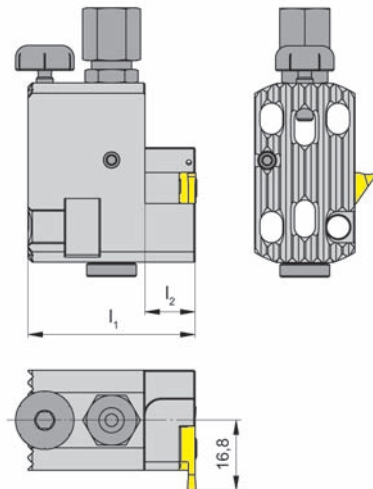
CARTRIDGE GRAF Type

R76

with through coolant supply



Depth of groove up to .236" (6.0 mm)
Width of groove up to .118" (3.0 mm)



R = right hand version shown

for use with Indexable insert

Type S274



Part number	l_1	l_2	Size
R76IK	40	12	04

Further sizes upon request

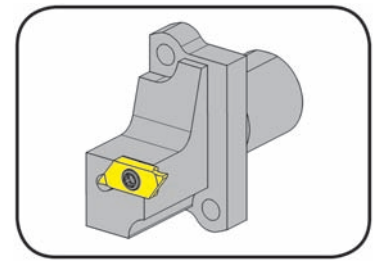
Dimensions in mm

Spare parts

Cartridge Graf	Screw	TORX PLUS® Wrench	Height adjustment screw	Coolant supply
R76IK	030.3509.T15P	T15PQ	002.00.69	004.00.19

TOOLHOLDER Type

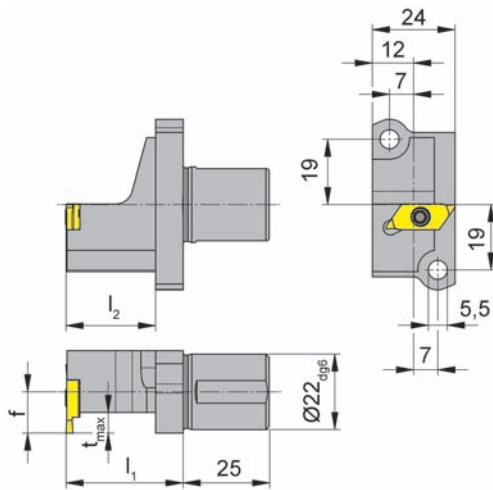
H274



Depth of groove up to .236" (6.0 mm)
Width of groove up to .118" (3.0 mm)

for use with Indexable insert

Type S274



R = right hand version shown

L = left hand version

Star SV 12/20/32
SR 10/20/32 and SB 16

Part number	l_1	l_2	f	t_{max}	Size
R/LH274.A022.09.04			9		
R/LH274.A022.12.04	34	26	12	6	04
R/LH274.A022.16.04			16		
R/LH274.A022.09.07	34	26	9	6	07
R/LH274.A022.12.07			12		

State R or L version

Dimensions in mm

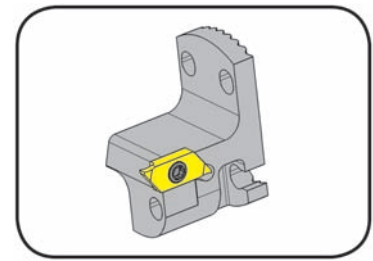
Further sizes upon request

Spare parts

Toolholder	Screw	TORX PLUS®-Wrench
R/LH274.A022....	030.3513.T15P	T15PQ

CARTRIDGE Type

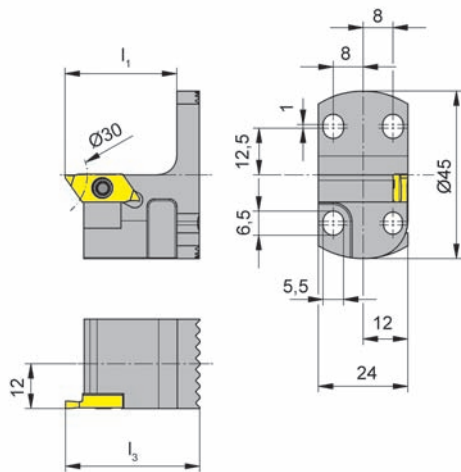
KT274



Depth of groove up to .236" (6.0 mm)
Width of groove up to .118" (3.0 mm)

for use with Indexable insert

Type S274



R = right hand version shown

L = left hand version

Part number	l_1	l_3	Size
R/LKT274.2445.04	30	36	04

State R or L version

Dimensions in mm

Further sizes upon request

Note:

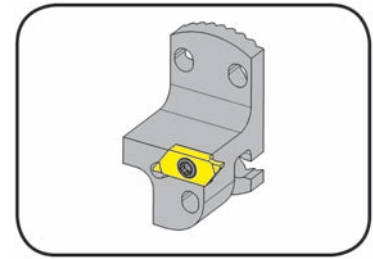
$t_{max} = .236"$ (6.0 mm) can only be reached when $D_{max} \leq 1.181"$ (30 mm)

Spare parts

Cartridge	Screw	TORX PLUS® Wrench
R/LKT274.2445.04	030.3509.T15P	T15PQ

CARTRIDGE Type

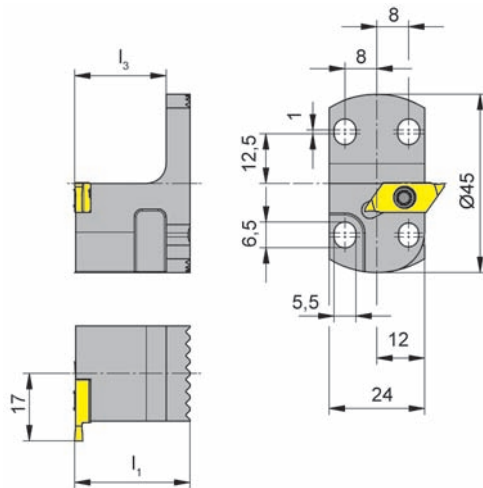
KTC274



Depth of groove up to .236" (6.0 mm)
 Width of groove up to .118" (3.0 mm)

for use with Indexable insert

Type S274



R = right hand version shown

Part number	l_1	l_3	Size
RKTC274.2445.04	29	23	04

Further sizes upon request

Dimensions in mm

$t_{max} = .236"$ (6.0 mm) can only be reached when $D_{max} \leq 1.181"$ (30 mm)

Spare parts

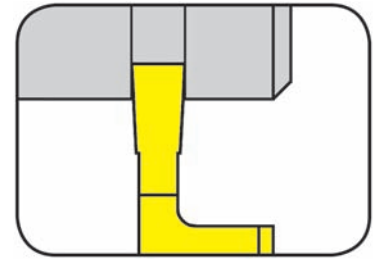
Cartridge	Screw	TORX PLUS® Wrench
RKTC274.2445.04	030.3509.T15P	T15PQ

GROOVING and PARTING OFF



INDEXABLE INSERT Type

S274

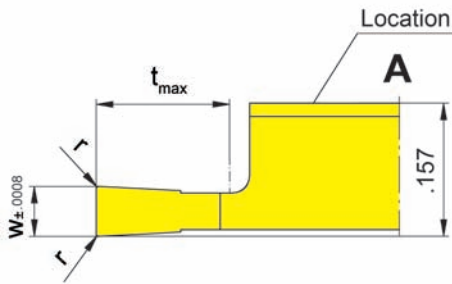
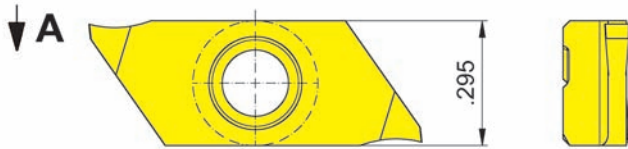


Depth of groove up to .236"
Width of groove .020 - .079"

precision ground

for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
± .0006"

Part number	w	r	t _{max}	Size	Carbide grades				
					K10	MG12	TN35	TI25	TH35
R/LS274.0050.01.10	.020		.059	04					▲/▲
R/LS274.0070.02.10	.028		.079						▲/▲
R/LS274.0080.03.10	.031		.118						▲/▲
R/LS274.0100.03.10	.039		.118						▲/▲
R/LS274.0120.03.10	.047	.002	.118						▲/▲
R/LS274.0150.04.10	.059		.157						▲/▲
R/LS274.0150.06.10	.059		.236						▲/▲
R/LS274.0200.04.10	.079		.157						▲/▲
R/LS274.0200.06.10	.079		.236						▲/▲

- ▲ on stock Δ 4 weeks
- main recommendation
- alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

	K10	MG12	TN35	TI25	TH35
P					●
M					●
K					●
S					●
N					●
H					

Dimensions in inch

Carbide grades

State R or L version

Note:

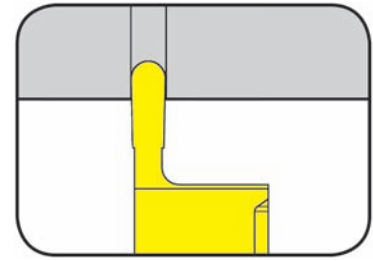
t_{max} = .236" can be reached only with workpiece Ø ≤ .984"

INDEXABLE INSERT Type

S274

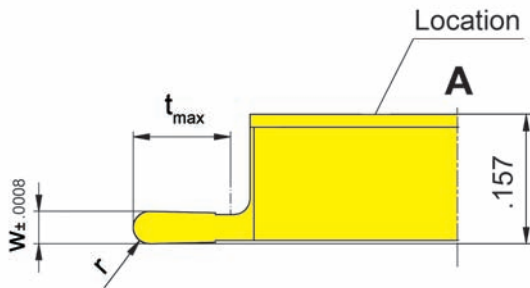
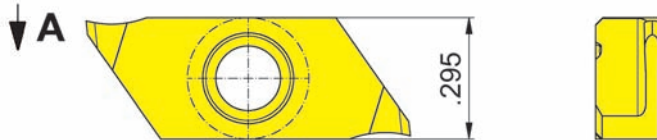
Depth of groove up to	.157"
Full radius	.010 - .039"

precision ground



for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
± .0006"

Part number	w	r	t _{max}	Size		K10	MG12	TN35	Ti25	TH35
R/LS274.0205.01.10	.020	.010	.059	04						▲/▲
R/LS274.0510.03.10	.039	.020	.118							▲/▲
R/LS274.1020.04.10	.079	.039	.157							▲/▲
					P					•
					M					•
					K					•
					S					•
					N					•
					H					

- ▲ on stock Δ 4 weeks
- main recommendation
- o alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

Dimensions in inch

State R or L version

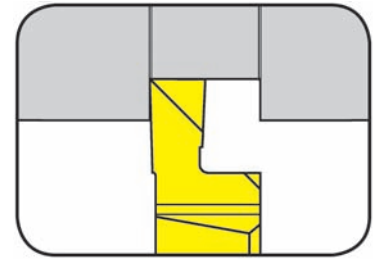
Carbide grades

INDEXABLE INSERT Type

S274

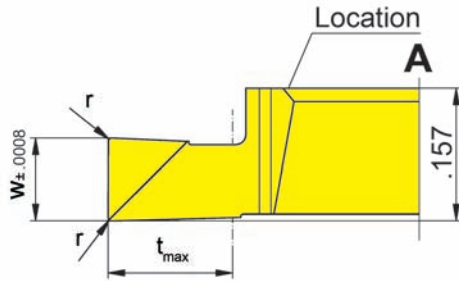
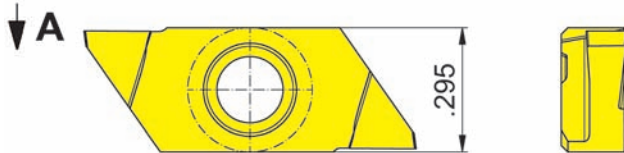
Depth of groove up to .177"
Width of groove .059 - .118"

precision ground



for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
± .0006"

Part number	w	r	t _{max}	Size		K10	MG12	TN35	Ti25	TH35
R/LS274.0150.P0	.059	.002	.089	04						▲/▲
R/LS274.0200.P0	.079	.002	.118							▲/▲
R/LS274.0250.P0	.098	.004	.148							▲/▲
R/LS274.0300.P0	.118	.004	.177							▲/▲
					P					•
					M					•
					K					•
					S					•
					N					•
					H					•

- ▲ on stock Δ 4 weeks
- main recommendation
- o alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

Dimensions in inch

State R or L version

Carbide grades

BACKTURNING (external)

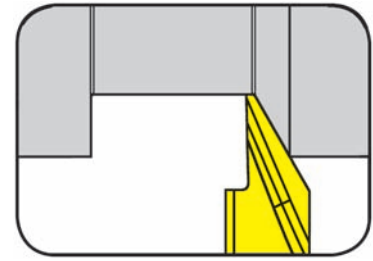


INDEXABLE INSERT Type

S274

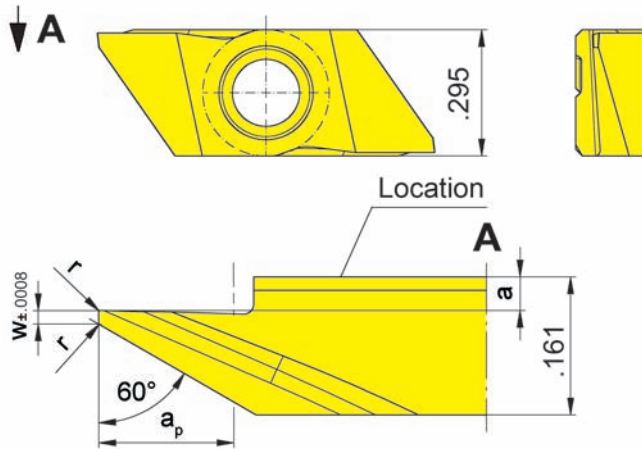
Depth of cut up to **.236"**

precision ground



for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
 $\pm .0006"$

Part number	w	r	a _p	a	Size	γ	Carbide grades						
							K10	MG12	TN35	TI25	TF45	TH35	
R/LS274.0460.04.10	.016	.002	.157	.039	04	15°						▲/▲	
R/LS274.0460.04.M0						0°	▲/▲						
R/LS274.0560.06.11	.020	.004	.236	.002	04	15°						▲/▲	
▲ on stock Δ 4 weeks ● main recommendation ○ alternative recommendation ■ uncoated grades ■ coated grades ■ brazed/Cermet							P	●	■	■	■	■	●
							M	○	■	■	■	■	●
							K	●	■	■	■	■	●
							S	○	■	■	■	■	●
							N	●	■	■	■	■	●
							H		■	■	■	■	

Dimensions in inch

State R or L version

γ = rake angle

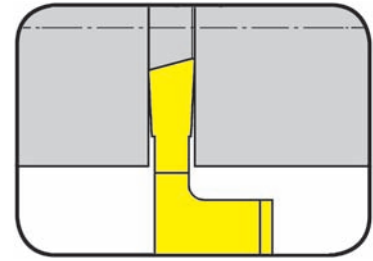
Depth of cut a_p = .236" can be reached only with workpiece Ø ≤ .984"

INDEXABLE INSERT Type

S274

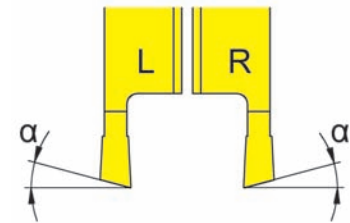
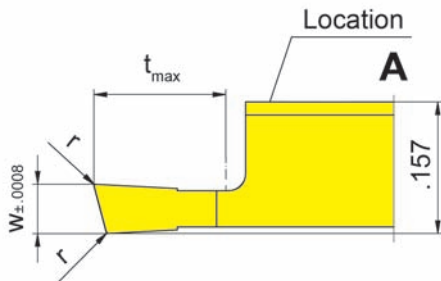
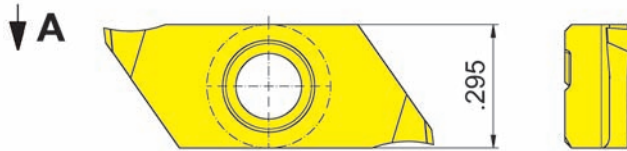
Depth of groove up to .236"
Width of groove .031 - .079"

precision ground



for use with Toolholder

Type H274
HU274



Indexability length
± .0006"

R = right hand version shown

L = left hand version

Part number	w	r	α	t _{max}	Size	Carbide grades					
						MG12	H54	TN35	TI25	TF46	TH35
R/LS274.1508.03.10	.031			.118	04						▲/▲
R/LS274.1510.03.10	.039			.118							▲/▲
R/LS274.1515.04.10	.059	.002	15°	.157							▲/▲
R/LS274.1520.06.10	.079			.236							▲/▲
<ul style="list-style-type: none"> ▲ on stock Δ 4 weeks ● main recommendation ○ alternative recommendation □ uncoated grades ■ coated grades ■ brazed/Cermet 						P					●
						M					●
						K					●
						S					●
						N					●
						H					

Dimensions in inch

Carbide grades

State R or L version

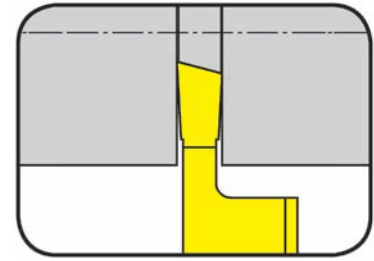
t_{max} = .236" can be reached only with workpiece Ø ≤ .984"

INDEXABLE INSERT Type

S274

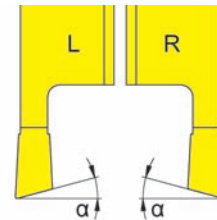
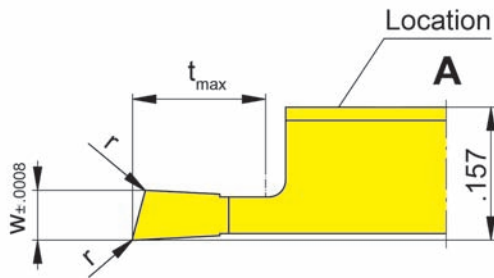
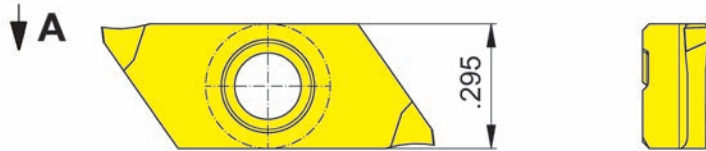
Depth of groove up to .236"
 Width of groove .031 - .079"

precision ground



for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
± .0006"

Part number	w	r	α	t _{max}	Size	Carbide grades		
						TN35	TI25	TH35
LS274.1508.03.10R	.031			.118	04			▲
LS274.1510.03.10R	.039			.118				▲
LS274.1515.04.10R	.059	.002	15°	.157				▲
LS274.1520.06.10R	.079			.236				▲
RS274.1508.03.10L	.031			.118	04			▲
RS274.1510.03.10L	.039			.118				▲
RS274.1515.04.10L	.059	.002	15°	.157				▲
RS274.1520.06.10L	.079			.236				▲

- ▲ on stock Δ 4 weeks
- main recommendation
- alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

	TN35	TI25	TH35
P	●		
M	●		
K	●		
S		●	
N		●	
H			●

Dimensions in inch

Carbide grades

State R or L version

Note:

t_{max} = .236" can be reached only with workpiece Ø ≤ .984"

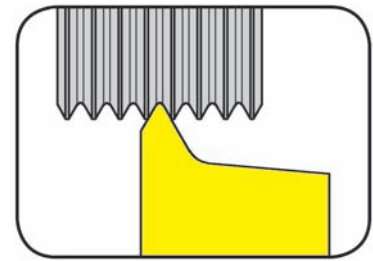
THREADING (external) Partial profile



INDEXABLE INSERT Type

S274

Metric ISO thread

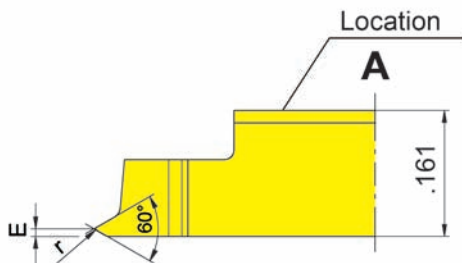
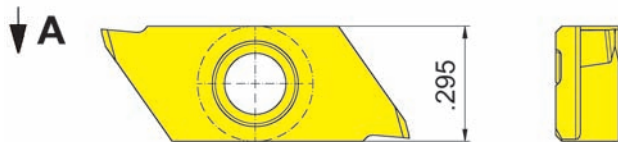


Pitch 0.25 - 0.40 mm

precision ground

for use with Toolholder

Type H274
HU274



R = right hand version shown

Indexability length
± .0006"

Part number	P	r	E	Size	Carbide grades					
					K10	MG12	P20	TN32	TI25	TH35
RS274.0102.01	0.25	0.04	0.20	04						▲
RS274.0203.01	0.35	0.05	0.25							▲
RS274.0204.01	0.40	0.06	0.30							▲
					P					●
					M					●
					K					●
					S					●
					N					●
					H					●

- ▲ on stock Δ 4 weeks
- main recommendation
- alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

Dimensions in mm

Carbide grades

No shims necessary. All HORN thread profiles are manufactured with **full ground radial clearance**.

THREADING (external) Full profile



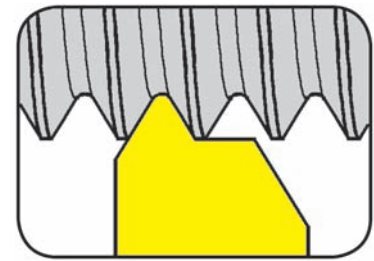
INDEXABLE INSERT Type

S274

Metric ISO thread

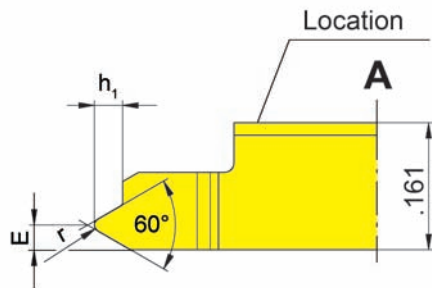
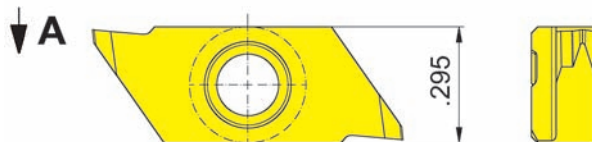
Pitch	0.50 - 1.50 mm
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precision ground



for use with Toolholder

Type H274
HU274



R = right hand version shown

L = left hand version

Indexability length
± .0006"

Part number	P	r	E	h ₁	Size	Carbide grades						
						K10	MG12	P20	TN32	T125	TH35	
R/LS274.0305.02	0.50	0.07	0.40	0.31	04						▲/▲	
R/LS274.0306.02	0.60	0.09	0.45	0.37								▲/▲
R/LS274.0307.02	0.70	0.10	0.50	0.43								▲/▲
R/LS274.0407.02	0.75	0.11	0.50	0.46								▲/▲
R/LS274.0408.02	0.80	0.12	0.55	0.49								▲/▲
R/LS274.0610.02	1.00	0.12	0.60	0.61								▲/▲
R/LS274.0712.02	1.25	0.15	0.70	0.77								▲/▲
R/LS274.0915.02	1.50	0.20	0.80	0.92								▲/▲

- ▲ on stock Δ 4 weeks
- main recommendation
- alternative recommendation
- uncoated grades
- coated grades
- brazed/Cermet

	K10	MG12	P20	TN32	T125	TH35
P						●
M						●
K						●
S						●
N						●
H						

Dimensions in mm

Carbide grades

State R or L version

No shims necessary. All HORN thread profiles are manufactured with **full ground radial clearance**.