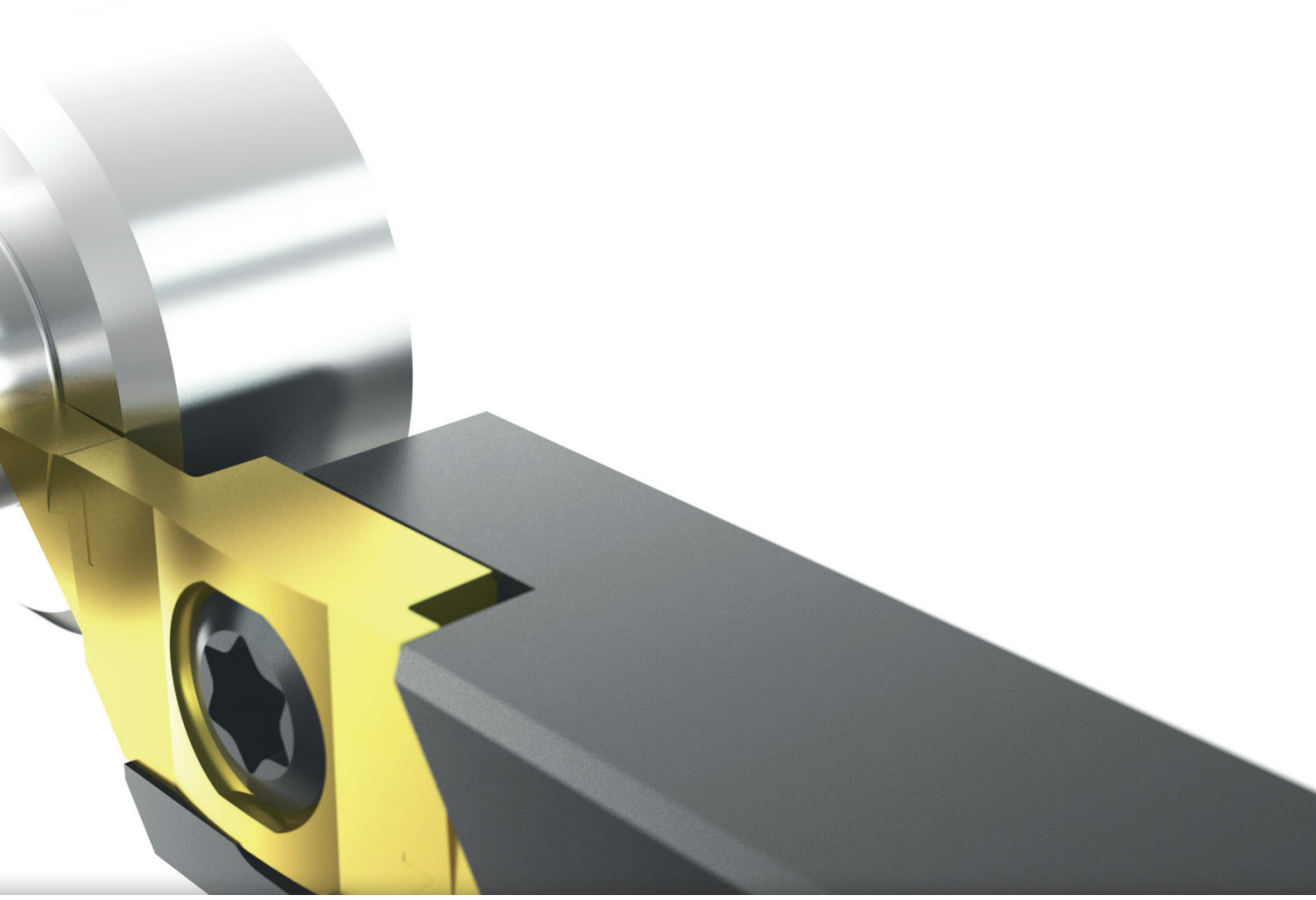
SIMTEK

Tools for
highest
expectations

Small part machining
external, with two-edged inserts.



simturn K2
SIMTEK Small Part Machining Type KX

Part Catalog
R20 US-Edition

SIMTEK

Tools for
highest
expectations

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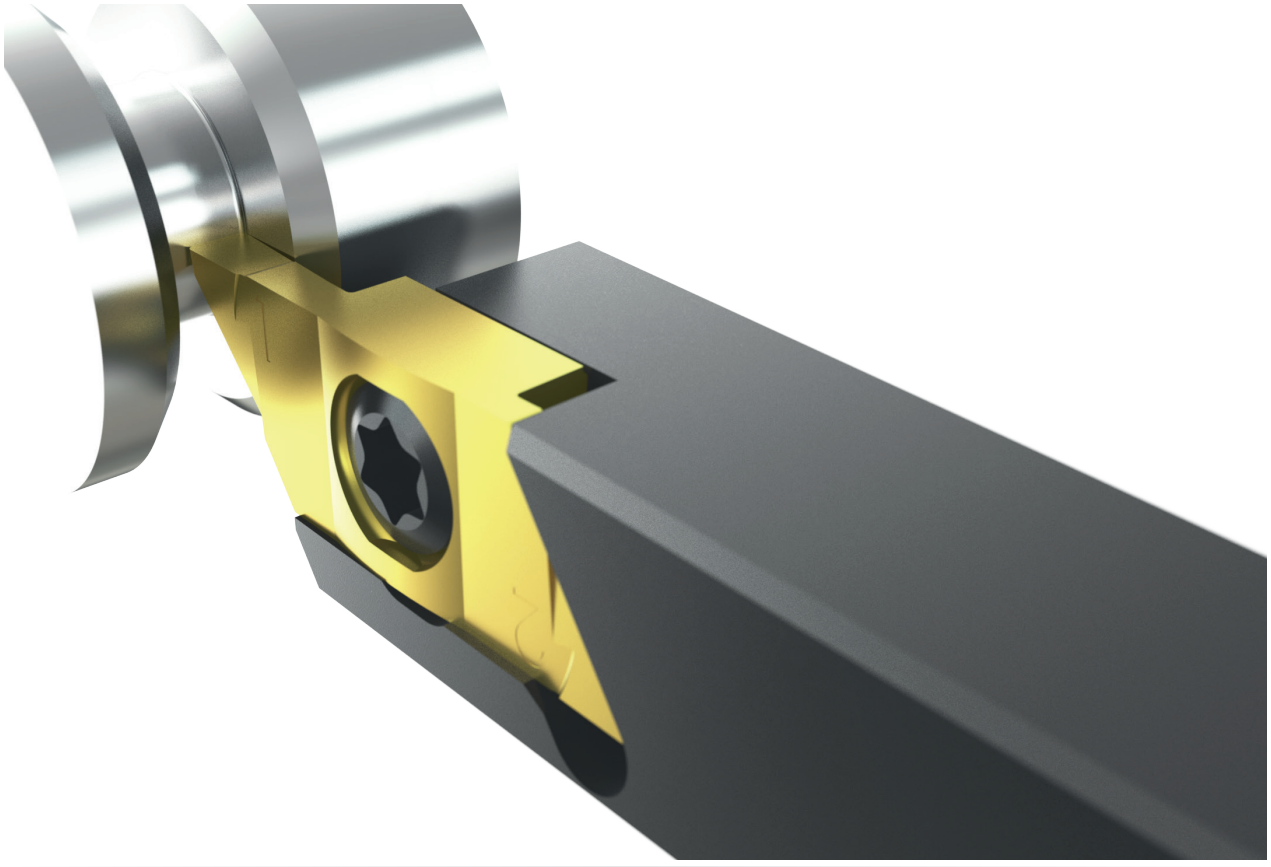
The Tool System Overview

Small Part Machining external, with two-edged inserts.

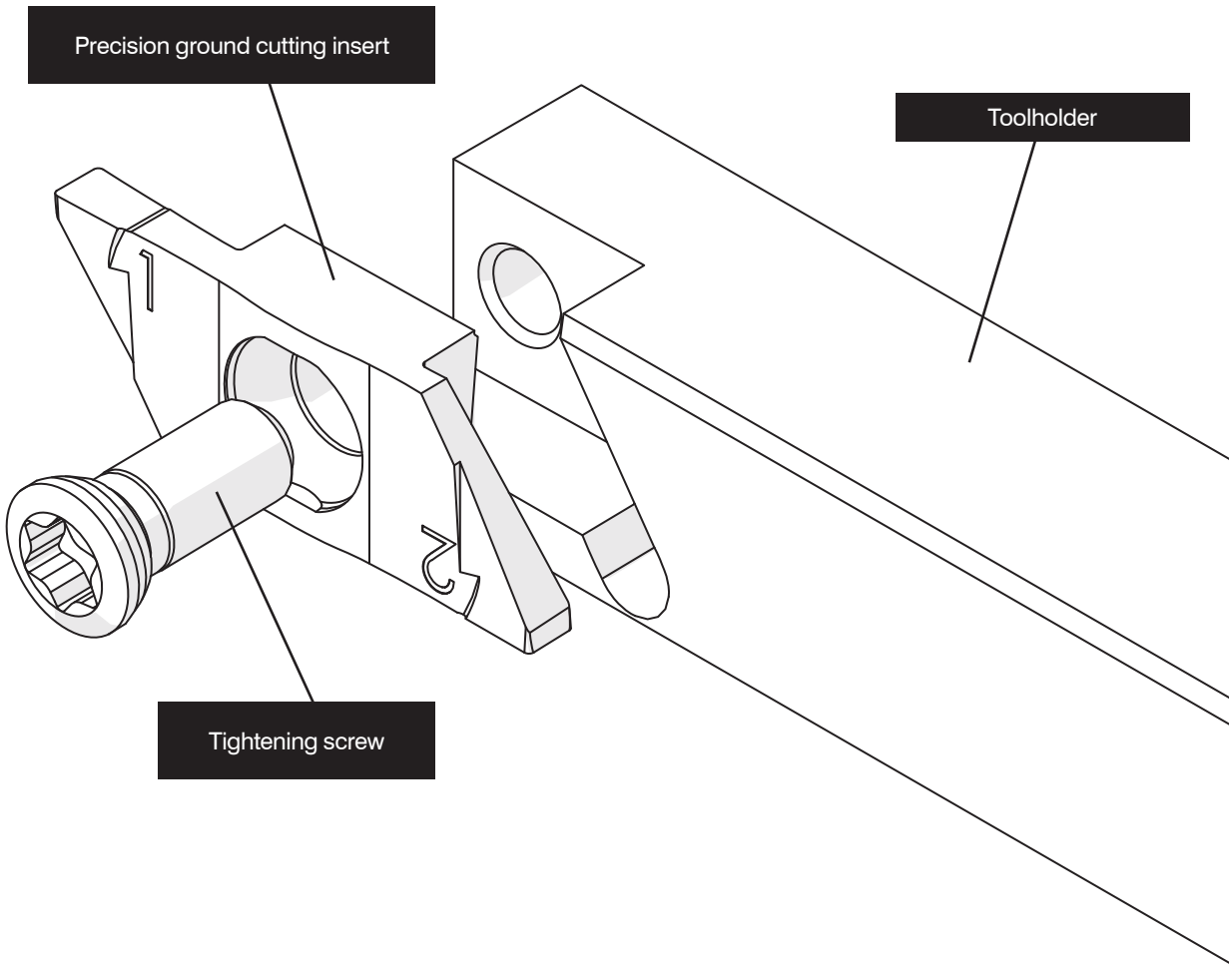


The tool system simturn K2 was designed to meet highest expectations in Small Part Machining. The system provides two-edged indexable cutting inserts and square shank sizes from 0.375“ x 0.375“ (10,0 x 10,0 mm) on.

All the major applications are available as standard items providing cutting depths up to 7,0 mm (0.276“).

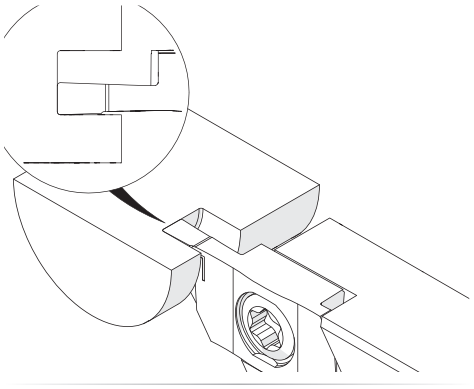
The System Details

Please read the general instructions for use on page 29



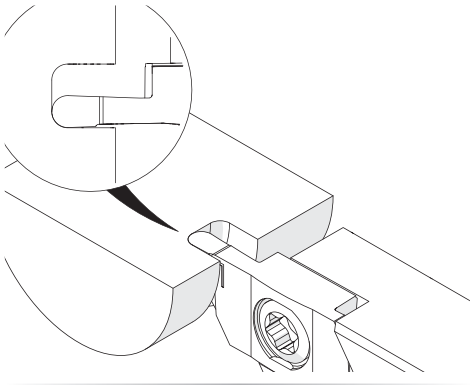
Standard Applications

As of page 9



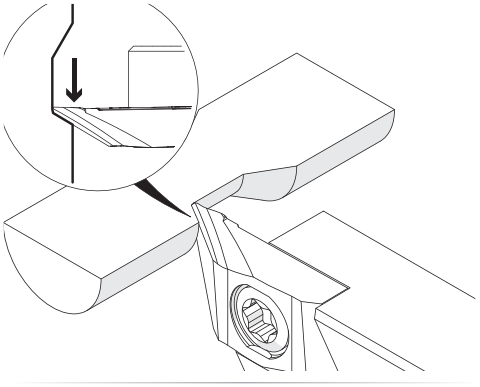
Grooving and Profiling

As of Page 11



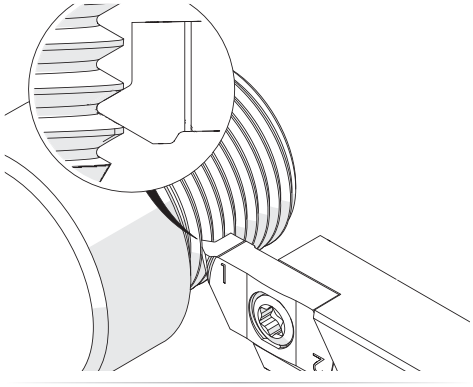
Grooving and Profiling, Full Radius

Page 14



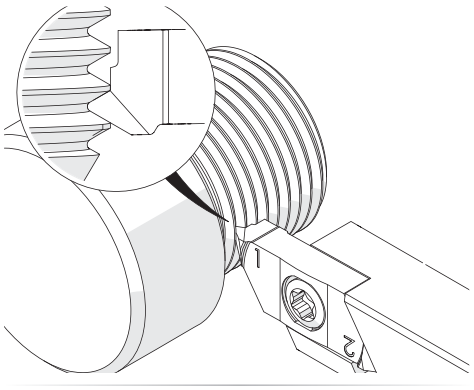
Turning

Page 17



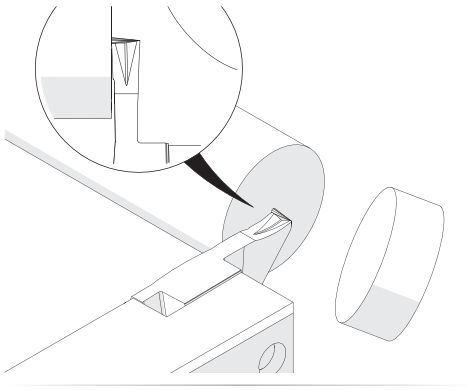
Threading: Metric ISO, External, Partial Profile

Page 18



Threading: Metric ISO, External, Full Profile

Page 20



Parting Off

Toolholder, External

Toolholder for small part machining.

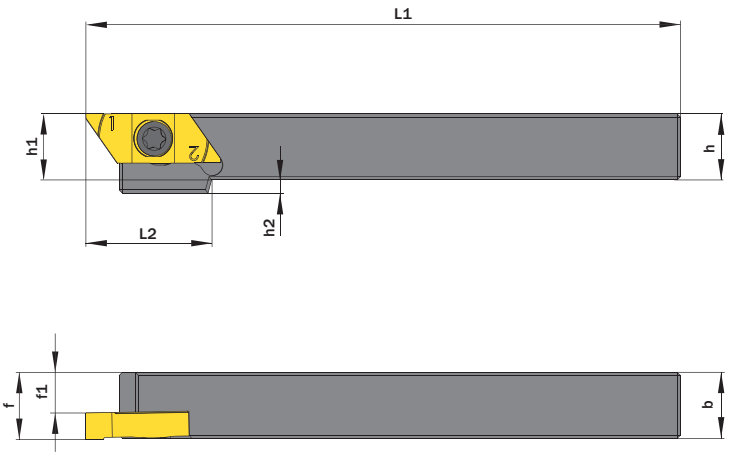
Tightening torque (screw)

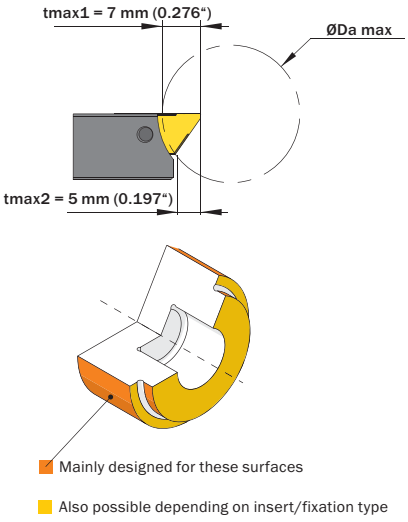
"M M3,5x11 T10F": 3,0 Nm
"M M3,5x9 T10F": 3,0 Nm

TW ST R Legend 23

Scan QR-Code Or Visit **www.simtek.info/cp/1108**

This page contains inch tools! These tools are indicated by inch on the right hand side.





Drawing shows: TK2.G.1010.A.14.04 R

h mm/inch	b mm/inch	L1 mm/inch	Part number	Webcode www.simtek.com/webcode	f mm/inch	f1 mm/inch	h1 mm/inch	h2 mm/inch	L2 mm/inch	ØDa max mm/inch	Screw	Screw driver	Connectcode www.simtek.com/ccode	
▼ h = 0.375"														
0.375"	0.375"	5.512"	**TK2.G.0.375.A.14.04 R**	A22E	0.383"	0.225"	0.375"	0.079"	0.748"	0.787"	M M3,5x9 T10F	T10F	TK2.G.R.04	inch
▼ h = 10,0 mm														
10,0	10,0	140,0	**TK2.G.1010.A.14.04 R/L**	R AYGQ L AYGS	10,2	6,2	10,0	2,0	19,0	20,0	M M3,5x9 T10F	T10F	R TK2.G.R.04 L TK2.G.L.04	
▼ h = 12,0 mm														
12,0	12,0	140,0	**TK2.G.1212.A.14.04 R/L**	R AYGK L AYGM	12,2	8,2	12,0	-	-	25,0	M M3,5x11 T10F	T10F	R TK2.G.R.04 L TK2.G.L.04	
▼ h = 0.500"														
0.500"	0.500"	5.512"	**TK2.G.0.500.A.14.04 R/L**	R A1DK L A1DH	0.509"	0.350"	0.500"	-	-	1.260"	M M3,5x11 T10F	T10F	R TK2.G.R.04 L TK2.G.L.04	inch
▼ h = 0.625"														
0.625"	0.625"	5.512"	**TK2.G.0.625.A.14.04 R/L**	R A1DN L A1DM	0.633"	0.476"	0.625"	-	-	1.260"	M M3,5x11 T10F	T10F	R TK2.G.R.04 L TK2.G.L.04	inch
▼ h = 16,0 mm														
16,0	16,0	140,0	**TK2.G.1616.A.14.04 R/L**	R AYGF L AYGG	16,2	12,2	16,0	-	-	32,0	M M3,5x11 T10F	T10F	R TK2.G.R.04 L TK2.G.L.04	

Order example: **TK2.G.1212.A.14.04 R** (R = Right hand version)

Toolholder, External

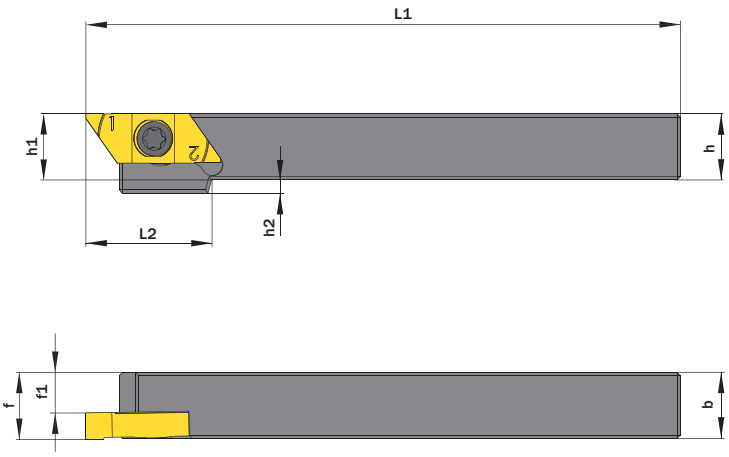
Toolholder for small part machining.

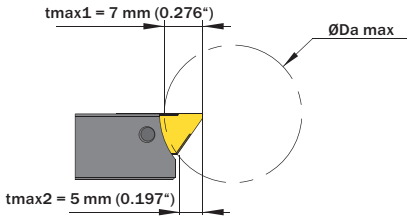
Tightening torque (screw)
3,0 Nm

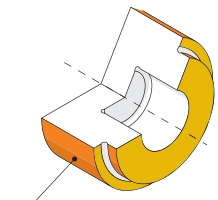
TW ST R Legend 23

Scan QR-Code Or Visit **www.simtek.info/cp/1329**

This page contains inch tools! These tools are indicated by **inch** on the right hand side.







Mainly designed for these surfaces

Also possible depending on insert/fixation type

Drawing shows: TK2.G.1010.A.14.04 R

h inch	b inch	L1 inch	Part number	Webcode www.simtek.com/webcode	f inch	f1 inch	h1 inch	ØDa max inch	Screw	Screw driver	Connectcode www.simtek.com/ccode	
▼ h = 0.750"												
0.750"	0.750"	5.512"	**TK2.G.0.750.A.14.04 R**	A234	0.758"	0.600"	0.750"	1.260"	M M3,5x11 T10F	T10F	TK2.G.R.04	inch
▼ h = 1.000"												
1.000"	1.000"	5.512"	**TK2.G.1.000.A.14.04 R**	A25U	1.008"	0.850"	1.000"	1.260"	M M3,5x11 T10F	T10F	TK2.G.R.04	inch

Order example: **TK2.G.1.000.A.14.04 R** (R = Right hand version)

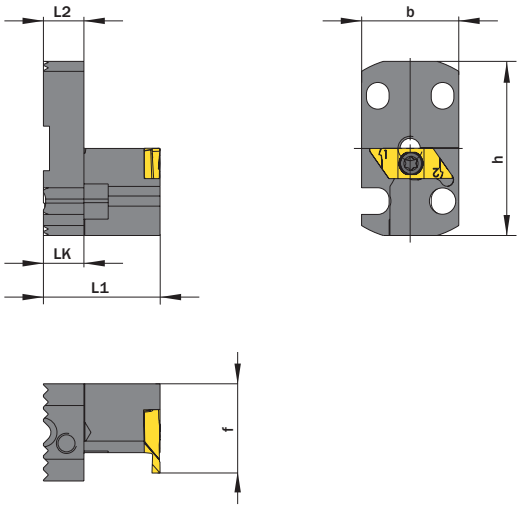
Height-Adjustable Cassette for back operations

Cassette for height-adjustable back operations tools.
Compatible to TOG-System by precium®.

Tightening torque (screw)
3,0 Nm

TW ST R Legend 23

Scan QR-Code Or Visit **www.simtek.info/cp/1270**



Drawing shows: TOG.K.TK2.G.A1 R

With through coolant supply	Part number	Webcode www.simtek.com/webcode			b mm	h mm	f mm	L1 mm	L2 mm	LK mm	Screw	Screw driver	Connectcode www.simtek.com/ccode		
Yes	**TOG.K.TK2.G.A1 R/L**	R	A18Q	L	A18P	24,0	43,0	22,0	29,0	10,0	10,0	M M3,5x11 T10F	T10F	R	TK2.G.R.04	L	TK2.G.L.04

Order example: **TOG.K.TK2.G.A1 R** (R = Right hand version)

Grooving and Profiling

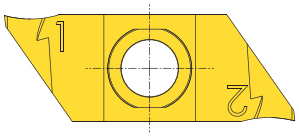
CNC profiling, with general cutting edge geometry for a wide variety of workpiece materials.

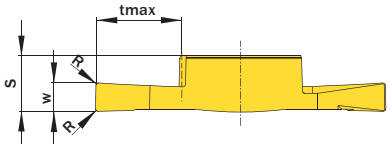
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

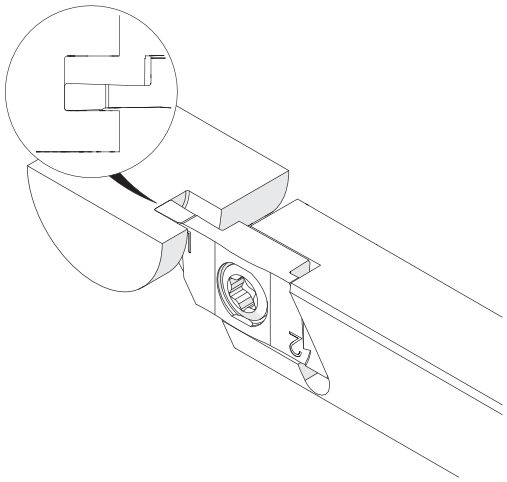
Suitable toolholders on page
6, 7, 8

SP HM | R | Legend **23**

Scan **QR-Code** | Or Visit **www.simtek.info/cp/1115**







Drawing shows: TK2.G.200.020.060 NS R

w ±0,02	R	tmax	Part number	Webcode www.simtek.com/webcode	Our first choice	S	Connectcode www.simtek.com/ccode
mm	mm	mm			P K M N S	mm	
0,5	0,05	2,5	**TK2.G.050.005.025 NS R/L**	R AYHA L AYG9	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
0,75	0,05	3,75	**TK2.G.075.005.038 NS R/L**	R AYG7 L AYG8	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
1,0	0,05	5,0	**TK2.G.100.005.050 NS R/L**	R AYG6 L AYG5	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
1,5	0,05	4,5	**TK2.G.150.005.045 NS R/L**	R A07B L A07A	X808 X408	3,85	R TK2.G.R.04 L TK2.G.L.04
1,5	0,2	4,5	**TK2.G.150.020.045 NS R/L**	R AYG4 L AYG3	X808 X408	3,85	R TK2.G.R.04 L TK2.G.L.04
2,0	0,05	6,0	**TK2.G.200.005.060 NS R/L**	R A07D L A07C	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,0	0,2	6,0	**TK2.G.200.020.060 NS R/L**	R AYG2 L AYG1	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,5	0,1	7,0	**TK2.G.250.010.070 NS R/L**	R A07F L A07E	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,5	0,2	7,0	**TK2.G.250.020.070 NS R/L**	R AYG0 L AYGZ	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
3,0	0,1	7,0	**TK2.G.300.010.070 NS R/L**	R A07H L A07G	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
3,0	0,2	7,0	**TK2.G.300.020.070 NS R/L**	R AYGY L AYGX	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.100.005.050 NS R X808** (R = Right hand version, X808 = Grade)

Grooving and Profiling

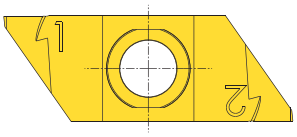
CNC Profiling, with special cutting edge geometry for brass, copper-based alloys and short-chipping materials.

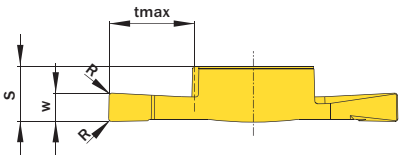
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

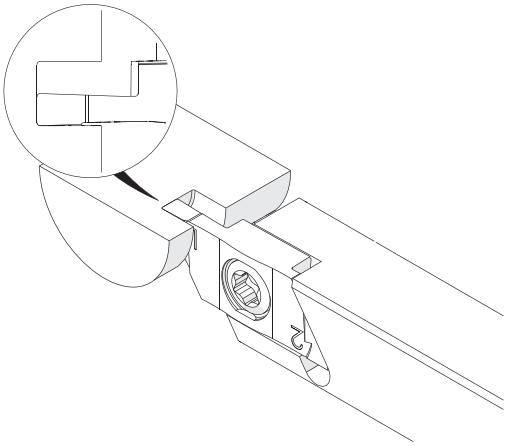
Suitable toolholders on page
6, 7, 8

SP HM | R | CU | Legend 23

Scan QR-Code | Or Visit **www.simtek.info/cp/1116**







Drawing shows: TK2.G.200.020.060 NU R

w ±0,02 mm	R mm	tmax mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	Connectcode www.simtek.com/ccode
0,5	0,05	2,5	**TK2.G.050.005.025 NU R/L**	R AYHB L AYHC	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
0,75	0,05	3,75	**TK2.G.075.005.038 NU R/L**	R AYHD L AYHE	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
1,0	0,05	5,0	**TK2.G.100.005.050 NU R/L**	R AYHG L AYHF	X808 X408	3,8	R TK2.G.R.04 L TK2.G.L.04
1,5	0,05	4,5	**TK2.G.150.005.045 NU R/L**	R A07K L A07J	X808 X408	3,85	R TK2.G.R.04 L TK2.G.L.04
1,5	0,2	4,5	**TK2.G.150.020.045 NU R/L**	R AYHJ L AYHH	X808 X408	3,85	R TK2.G.R.04 L TK2.G.L.04
2,0	0,05	6,0	**TK2.G.200.005.060 NU R/L**	R A07N L A07M	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,0	0,2	6,0	**TK2.G.200.020.060 NU R/L**	R AYHK L AYHM	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,5	0,1	7,0	**TK2.G.250.010.070 NU R/L**	R A07Q L A07P	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
2,5	0,2	7,0	**TK2.G.250.020.070 NU R/L**	R AYHN L AYHP	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
3,0	0,1	7,0	**TK2.G.300.010.070 NU R/L**	R A07T L A07S	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04
3,0	0,2	7,0	**TK2.G.300.020.070 NU R/L**	R AYHS L AYHQ	X808 X408	3,9	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.300.020.070 NU R X808** (R = Right hand version, X808 = Grade)

Grooving and Profiling, Full Radius

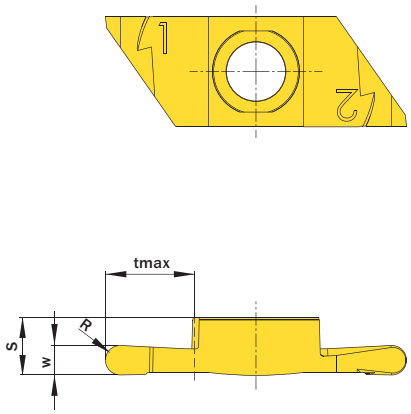
Full radius, CNC profiling. Special cutting edge geometry for brass, copper-base alloys and short-chipping materials.

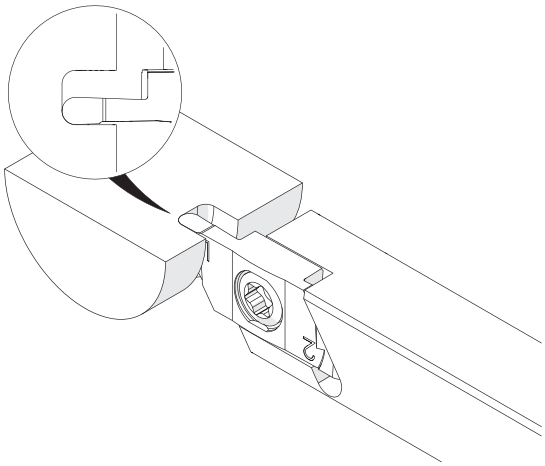
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

Suitable toolholders on page
6, 7, 8

SP HM | R | CU | Legend **23**

Scan **QR-Code** | Or Visit **www.simtek.info/cp/1109**





Drawing shows: TK2.G.200.100.060 VU R

w ±0,02 mm	R mm	tmax mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	Connectcode www.simtek.com/ccode
1,0	0,5	3,0	**TK2.G.100.050.030 VU R/L**	R AYE8 L AYE9	X808 X408	3,87	R TK2.G.R.04 L TK2.G.L.04
1,2	0,6	3,6	**TK2.G.120.060.036 VU R/L**	R AYFA L AYFB	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04
1,6	0,8	4,8	**TK2.G.160.080.048 VU R/L**	R AYFD L AYFC	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04
2,0	1,0	6,0	**TK2.G.200.100.060 VU R/L**	R AYFF L AYFE	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.160.080.048 VU R X808** (R = Right hand version, X808 = Grade)

Grooving and Profiling, Full Radius

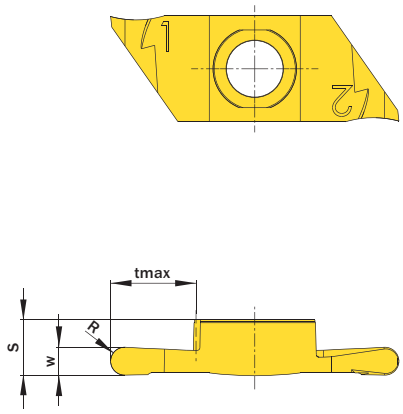
Full radius, CNC profiling. With general cutting edge geometry for a wide variety of workpiece materials.

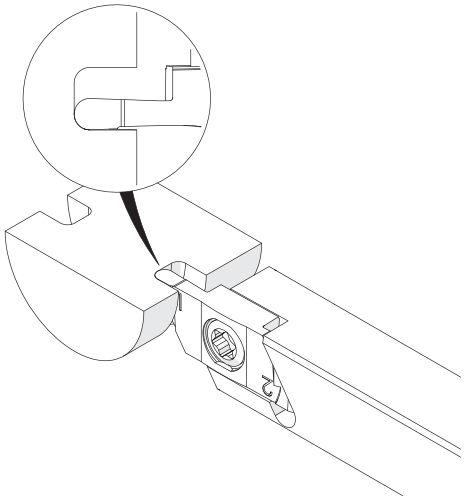
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1117**





Drawing shows: TK2.G.200.100.060 VS R

w ±0,02 mm	R mm	tmax mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	Connectcode www.simtek.com/ccode
1,0	0,5	3,0	**TK2.G.100.050.030 VS R/L**	R AYH0 L AYHZ	X808 X408	3,87	R TK2.G.R.04 L TK2.G.L.04
1,2	0,6	3,6	**TK2.G.120.060.036 VS R/L**	R AYHY L AYHX	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04
1,6	0,8	4,8	**TK2.G.160.080.048 VS R/L**	R AYHV L AYHW	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04
2,0	1,0	6,0	**TK2.G.200.100.060 VS R/L**	R AYHT L AYHU	X808 X408	3,92	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.100.050.030 VS R X808** (R = Right hand version, X808 = Grade)

Grooving and turning

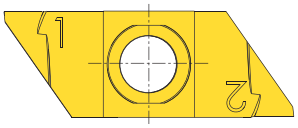
The ground geometry of two cutting egdes, that are directly on the rotation centre, ensure highest precision for grooving and turning applications with one tool. Optimum chip removal leads to high surface quality.

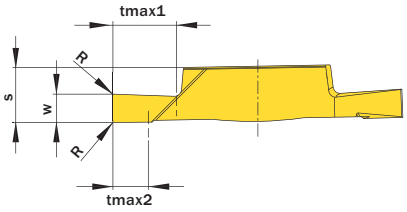
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

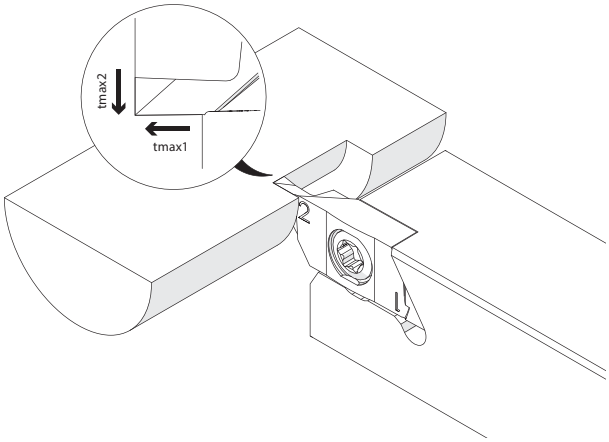
Suitable toolholders on page
6, 7, 8

SP HM R — Legend **23**

Scan **QR-Code** — Or Visit **www.simtek.info/cp/1272**







Drawing shows: TK2.G.R200.005 YP R

w	R	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	tmax1	tmax2	S	Connectcode www.simtek.com/ccode
mm	mm				mm	mm	mm	
▼ w = 1,0 mm								
1,0	-	**TK2.G.R100.000 YP R**	A14G	X808 X408	2,5	2,5	3,8	TK2.G.R.04
1,0	0,05	**TK2.G.R100.005 YP R**	A14H	X808 X408	2,5	2,5	3,8	TK2.G.R.04
▼ w = 1,5 mm								
1,5	0,05	**TK2.G.R150.005 YP R**	A14J	X808 X408	3,75	2,5	3,8	TK2.G.R.04
1,5	0,1	**TK2.G.R150.010 YP R**	A14K	X808 X408	3,75	2,5	3,8	TK2.G.R.04
▼ w = 2,0 mm								
2,0	0,05	**TK2.G.R200.005 YP R**	A14M	X808 X408	4,5	2,5	3,8	TK2.G.R.04
2,0	0,1	**TK2.G.R200.010 YP R**	A14N	X808 X408	4,5	2,5	3,8	TK2.G.R.04
2,0	0,2	**TK2.G.R200.020 YP R**	A14P	X800 X400	4,5	2,5	3,8	TK2.G.R.04

Order example: **TK2.G.R200.020 YP R X808** (R = Right hand version, X808 = Grade)

Turning

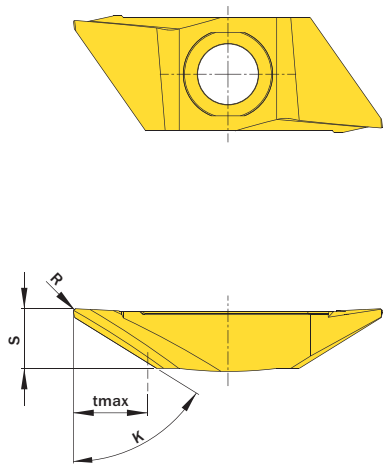
For turning as well as for back turning „behind shoulder“.

Cutting parameters (start)	
f **0,05 mm/U**	Vc **Page 25**

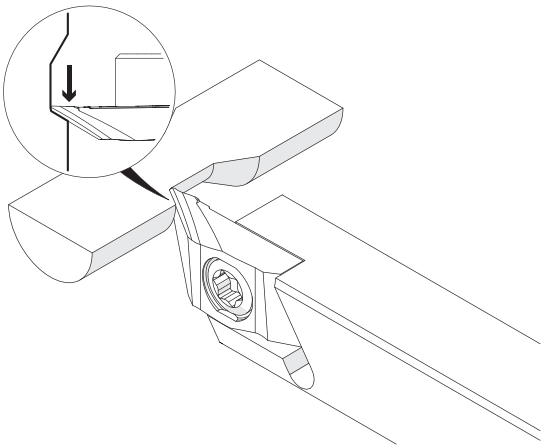
Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1110**



Drawing shows: TK2.G.059.02.06.20 YY R



κ	tmax mm	R mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	Connectcode www.simtek.com/ccode
59°	5,0	0,05	**TK2.G.059.02.05.05 YYR/L**	R A2BE L A2BF	X808 X408	3,95	R TK2.G.R.04 L TK2.G.L.04
59°	5,0	0,1	**TK2.G.059.02.05.10 YYR/L**	R A150 L A153	X808 X408	3,95	R TK2.G.R.04 L TK2.G.L.04
59°	5,0	0,2	**TK2.G.059.02.05.20 YYR/L**	R AYFH L AYFJ	X808 X408	3,95	R TK2.G.R.04 L TK2.G.L.04
59°	5,0	0,4	**TK2.G.059.02.05.40 YYR/L**	R AYFM L AYFK	X808 X408	3,95	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.059.02.05.10 YYR X808** (R = Right hand version, X808 = Grade)

Turning, Cutting Edge Design „E“

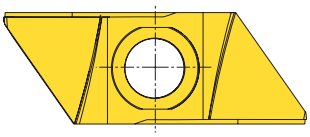
Cutting Edge Design „E“, for high performance and chip control.

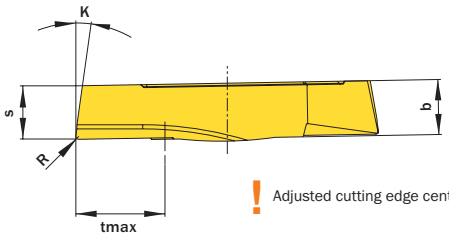
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1242**





! Adjusted cutting edge center height due to special chip former.

Drawing shows: TK2.G.008.10.020 YE R

κ	R mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	b mm	S mm	tmax mm	Connectcode www.simtek.com/ccode
▼ κ = 30°								
30°	0,2	**TK2.G.030.10.020 YER/L**	R A01W L A01X	X808 X408	3,7	3,6	6,0	R TK2.G.R.04 L TK2.G.L.04
▼ κ = 50°								
50°	0,2	**TK2.G.050.10.020 YER/L**	R A01V L A01U	X808 X408	3,7	3,6	6,0	R TK2.G.R.04 L TK2.G.L.04
▼ κ = 8°								
8°	0,2	**TK2.G.008.10.020 YER/L**	R A01Z L A01Y	X808 X408	3,7	3,6	6,0	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.008.10.020 YER X808** (R = Right hand version, X808 = Grade)

Threading, UN, external, partial profile

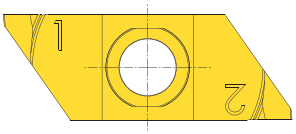
Partial profile for external UN threads.

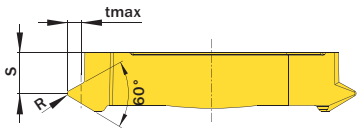
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

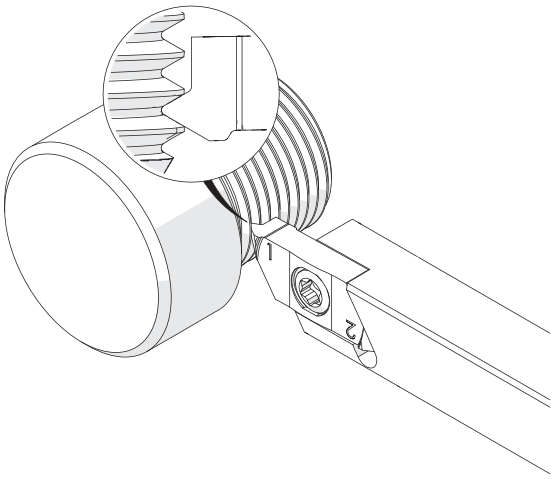
Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1250**







Drawing shows: TK2.G.M150.01 EMU R

Threads/Inch	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	b mm	tmax mm	R mm	S mm	Connectcode www.simtek.com/ccode
14	**TK2.G.UN14.01 EMU R/L**	R A09S L A09Q	X808 X408	4,1	1,11	0,26	3,0	R TK2.G.R.04 L TK2.G.L.04
16	**TK2.G.UN16.01 EMU R/L**	R A09U L A09T	X808 X408	4,1	0,97	0,23	3,0	R TK2.G.R.04 L TK2.G.L.04
18	**TK2.G.UN18.01 EMU R/L**	R A09W L A09V	X808 X408	4,1	0,87	0,2	3,0	R TK2.G.R.04 L TK2.G.L.04
20	**TK2.G.UN20.01 EMU R/L**	R A09Z L A09X	X808 X408	4,1	0,78	0,18	3,0	R TK2.G.R.04 L TK2.G.L.04
24	**TK2.G.UN24.01 EMU R/L**	R A09A L A09B	X808 X408	4,1	0,65	0,15	3,0	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.UN24.01 EMU R X808** (R = Right hand version, X808 = Grade)

Threading, Metr. ISO, External, Partial Profile

Multi-purpose tools, usable for different pitches. Special cutting edge geometry for brass, copper-base alloys and short-chipping materials.

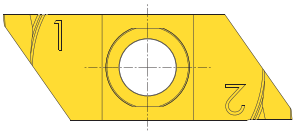
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

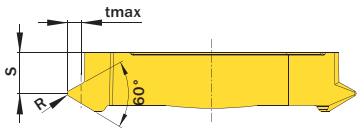
Suitable toolholders on page
6, 7, 8

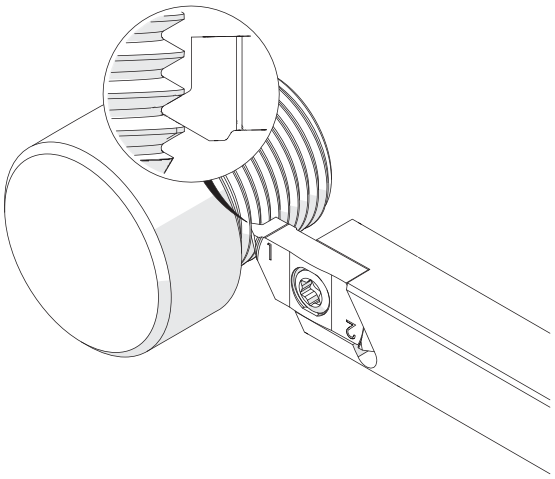
Please read add. notes
T01 (Seite/Page 22)

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1132**







Drawing shows: TK2.G.M150.01 EMU R

Pitch (as of) mm	Pitch (up to) mm	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	R mm	S mm	tmax mm	Connectcode www.simtek.com/ccode
0,25	0,45	**TK2.G.M025.01 EMU R/L**	R AYK9 L AYK8	X808 X408	0,04	3,4	0,3	R TK2.G.R.04 L TK2.G.L.04
0,4	0,6	**TK2.G.M040.01 EMU R/L**	R AYMD L AYMC	X808 X408	0,06	3,3	0,4	R TK2.G.R.04 L TK2.G.L.04
0,5	0,75	**TK2.G.M050.01 EMU R/L**	R AYMH L AYMG	X808 X408	0,07	3,2	0,5	R TK2.G.R.04 L TK2.G.L.04
0,7	1,0	**TK2.G.M070.01 EMU R/L**	R AYMK L AYMJ	X808 X408	0,1	3,1	0,7	R TK2.G.R.04 L TK2.G.L.04
0,8	1,25	**TK2.G.M080.01 EMU R/L**	R AYMQ L AYMP	X808 X408	0,12	3,1	0,8	R TK2.G.R.04 L TK2.G.L.04
1,0	1,5	**TK2.G.M100.01 EMU R/L**	R AYMT L AYMS	X808 X408	0,14	3,0	1,0	R TK2.G.R.04 L TK2.G.L.04
1,25	1,75	**TK2.G.M125.01 EMU R/L**	R AYMV L AYMU	X808 X408	0,18	2,9	1,1	R TK2.G.R.04 L TK2.G.L.04
1,5	2,0	**TK2.G.M150.01 EMU R/L**	R AYMX L AYMW	X808 X408	0,22	2,8	1,3	R TK2.G.R.04 L TK2.G.L.04
1,75	2,5	**TK2.G.M175.01 EMU R/L**	R AYUU L AYUT	X808 X408	0,25	2,7	1,6	R TK2.G.R.04 L TK2.G.L.04
2,0	2,5	**TK2.G.M200.01 EMU R/L**	R AYMZ L AYMY	X808 X408	0,29	2,6	1,6	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.M100.01 EMU R X808** (R = Right hand version, X808 = Grade)

Please read the additional notes mentioned in the information area on the top right corner of this page.

Threading, Metr. ISO, External, Full Profile

For a complete thread profile with correct depth, top radius and bottom radius. Special cutting edge geometry for brass, copper-base alloys and short-chipping materials.

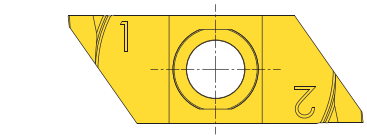
Cutting parameters (start)

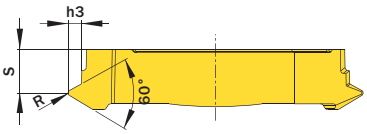
f	Vc
0,02 mm/U	**Page 25**

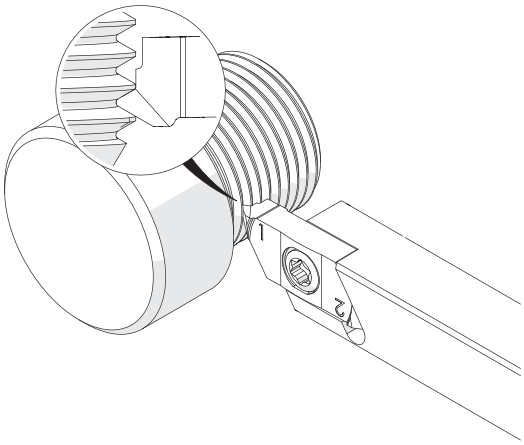
Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1131**







Drawing shows: TK2.G.M150.02 EMU R

Pitch (as of) mm	Part number	Webcode www.simtek.com/webcode		Our first choice P K M N S		h3 mm	R mm	S mm	Connectcode www.simtek.com/ccode	
0,25	**TK2.G.M025.02 EMU R/L**	R AYM5	L AYM4	X808	X408	0,15	0,04	3,6	R TK2.G.R.04	L TK2.G.L.04
0,35	**TK2.G.M035.02 EMU R/L**	R AYM7	L AYM6	X808	X408	0,22	0,05	3,5	R TK2.G.R.04	L TK2.G.L.04
0,4	**TK2.G.M040.02 EMU R/L**	R AYM9	L AYM8	X808	X408	0,25	0,06	3,5	R TK2.G.R.04	L TK2.G.L.04
0,45	**TK2.G.M045.02 EMU R/L**	R AYNB	L AYNA	X808	X408	0,28	0,07	3,5	R TK2.G.R.04	L TK2.G.L.04
0,5	**TK2.G.M050.02 EMU R/L**	R AYND	L AYNC	X808	X408	0,31	0,07	3,4	R TK2.G.R.04	L TK2.G.L.04
0,7	**TK2.G.M070.02 EMU R/L**	R AYNE	L AYNF	X808	X408	0,43	0,1	3,3	R TK2.G.R.04	L TK2.G.L.04
0,75	**TK2.G.M075.02 EMU R/L**	R AYNH	L AYNG	X808	X408	0,46	0,11	3,3	R TK2.G.R.04	L TK2.G.L.04
0,8	**TK2.G.M080.02 EMU R/L**	R AYNK	L AYNJ	X808	X408	0,49	0,11	3,3	R TK2.G.R.04	L TK2.G.L.04
1,0	**TK2.G.M100.02 EMU R/L**	R AYNN	L AYNM	X808	X408	0,61	0,12	3,2	R TK2.G.R.04	L TK2.G.L.04
1,25	**TK2.G.M125.02 EMU R/L**	R AYNQ	L AYNP	X808	X408	0,77	0,15	3,1	R TK2.G.R.04	L TK2.G.L.04
1,5	**TK2.G.M150.02 EMU R/L**	R AYNT	L AYNS	X808	X408	0,92	0,2	3,0	R TK2.G.R.04	L TK2.G.L.04
1,75	**TK2.G.M175.02 EMU R/L**	R AYNV	L AYNU	X808	X408	1,07	0,25	2,9	R TK2.G.R.04	L TK2.G.L.04
2,0	**TK2.G.M200.02 EMU R/L**	R AYNX	L AYNW	X808	X408	1,23	0,25	2,8	R TK2.G.R.04	L TK2.G.L.04
2,5	**TK2.G.M250.02 EMU R/L**	R AYNZ	L AYNY	X808	X408	1,53	0,35	2,6	R TK2.G.R.04	L TK2.G.L.04
3,0	**TK2.G.M300.02 EMU R/L**	R AYN1	L AYN0	X808	X408	1,84	0,4	2,4	R TK2.G.R.04	L TK2.G.L.04

Order example: **TK2.G.M045.02 EMU R X808** (R = Right hand version, X808 = Grade)

Threading, UN, external, full profile

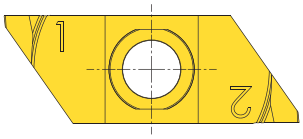
For a complete thread profile with correct depth.

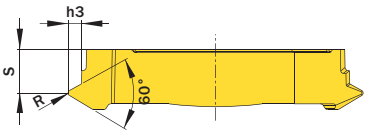
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

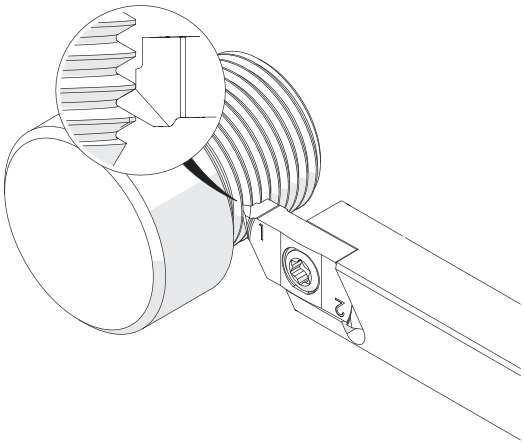
Suitable toolholders on page
6, 7, 8

SP HM | R | Legend **23**

Scan **QR-Code** | Or Visit **www.simtek.info/cp/1251**







Drawing shows: TK2.G.M150.02 EMU R

Threads/Inch	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	b mm	h3 mm	R mm	S mm	Connectcode www.simtek.com/ccode
14	**TK2.G.UN14.02 EMU R/L**	R A091 L A090	X808 X408	4,1	1,11	0,26	3,0	R TK2.G.R.04 L TK2.G.L.04
16	**TK2.G.UN16.02 EMU R/L**	R A093 L A092	X808 X408	4,1	0,97	0,23	3,0	R TK2.G.R.04 L TK2.G.L.04
18	**TK2.G.UN18.02 EMU R/L**	R A095 L A094	X808 X408	4,1	0,87	0,2	3,0	R TK2.G.R.04 L TK2.G.L.04
20	**TK2.G.UN20.02 EMU R/L**	R A097 L A096	X808 X408	4,1	0,78	0,18	3,0	R TK2.G.R.04 L TK2.G.L.04
24	**TK2.G.UN24.02 EMU R/L**	R A09D L A09C	X808 X408	4,1	0,65	0,15	3,0	R TK2.G.R.04 L TK2.G.L.04

Order example: **TK2.G.UN24.02 EMU R X808** (R = Right hand version, X808 = Grade)

Parting Off

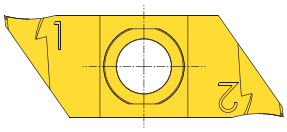
Available in different angles, widths and with/without ground chip form channel.

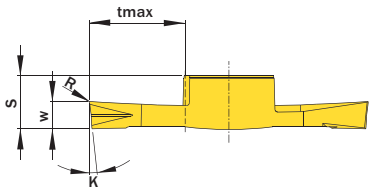
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

Suitable toolholders on page
6, 7, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1119**





Drawing shows: TK2.G.R200.06.005 PT R

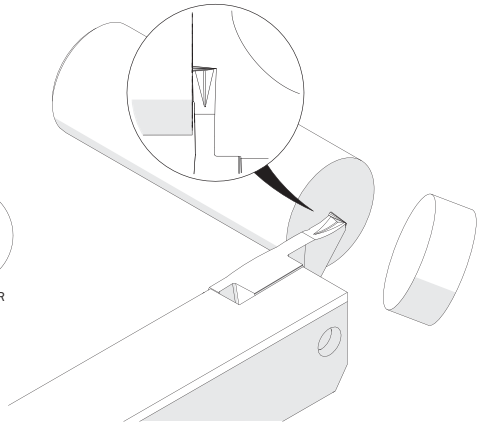
Similar illustrations


TK2.G.R...PS R


TK2.G.R...PU R


TK2.G.R...PT R

Machineable materials. See below.



w -0,05 mm	κ	R mm	With chip form channel	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	tmax mm	Connectcode www.simtek.com/ccode
▼ w = 1,0 mm									
1,0	6°	0,05	No	**TK2.G.R100.06.005 PS R**	AYJQ	X808 X408	3,8	4,0	TK2.G.R.04
1,0	6°	0,05	Yes	**TK2.G.R100.06.005 PT R**	AYJK	X808 X408	3,8	4,0	TK2.G.R.04
1,0	6°	0,05	No	**TK2.G.R100.06.005 PU R**	AYJJ	X808 X408	3,8	4,0	TK2.G.R.04
1,0	12°	0,05	No	**TK2.G.R100.12.005 PS R**	AYJF	X800 X400	3,8	4,0	TK2.G.R.04
1,0	12°	0,05	Yes	**TK2.G.R100.12.005 PT R**	AYJS	X808 X408	3,8	4,0	TK2.G.R.04
1,0	12°	0,05	No	**TK2.G.R100.12.005 PU R**	AYJE	X808 X408	3,8	4,0	TK2.G.R.04
▼ w = 1,5 mm									
1,5	6°	0,05	No	**TK2.G.R150.06.005 PS R**	AYJP	X808 X408	3,85	6,0	TK2.G.R.04
1,5	6°	0,05	Yes	**TK2.G.R150.06.005 PT R**	AYJM	X808 X408	3,85	6,0	TK2.G.R.04
1,5	6°	0,05	No	**TK2.G.R150.06.005 PU R**	AYJH	X800 X400	3,85	6,0	TK2.G.R.04
1,5	12°	0,05	No	**TK2.G.R150.12.005 PS R**	AYJG	X808 X408	3,85	6,0	TK2.G.R.04
1,5	12°	0,05	Yes	**TK2.G.R150.12.005 PT R**	AYJT	X808 X408	3,85	6,0	TK2.G.R.04
1,5	12°	0,05	No	**TK2.G.R150.12.005 PU R**	AYJD	X808 X408	3,85	6,0	TK2.G.R.04
▼ w = 2,0 mm									
2,0	6°	0,05	Yes	**TK2.G.R200.06.005 PT R**	AYJN	X808 X408	3,9	7,0	TK2.G.R.04
2,0	12°	0,05	Yes	**TK2.G.R200.12.005 PT R**	AYJU	X808 X408	3,9	7,0	TK2.G.R.04

Order example: **TK2.G.R150.12.005 PT R X808** (R = Right hand version, X808 = Grade)

TK2.G.R...PS R: For a wide variety of workpiece materials.
TK2.G.R...PU R: For brass, copper-based alloys and short-chipping materials
TK2.G.R...PT R: For a wide variety of workpiece materials as well as especially for long-chipping materials and high cutting depths.

Parting Off

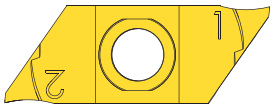
Available in different widths.

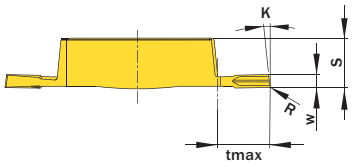
Cutting parameters (start)	
f **0,02 mm/U**	Vc **Page 25**

Suitable toolholders on page
6, 8

SP HM R Legend **23**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1287**

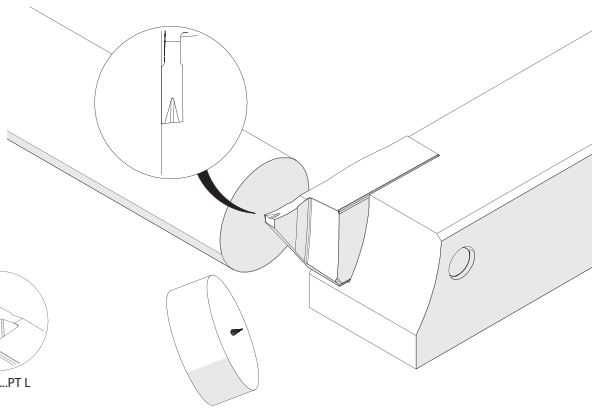




Similar illustrations


TK2.G.R...PS L


TK2.G.R...PT L



Drawing shows: TK2.G.R100.06.005 PT L

w -0,05 mm	κ	R mm	With chip form channel	Part number	Webcode www.simtek.com/webcode	Our first choice P K M N S	S mm	tmax mm	Connectcode www.simtek.com/ccode
▼ w = 1,0 mm									
1,0	6°	0,05	Yes	**TK2.G.R100.06.005 PT L**	A2S0	X808 X408	3,8	4,0	TK2.G.L.04
1,0	12°	0,05	No	**TK2.G.R100.12.005 PS L**	AZT2	X808 X408	3,8	4,0	TK2.G.L.04
▼ w = 1,5 mm									
1,5	6°	0,05	Yes	**TK2.G.R150.06.005 PT L**	A2S1	X808 X408	3,85	6,0	TK2.G.L.04
1,5	12°	0,05	No	**TK2.G.R150.12.005 PS L**	A2WC	X808 X408	3,85	6,0	TK2.G.L.04

Order example: **TK2.G.R100.12.005 PS L X808** (L = Left hand version, X808 = Grade)

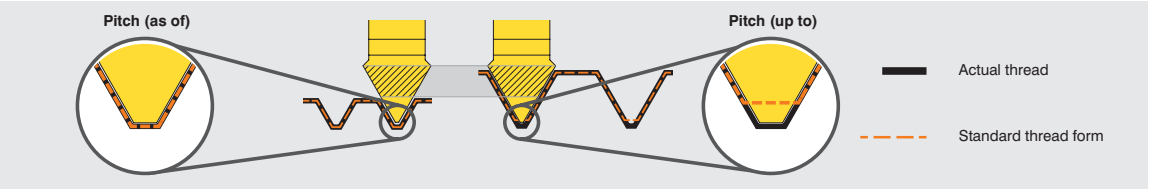
Additional information

T01

The simturn threading inserts with partial profile for metric ISO-threads are multi-purpose tools. This means that each insert is offering the possibility to machine different pitches.

The insert is always designed to meet the pitch given as „Pitch (as of)“: Machining this pitch will result in a standard conform thread form.

The given „Pitch (up to)“ can be machined too with this insert at the expense of standard conformity: The resulting thread will be slightly deeper than the standard. The deeper thread is usually acceptable, but the application and use needs to be evaluated.



Example

Legend

SP / HM **Carbide insert**

TW / ST **Steel toolholder**

R **Right hand version shown, left hand version inversely**

CU **For brass, copper-base alloys and other short-chipping materials**

Only suitable for external applications

simturn KX Product list

Information About The Cutting Parameters

Cutting speed recommendation as of page 26

General information about the cutting parameters recommendations

The given cutting parameters for speed and feed rates are ment as initial start values and are estimated for standard application conditions.
The best parameters depend on a wide variety of machine, workpiece and tool related conditions, for example the general machine condition, and can be above or below the given start values.

Example factors of influence and their effect on the cutting parameters

Reduce values	Increase values
Difficult machine and clamping conditions	Solid machine and clamping conditions
Difficult to machine materials	Easy to machine materials
Long tool reach (L2)	Small tool reach (L2)
No chip form geometry	With chip form geometry

List not complete

Suitability of cutting grades in relation to work piece hardness

Grade	Recommended up to approx.
X8*	HRC52
*T90 / *T91	HRC62
CBN	HRC65 (Depending on application)

Cutting Speed Recommendation

ISO-Group	Recommended Cutting Grade	Work piece material	Sub-group	Alternative cutting grade	Vc m/min (Start)
P	X800 X802 X804 X808	Steel, unalloyed	≤ 0,15 % C	X400 / X600	210
			0,15 - 0,4 % C	X400 / X600	190
			≥ 0,4 % C	X400 / X600	180
		Steel, low alloyed (alloying elements ≤ 5%)	Non-hardened	X400 / X600	170
			Hardened	X400 / X600	100
		Steel, high alloyed (Alloying elements > 5%)	Annealed	X400 / X600	110
			Hardened	X400 / X600	90
		Castings	Unalloyed	X400 / X600	150
			Low alloyed (Alloying elements ≤ 5%)	X400 / X600	120
			High alloyed (Alloying elements > 5%)	X400 / X600	90
M	X400 / X600 X402 / X602 X404 / X604 X408 / X608	Stainless Steel Ferritic/Martensitic	Non-hardened	*T41	150
			PH-hardened	*T41	110
			Hardened	*T41	110
		Stainless Steel Austenitic	Austenitic	*T41	140
			PH-hardened	*T41	100
			Super Austenitic	*T41	110
		Stainless Steel Austenitic-ferritic (Duplex)	Non-weldable ≥ 0,05 % C	*T41	120
			Weldable < 0,05 % C	*T41	100
		Stainless Steel (Cast) Ferritic/martensitic	Non-hardened	*T41	130
			PH-hardened	*T41	90
			Hardened	*T41	100
		Stainless Steel (Cast) Austenitic	Austenitic	*T41	130
			PH-gehärtet	*T41	90
		Stainless Steel (Cast) Austenitic-ferritic (Duplex)	Non-weldable ≥ 0,05 % C	*T41	110
			Weldable < 0,05 % C	*T41	90

Cutting Speed Recommendation

ISO-Group	Recommended Cutting Grade	Work piece material	Sub-group	Alternative cutting grade	Vc m/min (Start)
K	X800 X802 X804 X808	Malleable	Ferritic (short chipping)	*T57	180
			Pearlitic (long chipping)	*T57	150
		Grey Cast Iron	Low tensile strength	*T57	200
			High tensile strength	*T57	150
		Spheroidal Graphite cast iron	Ferritic	*T57	120
			Pearlitic	*T57	110
			Martensitic	*T57	110
N	X400 / X600 X402 / X602 X404 / X604 X408 / X608	Aluminium alloys, Whrought	Can not be hardened	*F25	590
			Can be hardened, hardened	*F25	530
		Aluminium alloys, Cast	Can not be hardened	*F25	590
			Can be hardened, hardened	*F25	530
		Aluminium alloys, Cast	< 5 % Si	*F25	240
			5 - 12 % Si	*X17	240
			> 12 % Si	PKD[1]	180
		Copper- and Copper Alloys	Free Cutting Alloys, ≥1 % Pb	*F25	290
			Brass, leaded bronzes, ≤ 1 % Pb	*F25	290
			Bronze, lead-free copper incl. electrolytic copper	*F25	210

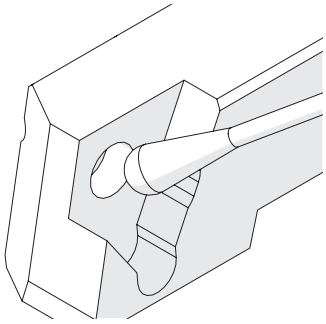
Cutting Speed Recommendation

ISO-Group	Recommended Cutting Grade	Work piece material	Sub-group	Alternative cutting grade	Vc m/min (Start)
S	X400 / X600 X402 / X602 X404 / X604 X408 / X608	Heat-resistant super alloys Fe-based	Annealed or solution treated	*X79	40
			Aged or solution treated and aged	*X79	30
		Heat-resistant super alloys Ni-based	Annealed or solution treated	*X79	40
			Aged or solution treated and aged	*X79	20
			Cast or Cast and aged	*X79	30
		Heat-resistant super alloys Co-based	Annealed or solution treated	*X79	10
			Solution treated and aged	*X79	10
			Cast or Cast and aged	*X79	10
		Titanium Alloys	Commercial pure (99,5 % Ti)	*X79	80
			α, near α and α + β alloys, annealed	*X79	40
			α+β Alloys in aged conditions as well as β alloys. Annealed or aged.	*X79	40
H	CBN[1]	Hardened steel		*T91	50
		Chilled cast iron, cast or cast and aged		*T91	90

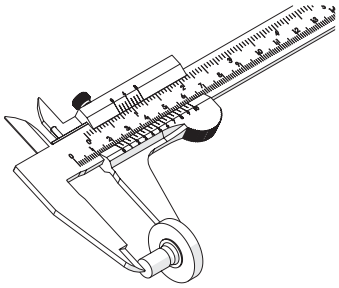
1) For best results, a special cutting edge geometry is recommended here.
Please contact our tecnical support +1 862 757 8130 oder usa@simtek.com.

(2) Recommendation depends on the chosen cutting inserts. Please look at the cutting grade recommendations on the catalog page of the cutting insert.

General Instructions For Use



Please clean insert seat well before mounting and use.



Please control your work pieces frequently.

We recommend the use of tool presetting and measuring devices.