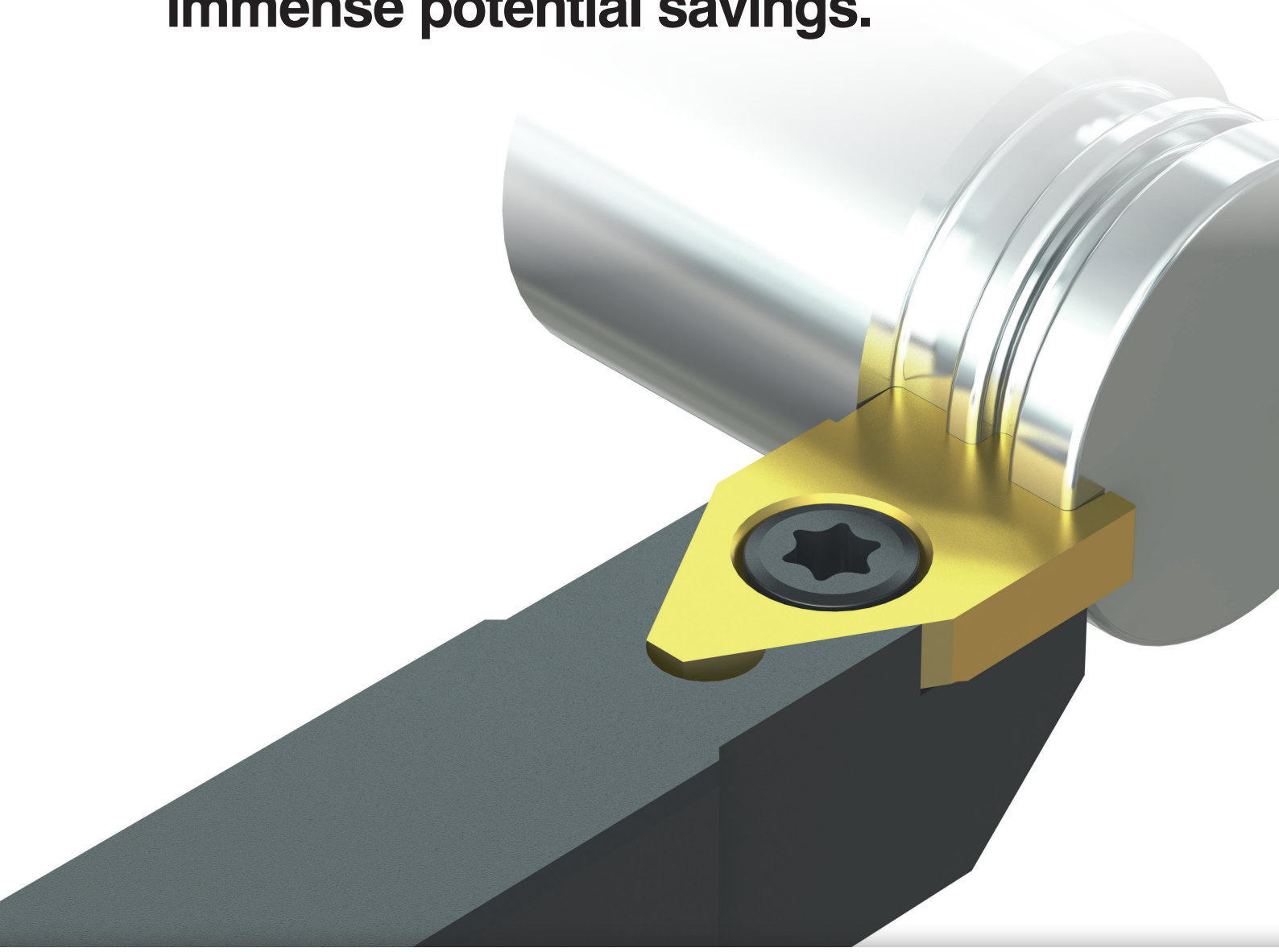
SIMTEK

Tools for
highest
expectations

Form tools provide **immense potential savings.**



simturn Decolletage

SIMTEK Turning Tools Type Decolletage

Part Catalog
R20 US-Edition

SIMTEK

Tools for
highest
expectations

Contact

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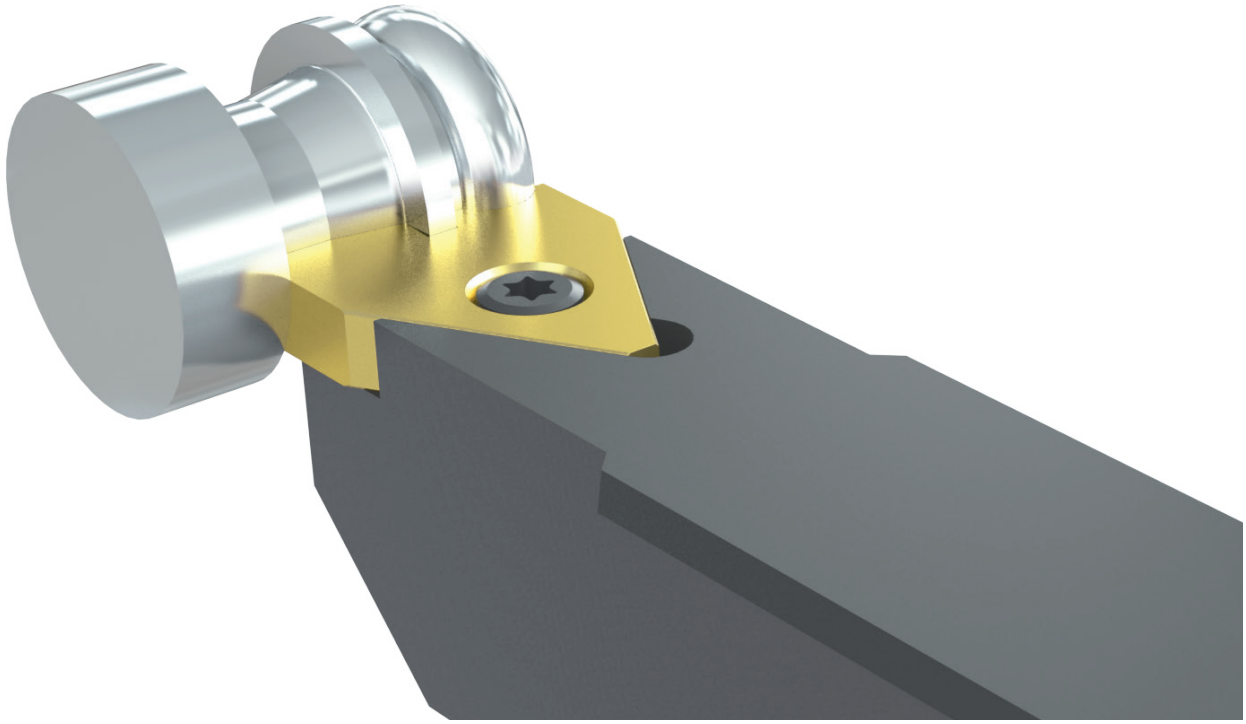
The Tool System Overview

Please read the general instructions for use on page 20

Form tools provide immense potential savings.



Form tools up to 66,0 mm (2.598“) wide.

Generate these savings by using special form and profiling tools.

You can choose between the fully ground form insert made by SIMTEK and the semi-finished inserts from the following pages. These semi-finished inserts can be used to produce individual form tools on your own.

SIMTEK Decolletage cutting tools are available in widths up to 66,0 mm (2.598“).

Special cutting inserts are available upon request.

Semi-Finished Inserts

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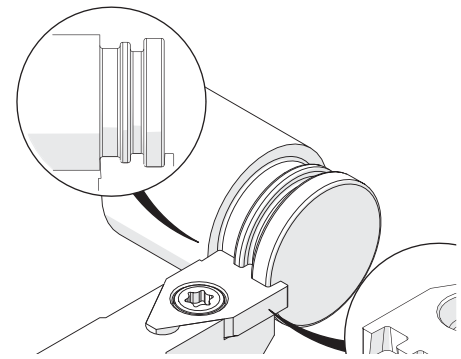
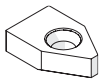
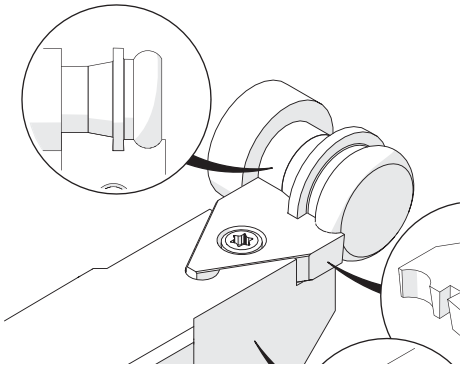


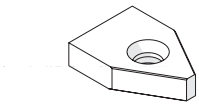
Small Version



Page 12



Mid-Size Version



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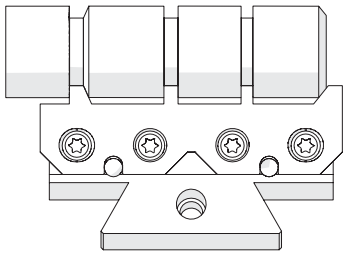
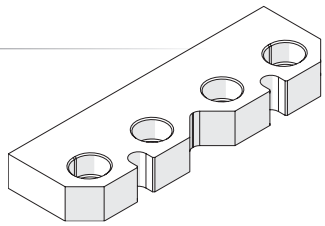


Wide Version



Toolholder, Profiling

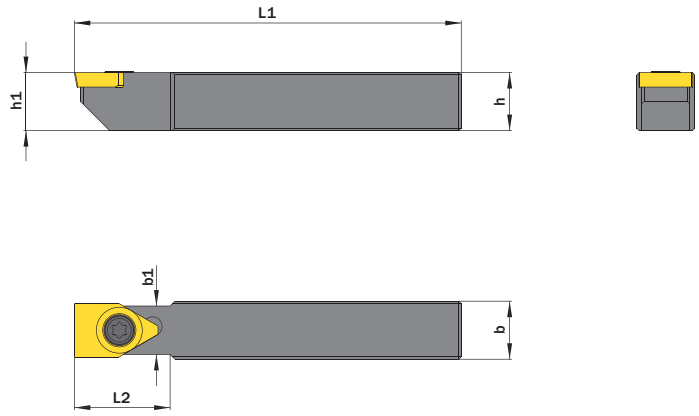
Square shank 0°-toolholder for mounting F10-Decolletage-inserts.

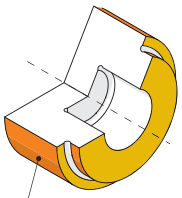
Tightening torque (screw)

"F M4x11 T15F": 4,5 Nm
"F M4x8,5 T15F": 4,5 Nm

TW ST Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/729**





Mainly designed for these surfaces

Also possible depending on insert/fixation type

Drawing shows: F10.1212.A11.08.03

h mm	b mm	L1 mm	Part number	Webcode www.simtek.com/webcode	b1 mm	h1 mm	L2 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode
▼ **Connectcode = TF10.A.30**										
10,0	10,0	80,0	**F10.1010.A11.08.03**	ATSK	10,0	10,0	-	F M4x8,5 T15F	T15F	TF10.A.30
12,0	12,0	80,0	**F10.1212.A11.08.03**	ATSG	10,0	12,0	20,0	F M4x11 T15F	T15F	TF10.A.30
▼ **Connectcode = TF10.A.45**										
10,0	10,0	80,0	**F10.1010.A11.08.04**	ATSJ	10,0	10,0	-	F M4x8,5 T15F	T15F	TF10.A.45
12,0	12,0	80,0	**F10.1212.A11.08.04**	ATSH	10,0	12,0	20,0	F M4x11 T15F	T15F	TF10.A.45

Order example: **F10.1010.A11.08.04**

Toolholder, Profiling

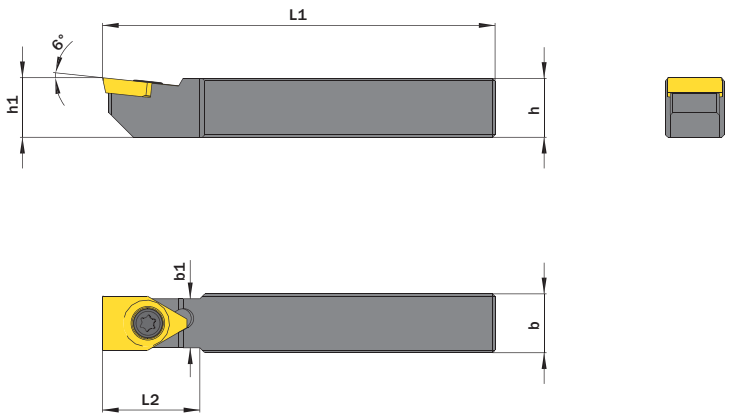
Square shank 6°-toolholder for mounting F10-Decolletage-inserts.

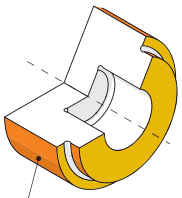
Tightening torque (screw)

"F M4x11 T15F": 4,5 Nm
"F M4x8,5 T15F": 4,5 Nm

TW ST Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/730**





Mainly designed for these surfaces

Also possible depending on insert/fixation type

Drawing shows: F10.1212.B11.08.03

h mm	b mm	L1 mm	Part number	Webcode www.simtek.com/webcode	b1 mm	h1 mm	L2 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode
▼ Connectcode = TF10.B.30										
10,0	10,0	80,0	**F10.1010.B11.08.03**	ATSM	10,0	10,0	-	F M4x8,5 T15F	T15F	TF10.B.30
12,0	12,0	80,0	**F10.1212.B11.08.03**	ATSP	10,0	12,0	20,0	F M4x8,5 T15F	T15F	TF10.B.30
▼ Connectcode = TF10.B.45										
10,0	10,0	80,0	**F10.1010.B11.08.04**	ATSN	10,0	10,0	-	F M4x8,5 T15F	T15F	TF10.B.45
12,0	12,0	80,0	**F10.1212.B11.08.04**	ATSQ	10,0	12,0	20,0	F M4x8,5 T15F	T15F	TF10.B.45

Order example: **F10.1010.B11.08.04**

Toolholder, Profiling

Square shank 0°-toolholder for mounting F12-Decolletage-inserts.

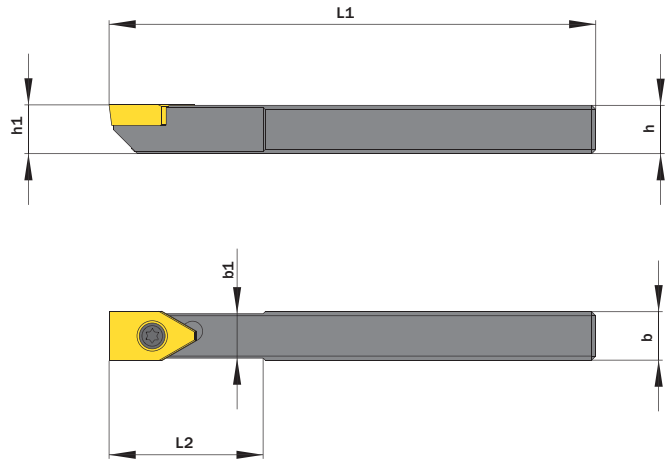
Tightening torque (screw)

"F M5x11,5 T20R": 6,0 Nm
"F M5x13 T20R": 6,0 Nm

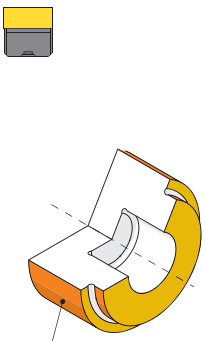
TW ST Legend 14

Scan QR-Code Or Visit **www.simtek.info/cp/1162**

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



Drawing shows: F12.1212.A12.10



Mainly designed for these surfaces

Also possible depending on insert/fixation type

h mm/inch	b mm/inch	Part number	Webcode www.simtek.com/webcode	L1 mm/inch	b1 mm/inch	h1 js14 mm/inch	L2 mm/inch	Screw	Screw driver	Connectcode www.simtek.com/ccode	
▼ **Connectcode = TF12.A.12.10**											
12,0	12,0	**F12.1212.A12.10**	AYV9	120,5	11,0	12,0	35,0	F M5x11,5 T20R	T20R	TF12.A.12.10	
16,0	16,0	**F12.1616.A12.10**	AYWD	120,5	11,0	16,0	35,0	F M5x13 T20R	T20R	TF12.A.12.10	
20,0	20,0	**F12.2020.A12.10**	AYWJ	145,5	11,0	20,0	35,0	F M5x13 T20R	T20R	TF12.A.12.10	
▼ **Connectcode = TF12.A.12.15**											
0.750"	0.750"	**F12.0.750.S.A12.15**	A4B3	5.906"	0.433"	0.750"	1.378"	F M5x13 T20R	T20R	TF12.A.12.15	inch
12,0	12,0	**F12.1212.A12.15**	AYWA	125,0	11,0	12,0	35,0	F M5x11,5 T20R	T20R	TF12.A.12.15	
16,0	16,0	**F12.1616.A12.15**	AYWE	125,0	11,0	16,0	35,0	F M5x13 T20R	T20R	TF12.A.12.15	
20,0	20,0	**F12.2020.A12.15**	AYWK	150,0	11,0	20,0	35,0	F M5x13 T20R	T20R	TF12.A.12.15	
25,0	25,0	**F12.2525.A12.15**	AYWQ	150,0	11,0	25,0	35,0	F M5x13 T20R	T20R	TF12.A.12.15	
▼ **Connectcode = TF12.A.16.12**											
12,0	12,0	**F12.1212.A16.12**	AYWB	122,0	15,0	12,0	35,0	F M5x11,5 T20R	T20R	TF12.A.16.12	
16,0	16,0	**F12.1616.A16.12**	AYWF	122,0	15,0	16,0	35,0	F M5x13 T20R	T20R	TF12.A.16.12	
20,0	20,0	**F12.2020.A16.12**	AYWM	147,0	15,0	20,0	35,0	F M5x13 T20R	T20R	TF12.A.16.12	
▼ **Connectcode = TF12.A.16.15**											
12,0	12,0	**F12.1212.A16.15**	AYWC	125,0	15,0	12,0	35,0	F M5x11,5 T20R	T20R	TF12.A.16.15	
16,0	16,0	**F12.1616.A16.15**	AYWG	125,0	15,0	16,0	35,0	F M5x13 T20R	T20R	TF12.A.16.15	
20,0	20,0	**F12.2020.A16.15**	AYWN	150,0	15,0	20,0	35,0	F M5x13 T20R	T20R	TF12.A.16.15	
25,0	25,0	**F12.2525.A16.15**	AYWS	150,0	15,0	25,0	35,0	F M5x13 T20R	T20R	TF12.A.16.15	
▼ **Connectcode = TF12.A.20.15**											
16,0	16,0	**F12.1616.A20.15**	AYWH	125,0	19,0	16,0	35,0	F M5x13 T20R	T20R	TF12.A.20.15	
20,0	20,0	**F12.2020.A20.15**	AYWP	150,0	19,0	20,0	35,0	F M5x13 T20R	T20R	TF12.A.20.15	
25,0	25,0	**F12.2525.A20.15**	AYWT	150,0	19,0	25,0	35,0	F M5x13 T20R	T20R	TF12.A.20.15	
▼ **Connectcode = TF12.A.25.15**											
25,0	25,0	**F12.2525.A25.15**	AYWU	150,0	24,0	25,0	35,0	F M5x13 T20R	T20R	TF12.A.25.15	

Order example: **F12.1616.A16.12**

Toolholder, Profiling

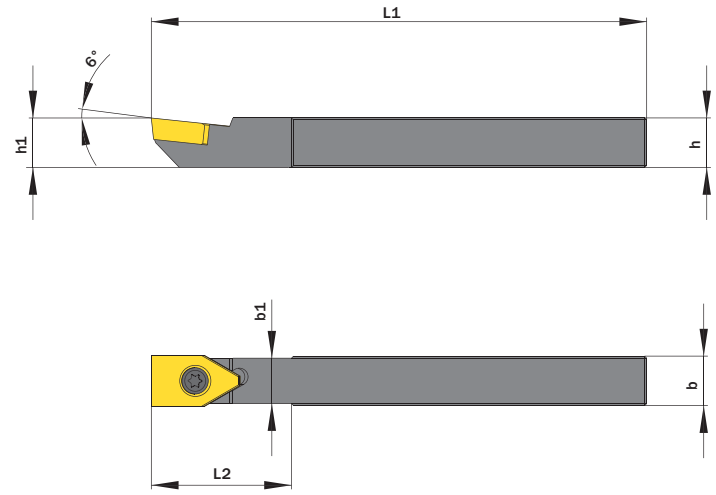
Square shank 6°-toolholder for mounting F12-Decolletage-inserts.

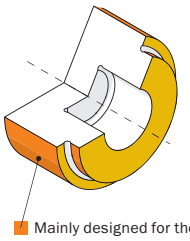
Tightening torque (screw)

"F M5x11,5 T20R": 6,0 Nm
"F M5x13 T20R": 6,0 Nm

TW ST Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/1163**





Drawing shows: F12.1212.B12.10

h mm	b mm	Part number	Webcode www.simtek.com/webcode	L1 mm	b1 mm	h1 js14 mm	L2 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode
▼ **Connectcode = TF12.B.12.10**										
12,0	12,0	**F12.1212.B12.10**	AYWV	120,5	11,0	12,0	35,0	FM5x11,5T20R	T20R	**TF12.B.12.10**
16,0	16,0	**F12.1616.B12.10**	AYWZ	120,5	11,0	16,0	35,0	FM5x13T20R	T20R	**TF12.B.12.10**
20,0	20,0	**F12.2020.B12.10**	AYW4	145,5	11,0	20,0	35,0	FM5x13T20R	T20R	**TF12.B.12.10**
25,0	25,0	**F12.2525.B12.10**	AYW9	145,5	11,0	25,0	35,0	FM5x13T20R	T20R	**TF12.B.12.10**
▼ **Connectcode = TF12.B.12.15**										
12,0	12,0	**F12.1212.B12.15**	AYWW	125,0	11,0	12,0	35,0	FM5x11,5T20R	T20R	**TF12.B.12.15**
16,0	16,0	**F12.1616.B12.15**	AYW0	125,0	11,0	16,0	35,0	FM5x13T20R	T20R	**TF12.B.12.15**
20,0	20,0	**F12.2020.B12.15**	AYW5	150,0	11,0	20,0	35,0	FM5x13T20R	T20R	**TF12.B.12.15**
25,0	25,0	**F12.2525.B12.15**	AYXA	150,0	11,0	25,0	35,0	FM5x13T20R	T20R	**TF12.B.12.15**
▼ **Connectcode = TF12.B.16.12**										
12,0	12,0	**F12.1212.B16.12**	AYWX	122,0	15,0	12,0	35,0	FM5x11,5T20R	T20R	**TF12.B.16.12**
16,0	16,0	**F12.1616.B16.12**	AYW1	122,0	15,0	16,0	35,0	FM5x13T20R	T20R	**TF12.B.16.12**
20,0	20,0	**F12.2020.B16.12**	AYW6	147,0	15,0	20,0	35,0	FM5x13T20R	T20R	**TF12.B.16.12**
▼ **Connectcode = TF12.B.16.15**										
12,0	12,0	**F12.1212.B16.15**	AYWY	125,0	15,0	12,0	35,0	FM5x11,5T20R	T20R	**TF12.B.16.15**
16,0	16,0	**F12.1616.B16.15**	AYW2	125,0	15,0	16,0	35,0	FM5x13T20R	T20R	**TF12.B.16.15**
20,0	20,0	**F12.2020.B16.15**	AYW7	150,0	15,0	20,0	35,0	FM5x13T20R	T20R	**TF12.B.16.15**
25,0	25,0	**F12.2525.B16.15**	AYXB	150,0	15,0	25,0	35,0	FM5x13T20R	T20R	**TF12.B.16.15**
▼ **Connectcode = TF12.B.20.15**										
16,0	16,0	**F12.1616.B20.15**	AYW3	125,0	19,0	16,0	35,0	FM5x13T20R	T20R	**TF12.B.20.15**
20,0	20,0	**F12.2020.B20.15**	AYW8	150,0	19,0	20,0	35,0	FM5x13T20R	T20R	**TF12.B.20.15**
25,0	25,0	**F12.2525.B20.15**	AYXC	150,0	19,0	25,0	35,0	FM5x13T20R	T20R	**TF12.B.20.15**
▼ **Connectcode = TF12.B.25.15**										
25,0	25,0	**F12.2525.B25.15**	AYXD	150,0	24,0	25,0	35,0	FM5x13T20R	T20R	**TF12.B.25.15**

Order example: **F12.1616.B12.10**

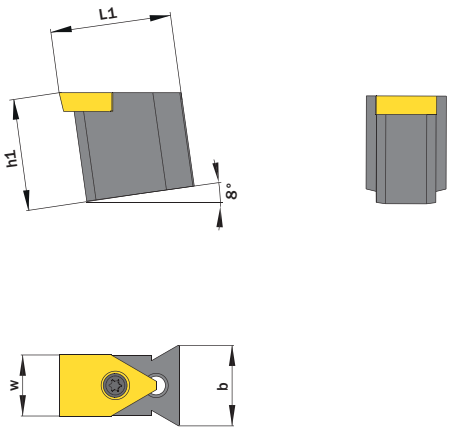
Toolholder, Profiling

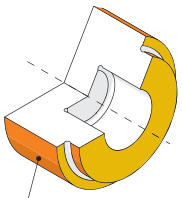
Square shank toolholder for mounting F12-Decolletage-inserts.

Tightening torque (screw)
6,0 Nm

TW ST Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/849**





Mainly designed for these surfaces

Also possible depending on insert/fixation type

Drawing shows: F25AW22.16

b mm	w mm	Part number	Webcode www.simtek.com/webcode	h1 mm	L1 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode
▼ **Connectcode = TF12.A.12.15**								
22,0	12,0	**F25.AW22.12**	ATYJ	28,0	23,0	F M5x13 T20R	T20R	**TF12.A.12.15**
▼ **Connectcode = TF12.A.16.15**								
22,0	16,0	**F25.AW22.16**	AHNZ	30,0	32,0	F M5x13 T20R	T20R	**TF12.A.16.15**
28,0	16,0	**F25.AW28.16**	AQK3	30,0	32,0	F M5x13 T20R	T20R	**TF12.A.16.15**
▼ **Connectcode = TF12.A.20.15**								
22,0	20,0	**F25.AW22.20**	AQ39	30,0	32,0	F M5x13 T20R	T20R	**TF12.A.20.15**
28,0	20,0	**F25.AW28.20**	AFH7	30,0	32,0	F M5x13 T20R	T20R	**TF12.A.20.15**
▼ **Connectcode = TF12.A.25.15**								
28,0	25,0	**F25.AW28.25**	AMPJ	30,0	32,0	F M5x13 T20R	T20R	**TF12.A.25.15**

Order example: **F25.AW28.16**

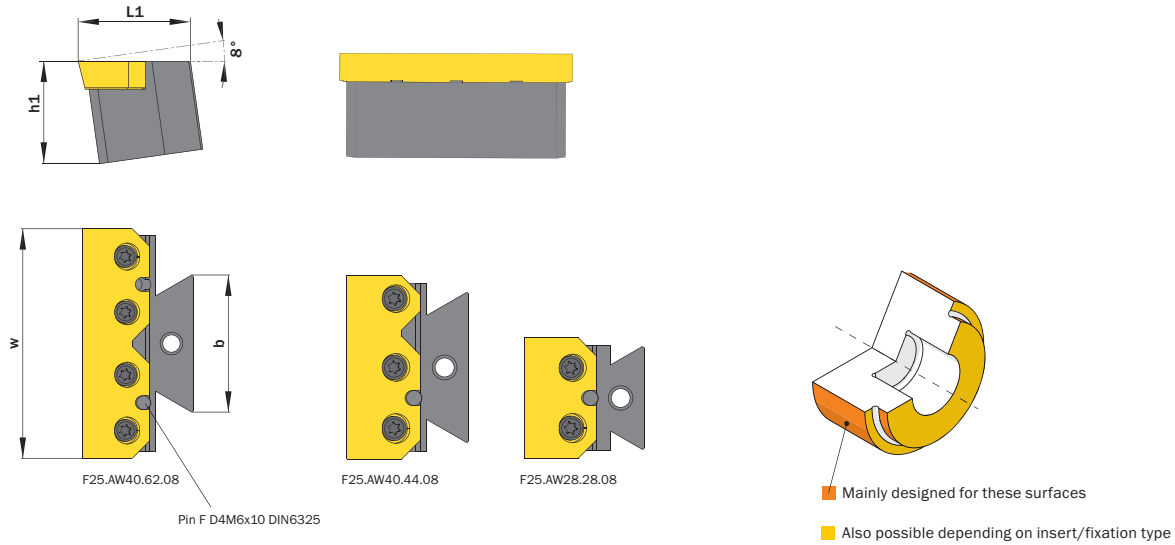
Toolholder, Profiling

Toolholder for mounting F12-Decolletage-inserts.

Tightening torque (screw)
6,0 Nm

TW ST Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/848**



b mm	Part number	Webcode www.simtek.com/webcode	h1 mm	L1 mm	w mm	Screw	Screw driver	Connectcode www.simtek.com/ccode
▼ **Connectcode = TF12.A.32**								
28,0	**F25.AW28.28.08**	AS90	30,0	32,0	32,0	D M5x12 T20T	T20T	**TF12.A.32**
▼ **Connectcode = TF12.A.48**								
40,0	**F25.AW40.44.08**	AS9Z	30,0	32,0	48,0	D M5x12 T20T	T20T	**TF12.A.48**
▼ **Connectcode = TF12.A.66**								
40,0	**F25.AW40.62.08**	AS9Y	30,0	32,0	66,0	D M5x12 T20T	T20T	**TF12.A.66**

Order example: **F25.AW40.44.08**

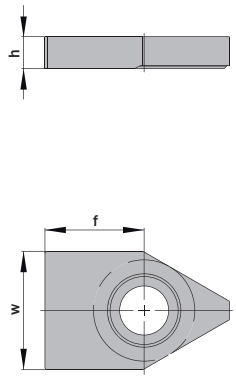
Semi-Finished-Insert, Profiling

Semi-finished-insert for component and client specific forms.

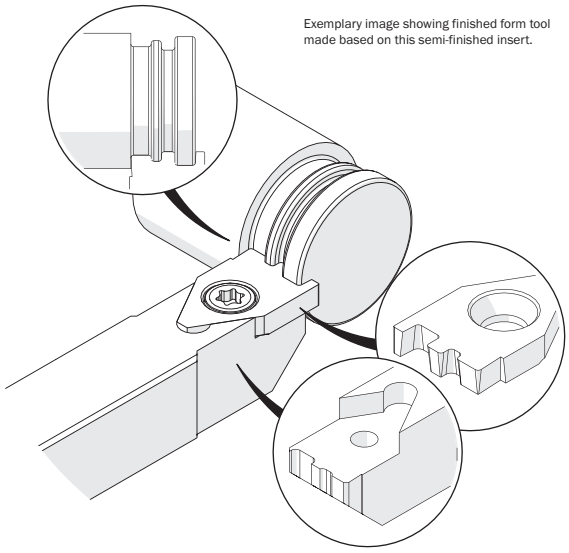
Suitable toolholders on page
6

SP HM Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/727**



Drawing shows: F10.1109.30 M



Exemplary image showing finished form tool made based on this semi-finished insert.

w mm	h +0,05 mm	Part number	Webcode www.simtek.com/iwebcode	Cutting grade group	f mm	Connectcode www.simtek.com/ccode
▼ **Connectcode = TF10.A.30 | TF10.B.30**						
11,1	2,95	**F10.1109.30 M**	ASAU	G	9,3	TF10.A.30 | TF10.B.30
▼ **Connectcode = TF10.A.45 | TF10.B.45**						
11,1	4,4	**F10.1109.45 M**	ASAY	G	9,3	TF10.A.45 | TF10.B.45

Order example: **F10.1109.45 M GF25** (GF25 = Grade)

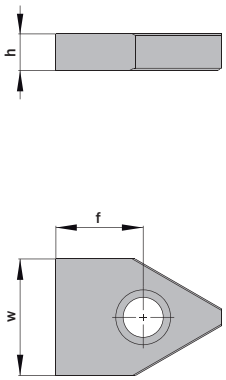
Semi-Finished-Insert, Profiling

Semi-finished-insert for component and client specific forms.

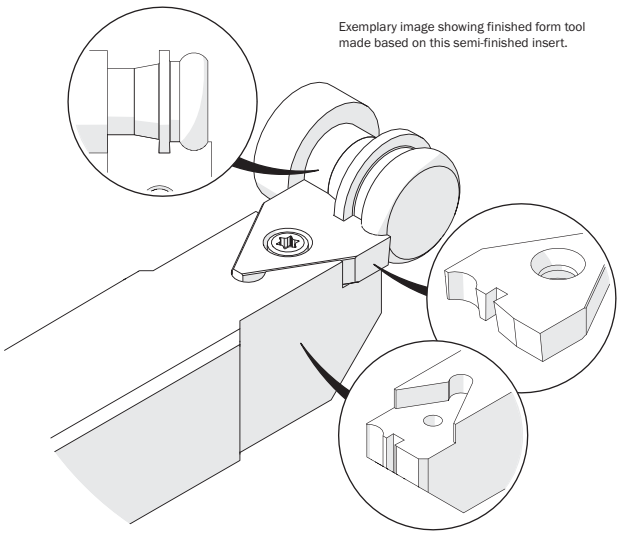
Suitable toolholders on page
7, 8, 9

SP HM Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/728**



Drawing shows: F12.1612.00 M



Exemplary image showing finished form tool made based on this semi-finished insert.

w mm	f mm	Part number	Webcode www.simtek.com/webcode	Cutting grade group	h +0,05 mm	Connectcode www.simtek.com/ccode
▼ w = 12,3 mm						
12,3	10,7	**F12.1210.00 M**	AMWH	G	5,0	TF12.A.12.10 | TF12.B.12.10
12,3	15,2	**F12.1215.00 M**	AG2E	G	5,0	TF12.A.12.15 | TF12.B.12.15
▼ w = 16,3 mm						
16,3	12,2	**F12.1612.00 M**	AKWQ	G	5,0	TF12.A.16.12 | TF12.B.16.12
16,3	15,2	**F12.1615.00 M**	AECD	G	5,0	TF12.A.16.15 | TF12.B.16.15
▼ w = 20,3 mm						
20,3	15,2	**F12.2015.00 M**	AA30	G	5,0	TF12.A.20.15 | TF12.B.20.15
▼ w = 25,3 mm						
25,3	15,2	**F12.2515.00 M**	AGXU	G	5,0	TF12.A.25.15 | TF12.B.25.15

Order example: **F12.1210.00 M GF25** (GF25 = Grade)

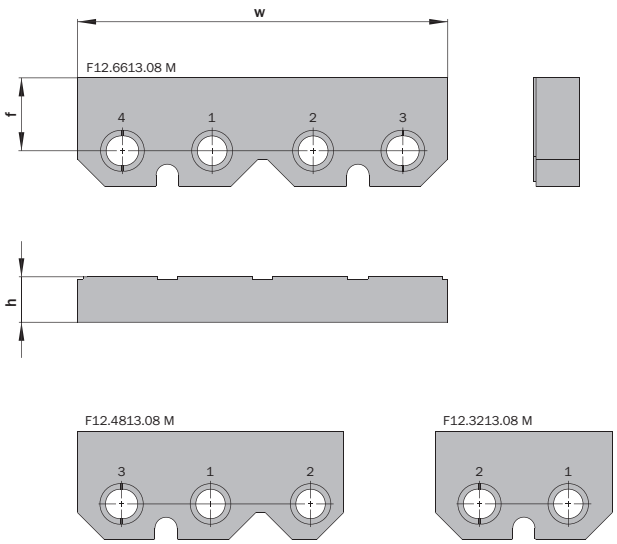
Semi-Finished-Insert, Profiling

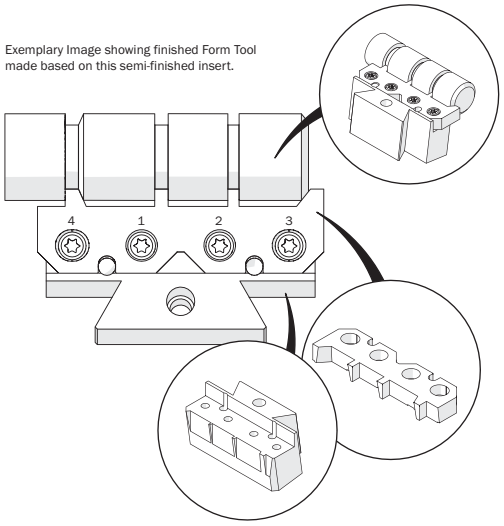
Semi-finished-insert for component and client specific forms.

Suitable toolholders on page
10

SP HM Legend **14**

Scan **QR-Code** Or Visit **www.simtek.info/cp/850**





Exemplary Image showing finished Form Tool made based on this semi-finished insert.

Please tighten the screws in the order marked on the Semi-Finished-Insert!

w mm	Part number	Webcode www.simtek.com/webcode	Cutting grade group	h mm	f mm	Connectcode www.simtek.com/ccode
▼ Connectcode = TF12.A.32						
32,0	**F12.3213.08 M**	AVFS	G	8,1	13,2	TF12.A.32
▼ Connectcode = TF12.A.48						
48,0	**F12.4813.08 M**	ATT4	G	8,1	13,2	TF12.A.48
▼ Connectcode = TF12.A.66						
66,0	**F12.6613.08 M**	ATT5	G	8,1	13,2	TF12.A.66

Order example: **F12.3213.08 M GK10** (GK10 = Grade)

Legend

SP
HM
Carbide insert

TW
ST
Steel toolholder

Through coolant

simturn Decolletage Product list

Part Nr.	P
F10.1010.A11.08.03	5
F10.1010.A11.08.04	5
F10.1010.B11.08.03	6
F10.1010.B11.08.04	6
F10.1109.30 M	14
F10.1109.45 M	14
F10.1212.A11.08.03	5
F10.1212.A11.08.04	5
F10.1212.B11.08.03	6
F10.1212.B11.08.04	6
F12.0.750.S.A12.15	7
F12.1210.00 M	15
F12.1212.A12.10	7
F12.1212.A12.15	7
F12.1212.A16.12	7
F12.1212.A16.15	7
F12.1212.B12.10	9
F12.1212.B12.15	9
F12.1212.B16.12	9
F12.1212.B16.15	9
F12.1215.00 M	15
F12.1612.00 M	15
F12.1615.00 M	15
F12.1616.A12.10	7
F12.1616.A12.15	7
F12.1616.A16.12	7
F12.1616.A16.15	7
F12.1616.A20.15	7
F12.1616.B12.10	9
F12.1616.B12.15	9
F12.1616.B16.12	9
F12.1616.B16.15	9
F12.1616.B20.15	9
F12.2015.00 M	15
F12.2020.A12.10	7
F12.2020.A12.15	7
F12.2020.A16.12	7
F12.2020.A16.15	7
F12.2020.A20.15	7
F12.2020.B12.10	9
F12.2020.B12.15	9
F12.2020.B16.12	9
F12.2020.B16.15	9
F12.2020.B20.15	9
F12.2515.00 M	15
F12.2525.A12.15	7
F12.2525.A16.15	7
F12.2525.A20.15	7
F12.2525.A25.15	7
F12.2525.B12.10	9
F12.2525.B12.15	9
F12.2525.B16.15	9
F12.2525.B20.15	9
F12.2525.B25.15	9
F12.3213.08 M	16
F12.4813.08 M	16
F12.6613.08 M	16
F25.1212.12.10	8
F25.1212.12.15	8
F25.1212.16.12	8
F25.1212.16.15	8
F25.1616.12.10	8
F25.1616.12.15	8
F25.1616.16.12	8
F25.1616.16.15	8
F25.1616.20.15	8

Part Nr.	P
F25.2020.12.10	8
F25.2020.12.15	8
F25.2020.16.12	8
F25.2020.16.15	8
F25.2020.20.15	8
F25.2525.12.15	8
F25.2525.16.15	8
F25.2525.20.15	8
F25.2525.25.15	8
F25.AW22.12	11
F25.AW22.16	11
F25.AW22.20	11
F25.AW28.16	11
F25.AW28.20	11
F25.AW28.25	11
F25.AW28.28.08	12
F25.AW40.44.08	12
F25.AW40.62.08	12
F26.1212.12.10	10
F26.1212.12.15	10
F26.1212.16.15	10
F26.1616.12.10	10
F26.1616.12.15	10
F26.1616.16.12	10
F26.1616.16.15	10
F26.1616.20.15	10
F26.2020.12.10	10
F26.2020.12.15	10
F26.2020.16.12	10
F26.2020.16.15	10
F26.2020.20.15	10
F26.2525.12.10	10
F26.2525.16.15	10
F26.2525.20.15	10
F26.2525.25.15	10
T0G.K.F12.1615.A1 L	13
T0G.K.F12.1615.A1 R	13

Information About The Cutting Parameters

Cutting speed recommendation as of page 17

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

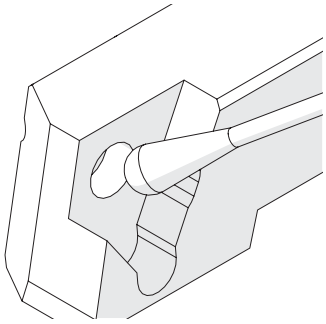
Cutting Speed Recommendation

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

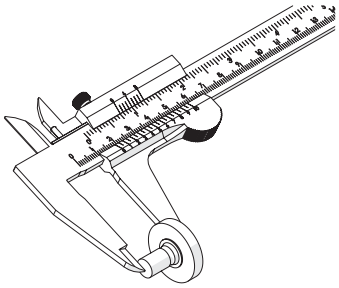
1) For best results, a special cutting edge geometry is recommended here.
Please contact our tecnical support +1 862 757 8130 oder usa@simtek.com.

(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.