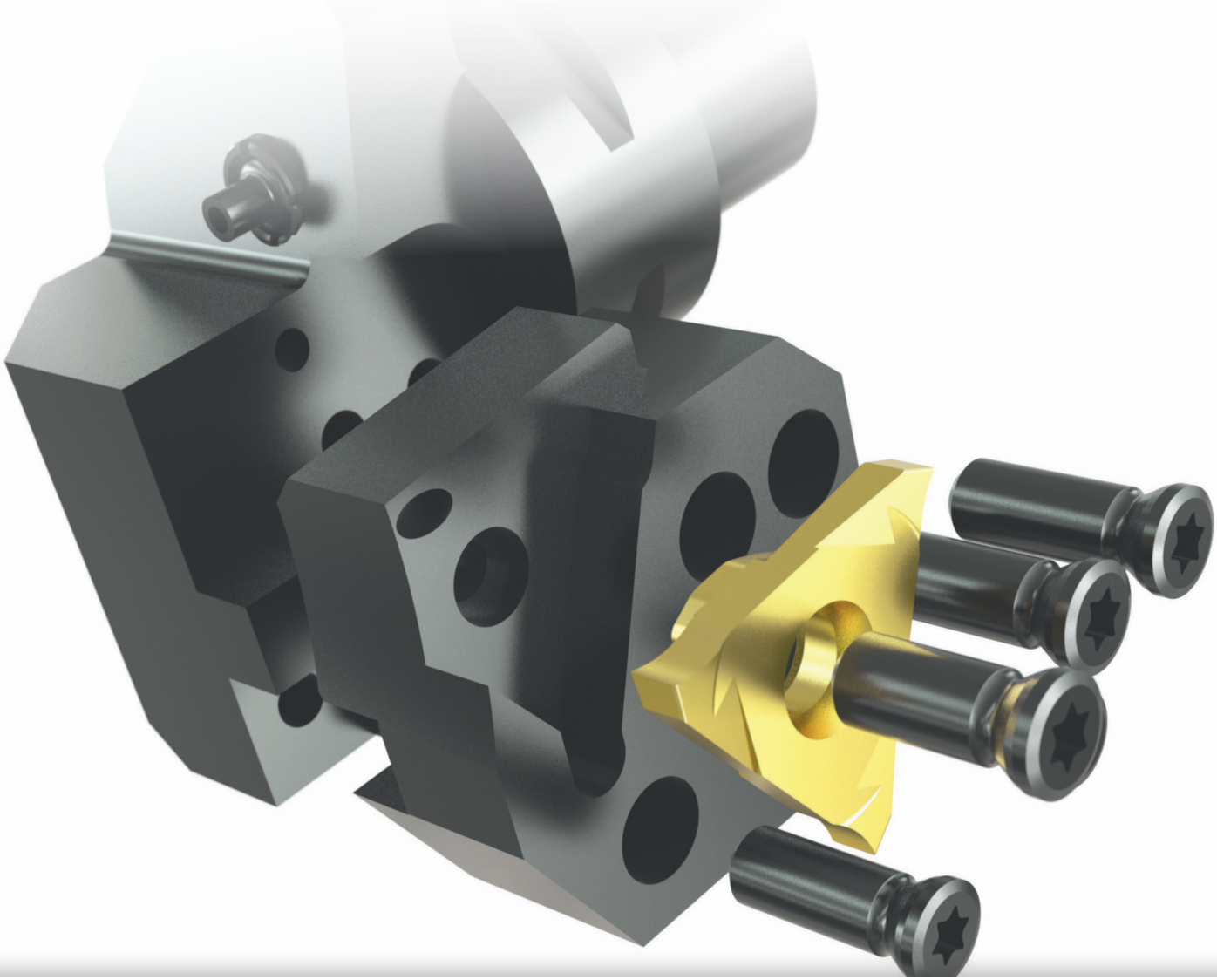
SIMTEK

Tools for
highest
expectations

Modular system of
basic toolholder and cassettes.



simturn OA

SIMTEK Turning Tools Type OA

Part Catalog
R20 US-Edition

SIMTEK

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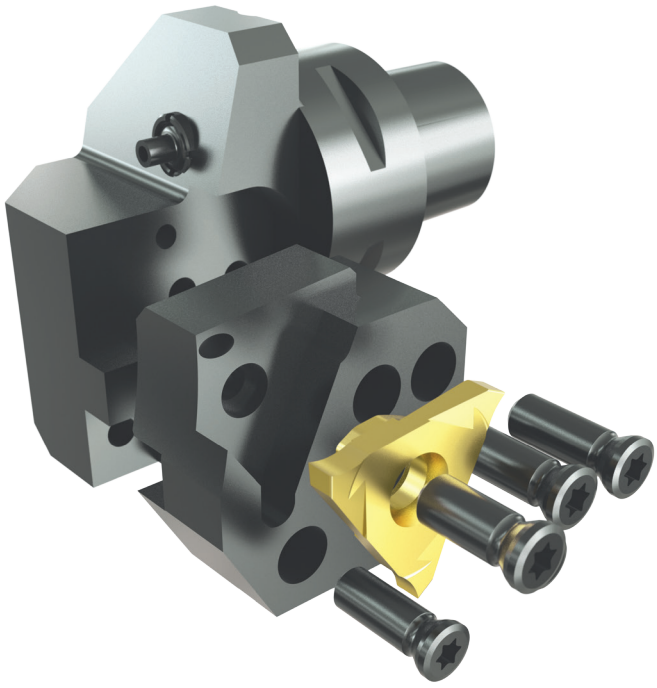
The Tool System Overview

Please read the general instructions for use on page 12

Modular system of basic toolholder and cassette.



System of modular basic toolholders and matching cassettes for a variety of simturn product groups.

The basic toolholders with polygonal shanks according to ISO 26623 are available for internal and external applications.

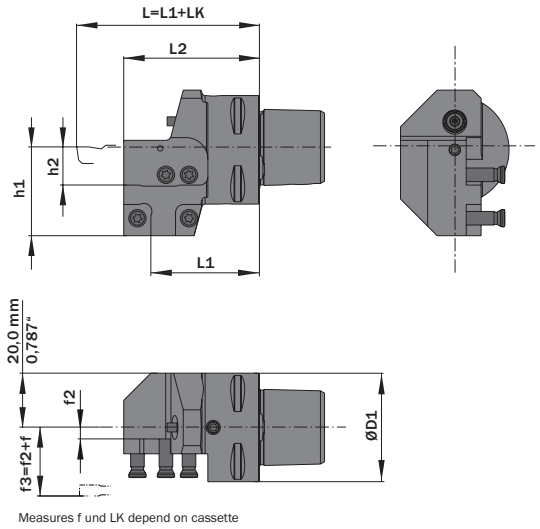
Modular Base Toolholder with Polygon Shank According to ISO 26623, Radial Application

SIMTEK toolholder with polygon shank according to ISO 26623 for TOA-cassettes.

Tightening torque (screw)
7,0 Nm

TW ST | R | Legend 6

Scan QR-Code | Or Visit **www.simtek.info/cp/334**



Measures f und LK depend on cassette

Drawing shows: TOA.00C4 R

ØD1 mm	Part number	Webcode www.simtek.com/webcode	h1 mm	h2 mm	f2 mm	L1 mm	L2 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode	Adaptcode
32,0	**TOA.00C3 R/L**	R AAAD L AJUB	31,6	12,95	4,2	36,0	46,0	TM5x15T20R	T20R	-	R: TOA.R | L: TOA.L
40,0	**TOA.00C4 R/L**	R AAX0 L AEEX	31,6	12,95	4,2	40,0	50,0	TM5x15T20R	T20R	-	R: TOA.R | L: TOA.L
50,0	**TOA.00C5 R/L**	R AEN3 L AKM8	31,6	12,95	4,2	40,0	50,0	TM5x15T20R	T20R	-	R: TOA.R | L: TOA.L
63,0	**TOA.00C6 R/L**	R AFJP L APM3	31,6	12,95	4,2	42,0	52,0	TM5x15T20R	T20R	-	R: TOA.R | L: TOA.L

Order example: **TOA.00C4 R** (R = Right hand version)

Technical changes reserved
The stability of the coolant nozzle should be checked regularly.

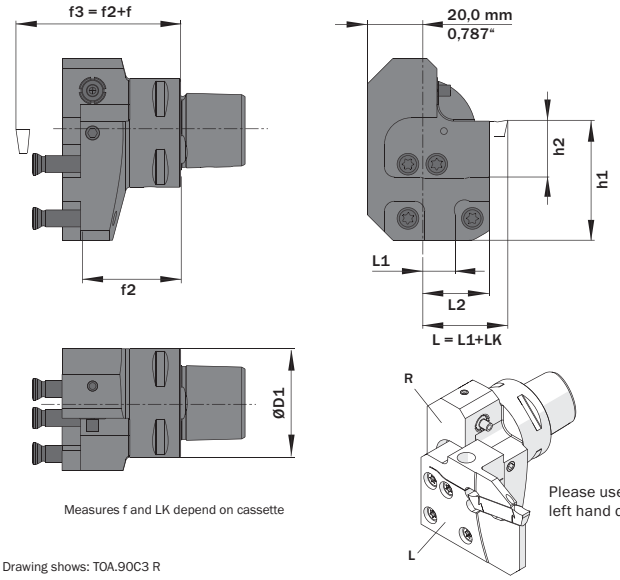
Modular Base Toolholder with Polygon Shank According to ISO 26623, Face Application

SIMTEK toolholder with polygon shank according to ISO 26623 for TOA-cassettes.

Tightening torque (screw)
7,0 Nm

TW ST | R | Legend 6

Scan QR-Code | Or Visit **www.simtek.info/cp/335**



Measures f and LK depend on cassette

Drawing shows: TOA.90C3 R

Please use right hand base toolholder with left hand cassette and vice versa.

ØD1 mm	Part number	Webcode www.simtek.com/webcode	h1 mm	h2 mm	f2 mm	L1 mm	L2 mm	Screw	Screw driver	Connectcode www.simtek.com/ccode	Adaptcode
32,0	**TOA.90C3 R/L**	R ACFP L ABCU	31,6	12,95	29,5	10,0	20,0	TM5x15T20R	T20R	-	R: TOA.L | L: TOA.R
40,0	**TOA.90C4 R/L**	R AJVH L AA0D	31,6	12,95	34,5	10,0	20,0	TM5x15T20R	T20R	-	R: TOA.L | L: TOA.R
50,0	**TOA.90C5 R/L**	R ANCY L APMN	31,6	12,95	34,5	10,0	20,0	TM5x15T20R	T20R	-	R: TOA.L | L: TOA.R
63,0	**TOA.90C6 R/L**	R AE57 L ADQ6	31,6	12,95	36,5	10,0	20,0	TM5x15T20R	T20R	-	R: TOA.L | L: TOA.R

Order example: **TOA.90C5 R** (R = Right hand version)

Technical changes reserved
The stability of the coolant nozzle should be checked regularly.

Legend

TW ST **Steel toolholder**

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

Through coolant

simturn OA Product list

Part Nr.	P
T0A.00C3 L	4
T0A.00C3 R	4
T0A.00C4 L	4
T0A.00C4 R	4
T0A.00C5 L	4
T0A.00C5 R	4
T0A.00C6 L	4
T0A.00C6 R	4
T0A.90C3 L	5
T0A.90C3 R	5
T0A.90C4 L	5
T0A.90C4 R	5
T0A.90C5 L	5
T0A.90C5 R	5
T0A.90C6 L	5
T0A.90C6 R	5

Information About The Cutting Parameters

Cutting speed recommendation as of page 9

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

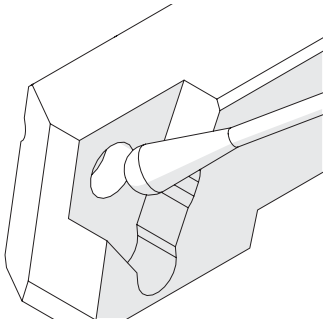
Cutting Speed Recommendation

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

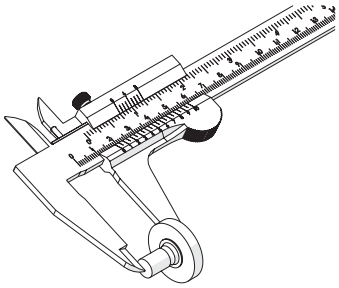
1) For best results, a special cutting edge geometry is recommended here.
Please contact our tecnical support +1 862 757 8130 oder usa@simtek.com.

(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.