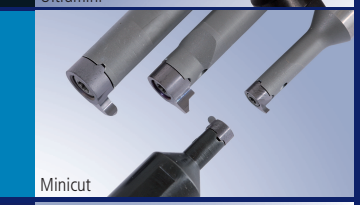
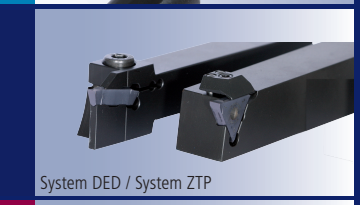
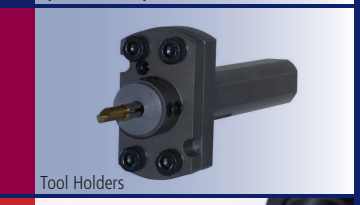
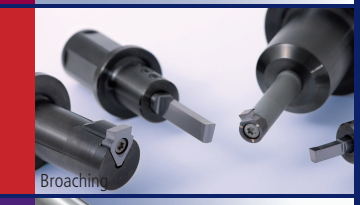

Ultramini


Minicut

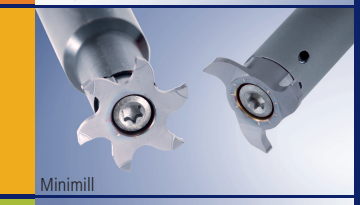

System DED / System ZTP


Tool Holders


Broaching


Rotaline


Mikromill


Minimill


System 500

SWISSLINE

MINIATURE EXTERNAL MACHINING

Express Delivery Only Item

premium carbide cutting tools

Dümmel

Dümmel®
WERKZEUGFABRIK

Swissline

Swissline

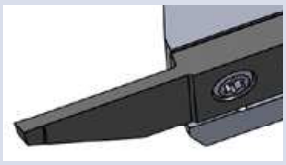
miniature external machining, two-cutting edges

summary

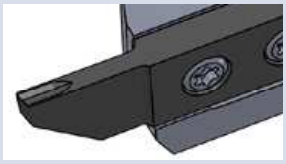
Swissline

miniature external machining, two-cutting edges

summary



	indexable inserts parting off	dimensions	page
Typ R/L ZW10	parting off	t max. = 6 - 16 b = 0.8 - 3	**... 10**
Typ R/L ZW11	parting off, offset cutting edge	t max. = 6 - 16 b = 0.8 - 3	**... 11**
Typ R/L ZW12	parting off with counter spindle	t max. = 6 b = 0.8 / 1.2	**... 12**
Typ R/L ZW13	parting off with counter spindle, offset cutting edge	t max. = 6 b = 0.8 / 1.2	**... 13**
Typ R/L ZW14	parting off, with chip former	t max. = 8 - 16 b = 1.5 - 3	**... 14**
Typ R/L ZW15	parting off, offset cutting edge, with chip former	t max. = 8 - 16 b = 1.5 - 3	**... 15**
Typ R/L ZW16	parting off, with chip breaker	t max. = 8 - 16 b = 1.5 - 3	**... 16**
Typ R/L ZW17	parting off, offset cutting edge, with chip breaker	t max. = 8 - 16 b = 1.5 - 3	**... 17**
Typ R/L ZW18	parting off with 0°, with chipformer	t max. = 10 - 16 b = 1.5 - 3	**... 18**
Typ R/L ZW19	parting off with 0°, with chip breaker	t max. = 10 - 16 b = 1.5 - 3	**... 19**



	indexable inserts turning and parting off	dimensions	page
Typ R/L ZW20	turning and parting off, wiper geometry	t max. = 10 b = 2	**... 20**
Typ R/L ZW21	turning and parting off, offset cutting edge, wiper geometry	t max. = 10 b = 2	**... 21**
Typ R/L ZW22	turning and parting off, with chipformer, wiper geometry	t max. = 10 b = 2	**... 22**
Typ R/L ZW23	turning and parting off, offset cutting edge, with chipformer, wiper geometry	t max. = 10 b = 2	**... 23**

Swissline

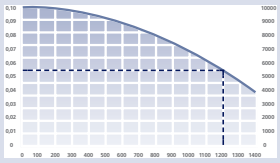
**miniature external machining,
two-cutting edges**

summary

Swissline

miniature external machining, two-cutting edges

summary



Technical Instructions **page**

Dümmel® WERKZEUGFABRIK

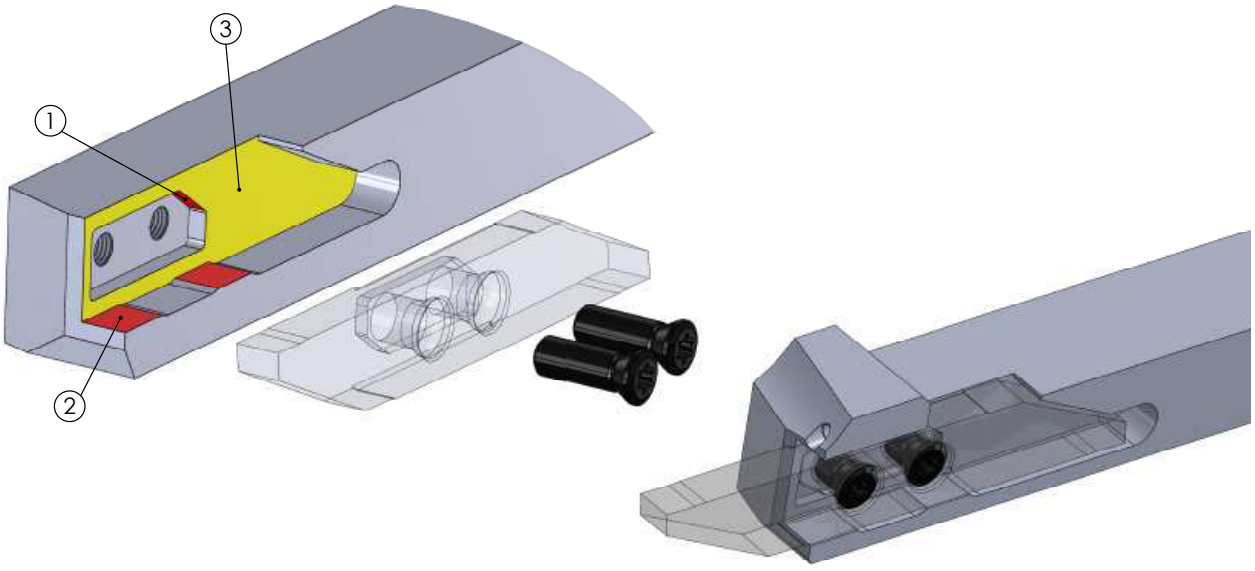
Swissline

miniature external machining, two-cutting edges

general instruction

Swissline

A turn and cut off tool system for Swiss type lathes up to Ø 32 mm. Inserts for cut off, turning, copy turning and threading are in standard available. A wide range of refined tool holders and shank sizes between 8 - 25 mm completes our product line.



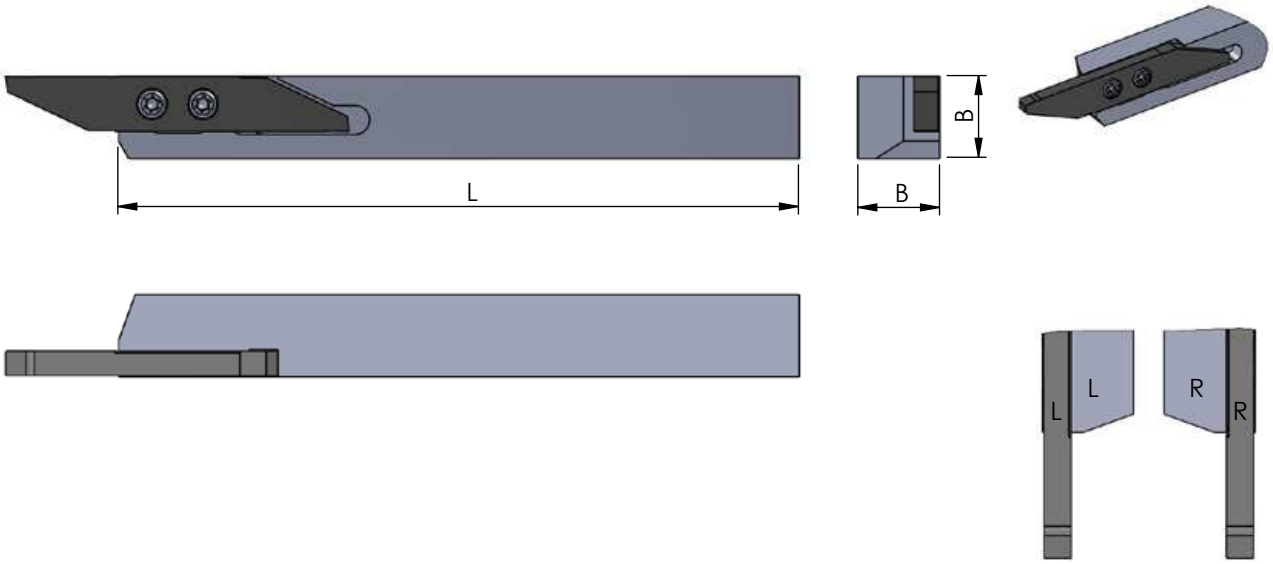
Advantages:	
Large selection of insert geometries with different chip breaker geometries	
Special chip breaker design for machining of small- to mid-sized work pieces	
Perpendicularity guaranteed by two fixing screws, large support face and a genuine stop face for axial positioning	
The cutting forces are transferred directly from the insert to the holder; the screws are therefore not exposed to shear stress	
limited regrinding posibility	
If first cutting edge has crashed the second is still usable	

Swissline

miniature external machining, two-cutting edges

Type HW10

toolholder



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	B	B (Zoll / inch)	L	screw	key driver	torque	for insert
R/L HW10.0808080	8		80	M3/7 T08	Torx T8	1.2 Nm	R/L ZW....
R/L HW10.0808100	8		100				
R/L HW10.1010080	10		80	M3/9 T08	Torx T8	1.2 Nm	
R/L HW10.1010100	10		100				
R/L HW10.1212100	12		100				
R/L HW10.1616125	16		125				
R/L HW10.2020125	20		125				
R/L HW10.2525150	25		150				
R/L HW10.Z0909080	9.525	3/8"	80				
R/L HW10.Z0909100	9.525	3/8"	100				
R/L HW10.Z1212100	12.7	1/2"	100				
R/L HW10.Z1515125	15.875	5/8"	125				
R/L HW10.Z1919125	19.05	3/4"	125				

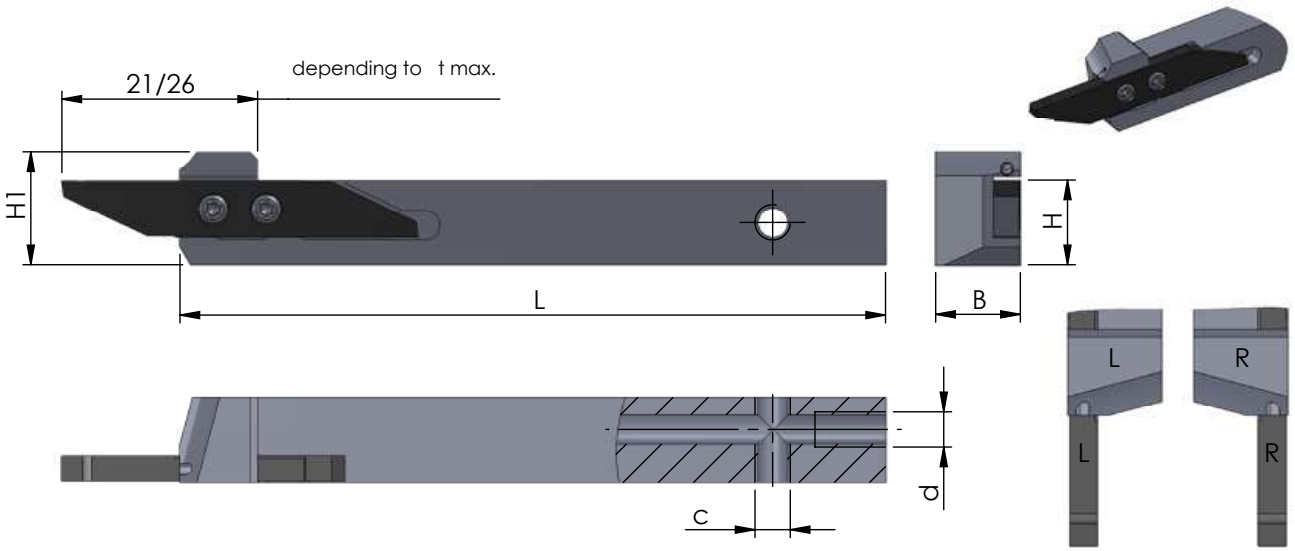
order-example:
righthand version
RHW10.0808080

Swissline

**miniature external machining,
two-cutting edges**

Type HW15

**toolholder
with internal cooling**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	B	B (Zoll / inch)	H	H (Zoll / inch)	L	H1	c	d	screw	key driver	torque	for insert
R/L HW15.1208100	12		8		100	12.2	M5	M5	M3/9-SL	Torx T8	1.2 Nm	R/L ZW....
R/L HW15.1210100	12		10		100	14	M5	M5				
R/L HW15.1212100	12		12		100	16	M5	M5				
R/L HW15.1616125	16		16		125	20	M5	G1/8"				
R/L HW15.2020125	20		20		125	24	M5	G1/8"				
R/L HW15.2525125	25		25		125	29	M5	G1/8"				
R/L HW15.Z0909100	9.525	3/8"	9.525	3/8"	100	13.5	M5	M5				
R/L HW15.Z1212100	12.7	1/2"	12.7	1/2"	100	16.7	M5	M5				
R/L HW15.Z1515125	15.875	5/8"	15.875	5/8"	125	19.9	M5	G1/8"				
R/L HW15.Z1919125	19.05	3/4"	19.05	3/4"	125	23	M5	G1/8"				

Scope of delivery:
Holder without coolant connector

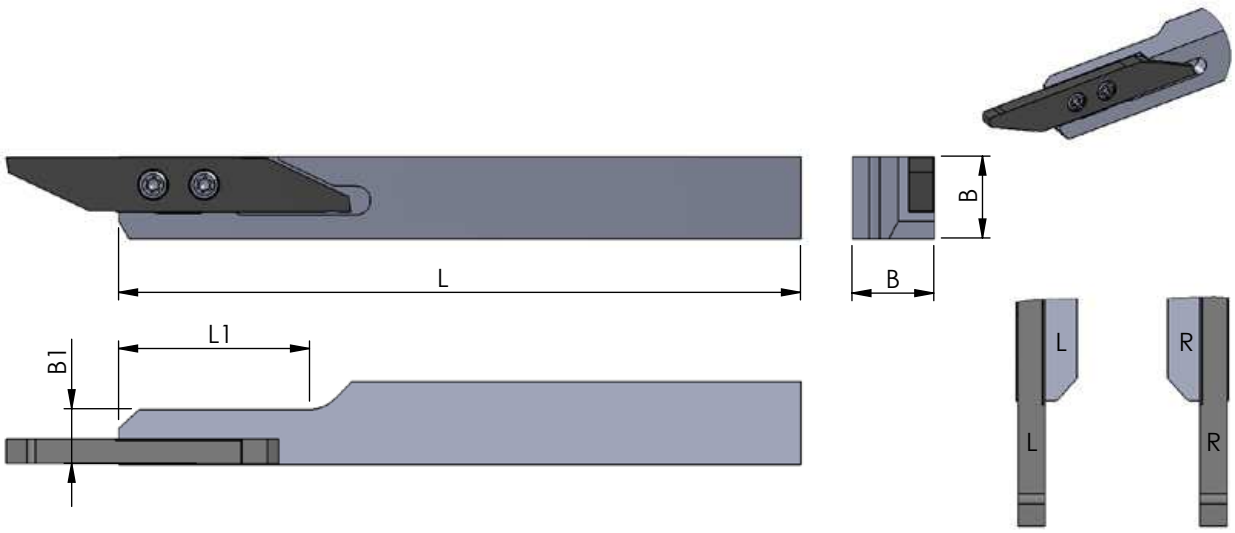
order-example:
righthand version
RHW15.1208100

Swissline

miniature external machining, two-cutting edges

Type HW20

toolholder, with offset



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	B	B (Zoll / inch)	L	L1	B1	screw	key driver	torque	for insert
R/L HW20.1010080	10		80	28	8	M3/7-SL	Torx T8	1.2 Nm	R/L ZW....
R/L HW20.1010100	10		100	28	8				
R/L HW20.1212100	12		100	28	8				
R/L HW20.1616125	16		125	28	8				
R/L HW20.Z0909080	9.525	3/8"	80	28	8				
R/L HW20.Z0909100	9.525	3/8"	100	28	8				
R/L HW20.Z1212100	12.7	1/2"	100	28	8				
R/L HW20.Z1515125	15.875	5/8"	125	28	8				

order-example:
righthand version
RHW20.1010080

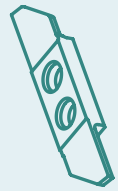
Swissline

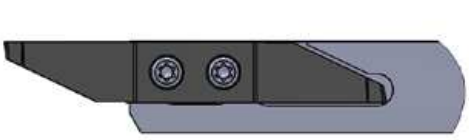
**miniature external machining,
two-cutting edges**

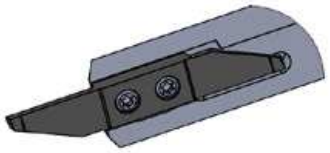
Type ZW10

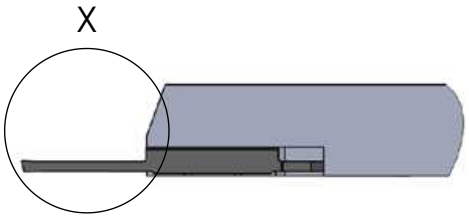
**indexable inserts
for parting off**

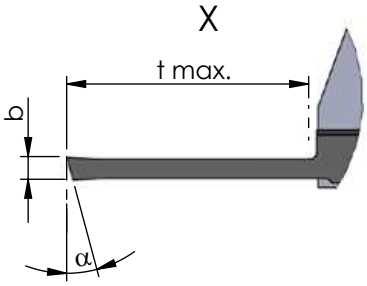
**depth of groove t max. = 6 - 16 mm
width of groove b = 0.8 - 3.0 mm**

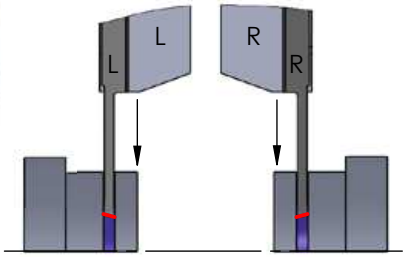












righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW10.08061500	0.8	6	15°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW10.08101500	0.8	10	15°	●			●	
R/L ZW10.10061500	1.0	6	15°	●			●	
R/L ZW10.10131500	1.0	13	15°	●			●	
R/L ZW10.12061500	1.2	6	15°	●			●	
R/L ZW10.15081500	1.5	8	15°	●			●	
R/L ZW10.15161500	1.5	16	15°	●			●	
R/L ZW10.18081500	1.8	8	15°	●			●	
R/L ZW10.20101500	2.0	10	15°	●			●	
R/L ZW10.20161500	2.0	16	15°	●			●	
R/L ZW10.25131500	2.5	13	15°	●			●	
R/L ZW10.25161500	2.5	16	15°	●			●	
R/L ZW10.30161500	3.0	16	15°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW10.08061500/P18C

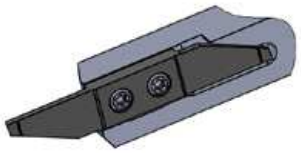
Swissline

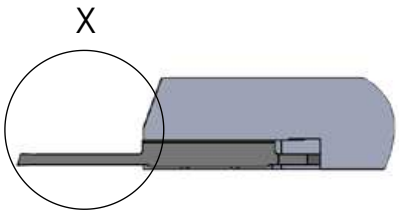
miniature external machining, two-cutting edges

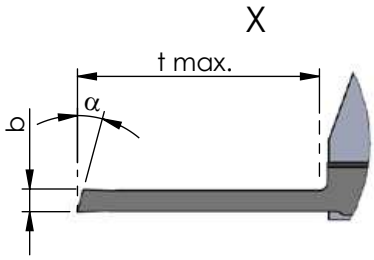
Type ZW11

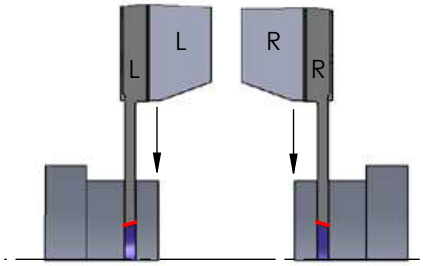
indexable inserts, for parting off, offset cutting edge

depth of groove t max. = 6 - 16 mm
width of groove b = 0.8 - 3.0 mm









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW11.08061500	0.8	6	15°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW11.08101500	0.8	10	15°	●			●	
R/L ZW11.10061500	1.0	6	15°	●			●	
R/L ZW11.10131500	1.0	13	15°	●			●	
R/L ZW11.12061500	1.2	6	15°	●			●	
R/L ZW11.15081500	1.5	8	15°	●			●	
R/L ZW11.15161500	1.5	16	15°	●			●	
R/L ZW11.18081500	1.8	8	15°	●			●	
R/L ZW11.20101500	2.0	10	15°	●			●	
R/L ZW11.20161500	2.0	16	15°	●			●	
R/L ZW11.25131500	2.5	13	15°	●			●	
R/L ZW11.25161500	2.5	16	15°	●			●	
R/L ZW11.30161500	3.0	16	15°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW11.08061500/P18C

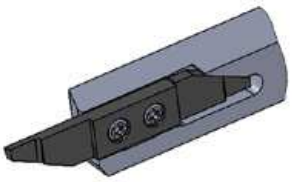
Swissline

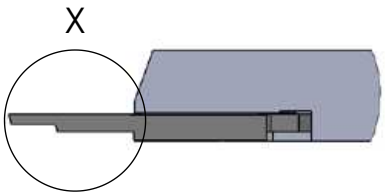
**miniature external machining,
two-cutting edges**

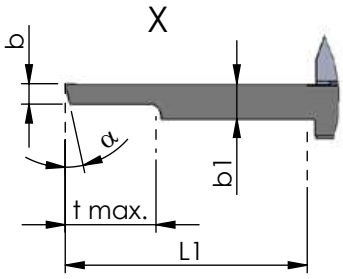
Type ZW12

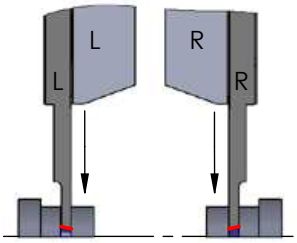
**indexable inserts,
parting off with counter spindle**

**depth of groove t max. = 6 mm
width of groove b = 0.8 / 1.2 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	L1	b1	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW12.08061500	0.8	6	15°	16	2.0	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW12.12061500	1.2	6	15°	16	2.4	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW12.08061500/P18C

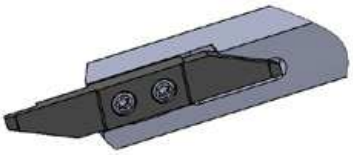
Swissline

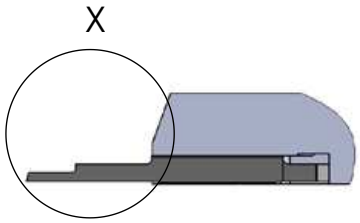
**miniature external machining,
two-cutting edges**

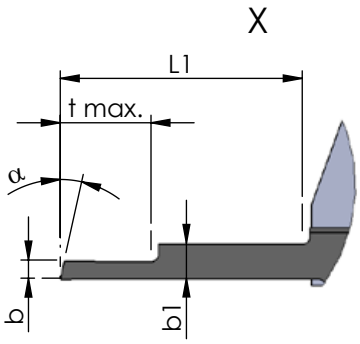
Type ZW13

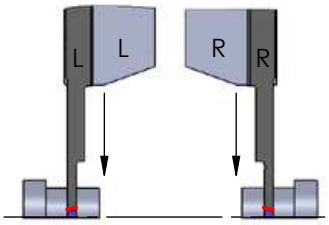
**indexable inserts,
parting off with counter spindle,
offset cutting edge**

**depth of groove t max. = 6 mm
width of groove b = 0.8 / 1.2 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	L1	b1	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW13.08061500	0.8	6	15°	16	2.0	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW13.12061500	1.2	6	15°	16	2.4	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW13.08061500/P18C

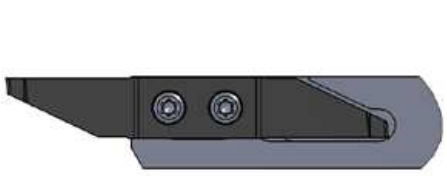
Swissline

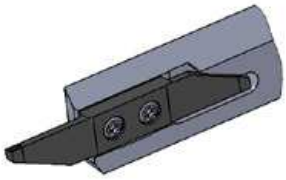
**miniature external machining,
two-cutting edges**

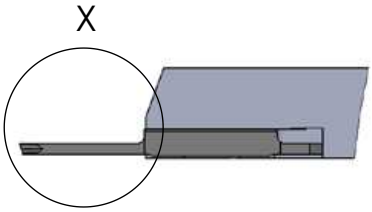
Type ZW14

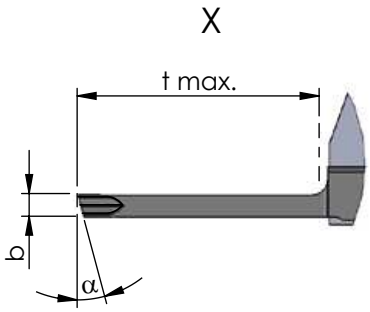
**indexable inserts, for
parting off,
with chip former**

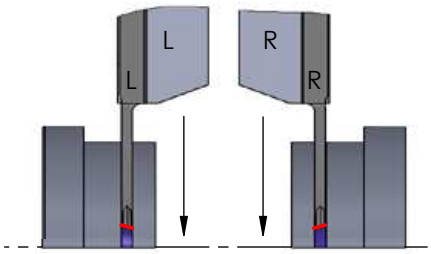
**depth of groove t max. = 8 - 16 mm
width of groove b = 1.5 - 3 mm**











righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW14.15081500	1.5	8	15°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW14.15161500	1.5	16	15°	●			●	
R/L ZW14.20101500	2.0	10	15°	●			●	
R/L ZW14.20161500	2.0	16	15°	●			●	
R/L ZW14.25131500	2.5	13	15°	●			●	
R/L ZW14.25161500	2.5	16	15°	●			●	
R/L ZW14.30161500	3.0	16	15°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW14.15081500/P18C

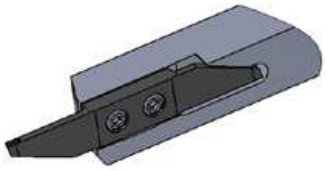
Swissline

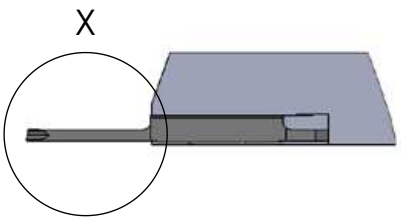
**miniature external machining,
two-cutting edges**

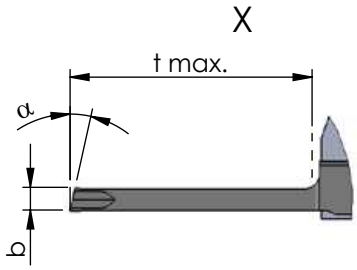
Type ZW15

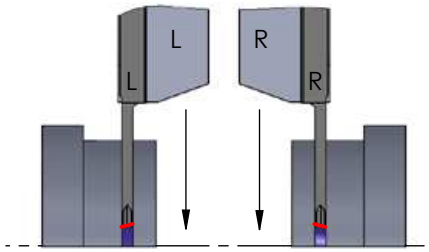
**indexable inserts,
for parting off,
offset cutting edge, with chip former**

**depth of groove t max. = 8 - 16 mm
width of groove b = 1.5 - 3 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW15.15081500	1.5	8	15°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW15.15161500	1.5	16	15°	●			●	
R/L ZW15.20101500	2.0	10	15°	●			●	
R/L ZW15.20161500	2.0	16	15°	●			●	
R/L ZW15.25131500	2.5	13	15°	●			●	
R/L ZW15.25161500	2.5	16	15°	●			●	
R/L ZW15.30161500	3.0	16	15°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW15.15081500/P18C

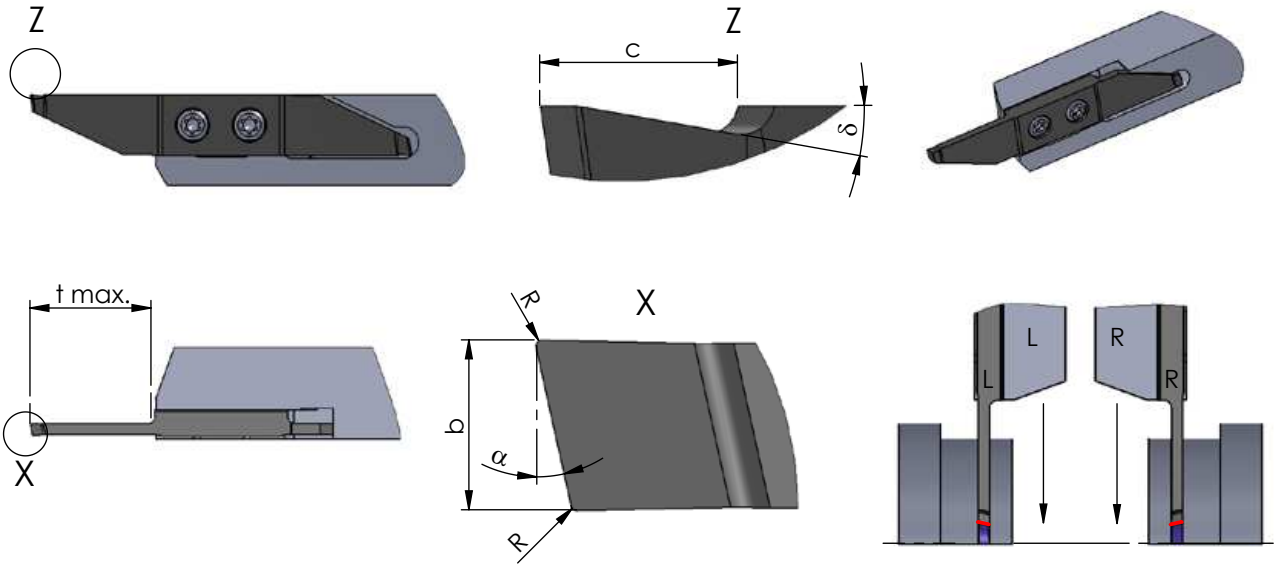
Swissline

**miniature external machining,
two-cutting edges**

Type ZW16

**indexable inserts, for
parting off,
with chip breaker**

**depth of groove t max. = 8 - 16 mm
width of groove b = 1.5 - 3 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	δ	R	α	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW16.15080605	1.5	8	6°	0.05	15°	2	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW16.15081205	1.5	8	12°	0.05	15°	2	●			●	
R/L ZW16.20100605	2.0	10	6°	0.05	15°	2	●			●	
R/L ZW16.20101205	2.0	10	12°	0.05	15°	2	●			●	
R/L ZW16.20160605	2.0	16	6°	0.05	15°	2	●			●	
R/L ZW16.20161205	2.0	16	12°	0.05	15°	2	●			●	
R/L ZW16.25130605	2.5	13	6°	0.05	15°	2	●			●	
R/L ZW16.25131205	2.5	13	12°	0.05	15°	2	●			●	
R/L ZW16.25160605	2.5	16	6°	0.05	15°	2	●			●	
R/L ZW16.25161205	2.5	16	12°	0.05	15°	2	●			●	
R/L ZW16.30160605	3.0	16	6°	0.05	15°	2	●			●	
R/L ZW16.30161205	3.0	16	12°	0.05	15°	2	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW16.15080605/P18C

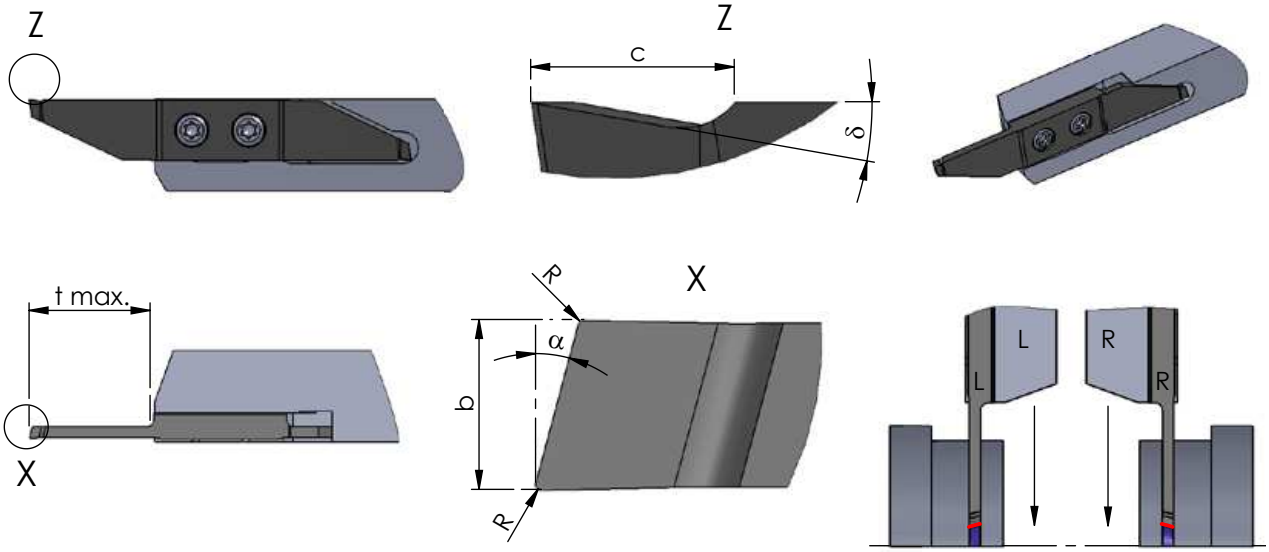
Swissline

**miniature external machining,
two-cutting edges**

Type ZW17

**indexable inserts,
for parting off,
offset cutting edge, with chip breaker**

**depth of groove t max. = 8 - 16 mm
width of groove b = 1.5 - 3 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	δ	R	α	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW17.15080605	1.5	8	6°	0.05	15°	2	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW17.15081205	1.5	8	12°	0.05	15°	2	●			●	
R/L ZW17.20100605	2.0	10	6°	0.05	15°	2	●			●	
R/L ZW17.20101205	2.0	10	12°	0.05	15°	2	●			●	
R/L ZW17.20160605	2.0	16	6°	0.05	15°	2	●			●	
R/L ZW17.20161205	2.0	16	12°	0.05	15°	2	●			●	
R/L ZW17.25130605	2.5	13	6°	0.05	15°	2	●			●	
R/L ZW17.25131205	2.5	13	12°	0.05	15°	2	●			●	
R/L ZW17.25160605	2.5	16	6°	0.05	15°	2	●			●	
R/L ZW17.25161205	2.5	16	12°	0.05	15°	2	●			●	
R/L ZW17.30160605	3.0	16	6°	0.05	15°	2	●			●	
R/L ZW17.30161205	3.0	16	12°	0.05	15°	2	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW17.15080605/P18C

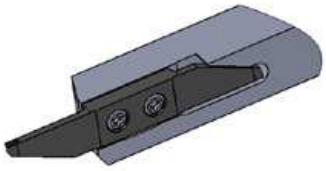
Swissline

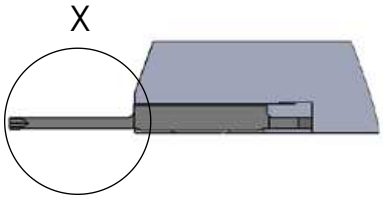
**miniature external machining,
two-cutting edges**

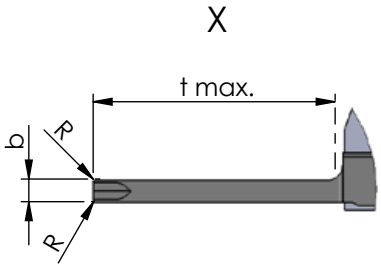
Type ZW18

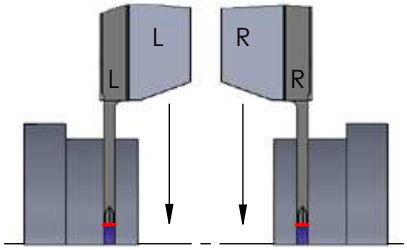
**indexable inserts,
for parting off with 0°,
with chip former**

**depth of groove t max. = 10 - 16 mm
width of groove b = 1.5 - 3 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	R	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW18.15100008	1.5	10	0.08	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW18.15160008	1.5	16	0.08	●			●	
R/L ZW18.20100008	2.0	10	0.08	●			●	
R/L ZW18.20160008	2.0	16	0.08	●			●	
R/L ZW18.25130008	2.5	13	0.08	●			●	
R/L ZW18.25160008	2.5	16	0.08	●			●	
R/L ZW18.30160008	3.0	16	0.08	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW18.15100008/P18C

Swissline

**miniature external machining,
two-cutting edges**

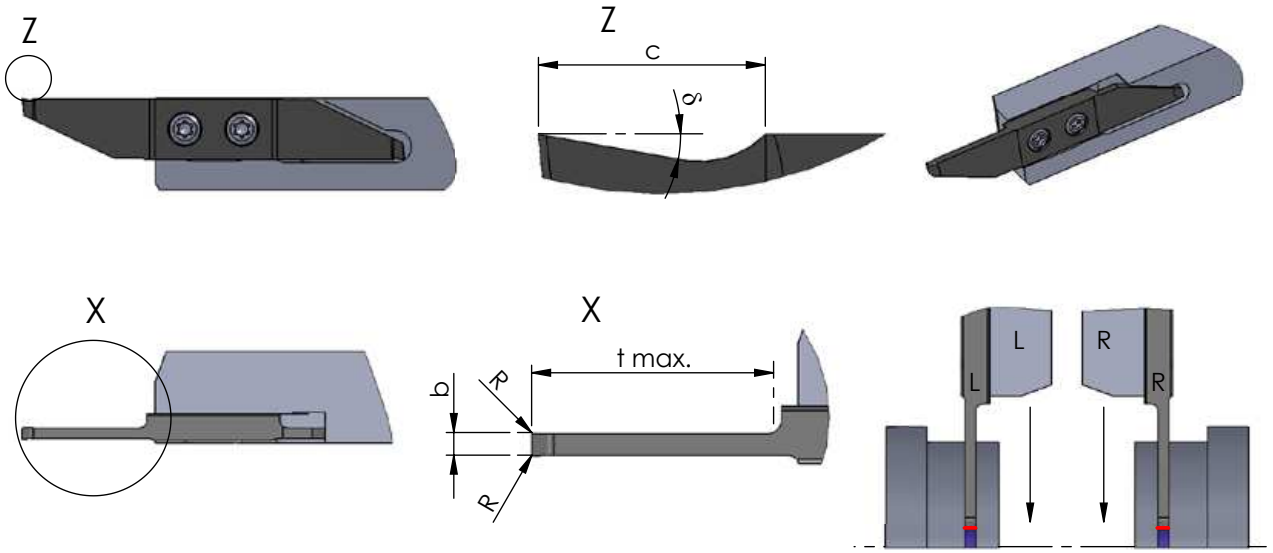
Typ ZW19

**Wendeschneidplatten,
zum Abstechen unter 0°,
mit Spantreppe**

**indexable inserts,
for parting off with 0°,
with chip breaker**

**Stechtiefe t max. = 10 - 16 mm
Stechbreite b = 1.5 - 3 mm**

**depth of groove t max. = 10 - 16 mm
width of groove b = 1.5 - 3 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	δ	R	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW19.15100605	1.5	10	6°	0.05	2	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW19.15101205	1.5	10	12°	0.05	2	●			●	
R/L ZW19.20100605	2.0	10	6°	0.05	2	●			●	
R/L ZW19.20101205	2.0	10	12°	0.05	2	●			●	
R/L ZW19.20160605	2.0	16	6°	0.05	2	●			●	
R/L ZW19.20161205	2.0	16	12°	0.05	2	●			●	
R/L ZW19.25130605	2.5	13	6°	0.05	2	●			●	
R/L ZW19.25131205	2.5	13	12°	0.05	2	●			●	
R/L ZW19.25160605	2.5	16	6°	0.05	2	●			●	
R/L ZW19.25161205	2.5	16	12°	0.05	2	●			●	
R/L ZW19.30160605	3.0	16	6°	0.05	2	●			●	
R/L ZW19.30161205	3.0	16	12°	0.05	2	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW19.15100605/P18C

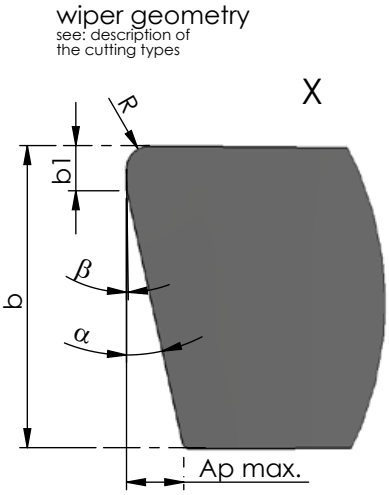
Swissline

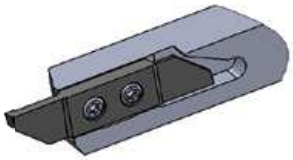
**miniature external machining,
two-cutting edges**

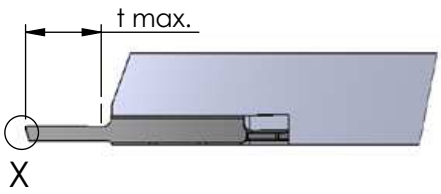
Type ZW20

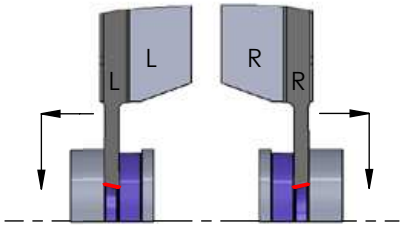
**indexable inserts,
turning and parting off,
wiper geometry**

**depth of groove t max. = 10 mm
width of groove b = 2 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	b1	Ap max. *	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW20.20101515	2	10	15°	0.15	1.5°	0.3	0.45	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX

*Ap max. = maximum depth of cut
(depending on material)

More carbide grades you can find in the grades
summary in the chapter "technical instructions"
and in the price list.
order-example: righthand version and grade
RZW20.20101515/P18C

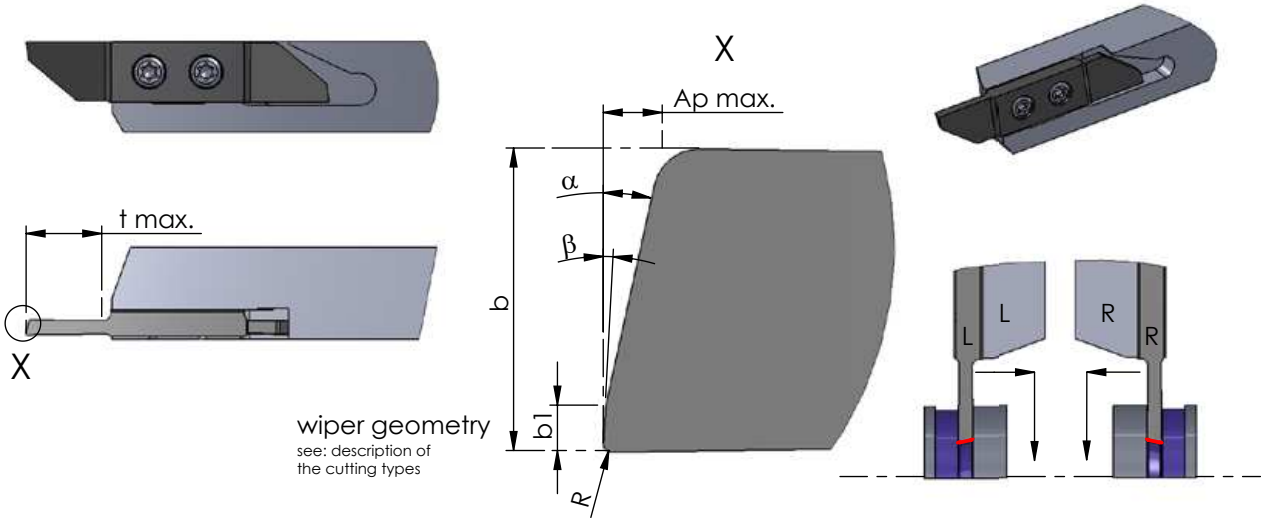
Swissline

**miniature external machining,
two-cutting edges**

Type ZW21

**indexable inserts,
turning and parting off,
offset cutting edge, wiper geometry**

**depth of groove t max. = 10 mm
width of groove b = 2 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	b1	Ap max. *	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW21.20101515	2	10	15°	0.15	1.5°	0.3	0.45	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX

*Ap max. = maximum depth of cut
(depending on material)

More carbide grades you can find in the grades
summary in the chapter "technical instructions"
and in the price list.
order-example: righthand version and grade
RZW21.20101515/P18C

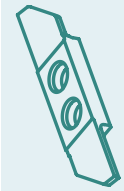
Swissline

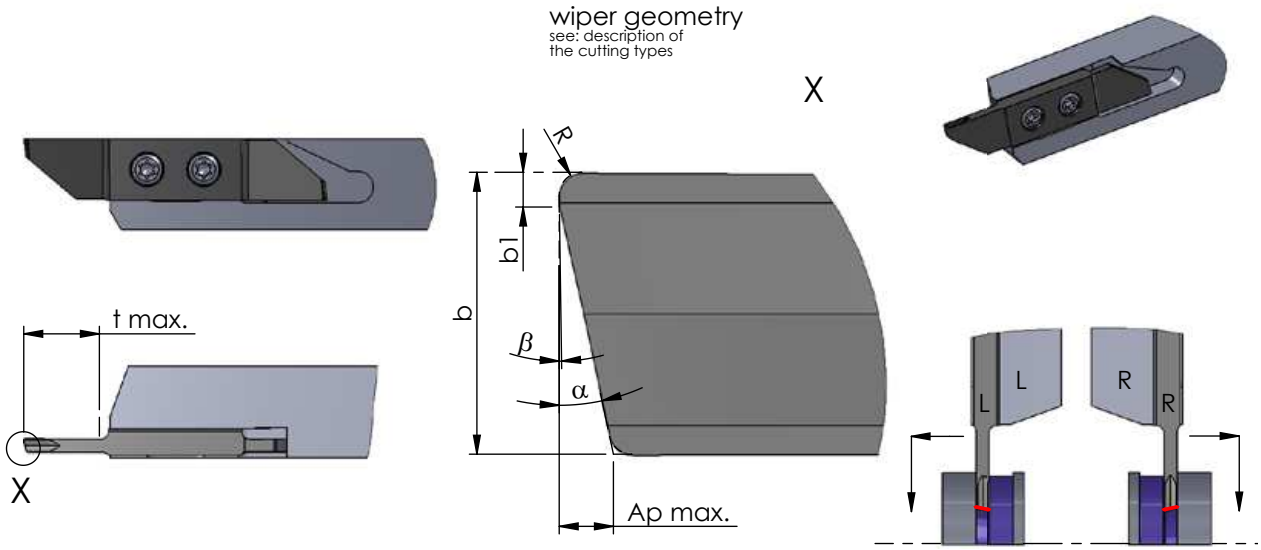
**miniature external machining,
two-cutting edges**

Type ZW22

**indexable inserts,
turning and parting off,
with chipformer, wiper geometry**

**depth of groove t max. = 10 mm
width of groove b = 2 mm**





righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	b1	Ap max. *	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW22.20101515	2	10	15°	0.15	1.5°	0.3	0.45	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX

*Ap max. = maximum depth of cut
(depending on material)

More carbide grades you can find in the grades
summary in the chapter "technical instructions"
and in the price list.
order-example: righthand version and grade
RZW22.20101515/P18C

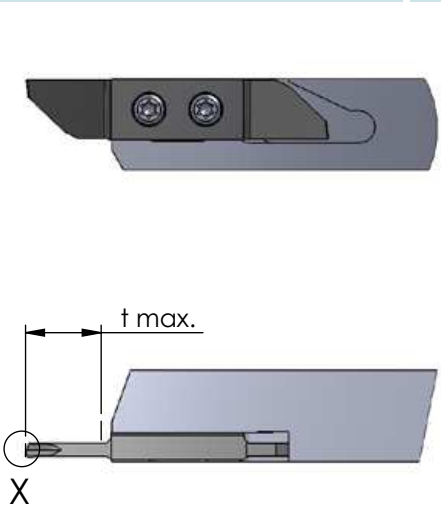
Swissline

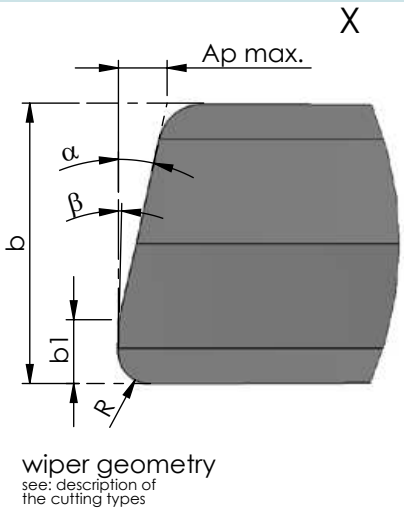
**miniature external machining,
two-cutting edges**

Type ZW23

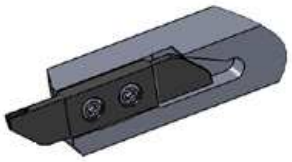
**indexable inserts,
turning and parting off,
offset cutting edge, with chipformer,
wiper geometry**

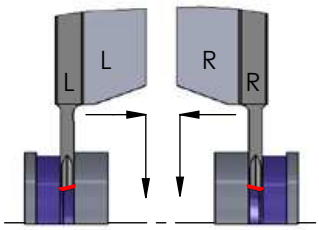
**depth of groove t max. = 10 mm
width of groove b = 2 mm**





wiper geometry
see: description of
the cutting types





righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	b1	Ap max. *	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW23.20101515	2	10	15°	0.15	1.5°	0.3	0.45	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX

*Ap max. = maximum depth of cut
(depending on material)

More carbide grades you can find in the grades
summary in the chapter "technical instructions"
and in the price list.
order-example: righthand version and grade
RZW23.20101515/P18C

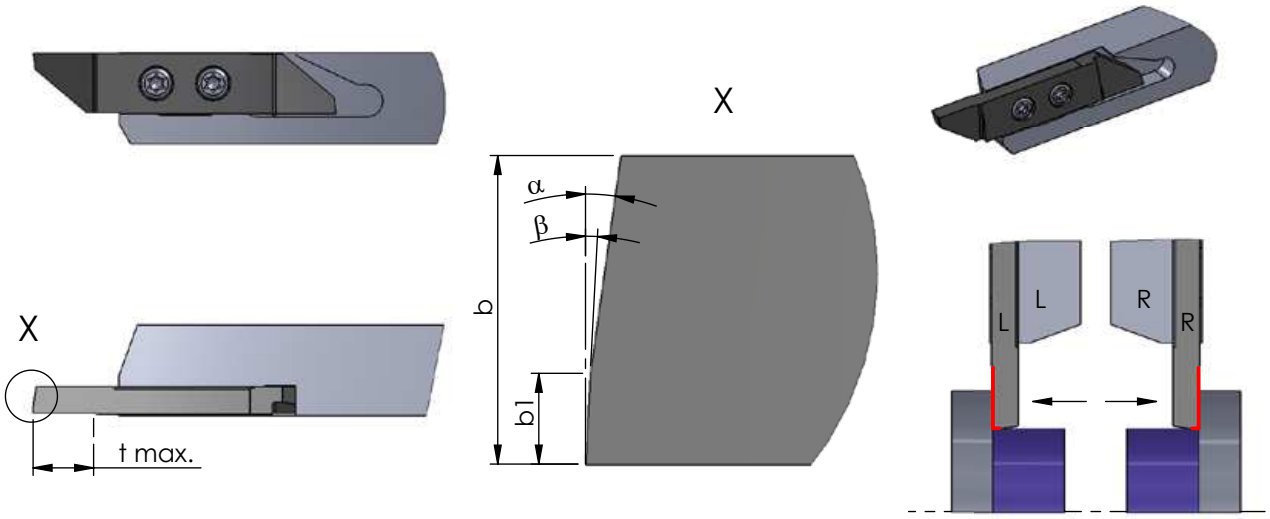
Swissline

**miniature external machining,
two-cutting edges**

Type ZW30

**indexable inserts,
front turning**

**depth of groove t max. = 8 mm
width of groove b = 3.4 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	b1	β	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW30.34080800	3.4	8	8°	1	3°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW30.34080800/P18C

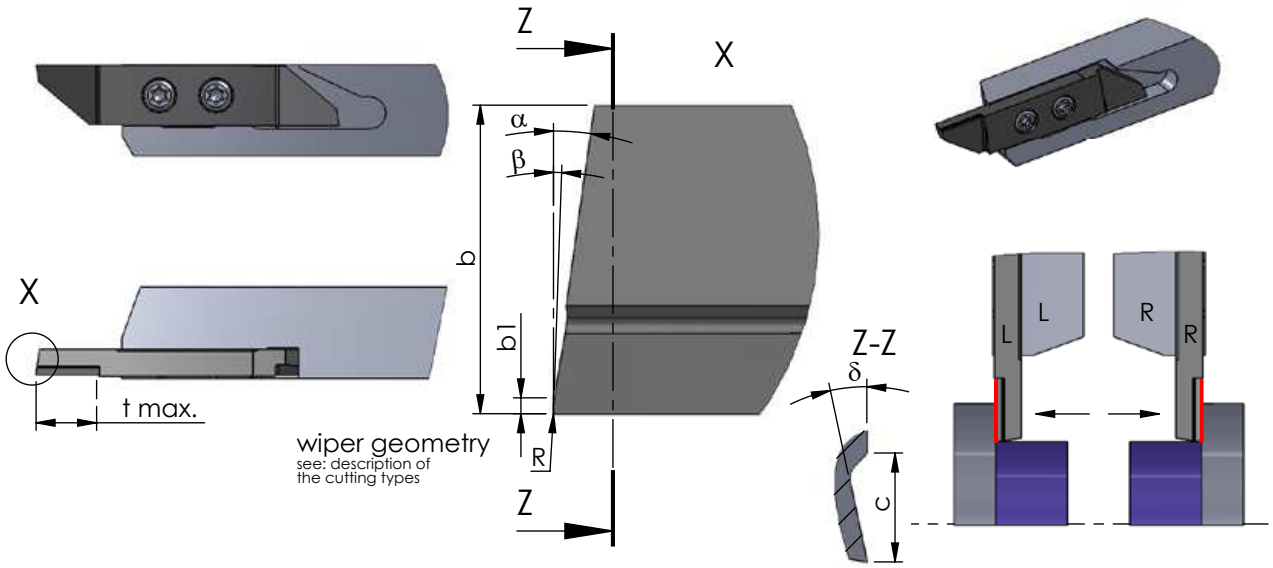
Swissline

**miniature external machining,
two-cutting edges**

Type ZW31

**indexable inserts,
front turning,
with chip former, wiper geometry**

**depth of groove t max. = 8 mm
width of groove b = 3.4 mm**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	b1	β	c	δ	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW31.34080800	3.4	8	8°	0	0.2	1°	1.2	12°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW31.34084508	3.4	8	45°	0.08	1.2	1°	1.2	12°	●			●	
R/L ZW31.34084515	3.4	8	45°	0.15	1.2	1°	1.2	12°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW31.34080800/P18C

Swissline

Miniaturaußenbearbeitung, zweischneidig

miniature external machining, two-cutting edges

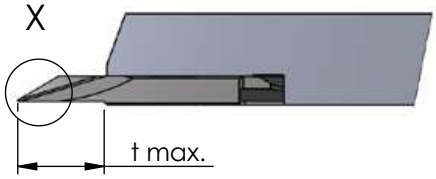
Typ ZW40

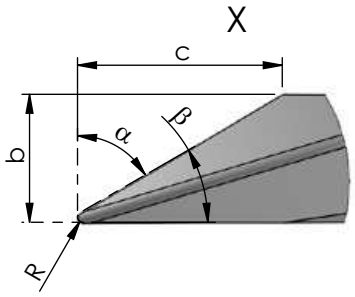
Wendeschneidplatten,
Kopierdrehen vorne,
Schneide versetzt, mit Spanformer

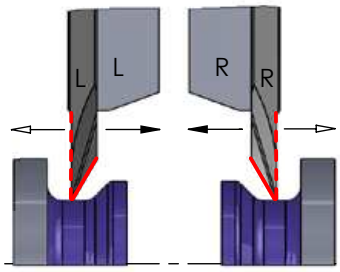
indexable inserts,
front copying,
offset cutting edge, with chip former

Stechtiefe t max. = 11 mm
Stechbreite b = 3.2 mm

depth of groove t max. = 11 mm
width of groove b = 3.2 mm







righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW40.32116108	3.2	11	61°	0.08	29°	5	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW40.32116115	3.2	11	61°	0.15	29°	5	●			●	
R/L ZW40.32116135	3.2	11	61°	0.35	29°	5	●			●	
R/L ZW40.32116175	3.2	11	61°	0.75	29°	5	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW40.32116108/P18C

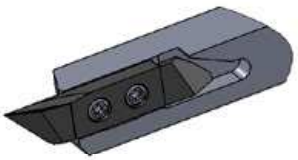
Swissline

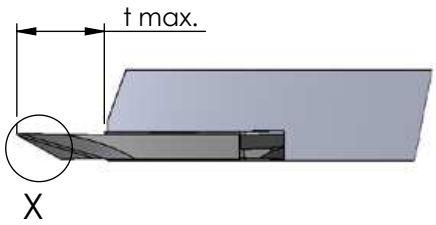
**miniature external machining,
two-cutting edges**

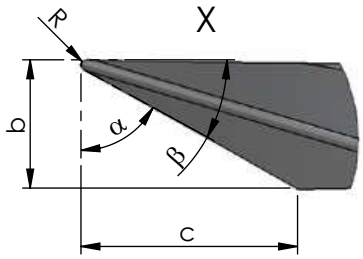
Type ZW41

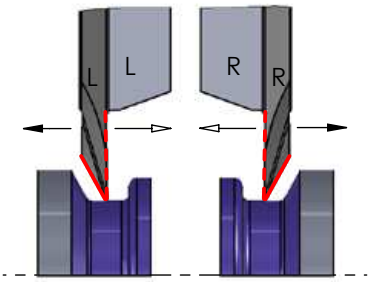
**indexable inserts, back
copying,
with chipformer**

**depth of groove t max. = 11 mm
width of groove b = 3.2 mm**









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	R	β	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW41.32115515	3.2	11	55°	0.15	35°	4	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW41.32115535	3.2	11	55°	0.35	35°	4	●			●	
R/L ZW41.32116108	3.2	11	61°	0.08	29°	5	●			●	
R/L ZW41.32116115	3.2	11	61°	0.15	29°	5	●			●	
R/L ZW41.32116135	3.2	11	61°	0.35	29°	5	●			●	
R/L ZW41.32116175	3.2	11	61°	0.75	29°	5	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW41.32115515/P18C

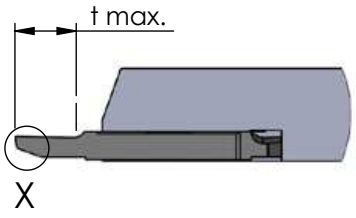
Swissline

**miniature external machining,
two-cutting edges**

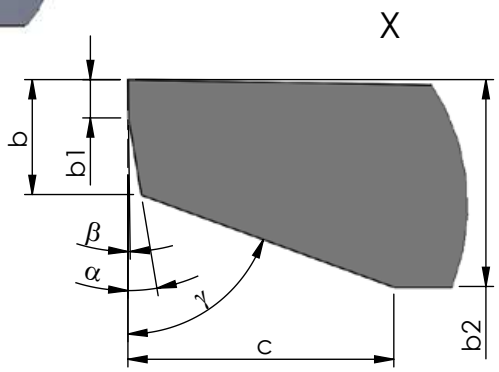
Type ZW50

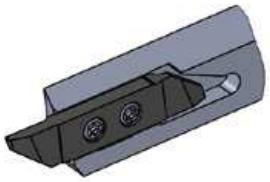
**indexable inserts,
back turning, wiper geometry**

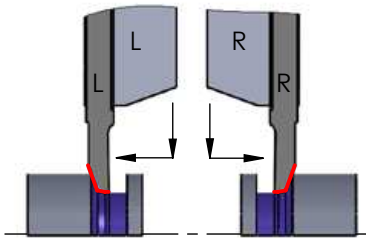
**depth of groove t max. = 6 - 8 mm
width of groove b = 0.8 - 1.8 mm**



wiper geometry
see: description of
the cutting types







righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	α	b1	b2	β	γ	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW50.08060800	0.8	6	8°	0.5	2	1°	70°	3	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW50.10060800	1.0	6	8°	0.5	2.2	1°	70°	3	●			●	
R/L ZW50.12080800	1.2	8	8°	0.5	2.4	1°	70°	3	●			●	
R/L ZW50.15080800	1.5	8	8°	0.5	2.7	1°	70°	3	●			●	
R/L ZW50.18080800	1.8	8	8°	0.5	3.0	1°	70°	3	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW50.08060800/P18C

Swissline

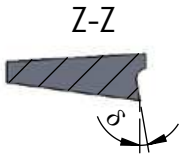
**miniature external machining,
two-cutting edges**

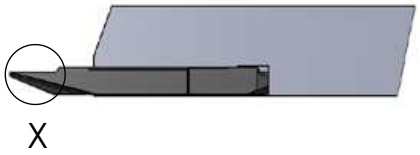
Type ZW51

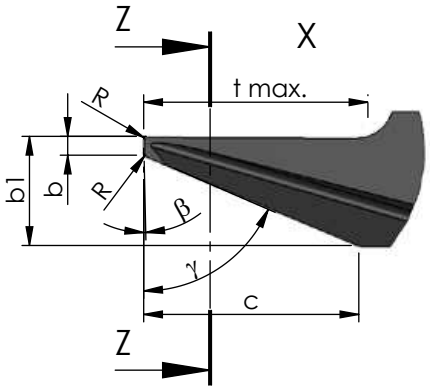
**indexable inserts,
back copying,
with chip former, wiper geometry**

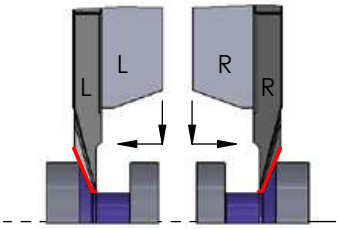
**depth of groove t max. = 6 mm
width of groove b = 0.5 mm**

wiper geometry
see: description of
the cutting types









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max	γ	R	b1	β	δ	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW51.05067000	0.5	6	70°	0	2.4	1.5°	15°	5	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW51.05067008	0.5	6	70°	0.08	2.4	1.5°	15°	5	●			●	
R/L ZW51.05067015	0.5	6	70°	0.15	2.4	1.5°	15°	5	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW51.05067000/P18C

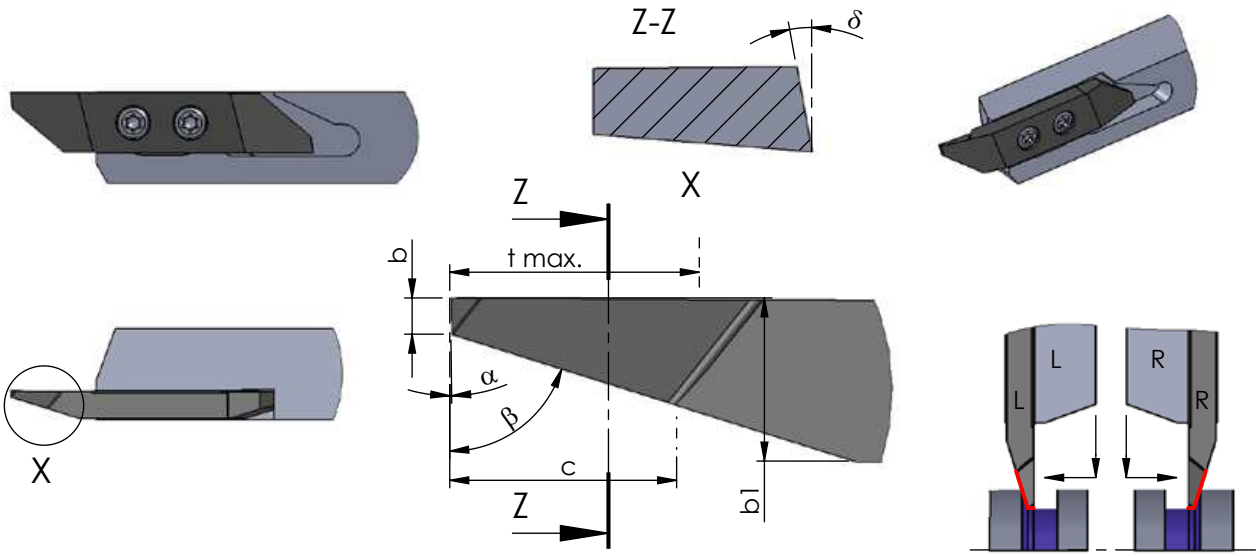
Swissline

miniature external machining, two-cutting edges

Type ZW52

indexable inserts, back turning, with chip breaker

depth of groove t max. = 4.5 mm
width of groove b = 0.8 mm



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	b	t max	β	b1	α	δ	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW52.08047000	0.8	4.5	70°	3.2	2°	7°	4	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
								●			●	
								●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW52.08047000/P18C

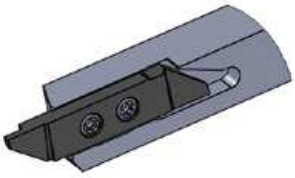
Swissline

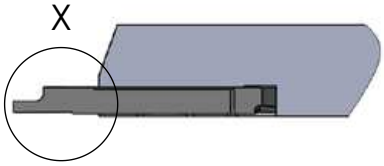
miniature external machining, two-cutting edges

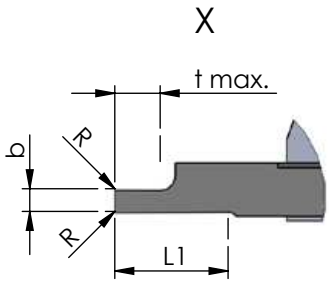
Type ZW60

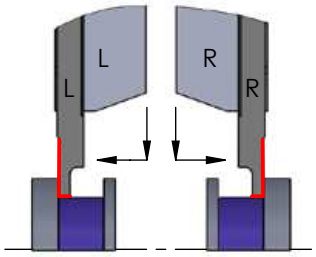
indexable inserts, grooving and turning

depth of groove t max. = 2.5 - 6 mm
width of groove b = 1 - 3 mm









righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and LH insert in LH tool holder

dimensions in mm

part number	b	t max.	R	L1	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW60.10250005	1.0	2.5	0.05	8	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW60.15300005	1.5	3 0	0.05	8	●			●	
R/L ZW60.20400005	2.0	4.0	0.05	8	●			●	
R/L ZW60.25500005	2.5	5.0	0.05	8	●			●	
R/L ZW60.30600005	3.0	6.0	0.05	8	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW60.10250005/P18C

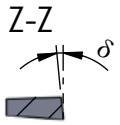
Swissline

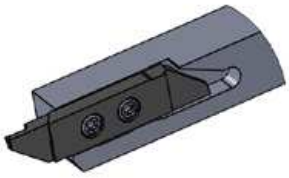
**miniature external machining,
two-cutting edges**

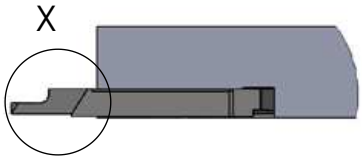
Type ZW61

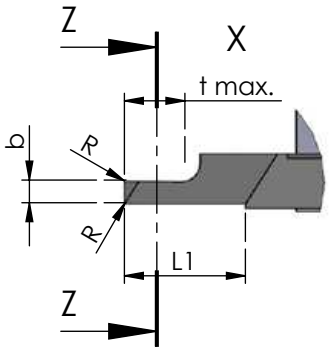
**indexable inserts,
grooving and turning,
with chip breaker**

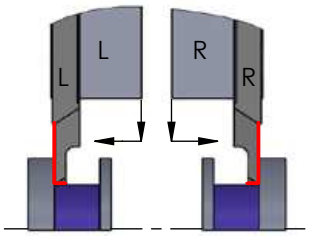
**depth of groove t max. = 2.5 - 6 mm
width of groove b = 0.8 - 3 mm**











righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	t max.	R	L1	δ	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW61.08250000	0.8	2.5	0	8	10°	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW61.10350000	1.0	3.5	0	8	10°	●			●	
R/L ZW61.15400000	1.5	4.0	0	8	10°	●			●	
R/L ZW61.15400008	1.5	4.0	0.08	8	10°	●			●	
R/L ZW61.20500000	2.0	5.0	0	8	10°	●			●	
R/L ZW61.20500008	2.0	5.0	0.08	8	10°	●			●	
R/L ZW61.20500015	2.0	5.0	0.15	8	10°	●			●	
R/L ZW61.25600000	2.5	6.0	0	8	10°	●			●	
R/L ZW61.25600008	2.5	6.0	0.08	8	10°	●			●	
R/L ZW61.25600015	2.5	6.0	0.15	8	10°	●			●	
R/L ZW61.30600000	3.0	6.0	0	8	10°	●			●	
R/L ZW61.30600008	3.0	6.0	0.08	8	10°	●			●	
R/L ZW61.30600015	3.0	6.0	0.15	8	10°	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW61.08250000/P18C

Swissline

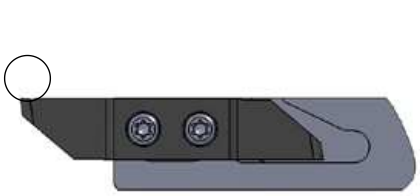
**miniature external machining,
two-cutting edges**

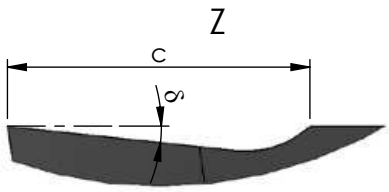
Z

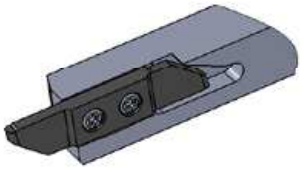
Type ZW70

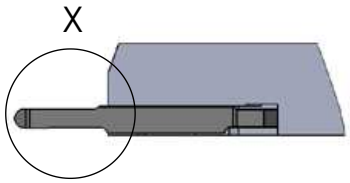
**indexable inserts, grooving,
full radius with chip breaker**

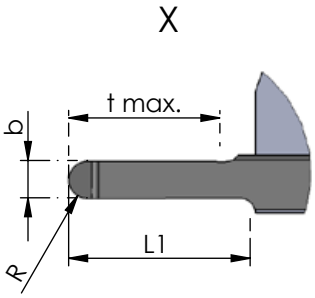
**depth of groove t max. = 2 - 16 mm
width of groove b = 0.5 - 3 mm**

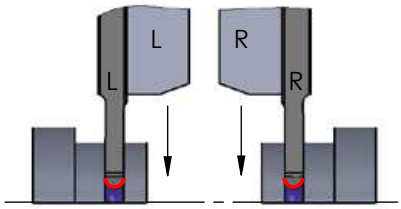












righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	b	R	t max.	L1	δ	c	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW70.0502020	0.5	0.25	2.0	12	6°	2	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW70.1005025	1.0	0.50	2.5	12	6°	2	●			●	
R/L ZW70.1206025	1.2	0.60	2.5	12	6°	2	●			●	
R/L ZW70.1507030	1.5	0.75	3.0	12	6°	2	●			●	
R/L ZW70.1608030	1.6	0.80	3.0	12	6°	2	●			●	
R/L ZW70.2010100	2.0	1.00	10	12	6°	2	●			●	
R/L ZW70.3015100	3.0	1.50	10	12	6°	2	●			●	
R/L ZW70.3015160	3.0	1.50	16	17	6°	2	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW70.0502020/P18C

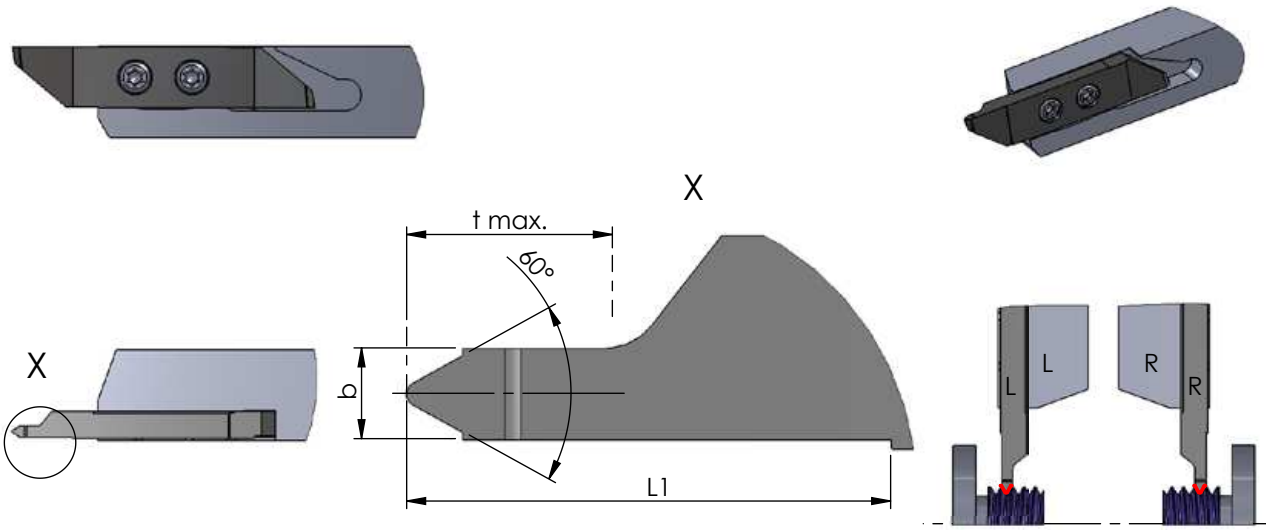
Swissline

**miniature external machining,
two-cutting edges**

Type ZW90

**indexable inserts,
threading,
full profile, metric 60°**

**thread M1 - M4.5
pitch P = 0.25 - 0.75**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	Gewindegröße thread size	Steigung P pitch	b	L1	t max.	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW90.VP60025	M1 / M1.2	0.25	0.28	8	0	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW90.VP60030	M1.4	0.30	0.34	8	0	●			●	
R/L ZW90.VP60035	M1.6 / M1.8	0.35	0.38	8	0	●			●	
R/L ZW90.VP60040	M2	0.4	0.44	8	0	●			●	
R/L ZW90.VP60045	M2.2 / M2.5	0.45	0.50	8	0	●			●	
R/L ZW90.VP60050	M3	0.5	0.70	8	1.4	●			●	
R/L ZW90.VP60060	M3.5	0.6	0.80	8	1.4	●			●	
R/L ZW90.VP60070	M4	0.7	0.90	8	1.8	●			●	
R/L ZW90.VP60075	M4.5	0.75	0.90	8	1.9	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW90.VP60025/P18C

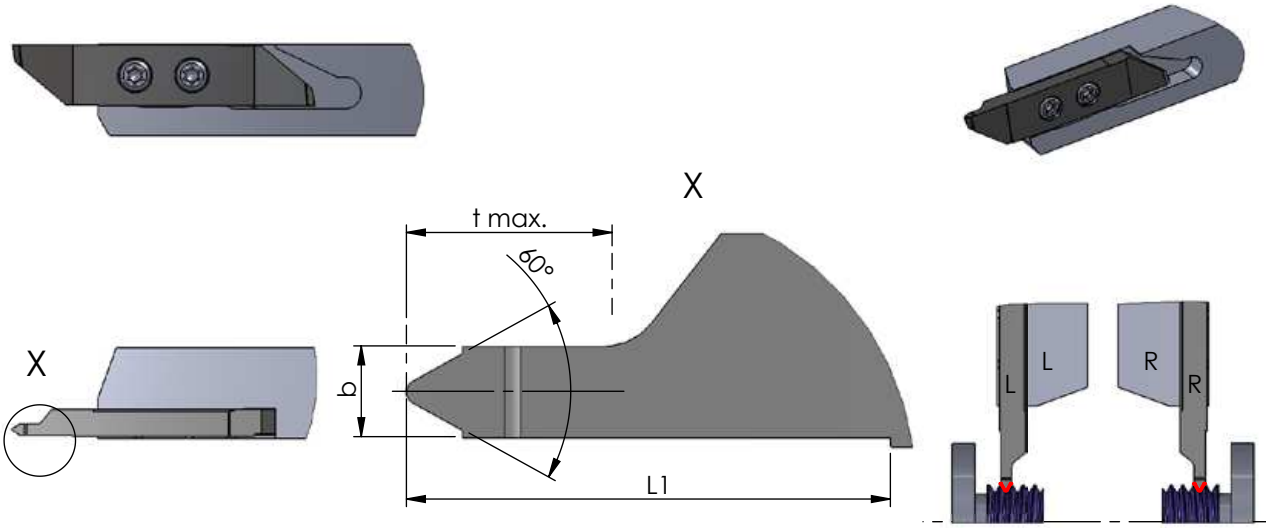
Swissline

**miniature external machining,
two-cutting edges**

Type ZW90

**indexable inserts,
threading,
full profile, metric 60°**

**thread M5 - M27
pitch P = 0.8 - 3**



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

part number	thread size	pitch	b	L1	t max.	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW90.VP60080	M5	0.8	1.00	8	2.0	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW90.VP60100	M6 / M7	1.0	1.10	8	2.4	●			●	
R/L ZW90.VP60125	M8	1.25	1.46	8	2.9	●			●	
R/L ZW90.VP60150	M10 / M11	1.50	1.74	8	3.4	●			●	
R/L ZW90.VP60175	M12	1.75	1.96	8	3.9	●			●	
R/L ZW90.VP60200	M14 / M16	2.00	2.20	8	4.0	●			●	
R/L ZW90.VP60250	M18 / M20 / M22	2.50	2.80	8	5.0	●			●	
R/L ZW90.VP60300	M24 / M27	3.00		8	5.0	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW90.VP60080/P18C

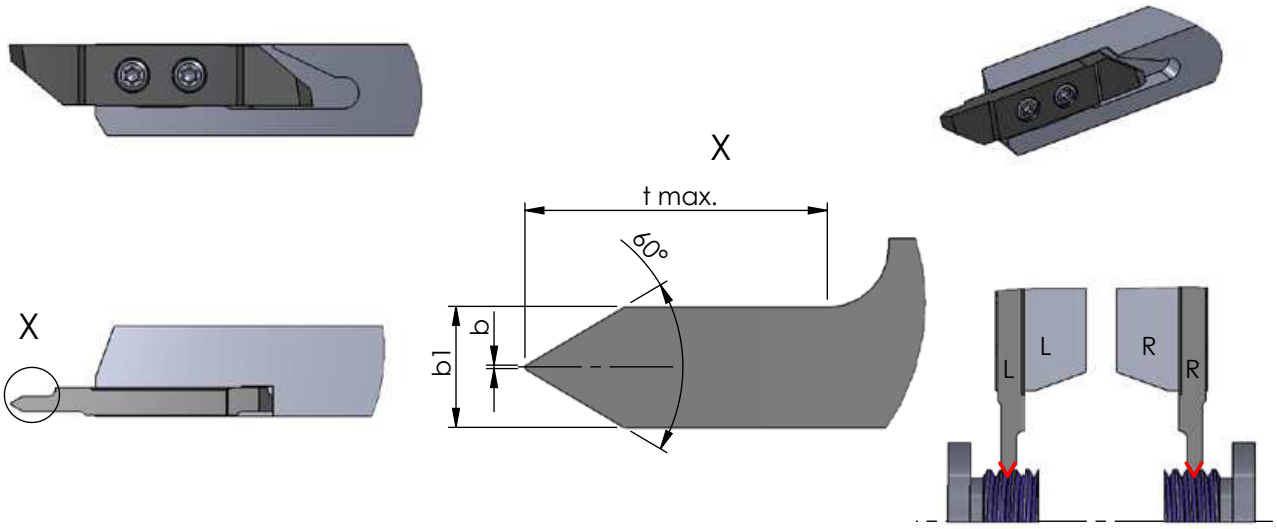
Swissline

**miniature external machining,
two-cutting edges**

Type ZW94

**indexable inserts,
threading,
partial profile, metric 60°**

pitch P = 0.25 - 2



righthand version (R): as shown
lefthand version (L): mirror image

use RH insert in RH tool holder and
LH insert in LH tool holder

dimensions in mm

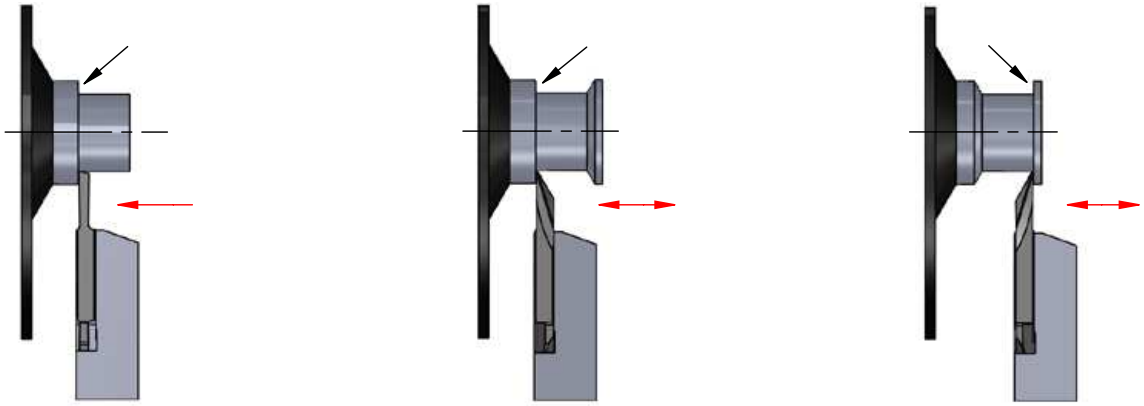
part number	pitch	t max.	b	b1	K10F	CN45F	AL41F	P18C	toolholder type
R/L ZW94.TP6006	0.25 - 2	6	0.035	2	●			●	R/L HW10.XXX R/L HW15.XXX R/L HW20.XXX
R/L ZW94.TP6010	0.25 - 2	10	0.035	3	●			●	

More carbide grades you can find in the grades summary in the chapter "technical instructions" and in the price list.

order-example:
righthand version and grade
RZW94.TP6006/P18C

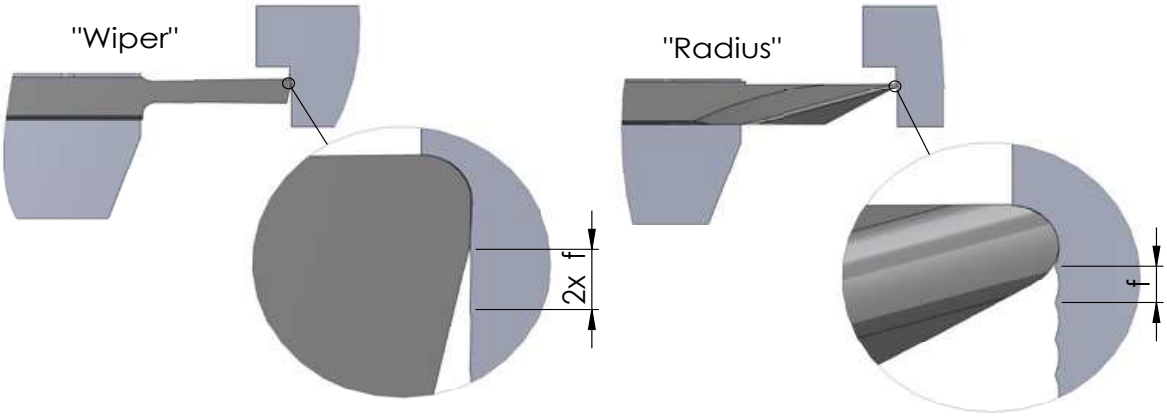
Description cutting edge

The description "front" or "back" means not the cutting direction, this shows the side which can produce an upright flank.



Wiper geometry

By using the insert with wiper geometry the feed rate can be increased up to double time in contrast to an insert with standard radius.
The special geometry improves the surface quality by using a higher feed rate.



Swissline

**miniature external machining,
two-cutting edges**

Technical instructions,
Cutting data and number of passes
for threading

Dümmel® WERKZEUGFABRIK

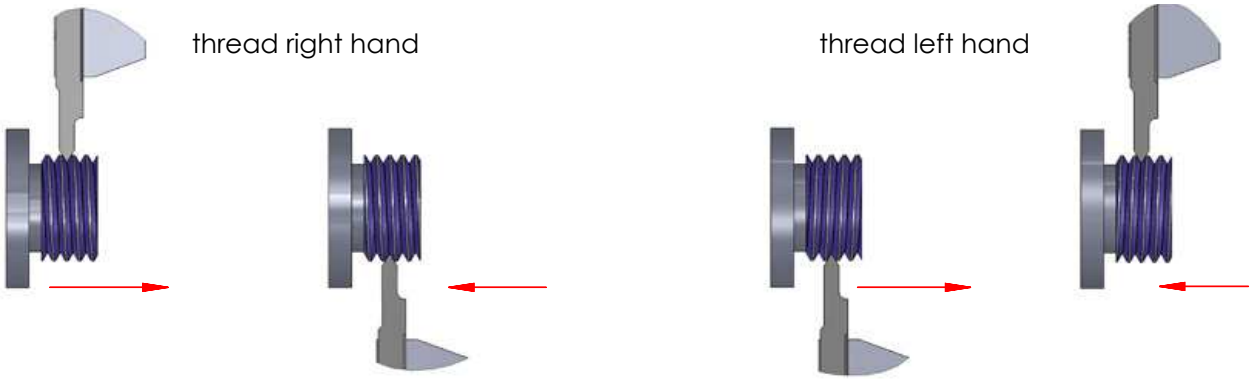
Recommended number of passes

The number of passes is only a recommendation for threading. To reach a good tool life you have to mention the explanation for the infeed.
Finishing passes are not considered in that chart.

		Steel (N/mm² tensile strength)					stainless steel	cast iron	alumini-um
		400-500	500-700	700-850	850-1150	>1150			
V m/min		160	140	120	90	70	90	100	300
Pitch P		number of passes							
mm	Gg/" TPI								
0,25 - 0,35	80/72	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5
0,4	64	3 - 5	3 - 5	4 - 6	4 - 6	4 - 6	4 - 6	4 - 6	3 - 6
0,45	56	3 - 6	3 - 5	4 - 6	5 - 7	5 - 7	5 - 7	4 - 6	3 - 7
0,5	48/44	5 - 8	5 - 8	6 - 9	7 - 10	7 - 10	7 - 10	6 - 9	3 - 8
0,75	40/36	7 - 9	7 - 9	8 - 10	9 - 11	9 - 11	9 - 11	8 - 10	4 - 9
0,8	32	7 - 10	7 - 10	8 - 11	10 - 12	10 - 12	10 - 12	8 - 11	5 - 10
1	28/24	8 - 12	9 - 13	10 - 14	11 - 15	12 - 15	12 - 15	10 - 14	6 - 11
1,25	20/19	10 - 15	11 - 16	12 - 17	14 - 18	15 - 18	15 - 18	12 - 17	7 - 14
1,5	18/16	11 - 18	12 - 19	15 - 20	16 - 21	18 - 22	18 - 22	15 - 20	8 - 16
1,75	14	12 - 20	13 - 21	15 - 22	18 - 23	20 - 24	20 - 24	15 - 22	8 - 16
2-2,5	13/11	15 - 24	16 - 25	18 - 26	20 - 27	22 - 28	22 - 28	18 - 26	17- 22

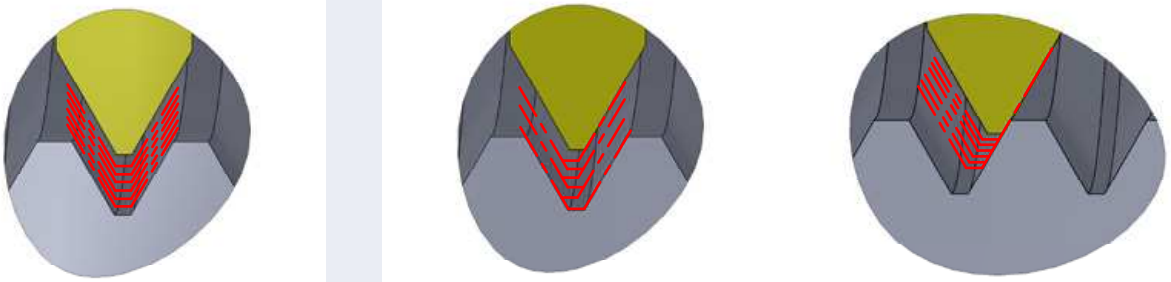
Feed direction

Every insert can be used for right- and lefthand thread. You only have to consider the following feed direction:



Infeed possibilities

Radial infeed	alternating flank infeed	flank infeed
The most used method for threading, both sides are at the same time in process.	The flanks are alternating used.	Only one cutting edge is used for the complete thread.
Problematic chip education, high cutting force and wearness at insert and work piece.	Reduced cutting force, higher state time and chip education.	Reduced cutting force and better chip education, but one-sided wearness.



Swissline

miniature external machining, two-cutting edges

Technical instructions, carbide grade and coatings

Dümmel WERKZEUGFABRIK

K10F	All purpose micrograin carbide with good abrasion resitance. Uncoated for applications with low or medium cutting speeds and machining off non-ferrous materials.
CBN	Ductile CBN grade for applications with lower cutting speed. Suitable for hardened steel, interrupted cuts and cast iron.
CN45F	All purpose PVD-TIN coating. This allround grade is suitable for low and medium cutting speed with restrictions on non-ferrous materials.
AL41F	Very universal TIALN coating with a high resistance to high temperature and hardness. Very suitable also for non-ferrous metals.
PD2F	Coating for universal use with medium and low speed.
XC2A	Coating with excellent hot hardness, high oxidation resistance and thermal insulation capacity. Perfect for hard machining >60 HRC

Dümmel WERKZEUGFABRIK

P01C	Coating for the processing in tough material with medium or low cutting speed
P03C	Coating for materials which are difficult to machine. Perfect to use for dry machining.
P07C	Coating to machine titanium and stainless steel.
P18C	Very universal high performance coating with high oxidation resistance, wear resistance and hot hard-ness resistance.
NEME	Coating for machining aluminum, alloys, non-ferrous metals and composite materials.

Dümmel® WERKZEUGFABRIK

	Werkstoff	Festigkeit	Werkstoff-Nr	Werkstoffbezeichnung	Werkstoff-Nr
P	Allgemeiner Baustahl	< 800 N/mm2	1.0037	St37-2	1.0570
	Automatenstahl	< 800 N/mm2	1.0718	9SMnPb28	1.0727
	Einsatzstahl unlegiert	< 800 N/mm2	1.0401	C15	1.0481
	Einsatzstahl legiert	< 1000 N/mm2	1.7331	16MnCr5 (EC80)	1.7015
	Vergütungsstahl unlegiert	< 850 N/mm2	1.0503	C45	1.1191
	Vergütungsstahl unlegiert	< 1000 N/mm2	1.0601	C60	1.1221
	Vergütungsstahl legiert	< 800 N/mm2	1.5131	50MnSi4	1.7030
	Vergütungsstahl legiert	< 1300 N/mm2	1.5755	31NiCr14	1.7033
	Stahlguss	< 850 N/mm2	0.9650	G-X260Cr27	1.6750
	Nitrierstahl	< 1000 N/mm2	1.8504	34CrAl6	1.8507
	Nitrierstahl	< 1200 N/mm2	1.8515	31CrMo12	1.8523
	Wälzlagerstahl	< 1200 N/mm2	1.3505	100Cr6 (W3)	1.3543
	Federstahl	< 1200 N/mm2	1.5026	55Si7	1.7176
	Schnellarbeitsstahl	< 1300 N/mm2	1.3344	S 6-5-3	1.3255
	Werkzeugstahl für Kaltarbeit	< 1300 N/mm2	1.2312	40CrMnMoS8 6	1.2379
	Werkzeugstahl für Warmbeit	< 1300 N/mm2	1.2343	X38CrMoV 5 1	1.2767
M	Stahl und Stahlguss rostfei geschwefelt	< 850 N/mm2	1.4305	X8CrNiS18 9	1.4105
	Nichtrostender Stahl, ferritisch	< 750 N/mm2	1.4510	X3CrTi17	1.4528
	Nichtrostender Stahl, martensitisch	< 900 N/mm2	1.4034	X46Cr13	1.4116
	Nichtrost. Stahl, ferritisch/martensit.	<1100 N/mm2	1.4313	X3CrNi13-4	1.4028
	Nichtrost. Stahl, austenitisch/ferritisch	< 850 N/mm2	1.4460	X8CrNiMo27 5	1.4821
	Nichtrostender Stahl, austenitisch	< 750 N/mm2	1.4301	X5CrNi18-10	1.4571
	Hitzebeständig	< 1100 N/mm2	1.4747	X80CrNiSi20	1.4876
K	Grauguss mit Lammellengraphit	100-350N/mm2	0.6010	GG10	0.6025
	Grauguss mit Lammellengraphit	300-1000N/mm2	0.6030	GG30	0.6045
	Kugelgraphitguss	300-500N/mm2	0.7040	GGG40	0.7050
	Kugelgraphitguss	550-800N/mm2	0.7060	GGG60	0.7080
	Temperguss weis	350-450N/mm2	0.8035	GTW35	0.8045
	Temperguss weis	500-650N/mm2	0.8055	GTW55	0.8065
	Temperguss schwarz	350-450N/mm2	0.8135	GTS35	0.8145
	Temperguss schwarz	500-700N/mm2	0.8155	GTS55	0.8170
N	Aluminium (unlegiert, niedrig legiert)	< 350 N/mm2	3.0255	Al99,5	3.3308
	Aluminiumlegierungen < 0,5% Si	< 500 N/mm2	3.0515	AlMn1	3.1355
	Aluminiumlegierungen 0,5-10% Si	< 400 N/mm2	3.2152	GD-AlSi6Cu4	3.2373
	Aluminiumlegierungen 10-15% Si	< 400 N/mm2	3.2381	G-AlSi10Mg	3.5562
	Aluminiumlegierungen > 15% Si	< 400 N/mm2		G-AlSi17Cu4	
	Kupfer (unlegiert, niedrig legiert)	< 350 N/mm2	2.0060	E-Cu57	2.0090
	Kupfer-Knetlegierungen	< 700 N/mm2	2.0240	CuZn15	2.0265
	Kupfer-Sonderlegierungen	< 200 HB	2.0916	CuAl5	2.1525
	Kupfer-Sonderlegierungen	< 300HB	2.0978	CuAl11Ni6Fe5	
	Kupfer-Sonderlegierungen	> 300 HB	2.1247	CuBe2F125	
	Messing kurzspanend, Bronze, Rotguss	< 600 N/mm2	2.0360	CuZn40 (Ms60)	2.0380
	Messing langspanend	< 600 N/mm2	2.0335	CuZn36 (Ms63)	2.1293
	Thermoplaste			Delrin, Hostalen	
	Duroplaste			Ferrozell, Bakelit	
	Faserverstärkte Kunststoffe			GFK (Glasfaserverstärkt)	
	Magnesium und Magnesiumlegierungen	< 850 N/mm2	3.5200	M2, MgMn2	3.5612
	Graphit			C8000, R8500X	
	Wolfram und Wolframlegierungen			W-NiFe (Densimet W)	
	Molybdän und Molybdänlegierungen			Mo , Mo-50Re	
S	Reinnickel		1.3911	RNi24	1.3927
	Nickellegierungen		1.3912	Ni36 (Invar)	1.3924
	Nickellegierungen	< 850 N/mm2	2.4360	S-NiCu 30 Fe	
	Nickel-Chromlegierungen		2.4886	SG-NiMo16Cr16W	2.4610
	Nickel- und Kobaltlegierungen	< 1300 N/mm2	2.4632	NiCr20Co18Ti	2.4631
	Nickel- und Kobaltlegierungen	< 1300 N/mm2	2.4634	NiCo20Cr15MoAlTi	2.4654
	Hochwarmfeste Legierungen	< 1300 N/mm2		Hardox 400	1.4939
	Nickel-Kobalt-(Chrom-)legierungen	< 1400 N/mm2	2.4806	SG-NiCr20Nb, Inconel 82	2.4851
	Reintitan	< 900 N/mm2	3.7025	Ti99,8	3.7034
	Titanlegierungen	< 700 N/mm2	3.7114	TiAl5Sn2	3.7174
	Titanlegierungen	< 1200 N/mm2	3.7164	TiAl5V4	3.7144
H	Stahl gehärtet	< 45 HRc			
		46-55HRc			
		56-60 HRc			
		61-65 HRc			
		65-70 HRc			

Werkstoffbezeichnung	Werkstoff-Nr	Werkstoffbezeichnung	Vc K10F (m/min.)	Vc P18C (m/min.)	Bearbeitung	ap (mm)	f (mm/U)
St52-3	1.0060	St60-2	50-120	100-240			
45S20	1.0757	46SPb2	50-120	100-240			
17Mn4	1.1141	C15E (CK15)	50-120	100-240			
13Cr3 (EC60)	1.5919	15CrNi6	60-120	80-220			
Ck45	1.0535	C55	60-120	80-220			
Ck60	1.0540	C50	60-120	80-220			
28Cr4	1.7225	42CrMo4	60-120	80-220	▼	< 4	0,1-0,25
34Cr4	1.3565	48CrMo4	60-120	80-220	▼▼	< 2,5	0,02-0,15
GS-20NiCrMo3 7	1.6582	GS-34 CrNiMo 6	60-120	80-220	▼▼▼	< 1,5	0,005-0,08
34AlMo5	1.8509	41CrAlMo7	40-100	80-200			
39CrMoV19 3	1.8550	34 CrAlNi 7	40-100	80-200			
X192CrMo17	1.3520	100 CrMn 6 (W4)	40-100	80-200			
55Cr3	1.7701	51CrMoV4		50-120			
S 18-1-2-5	1.3294	PMHS6-5-3-8; ASP30		50-120			
X155CrVMo12 1	1.2316	X38CrMo16; RAMAX		40-100			
X45NiCrMo4	1.2842	90MnCrV8		40-100			
X4CrMoS18	1.4107	GX8CrNi12	40-80	80-180			
X105CrCoMo18 2	1.4016	X6Cr17	40-80	80-180			
X50CrMoV15	1.4106	X2CrMoSiS18-2-1	40-80	80-180	▼	< 4	0,1-0,2
X30Cr13	1.4104	X14CrMoS17	30-65	50-100	▼▼	< 2,5	0,02-0,12
X20CrNiSi25 4	1.4462	X2CrNiMoN22-5-3 (Duplex)	30-65	50-100	▼▼▼	< 1,5	0,005-0,08
X6CrNiMoTi17 12 2	1.4449	X3CrNiMo18-12-3	30-65	50-100			
X10NiCrAlTi32-21	1.4825	GX25CrNiSi18-9	30-65	50-100			
GG25			30-110	30-180			
GG45			30-90	30-150			
GGG50			25-110	30-180			
GGG80			25-80	30-120	▼	< 4	0,1-0,25
GTW45			20-40	30-90	▼▼	< 2,5	0,02-0,15
GTW65			20-40	20-80	▼▼▼	< 1,5	0,005-0,08
GTS45			20-40	30-90			
GTS70			20-40	20-80			
Al99,9Mg0,5	3.0256	E-Al H	120-500	120-600			
AlCuMg2	3.3315	AlMg1	120-500	120-600			
GD-AlSi9Mg	3.2134	GD-AlSi5Cu1Mg	100-400	100-450			
G-MgAl6	3.2525	S-AlSi12	70-250	70-300			
G-AlSi25CuNiMg		G-AlSi21CuNiMg	60-140	60-150			
SF-Cu	2.1522	CuSl2Mn	60-140	60-150			
CuZn30	2.0321	CuZn37	100-160	100-180			
CuSi3Mn		Ampco 8-16	90-160	90-180			
		Ampco18-26	80-160	80-180	▼	< 5	0,1-0,3
		Ampco M-4	80-160	80-180	▼▼	< 3	0,02-0,2
CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2	120-200	120-220	▼▼▼	< 2	0,005-0,12
CuCrZr	2.1080	CuSn6Zn6	70-140	70-150			
Makrolon, Novodur		Acrylglas, Polystyrol	80-160	80-180			
Pertinax		Resopal	80-160	80-180			
CFK (Kohlefaserverstärkt)		AFK (Amidfaserverstärkt)		80-180			
MgAl6Zn1	3.5812	MgAl8Zn1		80-180			
R8650		Technograph15		80-180			
W-Cu80/20		W93NiFe (DENAL)		80-180			
TZC, TZM		MHC , ODS		80-180			
RNi8	1.3926	RNi12		30-80			
Ni54	1.3921	Ni49		18-75			
NiCu 30 Fe		Monel 400		18-75			
NiMo16Cr16Ti		Hastelloy C-276		18-40			
NiCr20TiAl		Nimonic 80		18-40	▼	< 4	0,1-0,25
NiCr19Co14Mo4Ti		Waspaloy		18-40	▼▼	< 2,5	0,02-0,08
X12CrNiMo12	1.4980	X6NiCrTiMoVB25-15-2		15-30	▼▼▼	< 1,5	0,005-0,06
NiCr23Fe, Inconel 601	2.4667	SG-NiCr19NbMoTi		15-30			
Ti99,7	3.7064	Ti99,5		15-30			
TiAl6V6Sn2	3.7124	TiCu2		100-150			
TiAl6Sn2Zr4Mo2	3.7154	TiAl6Zr5		100-150			

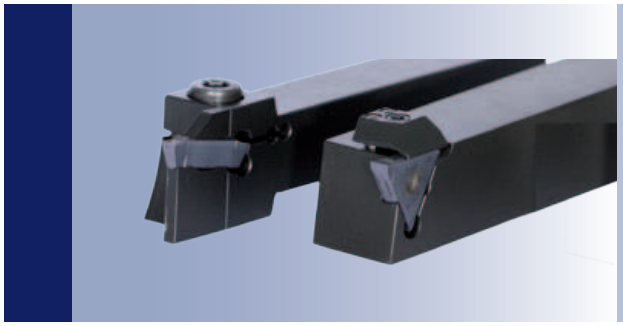
product overview
premium carbide cutting tools

Ultramini

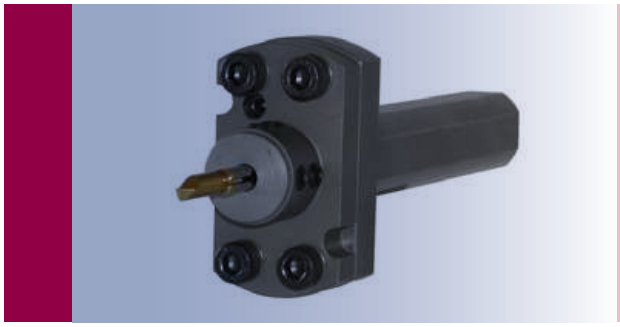
Grooving, boring and
pro iling starting at Ø
0.2 mm

Minicut

Grooving, boring and
pro iling starting at Ø
7.8 mm



System DED: three cutting edge grooving
System ZTP: two cutting edge grooving



VT

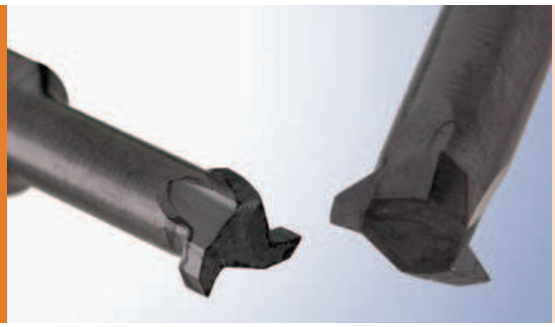
Height adjustable
tool-holders

Broaching keyways
in the range of 2-20 mm and
hexagon

product overview
premium carbide cutting tools

rotaline

Precision boring starting
at Ø 0.4 mm

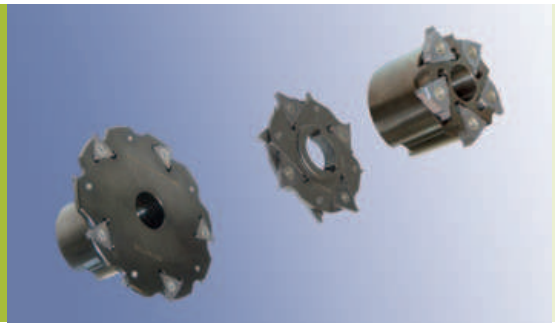


Mikromill

Groove milling by
circular interpolation
starting at Ø 1.3 mm

Minimill

Groove milling by
circular interpolation with three
and six cutting edges
starting at Ø 10 mm



System 500

Groove milling by
circular interpolation
groove milling and slotting
cutter

Swissline

miniature external machining,
two-cutting edges

Dümmel
WERKZEUGFABRIK