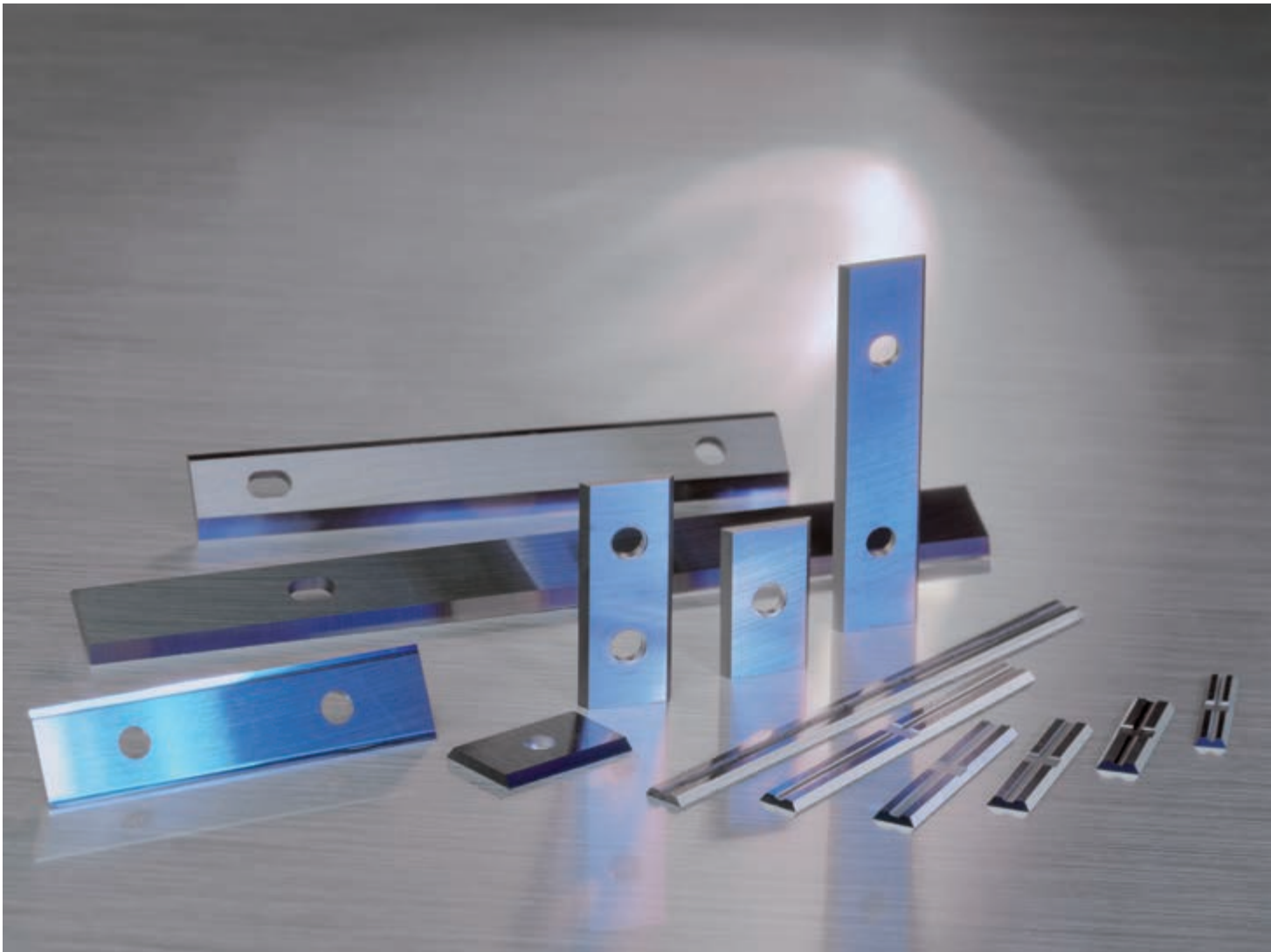




## Indexable knives

For tooling systems with replaceable indexable knives we produce a wide range of products in optimised carbide grades. Our indexable knives made of chrome grades or the grades SMG02 and UMG04 are the market leaders in this field. Our Easy Line indexable knives stand for a good price-performance-ratio in standard applications.

We also produce specific indexable knives according to customer request.





## Composition and properties

CERATIZIT grade code	ISO code	U.S. code	Binder [m %]	Density [g/cm <sup>3</sup> ]	Hardness			Transverse rupture strength		Fracture toughness [MPa*m <sup>1/2</sup> ]
					HV10	HV30	HRA	[MPa]	[P.S.I.]	

### Nano-grades

UMG04	K01	C4	2,2	15,30	2500	2400	96,0	3200	464000	5,4
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### Ultrafine grades

SMG02	K01	C4	2,4	15,25	2300	2200	95,2	3500	508000	5,7
HE40	K40	N/A	20,0	13,15	1250	1240	88,8	3500	508000	12,1

### Submicron grain

KCR08	N/A	N/A	4,2	15,20	1920	1885	93,4	2300	331000	8,7
MG18	K20	C2	10,0	14,45	1680	1660	92,3	3700	537000	9,4
CTOPP10	N/A	N/A	10,0	14,45	1570	1550	91,6	3000	435000	N/A

### Fine grain grades

HC05	K10	C3	4,0	15,15	1730	1700	92,5	2200	319000	8,7
HC20	K20	C2-C3	6,0	15,00	1640	1620	92,1	2200	319,000	9,9

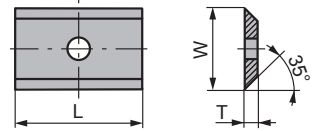
### Medium grain grades

HC35	K30	C1	9,0	14,60	1400	1380	90,3	2800	335000	10,9
------	-----	----	-----	-------	------	------	------	------	--------	------

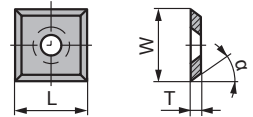
#### Comment:

1. The data in this table are typical material parameters. We reserve the right to modify the data due to technical progress or due to further development within our company.

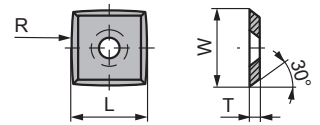
2.  $K_{IC}^*$ : The measured critical tension intensity factors ( $K_{IC}$ ) depend to a high degree on the sample geometry and sample preparation. A direct comparison with parameters which have been determined by means of a different method is therefore not admissible.


**EL CTK ST..**


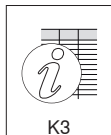
L [mm]	W [mm]	T [mm]	CTOPP10
9.6	12.0	1.5	11791000
15.0	12.0	1.5	11791001
20.0	12.0	1.5	11791002
30.0	12.0	1.5	11742547
40.0	12.0	1.5	11791003
50.0	12.0	1.5	11742544
60.0	12.0	1.5	11791004

**EL CTK SC**


L [mm]	W [mm]	T [mm]	CTOPP10
14.0	14.0	2.0	11742545

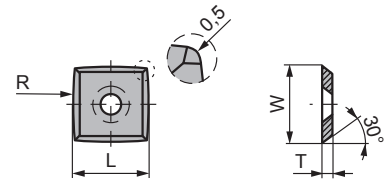
**EL CTK SC..R**


L [mm]	W [mm]	T [mm]	R [mm]	CTOPP10
15.0	15.0	2.5	95	11778838
15.0	15.0	2.5	115	11789902
15.0	15.0	2.5	150	11789899



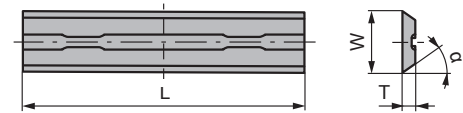


**EL CTK SC..R**

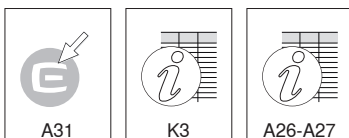


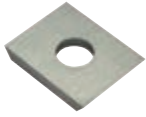
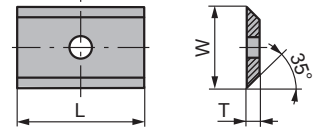
L [mm]	W [mm]	T [mm]	R [mm]	CTOPP10
15.0	15.0	2.5	95	11827619
15.0	15.0	2.5	115	11827617
15.0	15.0	2.5	150	11827613

**EL CTK PK..**



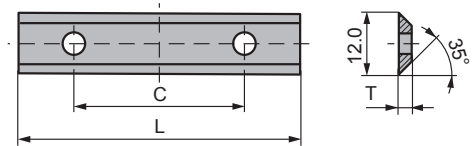
L [mm]	W [mm]	T [mm]	CTOPP10
75.5	5.5	1.1	11871695
80.5	5.9	1.2	11871691
82.0	5.5	1.1	11801133



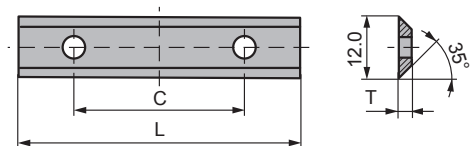

**CTK ST**

 Easy Line  
 see page(s)


L [mm]	W [mm]	T [mm]	$\alpha$ [°]	UMG04	SMG02	KCR08	HC05	
7.5	12.0	1.5	35			80360013		
7.6	12.0	1.5	35				80330647	
9.6	12.0	1.5	35		80358956	80360014	80330652	
10.5	12.0	1.5	35			80360015	80239369	
11.0	12.0	1.5	35			80360016	80239370	
13.0	12.0	1.5	35			80360017	80239371	
15.0	12.0	1.5	35		80358308	80360018	80330640	
15.7	12.0	1.5	35			80360019	80239372	
17.0	12.0	1.5	35			80360020	80331564	
18.0	12.0	1.5	35			80360021	80239368	
19.0	12.0	1.5	35			80360022	80331565	
20.0	12.0	1.5	35	80358633	80330673	80358831	80330641	
24.7	12.0	1.5	35			80360023	80239680	

**CTK ST**

 Easy Line  
 see page(s)


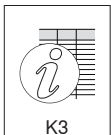
L [mm]	W [mm]	T [mm]	C [mm]	UMG04	SMG02	KCR08	HC05	
24.7	12.0	1.5	14			80360024	80239681	
30.0	12.0	1.5	14	80358634	80330674	80358833	80330642	
40.0	12.0	1.5	26	82009287	80358316	80360025	80330649	
50.0	12.0	1.5	26	80358635	80330675	80358835	80330643	
60.0	12.0	1.5	26		80358317	80360026	80330644	

**CTK ST**


L [mm]	W [mm]	T [mm]	C [mm]	HC05	MG18
30.0	12.0	2.5	14	82015043	82028333



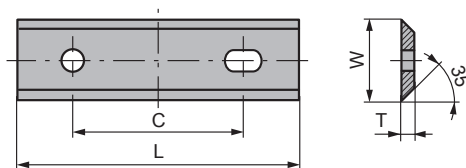
A31



K3

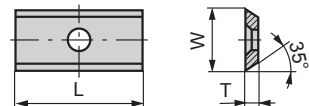
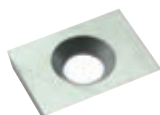


**CTK ST**

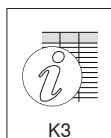


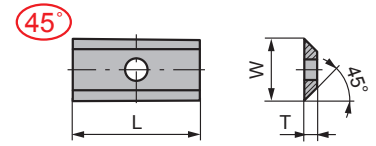
L [mm]	W [mm]	T [mm]	C [mm]	KCR08	
80.0	13.0	2.2	60	80360069	
100.0	13.0	2.2	60	80360084	
120.0	13.0	2.2	60	80360085	

**CTK ST.. SH**

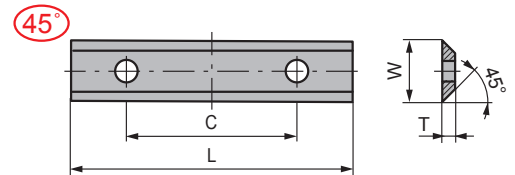


L [mm]	W [mm]	T [mm]	SMG02	
20.0	14.3	2.5	82030290	

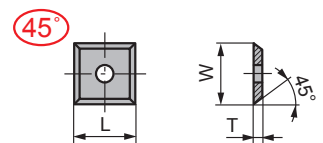
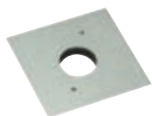



**CTK ST.. 45°**


L [mm]	W [mm]	T [mm]	MG18
7.5	12.0	1.5	80330520
15.0	12.0	1.5	80330522
20.0	12.0	1.5	80330523
24.7	12.0	1.5	80332389

**CTK ST.. 45°**


L [mm]	W [mm]	T [mm]	C [mm]	MG18
30.0	12.0	1.5	14	80330524
40.0	12.0	1.5	26	80330525
50.0	12.0	1.5	26	80330526
60.0	12.0	1.5	26	80330527

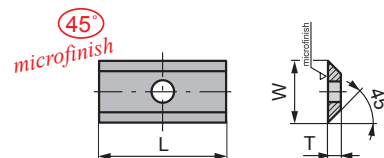
**CTK FC.. 45°**


L [mm]	W [mm]	T [mm]	MG18
12.0	12.0	1.5	80330521



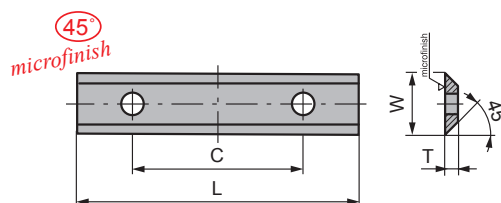


CTK ST.. MIC45°



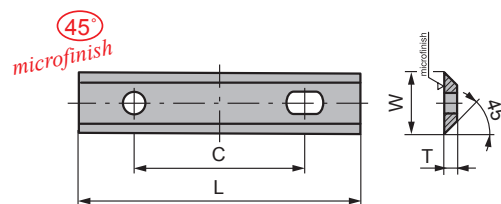
L [mm]	W [mm]	T [mm]	MG18	HE40
9.6	12.0	1.5	80359051	80359044
15.0	12.0	1.5	80330537	80359045
20.0	12.0	1.5	80330538	80357973

CTK ST.. MIC45°

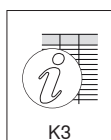


L [mm]	W [mm]	T [mm]	C [mm]	MG18	HE40
30.0	12.0	1.5	14	80330539	80357974
40.0	12.0	1.5	26	80330540	80359046
50.0	12.0	1.5	26	80330541	80357975
60.0	12.0	1.5	26	80330542	80359047

CTK ST.. MIC45°



L [mm]	W [mm]	T [mm]	C [mm]	MG18	HE40
80.0	13.0	2.2	60	80359052	80359048







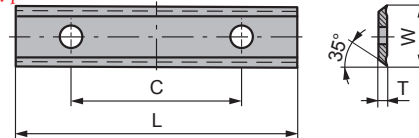
# KNIVES

STANDARD 45° – MICROFINISH

## CTK ST.. CB

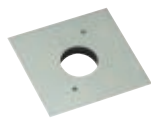


with chip breaker

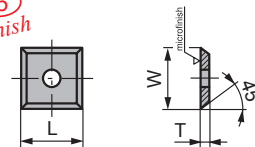


L [mm]	W [mm]	T [mm]	C [mm]	HE40
20.0	12.0	1.5	0	80357984
30.0	12.0	1.5	14	80357985
50.0	12.0	1.5	26	80357986

## CTK FC.. MIC45°

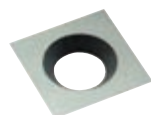


45°  
microfinish

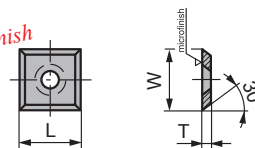


L [mm]	W [mm]	T [mm]	MG18	HE40
12.0	12.0	1.5	80330536	80359049

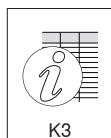
## CTK SC.. MIC



microfinish

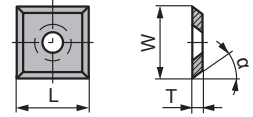
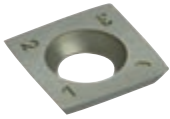


L [mm]	W [mm]	T [mm]	MG18	HE40
14.0	14.0	2.0	80332257	80359050



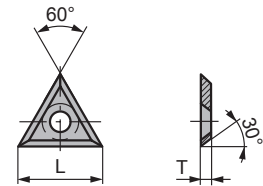


**CTK SC..**



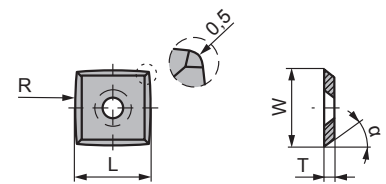
L [mm]	W [mm]	T [mm]	$\alpha$ [°]	MG18	SMG02	KCR08	HC05	HC35
10.5	10.5	1.5	35	80330882				
13.0	13.0	2.5	30	80357494				82001035
13.4	13.4	1.5	30					80332547
13.6	13.6	2.0	45					80239418
14.0	14.0	1.2	30					80330669
14.0	14.0	1.7	30					80331749
14.0	14.0	2.0	30	80239725	80332539	80359802	80332394	80330668
14.6	14.6	2.5	30			11444230		
15.0	15.0	2.5	30	82001124				

**CTK SC.. 3CUT**

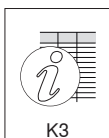


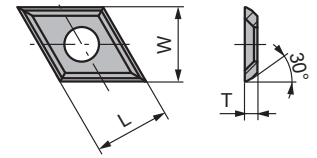
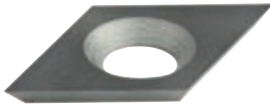
L [mm]	T [mm]	$\alpha$ [°]	MG18
22.0	2.0	30	80239466

**CTK SC..R**

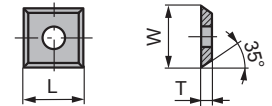
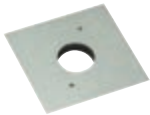


L [mm]	W [mm]	T [mm]	R [mm]	$\alpha$ [°]	HC35	SMG02	KCR08	HC05	MG18
14.0	14.0	2.0	100	30	80359039				
15.0	15.0	2.5	115	30				82003329	82023168
15.0	15.0	2.5	115	30			82019711		
15.0	15.0	2.5	115	30					
15.0	15.0	2.5	150	30				11281810	11225484
15.0	15.0	2.5		30		82018721	82022498	82018719	
15.0	15.0	2.5		37				82018720	

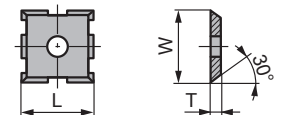



**CTK SC.. RHO**


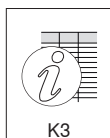
L [mm]	T [mm]	$\alpha$ [°]	HC05	
14.0	2.0	30.0	80332377	

**CTK FC..**


L [mm]	W [mm]	T [mm]	$\beta$ [°]	SMG02	KCR08	HC05	
10.5	10.5	1.5	35		80360027		
12.0	12.0	1.5	35	80358314	80360030	80330657	
15.0	15.0	2.0	35		11235079		
17.0	17.0	2.0	35		80360028	80239386	
19.0	19.0	2.0	35		80360029	80239387	

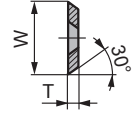
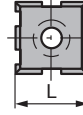
**CTK FC.. CB**


L [mm]	T [mm]	$\alpha$ [°]	MG18	
15.0	2.0	30	80239392	



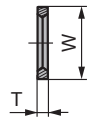
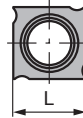


**CTK FC.. CB/SH**

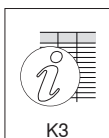


L [mm]	T [mm]	$\alpha$ [°]	MG18	
15.0	2.0	30	82009817	

**CTK GR..**



L [mm]	W [mm]	T [mm]	HC20	
14.0	14.0	2.0	80359032	
14.0	14.0	2.5	80332764	
14.0	14.0	3.0	80359033	
18.0	18.0	1.95	80330658	
18.0	18.0	2.5	80330659	
18.0	18.0	2.95	80331492	
18.0	18.0	3.7	80239391	
18.0	18.0	4.0	80331493	

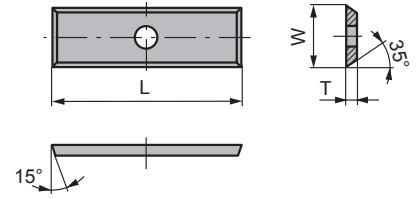
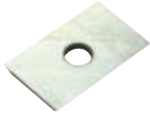




# KNIVES

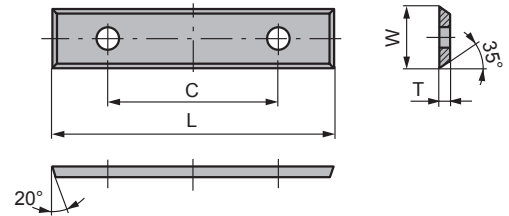
4 CUTTING EDGES

## CTK FC..



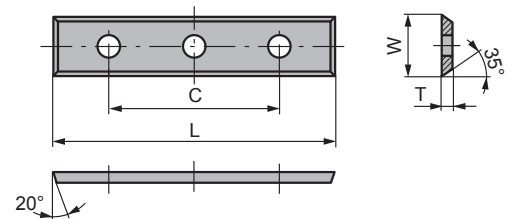
L [mm]	W [mm]	T [mm]	SMG02	HC05
9.0	12.0	1.5		80239376
10.0	12.0	1.5		80239374
19.4	12.0	1.5	80359075	
19.5	12.0	1.5		11935393

## CTK FC..



L [mm]	W [mm]	T [mm]	C [mm]	UMG04	SMG02	KCR08	HC05
29.0	12.0	1.5	14				80330711
29.5	12.0	1.5	14		80359076	80360082	80331886
29.2	12.0	1.5	14	80359079			
29.5	9.0	1.5	14			80360081	80331173
49.2	12.0	1.5	26	80359080	80359077	80360089	80331887
49.2	9.0	1.5	26			80360083	80359034
59.2	12.0	1.5	26		80359078		80359035

## CTK FC.. 3H



L [mm]	W [mm]	T [mm]	C [mm]	SMG02	KCR08	HC05
50.0	12.0	1.7	37	82004411	80358958	80419334

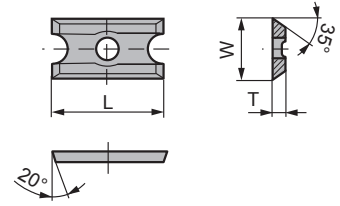
4 CUTTING EDGES

KNIVES



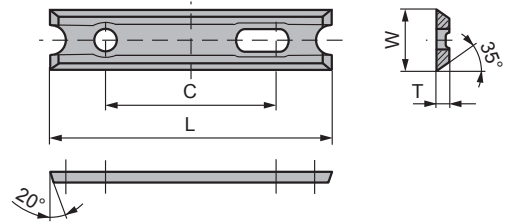


**CTK ECO.. FC**

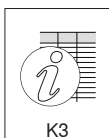


L [mm]	W [mm]	T [mm]	KCR08	
19.2	12.0	1.5	11507903	

**CTK ECO.. FC**



L [mm]	W [mm]	T [mm]	C [mm]	KCR08	
29.2	12.0	1.5	14	11507905	
49.2	12.0	1.5	26	11507910	

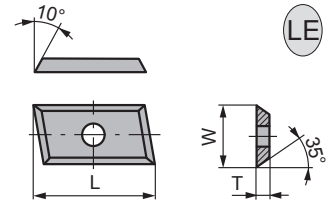




# KNIVES

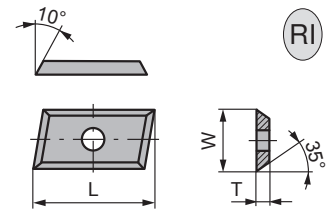
SLANTING KNIVES/BOSSED

## CTK SK.. LE.. °



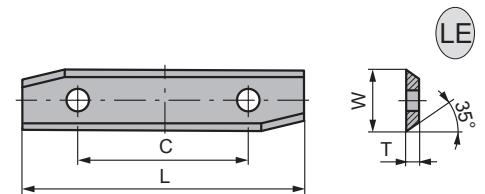
L [mm]	W [mm]	T [mm]	KCR08	HC05
19.5	12.0	1.5	80360076	80239367

## CTK SK.. RI.. °

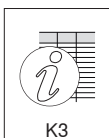


L [mm]	W [mm]	T [mm]	KCR08	HC05
19.5	12.0	1.5	80360075	80239366

## CTK SK.. LE.. °

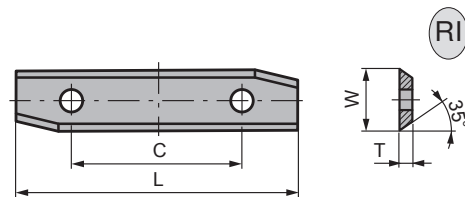


L [mm]	W [mm]	T [mm]	C [mm]	KCR08	HC05
29.5	12.0	1.5	14	80360071	80330648
49.5	12.0	1.5	26	80360073	80359036



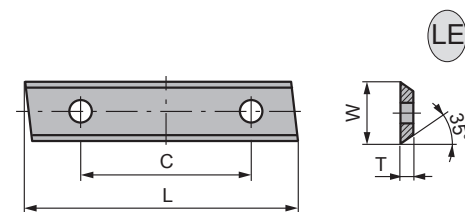


**CTK SK.. RI..°**



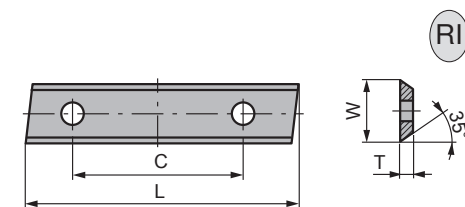
L [mm]	W [mm]	T [mm]	C [mm]	KCR08	HC05
29.5	12.0	1.5	14	80360070	80239365
49.5	12.0	1.5	26	80360072	80359037

**CTK SK.. LE..°**

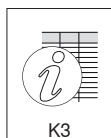


L [mm]	W [mm]	T [mm]	C [mm]	KCR08	HC05
29.5	12.0	1.5	14	80360077	80330646
49.5	12.0	1.5	26	80360079	80239361

**CTK SK.. RI..°**



L [mm]	W [mm]	T [mm]	C [mm]	KCR08	HC05
29.5	12.0	1.5	14	80360078	80330645
49.5	12.0	1.5	26	80360080	80239360



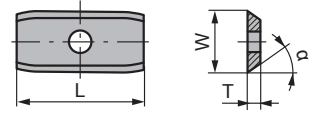




# KNIVES

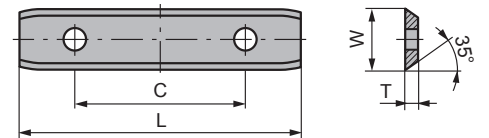
## SLANTING KNIVES/BOSSED

### CTK ST.. BO



L [mm]	W [mm]	T [mm]	$\alpha$ [°]	HC05	
20.0	12.0	1.5	35	80359038	
24.0	12.0	1.5	40	82000067	
24.7	12.0	1.5	40	80334040	

### CTK ST.. BO

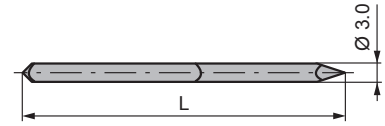


L [mm]	W [mm]	T [mm]	C [mm]	HC05	
30.0	12.0	1.5	14	80357890	
50.0	12.0	1.5	26	80357892	
40.0	12.0	1.5	26	82018841	



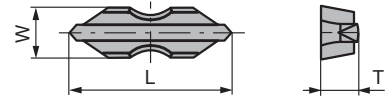


**CTK CP..**



L [mm]	D [mm]		HC35	
33.5	3.0		80162624	

**CTK SC..**

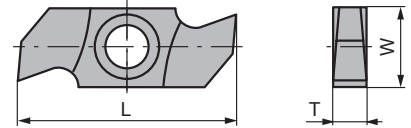


L [mm]	W [mm]	T [mm]	HC20	
18.0	6.0	3.5	80360002	



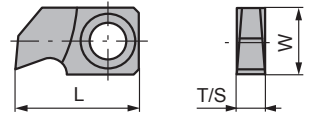


## CTK GR..



L [mm]	W [mm]	T [mm]	HC35	CTOPP10
34.0	16.0	3.2	80239830	11921649
34.0	16.0	4.0	80239831	11921650
34.0	16.0	5.0	80239832	11921651

## CTK GR..

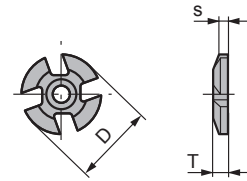


L [mm]	W [mm]	T [mm]	MG18	CTOPP10
24.5	13.0	3.0		11921643
24.5	13.0	4.0	80357834	11921646
24.5	13.0	5.0	80358124	11921648



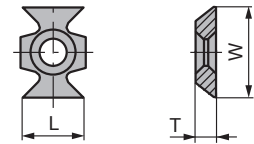


CTK CH..



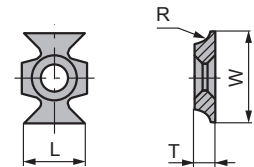
T [mm]	D [mm]	S [mm]	HC20	
4.6	25.0	2.8	80239567	

CTK CH.. 45°



L [mm]	W [mm]	T [mm]	HC20	CTOPP10	KCR08
16.0	22.0	5.0	80330575		11498133
16.5	22.0	5.0		11921629	

CTK CH.. R



L [mm]	W [mm]	T [mm]	R [mm]	HC20	CTOPP10	KCR08
16.0	22.0	5.0	1.0	80359041	11921631	
16.0	22.0	5.0	1.5	80330576		11844764
16.0	22.0	5.0	2.0	80330577	11921635	11716752
16.0	22.0	5.0	2.5	80330579	11921636	11716750
16.0	22.0	5.0	3.0	80330578	11921638	11498136
16.0	22.0	5.0	5.0	80333980	11921640	
16.0	22.0	5.0	6.0	80359042		

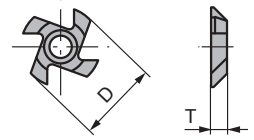




# KNIVES

CHAMFER BREAKING TIPS AND CHAMFERING KNIVES

## CTK CH.. RI/LE



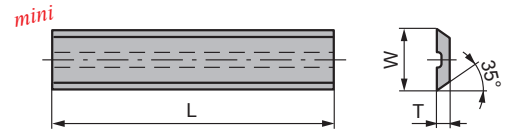
	D [mm]	T [mm]	HC20	
RI	25.0	5.0	80239423	
LE	25.0	5.0	80239424	



A31

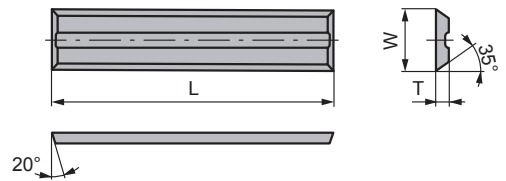


**CTK MK..FG**



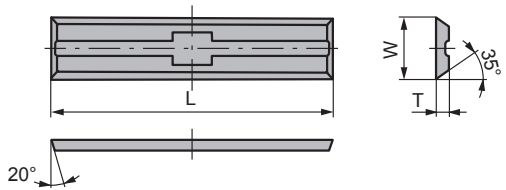
L [mm]	W [mm]	T [mm]	HC05
12.0	5.5	1.1	80330662
20.0	5.5	1.1	80330660
30.0	5.5	1.1	80331568
40.0	5.5	1.1	80330661
50.0	5.5	1.1	80239396
60.0	5.5	1.1	80359040

**CTK MK..BG**



L [mm]	W [mm]	T [mm]	HC05
12.0	5.5	1.1	80239398

**CTK MK..BCG**

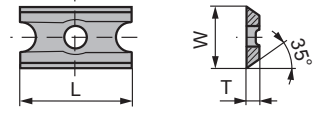


L [mm]	W [mm]	T [mm]	HC05
20.0	4.1	1.1	80331404
20.0	5.5	1.1	80331406
25.0	5.5	1.1	80331408
30.0	5.5	1.1	80331407
40.0	5.5	1.1	80331381
50.0	5.5	1.1	80331409



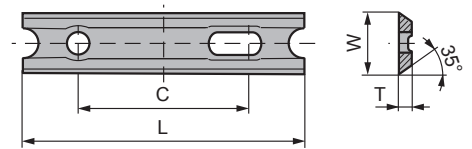


**CTK ECO..**



L [mm]	W [mm]	T [mm]	KCR08	
20.0	12.0	1.5	80359581	

**CTK ECO..**

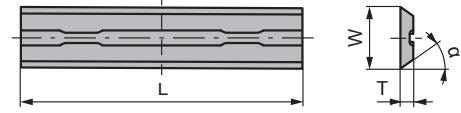


L [mm]	W [mm]	T [mm]	C [mm]	KCR08	
30.0	12.0	1.5	14	80359561	
50.0	12.0	1.5	26	80359562	





**CTK PK..**



L [mm]	W [mm]	T [mm]	HC35	
56.0	5.5	1.1	80333440	
75.5	5.5	1.1	80330664	
78.0	5.5	1.1	80331436	
80.5	5.9	1.2	80330666	
82.0	5.5	1.1	80330665	
92.0	5.5	1.2	80332144	
102.0	5.5	1.1	80239410	

