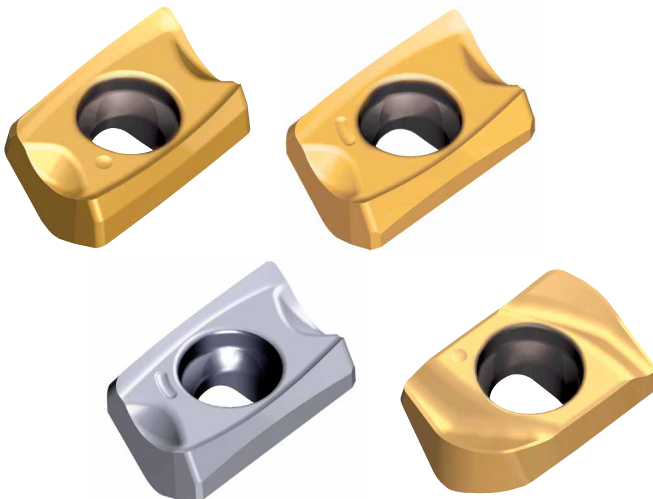


# NPN

New Product News



## Next Generation Shoulder and High Feed Milling Line



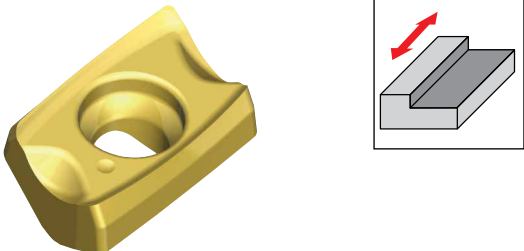
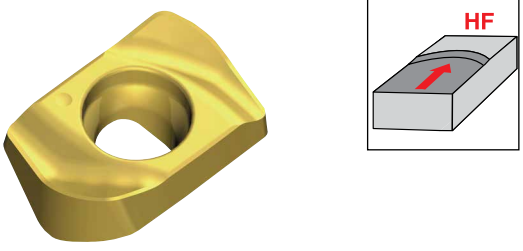
## KEY POINT

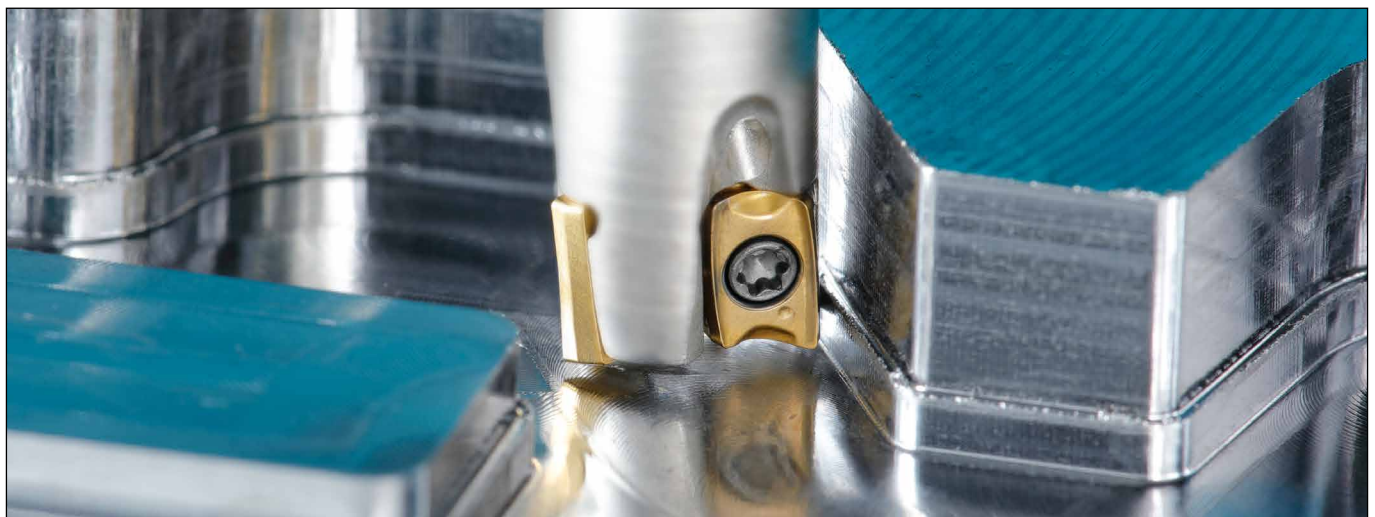
**TaeguTec has launched the CVKT line of inserts and cutters, in the Ø6-20 mm diameter range, for miniature machining.**

The WIN-MILL line, including CVKT inserts and holders, are small-size end mills optimized for the miniature industry. Featuring indexable inserts with Ø8 mm, 2 effective teeth end mills, the WIN-MILL line is an excellent choice for cost reduction. The increased number of teeth means it is a high productivity solution that replaces carbide end mill machining. Further, WIN-MILL end mills can be applied to various milling applications as the inserts are available in shoulder milling and high feed machining types. The contact between the V bottom insert and the cutter pocket maximizes clamping stability for both high feed and ramping machining, enabling excellent performance in multiple applications.

For further information, please contact product manager.

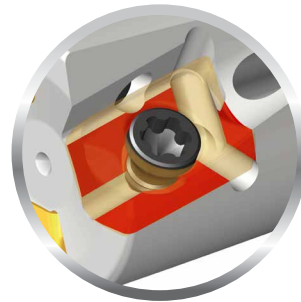
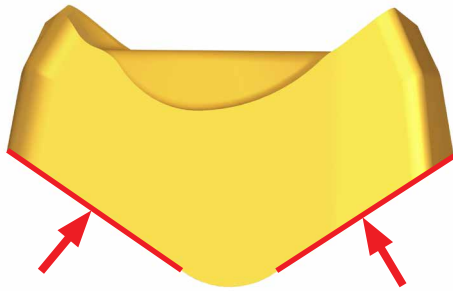
### WIN-MILL CVKT inserts

CVK(H)T 05-M/L/AL	CVKT 05-HF
 <p data-bbox="244 1391 440 1424">For shouldering</p>	 <p data-bbox="927 1391 1182 1424">For high feed milling</p>



## Features

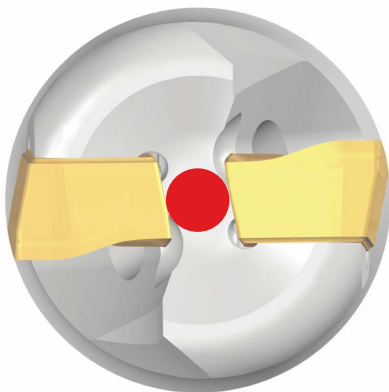
- Unique V shape 2-corner insert for shoulder and high feed machining
  - V-shape bottom contact for higher machining stability clamping during ramping or high feed operations



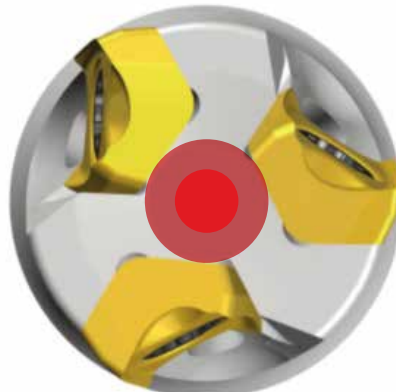
- Indexable mini size end mill
  - Minimum diameter Ø6 (1z), Ø8 (2z)



- Larger core diameter means higher rigidity for more stable machining



Competitor (Ø10, 2z)



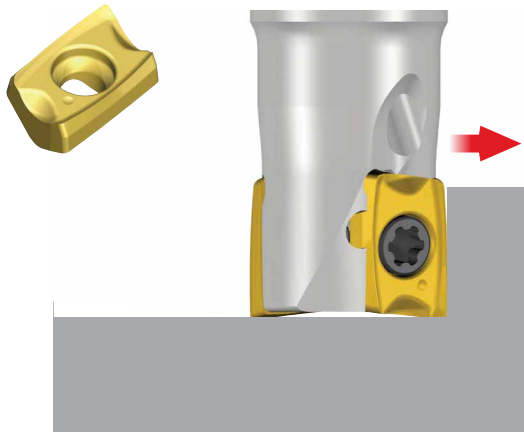
TaeguTec (Ø10, 3z)

- Increased number of inserts for improved productivity
  - Maximum number of teeth per cutter diameter

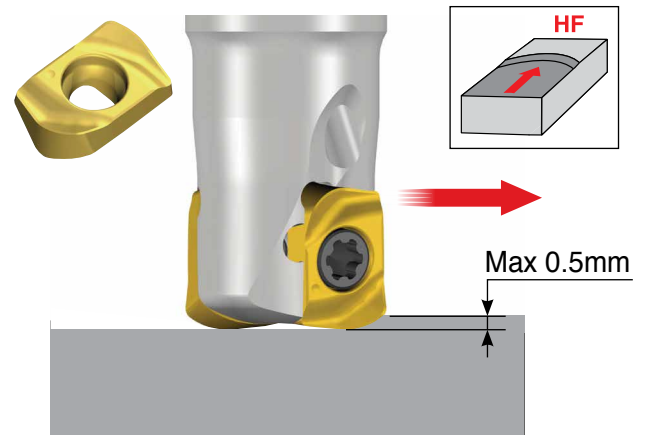
	Ø6	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø16	Ø20
<b>2S-TE90CV... <span style="color:red">new</span></b>	1	2	2	3	3	4	4	5	5	7
General holders		1	1	2	2	3	3	3	4	5

■ Insert types for shouldering and high feed machining

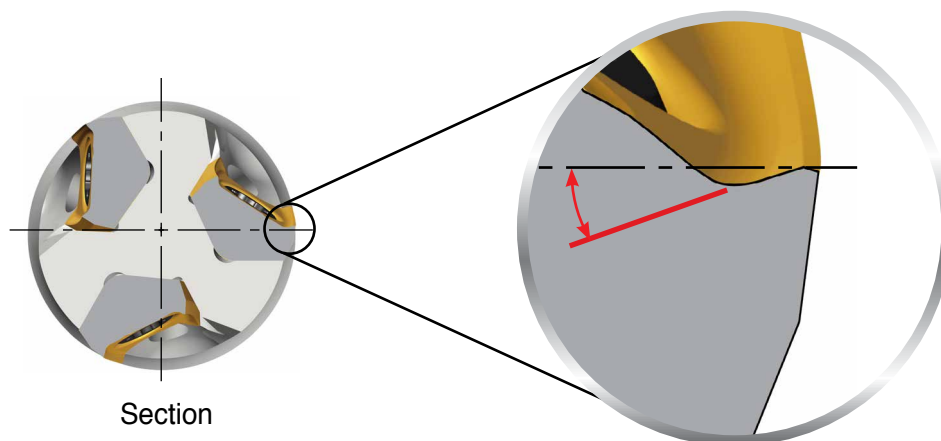
- Shouldering: CVK(H)T 0502PNR-M/L/AL



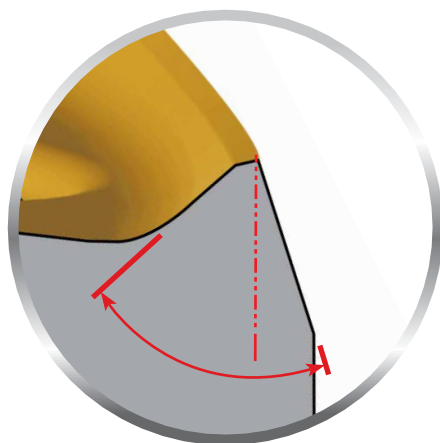
- High feed machining: CVKT 0502R-HF



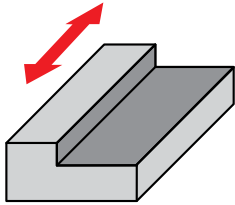
■ Inserts designed with a high rake angle for reduced cutting load and excellent chip evacuation



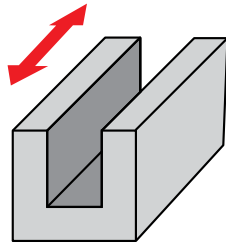
■ Enhanced machinability due to the insert's reinforced edge



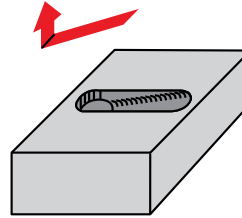
■ Covers a wide variety of applications:



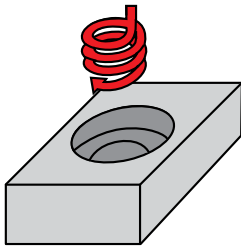
Shouldering



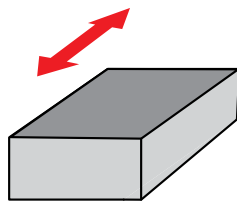
Slotting



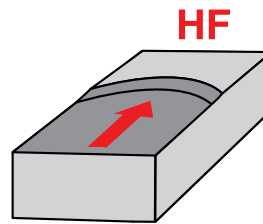
Straight ramping



Helical ramping



Facing

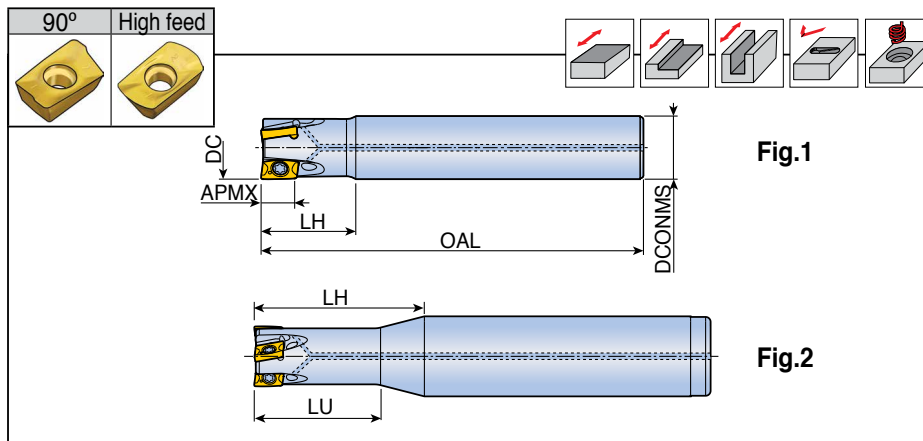
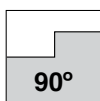


High feed milling

## 2S-TE90CV-05



End mills



Designation		Dimension (mm)						Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	LU	APMX			
2S-TE90CV-106-06-05	1	6	6	60	12	-	5.0	●	1	CVK(H)T 0502...
106-06-05-L50	1	6	6	50	10	-	5.0	●	1	
208-07-05	2	8	7	80	12	-	5.0	●	1	
208-08-05	2	8	8	80	12	-	5.0	●	1	
208-08-05-L50	2	8	8	50	10	-	5.0	●	1	
208-12-05	2	8	12	80	25	18	5.0	●	2	
209-08-05	2	9	8	80	12	-	5.0	●	1	
210-10-05	2	10	10	80	15	-	5.0	●	1	
212-12-05	2	12	12	80	15	-	5.0	●	1	
310-09-05	3	10	9	80	12	-	5.0	●	1	
310-10-05	3	10	10	80	15	-	5.0	●	1	
310-10-05-L55	3	10	10	55	12	-	5.0	●	1	
310-16-05-L90	3	10	16	90	34	22	5.0	●	2	
311-10-05	3	11	10	80	12	-	5.0	●	1	
312-12-05	3	12	12	80	15	-	5.0	●	1	
412-11-05	4	12	11	80	12	-	5.0	●	1	
412-12-05	4	12	12	80	15	-	5.0	●	1	
412-12-05-L60	4	12	12	60	14	-	5.0	●	1	
412-16-05-L100	4	12	16	100	34	26	5.0	●	2	
413-12-05	4	13	12	80	12	-	5.0	●	1	
414-12-05	4	14	12	80	10	-	5.0	●	1	
514-14-05-L90	5	14	14	90	15	-	5.0	●	1	

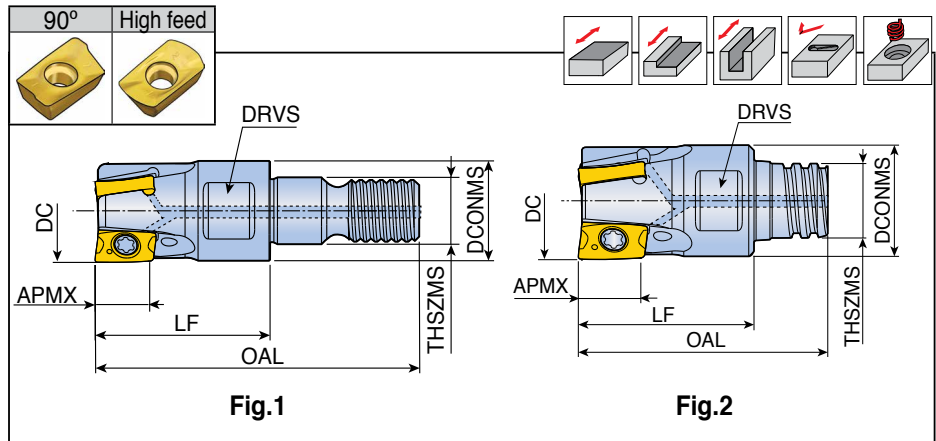
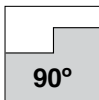
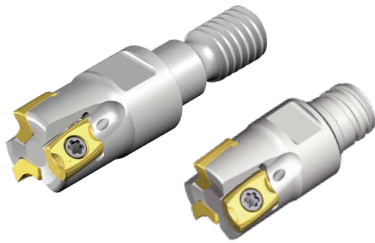
▶ Cutter body for 'L-HF' insert should be modified with body corner radius 1.8 mm



## 2S-TE90CV-M(S)-05



### Modular heads



Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
<b>2S-TE90CV- 208-M04-05</b>	2	8	7.8	10	21.5	M04	5.0	6	●	1	CVK(H)T 0502...
<b>310-M06-05</b>	3	10	9.7	17	31.5	M06	5.0	8	●	1	
<b>412-M06-05</b>	4	12	11	17	31.5	M06	5.0	8	●	1	
<b>516-M08-05</b>	5	16	13	23	40.5	M08	5.0	10	●	1	
<b>620-M10-05</b>	6	20	18	23	43.0	M10	5.0	15	●	1	
<b>720-M10-05</b>	7	20	18	23	43.0	M10	5.0	15	●	1	
<b>2S-TE90CV- 208-S05-05</b>	2	8	7.6	10	16.7	S05	5.0	5.5	●	2	
<b>310-S06-05</b>	3	10	9.6	15	21.3	S06	5.0	8	●	2	
<b>412-S08-05</b>	4	12	11.5	16	23.5	S08	5.0	10	●	2	

- ▶ Cutter body for '-HF' insert should be modified with body corner radius 1.8 mm
- ▶ Matched with T-FLEXTEC holder (Fig.1) & MAXI-RUSH holder (Fig.2)

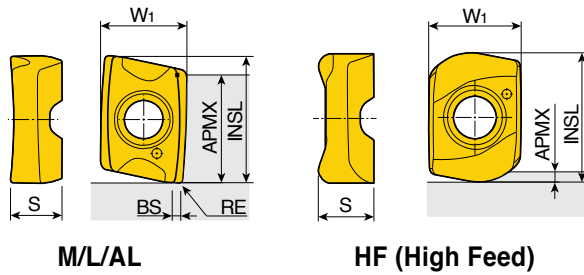
### Spare parts

Designation	Screw	Wrench			
<b>2S-TE90CV-05</b>	TS 18033/HG-P	TD 6P			

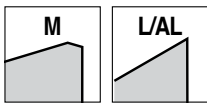
## CVK(H)T



### Inserts



Size	Dimension (mm)					
	INSL	W <sub>1</sub>	S	APMX	BS	RE
<b>05-M</b>	6.2-6.3	4.2	2.6	5.0	0.3	0.2-0.4
<b>05-L/AL</b>	6.3	4.1	2.6	5.0	0.3	0.2
<b>05-HF</b>	5.6	4.1	2.5	0.5	-	-



Insert	Designation	Recommended machining conditions		Coated								Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525	TT7080	TT7515	TT6080	TT5525	TT2510	UF10	
	<b>CVKT 0502PNR-M</b>	0.5-4.0	0.08-0.04	●		●									
	<b>050204R-M</b>	0.5-4.0	0.08-0.04	●		●									
	<b>CVHT 0502PNR-L</b>	0.5-4.0	0.07-0.03	●		●					●				
	<b>CVHT 0502PNR-AL</b>	0.5-4.0	0.07-0.03										●		
	<b>CVKT 0502R-HF</b>	0.2-0.4	0.70-0.30	●		●						●			

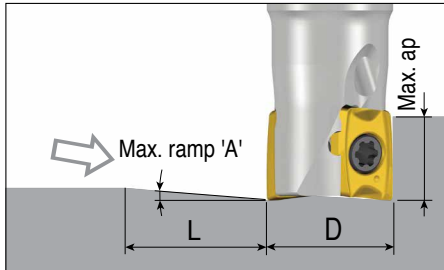
●: Standard items



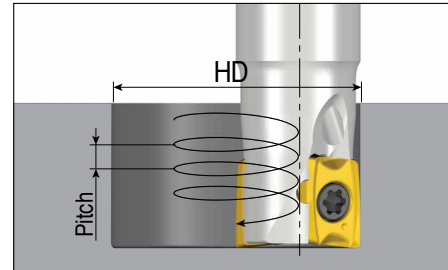
## Ramping Data



Straight ramping



Helical ramping



### CVK(H)T 05: R0.2

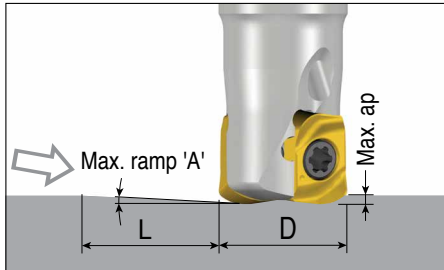
(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø6	2.5	5.0	112	8		0.2
					12	0.7
Ø8	2.1	5.0	136	12		0.4
					16	0.8
Ø9	1.7	5.0	164	14		0.4
					18	0.7
Ø10	1.7	5.0	169	16		0.5
					20	0.8
Ø11	1.3	5.0	212	18		0.4
					22	0.7
Ø12	1.3	5.0	220	20		0.5
					24	0.7
Ø13	1.1	5.0	249	22		0.5
					26	0.7
Ø14	1.0	5.0	273	24		0.5
					28	0.7
Ø16	0.9	5.0	302	28		0.5
					32	0.7
Ø20	0.7	5.0	382	36		0.6
					40	0.7

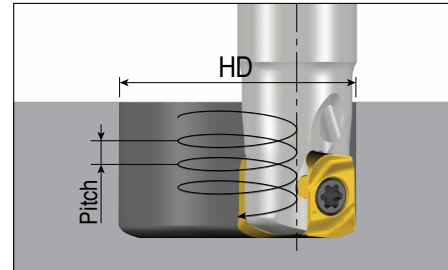
## Ramping Data



Straight ramping



Helical ramping

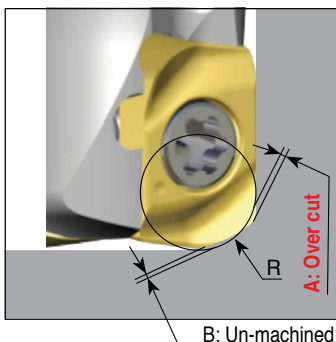


### CVKT 05-HF

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø6	0.20	0.5	143	8		0.0
					12	0.1
Ø8	0.45	0.5	64	12		0.1
					16	0.2
Ø9	0.55	0.5	52	14		0.1
					18	0.2
Ø10	0.30	0.5	96	16		0.1
					20	0.1
Ø11	0.35	0.5	82	18		0.1
					22	0.2
Ø12	0.70	0.5	41	20		0.3
					24	0.4
Ø13	0.75	0.5	38	22		0.3
					26	0.5
Ø14	0.85	0.5	34	24		0.4
					28	0.5
Ø16	0.65	0.5	44	28		0.4
					32	0.5
Ø20	0.50	0.5	57	36		0.4
					40	0.5

### Programming technical data



	R Program	A Over cut	B Un machined
CVKT 05-HF	0.8	0	0.21
	0.9	0	0.18
	1.0	0.02	0.14

**Yellow background**: Recommended program 'R'