May 2023
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NPN

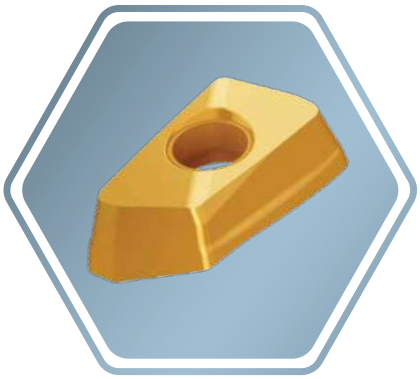
New Product News

new

WinMill ADVANCED MACHINING

TaeguTec WinSFeed ADVANCED MACHINING

Next Generation Shouldering Insert with V Bottom for Strong Clamping



ADVANCE CUTTING TaeguTec

TaeguTec Member IMC Group

KEY POINT

TaeguTec's WIN-MILL line has launched the next generation shoulder milling, high productivity AVKT inserts and cutters.

TaeguTec introduces its premium WIN-MILL line, including AVKT inserts with dedicated holders, that maximize productivity in the single-sided, two-corner shoulder milling insert market suitable for various applications.

The new insert includes a V-shape bottom contact for stronger and more stable clamping, providing excellent machining performance even in both ramping and step-down machining. In addition, the new AVKT insert includes a higher ramping angle over similar inserts to provide higher productivity.

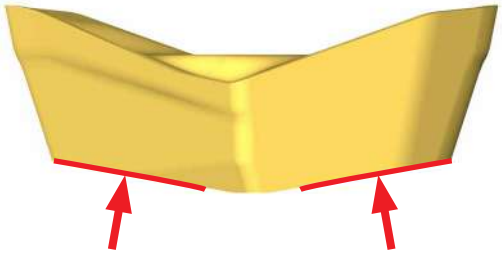
For further information, please contact the product manager.

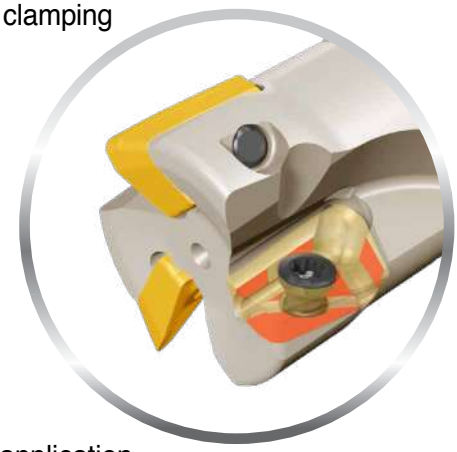
WIN-MILL AVK(C)T Insert

AVKT 10-M/EL	AVCT 10-AL	AVKT 10-HF
		
For shouldering	For shouldering aluminum	For high feed milling

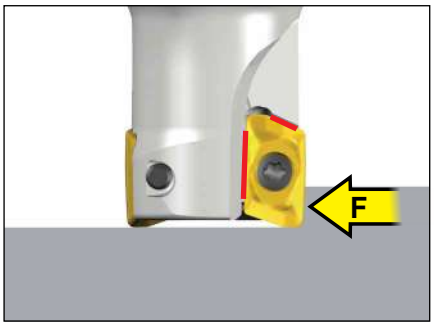
Features

■ Insert's V-shape contact face enables strong and stable clamping

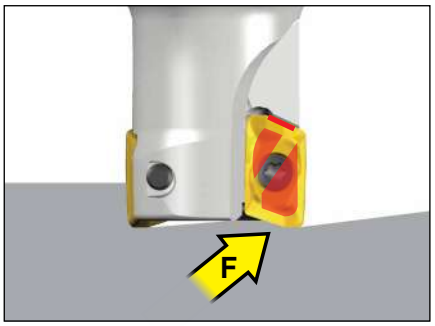




- Pocket contact reaction depending on machining application

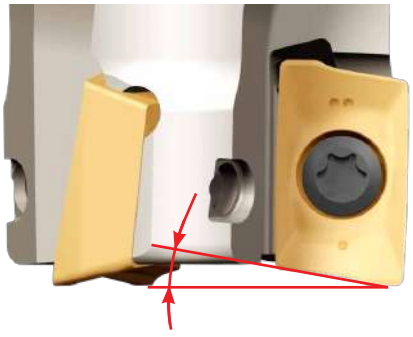


Shouldering

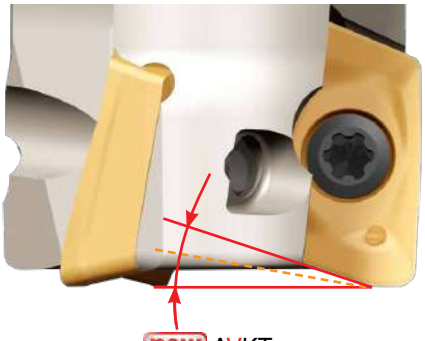


Ramping

■ Insert's higher ramping angle for improved productivity



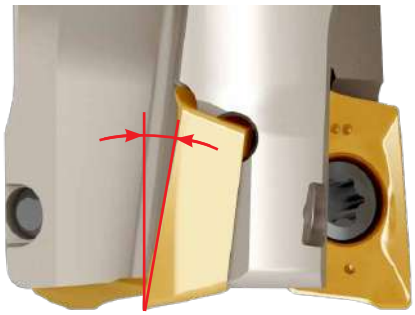
Current APKT type



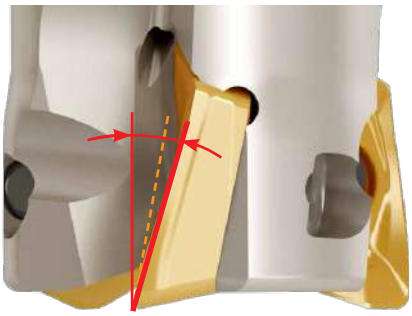
new AVKT

Cutter Dia.	Straight ramp down max. ramping angle			
	Competitor APKT type	new AVKT	Competitor APKT high feed type	new AVKT-HF
Ø16	4.9°	10.9°	3.8°	7.6°
Ø18	4.0°	8.3°	3.4°	5.5°
Ø20	3.4°	6.5°	3.0°	4.2°
Ø25	1.8°	4.3°	2.1°	2.6°
Ø32	2.0°	2.9°	1.6°	1.7°
Ø40	1.5°	2.1°	1.2°	1.2°
Ø50	1.1°	1.6°	0.9°	0.9°
Ø63	0.8°	1.2°	0.5°	0.7°

■ Higher insert rake angle over conventional inserts enable soft cutting

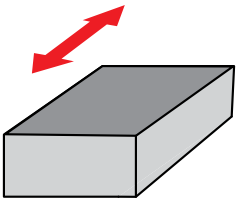


Current APKT type

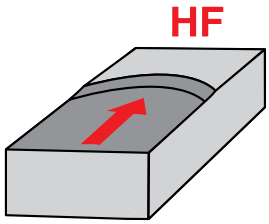


new AVKT

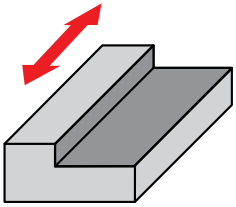
■ Applicable to the same applications as the current APKT type inserts



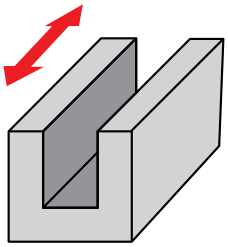
Facing



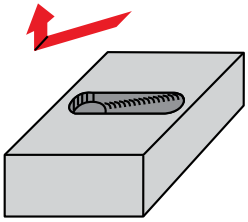
High feed milling



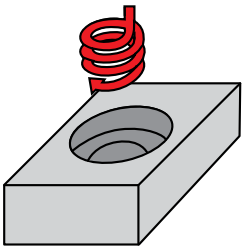
Shouldering



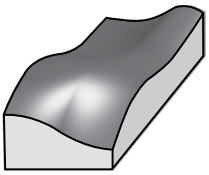
Slotting



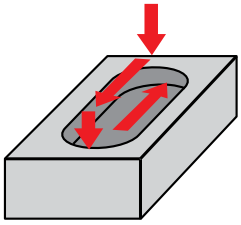
Straight ramping



Helical ramping



Profiling

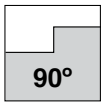


Step down

TE90AV-10

WINMILL ADVANCED MACHINING

End mills



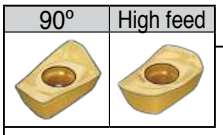


Fig.1

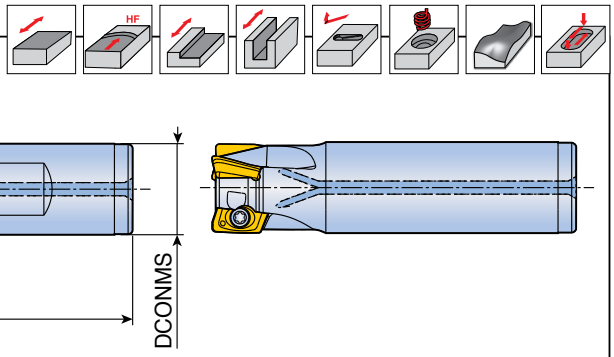


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AV-216-W16-10	2	16	16	75	20	10	●	1	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL
218-W16-10	2	18	16	90	25	10	●	1	
320-20-10-L120	3	20	20	120	40	10	●	2	
320-W20-10	3	20	20	80	25	10	●	1	
325-W25-10	3	25	25	90	30	10	●	1	
425-W25-10	4	25	25	90	30	10	●	1	
532-W32-10	5	32	32	100	35	10	●	1	

- When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm

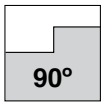
Spare parts

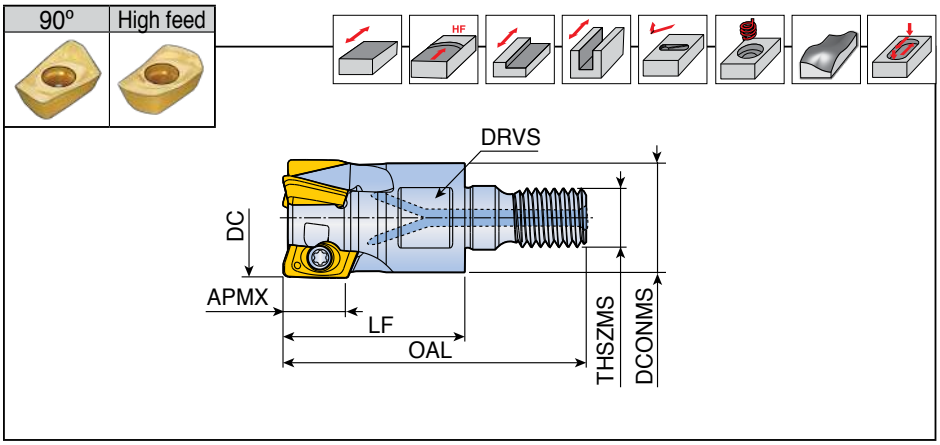
Designation	Screw	Wrench			
					
TE90AV-10	TS 30B062/HG-P	TD 8P			

TE90AV-M-10

WINMILL ADVANCED MACHINING

Modular heads





Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TE90AV-216-M08-10	2	16	13	30	47.5	M08	10	10	●	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL
320-M10-10	3	20	18	30	50	M10	10	15	●	
425-M12-10	4	25	21	35	57	M12	10	17	●	
532-M16-10	5	32	29	43	68	M16	10	25	●	

- When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm
- Matched with T-FLEXTEC holder

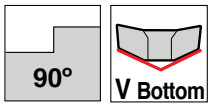
Spare parts

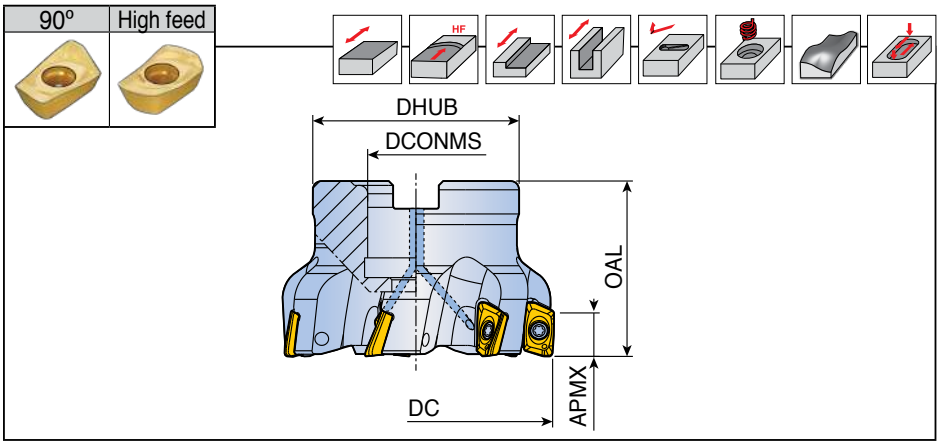
Designation	Screw	Wrench			
					
TE90AV-M-10	TS 30B062/HG-P	TD 8P			

TFM90AV-10

WINMILL ADVANCED MACHINING

Face mills





Designation		Designation					Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
TFM90AV-540-16R-10	5	40	16	38	40	10	●	A	0.2	SH M8x30	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL
550-22R-10	5	50	22	45	40	10	●	A	0.3	SH M10x30	
750-22R-10	7	50	22	45	40	10	●	A	0.3	SH M10x30	
763-22R-10	7	63	22	47	40	10	●	A	0.5	SH M10x30	

- When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm

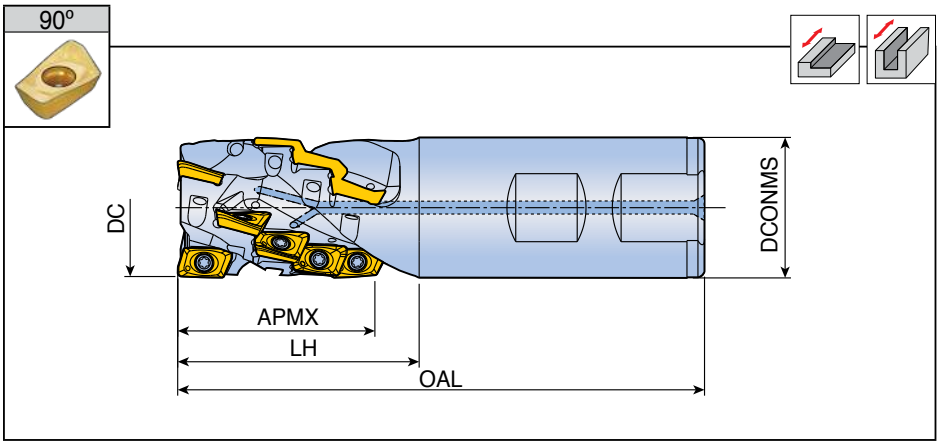
Spare parts

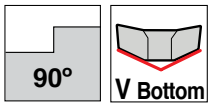
Designation	Screw	Wrench			
					
TFM90AV-10	TS 30B062/HG-P	TD 8P			

TEF-AV10

WINMILL ADVANCED MACHINING

Extended flute cutters



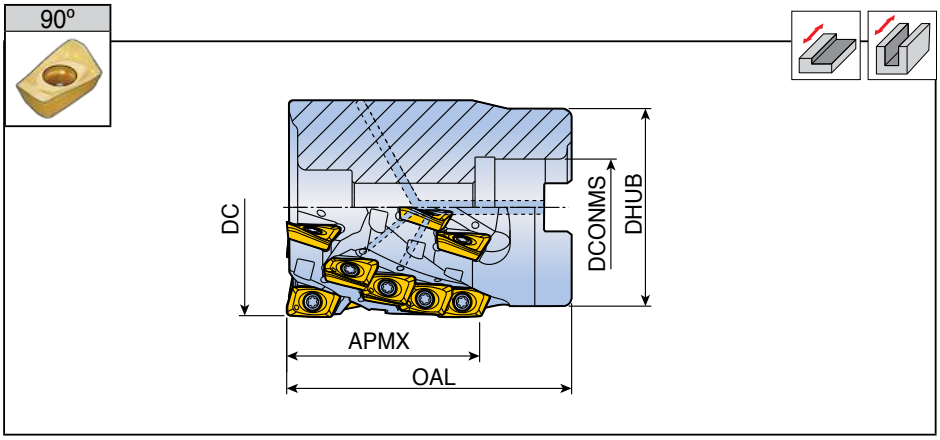


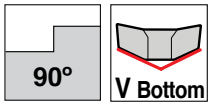
Designation		No. of insert	Dimension (mm)					Coolant hole	Kg	Insert
			DC	DCONMS	OAL	LH	APMX			
TEF D25-27-W25-AV10-2F	2	6	25	25	95	35	27	●	0.3	AVKT 10-M/EL AVCT 10-AL
D32-44-W32-AV10-3F	3	15	32	32	120	55	44	●	0.6	

TES-AV10

WINMILL ADVANCED MACHINING

Extended flute cutters





Designation		No. of insert	Dimension (mm)					Coolant hole	Kg	Mounting bolt	Insert
			DC	DCONMS	OAL	DHUB	APMX				
TES D40-35-16R-AV10-4F	4	16	40	16	55	38	35	●	0.3	SH M8x40	AVKT 10-M/EL AVCT 10-AL
D50-44-22R-AV10-5F	5	25	50	22	65	45	44	●	0.6	SH M10x50	

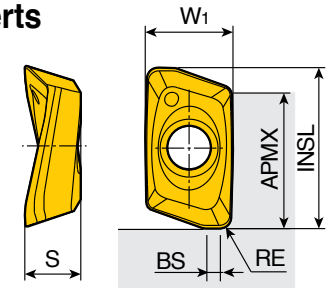
Spare parts

Designation	Screw	Wrench			
					
TEF/TES-AV10	TS 30B062/HG-P	TD 8P			

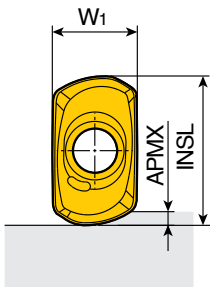
AVK(C)T 10

WINMILL ADVANCED MACHINING

Inserts

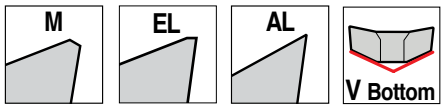


M / EL / AL



HF (High Feed)

Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
10-M/EL	11.5-12.4	6.8	4.1-4.3	9.6-10	0-1.0	0.8-3.2
10-HF	11.6	6.6	4.4	1.0	-	-
10-AL	11.5-12.5	6.8	4.1-4.5	9.6-10.1	0-1.2	0.4-3.0



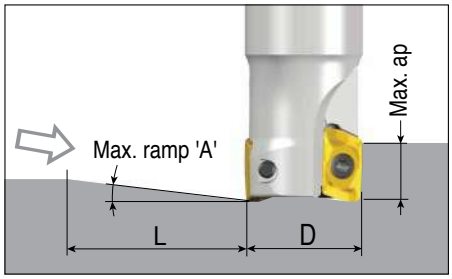
Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	K10
	**AVKT**	**1004 PER-M**	2.5-8.0	0.12-0.06	●		●			●		●	
		100416R-M	2.5-8.0	0.12-0.06	●								
		100432R-M	2.5-8.0	0.12-0.06	●								
	**AVKT**	**1004 PER-EL**	2.5-8.0	0.06-0.03			●						
		100416R-EL	2.5-8.0	0.06-0.03			●						
		100432R-EL	2.5-8.0	0.06-0.03			●						
	**AVKT**	**1004R-HF**	0.1-1.0	0.80-0.30	●		●						
	**AVCT**	**100404R-AL**	2.5-8.0	0.50-0.10									●
		1004 PER-AL	2.5-8.0	0.50-0.10									●
		100420R-AL	2.5-8.0	0.50-0.10									●
		100430R-AL	2.5-8.0	0.50-0.10									●

●: Standard items

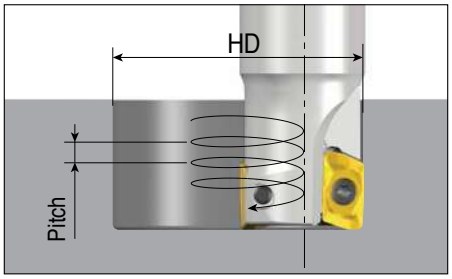
Ramping Data

WINMILL ADVANCED MACHINING

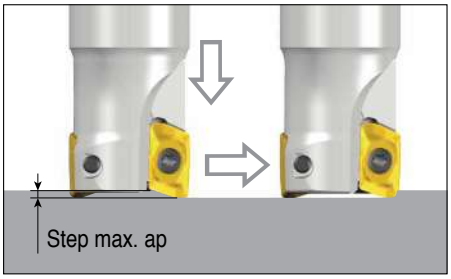
Straight ramping



Helical ramping



Step down



AVKT 10

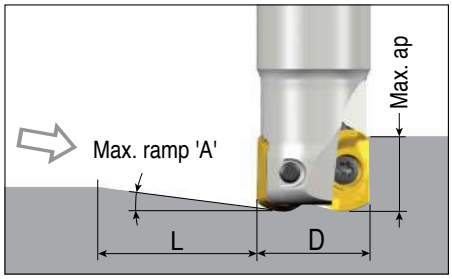
(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	10.9	10	52	20		2.4	1.7
					32	9.7	
Ø18	8.3	10	69	24		2.7	2.2
					36	8.2	
Ø20	6.5	10	88	28		2.9	2.1
					40	7.2	
Ø25	4.3	10	133	38		3.1	2.3
					50	5.9	
Ø32	2.9	10	198	52		3.2	2
					64	5.1	
Ø40	2.1	10	273	68		3.2	2.2
					80	4.6	
Ø50	1.6	10	358	88		3.3	2.4
					100	4.4	
Ø63	1.2	10	478	114		3.4	2.1
					126	4.1	

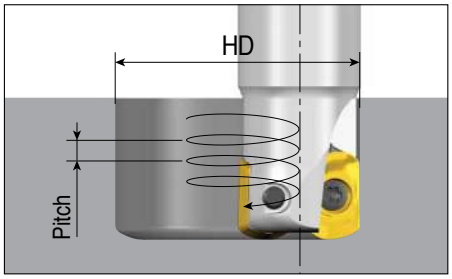
Ramping Data

WINMILL ADVANCED MACHINING

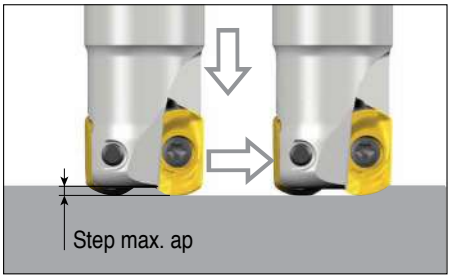
Straight ramping



Helical ramping



Step down

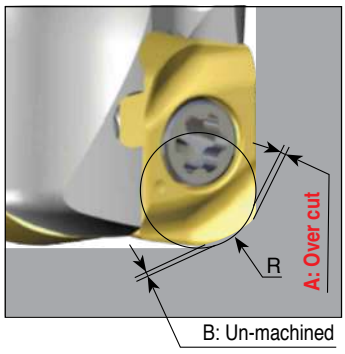


AVKT 1004R-HF

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	7.6	10	75	20.5		1.9	0.8
					32	6.7	
Ø18	5.5	10	104	24.5		2.0	1
					36	5.4	
Ø20	4.2	10	136	28.5		2.0	1.2
					40	4.6	
Ø25	2.6	10	220	38.5		1.9	1.3
					50	3.6	
Ø32	1.7	10	337	52.5		1.9	1.4
					64	3.0	
Ø40	1.2	10	478	68.5		1.9	1.4
					80	2.6	
Ø50	0.9	10	637	88.5		1.9	1.4
					100	2.5	
Ø63	0.7	10	819	114.5		2.0	1.4
					126	2.4	

Programming technical data



	R Program	A Over cut	B Un machined
AVKT 1004R-HF	1.7	0	0.49
	1.9	0	0.43
	2.0	0.01	0.40
	2.5	0.13	0.24
	3.0	0.30	0.11

: Recommended program 'R'