

NPA

New Product Announcement No. 2019-44



TANGSFEED

TANGENTIAL MILL



High Productivity Shoulder Mill with Tangential Insert



KEY POINT

A higher productivity perpendicular machining solution, TaeguTec's new tangential type TANG-SFEED inserts and cutter line.

The new **TANG-SFEED** line is a double-sided four-corner tangential insert line capable of ramping applications. Furthermore, the insert's high positive helical cutting edge design means high machining performance.

The new line is available in two insert sizes: 09, 14 mm and related cutters. Also included is a general purpose LPKU insert and a high precision LPHU insert.

Not only does the new line offer the advantages of a tangential insert, its new unique geometry enables for better productivity across a diverse range of high feed applications.

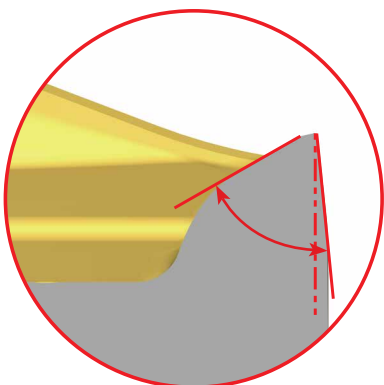
For further technical questions, please contact TaeguTec's product manager.

Features

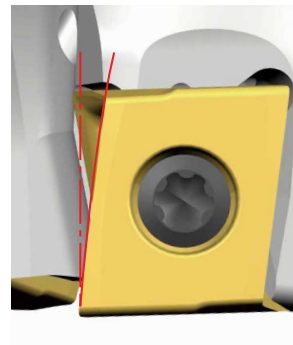
- Capable of helical and straight ramping applications



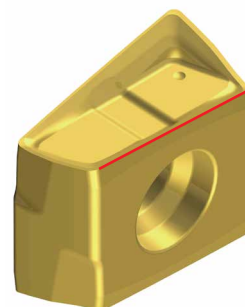
- Enhanced cutting stability due to the reinforced cutting edge



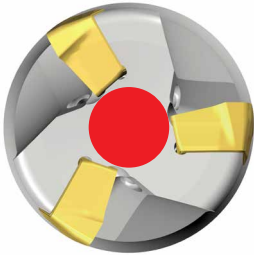
- Insert's helical cutting edge enables for smooth machining



- Unique tangential insert design
 - Minimizes mismatch during step machining
 - Excellent chip evacuation



- Tangential cutter's larger diameter core offers a higher stiffness cutter compared to the radial type

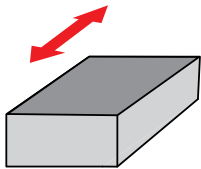


Radial type

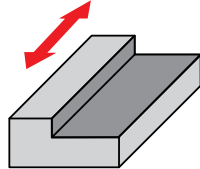


Tangential type

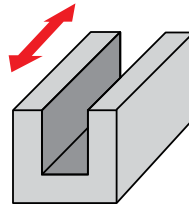
- A wide variety of applications



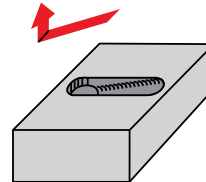
Facing



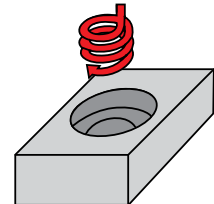
Shouldering



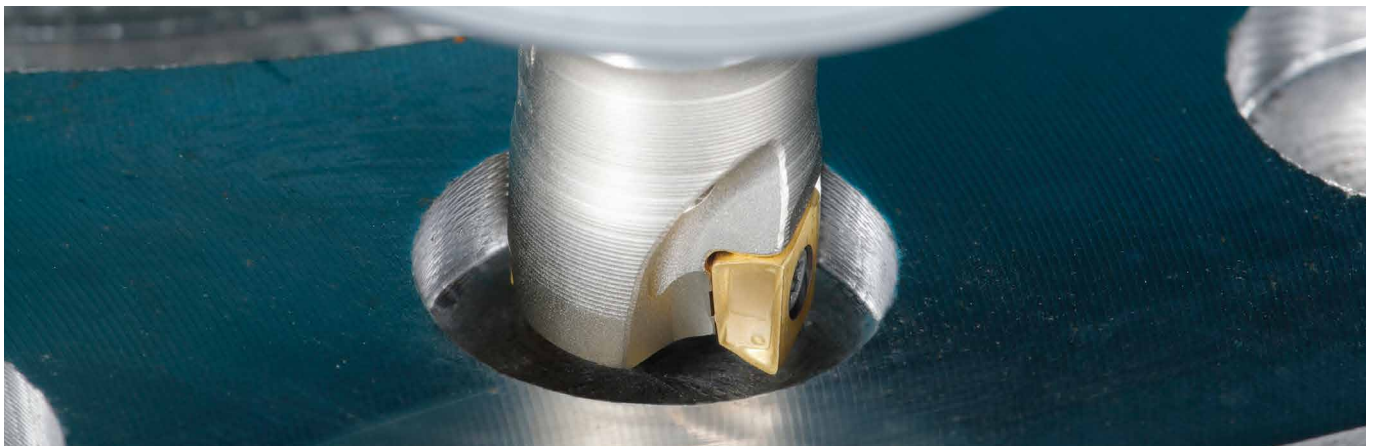
Slotting



Straight ramping



Helical ramping



Availability

In stock

Price

Available in the GAL system





Sincerely,
 TaeguTec

Cho Yeo-myeong
 Rotating General PM

Sincerely,
 TaeguTec

Lee Jae-wook
 Milling Product Manager

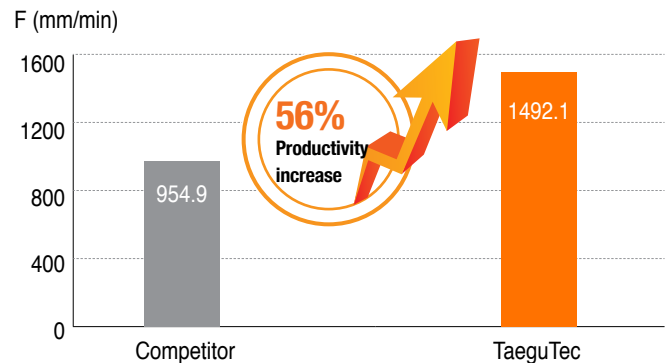
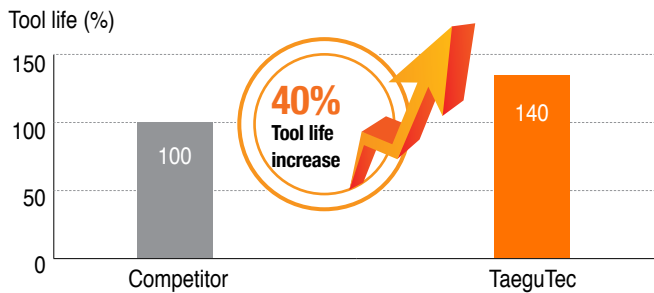
Case study 1

		Competitor	TaeguTec
Material		AISI 304	
Cutter		Ø25, 3z	4T-TE90-325-W25-09 (Ø25, 3z)
Insert		4 corner tangential insert	LPKU 090404-PNR-M TT9080
Cutting Speed	V (m/min)	150	150
Feed	f (mm/tooth)	0.1	0.1
Depth of cut	ap (mm)	8	8
Width of cut	ae (mm)	20	20
Coolant		Dry	Dry
Bottom surface roughness			
Side surface roughness			

Excellent
productivity and
surface
roughness

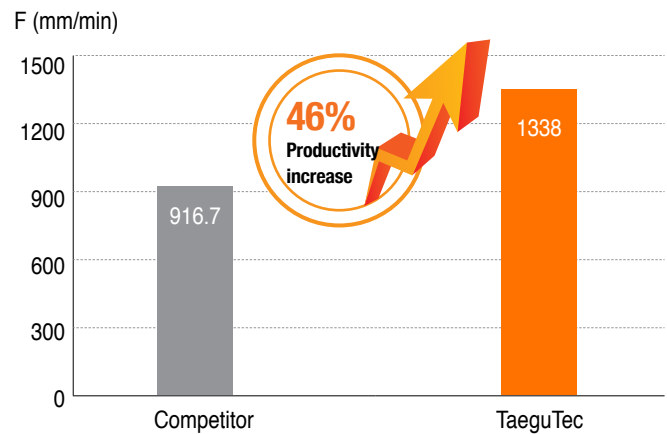
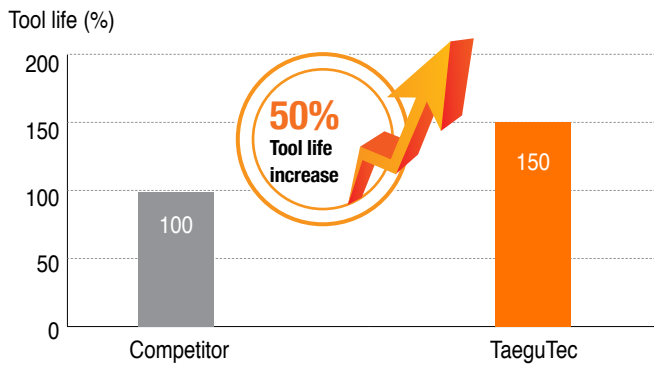
Case study 2

		Competitor	TaeguTec
Material		AISI 4140	
Cutter		Ø32, 4z	4T-TE90-532-W32-09 (Ø32, 5z)
Insert		4 corner radial insert	LPKU 090404-PNR-M TT9080
Cutting Speed	V (m/min)	200	200
Feed	f (mm/tooth)	0.1	0.15
	F (mm/min)	954.9	1492.1
Depth of cut	ap (mm)	3	3
Width of cut	ae (mm)	22.5	22.5
Coolant		Dry	Dry
Tool life (%)		100	140



Case study 3

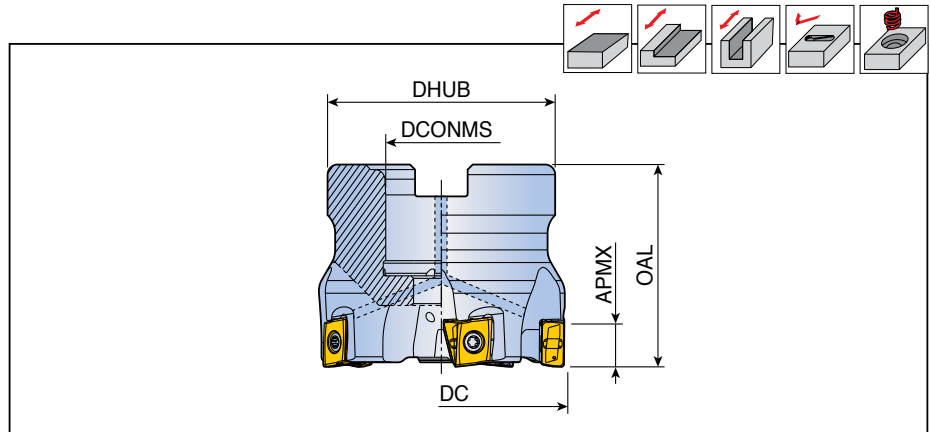
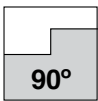
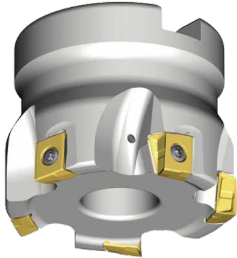
		Competitor	TaeguTec
Material		AISI 4140	
Cutter		Ø50, 6z	4T-TF90-750-22R-09 (Ø50, 7z)
Insert		4 corner radial insert	
Cutting Speed		200	
Feed	V (m/min)	200	
	f (mm/tooth)	0.12	0.15
	F (mm/min)	916.7	1338
Depth of cut	ap (mm)	5	5
Width of cut	ae (mm)	30	30
Coolant		Dry	
Tool life (%)		100	150



4T-TF90-09



Face mills



Designation		Dimension (mm)					Coolant	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
4T-TF90-640-16R-09	6	40	16	38	40	8.3	●	A	0.3	SH M8x30	LPK(H)U 0904...
550-22R-09	5	50	22	45	40	8.3	●	A	0.4	SH M10x30	
750-22R-09	7	50	22	45	40	8.3	●	A	0.4	SH M10x30	
663-22R-09	6	63	22	47	40	8.3	●	A	0.5	SH M10x30	
1063-22R-09	10	63	22	47	40	8.3	●	A	0.5	SH M10x30	

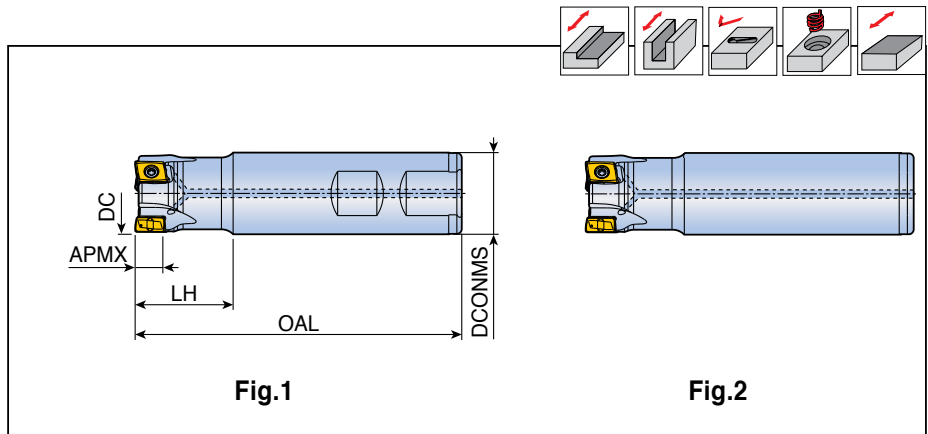
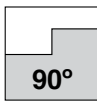
Spare parts

Designation	Screw	Wrench	Wrench handle		
4T-TF90-09	TS 30D082-P	TBLD T08P-W4	THND 4W		

4T-TE90-09



End mills

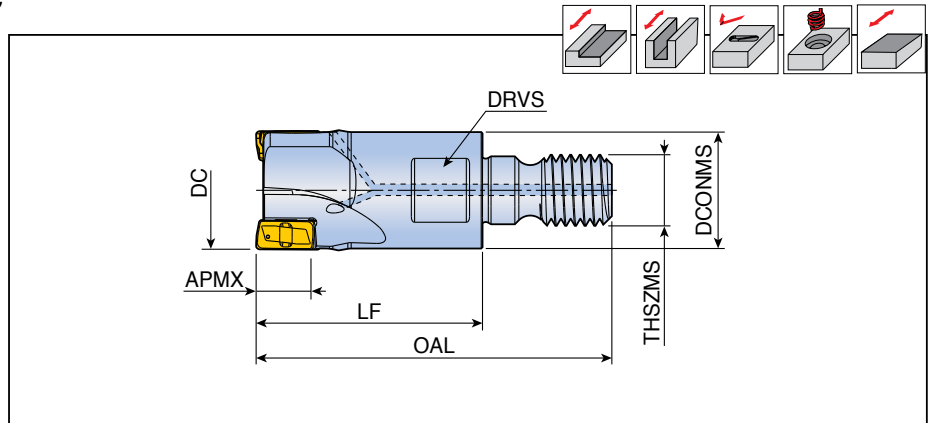
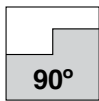


Designation	✱	Dimension (mm)					Coolant	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
4T-TE90-220-W20-09	2	20	20	100	30	8.3	●	1	LPK(H)U 0904...
220-20-09-L170	2	20	20	170	30	8.3	●	2	
320-W20-09	3	20	20	100	30	8.3	●	1	
325-W25-09	3	25	25	100	30	8.3	●	1	
325-25-09-L200	3	25	25	200	30	8.3	●	2	
425-W25-09	4	25	25	100	30	8.3	●	1	
425-25-09-L120	4	25	25	120	30	8.3	●	2	
332-W32-09	3	32	32	110	35	8.3	●	1	
332-32-09-L210	3	32	32	210	35	8.3	●	2	
532-W32-09	5	32	32	110	35	8.3	●	1	
532-32-09-L130	5	32	32	130	35	8.3	●	2	
440-W32-09	4	40	32	115	30	8.3	●	1	
440-32-09-L150	4	40	32	150	30	8.3	●	2	
640-W32-09	6	40	32	115	30	8.3	●	1	

4T-TE90-M-09



Modular heads for T-FLEXTEC



Designation	✳	Dimension (mm)							Coolant	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
4T-TE90-220-M10-09	2	20	18	30	50	M10	8.3	15	●	LPK(H)U 0904...
320-M10-09	3	20	18	30	50	M10	8.3	15	●	
425-M12-09	4	25	21	35	57	M12	8.3	17	●	
532-M16-09	5	32	29	43	68	M16	8.3	25	●	
640-M16-09	6	40	29	43	68	M16	8.3	25	●	

• Matched with T-FLEXTEC holder

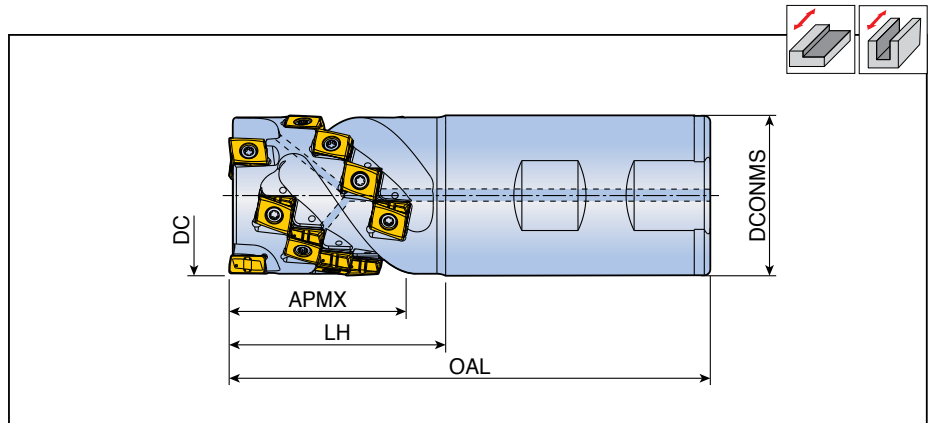
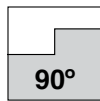
Spare parts

Designation	Screw 	Wrench 	Wrench handle 		
4T-TE90-09	TS 30D082-P	TBLD T08P-W4	THND 4W		

4T-TEF-09



Extended flute cutters



Designation	No. of insert	Dimension (mm)					Coolant	Insert	
		DC	DCONMS	OAL	LH	APMX			
4T-TEF D25-36-W25-09	2	10	25	25	100	43	36	●	LPK(H)U 0904...
D32-36-W32-09	3	15	32	32	105	44	36	●	
D32-43-W32-09	3	18	32	32	115	52	43	●	
D40-43-W40-09	3	18	40	40	125	54	43	●	
D40-51-W40-09	3	21	40	40	135	64	51	●	

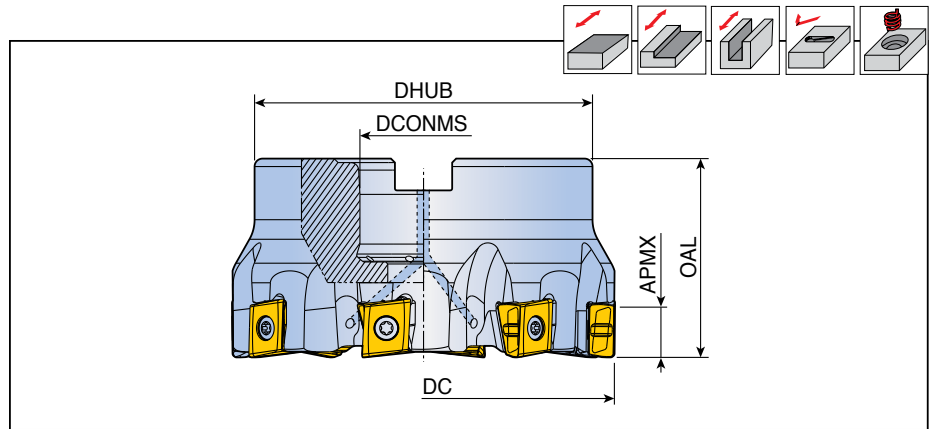
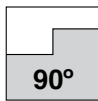
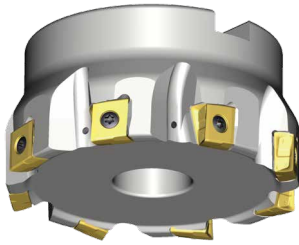
Spare parts

Designation	Screw	Wrench	Wrench handle		
4T-TEF-09	TS 30D082-P	TBLD T08P-W4	THND 4W		

4T-TF90-14

TANGSPEED
TANGENTIAL MILL

Face mills



Designation		Dimension (mm)					Coolant	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
4T-TF90-440-16R-14	4	40	16	38	40	12.5	●	A	0.3	SH M8x30	LPKU 1407...
450-22R-14	4	50	22	45	40	12.5	●	A	0.3	SH M10x30	
650-22R-14	6	50	22	45	40	12.5	●	A	0.3	SH M10x30	
563-22R-14	5	63	22	47	40	12.5	●	A	0.5	SH M10x30	
863-22R-14	8	63	22	47	40	12.5	●	A	0.5	SH M10x30	
780-27R-14	7	80	27	58	50	12.5	●	A	1.0	SH M12x35	
1080-27R-14	10	80	27	58	50	12.5	●	A	1.2	SH M12x35	
8100-32R-14	8	100	32	85	50	12.5	●	A	2.0	SH M16x35	
12100-32R-14	12	100	32	85	50	12.5	●	A	2.1	SH M16x35	
10125-40R-14	10	125	40	85	63	12.5	●	A	3.1	SH M20x40	
14125-40R-14	14	125	40	85	63	12.5	●	A	3.3	SH M20x40	
12160-40R-14	12	160	40	110	63	12.5	x	C	4.1	-	
16160-40R-14	16	160	40	110	63	12.5	x	C	4.3	-	
14200-60R-14	14	200	60	130	63	12.5	x	C	5.7	-	
18200-60R-14	18	200	60	130	63	12.5	x	C	5.8	-	

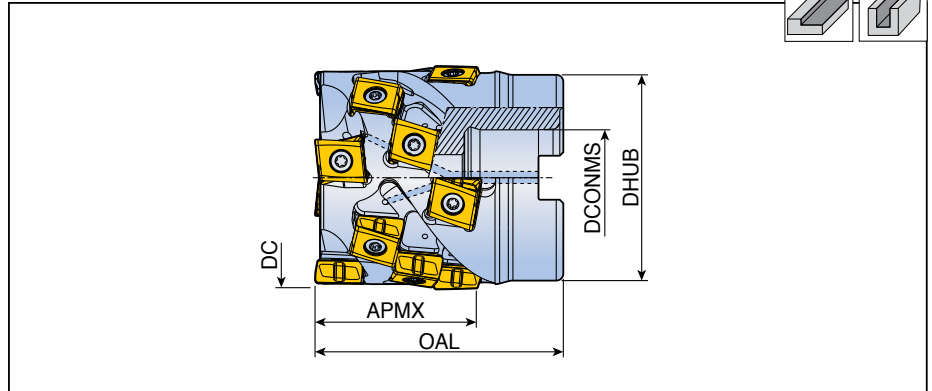
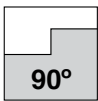
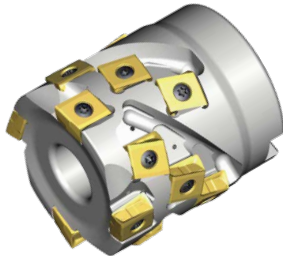
Spare parts

Designation	Screw	Wrench	Wrench handle		
4T-TF90-14	TS 40G110I	TBLD T15-W6	SW6-T		

4T-TES-14



Extended flute cutters



Designation	No. of insert	Dimension (mm)							Coolant	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX						
4T-TES D50-34-22R-14	3	9	50	22	45	55	34	●	0.5	SH M10x40	LPKU 1407...	
D50-45-22R-14	3	12	50	22	45	65	45	●	0.6	SH M10x50		
D63-45-27R-14	4	16	63	27	58	70	45	●	1.1	SH M12x50		
D63-56-27R-14	4	20	63	27	58	80	56	●	1.3	SH M12x60		
D80-56-32R-14	5	25	80	32	74	85	56	●	2.3	SH M16x60		
D100-56-40R-14	6	30	100	40	94	90	56	●	4.1	SH M20x60		

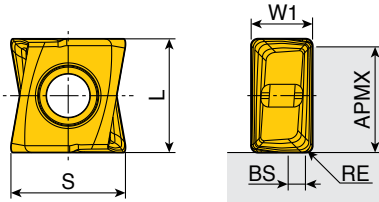
Spare parts

Designation	Screw	Wrench	Wrench handle		
4T-TES-14	TS 40G110I	TBLD T15-W6	SW6-T		

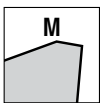
LPK(H)U



Inserts



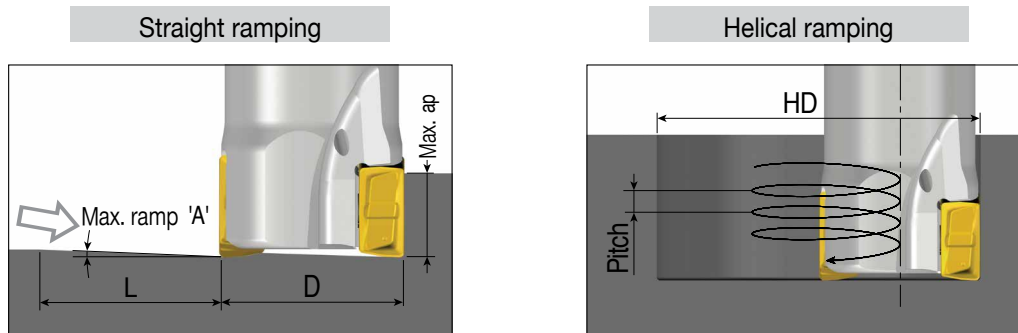
Size	Dimension (mm)					
	L	W1	S	APMX	BS	RE
09	9	4.5	8.6	8.3	0.6	0.4
14	13.5	6.7	13.5	12.5	0.9	0.8



Insert	Designation	Recommended machining conditions		Coated							Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525	TT7080	TT7515	TT6080		K10
	LPKU 090404 PNR-M	2.5-6.0	0.15-0.06	●		●							
	140708 PNR-M	3.5-10.0	0.20-0.10	●		●	●						
	LPHU 090404 PNR-M	2.5-6.0	0.15-0.06			●				●			

●: Standard items

Ramping Data

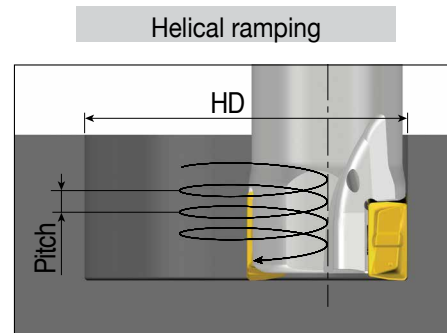
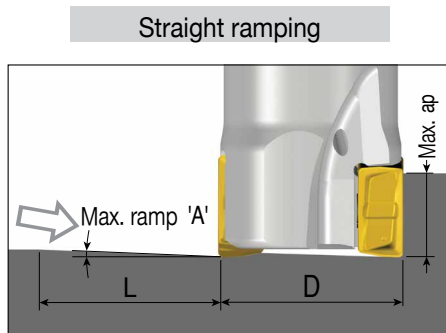


LPK(H)U 09

(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.
Ø20	1.4	8.3	328	33		1.0
					40	1.5
Ø25	1.1	8.3	432	43		1.0
					50	1.5
Ø32	0.8	8.3	594	57		1.1
					64	1.4
Ø40	0.6	8.3	793	73		1.0
					80	1.3
Ø50	0.4	8.3	1057	93		1.0
					100	1.2
Ø63	0.3	8.3	1359	119		1.0
					126	1.2

Ramping Data



LPKU 14

(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.
Ø40	0.9	12.5	754	69		1.5
					80	2.0
Ø50	0.7	12.5	1023	89		1.5
					100	1.9
Ø63	0.5	12.5	1302	115		1.5
					126	1.9
Ø80	0.4	12.5	1790	149		1.5
					160	1.7
Ø100	0.3	12.5	2387	189		1.4
					200	1.6
Ø125	0.2	12.5	2865	239		1.5
					250	1.7
Ø160	0.2	12.5	3581	309		1.6
					320	1.7
Ø200	0.1	12.5	4775	389		1.5
					400	1.6

KIT COLLECTIONS

These kit products are available in the format listed below.



Cat. No.	Designation	Bill of materials	Qty.
6334795	KISFT-4T-TE90-425-W25-09	4T-TE90-425-W25-09	1
		LPKU 090404 PNR-M TT9080	8
6334796	KISFT-4T-TE90-532-W32-09	4T-TE90-532-W32-09	1
		LPKU 090404 PNR-M TT9080	10
6334797	KISFT-4T-TF90-640-16R-09	4T-TF90-640-16R-09	1
		LPKU 090404 PNR-M TT9080	12
6334798	KISFT-4T-TF90-750-22R-09	4T-TF90-750-22R-09	1
		LPKU 090404 PNR-M TT9080	14



Cat. No.	Designation	Bill of materials	Qty.
6337860	KISFS-4T-TE90-425-W25-09	4T-TE90-425-W25-09	1
		LPKU 090404 PNR-M TT9080	50
6337861	KISFS-4T-TE90-532-W32-09	4T-TE90-532-W32-09	1
		LPKU 090404 PNR-M TT9080	50
6337862	KISFS-4T-TF90-640-16R-09	4T-TF90-640-16R-09	1
		LPKU 090404 PNR-M TT9080	50
6337863	KISFS-4T-TF90-750-22R-09	4T-TF90-750-22R-09	1
		LPKU 090404 PNR-M TT9080	50



Cat. No.	Designation	Bill of materials	Qty.
6338433	KISFF-A-LPKU 09-M TT9080	LPKU 090404 PNR-M TT9080	100
6338434	KISFF-B-LPKU 09-M TT9080		300