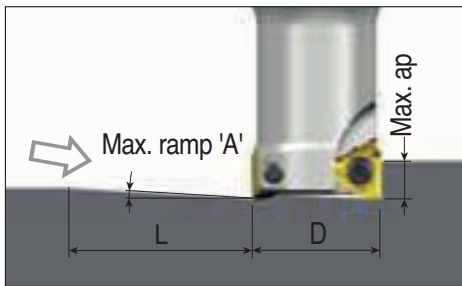
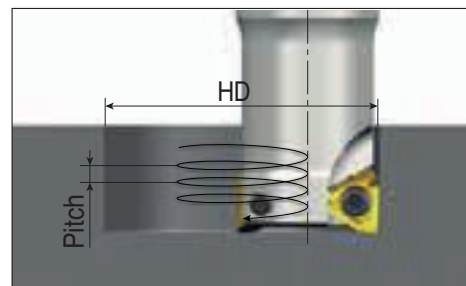


Straight ramping



Helical ramping



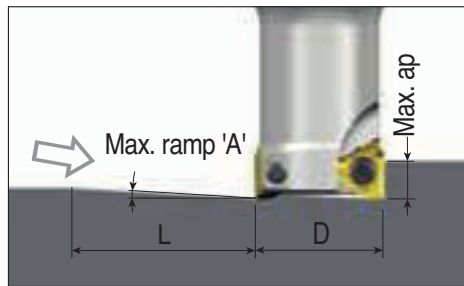
3PKT 04

(unit: mm)

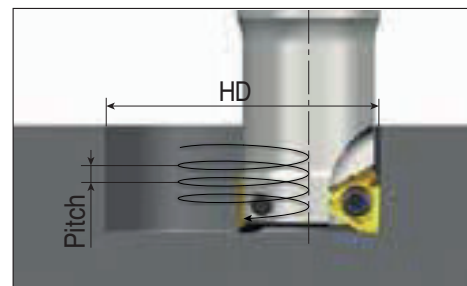
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	2.1	3.5	95	13.2		0.6
					16	0.9
Ø10	2.2	3.5	91	17.2		0.8
					20	1.2
Ø11	3.6	3.5	56	19.2		1.6
					22	2.1
Ø12	3.3	3.5	61	21.2		1.6
					24	2.1
Ø13	2.5	3.5	80	23.2		1.4
					26	1.7
Ø14	2.2	3.5	91	25.2		1.3
					28	1.6
Ø16	1.6	3.5	125	29.2		1.1
					32	1.4

Ramping Data

Straight ramping



Helical ramping



3PK(H)T 06

(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.
Ø12	3.7	4.7	73	19.5		1.3
					24	2.1
Ø14	2.8	4.7	96	23.5		1.2
					28	1.8
Ø16	2.3	4.7	117	27.5		1.2
					32	1.7
Ø17	2.0	4.7	135	29.5		1.2
					34	1.6
Ø18	2.0	4.7	135	31.5		1.3
					36	1.7
Ø20	1.6	4.7	168	35.5		1.2
					40	1.5
Ø21	1.5	4.7	180	37.5		1.2
					42	1.5
Ø22	1.5	4.7	180	39.5		1.2
					44	1.5
Ø25	1.5	4.7	180	45.5		1.4
					50	1.7
Ø30	1.2	4.7	224	55.5		1.4
					60	1.7
Ø32	1.2	4.7	224	59.5		1.5
					64	1.8
Ø35	1.0	4.7	269	65.5		1.4
					70	1.6
Ø40	0.7	4.7	385	75.5		1.2
					80	1.3

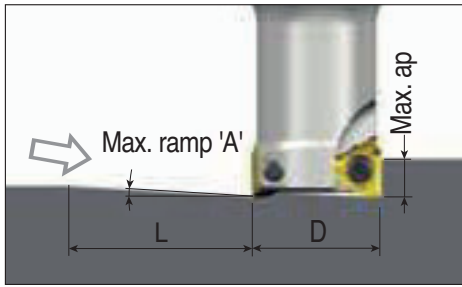
3PK(H)T 10

(unit: mm)

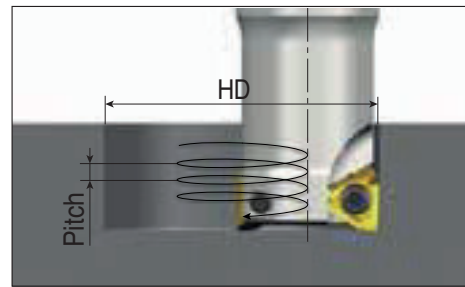
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	7.0	7.0	57	24.7		2.8
					32	5.2
Ø20	3.3	7.0	121	33.9		2.1
					40	3.1
Ø21	3.2	7.0	125	35.9		2.2
					42	3.1
Ø22	3.2	7.0	125	37.9		2.4
					44	3.3
Ø25	2.8	7.0	143	43.5		2.4
					50	3.3
Ø26	2.6	7.0	154	45.9		2.4
					52	3.1
Ø30	2.0	7.0	201	53.9		2.2
					60	2.8
Ø32	1.8	7.0	223	57.5		2.1
					64	2.7
Ø33	1.7	7.0	236	59.9		2.1
					66	2.6
Ø40	1.3	7.0	309	73.7		2.0
					80	2.4
Ø50	1.0	7.0	401	93.7		2.0
					100	2.3
Ø63	0.8	7.0	502	119.7		2.1
					126	2.3

Ramping Data

Straight ramping



Helical ramping



3PK(H)T 15

(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.
Ø32	3.2	11.0	197	53.5	64	3.2
						4.8
Ø33	3.1	11.0	203	55.5	66	3.3
						4.8
Ø35	3.1	11.0	203	59.5	70	3.5
						5.1
Ø40	2.0	11.0	315	70.1	80	2.8
						3.7
Ø50	1.5	11.0	420	90.1	100	2.8
						3.5
Ø63	1.1	11.0	573	116.1	126	2.7
						3.2
Ø80	0.8	11.0	788	150.3	160	2.6
						3.0
Ø100	0.6	11.0	1051	190.5	200	2.5
						2.8
Ø125	0.5	11.0	1261	240.3	250	2.7
						2.9
Ø160	0.3	11.0	2102	310.3	320	2.1
						2.2
Ø200	0.2	11.0	3153	390.3	400	1.8
						1.9

3PK(H)T 19

(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	3.6	15.0	239	66.7	80	4.5
						6.7
Ø50	2.2	15.0	391	87.9	100	3.9
						5.1
Ø63	1.7	15.0	506	113.9	126	4
						5
Ø80	1.3	15.0	661	147.9	160	4.1
						4.8
Ø100	1.0	15.0	860	187.9	200	4.1
						4.7
Ø125	0.8	15.0	1075	237.9	250	4.2
						4.7
Ø160	0.6	15.0	1433	307.9	320	4.1
						4.5
Ø200	0.4	15.0	2150	387.9	400	3.5
						3.7
Ø250	0.3	15.0	2866	487.9	500	3.3
						3.5