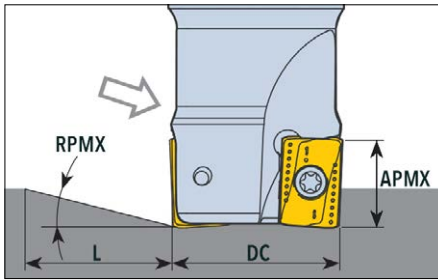


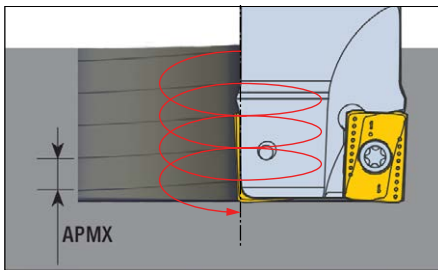
RAMPING DATA (12MM)

STRAIGHT RAMPING - 1TJ1Q, TJ5Q, TJ6Q



DC Cutting Dia.	RMPX Ramping Angle	L	APMX
1.00	1.4	17	0.43
1.25	1.0	25	0.43
1.50	0.7	31	0.43
2.00	0.6	41	0.43
2.50	0.4	62	0.43
3.00	0.3	82	0.43
4.00	0.2	124	0.43

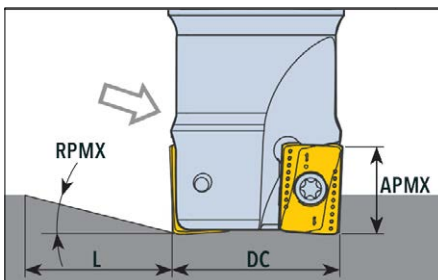
HELICAL RAMPING - 1TJ1Q, TJ5Q, TJ6Q



Cutter Dia. (DC) Using R.031 Insert	MIN. Diameter Milled Hole	MIN. APMX/Rev	MAX. Diameter Milled Hole	MAX. APMX/Rev
1.00	1.25	0.01	2.00	0.06
1.25	1.75	0.02	2.50	0.06
1.50	2.25	0.02	3.00	0.06
2.00	3.25	0.03	4.00	0.05
2.50	4.25	0.03	5.00	0.04
3.00	5.25	0.03	6.00	0.04
4.00	7.25	0.03	8.00	0.04

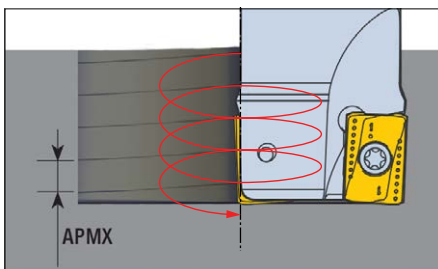
RAMPING DATA (16MM)

STRAIGHT RAMPING - 1TJ1N, TJ5N, TJ6N



DC Cutting Dia.	RMPX Ramping Angle	L	APMX
1.25	1.20	28	0.59
1.50	1.10	31	0.59
2.00	1.00	34	0.59
2.50	0.60	56	0.59
3.00	0.50	68	0.59
4.00	0.35	97	0.59
5.00	0.25	135	0.59
6.00	0.15	226	0.59
8.00	0.05	677	0.59

HELICAL RAMPING - 1TJ1N, TJ5N, TJ6N



Cutter Dia. (DC) Using R.031 Insert	MIN. Diameter Milled Hole	MIN. APMX/Rev	MAX. Diameter Milled Hole	MAX. APMX/Rev
1.25	1.75	0.024	2.44	0.071
1.50	2.40	0.039	2.94	0.079
2.00	3.25	0.055	3.94	0.091
2.50	4.25	0.047	4.94	0.071
3.00	5.50	0.055	5.94	0.075
4.00	7.25	0.051	7.94	0.063
5.00	9.10	0.047	9.94	0.059
6.00	11.85	0.039	11.94	0.043
8.00	15.00	0.016	15.94	0.020