

● Standard cutting conditions

ISO	Workpiece materials	Hardness	Grades	Chip-breaker	Cutting speed		Feed per tooth
		HB			Vc (sfm)	fz (ipt)	
N	Aluminum alloy	60	TH10	AJ	900 - 1600	0.006 - 0.015	
		100	TH10	AJ	650 - 6600	0.004 - 0.010	
	Cast aluminum alloy (Si ≤ 12%)	75	TH10	AJ	650 - 6600	0.006 - 0.012	
		90	TH10	AJ	650 - 5000	0.004 - 0.010	
	Cast aluminum alloy (Si > 12%)	75	TH10	AJ	650 - 3200	0.003 - 0.006	
		90	TH10	AJ	650 - 2600	0.003 - 0.006	
	Copper alloys (Pb > 1%)	90	TH10	AJ	900 - 3200	0.004 - 0.006	
		130	TH10	AJ	900 - 2600	0.004 - 0.006	
	Copper alloys	110	TH10	AJ	300 - 1600	0.004 - 0.006	
		90	TH10	AJ	300 - 900	0.004 - 0.006	
	Duroplastics, fiber plastics	90	TH10	AJ	900 - 1600	0.006 - 0.015	
		100	TH10	AJ	650 - 6600	0.004 - 0.010	
Hard rubber	90	TH10	AJ	650 - 6600	0.006 - 0.012		
	100	TH10	AJ	650 - 5000	0.004 - 0.010		

Safety guidelines

1. Use only the original inserts, cutters and spare parts.
2. Insert pocket must be cleaned before clamping the insert.
3. Clamp torque of screw should be 4.5 N·m.
4. For safety reasons, use a new screw when changing the insert.
5. Maximum RPM values are determined based on the burst test. Using RPM beyond maximum values may cause insert breakage, machine damage or personal injury.
6. XVCT insert has sharp cutting edges. Always wear gloves for protection from injury when handling.



Tool dia.: ϕD_c (in), Number of revolutions: n (rpm), Feed rate: V_f (ipm), Depth of cut: $a_p = 0.630''$, No. of inserts: z																	
$\phi 1.000''$		$\phi 1.250''$		$\phi 1.500''$		$\phi 2.000''$		$\phi 2.500''$		$\phi 3.000''$		$\phi 4.000''$		$\phi 5.000''$			
$z = 2$		$z = 2$		$z = 3$		$z = 3$		$z = 4$		$z = 5$		$z = 5$		$z = 6$		$z = 7$	
n	V_f	n	V_f	n	V_f	n	V_f	n	V_f	n	V_f	n	V_f	n	V_f	n	V_f
19,100	380	14,900	290	14,900	440	11,900	350	9,500	370	7,600	370	6,000	300	4,800	280	3,800	260
$V_c = 5,000 \text{ sfm}, f_z = 0.010 \text{ ipt}$																	
12,700	200	9,900	160	9,900	230	8,000	190	6,400	200	5,100	200	4,000	160	3,200	150	2,500	140
$V_c = 3,300 \text{ sfm}, f_z = 0.008 \text{ ipt}$																	
12,700	200	9,900	160	9,900	230	8,000	190	6,400	200	5,100	200	4,000	160	3,200	150	2,500	140
$V_c = 3,300 \text{ sfm}, f_z = 0.008 \text{ ipt}$																	
10,200	120	8,000	90	8,000	140	6,400	110	5,100	120	4,000	120	3,200	90	2,500	90	2,000	80
$V_c = 2,600 \text{ sfm}, f_z = 0.006 \text{ ipt}$																	
7,600	60	6,000	50	6,000	70	4,800	60	3,800	60	3,000	60	2,400	50	1,900	40	1,500	40
$V_c = 2,000 \text{ sfm}, f_z = 0.004 \text{ ipt}$																	
6,400	50	5,000	40	5,000	60	4,000	50	3,200	50	2,500	50	2,000	40	1,600	40	1,300	40
$V_c = 1,600 \text{ sfm}, f_z = 0.004 \text{ ipt}$																	
7,600	70	6,000	60	6,000	90	4,800	70	3,800	70	3,000	70	2,400	60	1,900	50	1,500	50
$V_c = 2,000 \text{ sfm}, f_z = 0.005 \text{ ipt}$																	
6,400	60	5,000	50	5,000	70	4,000	60	3,200	60	2,500	60	2,000	50	1,600	50	1,300	40
$V_c = 1,600 \text{ sfm}, f_z = 0.005 \text{ ipt}$																	
3,800	40	3,000	30	3,000	40	2,400	30	1,900	40	1,500	40	1,200	30	1,000	30	800	30
$V_c = 1,000 \text{ sfm}, f_z = 0.005 \text{ ipt}$																	
2,500	20	2,000	20	2,000	30	1,600	20	1,300	20	1,000	20	800	20	600	20	500	20
$V_c = 660 \text{ sfm}, f_z = 0.005 \text{ ipt}$																	

