

**S**

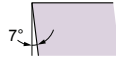
**C**

**M**

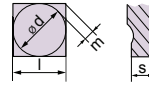
**T**



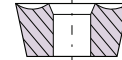
Shape



Clearance Angle



Tolerance  
 $d \pm 0.05$   
 $m \pm 0.08$   
 $s \pm 0.13$



Fixing  
 Chip breaker

Insert Designation	Grade	l	s	r	Catalog Nr.
SCMT 09T304 NN	LT 1000	9	3.97	0.4	T0001918
SCMT 09T308 NN	LT 1000	9	3.97	0.8	T0001919

**NN** All purpose Chipbreaker

Square inserts with a positive rake angle with excellent cutting edge resistance. Suitable for Boring.

**Application Guide**

	Finishing	Medium	Roughing / Interrupted cut
SCMT 09T304NN	😊	😐	😞
SCMT 09T308 NN	😐	😊	😐

<b>Finishing:</b> d.o.c. = 0.30 - 1.50 mm fn = 0.08 - 0.20 mm/rev	<b>Medium:</b> d.o.c. = 0.70 - 4.50 mm fn = 0.15 - 0.45 mm/rev	<b>Roughing</b> d.o.c. = 3.00 - 7.00 mm fn = 0.35 - 0.70 mm/rev
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😊 = Good  
 😐 = Acceptable  
 😞 = Not recommended

## SCMT 09T304 NN LT 10 &amp; LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V <sub>c</sub> [m/min]		Optimal cutting conditions					
					min	max	min	max		min	max	D.O.C.	Feed	V <sub>c</sub>			
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.2	4.0	0.11	0.26	0.72	180	330	2.5	0.18	300			
		2		190 HB		3.3		0.25	0.62		280			260			
		3		250 HB		3.3		0.23	0.58		250			240			
	Low alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.2	3.3	0.10	0.23	0.60	120	280	2.5	0.15	260			
		4,6		230 HB		3.3		0.23	0.58		250			240			
		5,7		280 HB		2.7		0.21	0.48		210			200			
		8		350 HB		2.7		0.21	0.43		180			180			
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.2	3.3	0.09	0.21	0.48	70	190	2.5	0.12	180			
		10		280 HB		3.3		0.18	0.48		150			140			
		11		320 HB		2.7		0.16	0.38		130			120			
		11		350 HB		2.7		0.16	0.31		110			110			
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.2	3.3	0.10	0.21	0.38	170	270	2.5	0.12	260			
		14		240 HB		3.3		0.21	0.31		160			220	210		
	Duplex	5	X2CrNi23-4, S31500	290 HB	0.2	2.7	0.09	0.16	0.24	80	150	2.0	0.12	140			
		14		310 HB		2.7		0.16	70		140						
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.2	3.3	0.10	0.21	0.38	170	250	2.5	0.15	240			
		13		42 HRc		2.7		0.18	0.31		120			190	2.0	0.12	180
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.2	4.0	0.08	0.23	0.77	170	250	2.5	0.18	240			
		15		200 HB		4.0		0.23	0.72		160			230	220		
		16		250 HB		4.0		0.23	0.72		150			210	200		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.2	3.3	0.08	0.21	0.58	120	250	2.5	0.15	240			
		17,19		200 HB		3.3		0.21	0.48		230			220			
18,20		250 HB		3.3		0.21		0.48	190		180						
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.2	2.7	0.09	0.17	0.31	25	50	2.0	0.12	40			
		33		250 HB		2.7		0.17	25		50			40			
		34		350 HB		2.7		0.17	23		45			35			
	Ti based	10	TiAl6V4, T40	-	0.2	2.7	0.09	0.18	0.38	45	65	2.0	0.15	60			
		37		-		2.7		0.16	0.31		35			60	0.12	50	
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.2	2.4	0.05	0.14	0.24	50	100	1.9	0.11	90			
		38		50 HRc		2.0		0.12	0.20		40			90	1.5	0.09	80
		38		55 HRc		1.9		0.10	0.16		40			80	1.3	0.07	70
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.2	2.1	0.05	0.14	0.20	40	60	1.5	0.11	50			
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.2	1.9	0.05	0.10	0.16	30	50	1.3	0.07	40			
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.2	5.3	0.10	0.35	0.84	200	400	2.5	0.20	350		

## SCMT 09T308 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Optimal cutting conditions						
					min	max	min	max		min	max	D.O.C.	Feed	V <sub>c</sub>				
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.21	0.50	1.62	180	280	3.0	0.32	240				
		190 HB		4.0		0.50		1.62						220				
		250 HB		4.0		0.45		1.35						200				
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.21	0.45	1.08	120	280	3.0	0.29	200				
				230 HB		3.2		0.45						1.08	180			
				280 HB		3.2		0.18						0.40	1.08	150		
				350 HB		2.8		0.18						0.40	0.90	130		
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.18	0.40	1.08	70	190	2.5	0.27	140				
				280 HB		3.2		0.40						1.08	120			
				320 HB		2.4		0.35						0.72	100			
				350 HB		2.4		0.35						0.72	90			
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.20	0.40	1.08	170	270	3.0	0.32	200				
				240 HB		4.0		0.40		0.90				160	220	180		
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.18	0.35	0.72	80	150	2.5	0.25	100				
				310 HB		3.2		0.35		0.72				70	140	90		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.22	0.40	0.90	170	250	3.0	0.29	190				
				42 HRc		3.2		0.40		0.90				120	190	130		
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.15	0.60	1.80	170	250	3.0	0.32	200				
				200 HB		4.0		0.60		1.62				160	230	180		
				250 HB		4.0		0.55		1.62				150	210	160		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.15	0.50	1.35	120	230	3.0	0.27	160				
				200 HB		4.0		0.50		1.17				190	140			
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.5	2.4	0.20	0.35	0.63	25	45	2.0	0.25	32				
				250 HB		2.4		0.35		0.63				25	45	30		
				350 HB		2.4		0.35		0.63				23	40	28		
	Ti based	10	TiAl6V4, T40	-	0.5	3.2	0.20	0.40	0.72	45	65	2.0	0.30	55				
				-		2.4		0.35		0.63				35	55	45		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.11	0.30	0.54	50	100	2.0	0.23	80				
				50 HRc		1.6		0.25		0.36				40	90	1.5	0.18	70
				55 HRc		1.2		0.20		0.27				40	80	1.0	0.16	60
	Chilled Cast Iron	40	0.5	1.6	0.11	0.25	0.36	40	60	1.5	0.16	50						
	White Cast Iron	41	0.5	1.2	0.11	0.20	0.27	30	50	1.0	0.14	40						
NF	Al (>8%Si)	12	25	AISi12	130 HB	0.5	4.8	0.20	0.60	1.60	200	400	3.0	0.36	280			