

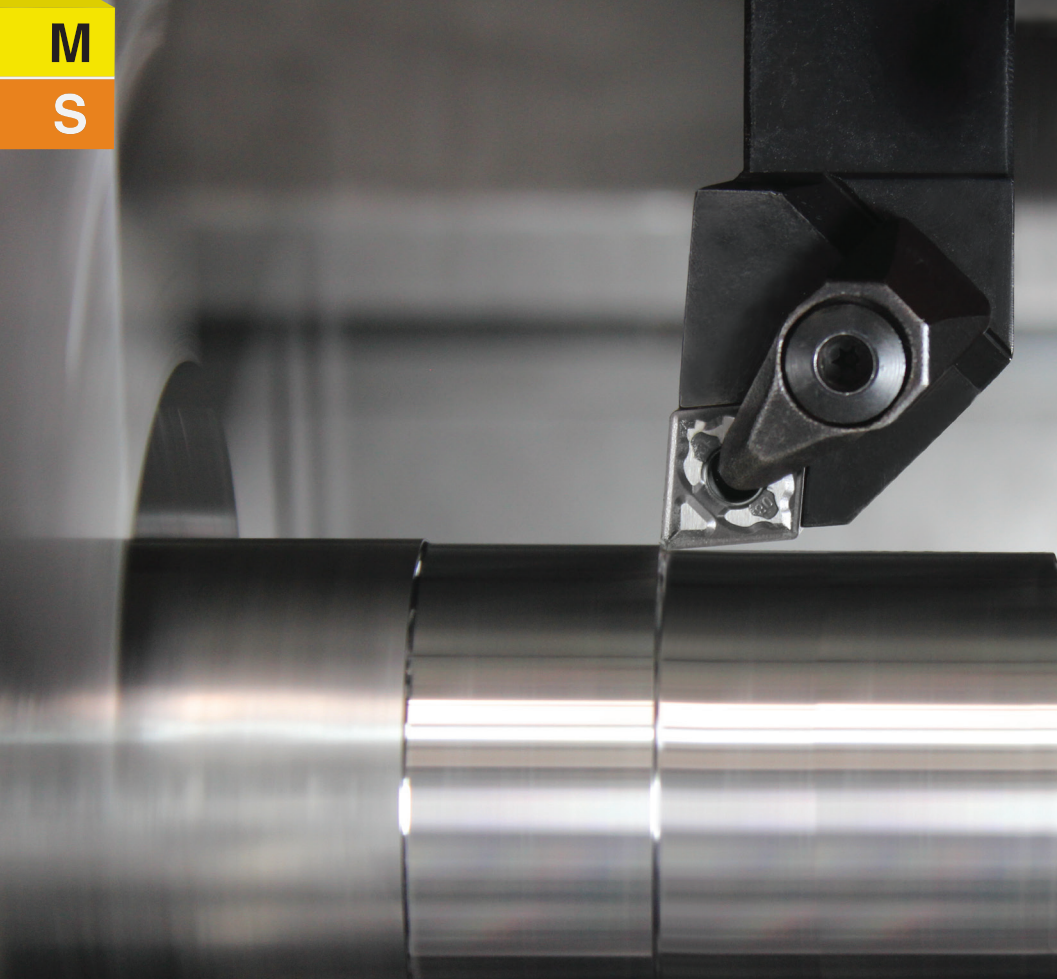


SF Chip Breaker

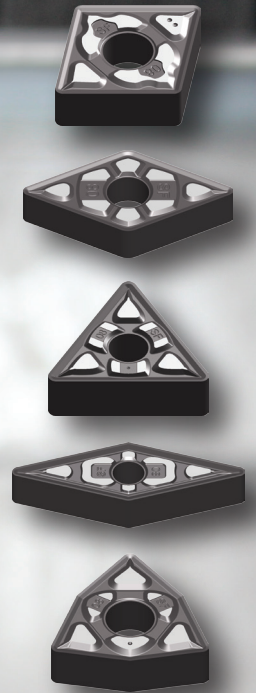


Medium to Finishing operations for
Stainless Steel and HRSA

M
S



New

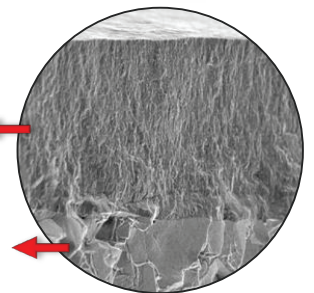


PH7... Series

- Smoother surface reduces friction
- High toughness and high hardness coating
- High temperature and oxidation resistance
- Low residual stress with very good adhesion
- Suitable for dry and wet operations

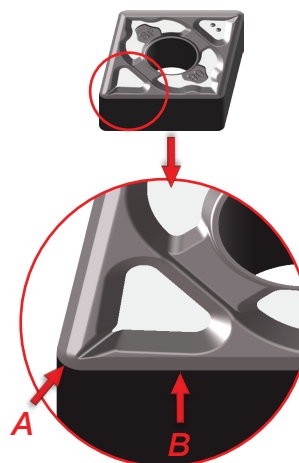
PVD AlTiN coating

Micrograin substrate



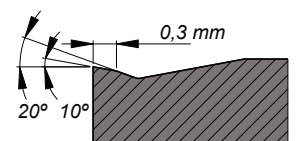
SF Chip Breaker

- Sharper edge prevents built-up edge
- Grinded surfaces for better seating
- Breaker "Inside wall" closer to the edge improves chip curving and evacuation
- Edge on the "inside wall" closer to the nose radius benefits small D.O.C.

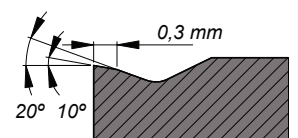


Chipbreaker profiles

Nose radius **A**



At the flank **B**



SF Chip Breaker

Inserts	(1) Geometry Code	② Grade Code		Grades				Dimensions (mm)				Cutting Conditions					
				M		S											
				ISO Ref.	ANSI Ref.	G1 PH7910	G4 PH7920	G1 PH7910	G4 PH7920	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)
	1123747	CNMG 120404-SF	CNMG 431-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23
	1123717	CNMG 120408-SF	CNMG 432-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38
	1123748	CNMG 120412-SF	CNMG 433-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55
	1123749	DNMG 110404-SF	DNMG 331-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23
	1123750	DNMG 110408-SF	DNMG 332-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38
	1123751	DNMG 150404-SF	DNMG 431-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23
	1123752	DNMG 150408-SF	DNMG 432-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38
	1123753	DNMG 150412-SF	DNMG 433-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55
	1123754	DNMG 150604-SF	DNMG 441-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	6,35	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23
	1123755	DNMG 150608-SF	DNMG 442-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	6,35	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38
	1123756	DNMG 150612-SF	DNMG 443-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	6,35	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55
	1123757	TNMG 160404-SF	TNMG 331-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23
	1123719	TNMG 160408-SF	TNMG 332-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38
	1123758	TNMG 160412-SF	TNMG 333-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55
	1123759	TNMG 220408-SF	TNMG 432-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38
	1123760	VNGM 160404-SF	VNGM 331-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23
	1123761	VNGM 160408-SF	VNGM 332-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38
	1123762	VNGM 160412-SF	VNGM 333-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55
	1123763	WNMG 060404-SF	WNMG 331-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23
	1123764	WNMG 060408-SF	WNMG 332-FP	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38
	1123765	WNMG 060412-SF	WNMG 333-FP	Ⓜ	Ⓜ	Ⓜ	Ⓜ	9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55
	1123766	WNMG 080404-SF	WNMG 431-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23
	1123721	WNMG 080408-SF	WNMG 432-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38
	1123767	WNMG 080412-SF	WNMG 433-SF	Ⓜ	Ⓜ	Ⓜ	Ⓜ	12,7	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55

Insert Order Code = (1) Geometry Code + (2) Grade Code

D = Inscribed Circle | S = Thickness | Re = Corner Radius | d1 = Hole

Ⓜ First choice Ⓜ Stock items

Cutting Conditions

ISO	Material	HB (Brinell)	V _c (mm/min)					
			← Wear Resistance			Toughness →		
			PH7910			PH7920		
			0.2	0.4	0.6	0.2	0.4	0.6
M	Ferritic/Martensitic	200-230	150-235	145-210	130-200	140-220	130-200	120-190
	Austenitic	180-330	170-244	155-225	140-211	155-235	140-216	125-203
	Duplex (Austenitic-Ferritic)	230-260	130-205	123-195	121-180	125-195	119-185	117-165
S	HRSA (Iron base)	200-280	80-115	65-90	50-80	45-95	35-75	30-65
	HRSA (Nickel base)	250-320	58-90	45-70	40-65	37-60	29-50	25-45
	HRSA (Cobalt base)	200-320	58-95	45-80	40-75	37-60	29-55	25-50
	Titanium alloys	-	85-195	80-151	65-117	75-176	65-136	50-106

Grades

PH7910
(M05-M10)
(S05-S15)

PVD (AITiN) coated carbide with a very hard micrograin substrate improves wear resistance, heat dissipation and avoid built-up edge. Especially suitable for "gummy" materials. For light turning in Stainless Steels and HRSA.

PH7920
(M10-M25)
(S10-S30)

A micrograin size combined with the AITiN PVD coating provides a good relation between wear resistance and toughness. Suitable for roughing to finishing operations under good to light interrupted cutting conditions at high to medium cutting speeds in Stainless Steels and HRSA.