

# GSF, MS and FF chipbreakers

The ultimate fine finishing for turning



FINE FINISHING <sup>NEW</sup>  
GSF, MS and FF chipbreakers



SCAN  
ME!

A New turn for **Stainless Steel and HRSA Turning**

# FINE FINISHING FOR TURNING OPERATIONS

Acabamento premium em operações de torneamento | Acabado premium en operaciones de torneado

Discover the GSF and FF chipbreakers in the world of fine finishing turning operations.

The negative chipbreaker GSF and positive chipbreaker FF are engineered with precision to provide superior chip control and surface finish.

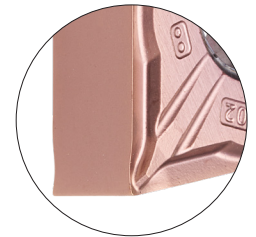
Along with the existing MS chipbreaker with a newly added 0,2mm radius option, these inserts are coated with PHH, our PVD coating designed specifically for efficient machining of HRSA.

## Benefits:

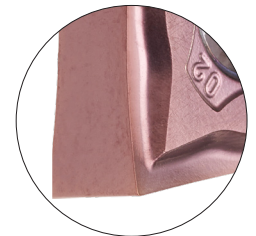
- Higher rake angle and special cutting edge shape
- New chipbreakers (GSF & FF)
- 0,2 mm corner radius
- Double sided negative inserts (GSF and MS)
- PHH coating



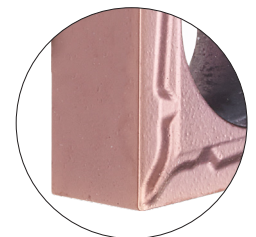
-GSF



-MS



-FF



# PHH GRADE - THE CUTTING EDGE TECHNOLOGY FOR SUPERALLOYS TURNING

Grau PHH - A tecnologia de ponta para super-ligas em torneamento | Calidad PHH - La tecnología de vanguardia para superaleaciones en torneado



**PHH905**  
M01-M05  
S01-S05

Very hard micro grain substrate combined with a thin optimized nanostructure PVD coating with excellent heat dissipation

Optimized for finishing and fine finishing operations in stainless steels and HRSA's

**PHH910**  
M05-M10  
S05-S15

An hard micro grain substrate combined with a thin optimized nanostructure PVD coating with excellent heat dissipation

The solution for Stainless steel and HRSA from medium turning to finishing.  
For continuous to semi-interrupted turning.  
First choice for HRSA.

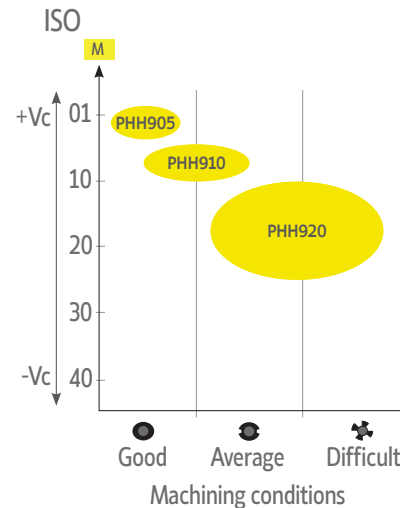
**PHH920**  
M10-M25  
S15-S30

A micro grain substrate combined with a thin optimized nanostructure PVD coating with excellent heat dissipation

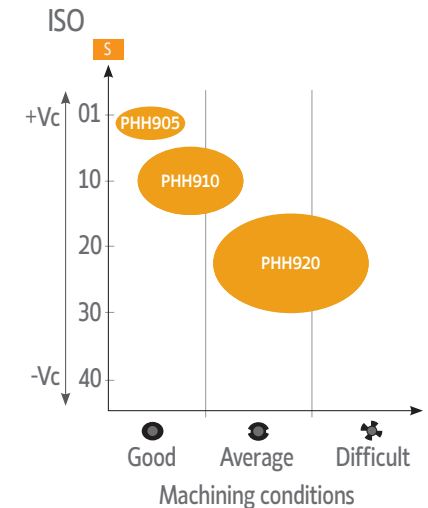
Solution for general turning of stainless steels and HRSA.



## M - STAINLESS STEEL

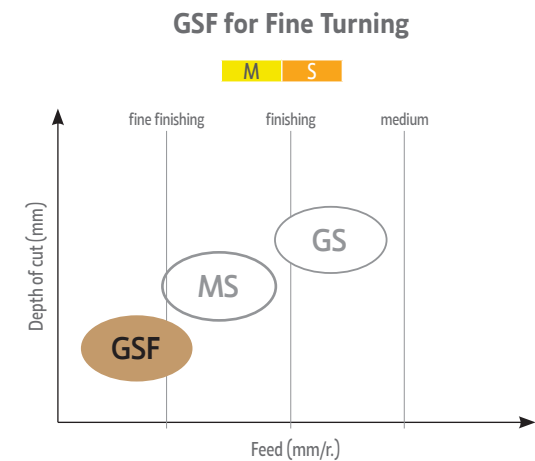
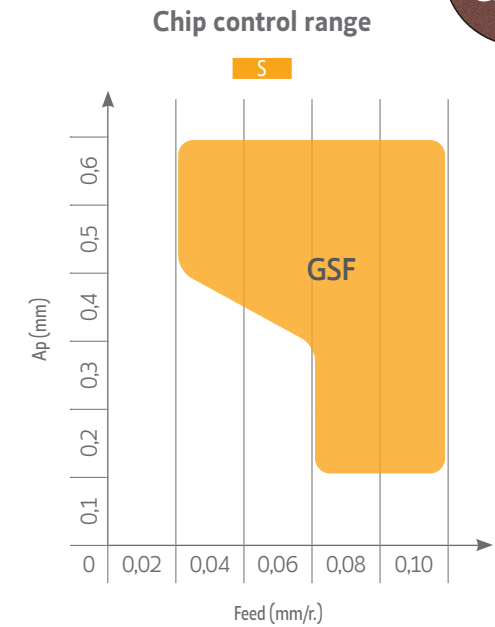
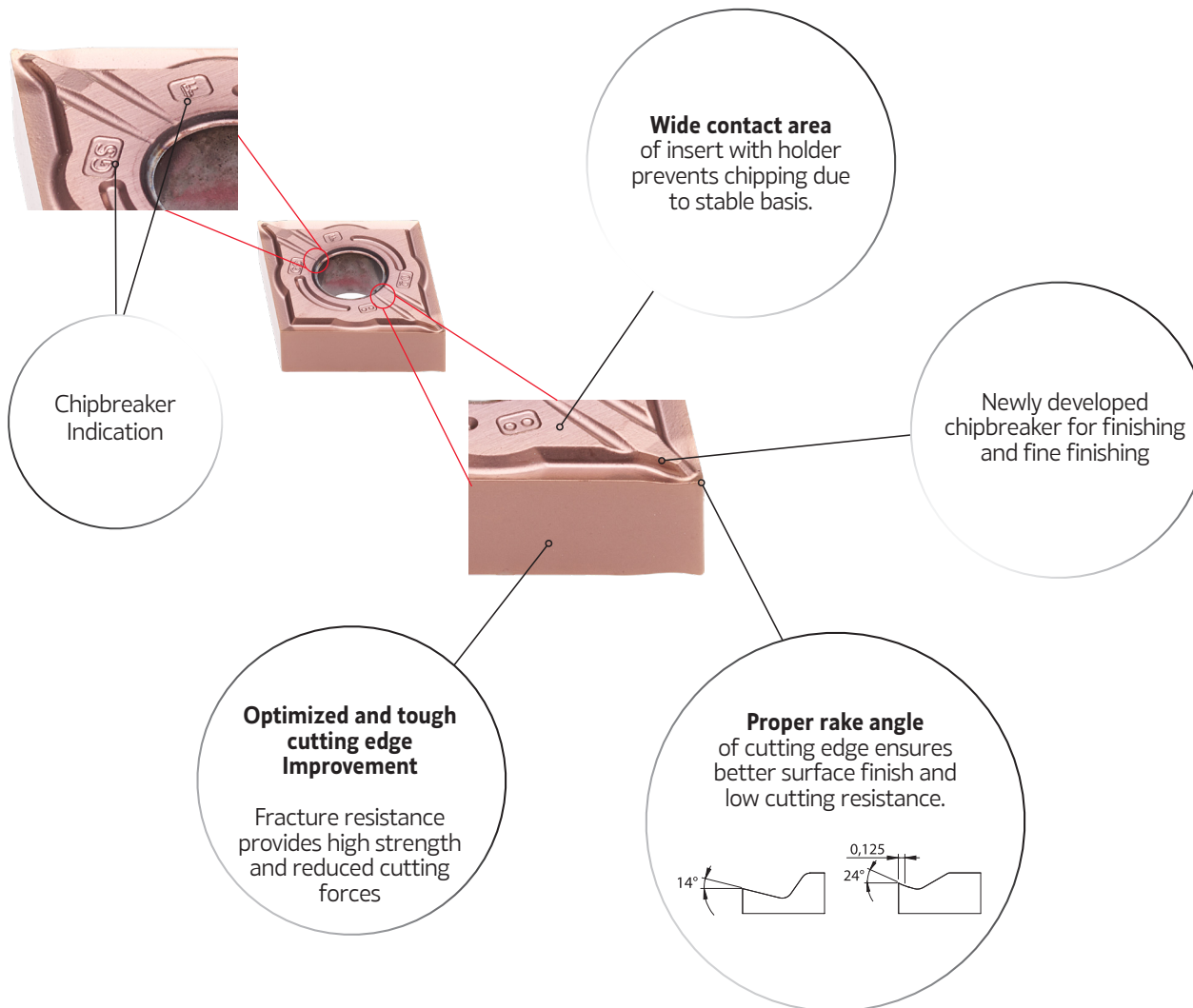



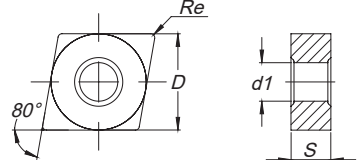

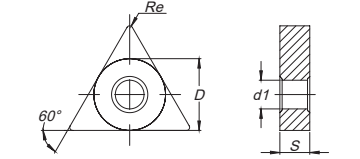
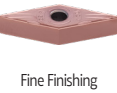
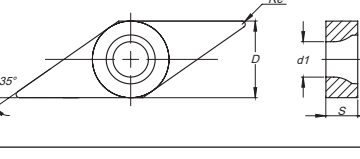
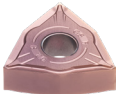
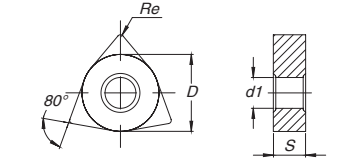
## S - HEAT RESISTANT / TITANIUM ALLOYS



Heat resistant PVD coating with TiAlSiN.  
Suitable for turning Stainless Steels and HRSA's.

First choice for finishing and fine finishing operations.



Inserts Pastilhas Plaquetas	(1) Geometry code	(2) Grade code		M			S			Dimensions (mm) Dimensões (mm) Dimensiones (mm)				Cutting Conditions Condições de Corte Condiciones de Corte				Technical drawing Desenho técnico Dibujo técnico			
				PVD			PVD														
				W8	X6	Y3	W8	X6	Y3	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)		Min	Max	
CNMG-GSF 	1124855	CNMG 120402-GSF	CNMG 430.5-GSF	○	⊗	⊗	○	⊗	⊗	12,700	4,76	0,20	5,16	1,30	0,10	2,50	0,12	0,08	0,15		
Fine Finishing																					
TNMG-GSF 	1124857	TNMG 160402-GSF	TNMG 330.5-GSF	○	⊗	⊗	○	⊗	⊗	9,525	4,76	0,20	3,81	1,55	0,10	3,00	0,19	0,08	0,30		
Fine Finishing																					
VNMG-GSF 	1124861	VNMG 160402-GSF	VNMG 330.5-GSF	○	⊗	⊗	○	⊗	⊗	9,525	4,76	0,20	3,81	1,10	0,20	2,00	0,15	0,05	0,25		
Fine Finishing																					
WNMG-GSF 	1124859	WNMG 080402-GSF	WNMG 430.5-GSF	○	⊗	⊗	○	⊗	⊗	12,700	4,76	0,20	5,16	1,30	0,10	2,50	0,17	0,08	0,25		
Fine Finishing																					

⊗ First choice | Primeira opção | 1ª opción

⊗ Stock item | Produto de stock | Itens de stock

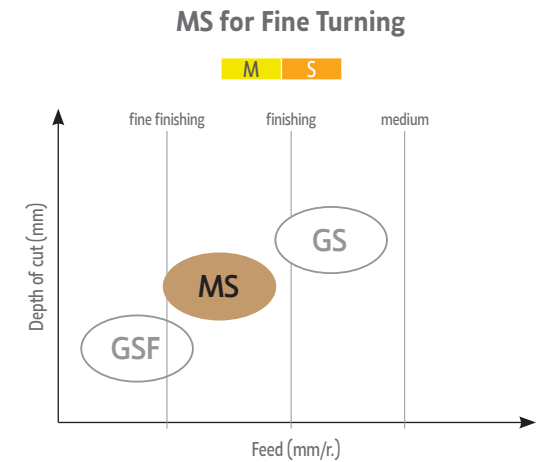
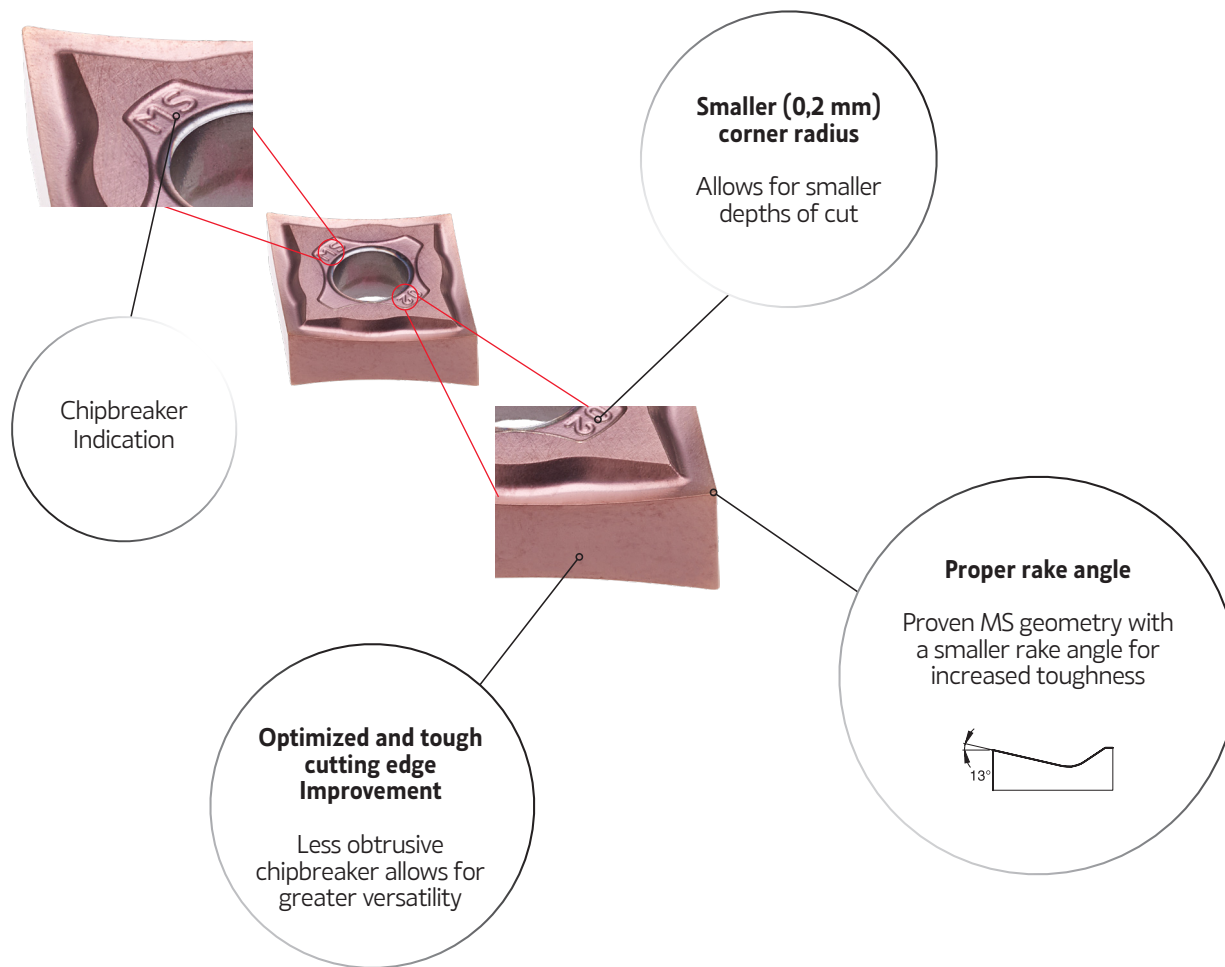
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

Insert order code = (1) Geometry Code + (2) Grade Code




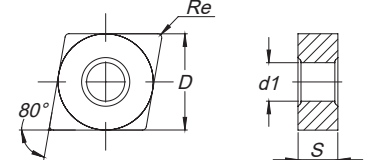

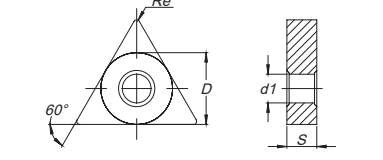

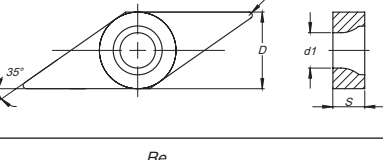

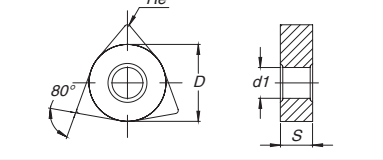
Extension of existing MS chipbreaker, now includes inserts with smaller corner radius  
Suitable for turning Stainless Steels and HRSA's.

The smaller corner radius allows for improved performance in finishing and fine finishing operations.



# MS CHIPBREAKER - RADIUS 0,2 MM || Quebra aparas MS com raio 0,2 mm | Rompe virutas MS con radio 0,2 mm

Negative Inserts

Inserts Pastilhas Plaquitas	(1) Geometry code	ISO Reference	ANSI Reference	M			S			Dimensions (mm) Dimensões (mm) Dimensiones (mm)				Cutting Conditions Condições de Corte Condiciones de Corte				Technical drawing Desenho técnico Dibujo técnico						
				PVD			PVD																	
				(2) Grade code		W8	X6	Y3	W8	X6	Y3	D	S	Re	d1	ap (mm)	Min			Max	fn (mm/rev)	Min	Max	
CNMG-MS 				1124854	CNMG 120402-MS	CNMG 430.5-MS	○	⊗	⊗	○	⊗	⊗	12,700	4,76	0,20	5,16	1,85	0,10	3,60	0,12	0,08	0,15		
Fine Finishing																								
TNMG-MS 				1124856	TNMG 160402-MS	TNMG 330.5-MS	○	⊗	⊗	○	⊗	⊗	9,525	4,76	0,20	3,81	1,85	0,20	3,50	0,12	0,08	0,15		
Fine Finishing																								
VNMG-MS 				1124860	VNMG 160402-MS	VNMG 330.5-MS	○	⊗	⊗	○	⊗	⊗	9,525	4,76	0,20	3,81	2,10	0,20	4,00	0,12	0,08	0,15		
Fine Finishing																								
WNMG-MS 				1124858	WNMG 080402-MS	WNMG 430.5-MS	○	⊗	⊗	○	⊗	⊗	12,700	4,76	0,20	5,16	2,25	0,50	4,00	0,25	0,15	0,35		
Fine Finishing																								

⊗ First choice | Primeira opção | 1ª opción

⊗ Stock item | Produto de stock | Itens de stock

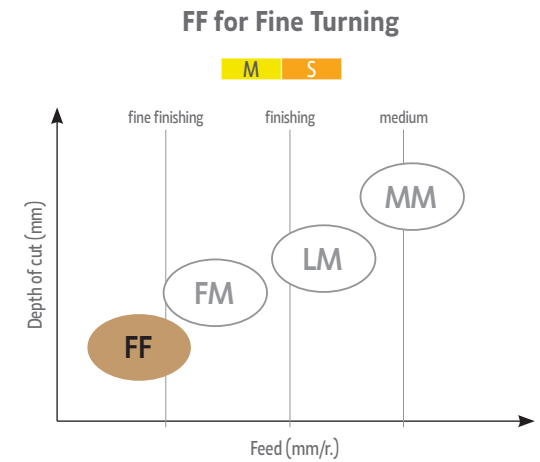
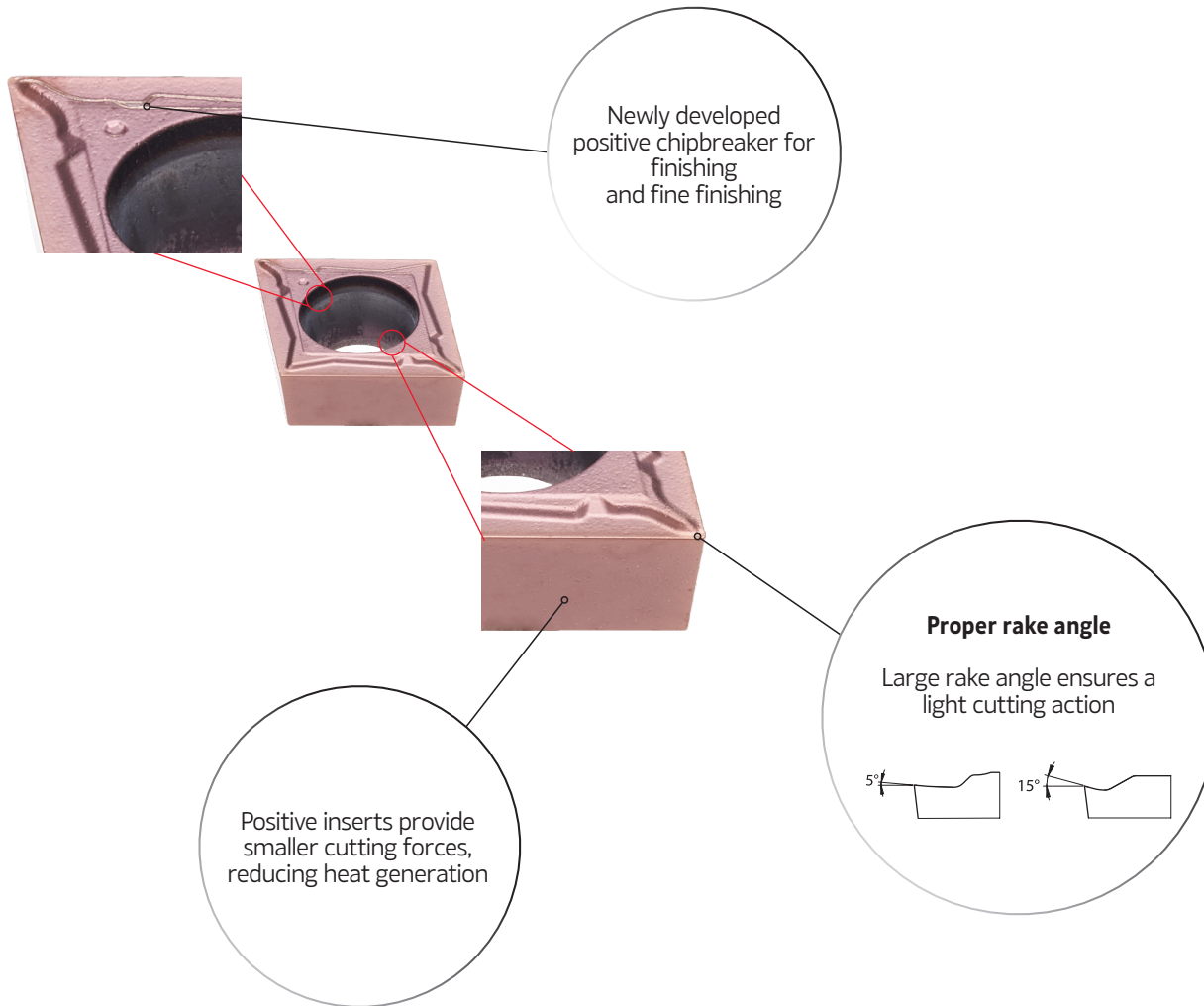
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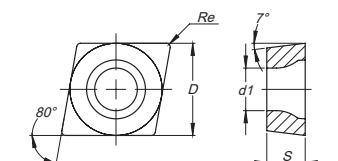

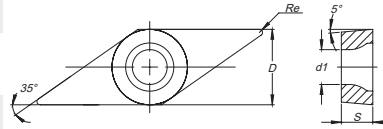


New chipbreaker geometry for positive inserts.  
Suitable for finishing and fine finishing of HRSA's & stainless steels.

First choice for internal turning or slender parts.





Inserts Pastilhas Plaquetas	(1) Geometry code	ISO Reference	ANSI Reference	M			S			Dimensions (mm) Dimensões (mm) Dimensiones (mm)				Cutting Conditions Condições de Corte Condiciones de Corte				Technical drawing Desenho técnico Dibujo técnico			
				PVD			PVD														
				(2) Grade code			W8	X6	Y3	W8	X6	Y3	D	S	Re	d1	ap (mm)		Min	Max	fn (mm/rev)
	CCMT-FF	1124850	CCMT 09T302-FF	CCMT 32.50.5-FF	○	⊗		○	⊗		9,525	3,97	0,20	4,40	1,00	0,08	2,00	0,09	0,04	0,13	
		1124669	CCMT 09T304-FF	CCMT 32.51-FF	○	⊗		○	⊗		9,525	3,97	0,40	4,40	1,25	0,08	2,00	0,13	0,02	0,23	
	Fine Finishing	1124851	CCMT 09T308-FF	CCMT 32.52-FF	○	⊗		○	⊗		9,525	3,97	0,80	4,40	1,50	0,15	2,00	0,27	0,08	0,45	
	VBMT-FF	1124852	VBMT 160402-FF	VBMT 330.5-FF	○	⊗		○	⊗		9,525	4,76	0,20	4,40	1,00	0,07	1,80	0,09	0,04	0,14	
		1124672	VBMT 160404-FF	VBMT 331-FF	○	⊗		○	⊗		9,525	4,76	0,40	4,40	1,20	0,10	1,80	0,13	0,05	0,20	
	Fine Finishing	1124853	VBMT 160408-FF	VBMT 332-FF	○	⊗		○	⊗		9,525	4,76	0,80	4,40	1,60	0,14	1,80	0,17	0,07	0,27	

⊗ First choice | Primeira opção | 1ª opción

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

Insert order code = (1) Geometry Code + (2) Grade Code



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