

PHS

NEW  
GRADE

palbit®  
TOOLING SOLUTIONS EXPERTS  
SINCE 1916

PalbitUSA.com

PILOT  
Precision Products

PHS TURNING  
Positive & Negative Inserts

COSMIC MATERIALS

# PHS TURNING GRADE



PHS215  
PHS225  
PHS240



**PHS215**  
M10-M25

Suitable for high to medium cutting speeds in stainless steels. Ideal for turning on good condition of cut (continuous cut)

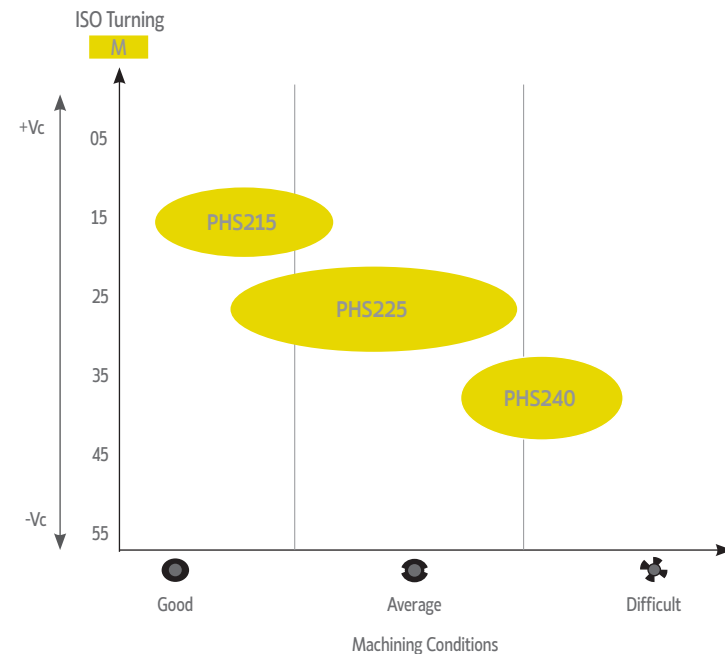
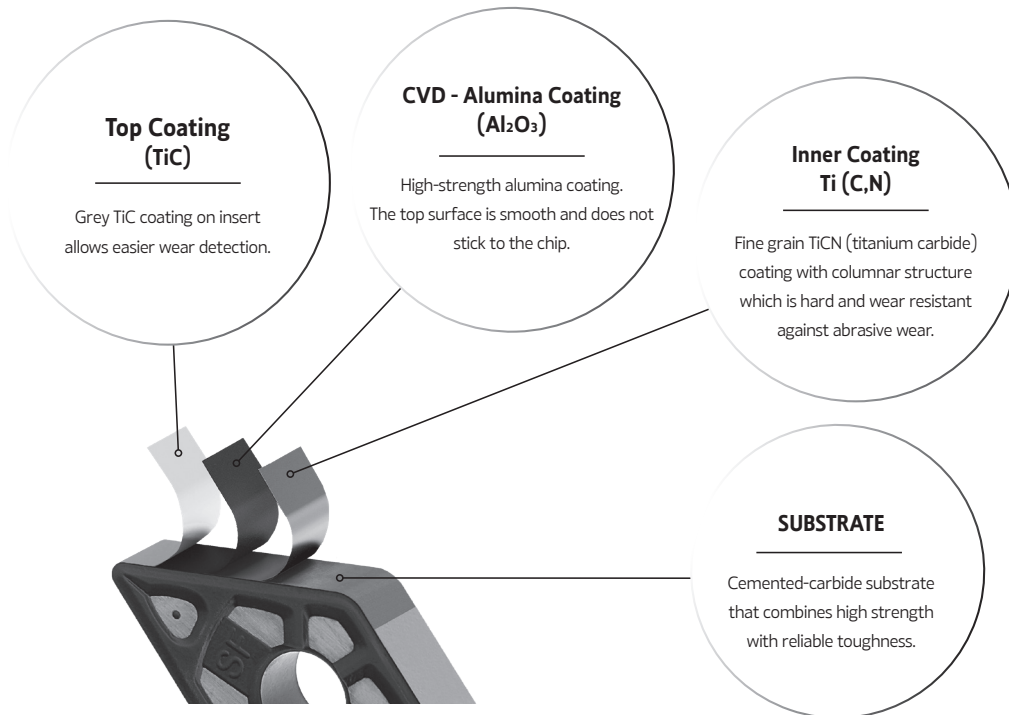
**PHS225**  
M15-M30

First choice for general application on turning of stainless steels


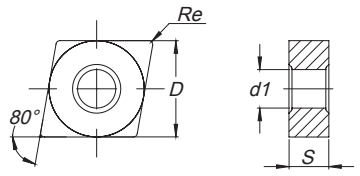

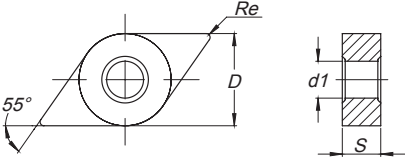

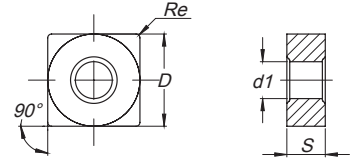

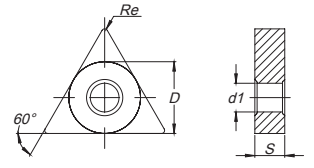
Carbide grade suitable for medium machining of stainless steels and super alloys at medium cutting speeds.

**PHS240**  
M25-M45

First choice for roughing to heavy roughing operations with interrupted cut at medium to low cutting speeds on stainless steel.




# PHS GRADES = NEGATIVE Turning Inserts

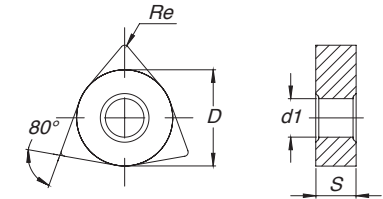
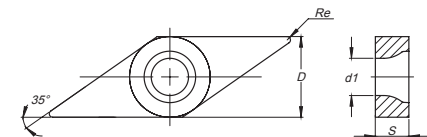
SF Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	$a_p$ (mm)	Min	Max	$f_n$ (mm/rev)	Min	Max	
	1123747	CNMG 120404-SF	CNMG 431-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.40	5.16	1.50	0.60	3.00	0.15	0.10	0.23	
	1123717	CNMG 120408-SF	CNMG 432-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.80	5.16	1.50	0.60	3.00	0.25	0.12	0.38	
	1123748	CNMG 120412-SF	CNMG 433-SF	Ⓢ	Ⓢ	○	12.700	4.76	1.20	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	0.40	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	0.80	3.81	1.50	0.60	3.00	0.25	0.12	0.38	
	1123751	DNMG 150404-SF	DNMG 431-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.40	5.16	1.50	0.60	3.00	0.15	0.10	0.23	
	1123752	DNMG 150408-SF	DNMG 432-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.80	5.16	1.50	0.60	3.00	0.25	0.12	0.38	
	1123753	DNMG 150412-SF	DNMG 433-SF	Ⓢ	Ⓢ	○	12.700	4.76	1.20	5.16	1.50	0.60	3.00	0.35	0.15	0.55	
	1123754	DNMG 150604-SF	DNMG 441-SF	Ⓢ	Ⓢ	○	12.700	6.35	0.40	5.16	1.50	0.60	3.00	0.15	0.10	0.23	
	1123755	DNMG 150608-SF	DNMG 442-SF	Ⓢ	Ⓢ	○	12.700	6.35	0.80	5.16	1.50	0.60	3.00	0.25	0.12	0.38	
1123756	DNMG 150612-SF	DNMG 443-SF	Ⓢ	Ⓢ	○	12.700	6.35	1.20	5.16	1.50	0.60	3.00	0.35	0.15	0.55		
	1123874	SNMG 120404-SF	SNMG 431-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.40	5.16	2.00	1.00	4.00	0.15	0.10	0.23	
	1123875	SNMG 120408-SF	SNMG 432-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.80	5.16	2.00	1.00	4.00	0.20	0.12	0.38	
	1123876	SNMG 120412-SF	SNMG 433-SF	Ⓢ	Ⓢ	○	12.700	4.76	1.20	5.16	2.50	1.00	4.00	0.25	0.15	0.55	
	1123757	TNMG 160404-SF	TNMG 331-SF	Ⓢ	Ⓢ	○	9.525	4.76	0.40	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	0.80	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	1.20	3.81	1.50	0.60	3.00	0.35	0.15	0.55	
	1124070	TNMG 220404-SF	TNMG 431-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.40	5.16	1.50	0.60	3.00	0.20	0.10	0.35	
	1123759	TNMG 220408-SF	TNMG 432-SF	Ⓢ	Ⓢ	○	12.700	4.76	0.80	5.16	1.50	0.60	3.00	0.25	0.12	0.40	
1124028	TNMG 220412-SF	TNMG 433-SF	Ⓢ	Ⓢ	○	12.700	4.76	1.20	5.16	1.50	0.60	3.00	0.35	0.15	0.55		

Ⓢ First choice      Ⓢ Stock Items      ○ Available Upon Request

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

# PHS GRADES = NEGATIVE Turning Inserts

SF Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	$a_p$ (mm)	Min	Max	$f_n$ (mm/rev)	Min	Max	
 VNMG-SF Medium to Finishing	1123760	VNMG 160404-SF	VNMG 331-SF				9.53	4.76	0.40	3.81	1.50	0.60	3.00	0.15	0.10	0.23	
	1123761	VNMG 160408-SF	VNMG 332-SF				9.53	4.76	0.80	3.81	1.50	0.60	3.00	0.25	0.12	0.38	
	1123762	VNMG 160412-SF	VNMG 333-SF				9.53	4.76	1.20	3.81	1.50	0.60	3.00	0.35	0.15	0.55	
 WNMG-SF Medium to Finishing	1123763	WNMG 060404-SF	WNMG 331-SF				9.53	3.18	0.40	3.81	2.00	0.50	2.50	0.20	0.10	0.25	
	1123764	WNMG 060408-SF	WNMG 332-SF				9.53	3.18	0.80	3.81	2.00	0.50	2.50	0.25	0.12	0.45	
	1123765	WNMG 060412-SF	WNMG 333-SF				12.70	4.76	0.40	5.16	3.00	0.50	5.70	0.20	0.10	0.25	
	1123766	WNMG 080404-SF	WNMG 431-SF				12.70	4.76	0.80	5.16	3.00	0.50	5.70	0.25	0.12	0.45	
	1123721	WNMG 080408-SF	WNMG 432-SF				12.70	4.76	1.20	5.16	3.00	0.50	5.70	0.30	0.15	0.60	
1123767	WNMG 080412-SF	WNMG 433-SF				12.70	4.76	1.60	5.16	3.00	0.50	5.70	0.37	0.18	0.65		

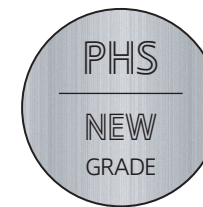



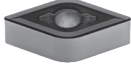

 First choice

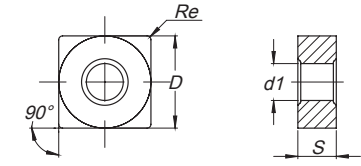
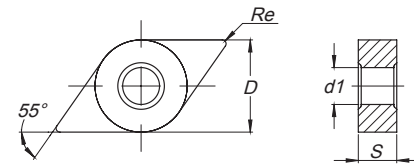
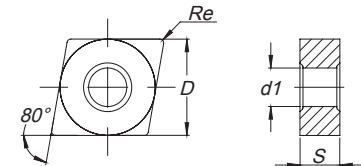
 Stock Items

 Available Upon Request

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


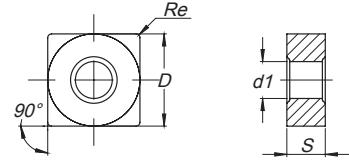
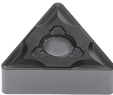
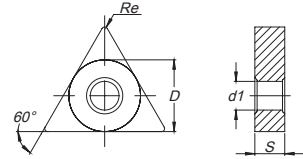

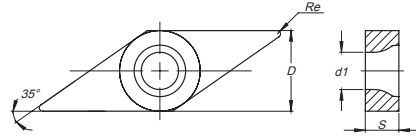

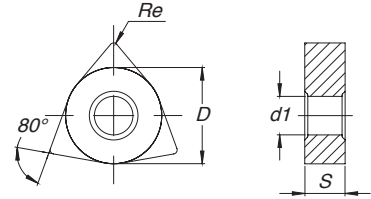


SS Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)	Min	Max	
 CNMG-SS Roughing to Medium	1121474	CNMG 090304-SS	CNMG 321-SS		⊗		9.53	3.18	0.40	3.81	2.00	0.50	2.50	0.20	0.10	0.25	
	1121476	CNMG 090308-SS	CNMG 322-SS		⊗		9.53	3.18	0.80	3.81	2.00	0.50	2.50	0.25	0.12	0.45	
	1121243	CNMG 120404-SS	CNMG 431-SS	⊗	⊗	⊗	12.70	4.76	0.40	5.16	3.00	0.50	5.70	0.20	0.10	0.25	
	1121201	CNMG 120408-SS	CNMG 432-SS	⊗	⊗	⊗	12.70	4.76	0.80	5.16	3.00	0.50	5.70	0.25	0.12	0.45	
	1121202	CNMG 120412-SS	CNMG 433-SS	⊗	⊗	⊗	12.70	4.76	1.20	5.16	3.00	0.50	5.70	0.30	0.15	0.60	
	1121487	CNMG 120416-SS	CNMG 434-SS	○	⊗		12.70	4.76	1.60	5.16	3.00	0.50	5.70	0.37	0.18	0.65	
	1121332	CNMG 160608-SS	CNMG 542-SS		⊗	○	15.88	6.35	0.80	6.35	4.00	0.50	7.20	0.25	0.12	0.45	
	1121333	CNMG 160612-SS	CNMG 543-SS		⊗	○	15.88	6.35	1.20	6.35	4.00	0.50	7.20	0.30	0.15	0.60	
	1121363	CNMG 190612-SS	CNMG 643-SS		⊗	○	19.05	6.35	1.20	7.94	4.00	0.50	8.50	0.30	0.15	0.60	
	1121364	CNMG 190616-SS	CNMG 644-SS		⊗	○	19.05	6.35	1.60	7.94	4.00	0.50	8.50	0.37	0.18	0.65	
 DNMG-SS Roughing to Medium	1121501	DNMG 110408-SS	DNMG 332-SS	○	⊗		9.53	4.76	0.80	3.81	2.00	0.50	4.40	0.25	0.12	0.45	
	1121291	DNMG 150404-SS	DNMG 431-SS	⊗	⊗	⊗	12.70	4.76	0.40	5.16	3.00	0.30	6.00	0.25	0.10	0.30	
	1121292	DNMG 150408-SS	DNMG 432-SS	⊗	⊗	⊗	12.70	4.76	0.80	5.16	3.00	0.50	6.40	0.25	0.12	0.45	
	1121511	DNMG 150412-SS	DNMG 433-SS	⊗	⊗	⊗	12.70	4.76	1.20	5.16	3.00	0.50	6.40	0.30	0.15	0.60	
	1121284	DNMG 150604-SS	DNMG 441-SS	⊗	⊗	⊗	12.70	6.35	0.40	5.16	3.00	0.30	6.00	0.25	0.10	0.30	
	1121285	DNMG 150608-SS	DNMG 442-SS	⊗	⊗	⊗	12.70	6.35	0.80	5.16	3.00	0.50	6.40	0.25	0.12	0.45	
	1121520	DNMG 150612-SS	DNMG 443-SS	⊗	⊗	⊗	12.70	6.35	1.20	5.16	3.00	0.50	6.40	0.30	0.15	0.60	
1121287	DNMG 150616-SS	DNMG 444-SS	○	⊗	○	12.70	6.35	1.60	5.16	3.00	0.50	6.40	0.50	0.20	1.00		
 SNMG-SS Roughing to Medium	1121526	SNMG 090304-SS	SNMG 321-SS		○		9.53	3.18	0.40	3.81	2.00	0.50	4.50	0.20	0.10	0.30	
	1121527	SNMG 090308-SS	SNMG 322-SS		○		9.53	3.18	0.80	3.81	2.00	0.50	4.50	0.25	0.12	0.45	
	1121365	SNMG 120404-SS	SNMG 431-SS	○	⊗		12.70	4.76	0.40	5.16	3.00	0.50	6.40	0.20	0.12	0.30	
	1121315	SNMG 120408-SS	SNMG 432-SS	○	⊗		12.70	4.76	0.80	5.16	3.00	0.50	6.40	0.25	0.12	0.45	
	1121366	SNMG 120412-SS	SNMG 433-SS	○	⊗		12.70	4.76	1.20	5.16	3.00	0.50	6.40	0.30	0.15	0.60	



⊗ First choice      ⊗ Stock Items      ○ Available Upon Request      Insert Order Code: (1) Geometry Code + (2) Grade Code

# PHS GRADES = NEGATIVE Turning Inserts

SS Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)	Min	Max	
				○	⊗	○											
 Roughing to Medium	1121532	SNMG 120416-SS	SNMG 434-SS	○	⊗		12.70	4.76	1.60	5.16	3.00	0.50	6.40	0.45	0.15	0.80	
	1121534	SNMG 150608-SS	SNMG 542-SS	○	⊗		15.88	6.35	0.80	6.35	4.00	0.50	8.00	0.25	0.12	0.45	
	1121537	SNMG 150612-SS	SNMG 543-SS	○	⊗		15.88	6.35	1.20	6.35	4.00	0.50	8.00	0.30	0.15	0.60	
	1121547	SNMG 190616-SS	SNMG 644-SS		⊗	○	19.05	6.35	1.60	7.94	4.00	0.50	8.00	0.45	0.15	0.80	
 Roughing to Medium	1121289	TNMG 160404-SS	TNMG 331-SS	⊗	⊗	⊗	9.53	4.76	0.40	3.81	2.00	0.50	4.00	0.20	0.10	0.30	
	1121271	TNMG 160408-SS	TNMG 332-SS	⊗	⊗	⊗	9.53	4.76	0.80	3.81	3.00	0.50	4.80	0.25	0.12	0.45	
	1121290	TNMG 160412-SS	TNMG 333-SS	⊗	⊗	⊗	9.53	4.76	1.20	3.81	3.00	0.50	4.80	0.30	0.15	0.60	
	1121330	TNMG 220408-SS	TNMG 432-SS	⊗	⊗	⊗	12.70	4.76	0.80	5.16	4.00	0.50	6.60	0.25	0.12	0.45	
	1121368	TNMG 220412-SS	TNMG 433-SS		⊗	○	12.70	4.76	1.20	5.16	4.00	0.50	6.60	0.30	0.15	0.60	
 Roughing to Medium	1121367	VNMG 160404-SS	VNMG 331-SS	○	⊗		9.53	4.76	0.40	3.81	1.50	0.50	4.00	0.20	0.10	0.30	
	1121295	VNMG 160408-SS	VNMG 332-SS	○	⊗		9.53	4.76	0.80	3.81	2.00	0.50	4.00	0.25	0.12	0.45	
 Roughing to Medium	1121321	WNMG 06T304-SS	WNMG 32.51-SS	○	○		9.53	3.97	0.40	3.81	2.00	0.50	3.00	0.20	0.12	0.30	
	1121324	WNMG 06T308-SS	WNMG 32.52-SS	○	○		9.53	3.97	0.80	3.81	2.00	0.50	3.00	0.25	0.12	0.45	
	1121322	WNMG 060404-SS	WNMG 331-SS	⊗	⊗		9.53	4.76	0.40	3.81	2.00	0.50	3.00	0.20	0.12	0.30	
	1121325	WNMG 060408-SS	WNMG 332-SS	⊗	⊗	⊗	9.53	4.76	0.80	3.81	2.00	0.50	3.00	0.25	0.12	0.45	
	1121323	WNMG 080404-SS	WNMG 431-SS	⊗	⊗	⊗	12.70	4.76	0.40	5.16	2.00	0.50	3.00	0.20	0.12	0.30	
	1121326	WNMG 080408-SS	WNMG 432-SS	⊗	⊗	⊗	12.70	4.76	0.80	5.16	2.50	0.50	4.00	0.25	0.12	0.45	
	1121591	WNMG 080412-SS	WNMG 433-SS	⊗	⊗	⊗	12.70	4.76	1.20	5.16	2.50	0.50	4.00	0.30	0.15	0.60	

⊗ First choice


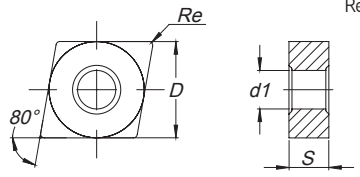

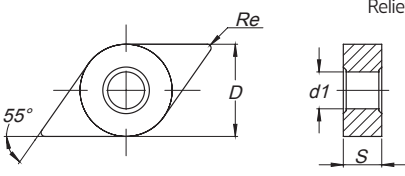

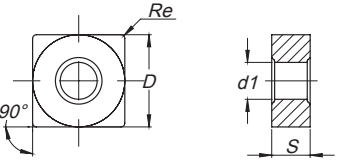
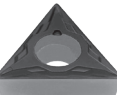
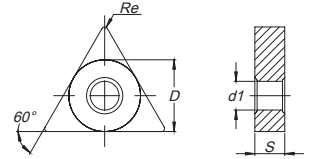
⊗ Stock Items

○ Available Upon Request

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

# PHS GRADES = POSITIVE Turning Inserts

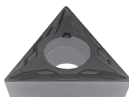
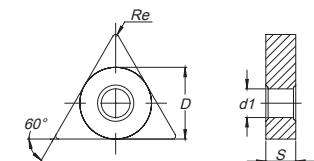
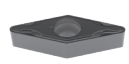
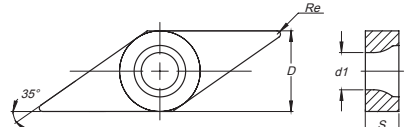

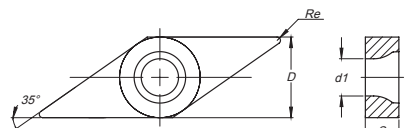
NEW

FM Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	$a_p$ (mm)	Min	Max	$f_n$ (mm/rev)	Min	Max	
 Finishing	1121657	CCMT 060204-FM	CCMT 21.51-FM	○	⊗		6.35	2.38	0.40	2.80	0.30	0.10	1.70	0.08	0.05	0.17	 Relief Angle 7°
	1121692	CCMT 09T304-FM	CCMT 32.51-FM	○	⊗		9.53	3.97	0.40	4.40	0.35	0.11	2.00	0.11	0.06	0.23	
	1121651	CCMT 09T308-FM	CCMT 32.52-FM	○	⊗		9.53	3.97	0.80	4.40	0.35	0.15	2.00	0.20	0.08	0.45	
	1121664	CCMT 120404-FM	CCMT 431-FM	○	⊗		12.70	4.76	0.40	5.50	0.42	0.14	2.40	0.14	0.07	0.27	
 Finishing	1121677	DCMT 070204-FM	DCMT 21.51-FM	○	⊗		6.35	2.38	0.40	2.80	0.26	0.08	1.50	0.08	0.05	0.17	 Relief Angle 7°
	1121710	DCMT 11T304-FM	DCMT 32.51-FM	○	⊗		9.53	3.97	0.40	4.40	0.35	0.11	2.00	0.11	0.06	0.23	
	1121712	DCMT 11T308-FM	DCMT 32.52-FM	○	⊗		9.53	3.97	0.80	4.40	0.35	0.15	2.00	0.15	0.08	0.30	
 Finishing	1121758	SCMT 09T304-FM	SCMT 32.51-FM	○	⊗		12.70	4.76	0.80	5.16	3.00	0.50	6.40	0.25	0.12	0.45	 Relief Angle 7°
	1121764	SCMT 09T308-FM	SCMT 32.52-FM	○	⊗		12.70	4.76	1.20	5.16	3.00	0.50	6.40	0.30	0.15	0.60	
 Finishing	1121787	TCMT 06T102-FM	TCMT 1.21.20.5-FM	○	⊗		3.97	1.98	0.20	2.15	0.26	0.06	1.50	0.06	0.03	0.11	 Relief Angle 7°
	1121797	TCMT 06T104-FM	TCMT 1.21.21-FM	○	⊗		3.97	1.98	0.40	2.15	0.26	0.08	1.50	0.08	0.05	0.17	
	1123637	TCMT 06T108-FM	TCMT 1.21.22-FM	○	⊗		3.97	1.98	0.80	2.15	0.26	0.11	1.50	0.11	0.06	0.23	
	1121803	TCMT 090202-FM	TCMT 1.81.50.5-FM	○	⊗		5.56	2.38	0.20	2.50	0.30	0.06	1.70	0.06	0.03	0.13	
	1121806	TCMT 090204-FM	TCMT 1.81.51-FM	○	⊗		5.56	2.38	0.40	2.50	0.30	0.10	1.70	0.10	0.05	0.19	
	1121960	TCMT 110202-FM	TCMT 21.50.5-FM	○	⊗		6.35	2.38	0.20	2.80	0.30	0.06	1.70	0.06	0.03	0.13	
	1121958	TCMT 110204-FM	TCMT 21.51-FM	○	⊗		6.35	2.38	0.40	2.80	0.30	0.10	1.70	0.10	0.05	0.19	

⊗ First choice      ⊗ Stock Items      ○ Available Upon Request

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

# PHS GRADES = POSITIVE Turning Inserts

FM Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings		
				CVD-MT														
		(2) Grade Code		U4	U5	V6												
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	$a_p$ (mm)	Min	Max	$f_n$ (mm/rev)	Min	Max		
 TCMT-FM  Finishing	1121959	TCMT 110208-FM	TCMT 21.52-FM	○	⊗		6.35	2.38	0.80	2.80	0.30	0.13	1.70	0.13	0.07	0.26	 Relief Angle 7°	
	1121881	TCMT 110302-FM	TCMT 220.5-FM	○	⊗		6.35	3.18	0.20	2.80	0.30	0.06	1.70	0.06	0.03	0.13		
	1121815	TCMT 110304-FM	TCMT 221-FM	○	⊗		6.35	3.18	0.40	2.80	0.30	0.10	1.70	0.10	0.05	0.19		
	1121822	TCMT 110308-FM	TCMT 222-FM	○	⊗		6.35	3.18	0.80	2.80	0.30	0.13	1.70	0.13	0.07	0.26		
	1121831	TCMT 16T304-FM	TCMT 32.51-FM	○	⊗		9.53	3.97	0.40	4.40	0.35	0.11	2.00	0.11	0.06	0.23		
 VBMT-FM  Finishing	1121851	VBMT 110302-FM	VBMT 220.5-FM	○	⊗		6.35	3.18	0.20	2.80	0.30	0.06	1.70	0.06	0.03	0.13	 Relief Angle 5°	
	1121854	VBMT 110304-FM	VBMT 221-FM	○	⊗		6.35	3.18	0.40	2.80	0.30	0.10	1.70	0.10	0.05	0.19		
	1121857	VBMT 110308-FM	VBMT 222-FM	○	⊗		6.35	3.18	0.80	2.80	0.30	0.13	1.70	0.13	0.07	0.26		
	1121861	VBMT 160402-FM	VBMT 330.5-FM	○	⊗		9.53	4.76	0.20	4.40	0.32	0.07	1.80	0.07	0.04	0.14		
	1121864	VBMT 160404-FM	VBMT 331-FM	○	⊗		9.53	4.76	0.40	4.40	0.32	0.10	1.80	0.10	0.05	0.20		
	1121870	VBMT 160408-FM	VBMT 332-FM	○	⊗		9.53	4.76	0.80	4.40	0.32	0.14	1.80	0.14	0.07	0.27		
	1121792	VBMT 160412-FM	VBMT 333-FM	○	⊗		9.53	4.76	1.20	4.40	0.32	0.14	1.80	0.16	0.09	0.32		
 VCMT-FM  Finishing	1121775	VCMT 110302-FM	VCMT 220.5-FM	○	⊗		6.35	3.18	0.20	2.80	0.30	0.07	1.50	0.07	0.03	0.13	 Relief Angle 7°	
	1121778	VCMT 110304-FM	VCMT 221-FM	○	⊗		6.35	3.18	0.40	2.80	0.30	0.10	1.50	0.10	0.05	0.20		
	1121981	VCMT 160402-FM	VCMT 330.5-FM	○	⊗		9.53	4.76	0.20	4.40	0.32	0.07	1.80	0.07	0.04	0.14		
	1121982	VCMT 160404-FM	VCMT 331-FM	○	⊗		9.53	4.76	0.40	4.40	0.32	0.10	1.80	0.10	0.05	0.20		
	1121983	VCMT 160408-FM	VCMT 332-FM	○	⊗		9.53	4.76	0.80	4.40	0.32	0.14	1.80	0.14	0.07	0.27		
	1121984	VCMT 160412-FM	VCMT 333-FM	○	⊗		9.53	4.76	1.20	4.40	0.32	0.14	1.80	0.16	0.09	0.32		

⊗ First choice

⊗ Stock Items

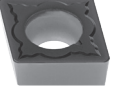



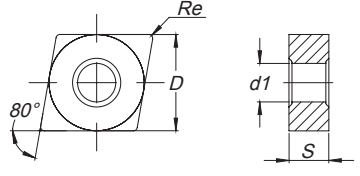






















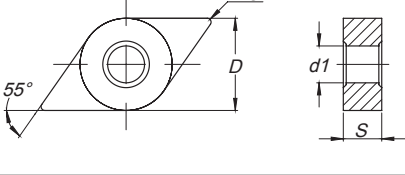













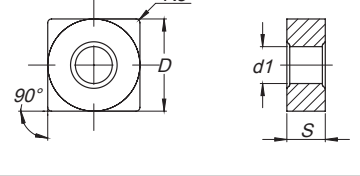












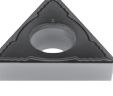



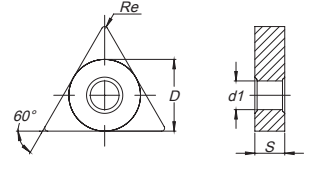


















○ Available Upon Request

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

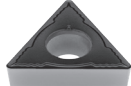


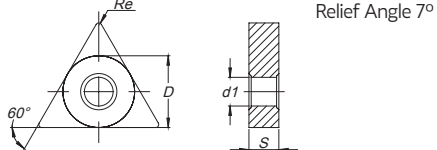







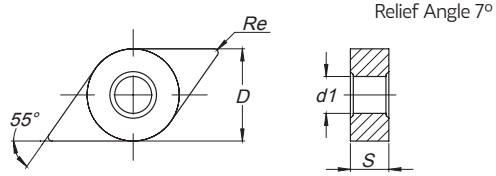











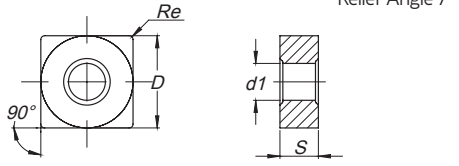








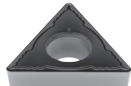


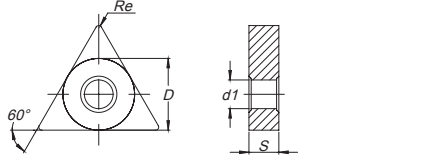


















# PHS GRADES = POSITIVE Turning Inserts

NEW

MM Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
		(2) Grade Code		CVD-MT													
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	U4	U5	V6	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)	Min		Max
 CCMT-MM Medium	1121696	CCMT 060204-MM	CCMT 21.51-MM				6.35	2.38	0.40	2.80	0.64	0.20	2.40	0.11	0.06	0.17	 Relief Angle 7°
	1121660	CCMT 060208-MM	CCMT 21.52-MM				6.35	2.38	0.80	2.80	0.64	0.40	2.40	0.18	0.08	0.35	
	1121699	CCMT 09T304-MM	CCMT 32.51-MM				9.53	3.97	0.40	4.40	0.64	0.25	3.00	0.15	0.08	0.23	
	1121686	CCMT 09T308-MM	CCMT 32.52-MM				9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.20	0.10	0.40	
	1121718	CCMT 120404-MM	CCMT 431-MM				12.70	4.76	0.40	5.50	0.96	0.30	3.60	0.18	0.09	0.27	
	1121721	CCMT 120408-MM	CCMT 432-MM				12.70	4.76	0.80	5.50	0.96	0.60	3.60	0.24	0.12	0.45	
	1121723	CCMT 120412-MM	CCMT 433-MM				12.70	4.76	1.20	5.50	0.96	0.72	3.60	0.35	0.14	0.60	
 DCMT-MM Medium	1121680	DCMT 070204-MM	DCMT 21.51-MM				6.35	2.38	0.40	2.80	0.60	0.19	2.25	0.11	0.06	0.17	 Relief Angle 7°
	1121683	DCMT 070208-MM	DCMT 21.52-MM				6.35	2.38	0.80	2.80	0.60	0.38	2.25	0.20	0.08	0.35	
	1121647	DCMT 11T304-MM	DCMT 32.51-MM				9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08	0.23	
	1121705	DCMT 11T308-MM	DCMT 32.52-MM				9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.25	0.10	0.40	
 SCMT-MM Medium	1121761	SCMT 09T304-MM	SCMT 32.51-MM				9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08	0.23	 Relief Angle 7°
	1121767	SCMT 09T308-MM	SCMT 32.52-MM				9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.25	0.10	0.40	
	1121769	SCMT 120404-MM	SCMT 431-MM				12.70	4.76	0.40	5.50	0.96	0.30	3.60	0.18	0.09	0.27	
	1121782	SCMT 120408-MM	SCMT 432-MM				12.70	4.76	0.80	5.50	0.96	0.60	3.60	0.25	0.12	0.45	
	1121784	SCMT 120412-MM	SCMT 433-MM				12.70	4.76	1.20	5.50	0.96	0.72	3.60	0.35	0.14	0.60	
 TCMT-MM Medium	1121702	TCMT 090204-MM	TCMT 1.81.51-MM				5.56	2.38	0.40	2.50	0.60	0.19	2.25	0.11	0.06	0.17	 Relief Angle 7°
	1121811	TCMT 090208-MM	TCMT 1.81.52-MM				5.56	2.38	0.80	2.50	0.60	0.38	2.25	0.15	0.08	0.23	
	1121968	TCMT 110204-MM	TCMT 21.51-MM				6.35	2.38	0.40	2.80	0.67	0.21	2.50	0.13	0.06	0.19	
	1121969	TCMT 110208-MM	TCMT 21.52-MM				6.35	2.38	0.80	2.80	0.67	0.42	2.50	0.17	0.09	0.26	
	1121819	TCMT 110304-MM	TCMT 221-MM				6.35	3.18	0.40	2.80	0.67	0.21	2.50	0.13	0.06	0.19	
	1121826	TCMT 110308-MM	TCMT 222-MM				6.35	3.18	0.80	2.80	0.67	0.42	2.50	0.20	0.09	0.40	
1121835	TCMT 16T304-MM	TCMT 32.51-MM				9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08	0.23		

# PHS GRADES = POSITIVE Turning Inserts

MM Chip Breaker				M			Dimensions (mm)				Cutting Conditions				Technical Drawings			
		(2) Grade Code		CVD-MT														
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	U4	U5	V6	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)	Min	Max		
				PHS215	PHS225	PHS240												
 Medium	1121839	TCMT 16T308-MM	TCMT 32.52-MM				9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.22	0.10	0.45		
	1121843	TCMT 16T312-MM	TCMT 32.53-MM				9.53	3.97	1.20	4.40	0.80	0.60	3.00	0.35	0.12	0.60		
	1121848	TCMT 220408-MM	TCMT 432-MM					12.70	4.76	0.80	5.50	0.96	0.60	3.60	0.25	0.12		0.45
 Medium	1121680	DCMT 070204-MM	DCMT 21.51-MM				6.35	2.38	0.40	2.80	0.60	0.19	2.25	0.11	0.06	0.17		
	1121683	DCMT 070208-MM	DCMT 21.52-MM				6.35	2.38	0.80	2.80	0.60	0.38	2.25	0.20	0.08	0.35		
	1121647	DCMT 11T304-MM	DCMT 32.51-MM					9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08		0.23
	1121705	DCMT 11T308-MM	DCMT 32.52-MM					9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.25	0.10		0.40
	1121707	DCMT 11T312-MM	DCMT 32.53-MM					9.53	3.97	1.20	4.40	0.80	0.60	3.00	0.35	0.12		0.60
 Medium	1121761	SCMT 09T304-MM	SCMT 32.51-MM				9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08	0.23		
	1121767	SCMT 09T308-MM	SCMT 32.52-MM				9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.25	0.10	0.40		
	1121769	SCMT 120404-MM	SCMT 431-MM					12.70	4.76	0.40	5.50	0.96	0.30	3.60	0.18	0.09		0.27
	1121782	SCMT 120408-MM	SCMT 432-MM					12.70	4.76	0.80	5.50	0.96	0.60	3.60	0.25	0.12		0.45
	1121784	SCMT 120412-MM	SCMT 433-MM					12.70	4.76	1.20	5.50	0.96	0.72	3.60	0.35	0.14		0.60
 Medium	1121702	TCMT 090204-MM	TCMT 1.81.51-MM				5.56	2.38	0.40	2.50	0.60	0.19	2.25	0.11	0.06	0.17		
	1121811	TCMT 090208-MM	TCMT 1.81.52-MM				5.56	2.38	0.80	2.50	0.60	0.38	2.25	0.15	0.08	0.23		
	1121968	TCMT 110204-MM	TCMT 21.51-MM					6.35	2.38	0.40	2.80	0.67	0.21	2.50	0.13	0.06		0.19
	1121969	TCMT 110208-MM	TCMT 21.52-MM					6.35	2.38	0.80	2.80	0.67	0.42	2.50	0.17	0.09		0.26
	1121819	TCMT 110304-MM	TCMT 221-MM					6.35	3.18	0.40	2.80	0.67	0.21	2.50	0.13	0.06		0.19
	1121826	TCMT 110308-MM	TCMT 222-MM					6.35	3.18	0.80	2.80	0.67	0.42	2.50	0.20	0.09		0.40
	1121835	TCMT 16T304-MM	TCMT 32.51-MM					9.53	3.97	0.40	4.40	0.80	0.25	3.00	0.15	0.08		0.23
	1121839	TCMT 16T308-MM	TCMT 32.52-MM					9.53	3.97	0.80	4.40	0.80	0.50	3.00	0.22	0.10		0.45
	1121843	TCMT 16T312-MM	TCMT 32.53-MM					9.53	3.97	1.20	4.40	0.80	0.60	3.00	0.35	0.12		0.60
	1121848	TCMT 220408-MM	TCMT 432-MM					12.70	4.76	0.80	5.50	0.96	0.60	3.60	0.25	0.12		0.45

 First choice

 Stock Items

 Available Upon Request

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

# PHS GRADES = POSITIVE Turning Inserts

NEW

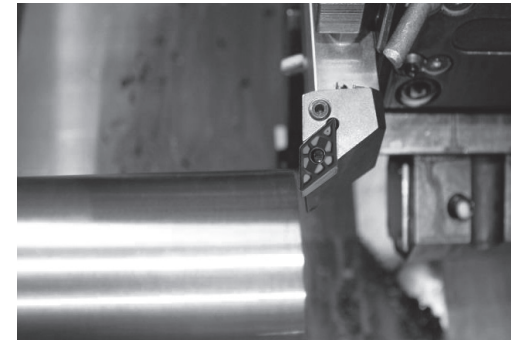
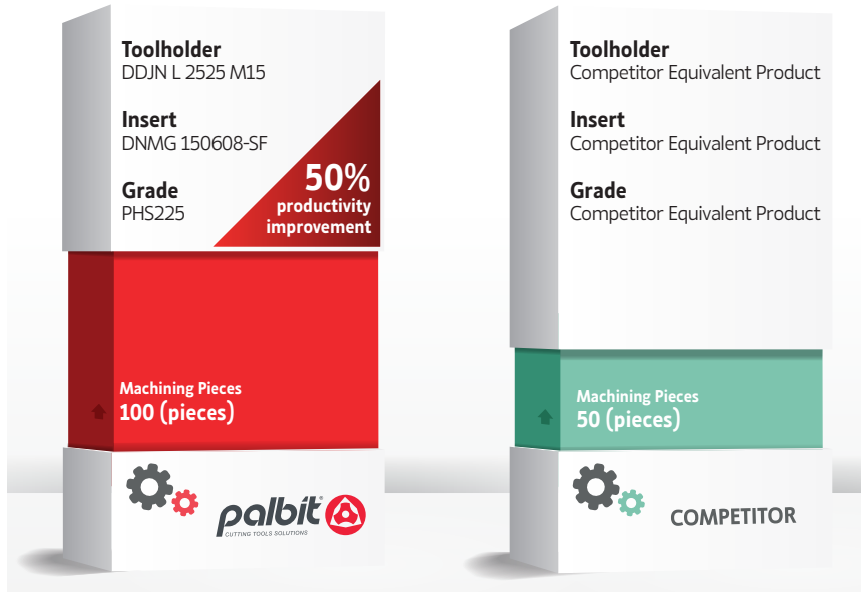
MM Chip Breaker				M			Dimensions (mm)				Cutting Conditions					Technical Drawings	
				CVD-MT													
		(2) Grade Code		U4	U5	V6											
Inserts	(1) Geometry Code	ISO Reference	ANSI Reference	PHS215	PHS225	PHS240	D	S	Re	d1	ap (mm)	Min	Max	fn (mm/rev)	Min	Max	
 VBMT-MM Medium	1121867	VBMT 160404-MM	VBMT 331-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	0.40	4.40	0.72	0.23	2.70	0.14	0.07	0.20	 Relief Angle 5°
	1121790	VBMT 160408-MM	VBMT 332-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	0.80	4.40	0.72	0.45	2.70	0.18	0.09	0.27	
	1121795	VBMT 160412-MM	VBMT 333-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	1.20	4.40	0.72	0.54	2.70	0.22	0.11	0.32	
 VCMT-MM Medium	1121780	VCMT 110304-MM	VCMT 221-MM	<input checked="" type="radio"/>	<input type="radio"/>		6.35	3.18	0.40	2.80	0.77	0.31	2.55	0.15	0.10	0.25	 Relief Angle 7°
	1121751	VCMT 110308-MM	VCMT 222-MM	<input checked="" type="radio"/>	<input type="radio"/>		6.35	3.18	0.80	2.80	0.77	0.61	2.55	0.20	0.13	0.33	
	1121991	VCMT 160404-MM	VCMT 331-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	0.40	4.40	0.72	0.23	2.70	0.14	0.07	0.20	
	1121992	VCMT 160408-MM	VCMT 332-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	0.80	4.40	0.72	0.45	2.70	0.18	0.09	0.27	
	1121993	VCMT 160412-MM	VCMT 333-MM	<input checked="" type="radio"/>	<input type="radio"/>		9.53	4.76	1.20	4.40	0.72	0.54	2.70	0.22	0.11	0.32	

First choice

Stock Items

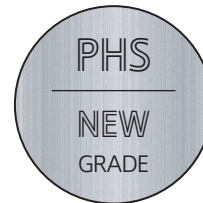
Available Upon Request

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



Workpiece material: stainless steel, AISI 316

Cutting speed: Vc (m/min)	200
Feed per tooth: fn (mm/r)	0.30
Depth of cut: ap (mm)	2.00
Operation	External turning
Coolant	Emulsion



COSMIC MATERIALS

PILOT\_PALBIT\_FYMKT\_49\_ED00\_REV01 (22)



PalbitUSA.com

U.S. Partner:



15 Merrigan Way | South Deerfield, MA 01373

413-350-5200 | PilotPrecision.com

ISO 9001:2015

