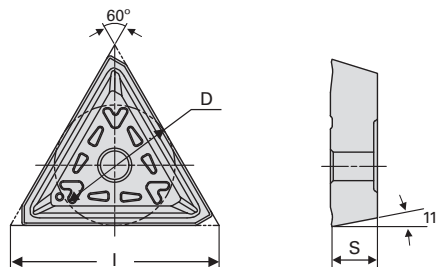


TPKR 1603



Designation	Grade	Dimensions			
		I	D	S	r
TPKR 1603PDTR	YG602	16.5	9.53	3.14	-

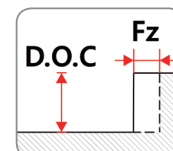


TPKR 1603

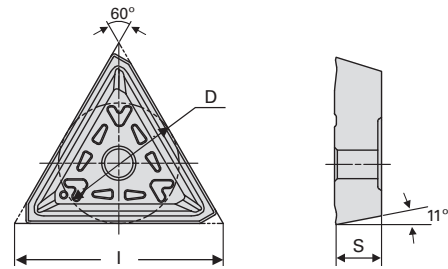
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.22	0.19	190	330	260	0.5	12.0	3.0
	Low Alloys	200	0.14	0.18	0.16	150	240	195	0.5	12.0	3.0
	High Alloys	220	0.11	0.15	0.13	90	150	120	0.5	8.6	2.5
M	Austenitic	190	0.14	0.15	0.15	190	250	220	0.5	12.0	3.0
K	Grey Cast Iron	140	0.16	0.22	0.19	150	240	195	0.5	12.0	3.0
S	Heat Resistant and Super Alloys	240	0.11	0.13	0.12	25	45	35	0.5	8.6	2.3
H	Hardened Materials	45HRC	0.09	0.13	0.11	40	80	60	0.5	3.4	1.5

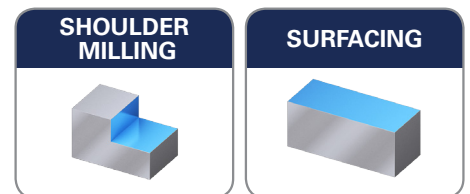
* D.O.C: Depth Of Cut



TPKR 2204



Designation	Grade	Dimensions			
		L	D	S	r
TPKR 2204PDTR	YG602	22.0	12.70	4.76	-

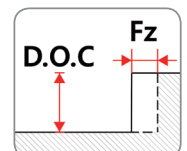


TPKR 2204

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.22	0.19	190	330	260	0.5	18.0	4.0
	Low Alloys	200	0.14	0.18	0.16	150	240	195	0.5	18.0	4.0
	High Alloys	220	0.11	0.15	0.13	90	150	120	0.5	12.9	3.0
M	Austenitic	190	0.14	0.15	0.15	190	250	220	0.5	18.0	4.0
K	Grey Cast Iron	140	0.16	0.22	0.19	150	240	195	0.5	18.0	4.0
S	Heat Resistant and Super Alloys	240	0.11	0.13	0.12	25	45	35	0.5	12.9	3.0
H	Hardened Materials	45HRc	0.09	0.13	0.11	40	80	60	0.5	6.4	2.0

* D.O.C: Depth Of Cut



Features of Grades :

YG-1 Universal grades, designs for multi-purpose application and extremely efficient in covering materials including Steels, Stainless Steels and Cast Iron.

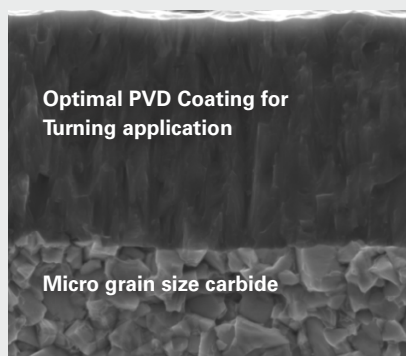
YG602



Exclusive PVD coating / Unique Substrate for MILLING and DRILLING Application

- Ultra dense PVD coating with optimal thermal resistance & added strength
- Sub-micron substrate designed for demanding application

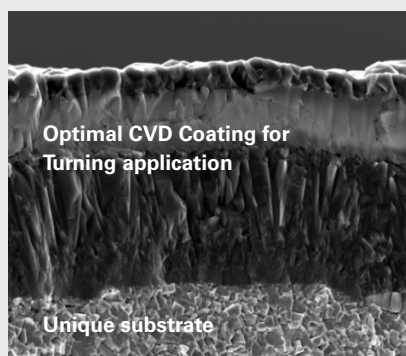
YG801



Exclusive PVD coating / Unique Substrate for TURNING Application

- Unique PVD coating and substrate designed to balance edge strength & wear resistance for continuous machining.
- Excellent cutting performance under harsh machining condition.

YG1001



Unique Substrate / CVD coating for TURNING Application

- Thick coating optimized for Cast iron applications and harsh machining condition.
- Advanced CVD coating with optimal thermal & wear resistance for turning applications.
- Exceptional cutting performance attributed to combination of carbide substrate and coating.

Grade	P	M	K	S
YG602	P30-40	M20-30	K20-30	S10-20
YG801	P20-40	M20-40	K10-25	S05-25
YG1001	-	-	K10-25	-



1 Insert Shape

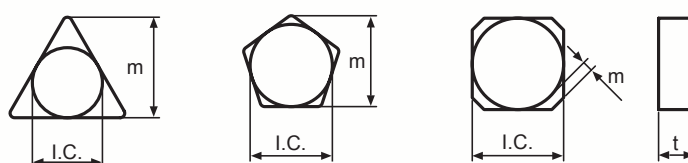
A	B	C	D	E	H	K	L
						Special	
O	P	R	S	T	W	X	

2 Clearance Angle

	5°	7°	15°	20°	25°	30°	0°	11°
B	C	D	E	F	G	N	P	

3 Tolerance

	Tolerance			I.C. Size					
	m	t	I.C.	6.35	9.525	12.7	15.875	19.05	25.4
A	± 0.005	± 0.025	± 0.025	●	●	●	●	●	●
C	± 0.013	± 0.025	± 0.025	●	●	●	●	●	●
E	± 0.025	± 0.025	± 0.025	●	●	●	●	●	●
F	± 0.005	± 0.025	± 0.013	●	●	●	●	●	●
G	± 0.025	± 0.13	± 0.025	●	●	●	●	●	●
H	± 0.013	± 0.025	± 0.013	●	●	●	●	●	●
K	± 0.013	± 0.025	± 0.05	●	●				
			± 0.08			●			
			± 0.10				●	●	
			± 0.13						●
M	± 0.08	± 0.13	± 0.05	●	●				
	± 0.13		± 0.08			●			
	± 0.15		± 0.10				●	●	
	± 0.18		± 0.13						●



4 Cross Section Shape

								Special
A	F	G	M	N	R	T	W	X

C'Sink40°~60°

C'Sink40°~60°

MILLING INSERTS DESIGNATION SYSTEM (ISO)

12	03	ED	T	R	CHIP BREAKER
5	6	7	8	9	10

5

Cutting
Edge
Length

	C	S	R	T	H	O
I.C. Size						
Metric						
5.56	05	05	05	09		
6.35	06	06	06	11		
7.94	08	07	07	13		
9.525	09	09	09	16		
12.7	12	12	12	22	05	05
15.875	16	15	15	27	09	06
19.05	19	19	19	33	10	
25.4	25	25	25	44		

6

Thickness

Symbol(t)	mm
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52

7

Lead Angle &
Relief Angle
of Minor
Cutting Edge

Lead Angle	
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Special

Relief Angle of minor cutting edge	
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z	Special

8

Edge
Preparation

	F
	E
	T
	S

9

Cutting
Direction

	R
	L
	N

10

Chip Breaker

For Application