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2013  
Grooving Inserts



Standard grooving Inserts Cut-off blades Circlip grooving Inserts  
Contour cutting Inserts Thread cutting Inserts End face ring grooving Inserts



Worldia Product Catalogue  
**Grooving Solutions**



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## Standard type code of External grooving solution

### Standard grooving Inserts

① <b>GTI</b> Groove turning inserts	② <b>S</b> Standard Inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W300</b> Main cutting edge width 3.0	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>R040</b> Blade nose radius angle 0.4	⑦ <b>P00</b> Rake angle 0°
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### Cut-off blades

① <b>GTI</b> Groove turning inserts	② <b>O</b> Cut-off inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W200</b> Main cutting edge width 2.0	⑤ <b>T650</b> Max Cutting depth 6.5	⑥ <b>R020</b> Blade nose radius angle 0.2	⑦ <b>P00</b> Rake angle 0°
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### Circlip grooving Inserts

① <b>GTI</b> Groove turning inserts	② <b>R</b> Specialized groove	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W195</b> Main cutting edge width 1.95	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>R020</b> Blade nose radius angle 0.2
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### End face ring grooving inserts

① <b>GTI</b> Groove turning inserts	② <b>E</b> End face ring groove	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W300</b> Main cutting edge width 3.0	⑤ <b>T850</b> Max Cutting depth 8.5	⑥ <b>R020</b> Blade nose radius angle 0.2	⑦ <b>B060</b> Bigger OD Φ60	⑧ <b>S040</b> Smaller OD Φ40
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### Contour cutting Inserts

① <b>GTI</b> Groove turning inserts	② <b>C</b> Contour cutting Inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>R200</b> Main cutting edge width 2.0	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>P00</b> Rake angle 0°
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### Metric thread cutting Inserts

① <b>GTI</b> Groove turning inserts	② <b>T</b> Threading Inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>M60</b> Metric 60°	⑤ <b>P100</b> Thread Pitch 1.0mm	⑥ Without Wiper <b>R</b> With Wiper
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### Inch thread cutting Inserts

① <b>GTI</b> Groove turning inserts	② <b>T</b> Threading Inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>I55</b> Inch 55°	⑤ <b>N11</b> 11 teeth per inch	⑥ Without Wiper <b>R</b> With Wiper
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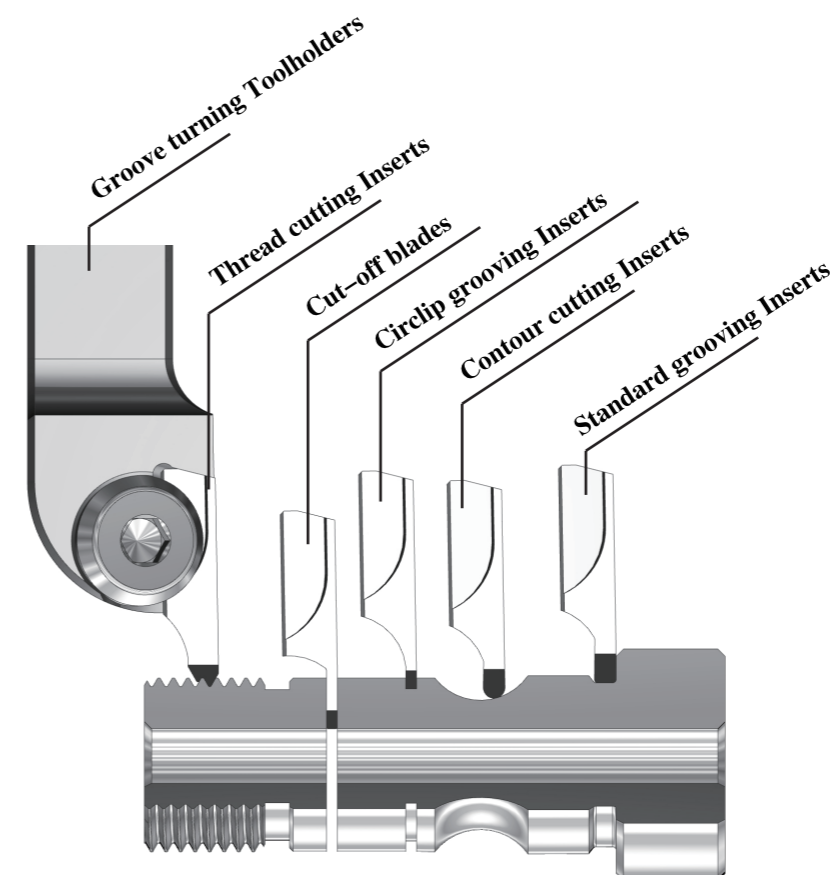
### Groove turning Toolholders

① <b>GTH</b> Groove turning Toolholders	② <b>R/L</b> Cutting Direction: Right-hand direction /Left-hand direction	③ <b>C91</b> Shank tool cutting edge angle 91°	④ <b>S2020</b> Direction of toolholders: b=20 h=20
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## Standard type code of External grooving solution ( supplement)

<b>S</b> Edge chamfering + honing	<b>010</b> Chamfer width 0.1	<b>20</b> Chamfer angle 20°	<b>05</b> Rounding R0.005	— <b>PN210-A</b> Tool nose material
<b>T</b> Edge chamfering	<b>010</b> Chamfer width 0.1	<b>20</b> Chamfer angle 20°		— <b>PN210-A</b> Tool nose material
<b>E</b> Edge honing	<b>05</b> Rounding R0.005			— <b>PN210-A</b> Tool nose material
<b>F</b> Edge sharpness				— <b>PD203-A</b> Tool nose material

### Type specification catalogue



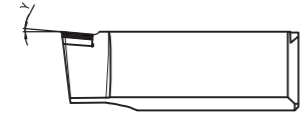
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## GTIS Standard Grooving inserts

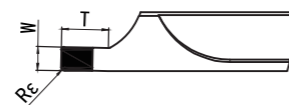
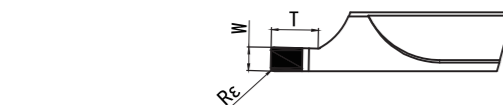
① <b>GTI</b> Groove turning inserts	② <b>S</b> Standard Inserts	③ <b>R/L</b> Assemble with Right-hand / Left-hand Toolholders	④ <b>W300</b> Main cutting edge width 3.0	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>R040</b> Blade nose radius angle 0.4	⑦ <b>P00</b> Rake angle 0°
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■ Fig: Right hand

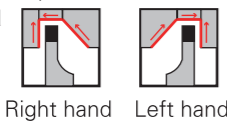
■ Material: PCD



■ Material: PCD  
PCBN



■ Allowable feed direction  
Traversing cutting



Material group	N			H			K		
Classification of usage									
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

Right hand inserts						WORLDIA PCD			WORLDIA PCBN					
No.	Type	W	T	R <sub>ε</sub>	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTISR-W300T500R020P00	3	5	0.2	0		▲	▲	▲	▲	▲	▲		▲
2	GTISR-W350T500R020P00	3.5	5	0.2	5	▲	△							
3	GTISR-W400T500R040P00	4	5	0.4	0		▲	▲	▲	▲	▲	▲		▲
4	GTISR-W450T500R040P00	4.5	5	0.4	5	▲	△							
5	GTISL-W300T500R020P00	3	5	0.2	0		▲	▲	▲	▲	▲	▲	▲	▲
6	GTISL-W350T500R020P00	3.5	5	0.2	5	▲	△							
7	GTISL-W400T500R040P00	4	5	0.4	0		▲	▲	▲	▲	▲	▲	▲	▲
8	GTISL-W450T500R040P00	4.5	5	0.4	5	▲	△							
Left hand inserts						WORLDIA PCD			WORLDIA PCBN					
No.	Type	W	T	R <sub>ε</sub>	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTISR-W300T500R020P00	3	5	0.2	0		▲	▲	▲	▲	▲	▲		▲
2	GTISR-W350T500R020P00	3.5	5	0.2	5	▲	△							
3	GTISR-W400T500R040P00	4	5	0.4	0		▲	▲	▲	▲	▲	▲		▲
4	GTISR-W450T500R040P00	4.5	5	0.4	5	▲	△							
5	GTISL-W300T500R020P00	3	5	0.2	0		▲	▲	▲	▲	▲	▲	▲	▲
6	GTISL-W350T500R020P00	3.5	5	0.2	5	▲	△							
7	GTISL-W400T500R040P00	4	5	0.4	0		▲	▲	▲	▲	▲	▲	▲	▲
8	GTISL-W450T500R040P00	4.5	5	0.4	5	▲	△							

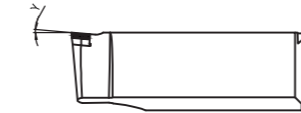
Note: ▲ First Choice △ Second Choice

## GTIR Contour cutting Inserts

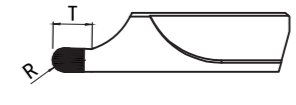
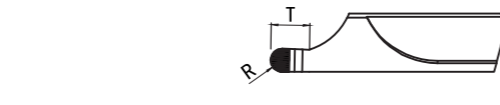
① <b>GTI</b> Groove turning inserts	② <b>C</b> Contour cutting Inserts	③ <b>R/L</b> Assemble with Right-hand / Left-hand Toolholders	④ <b>R200</b> Main cutting edge width 2.0	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>P00</b> Rake angle 0°
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■ Fig: Right hand

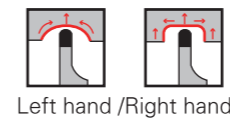
■ Material: PCD



■ Material: PCD  
PCBN



■ Allowable feed direction



Material group	N			H			K		
Classification of usage									
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

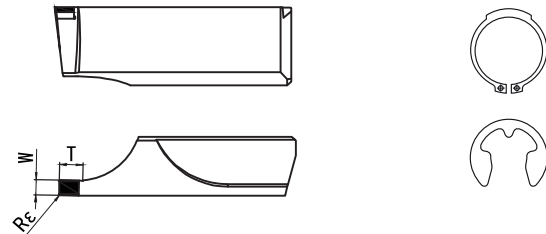
Right hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	W	T	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTICR-R150T500P00	1.5	5	0		▲	▲	▲	▲	▲	▲		
2	GTICR-R150T500P05	1.5	5	5	▲	△							
3	GTICR-R125T500P00	1.25	5	0		▲	▲	▲	▲	▲	▲		
4	GTICR-R125T500P05	1.25	5	5	▲	△							
5	GTICR-R150T500P00	1.5	5	0		▲	▲	▲	▲	▲	▲		
6	GTICR-R150T500P05	1.5	5	5	▲	△							
7	GTICR-R175T500P00	1.75	5	0		▲	▲	▲	▲	▲	▲		
8	GTICR-R175T500P05	1.75	5	5	▲	△							
9	GTICR-R200T500P00	2	5	0		▲	▲	▲	▲	▲	▲	▲	▲
10	GTICR-R200T500P05	2	5	5	▲	△							
11	GTICR-R250T500P00	2.5	5	0		▲	▲	▲	▲	▲	▲	▲	▲
12	GTICR-R250T500P05	2.5	5	5	▲	△							
13	GTICR-R300T500P00	3	5	0		▲	▲	▲	▲	▲	▲	▲	▲
14	GTICR-R300T500P05	3	5	5	▲	△							
Left hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	W	T	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTICL-R150T500P00	1.5	5	0		▲	▲	▲	▲	▲	▲		
2	GTICL-R150T500P05	1.5	5	5	▲	△							
3	GTICL-R125T500P00	1.25	5	0		▲	▲	▲	▲	▲	▲		
4	GTICL-R125T500P05	1.25	5	5	▲	△							
5	GTICL-R150T500P00	1.5	5	0		▲	▲	▲	▲	▲	▲		
6	GTICL-R150T500P05	1.5	5	5	▲	△							
7	GTICL-R175T500P00	1.75	5	0		▲	▲	▲	▲	▲	▲		
8	GTICL-R175T500P05	1.75	5	5	▲	△							
9	GTICL-R200T500P00	2	5	0		▲	▲	▲	▲	▲	▲	▲	▲
10	GTICL-R200T500P05	2	5	5	▲	△							
11	GTICL-R250T500P00	2.5	5	0		▲	▲	▲	▲	▲	▲	▲	▲
12	GTICL-R250T500P05	2.5	5	5	▲	△							
13	GTICL-R300T500P00	3	5	0		▲	▲	▲	▲	▲	▲	▲	▲
14	GTICL-R300T500P05	3	5	5	▲	△							

Note: ▲ First Choice △ Second Choice

## GTIR Circlip Grooving Inserts

① <b>GTI</b> Groove turning inserts	② <b>R</b> Specialized groove	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W195</b> Main cutting edge width 1.95	⑤ <b>T400</b> Max Cutting depth 4.0	⑥ <b>R020</b> Blade nose radius angle 0.2
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- Fig: Right hand
- Material: PCD  
PCBN



- Allowable feed direction
- Right hand Left hand

Material group	N			H			K		
Classification of usage	○	◐	⊕	○	◐	⊕	○	◐	⊕
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

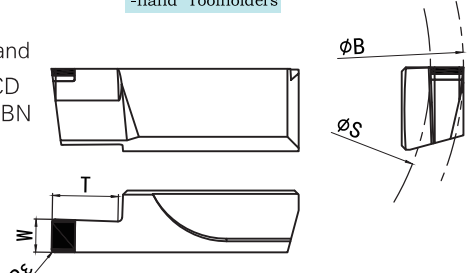
Right hand inserts				WORLDIA PCD			WORLDIA PCBN						
No.	Type	W	T	Re	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTIRR-W140T400R020	1.4	2	0.2	▲	▲	▲	▲	▲	▲		▲	
2	GTIRR-W170T400R020	1.7	3	0.2	▲	▲	▲	▲	▲	▲		▲	
3	GTIRR-W195T400R020	1.95	3	0.2	▲	▲	▲	▲	▲	▲		▲	
4	GTIRR-W225T500R020	2.25	3	0.2	▲	▲	▲	▲	▲	▲		▲	
Left hand inserts				WORLDIA PCD			WORLDIA PCBN						
No.	Type	W	T	Re	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTIRL-W140T400R020	1.4	2	0.2	▲	▲	▲	▲	▲	▲		▲	
2	GTIRL-W170T400R020	1.7	3	0.2	▲	▲	▲	▲	▲	▲		▲	
3	GTIRL-W195T400R020	1.95	3	0.2	▲	▲	▲	▲	▲	▲		▲	
4	GTIRL-W225T500R020	2.25	3	0.2	▲	▲	▲	▲	▲	▲		▲	

Note:▲First Choice △ Second Choice

## GTIE End face ring grooving inserts

① <b>GTI</b> Groove turning inserts	② <b>E</b> End face ring groove	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W300</b> Main cutting edge width 3.0	⑤ <b>T850</b> Max Cutting depth 8.5	⑥ <b>R020</b> Blade nose radius angle 0.2	⑦ <b>B060</b> Bigger OD Φ60	⑧ <b>S040</b> Smaller OD Φ40
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- Fig: Right hand
- Material: PCD  
PCBN



- Allowable feed direction
- Right hand Left hand

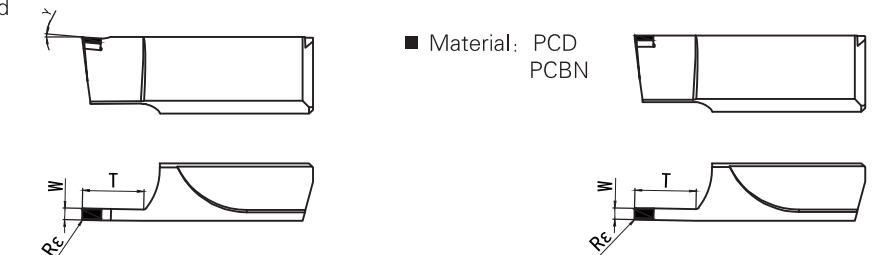
Material group	N			H			K		
Classification of usage	○	◐	⊕	○	◐	⊕	○	◐	⊕
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

- So customers need place order according to above mentioned specification patern based on actual requirement.  
Example: Intended part' s material is cast iron, continuous cutting, the ring groove bigger outer OD on the part' s end face is Φ45.5, smaller Inner OD isΦ38, depth of groove is 5, bottom R angle of groove is Max0.4.  
Namely the specification is GTIEL-W300T700R020-B045S038-F-PN306-A

## GTIO Cut-off Inserts

① <b>GTI</b> Groove turning inserts	② <b>O</b> Cut-off inserts	③ <b>R/L</b> Assemble with Right-hand /Left-hand Toolholders	④ <b>W200</b> Main cutting edge width 2.0	⑤ <b>T650</b> Max Cutting depth 6.5	⑥ <b>R020</b> Blade nose radius angle 0.2	⑦ <b>P00</b> Rake angle 0°
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- Fig: Right hand
- Material: PCD



- Allowable feed direction
- Right hand Left hand

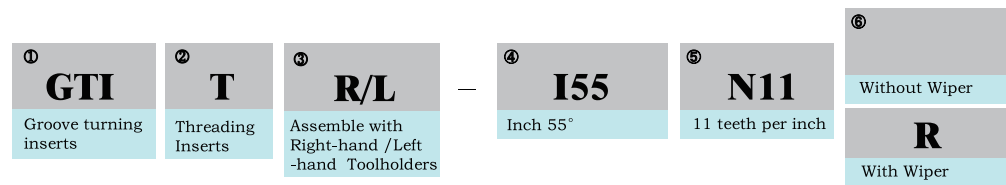
- Material: PCD  
PCBN

Material group	N			H			K		
Classification of usage	○	◐	⊕	○	◐	⊕	○	◐	⊕
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

Right hand inserts				WORLDIA PCD			WORLDIA PCBN							
No.	Type	W	T	Re	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTIOR-W150T700R020P00	1.5	7	0.2	0		△	▲	▲	▲	▲	▲	▲	
2	GTIOR-W150T700R020P05	1.5	7	0.2	5	▲	▲							
3	GTIOR-W200T700R020P00	2	7	0.2	0		△	▲	▲	▲	▲	▲	▲	
4	GTIOR-W200T700R020P05	2	7	0.2	5	▲	▲							
5	GTIOR-W250T850R020P00	2.5	8.5	0.2	0		△	▲	▲	▲	▲	▲	▲	
6	GTIOR-W250T850R020P05	2.5	8.5	0.2	5	▲	▲							
7	GTIOR-W300T850R020P00	3	8.5	0.2	0		△	▲	▲	▲	▲	▲	▲	
8	GTIOR-W300T850R020P05	3	8.5	0.2	5	▲	▲							
Left hand inserts				WORLDIA PCD			WORLDIA PCBN							
No.	Type	W	T	Re	γ°	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTIOL-W150T700R020P00	1.5	7	0.2	0		△	▲	▲	▲	▲	▲	▲	
2	GTIOL-W150T700R020P05	1.5	7	0.2	5	▲	▲							
3	GTIOL-W200T700R020P00	2	7	0.2	0		△	▲	▲	▲	▲	▲	▲	
4	GTIOL-W200T700R020P05	2	7	0.2	5	▲	▲							
5	GTIOL-W250T850R020P00	2.5	8.5	0.2	0		△	▲	▲	▲	▲	▲	▲	
6	GTIOL-W250T850R020P05	2.5	8.5	0.2	5	▲	▲							
7	GTIOL-W300T850R020P00	3	8.5	0.2	0		△	▲	▲	▲	▲	▲	▲	
8	GTIOL-W300T850R020P05	3	8.5	0.2	5	▲	▲							

Note:▲First Choice △ Second Choice

## GTIT Metric Threading Inserts



■ Fig: Right-hand inserts with wiper

■ Material: PCD

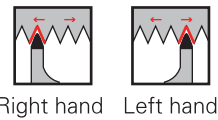


■ Fig: Right-hand inserts without wiper

■ Material: PCD  
PCBN



■ Allowable feed direction



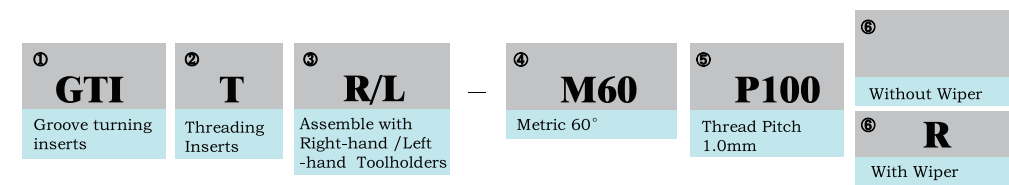
Material group	N			H			K		
Classification of usage	○	◐	⊕	○	◐	⊕	○	◐	⊕
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

Right hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	P	A	R <sub>ε</sub>	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTITR-M60P050	0.50	60	0.06	▲			▲			▲		
2	GTITR-M60P075	0.75	60	0.09	▲			▲			▲		
3	GTITR-M60P100	1.00	60	0.12	▲			▲			▲		
4	GTITR-M60P125	1.25	60	0.15	▲			▲			▲		
5	GTITR-M60P150	1.50	60	0.18	▲			▲			▲		
6	GTITR-M60P175	1.75	60	0.21	▲			▲			▲		
7	GTITR-M60P200	2.00	60	0.25	▲	▲		▲			▲		
8	GTITR-M60P200R	2.00	60	0.25	▲	▲		▲			▲		
9	GTITR-M60P250	2.50	60	0.31	▲	▲		▲			▲		
10	GTITR-M60P250R	2.50	60	0.31	▲	▲		▲			▲		
11	GTITR-M60P300	3.00	60	0.37	▲	▲		▲			▲		
12	GTITR-M60P300R	3.00	60	0.37	▲	▲		▲			▲		

Left hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	P	A	R <sub>ε</sub>	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTITL-M60P050	0.50	60	0.06	▲			▲			▲		
2	GTITL-M60P075	0.75	60	0.09	▲			▲			▲		
3	GTITL-M60P100	1.00	60	0.12	▲			▲			▲		
4	GTITL-M60P125	1.25	60	0.15	▲			▲			▲		
5	GTITL-M60P150	1.50	60	0.18	▲			▲			▲		
6	GTITL-M60P175	1.75	60	0.21	▲			▲			▲		
7	GTITL-M60P200	2.00	60	0.25	▲	▲		▲			▲		
8	GTITL-M60P200R	2.00	60	0.25	▲	▲		▲			▲		
9	GTITL-M60P250	2.50	60	0.31	▲	▲		▲			▲		
10	GTITL-M60P250R	2.50	60	0.31	▲	▲		▲			▲		
11	GTITL-M60P300	3.00	60	0.37	▲	▲		▲			▲		
12	GTITL-M60P300R	3.00	60	0.37	▲	▲		▲			▲		

Note: ▲ First Choice △ Second Choice

## GTIT Inch Threading Inserts



■ Fig: Right-hand inserts with wiper

■ Material: PCD

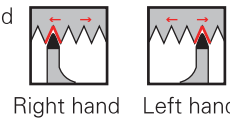


■ Fig: Right-hand inserts without wiper

■ Material: PCD  
PCBN



■ Allowable feed direction



Material group	N			H			K		
Classification of usage	○	◐	⊕	○	◐	⊕	○	◐	⊕
Cutting edge treatment	F	F	F	E20	T01020	S0102505	F	S0101505	S0102005

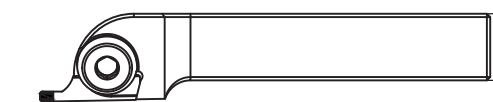
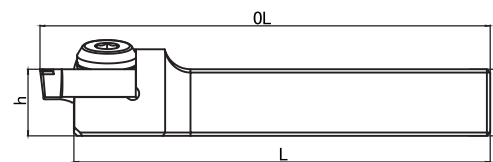
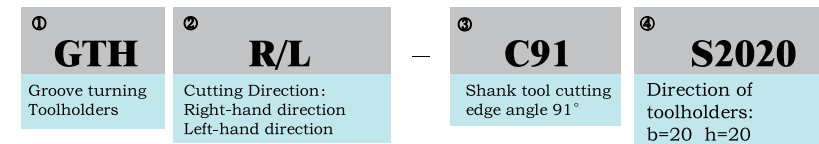
Right hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	N	A	R <sub>ε</sub>	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTITR-I55N28	28	55	0.12	▲			▲			▲		
2	GTITR-I55N19	19	55	0.18	▲			▲			▲		
3	GTITR-I55N14	14	55	0.25	▲			▲			▲		
4	GTITR-I55N14R	14	55	0.25	▲			▲			▲		
5	GTITR-I55N11	11	55	0.32	▲			▲			▲		
6	GTITR-I55N11R	11	55	0.32	▲			▲			▲		

Left hand inserts					WORLDIA PCD			WORLDIA PCBN					
No.	Type	N	A	R <sub>ε</sub>	PD302	PD305	PD205	PN210	PN208	PN208	PN209	PN404	PN306
1	GTITR-I55N28	28	55	0.12	▲			▲			▲		
2	GTITR-I55N19	19	55	0.18	▲			▲			▲		
3	GTITR-I55N14	14	55	0.25	▲			▲			▲		
4	GTITR-I55N14R	14	55	0.25	▲			▲			▲		
5	GTITR-I55N11	11	55	0.32	▲			▲			▲		
6	GTITR-I55N11R	11	55	0.32	▲			▲			▲		

Note: ▲ First Choice △ Second Choice

### Groove turning Toolholders



■ Fig: Right hand

### Specification of toolholders

No.	Type	b	h	L	OL
1	GTHR-C91S2020	20	20	125	135
2	GTHL-C91S2020	20	20	125	135
3	GTHR-C91S2525	25	25	150	160
4	GTHL-C91S2525	25	25	150	160

## PCD/PCBN material features

Material	PCD			PCBN					
	Type	PD302	PD305	PD205	PN210	PN208	PN404	PN209	PN306
Grian size [μm]	2	10	32、2	2	3~5	2	2~4	3	
Content [Vol.%]	90	92	90	50	65	90	90	95	
Binder	—	—	—	TiN	TiNC	TiN	AIN	TiN	
Material features	Sharp cutting edge, high surface finish, strong impact toughness, soft texture. Mainly used for processing soft Alu, Cu, Wood with good general performance, high wear resistance, high surface finish and high strength.	Mainly used for processing Cu, Alu, Wood, rubber .	Mainly used for processing material of medium hardness to extreme high hardness and interrupted processing with medium performance on Surface finish, impact toughness and wear resistance.	Mainly fit for both interrupted and continuous processing majority of steel Auto parts and also for processing cold working tool steel and some valve seat alloy.	Mainly used for interrupt processing hardened steel with medium to heavy loading .	Fit for both interrupted and continuous processing cast iron, powder metallurgy alloy, tool steel, hardened steels.	Fit for interrupted processing gray cast iron, hard cast iron, hardened steel, high alloy iron- based material and powder metal with high impact resistance and chemical stability.	With higher content CBN and binder, excellent wear resistance.	Fit for processing various cast iron parts.



**北京沃尔德超硬工具有限公司**  
Beijing World Super Hard Tools Co., Ltd.

As a national hi-tech enterprise registered in Beijing Zhongguancun Science Park in 2006, Beijing World Super hard Tools Company Limited (referred to as Worldia) is a globally renowned innovator in material processing and tool machining in diamond industry. At the end of 2010, Worldia obtained the core businesses and assets from Supower via company reorganization. And today, Worldia is growing with one branch company, two wholly-owned subsidiaries, dozens of patents and a number of leading edge technologies and products.

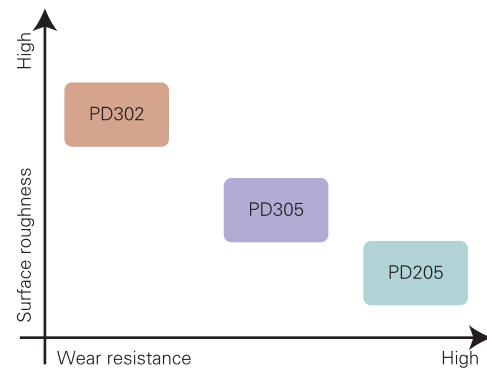
Worldia is one of the very few manufacturers of high-penetration and micro-teeth diamond scribe wheels worldwide. It is among China's most influential and largest manufacturers of PCD/PCBN cutting tools, PCD & carbide saw blades, diamond die blanks and CVD diamond. Growing the largest thick film CVD diamond wafers in Asia, Worldia also enjoys a global reputation in laser cutting and precision lapping/polishing of PCD, PCBN and PDC cutters.

With state of art design concepts and proprietary technologies, Worldia produces a variety of high quality diamond and PCBN cutting tools. Worldia is not only an industry leader in carbon machining tools, but also a cutting tool professional in windmills, rollers, automobile parts and stone machining industries.

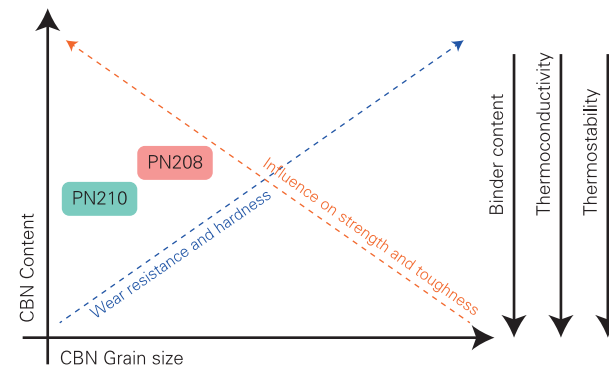
Certified to ISO 9001:2008 quality management systems, European ROHS directive and ISO14001:2004 environmental management certification, Worldia is equipped with advanced manufacturing & inspection equipment, including ultrasonic C-scanners, ZOLLER high-precision tool measuring equipment, and over 100sets relative precision inspection instruments. Worldia has a full line of quality management & quality inspection system and skilled technicians, which ensure the delivery of superior performance products.

Worldia is a team of individuals with passion, dreams and a global vision, ready to work together with friends from different walks of life to promote the development of super hard materials and tools industry.

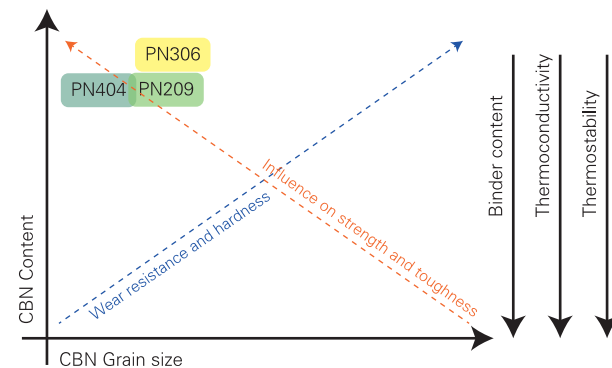
### Main application based on PCD features:



### Main application based on PCBN features: (H Hardened steel)



### Main application based on PCBN features: (K Cast iron)



ISO 9001:2008



ISO14001:2004



National High-Tech Enterprise



Second place of Chinese innovation & Entrepreneurship competition



RoHS



TüV & BV



70 Utility Model Patent Certificate