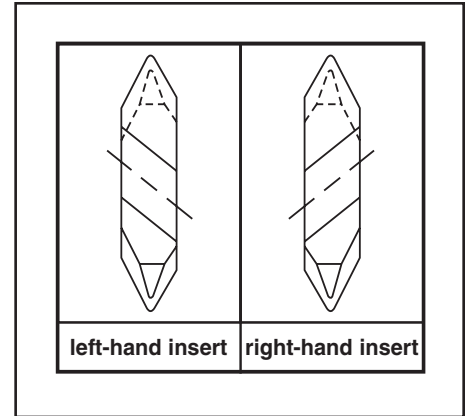
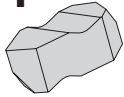
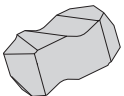
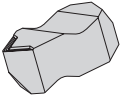
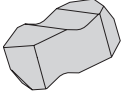
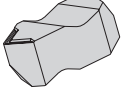
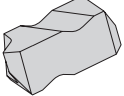

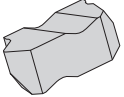


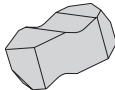
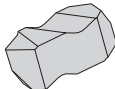
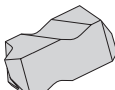

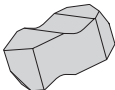


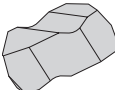

# ProNotch Threading Insert Styles

- All ProNotch threading inserts are precision ground to provide accurate edge location and secure locking of the insert in the toolholder pocket.
- ProNotch threading and grooving inserts can be used in either toolholders or boring bars.
- All non-cresting type threading inserts can be used for either external or internal applications. All cresting type inserts are designed specifically for external use.
- Right-hand ProNotch toolholders use right-hand inserts. Left-hand ProNotch toolholders use left-hand inserts.
- Right-hand ProNotch boring bars use left-hand inserts. Left-hand ProNotch boring bars use right-hand inserts.



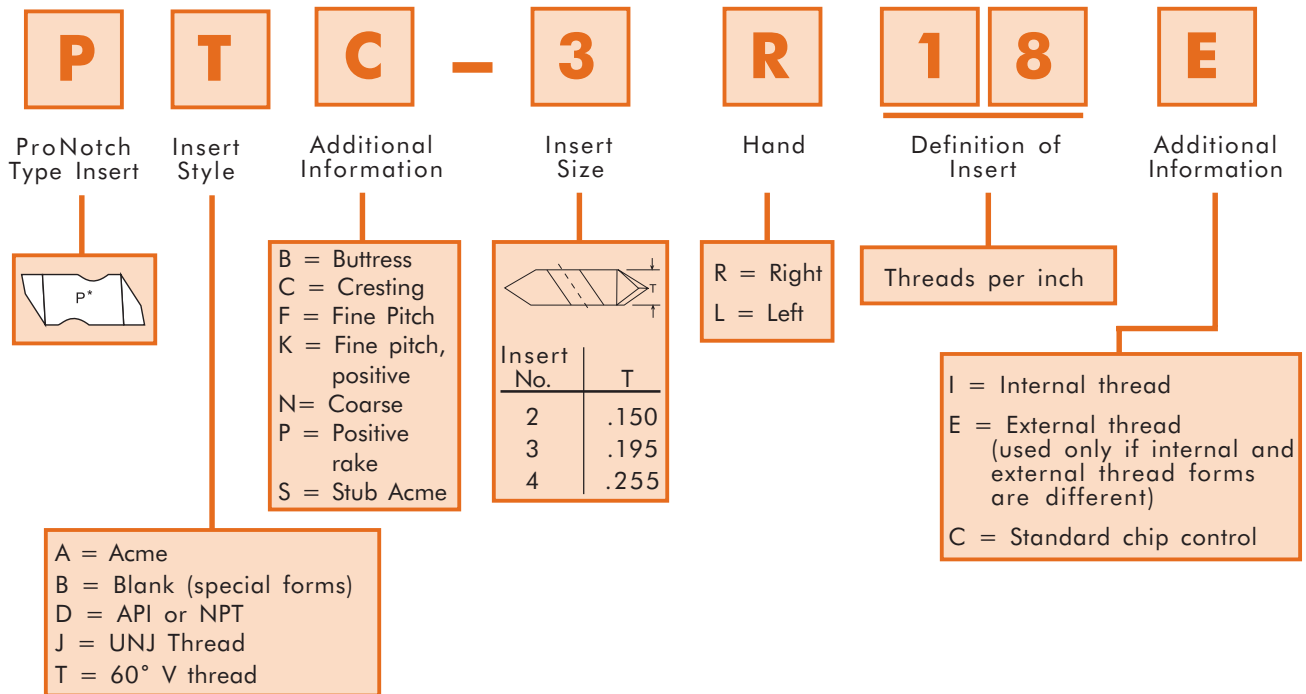
insert style	thread form	rake angle	cresting	tpi range (pitch in mm)		application
				external	internal	
<b>60° Partial Profile</b>						
<b>PT</b> 	60°V UN class 2 ISO 6g/6H	neutral	no	size 2=8 - 36 (.70 - 3.00) size 3=6 - 20 (1.25 - 4.00) size 4=4 - 20 (1.25 - 6.25)	size 2=7 - 20 (1.25 - 3.50) size 3=5 - 12 (2.00 - 5.00) size 4=4 - 12 (2.00 - 6.25)	<b>general purpose</b> • a popular threading insert style for general use • provides satisfactory performance in most applications
<b>PTP</b> 	60°V UN class 2 ISO 6g/6H	5° positive	no	size 2=8 - 36 (.70 - 3.00) size 3=6 - 20 (1.25 - 4.00) size 4=4 - 20 (1.25 - 6.25)	size 2=7 - 20 (1.25 - 3.50) size 3=5 - 12 (2.00 - 5.00) size 4=4 - 12 (2.00 - 6.25)	<b>general purpose</b> • ground positive rake reduces cutting forces • recommended for threading aluminum and difficult-to-machine materials
<b>PT-C</b> 	60°V UN class 2 ISO 6g/6H	10° positive chip control	no	size 2=8 - 36 (.70 - 3.00) size 3=6 - 20 (1.25 - 4.00) size 4=4 - 20 (1.25 - 6.25)	size 2=7 - 20 (1.25 - 3.50) size 3=5 - 12 (2.00 - 5.00) size 4=4 - 12 (2.00 - 6.25)	<b>general purpose with chip control</b> • threading insert with chip control and positive cutting action • especially helpful for internal threading operations
<b>PTN</b> 	60°V UN class 2 ISO 6g/6H	neutral	no	size 3=6 - 11 (2.50 - 4.00) size 4=4.5 - 11 (2.50 - 5.50)	size 3=6 only (4.00 only) size 4=4.5 - 6 (4.00 - 5.50)	<b>coarse pitches</b> • larger nose radius than general purpose inserts • promotes longer tool life
<b>PTN-C</b> 	60°V UN class 2 ISO 6g/6H	10° positive chip control	no	size 3=6 - 11 (2.50 - 4.00) size 4=4.5 - 11 (2.50 - 5.50)	size 3=6 only (4.00 only) size 4=4.5 - 6 (4.00 - 5.50)	<b>coarse pitches with chip control</b> • positive cutting action • larger nose radius than general purpose inserts • promotes longer tool life
<b>PTF</b> 	60°V UN class 2 ISO 6g/6H	neutral	no	size 2=14 - 44 (.60 - 1.75) size 3=10 - 44 (.60 - 2.50) size 4=10 - 44 (.60 - 2.50)	size 2=12 - 24 (1.00 - 2.00) size 3=9 - 24 (1.00 - 2.50) size 4=9 - 24 (1.00 - 2.50)	<b>fine pitches, close to shoulder operations</b> • smaller nose radius than general purpose inserts • use this style insert only when required for the operation
<b>PTK</b> 	60°V UN class 2 ISO 6g/6H	5° positive	no	size 2=14 - 44 (.60 - 1.75) size 3=10 - 44 (.60 - 2.50) size 4=10 - 44 (.60 - 2.50)	size 2=12 - 24 (1.00 - 2.00) size 3=9 - 24 (1.00 - 2.50) size 4=9 - 24 (1.00 - 2.50)	<b>fine pitches, close to shoulder operations</b> • ground positive rake • smaller nose radius than general purpose inserts • use this insert only when required for the operation
<b>60° American UN</b>						
<b>PTC</b> 	60°V UN class 2	neutral	yes	each insert produces a specific tpi	each insert produces a specific tpi	<b>cresting style for UN inch threads</b> • offers the best possible tool life for the application • produces the best surface finish, and accurate thread depth

# PRONOTCH THREADING INSERT STYLES

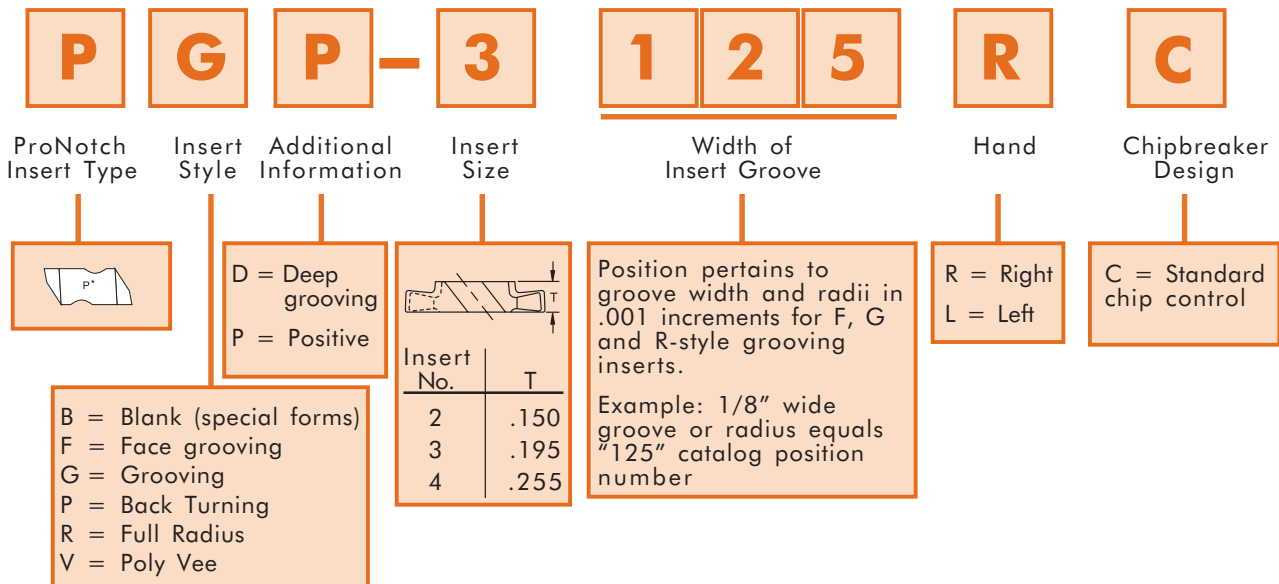
insert style	thread form	rake angle	cresting	tpi range (pitch in mm)		application
				external	internal	
<b>60° UNJ</b>						
<b>PJ</b> 	60°V UNJ class 3	neutral	no	each insert produces a specific tpi	use a class 2 insert, then finish bore the minor diameter	<b>UNJ external threads</b> • close tolerance on nose radius to control thread root radius • meets or exceeds SPEC MIL-S-8879C
<b>PJP</b> 	60°V UNJ class 3	5° positive	no	each insert produces a specific tpi	use a class 2 insert, then finish bore the minor diameter	<b>UNJ external threads</b> • ground positive rake • close tolerance on nose radius to control thread root radius • meets or exceeds SPEC MIL-S-8879C
<b>PJF</b> 	60°V UNJ class 3	neutral	no	each insert produces a specific tpi	use a class 2 insert, then finish bore the minor diameter	<b>UNJ external threads, fine pitches, close to shoulder</b> • close to shoulder applications • close tolerance on nose radius to control thread root radius • meets or exceeds SPEC MIL-S-8879C
<b>PJK</b> 	60°V UNJ class 3	5° positive	no	each insert produces a specific tpi	use a class 2 insert, then finish bore the minor diameter	<b>UNJ external threads, fine pitches, close to shoulder</b> • ground positive rake • close to shoulder applications • close tolerance on nose radius to control thread root radius • meets or exceeds SPEC MIL-S-8879C
<b>API</b>						
<b>PD</b> 	API 60°V	neutral	no	each insert produces a specific tpi	each insert produces a specific tpi	<b>API rotary shouldered connections- tapered</b> • for thread forms: V-.038R, V-.040 and V.050
<b>Acme Threads</b>						
<b>PA</b> 	29° Acme	neutral	no	each insert produces a specific tpi	each insert produces a specific tpi	<b>Acme threads</b> • strong ProNotch design does not allow the insert to move in the pocket during this type of threading operation, which places high cutting forces on the insert
<b>PAS</b> 	29° Acme	neutral	no	each insert produces a specific tpi	each insert produces a specific tpi	<b>Stub Acme threads</b> • strong ProNotch design does not allow the insert to move in the pocket during this type of threading operation, which places high cutting forces on the insert
<b>American Buttress</b>						
<b>PTB-A</b> 	52° American Buttress with radius	neutral	no	size 2 = 16 - 20 size 3 = 8 - 16 size 4 = 4 - 6	size 2 = 16 - 20 size 3 = 8 - 16 size 4 = 4 - 6	<b>7° pressure flank leading</b> • strong ProNotch design does not allow the insert to move in the pocket during this type of threading operation, which places high cutting forces on the insert
<b>PTB-B</b> 	52° American Buttress with radius	neutral	no	size 2 = 16 - 20 size 3 = 8 - 16 size 4 = 4 - 6	size 2 = 16 - 20 size 3 = 8 - 16 size 4 = 4 - 6	<b>45° pressure flank leading</b> • strong ProNotch design does not allow the insert to move in the pocket during this type of threading operation, which places high cutting forces on the insert
<b>Specials</b>						
	—	—	—	—	—	<b>made to your order</b> • let our expert design team and manufacturing personnel make the insert required for your application, including special API thread forms.

# ProNotch Insert Designations

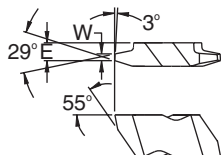
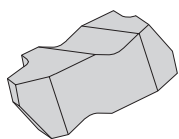
## ProNotch Threading Insert Designations



## ProNotch Grooving Insert Designations

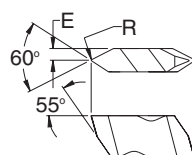
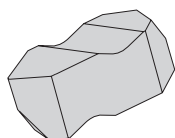


# PRONOTCH INSERTS - THREADING



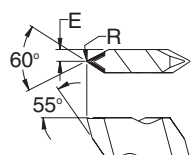
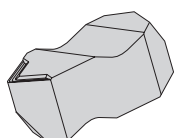
PA- ...										
COATED										
TC706		T541		T321		T323		T013		
R	L	R	L	R	L	R	L	R	L	
●	●									
●	●									
●	●									
●	●									
●	●									

DESIGNATION	tpi	W <sup>+/- .001</sup>	E <sup>+/- .001</sup>
PA-3R/L10	10	.0319	.149
PA-3R/L8	8	.0411	.149
PA-3R/L6	6	.0566	.149
PA-3R/L5	5	.0689	.149
PA-3R/L4	4	.0875	.133



PT- ...										
COATED										
TC706		T541		T321		T323		T013		
R	L	R	L	R	L	R	L	R	L	
●	●			●	●					
●	●	●		●	●					
●	●			●	●					

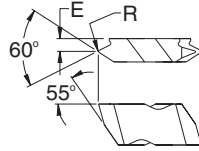
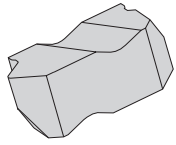
DESIGNATION	tpi		pitch (mm)		R <sup>+/- .001</sup>	E <sup>+/- .001</sup>
	ext	int	ext	int		
PT-2R/L	8-36	7-20	.70 - 3.0	1.25 3.5	.003 / .005	.075
PT-3R/L	6 -20	5 - 12	1.25 - 4.0	2.0 - 5.0	.005 / .008	.098
PT-4R/L	4 - 20	4 - 12	1.25 - 6.25	2.0 - 6.25	.005 / .008	.128



PT- ...C										
COATED										
TC706		T541		T321		T323		T013		
R	L	R	L	R	L	R	L	R	L	
●	●			●	●					

DESIGNATION	tpi		pitch (mm)		R <sup>+/- .001</sup>	E <sup>+/- .001</sup>
	ext	int	ext	int		
PT-3R/LC	6 -20	5 - 12	1.25 - 4.0	2.0 - 5.0	.005 / .008	.098

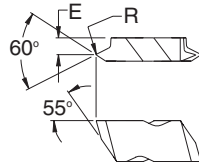
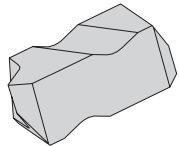
# PRONOTCH INSERTS - THREADING



## PTC- ...

COATED

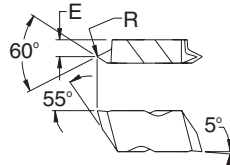
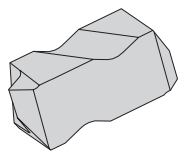
DESIGNATION	tpi		R +/- .001	E +/- .001	TC706		T541		T321		T323		T013	
	ext	int			R	L	R	L	R	L	R	L	R	L
PTC-3R/L12E	12	---	.0100	.148					●	●				
PTC-3R/L12I	---	12	.0040	.148					●	●				
PTC-3R/L16E	16	---	.0075	.148					●	●				
PTC-3R/L16I	---	16	.0030	.148					●	●				
PTC-3R/L18E	18	---	.0070	.148					●	●				



## PTF- ...

COATED

DESIGNATION	tpi		pitch (mm)		R +/- .001	E +/- .001	TC706		T541		T321		T323		T013	
	ext	int	ext	int			R	L	R	L	R	L	R	L	R	L
PTF-2R/L	14 - 44	12 - 24	.6 - 1.75	1.0 - 2.0	.002 / .004	.110	●	●			●	●				
PTF-3R/L	10 - 44	9 - 24	.6 - 2.5	1.0 - 2.5	.002 / .004	.141	●	●			●	●				

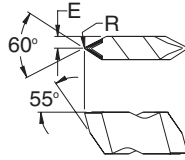
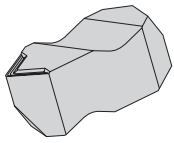


## PTK- ...

COATED

DESIGNATION	tpi		pitch (mm)		R +/- .001	E +/- .001	TC706		T541		T321		T323		T013	
	ext	int	ext	int			R	L	R	L	R	L	R	L	R	L
PTK-2R/L	14 - 44	12 - 24	.6 - 1.75	1.0 - 2.0	.002 / .004	.110					●	●				
PTK-3R/L	10 - 44	9 - 24	.6 - 2.5	1.0 - 2.5	.002 / .004	.141			●		●	●				

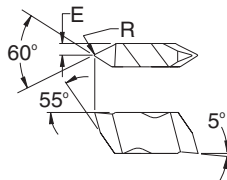
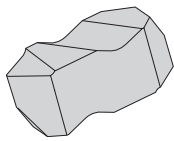
# ProNotch Inserts - Threading



## PTN- ...C

COATED

DESIGNATION	tpi		pitch (mm)		R $\pm .001$	E $\pm .001$	TC706		T541		T321		T323		T013	
	ext	int	ext	int			R	L	R	L	R	L	R	L	R	L
PTN-3R/LC	6 - 11	6	2.5 - 4.0	4.0	.012 / .015	.098	●	●			●	●				

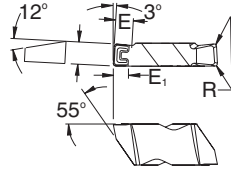
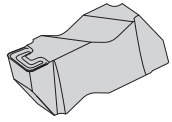


## PTP- ...

COATED

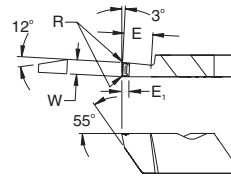
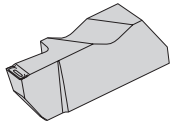
DESIGNATION	tpi		pitch (mm)		R $\pm .001$	E $\pm .001$	TC706		T541		T321		T323		T013	
	ext	int	ext	int			R	L	R	L	R	L	R	L	R	L
PTP-2R/L	8 - 36	7 - 20	.70 - 3.0	1.25 - 3.5	.003 / .005	.075			●		●	●				
PTP-3R/L	6 - 20	5 - 12	1.25 - 4.0	2.0 - 5.0	.005 / .008	.098			●	●	●	●				

# PRONOTCH INSERTS - GROOVING



## PF- ...C

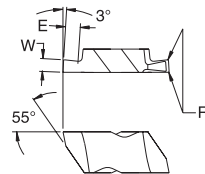
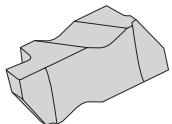
DESIGNATION	W $\pm .001$	R	E $\pm .005$	E <sup>1</sup>	COATED						UNCOATED		CERMET	
					TC706		T321		T013		TQ23		TTC4010	
					R	L	R	L	R	L	R	L	R	L
PF-3125R/LC	.125	.005 / .010	.150	.040			●	●						
PF-3156R/LC	.156	.005 / .010	.150	.115				●						



## PFD- ...C

DESIGNATION	W $\pm .001$	R	E $\pm .005$	E <sup>1</sup>	COATED						UNCOATED		CERMET	
					TC706		T321		T013		TQ23		TTC4010	
					R	L	R	L	R	L	R	L	R	L
PFD-3125R/LC*	.125	.005 / .010	.250	.040			●	●						

\* These inserts have one cutting edge.

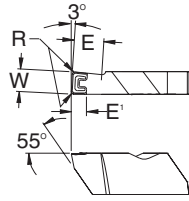
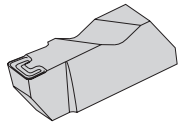


## PG- ...

DESIGNATION	W $\pm .001$	R	E $\pm .005$	COATED						UNCOATED		CERMET	
				TC706		T321		T013		TQ23		TTC4010	
				R	L	R	L	R	L	R	L	R	L
PG-2031R/L	.031	.002 / .005	.050	●	●					●	●		
PG-2062R/L	.062	.005 / .010	.110	●	●					●	●		
PG-2094R/L	.094	.005 / .010	.110	●	●					●	●		
PG-2125R/L	.125	.005 / .010	.110	●	●					●	●		
PG-3047R/L	.047	.005 / .010	.075	●	●					●	●		
PG-3062R/L	.062	.005 / .010	.094	●	●					●	●		
PG-3072R/L	.072	.005 / .010	.094	●	●					●	●		
PG-3078R/L	.078	.005 / .010	.094	●	●					●	●		
PG-3094R/L	.094	.005 / .010	.150	●	●					●	●		
PG-3125R/L	.125	.005 / .010	.150	●	●					●	●		
PG-3156R/L	.156	.005 / .010	.150	●	●					●	●		
PG-3189R/L	.189	.020 / .025	.150	●	●					●	●		
PG-4125R/L	.125	.005 / .010	.150	●	●					●	●		
PG-4189R/L	.189	.020 / .025	.250	●	●					●	●		
PG-4250R/L	.250	.020 / .025	.250	●	●					●	●		



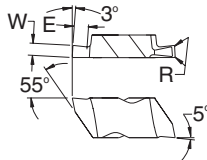
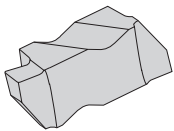
# PRONOTCH INSERTS - GROOVING



PGD- ...C										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
●	●	●	●							
●	●	●	●							
●	●	●	●							
●	●	●	●							
●	●	●	●							
●	●	●	●							
●	●	●	●							

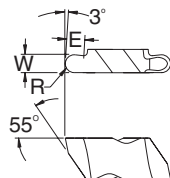
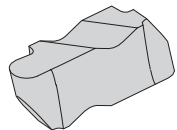
DESIGNATION	W +/- .001	R	E +/- .005	E <sup>1</sup>
PGD-3062R/LC	.062	.005 / .010	.125	.040
PGD-3094R/LC*	.094	.005 / .010	.250	.040
PGD-3125R/LC*	.125	.005 / .010	.250	.040
PGD-3189R/LC*	.189	.020 / .025	.250	.115
PGD-4125R/LC	.125	.005 / .010	.250	.040
PGD-4185R/LC*	.185	.020 / .025	.375	.115
PGD-4189R/LC*	.189	.020 / .025	.375	.115
PGD-4250R/LC*	.250	.020 / .025	.500	.150

\* Note: These inserts have one cutting edge.



PGP- ...										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
●	●	●				●				
●	●	●	●			●	●			
●	●	●	●			●	●			
●	●									

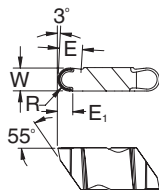
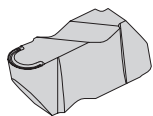
DESIGNATION	W +/- .001	R	E +/- .005
PGP-2031R/L	.031	.002 / .005	.050
PGP-3088R/L	.088	.005 / .010	.094
PGP-3125R/L	.125	.005 / .010	.150
PGP-4250R/L	.250	.020 / .025	.250



PR- ...										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
●	●	●	●							
●						●	●			
●	●					●	●			
●						●	●			
●										

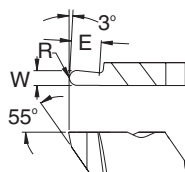
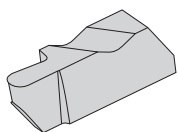
DESIGNATION	W +/- .001	R	E +/- .005
PR-3031R/L	.062	.031	.094
PR-3047R/L	.094	.047	.150
PR-3062R/L	.125	.062	.150
PR-3078R/L	.156	.078	.150
PR-3094R/L	.188	.094	.150

# PRONOTCH INSERTS - GROOVING



PR- ...C										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
●	●	●	●							
●	●	●	●							
●	●	●								

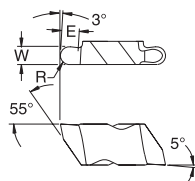
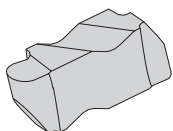
DESIGNATION	W +/- .001	R	E +/- .005	E <sup>1</sup>
PR-3047R/LC	.094	.047	.150	.100
PR-3062R/LC	.125	.062	.150	.100
PR-3078R/LC	.156	.078	.150	.100



PRD- ...										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
		●	●							
		●	●							

DESIGNATION	W +/- .001	R	E +/- .005
PRD-3031R/L	.062	.031	.125
PRD-3062R/L*	.125	.062	.250

\* Note: These inserts have one cutting edge.



PRP- ...										
COATED						UNCOATED		CERMET		
TC706		T321		T013		TQ23		TTC4010		
R	L	R	L	R	L	R	L	R	L	
●	●	●	●			●				
●	●	●	●							
●	●	●	●							
●	●	●	●							

DESIGNATION	W +/- .001	R	E +/- .005
PRP-3031R/L	.062	.031	.094
PRP-3047R/L	.094	.047	.150
PRP-3062R/L	.125	.062	.150
PRP-3094R/L	.188	.094	.150