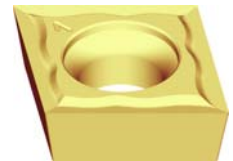


BELCAR PRODUCTS

**CARBIDE TOOL
SPECIALISTS**



**2010 TURNING
CATALOG**

BELCAR PRODUCTS

TURNING INSERTS

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BELCAR PRODUCTS, INC

ISO TURNING IDENTIFICATION SYSTEM

SYMBOL	SHAPE	NOSE ANGLE (DEGREES)
S	square	90
T	triangle	60
C	diamond	80
D		55
E		75
M		86
V		35
W	trigon	80
H	hexagon	120
O	octagon	135
P	pentagon	108
L	rectangle	90
A	parallelogram	85
B		82
R	round	-

1 - SHAPE

NOTE: tolerances apply prior to edge prep and coating

IC: theoretical diameter of the insert inscribed circle
T: thickness
B: see figures below

TOLERANCE CLASS	TOLERANCE ON "IC"		TOLERANCE ON "B"		TOLERANCE ON "T"	
	inch	mm	inch	mm	inch	mm
C	±0.0010	±0.025	±0.0005	±0.013	±0.001	±0.025
H	±0.0005	±0.013	±0.0005	±0.013	±0.001	±0.025
E	±0.0010	±0.025	±0.0010	±0.025	±0.001	±0.025
G	±0.0010	±0.025	±0.0010	±0.025	±0.005	±0.130
M	See tables at right		See tables at right		±0.005	±0.130
U	See tables at right		See tables at right		±0.005	±0.130

3 - TOLERANCE

N - 0°
A - 3°
B - 5°
C - 7°
P - 11°
D - 15°
E - 20°
F - 25°
G - 30°

2 - RELIEF ANGLE

EXAMPLE

inch	C	N	M	G	
metric	C	N	M	G	
position	1	2	3	4	

4 - INSERT TYPE				SYMBOL IF IC LESS THAN 1/4"
SYMBOL	HOLE	SHAPE OF HOLE	CHIPBREAKER	
N	without		without	E
R			single-sided	
F			double-sided	
A	with	cylindrical hole	without	D
M			single-sided	
G, P			double-sided	
W		partly cylindrical hole, 40-60° countersink	without	
T		single-sided		
B		partly cylindrical hole, 70-90° countersink	without	
H			single-sided	
J			double-sided	

5 - SIZE									
INCH	IC		METRIC CUTTING EDGE LENGTH (per insert shape indicated)						
	in.	mm	C	D	R	S	T	V	W
1.2 (5)	5/32	3.97	S4	04	03	03	06	-	-
1.5 (6)	3/16	4.76	04	05	04	04	08	08	S3
1.8 (7)	7/32	5.56	05	06	05	05	09	09	03
-	.236	6.00	-	-	06	-	-	-	-
2	1/4	6.35	06	07	06	06	11	11	04
2.5	5/16	7.94	08	09	07	07	13	13	05
-	.315	8.00	-	-	08	-	-	-	-
3	3/8	9.52	09	11	09	09	16	16	06
-	.394	10.00	-	-	10	-	-	-	-
3.5	7/16	11.11	11	13	11	11	19	19	07
-	.472	12.00	-	-	12	-	-	-	-
4	1/2	12.70	12	15	12	12	22	22	08
4.5	9/16	14.29	14	17	14	14	24	24	09
5	5/8	15.88	16	19	15	15	27	27	10
-	.630	16.00	-	-	16	-	-	-	-
5.5	11/16	17.46	17	21	17	17	30	30	11
6	3/4	19.05	19	23	19	19	33	33	13
-	.787	20.00	-	-	20	-	-	-	-
7	7/8	22.22	22	27	22	22	38	38	15
-	.984	25.00	-	-	25	-	-	-	-
8	1	25.40	25	31	25	25	44	44	17
10	1-1/4	31.75	32	38	31	31	54	54	21
-	1.260	32.00	-	-	32	-	-	-	-

NOTE: Inch sizes in parentheses for "alternate symbols" D or E (under 1/4" IC)

BELCAR PRODUCTS, INC

ISO TURNING IDENTIFICATION SYSTEM

IC		± TOLERANCE ON "IC"								IC		± TOLERANCE ON "B"														
		CLASS "M" TOLERANCE						CLASS "U" TOLERANCE				CLASS "M" TOLERANCE						CLASS "U" TOLERANCE								
		SHAPES S, T, C, R & W		SHAPE D		SHAPE V		SHAPES S, T, & C				SHAPES S, T, C, R & W		SHAPE D		SHAPE V		SHAPES S, T, & C								
inch	metric	inch	mm	inch	mm	inch	mm	inch	mm	inch	metric	inch	mm	inch	mm	inch	mm	inch	mm							
5/32	3,97	.002	0,05	-	-	-	-	-	-	.003	0,06	5/32	3,97	-	-	-	-	-	-	-						
3/16	4,76			-	-	-	-	-	-			3/16	4,76	-	-	-	-	-	-	-	-	-				
7/32	5,56			-	-	-	-	-	-			7/32	5,56	.004	0,11	-	-	-	-	.005	0,13	-	-			
1/4	6,35			-	-	-	-	-	-			1/4	6,35			-	-	-	-			-	-	-	-	-
5/16	7,94			.002	0,05	.002	0,05	.002	0,05			5/16	7,94			-	-	-	-			-	-	-	-	-
3/8	9,52			.003	0,06	-	-	-	-			-	-	.005	0,13	3/8	9,52	-	-	.007	0,18	-	-	-	-	
7/16	11,11	-	-			-	-	-	-	7/16	11,11	-	-			-	-	-	-	-	-	-				
1/2	12,70	.003	0,06			.003	0,06	.003	0,06	1/2	12,70	.005	0,13			.006	0,15	.010	0,25	.008	0,20	-	-			
9/16	14,29	-	-			-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-			
5/8	15,88	.004	0,10			-	-	-	-	-	-	.007	0,18			5/8	15,88	-	-	-	-	-	-	-		
11/16	17,46					.004	0,10	.004	0,10	.004	0,10					11/16	17,46	.006	0,15	.007	0,18	-	-	.011	0,27	-
3/4	19,05			-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-				
7/8	22,22	.005	0,13	-	-	-	-	-	-	.010	0,25	7/8	22,22	-	-	-	-	-	-	-						
1	25,40			-	-	-	-	-	-			1	25,40	.007	0,18	-	-	-	-	.015	0,38	-	-			
1-1/4	31,75			.006	0,15	-	-	-	-			-	-	.008	0,20	-	-	-	-	-	-	-				

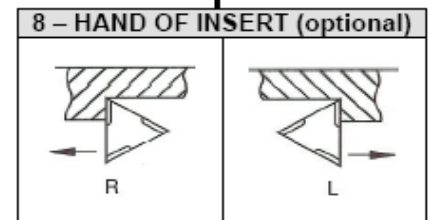
	4	3	2	-	E	P3
	12	04	08	-	E	P3
	5	6	7	8	9	10

9 & 10 - CUTTING EDGE CONDITION OR CHIP CONTROL FEATURES		
AL aluminum-high pos CB		R rough machining
F finishing		R rough machining
FN finishing -high pos CB		SS stainless steel CB
FT finishing with cermet		SF stainless steel -finish
FM finishing - medium CB		SF stainless steel -rough
M medium machining		WX finishing with wiper

6 - THICKNESS			
SYMBOL		THICKNESS	
inch	metric	inch	mm
.5 (1)	-	1/32	0,79
.6	T0	.040	1,00
1 (2)	01	1/16	1,59
1.2	T1	5/64	1,98
1.5 (3)	02	3/32	2,38
2	03	1/8	3,18
2.5	T3	5/32	3,97
3	04	3/16	4,76
3.5	05	7/32	5,56
4	06	1/4	6,35
5	07	5/16	7,94
6	09	3/8	9,52
7	11	7/16	11,11
8	12	1/2	12,70

NOTE: Inch sizes in parentheses for "alternate symbols" D or E (under 1/4" IC)

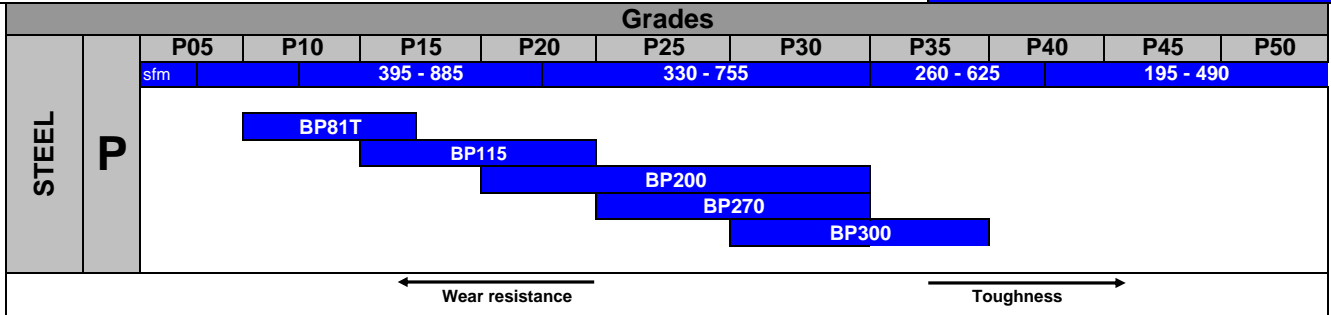
7 - CORNER RADIUS			
SYMBOL		CORNER RADIUS	
inch	metric	inch	mm
X0	X0	.0015	0,04
0	01	.004	0,1
.5	02	.008	0,2
1	04	1/64	0,4
2	08	1/32	0,8
3	12	3/64	1,2
4	16	1/16	1,6
5	20	5/64	2,0
6	24	3/32	2,4
7	28	7/64	2,8
8	32	1/8	3,2
-	00	round insert (inch)	
-	M0	round insert (metric)	



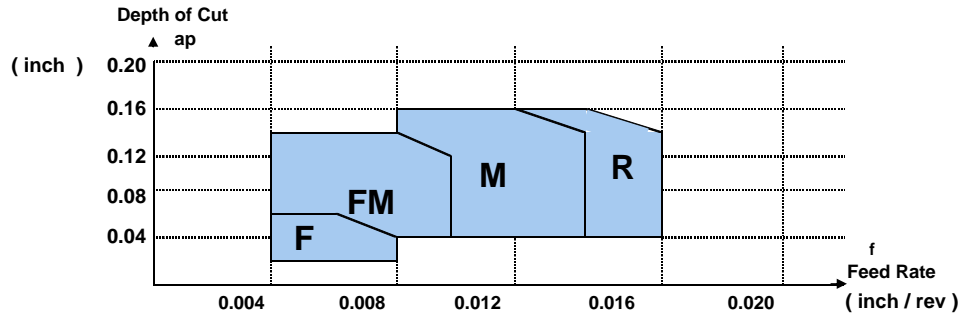
BELCAR PRODUCTS, INC

GRADE OVERVIEW

		P05	P10	P15	P20	P25	P30	P35	P40	P45	P50
STEEL	P	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">TCN280</div> Cermet <div style="border: 1px solid black; padding: 2px; margin-left: 20px;">BP100</div> CVD <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP115</div> CVD (TiN - TiCN - Al2O3 - TiN) <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP200</div> CVD (TiCN - Al2O3 - TiNB) <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP270</div> CVD <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP300</div> CVD (TiCN - TiN - TiN) </div>									
		sfm	395 - 885			330 - 755			260 - 625		195 - 490
		M05	M10	M15	M20	M25	M30	M35	M40	M45	M50
STAINLESS STEEL	M	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">BP81T</div> Cermet <div style="border: 1px solid black; padding: 2px; margin-left: 20px;">BP230</div> PVD (TiAlN) <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP355</div> CVD (TiN-TiCN-AlO3-TiN) </div>									
		sfm	330 - 720			260 - 590			195 - 460		
		K05	K10	K15	K20	K25	K30	K35	K40	K45	K50
CAST IRON	K	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px; width: 100px;">BP100</div> CVD <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 200px;">BP115</div> CVD (TiN - TiCN - Al2O3 - TiN) </div>									
		sfm	330 - 885			195 - 490					
		N05	N10	N15	N20	N25	N30	N35	N40	N45	N50
NON - FERROUS	N	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px; width: 150px;">BP750</div> PVD (ZrN) <div style="border: 1px solid black; padding: 2px; margin-left: 20px; width: 150px;">BP020</div> Uncoated </div>									
		sfm	655 - 1950			490 - 1310					



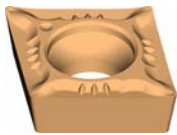
Geometries - Chipbreakers



FT



F



FM



M



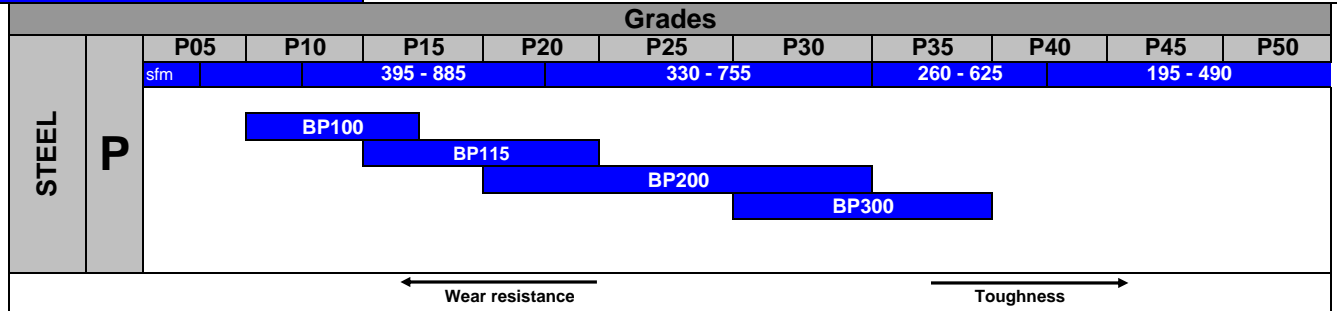
R

ISO	ANSI	BP81T	BP115	BP200	BP270	BP300
CCGT 060202 - FT	CCGT 21.5R008 - FT	8.90				
CCGT 09T302 - FT	CCGT 32.5R008 - FT	9.51				
CCMT 060204 - FT	CCMT 21.51 - FT	6.50				
CCMT 09T304 - FT	CCMT 32.51 - FT	7.09				
CCMT 09T308 - FT	CCMT 32.52 - FT	7.09				
CCMT 060202 - F	CCMT 21.5R008 - F			6.60		6.60
CCMT 060204 - F	CCMT 21.51 - F			6.60		6.60
CCMT 09T302 - F	CCMT 32.5R008 - F			7.29		7.29
CCMT 09T304 - F	CCMT 32.51 - F			7.29		7.29
CCMT 060202 - FM	CCMT 21.5R008 - FM			6.60		6.60
CCMT 060204 - FM	CCMT 21.51 - FM			6.60		6.60
CCMT 09T302 - FM	CCMT 32.5R008 - FM			7.29		7.29
CCMT 09T304 - FM	CCMT 32.51 - FM			7.29		7.29
CCMT 09T308 - FM	CCMT 32.52 - FM			7.29		7.29
CCMT 060204 - M	CCMT 21.51 - M		6.60	6.60		6.60
CCMT 060208 - M	CCMT 21.52 - M		6.60			
CCMT 09T304 - M	CCMT 32.51 - M		7.29	7.29		7.29
CCMT 09T308 - M	CCMT 32.52 - M		7.29	7.29		7.29
CCMT 120404 - M	CCMT 431 - M			9.56		9.56
CCMT 120408 - M	CCMT 432 - M		9.56	9.56		9.56
CCMT 060204 - R	CCMT 21.51 - R			6.60		6.60
CCMT 060208 - R	CCMT 21.52 - R			6.60		6.60
CCMT 09T304 - R	CCMT 32.51 - R			7.29	7.29	7.29
CCMT 09T308 - R	CCMT 32.52 - R			7.29	7.29	7.29
CCMT 120404 - R	CCMT 431 - R			9.56		9.56
CCMT 120408 - R	CCMT 432 - R			9.56		9.56
CCMT 120412 - R	CCMT 433 - R			9.56		9.56

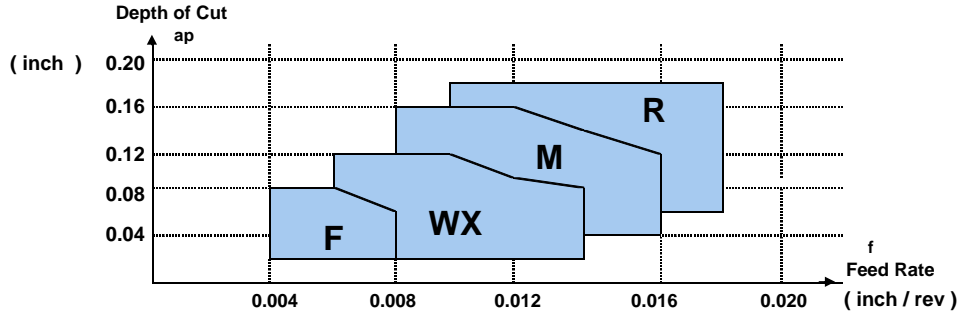
**NEGATIVE INSERTS
STEEL
CNM-**



BELCAR PRODUCTS



Geometries - Chipbreakers



F



WX



M



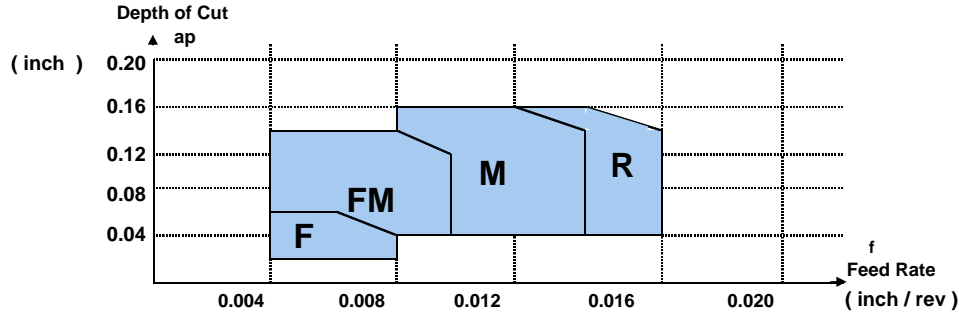
R

ISO	ANSI	BP100	BP115	BP200	BP300	
CNMG 120404 - F	CNMG 431 - F		7.81	7.81		
CNMG 120408 - F	CNMG 432 - F		7.81	7.81		
CNMG 120412 - F	CNMG 433 - F			7.81		
CNMG 120404-WX	CNMG 431 - WX	12.34	11.59			
CNMG 120408-WX	CNMG 432 - WX	12.34	11.59			
CNMG 090304 - M	CNMG 321 - M			5.88	5.88	
CNMG 090308 - M	CNMG 322 - M			5.88	5.88	
CNMG 120404 - M	CNMG 431 - M		7.81	7.81	7.81	
CNMG 120408 - M	CNMG 432 - M		7.81	7.81	7.81	
CNMG 120412 - M	CNMG 433 - M			7.81	7.81	
CNMG 160612 - M	CNMG 543 - M		13.65	13.65		
CNMG 120408 - R	CNMG 432 - R	8.91	7.81	7.81	7.81	
CNMG 120412 - R	CNMG 433 - R	8.91	7.81	7.81	7.81	
CNMG 160608 - R	CNMG 542 - R			13.65	13.65	
CNMG 160612 - R	CNMG 543 - R			13.65	13.65	
CNMG 160616 - R	CNMG 544 - R			13.65	13.65	
CNMG 190612 - R	CNMG 643 - R	19.89		18.75	18.75	
CNMG 190616 - R	CNMG 644 - R			18.75	18.75	
CNMG 250924 - R	CNMG 866 - R				36.19	

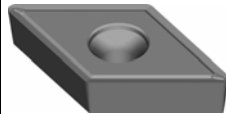


		Grades									
STEEL	P	P05	P10	P15	P20	P25	P30	P35	P40	P45	P50
				395 - 885		330 - 755			260 - 625		195 - 490
		BP81T		BP115		BP200		BP270		BP300	
		← Wear resistance					→ Toughness				

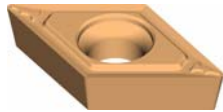
Geometries - Chipbreakers



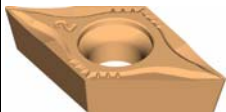
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	DCGT 070202 - FT	DCGT 21.5R008 - FT	8.90				
	DCGT 11T302 - FT	DCGT 32.5R008 - FT	9.51				
FT	DCMT 070204 - FT	DCMT 21.51 - FT	6.50				
	DCMT 11T304 - FT	DCMT 32.51 - FT	7.09				
	DCMT 070202 - F	DCMT 21.5R008 - F			6.60		6.60
	DCMT 070204 - F	DCMT 21.51 - F			6.60		6.60
	DCMT 11T302 - F	DCMT 32.5R008 - F			7.29		7.29
	DCMT 11T304 - F	DCMT 32.51 - F			7.29		7.29
	DCMT 070202 - FM	DCMT 21.5R008 - FM			6.60		6.60
	DCMT 070204 - FM	DCMT 21.51 - FM			6.60		6.60
	DCMT 11T302 - FM	DCMT 32.5R008 - FM			7.29		7.29
	DCMT 11T304 - FM	DCMT 32.51 - FM			7.29		7.29
	DCMT 11T308 - FM	DCMT 32.52 - FM			7.29		7.29
	DCMT 070204 - M	DCMT 21.51 - M			6.60		6.60
	DCMT 070208 - M	DCMT 21.52 - M			6.60		6.60
	DCMT 11T304 - M	DCMT 32.51 - M		7.29	7.29		7.29
	DCMT 11T308 - M	DCMT 32.52 - M		7.29	7.29		7.29
	DCMT 070204 - R	DCMT 21.51 - R			6.60		6.60
	DCMT 070208 - R	DCMT 21.52 - R			6.60		6.60
	DCMT 11T304 - R	DCMT 32.51 - R			7.29	7.29	7.29
	DCMT 11T308 - R	DCMT 32.52 - R			7.29	7.29	7.29



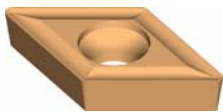
FT



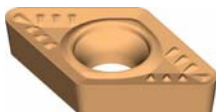
F



FM



M

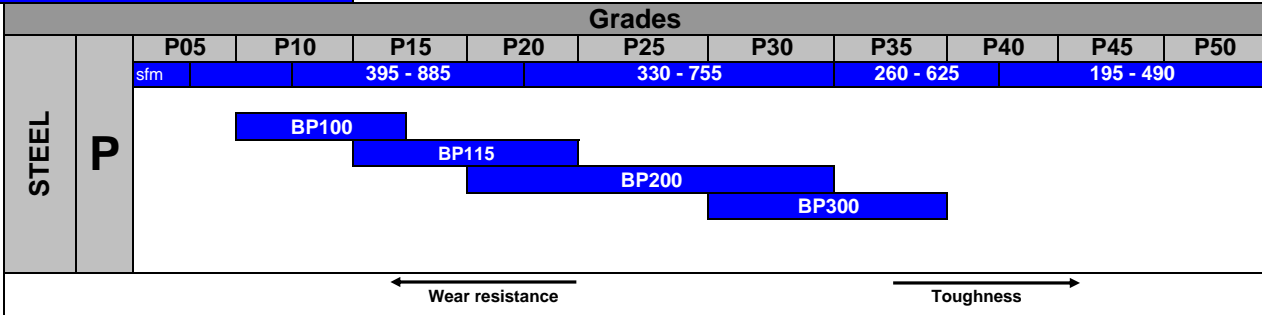


R

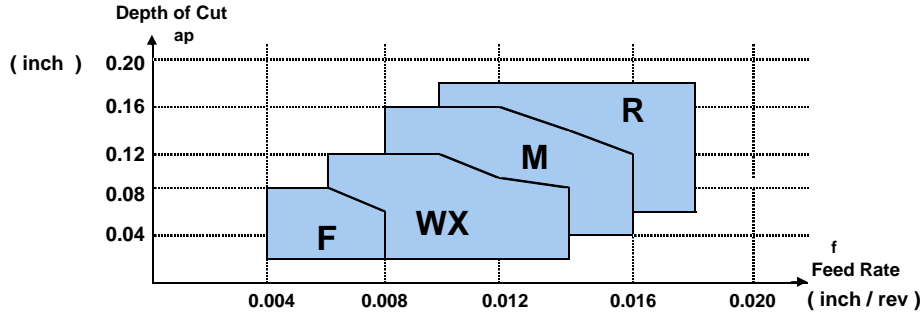
**NEGATIVE INSERTS
STEEL
DNMG**

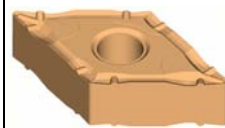
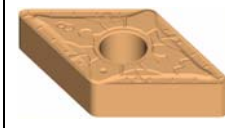
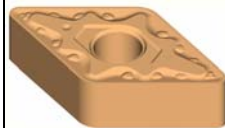
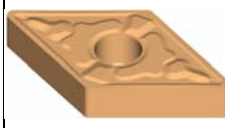


BELCAR PRODUCTS



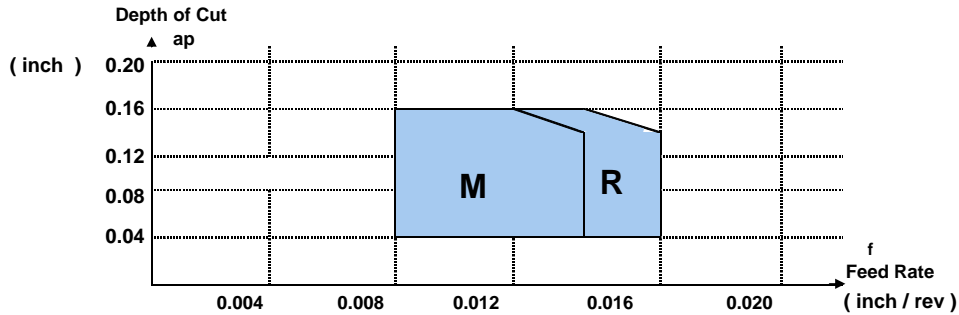
Geometries - Chipbreakers



	ISO	ANSI	BP100	BP115	BP200	BP300
 F	DNMG 110404 - F	DNMG 331 - F			7.62	
	DNMG 150404 - F	DNMG 431 - F			9.71	
	DNMG 150604 - F	DNMG 441 - F			10.71	
	DNMG 150608 - F	DNMG 442 - F			10.71	
 WX	DNMG 150404-WX	DNMG 431 - WX		13.57		
	DNMG 150408-WX	DNMG 432 - WX		13.57		
	DNMG 150608-WX	DNMG 442 - WX	15.42	14.39		
 M	DNMG 110404 - M	DNMG 331 - M			7.62	
	DNMG 110408 - M	DNMG 332 - M		7.62	7.62	7.62
	DNMG 150404 - M	DNMG 431 - M		9.71	9.71	9.71
	DNMG 150408 - M	DNMG 432 - M		9.71	9.71	9.71
	DNMG 150604 - M	DNMG 441 - M			10.71	10.71
	DNMG 150608 - M	DNMG 442 - M		10.71	10.71	10.71
 R	DNMG 150612 - M	DNMG 443 - M			10.71	10.71
	DNMG 150408 - R	DNMG 432 - R				9.71
	DNMG 150608 - R	DNMG 442 - R	11.98		10.71	10.71
	DNMG 150612 - R	DNMG 443 - R				10.71



		Grades									
STEEL	P	P05	P10	P15	P20	P25	P30	P35	P40	P45	P50
		sfm		395 - 885			330 - 755			260 - 625	
		BP81T			BP115		BP200		BP300		
		← Wear resistance					→ Toughness				

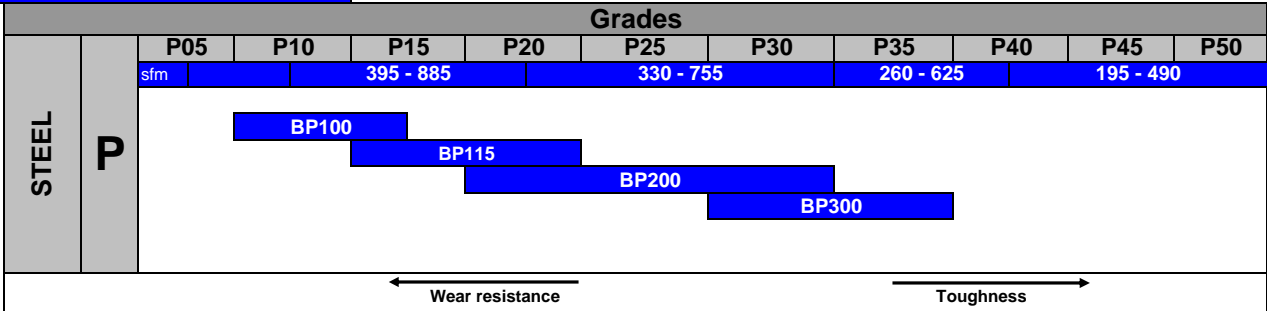
Geometries - Chipbreakers


ISO	ANSI	BP81T	BP115	BP200	BP300
SCMT 09T304 - FT	SCMT 32.51 - FT	7.09			
SCMT 09T308 - FT	SCMT 32.52 - FT	7.09			
SCMT 09T304 - M	SCMT 32.51 - M		7.29	7.29	7.29
SCMT 09T308 - M	SCMT 32.52 - M		7.29	7.29	7.29
SCMT 120404 - M	SCMT 431 - M				9.56
SCMT 120408 - M	SCMT 432 - M				9.56
SCMT 09T304 - R	SCMT 32.51 - R			7.29	7.29
SCMT 09T308 - R	SCMT 32.52 - R			7.29	7.29
SCMT 120404 - R	SCMT 431 - R			9.56	
SCMT 120408 - R	SCMT 432 - R			9.56	
SCMT 120412 - R	SCMT 433 - R			9.56	

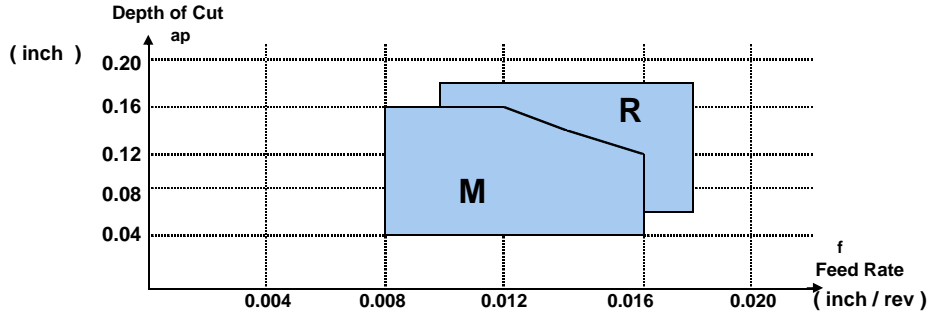

M

R

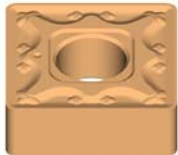
**NEGATIVE INSERTS
STEEL
SNM-**



Geometries - Chipbreakers



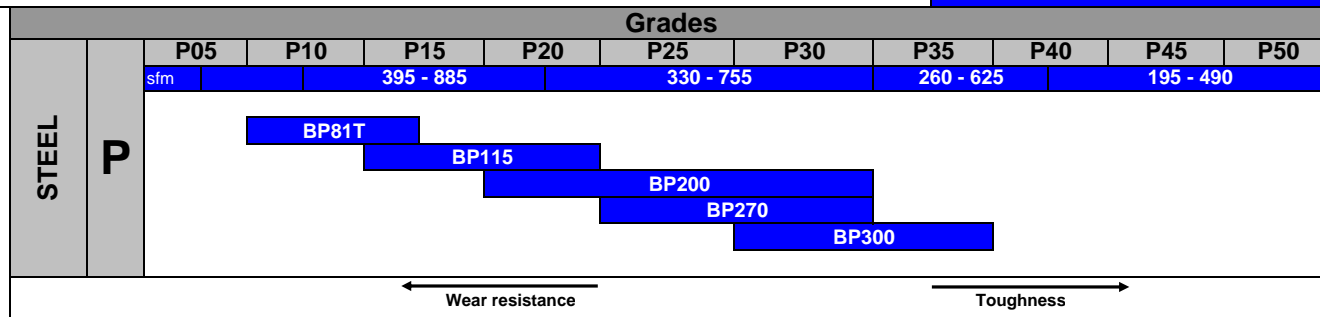
ISO	ANSI	BP100	BP115	BP200	BP300
SNMG 120404 - M	SNMG 431 - M			7.81	
SNMG 120408 - M	SNMG 432 - M			7.81	7.81
SNMG 120412 - M	SNMG 433 - M			7.81	7.81
SNMG 150612 - M	SNMG 543 - M			13.65	
SNMG 120408 - R	SNMG 432 - R	8.91		7.81	7.81
SNMG 120412 - R	SNMG 433 - R			7.81	7.81
SNMG 150612 - R	SNMG 543 - R			13.65	
SNMG 150616 - R	SNMG 544 - R			13.65	
SNMG 190612 - R	SNMG 643 - R			18.75	18.75
SNMG 190616 - R	SNMG 644 - R		18.75	18.75	18.75



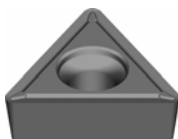
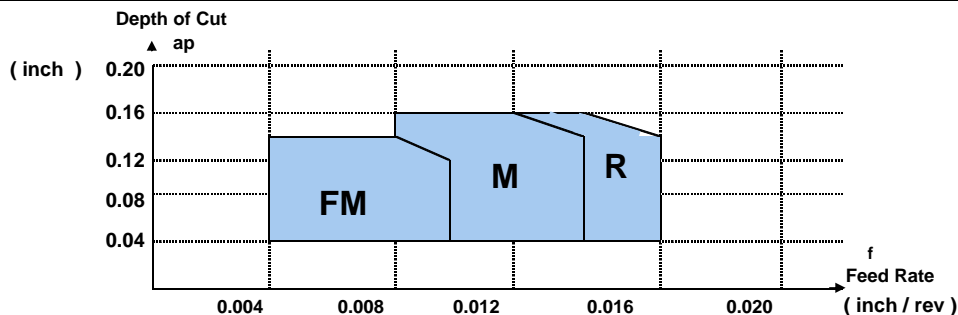
SNMG - M



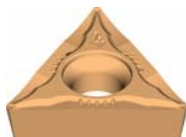
SNMG - R



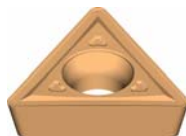
Geometries - Chipbreakers



FT



FM



M



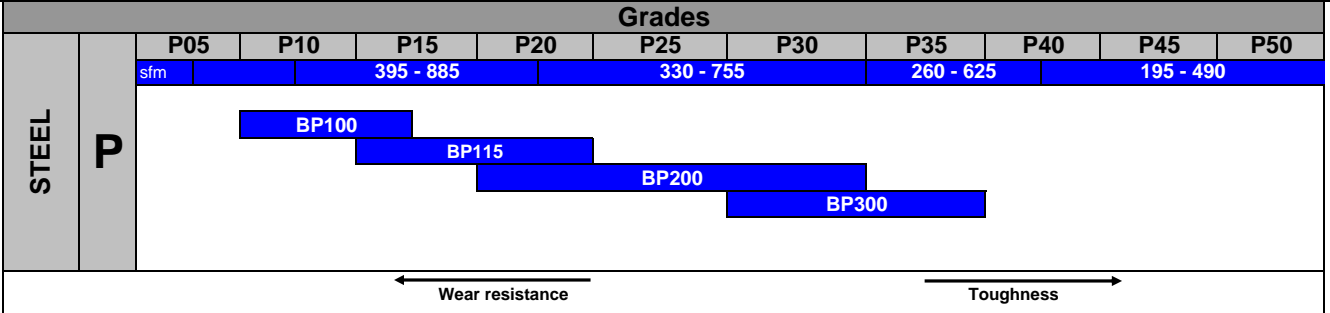
R

ISO	ANSI	BP81T	BP115	BP200	BP270	BP300
TCGT 110202 - FT	TCGT 21.5R008 - FT	8.90				
TCMT 110204 - FT	TCMT 21.51 - FT	6.50				
TCMT 110202 - FM	TCMT 21.5R008 - FM			6.60		
TCMT 110204 - FM	TCMT - 21.51 - FM			6.60		
TCMT 16T304 - FM	TCMT 32.51 - FM			7.29		
TCMT 16T308 - FM	TCMT 32.52 - FM					
TCMT 110204 - M	TCMT 21.51 - M		6.60	6.60		
TCMT 16T304 - M	TCMT 32.51 - M		7.29	7.29		7.29
TCMT 16T308 - M	TCMT 32.52 - M		7.29	7.29		7.29
TCMT 090204 - R	TCMT 11.51 - R					*
TCMT 110204 - R	TCMT 21.51 - R			6.60		6.60
TCMT 110208 - R	TCMT 21.52 - R			6.60		6.60
TCMT 16T304 - R	TCMT 32.51 - R			7.29		7.29
TCMT 16T308 - R	TCMT 32.52 - R			7.29		7.29

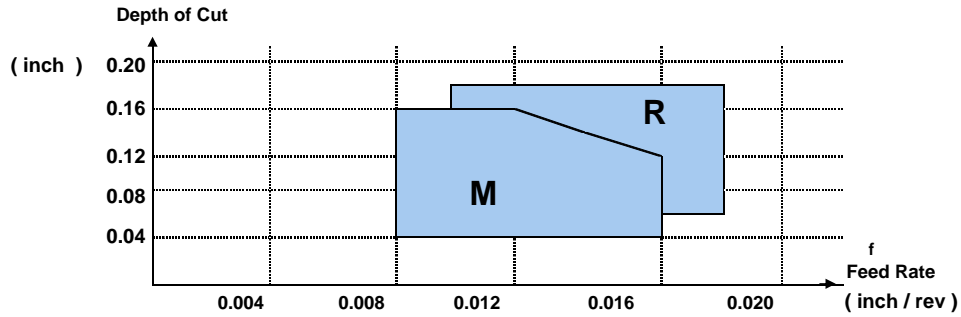
NEGATIVE INSERTS STEEL TNMG



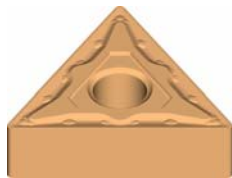
BELCAR PRODUCTS



Geometries - Chipbreakers



	ISO	ANSI	BP100	BP115	BP200	BP300
	TNMG 160404 - M	TNMG 331 - M			7.62	7.62
	TNMG 160408 - M	TNMG 332 - M		7.62	7.62	7.62
	TNMG 220404 - M	TNMG 431 - M			10.32	10.32
	TNMG 220408 - M	TNMG 432 - M			10.32	10.32
	TNMG 160404 - R	TNMG 331 - R				
	TNMG 160408 - R	TNMG 332 - R			7.62	
	TNMG 220404 - R	TNMG 431 - R				
	TNMG 220408 - R	TNMG 432 - R		10.32	10.32	



M



R

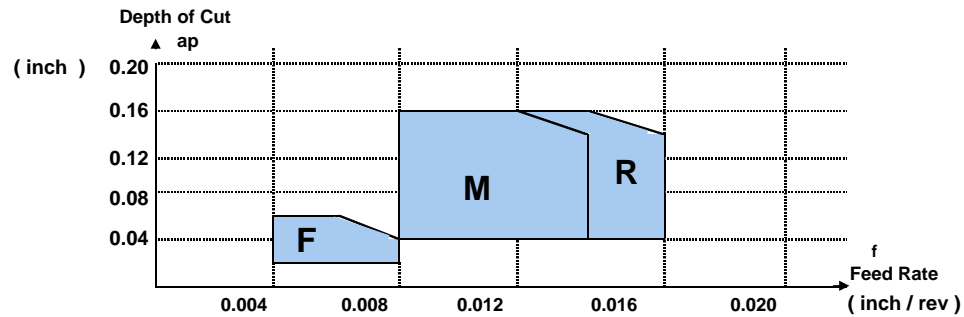


		Grades									
STEEL	P	P05	P10	P15	P20	P25	P30	P35	P40	P45	P50
				395 - 885		330 - 755			260 - 625		195 - 490

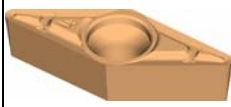
BP81T	BP115	BP200	BP300	BP350
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← Wear resistance Toughness →

Geometries - Chipbreakers



ISO	ANSI	BP81T	BP1	BP200		BP300
VBGT 110302 - F	VBGT 22R008 - F		8.90			
VBGT 110304 - F	VBGT 221 - F		8.90			
VBMT 160404 - M	VBMT 431 - M			9.56		9.56
VBMT 160408 - M	VBMT 432 - M			9.56		9.56
VCGT 110302 - FT	VCMT 22R008 - FT	8.90				
VCMT 110302 - F	VCMT 22R008 - F			6.93		6.93
VCMT 110304 - F	VCMT 221 - F			6.93		
VCMT 160404 - F	VCMT 431 - F			9.56		9.56
VCMT 110304 - M	VCMT 221 - M			6.93		
VCMT 160404 - M	VCMT 431 - M			9.56		9.56
VCMT 160408 - M	VCMT 432 - M			9.56		9.56
VCMT 110304 - R	VCMT 221 - R			6.93		6.93
VCMT 110308 - R	VCMT 222 - R			6.93		6.93
VCMT 160404 - R	VCMT 431 - R			9.56		9.56
VCMT 160408 - R	VCMT 432 - R			9.56		9.56
VCMT 160412 - R	VCMT 433 - R			9.56		9.56



F

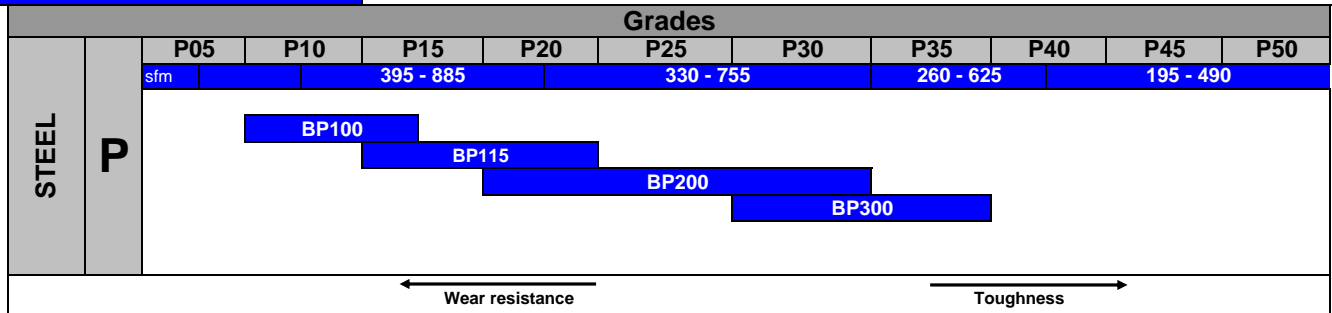


R

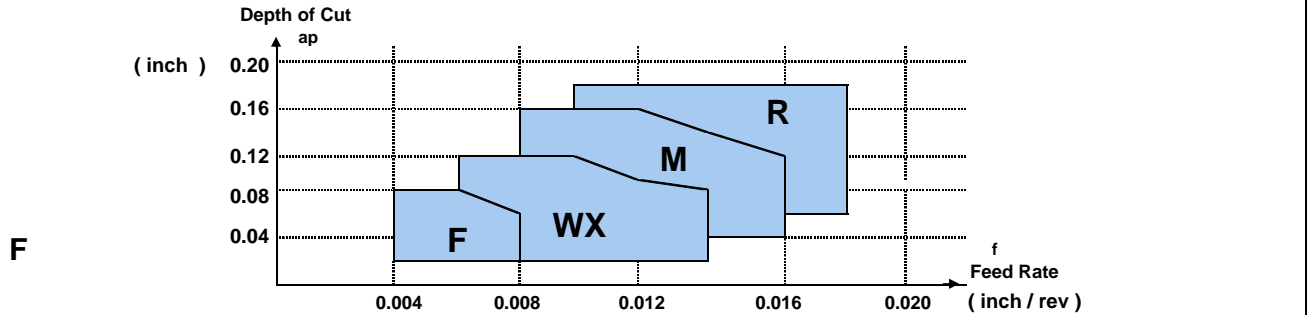
NEGATIVE INSERTS STEEL WNMG



BELCAR PRODUCTS



Geometries - Chipbreakers



ISO	ANSI	BP100	BP115	BP200	BP300
WNMG 080404 - F	WNMG 431 - F			7.81	
WNMG 080404-WX	WNMG 431 - WX				
WNMG 080408-WX	WNMG 432 - WX				
WNMG 060404 - M	WNMG 331 - M			7.62	
WNMG 060408 - M	WNMG 332 - M			7.62	7.62
WNMG 080404 - M	WNMG 431 - M			7.81	7.81
WNMG 080408 - M	WNMG 432 - M		7.81	7.81	7.81
WNMG 080412 - M	WNMG 433 - M			7.81	
WNMG 080408 - R	WNMG 432 - R			7.81	7.81
WNMG 080412 - R	WNMG 433 - R			7.81	

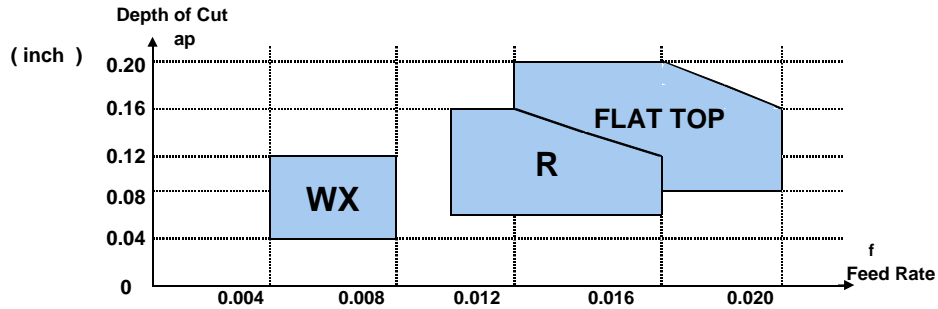
**NEGATIVE INSERTS
CAST IRON
CNM-**



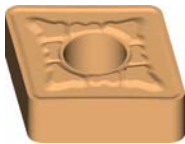
BELCAR PRODUCTS

Grades										
K05	K10	K15	K20	K25	K30	K35	K40	K45	K50	
sfm		330 - 885			195 - 490					
K	BP100									
	<div style="display: flex; justify-content: space-between;"> ← Wear resistance Toughness → </div>									

Geometries - Chipbreakers



ISO	ANSI	BP100			
CNMG 120408 - R	CNMG 432 - R	8.91			
CNMG 120412 - R	CNMG 433 - R	8.91			
CNMG 190612 - R	CNMG 643 - R	19.89			
CNMA 120408	CNMA 432	8.91			
CNMA 120412	CNMA 433	8.91			
CNMA 190616	CNMA 644	19.89			
CNMG 120404-WX	CNMG 431 - WX	12.34			
CNMG 120408-WX	CNMG 432 - WX	12.34			



R



WX

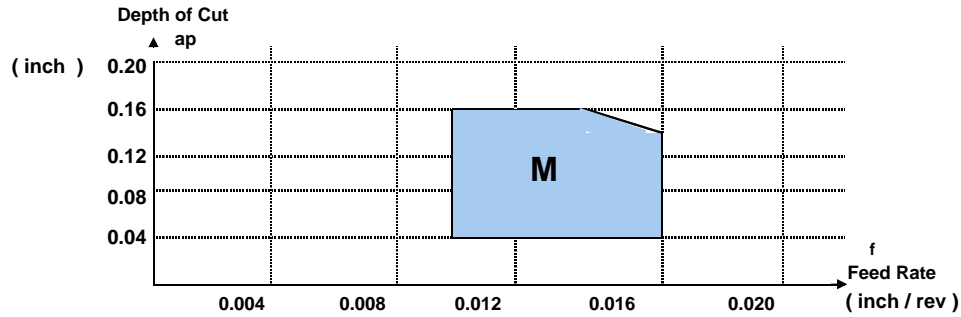


Grades											
CAST IRON	K	K05	K10	K15	K20	K25	K30	K35	K40	K45	K50
		sfm		330 - 885			195 - 490				

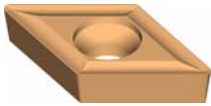
BP115

← Wear resistance Toughness →

Geometries - Chipbreakers



ISO	ANSI	CVD			
			BP115		
DCMT 070204 - M	DCMT 21.51 - M				
DCMT 11T304 - M	DCMT 32.51 - M		7.29		
DCMT 11T308 - M	DCMT 32.52 - M		7.29		



M

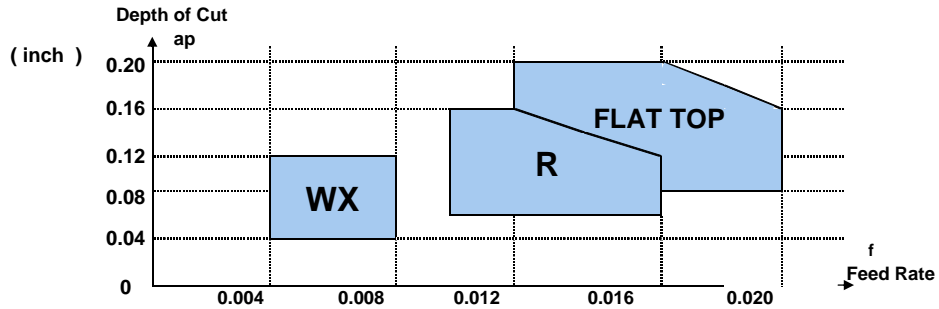
**NEGATIVE INSERTS
CAST IRON
DNM-**



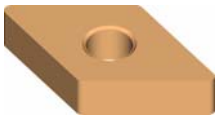
BELCAR PRODUCTS

Grades											
	K05	K10	K15	K20	K25	K30	K35	K40	K45	K50	
K	sfm		330 - 885			195 - 490					
	BP100										
← Wear resistance Toughness →											

Geometries - Chipbreakers



R



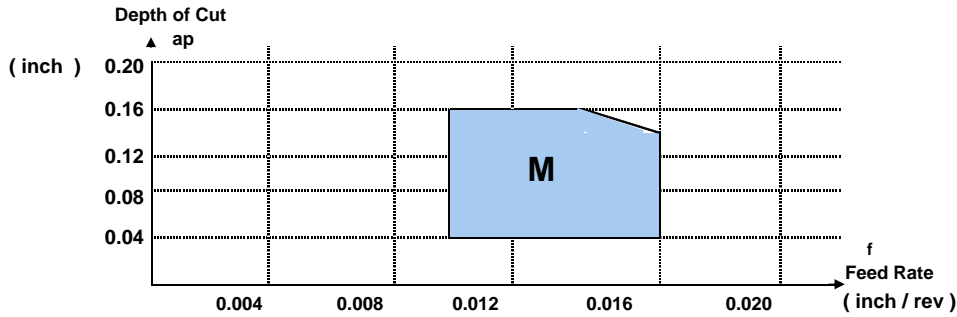
WX

ISO	ANSI	BP100			
DNMG 150608 - R	DNMG 442 - R	11.98			
DNMA 150608	DNMA 442	11.98			
DNMG 150608 - WX	DNMG 442 - WX	15.42			

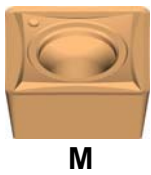


		Grades									
CAST IRON	K	K05	K10	K15	K20	K25	K30	K35	K40	K45	K50
		sfm		330 - 885		195 - 490					
		BP115									
		← Wear resistance					→ Toughness				

Geometries - Chipbreakers



ISO	ANSI	CVD				
				BP115		
SCMT 09T304 - M	SCMT 32.51 - M			7.29		
SCMT 09T308 - M	SCMT 32.52 - M			7.29		
SCMT 120404 - M	SCMT 431 - M			9.56		
SCMT 120408 - M	SCMT 432 - M			9.56		



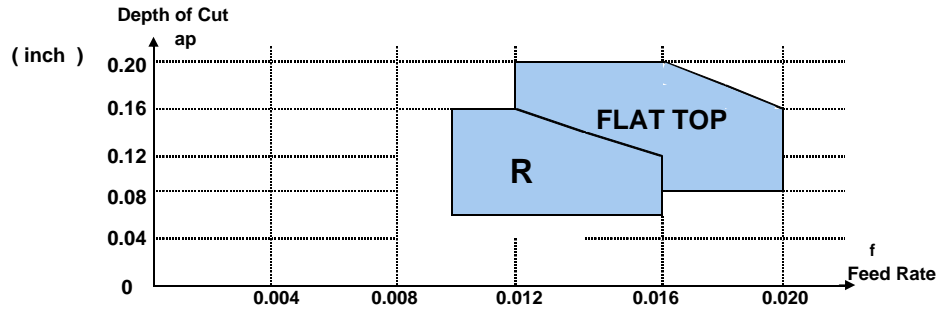
**NEGATIVE INSERTS
CAST IRON
SNM-**



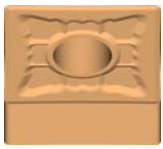
BELCAR PRODUCTS

Grades										
K05	K10	K15	K20	K25	K30	K35	K40	K45	K50	
sfm		330 - 885			195 - 490					
K	BP100									
	← Wear resistance					→ Toughness				

Geometries - Chipbreakers



ISO	ANSI	BP100			
SNMG 120408 - R	SNMG - 432 - R	8.91			
SNMA 120408	SNMA - 432	8.91			
SNMA 120412	SNMA - 433	8.91			



R





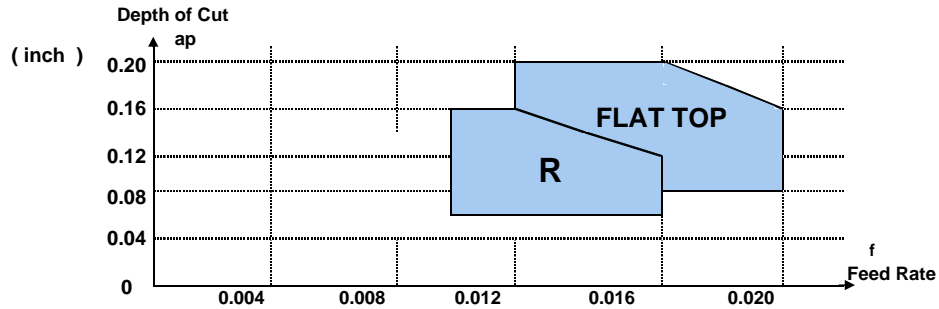
BELCAR PRODUCTS

**NEGATIVE INSERTS
CAST IRON
WNM-**



Grades									
K05	K10	K15	K20	K25	K30	K35	K40	K45	K50
sfm		330 - 885			195 - 490				
K	BP100								
	← Wear resistance					→ Toughness			

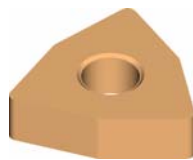
Geometries - Chipbreakers



ISO	ANSI	BP100			
WNMG 080408 - R	WNMG 432 - R	9.07			
WNMG 080412 - R	WNMG 433 - R	9.07			
WNMA 080408	WNMA 432	9.07			
WNMG 080408 - WX	WNMG 432 - WX	11.61			
WNMG 080412 - WX	WNMG 433 - WX	11.61			



R



WX