



90° MILL FAMILY WITH A GROWING NUMBER OF OPTIONS!

Diameters:
Ø .750" - Ø 5.000"

Depth of Cut:
.47" Max.

Insert Series:
BOCT13 / BOMT13 / ZOMT13

Materials:
Aluminum, Iron, Steel, Stainless Steel, Hi-Temps, Titanium

Multi-Purpose



PCD Tip



Polished for Alum



Chip Splitters



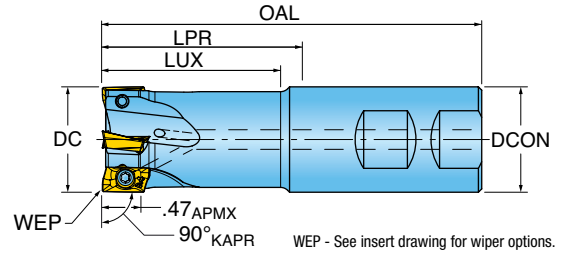
**UPDATED
PRODUCT
ANNOUNCEMENT
2017**

General Features:

- BOMT offers 2X positive rake and 2X face clearance when compared to APKT/AOMT; resulting in higher efficiency, less heat and more aggressive ramping capability.
- Ramping and helical interpolation capabilities inherent with cutter designs
- Diverse range of insert corner and grade options for a broad range of materials
- Cutters ported with coolant for use with non-ferrous, stainless steel, titanium and hi-temp alloy materials
- Carbide inserts equipped with 2 indexes; PCD with 1 index
- Inserts with integrated wiper flats typically produce surface finishes between 32-63 Ra

HI^oPOS⁺™ SERIES: 12J1R (WELDON SHANK)

90° END MILL

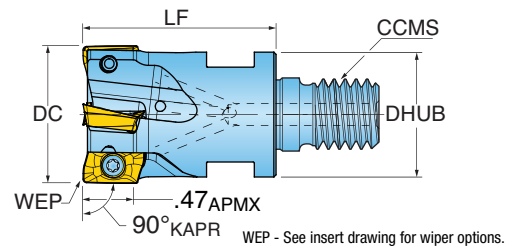


Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter	CSP Coolant	RMPX Ramp Angle Max.
NEW 12J1R-0701284R01	0.750	1.22	1.25	3.25	2	0.750	Yes	6.3
12J1R-0702084R01	0.750	1.97	2.00	4.00	1	0.750	Yes	6.3
NEW 12J1R-0703084R01	0.750	2.97	3.00	5.00	2	0.750	Yes	6.3
12J1R-1001780R01	1.000	1.72	1.75	4.00	3	1.000	Yes	7.9
12J1R-1003780R01	1.000	3.72	3.75	6.00	3	1.000	Yes	7.9
12J1R-1202281R01	1.250	2.22	2.25	4.50	4	1.250	Yes	3.1
NEW 12J1R-1204281R01	1.250	4.22	4.25	6.50	4	1.250	Yes	3.1
NEW 12J1R-1501781R01	1.500	1.72	1.75	4.00	5	1.250	Yes	2.3
12J1R-1502281R01	1.500	2.22	2.25	4.50	4	1.250	Yes	2.3
NEW 12J1R-1504281R01	1.500	4.22	4.25	6.50	4	1.250	Yes	2.3

NOTE: Cutter body must be relieved when using insert corner radii larger than R.078: Body R" = Insert R" - .02"

HI^oPOS⁺™ SERIES: 12J1R (TOPON M-ADAPTION)

90° MODULAR END MILL

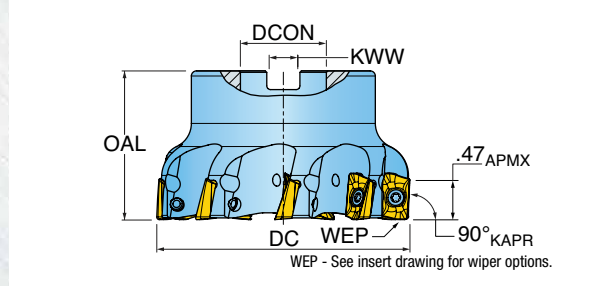


Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter	CSP Coolant	RMPX Ramp Angle Max.
NEW 12J1R-07015X6R01	0.750	1.50	2	TopOn M10	0.69	Yes	6.3
NEW 12J1R-10015X7R01	1.000	1.50	3	TopOn M12	0.81	Yes	4.6
NEW 12J1R-12017X8R01	1.250	1.75	4	TopOn M16	1.13	Yes	3.1
NEW 12J1R-15017X8R01	1.500	1.75	5	TopOn M16	1.13	Yes	2.3

NOTE: Cutter body must be relieved when using insert corner radii larger than R.078: Body R" = Insert R" - .02"

HIPOST[™] SERIES: 2J1R

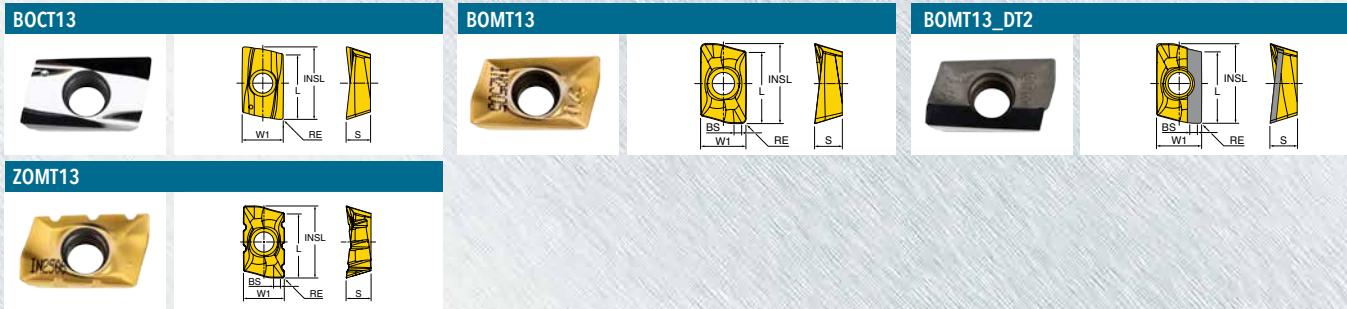
90° FACE MILL



Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway	CSP Coolant	RMPX Ramp Angle Max.
NEW 2J1R-20R01	2.000	1.57	5	0.750	0.312	Yes	1.5
NEW 2J1R-20R02	2.000	1.57	6	0.750	0.312	Yes	1.5
NEW 2J1R-25R01	2.500	1.57	6	0.750	0.312	Yes	1.1
NEW 2J1R-30R01	3.000	1.75	9	1.000	0.375	Yes	.9
NEW 2J1R-40R01	4.000	2.38	11	1.500	0.625	Yes	.6
NEW 2J1R-50R01	5.000	2.38	13	1.500	0.625	Yes	.5

NOTE: Cutter body must be relieved when using insert corner radii larger than R.078: Body R" = Insert R" - .02"

HIPOST[™] INSERTS



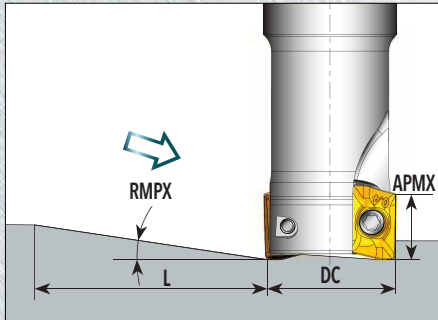
Part Number	Application	RE Corner Radius	BS Wiper Length	L Cutting Edge Length	INSL Length	W1 Width	S Thickness	IH Insert Hand	Grade	IN10K	NEW IN2035	IN2505	IN2530	NEW IN4030	NEW IN90D
NEW BOCT130404FR-P	Grd/Pol for Al	0.015 R	-	0.490	0.557	0.320	0.189	Right	•						
NEW BOCT130408FR-P	Grd/Pol for Al	0.031 R	-	0.490	0.555	0.319	0.187	Right	•						
BOMT130404R	Multi-Purpose	0.015 R	0.067	0.490	0.558	0.320	0.190	Right		•	•	•	•		
BOMT130408R	Multi-Purpose	0.031 R	0.051	0.490	0.558	0.320	0.190	Right		•	•	•	•		
BOMT130416R	Multi-Purpose	0.062 R	0.019	0.490	0.561	0.320	0.190	Right			•	•			
BOMT130420R	Multi-Purpose	0.078 R	-	0.490	0.561	0.320	0.190	Right			•	•			
BOMT130424R	Multi-Purpose	0.093 R	-	0.490	0.560	0.320	0.190	Right			•	•			
BOMT130431R	Multi-Purpose	0.125 R	-	0.480	0.546	0.320	0.180	Right		•	•	•			
BOMT130440R	Multi-Purpose	0.156 R	-	0.480	0.538	0.320	0.183	Right			•				
NEW BOMT130404R-DT2	PCD Tipped	0.015 R	0.055	0.490	0.557	0.320	0.190	Right							•
NEW ZOMT130404R	Positive-Splitters	0.015 R	0.067	0.490	0.558	0.320	0.190	Right				•	•		
NEW ZOMT130408R	Positive-Splitters	0.031 R	0.051	0.490	0.561	0.320	0.190	Right				•			

	Insert Screw	Driver Handle	Torx Driver Blade	Optional Torx Driver Handle	Optional Torx Driver Bit	Wrench	Retention Bolt	Optional Coolant Bolt
12J1R-0701284R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-0702084R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-0703084R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1001780R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1003780R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1202281R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1204281R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1501781R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1502281R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-1504281R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	-	-
12J1R-07015X6R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	615MM	-	-
12J1R-10015X7R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	617MM	-	-
12J1R-12017X8R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	622MM	-	-
12J1R-15017X8R01	SM35-076-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	622MM	-	-
2J1R-20R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-06-46	SD-06-89
2J1R-20R02	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-06-46	SD-06-89
2J1R-25R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-06-46	SD-06-89
2J1R-30R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-08-46	SD-08-92
2J1R-40R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-12-82	SD-12-99
2J1R-50R01	SM35-088-10	DS-A00T	DS-T106B	DT-28-01	DS-T10B	-	SD-12-82	SD-12-99

Series 12J1R, 2J1R		Brinnell Hardness	SFM	Feed per Insert	IN10K	IN2035	IN2505	IN2530	IN4030	IN90D	Coolant
Material											
Aluminum	6061-T6, 7075-T6, 2024	-	1500 - 5000	.003-.008	1					1	Yes
Cast Iron	Gray	150 - 250	300 - 1000	.004-.007			1		2		No
	Nodular		300 - 600				1		2		
Steel	Low Carbon 1018, 8620	100 - 250	400 - 1000	.004-.007				3	2	1	No
	High Carbon F-6180	250 - 400	350 - 500								
	Alloyed Steel 4140, 4340	150 - 300	300 - 700								
	Tool Steel A-6, D-1, D-2	Up to 300									
Stainless Steel	300 Series, 304, 316	-	300 - 550	.004-.006			1	4	3	2	May not be required at high speeds
	400 Series 15-5 PH	Up to 320	350 - 600								
	13-8 PH	-	200 - 400								Yes
Nickel Alloys	Inconel, Hastelloy, Waspalloy	-	75-120	.003-.005			1	2	4	3	Yes
Titanium	6AL-4V	-	100 - 150	.003-.005			1	4	3	2	Yes

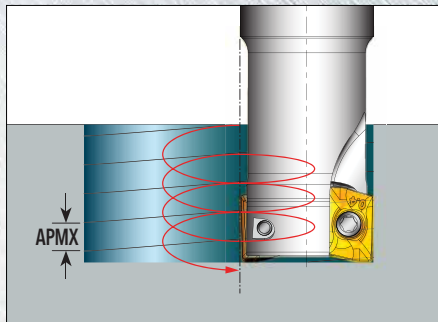
HI^oPOS⁺ RAMPING DATA

Straight ramping



DC Cutter Diameter	RMPX Ramp Angle Max.	APMX Depth of Cut Max.	L
0.750	7.0	0.47	3.8
1.000	7.9	0.47	3.3
1.250	5.0	0.47	5.3
1.500	3.2	0.47	8.4
2.000	2.1	0.47	12.8
2.500	1.4	0.47	19.2
3.000	1.0	0.47	26.9
4.000	0.8	0.47	33.7
5.000	0.6	0.47	44.9

Helical ramping



DC Cutter Diameter (Using R.031 Insert)	Min. Dia. Milled Hole (Bottom with Cusp)	APMX / Rev.	Max. Dia. Milled Hole (Flat Bottom)	APMX / Rev.
0.750	1.01	0.09	1.46	0.28
1.000	1.41	0.20	1.96	0.40
1.250	1.91	0.18	2.46	0.33
1.500	2.41	0.16	2.96	0.26
2.000	3.41	0.16	3.96	0.22
2.500	4.41	0.14	4.96	0.18
3.000	5.41	0.13	5.96	0.16
4.000	7.41	0.14	7.96	0.16
5.000	9.41	0.14	9.96	0.15