



HIPOSTTM 09,13,17

MILLING PRODUCTS



Cutter Series:

- 12J1P, 2J1P: 90° Mill (.35" DOC)
- 12J1R, 2J1R: 90° Mill (.47" DOC)
- 12J1G, 2J1G: 90° Mill (.63" DOC)
- 22J3P, 22J3R, 22J_G: 90° Long Edge
- 12_1R, 12_1G: Chamfer End Mill
- 22_3R: Chamfer Long Edge Mill
- 12L, 2L: 70° Mill
- 2J5P: 90° Finish Mill (9mm DOC)

Diameters:

- 0.500" - 8.000"
- 12.0mm - 160.0mm

Cutting Edge Angles:

- 15°, 30°, 45°, 60°, 70°, 75° & 90°

Insert Series:

- BOMT09, BOCT09, BODT09, ZOMT09
- BOMT13, BOCT13, BODT13, ZOMT13
- AOMT17, BOMT17, BOCT17, ZOMT17

Insert Corners:

- .015", .031", .039", .062",
- .078", .093", .120", .125", .156",
- .187", .197" & .250" R

Materials:

- Aluminum, Iron, Steel,
- Stainless Steel, High-Temps,
- Titanium & Hard Steel

Our Highest Positive Milling Geometry!

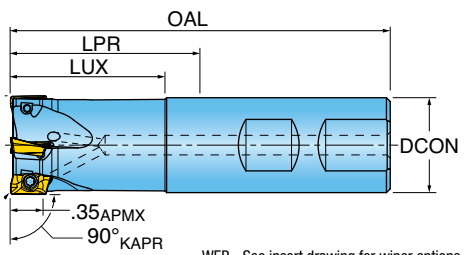
Designed with diversity and efficiency in mind, Ingersoll's HiPos+ Milling line features three popular insert sizes (9mm, 13mm & 17mm) that are common to several cutter body styles. Having the largest cutter diameter/length/adaption selection and the largest insert corner offering of any Ingersoll milling line, HiPos+ is an ideal multi-purpose mill that excels on low horsepower machines and long chipping materials.

Features & Benefits:

- BOMT inserts offer 2X positive rake and 2X face clearance when compared to APKT; resulting in higher efficiency, less heat and more aggressive ramping capability
- Diverse range of insert grade/geometry additions to accommodate a wide variety of materials
- Inserts with integrated wiper flats typically produce surface finishes between 32-63 Ra
- Carbide inserts equipped with 2 indexes; PCD with 1 index; Add series 12L/2L cutter to get 4 indexes
- Cutters ported with coolant to accommodate non-ferrous, stainless steel, titanium and hi-temp alloy materials

HIPOST™ SERIES: 12J1P (WELDON SHANK)

90° END MILL (9MM INSERT)



WEP - See insert drawing for wiper options.

Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12J1P-0501379R01	0.500	1.18	1.34	3.25	1	0.625
12J1P-0601379R01	0.625	1.18	1.34	3.25	2	0.625
12J1P-0701784R01	0.750	1.18	1.75	3.75	2	0.750
12J1P-0701784R02	0.750	1.18	1.75	3.75	3	0.750
12J1P-0702784R01	0.750	2.75	2.75	4.75	2	0.750
12J1P-0704084R01	0.750	2.75	4.00	6.00	2	0.750
12J1P-0801784R01	0.875	1.18	1.75	3.75	3	0.750
12J1P-1001784R01	1.000	1.75	1.75	3.75	3	0.750
12J1P-1001784R02	1.000	1.75	1.75	3.75	4	0.750
12J1P-1201584R01	1.250	1.50	1.50	3.75	5	0.750
12J1P-1501780R01	1.500	1.75	1.75	4.00	6	1.000

NOTE: Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).

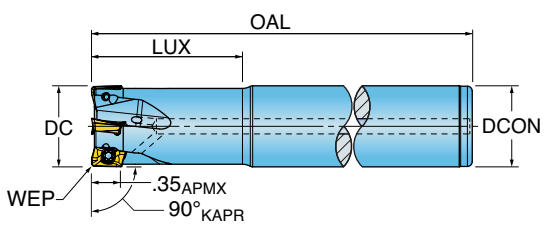
METRIC

Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12J1P012020W3R00	12.00 mm	20.0 mm	32.0 mm	80.0 mm	1	16.00 mm
12J1P016026W3R00	16.00 mm	26.0 mm	37.0 mm	85.0 mm	2	16.00 mm
12J1P020030W4R00	20.00 mm	30.0 mm	40.0 mm	90.0 mm	3	20.00 mm
12J1P020075W4R00	20.00 mm	75.0 mm	75.0 mm	125.0 mm	2	20.00 mm
12J1P025040W5R00	25.00 mm	40.0 mm	44.0 mm	100.0 mm	4	25.00 mm
12J1P025085W5R00	25.00 mm	85.0 mm	89.0 mm	145.0 mm	3	25.00 mm
12J1P025085W5R01	25.00 mm	85.0 mm	89.0 mm	145.0 mm	4	25.00 mm

NOTE: Relieve cutter body when using insert corner radii larger than R1.6mm (see Operating Guidelines).

HIPOST™ SERIES: 12J1P (CYLINDRICAL SHANK)

90° END MILL (9MM INSERT)



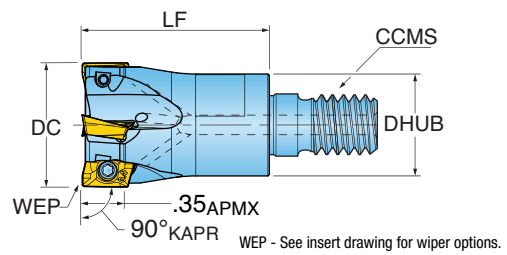
WEP - See insert drawing for wiper options.

Part Number	DC Cutting Diameter	LUX Usable Length Max.	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12J1P-05030S6R10	0.500	1.79	5.00	1	0.625
12J1P-07020S7R01	0.750	1.84	7.00	3	0.750
12J1P-10020S1R01	1.000	1.83	7.00	4	1.000
12J1P-12022S9R01	1.250	2.08	8.00	5	1.250
12J1P-15025S5R01	1.500	2.32	8.50	6	1.500

NOTE: Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).

HIPOST™ SERIES: 12J1P (TOPON M-ADAPTION)

90° MODULAR END MILL (9MM INSERT)



Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter
12J1P-06015X5R01	0.625	1.50	2	TopOn M08	0.500
12J1P-07015X6R01	0.750	1.50	3	TopOn M10	0.690
12J1P-10015X7R01	1.000	1.50	4	TopOn M12	0.810
12J1P-12017X8R01	1.250	1.75	5	TopOn M16	1.130

NOTE: Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).

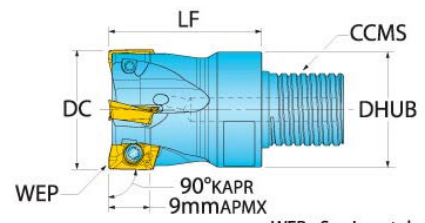
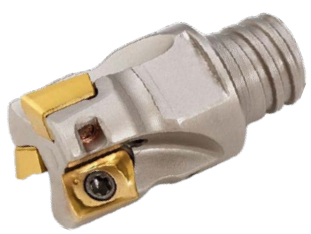
METRIC

Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter
12J1P012030X4R00	12.00 mm	30.0 mm	1	TopOn M06	11.80 mm
12J1P015030X5R00	15.00 mm	30.0 mm	2	TopOn M08	13.00 mm
12J1P016035X5R00	16.00 mm	35.0 mm	2	TopOn M08	13.00 mm
12J1P020035X6R00	20.00 mm	35.0 mm	3	TopOn M10	18.00 mm
12J1P020035X6R01	20.00 mm	30.0 mm	2	TopOn M10	18.00 mm
12J1P025035X7R00	25.00 mm	35.0 mm	4	TopOn M12	21.00 mm
12J1P032043X8R00	32.00 mm	43.0 mm	5	TopOn M16	29.00 mm
12J1P032043X8R01	32.00 mm	43.0 mm	4	TopOn M16	29.00 mm
12J1P035043X8R00	35.00 mm	43.0 mm	5	TopOn M16	29.00 mm

NOTE: Relieve cutter body when using insert corner radii larger than R1.6mm (see Operating Guidelines).

HI-POST⁺ SERIES: 12J1P (CHIP SURFER)

90° MODULAR END MILL (9MM INSERT)



WEP - See insert drawing for wiper options.

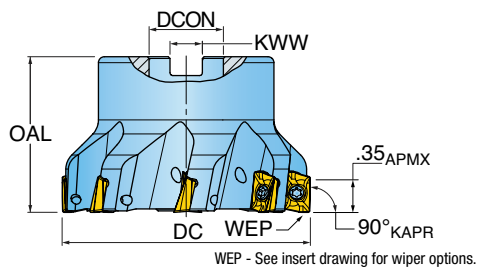
Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code
12J1P016026TRR00	16.00 mm	26.0 mm	2	Chip Surfer T10
12J1P020026TSR00	20.00 mm	26.0 mm	3	Chip Surfer T12
12J1P025032TUR00	25.00 mm	32.0 mm	4	Chip Surfer T15

NOTE: Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).



HIPOST™ SERIES: 2J1P

90° FACE MILL (9MM INSERT)



Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway
2J1P-15R01	1.500	1.57	6	0.500	0.250
2J1P-20R01	2.000	1.57	7	0.750	0.312
2J1P-25R01	2.500	1.57	8	0.750	0.312
2J1P-30R01	3.000	1.75	9	1.000	0.375

NOTE: Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).

METRIC

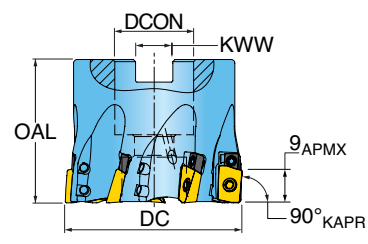
Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway
2J1P032R00	32.00 mm	32.00 mm	5	16.00 mm	8.40 mm
2J1P032R01	32.00 mm	32.00 mm	4	16.00 mm	8.40 mm
2J1P035R00	35.00 mm	32.00 mm	6	16.00 mm	8.40 mm
2J1P040R00	40.00 mm	40.00 mm	6	16.00 mm	8.40 mm
2J1P040R01	40.00 mm	40.00 mm	4	16.00 mm	8.40 mm
2J1P050R00	50.00 mm	40.00 mm	7	22.00 mm	10.40 mm
2J1P050R01	50.00 mm	40.00 mm	4	22.00 mm	10.40 mm
2J1P063R00	63.00 mm	40.00 mm	8	22.00 mm	10.40 mm
2J1P063R01	63.00 mm	40.00 mm	6	22.00 mm	10.40 mm
2J1P080R00	80.00 mm	50.00 mm	10	27.00 mm	12.40 mm
2J1P100R00	100.00 mm	50.00 mm	12	32.00 mm	14.40 mm

NOTE: Relieve cutter body when using insert corner radii larger than R1.6mm (see Operating Guidelines).



HIPOST[™] SERIES: 2J5P

90° ADJUSTABLE FINISH MILL (9MM INSERT)










METRIC

Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway
2J5P032R00	32.00 mm	32.00 mm	5	16.00 mm	8.40 mm
2J5P040R00	40.00 mm	40.00 mm	6	16.00 mm	8.40 mm
2J5P050R00	50.00 mm	45.00 mm	7	22.00 mm	10.40 mm
2J5P063R00	63.00 mm	55.00 mm	8	22.00 mm	10.40 mm
2J5P080R00	80.00 mm	70.00 mm	10	27.00 mm	12.40 mm

NOTE: Relieve cutter body when using insert corner radii larger than R1.6mm (see Operating Guidelines).



HIPOST™ 12J1P HARDWARE

							
	Insert Screw	Screw Driver	**OPTIONAL**	**OPTIONAL**	**OPTIONAL**	**OPTIONAL**	**OPTIONAL**
	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0501379R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0601379R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0701784R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0701784R02	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0702784R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0704084R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0801784R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1001784R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1001784R02	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1201584R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1501780R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0503056R10	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-0702057R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1002051R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1202259R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-1502555R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-06015X5R01	SM25-054-00	DS-T08W	610MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-07015X6R01	SM25-054-00	DS-T08W	615MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-10015X7R01	SM25-054-00	DS-T08W	617MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P-12017X8R01	SM25-054-00	DS-T08W	622MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P012020W3R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P016026W3R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P020030W4R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P020075W4R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P025040W5R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P025085W5R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P025085W5R01	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P012030X4R00	SM25-054-00	DS-T08W			DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P015030X5R00	SM25-054-00	DS-T08W	610MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P016035X5R00	SM25-054-00	DS-T08W	610MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P020035X6R00	SM25-054-00	DS-T08W	615MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P020035X6R01	SM25-054-00	DS-T08W	615MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P025035X7R00	SM25-054-00	DS-T08W	617MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P032043X8R00	SM25-054-00	DS-T08W	622MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P032043X8R01	SM25-054-00	DS-T08W	622MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P035043X8R00	SM25-054-00	DS-T08W	622MM		DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P016026TRR00	SM25-054-00	DS-T08W	WS-0044	DT-250-13	DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P020026TSR00	SM25-054-00	DS-T08W	WS-0059	DT-250-16	DS-A00-.25-S	DT-11-.25	DS-T08B
12J1P025032TUR00	SM25-054-00	DS-T08W	WS-0061	DT-350-20	DS-A00-.25-S	DT-11-.25	DS-T08B

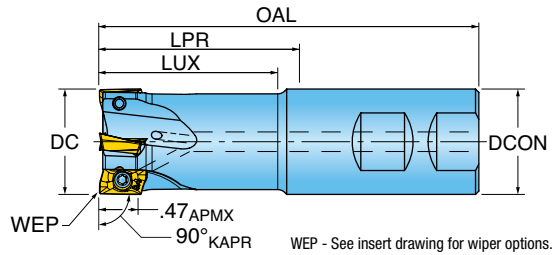


HIPOST™ 2J1P, 2J5P HARDWARE

	Insert Screw	Screw Driver	Adjusting Screw	Adjusting Wedge	Retention Bolt	Retention Bolt w/Coolant	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
2J1P-15R01	SM25-064-00	DS-T08W	-	-	SD-04-46	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P-20R01	SM25-064-00	DS-T08W	-	-	SD-06-46	SD-06-89	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P-25R01	SM25-064-00	DS-T08W	-	-	SD-06-46	SD-06-89	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P-30R01	SM25-064-00	DS-T08W	-	-	SD-08-48	SD-08-C9	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P032R00	SM25-064-00	DS-T08W	-	-	ISO4762M8X20-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P032R01	SM25-064-00	DS-T08W	-	-	ISO4762M8X20-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P035R00	SM25-064-00	DS-T08W	-	-	ISO4762M8X20-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P040R00	SM25-064-00	DS-T08W	-	-	ISO4762M8X30-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P040R01	SM25-064-00	DS-T08W	-	-	ISO4762M8X30-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P050R00	SM25-064-00	DS-T08W	-	-	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P050R01	SM25-064-00	DS-T08W	-	-	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P063R00	SM25-064-00	DS-T08W	-	-	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P063R01	SM25-064-00	DS-T08W	-	-	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P080R00	SM25-064-00	DS-T08W	-	-	ISO4762M12X35-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J1P100R00	SM25-064-00	DS-T08W	-	-	ISO4762M16X30-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J5P032R00	SM25-064-00	DS-T08W	SB025-00	PAR5092	ISO4762M8X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J5P040R00	SM25-064-00	DS-T08W	SB025-00	PAR5092	ISO4762M8X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J5P050R00	SM25-064-00	DS-T08W	SB025-00	PAR5092	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J5P063R00	SM25-064-00	DS-T08W	SB025-00	PAR5092	ISO4762M10X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B
2J5P080R00	SM25-064-00	DS-T08W	SB025-00	PAR5092	ISO4762M12X25-12.9	-	DS-A00-.25-S	DT-11-.25	DS-T08B

HIPOST⁺ SERIES: 12J1R (WELDON SHANK)

90° END MILL (13MM INSERT)



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

NOTE: Relieve cutter body when using insert corner radii larger than R.078" (see Operating Guidelines).

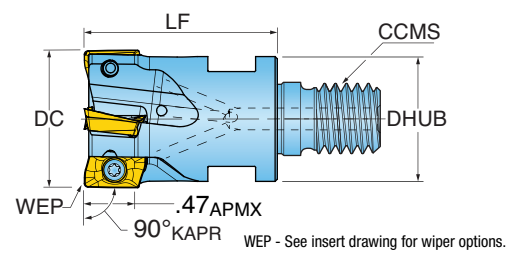
METRIC

Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12J1R020030W4R00	20.00 mm	30.0 mm	40.0 mm	90.0 mm	2	20.00 mm
12J1R025040W5R00	25.00 mm	40.0 mm	44.0 mm	100.0 mm	3	25.00 mm
12J1R025040W5R01	25.00 mm	40.0 mm	44.0 mm	100.0 mm	2	25.00 mm
12J1R032038W6R00	32.00 mm	38.0 mm	40.0 mm	100.0 mm	4	32.00 mm
12J1R032040W5R00	32.00 mm	40.0 mm	44.0 mm	100.0 mm	4	25.00 mm

NOTE: Relieve cutter body when using insert corner radii larger than R2.0mm (see Operating Guidelines).

HIPOST™ SERIES: 12J1R (TOPON M-ADAPTION)

90° MODULAR END MILL (13MM INSERT)



Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter
12J1R-07015X6R01	0.750	1.50	2	TopOn M10	0.690
12J1R-10015X7R01	1.000	1.50	3	TopOn M12	0.810
12J1R-12017X8R01	1.250	1.75	4	TopOn M16	1.130
12J1R-15017X8R01	1.500	1.75	5	TopOn M16	1.130

NOTE: Relieve cutter body when using insert corner radii larger than R.078" (see Operating Guidelines).

METRIC

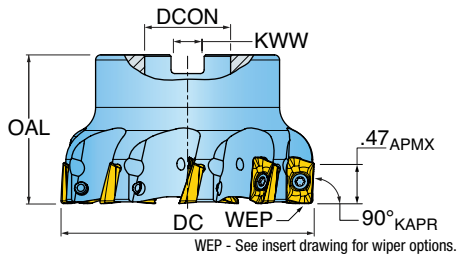
Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter
12J1R020035X6R00	20.00 mm	35.0 mm	2	TopOn M10	18.00 mm
12J1R025035X7R00	25.00 mm	35.0 mm	3	TopOn M12	21.00 mm
12J1R025035X7R01	25.00 mm	35.0 mm	2	TopOn M12	21.00 mm
12J1R032043X8R00	32.00 mm	43.0 mm	4	TopOn M16	29.00 mm
12J1R035043X8R00	35.00 mm	43.0 mm	4	TopOn M16	29.00 mm
12J1R040043X8R00	40.00 mm	43.0 mm	5	TopOn M16	29.00 mm
12J1R040043X8R01	40.00 mm	35.0 mm	4	TopOn M16	29.00 mm

NOTE: Relieve cutter body when using insert corner radii larger than R2.0mm (see Operating Guidelines).



HIPOST[™] SERIES: 2J1R

90° FACE MILL (13MM INSERT)



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

NOTE: Relieve cutter body when using insert corner radii larger than R.078" (see Operating Guidelines).

METRIC

Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway
2J1R035R00	35.00 mm	35.00 mm	4	16.00 mm	8.40 mm
2J1R040R00	40.00 mm	40.00 mm	5	16.00 mm	8.40 mm
2J1R040R01	40.00 mm	40.00 mm	5	22.00 mm	10.40 mm
2J1R040R02	40.00 mm	40.00 mm	4	16.00 mm	8.40 mm
2J1R040R03	40.00 mm	40.00 mm	4	22.00 mm	10.40 mm
2J1R050R00	50.00 mm	40.00 mm	6	22.00 mm	10.40 mm
2J1R050R01	50.00 mm	40.00 mm	4	22.00 mm	10.40 mm
2J1R052R00	52.00 mm	50.00 mm	5	22.00 mm	10.40 mm
2J1R063R00	63.00 mm	40.00 mm	7	22.00 mm	10.40 mm
2J1R063R01	63.00 mm	40.00 mm	6	22.00 mm	10.40 mm
2J1R066R00	66.00 mm	50.00 mm	6	27.00 mm	12.40 mm
2J1R080R00	80.00 mm	50.00 mm	9	27.00 mm	12.40 mm
2J1R080R01	80.00 mm	50.00 mm	6	27.00 mm	12.40 mm
221R100R00	100.00 mm	50.00 mm	11	32.00 mm	14.40 mm
2J1R100R01	100.00 mm	50.00 mm	8	32.00 mm	14.40 mm
2J1R125R00	125.00 mm	63.00 mm	13	40.00 mm	16.00 mm
2J1R125R01	125.00 mm	63.00 mm	10	40.00 mm	16.00 mm

NOTE: Relieve cutter body when using insert corner radii larger than R2.0mm (see Operating Guidelines).



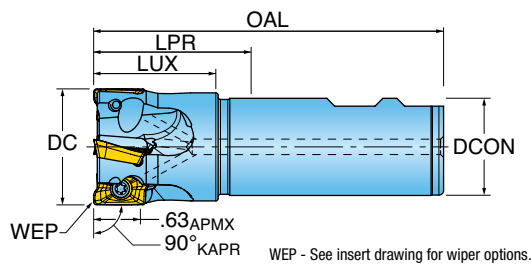
HiPOST™ 12J1R, 2J1R HARDWARE

	Insert Screw	Driver Handle	Driver Bit	Wrench	Retention Bolt	Coolant Bolt	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
12J1R-0701284R01	SM35-076-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-0702084R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-0703084R01	SM35-076-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1001780R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1003780R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1202281R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1204281R01	SM35-076-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1501781R01	SM35-076-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1502281R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-1504281R01	SM35-076-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-07015X6R01	SM35-076-10	DS-A00T	DS-T106B	615MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-10015X7R01	SM35-076-10	DS-A00T	DS-T106B	617MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-12017X8R01	SM35-076-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R-15017X8R01	SM35-076-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-20R01	SM35-088-10	DS-A00T	DS-T106B		SD-06-46	SD-06-89	DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-20R02	SM35-088-10	DS-A00T	DS-T106B		SD-06-46	SD-06-89	DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-25R01	SM35-088-10	DS-A00T	DS-T106B		SD-06-46	SD-06-89	DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-30R01	SM35-088-10	DS-A00T	DS-T106B		SD-08-46	SD-08-92	DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-40R01	SM35-088-10	DS-A00T	DS-T106B		SD-12-82	SD-12-99	DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R-50R01	SM35-088-10	DS-A00T	DS-T106B		SD-12-82	SD-12-99	DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R020030W4R00	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R025040W5R00	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R025040W5R01	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R032038W6R00	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R032040W5R00	SM35-088-10	DS-A00T	DS-T106B				DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R020035X6R00	SM35-088-10	DS-A00T	DS-T106B	615MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R025035X7R00	SM35-088-10	DS-A00T	DS-T106B	617MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R025035X7R01	SM35-088-10	DS-A00T	DS-T106B	617MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R032043X8R00	SM35-088-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R035043X8R00	SM35-088-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R040043X8R00	SM35-088-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
12J1R040043X8R01	SM35-088-10	DS-A00T	DS-T106B	622MM			DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R035R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M8X20-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R040R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M8X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R040R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R040R02	SM35-088-10	DS-A00T	DS-T106B		ISO4762M8X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R040R03	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R050R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R050R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R052R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X35-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R063R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R063R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M10X25-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R066R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M12X35-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R080R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M12X35-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R080R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M12X35-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R100R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M16X30-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R100R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M16X30-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R125R00	SM35-088-10	DS-A00T	DS-T106B		ISO4762M20X40-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1
2J1R125R01	SM35-088-10	DS-A00T	DS-T106B		ISO4762M20X40-12.9		DS-A00-.25-T	DT-30-.25	DS-T10B1



HIPOST™ SERIES: 12J1G (WELDON SHANK)

90° END MILL (17MM INSERT)



WEP - See insert drawing for wiper options.

Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter	CSP Coolant
12J1G-0701284R01	0.750	1.25	1.75	3.75	1	0.7500	Yes
12J1G-1001580R01	1.000	1.50	1.75	4.00	2	1.0000	No
12J1G-1001580R02	1.000	1.50	1.75	4.00	2	1.0000	Yes
12J1G-1003780R01	1.000	3.50	3.75	6.00	2	1.0000	Yes
12J1G-1005081R01	1.000	1.95	5.00	8.00	2	1.2500	No
12J1G-1006080R01	1.000	5.75	6.00	8.00	2	1.0000	Yes
12J1G-1007081R01	1.000	3.94	7.00	10.00	2	1.2500	No
12J1G-1008080R01	1.000	7.75	8.00	10.00	2	1.0000	Yes
12J1G-1201681R01	1.250	1.60	2.25	4.50	3	1.2500	No
12J1G-1201681R02	1.250	1.60	2.25	4.50	3	1.2500	Yes
12J1G-1204281R01	1.250	3.75	4.25	6.50	3	1.2500	Yes
12J1G-1205281R01	1.250	5.25	5.75	8.00	3	1.2500	Yes
12J1G-1207281R01	1.250	7.25	7.75	10.00	3	1.2500	Yes
12J1G-1501681R01	1.500	2.25	2.25	4.50	4	1.2500	Yes
12J1G-1501681R02	1.500	2.25	2.25	4.50	3	1.2500	No
12J1G-1501681R04	1.500	2.25	2.25	4.50	3	1.2500	Yes
12J1G-1501881R01	1.500	4.25	4.25	6.50	3	1.2500	Yes
12J1G-1505586R01	1.500	5.50	5.50	8.00	3	1.5000	No
12J1G-1507586R01	1.500	7.50	7.50	10.00	3	1.5000	Yes
12J1G-1508586R01	1.500	8.50	8.50	11.00	3	1.5000	Yes
12J1G-1701781R01	1.750	1.70	2.25	4.50	4	1.2500	No
12J1G-2001781R01	2.000	2.25	2.25	4.50	5	1.2500	Yes

NOTE: Relieve cutter body when using insert corner radii larger than R.093" (see Operating Guidelines).
BOMT17 produces slightly larger diameter (up to .011") for cutters 1.00" and smaller.

METRIC

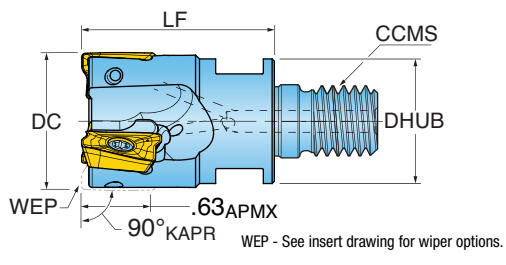
Part Number	DC Cutting Diameter	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter	CSP Coolant
12J1G025040W5R00	25.00 mm	40.0 mm	44.0 mm	100.0 mm	2	25.00 mm	Yes
12J1G032040W6R00	32.00 mm	36.0 mm	40.0 mm	100.0 mm	2	32.00 mm	Yes
12J1G032120W6R00	32.00 mm	120.0 mm	125.0 mm	185.0 mm	2	32.00 mm	Yes
12J1G040050W6R00	40.00 mm	50.0 mm	50.0 mm	110.0 mm	3	32.00 mm	Yes
12J1G040130W6R00	40.00 mm	130.0 mm	135.0 mm	195.0 mm	3	32.00 mm	Yes

NOTE: Relieve cutter body when using insert corner radii larger than R2.4mm (see Operating Guidelines).
BOMT17 produces slightly larger diameter (up to .25mm) for 25mm cutter.



HIPOST™ SERIES: 12J1G (TOPON M-ADAPTION)

90° MODULAR END MILL (17MM INSERT)



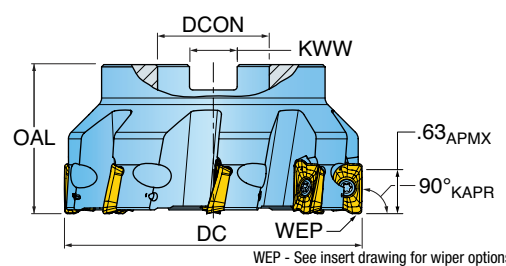
Part Number	DC Cutting Diameter	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code	DHUB Hub Diameter
12J1G-10015X7R01	1.000	1.50	2	TopOn M12	0.810
12J1G-12017X8R01	1.250	1.75	3	TopOn M16	1.130
12J1G-15017X8R01	1.500	1.75	3	TopOn M16	1.130

NOTE: Relieve cutter body when using insert corner radii larger than R.093" (see Operating Guidelines). BOMT17 produces slightly larger diameter (up to .011") for cutters 1.00" and smaller.



HIPOST[™] SERIES: 2J1G

90° FACE MILL (17MM INSERT)



Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway	DBC Bolt Circle	CSP Coolant
2J1G-20R01	2.000	1.570	5	0.7500	0.312	NA	Yes
2J1G-20R02	2.000	1.570	3	0.7500	0.312	NA	Yes
2J1G-25R01	2.500	1.570	6	0.7500	0.312	NA	Yes
2J1G-30R01	3.000	1.750	7	1.0000	0.375	NA	Yes
2J1G-30R02	3.000	1.750	4	1.0000	0.375	NA	Yes
2J1G-40R03	4.000	2.375	8	1.5000	0.625	NA	Yes
2J1G-40R04	4.000	2.375	6	1.5000	0.625	NA	Yes
2J1G-50R02	5.000	2.375	9	1.5000	0.625	NA	Yes
2J1G-50R04	5.000	2.375	7	1.5000	0.625	NA	Yes
2J1G-60R01	6.000	2.000	10	2.0000	0.750	NA	No
2J1G-60R02	6.000	2.000	8	2.0000	0.750	NA	No
2J1G-80R01	8.000	2.370	12	2.5000	1.000	4.00	No

NOTE: Relieve cutter body when using insert corner radii larger than R.093" (see Operating Guidelines).
BOMT17 produces slightly smaller diameter (up to .007") for cutters 3.00" and larger.

METRIC

Part Number	DC Cutting Diameter	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway	CSP Coolant
2J1G040R00	40.00 mm	40.00 mm	3	16.00 mm	8.40 mm	Yes
2J1G050R00	50.00 mm	40.00 mm	4	22.00 mm	10.40 mm	Yes
2J1G050R01	50.00 mm	40.00 mm	5	22.00 mm	10.40 mm	Yes
2J1G063R00	63.00 mm	40.00 mm	5	22.00 mm	10.40 mm	Yes
2J1G063R01	63.00 mm	40.00 mm	6	22.00 mm	10.40 mm	Yes
2J1G080R00	80.00 mm	50.00 mm	6	27.00 mm	12.40 mm	Yes
2J1G080R01	80.00 mm	50.00 mm	8	27.00 mm	12.40 mm	Yes
2J1G100R00	100.00 mm	50.00 mm	6	32.00 mm	14.40 mm	Yes
2J1G100R01	100.00 mm	50.00 mm	9	32.00 mm	14.40 mm	Yes
2J1G125R00	125.00 mm	63.00 mm	7	40.00 mm	16.00 mm	No
2J1G160R00	160.00 mm	63.00 mm	8	40.00 mm	16.00 mm	No

NOTE: NOTE: Relieve cutter body when using insert corner radii larger than R2.4mm (see Operating Guidelines).
BOMT17 produces slightly smaller diameter (up to .17mm) for cutters 80mm and larger.

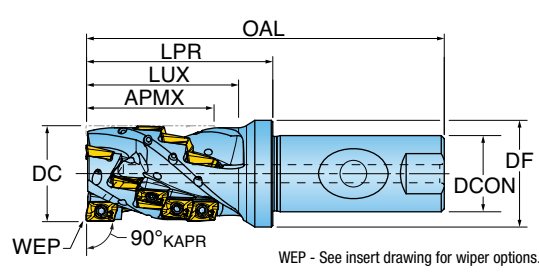


HIPOST™ 12J1G, 2J1G HARDWARE

	Insert Screw	Driver Handle	Driver Bit	Wrench	Retention Bolt	Coolant Bolt	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
12J1G-0701284R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1001580R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1001580R02	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1003780R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1005081R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1006080R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1007081R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1008080R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1201681R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1201681R02	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1204281R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1205281R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1207281R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1501681R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1501681R02	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1501681R04	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1501881R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1505586R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1507586R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1508586R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-1701781R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-2001781R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-10015X7R01	SM40-084-20	DS-A00T	DS-T156B	617MM			DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-12017X8R01	SM40-084-20	DS-A00T	DS-T156B	622MM			DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G-15017X8R01	SM40-084-20	DS-A00T	DS-T156B	622MM			DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-20R01	SM40-084-20	DS-A00T	DS-T156B		SD-06-46	SD-06-89	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-20R02	SM40-084-20	DS-A00T	DS-T156B		SD-06-46	SD-06-89	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-25R01	SM40-084-20	DS-A00T	DS-T156B		SD-06-46	SD-06-89	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-30R01	SM40-084-20	DS-A00T	DS-T156B		SD-08-47	SD08-C9	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-30R02	SM40-084-20	DS-A00T	DS-T156B		SD-08-47	SD08-C9	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-40R03	SM40-084-20	DS-A00T	DS-T156B		SD-12-82	SD-12-99	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-40R04	SM40-084-20	DS-A00T	DS-T156B		SD-12-82	SD-12-99	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-50R02	SM40-084-20	DS-A00T	DS-T156B		SD-12-82	SD-12-99	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-50R04	SM40-084-20	DS-A00T	DS-T156B		SD-12-82	SD-12-99	DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-60R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-60R02	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G-80R01	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G025040W5R00	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G032040W6R00	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G032120W6R00	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G040050W6R00	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
12J1G040130W6R00	SM40-084-20	DS-A00T	DS-T156B				DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G040R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M8X25-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G050R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M10X25-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G050R01	SM40-084-20	DS-A00T	DS-T156B		ISO4762M10X25-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G063R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M10X25-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G063R01	SM40-084-20	DS-A00T	DS-T156B		ISO4762M10X25-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G080R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M12X30-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G080R01	SM40-084-20	DS-A00T	DS-T156B		ISO4762M12X30-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G100R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M16X30-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G100R01	SM40-084-20	DS-A00T	DS-T156B		ISO4762M16X30-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G125R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M20X40-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1
2J1G160R00	SM40-084-20	DS-A00T	DS-T156B		ISO4762M20X40-12.9		DS-A00.25-T	DT-35-.25	DS-T15B1

HIPOST™ SERIES: 22J3P (WELDON SHANK)

90° END MILL; ALL EFFECTIVE, RH HELIX (9MM INSERT)



Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZNF Face Insert Count	ZNP Periphery Insert Count	NOF Flute Count	DF Flange Diameter	DCON Shank Diameter
22J3P-1001780R01	1.000	1.35	1.75	1.75	4.00	2	6	2	1.000	1.000
22J3P-1002780R01	1.000	2.26	2.40	2.75	5.00	2	12	2	1.375	1.000
22J3P-1202480R01	1.250	1.68	2.00	2.45	4.70	3	12	3	1.400	1.000
22J3P-1502881R01	1.500	2.00	2.36	2.80	5.00	4	20	4	1.650	1.250

NOTE: Total Number of Inserts = ZNF + ZNP.
Relieve cutter body when using insert corner radii larger than R.062" (see Operating Guidelines).

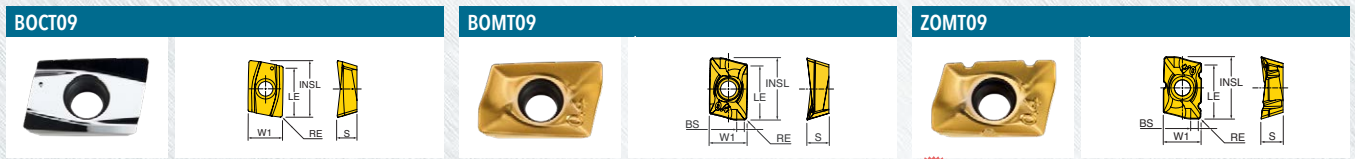
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Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZNF Face Insert Count	ZNP Periphery Insert Count	NOF Flute Count	DCON Shank Diameter
22J3P025026W5R00	25.00 mm	25.00 mm	40.0 mm	44.0 mm	100.0 mm	2	4	2	25 mm
22J3P032034W6R00	32.00 mm	32.00 mm	50.0 mm	50.0 mm	110.0 mm	3	9	3	32 mm

NOTE: Total Number of Inserts = ZNF + ZNP.
Relieve cutter body when using insert corner radii larger than R1.6mm (see Operating Guidelines).



HIPOST[™] 22J3P INSERTS



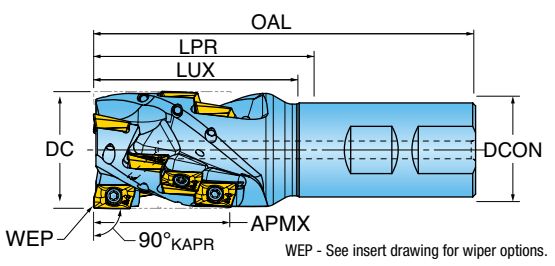
Part Number	Application	Insert Station	RE Corner Radius	BS Wiper Length	LE Cutting Edge Length	INSL Length	W1 Width	S Thickness	Grade													
									IN0560	IN10K	IN2005	IN2010	IN2036	IN2504	IN2505	IN2530	IN2540	IN4030	IN6537	IN90D		
BOCT09T304FR-P	Grd/Pol for Al	Face & Periphery	0.015 R	-	0.350	0.417	0.260	0.146		•												
NEW BODT09T304R	Neutral Geometry; Precision	Face & Periphery	0.015 R	0.074	0.366	0.421	0.260	0.147	•	•			•									
NEW BODT09T304R-001	Neutral Geometry; Precision	Face & Periphery	0.015 R	0.074	0.118	0.421	0.260	0.147	•	•			•									
BOMT09T304R	Multi-Purpose	Face & Periphery	0.015 R	0.050	0.350	0.421	0.258	0.148					•	•	•	•	•	•	•	•	•	•
BOMT09T304R-DT1	PCD Tipped	Face & Periphery	0.015 R	0.060	0.120	0.421	0.260	0.147														•
BOMT09T304R-DT2	PCD Tipped	Face & Periphery	0.015 R	0.060	0.370	0.421	0.260	0.147														•
ZOMT09T304R	Positive-Splitters	Face & Periphery	0.015 R	0.050	0.350	0.421	0.259	0.148					•		•	•						•
BOCT09T308FR-P	Grd/Pol for Al	Face & Periphery	0.031 R	-	0.350	0.414	0.260	0.144		•												
BODT09T308R	Neutral Geometry; Precision	Face & Periphery	0.031 R	0.057	0.330	0.421	0.258	0.148			•			•								
BODT09T308R-001	Neutral Geometry; Precision	Face & Periphery	0.031 R	0.057	0.120	0.421	0.254	0.148	•	•			•									
BOMT09T308R	Multi-Purpose	Face & Periphery	0.031 R	0.034	0.350	0.421	0.259	0.148					•	•	•	•					•	•
BOMT09T316R	Multi-Purpose	Face	0.062 R	-	0.350	0.421	0.259	0.148					•		•	•						
BOMT09T320R	Multi-Purpose	Face	0.078 R	-	0.350	0.421	0.259	0.148					•		•	•						
NEW BODT09T320R-001	Neutral Geometry; Precision	Face	0.078 R	0.012	0.124	0.421	0.254	0.148						•								
BOMT09T331R	Multi-Purpose	Face	0.120 R	-	0.350	0.421	0.259	0.148					•		•	•						

HIPOST[™] 22J3P HARDWARE

	Insert Screw	Screw Driver	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit	
22J3P-1001780R01	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	
22J3P-1002780R01	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	
22J3P-1202480R01	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	
22J3P-1502881R01	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	
22J3P025026W5R00	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	
22J3P032034W6R00	SM25-064-00	DS-T08W	DS-A00-.25-S	DT-11-.25	DS-T08B	

HIPOST[™] SERIES: 22J3R (WELDON SHANK)

90° END MILL, ALL EFFECTIVE, RH HELIX (13MM INSERT)

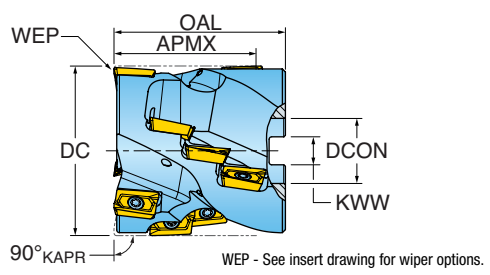


Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	DCON Bore Diameter
22J3R032035W6R00	32.00 mm	35.00 mm	48.0 mm	48.0 mm	110.0 mm	2	4	2	32.00 mm
22J3R040046W6R00	40.00 mm	46.00 mm	65.0 mm	65.0 mm	130.0 mm	3	9	3	32.00 mm

NOTE: Total Number of Inserts = ZNF + ZNP.
Relieve cutter body when using insert corner radii larger than R2.0mm (see Operating Guidelines).

HIPOST[™] SERIES: 22J3R (SHELL MILL)

90° SHELL MILL ALL EFFECTIVE, RH HELIX (13MM INSERT)

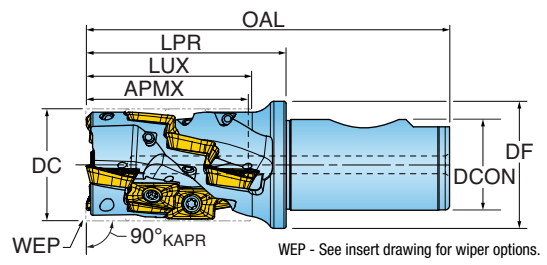


Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	DCON Bore Diameter	KWW Keyway
22J3R040035F0R00	40.00 mm	35.00 mm	55.0 mm	3	6	3	16.00 mm	8.4 mm
22J3R050046F1R00	50.00 mm	46.00 mm	70.0 mm	4	12	4	22.00 mm	10.4 mm
22J3R050046F2R00	50.00 mm	46.00 mm	70.0 mm	4	12	4	27.00 mm	12.4 mm
22J3R063046F2R00	63.00 mm	46.00 mm	70.0 mm	4	12	4	27.00 mm	12.4 mm
22J3R080046F3R00	80.00 mm	46.00 mm	70.0 mm	5	15	5	32.00 mm	14.4 mm

NOTE: Total Number of Inserts = ZNF + ZNP.
Relieve cutter body when using insert corner radii larger than R2.0mm (see Operating Guidelines).

HIPOST[™] SERIES 22J3G (WELDON SHANK)

90° ROUGH & FINISH END MILL
ALL-EFFECTIVE RH HELIX (17MM INSERT)

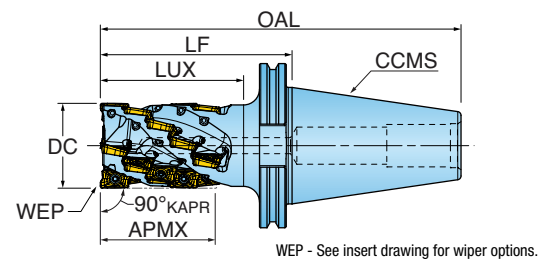


Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Useable Length Max.	LPR Protruding Length	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	DF Flange Diameter	DCON Shank Diameter
22J3G-1502781R01	1.500	2.27	2.40	2.75	5.00	3	9	3	1.750	1.250
22J3G-1503381R01	1.500	2.82	3.00	3.30	5.50	3	12	3	1.750	1.250
22J3G-2002782R01	2.000	2.25	2.70	2.75	6.00	4	12	4	2.000	2.000
22J3G-2005082R01	2.000	4.16	4.90	5.00	8.25	4	24	4	2.000	2.000

NOTE: Total Number of Inserts = ZNF + ZNP.

HIPOST[™] SERIES 22J3G (50 TAPER)

90° ROUGH & FINISH END MILL
ALL-EFFECTIVE RH HELIX



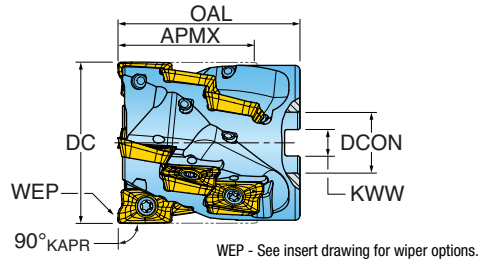
Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Useable Length Max.	LF Functional Length	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	CCMS Connection Code Machine Side
22J3G-2004548R01	2.000	2.80	3.38	4.500	8.50	4	16	4	ICTC #50 .125 Draw
22J3G-2006048R01	2.000	4.16	4.88	6.000	10.00	4	24	4	ICTC #50 .125 Draw

NOTE: Total Number of Inserts = ZNF + ZNP.



HIPOSTTM SERIES 22J3G (SHELL MILL)

90° ROUGH & FINISH END MILL
ALL-EFFECTIVE RH HELIX (17MM INSERT)



Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	DCON Bore Diameter	KWW Keyway
22J3G-20022D1R02	2.000	1.71	2.25	4	8	4	0.750	0.312
22J3G-20041D3R02	2.000	2.80	4.17	4	20	4	1.000	0.375
22J3G-25030D3R02	2.500	2.27	3.00	5	15	5	1.000	0.375
22J3G-25040D3R02	2.500	3.35	4.00	5	25	5	1.000	0.375
22J3G-30040D4R02	3.000	3.35	4.00	6	30	6	1.250	0.500

NOTE: Total Number of Inserts = ZNF + ZNP.

METRIC

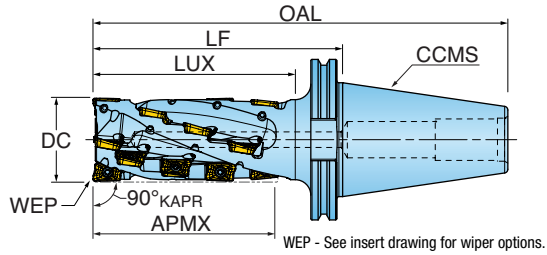
Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	OAL Overall Length	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	DCON Bore Diameter	KWW Keyway
22J3G063045F2R00	63.00 mm	45.00 mm	63.0 mm	3	6	3	27.00 mm	12.40 mm
22J3G063059F2R00	63.00 mm	59.00 mm	75.0 mm	3	9	3	27.00 mm	12.40 mm
22J3G063059F2R01	63.00 mm	59.00 mm	75.0 mm	4	12	4	27.00 mm	12.40 mm
22J3G080074F3R00	80.00 mm	74.00 mm	95.0 mm	4	16	4	32.00 mm	14.40 mm
22J3G080074F3R01	80.00 mm	74.00 mm	95.0 mm	5	20	5	32.00 mm	14.40 mm
22J3G100088F4R00	100.00 mm	88.00 mm	110.0 mm	6	30	6	40.00 mm	16.00 mm

NOTE: Total Number of Inserts = ZNF + ZNP.



HIPOSTTM SERIES 22J5G

**90° ROUGH & FINISH END MILL
1/2-EFFECTIVE RH HELIX (17MM INSERT)**











Part Number	DC Cutting Diameter	APMX Depth of Cut Max.	LUX Useable Length Max.	LF Functional Length	OAL Overall Length	ZFP Eff. Teeth Periphery	ZNF Face Insert Count	ZNP Peripheral Insert Count	NOF Flute Count	KAPR Cutting Edge Angle	CCMS Connection Code Machine Side
22J5G-2006048R01	2.000	4.40	4.88	6.000	10.00	2	4	14	4	90	ICTC #50 .125 Draw

NOTE: Total Number of Inserts = ZNF + ZNP.
Relieve cutter body when using insert corner radii larger than R.093" (see Operating Guidelines).

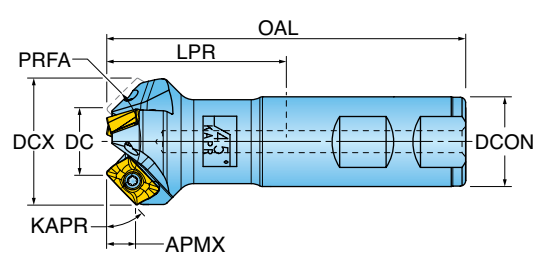


HIPOST™ 22J3G, 22J5G HARDWARE

								
	Insert Screw	Driver Handle	Driver Bit	Socket Head Cap Screw	Socket Set Screw	**OPTIONAL**	**OPTIONAL**	**OPTIONAL**
22J3G-1502781R01	SM40-093-20	DS-A00T	DS-T156B			DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-1503381R01	SM40-093-20	DS-A00T	DS-T156B			DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-2002782R01	SM40-093-20	DS-A00T	DS-T156B		SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-2005082R01	SM40-093-20	DS-A00T	DS-T156B		SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-2004548R01	SM40-093-20	DS-A00T	DS-T156B		SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-2006048R01	SM40-093-20	DS-A00T	DS-T156B		SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J5G-2006048R01	SM40-093-20	DS-A00T	DS-T156B		SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-20022D1R02	SM40-093-20	DS-A00T	DS-T156B	SD06-50		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-20041D3R02	SM40-093-20	DS-A00T	DS-T156B	SD08-97		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-25030D3R02	SM40-093-20	DS-A00T	DS-T156B	SD08-52	SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-25040D3R02	SM40-093-20	DS-A00T	DS-T156B	SD08-D3	SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G-30040D4R02	SM40-093-20	DS-A00T	DS-T156B	SD10-73	SA030-01	DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G063045F2R00	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M12X45-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G063059F2R00	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M12X60-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G063059F2R01	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M12X60-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G080074F3R00	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M16X75-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G080074F3R01	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M16X75-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1
22J3G100088F4R00	SM40-093-20	DS-A00T	DS-T156B	ISO4762-M20X90-12_9		DS-A00.25-T	DT-35-.25	DS-T15B1

HIPOST[™] SERIES: 12_1R

CHAMFER END MILL (13MM INSERT)



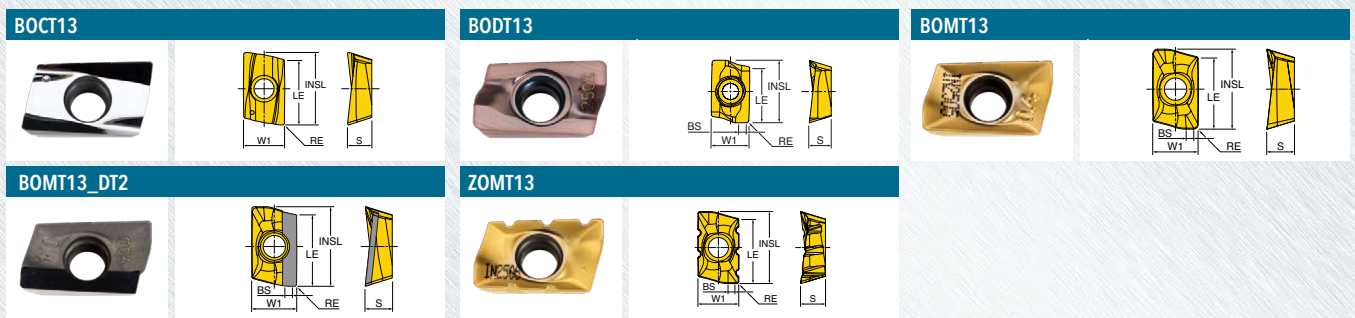
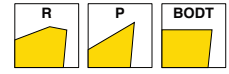
Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	PRFA Profile Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12M1R-0701780R01	0.750	1.220	60	60	0.40	1.75	4.00	3	1.000
12N1R-0701780R01	0.750	1.408	45	90	0.32	1.75	4.00	3	1.000
12P1R-0701780R01	0.750	1.546	30	120	0.22	1.75	4.00	3	1.000
12Q1R-0701780R01	0.750	1.641	15	150	0.12	1.75	4.00	3	1.000
12L1R-0801780R01	0.875	1.123	75	30	0.46	1.75	4.00	3	1.000

METRIC

Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	PRFA Profile Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12L1R020044W5R00	20.00 mm	26.20 mm	75	30	11.60 mm	44.0 mm	100.0 mm	3	25 mm
12M1R020044W5R00	20.00 mm	31.90 mm	60	60	10.30 mm	44.0 mm	100.0 mm	3	25 mm
12N1R020044W5R00	20.00 mm	36.90 mm	45	90	8.40 mm	44.0 mm	100.0 mm	3	25 mm
12P1R020044W5R00	20.00 mm	40.40 mm	30	120	5.90 mm	44.0 mm	100.0 mm	3	25 mm
12Q1R020044W5R00	20.00 mm	42.10 mm	15	150	2.90 mm	44.0 mm	100.0 mm	3	25 mm



HIPOST[™] 12_1R INSERTS



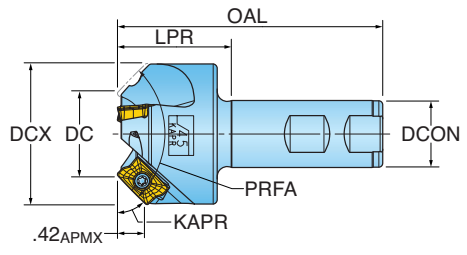
Part Number	Application	RE Corner Radius	BS Wiper Length	LE Cutting Edge Length	INSL Length	W1 Width	S Thickness	Grade													
								IN0560	IN10K	IN2005	IN2010	IN2036	IN2504	IN2505	IN2530	IN2540	IN4030	IN6537	IN90D		
BOCT130404FR-P	Grd/Pol for Al	0.015 R	-	0.490	0.557	0.320	0.189		•												
NEW BODT130404R	Neutral Geometry; Precision	0.015 R	0.093	0.490	0.557	0.320	0.190	•		•				•							
NEW BODT130404R-001	Neutral Geometry; Precision	0.015 R	0.095	0.157	0.557	0.320	0.190	•		•				•							
BOMT130404R	Multi-Purpose	0.015 R	0.067	0.490	0.558	0.320	0.190					•	•	•	•	•	•	•	•	•	•
BOMT130404R-DT2	PCD Tipped	0.015 R	0.055	0.490	0.557	0.320	0.190														•
ZOMT130404R	Positive-Splitters	0.015 R	0.067	0.490	0.558	0.320	0.190						•		•	•		•	•		
BOCT130408FR-P	Grd/Pol for Al	0.031 R	-	0.490	0.555	0.319	0.187		•												
BODT130408R	Neutral Geometry; Precision	0.031 R	0.076	0.490	0.558	0.320	0.190	•		•				•							
BODT130408R-001	Neutral Geometry; Precision	0.031 R	0.076	0.170	0.558	0.319	0.190	•		•				•							
BOMT130408R	Multi-Purpose	0.031 R	0.051	0.49	0.558	0.32	0.190						•	•	•	•		•	•		
ZOMT130408R	Positive-Splitters	0.031 R	0.051	0.490	0.561	0.320	0.190								•			•			

HIPOST[™] 12_1R HARDWARE

	Insert Screw	Driver Handle	Driver Bit	**OPTIONAL** Torque Driver Handle	**OPTIONAL** Preset Torque Bit	**OPTIONAL** Torque Driver Bit
12M1R-0701780R01	SM35-076-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12N1R-0701780R01	SM35-076-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12P1R-0701780R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12Q1R-0701780R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12L1R-0801780R01	SM35-076-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12L1R020044W5R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12M1R020044W5R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12N1R020044W5R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12P1R020044W5R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
12Q1R020044W5R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1

HIPOST⁺ SERIES: 12N1G

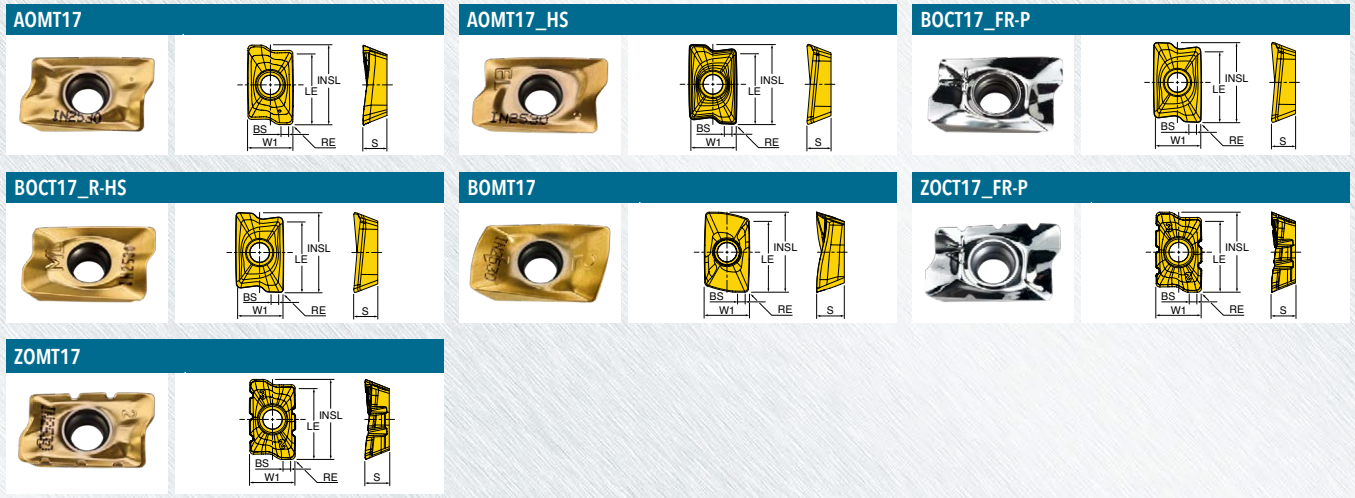
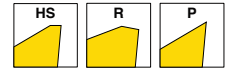
45° CHAMFER END MILL (17MM INSERT)



Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	PRFA Profile Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12N1G-1201780R01	1.250	2.118	45	90	0.425	1.75	4.00	3	1.000



HIPOST™ 12N1G INSERTS



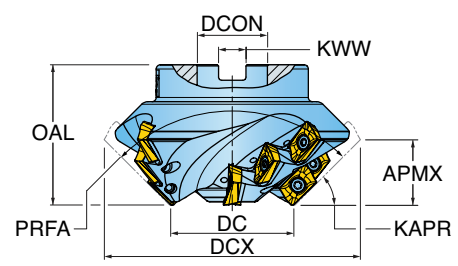
Part Number	Application	RE Corner Radius	BS Wiper Length	LE Cutting Edge Length	INSL Length	W1 Width	S Thickness	Grade	IN10K	IN1030	IN2005	IN2036	IN2504	IN2505	IN2510	IN2530	IN2540	NEW IN3310	IN4030	IN6515	IN6537	IN7036	IN93D		
AOMT170504R	Multi-Purpose	0.015 R	0.102	0.630	0.729	0.421	0.219			•				•		•	•								
APKT170504R-DT	PCD Tipped	0.015 R	0.125	0.300	0.731	0.422	0.219																	•	
AOCT170508FR-P	General Purpose Aluminum	0.031 R	0.129	0.633	0.682	0.421	0.207		•																
AOMT170508R	Multi-Purpose	0.031 R	0.089	0.633	0.728	0.421	0.218			•	•			•	•	•	•			•		•			
AOMT170508R-HS	SS/Hi-Temp/Ti	0.031 R	0.093	0.633	0.729	0.422	0.219			•	•	•		•		•									
BOCT170508FR-P	Grd/Pol for Al	0.031 R	0.100	0.633	0.728	0.425	0.221		•											•					
BOCT170508R-HS	Precision	0.031 R	0.081	0.633	0.728	0.425	0.218										•								
BOMT170608R	Heavy Duty	0.031 R	0.086	0.630	0.744	0.421	0.256						•	•	•	•	•								
ZOCT170508FR-P	Grd/Pol w/ Splitters	0.031 R	0.100	0.633	0.728	0.425	0.221		•																
ZOMT170508R	Chip Splitters	0.031 R	0.089	0.630	0.728	0.421	0.219																		

HIPOST™ 12N1G HARDWARE

	Insert Screw	Driver Handle	Driver Bit	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
12N1G-1201780R01	SM40-120-20	DS-A00T	DS-T156B	DS-A00.25-T	DT-35-.25	DS-T15B1

HIPOST[™] SERIES: 22_3R

CHAMFER SHELL MILL (13MM INSERT)



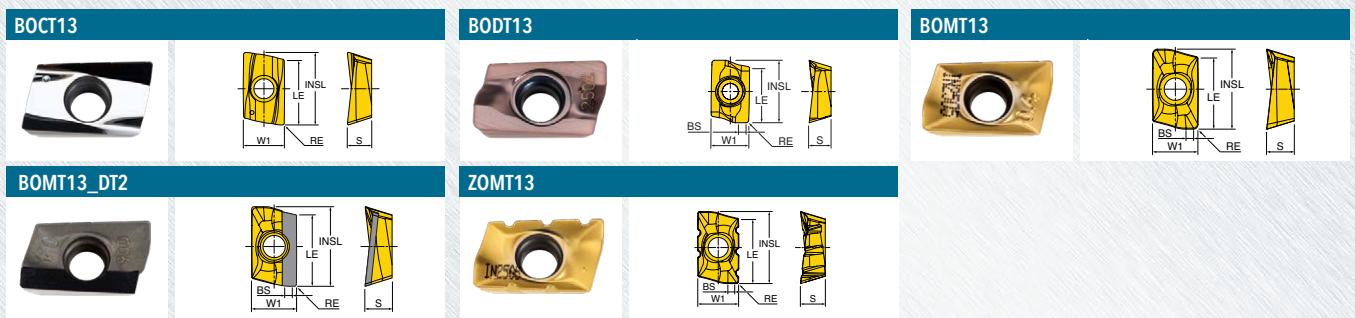
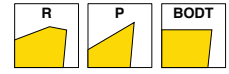
Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	PRFA Profile Angle	APMX Depth of Cut Max.	OAL Overall Length	ZNF Face Inserts	ZNP Peripheral Inserts	NOF Flute Count	DCON Shank Diameter	KWW Keyway
22L3R-17020D3R01	1.750	2.445	75	30	1.29	2.00	4	8	4	1.000	0.375
22M3R-17020D3R01	1.750	3.082	60	60	1.15	2.00	4	8	4	1.000	0.375
22N3R-17020D3R01	1.750	3.621	45	90	0.93	2.00	4	8	4	1.000	0.375
22P3R-17020D4R01	1.750	4.034	30	120	0.66	2.00	4	8	4	1.250	0.500
22Q3R-17020D4R01	1.750	4.305	15	150	0.34	2.00	4	8	4	1.250	0.500

METRIC

Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	PRFA Profile Angle	APMX Depth of Cut Max.	OAL Overall Length	ZNF Face Inserts	ZNP Peripheral Inserts	NOF Flute Count	DCON Shank Diameter	KWW Keyway
22L3R045050F1R00	45.00 mm	63.20 mm	75	30	33.90 mm	50.0 mm	4	8	4	22.00 mm	10.40 mm
22M3R045050F2R00	45.00 mm	80.00 mm	60	60	30.20 mm	50.0 mm	4	8	4	27.00 mm	12.40 mm
22N3R045050F2R00	45.00 mm	94.40 mm	45	90	24.60 mm	50.0 mm	4	8	4	27.00 mm	12.40 mm
22P3R045050F2R00	45.00 mm	105.40 mm	30	120	17.30 mm	50.0 mm	4	8	4	27.00 mm	12.40 mm
22Q3R045050F2R00	45.00 mm	112.50 mm	15	150	9.00 mm	50.0 mm	4	8	4	27.00 mm	12.40 mm



HIPOST™ 22_3R INSERTS



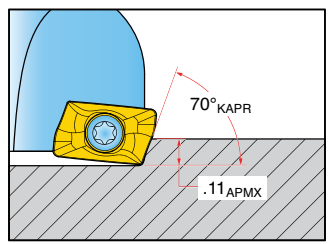
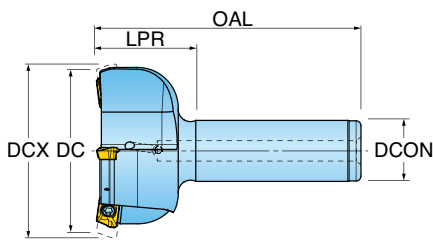
Part Number	Application	RE Corner Radius	BS Wiper Length	LE Cutting Edge Length	INSL Length	W1 Width	S Thickness	Grade													
								IN0560	IN10K	IN2005	IN2010	IN2036	IN2504	IN2505	IN2530	IN2540	IN4030	IN6537	IN90D		
BOCT130404FR-P	Grd/Pol for Al	0.015 R	-	0.490	0.557	0.320	0.189		•												
NEW BODT130404R	Neutral Geometry; Precision	0.015 R	0.093	0.490	0.557	0.320	0.190	•		•				•							
NEW BODT130404R-001	Neutral Geometry; Precision	0.015 R	0.095	0.157	0.557	0.320	0.190	•		•				•							
BOMT130404R	Multi-Purpose	0.015 R	0.067	0.490	0.558	0.320	0.190					•	•	•	•	•	•	•	•	•	•
BOMT130404R-DT2	PCD Tipped	0.015 R	0.055	0.490	0.557	0.320	0.190														•
ZOMT130404R	Positive-Splitters	0.015 R	0.067	0.490	0.558	0.320	0.190						•		•	•		•	•		
BOCT130408FR-P	Grd/Pol for Al	0.031 R	-	0.490	0.555	0.319	0.187		•												
BODT130408R	Neutral Geometry; Precision	0.031 R	0.076	0.490	0.558	0.320	0.190	•		•				•							
BODT130408R-001	Neutral Geometry; Precision	0.031 R	0.076	0.170	0.558	0.319	0.190	•		•				•							
BOMT130408R	Multi-Purpose	0.031 R	0.051	0.49	0.558	0.32	0.190					•	•	•	•			•	•		
ZOMT130408R	Positive-Splitters	0.031 R	0.051	0.490	0.561	0.320	0.190								•			•			

HIPOST™ 22_3R HARDWARE

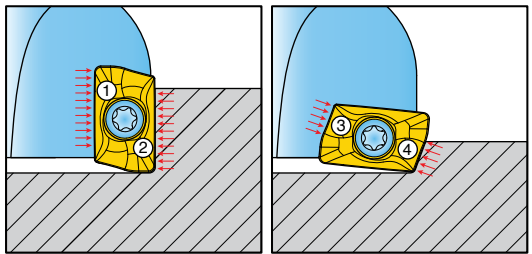
	Insert Screw	Driver Handle	Driver Bit	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
22L3R-17020D3R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22M3R-17020D3R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22N3R-17020D3R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22P3R-17020D4R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22Q3R-17020D4R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22L3R045050F1R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22M3R045050F2R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22N3R045050F2R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22P3R045050F2R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1
22Q3R045050F2R00	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1

Hi-Pos+™ SERIES: 12L1P

70° ROUGHING END MILL (9MM INSERT)



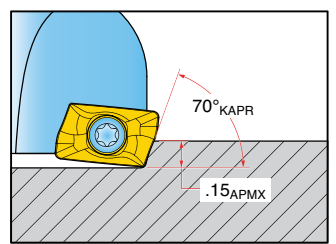
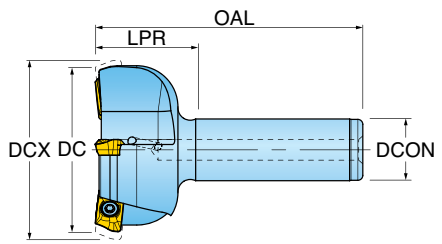
Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12L1P-20012S7R01	2.000	2.130	70	0.12	1.25	3.25	3	0.750



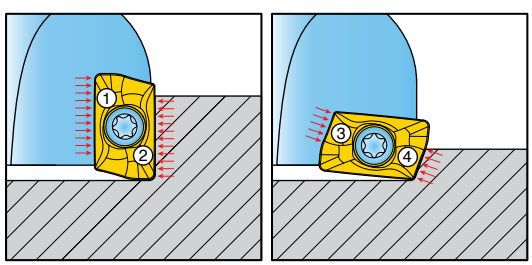
When using the Hi-Pos+ milling family, it is possible to make use of all four cutting edges. The first 2 edges can be used in any Hi-Pos+ 90° or lead angle endmill or facemill, then use edges 3 and 4 in 12L endmills or 2L facemills.

Hi-Pos+™ SERIES: 12L1R

70° ROUGHING END MILL (13MM INSERT)



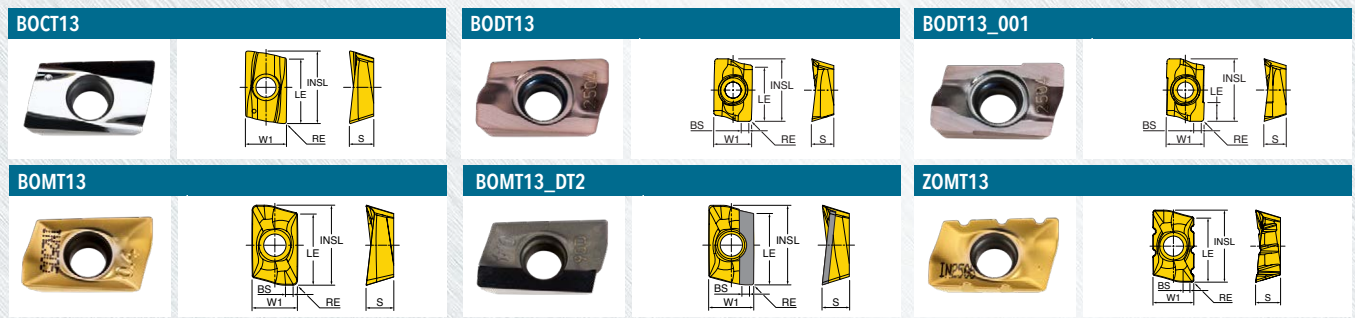
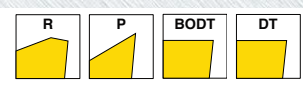
Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12L1R-20012S7R01	2.000	2.170	70	0.15	1.25	3.25	3	0.750



When using the Hi-Pos+ milling family, it is possible to make use of all four cutting edges. The first 2 edges can be used in any Hi-Pos+ 90° or lead angle endmill or facemill, then use edges 3 and 4 in 12L endmills or 2L facemills.



HIPOST⁺ 12L1R INSERTS



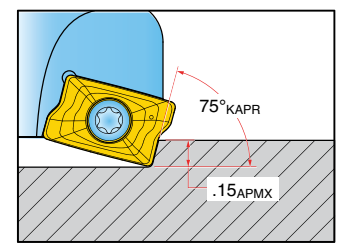
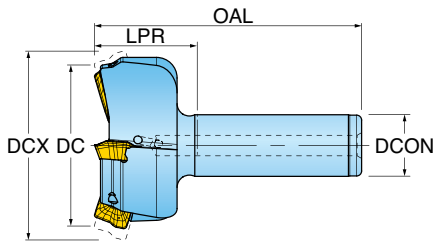
Part Number	Application	RE Corner Radius	BS Wiper Length	LE Cutting Edge Length	INSL Length	W1 Width	S Thickness	Grade													
								IN0560	IN10K	IN2005	IN2010	IN2036	IN2504	IN2505	IN2530	IN2540	IN4030	IN6537	IN90D		
BOCT130404FR-P	Grd/Pol for Al	0.015 R	-	0.490	0.557	0.320	0.189		•												
NEW BODT130404R	Neutral Geometry; Precision	0.015 R	0.093	0.490	0.557	0.320	0.190	•		•				•							
NEW BODT130404R-001	Neutral Geometry; Precision	0.015 R	0.095	0.157	0.557	0.320	0.190	•		•				•							
BOMT130404R	Multi-Purpose	0.015 R	0.067	0.490	0.558	0.320	0.190					•	•	•	•	•	•	•	•	•	
BOMT130404R-DT2	PCD Tipped	0.015 R	0.055	0.490	0.557	0.320	0.190														•
ZOMT130404R	Positive-Splitters	0.015 R	0.067	0.490	0.558	0.320	0.190						•		•	•		•	•		
BOCT130408FR-P	Grd/Pol for Al	0.031 R	-	0.490	0.555	0.319	0.187		•												
BODT130408R	Neutral Geometry; Precision	0.031 R	0.076	0.490	0.558	0.320	0.190	•		•				•							
BODT130408R-001	Neutral Geometry; Precision	0.031 R	0.076	0.170	0.558	0.319	0.190	•		•				•							
BOMT130408R	Multi-Purpose	0.031 R	0.051	0.49	0.558	0.32	0.190					•	•	•	•	•		•	•		
ZOMT130408R	Positive-Splitters	0.031 R	0.051	0.490	0.561	0.320	0.190							•					•		
BOMT130416R	Multi-Purpose	0.062 R	0.019	0.490	0.561	0.320	0.190								•	•					
BOMT130420R	Multi-Purpose	0.078 R	-	0.490	0.561	0.320	0.190								•	•			•		
BOMT130424R	Multi-Purpose	0.093 R	-	0.490	0.560	0.320	0.190								•	•					
BOMT130431R	Multi-Purpose	0.125 R	-	0.480	0.546	0.320	0.180						•		•	•					•
BOMT130440R	Multi-Purpose	0.156 R	-	0.480	0.538	0.320	0.183								•	•					

HIPOST⁺ 12L1R HARDWARE

	Insert Screw	Driver Handle	Driver Bit	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
12L1R-20012S7R01	SM35-088-10	DS-A00T	DS-T106B	DS-A00-.25-T	DT-30-.25	DS-T10B1

HIPOST⁺ SERIES: 12L1G

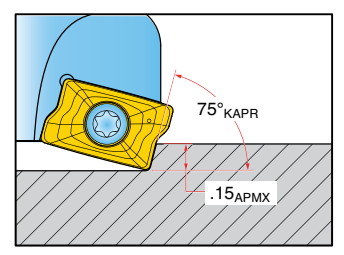
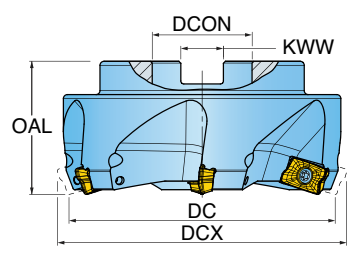
75° ROUGHING END MILL (17MM INSERT)



Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	APMX Depth of Cut Max.	LPR Projection Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Diameter
12L1G-20012S7R01	2.000	2.300	75	0.15	1.25	3.25	3	0.750

HIPOST⁺ SERIES: 2L1G







75° ROUGHING FACE MILL (17MM INSERT)



Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	KAPR Cutting Edge Angle	APMX Depth of Cut Max.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway
2L1G-40R01	4.000	4.35	75.0	0.15	2.000	6	1.500	0.625



HIPOST™ 12L1G, 2L1G HARDWARE

							
	Insert Screw	Driver Handle	Driver Bit	<small>**OPTIONAL**</small>	<small>**OPTIONAL**</small>	<small>**OPTIONAL**</small>	
12L1G-20012S7R01	SM40-120-20	DS-A00T	DS-T156B	DS-A00.25-T	DT-35-.25	DS-T15B1	
2L1G-40R01	SM40-120-20	DS-A00T	DS-T156B	DS-A00.25-T	DT-35-.25	DS-T15B1	

HI·POST[™] CHIP SPLITTER INFORMATION

- Draws less horsepower
- Reduces cutting force and vibration/chatter
- Improves chip evacuation (Chips split into small pieces)
- Reduces heat generation
- Suitable for long overhang machining (Weak machining and fixture applications)
- Mountable on all standard cutter lines without any modification



Side A

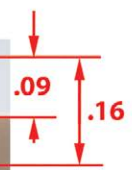
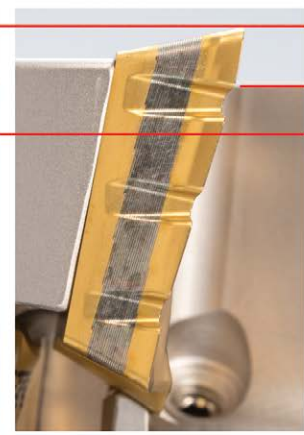


Side B

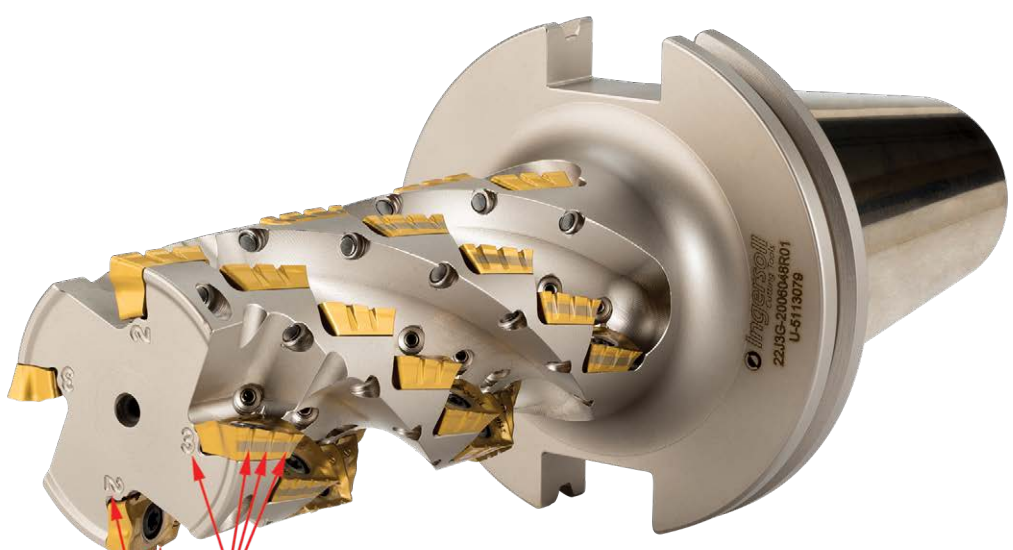
With 2 Grooves



With 3 Grooves



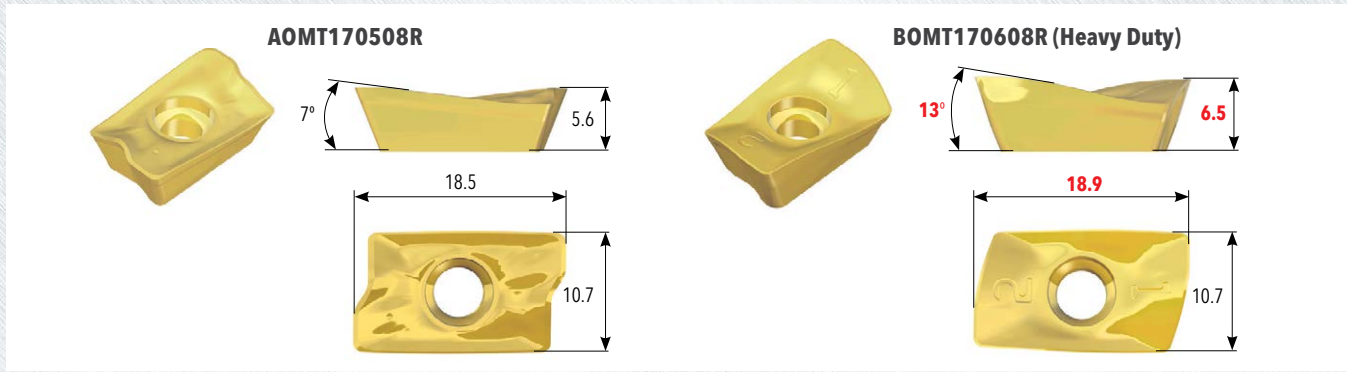
For best performance and surface finish results, alternate grooves from one flute to the next.



The number "3" designates the number of chip splitters presented on the OD of the entire flute

The number "2" designates the number of chip splitters presented on the OD of the entire flute

HiPos+™ BOMT17 DIAMETER DEVIATION

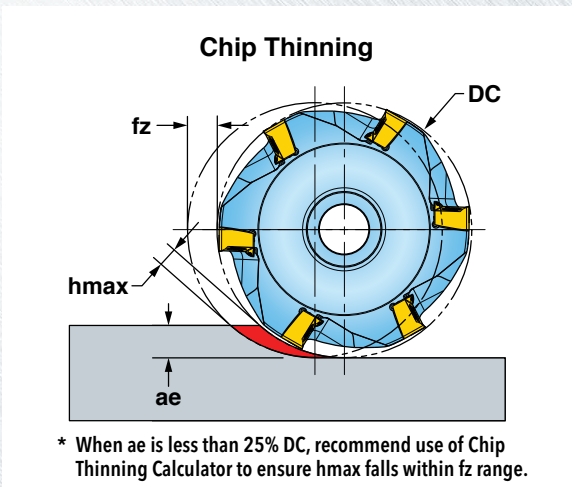


- Higher positive helix angle (AOMT17: 7°/ BOMT17: 13°) for smoother machining
- Thicker and stronger insert design (AOMT17: 5.6 mm / BOMT17: 6.5 mm)
- Compatible with the existing HiPos+ milling cutters for AOMT17

Please note possible cutter diameter deviations when using BOMT insert as follows:

Tool Diameter	Deviation of Diameter Compared to AOMT1705
.750" - 1.00"	+ .004" ~ +.011"
1.25" - 2.50"	0
3.00" - 8.00"	- .004" ~ -.007"

HIPOST™ OPERATING GUIDELINES: SERIES 12J1P, 12L1P, 2J1P & 2J5P

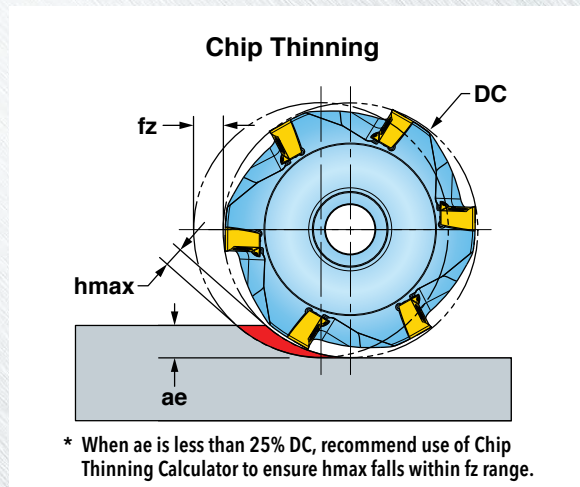


ISO	Mat'l Group #VDI 3323	Materials		V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
		Type	Examples			PCD	Cermet		Carbide							
							IN90D	IN0560	IN2504	IN10K	IN2010	IN2540	IN2505	IN2005	IN4030	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-1000	.003-.006						4	2	1	3	NO	
				600-1600			1									
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-700							4	2	1	3		
				500-1000			1									
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600						4	2	1	3			
				400-800		1										
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	350-600	.003-.005										YES	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	300-550								3	2	1	May not be required at high speeds	
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-1000	.003-.006										NO	
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	400-800			2		1		4			3		
N	21 thru 30	Aluminum	7075, 6061	1000-3000	.003-.007	1			1						YES	
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-150	.003-.005							2	3	1	YES	
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	85-200								3	2	1		
H	38 thru 39	Hardened Steel >48	A2, 01, D2	130-250	.003-.004							1		2	NO	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.



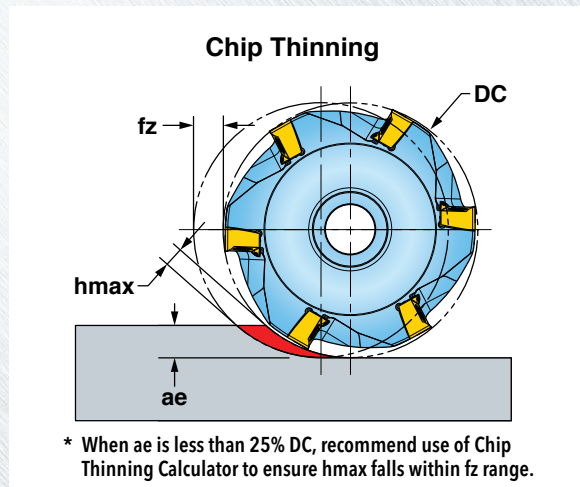
HIPOST™ OPERATING GUIDELINES: SERIES 22J3P



ISO	Materials			V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
	Mat'l Group #VDI 3323	Type	Examples			PCD	Cermets		Carbide							
							IN0560	IN2504	IN10K	IN2010	IN2540	IN2505	IN2005	IN4030	IN2530	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	300-600	.003-.005					4	2	1	3	NO		
				450-900		1										
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	250-500						4	2	1	3			
				350-700		1										
10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-450					4	2	1	3					
			350-650	1												
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	300-500	.003-.004									YES May not be required at high speeds		
	14			Stainless Steel (Austenitic)		303, 304, 316, 15-5, 17-4	250-450					3	2		1	
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	300-600	.003-.005			2	1	4			3	NO		
	17 thru 20			Nodular Cast Iron		60-40-18, 100-70-03	300-500									
N	21 thru 30	Aluminum	7075, 6061	800-1500	.003-.006	1			1					YES		
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	50-120	.003-.004					2		3	1	YES		
	36 thru 37			Titanium Alloys		6AL-4V, 5Al-5Mo-5V-3Cr	60-130					3	2		1	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

HiPOST™ OPERATING GUIDELINES: SERIES 12J1R, 12L1R & 2J1R

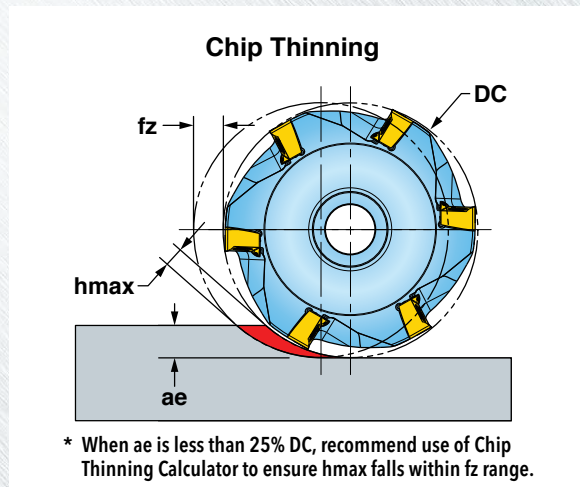


ISO	Materials			V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
	Mat'l Group #VDI 3323	Type	Examples			PCD	Cermets		Carbide							
							IN90D	IN0560	IN2504	IN10K	IN2010	IN2540	IN2505	IN2005	IN4030	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-1000	.003-.007						4	2	1	3	NO	
				600-1600		1										
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-700							4	2	1	3		
				500-1000		1										
M	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600	.003-.006						4	2	1	3	YES May not be required at high speeds	
				400-800		1										
K	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	350-600	.003-.007										NO	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	300-550							3	2	1			
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-1000	.003-.007			2		1					NO	
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	400-800							3			4		
N	21 thru 30	Aluminum	7075, 6061	1000-3000	.003-.008	1			1						YES	
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-150	.003-.005							2	3	1	YES	
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	85-200								3	2	1		
H	38 thru 39	Hardened Steel >48	A2, 01, D2	130-250	.003-.004			1				2			NO	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.



HIPOST™ OPERATING GUIDELINES: SERIES 22J3R

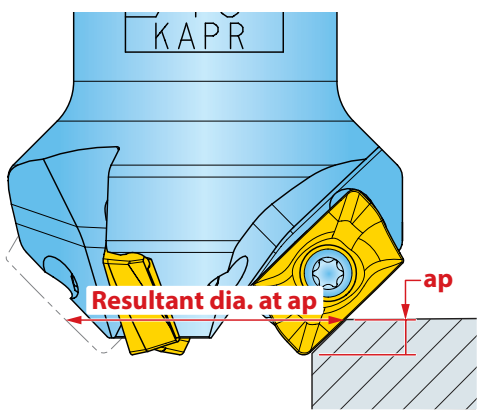


ISO	Materials			V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
	Mat'l Group #VDI 3323	Type	Examples			PCD	Cermets		Carbide							
							IN0560	IN2504	IN10K	IN2010	IN2540	IN2505	IN2005	IN4030	IN2530	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	300-600	.003-.006						4	2	1	3	NO	
				450-900		1										
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	250-500							4	2	1	3		
				350-700		1										
M	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-450	.003-.005						4	2	1	3	YES	
				350-650		1										
K	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	300-500	.003-.006										May not be required at high speeds	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	250-450							3	2	1			
N	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	300-600	.003-.007			2	1		3			4	NO	
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	300-500												
S	21 thru 30	Aluminum	7075, 6061	800-1500	.003-.005	1			1						YES	
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	50-120	.003-.005							2	3	1	YES	
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	60-130							3	2	1			

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

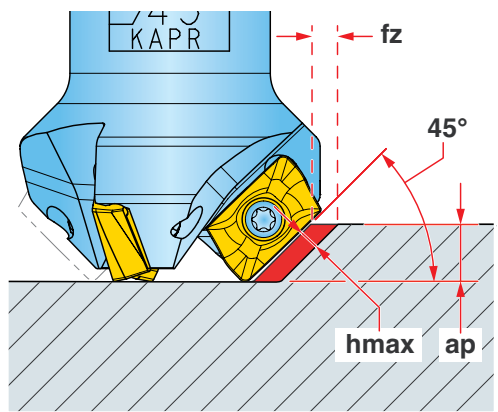
HIPOST™ OPERATING GUIDELINES - SERIES 12_1R, 12_1G

RPM Calculation



Calculation is to be made using the resultant diameter at ap.

Chip Thinning



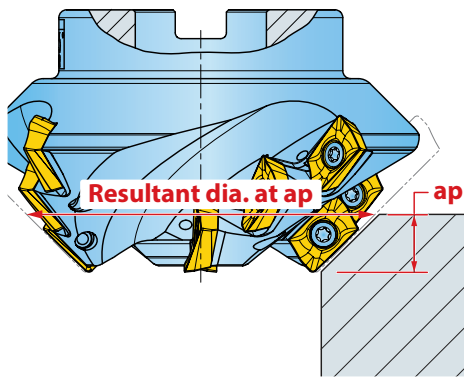
Chip Thinning Calculator is recommended to ensure hmax falls within fz range.

ISO	Materials			V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
	Mat'l Group #VDI 3323	Type	Examples			PCD	Cermet	Carbide						IN6537		
								IN90D	IN0560	IN2504	IN10K	IN2010	IN2540		IN2505	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-1000	.003-.007						4	2	1	3	NO	
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-700		1					4	2	1	3		
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600			1					4	2	1		3
				400-800		1										
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	350-600	.003-.006										YES	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	300-550								3	2	1	May not be required at high speeds	
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-1000	.003-.007										NO	
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	400-800			2	1			3			4		
N	21 thru 30	Aluminum	7075, 6061	1000-3000	.003-.008	1			1						YES	
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-150	.003-.005								2	3	1	YES
	36 thru 37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr	85-200								3	2	1		
H	38 thru 39	Hardened Steel >48	A2, 01, D2	130-250	.003-.004						1			2	NO	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

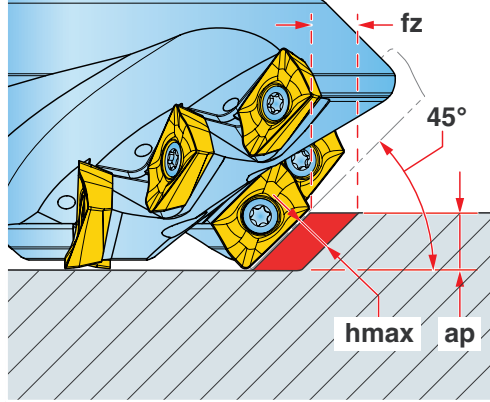
HIPOST™ OPERATING GUIDELINES - SERIES 22_3R

RPM Calculation



Calculation is to be made using the resultant diameter at ap.

Chip Thinning



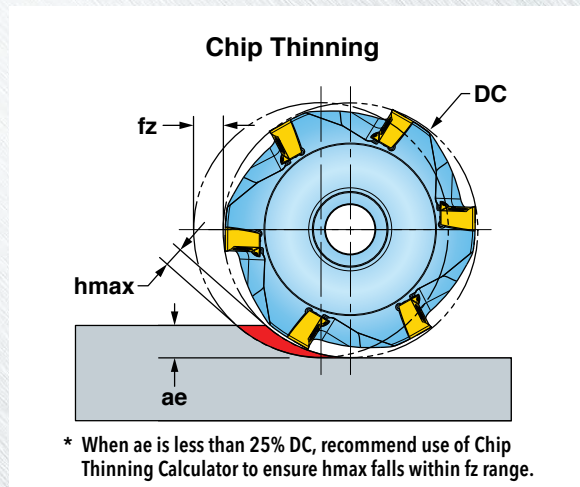
Chip Thinning Calculator is recommended to ensure hmax falls within fz range.

Materials				V _c Cutting Speed SFM	f _z Feed/Tooth (inch)	Harder <-----> Tougher										Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples			PCD	Cermet	Carbide								
								IN90D	IN0560	IN2504	IN10K	IN2010	IN2540		IN2505	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	300-600	.003-.006						4	2	1	3	NO	
				450-900		1										
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	250-500							4	2	1	3		
				350-700		1										
10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-450						4	2	1	3				
			350-650	1												
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	300-500	.003-.005										YES May not be required at high speeds	
	14			Stainless Steel (Austenitic)		303, 304, 316, 15-5, 17-4	250-450						3	2		1
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	300-600	.003-.006										NO	
	17 thru 20			Nodular Cast Iron		60-40-18, 100-70-03	300-500			2	1		3			
N	21 thru 30	Aluminum	7075, 6061	800-1500	.003-.007	1			1						YES	
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	50-120	.003-.005								2	3	1	YES
	36 thru 37			Titanium Alloys		6AL-4V, 5Al-5Mo-5V-3Cr	60-130							3	2	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.



HIPOST™ OPERATING GUIDELINES: SERIES 12J1G, 12L1G, 12N1G, 2J1G & 2L1G

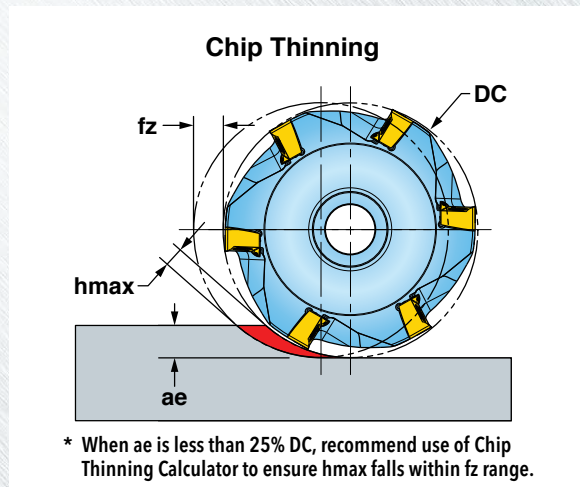


ISO	Materials			V _c Cutting Speed SFM	f _z Feed/ Tooth (inch)	Harder <-----> Tougher											Coolant							
	Mat'l Group #VDI 3323	Type	Examples			PCD		Carbide																
						IN93D	IN3310	IN2504	IN6515	IN2540	IN10K	IN2510	IN2505	IN2005	IN4030	IN2530		IN1030	IN7036	IN2036	IN6537			
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-1000																				
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-700	.003-.008			5		4			2	1						3			NO	
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600																				
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	350-600	.003-.007																		YES	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	300-550						4			3	2	1									May not be required at high speeds
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-1000	.003-.008																			
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	400-800				3	2			1	4									5		NO
N	21 thru 30	Aluminum	7075, 6061	1000-3000	.003-.009	1					1												YES	
				1500-4500		1																		
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-150	.003-.006									2	3	1							YES	
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	85-200										3	2	1								
H	38 thru 39	Hardened Steel >48	A2, O1, D2	130-250	.003-.004			1						2									NO	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.



HiPOST™ OPERATING GUIDELINES: SERIES 22J3G & 22J5G



ISO	Materials			V _c Cutting Speed SFM	f _z Feed/ Tooth (inch)	Harder <-----> Tougher											Coolant			
	Mat'l Group #VDI 3323	Type	Examples			PCD	DLC	Carbide												
								IN93D	IN3310	IN2504	IN6515	IN2540	IN10K	IN2510	IN2505	IN2005		IN4030	IN2530	IN1030
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	300-600	.003-.006															NO
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	250-500				5		4				2	1				3	
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-450																
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	300-500	.003-.005														YES	
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	250-450						4			3	2	1				May not be required at high speeds	
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	300-600	.003-.006														NO	
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03	300-500				3	2			1	4					5		
N	21 thru 30	Aluminum	7075, 6061	800-1500	.003-.007	1					1							YES		
				1300-3000			1													
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	50-120	.003-.005									2	3	1		YES		
	36 thru 37	Titanium Alloys	6AL-4V, 5AI-5Mo-5V-3Cr	60-130										3	2	1				

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

HIPOST[™] 09 CUTTER BODY MODIFICATION FOR LARGE RADIUS INSERTS

**BEFORE
(stock)**

R .02"
stock corner

**AFTER
(modified)**

Modified
body radius

Insert Size	Modify Cutter Body If Insert Radius Exceeds	Insert Radius	Modified Body Radius
9mm	.062"	0.078	0.050
		0.120	0.100

When using an insert radius larger than indicated per Insert IC, be sure the cutter body does not protrude beyond the trailing edge of the insert. If it does, the housing corner can be modified on a lathe or grinder by enlarging the corner radius.

HIPOST[™] 13 CUTTER BODY MODIFICATION FOR LARGE RADIUS INSERTS

**BEFORE
(stock)**

R .02"
stock corner

**AFTER
(modified)**

Modified
body radius

Insert Size	Modify Cutter Body If Insert Radius Exceeds	Insert Radius	Modified Body Radius
13mm	.078"	0.093	0.080
		0.125	0.100
		0.156	0.150

When using an insert radius larger than indicated per Insert IC, be sure the cutter body does not protrude beyond the trailing edge of the insert. If it does, the housing corner can be modified on a lathe or grinder by enlarging the corner radius.

HIPOST[™] 17 CUTTER BODY MODIFICATION FOR LARGE RADIUS INSERTS

**BEFORE
(stock)**

R .02"
stock corner

**AFTER
(modified)**

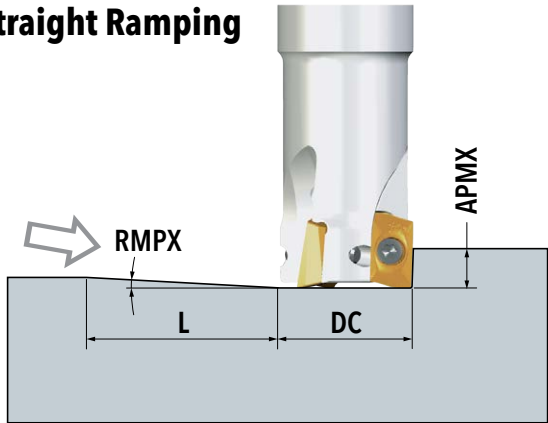
Modified
body radius

Insert Size	Modify Cutter Body If Insert Radius Exceeds	Insert Radius	Modified Body Radius
17mm	.093"	0.125	0.110
		0.156	0.110
		0.187	0.110
		0.250	0.200

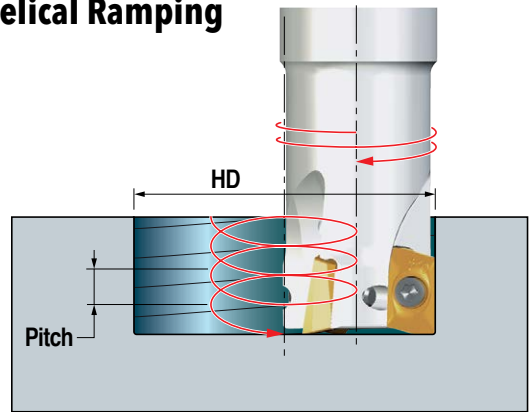
When using an insert radius larger than indicated per Insert IC, be sure the cutter body does not protrude beyond the trailing edge of the insert. If it does, the housing corner can be modified on a lathe or grinder by enlarging the corner radius.

HIPOST™ 09 RAMPING DATA: SERIES 12J1P, 2J1P & 22J3P

Straight Ramping



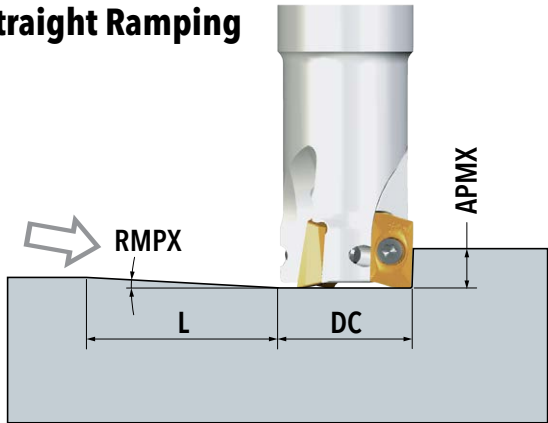
Helical Ramping



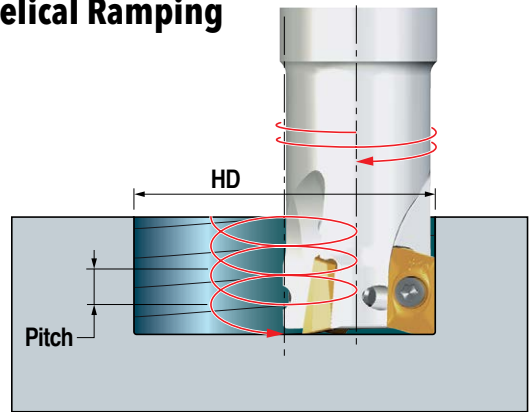
DC Cutter Diameter	Straight Ramp			Helical Ramp		
	RMPX Ramp Angle Max.	APMX Depth of Cut Max.	L Ramp Length Max.	HD Hole Dia. Min.	HD Hole Dia. Max.	Pitch Max.
0.500	10.0	0.35	1.9	0.62		0.080
					0.96	0.230
0.625	10.0	0.35	1.9	0.78		0.080
					1.21	0.330
0.750	7.0	0.35	2.8	1.02		0.110
					1.46	0.280
0.875	5.5	0.35	3.6	1.27		0.110
					1.71	0.240
1.000	4.4	0.35	4.5	1.52		0.110
					1.96	0.220
1.250	2.8	0.35	7.1	2.02		0.110
					2.46	0.180
1.500	2.4	0.35	8.3	2.52		0.140
					2.96	0.200
2.000	1.3	0.35	15.4	3.52		0.100
					3.96	0.130
2.500	1.0	0.35	20.0	4.52		0.100
					4.96	0.120
3.000	0.7	0.35	28.6	5.52		0.100
					5.96	0.100

HIPOST™ 13 RAMPING DATA: SERIES 12J1R, 2J1R & 22J3R

Straight Ramping

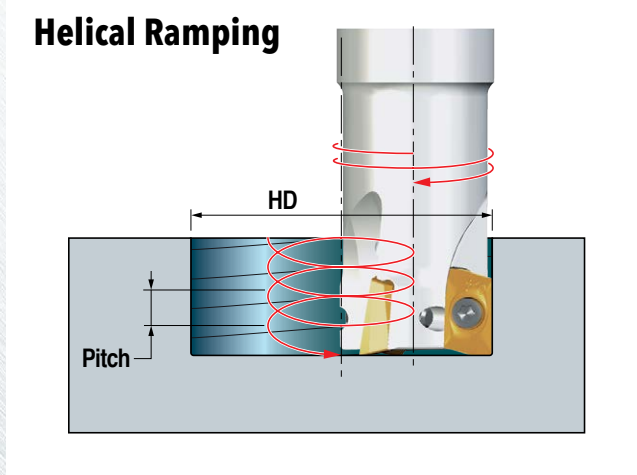
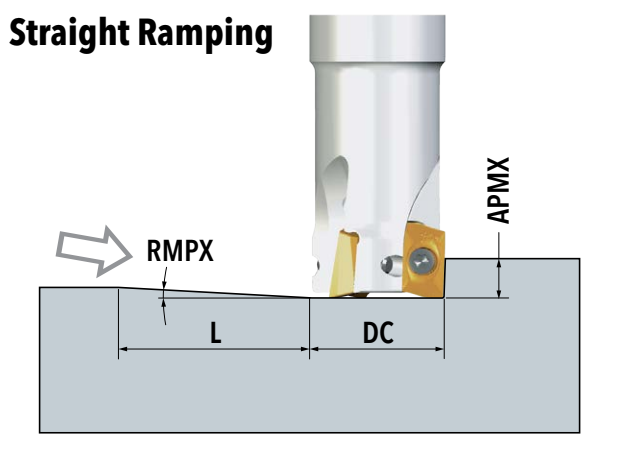


Helical Ramping



DC Cutter Diameter	Straight Ramp			Helical Ramp		
	RMPX Ramp Angle Max.	APMX Depth of Cut Max.	L Ramp Length Max.	HD Hole Dia. Min.	HD Hole Dia. Max.	Pitch Max.
0.750	7.0	0.47	3.8	1.01		0.090
					1.46	0.280
1.000	7.9	0.47	3.3	1.41		0.200
					1.96	0.400
1.250	5.0	0.47	5.3	1.91		0.180
					2.46	0.330
1.500	3.2	0.47	8.4	2.41		0.160
					2.96	0.260
2.000	2.1	0.47	12.8	3.41		0.160
					3.96	0.220
2.500	1.4	0.47	19.2	4.41		0.140
					4.96	0.180
3.000	1.0	0.47	26.9	5.41		0.130
					5.96	0.160
4.000	0.8	0.47	33.7	7.41		0.140
					7.96	0.160
5.000	0.6	0.47	44.9	9.41		0.140
					9.96	0.150

HIPOST™ 17 RAMPING DATA: SERIES 12J1G, 2J1G & 22J3G



DC Cutter Diameter	Straight Ramp			Helical Ramp		
	RMPX Ramp Angle Max.	APMX Depth of Cut Max.	L Ramp Length Max.	HD Hole Dia. Min.	HD Hole Dia. Max.	Pitch Max.
0.750	8.0	0.63	4.5	0.85		0.020
					1.50	0.280
1.000	5.0	0.63	7.2	1.24		0.050
					2.00	0.200
1.250	9.0	0.63	4.0	1.74		0.200
					2.50	0.500
1.500	5.0	0.63	7.2	2.24		0.180
					3.00	0.350
2.000	4.0	0.63	8.2	3.24		0.240
					4.00	0.400
2.500	3.0	0.63	11.2	4.24		0.250
					5.00	0.300
3.000	2.0	0.63	15.7	5.24		0.260
					6.00	0.300
4.000	1.8	0.63	20.0	7.24		0.260
					8.00	0.300
5.000	1.4	0.63	26.0	9.24		0.270
					10.00	0.300
6.000	1.0	0.63	36.0	11.24		0.250
					12.00	0.280
8.000	0.5	0.63	52.0	15.24		0.230
					16.00	0.250