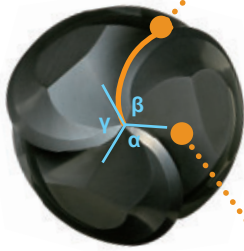


Exchangeable Head End Mills

iMX End Mill Series

# iMX-B3FV

High Helical tooth improves fracture resistance.



Stable wall machining is possible with a strong back taper angle.



Reduced vibration by optimized irregular curve

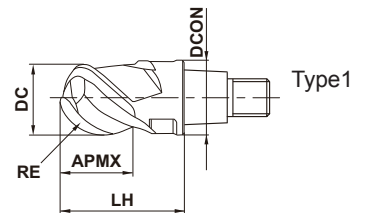
$\alpha \neq \beta \neq \gamma$

EP 8120 is ideal for processing hot forging dies.

Ball nose head, For high efficiency machining, 3 flute, Irregular curve



Carbon Steel, Alloy Steel, Cast Iron (<30HRC)	Tool Steel, Pre-Hardened Steel, Hardened Steel (≤45HRC)	Hardened Steel (≤55HRC)	Hardened Steel (>55HRC)	Austenitic Stainless Steel	Titanium Alloy, Heat Resistant Alloy	Copper Alloy	Aluminum Alloy
	◎	◎					



R	DC ≤ 12	DC > 12			
	±0.010	±0.020			

● High efficiency machining is possible in deep engraving processing(DCx5)

(mm)

Order Number	RE	DC	APMX	LH	DCON	* No.F	Grade	Type
							EP8120	
IMX10B3FV10008	5	10	8	16	9.7	3	●	1
IMX12B3FV12009	6	12	9.6	19	11.7	3	●	1
IMX16B3FV16012	8	16	12.8	24	15.5	3	●	1
IMX20B3FV20016	10	20	16	30	19.5	3	●	1

\* Number of Flutes

● : Inventory maintained in Japan.

# IMX-B3FV NEW

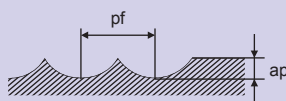
Ball nose head, For high efficiency machining, 3 flute, Irregular curve

## Recommended Cutting Conditions

### Shoulder milling

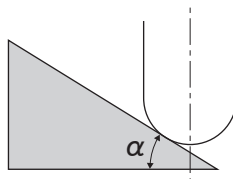
(mm)

Work material		Pre-hardened steel, Alloy tool steel										Hardened steel (40-55HRC)									
		$\alpha \leq 15^\circ$				$\alpha > 15^\circ$				ap	pf	$\alpha \leq 15^\circ$				$\alpha > 15^\circ$				ap	pf
DC	RE	vc (m/min)	n (min <sup>-1</sup> )	fz (mm/t.)	vf (mm/min)	vc (m/min)	n (min <sup>-1</sup> )	fz (mm/t.)	vf (mm/min)			vc (m/min)	n (min <sup>-1</sup> )	fz (mm/t.)	vf (mm/min)	vc (m/min)	n (min <sup>-1</sup> )	fz (mm/t.)	vf (mm/min)		
<b>10</b>	<b>5</b>	175	5600	0.22	3700	115	3700	0.15	1700	0.7	2.6	150	4800	0.18	2600	100	3200	0.12	1200	0.5	2
<b>12</b>	<b>6</b>	175	4600	0.22	3000	115	3100	0.15	1400	1	3.2	150	4000	0.18	2200	100	2700	0.12	970	0.7	2.5
<b>16</b>	<b>8</b>	175	3500	0.22	2300	115	2300	0.15	1000	1.1	3.8	150	3000	0.18	1600	100	2000	0.12	720	0.9	3.5
<b>20</b>	<b>10</b>	175	2800	0.22	1800	115	1800	0.15	810	1.2	4.8	150	2400	0.18	1300	100	1600	0.12	580	1.1	4.2



DC: Dia.

- 1) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 2) The irregular helix flute end mill has a large effect on controlling vibration when compared to standard end mills. However, if the rigidity of the machine or the workpiece installation is poor, vibration or abnormal sound can occur. In this case, please reduce the revolution and feed rate proportionately, or set a lower depth of cut.
- 3)  $\alpha$  is the inclination angle of the machined surface.



#### For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

## MITSUBISHI MATERIALS CORPORATION

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(Tools specifications subject to change without notice.)