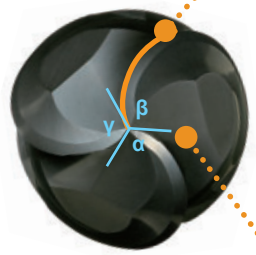
Exchangeable Head End Mills

iMX End Mill Series

iMX-B3FV

High Helical tooth improves fracture resistance.



Reduced vibration by optimized irregular curve

α ≠ β ≠ γ

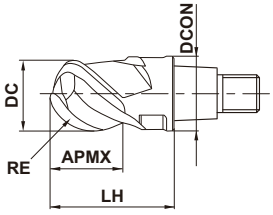
Stable wall machining is possible with a strong back taper angle.

EP 8120 is ideal for processing hot forging dies.

UWC 45°

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
	◎	◎					



Type1

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 EP8120	Type
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.**

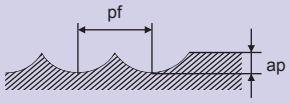
iMX-B3FV NEW

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

Recommended Cutting Conditions

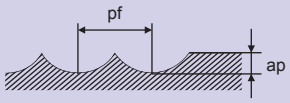
Shoulder milling (L/D=5)

(inch)

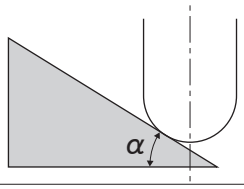
Work material			Pre-hardened steel,Alloy tool steel										Hardened steel (40-55HRC)									
Inclination angle			α≤15°				α>15°				ap	pf	α≤15°				α>15°				ap	pf
DC (mm)	DC (inch)	RE (mm)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)			vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)		
10	**.3937**	**5**	575	5600	.0087	145.7	375	3700	.0059	66.9	.028	.102	490	4800	.0071	102.4	330	3200	.0047	47.2	.020	.079
12	**.4724**	**6**	575	4600	.0087	118.1	375	3100	.0059	55.1	.039	.126	490	4000	.0071	86.6	330	2700	.0047	38.2	.028	.098
16	**.6299**	**8**	575	3500	.0087	90.6	375	2300	.0059	39.4	.043	.150	490	3000	.0071	63.0	330	2000	.0047	28.3	.035	.138
20	**.7874**	**10**	575	2800	.0087	70.9	375	1800	.0059	31.9	.047	.189	490	2400	.0071	51.2	330	1600	.0047	22.8	.043	.165
Depth of cut			 DC:Dia.																			

Shoulder milling (L/D=7)

(inch)

Work material			Pre-hardened steel,Alloy tool steel										Hardened steel (40-55HRC)									
Inclination angle			α≤15°				α>15°				ap	pf	α≤15°				α>15°				ap	pf
DC (mm)	DC (inch)	RE (mm)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)			vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)	vc (SFM)	n (min-1)	fz (IPT)	vf (IPM)		
10	**.3937**	**5**	395	3800	.0079	90.6	260	2500	.0051	38.6	.020	.051	330	3200	.0051	47.2	210	2100	.0033	21.3	.016	.039
12	**.4724**	**6**	395	3200	.0079	74.8	260	2100	.0051	32.3	.028	.063	330	2700	.0051	43.3	210	1700	.0033	16.9	.024	.051
16	**.6299**	**8**	395	2400	.0079	55.1	260	1600	.0051	24.4	.031	.075	330	2000	.0051	30.7	210	1300	.0033	13.0	.028	.071
20	**.7874**	**10**	395	1900	.0079	43.3	260	1300	.0051	20.1	.035	.094	330	1600	.0051	24.4	210	1000	.0033	10.2	.031	.083
Depth of cut			 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) α 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.

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(Tools specifications subject to change without notice.)

EXP-12-E029
Printed in U.S.A. 7/17