

MILLING INSERTS · HIGH FEED

BLMP (high feed)

Double-sided insert for high-feed cutters: from BLMP 04 to 13, up to 2 mm/tooth, for steels, stainless steels, superalloys and hardened steels up to 65 HRC.



KEY DATA

Product type	Milling Inserts
ISO materials	P steel M stainless K cast iron S superalloys H hardened
Operation	Semi-finishing · Roughing
INNOT grades	IT5110 · IT5210 ★ · IT5220 ★ · IT6130 · IT7140 · IT7240 ★ ★ recommended
Nose radii	R0.5 · R1 · R1.2 · R1.3 · R1.8
Online page	innot-it.com/en/prodotto/blmp-alto-avanzamento

Specifications

Code	INSL	W1	S	RE	APMX	fz (mm/tooth)	Cutting edges
BLMP0402R-M	6	4.2	2.52	0.5	0.5	0.2-1.0	4
BLMP0402R-ML	6	4.2	2.52	0.5	0.5	0.2-0.8	4
BLMP0603R-M	9	6.39	3.73	1	1	0.3-1.2	4
BLMP0603R-ML	9	6.39	3.73	1	1	0.2-1.0	4
BLMP0603R-MM	9	6.39	3.73	1	1	0.3-1.0	4
BLMP0904R-M	11.94	9.2	4.79	1.2	1.5	0.3-1.3	4
BLMP0904R-ML	11.94	9.2	4.79	1.2	1.5	0.3-1.0	4
BLMP0904R-MM	11.94	9.2	4.79	1.2	1.5	0.3-1.1	4
BLMP1105R-M	14.6	11.2	6.54	1.3	2	0.3-1.5	4
BLMP1105R-ML	14.6	11.2	6.54	1.3	2	0.3-1.2	4
BLMP1306R-M	12.3	12.3	7	1.8	2	0.4-2.0	6
BLMP1306R-MM	12.3	12.3	7	1.8	2	0.4-1.6	6
BLMP1306R-MR	12.3	12.3	7	1.8	2	0.5-2.0	6

Misure in mm. INSL = lunghezza dell'inserto (IC per il trilobato 13), W1 = larghezza, S = spessore, RE = raggio, APMX = profondità di passata massima, fz = campo di avanzamento per dente.

Geometries

Geometry	Cutting edge	Application	Sizes
M	Universal, reinforced	Steels, cast irons and hardened steels: the standard choice for roughing moulds and pockets	04 · 06 · 09 · 11 · 13
ML	Positive and sharp	Stainless steels, superalloys and work-hardening materials; low-power machines and long overhangs	04 · 06 · 09 · 11

Geometry	Cutting edge	Application	Sizes
MM	Positive, protected cutting edge	Stainless steels and titanium alloys: smooth cutting with good edge strength	06 · 09 · 13
MR	Heavily reinforced	Heavy roughing, casting and forging skins, interrupted cuts	13

Technical data

Operation	Milling – High feed: face milling, pockets, contouring, ramping and helical interpolation
Shape	Double-sided with convex cutting edges: 4 cutting edges per insert (6 on the trigon 13)
ISO material	P (steels), M (stainless steels), K (cast irons), S (superalloys and titanium), H (hardened steels)
Features	Il tagliente convesso a piccolo angolo di registrazione assottiglia il truciolo: si lavora con avanzamenti per dente molto alti (fino a 2 mm/dente) e passate leggere, con le forze dirette lungo l'asse del mandrino. Vibrazioni ridotte anche con sporgenze lunghe e acciai temprati fino a 65 HRC.
Compatible cutters	INNOT modular heads, shank end mills and shell mills for BLMP (see below). Already have a cutter? Send us the code and we will check compatibility.

How many inserts per cutter diameter

Maximum number of inserts (effective cutting edges) per cutter diameter: more inserts = more feed per minute; fewer inserts = more chip space and less power required.

Cutter Ø	BLMP 04	BLMP 06	BLMP 09	BLMP 11	BLMP 13
Ø10	2	-	-	-	-
Ø11	2	-	-	-	-
Ø12	3	-	-	-	-
Ø13	3	-	-	-	-
Ø16	4	2	-	-	-
Ø17	4	-	-	-	-
Ø18	-	2	-	-	-
Ø20	5	3	-	-	-
Ø21	-	3	-	-	-
Ø22	-	3	-	-	-
Ø25	7	4	3	-	-
Ø26	-	4	3	-	-
Ø30	-	5	3	2	-
Ø32	8	5	4	2	2
Ø33	-	5	4	2	2
Ø35	-	5	4	3	2
Ø40	-	6	5	3	3
Ø42	-	6	5	3	3

Modular heads for BLMP

Heads with M6-M16 threaded connection to mount on carbide or steel extensions: change heads in seconds and keep the same extension.

BLMP 04 insert - heads from Ø10 to Ø32 mm

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø10	2	M6	9.7	17	31.5	0.5
Ø11	2	M6	9.7	17	31.5	0.5
Ø12	3	M6	11	17	31.5	0.5
Ø13	3	M6	11	17	31.5	0.5
Ø16	4	M8	13	23	40.5	0.5
Ø17	4	M8	13	23	40.5	0.5
Ø20	5	M10	18	23	43	0.5
Ø25	7	M12	21	27	49	0.5
Ø32	8	M16	29	27	52	0.5

BLMP 06 insert - heads from Ø16 to Ø42 mm

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø16	2	M8	13	25	42.5	0.7
Ø18	2	M8	13	25	42.5	0.7
Ø20	2	M10	18	30	50	1
Ø20	3	M10	18	30	50	1
Ø21	3	M10	18	30	50	1
Ø22	3	M10	18	30	50	1
Ø25	3	M12	21	35	57	1
Ø25	4	M12	21	35	57	1
Ø26	3	M12	21	35	57	1
Ø26	4	M12	21	35	57	1
Ø30	5	M16	29	40	65	1
Ø32	4	M16	29	40	65	1
Ø32	5	M16	29	40	65	1
Ø33	4	M16	29	40	65	1
Ø33	5	M16	29	40	65	1
Ø35	4	M16	29	43	68	1
Ø35	5	M16	29	43	68	1
Ø40	6	M16	29	43	68	1
Ø42	5	M16	29	43	68	1
Ø42	6	M16	29	43	68	1

BLMP 09 insert - heads from Ø25 to Ø42 mm

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø25	2	M12	21	35	57	1.5

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø25	3	M12	21	35	57	1.5
Ø26	3	M12	21	35	57	1.5
Ø30	3	M16	29	43	68	1.5
Ø32	3	M16	29	43	68	1.5
Ø32	4	M16	29	43	68	1.5
Ø33	4	M16	29	43	68	1.5
Ø35	3	M16	29	43	68	1.5
Ø35	4	M16	29	43	68	1.5
Ø40	4	M16	29	43	68	1.5
Ø40	5	M16	29	43	68	1.5
Ø42	3	M16	29	43	68	1.5
Ø42	5	M16	29	43	68	1.5

BLMP 11 insert - heads from Ø30 to Ø42 mm

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø30	2	M16	29	43	68	2
Ø32	2	M16	29	43	68	2
Ø33	2	M16	29	43	68	2
Ø35	3	M16	29	43	68	2
Ø40	3	M16	29	43	68	2
Ø42	3	M16	29	43	68	2

BLMP 13 insert - heads from Ø32 to Ø42 mm

Cutter Ø DCX	Cutting edges Z	Connection	Connection Ø DCONMS	LF	OAL	APMX
Ø32	2	M16	29	50	75	2
Ø33	2	M16	29	50	75	2
Ø35	2	M16	29	50	75	2
Ø40	3	M16	29	50	75	2
Ø42	3	M16	29	50	75	2

Misure in mm secondo ISO 13399. DCX = diametro di taglio, Z = numero di inserti (taglienti effettivi), DCONMS = diametro dell'attacco lato macchina, LF = lunghezza funzionale, OAL = lunghezza totale, APMX = profondità di passata massima. Tutte le testine hanno refrigerazione interna.

Shank end mills and shell mills

Insert	Shank: cutter Ø	Z	Shank Ø	Shell mill: cutter Ø	Z	Bore Ø
BLMP 04	Ø8-21	1-5	Ø8-20	-	-	-
BLMP 06	Ø16-40	2-6	Ø16-32	Ø32-66	4-9	16-27
BLMP 09	Ø25-40	2-5	Ø25-32	Ø32-125	4-14	16-40

Insert	Shank: cutter Ø	Z	Shank Ø	Shell mill: cutter Ø	Z	Bore Ø
BLMP 11	Ø30-40	2-4	Ø32	Ø40-200	4-12	16-60
BLMP 13	Ø32-40	2-3	Ø32	Ø40-250	3-11	16-60

Cylindrical or Weldon shank end mills in short, long and extra-long versions; shell mills with normal, close and extra-close pitch. Full dimensions on request.

Available INNOT grades

Grade	ISO	Coating	Composition	Application
IT5220 ★	P · M · K	PVD	AlTiN + TiSiN	Universal grade for steels, stainless steels and cast irons up to 40-50 HRC. Double-layer coating: strength, toughness and protection against edge chipping.
IT7240 ★	M · S	PVD	AlCrN	Milling of difficult materials: stainless steels, superalloys and titanium. High hot hardness, high toughness and resistance to fatigue fracture.
IT5210 ★	P · H	PVD	AlTiN + TiSiN	Milling of hardened steels 50-65 HRC. Coating with high thermal stability and oxidation resistance: withstands the most severe cutting temperatures.
IT6130	P · K	CVD	TiN + MT-TiCN + Al ₂ O ₃	Semi-finishing and roughing of steels and cast irons. High-strength composite coating that balances wear and toughness; post-coating treatment increases insert toughness.
IT7140	M · S	PVD	AlCrN	Milling of stainless steels, titanium alloys and superalloys. Substrate with special micro-elements: excellent toughness and high-temperature performance.
IT5110	P · H	PVD	TiAlN + CrAlN + TiSiN	Milling of hardened steels 45-55 HRC. Nano-composite coating on an ultra-fine grain substrate: smooth surface, low friction, high nano-hardness and excellent oxidation resistance.

★ Recommended grade. Other grades are available on request.

Recommended cutting data

High feed - cutting speed and feed per tooth

Material	Hardness	Grade	Vc (m/min)	fz 04	fz 06	fz 09	fz 11	fz 13
PNon-alloy / mild steel	≤ 180 HB	IT5220 IT6130	200 (160-250)	0.6	0.8	1	1.1	1.4
PAlloy / quenched and tempered steel	180-280 HB	IT5220 IT6130	170 (140-210)	0.5	0.7	0.9	1	1.2
PTool and mould steel	280-350 HB	IT5220 IT5110	150 (120-180)	0.4	0.6	0.8	0.9	1
MStainless steel	≤ 270 HB	IT7240 IT7140	140 (110-180)	0.4	0.5	0.7	0.8	1
KGrey and ductile cast iron	180-260 HB	IT6130 IT5220	180 (140-240)	0.6	0.8	1	1.1	1.4
STitanium alloys	≤ 350 HB	IT7240 IT7140	60 (40-80)	0.3	0.4	0.5	0.6	0.8
SNickel / cobalt-based superalloys	≤ 400 HB	IT7240	35 (25-50)	0.25	0.3	0.4	0.5	0.6
HHardened steels	45-55 HRC	IT5210 IT5110	100 (70-130)	0.3	0.4	0.5	0.6	0.7
HHardened steels	55-65 HRC	IT5210	60 (40-80)	0.2	0.3	0.4	0.4	0.5

Guide values for dry milling or with air, up to APMX (hardened steels: ap ≤ 50% of APMX). Vc: recommended (min-max range); fz in mm/tooth per insert size. Reduce fz by 20-30% with overhangs over 4xD, when ramping and in helical interpolation.

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Cutting data are indicative starting values: adjust them to machine, clamping, tool overhang and workpiece material. Data and images may change without notice.