

TURNING INSERTS · PARTING AND GROOVING

QPEB-AK

Full-radius insert for grooves on aluminium alloy wheels, with sharp AK cutting edge and INNOT carbide grades.



KEY DATA

Product type	Turning Inserts
ISO materials	N aluminium
Operation	Special
Chipbreaker	AK
INNOT grades	ITK10 ★ · ITK20 ★ ★ recommended
Nose radii	R4
Online page	innot-it.com/en/prodotto/qpeb-ak

Specifications

Code	Width CW	Corner radius RE	INSL	Available grades
QPEB8040-AK	8.0 mm (±0.025)	4.0	30.0	ITK10 - ITK20

CW = cutting width, RE = corner radius, INSL = insert length (mm).

AK chipbreaker data sheet

Operation	Grooves and profiles on aluminium alloy wheels
ISO material	N (aluminium and non-ferrous metals)
Type	Two cutting edges, full-radius tip
Tolerance	E - width ±0.025 mm
Features	Tagliente affilato e lucido per l'alluminio: basso attrito, niente tagliente di riporto e ottima finitura. Gradi in metallo duro non rivestito a grana fine.
Compatible toolholders	Grooving toolholders on request

Available INNOT grades

Grade	ISO	Coating	Composition	Application
ITK10 ★	N	Uncoated	Fine-grain carbide	First-choice grade for turning aluminium alloys. Uncoated carbide with a fine, uniform grain matrix: high transverse rupture strength and good wear resistance.
ITK20 ★	N	Uncoated	Carbide	Universal grade for turning aluminium alloys. Uncoated carbide with excellent wear resistance, better chipping resistance, great versatility and reliability.

★ Recommended grade for this insert. CVD = chemical vapour deposition coating, PVD = physical vapour deposition coating.

Recommended cutting data

Grooves and profiles on alloy wheels (ISO N) - AK chipbreaker

Starting values for cast and wrought aluminium alloys, with coolant.

Operation	Grade	Vc (m/min)	fn (mm/rev)	ap (mm)
Radial plunge (groove)	ITK10 · ITK20	250 - 600	0.08 - 0.20	-
Side turning and profiling	ITK10 · ITK20	300 - 700	0.15 - 0.35	0.50 - 3.00

Speeds of the ITK10 and ITK20 grades on aluminium alloys, reduced for radial plunging. With high-silicon alloys (above 10%) start from the minimum values.

Consigli d'uso

- Parting off: when approaching the centre reduce the feed by 30% for longer life and a better finish; keep the tool overhang to a minimum.
- External grooving and side turning: with depths over 0.5 mm work in radial passes (up to 0.75 × insert width), retract 0.1 mm, then an axial pass.
- Wide grooves: make side-by-side stepped plunges, then finish the bottom and the flanks.
- Face grooves: start from the largest diameter and move inwards; for finishing machine the bottom and the outer diameter first, then the inner one.
- Internal grooves: work from the inside outwards to help the chip out.

INNOT · CUTTING TOOLS FOR CNC MACHINE SHOPS

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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.