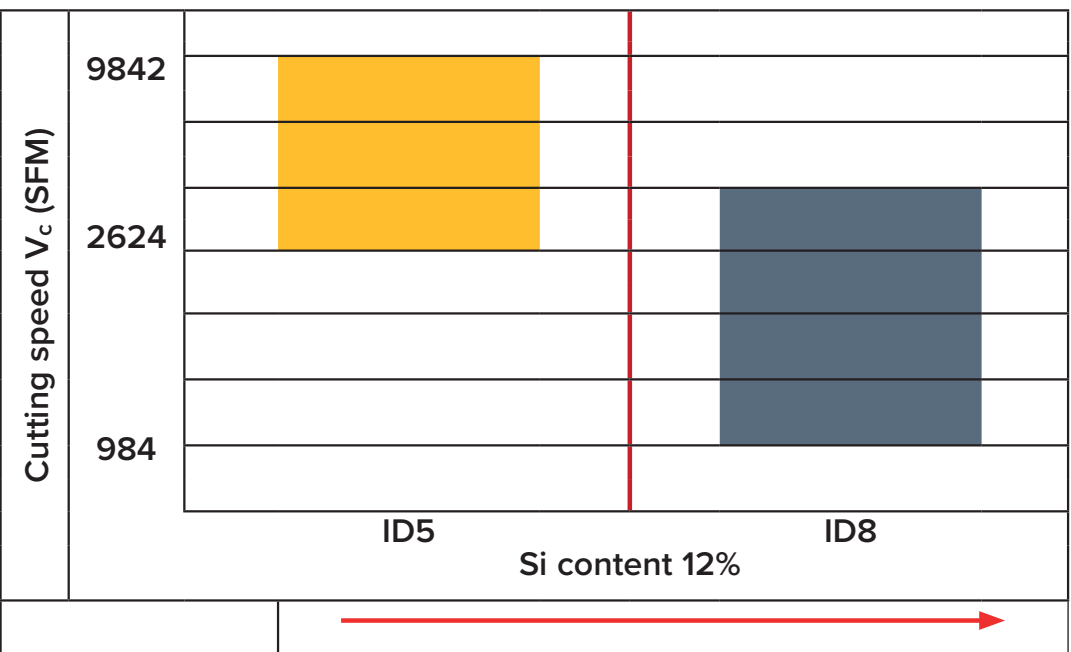
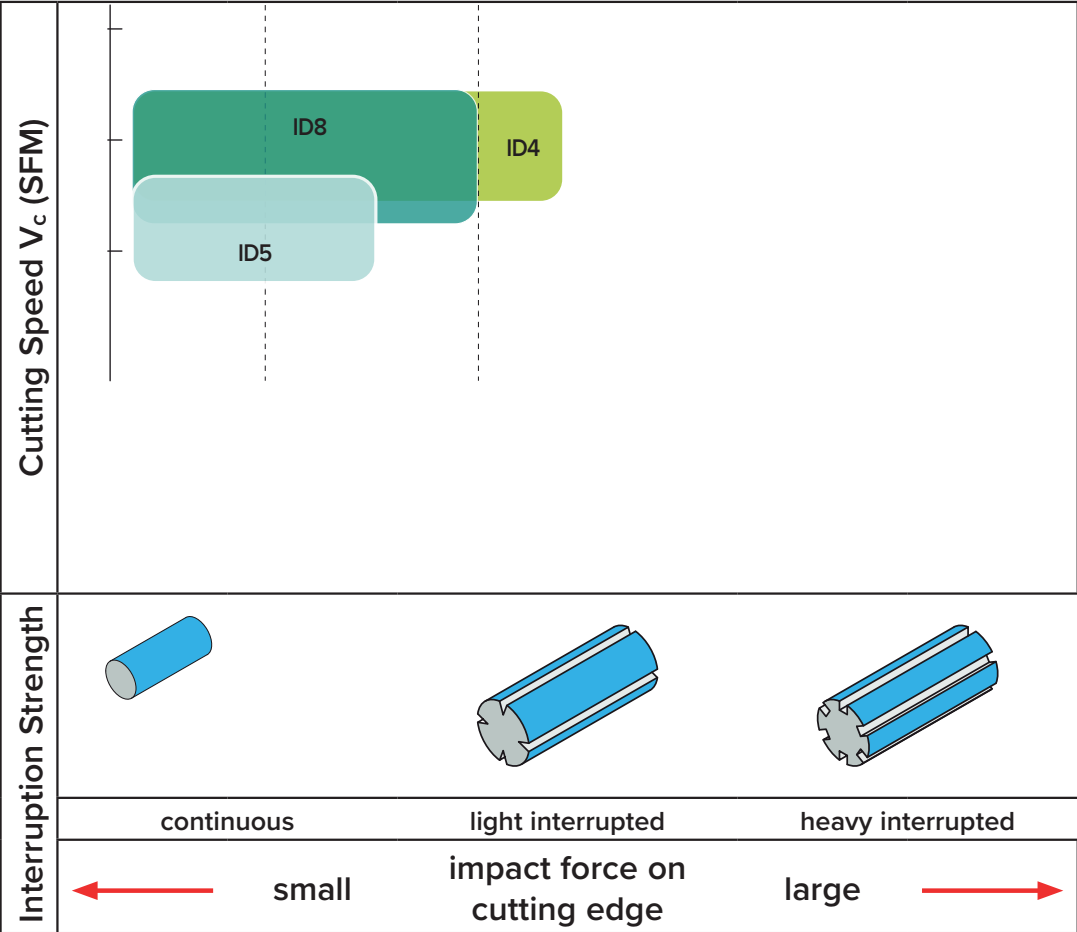




PCD (Sintered Diamond)

Suitable for materials such as aluminum alloy, non-ferrous metals, and fiber-reinforced plastics.
Suitable for extremely high-speed finishing.

Application Range



Standard Cutting Conditions

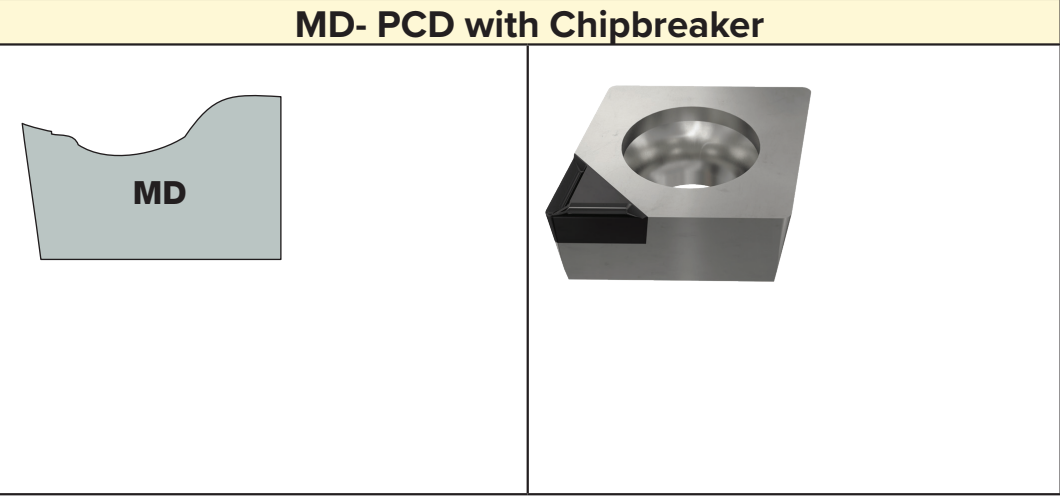
ISO	Material		V _c (SFM)	DOC A _p (inch)	F IPR	ID4	ID5	ID8
N	aluminum alloys: aluminum si<12%	semi-finish	2624-9842	.0118-.1969	.0039-.0236	—	✓	—
		finish	2624-9842	.002-.0394	.0012-.0079	—	✓	✓
		milling	2624-11483	.0039-.0984	.002-.0118	—	✓	—
	aluminum alloys: aluminum si>12%	semi-finish	984-2953	.0039-.0984	.0039-.0158	—	—	✓
		finish	984-2953	.002-.0315	.0012-.0079	—	—	✓
		milling	1312-3281	.0039-.0787	.002-.0118	—	✓	✓
	copper alloys: bronze, brass, tin-foil, copper, zinc alloys, magnesium alloys	semi-finish	1968-3937	.0197-.0787	.0039-.0158		✓	
		finish	2296-4921	.002-.0197	.002-.0158	—	✓	✓
		milling	2296-3937	.0039-.0984	.0039-.0118		✓	—
	carbide up to 15% cobalt	semi-finish	65-82	.0039-.0197	.0039-.0118		✓	—
		finish	65-98	.002-.0079	.002-.0079		✓	—
	ebonite, glass, plastic-materials ceramic, graphite, fiber-glass	semi-finish	262-3281	.0394-.1969	.0039-.0158		✓	✓
		finish	262-4921	.0039-.0787	.002-.0118	—	✓	✓
		milling	656-3281	.0039-.1969	.0039-.0118		✓	✓
	wood	finish	6561-16404		.002-.0394		✓	✓
		milling	6561-16404		.002-.0394	—	✓	✓

✓ First choice
— Second choice

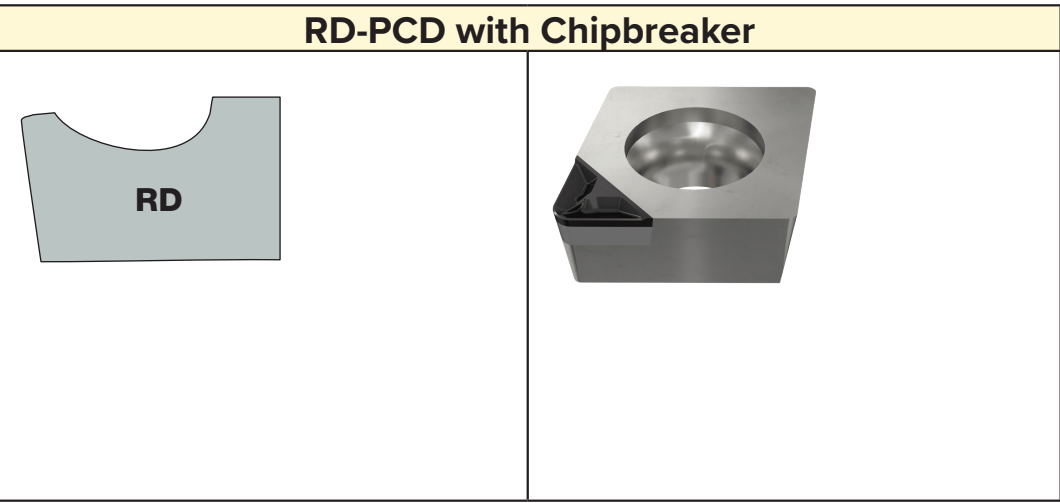
PCD Chipbreaker Inserts MD/RD Types

General Features

- Chipbreaker formed directly on the PCD segment delivers superior chip control. Provides good chip control in semi-finish and finishing of auminum alloys.
- Drastically increases work efficiency and solves chip control issues.
- Corner of R.0079 and R.0157 inserts are available enabling the machining of corners with a small radius.



Used for better chip control and decreasing the cutting forces especially when machining low silicon aluminum. MED is used in low and medium depths of cut.



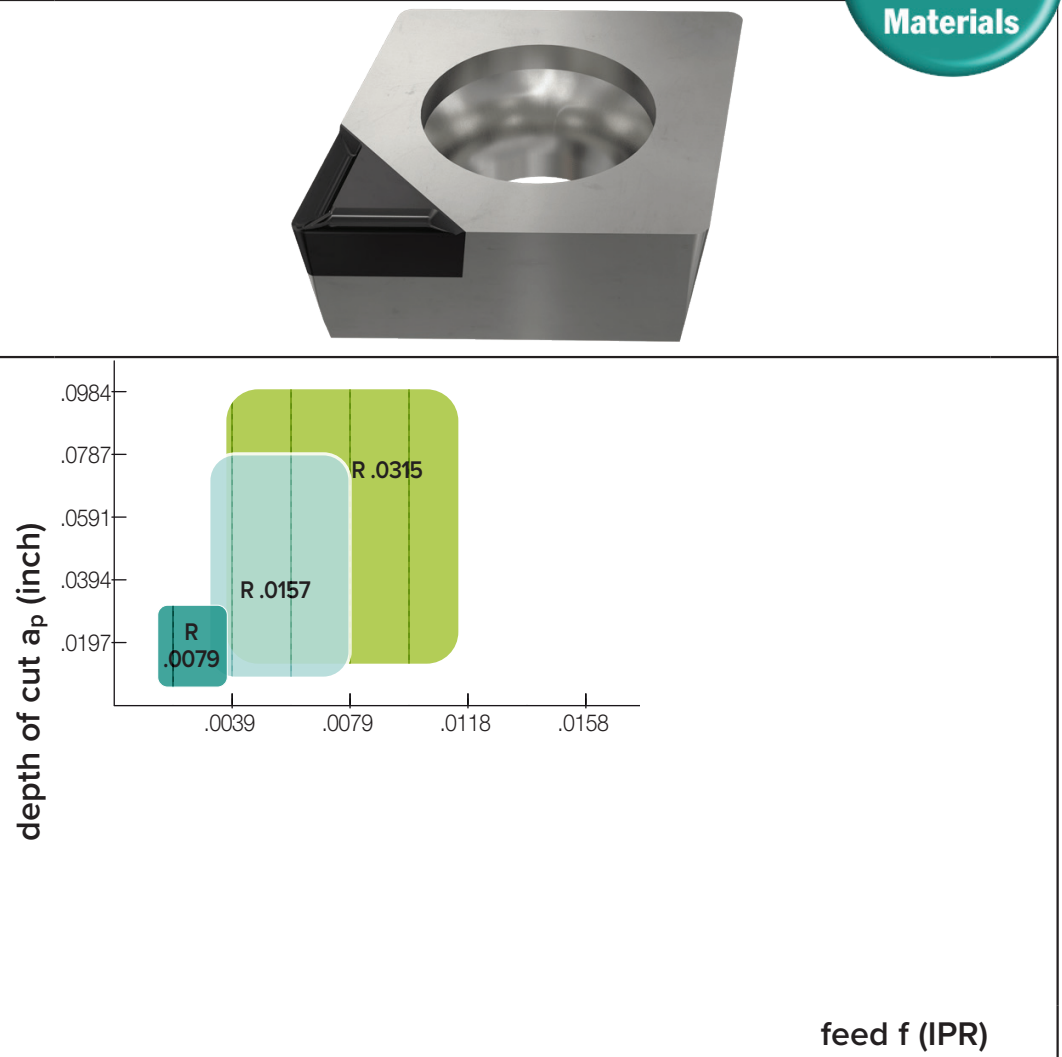
Additional negative chamfer for better chip control and reduced cutting forces in roughing applications. Minimized risk of vibrations.

for Fine - Medium Machining					
MD	radius (inch)	R.0079	R.0157	R.0315	
	f (IPR)	.0016-.0039	.0032-.0079	.0039-.0118	
	a _p (inch)	.002-.0236	.0039-.0787	.0118-.0984	
for Rough Machining					
RD	radius (inch)		R.0157	R.0315	
	f (IPR)		.0039-.0099	.0059-.0138	
	a _p (inch)		.0157-.0787	.0236-.1181	

Insert Grades

Grades	Features
ID4	PCD fine grain, increased surface requirements, micro-erosion tools, well suited for milling. PCD grain size<1μm with great toughness, usable also for interrupted cut fine grain diamond particles, fracture resistance and cutting edge sharpness are excellent. Ideal for milling and rough cutting of aluminium alloys where extreme chip resistance is required, also for machining titanium and composties. Sub-micron grain size, ID4's ultra-fine grain structure is suitable for applications where mirror finishes are required due to its extreme edge sharpness/retention.
ID5	PCD medium grain, standard PCD quality, ALSi max. 12%. grain size 10μm to use for normal aluminium applications good balance of wear resistance and flexural strength.
ID8	PCD mixed grain, increased wear resistance, ALSi > 12%, tools with a high amount of abrasive fillers. Grain size from 3 - 30μm for high abrasive materials, excellent abrasive wear resistance, and fracture resistance. Use when ID5 is inadequate. Application areas include MMC, high silicon aluminium alloys, high strength cast irons and bi-metal applications. Excellent abrasion resistance and good thermal stability. A multi-modal PCD with grain sizes of 2um to 25um which gives ID8 excellent wear resistance, edge strength and edge quality.

Application Range for MD Chipbreaker



Application Range for RD Chipbreaker

