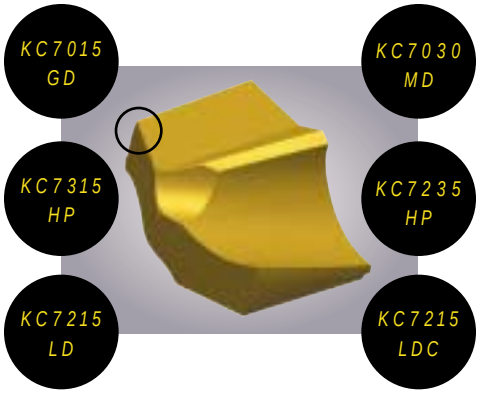
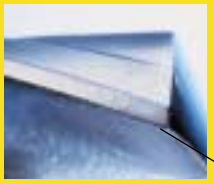
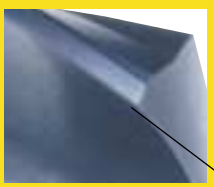
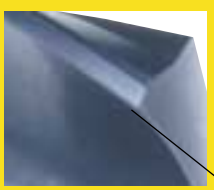
KSEM Grade and Geometry Descriptions

- See page H538 for technical information.
- See page H532 for insert blade reconditioning information.



KSEM Carbide Grades and Geometry

grade	geometry	composition and application	ISO class
KC7015	GD 	**composition:** A PVD TiN coated grade with a tough ultra-fine grain, 10% cobalt unalloyed substrate. **application:** This perfectly balanced grade is the workhorse of Kennametal's drilling product line. Its fine grain microstructure and high cobalt content provide the strength required for tool security in demanding deep hole drilling applications. Our PVD TiN coating is relatively tough compared to other coatings, while still improving the wear characteristics of the tool. This grade is primarily designed for application on carbon steel, alloy steel, PH stainless steels, and ductile iron. **geometry:** The cutting edge design incorporates a moderate hone and protection chamfer. **moderate hone and protection chamfer**	K25 M25 P35
KC7030	MD 	**composition:** A PVD TiN coated grade with a medium grain, 8.5% cobalt unalloyed substrate. **application:** The substrate of grade KC7030 has a large grain structure that improves toughness, while the reduced cobalt content increases wear resistance. The PVD TiN coating resists abrasive wear, reduces frictional heat, and preserves edge strength. These combinations make this grade ideal for machining long-chipping materials such as low-carbon steel, austenitic stainless steel and heat-resistant alloys. **geometry:** The cutting edge has a light hone and corner chamfer. **light hone and corner chamfer**	K30 M30 P40
KC7215	LD 	**composition:** A PVD TiAlN coated grade with a tough ultra-fine grain, 10% cobalt unalloyed substrate. **application:** Grade KC7215 blends together the newest technical advances in drilling. Its tough substrate provides security in the cut, while the edge preparation employed increases edge strength and integrity. The low thermal conductivity and excellent hot hardness of our TiAlN coating offers a true advantage when applied in higher temperature cutting conditions. KC7215 is ideal for use on short chipping, abrasive workpiece materials like gray cast iron. **geometry:** The cutting edge has a light hone only. **light hone**	K20 M20 P30
KC7215	LDC 	**composition:** A PVD TiAlN coated grade with a tough ultra-fine grain, 10% cobalt unalloyed substrate. **application:** This grade and geometry combination is available as a non-stock standard. The grade description is the same as the LD geometry. Application of this insert blade is for gray cast iron only. **geometry:** The cutting edge has a light hone. In addition, a moderate corner chamfer is ground on the insert blade to reduce "breakout"... a condition often encountered in through drilling of gray cast iron. **light hone and moderate corner chamfer**	K25 M30
KC7235	HP 	**composition:** A PVD TiAlN coated grade with a medium grain, 11.5% cobalt unalloyed substrate. **application:** Grade KC7235 combines toughness with the heat-resistant property of our TiAlN coating. Excellent for machining low carbon, alloy, and stainless steels, and/or for applications where horsepower or thrust is limited or the setup is not optimum. **geometry:** A TiAlN coating with a heavy hone. **heavy hone**	K35 M30 P40
KC7315	HP 	**composition:** An advanced PVD TiAlN coated grade with a medium grain, 10% cobalt unalloyed substrate. **application:** Grade KC7315 combines toughness with the heat resistant property of our advanced TiAlN coating. Excellent for machining medium carbon and alloy steels, cast irons, and/or for applications where horsepower or thrust is limited or the setup is not optimum. **geometry:** Our advanced TiAlN coating with a heavy hone. **heavy hone**	K20 M15 P30