



KGS Quadroflex™
K-Loc Diamond Disc
GRINDING

KGS Quadroflex™ K-Loc Diamond Disc

GOLD LINE - Dry / Wet Use  



TURBINE BLADES WITH THERMAL BARRIER COATING:

Thermal barrier coatings (TBC) are highly advanced materials systems applied to metallic surfaces, such as on gas turbine or aero-engine parts, operating at elevated temperatures, as a form of exhaust heat management. These coatings create a very hard and tough to grind surface on turbine blades in different shapes and geometries, from small to quite large sized parts. KGS DIAMOND has developed a special range of small K-Loc discs for this specific application, KGS Quadroflex™ K-Loc Diamond Disc creates the perfect balance between cutting power and accuracy.

These 100 μm to 2 mm thermal barrier coatings (TBC) can allow for higher operating temperatures while limiting the thermal exposure of structural components, extending part life by reducing oxidation and thermal fatigue. Due to increasing demand for higher engine performance (efficiency increases at higher temperatures), better durability / lifetime, and thinner coatings there is an increasing trend in developing and applying TBCs.

Thermal barrier coatings (TBC) create a very hard and tough to grind surface on turbine blades in different shapes, geometries and sizes. KGS DIAMOND has developed a special range of small K-Loc discs for this specific application, the Quadroflex™ K-Loc. KGS Quadroflex™ is a versatile and flexible diamond tool for finishing and dimensioning flat and contoured surfaces, which can also be used for hard to reach areas. Rigid enough to remove material at a high rate and flexible enough to follow difficult geometries easily.

MAIN APPLICATIONS :

The KGS Quadroflex™ K-Loc Diamond Disc is primarily used for grinding thermal barrier coatings. Depending on the diamond grit size selected, this disc is capable of grinding a rough surface to the required finish, coping with complex geometries, contoured areas, and cleaning of profiles. Suitable for a variety of hard-to-grind materials, including tungsten carbide and chrome carbide, thermal sprays Yttria-Stabilized Zirconia (YSZ) and alumina ceramics. It also easily removes coating oversprays and coatings prior to part refurbishment.

TYPE OF GRINDING MACHINES:

Robots, powertools, pneumatic or electric.

PRODUCT OFFERING:

KGS Quadroflex™ - A unique and continuous connected wave pattern for general purpose applications which require high stock removal. Excellent for cooler grinding and heavy grinding applications. A very strong no clogging pattern with an open structure. It ensures high stock removal and higher pressure per grit.

COMMON SIZES:

Ø25 mm | Ø38 mm | Ø50 mm | Ø75 mm

INDUSTRY :

Aerospace, energy (industrial gas turbines)

PRODUCT OVERVIEW:

PRODUCT	PATTERN	BACKER Backing type	Flexibility	Stretch	GRIT	USE
KGS Quadroflex™ K-Loc Diamond Disc	Quadroflex™	BP - Heavy backing, Y-weight poly-cotton, waterproof	Medium	Medium	60, 120, 200, 325, 400, 800	Wet & Dry
		BYW4 - Strong heavy rigid backing, Y-weight polyester, waterproof	Low	Low		

KGS K-Loc Back-up Pads:

Ø MM	CODE
25	8851.10038
35	8851.00477
45	8851.10036
70	8851.10035

