KENNAMETAL®
EPG
ENGINEERED PRODUCTS GROUP

A world wide organisation. Serving local and global industries.

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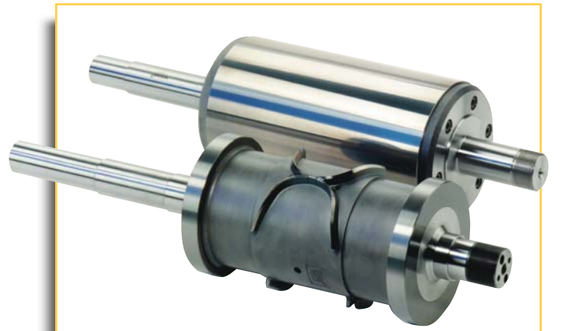

Hardmetal Blades and Rotary Cutting Dies for Hygiene Products

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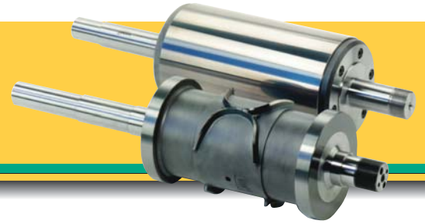
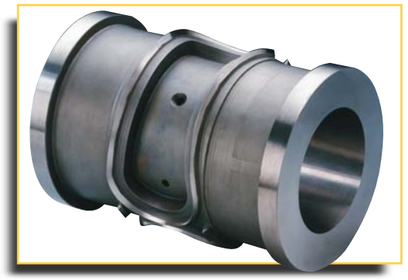




New production line

KENNAMETAL EPG has developed a production set-up to make hardmetal blades and rotary cutting dies for hygiene products. These tools ideally complement a full line of wear products aimed at improving the performance of high volume production lines in various industries.

Production from a single source

Particularly for precision tools, quality in all stages of production is vital. KENNAMETAL EPG's quality system is certified to ISO 9001, and all production processes are subject to continuous improvement.

From powder to finished tool, all operations are carried out in-house. About forty production steps are needed to make high-quality tools. Rigorous checks during each of these operations result in the high process security necessary for making complex tools such as rotary cutting dies.

General aspects of the cutting process

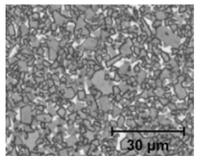
If we regard the rotary die cutting process as a dynamic system in which the compressive strength and shear strength of the material being cut, are exceeded locally, then the size of the contact area is of great importance. Dull knives require higher cutting pressures than sharp ones. Cutting proceeds by local separation of the material. A cutting edge is made up of a large number of individual elements consisting of carbides and binder metal. Each element represents an active area which is ultimately responsible for the cutting result.

Kennametal grades

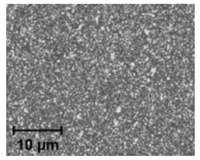
KENNAMETAL EPG uses the latest technology in its production. Rotary cutting dies for example are nowadays generally made of fine grain alloys, which are produced under clean room conditions. These hardmetals - with structured grain sizes of 1 µm and smaller - are ideal for applications requiring extreme cutting edge quality.

Micrographs

The micrographs show the difference between a traditional hard metal alloy with a grain spectrum from 1 µm to 4 µm (normal grain) and a fine grain alloy of the same chemical composition.



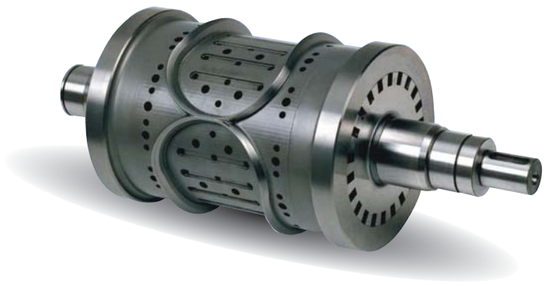
Regular WC grains alloy.



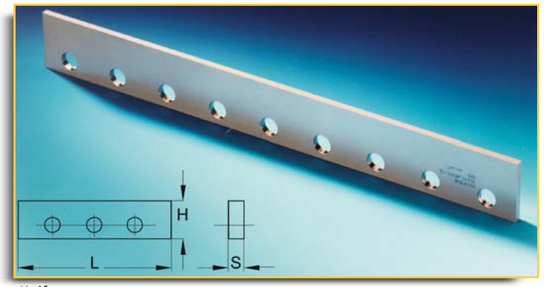
Fine WC homogeneous grains alloy.

Products in hardmetal or hardmetal-steel composites:

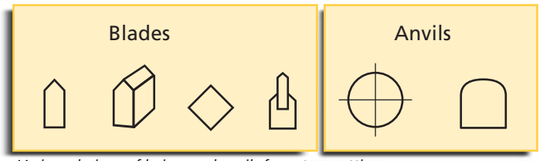
- Die and anvil rolls
- Anvil rolls with hardmetal sleeves
- Integrated support rings
- Pre-machined rolls with sintered contours
- Vacuum rolls, suction rolls
- Hardmetal blades and slitters
- Rotors and stators for hammer mills



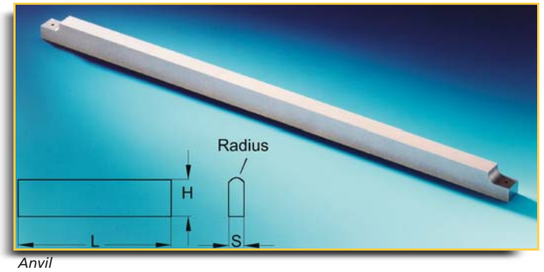
Suction Roll



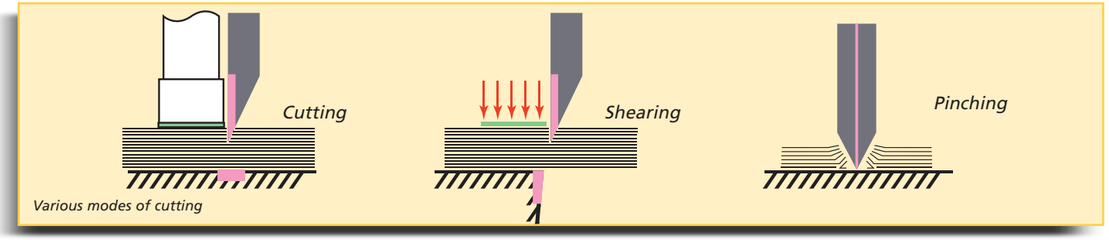
Knife



Various designs of knives and anvils for rotary cutting



Anvil



Various modes of cutting

Rotary slitters and various cutting knives

Rotor for hammer mill