

PCD  
PELLETIZER KNIVES

# PCD-PELLETIZER KNIVES

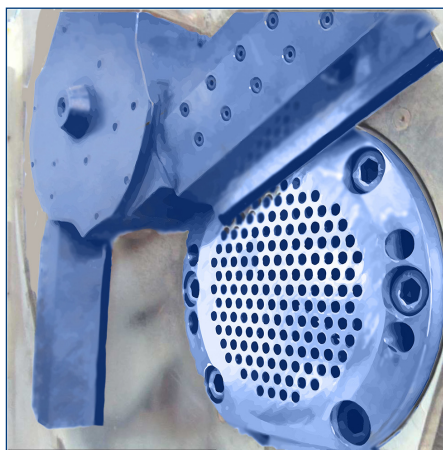
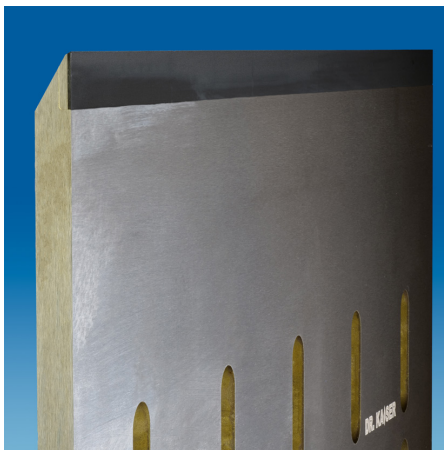
## STEEL, CARBIDE OR MAYBE SOMETHING MORE HIGH-TECH?

Pelletizer knife blades utilizing stainless steel (D2 steel, 1.2379) with a hardness of 61 HRC (after heat treatment) and high speed steel M2 (HS6-5-2, 1.3343) with a maximum hardness of 65 HRC (after heat treatment) are frequently encountered in the pelletizing industry. These materials can be machined quite easily in their "soft" condition and can have a sharp edge ground after heat treatment. For many pelletizing applications, the service life of these blades is not sufficient. For longer life, carbide knife blades are often used. Compared to HSS, carbide pelletizer knife blades provide better tool life by a factor of 6-8.

In a situation where the "set up" of a machine takes a lot of time, blades manufactured with a material even more durable might be desired. For these applications, innovative high-tech pelletizer knives made of polycrystalline diamond (PCD) are available and are the future for many manufacturers of granulates: technologically and economically.

## HIGH TECH PELLETIZING WITH PCD-PELLETIZER KNIVES

Not everyone has the unique skills required to machine diamond materials. Over many decades, DR. KAISER has developed these skills and has the know-how and experience to produce PCD components using a segmental design strategy. Compared to carbide, PCD granulator knives achieve a much longer service life, meaning they pay for themselves very quickly. DR. KAISER produces PCD pelletizer knives for strand and underwater pelletizing of plastics with or without fillers and fiber content, for a wide variety of machines.

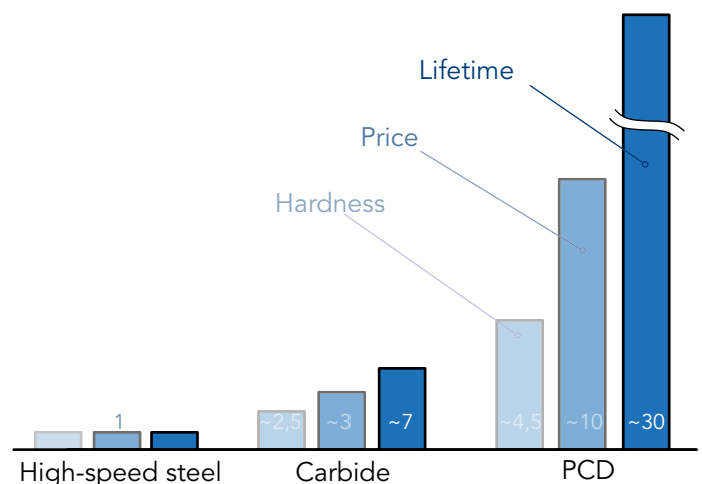


## TECHNOLOGY AND ECONOMIC EFFICIENCY

The proportion of plastics that are difficult to pelletize is increasing in all production areas. The stored additives and fibers cause severe damage to the pelletizer knives and shorten their service lives. Compared to carbide, PCD is approx. twice as hard and thus leads to service lives that in many cases clearly exceed a factor of 30.

Machining PCD is complex and can be expensive, yet there are clear economic advantages compared to use of HSS or carbide:

- Longer life as against conventional knives
- The reduction of set-up costs through longer operating times
- A reduction in waste production
- The reduction of production downtime
- A relief for the repair shop



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präzision durch diamant

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