

# COATING VERSIONS

## TO REDUCE MATERIAL BUILD-UP

**H-PM**<sup>®</sup> tools are produced with steel made on powder-metallurgical base with a high degree of purity to fulfill the highest punching demands.

Furthermore we attach great importance to a high quality hardening process by repeated tempering and deep-freeze subsequently.

This process guarantees an extremely high hardness with an outstanding wear resistance of our punching tools.

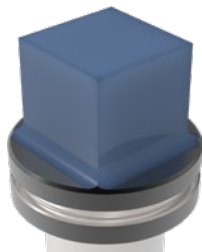
Associated with modern production methods (grinding of the cutting edges with special grinding wheels) we can ensure that the wide range of different sheet qualities can be punched up to 1.600 N/mm<sup>2</sup> – no matter if it concerns mild alloyed aluminium, mild steel, stainless steel or spring band steel.

A high punch hardness as well as an excellent grinding surface are important in order to counteract the problem with edge build-up.

Tests show us that the well-known TiCN coating is a good coating to increase the lifetime (especially working with stainless steel). However, the problem of material buildup on the edges have not really been counteracted.

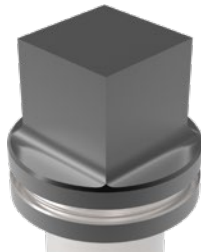
Built-up edges are known especially when working with:

- galvanised steel
- aluminium



TiCN

for working with stainless steel



A-MAX

for dry processing with aluminium sheet



T-MAX

for working with galvanised sheet

We recommend draw-polished punch edges to increase tool lifetime and reduce material build up:

