

# DUPLEX-VARIANTIC®-1000

The multifunctional multilayer coating for extreme wear

The Duplex-VARIANTIC®-1000 represents an expansion of our PVD coatings for the forming process. Its high layer adhesion and excellent protection against abrasive wear is the reason it has been developed especially for the cold forming of highstrength steels.

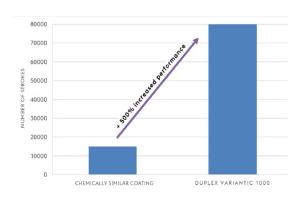
### **APPLICATIONS**

| Forming | Drawing, pressing and forming tools for the working of high-strength steels. |
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## **PRODUCT FEATURES**

- » Can be deposited on tool steels, HSS, hard metals or materials at temperatures under 450 °C
- » Application by means of PVD technology
- » Use of the voestalpine eifeler Duplex technology

### COMPARISON OF NUMBER OF STROKES



Tool: Through-punch
Tool material: 1.2379 (58 HRc)

Workpiece: DP800 with 3.2 mm plate thickness Lubricant: Oil-free, water-based lubricant

# **COATING PROPERTIES**

| Material   | Titanium aluminium<br>carbonitride, TiAICN<br>(multilayer) |
|--|--|
| Microhardness                                    | 4,000 ± 200 HV   |
| Max. application temp.                           | 800 °C / 1,470 °F  |
| Coating thickness                                | approx. 9 µm   |
| Roughness with compa-<br>rable substrate quality | Ra 0.04 μm;<br>Rz 0.6 μm                                   |
| Colour   | dark reddish gold  |

