

# BusaDUR®

## Wear Protection Technology

Busatis developed our most versatile coating technology **BusaDUR®** for highly stressed machine components in wear-intensive industries.

### Advantages of the BusaDUR® wear protection coatings:

- ▶ High versatility regarding a variety of materials
- ▶ Extreme variability regarding surface from a very smooth surface for efficient material flow
  - ▶ To a strong roughness for severe conditions
  - ▶ Wear resistance many times higher than pre-hardened steel
- ▶ Formability and workability after sintering process (rolling, edging, milling, grinding, welding)
- ▶ Saving of costs and time – less downtime
- ▶ Less maintenance effort

# BusaDUR®

## Wear Protection Technology



### A unique coating

- ▶ For 50 years, Busatis has been developing and producing various coatings for wear parts.
- ▶ **BusaDUR®** is an in-house development and a global unique sintering process.
- ▶ The main causes of abrasive wear are sand, stones and soil, for example in agriculture, construction and building materials industry, in mining and other industries.
- ▶ Busatis materials are made up of metal-matrix systems and hard materials.

### Mass production

- ▶ Busatis manufactures products according to customer requirements using highly automated systems with the highest precision even for complex components.

### Wear and cutting components

- ▶ Busatis started in 1888 as a "saw, machine knife, and tool factory" and today produces highly wear-resistant components "Made in Austria" for many industries as a premium manufacturer in top quality.

### Great range of usage

- ▶ Extreme versatility in different application's
- ▶ Depending on user and application area, the surface is smooth or structured
- ▶ Reduces energy consumption in machine drive
- ▶ Offers optimum distribution of hard substances and is many times more durable than hardened steel

## Key Characteristics

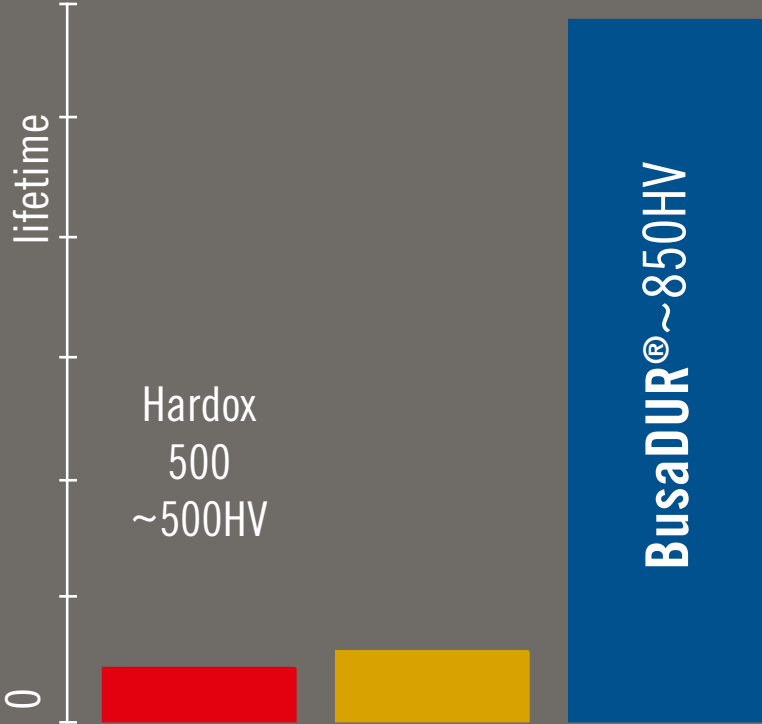
| Material    | Brand            | Sheet metal<br>hardend | BusaDUR®    |             |
|-------------|------------------|------------------------|-------------|-------------|
|             |                  |                        | Classic     | Premium     |
| Hardness HV | Hardness matrix  | ~520                   | 775-900     | 300-900     |
|             | Hardness carbide | -                      | 1500        | 1200-2000   |
| Resistance  | ASTM G65         | —                      | +           | ++          |
|             | Fatigue          | +                      | 0           | +           |
|             | Impact           | ++                     | 0           | +           |
|             | Temperature      | -                      | +           | 0           |
| Roughness   | Ra               | sheet                  | 4 µm        | >= 6 µm     |
| Forming     | Cold R =         | 250 mm                 | 100 mm      | —           |
|             | Hot R =          | 100 mm                 |             |             |
| Cutting     | Laser            |                        | Laser       | Plasma      |
|             | Plasma           |                        | Plasma      |             |
| Dimension   | 3000x2000 mm     |                        | 1000x420 mm | 1000x420 mm |

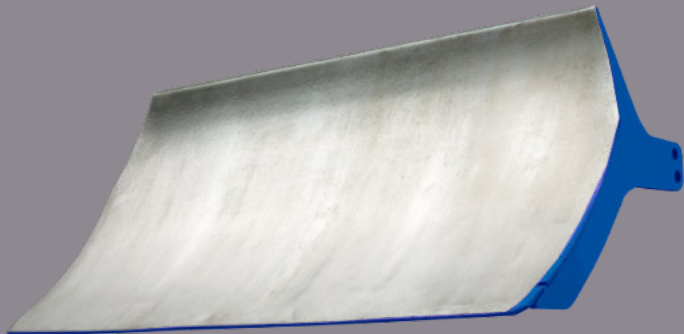
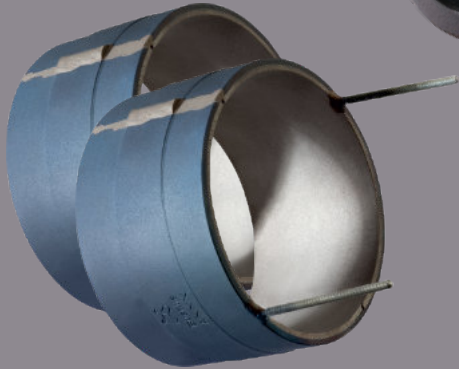
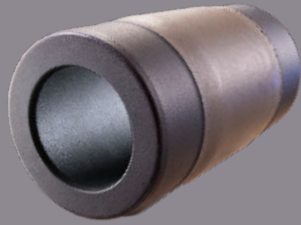
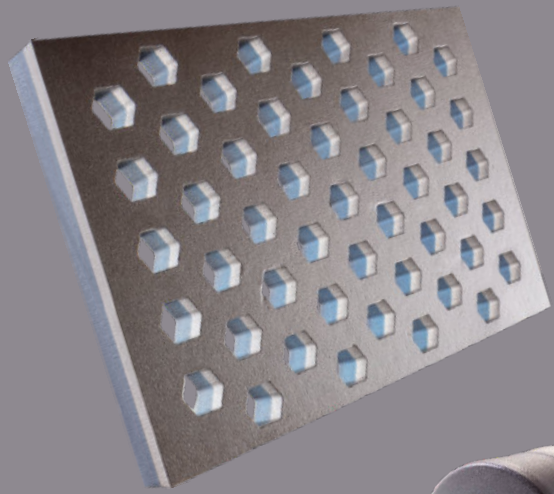
## BusaDUR® Wear Protection Technology

### Service life comparison

with uncoated materials

- ▶ The graphic illustrates the increase in service life of Busatis BusaDUR® wear protection coating compared to uncoated materials based on the American standard test (ASTM G65) conducted by AC²T (Austrian Center of Competence for Tribology).





## What types of components are suitable for BusaDUR® coatings?

- ▶ From big flat surfaces to complex component geometries
- ▶ Coating thickness: 1-15 mm
- ▶ Base material thickness: 3-50 mm (other thickness on request)

## On which substrate materials can BusaDUR® be applied?

- ▶ All weldable ferrous materials, including tempered steel

## What are typical hardfacing materials of BusaDUR®?

- ▶ Standardized high-performance materials consisting of matrix alloys with synthetic or metallurgical precipitated hard materials

## What are the advantages of BusaDUR® coatings?

- ▶ High flexibility due to modular coating technology, which allows a variety of materials to reach the requested properties exactly regarding wear
- ▶ Extreme variability regarding surface finish from a smooth surface without further processing for efficient material flow to strong roughness by adding hard material for severe conditions (e.g. soil cultivation)

**Production and Quality:** Busatis manufactures its products on the most modern, automated, and robot controlled systems and meets the strictest quality specifications by making use of its **expertise** and **technical equipment**. Busatis is able to manufacture **all products with consistent high quality**.

