Technical details for choosing burrs

• Quality

LUKAS® burrs are made in HSS or hard metal, tested at a practical level and compliant with the current technical state of the art.
Production is made with modern automatic CNC grinding machines, which guarantee optimal teeth and rake angle for high performance levels in any application.
Furthermore, HSS burrs are subjected to further thermal treatment for constant high quality.

• Use

LUKAS® burrs make it possible to functionally chip various types of material, accurately following the teeth or cut at the correct number of revs.
The general principle is the following: soft material = large teeth or cut, hard material = fine teeth or cut.

• Warning

LUKAS® burrs in HSS may be mounted on all machines on the market, whether they are electrically or air activated.
Eccentricity and vibrations of the burr lead to early wear and breakage in the teeth
Extreme contact pressure does not increase performance, but rather leads to quicker wear.

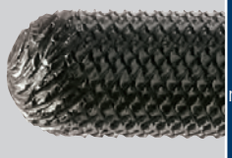
• Cutting speed / revolution per minute

Choosing the teeth and correct number of revs guarantees the best results when chipping a large variety of materials.
In order to facilitate identification of the number of revs according to the type of burr and the type of use, please use the formula indicated below:
- To calculate the number of revs, use the following formula: $r = \frac{v \times 1000}{d \times \pi}$

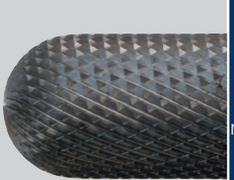
Example:

- LUKAS® burr, code D 9512 2218
- head Ø (d) = 12 mm / Cutting speed (v) = 150-300 m/min (HSS / Z2)
- Suggested rev number range (r) - 4000-8000 revs/min

HSS

Teeth / Cut	Materials - Suitable for:	Cutting speed
 **Z 1** coarse	• Light metals (with long chips) • Light alloys • Aluminium • Lead • Zinc • Thermoplastic and thermosetting resins • Fibres • Rubber • Wood	**200÷300 rpm**
 **Z 2** medium	• Light metals (with short chips) • Brass • Copper / Electrolytic copper • Bronze / Bronze for casting • Zinc • Magnesium alloys	**150÷300 rpm**
 **Z 3** fine	• Alloyed or non-alloyed steel • High quality cast iron	**60÷180 rpm**
 **H 2** medium	• Alloyed or non-alloyed steel • High quality cast iron	**60÷180 rpm**

HARD METAL

Teeth / Cut	Materials - Suitable for:	Cutting speed
 **ZF** medium	• High quality cast iron • High alloy content steel • Tool steel • Rust, acid and heat resistant cast iron • Titanium and nickel alloys	**400÷700 rpm**

HARD METAL

Teeth / Cut	Materials - Suitable for:	Cutting speed
 **Z 3** medium	• High quality cast iron • Welding seams • Tempered and non-high resistance steel	**450÷800 rpm**
 **Z 4** fine	• **Fine cross cut teeth** (diamond type) • High alloy content steel • Rust, acid and heat resistant cast iron • Resins • For greater chipping capacity, reduced vibrations, short chips	**450÷800 rpm**
 **Z 5** medium	• Same possibilities for use as Z3, but for a better surface finish	**350÷600 rpm**
 **Z 9** coarse	• Aluminium alloys • Non-ferrous metals • Thermoplastic resins • Optimum material removal thanks to the large grooves	**700÷900 rpm**
 **Z X** medium	• **Medium cross cut teeth For universal use on:** • Stainless steel • High alloy content steel • Tempered and non-tempered steel • Resins • Welding seams • High and even removal of material, with rough grinding • **Medium cross cut teeth with TiAlN coating** used as above but with: • High performance with high level of hardness • Increased duration of the tool and greater resistance to heat	**450÷800 rpm**
 **Z42**	• Steel and stainless steel • Tempered and alloyed steel • Tool steel	**300÷500 rpm**