



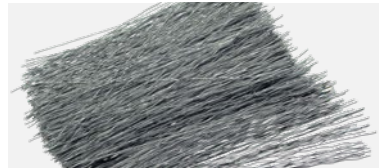
# The right filling material



**STM  
brass-coated wire**  
Very stable material,  
maximum effect



**STH/ROH  
high-tensile  
(stainless) steel wire**  
High-strength material,  
above-average effect



**STA/ROF  
(stainless) steel wire**  
Strong material,  
average effect



**MES  
brass wire**  
Soft, gentle-action  
material, minimum  
effect

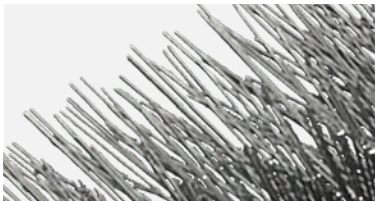
Most aggressive  
effect

Cleaning &  
Deburring

**Knotted wire**  
Twisted wire design  
is extremely stable,  
resulting in maximum  
effect



**Straight wire**  
Allows for higher  
density and therefore a  
relatively strong effect



**Crimped wire**  
Relatively soft for  
gentle action on  
materials



Least aggressive  
effect

Removal

Most aggressive  
effect



**AO  
aluminium oxide**  
Not as sharp-edged; for  
polishing and finishing



**SIC  
silicon carbide**  
For deburring, enhancing  
and processing surfaces



**KK  
ceramic grit**  
Maximum aggressive-  
ness and service life



## Operating principle of the filling material

The degrees of brush effect described here serve as a basic starting point only. In practice, the final effect is determined by the combination of the type, shape, and length of filling material, as well as the speed and pressure of application.

For this reason, the brush effect should always be tested on a sample workpiece or an inconspicuous spot.

When it comes to material removal, grit size is an added factor. The smaller the specified grit size, the coarser and more aggressive the effect.



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# Brush Know- How

Brush types,  
applications, and  
filling materials

Subject to technical changes and errors.  
10/2024 | ARTNR 99BK HENG



## The right brush for my application



### Weld seam finishing

This kind of work requires high and aggressive brush performance. Get the best results with **knotted wheel and cup brushes**, or **knotted end and bevel brushes** for hard-to-reach areas.

Recommended speed: 35–45  $m/s$   
RPM 6,000–12,000  $1/min$



### Cleaning, polishing, and structuring with abrasive grit

In **brushes with abrasive filaments**, the abrasives are incorporated in the synthetic bristles. This is the right type of brush if you want to clean or polish very sensitive surfaces. It also is suitable for wood and plastic.

Recommended speed: 5–20  $m/s$   
RPM 1,000–4,500  $1/min$



### Detail work

**Spark plug and fine scratch brushes** can be used for all fine brushwork that requires thin wire. This product range includes a number of beechwood models of various sizes and filling materials.

### Metalworking

Use **knotted brushes** for these applications. **Knotted bevel brushes** are a universal choice. They are ideal for use on edges, grooves, and surfaces. They can also be used to clean concrete surfaces.

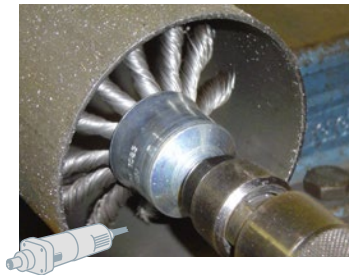
Recommended speed: 35–45  $m/s$   
RPM 9,000–12,000  $1/min$



### Hard-to-reach areas

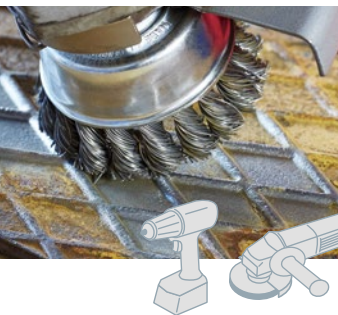
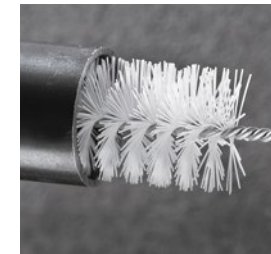
With an **end brush**, you can get into even narrow openings. **Knotted end brushes** open up as they rotate, so they can be used to clean hidden joints and internal surfaces.

Recommended speed: 5–35  $m/s$   
RPM 3,000–15,000  $1/min$



### Cleaning tubes inside

**Cylinder brushes** are used for manually cleaning and deburring tubes, bores, etc. They are also available with other dimensions and materials. When ordering, be sure to indicate: total length, filling length, filling material, diameter, and quantity.



### Surface cleaning (stripping paint, derusting, etc.)

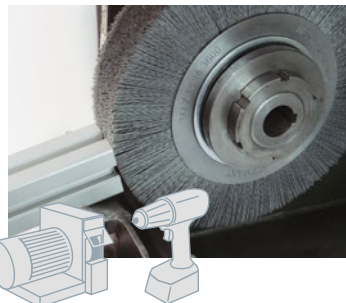
If you are working with an angle grinder, use a **cup brush** for sheet steel and metal surfaces. **Cup and wheel brushes with shank** are available for drills.

Recommended speed: 20–35  $m/s$   
RPM angle grinder 6,000–12,000  $1/min$   
RPM drill 3,000–15,000  $1/min$

### Deburring

Brushes with **crimped wire** or **abrasive nylon** are best for deburring cut edges. Choose a **wheel brush** for your bench grinder and a **wheel brush with shank** for your drill.

Recommended speed: 25–35  $m/s$   
RPM 1,000–6,000  $1/min$



### Universal tool

If you cannot, or prefer not to, use a machine, your best choice is a **hand brush**. Be sure to choose the right type of wire. Thick wires for heavy-duty work, thin wires for simple cleaning.



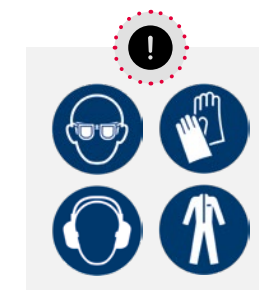
### Weeding

Mounted on grass trimmers, **knotted wheel and bevel brushes** are ideal for removing weeds on yard pavers, kerbstones, cobbled areas or other areas that are hard to reach.

Recommended speed: 35–45  $m/s$   
RPM 10,000–12,500  $1/min$

## The right way to use my brush

As with all rotating tools, working with power brushes requires compliance with safety measures:



### Personal protective equipment

All persons in the work area must wear safety goggles or a face mask, as well as appropriate protective clothing when brushes are in operation.

### Brush check

Check brushes for any damage before use.

### Careful installation

Always make sure a brush is mounted properly.

### Using shank and interior brushes

When using machine-powered interior brushes, be sure to adhere to the maximum specified speed. Only use a brush at maximum RPM if the brush is clamped to a depth of at least 10 mm and inserted in the respective workpiece before it begins to rotate. **Brushes should rotate in the clockwise direction.**

### Using brushes on stainless steel

When working with stainless steel, always use brushes that also have a stainless steel filling. You can easily identify these brushes by their green-coated cups or side plates.

See also our information sheet on using brushes on stainless steel at [lessmann.com/downloads/](https://lessmann.com/downloads/)



### The right contact pressure

Use only minimal contact pressure for brushing, so that only the wire tips act on the workpiece (see figure). Excessive contact pressure does not improve the result. In fact, it shortens the service life of your brush and requires greater output power.

