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

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

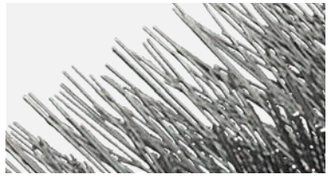
Maximum aggressiveness and service life

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

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

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Brush types, applications, and filling materials

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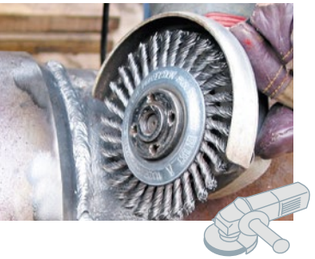
The right brush for my application



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 $^{1}/_{min}$

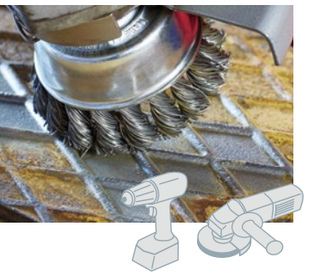
Hard-to-reach areas

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.)

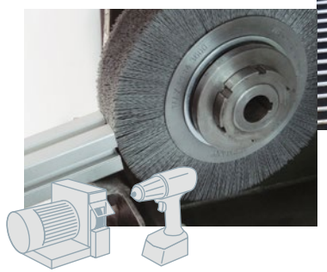
If you are working with an angle grinder, use a **cup brush** for sheet steel and metal surfaces. **Cup and wheel brushes with shank** are available for drills.

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.

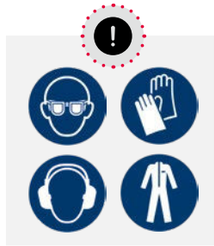
Weeding

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/

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.