

# Recommendations for safe brush use

## LESSMANN Quality is Safe

We guarantee the best quality and long lifetime for our products.

Our brushes are manufactured according to the existing standard EN 1083-2 and ANSI 165.1. All the relevant machine driven brushes are checked for occupational safety using a centrifugal force test.

## Safety Information

All machine driven brushes require as with other rotary tools, that the required safety precautions are kept:

## Safety for Your Body

All operators and other personnel in areas where rotary brushes are being used must wear safety goggles or face shields and protective clothing.

## For your own safety:

### Wear personal protective equipment



## Brush Check

The brushes should be checked for damage before using.

## A correct mounting is imperative.

### Peripheral Speed

The max. RPM indicated in the catalogue are safety figures by which the brushes can be used without danger. Please do not exceed these figures under any circumstances! In most cases a lower RPM is sufficient to gain an optimal result.

### Correct Pressure

The schedule on page 11 shows the necessary motor drive power for different brush diameters. The brushes need only a light pressure while brushing because only the wire points are effective (please look at the schedule). A higher pressure does not improve the brushing effect. In fact the brush lifetime is reduced and greater power is needed.

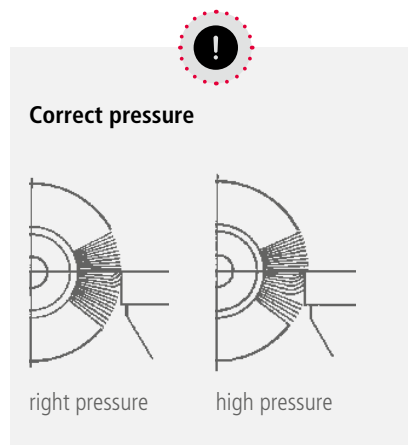
## Working with Shank Brushes

When working with shank brushes please note that the shank has to be inserted fully into the tool.

This is especially necessary when working with high RPM, for example on straight grinders and pneumatic tools.

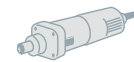
## Mechanical Application of interior brushes

Only use the brush with the indicated maximal peripheral speed (RPM max.). The max. RPM only is allowed when the brush is clamped min. for 10 mm into the tool. When the brush is inserted into the suitable work piece, higher RPMs are possible. **Only use the brush right rotating.**

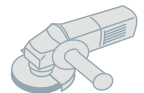


## Machine usage:

These symbols in the chapters show on which machines the brushes usually are used.



Straight grinder



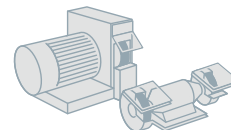
Angle grinder



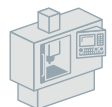
Drilling machine



Grass trimmer



Stationary equipment

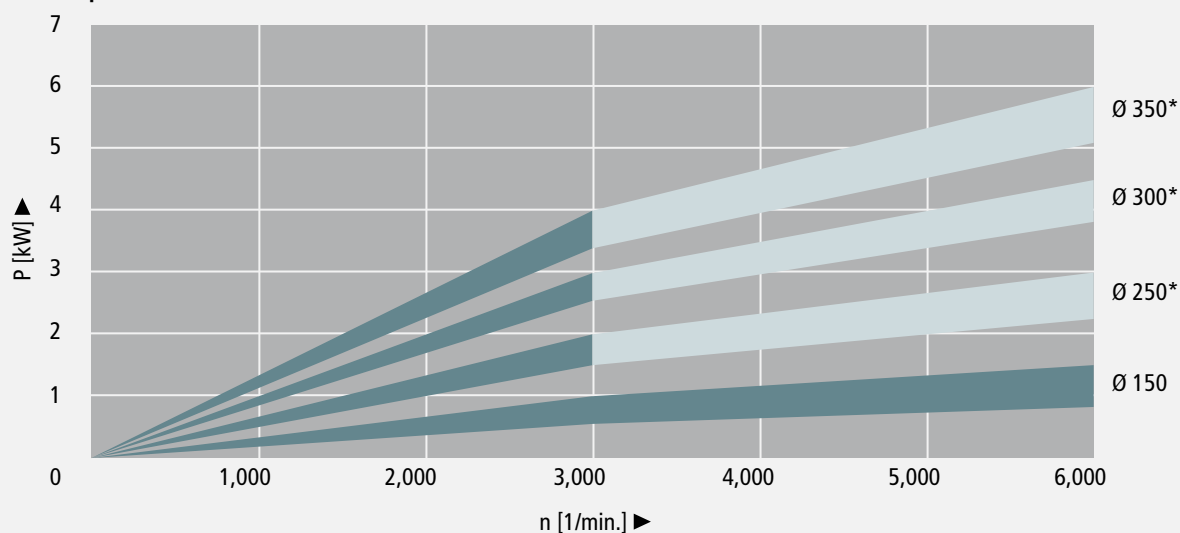


CNC & Robots, machining centres





### Power requirements for Wheel Brushes



The performance figures mentioned above are only guidelines. \*Power requirements for a brush width of 30 mm

### Recommended use of brushes on angle grinders – the right combination

Brush diameter	60	65	75	80	90	100	115	125	150	178	200
Cup Brush, Crimped Wire	WS 1		WS 2	WS 3		WS 3		WS 5	WS 5		
Knot Cup Brush without Bridle		WS 1	WS 2	WS 2	WS 2	WS 3/4		WS 5			
Knot Cup Brush with Bridle				WS 3/4		WS 3/4		WS 5			
Bevel Brush, crimped wire						WS 1					
Knot Bevel Brush						WS 1	WS 1				
Knot Wheel Brush						WS 1	WS 1	WS 2	WS 3	WS 4	WS 5

### Common idle speed of angle grinders (WS)

- Ø 115 11,000 RPM = WS 1
- Ø 125 11,000 RPM = WS 2
- Ø 150 9,000 RPM = WS 3
- Ø 180 8,500 RPM = WS 4
- Ø 230 6,500 RPM = WS 5



**Warning:** Before each operation please compare the idle speed of the angle grinder with the max. peripheral speed of the brush!

### Minimum bore size for wheel brushes according to EN 1083

Diameter of the brush in mm	Minimum diameter of bore in mm
50	4.6
75	6.5
100	10
150	13
200	16
250	20
300	20
350	32

