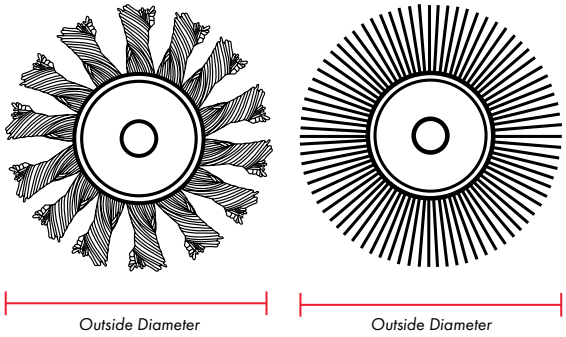
# Brushing Diagrams & Recommendations

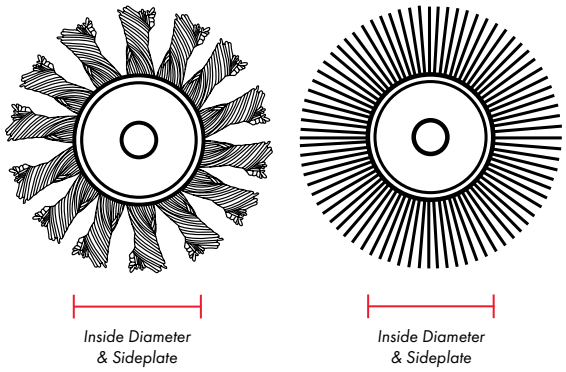
## Wheel & Bevel Brush Outside Diameter

Outside diameter (OD) is the overall diameter of the wheel or bevel brush. The diameter of the brush required will depend largely on the tool being used and the job being performed.



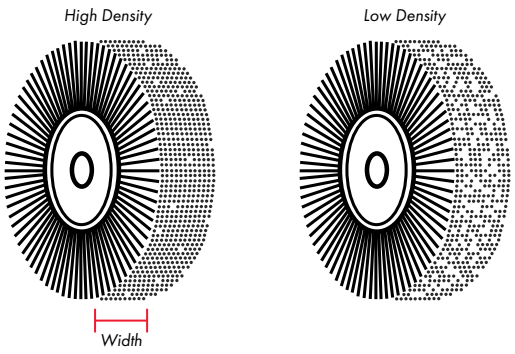

## Wheel & Bevel Brush Inside Diameter & Sideplate

Inside diameter (ID) is the diameter of the sideplate or flange. The ratio between the inside diameter of the brush and outside diameter of the brush will affect the trim length of the wire in the brush. A shorter trim length will result in a more densely filled brush.



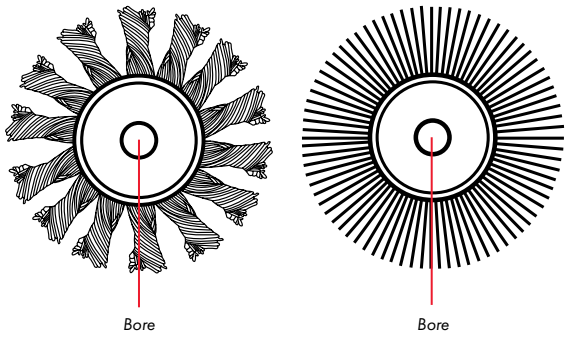

## Wheel Brush Width & Density

Width and density will have the most impact on the effectiveness of the brush. A brush with greater width and density will be more aggressive at removing material. The width of the brush refers to the distance from one edge of the brush to the other when viewed on edge (see diagram). The density of the brush refers to the number of wires in the brush, and a brush with a shorter trim length will have a higher density of wire.




## Bore & Threaded Centre

Sideplates contain a bore or threaded centre to allow the brush to be easily mounted to the tool they are being used on. Most Josco wheel brushes have multi-bore adaptors to allow them to be fitted to all bench grinders. Wheel brushes designed for use with angle grinders will have a threaded centre or bore appropriate for the shaft size of the grinder to be used.



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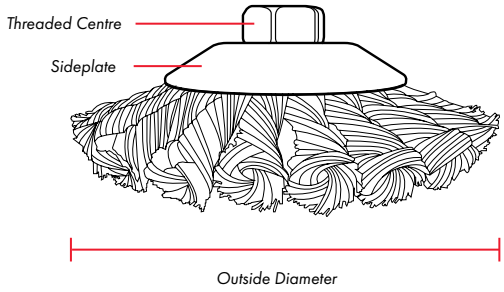
## Bevel Brushes

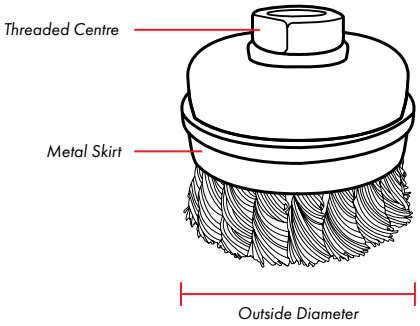
Bevel Brushes can be used on edge to get into harder to reach areas such as corners and seams, as well as on flat surfaces. The bevel also helps keep the brush away from the guard of the angle grinder.




## Cup Brushes

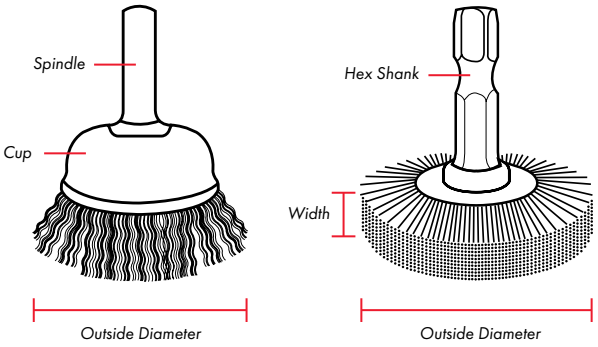
Cup Brushes are designed for use primarily with angle grinders or automated machines, and best suited to be used on flat surfaces.

Metal Skirt: Some cup brushes have a metal skirt, which allows the brush to have a longer trim length, extending the life of the brush. Refer Page 14 for detail on skirt removal.



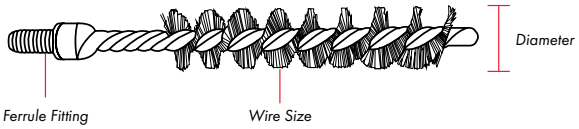

## Spindle Mounted Brushes

Designed for use in drills and die grinders, spindle mounted brushes are often used to get into tighter spaces due to their longer reach. Spindle diameter varies depending on the tool to be used. 6mm or 6.3mm(1/4") shanks are standard sizes and can be used in drills or die grinders (check speed rating), while some larger brushes require a larger diameter spindle that can only be used in drills. Hex shank spindles can only be used in drills, and many can be used with quick change adaptors.




## Tube Brushes

Tube Brushes are ideal for use when deburring or removing foreign material from the inside of pipes and tubes. The ferrule fitting allows the brush to be used with handles, extension adaptors, and drills.



# Brushing Diagrams & Recommendations

## Wire Types

Straight wire can be used in twist knots and tube brushes. When gathered as a collection of straight wires as in hand brushes and some decarb brushes, the straight wire is more capable of getting into narrow slots and other tight spaces.

Used in many different brush configurations, the crimped wire is less aggressive and more flexible than the twist knot making it ideal for contoured surfaces.

*Straight*

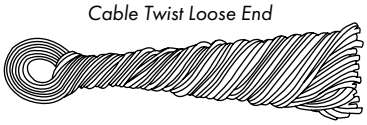


*Crimped*

## Knot Types

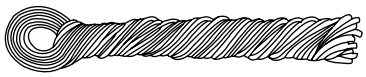
**Cable Twist Loose End**
A standard twist knot configuration, the knot is twisted 2/3 of its length.

*Cable Twist Loose End*



**Cable Twist Tight End**
A more rigid twist knot suitable for more aggressive material removal, the knot is twisted along its full length.

*Cable Twist Tight End*

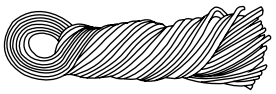


**Stringer Bead**
A narrower knot specifically suited for cleaning out the root welds in pipeline welding, this knot configuration is ideal for aggressively cleaning.

*Stringer Bead*

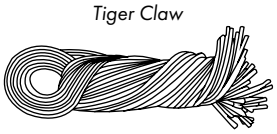
**Pipeline Twist**
A robust knot that is twisted beyond its intended length and then trimmed to produce a very tight strong knot ideally suited to aggressive cleaning of pipeline welds.

*Pipeline Twist*



**Tiger Claw**
A durable twist knot that is twisted its entire length and finished with a tiger claw twist, giving the knot more strength.

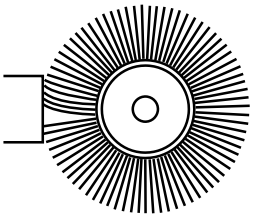
*Tiger Claw*



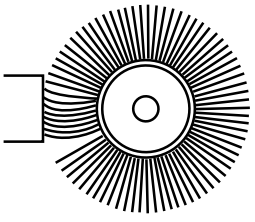
## Brushing Speed and Pressure

Recommended operating speeds vary greatly depending on the brush and its intended use. For cleaning, roughing and de-burring at high speeds, use a light pressure. For finishing, polishing and brushing at low speeds with wire, sufficient pressure may be needed to bring the sides of the wire in contact with the work. Do not exceed the brush's maximum recommended RPM.

*Correct Pressure*



*Excessive Pressure*





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# Brushing Diagrams & Recommendations

| Desired Effect/Problem | Course of Action Advised/Solution |
|---|---|
| To cut faster | • Use a large diameter brush<br>• Increase RPM<br>• Use a brush with a heavier wire gauge<br>• Use a shorter trim<br>*The trim of the brush is the free length wire protruding from the sideplates.* |
| To produce a finer finish | • Use a brush with a lighter wire gauge<br>• Follow up with Josco polishing mops and compounds |
| To reach all parts of an irregular surface | • Use a brush with a longer trim |
| To remove burrs | • Use a short trim wire brush |
| To produce a more even finish | • Use a holding fixture, hand operated or automatic |

**For more information regarding brushing techniques and how-to's, refer to the resources page of the Josco website at www.josco.com.au. If you have any suggestions of videos, or more questions on how to get the best use out of your Josco brush, please contact us at customerservice@josco.com.au or call 1800 445 444.**

Disclaimer: All recommendations specified in the 2016 Josco Brush Catalogue are suggestions for use only, and Josco will hold no responsibility for misuse of product where a specified warning is featured in the catalogue or on the products' packaging.