

EXITFLEX[®]

SWITZERLAND



UNION ALLOYS

**QUALITY &
SAFETY**

www.unionalloys.com.au



EXIT FLEX®

SWITZERLAND

TAILOR-MADE TO MEET ALL YOUR GRINDING AND CUTTING NEEDS.



EXITFLEX® ABRASIVES

EXITFLEX Abrasives are manufactured in an eco-friendly, state-of-the-art facility equipped with the latest moulding machines, ovens, testing & storage facilities.

Quality & safety being the very foundation of the manufacturing policy, abrasives are manufactured in compliance with EN12413 standards.

We have the following sizes listed below in
Aloxite,
White Aloxite,
Silicon Carbide and
Zirconia Abrasives.



CUT- OFF WHEELS	DEPRESSED CENTRE WHEELS	FLEXIBLE WHEELS
100 mm x 3mm x 16mm	100mm x 4mm x 16mm	100mm x 2.5mm x 7mm
105 mm x 1mm x 16 mm	100mm x 5mm x 16mm	180mm x 3mm x 22.23mm
105 mm x 2mm x 16mm	100mm x 6mm x 16mm	
115 mm x 1mm x 22.23mm	115mm x 6mm x 16mm	
115 mm x 3mm x 22.23mm	125mm x 6mm x 22.23mm	
125 mm x 1mm x 22.23mm	125mm x 7mm x 22.23mm	
125 mm x 3mm x 22.23mm	180mm x 5mm x 22.23mm	
180 mm x 1.2mm x 22.23mm	180mm x 6mm x 22.23mm	
180 mm x 1.6mm x 22.23mm	180mm x 6.5mm x 22.23mm	
180 mm x 3mm x 22.23mm	180mm x 7mm x 22.23mm	
180 mm x 4mm x 22.23mm	230mm x 7mm x 22.23mm	
230 mm x 3mm x 22.23mm		
305mm x 2.8mm x 25.4mm		
305mm x 3mm x 25.4mm		
355mm x 2.7mm x 25.4mm		
355mm x 2.8mm x 25.4mm		
355mm x 3mm x 25.4mm		
400mm x 3mm x 25.4mm		
400mm x 3.2mm x 25.4mm		

EXITFLEX® CUT-OFF WHEELS

ABOUT THE PRODUCT

EXITFLEX cut-off wheels with a minimum disc thickness of 1 mm and maximum thickness of 3 mm and has excellent cutting properties, great stability and minimum burr formation.

TYPICAL MATERIALS FOR EXITFLEX Cut-off Wheels

- Steel
- Stainless steel
- Construction steel
- Non-Ferrous - metals
- Cast materials
- Pipes
- Flat iron
- Tins
- Solid materials



TYPICAL APPLICATIONS FOR THESE PRODUCTS

- Structural steel
- Shipyards
- Steelwork
- Plant Construction
- Metal works
- Vehicle construction



“ Quality & Safety being the very foundation of the manufacturing policy, EXITFLEX abrasives are manufactured to meet stringent international standards.

EXITFLEX abrasives are guaranteed to give the best in terms of grinding and cutting performance, life and safety. Certainly proving to be a cut above the rest. ”





While the exhaustive program of our abrasives will cater to most grinding and cutting needs, abrasives could also be custom manufactured for specific applications. The wheels can be used with Cut-off machines, Electric and Pneumatic Angle Grinders.



EXITFLEX®

DE-CODING THE LABEL



1) LABEL AND COVER SHEET

The label includes all of the important information on the product, manufacturer and information on the proper usage of the grinding tool.

2) MIXTURE

The Grit: Today all grit types are only produced synthetically. Only grit produced synthetically can ensure continuously high wear and disc quality.

Resins and fillers: Additional, important components for cutting and grinding discs are resins, (in liquid and dry form), and fillers. These components are key in determining the disc properties, such as stability, stock removal rate, shear strength and can be adjusted to meet the needs of the specific application.

3) METAL RING

Provides information on the expiry date of the disc.



4) GLASS FIBRE DISC

Glass fibre is a reinforcing layer to ensure stability and increases the safety of the cut-off wheel.

The number and strength of the glass fibre layers is dependent upon disc type and application. The higher the potential lateral load on a cut-off disc (it is greater during free cutting than during stationary cutting), the more glass fibre that the cutting disc must contain, or the contained glass fibre must be more stable. Particularly thin material is used for thin cutting discs (0.8 mm to 1.0 mm), ensure that a large grit ratio is achieved between the layers. Grinding wheels are constructed with at least 2 glass fibre layers.

EXITFLEX® CUT-OFF AND GRINDING WHEELS

Applications guide



Safety and storage

The shelf life of cut-off wheels and grinding discs is primarily determined by their moisture content. Cut-off wheels and grinding discs that are subjected to increased humidity after they are manufactured lose their original service life. Correct storage ensures a consistent long service life. Cut-off wheels and grinding discs that are subjected to water or steam are a safety risk. The user is obligated to use the product correctly. Cut-off wheels and grinding wheels should not be used after the expiry date.

Working safely...

... by being careful and recognising risks

Please avoid the risks listed below when working with cut-off wheels and grinding discs.

- ▶ contact with rotating abrasive discs
- ▶ abrasive disc breakage
- ▶ grinding dust and debris
- ▶ vibration
- ▶ noise

... through with personal protective gear

Goggles, gloves, ear muffs and dust masks must be worn. When working on hard grinding applications additional protective gear is required, such as face protection, leather aprons and safety boots.

... with protective machine guards

Machine guards are supplied with the grinding machine and may not be changed or removed. When using cup grinding wheels the outer surface must be completely enclosed.



Quarter	
V 01	January-March
V 04	April-June
V 07	July-September
V 10	October-December

In addition, cup grinding wheels may only be used in combination with an adjustable wheel guard, to balance the wear on the disc and to keep the exposure of the disc at a minimum.

... through visual inspection and performance of checks prior to mounting

Ensure the disc RPM matches the machine RPM setting and avoid exceeding the maximum admissible operating speed. Carefully check the cutting-off wheel and grinding disc for damage. If the cut-off wheel or grinding disc is damaged, do not use the damaged product. Our cut-off wheels and grinding discs are marked with the corresponding safety pictograms.

... through correct use

Ensure that the respective disc is being used correctly. Avoid damage to the mounting bore or to the disc through jerks, excessive force, or falls. Ensure that the disc is correctly and securely mounted and use the correct mounting flange. Prior to starting work, the abrasive disc should run at operating speed for at least 30 seconds. Please observe the FEPA safety regulations and the European Standard EN12413

The peripheral speed and grinding pressure are important parameters for achieving optimal cut-off and grinding wheel results.

EXITFLEX® CUT-OFF AND GRINDING WHEELS

Applications guide



The optimal speed

Too low

If the RPM of the machine is too low, the cut-off wheel and grinding disc tend to “jump”, and the disc edges wear down unevenly. Particularly with thin material cross sections, such as cutting tin or wire, this causes the grit to be separated from the bond and the disc wear speed is above average.

Optimal

Exitflex cut-off wheels and grinding discs are high performance products and were developed such that best disc performance (measured according the stock removal volume to disc wear ratio) is achieved in the range right below the maximum peripheral speed. Keep the machine running at a consistently high RPM and, if needed, select a more powerful machine.

Too high

The maximum RPM and peripheral speed is printed on the label of each disc. For your own safety, please be sure not to exceed the recommended speeds when grinding.

The correct grinding pressure

An important requirement for a satisfactory cutting result is the correct grinding pressure. A common mistake is to reduce the grinding pressure to preserve the disc and extend the cutting life of the wheel. If this is done, the material overheats (turns blue); the cut-off wheel becomes clogged and “burns up”. This is why the grinding pressure should always be set such that the cutting time is as short as possible. This is particularly true for heat sensitive material with large material cross sections.

The proper hardness

...for cut-off wheels

Generally, the rule of thumb when selecting the correct cut-off wheel is: the harder the material, the softer the abrasive bond. The reason: the service life of a cut-off wheel is dependent on whether the cutting surface of the workpiece hardens or not. Overheating results in the disc “glazing” and the cutting properties are negatively affected. In this case, the hardness of the bond should be decreased and the softer cut-off wheel should be used.

...for grinding discs

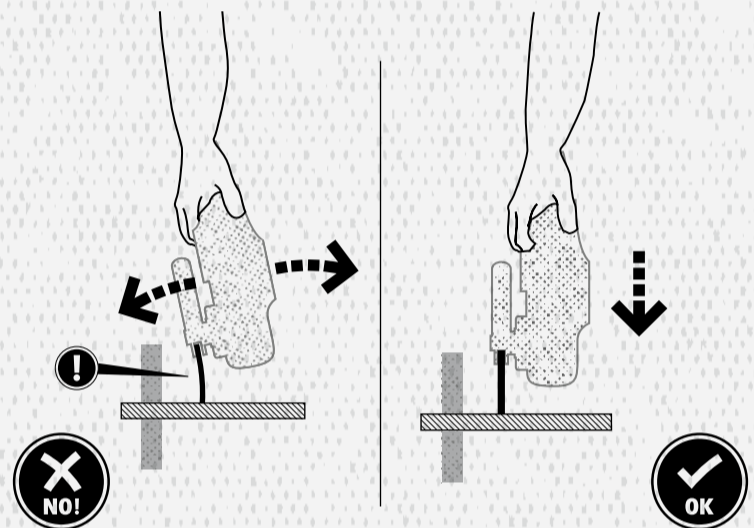
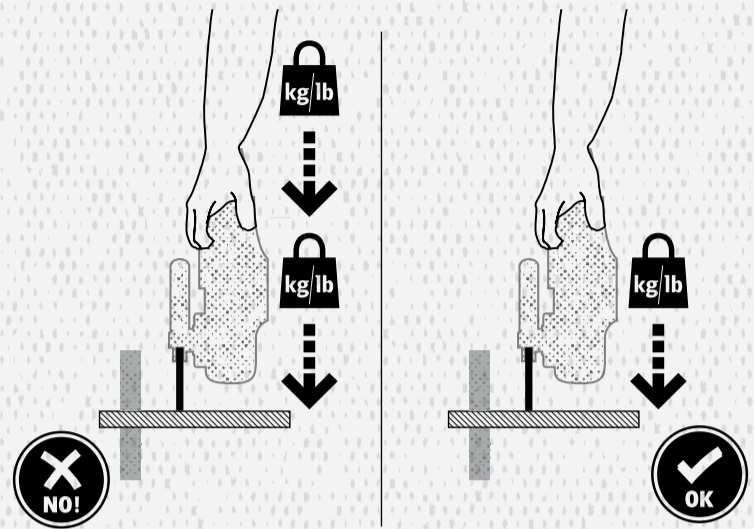
The rule of thumb also applies to grinding discs: the harder the material, the softer the grinding disc bond. In addition, the application plays a decisive role. Corner grinding and the grinding of burrs and sharp edges can cause grit to be removed from the bond. We suggest the selection of a hard bond. On the other hand, when working on surfaces or small weld seams a disc that is too hard would become dull and would no longer be effective. It would have a good service life, but would also have a low stock removal rate and high work costs. A medium or soft disc bond would be best for finish grinding.

EXITFLEX® CUT-OFF AND GRINDING WHEELS

Applications guide

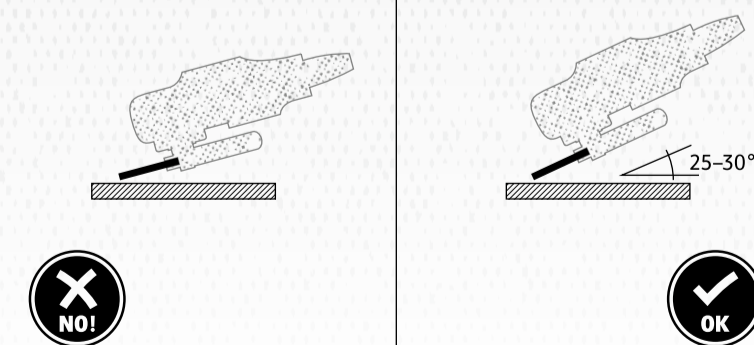
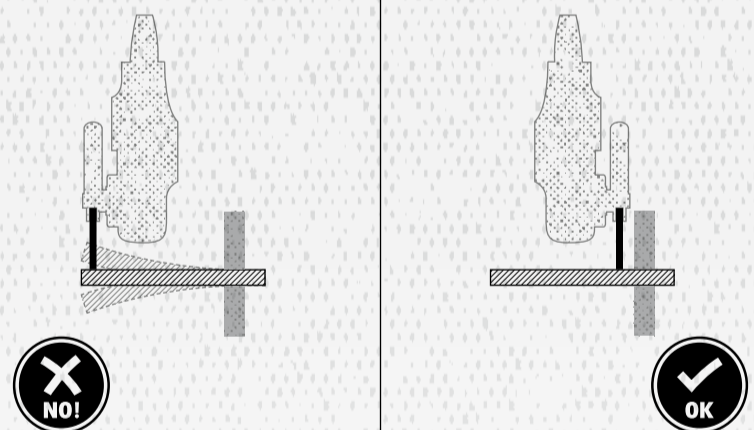
Correct application/techniques for cut-off

Pressure may only be placed on the cut-off wheel from a radial direction. This is the only way to avoid wobbling, buckling and disc breakage, especially when applying a high level of cutting pressure. The workpiece that is to be cut-off should be properly affixed to the workbench to ensure that the disc does not slide off to the side. In addition, we recommend that the material is affixed as close to the cutting site as possible to ensure that it does not vibrate, flutter or slip to the side.



Correct application/techniques for grinding

Grinding discs work best at 35 degree angle to the workpiece. This angle provides the best stock removal to disc wear ratio. If possible, always select this angle. When grinding and the angle is below 15° a very thin edge which levels off is formed around the circumference of the disc. Even minimal changes to the angle can result in a situation in which the grinding pressure can no longer be absorbed resulting in the grinding disc slipping to the side. The values of the grit are not used and an imbalance is created that results in having to replace the disc prematurely.



EXITFLEX® CUT-OFF AND GRINDING WHEELS

Applications guide

The correct mount

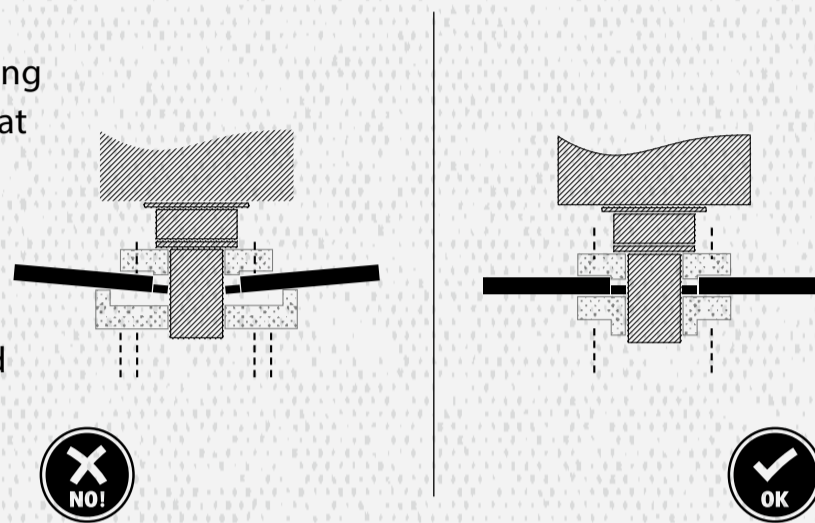
... for better power transmission

Cut-off wheels and grinding discs are mounted to the machine with side flanges. The flange elements are responsible for transferring power to the disc. For reasons of safety it is extremely important that defective or incorrect flanges are not used.

... and for more safety

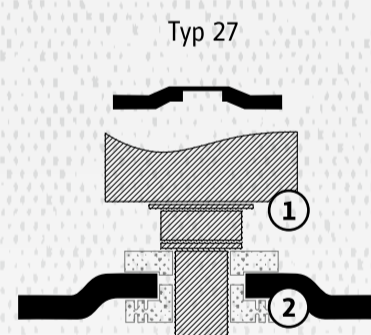
The use of wheel flange FL 76 provides increased lateral stability and user control, specifically when using thin cut-off wheels with a flat form and diameter of 180 mm and 230 mm.

The applicable regulations and standards must be complied with when using the wheel flange. The contact surface and diameter of the wheel flange must match. Using wheel flanges with diameters that do not match is prohibited.



Depressed centre grinding discs

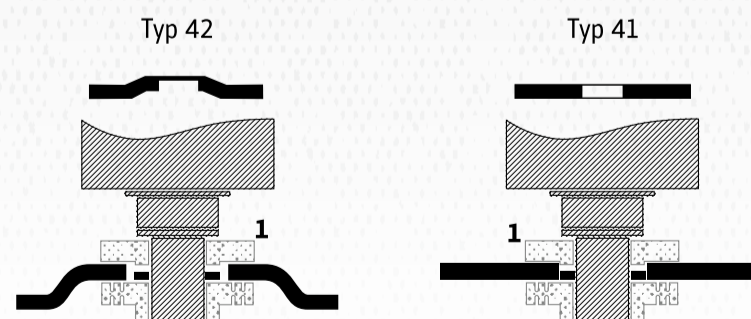
4 - 7 mm thickness



1. Disc flange
2. Flange nut

Flat and depressed centre cut-off wheels

0.8 - 4 mm thickness



1. Disc flange
2. Flange nut

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