

# METAL FABRICATION



*SWATY COMET*  
WEILER ABRASIVES GROUP



# SWATYCOMET TODAY FOR TOMORROW

SWATYCOMET is one of the leading manufacturers of artificial abrasives and technical fabrics and offers a comprehensive range of abrasives for cleaning, cutting and grinding.

Business excellence, more than 135 years experience on the global market, investments in knowledge, development, equipment, automation and innovation are a guarantee for our customers that we are providing safe, high quality abrasives and meet the expectations of even the most demanding customers.



An important part of our offer is comprehensive technical support and assistance. Our solutions meet customer requirements even on the most complex technical and technological level. We provide effective, high quality and innovative solutions that deliver higher productivity and profitability to our customers.

You need the right tools to perform your work successfully. Swatycomet offers a wide range of products allowing you to choose the best grinding tool for your use and instructs you on their safe use and proper handling.

Our grinding tools enable you to perform your work safely, faster, more efficiently and with less effort.

With our comprehensive offer and technological excellence, Swatycomet contributes to advanced changes in the grinding industry. We are constantly improving our products and production processes, whereby we feel responsible for conservation of natural balance in the environment in which we live and work.

Since 2015, SWATYCOMET has been a part of the WEILER Abrasive Group.

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# TRADEMARKS SWATYCOMET

## QUALITY LEVELS

### PROFESSIONAL













Products are intended for professional use on various materials with regard to the optimum ratio between the cutting or grinding effect and the price of the product.

### EXTRA

The extra high-quality line is intended for users in the industry, where high product quality is required: exceptional cutting and grinding capabilities of the product, faster cut, more grindings per unit of time, high product durability.

### SPECIAL

The products have been produced for use in the industry. They have built-in special grains which together with the appropriate bonding system provide best cutting and grinding product properties.

Quality level <b>PROFESSIONAL</b> <i>Base: monochrome Centre: black Graphics: silver</i>	Quality level <b>EXTRA</b> <i>Base: black Centre: black colour Graphics: silver</i>	Quality level <b>SPECIAL</b> <i>Base: black Centre: black Graphics: monochrome</i>
 Steel Colour: SC. Blue	 Steel Colour: SC. Blue	
 Stainless steel Colour: red	 Stainless steel Colour: red	 ULTRACUT Stainless steel Colour: red
 Steel+Inox Colour: blue	 Steel+Inox Colour: blue	 CERAMIC Steel+Inox Colour: orange
 Casts Colour: purple	 Aluminum Colour: grey	 ZIRCONIA Inox+Cast+Steel Colour: gold
 Stone Colour: green		

PROFESSIONAL	EXTRA	SPECIAL
●●●○○	●●●●○	●●●●●
●●●○○	●●●●○	●●●●●

\* Cutting or grinding capabilities

\* Life





# SAFETY OF RESIN-BONDED ABRASIVES

Resin-bonded reinforced abrasives, produced by highly automated machines, are distinguished by dependable quality and safety.

They are manufactured in accordance with the highest standards:

EN12413

Safety requirements for bonded coated abrasives



Federation of the European Producers of Abrasives

EN13743

Safety requirements for flexible grinding tools

ANSI B 7.1

Safety requirements for the use of handling and protection of grinding tools



Organization for the Safety of Abrasives

## INSTRUCTIONS FOR SAFE WORK WITH ABRASIVES

**SWARTY COMET**  
WET GRINDABLE SAND

**SAFETY LEAFLET**

**Do not contain Fe, S, Cl, and are therefore suitable for cutting and grinding of stainless steel.**

**Instructions for safe work with abrasives:**

- Read the instructions
- Wear eye protection
- Wear hearing protection
- Wear gloves
- Wear a respirator
- Only permitted with a back-up pad
- Only permitted for wet cutting
- Not permitted for hand-held machine
- Not permitted for wet grinding
- Not permitted for face grinding
- Do not use if damaged

**Do not contain Fe, S, Cl, and are therefore suitable for cutting and grinding of stainless steel.**

# QUALITY MARKS

PROFESSIONAL		EXTRA		SPECIAL	
Quality	Materials	Quality	Materials	Quality	
A	steel, metal	EA	steel, metal		
16A	steel + stainless steel	E16A	steel + stainless steel		
20A	stainless steel	E20A	stainless steel		
C	stone				
19A	casts				
		E54A	aluminum		
				UC	ultracut
				ZA	zirconia
				EZA	zirconia + ceramic grain
				CER	ceramic grain

# MARKS ON THE LABEL



# TRACEABILITY

## Product markings

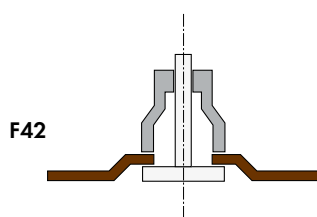
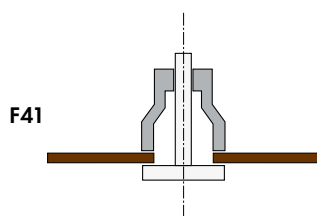


## Packaging markings

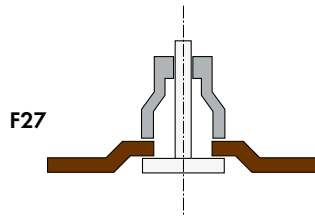
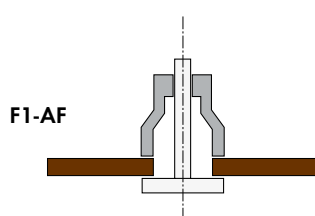


# STANDARD SHAPES

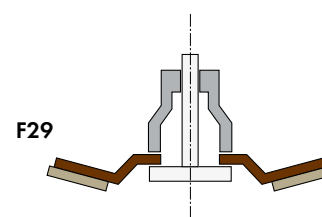
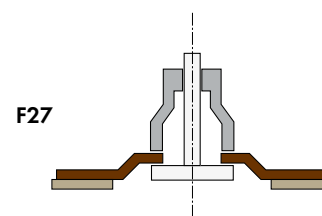
## Cutting wheels



## Grinding wheels



## Flap discs



# CUTTING AND GRINDING MACHINES

## Manual

Angular  
cutting  
machine



Angular  
grinding  
machine



Flat  
grinding  
machine



## Portable

Desktop  
machine



Gasoline-  
powered  
machine



## Stationary

Fixed  
sliding  
machine



Fixed  
vibratory  
machine





# THIN CUTTING WHEELS

**The thinnest,  
the fastest,  
the most  
powerful!**  
With innovative  
technology  
we are able to do this.

Thin cutting wheels are most suitable for cutting thin sheet metal, pipes, profiles and rods with small diameters.

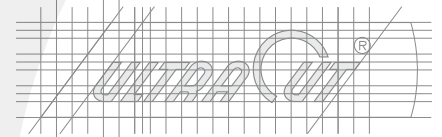
The **PROFESSIONAL** line is distinguished by the optimum quality to price ratio.

The **EXTRA** cutting wheels are distinguished by a high quality level and are intended for industrial use. They provide excellent cutting ability and longer cutting wheel resistance.

The **SPECIAL** line is the line with the highest quality featuring Ultracut and Ceramic.

- **ULTRACUT®** cutting wheels are manufactured using a new, innovative production technology which allows manufacturing of the thinnest products which cut **30% faster** compared to the majority of thin cutting wheels on the market, while they are extremely durable and stable. They provide the most accurate cut, ease of use, comfort and safety at work.

- **CERAMIC** thin cutting wheels with ceramic grains which due to their special structure are self-sharpening enabling the longest lifespan of the product. In particular, their advantage can be observed when cutting full profiles. The best results are obtained when **ceramic** products are used in combination with the most powerful angular cutting machines.





D/mm	T/mm
100 – 230	0.75 - 1.9

PROFESSIONAL	EXTRA	SPECIAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete	Plastics
A60S-B A46S-BF	EA60S-BF, EA60T-BF EA46S-BF, EA46T-BF		●	●	○						
20A60R-BF  20A46R-BF	E20A60S-B  E20A46S-BF	UC20A60R-BF 	○	○	●						
16A60S-BF  16A46S-BF		UC20A60S-BF CER46T-BF 	●	●	●						
C60S-BF C46S-BF					○	○	○	○	●	●	
C60T-BF (UNIVERSAL) C46T-BF (UNIVERSAL)			●	●	●	●	●	●	●	●	●
	E54A60S-BF  E54A46S-BF				○	○	●	●			

Shapes	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Pack. pcs	Grit size	PROFESSIONAL	EXTRA	SPECIAL
	mm	"							
F41, F42	115 x 0.75 x 22.23	4-1/2" x 1/32" x 7/8"	13300	80	25	60			✓ (UC)
F41, F42	125 x 0.75 x 22.23	5" x 1/32" x 7/8"	12250						✓ (UC)
F41, F42	100 x 1 x 16	4" x .040" x 5/8"	15300				✓	✓	
F41, F42	115 x 1 x 22.23	4-1/2" x .040" x 7/8"	13300				✓	✓	✓ (UC)
F41, F42	125 x 1 x 22.23	5" x .040" x 7/8"	12250				✓	✓	✓ (UC)
F41, F42	100 x 1.2 x 16	4" x .045" x 5/8"	15300			46	✓		
F41, F42	115 x 1.2 x 22.23	4-1/2" x .045" x 7/8"	13300				✓		
F41, F42	125 x 1.2 x 22.23	5" x .045" x 7/8"	12250				✓		
F41, F42	100 x 1.6 x 16	4" x 1/16" x 5/8"	15300				✓	✓	
F41, F42	115 x 1.6 x 22.23	4-1/2" x 1/16" x 7/8"	13300				✓	✓	✓ (CER)
F41, F42	125 x 1.6 x 22.23	5" x 1/16" x 7/8"	12250				✓	✓	✓ (CER)
F41, F42	150 x 1.6 x 22.23	6" x 1/16" x 7/8"	10200				✓	✓	✓ (CER)
F41, F42	180 x 1.6 x 22.23	7" x 1/16" x 7/8"	8500				✓	✓	✓ (CER)
F41, F42	150 x 1.9 x 22.23	6" x .075" x 7/8"	10200				✓	✓	✓ (CER)
F41, F42	180 x 1.9 x 22.23	7" x .075" x 7/8"	8500				✓	✓	✓ (CER)
F41, F42	230 x 1.9 x 22.23	9" x .075" x 7/8"	6650				✓	✓	✓ (CER)

# CUTTING WHEELS

**Only the most  
persistent win!**

**With self-sharpening,  
the longest life span  
is achieved!**

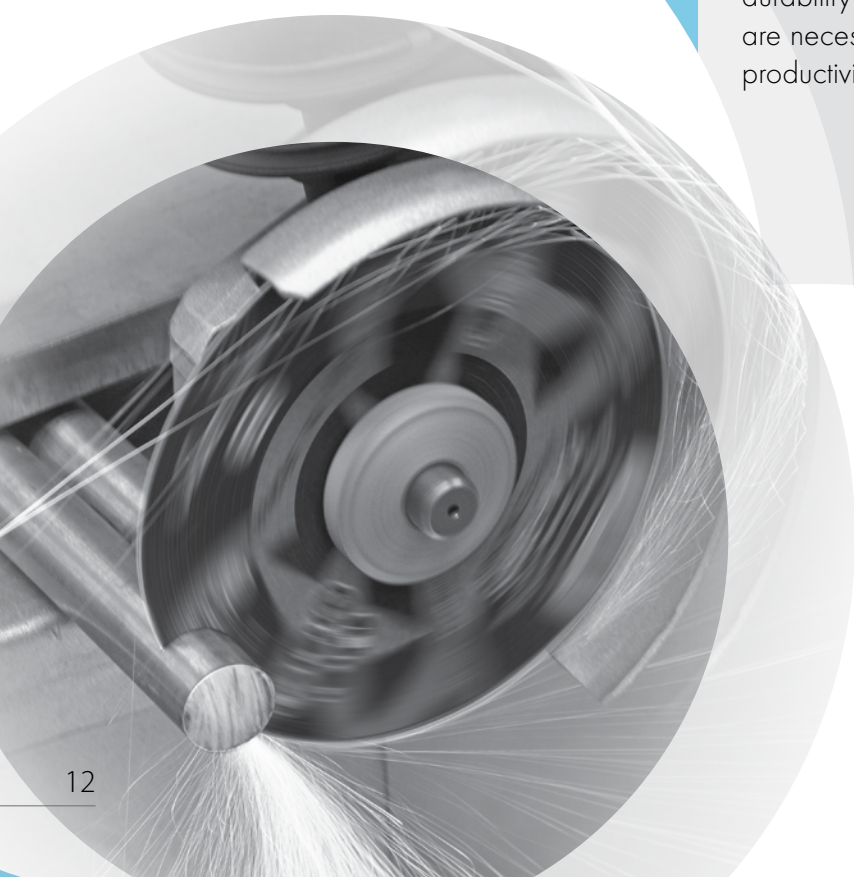
The **PROFESSIONAL** products are intended for general cutting of various materials with regard to the optimum ratio between cutting effect and the price of the product.

The **EXTRA** cutting wheels are intended for professional use in industry, which requires high quality of products, shorter cutting time and high durability of cutting wheels.

The **SPECIAL** line features products containing zirconia and products with ceramic grains.

This group of cutting wheels represents products with the longest life span.





The **SPECIALCERAMIC** cutting wheels are produced with ceramic abrasive grains, which constantly self-sharpen themselves during the cutting process due to their special microcrystal structure, which means that this product constantly provides full-power cutting. When cutting, it is important to use manual cutting machines with maximum power. The advantage of ceramic products is that they do not contain Fe, S, Cl and are therefore suitable for cutting all types of steel, including stainless steel. To achieve superior performance when cutting, lower pressure is required compared to other products. Operators are able to process a larger number of workpieces with less effort required. This results in a fast, clean cut with no overheating and due to high durability fewer replacements are necessary while productivity is increased.





D/mm	T/mm
<b>100 – 250</b>	2 – 3



PROFESSIONAL	EXTRA	SPECIAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete
A30R-BF, A30S-BF	EA30T-BF		●	●	○					
20A30P-BF 	E20A30R-BF 		○	○	●					
16A30R-BF 		CER36T-BF (2mm) 	●	●	●	○				
C30S-BF						●	○	○	●	●
19A30S-BF						●	○	○	○	○
		ZA30S-BF, EZA30T-BF	●	●	●	●				
	E54A30S-BF 						●	●		

Shapes	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	EXTRA	SPECIAL
	mm	"						
F41, F42	100 x 2 x 16	4" x 5/64" x 5/8"	15300	80	25	✓	✓	✓
F41, F42	100 x 2.5 x 16	4" x 3/32" x 5/8"	15300			✓	✓	✓
F41, F42	100 x 3 x 16 100 x 3.2 x 16	4" x 1/8" x 5/8"	15300			✓	✓	✓
F41, F42	115 x 2 x 22.23	4-1/2" x 5/64" x 7/8"	13300			✓	✓	✓
F41, F42	115 x 2.5 x 22.23	4-1/2" x 3/32" x 7/8"	13300			✓	✓	✓
F41, F42	115 x 3 x 22.23 115 x 3.2 x 22.23	4-1/2" x 1/8" x 7/8"	13300			✓	✓	✓
F41, F42	125 x 2 x 22.23	5" x 5/64" x 7/8"	12250			✓	✓	✓
F41, F42	125 x 2.5 x 22.23	5" x 3/32" x 7/8"	12250			✓	✓	✓
F41, F42	125 x 3 x 22.23 125 x 3.2 x 22.23	5" x 1/8" x 7/8"	12250			✓	✓	✓
F41, F42	150 x 2 x 22.23	6" x 5/64" x 7/8"	10200			✓	✓	✓
F41, F42	150 x 2.5 x 22.23	6" x 3/32" x 7/8"	10200			✓	✓	✓
F41, F42	150 x 3 x 22.23 150 x 3.2 x 22.23	6" x 1/8" x 7/8"	10200			✓	✓	✓
F41, F42	180 x 2 x 22.23	7" x 5/64" x 7/8"	8500			✓	✓	✓
F41, F42	180 x 2.5 x 22.23	7" x 3/32" x 7/8"	8500			✓	✓	✓
F41, F42	180 x 3 x 22.23 180 x 3.2 x 22.23	7" x 1/8" x 7/8"	8500			✓	✓	✓
F41, F42	230 x 2 x 22.23	9" x 5/64" x 7/8"	6650			✓	✓	✓
F41, F42	230 x 2.5 x 22.23	9" x 3/32" x 7/8"	6650			✓	✓	✓
F41, F42	230 x 3 x 22.23 230 x 3.2 x 22.23	9" x 1/8" x 7/8"	6650			✓	✓	✓
F41, F42	250 x 2 x 22.23	10" x 5/64" x 7/8"	6150			✓	✓	✓
F41, F42	250 x 2.5 x 22.23	10" x 3/32" x 7/8"	6150			✓	✓	✓
F41, F42	250 x 3 x 22.23 250 x 3.2 x 22.23	10" x 1/8" x 7/8"	6150			✓	✓	✓

# CUTTING AND GRINDING WHEELS



D/mm	T/mm
100 – 150	1.9 – 2.5

## 2x2 COMBO

The **2x2 COMBO** products enable safe cutting and grinding. Additionally, they feature integrated third layer of reinforcement, which allows significantly higher side loads, and therefore they can be safely used for grinding. Because they do not contain Fe, S or Cl, they are suitable for cutting metals, steel and stainless steel.

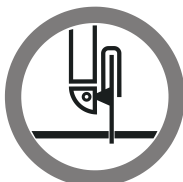
### ADVANTAGES

- Safe cutting and grinding without having to change the grinding wheel,
- time savings,
- reduced labour costs,
- fast cut.

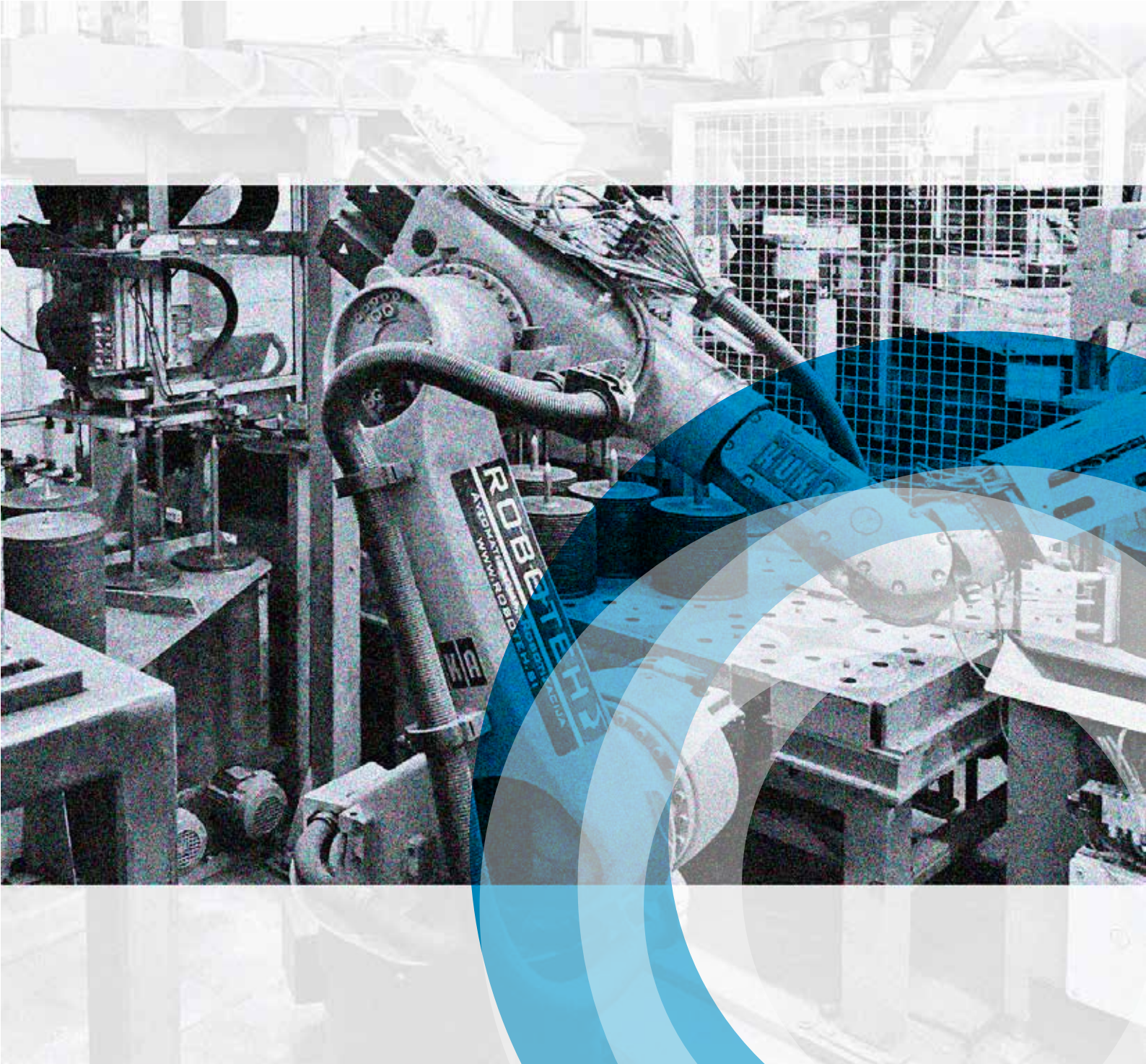


PROFESSIONAL	EXTRA	Steel	Metals	Stainless steel
20A46S-BF	E20A46S-BF	●	●	●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	PROFESSIONAL	EXTRA
	mm	"						
F27-42	100 x 1.9 x 16	4" x .075" x 5/8"	15300	80	25	46	✓	✓
F27-42	100 x 2.5 x 16	4" x 3/32" x 5/8"	15300				✓	✓
F27-42	115 x 1.9 x 22.23	4-1/2" x .075" x 7/8"	13300				✓	✓
F27-42	115 x 2.5 x 22.23	4-1/2" x 3/32" x 7/8"	13300				✓	✓
F27-42	125 x 1.9 x 22.23	5" x .075" x 7/8"	12250				✓	✓
F27-42	125 x 2.5 x 22.23	5" x 3/32" x 7/8"	12250				✓	✓
F27-42	150 x 2.5 x 22.23	6" x 3/32" x 7/8"	10200				✓	✓



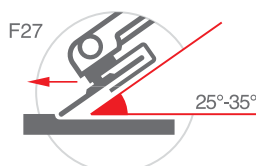
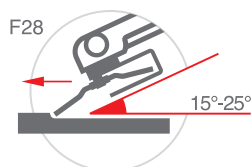
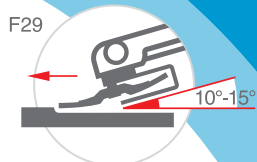




# GRINDING WHEELS

**We guarantee  
your expectation  
will be exceeded  
three times over!**

**The MAXimum,  
FASTest  
GRINDING PROCESS  
with MINimum effort!**



D/mm	T/mm
<b>100 – 230</b>	4 – 10

We produce grinding wheels in three quality levels, i.e. professional, extra and special.

The **PROFESSIONAL** grinding wheels are intended for use on various materials and offer the optimum quality to price ratio. These products have a long life span.

The **EXTRA** quality is intended for the most demanding users in industry, who require a higher material removal per unit of time and higher durability of the wheels.

For the most demanding industrial users, who process various materials, we manufacture dedicated **SPECIAL** grinding wheels, which contain zirconia and other special grains.

The longest durability is achieved with **SPECIALCERAMIC** grinding wheels and we have also developed a special bonding system especially for them. To achieve the maximum effect, it is important to use those products with the most powerful angular grinding wheels. The ceramic grains constantly self-sharpen during the grinding process which means that the product can constantly grind with full power. To achieve superior performance during grinding lower pressure is required while the grinding is extremely aggressive and therefore enables the operator to effortlessly process a large number of workpieces in the shortest time without the need to replace the product.

This applies to all grinding wheels: to achieve the optimum grinding effect always use the prescribed tilt angle between the wheel and the workpiece.





# GRINDING WHEELS



D/mm	T/mm
100 – 230	4 – 10



PROFESSIONAL	EXTRA	SPECIAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete
A24R-BF A24S-BF	EA24R-BF EA24S-BF		●	●	○					
		ZA24S-BF ZAC24R-BF EZA24S-BF	●	●		●				
		ZZ24R-BF	●	●	●	●				
20A24P-BF	E20A24R-BF		○	○	●					
16A24R-BF		CER24S-BF	●	●	●	○				
19A24S-BF						●				
	E54A24R-BF						●	●		
C24S-BF						○			●	●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	EXTRA	SPECIAL
	mm	"						
F27	100 x 4 x 16	4" x 5/32" x 5/8"	15300	80	10	✓	✓	✓
F27	100 x 6.5 x 16	4" x 1/4" x 5/8"	15300			✓		
F27	100 x 7 x 16	4" x 1/4" x 5/8"	15300			✓	✓	✓
F27	115 x 4 x 22.23	4-1/2" x 5/32" x 7/8"	13300			✓	✓	✓
F27	115 x 6.5 x 22.23	4-1/2" x 1/4" x 7/8"	13300			✓		
F27	115 x 7 x 22.23	4-1/2" x 1/4" x 7/8"	13300			✓	✓	✓
F27	115 x 8 x 22.23	4-1/2" x 5/16" x 7/8"	13300			✓	✓	✓
F27	125 x 4 x 22.23	5" x 5/32" x 7/8"	12250			✓	✓	✓
F27	125 x 6.5 x 22.23	5" x 1/4" x 7/8"	12250			✓		
F27	125 x 7 x 22.23	5" x 1/4" x 7/8"	12250			✓	✓	✓
F27	125 x 8 x 22.23	5" x 5/16" x 7/8"	12250			✓	✓	✓
F27	150 x 4 x 22.23	6" x 5/32" x 7/8"	10200			✓	✓	✓
F27	150 x 6.5 x 22.23	6" x 1/4" x 7/8"	10200			✓		
F27	150 x 7 x 22.23	6" x 1/4" x 7/8"	10200			✓	✓	✓
F27	150 x 8 x 22.23	6" x 5/16" x 7/8"	10200			✓	✓	✓
F27	180 x 4 x 22.23	7" x 5/32" x 7/8"	8500			✓	✓	✓
F27	180 x 6.5 x 22.23	7" x 1/4" x 7/8"	8500			✓		
F27	180 x 7 x 22.23	7" x 1/4" x 7/8"	8500			✓	✓	✓
F27	180 x 8 x 22.23	7" x 5/16" x 7/8"	8500			✓	✓	✓
F27	180 x 10 x 22.23	7" x 3/8" x 7/8"	8500			✓	✓	✓
F27	230 x 4 x 22.23	9" x 5/32" x 7/8"	6650			✓	✓	✓
F27	230 x 6.5 x 22.23	9" x 1/4" x 7/8"	6650			✓		
F27	230 x 7 x 22.23	9" x 1/4" x 7/8"	6650			✓	✓	✓
F27	230 x 8 x 22.23	9" x 5/16" x 7/8"	6650			✓	✓	✓
F27	230 x 10 x 22.23	9" x 3/8" x 7/8"	6650			✓	✓	✓

# LARGE CUTTING WHEELS

## Getting bigger!

### Productivity for the most demanding!

Prohibited  
grinding!



Prohibited  
hands-free  
grinding  
or cutting!



Prohibited  
wet cutting!



Prohibited  
application  
of damaged  
grinding tools!



Larger cutting wheels are intended for machine cutting of different profiles.

**When choosing cutting wheels, be sure to observe the following:**

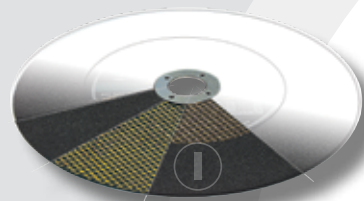
- machine type determining the type of cutting;  
STATIONARY cutting using portable or stable cutting machines, HANDS-FREE cutting using manual gasoline- or electricity-powered cutting machines;
- workpiece quality and dimensions;
- prescribed peripheral speed.

**By observing the above, you prevent the following:**

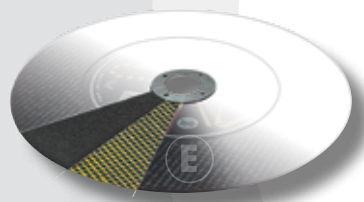
- excessive workpiece cut time;
- excessive wear of the cutting disc as a result of low motor power and low peripheral speed or too low rotation speed;
- uneven cut due to using too thin a cutting wheel, non-compliant cutting machine, inadequate cutting wheel diameter or uneven clamping plate.

**The consequences of selecting unsuitable tools are:**

- cutting-off wheels can fly off due to cutting of large non-fixed workpieces;
- use of extreme pressure when cutting due to too hard a bond or too low peripheral speed or too low rotation speed;
- surface damage of the cutting wheel due to unsuitable cutting machine or because cutting wheel is trapped into workpiece;
- cutting wheel breakage due to too rough cutting, unsuitable clamping plates or clamp, damaged bore on the cutting wheel or overburdening of the machine axis.



Internally reinforced abrasives



Externally reinforced abrasives

# THIN CUTTING WHEELS



D/mm	T/mm	H/mm
<b>300 – 400</b>	2.8 – 3.2	20 – 32

Thin cutting wheels are intended for cutting small-size profiles.



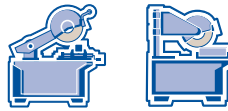
PROFESSIONAL	EXTRA	Steel	Metals	Stainless steel	Stone	Concrete
A36P-BF	EA36T-BF	●	●	○		
20A30P-BF 		○	○	●		
C46S-BF					●	●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	EXTRA
	mm	"					
F41	300 x 2.8 x H	12" x 3/32" x H	4050	63	25	✓	✓
F41	350 x 3.0 x H	14" x 1/8" x H	3450		10	✓	✓
F41	400 x 3.2 x H	16" x 1/8" x H	3050			✓	✓
F41	300 x 2.8 x H	12" x 3/32" x H	5100	80	25	✓	✓
F41	350 x 3.0 x H	14" x 1/8" x H	4400		10	✓	✓
F41	400 x 3.2 x H	16" x 1/8" x H	3850			✓	✓





# CUTTING WHEELS



D/mm	T/mm	H/mm
<b>300 – 400</b>	3.7 – 4.5	20 – 80

Cutting wheels are intended for cutting profiles and casts using stationary machines.



PROFESSIONAL	EXTRA	SPECIAL	Steel	Metals	Stainless steel	Casts	Stone	Concrete	Titanium	Inconel
A24S-BF- (D400) A30S-BF- (D300,350)	EA30S-BF		●	●	○					
20A30P-BF			○	○	●					
C24S-BF- (D400) C30S-BF- (D300,350)						○	●	●		
19A24S-BF		E479A24R-BF	○			●				
		Z73A24T-BF	○						●	
		ZA30T-BF								●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	EXTRA	SPECIAL
	mm	"						
F41	300 x 3.7 x H	12" x 9/64" x H	5100	80	25	✓	✓	✓
F41	350 x 3.8 x H	14" x 9/64" x H	4400		10	✓	✓	✓
F41	400 x 4.5 x H	16" x 5/32" x H	3850			✓	✓	✓
F41	300 x 3.7 x H	12" x 9/64" x H	6400	100	25	✓	✓	✓
F41	350 x 3.8 x H	14" x 9/64" x H	5500		10	✓	✓	✓
F41	400 x 4.5 x H	16" x 5/32" x H	4800			✓	✓	✓

# FLAT GRINDING WHEELS



D/mm	T/mm	H1/mm	H2/mm
<b>300 – 400</b>	6 – 8	20 – 32	32 – 80

The products are intended for cleaning casts, forgings and welded materials. They guarantee high material removal, good durability without workpiece overheating.



PROFESSIONAL	SPECIAL	Casts
19A24S-BF	E479A24R-BF	
		●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging	PROFESSIONAL	SPECIAL
	mm	"			pcs		
F1-AF	300 x 6; 8 x H1	12" x 1/4"; 5/16" x H1	5100	80	8	✓	✓
F1-AF	350 x 6; 8 x H1	14" x 1/4"; 5/16" x H1	4400			✓	✓
F1-AF	400 x 6; 7 x H2	16" x 1/4" x H2	3850			✓	✓



# CUTTING WHEELS FOR CUTTING RAILS AND SLEEPERS



D/mm	T/mm	H/mm
300 – 400	3.7 – 4	20 – 32

The EXTRA cutting wheels are intended for cutting rails.

Their advantages are high durability, high quality and precision cut with no workpiece overheating.

Higher efficiency of the cutting wheel can be achieved by turning the machine.



PROFESSIONAL	EXTRA	SPECIAL	Rails	Steel	Sleepers	Reinforced concrete
45A24Q-BF			●	●		
	E23A24S-BF		●	●		
		E47A24Q-BF	●	●		
		E74A20R-BF	●	●		
	E91C24S-BF				●	●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	EXTRA	SPECIAL
	mm	"						
F41-PR	300 x 3.7 x H	12" x 9/64" x H	5100	80	25	✓	✓	✓
F41-PR	350 x 3.8 x H	14" x 9/64" x H	4400		10	✓	✓	✓
F41-PR	400 x 4 x H	16" x 5/32" x H	3850			✓	✓	✓
F41-PR	300 x 4 x H	12" x 5/32" x H	6400	100	25	✓	✓	✓
F41-PR	350 x 4 x H	14" x 5/32" x H	5500		10	✓	✓	✓
F41-PR	400 x 4 x H	16" x 5/32" x H	4800			✓	✓	✓

**WARNING:** With manual petrol-powered cutting machines, we get the best results when cutting with the prescribed peripheral speed and constant force. Do not cut with excessive force, as this may cause overheating and burning of the cutting wheel and rail, rapid wear, poor performance or breakage of the cutting disc.

The pause between two cuts should last at least two minutes!

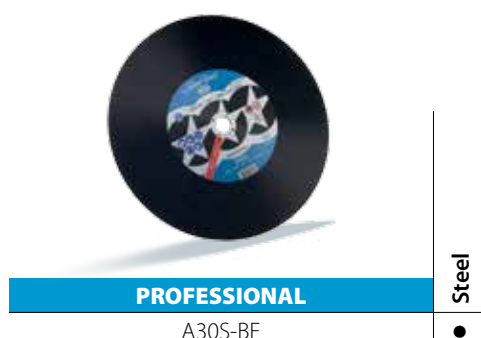


# CUTTING WHEELS FOR USE WITH HANDS-FREE MACHINES



D/mm	T/mm	H/mm
<b>300 – 400</b>	3.7 – 4	20 – 25.4

Cutting wheels are used for cutting metal materials on manually-operated petrol-powered machines. The composition and thickness of the products give extremely high quality cutting effects. The best cutting effects are achieved when cutting at max. rotation speed.



Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL
	mm	"				
F41-PR	300 x 3.7 x 20	12" x 9/64" x 3/4"	5100	80	25	✓
F41-PR	300 x 3.7 x 22.23	12" x 9/64" x 7/8"	5100			✓
F41-PR	300 x 3.7 x 25.4	12" x 9/64" x 1"	5100			✓
F41-PR	350 x 4.0 x 22.23	14" x 5/32" x 7/8"	5500	100	10	✓
F41-PR	350 x 4.0 x 25.4	14" x 5/32" x 1"	5500			✓
F41-PR	400 x 4.0 x 25.4	16" x 5/32" x 1"	4800			✓



# SMALL DIAMETER CUTTING WHEELS



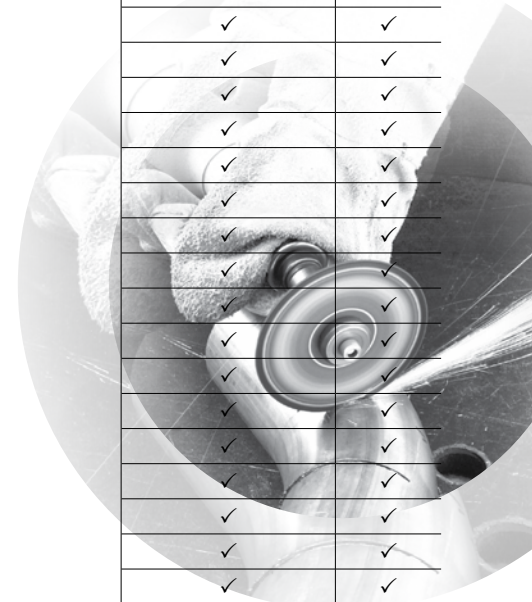
D/mm	T/mm	H/mm
<b>50 – 90</b>	1 – 3	6 – 10

These cutting wheels are intended for cutting of various materials using flat manual cutting machines with regard to the optimum ratio between cutting or grinding effect and the price of the product. The extra product quality provides maximum cutting effects and the longest lifespan.



PROFESSIONAL	EXTRA	Steel	Metals	Stainless steel	Casts
AxxT-BF	EAXxT-BF	●	●	○	○
20AxxR-BF 	E20AxxR-BF 	○	○	●	○

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size XX*	PROFESSIONAL	EXTRA
	mm	"						
F41	50 x 1.0 x H	2" x .040" x H	30600	80	100	46	✓	✓
F41	50 x 1.2 x H	2" x .045" x H	30600				✓	✓
F41	50 x 1.6 x H	2" x 1/16" x H	30600				✓	✓
F41	50 x 1.8 x H	2" x .075" x H	30600				✓	✓
F41	60 x 1.0 x H		25450				✓	✓
F41	60 x 1.2 x H		25450				✓	✓
F41	60 x 1.6 x H		25450				✓	✓
F41	60 x 1.8 x H		25450				✓	✓
F41	65 x 1.0 x H	2-1/2" x .040" x H	23500				✓	✓
F41	65 x 1.2 x H	2-1/2" x .045" x H	23500				✓	✓
F41	65 x 1.6 x H	2-1/2" x 1/16" x H	23500				✓	✓
F41	65 x 1.8 x H	2-1/2" x .075" x H	23500				✓	✓
F41	70 x 1.0 x H		21850				✓	✓
F41	70 x 1.2 x H		21850				✓	✓
F41	70 x 1.6 x H		21850				✓	✓
F41	70 x 1.8 x H		21850				✓	✓
F41	76 x 1.0 x H	3" x .040" x H	20100				✓	✓
F41	76 x 1.2 x H	3" x .045" x H	20100				✓	✓
F41	76 x 1.6 x H	3" x 1/16" x H	20100				✓	✓
F41	76 x 1.8 x H	3" x .075" x H	20100				✓	✓
F41	80 x 1.0 x H	3" x .040" x H	19100				✓	✓
F41	80 x 1.2 x H	3" x .045" x H	19100				✓	✓
F41	80 x 1.6 x H	3" x 1/16" x H	19100				✓	✓
F41	80 x 1.8 x H	3" x .075" x H	19100				✓	✓
F41	50 x 2; 2.5; 3 x H	2" x 5/64"; 3/32"; 1/8" x H	30600			30, 36, 46	✓	✓
F41	60 x 2; 2.5; 3 x H		25450				✓	✓
F41	65 x 2; 2.5; 3 x H	2-1/2" x 5/64"; 3/32"; 1/8" x H	23500				✓	✓
F41	70 x 2; 2.5; 3 x H		21850				✓	✓
F41	76 x 2; 2.5; 3 x H	3" x 5/64"; 3/32"; 1/8" x H	20100				✓	✓
F41	80 x 2; 2.5; 3 x H		19100				✓	✓






# FLAT GRINDING WHEELS



D/mm	T/mm
50 – 100	4 – 10

The professional grinding wheels are intended for grinding of various materials with regard to the optimum ratio between grinding effect and the price of the product. The **SPECIAL** product quality provides maximum grinding effects and the longest lifespan.



PROFESSIONAL	SPECIAL	Steel	Metals	Stainless steel	Casts
A24S-BF		●	●	○	
15A30R-BF		●	●	○	
20A24R-BF 		○	○	●	
	ZA24R-BF 	●	●	●	●

Shape	Dimensions D x T x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	PROFESSIONAL	SPECIAL
	mm	"					
F1-AF	50 x 4 x H	2" x 5/32" x H	30600	80	25	✓	✓
F1-AF	50 x 6 x H	2" x 1/4" x H	30600			✓	✓
F1-AF	50 x 10 x H	2" x 3/8" x H	30600			✓	✓
F1-AF	50 x 12 x H	2" x 1/2" x H	30600			✓	✓
F1-AF	60 x 4 x H		25500			✓	✓
F1-AF	60 x 6 x H		25500			✓	✓
F1-AF	60 x 10 x H		25500			✓	✓
F1-AF	60 x 12 x H		25500			✓	✓
F1-AF	65 x 4 x H1	2-1/2" x 5/32" x H1	23500			✓	✓
F1-AF	65 x 6 x H1	2-1/2" x 1/4" x H1	23500			✓	✓
F1-AF	65 x 10 x H1	2-1/2" x 3/8" x H1	23500			✓	✓
F1-AF	65 x 12 x H1	2-1/2" x 1/2" x H1	23500			✓	✓
F1-AF	70 x 4 x H1		21800			✓	✓
F1-AF	70 x 6 x H1		21800			✓	✓
F1-AF	70 x 10 x H1		21800			✓	✓
F1-AF	70 x 12 x H1		21800			✓	✓
F1-AF; F27	76 x 6 x H1	3" x 1/4" x H1	20100			✓	✓
F1-AF	76 x 10 x H1	3" x 3/8" x H1	20100			✓	✓
F1-AF	76 x 12 x H1	3" x 1/2" x H1	20100			✓	✓
F1-AF	80 x 4 x H1	3" x 5/32" x H1	19100			✓	✓
F1-AF	80 x 6 x H1	3" x 1/4" x H1	19100			✓	✓
F1-AF	80 x 10 x H1	3" x 3/8" x H1	19100			✓	✓
F1-AF	80 x 12 x H1	3" x 1/2" x H1	19100			✓	✓
F1-AF	100 x 6 x H2	4" x 1/4" x H2	15300			✓	✓
F1-AF	100 x 10 x H2	4" x 3/8" x H2	15300			✓	✓
F1-AF	100 x 12 x H2	4" x 1/2" x H2	15300			✓	✓

	mm	"	mm	"	mm	"	mm
H	6	1/4	10	3/8			
H1	6	1/4	10	3/8	12	1/2	
H2			10	3/8	12	1/2	20

# FLAP DISCS & WHEELS

**LARGEst diameter,  
MAXimum efficiency!**

**Enabled by advanced  
durability technology.**

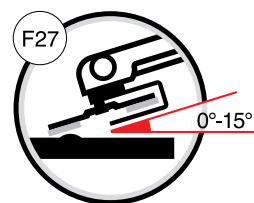
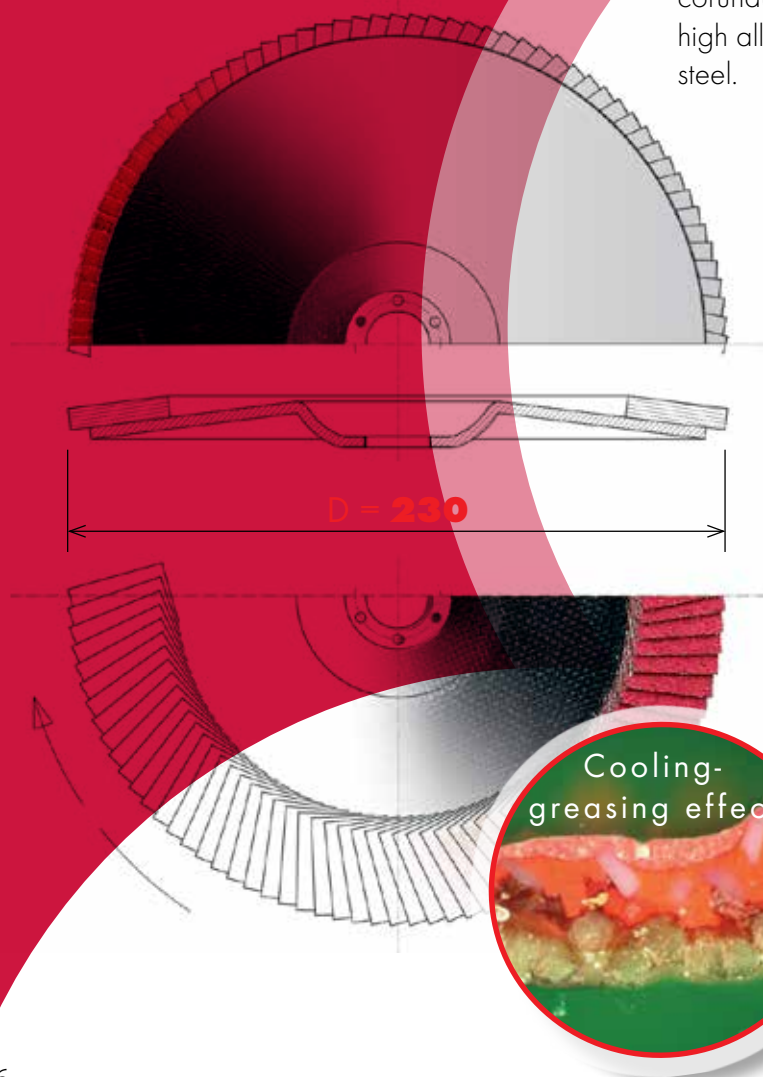
We produce flap discs and wheels in three quality levels, i.e. **PROFESSIONAL**, **EXTRA** and **SPECIAL**.

Flap discs are intended for grinding using manual grinding machines at a maximum peripheral speed of **80 m/s**. They are distinguished by high durability, low noise level, smoother running, ease of use and highly efficient grinding. They can be used for basic grinding, fine weld grinding, polishing, edge finishing, surface treatment, cleaning of casts, etc.

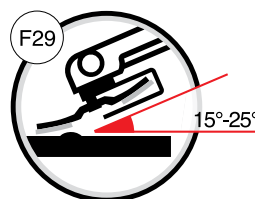
When processing various materials (metals, wood, plastics) there is no need to change quality of the disc since the difference in grinding effect is only noticeable after grinding for a longer period of time.

Quality **A** flap discs which are made of abrasive cloth on which corundum grains are applied can be used for the treatment of aluminum, non-ferrous metals, softer alloys, low alloyed steel, plastics and wood.

However, use the **Z** quality flap discs which are made of abrasive cloth with zirconia corundum grains and **SA** quality flap discs which are made of abrasive cloth with ceramic corundum grains for treating alloys, fine non-ferrous metals, high alloyed, temperature resistant and thermally reinforced steel.



Flat shape **F27** allows better control of the grinding direction and is therefore suitable for treatment of edges!



The **F29** convex shape allows larger contact surface between the disc and the workpiece and is therefore suitable for higher material removals.

# FLAP DISCS



D/mm

115 – 230

Flap discs are intended for grinding using manual grinding machines. They are distinguished by high durability, low noise level, smoother running, ease of use and high efficiency.



PROFESSIONAL	EXTRA	SPECIAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete	Rubber, plastics	Wood
A			●	●	○	●	●	●				●
Z	Z	Z	●	●	●	●	●	●				○
SA	SA	SA	●	●	●	●						
SC		SC				○			●	●	●	○

Shapes	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging	Grit size	PROFESSION- AL	EXTRA	SPE- CIAL
	mm	"			pcs				
F27, F29	100 x 16	4" x 5/8"	15300	80	10	40, 60, 80, 120	✓	✓	✓
F27, F29	115 x 22.23	4-1/2" x 7/8"	13300			36, 40, 60, 80, 120	✓	✓	✓
F27, F29	125 x 22.23	5" x 7/8"	12250			36, 40, 60, 80, 120	✓	✓	✓
F27, F29	150 x 22.23	6" x 7/8"	10200			36, 40, 60, 80, 120	✓	✓	✓
F27, F29	180 x 22.23	7" x 7/8"	8500			36, 40, 60, 80, 120	✓	✓	✓
F27, F29	230 x 22.23	7" x 7/8"	6650			36, 40, 60, 80, 120	✓	✓	✓



# FLAP DISCS - SPECIAL DESIGNS

for grinding, pre-polishing, polishing and cleaning



D/mm

115 – 180



SPECIAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete	Rubber, plastics	Wood
ANGLED Z, SA	●	●	○							●
POLIRCO A	●	●	●	●	●	●				○
SOFT POLISH SiC	●	●	●	●	●	●				
SUPER FINISH	●	●	●	●	●	○				
FELT	●	●	●	●	●	●				
STRIPITCO	●	●	●	●		●	●	●	●	○

## ANGLED– weld grinding


Shape	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging	Grit size	SPECIAL
	mm	"			pcs		
F27	100 x 16	4" x 5/8"	15300	80	10	40, 60, 80, 120	✓
F27	115 x 22.23	4-1/2" x 7/8"	13300			40, 60, 80, 120	✓
F27	125 x 22.23	5" x 7/8"	12250			40, 60, 80, 120	✓






## POLIRCO – pre-polishing



Shapes 	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	SPECIAL
	mm	"					
F27, F29	115 x 22.23	4-1/2" x 7/8"	13300	80	10	Coarse, medium, fine	✓
F27, F29	125 x 22.23	5" x 7/8"	12250			Coarse, medium, fine	✓


## SOFT POLISH – pre-polishing



Shape 	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	SPECIAL
	mm	"					
F27	115 x 22.23	4-1/2" x 7/8"	13300	80	10	80, 150, 280, 400, 600	✓
F27	125 x 22.23	5" x 7/8"	12250			80, 150, 280, 400, 600	✓


## SUPER FINISH – pre-polishing



Shapes 	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	SPECIAL
	mm	"					
F27, F29	115 x 22.23	4-1/2" x 7/8"	13300	80	10	200, 280, 400	✓
F27, F29	125 x 22.23	5" x 7/8"	12250			200, 280, 400	✓


## FELT – polishing with pastes



Shapes 	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	SPECIAL
	mm	"					
F27, F29	115 x 22.23	4-1/2" x 7/8"	13300	80	10	paste	✓
F27, F29	125 x 22.23	5" x 7/8"	12250			paste	✓

## STRIPITCO – surface cleaning



Shapes 	Dimensions D x H		Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	SPECIAL
	mm	"					
F27, F29	115 x 22.23	4-1/2" x 7/8"	13300	80	10	coarse	✓
F27, F29	125 x 22.23	5" x 7/8"	12250			coarse	✓
F27, F29	150 x 22.23	6" x 7/8"	10200			coarse	✓
F27, F29	180 x 22.23	7" x 7/8"	8500			coarse	✓



# SPINDLE MOUNTED FLAP WHEELS



D/mm

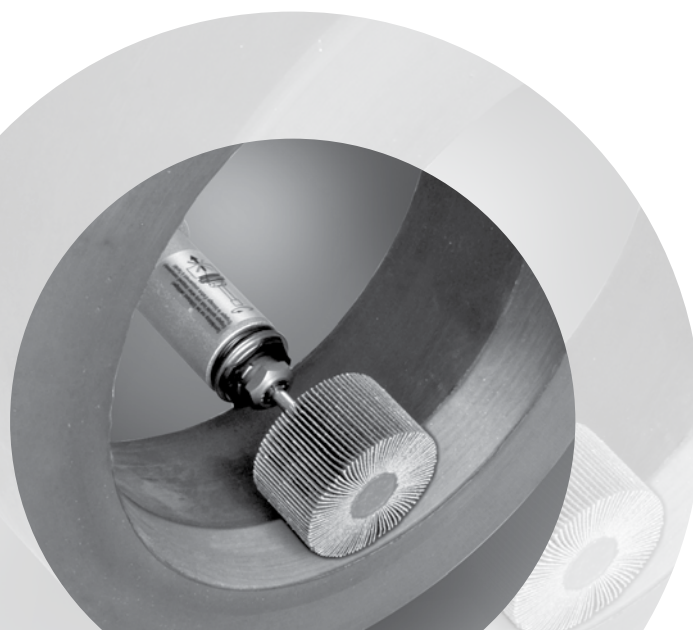
15 – 80

Spindle-mounted flap wheels abrasives are intended for grinding using manual grinding machines. They are used for treatment of smaller spaces that are difficult to reach, products with concave shapes, edges, surfaces and welds.



PROFESSIONAL	EXTRA	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete	Rubber, plastics	Wood
A		●	●	○		○	○		○	○	○
Z		●	●	●	●	○	○	○	○	○	○
	SA	●	●	●	●		○				

Dimension D x T mm	Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	PROFESSIONAL	EXTRA
15 x 10 - 15	27500	22	25	40 – 400	✓	✓
20 x 10 - 20	27500	29			✓	✓
25 x 10 - 20	27500	35			✓	✓
30 x 10 - 20	22900	35			✓	✓
40 x 10 - 30	16900	35			✓	✓
50 x 10 - 40	13500	35			✓	✓
60 x 15 - 50	11300	35			✓	✓
80 x 20 - 50	8400	35			✓	✓



# FLAP WHEELS



D/mm

**100 – 350**

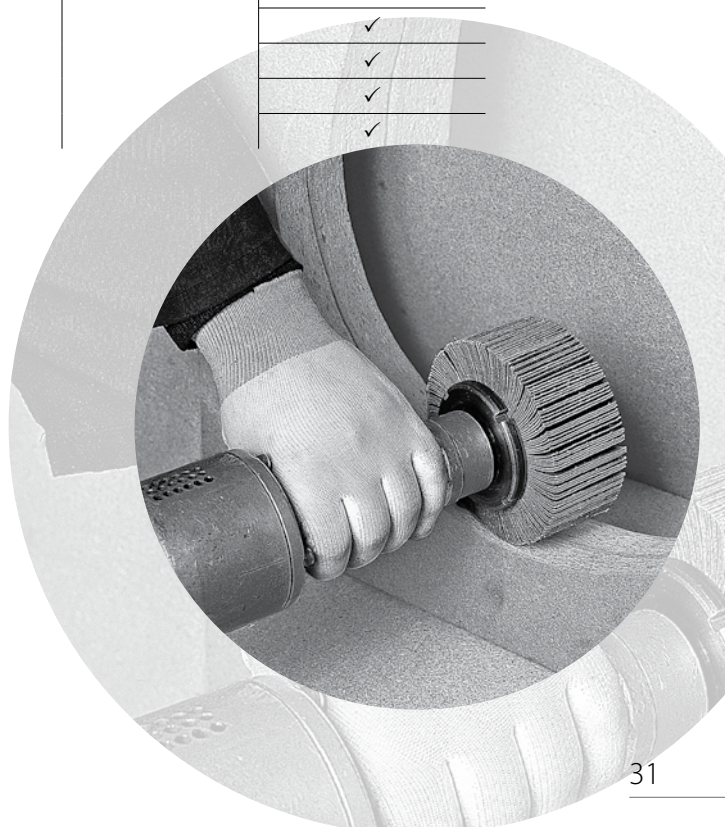
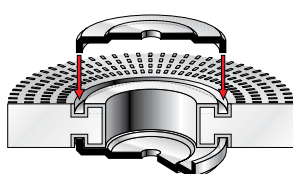
Flap wheels are intended for grinding surfaces using stable grinding machines. They are used to remove material and even out the surface roughness prior to applying paint or galvanised treatment.



PROFESSIONAL	Steel	Metals	Stainless steel	Casts	Aluminum	Non-ferrous metals	Stone	Concrete	Rubber, plastics	Wood
A	●	●	○	●	○	○		○	○	○
Z	●	●	●	●	○	○	○	○	○	○
SB	●	●	●	●	○	○				

Dimension D x V mm	Rotation speed min <sup>-1</sup>	Peripheral speed m/s	Packaging pcs	Grit size	PROFESSIONAL
100 x 25 - 30	8600	45	25	40 – 400	✓
120 x 25 - 30	7100				✓
150 x 25 - 30 - 50	5700				✓
165 x 25 - 30 - 50	5200				✓
200 x 25 - 30 - 50	4300				✓
250 x 25 - 30 - 50	3400				✓
300 x 30 - 50	2850	41			✓
350 x 30 - 50	2250				✓

Always use appropriate flanges for mounting!



# GENERAL INFORMATION

## RUN-OUT TOLERANCES OF GRINDING PRODUCTS

The table of maximum deviations by grinding tool diameters and values of maximum run-out tolerances.

D mm	TD	TPL	TRL
30 ≤ D ≤ 100	± 2	0.5	0.5
100 < D ≤ 150	± 2.5	0.6	0.6
150 < D ≤ 200	± 3	0.8	0.8
200 < D ≤ 300	+ 5, - 1	1	1
300 < D ≤ 400	+ 6, - 0	1.2	1.2

## MAXIMUM ROTATION SPEED

Maximum No. of revolutions depends on the grinding tool diameter and maximum peripheral speed.

D mm	Peripheral speed m/s									
	20	25	32	35	40	45	50	63	80	100
40	9550	11950	15300	16750	19100	21500	23900	30100	38200	47200
50	7650	9550	12250	13400	15300	17200	19100	24100	30600	38200
63	6100	7600	9750	10650	12150	13650	15200	19100	24300	30250
80	4800	6000	7650	8400	9550	10750	12000	15100	19100	23900
100	3850	4800	6150	6700	7650	8600	9550	12100	15300	19100
115	3350	4200	5350	5850	6500	7500	8350	10500	13300	16650
125	3100	3850	4900	5350	6150	6900	7650	9650	12250	15300
150	2550	3200	4100	4500	5100	5750	6400	8050	10200	12700
180	2150	2700	3400	3750	4250	4800	5350	6700	8500	10650
200							4800	6050	7650	9550
230							4200	5250	6650	8350
250								4850	6150	7650
300								4050	5100	6400
350/356								3450	4400	5500
400/406								3050	3850	4800

Grinding tool peripheral speed can be determined according to the following formula:

$$v = \frac{D \times \pi \times n}{60000}$$

The required rotation speed can be determined according to the following formula:

$$n = \frac{60000 \times v}{D \times \pi}$$

**v** – peripheral speed (m/s)  
**D** – grinding tool diameter (mm)  
**n** – rotational speed (rev./min.)  
**π** – 3.14159

# GRINDING TOOL IMBALANCE

k coefficient for imbalance calculation is shown in the following table and depends on the shape, dimensions and the method of using the grinding tool:

Calculation of the allowed grinding tool imbalance:

$$ma = k \sqrt{m_1}$$

**ma** – imbalance (g)  
**k** – imbalance calculation coefficient  
**m1** – grinding tool weight (g)

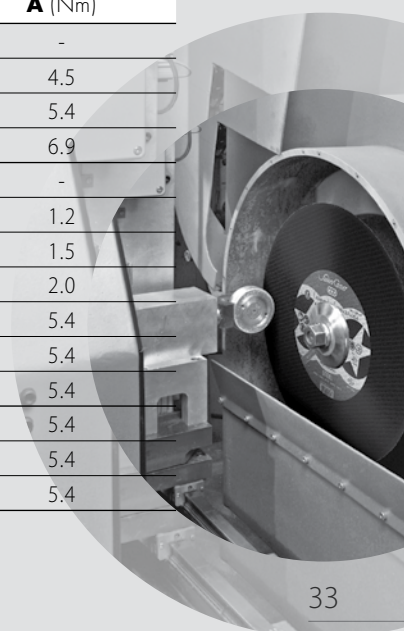
Method	Machine type	Shape of grinding tools	Dimensions		Max operating speed coefficient m/s 63 < Vs ≤ 100
			D mm	T mm	
Grinding	Manual grinding machines	F1, F27, F28	115 < D ≤ 150	-	0.25
			115 < D ≤ 180	-	0.20
			D > 180	T ≤ 6	0.20
				T > 6	0.20
	Stationary, portable and other machines	F1	All dimensions		0.40
High-pressure grinding	Stationary machines	F1	All dimensions		0.8
Grinding: – precision – external cylindric – surface – sharpening	Stationary machines	All shapes	125 < D ≤ 300	All dimensions	0.16
			300 < D ≤ 610		0.20
			D > 600		0.25
Cutting	Manual cutting machines	F41, F42	115 < D ≤ 400	-	0.20
	Stationary machines	F41, F42	D ≤ 300	-	0.32
			D > 300	-	0.40

# GRINDING TOOL SIDE LOAD TEST

In accordance with the standard EN12413 we are required to perform side load tests of the grinding tools which are used with manual machines.

Shapes of grinding tools	Maximum peripheral speed	External diameter	Side load		
	Vs (m/s)	D (mm)	Single point test Fs1 (N)	Three point test Fs3 (N)	Impact test A (Nm)
Convex grinding wheels F27, F28, F29a	≤ 80	≥ 115	290	-	-
		150	290	-	4.5
		180	290	-	5.4
		230	290	-	6.9
Flat and convex cutting wheels F41, F42a	≤ 80	≥ 115	40	-	-
		150	50	-	1.2
		180	50	-	1.5
		230	50	-	2.0
		300	125	150	5.4
		350/356	125	150	5.4
		400/406	125	150	5.4
	80 < Vs ≤ 100	300	125	150	5.4
		350/356	125	150	5.4
		400/406	125	150	5.4

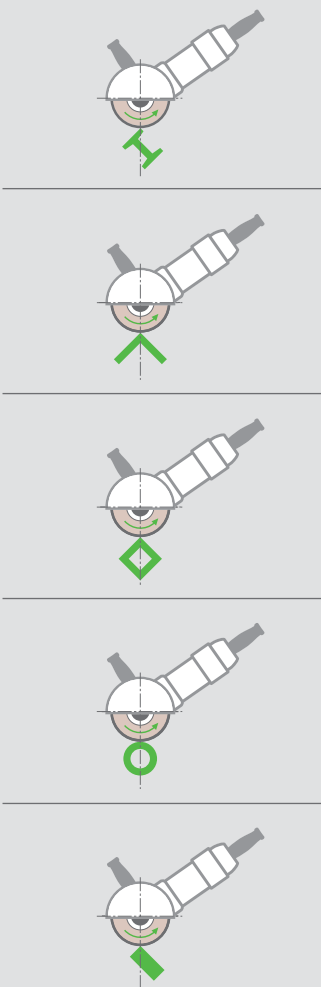
<sup>a</sup> = in accordance with the standard ISO 525





# CORRECT HANDLING

1. **ALWAYS** consider the instructions for proper storage!  
**Provide dry and aerated space without major temperature changes (temperature between 10° and 30°C and a maximum 70% of relative humidity).**  
**This will preserve the physical properties of reinforced resin-bonded grinding wheels for a period of up to three years or two years for non-reinforced models. The storage area must be as close as possible to the place of use, to avoid mechanical damage of grinding tools during transport, and condensation build-up during transport in colder conditions.**  
**Provide suitable racks, shelves, compartments or storage boxes for different shapes of grinding wheels.**
2. **ALWAYS** visually inspect the grinding tool prior to mounting and remove any damaged grinding tools!
3. **ALWAYS** use the grinding tool with the machine with a safety guard which must cover almost half of the grinding tool!
4. **ALWAYS** use non-reinforced cutting wheels only with stable stationary machines!
5. **ALWAYS** switch off the machine power supply and unplug the machine before you replace the grinding tool!
6. **ALWAYS** use the original tools supplied by the machine manufacturer when changing the grinding tool!
7. **ALWAYS** make sure that the rotational speed of the machine is not greater than the nominal operating speed marked on the grinding tool!
8. **ALWAYS** always use correct mounting flanges for grinding tools and check that they are undamaged and free of burrs!
9. **ALWAYS** use the cardboard base for soft mounting of flat grinding tools between the clamping flange!
10. **ALWAYS** consider that the newly clamped grinding tool requires the machine with a safety guard to be started with at operating speed and that the grinding tool operates for at least 60 seconds at operating speed before being cutting or grinding!
11. **ALWAYS** use protective work equipment: clothing, mask, goggles or visor, as well as gloves and hearing protection!
12. **ALWAYS** regularly check machine speed, especially after performing maintenance works or repairs of the machine!
13. **ALWAYS** check the driving belt tension to achieve optimum power transmission!
14. **ALWAYS** check the clamping of the workpiece before starting cutting or grinding operations!
15. **ALWAYS** place the portable machine in an appropriate place where there is no possibility of mechanical damage of the grinding tool!
16. When working with a portable machine **ALWAYS** maintain a comfortable and balanced position!
17. When grinding with convex grinding tools on an angular grinding machine **ALWAYS** consider the prescribed tilt angle between the workpiece and the grinding wheel!
18. **ALWAYS** keep the workplace tidy to prevent slips or falls during grinding operations!
19. **ALWAYS** consider proper cutting of workpieces with different geometrical shapes!



## INCORRECT HANDLING

1. **NEVER** store the grinding tools in a humid environment or at extreme temperatures!
2. **NEVER** handle the grinding tools roughly!
3. **NEVER** mount a damaged grinding tool!
4. **NEVER** exceed the maximum permitted circumferential velocity marked on the grinding tool!
5. **NEVER** mount the grinding tool on the axis using excessive force!
6. **NEVER** use mounting flanges that are inappropriate, damaged, dirty or worn out!
7. **NEVER** tighten the mounting flange, as this could damage it!
8. **NEVER** use the cardboard base for soft mounting with convex grinding tools!
9. **NEVER** use a machine that is not in good mechanical condition!
10. **NEVER** use the machine without a safety guard and protective equipment!
11. **NEVER** use the machine without an appropriate dust removal system and dust protection equipment!
12. **NEVER** stop the machine after operation by pressing on the grinding tool (lateral or circumferential), but always switch the machine off and allow the tool to stop rotating!
13. **NEVER** let the grinding tool be pinched while cutting the workpiece!
14. **NEVER** apply excessive force to the grinding tool, as this may slow down the engine!
15. **NEVER** set the grinding tool down by using the cable of the grinding machine, because the grinding tool can be fractured by the full weight while releasing it which can cause the grinding tool to fall apart later!
16. **NEVER** grind using a convex grinding wheel or disc on an angular grinding machine using a smaller tilt angle than prescribed!
17. **NEVER** use the machine without having full control and being in a fully balanced position!
18. **NEVER** grind the lateral sides of cutting wheels!

# METAL FABRICATION



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