

*SWATY COMET*



# Flex SC

THIN WHEELS & FLAP WHEELS

2015 Catalogue



*SWIATY COMET*



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### QUALITY LEVELS

#### **STANDARD**

STANDARD resin bonded cutting-off and grinding wheels of SKORPIO, FLEXCO, 3STARS FLEX and TOROFLEX brands are intended for general-purpose cutting on various materials, taking into account the optimum ratio between cutting or grinding effect and grinding wheels price.

#### **EXTRA**

The EXTRA product category is distinguished by a high quality level and is therefore suitable for more demanding industrial uses. It provides excellent cutting and grinding properties: a quick and clear cut without overheating of the workpiece, as well as soft grinding with high material removal rates.

#### **SPECIAL**

SPECIAL resin bonded grinding wheels with zirconium are intended for use in industry and ensure minimisation of cutting costs, optimum stock removal, minimum influence on workpiece surface (no overheating) and correspondingly higher durability.





SWATYCOMET BRANDS



SKORPIO



FLEXCO



3STARS



TOROFLEX



SWATYRASANT



TRI ZVEZDE



Standard quality cutting-off wheels are intended for general applications in the cutting of various materials, taking into account the optimal ratio of cutting effect to product price.



SKORPIO  
FLEXCO  
TOROFLEX

3STARS

Quality	Quality	Material	Quality class
A60T-BF, A46T-BF	A60SBF, A46SBF	Steel, metals	Standard
20A60S-BF, 20A46S-BF	A60SBF, A46SBF	Stainless steel, steel, metals	Standard
C60S-BF, C46S-BF		Stone, concrete	Standard
C60T-BF		Stel, Inox, Al, stone, plastic, aluminum, marble	Universal



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41, F42	100 x 1 x 16	80	15300	60	25
F41, F42	115 x 1 x 22,23		13300		
F41, F42	125 x 1 x 22,23		12250		
F41, F42	100 x 1,2 x 16		15300	46	
F41, F42	115 x 1,2 x 22,23		13300		
F41, F42	125 x 1,2 x 22,23		12250		
F41, F42	100 x 1,6 x 16		15300		
F41, F42	115 x 1,6 x 22,23		13300		
F41, F42	125 x 1,6 x 22,23		12250		
F41, F42	150 x 1,6 x 22,23		10200		
F41, F42	180 x 1,6 x 22,23		8500		
F41, F42	150 x 1,9 x 22,23		10200		
F41, F42	180 x 1,9 x 22,23		8500		
F41, F42	230 x 1,9 x 22,23		6650		

F41 type cutting-off wheels are also available with the following bores:

D = 100 mm  
D = 230 mm

H = 10 mm  
H = 16 mm



# THIN CUTTING-OFF WHEELS

Diameters 110–230 mm

SKORPIO EXTRA  
3STARS PROFESSIONAL  
PRODIMENSION




The EXTRA product category is distinguished by a high quality level; therefore, it is suitable for more demanding industrial uses.

They are manufactured from special selected abrasive grains and bonding system which yields convincing, extraordinary results: quick and precise cutting results in optimum handling. These wheels last longer and are easier to work with, since narrow cuts mean that only minimum pressure is needed for cutting.

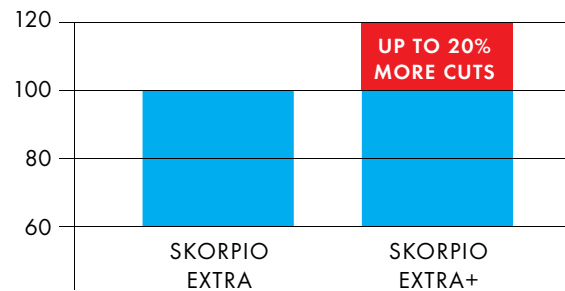
They are improved to achieve better cutting capabilities without overheating of the workpiece, along with even shorter cutting times and generating of less waste. All this yields significant savings in terms of time and labour costs.

Cutting-off wheels with a thickness of 0.75 mm should be used with a flange for soft fastening.

Quality	Material	Quality class
EA60T-BF, EA46T-BF	Steel, metals	Extra
 E20A60S-BF, E20A46S-BF	Stainless steel, steel, metals	Extra plus+
E54A60S-BF, E54A46S-BF	Aluminium	Extra



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Grit size	Packaging (units)
F42	115 x 0.75 x 22.23	80	13300	60	25
F42	125 x 0.75 x 22.23		12250		
F41, F42	100 x 1 x 16		15300		
F41, F42	115 x 1 x 22.23		13300		
F41, F42	100 x 1.6 x 16		15300		
F41, F42	125 x 1 x 22.23		12250		
F41, F42	115 x 1.6 x 22.23		13300	46	
F41, F42	125 x 1.6 x 22.23		12250		
F41, F42	150 x 1.6 x 22.23		10200		
F41, F42	180 x 1.6 x 22.23		8500		
F41, F42	150 x 1.9 x 22.23		10200		
F41, F42	180 x 1.9 x 22.23		8500		
F41, F42	230 x 1.9 x 22.23		6650		





Standard quality cutting-off wheels are intended for general applications in the cutting of various materials, taking into account the optimal ratio of cutting effect to product price.



SKORPIO	FLEXCO	TOROFLEX	3STARS FLEX	Material	Quality class
Quality	Quality	Quality	Quality		
A30S-BF	A30SBF			Steel, metals	Standard
20A30P-BF	4A30QBF			Stainless steel, steel	Standard
19A30S-BF	A30PBF, A30RBF			Grey cast, aluminium	Standard
C30S-BF	C30PBF			Stone, concrete	Standard



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)
F41	100 x 2 x 16	80	15300	25
F41, F42	100 x 2.5 x 16		15300	
F41, F42	100 x 3 x 16		15300	
F41	115 x 2 x 22.23		13300	
F41, F42	115 x 2,5 x 22.23		13300	
F41, F42	115 x 3 x 22.23		13300	
F41	125 x 2 x 22.23		12250	
F41, F42	125 x 2.5 x 22.23		12250	
F41, F42	125 x 3 x 22.23		12250	
F41	150 x 2 x 22.23		10200	
F41, F42	150 x 2.5 x 22.23		10200	
F41, F42	150 x 3 x 22.23		10200	
F41	180 x 2 x 22.23		8500	
F41, F42	180 x 2.5 x 22.23		8500	
F41, F42	180 x 3 x 22.23		8500	
F41	230 x 2 x 22.23		6650	
F41, F42	230 x 2.5 x 22.23		6650	
F41, F42	230 x 3 x 22.23		6650	

F41 type cutting-off wheels are also available with the following bores:

D = 100 mm	H = 10 mm
D = 115, 125 mm	H = 13 mm
D = 180 mm	H = $\diamond$
D = 150 - 230 mm	H = 13, 16, 20, 25.4, 32 mm





## CUTTING-OFF WHEELS




Diameters 100–230 mm



The EXTRA product category is intended for professional industrial use where high quality products are required – quick cuts, high durability of cutting-off wheels.




### SKORPIO EXTRA 3STARS PROFESSIONAL PRODIMENSION

Quality	Material	Quality class			
EA30T-BF	Steel, metals	Extra			
 E20A30R-BF	Stainless steel, steel	Extra			
Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	
F41	 100 x 2 x 16	80	15300	25	
F41, F42	 100 x 2.5 x 16		15300		
F41, F42	100 x 3 x 16		15300		
F41	115 x 2 x 22.23		13300		
F41, F42	115 x 2.5 x 22.23		13300		
F41, F42	115 x 3 x 22.23		13300		
F41	125 x 2 x 22.23		12250		
F41, F42	125 x 2.5 x 22.23		12250		
F41, F42	125 x 3 x 22.23		12250		
F41	150 x 2 x 22.23		10200		
F41, F42	150 x 2,5 x 22.23		10200		
F41, F42	150 x 3 x 22.23		10200		
F41	180 x 2 x 22.23		8500		
F41, F42	180 x 2,5 x 22.23		8500		
F41, F42	180 x 3 x 22.23		8500		
F41	230 x 2 x 22.23		6650		
F41, F42	230 x 2.5 x 22.23		6650		
F41, F42	230 x 3 x 22.23		6650		



### Quality Material Quality class

E54A30S-BF	Grey cast, aluminium	Extra			
Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	
F41, F42	 100 x 3 x 16	80	15300	25	
F41, F42	115 x 3 x 22.23		13300		
F41, F42	125 x 3 x 22.23		12250		
F41, F42	150 x 3 x 22.23		10200		
F41, F42	180 x 3 x 22.23		8500		
F41, F42	230 x 3 x 22.23		6650		



Intended for cutting of all types of steel and metal on flat, manual cutting machines.

SKORPIO  
SKORPIO EXTRA

Quality	Material	Quality class
AxxT-BF	Steel, metals	Standard
20AxxR-BF	Stainless steel, steel	Standard
E AxxT-BF	Steel, metals	Extra
E20AxxR-BF	Stainless steel, steel	Extra



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Grit size xx	Packaging (units)
F41	50 x 1.0 x H	80	30600	46, 60	100
F41	50 x 1.2 x H		30600		
F41	50 x 1.6 x H		30600		
F41	50 x 1.8 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		23500		
F41	65 x 1.2 x H		23500		
F41	65 x 1.6 x H		23500		
F41	65 x 1.8 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		20100		
F41	76 x 1.2 x H		20100		
F41	76 x 1.6 x H		20100		
F41	76 x 1.8 x H		20100		
F41	80 x 1.0 x H		19100		
F41	80 x 1.2 x H		19100		
F41	80 x 1.6 x H		19100		
F41	80 x 1.8 x H		19100		
F41	50 x 2, 2.5, 3 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		23500		
F41	70 x 2, 2.5, 3 x H		21850		
F41	76 x 2, 2.5, 3 x H		20100		
F41	80 x 2, 2.5, 3 x H		19100		

mm

H 6 10






# CUTTING AND GRINDING WHEELS

Diameters 100-150 mm

SKORPIO 2x2  
3STARS 2x2


Quality	Material	Quality class
 20A46S-BF	Stainless steel, steel, metals	Standard
E20A46S-BF	Stainless steel, steel, metals	Extra



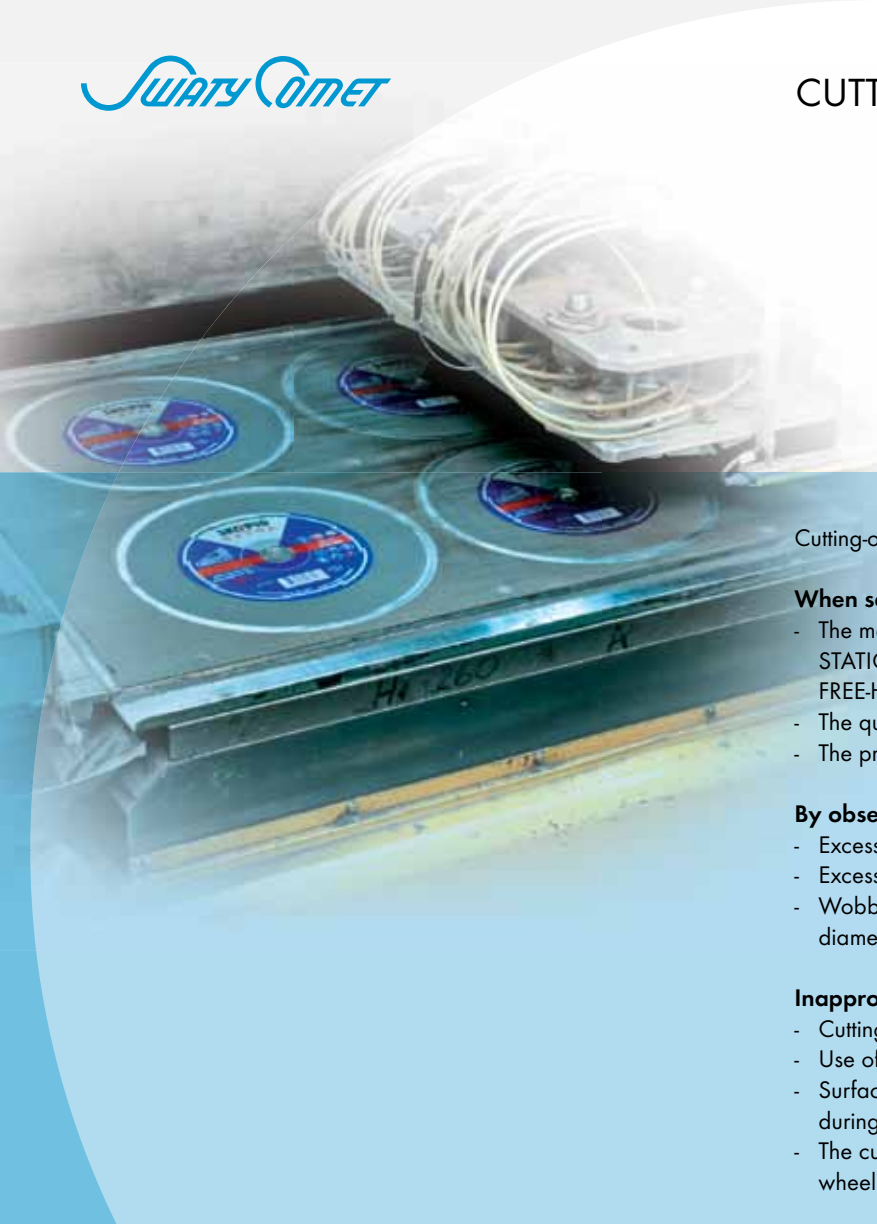
Our 2x2 products enable safe cutting and grinding. Due to stronger reinforcement (3 nets can withstand higher side loads), they can also be used for grinding after cutting. They do not contain Fe, S or Cl, so they are suitable for cutting metals, steels and also stainless steels.

Advantages:

- Cutting and grinding without tool changes
- Time savings
- Reduced costs
- Short cuts

Type	Dimensions D x T x H mm	Peripheral speed		Grit size	Packaging (units)
		m/s	Rpm 1/min		
F27-42 	100 x 1.9 x 16	80	15300	46	25
F27-42	100 x 2.5 x 16		15300		
F27-42	115 x 1.9 x 22.23		13300		
F27-42	115 x 2.5 x 22.23		13300		
F27-42	125 x 1.9 x 22.23		12250		
F27-42	125 x 2.5 x 22.23		12250		
F27-42	150 x 2.5 x 22.23		10200		





Cutting-off wheels of larger dimensions are intended for machine cutting of various profiles.

**When selecting the cutting-off wheel, you should always take into account the following:**

- The machine type, which determines the type of cutting;  
STATIONARY cutting on portable or stationary cutting machines,  
FREE-HAND cutting on gas- or electrically-operated manual cutting machines;
- The quality and dimensions of the workpiece;
- The prescribed peripheral speed.

**By observing the above requirements, you will be able to avoid the following problems:**

- Excessive duration of cutting;
- Excessive wheel wear due to low machine power and low peripheral speed or insufficient rpms;
- Wobbly cuts, which may occur as a result of using a too thin cutting-off wheel, cutting machine malfunction, or an inappropriate diameter or damaged, dirty or worn out flange.

**Inappropriate wheel selection may lead to:**

- Cutting-off wheels can fly off due to cutting of large non-fixed workpieces;
- Use of extreme pressures during cutting as a result of too hard bond, insufficient peripheral speed or too low rpms;
- Surface damage to the cutting-off wheel due to inappropriate cutting machine or because the workpiece grips the cutting-off wheel during operation or due to too rough handling of the cutting-off wheel;
- The cutting-off wheel may also break due to forcible cutting, inappropriate flange or fastening method, damage to the cutting-off wheel bore or too high load on the machine axle.

Grinding prohibited



Free-hand grinding or cutting prohibited



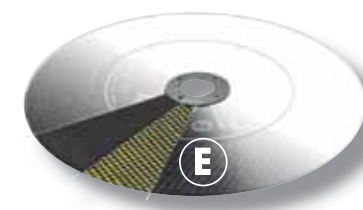
Wet cutting prohibited



Use of damaged products prohibited



Internally reinforced



Externally reinforced



## CUTTING-OFF WHEELS

Diameters 300–400 mm



These cutting-off wheels are intended for cutting smaller profiles.



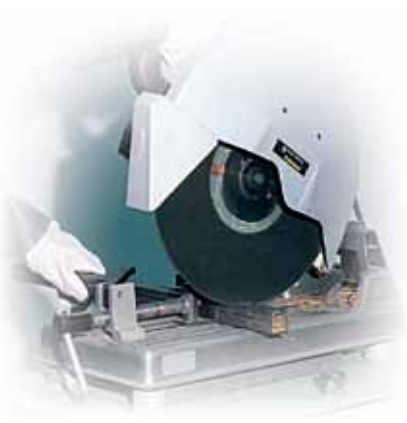
SKORPIO FLEXCO TOROFLEX	Quality	Material	Quality class			
A36P-BF		METALS, steel, general and high-strength construction steel, tool steel, low and high-alloy stainless steel.	Standard			
Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Grit size	Packaging (units)	
F41	300 x 2.5 x H	80	5100	E	25	
F41	300 x 2.8 x H	80	5100	E		
F41	300 x 2.8 x H	63	4050	I		
F41	350 x 2.5 x H	80	4400	E	10	
F41	350 x 3.0 x H	80	4400	E		
F41	350 x 3.0 x H	63	3450	I		
F41	400 x 3.0 x H1	80	3850	E		
F41	400 x 3.5 x H1	63	3050	I		

	Quality	Material	Quality class			
	20A30P-BF	STAINLESS STEEL, low and high-alloy stainless steel sheet metal, steel, general and high-strength construction steel, tool steel.	Standard			
Type	Dimensions mm	Peripheral speed m/s	Rpm 1/min	Grit size	Packaging (units)	
F41	300 x 2.8 x H	80	5100	E	25	
F41	350 x 3.0 x H		4400	E	10	

	Quality	Material	Quality class			
	C46S-BF	STONE, fire-resistant brick, clinker, ceramics, granite, reinforced concrete, marble and ordinary types of concrete, concrete with paving stones.	Standard			
Type	Dimensions mm	Peripheral speed m/s	Rpm 1/min	Grit size	Packaging (units)	
F41	300 x 2.8 x H	80	5100	E	25	
F41	350 x 3.0 x H		4400	E	10	

mm					
H	20	22,23	25.4		
H1			25.4		

Products with various bore sizes (H) are available on customer request.





These cutting-off wheels are intended for cutting smaller profiles.



SKORPIO  
FLEXCO  
TOROFLEX

Quality

A30S-BF

3STARS FLEX

Quality

A30SBF

Material

METALS, steel, tool steel, general and high-strength construction steel.

Quality class

Standard

Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	300 x 3 x H	80	5100	E	25
F41	300 x 3 x H	100	6400	I	
F41	350 x 3.5 x H	80	4400	E	10
F41	350 x 3.5 x H	100	5500	I	

Quality Quality Material



20A30P-BF

Quality

4A30QBF

Material  
STAINLESS STEEL, low and high-alloy stainless steel sheet metal, steel, general and high-strength construction steel, tool steel.

Quality class

Standard

Type	Dimensions mm	m/s	1/min	(units)
F41	300 x 3 x H	80	5100	E 25
F41	350 x 3.5 x H		4400	E 10

Quality Material

19A30S-BF

Material  
GREY CAST, steel, general and high-strength construction steel, nodular and tempered alloy, steel alloy, aluminium, other colour metals.

Quality class

Standard

Type	Dimensions mm	m/s	1/min	(units)
F41	300 x 3 x H	80	5100	E 25
F41	350 x 3.5 x H		4400	E 10

mm

H 20 22.23 25.4 30 32

Products with various bore sizes (H) are available on customer request.



## CUTTING-OFF WHEELS

Diameters 400 mm



These cutting-off wheels are intended for cutting large profiles and casts in industry.

SKORPIO  
FLEXCO  
TOROFLEX 3STARS FLEX

Quality	Quality	Material	Quality class
A24S-BF	A24S-BF	METALS, grey cast, steel, general and high-strength construction steel.	Standard

Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	400 x 4 x H	80	3850	E	10
F41	400 x 4 x H	100	4800	I	

mm

H	25.4	32	40	60	76.2	80
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Cutting-off wheels with various bore sizes (H) are available on customer request.



SKORPIO  
FLEXCO  
TOROFLEX 3STARS FLEX

Quality	Quality	Material	Quality class
20A24P-BF	4A30QBF	STAINLESS STEEL, steel, tool steel, general and high-strength construction steel, low and high-alloy stainless steel, stainless steel sheet metal.	Standard
19A24S-BF		GREY CAST, steel, general and high-strength construction steel, nodular and tempered alloy, steel alloy, aluminium, other colour metals.	Standard

Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	400 x 4 x H	80	3850	E	10
F41	400 x 4 x H	100	4800	E	

mm

H	20	22.23	25.4	30	32
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Cutting-off wheels with various bore sizes (H) are available on customer request.





SKORPIO  
FLEXCO  
TOROFLEX

Quality	Quality	Material	Quality class
C30S-BF	C30PBF	STONE, fire-resistant brick, ceramics, granite, reinf. concrete, marble	Standard
C24S-BF	C30SBF	and ordinary types of concrete, concrete with paving stones, asphalt.	



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	300 x 3 x H	80	5100	E	25
F41	350 x 3.5 x H		4400	E	10
F41	400 x 4 x H1		3850	E	
F41	400 x 4 x H1	100	4800	E	

mm

H	20	22.23	25.4	30	32				
H1			25.4		32	40	60	76.2	80
H2							60	76.2	80

*Cutting-off wheels with various bore sizes (H) are available on customer request.*

These cutting-off wheels are intended for cutting non-metal materials.





## CUTTING-OFF WHEELS

Diameters 300–400 mm



These cutting-off wheels are intended for cutting various types of alloys in industry. They are distinguished by quick cuts and a high cutting factor.



### SKORPIO EXTRA

Quality Material Quality class

E479A24R-BF GREY CAST, nodular alloy, tempered alloy, steel alloy, steel, general and high-strength construction steel, tool steel, stainless steel, low and high-alloy stainless steel, stainless steel sheet metal. Extra

Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	400 x 4 x H	100	4800	I	10

Quality Material Quality class

EA36T-BF STEEL, tool steel, metal. Extra

ZA30T-BF INCONEL, cast, metal. Extra

Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	300 x 3 x H1	80	5100	E	25
F41	300 x 3 x H1	100	6400	E	25
F41	350 x 3 x H1	80	4400	E	10
F41	350 x 3 x H1	100	5500	E	10
F41	300 x 2.8 x H1	80	5100	E	10
F41	350 x 3.0 x H1	80	4400	E	25
F41	400 x 4.0 x H1	80	3850	E	10

mm

H	20	22.23	25.4	32	60	76.2	80
H1	20	22.23	25.4	32			

Cutting-off wheels with various bore sizes (H) are available on customer request.



The EXTRA cutting-off wheels are intended for cutting railway tracks. Their advantages include high durability, along with high-quality and precise cuts without workpiece overheating. Greater cutting wheel efficiency can be achieved by turning the machine.

SKORPIO  
SKORPIO EXTRA

Quality	Material	Quality class
45A24Q-BF	RAILWAYS, steel, general and high-strength steel, tool steel, stainless steel, low and high-alloy stainless steel.	Standard
23A24S-BF		Standard
E47A24Q-BF		Extra
E74A20R-BF		Extra



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	300 x 3 x H	80	5100	E	25
F41	300 x 4 x H	100	6400	E	
F41	350 x 3 x H	80	4400	E	10
F41	350 x 4 x H	100	5500	E	
F41	400 x 3 x H	80	3850	E	
F41	400 x 4 x H	100	4800	E	

mm

H	20	22.23	25.4
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*Cutting-off wheels with various bore sizes (H) are available on customer request.*

### WARNING!

Gas-operated manual cutting machines achieve the best results when cutting at maximum speed and power (constantly). Do not press hard while cutting, as this may cause overheating and burning of the railway track, rapid wear on the wheel, lower efficiency and breakage. Between individual cuts, breaks of at least 2 minutes are recommended.





## CUTTING-OFF WHEELS

Diameters 300–400 mm



Type E91C24S-BF cutting-off wheels are intended for cutting railway sleepers.

### SKORPIO EXTRA

Quality	Material		Quality class			
E91C24S-BF	RAILWAY SLEEPERS, marble and ordinary types of concrete, granite, ceramics, clinker, fire-resistant brick, stone.		Extra			
Type	Dimensions D x T x H mm		Peripheral speed m/s	Rpm 1/min	Reinf.	Packaging (units)
F41	300 x 3 x H		80	5100	E	25
F41	300 x 4 x H		100	6400	E	
F41	350 x 3 x H		80	4400	E	10
F41	350 x 4 x H		100	5500	E	
F41	400 x 3 x H		80	3850	E	
F41	400 x 4 x H		100	4800	E	
<b>mm</b>						
H	20	22.23	25.4			

*Cutting-off wheels with various bore sizes (H) are available on customer request.*



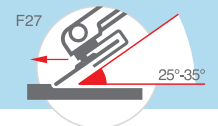
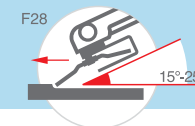
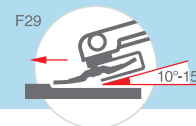
Grinding wheels are produced in three quality classes and in types F27, F27-GR and F28.

The EXTRA grinding wheels are intended for industry applications which require large material removal rates per time unit and a high grinding factor.

For the most demanding industry applications that involve machining of various materials, Swatycomet produces grinding wheels for specific applications called SPECIAL, which also contain zirconium.

In order to achieve optimum grinding effects, ALWAYS observe the prescribed angle between the grinding wheel and the workpiece.

ALWAYS maintain the prescribed angle between the grinding wheel and the workpiece!





# STRAIGHT GRINDING WHEELS


Diameters 50–100 mm




The F1-AF grinding wheels are intended for cleaning cast and forged pieces using flat, manual grinding machines. They are distinguished by optimal material removal rates and appropriate durability without workpiece overheating.



## SKORPIO

Quality	Material	Quality class
A24S-BF	Metals, steels	Standard
15A30R-BF	Metals, steels	Standard
 20A24R-BF	Stainless steel	Standard
ZA24R-BF	Alloys	Special

Type	Dimensions D x T x H mm	Peripheral		Packaging (units)
		speed m/s	Rpm 1/min	
F1-AF 	50 x 4 x H	80	30600	25
F1-AF	50 x 6 x H		30600	
F1-AF	50 x 10 x H		30600	
F1-AF	50 x 12 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 6 x H1		23500	
F1-AF	65 x 10 x H1		23500	
F1-AF	65 x 12 x H1		23500	
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	76 x 6 x H1		20100	
F1-AF	76 x 10 x H1		20100	
F1-AF	76 x 12 x H1		20100	
F1-AF	80 x 4 x H1		19100	
F1-AF	80 x 6 x H1		19100	
F1-AF	80 x 10 x H1		19100	
F1-AF	80 x 12 x H1		19100	
F1-AF	100 x 6 x H2		15300	
F1-AF	100 x 10 x H2		15300	
F1-AF	100 x 12 x H2		15300	

mm

H	6	10	
H1	6	10	12
H2		10	12 20



The STANDARD grinding wheels are intended for grinding and cleaning of welds, casts and forged pieces.

SKORPIO	3STARS FLEX	Material	Quality class
FLEXCO			
TOROFLEX			
Quality	Quality		
A24Q-BF	A30PBF	Steel, metals	Standard
A24S-BF	A30SBF	Steel, metals	Standard
20A24P-BF	4A30QBF	Stainless steel, steel	Standard
19A24S-BF	A30PBF, A30QBF	Grey cast, aluminium	Standard
C24S-BF	C30PBF	Stone, concrete	Standard



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)
F27	76 x 6 x 10	80	20380	25
F27	100 x 4 x 16		15300	10
F27	100 x 6 x 16		15300	
F27	100 x 7 x 16		15300	
F27	115 x 4 x 22.23		13300	
F27	115 x 6 x 22.23		13300	
F27	115 x 7 x 22.23		13300	
F27	115 x 8 x 22.23		13300	
F27	125 x 4 x 22.23		12250	
F27	125 x 6 x 22.23		12250	
F27	125 x 7 x 22.23		12250	
F27	125 x 8 x 22.23		12250	
F27	150 x 4 x 22.23		10200	
F27	150 x 6 x 22.23		10200	
F27	150 x 7 x 22.23		10200	
F27	150 x 8 x 22.23		10200	
F27	180 x 4 x 22.23		8500	
F27	180 x 6 x 22.23		8500	
F27	180 x 7 x 22.23		8500	
F27 (F28)	180 x 8 x 22.23		8500	
F27	180 x 10 x 22.23		8500	
F27	230 x 4 x 22.23		6650	
F27	230 x 6 x 22.23		6650	
F27	230 x 7 x 22.23		6650	
F27 (F28)	230 x 8 x 22.23		6650	
F27	230 x 10 x 22.23		6650	



On customer request, grinding wheels can also be produced as type F27-GR.




# GRINDING WHEELS

Diameters 100–230 mm


SKORPIO EXTRA  
3STARS PROFESSIONAL  
PRODIMENSION



The EXTRA grinding wheels are intended for professional use in industry whenever large material removal rates per time unit and a high grinding effects are required.

Quality	Material	Quality class
EA24R-BF	Steel, metals	Extra
 EA24S-BF	Steel, metals	Extra
E20A24R-BF	Stainless steel, steel	Extra
E54A30R-BF	Aluminium, alloys	Extra



Type	Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)
F27 	100 x 4 x 16	80	15300	10
F27	100 x 7 x 16		15300	
F27	115 x 4 x 22,23		13300	
F27	115 x 7 x 22,23		13300	
F27	115 x 8 x 22,23		13300	
F27	125 x 4 x 22,23		12250	
F27	125 x 7 x 22,23		12250	
F27	125 x 8 x 22,23		12250	
F27	150 x 4 x 22,23		10200	
F27	150 x 7 x 22,23		10200	
F27	150 x 8 x 22,23		10200	
F27	180 x 4 x 22,23		8500	
F27	180 x 7 x 22,23		8500	
F27	180 x 8 x 22,23		8500	
F27	230 x 4 x 22,23		6650	
F27	230 x 7 x 22,23		6650	
F27	230 x 8 x 22,23		6650	





The SPECIAL grinding wheels are manufactured for specific industrial applications.

They are distinguished by:

- high level of quality
- high durability
- no fly-offs during grinding
- exceptional grinding properties
- aggressive material removal
- compliance with EN12413, OSA , FEPA



## SKORPIO SPECIAL 3STARS SPECIAL

Quality	Material	Quality class	Abrasive grain
ZA24R-BF	Steel, stainless steel, alloys	Special	ZA
ZA24S-BF	Steel, stainless steel, alloys	Special	ZA
EZA24S-BF	Steel, stainless steel, alloys	Special	ZA + Ceramic grain



Type	Dimensions D x T x H mm	Peripheral speed		Packaging (units)
		m/s	Rpm 1/min	
F27	100 x 4 x 16	80	15300	10
F27	100 x 7 x 16		15300	
F27	115 x 4 x 22.23		13300	
F27	115 x 7 x 22.23		13300	
F27	125 x 4 x 22.23		12250	
F27	125 x 7 x 22.23		12250	
F27	150 x 4 x 22.23		10200	
F27	150 x 7 x 22.23		10200	
F27	180 x 4 x 22.23		8500	
F27	180 x 7 x 22.23		8500	
F27 (F28)	180 x 8 x 22.23		8500	
F27	180 x 10 x 22.23		8500	
F27	230 x 4 x 22.23		6650	
F27	230 x 7 x 22.23		6650	
F27 (F28)	230 x 8 x 22.23		6650	
F27	230 x 10 x 22.23		6650	



On customer request, grinding wheels can also be produced as type F27-GR in F1-AF.

We also manufacture double layer grinding wheels with a thickness (T) of 7 mm.

ZA24R-BF  
ZA24S-BF  
EZA24S-BF

Soft grinding with high material removal rates for grinding various types of steel, stainless steel and alloys  
High material removal rates with long durability of grinding wheels for grinding various types of alloys, steel, stainless steel  
Exceptional quality with very aggressive material removal enabled by the use of the highest quality abrasives and a special bonding system, along with longest wheel durability, primarily for grinding of various alloys, steels and stainless steel






## SEMI-FLEXIBLE GRINDING WHEELS

Diameters 100–180 mm




Semi-flexible grinding wheels are intended for general cleaning of large surface areas. They are produced in grit sizes between 24 and 60, to be used for coarse, medium or fine grinding.

SKORPIO  
3STARS FLEX

Quality	Material	Quality class
A24 - A60	Steel	Standard
 20A24 - 20A60	Stainless steel	Standard
19A24 - 19A60	Grey cast	Standard
C24 - C60	Stone, concrete, marble	Standard



Type	Dimensions D x T x H mm	Peripheral speed		Packaging (units)
		m/s	Rpm 1/min	
F29 	100 x 3.5 x 22.23	80	15300	25
F29	115 x 3.5 x 22.23		13300	
F29	125 x 3.5 x 22.23		12200	
F29	150 x 3.5 x 22.23		10200	
F29	180 x 3.5 x 22.23		8500	



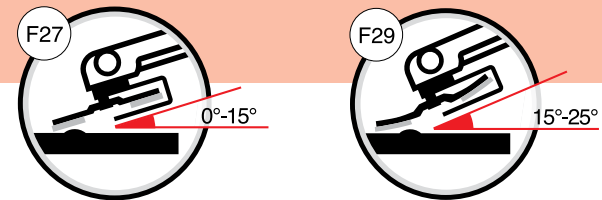
Coated abrasives are produced in three quality classes: STANDARD, EXTRA and SPECIAL.

Flap discs are intended for grinding with the use of manual grinding machines at a maximum peripheral speed of 80 m/s. They are distinguished by high durability, low noise levels, smoother grinding, simple use and high grinding efficiency. They can be used for basic grinding, fine grinding of welds, polishing, finishing of edges, surface treatment, cleaning of alloys, etc.

When switching to another material (metal, wood, plastics) disk quality need not be changed, since the difference in their grinding effects may only be noticed after a longer period of use.

A type discs, which are manufactured of emery cloth coated with aluminium oxide grains, should be used to finish aluminium, coloured metals, softer alloys, low-alloy steel, plastics and wood, while Z type discs, which are made of emery cloth coated with zirconium Al oxide grains are intended for the surface treatment of alloys, tough coloured metals and high-alloy, heat-resistant, thermally treated steel.

The grinding effect of flat F27 discs on flat surfaces is greater than that of depressed-centre F29 discs, irrespective of the size of the abrasive grains.





## MARKINGS ON WHEEL LABELS



Please read the instructions carefully.



Use a safety shield or protective eyewear.  
Use ear protection.  
Use a dust mask.



Use protective gloves.





Standard flap discs are intended for general grinding applications, primarily on structural steel, alloys and colour metals. They are designed to achieve the optimal ratio of grinding effect versus flap disc price.

SKORPIO  
3STARS

Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	STANDARD	<b>A</b>	●	○		●	●

● - Main application  
○ - Possible application

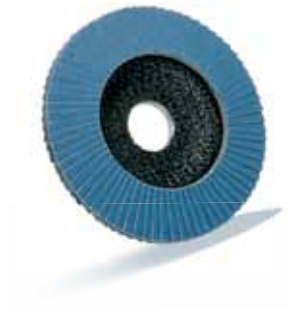


Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber numbers				
					40	60	80	100	120
F 27 	100 x 16	80	15.300	25	01.201	01.202	01.203	01.204	01.205
F 29 	100 x 16		15.300		01.206	01.207	01.208	01.209	01.210
F 27	115 x 22.23		13.300		01.211	01.212	01.213	01.214	01.215
F 29	115 x 22.23		13.300		01.216	01.217	01.218	01.219	01.220
F 27	125 x 22.23		12.200		01.221	01.222	01.223	01.224	01.225
F 29	125 x 22.23		12.200		01.226	01.227	01.228	01.229	01.230
F 27	150 x 22.23		10.200		01.231	01.232	01.233	01.234	01.235
F 29	150 x 22.23		10.200		01.236	01.237	01.238	01.239	01.240
F 27	165 x 22.23		9.300		01.241	01.242	01.243	01.244	01.245
F 29	165 x 22.23		9.300		01.246	01.247	01.248	01.249	01.250
F 27	180 x 22.23		8.500		01.251	01.252	01.253	01.254	01.255
F 29	180 x 22.23		8.500		01.256	01.257	01.258	01.259	01.260



# FLAP DISCS

Diameters 100–180 mm





SKORPIO  
3STARS

Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	STANDARD	<b>Z</b>	●	●	●	●	

● - Main application  
○ - Possible application



Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber numbers				
					40	60	80	100	120
F 27 	100 x 16	80	15.300	25	01.301	01.302	01.303	01.304	01.305
F 29 	100 x 16		15.300		01.306	01.307	01.308	01.309	01.310
F 27	115 x 22		13.300		01.311	01.312	01.313	01.314	01.315
F 29	115 x 22.23		13.300		01.316	01.317	01.318	01.319	01.320
F 27	125 x 22.23		12.200		01.321	01.322	01.323	01.324	01.325
F 29	125 x 22.23		12.200		01.326	01.327	01.328	01.329	01.330
F 27	150 x 22.23		10.200		01.331	01.332	01.333	01.334	01.335
F 29	150 x 22.23		10.200		01.336	01.337	01.338	01.339	01.340
F 27	165 x 22.23		9.300		01.341	01.342	01.343	01.344	01.345
F 29	165 x 22.23		9.300		01.346	01.347	01.348	01.349	01.350
F 27	180 x 22.23		8.500		01.351	01.352	01.353	01.354	01.355
F 29	180 x 22.23		8.500		01.356	01.357	01.358	01.359	01.360







The EXTRA flap discs are intended for professional applications in all branches of industry in which flap discs are used as important grinding tools. With the correct choice of the diameter, shape and grain size, as well as the machine, they reach excellent grinding results.

## SKORPIO TOP

Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	EXTRA	<b>A</b>	●	○		●	●

● - Main application  
○ - Possible application



Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber numbers				
					40	60	80	100	120
F 27 	100 x 16	80	15.300	25	01.401	01.402	01.403	01.404	01.405
F 29 	100 x 16		15.300		01.406	01.407	01.408	01.409	01.410
F 27	115 x 22.23		13.300		01.411	01.412	01.413	01.414	01.415
F 29	115 x 22.23		13.300		01.416	01.417	01.418	01.419	01.420
F 27	125 x 22.23		12.200		01.421	01.422	01.423	01.424	01.425
F 29	125 x 22.23		12.200		01.426	01.427	01.428	01.429	01.430
F 27	150 x 22.23		10.200		01.431	01.432	01.433	01.434	01.435
F 29	150 x 22.23		10.200		01.436	01.437	01.438	01.439	01.440
F 27	165 x 22.23		9.300		01.441	01.442	01.443	01.444	01.445
F 29	165 x 22.23		9.300		01.446	01.447	01.448	01.449	01.450
F 27	180 x 22.23		8.500		01.451	01.452	01.453	01.454	01.455
F 29	180 x 22.23		8.500		01.456	01.457	01.458	01.459	01.460



# FLAP DISCS

Diameters 100-180 mm





## SKORPIO TOP

Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	EXTRA	<b>Z</b>	●	●	●	●	

● - Main application  
○ - Possible application



Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber numbers				
					40	60	80	100	120
F 27 	100 x 16	80	15.300	25	01.501	01.502	01.503	01.504	01.505
F 29 	100 x 16		15.300		01.506	01.507	01.508	01.509	01.510
F 27	115 x 22.23		13.300		01.511	01.512	01.513	01.514	01.515
F 29	115 x 22.23		13.300		01.516	01.517	01.518	01.519	01.520
F 27	125 x 22.23		12.200		01.521	01.522	01.523	01.524	01.525
F 29	125 x 22.23		12.200		01.526	01.527	01.528	01.529	01.530
F 27	150 x 22.23		10.200		01.531	01.532	01.533	01.534	01.535
F 29	150 x 22.23		10.200		01.536	01.537	01.538	01.539	01.540
F 27	165 x 22.23		9.300		01.541	01.542	01.543	01.544	01.545
F 29	165 x 22.23		9.300		01.546	01.547	01.548	01.549	01.550
F 27	180 x 22.23		8.500		01.551	01.552	01.553	01.554	01.555
F 29	180 x 22.23		8.500		01.556	01.557	01.558	01.559	01.560





The PROFI GREEN LINE flap discs are intended for extreme grinding conditions. With the correct choice of the diameter, shape and grit size, as well as the machine, they reach excellent grinding results. The base allows for work under extreme conditions and its material does not become overheated during grinding.

## PROFI GREEN LINE

Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	EXTRA	<b>Z</b>	●	●	●	●	○

● - Main application  
○ - Possible application



Shape	Dimensions D x H mm	Peripheral speed		Packaging (units)	Grit size / Subscriber numbers		
		m/s	Rpm 1/min		40	60	80
F27	115 x 22.23	80	13300	10	01.601	01.602	01.603
F29	115 x 22.23		13300		01.604	01.605	01.606
F27	125 x 22.23		12200		01.607	01.608	01.609
F29	125 x 22.23		12200		01.610	01.611	01.612
F27	180 x 22.23		8500		01.613	01.614	01.615
F29	180 x 22.23		8500		01.616	01.617	01.618





# FLAP DISCS

Diameters 115–180 mm



The SKORPIO CERAMIC flap discs are suitable for high speeds and high grinding pressures. They enable quick grinding, exceptional material removal rates primarily when working with harder materials, and uniform surface roughness due to continuous self-sharpening of the abrasive grit and the use of active cooling additives.

### Uniform Surface Roughness:

- Optimal grain distribution across the base, with active additives;
- Continuous self-sharpening of grains during the grinding process.

### Long tool life:

- Good adherence of grains to the polyester base;
- Active additives;
- High grain aggressiveness.

### SKORPIO CERAMIC

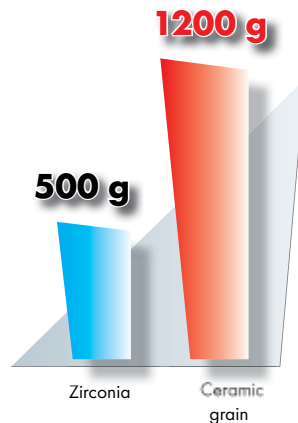
Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>LBD</b>	EXTRA	<b>SA, Z</b>	●	●	●	●	○

● - Main application  
○ - Possible application



Shape	Dimensions D x T mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size/ Subscriber numbers				
					36	40	60	80	120
F29	115 x 22.23	80	13300	10	01.701	01.702	01.703	01.704	01.705
F29	125 x 22.23		12200		01.706	01.707	01.708	01.709	01.710
F29	180 x 22.23		8500		01.711	01.712	01.713	01.714	01.715
* F27	115 x 22.23		13300					01.750	01.751
* F27	125 x 22.23		12200					01.770	01.771
						<b>Z40</b>	<b>Z60</b>	<b>Z80</b>	
* F27	115 x 22.23		13300			01.781	01.782	01.783	
* F27	125 x 22.23		12200			01.784	01.785	01.786	

\* SKORPIO ANGLED





## SKORPIO POLIRCO





Name	Quality class	Abrasive grain and base	Structural steels	Carbon steels	Stainless steels	Soft metal alloys	Glass	Plastics	Rubber	Wood
<b>PolirCO</b>	SPECIAL	<b>A</b> Non-woven material	●	●	●	●	●	●	●	●

● - Main application



Flap discs from non-woven material are intended for grinding and finishing of structural steel and carbon steel in the automotive, aircraft and other branches of industry.

Shape	Dimensions D x H mm	Pheriph. speed m/s	Rpm 1/min	Packaging (unit)	Grit size / Subscriber numbers		
					Coarse	Medium	Very fine
F 27 	115 x 22	80	8.500	10	01.801	01.802	01.803
F 29 	115 x 22		8.500		01.804	01.805	01.806
F 27	125 x 22		8.500		01.805	01.806	01.807
F 29	125 x 22		8.500		01.808	01.809	01.810



# DISCS FROM NON-WOVEN MATERIAL

Diameters 115–125 mm



## SKORPIO SOFT POLISH




Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>Soft Polish</b>	SPECIAL	<b>C</b> Non-woven material	●	●	●	●	○

● - Main application  
○ - Possible application



Skorpio Soft Polish discs are manufactured of compact non-woven material with a high content of silicon carbide. They are available in various grit sizes and hardnesses. These discs are intended for cleaning and polishing all kinds of metals, particularly high-alloyed steels applicable on manual angle grinding machines.

Shape	Dimensions D x H mm	Hardness	Pheriph. speed m/s	Rpm 1/min	Packaging (unit)	Grit size / Subscriber numbers				
						80	150	280	400	600
F27 	115 x 22.23	Soft	80	13.300	10	01.901	01.902	01.903	01.904	01.905
F27	115 x 22.23	Hard		13.300		01.906	01.907	01.908	01.909	01.910
F27	125 x 22.23	Soft		12.200		01.911	01.912	01.913	01.914	01.915
F27	125 x 22.23	Hard		12.200		01.916	01.917	01.918	01.919	01.920
Surface roughness (Ra in $\mu\text{m}$ ):						<b>0.17</b>	<b>0.13</b>	<b>0.11</b>	<b>0.077</b>	<b>0.073</b>



# FLAP WHEELS FOR PREPOLISHING

Super Finish flap wheels are intended for professional use in various industrial branches to reach surface roughness up to 0.04. Extremely good results of grinding and polishing can be reached on carbon steels, tool steels, stainless steels and various lacquered surfaces.

## SKORPIO SUPER FINISH

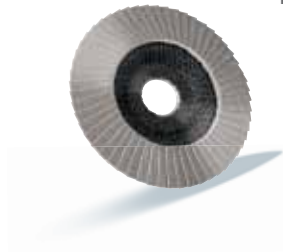


Name	Quality class	Abrasive grain	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>Super Finish</b>	SPECIAL	<b>A</b> Cloth	●	●	●	●	○

● - Main application  
○ - Possible application

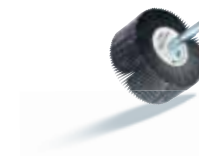


### Flap discs



Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (unit)	Grit size / Subscriber numbers			
					200	280	400	
F 29	115 x 22.23	80	optimal 45	max. 13.300	10	01.111	01.112	01.113
F 29	125 x 22.23			max. 12.200		01.114	01.115	01.116

### Spindle mounted flap wheels



	D x T x S mm	m/s	1/min	(unit)	200	280	400
PBČ	30 x 30 x 6	45	max. 13.300	10	02.111	02.112	02.113
PBČ	60 x 30 x 6		max. 12.200		02.114	02.115	02.116
PBČ	80 x 30 x 6		max. 8.600		02.117	02.118	02.119

### Flap wheels



	D x T x H mm	m/s	1/min	(unit)	200	280	400
PBK	165 x 25 x 25.4	45	5.200	10	03.111	03.112	03.113
PBK	165 x 50 x 25.4		5.200		03.114	03.115	03.116



# POLISHING WHEELS FROM NON-WOVEN MATERIALS

## SKORPIO SOFT POLISH



### Recommendations:

1. Start with rough, medium and fine grinding as necessary using SKORPIO Flap Discs.
2. Then prepare the surface using SKORPIO SuperFinish Flap Discs.
3. Clean the surface thoroughly.
4. Polish it with the SKORPIO Special Polishing Disc using the appropriate polishing paste in order to reach the desired surface quality, in one or more stages.  
Clean the surface well between individual phases of polishing!  
The SKORPIO polishing product should always be used with only one quality (colour) of the paste.

### Advantages of polished surface:

- Smooth surface,
- Easier filling of moulds with melted material (plastic),
- Reduced risk of local corrosion,
- Reduced risk of breakage.

### Quality of polishing – the degree of roughness depends on:

- Quality of the basic material – steel,
- Prior heat treatment of the basic material,
- Surface preparation,
- Used polishing technique.

Name	Quality class	Base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>Soft Polish</b>	SPECIAL	Non-woven material	○	●	●	●	●

● - Main application  
○ - Possible application



### Polishing discs

Shape	Dimensions D x H mm	Pheripher. speed m/s	Rpm 1/min	Packaging (unit)	Order number
F29	115 x 22	5 - 20	800 - 3300	5	01.211
F29	125 x 22		760 - 3000		01.212



### Polishing felts

	D x T x S mm	m/s	1/min	(unit)	Order number
PČ	40 x 15 x 6	5 - 20	2400 - 9600	10	02.211
PČ	50 x 15 x 6		1900 - 7600		02.212
PČ	60 x 15 x 6		1600 - 6400		02.213
PČ	80 x 15 x 6		1200 - 4800		02.214



### Polishing wheels

	D x T x H mm	m/s	1/min	(unit)	Order number
PK	100 x 15 x 13	5 - 20	960 - 3800	10	01.311
PK	125 x 15 x 13		760 - 3000		01.312
PK	150 x 15 x 13		640 - 2500		01.313
PK	180 x 15 x 13		530 - 2100		01.314



### Polishing pastes

Tip	Applications	Quantity 1/g	Packaging (unit)	Order number
Dialux green	Polishing	140	1	01.411
Dialux white	High gloss polishing	125		01.412
Dialux blue	Super-finish	120		01.413

Excellent for cleaning welds or metal, concrete, wall and wooden surfaces and for removing various coats: rust, varnish, paint, light weld splatter, etc.

**USE:**

- household
- industrial
- car industry
- shipbuilding



SKORPIO STRIPITCO



Name	Quality class	Abrasive grain and base	Construction steel	Colour metals	Cleaning welds	Cleaning concrete and wall surfaces	Cleaning wood surfaces	Removing paint and varnish	Removing rust
<b>StripitCO</b>	SPECIAL	<b>C</b> Nylon fibres	○	○	●	●	●	●	●

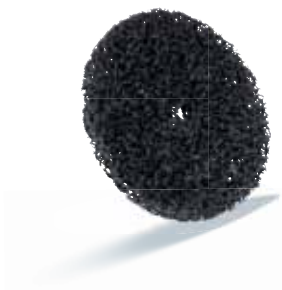
● - Main application  
○ - Possible application



Discs	Shape	Dimensions D x H mm	Peripheral speed		Packaging (unit)	Order number
			m/s	Rpm 1/min		
		115 x 22	50	8.300	10	01.201, 01.202
		125 x 22		7.700		01.203, 01.204
		150 x 22		6.400		01.205, 01.206
		180 x 22		5.500		01.207, 01.208

Spindle mounted wheels	D x T x S			Rpm 1/min	Packaging (unit)	Order number
	D	T	S			
BČ	60	13	6	30	25	02.1101
BČ	60	28	6	30	25	02.1102



### Wheels

Shape	Dimensions D x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (unit)	Order number
BK	100 x 13 x 13	30	6.000	10	03.1101
BK	115 x 13 x 13		5.200		03.1102
BK	125 x 13 x 13		4.800		03.1103
BK	150 x 13 x 13		4.100		03.1104
BK	180 x 13 x 13		3.300		03.1105



### Wheels with a built-in pin

	D x T x S					
KVT	100 x 13 x 6	50		6.000	10	03.1131
KVT	115 x 13 x 6			5.200		03.1132
KVT	125 x 13 x 6			4.800		03.1133
KVT	150 x 13 x 6			4.100		03.1134
KVT	180 x 13 x 6			3.300		03.1135
KVT	200 x 13 x 6			2.900		03.1136



### Mounting pin

	D x S			
VT	12 x 6		1	03.TR1





Flap wheels are distinguished by a high degree of flexibility. They are intended for material removal and surface improvement prior to painting or galvanic treatment. Optimal results are achieved with peripheral speeds from 15 to 30 m/s.

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Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals	Wood	Rubber
<b>PBK</b>	STANDARD	<b>A</b> Cloth	●	○		●	○	●	●

● - Main application  
○ - Possible application



Dimensions D x T x H mm	Peripheral speed		Packaging (unit)	Grit size / Subscriber number									
	m/s	Rpm 1/min		40	60	80	100	120	150	180	220		
100 x 25 x 25	45	8.600	10	03.001	03.002	03.003	03.004	03.005	03.006	03.007	03.008		
100 x 30 x 25				03.009	03.010	03.011	03.012	03.013	03.014	03.015	03.016		
120 x 25 x 25	7.100	10	10	03.017	03.018	03.019	03.020	03.021	03.022	03.023	03.024		
120 x 30 x 25				03.025	03.026	03.027	03.028	03.029	03.030	03.031	03.032		
150 x 25 x 54	5.700	10	10	03.033	03.034	03.035	03.036	03.037	03.038	03.039	03.040		
150 x 30 x 54				03.041	03.042	03.043	03.044	03.045	03.046	03.047	03.048		
150 x 50 x 54	5.700	5	5	03.049	03.050	03.051	03.052	03.053	03.054	03.055	03.056		
165 x 25 x 25,4				03.057	03.058	03.059	03.060	03.061	03.062	03.063	03.064		
165 x 30 x 25,4	5.200	10	10	03.065	03.066	03.067	03.068	03.069	03.070	03.071	03.072		
165 x 50 x 25,4				03.073	03.074	03.075	03.076	03.077	03.078	03.079	03.080		
165 x 25 x 54	5.200	10	10	03.081	03.082	03.083	03.084	03.085	03.086	03.087	03.088		
165 x 30 x 54				03.089	03.090	03.091	03.092	03.093	03.094	03.095	03.096		
165 x 50 x 54	5.200	5	5	03.097	03.098	03.099	03.100	03.101	03.102	03.103	03.104		
200 x 25 x 54				03.105	03.106	03.107	03.108	03.109	03.110	03.111	03.112		
200 x 30 x 54	4.300	5	5	03.113	03.114	03.115	03.116	03.117	03.118	03.119	03.120		
200 x 50 x 54				03.121	03.122	03.123	03.124	03.125	03.126	03.127	03.128		
250 x 25 x 100	3.400	5	5	03.129	03.130	03.131	03.132	03.133	03.134	03.135	03.136		
250 x 30 x 100				03.137	03.138	03.139	03.140	03.141	03.142	03.143	03.144		
250 x 50 x 100	3.400	5	5	03.145	03.146	03.147	03.148	03.149	03.150	03.151	03.152		
300 x 30 x 100				03.153	03.154	03.155	03.156	03.157	03.158	03.159	03.160		
300 x 50 x 100	2.850	5	5	03.161	03.162	03.163	03.164	03.165	03.166	03.167	03.168		
350 x 30 x 100				41	2.250	2	03.169	03.170	03.171	03.172	03.173	03.174	03.175
350 x 50 x 100	41	2.250	2	03.177	03.178	03.179	03.180	03.181	03.182	03.183	03.184		





# FLAP WHEELS

Diameters 100–350 mm



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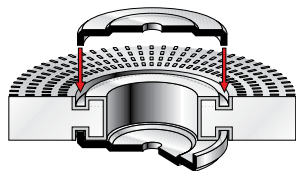
Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals	Wood	Rubber
<b>PBK</b>	STANDARD	<b>Z</b> Cloth	●	●	●	●	●	○	

● - Main application  
○ - Possible application



Dimensions D x T x H mm	Peripheral speed		Packaging (units)	Grit size / Subscriber number					
	m/s	Rpm 1/min		40	60	80	100	120	150
100 x 25 x 25	45	8.600	10	03.301	03.302	03.303	03.304	03305	03.306
100 x 30 x 25		8.600	10	03.309	03.310	03.311	03.312	03.313	03.314
120 x 25 x 25		7.100	10	03.317	03.318	03.319	03.320	03.321	03.322
120 x 30 x 25		7.100	10	03.325	03.326	03.327	03.328	03.329	03.330
150 x 25 x 54		5.700	10	03.333	03.334	03.335	03.336	03.337	03.338
150 x 30 x 54		5.700	10	03.341	03.342	03.343	03.344	03.345	03.346
150 x 50 x 54		5.700	5	03.349	03.350	03.351	03.352	03.353	03.354
165 x 25 x 25,4		5.200	10	03.357	03.358	03.359	03.360	03.361	03.362
165 x 30 x 25,4		5.200	10	03.365	03.366	03.367	03.368	03.369	03.370
165 x 50 x 25,4		5.200	5	03.373	03.374	03.375	03.376	03.377	03.378
165 x 25 x 54		5.200	10	03.381	03.382	03.383	03.384	03.385	03.386
165 x 30 x 54		5.200	10	03.389	03.390	03.391	03.392	03.393	03.394
165 x 50 x 54		5.200	5	03.397	03.398	03.399	03.400	03.401	03.402
200 x 25 x 54		4.300	5	03.405	03.406	03.407	03.408	03.409	03.410
200 x 30 x 54		4.300	5	03.413	03.414	03.415	03.416	03.417	03.418
200 x 50 x 54		4.300	5	03.421	03.422	03.423	03.424	03.425	03.426
250 x 25 x 100		3.400	5	03.429	03.430	03.431	03.432	03.433	03.434
250 x 30 x 100		3.400	5	03.437	03.438	03.439	03.440	03.441	03.442
250 x 50 x 100		3.400	5	03.445	03.446	03.447	03.448	03.449	03.450
300 x 30 x 100		2.850	5	03.453	03.454	03.455	03.456	03.457	03.458
300 x 50 x 100		2.850	5	03.461	03.462	03.463	03.464	03.465	03.466
350 x 30 x 100	41	2.250	2	03.469	03.470	03.471	03.472	03.473	03.474
350 x 50 x 100	41	2.250	2	03.477	03.478	03.479	03.480	03.481	03.482

Always use appropriate flanges for mounting!



D x H x T mm	Wheels H	Packaging (units)	Subscriber numbers
57 x 20 x 9.5	25 mm	2	03.PR1
90 x 20 x 9.5	54 mm	2	03.PR2
144 x 70 x 9.5	100 mm	2	03.PR3



Flap wheels from non-woven material are distinguished by their elastic and flexible structure. They enable cold mat and satin finishing of surfaces as well as surface cleaning and preparation prior to gluing or varnishing. The optimal speeds during use range between 10 and 20 m/s.



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Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals	Wood	Plastics	Glass/Stone
<b>PBK</b>	STANDARD	<b>A</b> Non-woven material	●	○		●	○	●	○	

● - Main application  
○ - Possible application



Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber number			
				Coarse	Medium	Fine	Very fine
100 x 50 x 19 (1 groove)	20	3.700	8	03.501	03.502	03.503	03.504
100 x 50 x 19 (2 grooves)	20	3.700	8	03.505	03.506	03.507	03.508
100 x 100 x 19 (1 groove)	20	3.700	4	03.509	03.510	03.511	03.512
100 x 100 x 19 (2 grooves)	20	3.700	4	03.513	03.514	03.515	03.516
100 x 50 x 35	20	3.700	8	03.517	03.518	03.519	03.520
100 x 100 x 35	20	3.700	4	03.521	03.522	03.523	03.524
150 x 20 x 54	20	2.600	10	03.525	03.526	03.527	03.528
150 x 30 x 54	20	2.600	10	03.529	03.530	03.531	03.532
150 x 40 x 54	20	2.600	5	03.533	03.534	03.535	03.536
150 x 50 x 54	20	2.600	5	03.537	03.538	03.539	03.540
150 x 70 x 54	20	2.600	2	03.541	03.542	03.543	03.544
150 x 100 x 54	20	2.600	2	03.545	03.546	03.547	03.548
165 x 20 x 54	20	2.400	10	03.549	03.550	03.551	03.552
165 x 30 x 54	20	2.400	10	03.553	03.554	03.555	03.556
165 x 40 x 54	20	2.400	5	03.557	03.558	03.559	03.560
165 x 50 x 54	20	2.400	5	03.561	03.562	03.563	03.564
165 x 70 x 54	20	2.400	2	03.565	03.566	03.567	03.568
165 x 100 x 54	20	2.400	2	03.569	03.570	03.571	03.572
200 x 20 x 78	20	2.000	10	03.573	03.574	03.575	03.576
200 x 30 x 78	20	2.000	10	03.577	03.578	03.579	03.580
200 x 40 x 78	20	2.000	5	03.581	03.582	03.583	03.584
200 x 50 x 78	20	2.000	5	03.585	03.586	03.587	03.588
200 x 70 x 78	20	2.000	2	03.589	03.590	03.591	03.592
200 x 100 x 78	20	2.000	2	03.593	03.594	03.595	03.596
250 x 30 x 127	20	1.600	10	03.597	03.598	03.599	03.600
250 x 40 x 127	20	1.600	5	03.601	03.602	03.603	03.604
250 x 50 x 127	20	1.600	5	03.605	03.606	03.607	03.608
250 x 70 x 127	20	1.600	2	03.609	03.610	03.611	03.612
250 x 100 x 127	20	1.600	2	03.613	03.614	03.615	03.616



# COMBINED FLAP WHEELS

Diameters 100-250 mm



SKORPIO

Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals	Wood
<b>BK-SBK</b>	STANDARD	<b>A</b> Cloth/Non-woven material	○	●	●	●	○	●

● - Main application  
○ - Possible application



Combined grinding wheels enable stock removal stock with simultaneous surface improvement. They are distinguished by a large selection of grain sizes from coarse to very fine ones.

Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber number					
				100	120	150	120	150	180
150 x 30 x 54	30	3.800	10	03.901	03.902	03.903	03.904	03.905	03.906
150 x 40 x 54	30	3.800	5	03.907	03.908	03.909	03.910	03.911	03.912
150 x 50 x 54	30	3.800	5	03.913	03.914	03.915	03.916	03.917	03.918
150 x 70 x 54	30	3.800	2	03.919	03.920	03.921	03.922	03.923	03.924
150 x 100 x 54	30	3.800	2	03.925	03.926	03.927	03.928	03.929	03.930
165 x 30 x 54	30	3.500	10	03.931	03.932	03.933	03.934	03.935	03.936
165 x 40 x 54	30	3.500	5	03.937	03.938	03.939	03.940	03.941	03.942
165 x 50 x 54	30	3.500	5	03.943	03.944	03.945	03.946	03.947	03.948
165 x 70 x 54	30	3.500	2	03.949	03.950	03.951	03.952	03.953	03.954
165 x 100 x 54	30	3.500	2	03.955	03.956	03.957	03.958	03.959	03.960
200 x 30 x 78	30	2.900	10	03.961	03.962	03.963	03.964	03.965	03.966
200 x 40 x 78	30	2.900	5	03.967	03.968	03.969	03.970	03.971	03.972
200 x 50 x 78	30	2.900	5	03.973	03.974	03.975	03.976	03.977	03.978
200 x 70 x 78	30	2.900	2	03.979	03.980	03.981	03.982	03.983	03.984
200 x 100 x 78	30	2.900	2	03.985	03.986	03.987	03.988	03.989	03.990
250 x 30 x 127	30	2.300	10	03.991	03.992	03.993	03.994	03.995	03.996
250 x 30 x 127	30	2.300	5	03.997	03.998	03.999	03.1000	03.1001	03.1002
250 x 30 x 127	30	2.300	5	03.1003	03.1004	03.1005	03.1006	03.1007	03.1008
250 x 30 x 127	30	2.300	2	03.1009	03.1010	03.1011	03.1012	03.1013	03.1014
250 x 30 x 127	30	2.300	2	03.1015	03.1016	03.1017	03.1018	03.1019	03.1020



SKORPIO

Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals	Rubber
<b>PBC</b>	STANDARD	<b>A</b> Cloth	●	○		●	○	●

● - Main application  
○ - Possible application



Spindle mounted flap wheels are intended for machining of small and difficult-to-reach areas in the manufacture of various containers and devices, as well as for fine machining of tools, fittings, turbine blades and engines. The best grinding results are achieved at peripheral speeds between 15 and 20 m/s.

Dimensions D x T x H mm	Peripheral speed		Packaging (units)	Grit size / Subscriber number							
	m/s	Rpm 1/min		40	60	80	100	120	150	180	
15 x 10 x 3	22	27.500	25	02.001	02.002	02.003	02.004	02.005	02.006	02.007	02.008
15 x 15 x 3	29	27.500	25	02.008	02.009	02.010	02.011	02.012	02.013	02.014	02.015
20 x 10 x 3	29	27.500	25	02.015	02.016	02.017	02.018	02.019	02.020	02.021	02.022
20 x 15 x 3	29	27.500	25	02.022	02.023	02.024	02.025	02.026	02.027	02.028	02.029
20 x 20 x 3	35	27.500	25	02.029	02.030	02.031	02.032	02.033	02.034	02.035	02.036
25 x 10 x 3	35	27.500	25	02.036	02.037	02.038	02.039	02.040	02.041	02.042	02.043
25 x 15 x 3	35	27.500	25	02.043	02.044	02.045	02.046	02.047	02.048	02.049	02.050
25 x 20 x 3	35	27.500	25	02.050	02.051	02.052	02.053	02.054	02.055	02.056	02.057
30 x 10 x 6	35	22.900	25	02.057	02.058	02.059	02.060	02.061	02.062	02.063	02.064
30 x 15 x 6	35	22.900	25	02.064	02.065	02.066	02.067	02.068	02.069	02.070	02.071
30 x 20 x 6	35	22.900	25	02.071	02.072	02.073	02.074	02.075	02.076	02.077	02.078
40 x 10 x 6	35	17.100	25	02.078	02.079	02.080	02.081	02.082	02.083	02.084	02.085
40 x 15 x 6	35	17.100	25	02.085	02.086	02.087	02.088	02.089	02.090	02.091	02.092
40 x 20 x 6	35	17.100	25	02.092	02.093	02.094	02.095	02.096	02.097	02.098	02.099
40 x 30 x 6	35	17.100	25	02.099	02.100	02.101	02.102	02.103	02.104	02.105	02.106
50 x 10 x 6	35	13.700	25	02.106	02.107	02.108	02.109	02.110	02.111	02.112	02.113
50 x 15 x 6	35	13.700	25	02.113	02.114	02.115	02.116	02.117	02.118	02.119	02.120
50 x 20 x 6	35	13.700	25	02.120	02.121	02.122	02.123	02.124	02.125	02.126	02.127
50 x 30 x 6	35	13.700	25	02.127	02.128	02.129	02.130	02.131	02.132	02.133	02.134
50 x 40 x 6	35	13.700	25	02.134	02.135	02.136	02.137	02.138	02.139	02.140	02.141
60 x 15 x 6	35	11.500	25	02.141	02.142	02.143	02.144	02.145	02.146	02.147	02.148
60 x 20 x 6	35	11.500	25	02.148	02.149	02.150	02.151	02.152	02.153	02.154	02.155
60 x 30 x 6	35	11.500	25	02.155	02.156	02.157	02.158	02.159	02.160	02.161	02.162
60 x 40 x 6	35	11.500	25	02.162	02.163	02.164	02.165	02.166	02.167	02.168	02.169
60 x 50 x 6	35	11.500	25	02.169	02.170	02.171	02.172	02.173	02.174	02.175	02.176
80 x 20 x 6	35	8.600	25	02.176	02.177	02.178	02.179	02.180	02.181	02.182	02.183
80 x 30 x 6	35	8.600	25	02.183	02.184	02.185	02.186	02.187	02.188	02.189	02.190
80 x 40 x 6	27	6.500	25	02.190	02.191	02.192	02.193	02.194	02.195	02.196	02.197
80 x 50 x 6	27	6.500	25	02.197	02.198	02.199	02.200	02.201	02.202	02.203	02.204





# COMBINED SPINDLE MOUNTED WHEELS

Diameters 60–80 mm



Combined spindle mounted wheels enable stock removal in difficult-to-reach areas with simultaneous surface improvement.

SKORPIO

Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>BČ-SBK</b>	STANDARD	<b>A</b> Cloth/Non-woven material	●	○		●	○

● - Main application  
○ - Possible application



Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber number					
				100 Medium	120 Medium	150 Medium	120 Fine	150 Fine	180 Fine
60 x 40 x 6	32	10.000	25	02.1001	02.1002	02.1003	02.1004	02.1005	02.1006
60 x 50 x 6	32	10.000	25	02.1007	02.1008	02.1009	02.1010	02.1011	02.1012
80 x 40 x 6	32	7.600	25	02.1013	02.1014	02.1015	02.1016	02.1017	02.1018
80 x 50 x 6	32	7.600	25	02.1019	02.1020	02.1021	02.1022	02.1023	02.1024



Radial spindle mounted wheels from non-woven material are distinguished by their elastic and flexible structure. They enable cold mat and satin finishing of surfaces in difficult-to-reach areas as well as surface cleaning and preparation prior to gluing or varnishing. The optimal peripheral speeds range between 10 and 20 m/s.

SKORPIO

Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>BČ-SBR</b>	STANDARD	<b>A</b> Non-woven material	●	○		●	○

● - Main application  
 ○ - Possible application



Dimensions D x T x H mm	Peripheral speed		Packaging (units)	Grit size / Subscriber number		
	m/s	Rpm 1/min		Medium	Fine	Very fine
60 x 30 x 6	32	10.000	25	02.601	02.602	02.603
60 x 40 x 6	32	10.000	25	02.604	02.605	02.606
60 x 50 x 6	32	10.000	25	02.607	02.608	02.609
60 x 60 x 6	32	10.000	25	02.610	02.611	02.612
80 x 30 x 6	32	7.600	25	02.613	02.614	02.615
80 x 40 x 6	32	7.600	25	02.616	02.617	02.618
80 x 50 x 6	32	7.600	25	02.619	02.620	02.621





# RADIAL SPINDLE MOUNTED WHEELS

Diameters 60–80 mm

SKORPIO  


Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>BČ-SBR</b>	STANDARD	<b>C</b> Non-woven material	○	●	●	●	●

● - Main application  
 ○ - Possible application



Dimensions D x T x H mm	Peripheral speed m/s	Rpm 1/min	Packaging (units)	Grit size / Subscriber number			
				Medium	Fine	Very fine	Ultra fine
60 x 30 x 6	32	10.000	25	02.701	02.702	02.703	02.704
60 x 40 x 6	32	10.000	25	02.705	02.706	02.707	02.708
60 x 50 x 6	32	10.000	25	02.709	02.710	02.711	02.712
60 x 60 x 6	32	10.000	25	02.713	02.714	02.715	02.716
80 x 30 x 6	32	7.600	25	02.717	02.718	02.719	02.720
80 x 40 x 6	32	7.600	25	02.721	02.722	02.723	02.724
80 x 50 x 6	32	7.600	25	02.725	02.726	02.727	02.728



Axial spindle mounted wheels from non-woven material are distinguished by their elastic and flexible structure. They enable cold matt and satin finishing of surfaces in difficult-to-reach areas as well as surface cleaning and preparation prior to gluing or varnishing. The optimal peripheral speeds range between 10 and 20 m/s.

SKORPIO

Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>BČ-SBA</b>	STANDARD	<b>A</b> Non-woven material	●	○		●	○

● - Main application  
 ○ - Possible application



Dimensions D x T x H mm	Peripheral speed		Packaging (units)	Grit size / Subscriber number		
	m/s	Rpm 1/min		Medium	Fine	Very fine
40 x 30 x 6	32	16.000	25	02.801	02.802	02.803
40 x 40 x 6	32	16.000	25	02.804	02.805	02.806
50 x 30 x 6	32	12.000	25	02.807	02.808	02.809
50 x 40 x 6	32	12.000	25	02.810	02.811	02.812
50 x 50 x 6	32	12.000	25	02.813	02.814	02.815
60 x 30 x 6	32	10.000	25	02.816	02.817	02.818
60 x 40 x 6	32	10.000	25	02.819	02.820	02.821
60 x 50 x 6	32	10.000	25	02.822	02.823	02.824
60 x 60 x 6	32	10.000	25	02.825	02.826	02.827
80 x 30 x 6	32	7.600	25	02.828	02.829	02.830
80 x 40 x 6	32	7.600	25	02.831	02.832	02.833
80 x 50 x 6	32	7.600	25	02.834	02.835	02.836
80 x 60 x 6	32	7.600	25	02.837	02.838	02.839





# AXIAL SPINDLE MOUNTED WHEELS

Diameters 40–80 mm



SKORPIO



Name	Quality class	Abrasive grain and base	Construction steel	Alloy stainless steel	Stainless steel	Alloy	Colour metals
<b>BČ-SBA</b>	STANDARD	<b>C</b> Non-woven material	○	●	●	●	●

● - Main application  
○ - Possible application



Dimensions D x T x S mm	Peripheral speed		Packaging (units)	Grit size / Subscriber number			
	m/s	Rpm 1/min		Medium	Fine	Very fine	Ultra fine
40 x 30 x 6	32	16.000	25	02.901	02.902	02.903	02.904
40 x 40 x 6	32	16.000	25	02.905	02.906	02.907	02.908
50 x 30 x 6	32	12.000	25	02.909	02.910	02.911	02.912
50 x 40 x 6	32	12.000	25	02.913	02.914	02.915	02.916
50 x 50 x 6	32	12.000	25	02.917	02.918	02.919	02.920
60 x 30 x 6	32	10.000	25	02.921	02.922	02.923	02.924
60 x 40 x 6	32	10.000	25	02.925	02.926	02.927	02.928
60 x 50 x 6	32	10.000	25	02.929	02.930	02.931	02.932
60 x 60 x 6	32	10.000	25	02.933	02.934	02.935	02.936
80 x 30 x 6	32	7.600	25	02.937	02.938	02.939	02.940
80 x 40 x 6	32	7.600	25	02.941	02.942	02.943	02.944
80 x 50 x 6	32	7.600	25	02.945	02.946	02.947	02.948
80 x 60 x 6	32	7.600	25	02.949	02.950	02.951	02.959



## RUN-OUT VALUES OF ABRASIVE PRODUCTS

Table (ISO 13942) states the diameter limit deviations for abrasive products of type F41, F42 and F27 (TD), and the values of permissible axial (TPL) and radial run-out tolerances (TRL):

The grinding wheel operating speed is determined using the following equation:

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

The necessary rpms are determined with equation:

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

**v** - operating speed (m/s)  
**D** - wheel diameter (mm)  
**n** - Rpm (1/min)  
 $\pi$  - 3.14159

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 RPMS

The maximum rpms depend on the grinding wheel diameter and the maximum operating speed.

D mm	Maximum operating speed m/s										
	16	20	25	32	35	40	45	50	63	80	100
<b>40</b>	7650	9550	11950	15300	16750	19100	21500	23900	30100	38200	47200
<b>50</b>	6150	7650	9550	12250	13400	15300	17200	19100	24100	30600	38200
<b>63</b>	4850	6100	7600	9750	10650	12150	13650	15200	19100	24300	30250
<b>80</b>	3850	4800	6000	7650	8400	9550	10750	12000	15100	19100	23900
<b>100</b>	3100	3850	4800	6150	6700	7650	8600	9550	12100	15300	19100
<b>115</b>	2700	3350	4200	5350	5850	6500	7500	8350	10500	13300	16650
<b>125</b>	2450	3100	3850	4900	5350	6150	6900	7650	9650	12250	15300
<b>150</b>	2050	2550	3200	4100	4500	5100	5750	6400	8050	10200	12700
<b>180</b>	1700	2150	2700	3400	3750	4250	4800	5350	6700	8500	10650
<b>200</b>								4800	6050	7650	9550
<b>230</b>								4200	5250	6650	8350
<b>250</b>								3850	4850	6150	7650
<b>300</b>								3200	4050	5100	6400
<b>350/356</b>								2750	3450	4400	5500
<b>400/406</b>								2400	3050	3850	4800



## UNBALANCE VALUES OF ABRASIVE PRODUCTS

Calculation of the permissible unbalance of abrasive products:

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

$m_a$  - unbalance (g)

$k$  - unbalance coefficient (see Table)

$m_1$  - abrasive product weight (g)

The ratio  $k$  for the calculation of the permissible unbalance values should be taken from the following table and depends on the abrasive product's type, dimensions and application:

Method	Machine type	Product type	Dimensions		Ratio for max. operating speed m/s $63 < V_s \leq 100$
			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, manual and other mach.	F1	All dimensions		0.40	
Grinding with high pressures	Stationary grinding machines	F1	All dimensions		0.8
Grinding: -precision gr. -external cylindrical gr. -surface gr. -sharpening	Stationary grinding machines	All types	125 < D ≤ 300	All dimensions	0.16
			300 < D ≤ 610		0.20
			D > 600		0.25
Cutting-off	Manual cutting-off mach.	F41, F42	115 < D ≤ 400	-	0.20
	Stationary cutting-off mach.	F41, F42	D ≤ 300	-	0.32
			D > 300	-	0.40

## SIDE-LOAD TESTING OF ABRASIVE PRODUCTS

In order to ensure a greater safety of abrasive products, all manufacturers are required to test abrasive products for their side-load capacity in accordance with the new requirements of standard EN 12413. The minimal side-load force that an abrasive product is required to sustain for types F41, F42, F27, F28 and F29 used on manual grinding machines is determined from the table below.

Abrasive product	Maximum operating speed $v_s$ m/s	Outside diameter D mm	Side-load testing		
			Single-point test	Three-point test	Impact test
			Single-point side-load $F_{s1}$ , N	Three-point side-load $F_{s3}$ , N	Impact resistance A, Nm
Depressed centre grinding wheels F27, F28, F29 <sup>a</sup>	≤ 80	≥ 115	290	-	-
		150	290	-	4.5
		180	290	-	5.4
		230	290	-	6.9
Flat and depressed centre grinding wheels F41, F42 <sup>a</sup>	≤ 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
	80 < $v_s$ ≤ 100	400/406	125	150	5.4
		300	125	150	5.4

<sup>a</sup> - in accordance with ISO 525





## PACKAGE LABELS



Order  
(230837)

Item  
(001)

Controller  
(T)

Packing date  
(17.03.11)

Units per box  
(25)

## PRODUCT TRACEABILITY

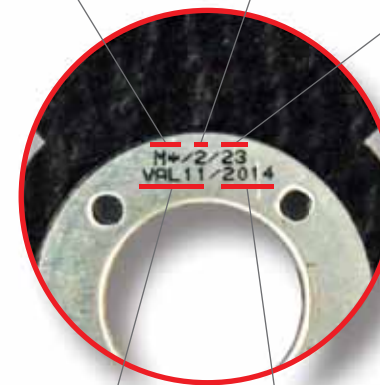
Machine name  
(M+)

Shift  
(2)

Manufacturing date  
(23)

Month of manufacture  
(VAL 11)

Shelf life  
(2014)



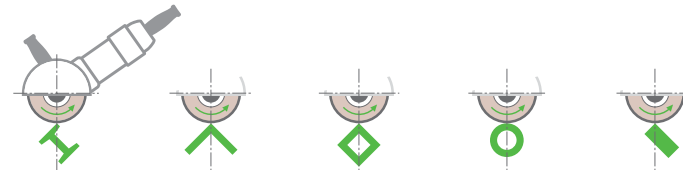
## INCORRECT HANDLING

1. **DON'T** store wheels in a damp atmosphere or in extreme temperatures.
2. **DON'T** use non-reinforced cutting-off wheels on portable machines.
3. **DON'T** handle wheels roughly.
4. **DON'T** mount a damaged wheel.
5. **DON'T** EVER exceed the maximum operating speed marked on the wheel.
6. **DON'T** force a wheel onto a machine spindle.
7. **DON'T** use mounting flanges which are incorrect, damaged, dirty or worn out.
8. **DON'T** tighten the mounting nut or locking flange excessively. This can distort the flanges.
9. **DON'T** use blotters for soft mounting of depressed-centre concave wheels.
10. **DON'T** use a machine which is not in good mechanical condition.
11. **DON'T** use a machine without a wheel guard.
12. **DON'T** use wheels without proper ventilation or dust protection equipment.
13. **DON'T** apply side pressure to cutting-off wheels.
14. **DON'T** stop the wheel after use by applying pressure to the wheel edge or side. Always switch the machine off and allow the wheel to stop revolving.
15. **DON'T** allow the wheel to be trapped or pinched in the cut.
16. **DON'T** apply excessive pressure onto the wheel so that the driving motor slows down.
17. **DON'T** grind on the side of cutting-off wheels.
18. **DON'T** drop portable machines or lower to the floor by the cable or air hose. A wheel can be easily cracked by the weight of the machine if it is put down hard. This is a common cause of wheel breakage.
19. **DON'T** grind with a depressed-centre grinding wheel at an angle lower than the pre scribed angle.
20. **DON'T** use a machine in a position where you do not have full control of the machine and you are not well balanced.



## CORRECT HANDLING

1. **DO** always follow instructions for correct storage.
2. **DO** always visually inspect grinding wheels before mounting for possible damage during transport and eliminate damaged ones.
3. **DO** always use a safety guard, which should cover nearly one half of the grinding wheel.
4. **DO** always use non-reinforced cutting-off wheels on fixed stationary machines.
5. **DO** always switch off the power at the supply and/or unplug the machine before changing the wheel.
6. **DO** always use the tools supplied by the machine manufacturer to change the wheel.
7. **DO** always ensure that the spindle speed of the machine is no higher than the operating speed marked on the wheel.
8. **DO** always use the correct wheel mounting flanges for grinding wheels and check that they are undamaged, clean and free of burrs.
9. **DO** always use blotters between the mounting flanges and the wheel sides for soft mounting of flat cutting-off wheels.
10. **DO** always allow newly mounted wheels to run at operating speed with the guard in place for at least one minute before cutting or grinding.
11. **DO** always wear protective gear: safety clothing, dust masks, eye protection (glasses or shield), gloves and ear protection.
12. **DO** have machine speeds checked regularly, especially after maintenance or repair.
13. **DO** always check the tension of the driving belt, where fitted, on a regular basis: belts must be kept tight in order to ensure optimum power transmission.
14. **DO** always secure the workpiece firmly before beginning cutting or grinding.
15. **DO** store portable machines appropriately when not being used, to avoid accidental physical damage to the wheel.
16. **DO** always use manual machines in a comfortable position, where the body is well balanced and the machine is well supported.
17. **DO** grind at the prescribed angle to the item with depressed-centre grinding wheels on an angle grinding machine.
18. **DO** always keep the work space around cutting and grinding operations clear. It is very dangerous if an operator slips or falls during cutting or grinding operations.
19. **ALWAYS** use the correct method/approach for cutting various geometrical shapes of workpieces.





Please store in dry and well-ventilated premises without major temperature changes (temperatures between 10° and 30°C and max. 70 % relative humidity).

This will help preserve the physical properties of reinforced resin bonded grinding wheels for up to three years, up to two years for non-reinforced ones.

The storage premises should be as close to the place of use as possible in order to avoid mechanical damage to the wheels during transport, as well as moisture condensation while in transit on colder days.



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