

INDUSTRIAL PERFORMANCE ABRASIVES

# **CUT-OFF AND GRINDING WHEEL**



# The Flexovit Brand History

Founded in the Netherlands, Flexovit began manufacturing cutting-off and grinding wheels in 1958. By 1960, Flexovit had carved out its ambition to become a global player and began exporting products across Europe. This international development continued throughout the 1960's and 70's fuelled by the introduction of automated production presses ensuring continued manufacture of high performance quality wheels. With an excellent brand reputation Flexovit began adding to its product portfolio with coated abrasives, bonded abrasives and construction products.



# A Corporate Perspective

Flexovit is a vital ingredient in the effective portfolio of brands from Saint-Goain Abrasives. The mission is to deliver a portfolio of highly recognized brands with unique value, fulfilling the the complete spectrum of customer needs.

Saint-Gobain is a global manufacturer and provider of high-technology materials and associated services. Abrasives forms one key part of the Innovative Materials Division of Saint-Gobain, which is one of the 4 key areas of activity in which Saint-Gobain operate. The other three sectors of activities are Building Distribution, Construction Products and Packaging Verallia.

### Saint-Gobain Abrasives

Saint-Gobain Abrasives takes time to understand and fulfil its evolving customer needs which is refected in its worldwide market leader status. It is the only international manufacturer of abrasives that provides each of the 3 major types of abrasives; Bonded Abrasives (resinoid and vitri ed), Coated Abrasives, and Diamond products. This is supported by exceptional technology, complete and innovative product lines, an irrefutable reputation for quality and safety, and experienced, committed, passionate people.

# Our Responsibility – Safety, Health & Environment

Our responsibility to customers, particularly in the area of safety and comfort, is taken very seriously. Products are designed and produced to the most stringent quality s tandards to guarantee optimum personal safety and user comfort. Saint-Gobain Abrasives is an active member of both FEPA and oSa.





# **Technical Information**

Throughout the world, Flexovit cutting-off and grinding wheels are extensively used across a range of industries including aerospace, automotive, foundries, fabrication, ship-building and construction. Flexovit's wide range of products provide high value, high performance industrial solutions. High performance Flexovit products are backed up by a team of experienced product engineers providing the technical support that modern industrial companies demand.

Flexovit's stock delivery program ensures quick and reliable availability. This is why Flexovit is the preferred brand for professional users of abrasive wheels. This section presents our state-of-the-art industrial range of cutting-off and grinding wheels covering a wide variety of cutting-off and grinding applications.

## Cutting-Off & Grinding Wheels



# **Understanding the Product**





## Cutting-Off & Grinding Wheels



# **Differentiation in the Range**

Flexovit provides the industry's widest selection of cutting-off and grinding wheels to help meet every requirement. The Flexovit Industrial range comprises three distinct product lines giving three different price/performance levels, satisfying all demands encountered in industrial markets. Flexovit cutting-off and grinding wheels are classified into Flexovit Mega-Line (premium performance), Flexovit (high performance), and Flexovit Lynx (standard performance) product lines to help you choose the right product for your specific application.

# FLEXOVIT

Throughout the world, Flexovit cutting-off and grinding wheels are used extensively in a range of industries including aerospace, automotive, foundry, fabrication, mining, oil & gas, ship-building and construction. Flexovit's wide range of products give high performance and high value levels, leading to lower costs.



#### FLEXOVIT LYNX

Flexovit Lynx cutting-off and grinding wheels offer good levels of performance with excellent price/performance ratio, an excellent economy product. They are suitable for cutting-off and grinding wheels a wide range of materials including steel, stainless steel, cast iron and stone.

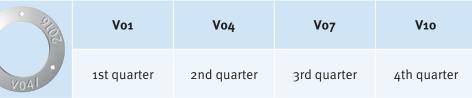
# **Technical Information**

Type of Abrasive	Grit size		Hardness Grade			Type of Bond	
A	30		S			BF27	
A = Aluminium Oxide C = Silicon Carbide Z = Zirconia Alumina	Coarse 16 20 24	Medium 30 to 60	Fine 80 to 100	Soft N O P	Medium Q R S	Hard T U V	B = Bakelite/ Resinoid bond BF = Bakelite and glass fibre reinforcement

#### SHAPE SPECIFICATION SYSTEM BF 41 BF 42 BF 27 Depressed centre grinding wheels, Flat cutting-off wheels. Available Depressed centre cutting-off thickness from 2.2-10mm. in diameters 76-406mm for handwheels. Available in diameters 76-230mm held machines and 300-406mm Available in diameters 76-230mm for hand-held machines. for stationery machines. Application: grinding Application: cutting-off Application: cutting-off

#### METAL RING WITH VALIDITY DATE

#### V = validity date (production quarter + 3 year)



Example:

V04/2016 indicates production in the 2nd quarter of 2013 and advised usage before the end of 2nd quarter of 2016

#### MARKING SYSTEM OF ABRASIVE CUTTING-OFF & GRINDING WHEELS



# **Operating Speeds**

Flexovit products are designed and tested for certain applications and operating speeds. Choose a wheel suitable for the application material. Suitable materials are indicated on the wheel label. For a comprehensive list please refer to Selecting the Right Product chart on page 164. Before mounting the grinding or cutting-off wheel on the machine, ensure that the operating speed of the machine does not exceed the maximum operating speed as it is marked on the product.

SPEED CONVERSION FOLLOWING EN 12413						
Wheel diameter	Maximum peripheral operating speed in m/s					
(mm)	63	80	100			
50/51	24100	30600	38200			
63/65	19100	24300	30250			
76	15850	20150	25150			
80	15100	19100	23900			
85	14200	18000	22500			
100/102	12100	15300	19100			
115	10500	13300	16650			
125	9650	12250	15300			
150/152	8050	10200	12700			
180	6700	8500	10650			
200	6050	7650	9550			
230	5250	6650	8350			
250/254	4850	6150	7650			
300/305	4050	5100	6400			
350/356	3450	4400	5500			
400/406	3050	3850	4800			

All figures are maximum operating speeds in RPM

## Cutting-Off & Grinding Wheels





## **Cutting-Off** & Grinding Wheels



# **Technical Information**

# Safety in the Storage & Use of Cutting-Off & Grinding Wheels

All cutting-off and grinding wheels are breakable and it is imperative that users take the appropriate precautions. Abrasive wheels that are damaged, improperly mounted or improperly used are dangerous and can cause serious injuries to any person in the vicinity. This section contains a summary of the most important precautions. Further safety recommendations can be found in the country laws, decrees and technical standards in the FEPA safety code (Federation of European Producers of Abrasives, www.fepa-abrasives.org).

#### SELECTION OF THE WHEEL

Carefully read the label or the information on the wheel and make sure that the wheel is suitable for the application and has the correct dimensions. Check that the max. rpm of the machine spindle on which you will mount the wheel never exceeds the max. rpm printed on the wheel label. Follow any restriction of use and any specific instruction which may be indicated on the wheel or on attached documents.

#### **INSPECTION & TEST BEFORE MOUNTING**

Make sure that the instructions on the wheel and on the machine are compatible.

#### VISUAL INSPECTION

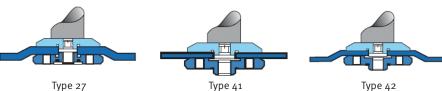
Carefully inspect the abrasive wheel: if it is damaged in any way do not use.

#### SAFETY EQUIPMENT

Before starting the cutting-off or grinding operation, the wheel guard must be in position and fixed securely. The wheel guard must be capable of catching broken wheel fragments effectively and capable of withstanding the impact caused by wheel breakage.

#### MOUNTING OF THE GRINDING WHEEL & USE OF THE MOUNTING DEVICES

Only mount the wheels on machines designed for the operation. Never use force when mounting. Always use the mounting flanges supplied with the machine and ensure they are clean, never modify them in any way.







#### WORKPLACE CONDITIONS

Safe operations depend on a clean and tidy working environment. Adequate working space, good lighting and heating should be available. All relevant local, national and international regulations must be followed.

#### INSTRUCTIONS FOR USE

Cutting-off and grinding wheels should only be used for materials they are suitable for. This is shown by means of pictograms on the product, on the packaging and in the catalogue.

#### Cutting-off

When cutting-off, keep the wheel straight in the cut and add only radial pressure to the wheel.

#### Grinding

When grinding keep the wheel at an angle of 20/30 degrees or more to the work piece.

#### PERSONAL PROTECTION

Safety goggles, ear defenders, safety gloves, dust masks and, if conditions are severe, additional face protection. Leather aprons and safety shoes must be worn.



#### PROTECTION OF THE WORKPIECE

Hand-held grinders should be used in such a manner that sparks fly away from the operators body and any flammable material.

#### SAFETY GUARDS

The wheel guard of the machine must be in position and securely fixed.

#### STOPPING THE MACHINE

Switch off the machine and allow the wheel to stop completely before placing it on a bench or on the floor. Never bring the wheel to rest by applying pressure to the wheel surface.

# Cutting-Off & Grinding Wheels





## Cutting-Off & Grinding Wheels

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# Grinding – BF 27

#### A30S I/F A24/30T I/F

- Standard grade for general purpose grinding of stainless steel and harder ferrous metals.
- Free of iron (I/F).Excellent grinding performance and stock removal.



P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty. A	rticle Number
6710240	100x4.0x16.0	A30S-BF27 I/F	15 300	50	66252844172
6710260	100x6.0x16.0	A30S-BF27 I/F	15 300	50	66252844074
6711560	115x6.0x22.23	A30S-BF27 I/F	13 300	50	66252844132
6812768	125x6.8x22.23	A24/30T-BF27 I/F	12 250	50	66252844075
6815268	150x6.8x22.23	A24/30T-BF27 I/F	10 200	25	66252844134
6817845	180x4.5x22.23	A24/30T-BF27 I/F	8 500	40	66252844174
6817868	180x6.8x22.23	A24/30T-BF27 I/F	8 500	25	66252844077
6823068	230x6.8x22.23	A24/30T-BF27 I/F	6 650	10	66252844144



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66252844086

• General purpose grinding of ferrous metal welds and structural steels.

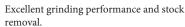
Excellent grinding	performance	and life.
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P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
6310240	100x4.0x16.0	A30S-BF27	15 300	50	66252844073
6310260	100x6.0x16.0	A30S-BF27	15 300	50	66252844076
6311540	115x4.0x22.23	A30S-BF27	13 300	50	
6311560	115x6.0x22.23	A30S-BF27	13 300	50	66252844131



A30S

• General purpose grinding of ferrous metal welds and structural steels.



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P/N	Size (mm)	Specification	MAX R.P.M	Std. Pack Qty.	Article Number
6010260	100x6.0x16.0	A24/30T-BF27	15 300	50	66252844079
6012768	125x6.8x22.23	A24/30T-BF27	12 250	50	66252844080
6015268	150x6.8x22.23	A24/30T-BF27	10 200	25	66252844133
6017845	180x4.5x22.23	A24/30T-BF27	8 500	40	66252844173
6017868	180x6.8x22.23	A24/30T-BF27	8 500	25	66252844078
6023068	230x6.8x22.23	A24/30T-BF27	6 650	10	66252844177

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A30V EXTRA				۵
<ul> <li>Long life structural</li> </ul>	grade for ferrous me l steels.	etal welds and		
P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty. Article Number

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# **Cutting-off Wheels**

# Cutting – BF 41

#### FH38 A365 I/F

• Standard grade - for cutting stainless steel and ferrous metals.

Excellent cutting performance and life.

Free of	f iron (I/F).				
P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
1810216	100x2.5x16.0	A36S-BF41 I/F	15 300	100	66252844028
1811522	115x2.5x22.23	A36S-BF41 I/F	13 300	100	66252844241
1812722	125x2.5x22.23	A36S-BF41 I/F	12 250	100	66252844031
1815222	150x2.5x22.23	A36S-BF41 I/F	10 200	50	66252844064
1817822	180x2.5x22.23	A36S-BF41 I/F	8 500	50	66252844030
1823022	230x2.5x22.23	A36S-BF41 I/F	6 650	50	66252844067

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#### FH38 A36S

• General purpose cutting of ferrous metals.

Excellent cutting performance and life.

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P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
1010216	100x2.5x16.0	A36S-BF41	15 300	100	66252844027
1011522	115x2.5x22.23	A36S-BF41	13 300	100	66252844240
1012722	125x2.5x22.23	A36S-BF41	12 250	100	66252844066
1015222	150x2.5x22.23	A36S-BF41	10 200	50	66252844065
1017822	180x2.5x22.23	A36S-BF41	8 500	50	66252844029
1023022	230x2.5x22.23	A36S-BF41	6 650	50	66252844142

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# **Cutting-Off** & Grinding Wheels







# Cutting-Off & Grinding Wheel









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# **Cutting-off Wheels**

# Cutting – BF 42

#### A30S I/F A24/30T I/F

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Standard grade - for cutting stainless steel and ferrous metals

Free of iron (I/F) Fast cutting and excellent life Suitable for notching

P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
6710234	100x3.4x16.0	A30S-BF42 I/F	15 300	100	66252844034
	115x2.5x22.23	A30S-BF42 I/F	13 300	100	
6711534	115x3.4x22.23	A30S-BF42 I/F	13 300	100	66253371148
6812734	125x3.4x22.23	A24/30T-BF42 I/F	12 250	100	66252844035
6817834	180x3.4x22.23	A24/30T-BF42 I/F	8 500	50	66252844033
6823034	230x3.4x22.23	A24/30T-BF42 I/F	6 650	20	66253371251

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#### A30S A24/30T

• General purpose cutting of ferrous metals including structural steel and sheet metals

Excellent cutting performance and life Suitable for notching

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including structural steel and sheet metals		for notching		-	
P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
6310234	100x3.4x16.0	A30S-BF42	15 300	100	66252844069
6311534	115x3.4x22.23	A30S-BF42	13 300	100	66253371147
6012734	125x3.4x22.23	A24/30T-BF42	12 250	100	66252844070
6017834	180x3.4x22.23	A24/30T-BF42	8 500	50	66252844068
6023034	230x3.4x22.23	A24/30T-BF42	6 650	20	66252844130

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# **Large Diameter Wheels**

# Chop Saws - BF41

A36S (80 m	/s)				
<ul> <li>General p and ferror</li> </ul>	urpose cutting of sta us metals (bar, tubin	inless steel g, etc).	Fast cutting a	nd excellent life.	
P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
1930525	300x3.0x25.4	A36S-BF41	5 100	10	66252844135
1935625	350x3.0x25.4	A36S-BF41	4 400	10	66252844136
1940625	406x3.0x25.4	A36S-BF41	3 850	10	66252844137

A30Q (10	0 m/s)			🔰 👻 🌠 🛛		
<ul> <li>Metal cu elextrica</li> </ul>	utting for higher spee l) saws and heavy-du	d (petrol and ity applications				
P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number	

P/N	Size (mm)	Specification	MAX R.P.M.	Std. Pack Qty.	Article Number
2835625	350x3.8x25.4	A30Q Hard-BF41 2UE790QR	4 400	10	66252844143

# Cutting, Grinding, Polishing – BF27

# All in

#### ALL IN 1 WHEEL

#### Flexovit "All in 1" benefits:

- cutting, light grinding and polishing with one single product no
- more time loss due to machine or product changes
- the fine grit provides an excellent and uniform finishing result
- extreme long wheel life compared to conventional products low
- vibration; comfortable operation
- free of iron, sulphur and chlorine
- very smooth grinding result with an incredible clean surface low
- cutting temperature due to special fillers
- and.. it's from Flexovit, so no need to question quality



Use the new "All in 1" from Flexovit to cut steel and stainless steel plates, tubes and other applications quickly, easily and very smoothly. The wheel cuts most materials like many dedicated cutting wheels.



Use the same wheel at a 30° angle for light grinding jobs. The "All in 1" gives a nice smooth grinding result and an incredible clean surface. The triple layer reinforcement of this advanced wheel guarantees maximum user safety on grinding jobs.



Grind

30°

Cut

90°

Maximum safety due to 3 layered strong reinforcements

Polish

A 15° working angle offers users of the "All in 1" a third function. The fine grit together with light pressure provides an excellent and uniform polishing result.

P/N	Size (mm)	Specificaiton	MAX R.P.M.	Std. Pack Qty.	Article Number
7210016	100x2.6x16.0	A46S-BF27	15 300	25	66252844087
7211522	115x2.6x22.23	A46S-BF27	13 300	25	
7212522	125x2.6x22.23	A46S-BF27	12 250	25	66252844088

# Cutting-Off & Grinding Wheel







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