

# FRIEDRICH AUGUST PICARD GMBH & CO. KG



















POLISHING

Friedrich August Picard GmbH & Co. KG

WISSEN WORUM ES SICH DREHT

BRUSHING

**COMPLETE CATALOGUE** 



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### WELCOME!

#### Dear customers and friends of Picard,

many of you have been familiar with our family-run company for a long time. You know about the expertise we have developed over our 100 years of existence through ongoing research and development, dialogues with users and suppliers, and cooperation with universities and institutions.

Today we are one of the leading manufacturers of grinding, deburring, polishing and brushing tools, contact wheels and contact rollers, and we are an authorised partner in many different sectors of industry. Besides a very wide standard product range, one of our strengths is the ability to respond flexibly and fast to our customers' specific requirements.

Our continuing success is primarily down to you - our customers at home and abroad - who have remained loyal to us for many decades and who appreciate our high-quality products bearing the label "Made in Germany".

But we also owe thanks to the major contribution made by our committed and dependable staff, without whose dedication we would not be where we are today. Every day they play their part in producing the very highest quality products - all with a view to ensuring optimum customer satisfaction.

We are delighted that you are interested in our product range and hope you enjoy browsing our catalogue.



Jörn Vahrenholt

Dirk Vahrenholt

### HISTORIE - FRIEDRICH AUGUST PICARD GMBH & CO. KG

#### 2000 - TODAY

Today Picard is a leading provider of grinding, deburring, polishing and brushing systems. We constantly enhance our product portfolio by adding new materials, new manufacturing technologies and new developments (such as the deburring rollers FAPI-FLEX, the deburring discs series, the return pulleys FAPI-SWITCH, etc.), with the aim of providing our continuallygrowing customer base at home and abroad with products of the very highest quality.

Today the company is managed by the fourth generation of the brothers Dirk Vahrenholt and Jörn Vahrenholt. Their relocation to the new installations (production hall with administrative wing of 2.200 m<sup>2</sup>) in Hückeswagen was also the basis for further growth.

#### 1950 - 2000

The consistent advancements of synthetic abrasive products and contact wheels for the belt grinding system is advanced particularly by **Edmund Vahrenholt**, the 3. generation ot the enterprise. Our product portfolio has been enhanced by the addition of a manufacturing plant for cloth and sisal polishing rings and wheels, as well as profile sanding tools for the woodworking industry.

Our rapidly growing customer base bears testament to the high-quality products we produce.

#### 1907 - 1950

Having come out of World War I more or less intact, we moved our manufacturing base to our current site at Remscheid-Lennep in 1919. After World War II and the death of our founder in October 1945, manufacturing of poplar wood wheels and sales of technical industrial requisites were initially continued in our intact premises. With the support of our loyal staff we were able to gradually rebuild our synthetic grinding equipment production facility, which was destroyed in the war.

#### **1907** COMPANY ESTABLISHED

The company's founder, **Friedrich August Picard**, opened a store selling plumbing and manufacturing supplies at Freiheitstrasse 23 in Remscheid, Germany, on 2 January 1907. The business's reputation was soon established thanks to his farsightedness both as a businessman and as an engineer.





Picard - Logo (to 2000) Picard - Logo ( 2001 – today )

APC

SEN WORUM ES SICH DREHT





Production in the 1950s



Friedrich August Picard (\*1875 - †1945)



Exhibition, c. 1930



Factory in Remscheid, 1927

### FRIEDRICH AUGUST PICARD GMBH & CO. KG

#### FRIEDRICH AUGUST PICARD GMBH & CO. KG

As a family company going back four generations, Friedrich August Picard GmbH & Co. KG has been a leading manufacturer of grinding, polishing, brushing and deburring tools as well as contact wheels and rollers for belt grinding processes in a wide range of industries for more than 100 years.

#### **EXPERIENCE AND INNOVATION**

In our company we combine a wealth of experience with a very strong innovative spirit. By constantly improving and enhancing our tools and machines, we are always able to respond fast and efficiently to queries and problems around grinding, deburring, polishing and brushing.



#### **RESEARCH AND DEVELOPMENT**

We work closely with our customers and suppliers, as well as with institutions and universities to ensure that our grinding, polishing, deburring and brushing technologies are always state-of-the-art.



#### INTELLIGENT PRODUCTION

Our winning combination of highly committed, qualified staff and stateof-the-art manufacturing technologies enables us to produce flexibly, rationally and to the very highest quality standards.



#### SYSTEM PROVIDERTER

We are a system provider. We offer our customers a onestop service. So we offer a highly diverse product range that is sure to include exactly the right tool or machine for your case of application. Our product range is divided into the following areas:



#### FAPI - A STRONG BRAND

FAPI

Friedrich August Picard GmbH & Co. KG

Strong brands that stand for top performance and top quality make their mark in the marketplace. All Picard tools, Picard abrasive materials and Picard machines have these qualities and will therefore increase your productivity.

It's easy to recognize whether you have one of our top quality products in your factory: just look for the FAPI label.

#### INDIVIDUAL ADVICE

Every application has its own specific requirements. Our committed and highly qualified sales representatives are always at your disposal to help and give you fast, expert advice.

Please give us a call: +49 (0)2192/85930-0 Or send us an email: info@picard-kg.com GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### INDEX

INTRODUCTION......PAGES 02 - 05



History	Page 02
Friedrich August Picard GmbH & Co. KG	Page 03
Index	Page 04

### DEBURRING TOOLS.....PAGES 06 - 17



Deburring tools	Page	06
Deburring rollers FAPI-FLEX	Page	08
Deburring disc - series	Page	10
Deburring discs -abrasive fleece qualities	Page	13
Deburring discs / deburring segments	Page	16
Deburring wheels / elastic grinding wheels	.Page	17

#### CONTACT WHEELS.....PAGES 18 - 33



Contact wheels	. Page 18
Contact wheels full version	Page 19
Contact wheels FAPI-PA – series	. Page 20
Contact wheels FAPI-VU – series	Page 22
Contact wheels lamellae version	.Page 25
Contact wheels FAPI-KS/V - series	Page 26
Contact wheels FAPI-VUS - series	. Page 28
Contact wheels FAPI-PUS - series	. Page 30
Contact wheels FAPI-BW - series	. Page 32

Rolls and rollers.....Pages 34 - 41



Rolls and Rollers	.Page 34
Contact rolls / folding contact wheels / -rollers	Page 35
Return pulleys	.Page 36
Return pulleys FAPI-SWITCH	.Page 37
Expander wheels / expander rollers	.Page 38
Abrasive sleeve holders / expander rollers	.Page 39
Air contact rolls / pressure rolls / guide rolls	Page 40
Pressure and feed rolls / band saw wheels	Page 41

#### ABRASIVE MATERIALS.....PAGES 42 - 51



Coated abrasives	.Page 42
Endless abrasive belts (narrow-/wide belts)	Page 44
Abrasive sleeves	.Page 45
Fiber discs	.Page 46
Velcro-backed grinding discs	Page 47
Abrasive rolls	Page 48
Abrasive fleece / Scotch-Brite™	Page 49
Trizact <sup>™</sup> - / Cubitron <sup>™</sup> -abrasive material	.Page 50
Diamond- / CBN-abrasive material	.Page 51



Grinding flap tools	Page 52
Grinding discs FAPI-ATTACK	Page 53
Flap grinding wheels	Page 54
Flap grinding rollers / mounted flap wheels	Page 55
Profile sanding rollers / profile sanding wheels	.Page 56
Pleated grinding mop / sanding strip rings / grinding stars	.Page 57

GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY



Abrasive fleece tools	Page &	58
Abrasive fleece rings	.Page 5	59
Satin finishing wheels / -rollers	Page 6	30
Satin finishing rollers / -mounted flap wheels	Page 6	31
Combined satin finishing wheels / -rollers	Page 6	32
Combined satin finishing rollers / -mounted flap wheels.	.Page 6	33
Cleaning rollers / -plates / -discs	.Page 6	34
Serration grinding wheels / wood profile wheels	.Page 6	35

#### POLISHING TOOLS.....PAGES 66 - 79



Sisal and sisal cotton tools	Page	66
Sisal wheels / sisal cloth wheels / sisal fabric rings	.Page	67
Sisal cord brushes / sisal cord rings	.Page	68
Sisal cotton rings	.Page	69
Cloth- / sisal cloth- / cloth leather lappers	Page	70
Combi rollers / leather rollers	.Page	71
Cotton polishing tools	.Page	72
Polishing - / buffing - / flap polishing wheels	Page	73
Polishing rings	.Page	74
Polishing rings / polishing rollers	.Page	75
Felt tools	Page	76
Felt rollers / felt belts / felt sleeves	.Page	77
Felt polishing discs	.Page	78
Felt rollers / felt polishing points	.Page	79





Brushing tools	.Page 80
Round brushes	.Page 82
Round brushes / ring brushes	.Page 83
Roller brushes	Page 84
Shaft - / end - / cup brushes	.Page 85
Knotted round brushes	Page 86
Fibre cardboard brushes / brush grinding system	Page 87

#### MACHINES.....PAGES 88 - 101



Machines	Page	88
Deburring case kit / angle grinders	Page	89
Longitudinal grinding system / fillet weld grinders /		
Tube belt grinders	Page	90
Pneumatic hand sander unites / flexible shaft machine	Page	91
Belt grinding and polishing machines 72711 / SMB	Page	92
Belt grinding and polishing machines 72730 / PM75	Page	93
Belt grinding and polishing machines SMG56 / SMZ57	Page	94
Belt grinding and polishing machines 72780 / SMG58	Page	95
Surface belt grinding machines BS75 / BS200 / BS300	Page	96
Surface belt grinding machines BS200/150S	.Page	97
Surface belt grinding machines K100 / C100/S-C300/S	Page	98
Tube grinding machines / deburring machine	Page	99
Workshop machines	Page	100
Serration grinding machines / Knife sharpening machine	Page	101

#### EXTRACTION SYSTEMS......PAGES 102 - 105



*Extraction systems.....Page 102* Stationary extraction systems / stationary wet separators.Page 103 Small dust collectors / mobile extraction systems......Page 104 Mobile wet separators / Industrial vacuum cleaners.....Page 105

#### Accessories......Pages 106 - 111



Accessories	Page 106
Flange connectors / mounting adapter /	
TRIM-adapter	Page 107
Clamping covers / aluminium flanges / mandrel	.Page 108
Velcro supporter / self-adhesive velcro support /	
Polishing wheel dresser	Page 109
Brushing and polishing compounds / grinding soap	/
Grinding grease	Page 110
Belt grinding oil / vienna lime / cleaning stones	Page 111

#### **DEBURRING TOOLS**

#### **O**VERVIEW DEBURRING DISC-SERIES



Deburring discs FAPI-M14





Deburring discs FAPI-350



Deburring discs FAPI-250

#### **OVERVIEW DEBURRING ROLLER-SERIES**



Deburring rollers FAPI-FLEX





**Deburring discs** 

**FAPI-150** 

**Deburring discs** 

**FAPI-TRIM** 

#### Deburring wheels FAPI-FLEX

Deburring rollers FAPI-FLEX

#### BURR FORMATION

A burr is formed along the edges of metal components when they are mechanically processed because of the displacement of the material. Burrs are also formed along the cut edges of workpieces that are laser cut, water jet cut, die cut, etc. Thicker sheet metal cut using plasma or oxyfuel processes have a tendency to form very thick burrs and slag formation during cutting.



#### **PROCESS** "DEBURRING"

Our deburring tools are used for industrial deburring and edge rounding. After the workpiece is cut, a common procedure is first to grind off the primary burr, then to deburr or round off the edges of the workpiece.



#### TYPES OF DEBURRING TOOLS

Deburring tools can be divided into the following two types:

DEBURRING	DEBURRING
TOOLS	TOOLS
disc form	roller form
FAPI-TRIM	FAPI-FLEX
FAPI-M14	FAPI-FLEX-PLUS
FAPI-150	
FAPI-250	
FAPI-350	

#### INTENSITY OF EDGE ROUNDING

Edge rounding depends on three factors:

#### Deburring machine

A distinction can be made between deburring machines for tools in roller and disc form. Besides the number of deburring tools on a deburring machine, the possible contact pressure exerted by the machine on the workpiece and the number of grinding heads are decisive factors.

**DEBURRING TOOLS** 

#### Workpiece

The shape and thickness of the workpiece and the burr (possibly pretreated) are decisive for the rounding result.

#### Deburring tool

The grain size, the supporting fabric and the flexibility of the deburring tool are the deciding parameters for achieving an optimum rounding result.

#### Rule of thumb:

The edge rounding on the workpiece becomes stronger

- the rougher the grain size.
- the firmer the supporting fabric.

FINE G	RAIN		COARSE GRAIN
LOW	EDGE	ROUNDING	HIGH
LOW	<b>STOCK</b>	REMOVAL	HIGH
HIGH	ADAPTABILITY 1	O THE WORKPIE	CE LOW
FINE	SU	RFACE	COARSE
PROFILED	WORKPIE	CE CONTOUR	FLAT
SOFT SUPPOR	TING FABRIC	HARD	SUPPORTING FABRIC

#### **C**UTTING SPEED

For deburring we recommend using different cutting speeds. The values given below are averages. The optimal cutting speed for the process concerned have to be decided in practice according to the application.

Deburring tools in disc form:	12 m/s
Deburring tools in roller form:	17 m/s

### **DEBURRING ROLLERS FAPI-FLEX**

#### **DEBURRING ROLLERS FAPI-FLEX**

The processing of sheet metal parts, by die cutting, laser, plasma cutting, flame cut, etc. always generates a burr.

The challenge in factories to deburr or round these "sharp" edges of the workpieces has been met by the development of our grinding rolls. Through the use of high flexible tools on both hand-operated machines and automatic machines, the rounding or deburring of sheet metal parts is optimally achieved.

Dimensions:	Diameter:	150 to 400 mm
	Width:	200 to 1.500 mm
Grain sizes:	80 / 100 / 120 /	/ 150 / 180
Applications:	Portable mach	ines, carousel and dual or multi-roll grinding
	machines (Fla	adder, Ernst, Timesavers, Weber deburring
	machines etc.)	



#### PRODUCT ADVANTAGES DEBURRING ROLLERS FAPI-FLEX

#### • Increased tool life

The use of our specially developed deburring rollers FAPI-FLEX results in an increased tool life. In practice, it has been demonstrated that the tool life of our deburring rollers has been duplicated in comparison with the conventional tools.

#### • Axial arrangement of abrasive lamellae

The abrasive grain sides on the slotted strips of abrasive cloth lamellae are arranged on the roller body in axial direction. This way, the abrasive grain sides do not knock against one another and therefore grinding materials are not destroyed prematurely as in the case of uniformly arranged radial strips.

#### • Very high abrasive cloth fraction

A very high abrasive cloth fraction on the deburring wheels and rollers results in a significantly enhanced tool life.

#### Short tooling times

The very simple mounting or demounting on the machines allow for extremely low tooling times.

#### • Variable Dimensions

The deburring rollers can be manufactured in different densities, filling lengths and abrasive cloth types.







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### **DEBURRING ROLLERS FAPI-FLEX**

#### DEBURRING ROLLERS FAPI-FLEX (FOR ERNST-MACHINES)

Туре:	Atlas	
	Neptun	
	Pluto/Titan	
	Triton ES	
Module:	Spin	
	Rotor	
	Brush Rollers (Det	ourring rollers)
Dimensions:	Diameter:	250 mm / 300 mm / 350 mm
	Width:	250 mm / 450 mm / 1.400 mm
	Hole:	60 mm / 65 mm



DEBURRING RC	DLLERS FAPI-FLE	EX (FOR WEBER-MACHINES)
Туре:	тт	
	NLC	
	MKS	
	МК	
	MRB	
	PT	
Dimensions:	Diameter:	250 mm / 300 mm / 350 mm
	Width:	250 mm
	Hole:	80 mm



### DEBURRING ROLLERS FAPI-FLEX (FOR FLADDER®-MACHINES)

Туре:	AUT	
	GYRO 200	
	GYRO 300	
	GYRO 400	
Dimensions:	Diameter:	300 mm / 350 mm / 400 mm
	Width:	250 mm / 300 mm / 350 mm
	Hole:	32 mm / 100 mm / 200 mm



#### DEBURRING DISC FAPI-SERIES

Cost-effective and productive solutions for the mechanical deburring of sheet metal parts are the industrial requirements today. Deburring tools must remove both loose and adhering burrs while guaranteeing the optimal rounding of edges on workpieces. This requires a rapid, safe and clean deburring or edge rounding. Our deburring discs series has been specifically developed for the "deburring" process and their design and structure are adapted to the individual applications (abrasive fleece quality/grain size of the abrasive cloth).

Next to our standard design of deburring discs where the abrasive fleece/abrasive cloth lamellae are uniformly arranged on the carrier disc, two other variants have been developed: the Y position and the double row.

In the Y position, an alternating small and a broad abrasive fleece lamella with uniform broad abrasive cloth lamellae are arranged on the carrier disc. Inversely, in the double row design, uniform broad abrasive fleece and abrasive cloth lamellae have been arranged in two rows. In both designs, the filling density of the abrasive fleece at the inside and outside radius is thus the same. Compared to our standard discs, they have a higher flexibility in their practice and adapt optimally to the smaller sections and inside contours.









after







single-row (Standard)

double-row

Y-assembly



#### **DEBURRING DISC FAPI-SERIES**

The diversity of our deburring disc series based on different mountings (M14 threads, quick release system, 25 mm and 30 mm hole) offers a wide spectrum of applications.

The deburring discs of the FAPI-M14 series are the ideal tool for handoperated deburring. The integrated M14 thread can be adjusted to regulated angle grinders and are especially fit for smaller and medium series, in which the purchase of an automatic deburring machine is not worthwhile. On the contrary, our deburring discs of the FAPI-TRIM, FAPI-150 and FAPI-250 series allow the use on stationary deburring machines as well as on the automatic deburring machines for the processing of greater series.



Deburring disc- series	Ø [ in mm ]	Mounting	Use
FAPI-M14	115	0	hand helt machines (e.g. angle grinders)
FAPI-TRIM	115		stationary deburring machines with quick release system (e.g. Weber-deburring machines)
FAPI-150	150		stationary deburring machines (e.g. Timesavers Manual Grinder, Loewer Swinggrinder, Q-fin TopGrinder, VG ArmGrinder)
FAPI-250	250		stationary deburring machines (e.g. Loewer-deburring machines, Q-fin TopGrinder)



Deburring disc FAPI-M14 used on an angle grinder



Deburring discs FAPI-TRIM used on a planetary head system



Deburring disc FAPI-150 used on a Manual Grinder from Timesavers B.V. on a Loewer DiscMaster 4TD



Deburring discs FAPI-250 used

#### ABRASIVE FLEECE FAPI-GREEN SOFT FLEECE!

Edge rounding: category 1 (very slightly)

**Standard abrasive fleece Green**, interspersed with aluminum oxide  $(Al_2O_3)$  with a grain size of 320, with the characteristic of containing a high aluminum oxide fraction. Therefore the abrasive grain has a higher hardness and resilience than a normal corundum, which is an advantage for the grain size that is implemented here.

The type of the used abrasive grain and the specific kind of fleece structure allow the smooth but efficient processing of the abrasive fleece on the surface. The intensity at which the edges are rounded can further be optimized through a high-quality abrasive cloth. This way the edges are optimally rounded, providing also a homogeneous surface finish.

Grain sizes of abrasive cloth:	: P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Deburring of thin sheet with small bo	res or cuttings	
Picard recommendation:	For contours of category 1-2 as well a	s workpiece strengths of category 1-2	

#### ABRASIVE FLEECE FAPI-BROWN ALLROUNDER!

Edge rounding: category 2 (slightly)

**Standard abrasive fleece Brown**, interspersed with aluminum oxide  $(Al_2O_3)$  with a grain size of 280, is our standard quality for a wide range of applications on steel/stainless steel and also NE metals. The abrasive grain has a v-shaped / oval form and is characteristic for its resilience. This feature has the advantage that premature grinding of the grain is avoided achieving a higher stock removal rate over a longer time period.

Due to the high-value abrasive cloth and optimal number of lamellae and lamellae arrangement, it is possible to have a decisive influence over the edge rounding and deburring process.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b> P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b> P60 / <b>P80*</b> / P100 / P120 / P150	Al <sub>2</sub> O <sub>3</sub> SiC ZA	
Application:	Deburring of different sheet types, par of materials	ticularly for frequent change	
Picard recommendation:	For contours of category 2-3 as well as	workpiece strengths of category 1-3	

#### ABRASIVE FLEECE FAPI-BLUE SELF-SHARPING!

Edge rounding: category 3 (strong)

**Spezial abrasive fleece Blue**, interspersed with zirconia alumina (ZA) with a grain size of 180, offering a combination of a high-quality abrasive cloth with an optimal number of lamellae and lamella arrangements, providing the perfect basis for a strong and uniform rounding of edges.

Zirconia alumina (ZA) consists of aluminum oxide  $(AI_2O_3)$  and zirconium oxide  $(ZrO_2)$  and is the further development of the normal aluminum oxide The abrasive grain has a v-shaped / oval form in a micro-crystalline structure. Due to such composition, the small grain particles are continuously broken off and new sharp-edge borders are formed. This self-sharpening effect maintains the grain sharp during a longer period, so that an increased tool life is achieved.

It is perfectly suitable for the processing of tool steel or stainless steel as well as the deburring of long edges or inside contours of diverse geometries.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Deburring of steel, tool steel and stain	less steel sheet,	
	particularly thick sheet metal		
Picard recommendation:	For contours of category 3-4 as well as	s workpiece strengths of category 2-4	

DEBURRING TOOLS

**DEBURRING DISC - SERIES** 

### ABRASIVE FLEECE FAPI-MAROON 1ST IN HIGH STOCK REMOVAL!

#### Edge rounding: category 3 (strong)

**Special abrasive fleece Maroon**, interspersed with aluminum oxide  $(Al_2O_3)$  with a grain size of 180, is our abrasive fleece with an increased grain fraction, for applications on steel and stainless steel, for high stock removal requirements. Fit for the rounding of edges, based on the fleece thickness and high flexibility of the lamella, also for sheet metal with the most various inside contours, combined with a high-value abrasive cloth and an optimal number of lamellae and lamella arrangements. The abrasive grain has a v-shaped / oval form and is characteristic for its resilience. The abrasive fleece is relatively tear-resistant and still offers a high flexibility, which is an additional advantage with regards to a longer tool life.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Intensive deburring, high stock remove	val on different sheets	
Picard recommendation:	For contours of category 3-4 as well a	s workpiece strengths of category 2-4	

#### ABRASIVE FLEECE FAPI-YELLOW WET & DRY VERSATILITY! WET AND DRY!

#### Edge rounding: category 3 (strong)

**Special abrasive fleece Yellow wet & dry**, interspersed with aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) with a grain size of 180, double-impregnated abrasive fleece for applications on steel and stainless steel, for high stock removal requirements. Fit for the rounding of edges, based on the fleece thickness and high flexibility of the lamella, also for sheet metal with the most various inside contours, combined with a high-value abrasive cloth and an optimal number of lamellae and lamella arrangements.

The abrasive fleece is relatively tear-resistant and still offers a high flexibility, which is an additional advantage with regards to a longer tool life. Very high suitability for wet applications (wet deburring machines) due to the double impregnation and the higher density of the fleece structure.

Grain sizes of abrasive cloth:	P60 / P80* / P100* / P120 / P150* Al <sub>2</sub> O <sub>3</sub>		
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Deburring of steel, tool steel and stair	nless steel sheet,	
	as well as wet deburring		
Picard advice:	For contours of category 3-4 as well a	s workpiece strengths of category 2-4	

#### ABRASIVE FLEECE FAPI-SAND CUT AND POLISH!

#### Edge rounding: category 3 (strong)

**Special abrasive fleece Sand**, interspersed with aluminum oxide  $(Al_2O_3)$  with a grain size of 180, is our abrasive fleece with an increased grain fraction and dense fleece structure for applications on steel and stainless steel, for high stock removal requirements. It is possible to have a decisive influence over the intensity of stock removal in combination with the high-value abrasive cloth and the optimal number of lamellae and lamellae arrangement.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA
Application:	Deburring of steel, tool steel and stain	less steel sheet
Picard recommendation:	For contours of category 3-4 as well as	workpiece strengths of category 3-4



#### ABRASIVE FLEECE FAPI-GREY SHARP GRIT!

#### Edge rounding: category 3 (strong)

**Special abrasive fleece Grey**, interspersed with silicon carbide (SiC) with a grain size of 180, is our abrasive fleece with an increased grain fraction as well as a dense fleece structure for application on aluminum and plastics. The abrasive grain implemented here has an apex crystalline form and is harder and more brittle than aluminum oxide. Its properties are excellent for soft materials. Its extreme sharpness allows for a fast chipping performance and cool cutting results.

It is possible to have a decisive influence over the intensity of stock removal in combination with the high-value abrasive cloth and the optimal number of lamellae and lamellae arrangement.

Grain sizes of abrasive cloth	: P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80</b> * / P100 / P120 / P150	ZA	
Application:	Deburring of NE metals and plastics		
Picard recommendation:	For contours of category 1-3 as well a	s workpiece strengths of category 1-3	

#### ABRASIVE FLEECE FAPI-RED ROUGH & STRONG!

Edge rounding: category 4 (very strong)

**Specal abrasive fleece Red**, interspersed with aluminum oxide  $(Al_2O_3)$  with a grain size of 100, is our abrasive fleece with open cloth and extremely high stock removal for application on steel and stainless steel. Excellent for long workpiece edges with high burr formation.

It is possible to have a decisive influence over the intensity of stock removal in combination with the high-value abrasive cloth and the optimal number of lamellae and lamellae arrangement.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Deburring of steel parts or tool steel at	fter flame cut	
Picard recommendation:	For contours of category 4 as well as workpiece strengths of category 3-4		

#### ABRASIVE FLEECE FAPI-DARKBLUE WIDE & FLEXIBLE!

Edge rounding: category 4 (very strong)

**Special abrasive fleece DarkBlue**, interspersed with aluminum oxide  $(AI_2O_3)$  with a grain size of 100, is our abrasive fleece with open cloth and extremely high stock removal for application on steel, stainless steel or NE metals. The abrasive grain implemented here has a v-shaped / oval form and is characteristic for its resilience. The special unique bonding of the abrasive grain allows for a high stock removal and a significantly higher tool life compared with fleeces of the same category with regards to the grain type and grain size, particularly in the application area of NE metals.

Excellent for long workpiece edges with high burr formation. In spite of the 18 mm fleece strength, the uniform distribution of the abrasive grain provides a beautiful uniform satin surface finish on NE metals. The lateral tilting in the form of deburring discs is strongly reduced by the higher abrasive fleece thickness. Another positive side-effect is that only such an amount of abrasive cloth is used as is necessary (deburring discs combined with abrasive fleece and abrasive cloth).

It is possible to have a decisive influence over the intensity of stock removal in combination with the high-value abrasive cloth and the optimal number of lamellae and lamellae arrangement.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80*</b> / P100 / P120 / P150	ZA	
Application:	Deburring of steel, stainless steel or N	NE metals, satin finish	
	of aluminum surfaces, high stock rem	oval	
Picard recommendation:	For contours of category 3-4 as well as	s workpiece strengths of category 4	

#### ABRASIVE FLEECE FAPI-BLACK THE WATER-RESISTANT!

Edge rounding: category 4 (very strong)

**Special abrasive fleece Black**, interspersed with silicon carbide (SiC) with a grain size of 60, is our abrasive fleece for wet deburring is ideal for application on steel, stainless steel and aluminum. The abrasive grain implemented here has an apex crystalline form and is harder and more brittle than aluminum oxide. Excellent properties for soft materials. The special impregnation allows the use on wet deburring machines.

It is possible to have a decisive influence over the intensity of stock removal in combination with the high-value abrasive cloth and the optimal number of lamellae and lamellae arrangement.

Grain sizes of abrasive cloth:	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	Al <sub>2</sub> O <sub>3</sub>	
	P60 / <b>P80*</b> / <b>P100*</b> / P120 / <b>P150*</b>	SiC	
	P60 / <b>P80</b> * / P100 / P120 / P150	ZA	
Application:	Deburring of steel, stainless steel and	aluminum,	
	also on wet deburring machines		
Picard recommendation:	For contours of category 3-4 as well as	workpiece strengths of category 3-4	

#### SCHEMATIC REPRESENTATION OF ABRASIVE GRAIN - TYPES



#### WORKPIECE PARAMETER

#### Workpiece thickness

Category 1	=	0,5 mm – 1,5 mm
Category 2	=	1,0 mm – 3,0 mm
Category 3	=	2,0 mm – 5,0 mm
Category 4	=	4,0 mm - max. workpiece height

#### Workpiece contour \* (cutouts)

Category 1	=	Ø 2,0 mm – 3,0 mm
Category 2	=	Ø 3,0 mm – 5,0 mm
Category 3	=	Ø 4,0 mm – 6,0 mm
Category 4	=	Ø 5,0 mm – bigger

#### Edge rounding \*\*

Category 1	=	very slightly =	=	ca. 0,1 mm – 0,2 mm
Category 2	=	slightly =	=	ca. 0,2 mm – 1,0 mm
Category 3	=	strong =	=	ca. 0,5 mm – 1,0 mm
Category 4	=	very strong =	=	ca. 1,0 mm – 2,0 mm

\* Example based on hole diameters

\*\* According to the used abrasive grain

### **DEBURRING DISCS / DEBURRING SEGMENTS**

#### **DEBURRING DISCS FAPI-350**

The deburring discs FAPI-350 consist of a carrier disc of aluminum, faced with three rings of abrasive fleece and abrasive cloth in different sizes. They are used on automatic deburring machines of the company Timesavers B.V. (the Netherlands) and the high-density filling allows a significant stock removal in the deburring process.

#### Standard version:

3 rings (abrasive fleece Brown/grain size 80) Further combinations of abrasive fleece qualities and grain size are possible!

#### Applications:

In the deburring process the edges or chips generated in the treatment or manufacturing process, the so-called burr, are removed from mostly metallic workpieces. These burrs are generated in many treatment processes, such as die cutting, flame cut, laser or water jet cutting on the interfaces of the workpieces.



#### DEBURRING SEGMENTS FAPI-FLEX-SAT

Our deburring segments FAPI-FLEX-SAT with larger tool diameters are a further enhancement of our deburring discs FAPI-350.

These advanced deburring segments were developed in cooperation with the Dutch group, Timesavers. Fast, safe and clean deburring or edge rounding of sheet metal is no longer a problem with the use of these tools. Deburring segments FAPI-FLEX-SAT can also be adapted individually depending on the application.

Dimensions:	Ø 900 mm / Ø 1.200 mm / Ø 1.500 mm
Grain Sizes:	80 / 100 / 120 / 150
Abrasive fleece:	Green (very soft)
	Brown (soft)
	Blue (medium hard)
	Sand (hard)
	Black (extremly hard)

#### Applications:

Die-cutting, flame-cutting, laser-cutting or water-jet cutting sheet metal usually leaves a burr along the cut edge. This is best removed using our deburring segments FAPI-FLEX-SAT. This deburring or edge rounding of sheet metal is carried out on automatic, stationary deburring machines (e.g. Timesavers deburring machines).

#### Note:

Deburring segments FAPI-FLEX-SAT for Timesavers deburring machines are available exclusively from Timesavers International B.V. (the Netherlands). Please ask for contact details.



### **DEBURRING WHEELS / ELASTIC GRINDING WHEELS**

#### **DEBURRING WHEELS FAPI-FLEX**

The deburring wheels FAPI-FLEX are the perfect tool for the rounding resp. deburring of sheet metal parts and can be used on hand-operated machines and automatic machines. Their flexible fillings are optimally adapted to the workpiece to be treated.

Dimensions:	Diameter:	150 to 400 mm
	Width:	30 to 150 mm
	Hole:	as per specification
Grain sizes:	60 / 80 / 100 / 1	20 / 150 / 180 / 240
Applications:	Finishing of corrugated and curved workpieces,	
	edge rounding	of laser cut, water cut or plasma cut workpieces



#### DEBURRING WHEELS FAPI-SW

The deburring wheels FAPI-SW with their high-elasticity filling are mainly used for the fine grinding on wavy and curved metal workpieces. They are also used frequently for the edge rounding on laser, water or plasma cut workpieces. The optimal adaptation of the filling ensures an excellent surface performance and optimal edge rounding on the workpiece to be treated.

Dimensions:	Diameter:	160 mm / 250 mm
	Width:	50 mm
	Hole:	as per specification
Grain sizes:	60 / 80 / 100	0 / 120 / 150 / 180 / 240
Applications:	Finishing of corrugated and curved workpieces,	
	edae roundi	ing of laser cut, water cut or plasma cut workpieces



#### ELASTIC GRINDING WHEELS FAPI-FEST

Elastic grinding wheels FAPI-FEST are ideally suited for the sharpening, stripping, deburring and polishing of knives and splitting tools. The composition of the elastic grinding wheel is also important. The elastic grinding wheel is manufactured from openpore rubber or polyurethane, which is uniformly interspersed with most different abrasive grain sizes.

Dimensions:	Diameter:	150 to 1	.000 mm
	Width:	5 to	300 mm
	Hole:	as per s	pecification
Grain types:	Regular alum	inium oxi	de / silicon carbide / mixed aluminium oxide /
	White alumini	um oxide	9
Hardness grades, b	ondings and	Grain si	zes on request!
Applications:	Sharpening, I	honing, c	beburring and polishing knives and splitting
	tools		



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### **CONTACT WHEELS**

#### MAIN TASKS

The choice of the contact wheel plays a **DECISIVE ROLE** in the quality, cost and duration of the belt grinding process.

#### Most important tasks:

- Contribute to the grinding result in terms of cost, quality and time
- Regulate temperature development during the process
- Support the abrasive belt in the grinding zone
- Reduce noise development
- Absorb and reduce vibrations which arise during the process

#### INFLUENCING FACTORS

When selecting the appropriate contact wheels for the belt grinding process, there are various process parameters which should be taken into account.



#### CONTACT WHEEL TYPES

Contact wheels can be divided into two types:

CONTACT WHEELS
full version
FAPI-PA – series
FAPI-VU – series
FAPI-V – series



#### **Recovering / Recycling**

In most cases, worn contact wheels can be recovered, provided the used core is suitable and safe for reuse. This is a low-cost alternative to buying a new one.

#### SHAPES AND PROFILES

We can produce contact wheels in various shapes and profiles, depending on the application. *Examples:* 



#### HARDNESS

The hardness of the contact wheel is a decisive influencing factor in the grinding process. Hardness is measured in Shore (A) units. The higher the value, the harder the coating.



#### Rule of thumb for contact wheels:

Select the contact wheel for your belt grinding process as hard as possible and as soft as necessary.

#### **CUTTING SPEED**

For different materials we recommend using different cutting speeds. The values given below are averages. The optimal cutting speed for the process concerned has to be decided in practice according to the application.



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#### CONTACT WHEELS FULL VERSION

The cores of our full-version contact wheels have cylindrical coatings. Due to the grooves in the coating, the contact wheels can be adapted precisely to the process for which they should be used.

CONTACT WHEELS
full version
FAPI-PA – series
FAPI-VU – series
FAPI-V – series

#### COATING

The standard materials we use to cover our full-version contact wheels, after which our ranges are named, are listed in the following table:

DESIGNATION	
PA	Rubber (NBR, EPDM, etc.)
VU	foamed up Vulkollan®
V	Vulkollan®

Our contact wheels can be recovered with other materials on request.

#### **GROOVE-WEB RATIO**

Grooves in the coating of a contact wheel change the geometric conditions in the contact zone between the abrasive belt and the workpiece.

The serrations reduce the contact length, so the contact wheel has a more aggressive effect.

#### Rule of thumb:

The wider the groove, the more aggressive the contact wheel will be.



### STANDARD MILLINGS

Our standard millings on contact wheels can be seen in the table below. Other millings (e.g. special Picard millings) are also available.

**CONTACT WHEELS FULL VERSION** 

outor Ø	<b>S</b> TANDARD MILLINGS			
[ in mm ]	groove depth [ in mm ]	groove width [in mm]	web width [ in mm ]	
100				
125	10	6	10	
150				
175	10	6	10	
200	10	0	12	
250				
300	10			
350		8	12	
400				
450				

#### MILLING ANGLES

The angle at which the grooves are milled has a decisive influence on the grinding output and the resulting noise level during the belt grinding process.

#### **Removal rate**

The higher the milling angle on the contact wheel, the lower the removal rate. Therefore, smooth contact wheels have a low removal rate.

#### Noise level

The higher the milling angle on the contact wheel, the lower the noise level during grinding. Therefore, smooth contact wheels are very quiet running.

SUMMARY		
SMOOTH CONT	ACT WHEEL	MILLED CONTACT WHEEL
LOW	DOWNFORCE TO THE	SINGLE GRAIN HIGH
HIGH	ADAPTABILITY TO TH	E WORKPIECE LOW
LOW	STOCK REM	OVAL HIGH
FINE	GRAIN	COARSE
FINE	SURFAC	E COARSE
PROFILED		DNTOUR FLAT
SOFT CONTA	CT WHEEL	HARD CONTACT WHEEL

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GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### CONTACT WHEELS FAPI-PA

#### **PRODUCT DESCRIPTION FAPI-PA - SERIES**

The contact wheels of the FAPI-PA series are covered only with NBR (formerly: PAra rubber coating). The NBR coated contact wheels are in practice often simply called rubber coated contact wheels or rubber contact wheels.

Advantages of contact wheels with this structure:

- Maximum service life
- Wear-resistance
- Oil-resistance
- Grease-resistance
- Emulsion-resistance



Because of these outstanding properties, our contact wheels of the FAPI-PA series have proven themselves in the market over decades.

#### COATING HARDNESS FAPI-PA - SERIES

The NBR rubber coating is available in five levels of hardness, ranging from extra soft with 35° Shore (A) up to extra hard with 90° Shore (A). Selecting the right contact wheel hardness always depends on the individual application.



#### Coating height:

While a coating height of 20 mm has established itself as the standard, the coating height can be varied as desired. The higher the coating, the more elastic and therefore the softer the contact wheel surface will be.

#### **R**ECOMMENDED APPLICATIONS

Contact wheels FAPI-PA are the standard contact wheels often found on machines. Because of their universal usage options, almost all machine manufacturers supply their machines with contact wheels from this series.

Grinding operation:	Cylindrical grinding,	surface grinding, heavy-duty grinding and roughing
Grinding type:	Wet and dry grinding	g
Used in:	Automatic grinding,	portable machines, pedestal grinder/backstand, robotic grinding
Cutting speeds:	maximal	50 m/s
	recommended	36 m/s
Areas of use:	of use: Pipe manufacturing, aerospace industry, foundries, etc	

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### **CONTACT WHEELS FAPI-PA**

#### CONTACT WHEEL FAPI-PA SMOOTH TYPE

Structure:	As the name suggests, the aluminium core of the contact wheel FAPI-PA SMOOTH is coated with a smooth NBR coating. The coating height can be varied depending on the application.	
Dimensions:	Diameter: Width: Hole: - Further dimensio	75 to 450 mm 20 to 200 mm as per specification ns on request! -
Core shapes: Applications:	as per specification, have a look at page 18 Metalworking, wood processing, plastic processing, stone processing	



### CONTACT WHEEL FAPI-PA MILLED TYPE

Structure:	The contact wheel FAPI-PA MILLED is an enhancement of the smooth type. It has		
	grooves milled in	to the NBR coating. The grooves can be cut into the coating	
	in various widths,	depths and angles.	
Dimensions:	Diameter:	75 to 450 mm	
	Width:	20 to 200 mm	
	Hole:	as per specification	
	- Further dimensions on request! -		
Core shapes:	as per specification, have a look at page 18		
Applications:	Metalworking, wood processing, plastic processing, stone processing		



#### CONTACT WHEEL FAPI-PA MILLED FREQUENCY DAMPED TYPE

Structure:	The contact whe	eel FAPI-PA MILLED FREQUENCY DAMPED is a further		
	development of th	ne milled type. It has grooves cut into the NBR coating in our		
	ed ratio of groove width to groove depth to web width. This			
	minimises the no	ise level during the belt grinding process and maximises the		
	removal rate.			
Dimensions:	Diameter:	75 to 450 mm		
	Width:	20 to 200 mm		
	Hole:	as per specification		
	- Further dimensions on request! -			
Core shapes:	as per specification, have a look at page 18			
Applications:	Metalworking, woo	d processing, plastic processing, stone processing		



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**GRINDING TECHNOLOGY** • **DEBURRING TECHNOLOGY** • **POLISHING TECHNOLOGY** • **BRUSHING TECHNOLOGY** 

### **CONTACT WHEELS FAPI-VU**

#### **PRODUCT DESCRIPTION FAPI-VU – SERIES**

The contact wheels of the FAPI-VU series are coated only with foamed up Vulkollan<sup>®</sup>. It's a matter of cellular Vulkollan<sup>®</sup>, a polyurethane foamed with water which has very high dynamic properties. Foamed up Vulkollan<sup>®</sup> can be identified by its slightly yellowish colour.

# Advantages of contact wheels with a coating of foamed up Vulkollan<sup>®</sup>:

- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance
- Acid-resistance

Because of these outstanding properties, our contact wheels of the FAPI-VU series have proven themselves in the market over decades

#### COATING HARDNESS FAPI-VU - SERIES

The hardness of the foamed up Vulkollan<sup>®</sup> coating can be divided into three levels ranging from a soft foamed up Vulkollan<sup>®</sup> coating with 25° Shore (A) to a hard foamed up Vulkollan<sup>®</sup> coating with 45° Shore (A). Selecting the right contact wheel hardness always depends on the individual application.



#### Coating height:

22

While a coating height of 20 mm has established itself as the standard, the coating height can be varied as desired. The higher the coating, the more elastic and therefore the softer the contact wheel coating will be.

#### **R**ECOMMENDED APPLICATIONS

Contact wheels of the FAPI-VU series are especially suitable for achieving a fine finish on (heavily) rounded and profiled parts. In addition, there is almost no fatiguing of the contact wheel when used correctly, even after long and intensive use.

Grinding operation:	Cylindrical grinding, surface grinding, profile grinding		
Grinding type:	Dry grinding		
Used in:	Automatic grinding,	portable machines, pedestal grinder//backstand, robotic grinding	
Cutting speeds:	maximal	36 m/s	
	recommended	36 m/s	
Areas of use:	Fittings industry, medical technology, aerospace industry, car industry, etc.		



ONTACT WHEELS

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### **CONTACT WHEELS FAPI-VU**

#### CONTACT WHEEL FAPI-VU SMOOTH TYPE

Structure:	As the name sugg	ests, the aluminium core of the contact wheel FAPI-VU SMOOTH	
	has a coating of	smooth foamed up Vulkollan®. The coating height can be varied	
	depending on the a	application.	
Dimensions:	Diameter:	75 to 450 mm	
	Width:	20 to 200 mm	
	Hole:	as per specification	
Core shapes:	as per specification, have a look at page 18		
Applications:	Metalworking, wood processing, plastic processing, stone processing		



### CONTACT WHEEL FAPI-VU MILLED TYPE

Structure:	The contact whe	el FAPI-PA MILLED is an enhancement of the smooth type.		
	It has grooves milled into the coating of foamed up Vulkollan®. The grooves can be cut			
	into the coating in various widths, depths and angles.			
Dimensions:	Diameter:	75 to 450 mm		
	Width:	20 to 200 mm		
	Hole:	as per specification	- 5	
Core shapes:	as per specification, have a look at page 18		-	
Applications:	Metalworking, wood processing, plastic processing, stone processing			



#### CONTACT WHEEL FAPI-VU MILLED FREQUENCY DAMPED TYPE

Structure:	The contact whe	eel FAPI-VU MILLED FREQUENCY DAMPED is a further		
	development of the milled type. It has grooves cut into thecoating of foamed up			
	Vulkollan® in our s	specially developed ratio of groove width to groove depth to web		
	width. This minimi	ises the noise level during the grinding process and maximises		
	the removal rate.			
Dimensions:	Diameter:	75 to 450 mm		
	Width:	20 to 200 mm		
	Hole:	as per specification		
Core shapes:	as per specification, have a look at page 18			
Applications:	Metalworking, wood processing, plastic processing, stone processing			

**CONTACT WHEELS** 

#### OVERVIEW CONTACT WHEEL - SERIES



FAPI-PA – series



**FAPI-VU – series** 



**FAPI-BW** – series





FAPI-PUS – series



FAPI-KS/V – series



**FAPI-VUS – series** 

#### **Picard tip:**

Especially when grinding at contact wheels the factor "contact wheel" should not be underrated. With the choose of the suitable contact wheel a much better performance up to 40% more may be achieved in the belt grinding process.

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### CONTACT WHEELS LAMELLAE VERSION

#### CONTACT WHEELS LAMELLAE VERSION

Our contact wheels in lamellae version have cores that are covered with individual lamellae. By varying the hardness of the lamellae, the contact wheels can be adapted precisely to the process for which they should be used.

CONTACT WHEELS
lamellae version
FAPI-KS/V – series
FAPI-VUS – series
FAPI-PUS – series
FAPI-BW – series

#### COATING

The standard materials we use to cover our contact wheels in lamellae version are listed in the following table:

DESIGNATION	
V	Vulkollan®
VUS	foamed up Vulkollan®
PUS	Polyurethan foam
BW	Cotton
KS	Plastic foam

Our contact wheels can be recovered with other materials on request.

#### LAMELLAE POSITION

Different lamellae positions and hardnesses on contact wheels change the geometric conditions at the contact zone between the abrasive belt and the workpiece.

A kind of 'serration" is achieved on the contact wheel, as in the full-wheel version. However, because this "serration" is made of lamellae, it is more flexible.

#### ATTACK ANGLE

The attack angle of the lamellae has a decisive influence on the removal rate and the resulting noise level during the belt grinding process.

#### Removal rate

The higher the declination angle of the lamlellae on the contact wheel, the lower the removal rate.

#### Noise level

The higher the attack angle of the lamellae at the contact wheel, the lower the noise level during grinding.

#### SUMMARY

DENSE POSITION	OF THE LAMELLAE	LOOSE POSITION OF	THE LAMELLAE
LOW	DONWFORCE TO THE	SINGLE GRAIN	HIGH
HIGH	ADAPTABILITY TO TH	EWORKPIECE	LOW
LOW	STOCK REM	OVAL	HIGH
FINE	GRAIN		COARSE
FINE	SURFAC	E	COARSE
PROFILED	WORKPIECE CO	INTOUR	FLAT
SOFT CON	ACT WHEEL	HARD CONTAC	T WHEEL

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### **CONTACT WHEELS FAPI-KS/V**

#### PRODUCT DESCRIPTION FAPI-KS/V - SERIES

Because of their Vulkollan<sup>®</sup> and plastic foam lamellae, our contact wheels of the FAPI-KS/V series are extremely aggressive.

#### Advantages of contact wheels with this structure:

- > Maximum removal rate
- > Plastic lamellae provide optimum cooling of the abrasive belt
- Wear-resistance
- Oil-resistance
- Grease-resistance



Because of these outstanding properties, our contact wheels of the FAPI-KS/V series have proven themselves in the market over decades.

#### COATING HARDNESS FAPI-KS/V - SERIES

The Vulkollan<sup>®</sup> lamellae are available in three hardness levels, ranging from a medium soft Vulkollan<sup>®</sup> lamella with 60° Shore (A) to an extra hard Vulkollan<sup>®</sup> lamella with 90° Shore (A). Selecting the right lamella hardness always depends on the individual application.



#### Coating height:

The height of the coating and the length of the Vulkollan<sup>®</sup> and plastic foam lamellae can be varied depending on the application (standard: 25 mm). The longer the lamellae are, the less rigid the material becomes, which in turn reduces the aggressiveness of the contact wheel.

#### **R**ECOMMENDED APPLICATIONS

The contact wheel FAPI-KS/V is used in particular when high abrasion is required in a short time (for example for surface grinding). But even lightly rounded workpieces can be ground without difficulty using this contact wheel.

Grinding operation:	Cylindrical grinding,	surface grinding, profile grinding
Grinding type:	Dry grinding	
Used in:	Automatic grinding,	portable machines, pedestal polisher//backstand, robotic grinding
Cutting speeds:	maximal	50 m/s
	recommended	36 m/s
Areas of use:	Foundries, fittings ir	ndustry, aerospace industry, etc.

### CONTACT WHEELS FAPI-KS/V

#### CONTACT WHEEL FAPI-KS/V STANDARD TYPE

Structure:	Vulkollan <sup>®</sup> and pla	astic foam lamellae are attached alternately to the aluminium	
	core of the contact wheel FAPI-KS/V. While the width of the Vulkollan® lamellae		
	should be kept co	onstant, the width of the plastic foam lamellae can be varied.	
	The wider the plas	tic foam lamella, the more aggressive the contact wheel will be.	
Dimensions:	Diameter:	150 to 450 mm	
	Width:	20 to 200 mm	
	Hole:	as per specification	
	- Further dimensions on request! -		
Core shapes:	as per specification, have a look at page 18		
Applications:	Metalworking, woo	d processing, plastic processing, stone processing	



#### Contact wheel Fapi-KS/V special type

Structure:	Uniformly wide V	/ulkollan <sup>®</sup> lamellae are attached to the aluminium core of			
	the contact wheel FAPI-KS/V SPECIAL at alternating angles with plastic for				
	lamellae attached	in the spaces between them. The alternating angles of			
	the lamellae resul	t in a longer service life for the contact wheel and optimum			
	utilisation of the abrasive belt.				
Dimensions:	Diameter:	150 to 450 mm			
	Width:	20 to 200 mm			
	Hole:	as per specification			
	- Further dimensions on request! -				
Core shapes:	as per specification, have a look at page 18				
Applications:	Metalworking, woo	d processing, plastic processing, stone processing			



#### CONTACT WHEEL FAPI-KS/V FREQUENCY DAMPED TYPE

Structure: Uniformly wide Vulkollan® lamellae are attached to the aluminium core of the contact wheel FAPI-KS/V FREQUENCY DAMPED at well defined distances, with plastic foam lamellae attached in the spaces between them. Thanks to the special lamella distances, the noise level during the belt grinding process is minimised and the removal rate is maximised. **Dimensions:** Diameter: 150 to 450 mm Width: 20 to 200 mm Hole: as per specification - Further dimensions on request! -Core shapes: as per specification, have a look at page 18

Applications: Metalworking, wood processing, plastic processing, stone processing



Vulkollan® = registered trade mark of the Covestro-Group

### **CONTACT WHEELS FAPI-VUS**

#### PRODUCT DESCRIPTION FAPI-VUS - SERIES

Our contact wheels of the FAPI-VUS series are coated with foamed up Vulkollan<sup>®</sup> lamellae. Combinations with other lamellae made of different materials are possible, so contact wheels FAPI-VUS can be adapted to a wide range of belt grinding processes.

Advantages of contact wheels with lamellae of foamed up Vulkollan<sup>®</sup>:

- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance

Because of these outstanding properties, our contact wheels of the FAPI-VUS series have proven themselves in the market over decades.

#### COATING HARDNESS FAPI-VUS - SERIES

The foamed up Vulkollan<sup>®</sup> lamella coating is available in three hardness levels, ranging from a soft coatings of foamed up Vulkollan<sup>®</sup> lamella with 25° Shore (A) to a hard coating of foamed up Vulkollan<sup>®</sup> lamella with 45° Shore (A). Selecting the right lamella hardness always depends on the individual application



#### Coating height:

The height of the coating and the length of the foamed up Vulkollan<sup>®</sup> lamellae can be varied depending on the application (standard: 20 mm or 35 mm). The longer lamellae of the foamed up Vulkollan<sup>®</sup>, the softer/more adaptable the contact wheel will be, with the same Shore hardness rating

#### **R**ECOMMENDED APPLICATIONS

Contact wheels FAPI-VUS are used in particular to achieve a high-quality finish on heavily profiled or heavily rounded workpieces in a very short time.

Grinding operation:	Cylindrical grinding,	profile grinding
Grinding type:	Dry grinding	
Used in:	Automatic grinding,	portable machines, pedestal grinder/backstand, robotic grinding
Cutting speeds:	maximal	36 m/s
	recommended	36 m/s
Areas of use:	Fittings industry, car	r industry, aerospace industry, foundries, etc.



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### **CONTACT WHEELS FAPI-VUS**

#### CONTACT WHEEL FAPI-VUS DENSE TYPE

Structure:	The aluminium core dense, adjoining lamel	of the contact wheel FAPI-VUS DENSE is covered with ellae of foamed up Vulkollan <sup>®</sup> .	
Dimensions:	Diameter: 75	to 450 mm	
	Width: 20	to 200 mm	
	Lamella height: 20	mm / 35 mm / as per specification	
	Hole: as	per specification	
	- Further dimensions o	on request! -	
Core shapes:	as per specification, ha	ave a look at page 18	
Applications:	Metalworking wood pr	processing plastic processing stone processing	
Applicatione	wood pi		
CONTACT WHE	el Fapi-VUS loos	SE TYPE	
Structure:	The contact wheel F	FAPI-VUS LOOSE is an enhancement of the dense type.	
	The aluminium core	of this wheel is coated with alternately long and short	
	lamellae of foamed up	o Vulkollan <sup>®</sup> .	
Dimensions:	Diameter: 75	to 450 mm	300
	Width: 20	to 200 mm	
	Lamella height: 20	mm / 35 mm / as per specification	
	Hole: as	per specification	
	- Further dimensions o	on request! -	
Core shapes:	as per specification, ha	ave a look at page 18	141100
Applications:	Metalworking, wood pr	processing, plastic processing, stone processing	
CONTACT WHE	EL FAPI-VUS/KS		
Structure:	The contact wheel F	API-VUS/KS is a type coated with lamellae of foamed up	

Vulkollan® and plastic foam lamellae. The different material densities result in the heat generated during the belt grinding process being drawn off very effectively.

**Dimensions:** Diameter: 75 to 450 mm Width: 20 to 200 mm Lamella height: as per specification Hole: as per specification - Further dimensions on request! -Core shapes: as per specification, have a look at page 18



CONTACT WHEEL FAPI-VUS/RE

Applications:

Structure: The contact wheel FAPI-VUS/RE is an alternative to the FAPI-VUS/KS. The different material densities of the alternately arranged lamellae of foamed up Vulkollan® and laminated Moltopren foam lamellae result in the heat generated during the belt grinding process being drawn off very effectively.

Metalworking, wood processing, plastic processing, stone processing

Diameter: 75 to 450 mm **Dimensions:** Width: 20 to 200 mm Lamella height: as per specification Hole: as per specification - Further dimensions on request! -Core shapes: as per specification, have a look at page 18 Applications: Metalworking, wood processing, plastic processing, stone processing



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29

### CONTACT WHEELS FAPI-PUS

#### **PRODUCT DESCRIPTION FAPI-PUS – SERIES**

Our contact wheels of the FAPI-PUS series are coated with lamellae made of polyurethane foam. Combinations with other lamellae made of different materials are possible, so contact wheels FAPI-PUS can be adapted to a wide range of belt grinding processes.

# Advantages of contact wheels with lamellae made of polyurethane foam:

- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance



Because of these outstanding properties, our contact wheels of the FAPI-PUS series have proven themselves in the market over decades.

#### COATING HARDNESS FAPI-PUS - SERIES

Our polyurethane foam lamellae are available in only one hardness of approx. 15° Shore (A). Contact wheels of the FAPI-PUS series are used if the hardness spectrum of the FAPI-VUS series is inadequate.



#### Coating height:

The height of the coating and/or the length of the polyurethane foam lamellae can be varied depending on the application (standard: 35 mm). The longer the polyurethane foam lamellae, the softer/more adaptable the contact wheel will be.

#### **R**ECOMMENDED APPLICATIONS

Our contact wheels FAPI-PUS are used in particular to achieve a high-quality finish on heavily profiled or heavily rounded parts in a very short time.

Grinding operation:	Cylindrical grinding, prof	ile grinding
Grinding type:	Dry grinding	
Used in:	Automatic grinding, porta	able machines, pedestal grinder/backstand, robotic grinding
Cutting speeds:	maximal	36 m/s
	recommended	36 m/s
Areas of use:	Fittings industry, medica	I technology, car industry, aerospace industry, foundries, etc.

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### **CONTACT WHEELS FAPI-PUS**

#### CONTACT WHEEL FAPI-PUS DENSE TYPE

Structure:	The aluminium core of t	he contact wheel FAPI-PUS DENSE is coated with			
	dense, adjoining polyuretha	ane foam lamellae.			
Dimensions:	Diameter:	75 to 450 mm			
	Width:	20 to 200 mm			
	Lamella height:	35 mm / as per specification			
	Hole:	as per specification			
	- Further dimensions on request! -				
Core shapes:	as per specification, have a look page 18				
Applications:	Metalworking, wood processing, plastic processing, stone processing				

#### CONTACT WHEELFAPI-PUS OPEN TYPE

Structure:	The contact wheel FAP	I-VUS OPEN is an enhancement of the dense type.	
	On the loose wheel, the	aluminium core is coated with alternating long and short	
	polyurethane foam lamellae.		
Dimensions:	Diameter:	75 to 450 mm	
	Width:	20 to 200 mm	
	Lamella height:	35 mm / as per specification	
	Hole:	as per specification	
	- Further dimensions on request! -		
Core shapes:	as per specification, have a look page 18		
Applications:	Metalworking, wood proce	essing, plastic processing, stone processing	

#### CONTACT WHEEL FAPI-PUS/KS

Applications:

Structure: The contact wheel FAPI-PUS/KS is coated with polyurethane foam and plastic foam lamellae. The different material densities result in the heat generated during the belt grinding process being drawn off very effectively.

Dimensions: Diameter: 75 to 450 mm Width: 20 to 200 mm Lamella height: as per specification Hole: as per specification - Further dimensions on request! -Core shapes: as per specification, have a look page 18



#### CONTACT WHEEL FAPI-PUS/KS FREQUENCY DAMPED TYPE

Structure:	The contact wheel FA	PI-PUS/KS FREQUENCY DAMPED is a further development		
	of the contact wheel FAPI-PUS/KS. Thanks to the special lamella distances, the noise			
	level is minimised and the removal rate is maximised.			
Dimensions:	Diameter:	75 to 450 mm		
	Width:	20 to 200 mm		
	Lamella height:	as per specification		
	Hole:	as per specification		
	- Further dimensions on request! -			
Core shapes:	as per specification, have a look page 18			
Applications:	Metalworking, wood processing, plastic processing, stone processing			

Metalworking, wood processing, plastic processing, stone processing



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### **CONTACT WHEELS FAPI-BW**

#### PRODUCT DESCRIPTION FAPI-BW - SERIES

With their cotton cloth lamellae, contact wheels of the FAPI-BW series are very well suited for fine sanding.

#### Advantages of contact wheels with cotton cloth lamellae:

- Highly elastic (adaptable) ⊳
- Wear-resistance ⊳

Because of these outstanding properties, our contact wheels of the FAPI-BW series have proven themselves in the market over many decades.



#### COATING HARDNESS FAPI-BW - SERIES

Contact wheels with cotton cloth lamellae can be supplied in several levels of surface hardness, ranging from "extra soft" to "extra hard". The hardness of the contact wheel FAPI-BW is achieved with the number of cotton cloth lamellae around the contact wheel's circumference, i.e. the density of the cotton cloth lamellae. Unfortunately it is not possible to give a precise value in Shore (A).



#### HARDNESS RATING

#### Coating height:

The height of the coating and/or the length of the cotton lamellae can be varied depending on the application (standard: 35 mm). The longer the cotton lamellae, the softer/more adaptable the contact wheel will be.

#### **R**ECOMMENDED APPLICATIONS

The contact wheel FAPI-BW is used for heavily profiled or heavily rounded parts that are ground manually in a dry process.

Grinding operation:	Cylindrical grinding, profile grinding		
Grinding type:	Dry grinding		
Used in:	Automatic grinding, portable machines, pedestal grinder//backstand, robotic grinding		
Cutting speeds:	maximal	36 m/s	
	recommended	36 m/s	
Areas of use: Fittings industry, medical technology, car industry, aerospace ind		dical technology, car industry, aerospace industry, etc.	

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Structure:	: The contact wheel FAPI-BW is made of cotton cloth lamellae attached ar		
	an aluminium core. Predo	minantly, the contact wheel FAPI-BW with a softer	
	coating contributes signifi	cantly to keeping the abrasive belt cool, because	
	the spaces between the lamellae draw off the heat generated during belt grinding.		
Dimensions:	Diameter:	75 to 450 mm	
	Width:	20 to 200 mm	
	Lamella height:	35 mm / as per specification	
	Hole:	as per specification	
	- Further dimensions on request! -		
Applications:	Metalworking, wood processing, plastic processing, stone processing		



**CONTACT WHEELS FAPI-BW** 

#### **R**ECOVERING OF **C**ONTACT WHEELS

CONTACT WHEEL FAPI-BW

In most cases, worn contact wheels can be recovered, provided the used core is suitable and safe for reuse. This is a low-cost alternative to buying a new one.

Apart from single-use cores, we can recover all types of contact wheel cores. For the new coating, you can select a coating that suits your application best from our contact wheel series:

**FAPI-PA** coating FAPI-VU coating FAPI-KS/V coating FAPI-VUS coating **FAPI-PUS** coating FAPI-BW coating



### **ROLLS AND ROLLERS**

#### **P**RODUCT FEATURES

We produce elastic rolls and rollers for technical applications with a wide range of coatings, geometries, edges and profiles. Our rolls and rollers have been tried and tested in many different uses and industries over several decades.

#### COATINGS

Our roll and roller coatings meet a wide range of demands reliably, precisely and, of course, economically. We offer a large selection of coatings:

Designation ASTM	English designation acc. to ISO
NBR	Nitrile butadiene rubber
NR	Natural rubber
SBR	Styrene butandiene rubber
EPDM	Ethylene propylene terpolymers
CR	Chloroprene rubber
CSM	Chlorsulphonated polyethylene
MQ	Silicone rubber
V	Vulkollan®
VU	foamed up Vulkollan®

#### GEOMETRIES

We produce rolls and rollers in the following geometries:



#### Edges



#### PROFILES

The profiles listed below are just a small selection of our profiles. We can produce glued and painted profiles, spiral grooves radiating from the centre, special profiles, and so on.



#### EXAMPLES OF APPLICATIONS

Printing industry - films and foils industry - metal industry - textile industry - wood and furniture industry - paper industry - food industry - packaging industry - PCB industry

#### Picard tip:

With our many years of experience in belt grinding, we have big know-how in producing the very best contact rollers for wide belt grinding processes.

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# **CONTACT ROLLS / FOLDING CONTACT WHEELS**

### CONTACT ROLLS FAPI-PA M8 AND FAPI-VU M8

The contact rolls FAPI-PA M8 and FAPI-VU M8 can be covered with rubber and foamed up Vulkollan<sup>®</sup>. This coating can be supplied ia a smooth or grooved version. All contact rolls FAPI-PA M8 and FAPI-VU M8 are equipped with two high-quality ball bearings and a M8 threaded bolt for mounting to the machines.

Dimensions:	Diameter:	30 mm / 50 mm
	Width:	30 mm / 50 mm
	- Further dime	ensions on request! -
	Thread:	M8
Coating hardness:	FAPI-PA M8: (	ca. 45° / ca. 65° / ca. 80° / ca. 90° Shore (A)
	FAPI-VU M8:	25° / 35° / 45° Shore (A)
Applications:	Manual belt g	rinders, automation units, etc



### FOLDING CONTACT WHEELS FAPI-METALL

Folding contact wheels FAPI-METALL are an excellent alternative to abrasive sleeve holders, particularly in container construction. High-quality design, cost-effective application with the use of abrasive rolls and easy handling are the criteria the folding contact wheel FAPI-METALL meets in order to satisfy customers' demands for the highest possible quality.

Dimensions:	Diameter:	150 mm		
	Width:	40 mm		
	Thread:	M14 / 5/8"		E
Model:	FAPI-METALL V	/UG		
	The folding conta	act wheel FAPI-METALL VUG is covered	OUR	
	with a slitted coa	ting made of foamed up Vulkollan <sup>®</sup> .		
	FAPI-METALL K	(S/V		
	The folding conta	act wheel FAPI-METALL KS/V is coated wi	th lamellae	
	made of Vulkolla	n <sup>®</sup> and plastic foam.		
	Compared to the	type FAPI-METALL VUG she is harder an	nd therefore	
	more aggressive	in stock removal		
Applications:	Metalworking, co	ontainer construction, etc.		



Folding contact rollers FAPI-HOLZ are an excellent alternative to abrasive sleeve holders. High-quality design, cost-effective application with the use of abrasive rolls and easy handling are the criteria the folding contact roller FAPI-HOLZ meets in order to satisfy customers' demands for the highest possible quality.

Dimensions:	Diameter:	100 mm
	Width:	100 mm
	Thread:	M16 / 5/8"
Applications:	Metalworking,	container construction, orthopaedics,
	wood processi	ng, etc.



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# **RETURN PULLEYS FAPI-SWITCH**

### PRODUCT FEATURES FAPI-SWITCH - SERIES

With our newly developed FAPI-SWITCH series, we have succeeded in designing return pulleys in a light system format that are unprecedentedly quiet and smooth running and that set new standards in belt grinding. Due to their flexibility - also with respect to a wide range of dimensions - all brands of belt grinding machines can be equipped with these return pulleys.

#### Picard tip:

Save money! Return pulleys are often used without a coating - i.e. with the pure metal only. This often causes problems with the grinding belt guide after a certain period of use. When the grinding belt is deflected on the return pulley, the grinding belt grain presses through the grinding belt base and on to the surface of the return pulley. After some time the running track of the grinding belt forms a track on the metal body of the return pulley. A worn return pulley can no longer guide the abrasive belt properly. It is for this reason that we always recommend using an ultra wear-resistant coating on the return pulley.



### PRODUCT ADVANTAGES FAPI-SWITCH - SERIES

#### Quiet and smooth running

The intelligent bearing on the return pulley FAPI-SWITCH forms its "heart", ensuring that the roller is as quiet and as smooth running as possible during the belt grinding process. Friction between the return pulley and its axle is minimised.

> System configuration

The components of the return pulley are very easy to screw together.

Light design

The return pulley FAPI-SWITCH is produced exclusively from high-quality aluminium, which reduces the weight of the module "return pulley" quite considerably.

Highly abrasion-resistant coatings

We offer a choice of three different coating options (Vulkollan®, NBR or LongLife).

Multiple options for recovering

The return pulleys of the FAPI-SWITCH series can be recovered multiple times.

> Optimum grinding belt guidance

To guarantee that the abrasive belt is properly guided during grinding, the coating of the return pulleys FAPI-SWITCH is spherical. If the return pulley FAPI-SWITCH is used for wet grinding, it can be grooved. This entirely eliminates the risk of the belt aqua-planing on the return pulley.

Wide range of dimensions

Due to their flexibility - also with respect to a wide range of dimensions - almost all brands of belt grinding machines can be equipped with these return pulleys.





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# **RETURN PULLEYS FAPI-SWITCH**

### **RETURN PULLEYS FAPI-SWITCH (STANDARD TYPE WITH VULKOLLAN®-COATING)**

Return pulleys FAPI-SWITCH are made with a Vulkollan<sup>®</sup> coating as standard. The highly wearresistant elastomer Vulkollan<sup>®</sup> significantly increases the service life of the return pulley.

#### Advantages of a Vulkollan® coating:

- Excellent mechanical wear resistance and very low compression set
- Good resistance to mineral oils, greases, benzines and various solvent

Coating type:	Vulkollan®		
Coating hardness:	90° Shore (A)		
Comment:	Single or double sided shaft ends for attachment		
Dimensions:	Diameter: 100 to 250 mm		
	Width:	50 to 500 mm	
	Shaft:	as per specification	
	- Further dimensio	ns on request! -	

#### **RETURN PULLEYS FAPI-SWITCH (TYPE WITH NBR-COATING)**

The return pulley FAPI-SWITCH with an NBR coating is an alternative to the Vulkollan<sup>®</sup> coating. However, return pulleys with an NBR coating have a much shorter service life than those with a Vulkollan<sup>®</sup> coating.

#### Advantages of a NBR coating:

- · Medium wear resistance and low compression set
- · Good resistance to mineral oils, greases, benzines and various solvents

Coating type:	NBR		
Coating hardness:	90° Shore (A)		
Comment:	Single or double sided shaft ends for attachment		
Dimensions:	Diameter: 100 to 250 mm		
	Width:	50 to 500 mm	
	Shaft:	as per specification	
	- Further dimensions on request! -		



### **RETURN PULLEYS FAPI-SWITCH LONGLIFE (TYPE WITH LONGLIFE-COATING)**

The return pulley FAPI-SWITCH LONGLIFE is designed for the most extreme uses. The coating of the return pulley FAPI-SWITCH LONGLIFE has a multiple service life compared with conventional return pulleys.

Coating type:	Special LONGL	Special LONGLIFE coating		
Remark:	Single or double	Single or double sided shaft ends for attachment		
Dimensions:	Diameter:	Diameter: 100 to 250 mm		
	Width: 50 to 500 mm			
	Shaft:	as per specification		
	- Further dimensions on request! -			



Design:

Thanks to their extremely tough coating, return pulleys FAPI-SWITCH LONGLIFE are even suitable for use in situations in which the grain side of the abrasive belt runs over the return pulley coating.

ground for grain side rough for abrasive belt back

absolutely necessary!



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# **EXPANDER WHEELS / EXPANDER ROLLERS**

### EXPANDER WHEELS FAPI-PA

The expander wheels of the FAPI-PA series are an ideal grinding tool for working with every kind of abrasive sleeve. These expander wheels are supplied only with a special slitted NBR coating, whereby the abrasive sleeve is clamped by the centrifugal force during operation. The NBR coated expander wheels are in practice often simply called "rubber expander wheels" or abrasive sleeve holders.

Dimensions:	Diameter:	50 to 450 mm		
	Width:	20 to 200 mm		
	Hole:	as per specific	ation	
Coating hardness:	45° Shore (A) or 65°	Shore (A)		
Cutting speeds:	up to 200 mm outer of	diameter	not less than max.	10 m/s 36 m/s
	from 200 mm outer of	liameter	not less than max.	13 m/s 36 m/s
Applications:	Metalworking, wood	processing		



### EXPANDER WHEELS FAPI-VU

The expander wheels of the FAPI-VU series are an ideal grinding tool for working with every kind of abrasive sleeve. These expander wheels are supplied only with a special slitted coating made of foamed up Vulkollan<sup>®</sup>, whereby the abrasive sleeve is clamped by the centrifugal force during operation. The expander wheels coated with the foamed up Vulkollan<sup>®</sup> (VU) are in practice often simply called "foam expander wheels" or abrasive sleeve holders.

Dimensions:	Diameter:	50 to 450 mm		
	Width:	20 to 200 mm		
	Hole:	as per specific	ation	
Coating hardness:	$25^\circ$ / $35^\circ$ / $45^\circ$ Shore	(A)		
Cutting speeds:	up to 200 mm outer d	liameter	not less than max.	10 m/s 36 m/s
	from 200 mm outer d	liameter	not less than max.	13 m/s 36 m/s
Applications:	Metalworking, wood p	processing		



### EXPANDER ROLLERS FAPI-VU HAND

Our expander rollers FAPI-VU HAND are an ideal grinding tool for working with every kind of abrasive sleeve on hand-operated machines. Expander rollers FAPI-VU HAND are supplied only with a special slitted foamed up Vulkollan<sup>®</sup> coating, whereby the abrasive sleeve is clamped by the centrifugal force during operation.

Dimensions:	Diameter:	90 / 100 / 110 mm
	Width:	40 / 50 / 100 mm
	Hole:	19 mm keyway
The suitable mounting	adapter FAPI-M	14 can be found on page 107!
Coating hardness:	45° Shore (A)	
Cutting speeds:	not less than max.	10 m/s 36 m/s
Applications:	Metalworking,	wood processing



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38

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# ABRASIVE SLEEVE HOLDERS / EXPANDER ROLLERS

#### ABRASIVE SLEEVE HOLDERS FAPI-SOFT

The highly elastic abrasive sleeve holders FAPI-SOFT are specifically designed for use on CNC- and hand drills. With its incredibly soft coating, the abrasive sleeve holder easily adapts to even complex shaped and curved workpieces.

Dimensions:	Diameter:	40 to 100 mm	
	Width:	50 to 200 mm	
	Hole/Shaft:	as per specification	
Coating types:	Sponge rubber, foamed up Vulkollan®, NBR, etc		
Coating hardness:	7° Shore (A) to 45° Shore (A).		
Cutting speeds:	not less than max.	10 m/s 36 m/s	
Applications:	Finishing of glued joints in the seating furniture industry		
	and other large, complex shaped wooden parts.		



### ABRASIVE SLEEVE HOLDERS FAPI-PA

Abrasive sleeve holders FAPI-PA are primarily used on hand-held electric or pneumatic drills, flexible shafts and straight grinders. Using our abrasive sleeve holders FAPI-PA produces a longitudinal grinding, as opposed to the cross-grinding produced with grinding flap discs.

Dimensions:	Diameter:	8 to 100 mm	
	Width:	10 to 40 mm	
	Shaft:	3 mm / 6 mm / 8 mm	
Coating types:	NBR		
Coating hardness:	65° or 85° S	hore (A).	
Applications:	Removal of weld joints in steel construction		
	Edge and co	ontour processing in turbine construction	
	Post-treatme	ent in construction work	



#### EXPANDER ROLLERS FAPI-PA HAND

Expander rollers FAPI-PA HAND are supplied only with a special perforated NBR coating, whereby the abrasive sleeve is clamped by the centrifugal force during operation.

Dimensions:	Diameter:	90 mm
	Width:	100 mm
	Hole:	as per specification
Coating types:	NBR	
Coating hardness:	45° Shore (A)	).
Cutting speeds:	not less than max.	10 m/s 36 m/s
Applications:	Removal of w	eld joints in steel construction
	Edge process	sing



# AIR CONTACT ROLLS / PRESSURE ROLLS / GUIDE ROLLS

### AIR CONTACT ROLLS FAPI-AIR

Our air contact rolls FAPI-AIR are used for precision grinding of contours. The hardness of the air contact roll FAPI-AIR is determined by the volume of air supplied. Air contact rolls FAPI-AIR therefore enable surfaces to be ground with a hard setting and profiles with a softer setting.

Dimensions:	Diameter:	90 mm	
	Width:	100 mm	
	Hole:	19 mm keyway	
Applications:	Edge, contour and surface treatment in metal processing/		
	working (e.g. turbines)		
	Metalworking, wood processing		



### PRESSURE ROLLS FAPI-PRESS

The pressure rolls FAPI-PRESS are equipped with an intelligent clamping system which enables abrasive sleeves to be clamped securely and completely independently of the centrifugal force. The abrasive sleeve is clamped by means of a cone system, guaranteeing that it is constantly held firmly in place during grinding.

Dimensions:	Diameter:	100 to 450 mm
	Width:	50 to 200 mm
	Thread:	as per specification
Applications:	Removal of wel	ds in steel construction
	Edge and conto	our processing in turbine construction
	Post-treatment	in construction work





### GUIDE ROLLS FAPI-RAIL

The guide rolls FAPI-RAIL were developed for grinding railings, pipes, etc. With an abrasive fleece belt secured with a Velcro fastener, items such as railings, pipes, etc. can be ground and polished easily with guide rolls FAPI-RAIL.

Dimensions:	Diameter:	60 mm
	Width:	100 mm
	Thread:	M14
Coating hardness:	80° Shore (A)	
Applications:	Banisters	
	Guide rails	
	Pipes	



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# PRESSURE- AND FEEDING ROLLS / BAND SAW WHEELS

#### **P**RESSURE AND FEEDING ROLLS

We produce complete, installation-ready pressure and feeding rolls for moulding machines, feeding systems and belt grinding machines. We determine the rolls coating material, the format in smooth or grooved configuration and the optimum hardness rating for the coating on a customer-specific basis.

Dimensions:	Diameter:	110 to 180 mm	
	Width:	10 to 220 mm	
	Hole:	as per specification	
Coating types:	NBR, Vulkollan <sup>®</sup> , Silicone, etc.		
Coating hardness:	25° / 35° / 45° / 65° / 80° / 90° Shore (A).		
Rolls:	Weinig, Gubisch, Holz-Her, Harbs, Roma, etc		



#### Recovering

We offer a recovering service for your used pressure and feeding rolls. We can also supply the most common pressure and feeding rolls at short notice from our stock through an exchange process.

#### BAND SAW WHEELS FAPI-SAW

For decades we have been supplying the furniture and wood industry with rolls and rollers with features that are tailored precisely to the intended use. In particular, we produce and coat band saw wheels for band saw machines. As part of this service, we constantly enhance our coatings in order to attain optimum customer satisfaction with top quality products.

Dimensions:	as per specification
Coating types:	NBR, Vulkollan <sup>®</sup> , etc.
Coating hardness:	65° / 80° / 90° Shore (A).

#### Recovering

We offer a recovering service for your used band saw wheels, fitting them with the most appropriate coating for your uses.



### **O**VERVIEW COATED ABRASIVES

**COATED ABRASIVES** 



































**COATED ABRASIVES** 

#### MANUFACTURERS OF ABRASIVE MATERIALS

We work exclusively with well-known manufacturers of abrasive materials, ensuring that all our products are of the very highest quality standard.



Thanks to our long-term relationships with the manufacturers and our continuous programme of training for our entire sales team, we are always able to advise our customers about the very latest products and services.



#### **A**BRASIVE SOLUTIONS

We operate as a troubleshooter for our customers, with the focus firmly on meeting their needs. We work with you to determine the best possible solution for your requirements. Besides technical advice and on-site service, this includes supplying high-tech, high-quality and high-performance abrasive products in roll, belt, disc and sheet form.

#### **PROCESS SOLUTIONS "BELT GRINDING"**

We improve the belt grinding process from start to finish. This means that we analyse your entire process and recommend the best abrasive belt and contact wheel for your needs:

#### a) Contact wheels

We advise you on the best contact wheel for your belt grinding process. Choosing the perfect contact wheel for the job can improve the belt grinding process by up to 40%.

#### b) Choice of abrasive belts

As we can custom-assemble different abrasive belts from different manufacturers, we are independent and have recourse to the best product for your purposes.

#### **G**RAIN SIZE TABLE

The table below provides a comparison of the various grain sizes and roughness values that can be achieved. Please note that these are guide figures only.

FEPA	Trizact™ Norax™	Diamond CBN	JIS ( Japan )
60		251µ	J60
80	A300		
100			
120	A160	126µ	J100
150	A130		
180		91µ	J150
220	A90		J180
240	A80		J320
280		64µ	
320	A65		J360
360			J400
400	A45	46µ	
500	A30		J600
600		20µ	
800			J700
1000	A20		J800
1200	A16		J1000
1500			J1200
2000	A6		
2500			J2000

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# ENDLESS ABRASIVE BELTS (NARROW / WIDE BELTS)

#### ABRASIVE BELTS WITH CERAMIC ABRASIVE GRAIN

Abrasive belts with ceramic abrasive grains can be used to achieve the very highest belt grinding performance. This results from the grinding belt's special design with ceramic grains, which, with special grinding additives, provides for especially cool grinding.

Dimensions:	Width:	as per specification
	Length:	as per specification
Grain sizes:	20 / 24 / 36	/ 40 / 60 / 80 / 120
Applications:	Chrome steel, chrome nickel steel, high-alloyed steel,	
	nickel based	d/titanium/aluminium alloys, brass and bronze



### Abrasive belts with zirconia alumina abrasive grain

Due to their outstanding cutting ability and active grinding additives, the abrasive belts with zirconia alumina abrasive grains enable aggressive stock removal during belt grinding. During dry grinding, an additional active grinding layer increases the cutting performance many times over and significantly reduces the working temperature at the grinding point.

Dimensions:	Width:	as per specification
	Length:	as per specification
Grain sizes:	24 / 36 / 40	0 / 60 / 80 / 120
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, cas	
	aluminium	alloys, brass and bronze



### ABRASIVE BELTS WITH SILICON CARBIDE ABRASIVE GRAIN

Abrasive belts with silicon carbide abrasive grains are produced synthetically and are very sharp edged by low toughness and great hardness. This enables a fine and even finish to be achieved with these abrasive belts with silicon carbide abrasive grains on the workpieces.

Dimensions:	Width:	as per specification
	Length:	as per specification
Grain sizes:	24 / 36 / 4	0 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800	/ 1000 / 1200
Applications:	Non-alloye	ed and low-alloyed steel, brass and bronze, hardwood,
	paints/var	nishes/filler, glass/ceramics/porcelain, rubber and plastics,
	minerals	



#### ${f A}$ BRASIVE BELTS WITH ALUMINIUM OXIDE ABRASIVE GRAIN

Abrasive belts with aluminium oxide abrasive grains are extremely hard and adequately tough. Aluminium oxide abrasive grain is the universal grain for processing metal and wood surfaces.

Dimensions:	Width:	as per specification
	Length:	as per specification
Grain sizes:	24 / 36 / 40	/ 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800 /	1000 / 1200 / 1500 / 2000 / 2500
Applications:	Non-alloyed	d and low-alloyed steel, high-alloyed steel, cast iron,
	aluminium a	alloys, brass and bronze



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### ABRASIVE SLEEVES WITH CERAMIC ABRASIVE GRAIN

Abrasive sleeves with ceramic abrasive grains can be used to achieve the very highest stock removal. This results from the sleeve's special design with ceramic grains, which, with their special grinding additives, keep the workpiece particularly cool during grinding.

Dimensions:	Width:	10 to 40 mm
	Diameter:	10 to 100 mm
Grain sizes:	20 / 24 / 36	/ 40 / 50 / 60 / 80 / 100 / 120
Applications:	Chrome ste	el, chrome nickel steel, high-alloyed steel, nickel based/
	titanium/alu	minium alloys, brass and bronze

#### ABRASIVE SLEEVES WITH ZIRCONIA ALUMINA ABRASIVE GRAIN

Due to their outstanding cutting ability and active grinding additives, our abrasive sleeves with zirconia alumina abrasive grains enable aggressive stock removal during grinding. During dry grinding, an additional active grinding layer increases the cutting performance many times over and significantly reduces the working temperature at the grinding point.

Dimensions:	Width:	10 to 40 mm
	Diameter:	10 to 100 mm
Grain sizes:	24 / 36 / 40	/ 50 / 60 / 80 / 100 / 120
Applications:	Non-alloyed	and low-alloyed steel, high-alloyed steel, cast iron,
	aluminium alloys, brass and bronze	

#### ABRASIVE SLEEVES WITH SILICON CARBIDE ABRASIVE GRAIN

Abrasive sleeves with silicon carbide grinding grains are produced synthetically and are very sharp edged by low toughness and great hardness. This enables a fine and even finish to be achieved with our abrasive sleeves with silicon carbide abrasive grains on the workpieces.

Dimensions:	Width: 10 to 40 mm
	Diameter: 10 to 100 mm
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800 / 1000 / 1200
Applications:	Non-alloyed and low-alloyed steel, brass and bronze, hardwood, paints/
	varnishes/filler, glass/ceramics/porcelain, rubber and plastics, minerals

#### ABRASIVE SLEEVES WITH ALUMINIUM OXIDE ABRASIVE GRAIN

Abrasive sleeves with aluminium oxide abrasive grains are extremely hard and adequately tough. Aluminium oxide abrasive grain is the universal grain for processing metal and wood surfaces.

Dimensions:	Width:	10 to	40 mm					
	Diameter:	10 to	100 mm					
Grain sizes:	24 / 36 / 40	/ 50 / 6	60 / 80 / 100 /	120 / 1	50 / 180 / 240	/ 320 /	400 /	
	600 / 800 / 1	1000 /	1200 / 1500 /	2000 /	2500			
Applications:	Non-alloyed	and	low-alloyed	steel,	high-alloyed	steel,	cast	iron,
	aluminium a	lloys,	brass and bro	nze				

# ABRASIVE SLEEVES

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#### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### **FIBRE DISCS**

#### FIBRE DISCS WITH CERAMIC ABRASIVE GRAIN

Fibre discs with ceramic abrasive grain can be used to achieve the very highest removal rate. This results from the disc's special design with ceramic grains, which, with their special grinding additives, keep the workpiece particularly cool during grinding.

Dimensions:	Ø 115 x 22 mm / Ø 125 x 22 mm / as per specification
Grain sizes:	20 / 24 / 36 / 40 / 60 / 80 / 120
Applications:	Chrome steel, chrome nickel steel, high-alloyed steel, nickel based/
	titanium/aluminium alloys, brass and bronze



#### FIBRE DISCS WITH ZIRCONIA ALUMINA ABRASIVE GRAIN

Due to their outstanding cutting ability and active grinding additives, our fibre discs with zirconia alumina abrasive grain enable aggressive stock removal during grinding. During dry grinding, an additional active grinding layer increases the cutting performance many times over and significantly reduces the working temperature at the grinding point

Dimensions:	Ø 115 x 22 mm / Ø 125 x 22 mm / as per specification			
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120			
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, cast iron,			
	aluminium alloys, brass and bronze			



#### FIBRE DISCS WITH SILCON CARBIDE ABRASIVE GRAIN

Fibre discs with silicon carbide abrasive grain are produced synthetically and are very sharp edged by low toughness and great hardness. This enables a fine and even finish to be achieved with our fibre discs with silicon carbide abrasive grains on the workpieces.

Dimensions:	Ø 115 x 22 mm / Ø 125 x 22 mm / as per specification
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800 / 1000 / 1200
Applications:	Non-alloyed and low-alloyed steel, brass and bronze, hardwood,
	paints/varnishes/filler, glass/ceramics/porcelain, rubber and plastics,
	minerals



#### FIBRE DISCS WITH ALUMINIUM OXIDE ABRASIVE GRAIN

Fibre discs with aluminium oxide abrasive grain are extremely hard and adequately tough. Aluminium oxide abrasive grain is the universal grain for processing metal and wood surfaces.

Dimensions:	Ø 115 x 22 mm / Ø 125 x 22 mm / as per specification
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800 / 1000 / 1200 / 1500 / 2000 / 2500
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, cast iron,
	aluminium alloys, brass and bronze



### **VELCRO-BACKED GRINDING DISCS**

#### VELCRO-BACKED GRINDING DISCS WITH CERAMIC ABRASIVE GRAIN

Velcro-backed grinding discs with ceramic abrasive grain can be used to achieve the very highest removal rate. This results from the special design of the Velcro-backed abrasive belt with ceramic grains, which, with special grinding additives, keeps the workpiece particularly cool during grinding.

Dimensions:	Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification					
Grain sizes:	20 / 24 / 36 / 40 / 60 / 80 / 120					
Applications:	Chrome steel, chrome nickel steel, high-alloyed steel, nickel based/					
	titanium/aluminium alloys, brass and bronze					

#### VELCRO-BACKED GRINDING DISCS WITH ZIRCONIA ALUMINA ABRASIVE GRAIN

Due to their outstanding cutting ability and active grinding additives, our Velcro-backed grinding discs with zirconia alumina abrasive grain enable aggressive stock removal during grinding. During dry grinding, an additional active grinding layer increases the cutting performance many times over and significantly reduces the working temperature at the grinding point.

Dimensions:	Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification			
Grain sizes:	24 / 36 / 40 / 60 / 80 / 120			
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, cast iron,			
	aluminium alloys, brass and bronze			

#### Velcro-backed grinding discs with silicon carbide abrasive grain

Velcro-backed grinding discs with silicon carbide abrasive grain are produced synthetically and are very sharp edged by low toughness and great hardness. This enables a fine and even finish to be achieved with our grinding discs with silicon carbide abrasive grains on the workpieces.

Dimensions:	Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800 / 1000 / 1200
Applications:	Non-alloyed and low-alloyed steel, brass and bronze, hardwood, paints
	varnishes/filler, glass/ceramics/porcelain, rubber and plastics, minerals

#### VELCRO-BACKED GRINDING DISCS WITH ALUMINIUM OXIDE ABRASIVE GRAIN

Velcro-backed grinding discs with aluminium oxide abrasive grain are extremely hard and adequately tough. Aluminium oxide abrasive grain is the universal grain for processing metal and wood surfaces.

Dimensions:	Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification			
Grain sizes:	24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /			
	600 / 800 / 1000 / 1200 / 1500 / 2000 / 2500			
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, cast iron,			
	aluminium alloys, brass and bronze			







47

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#### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### **ABRASIVE ROLLS**

### ABRASIVE ROLLS WITH CERAMIC ABRASIVE GRAIN

Abrasive rolls with ceramic abrasive grain can be used to achieve the very highest stock removal. This results from the abrasive belt's special design with ceramic grains, which, with special grinding additives, keeps the workpiece particularly cool during grinding

Dimensions:	Width:	5 to 1.450 mm	
	Length:	as per specification	
Grain sizes:	20 / 24 / 36 / 40 / 60 / 80 / 120		
Applications:	Chrome steel, chrome nickel steel, high-alloyed steel, nickel based/		
	titanium/alu	minium alloys, brass and bronze	



### ABRASIVE ROLLS WITH ZIRCONIA ALUMINA ABRASIVE GRAIN

Due to their outstanding cutting ability and the active grinding additives, our abrasive rolls with zirconia alumina grain make aggressive stock removal possible during belt grinding. During dry grinding, an additional active grinding layer increases the cutting performance many times over and significantly reduces the working temperature at the grinding point.

Dimensions:	Width:	5 to 1.450 mm
	Length:	as per specification
Grain sizes:	24 / 36 / 4	0 / 60 / 80 / 120
Applications:	Non-alloye	ed and low-alloyed steel, high-alloyed steel, cast iron,
	aluminium	alloys, brass and bronze



#### ${f A}$ BRASIVE ROLLS WITH SILICON CARBIDE ABRASIVE GRAIN

Abrasive rolls with silicon carbide grinding grain are produced synthetically and are very sharp edged by low toughness and great hardness. This enables a fine and even finish to be achieved with our abrasive rolls with silicon carbide abrasive grains on the workpiece.

Dimensions:	Width:	5 to 1.450 mm
	Length:	as per specification
Grain sizes:	24 / 36 / 4	0 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 / 400 /
	600 / 800	/ 1000 / 1200
Applications:	Non-alloy	ed and low-alloyed steel, brass and bronze, hardwood
	paints/var	nishes/filler, glass/ceramics/porcelain, rubber and plastics
	minerals	



#### ABRASIVE ROLLS WITH ALUMINIUM OXIDE ABRASIVE GRAIN

Abrasive rolls with aluminium oxide abrasive grain are extremely hard and adequately tough. Aluminium oxide abrasive grain is the universal grain for processing metal and wood surfaces.

Length: as per specification	
Grain sizes: 24 / 36 / 40 / 50 / 60 / 80 / 100 / 120 / 150 / 180 / 240 / 320 /	400 /
600 / 800 / 1000 / 1200 / 1500 / 2000 / 2500	
Applications: Non-alloyed and low-alloyed steel, high-alloyed steel, c	ast iron
aluminium alloys, brass and bronze	



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# ABRASIVE FLEECE / SCOTCH-BRITE

### **A**BRASIVE FLEECE BELTS

Dimensions:	Width: as per specification		
	Length:	as per specification	
Grain sizes:	A-Coarse / A-Medium / A-Fine / A-Very Fine		6
Applications:	Cleaning lightly oxidised and rusted metal surfaces, satin finishing metal		
	surfaces, finishing stainless steel and painted/varnished surfaces.		



### ABRASIVE FLEECE ROLLS

Dimensions:	Width: as per specification	
	Length:	10 m / as per specification
Grain sizes:	A-Coarse / A-Medium / A-Fine / A-Very Fine / S-Very Fine /	
	S-Super-Fine / S-Ultra-Fine/ S-Micro-Fine	
Applications:	Cleaning lightly oxidised and rusted metal surfaces, satin finishing metal	
	surfaces, finishing stainless steel and painted/varnished surfaces	

### ABRASIVE FLEECE SLEEVES

Dimensions:	Width: as per specification	
	Length:	as per specification
Grain sizes:	A-Coarse / A-Medium / A-Fine / A-Very Fine	
Applications:	Cleaning lightly oxidised and rusted metal surfaces, satin finishing metal	
	surfaces, finishing stainless steel and painted/varnished surfaces	

VELCRO-BACKED ABRASIVE FLEECE DISCS

Dimensions:	Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification
Grain sizes:	A-Coarse / A-Medium / A-Fine / A-Very Fine / S-Ultra-Fine
	- Further grain sizes on request! -
Applications:	Cleaning lightly oxidised and rusted metal surfaces, satin finishing metal
	surfaces, finishing stainless steel and painted/varnished surfaces.



#### **A**BRASIVE FLEECE SHEETS

Dimensions:	150 x 230 mm / 230 x 280 mm / as per specification
Grain sizes:	A-Coarse / A-Medium / A-Fine / A-Very Fine / S-Very Fine /
	S-Super-Fine / S-Ultra-Fine/ S-Micro-Fine
Applications:	Cleaning lightly oxidised and rusted metal surfaces, satin finishing metal
	surfaces, finishing stainless steel and painted/varnished surfaces.



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#### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

# **3M TRIZACT<sup>TM</sup>-ABRASIVE MATERIAL / 3M CUBITRON<sup>TM</sup>-ABRASIVE MATERIAL**

### ABRASIVE BELTS 3M TRIZACT<sup>™</sup>

Abrasive belts 3M Trizact<sup>™</sup> are precision tools for processing and finishing. As these three-dimensional structures – pyramid or block shaped – wear, fresh cutting edges are exposed, resulting in a high-quality, consistent finish throughout the tool's service life.

Dimensions:	Width:	as per specification	
	Length:	as per specification	
Grain sizes:	A300 / A16	0 / A130 / A100 / A90 / A80 / A65 / A60 / A45 / A40 /A30 /	
	A 20 / A16	/ A6	
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, chrome steel,		
	chrome nickel steel, cast iron, nickel-based, aluminium and titanium		
	allovs bras	s and bronze	



### ABRASIVE SLEEVES 3M TRIZACT<sup>™</sup>

Dimensions:	Width: 50 mm / as per specification		
	Diameter:	50 to 100 mm	
Grain sizes:	A300 / A160 / A130 / A100 / A90 / A80 / A65 / A60 / A45 / A40 /A30		
	A 20 / A16 / A	6	
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, chrome steel,		
	chrome nickel steel, cast iron, nickel-based, aluminium and titanium		
	alloys, brass and bronze		



### Velcro-backed discs 3m Trizact™

Dimensions:	Ø 115 mm / Ø 125 mm / as per specification
Grain sizes:	A300 / A160 / A130 / A100 / A90 / A80 / A65 / A60 / A45 / A40 / A30 /
	A 20 / A16 / A6
Applications:	Non-alloyed and low-alloyed steel, high-alloyed steel, chrome steel,
	chrome nickel steel, cast iron, nickel-based, aluminium and titanium
	alloys, brass and bronze



### ABRASIVE BELTS 3M CUBITRON<sup>™</sup> II

The grinding bands 3M Cubitron<sup>™</sup> II consist of a ceramic sinter grain providing a constantly new sharpening of the worn part. During grinding, small corners of the abrasive grain are broken off. Due to the micro fractures in the grain, sharp edges with an increased cutting ability are generated.

Dimensions:	Width:	as per specification
	Length:	as per specification
Grain sizes:	36 / 60 / 80	
Applications:	Chrome steel, chrome nickel steel, high-alloyed steel, nickel based	
	and titanium	alloys



# **DIAMOND ABRASIVE MATERIAL / CBN ABRASIVE MATERIAL**

#### ABRASIVE BELTS DIAMOND / CBN

The new Diamond and CBN abrasive belts are particularly suited for work with hardened steels (>55 HRC) and titanium alloys. Next to diamonds, CBN (cubic boron nitride) is the hardest grinding grain.

Dimensions:	Width:	5 to 300 mm		
	Length:	330 to 3.500 mm		
Grain sizes:	251µ / 126µ / 91µ / 64µ / 46µ / 30µ			
Applications (diamond):	Glass, ceramics, tungsten carbide, chrome oxide, natural stone			
Applications (CBN):	Hardened steels, chrome (layers), carbon metals, cast iron			



### ABRASIVE SLEEVES DIAMOND / CBN

Dimensions: Grain sizes: Applications (diamond): Applications (CBN):

Width:10 to40 mmDiameter:10 to100 mm $251\mu / 126\mu / 91\mu / 64\mu / 46\mu / 30\mu$ Glass, ceramics, tungsten carbide, chrome oxide, natural stoneHardened steels, chrome (layers), carbon metals, cast iron



### VELCRO-BACKED DISCS DIAMOND / CBN

Dimensions: Grain sizes: Applications (Diamant): Applications (CBN): Ø 115 mm / Ø 125 mm / Ø 150 mm / as per specification 251 $\mu$  / 126 $\mu$  / 91 $\mu$  / 64 $\mu$  / 46 $\mu$  / 30 $\mu$ Glass, ceramics, tungsten carbide, chrome oxide, natural stone Hardened steels, chrome (layers), carbon metals, cast iron



#### **A**BRASIVES SHEETS DIAMOND / CBN

*Dimensions: Grain sizes: Applications (Diamant): Applications (CBN):*   $\begin{array}{l} 230 \ x \ 280 \ mm \ / \ as \ per \ specification \\ 251 \mu \ / \ 126 \mu \ / \ 91 \mu \ / \ 64 \mu \ / \ 46 \mu \ / \ 30 \mu \\ \\ Glass, \ ceramics, \ tungsten \ carbide, \ chrome \ oxide, \ natural \ stone \\ \\ Hardened \ steels, \ chrome \ (layers), \ carbon \ metals, \ cast \ iron \end{array}$ 



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### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### **GRINDING FLAP TOOLS**

#### MATERIAL "ABRASIVE CLOTH IN FORM OF LAMELLAR"

Grinding flaps are cut from grinding rolls of the appropriate quality. The fabric, the grain size and its adhesion are decisive in determining the life cycle of a grinding flap tool. To guarantee a maximum service life for the grinding flap tool and an optimum surface finish on the workpiece, it is essential to choose the right quality abrasive cloth.

### QUALITIES "ABRASIVE CLOTH"

Basically our grinding flap tools can be produced of most different abrasive cloths:

Aluminium oxide (Al,O,) abrasive cloth

Very tough universal abrasive material, extremely strong. Colour: brown (predominantly)



#### Silicon carbide (SiC) abrasive cloth

Very tough abrasive material made extremely strong due to silicon carbide grains. Colour: black (predominantly)



#### Zirkonia alumina abrasive cloth

Excellent wear behaviour and good stock removal rate.

Colour: blue (predominantly)

#### Ceramic grain abrasive cloth

Very high stock removal rate. Particularly stable; due to active top-size coating (coolant liquid in solid form) keeps the workpiece cool during grinding.

Colour: red (predominantly)

#### Diamond abrasive cloth

Clear service life benefits compared with conventional abrasive cloth. Ideal for particularly hard materials.



Colour: green / silver (predominantly)

#### CBN abrasive cloth

Clear service life benefits compared with conventional abrasive cloth. Ideal for particularly hard materials. Colour: green / silver (predominantly)



### PROCESS STEP "GRINDING / DEBURRING"

Our grinding flap tools are ideally suited for grinding and deburring all kinds of materials. Grinding flap tools are used for both manual and machine work.

Our grinding flap tools can be individually adapted to the process they are needed for, and because of their flexibility they are primarily used when the job cannot be performed with an abrasive belt or a grinding wheel.

Grinding flap tools can be used for dry and wet processes.



### **GRAIN SIZES**

Please bear in mind that because grinding flap tools are flexible, they do not have such an aggressive effect on the workpiece as abrasive belts.

Practical experience has shown that because of their flexibility, grinding flap tools have the effect of grinding more finely than abrasive belts by about one or two grain sizes.

#### Example:

With a flap grinding wheel FAPI-RING with grain size 180 you can achieve roughly the same finish as with an abrasive belt with grain size 240.



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# GRINDING DISCS FAPI-ATTACK 150

The grinding disc FAPI-ATTACK 150 is ideally suited for extremely aggressive grinding and will be used primarily for aggressive grinding both on flat surfaces and edges.

Dimensions:	Diameter:	150 mm
	Facing height:	30 mm / as per specification
	Hole:	25 mm
Grain sizes:	24 / 36 / 40 / 60 / 80 / 120 / as per specification	
Applications:	Metalworking (coarse roughing, welded seams treatmen	
	stone processing	



**GRINDING DISCS** 

### GRINDING DISCS FAPI-ATTACK M14

The grinding disc FAPI-ATTACK M14 has been developed for manual use on angle grinders. It is ideally suited for extremely aggressive grinding and will be used primarily for aggressive grinding both on flat surfaces and edges. Because of the higher facing, the grinding disc FAPI-ATTACK M14 has a much longer service life than a lamellar flap disc.

Dimensions:	Diameter:	115 mm
	Facing height:	30 mm / as per specification
	Thread:	M14
Grain sizes:	24 / 36 / 40 / 60 /	80 / 120 / as per specification
Applications:	Metalworking (welded seams treatment, edging, etc.)	
	stone processing	



### GRINDING DISCS FAPI-ATTACK TRIM

The grinding disc FAPI-ATTACK TRIM has been developed for use on deburring machines and for stone processing. It is ideally suited for removing the primary burr at sheet metal resp. for grinding stones.

Dimensions:	Diameter:	115 mm	
	Facing height:	30 mm / as per specification	
	Hole:	14 mm with quick release system	
Grain sizes:	24 / 36 / 40 / 60 / 80 / 120 / as per specification		
Applications:	Metalworking		
	stone processing		



GRINDING TOOLS

### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### FLAP GRINDING WHEELS

### FLAP GRINDING WHEELS FAPI-RING

Flap grinding wheels FAPI-RING with straight lamellae for surface treatment. The fan-like, radially arranged lamellae adjust ideally to the workpiece's contours. Our flap grinding wheels FAPI-RING are manufactured with an economic ring-shaped holder. When in use, the tool must be equipped with a pair of reusable clamping covers.

Dimensions:	Diameter:	100 to 460 mm	
	Width:	30 to 200 mm	
	Hole:	as per specification	
Grain sizes:	40 / 50 / 60 / 80	/ 100 / 120 / 150 / 180 / 240 / 320 / 400 / 600	
Applications:	Fine surface grinding jobs		
	Concave and co	onvex surfaces	
	Edge working		
	Profiles		
	Internal and exte	ernal grinding of canisters and apparatus	



For flap grinding wheels FAPI-RING the principle of course applies that they should only be used in conjunction with clamping covers! Please have a look at our brochure page 108 to get more information about clamping covers FAPI-SPANN!

### FLAP GRINDING WHEELS FAPI-CORE

Flap grinding wheels FAPI-CORE with straight lamellae for surface treatment. The fan like, radially arranged lamellae adjust ideally to the workpiece's contours. Our flap grinding wheels FAPI-CORE are manufactured with a plastic core and can be mounted directly on the machine shaft. They therefore do not need to be used with a suitable pair of clamping covers - as the flap grinding wheel FAPI-CORE.

Dimensions:	Diameter:	100 to 460 mm	
	Width:	30 to 200 mm	
	Hole:	as per specification	
Grain sizes:	40 / 50 / 60 / 80	/ 100 / 120 / 150 / 180 / 240 / 320 / 400 / 600	
Applications:	Fine surface grinding jobs		
	Concave and convex surfaces		
	Edge working		
	Profiles		
	Internal and ext	ernal grinding of canisters and apparatus	



# FLAP GRINDING ROLLERS / MOUNTED FLAP WHEELS

### FLAP GRINDING ROLLERS FAPI-SAND

Our flap grinding rollers FAPI-SAND are made of individual abrasive cloth flaps. The flaps are arranged fan-like around the hole and embedded in a plastic core. The plastic core has a hole of 19 mm and keyways to enable them to be used on hand-held sanders or satin finishers.

Dimensions:	Diameter:	100 mm
	Width:	50 and 100 mm
	Hole:	19 mm with keyway
Grain sizes:	40 to 320	
Applications:	Cleaning, deb	urring, derusting, pre-grinding, structuring, roughening



### MOUNTED FLAP WHEELS FAPI-SAND

Mounted flap wheels FAPI-SAND are made of individual abrasive cloth lamellae. The lamellae are fastened fan-like around the tool's axis. The mounted flap wheels have a shaft diameter of 3, 6 or 8 mm depending on the design, and can be used easily on manual drills, flexible shafts etc.

Dimensions:	Diameter:	10 to 100 mm
	Width:	5 to 50 mm
	Shaft:	3 mm / 6 mm / 8 mm
Grain sizes:	60 to 320	
Applications:	Cleaning, debu	rring, derusting, pre-grinding, structuring, roughening



#### MOUNTED FLAP WHEELS FAPI-SANDBRUSH

Mounted flap wheels FAPI-SANDBRUSH are made of individual abrasive cloth lamellae, each of which is slit around its entire circumference. The slits increase the flexibility of the mounted flap wheels so that it fits the workpiece's contours better. The slit abrasive cloth lamellae are fastened fan-like around the tool's axis.

Dimensions:	Diameter:	40 to 60 mm
	Width:	20 to 30 mm
	Shaft:	6 mm
Grain sizes:	80 / 120	
Applications:	Cleaning, deb	urring, derusting, pre-grinding, structuring, roughening



GRINDING TOOLS

# **PROFILE SANDING ROLLERS / PROFILE SANDING WHEELS**

### PROFILE SANDING ROLLERS FAPI-FLEX / FAPI-FLEX-PLUS

With their special structure and completely slit abrasive cloth lamellae, the profile sanding rollers FAPI-FLEX and FAPI-FLEX-PLUS are suitable for a wide range of uses. In fine wood sanding, the profile sanding rollers do not carve into soft wood or leave comma formations on the wood surface. Wood finishing removes the fine wood fibres left after the abrasive belt treatment, thus reducing not only the amount of base paint required, but also providing a better surface for an optimum intermediate varnish sanding.

Dimensions:	Diameter:	150 to 400 mm
	Width:	200 to 2.000 mm
	Hole:	as per specification
Grain sizes:	60 to 400	
Applications:	Fine wood san	ding, intermediate varnish sanding, oil/wax intermediate
	sanding, plasti	ic sanding (satin effect). MDF board sanding





### PROFILE SANDING WHEELS FAPI-FLEX-RADIAL

Our profile sanding wheels of the FAPI-FLEX-RADIAL series - depending on the respective grain size - are especially suitable for fine wood sanding and/or intermediate varnish sanding. For example, this tool can be used well when working on the fold area on doors and windows. Profile sanding wheels of the FAPI-FLEX-RADIAL series can also be used for all kinds of sharp edged profile shapes, such as mouldings.

Dimensions:	Diameter:	250 mm / 400 mm
	Width:	2.000 mm
	Hole:	as per specification
Grain sizes:	60 to 400	
Applications:	Fine wood sanding, intermediate varnish sanding, oil/wax intermediate sanding, plastic sanding (satin effect), MDF board sanding	



#### PROFILE SANDING WHEELS FAPI-SW

Thanks to their highly elastic facing, our profile sanding wheels FAPI-SW are used primarily for fine sanding at wavy and curved wooden workpieces. The optimal adaptation of the facing ensures optimal surface qualities on the workpiece.

Dimensions:	Diameter:	160 mm / 250 mm
	Width:	50 mm
	Hole:	as per specification
Grain sizes:	60 to 400	
Applications:	Fine sanding at	wavy and curved workpieces (mainly wood)



# PLEATED GRINDING MOP / SANDING STRIP RINGS / GRINDING STARS

### PLEATED GRINDING MOP FAPI-SAND

The pleated grinding mop FAPI-SAND is the ideal tool for fine surface finishing and is especially suited for work on joints, grooves and fluting. It can be used with every kind of machine (hand grinders, stationary grinders, automated grinders, pedestal grinders, flexible shafts, etc.).

Dimensions:	Diameter:	165 to 400 mm
	Width:	10 to 35 mm
	Hole:	as per specification
Grain sizes:	40 to 320	
Applications:	Container/appa	ratus engineering, precision engineering,
	form construction	on



### ABRASIVE STRIP RINGS FAPI-STRIPS

The facing of the abrasive strip ring FAPI-STRIPS produces a high abrasive effect. Furthermore, processing is positively influenced by the high elasticity of the abrasive cloth lamellae and the ability to optimally adapt the tool to the workpiece being processed. Due to their construction the air-cooled abrasive strip rings FAPI-STRIPS also enable strong contact pressure and high speeds without heating or burning.

Types:	Cardboard core / Steel ring insert				
Structure:	6 to 12 layers in a range of abrasive cloth qualities				
	Other numbers	Other numbers of layers possible			
Dimensions:	Diameter:	100 to 500 mm			
	Width:	15 to 56 mm			
	Hole:	as per specification			
Grain sizes:	120 to 400				
Applications:	For deburring,	rounding and sanding all workpieces/materials with			
	multiple contou	rs on automatic grinding and polishing machines and/or			
	manual processing on a pedestal polisher				



### **GRINDING STARS FAPI-STAR**

Generally, grinding stars FAPI-STAR are the ideal tool for deburring or when working on strongly profiled workpieces or cut edges. The use of grinding stars is recommended if extremely cool or fine grinding is required.

Types:	Bushing					
Structure:	Slotted strips of abrasive cloth laid reciprocally one on the other,					
	in various quali	in various qualities				
Dimensions:	Diameter:	100 to 350 mm				
	Width:	15 to 56 mm				
	Hole:	as per specification				
Grain sizes:	60 to 600					
Applications:	Processing of thermoplastic plastics					
	Woodworking industry (profiles, forms, figures, etc.)					
	Metalworking industry (engine parts, aluminium profiles, etc.)					



#### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

### **ABRASIVE FLEECE TOOLS**

### MATERIAL "ABRASIVE FLEECE"

Abrasive fleece is a three-dimensional grinding material made of non-woven nylon fibres interspersed with grinding grain. The various grain sizes make it ideal for work on nearly every surface and ensure a superior surface finish during grinding.

### QUALITIES "ABRASIVE FLEECE"

Basically, our abrasive fleece tools can be divided into two qualities:

#### Aluminium oxide (Al<sub>2</sub>O<sub>3</sub>) abrasive fleece tools

Abrasive fleece sheets interspersed with  $AI_2O_3$  are used mainly in metalworking and woodworking.

#### Silicon carbide (SiC) abrasive fleece tools

Abrasive fleece tools interspersed with SiC are used mainly for work on painted surfaces or with plastics. In stainless steel processing, they are used when a reflective surface finish is desired.

DESIGNATION	CLASSIFICATION GRAIN FRACTION
Coarse	80 to 100
Medium	120 to 150
Fine	180 to 240
Very fine	280 to 320
Super fine	400 to 600
Ultra fine	800 to 1000

We also manufacture special abrasive fleeces on request.

### HARDNESS / DENSITY "ABRASIVE FLEECE"

Various types of hardness can be produced on abrasive fleece tools (particularly on satin finishing wheels). The decisive criterion is the compaction of the abrasive fleece:

HARDNESS	DESCRIPTION
H3	soft
H5	medium soft
H7	medium hard
H10	hard
H12	very hard
RAX	extremely hard

### PROCESS STEPS "SATIN FINISHING"

Our abrasive fleece tools are ideally suited for fine work on every kind of material. Abrasive fleece tools are mainly used for hand grinding, on routers or on oscillating sanders. They are used to clean light oxidation, remove rust from metal surfaces, provide metal surfaces with a satin finish and finish stainless steel and painted surfaces.

Abrasive fleece tools can be used in dry and wet processes. The following cutting speeds should not be exceeded:

Dry processing:	15 m/s
Net processing:	25 m/s

Higher cutting speeds will unavoidably result in more heat generation, faster tool wear and lubrication of the abrasive fleece tool during processing.



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### ABRASIVE FLEECE RINGS FAPI-UNI WITH UNIVERSAL FOLD

Abrasive fleece in a 45° diagonal cut in open cooling fold with four or six layers. This results in a hard, aggressive facing on the one side, and on the other a soft, yielding facing for all materials. Abrasive fleece rings FAPI-UNI are highly elastic tools and are therefore suitable for optimum adaptability to the workpiece. The air-cooled abrasive fleece rings FAPI-UNI also enable strong contact pressure and high speeds without heating or burning.

Model:	Cardboard core / Steel ring insert			
Structure:	4 to 6 layers in various abrasive fleece qualities			
	Other numbers of layers possible			
Dimensions:	Diameter: 150 to 600 mm			
	Width: depending on the number of layers			
Grain sizes:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine			
Applications:	For grinding and matting/satin finishing of all workpieces/materials			
	on automatic grinding and polishing machines and/or manual processing			
	on a pedestal polisher. Mainly processed materials are steel, aluminium			
	non-ferrous wide belt material and plastics.			

### ABRASIVE FLEECE RINGS FAPI-WAVE WITH WAVE FOLD

Our abrasive fleece ring FAPI-WAVE exists of regular wave fold, which guarantees an optimum service life of the tool. It is the most aggressive abrasive fleece ring in the Picard production range with simultaneous optimum cooling. Abrasive fleece rings FAPI-WAVE are used predominantly as wide rollers which are composed of individual abrasive fleece rings. Due to the precise fold it is possible to line up the individual abrasive fleece rings FAPI-WAVE together without gaps forming. This results in an entirely seamless and line-free surface on the workpiece during processing.

Ausführung:	Cardboard core / Cardboard ring		
Structure:	4 to 6 layers in various abrasive fleece qualities		
	Other numbers of layers possible		
Dimensions:	Diameter: 300 to 500 mm		
	Width: depending on the number of layers		
Grain sizes:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine		
Applications:	For grinding and matting of all flat workpieces. Abrasive fleece rings FAPI-WAVE are used predominantly in automatic grinding and polishing machines, but they are also used for manual processing on a pedestal polishers.		



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### **ABRASIVE FLEECE RINGS**

**G**RINDING TOOLS

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# SATIN FINISHING WHEELS / - ROLLERS

### SATIN FINISHING WHEELS FAPI-SATALO

The surface treatment of metal takes place as a rule with satin finishing wheels which have an aluminium oxide facing. Grinding with this facing produces a silky gloss effect on the surface of the workpiece. This can be varied further with polishing additives. In this case, grinding compounds or grease - in very small amounts - are added during processing.

Structure:	Abrasive fleece lamellae made of aluminium oxide glued onto
	a waterproof hard paper tube
Dimensions:	Diameter: 100 to 450 mm
	Width: 10 to 100 mm
Grain sizes:	Ultra coarse, Heavy coarse, Extra coarse, Coarse, Medium, Fine,
	Very fine
Applications:	Escalators, lift signs, railings, painting pretreatment, surgical
	instruments, stainless steel, brass and aluminium products, porcelain
	and ceramics. fittings



### SATIN FINISHING WHEELS FAPI-SATSIC

Wood is generally surface-treated with satin finishing wheels which have a silicon carbide facing. Using this facing produces a silky gloss effect on the surface of the workpiece.

Structure:	Abrasive	fleece	lamellae	made	of	silicon	carbide	glued	onto
	a waterpro	oof hard	paper tub	е					
Dimensions:	Diameter:	100 to	o 450 mm						
	Width:	10 to	o 100 mm						
Grain sizes:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine, Micro fine			e					
Applications:	Moulding, doors, furniture, intermediate varnish sanding, etc.								



### SATIN FINISHING ROLLERS FAPI-SATALO UND FAPI-SATSIC

Structure:	Abrasive fleece lamellae made of aluminium oxide or silicon carbide			
	glued onto a wate	erproof hard paper tube		
Dimensions:	Diameter:	100 to 450 mm		
	Width:	100 to 2.500 mm		
Grain sizes:	FAPI-SATALO:	Ultra coarse, Heavy coarse, Extra coarse, Coarse,		
		Medium, Fine, Very fine		
	FAPI-SATSIC:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine,		
		Micro fine		
Applications:	deburring, descaling, technical PCB processing, metal belt processing, decorative satin finishing			



#### Advice:

For satin finishing wheels and -rollers the principle of course applies that they should only be used in conjunction with aluminium flanges! Please have a look at page 108 to get more information about aluminium flanges FAPI-SPANN!

# SATIN FINISHING ROLLERS / MOUNTED FLAP WHEELS

### SATIN FINISHING ROLLERS FAPI-FLEECE

Our satin finishing rollers FAPI-FLEECE consist of individual abrasive fleece lamellae. These lamellae are arranged fan-like around the axis and embedded in a plastic core. During operation, the satin finishing rollers FAPI-FLEECE work elastically – because of its facing with abrasive fleece lamellae – and adapts easily to the shape or contour of the workpiece.

Dimensions:	Diameter:	100 mm / 110 mm	
	Width:	50 mm / 100 mm	
	Hole:	19 mm with keyway	
Grain sizes:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine, Micro Fine		
Applications:	apparatus engineering and container construction,		
	automotive en	gineering, tool and form construction	



### MOUNTED FLAP WHEELS FAPI-FLEECE

Mounted flap wheels FAPI-FLEECE consist of individual abrasive fleece lamellae. During operation, the mounted flap wheel FAPI-FLEECE works elastically - because of its facing with abrasive fleece lamellae - and adapts easily to the shape or contour of the workpiece. Mounted flap wheels FAPI-FLEECE have a shaft diameter of 6 mm and can be used on manual drills, flexible shafts, etc. with no problem.

Dimensions:	Diameter:	40 to 80 mm	
	Width:	20 to 50 mm	
	Shaft:	6 mm	
Grain sizes:	Coarse, Medium, Fine, Very fine, Super fine, Ultra fine, Micro Fine		
Applications:	apparatus engineering and container construction,		
	automotive engineering, tool and form construction		



### SATIN FINISHING ROLLERS FAPI-FLEECELANE

Our satin finishing rollers FAPI-FLEECELANE consist of a continuous section of abrasive fleece. This wave-like arrangement enables continuous brush matting of surfaces. The use of special types of fleece makes satin finishing rollers FAPI-FLEECELANE elastic. As a result, they adjust effortlessly to the shape and contours of the workpiece.

Dimensions:	Diameter:	100 mm
	Width:	50 mm / 100 mm
	Hole:	19 mm with keyway
Grain sizes:	Coarse, Medium,	Fine, Very fine, Super fine, Ultra fine
Applications:	apparatus engineering and container construction,	
	automotive engineering, tool and form construction	



GRINDING TOOLS

# **COMBINED SATIN FINISHING WHEELS / - ROLLERS**

#### COMBINED SATIN FINISHING WHEELS FAPI-KOMBIALO



Compared with satin finishing wheels, the combined satin finishing wheels feature a longer service life, a different grinding effect (i.e. from line formation to comma-line formation) and a stronger silky gloss effect.

Structure:	Abrasive fleece and abrasive cloth lamellae made of aluminium oxide glued onto a waterproof hard paper tube		
Dimensions:	Diameter:	100 to 450 mm	
	Width:	10 to 100 mm	
Grain sizes:	as per specification		
Applications:	Canisters and	kitchenware, coppersmith, food industry, vehicle	
	construction, machining of stainless steel, copper, aluminium, brass,		



### COMBINED SATIN FINISHING WHEELS FAPI-KOMBISIC

plastics, leather

In the woodworking industry, our combined satin finishing wheels FAPI-KOMBISIC are used for sanding untreated wood; for example, after profiling to provide a better paint surface or for use with edging machines for light bevel.

Combined satin finishing wheels FAPI-KOMBISIC can also be adapted to the wood profile being worked.

Structure:	Abrasive fleece	and abrasive cloth lamellae made of silicon carbide
	glued onto a wat	erproof hard paper tube
Dimensions:	Diameter:	100 to 450 mm
	Width:	10 to 100 mm
Grain sizes:	as per specification	
Applications:	Mouldings, doors, furniture, intermediate varnish sanding, etc.	



### COMBINED SATIN FINISHING ROLLERS FAPI-KOMBIALO UND FAPI-KOMBISIC

Structure:	Abrasive fleece	and abrasive cloth lamellae made of aluminium oxide	
	or silicon carbid	le glued onto a waterproof hard paper tube	
Dimensions:	Diameter:	100 to 450 mm	
	Width:	100 to 1.400 mm	
Grain sizes:	as per specifica	ition	
Applications:	Wide belt syste	ems, deburring, descaling, technical PCB processing,	
	metal belt processing, decorative satin finishing		



#### Advice:

For combined satin finishing wheels and -rollers the principle of course applies that they should only be used in conjunction with aluminium flanges! Please have a look at page 108 to get more information about aluminium flanges FAPI-SPANN!

# **COMBINED SATIN FINISHING WHEELS / - MOUNTED FLAP WHEELS**

#### COMBINED SATIN FINISHING ROLLERS FAPI-KOMBI

Combined satin finishing rollers FAPI KOMBI with the combination of abrasive fleece and abrasive cloth are made of alternating lamellae of these two grinding materials. Both types of lamellae are arranged fan-like around the hole and embedded in a plastic core. The level of abrasiveness of the combined satin finishing rollers FAPI-KOMBI during operation – due to its abrasive fleece and abrasive cloth lamella facing – is between that of a satin finishing roller FAPI-FLEECE with only abrasive fleece and that of a flap grinding roller FAPI-SAND with only abrasive cloth.

Dimensions:	Diameter:	100 mm
	Width:	50 mm / 100 mm
	Hole:	19 mm with keyway
Grain sizes:	Medium/K60, I	Medium/K80, Fine/K100, Fine/K150, Fine/K240
	- Further grain	sizes on request -
Applications:	Cleaning, deru	isting, pre-grinding, structuring, roughening



#### COMBINED MOUNTED FLAP WHEELS FAPI-KOMBI

The combined mounted flap wheels FAPI-KOMBI with a combination of abrasive fleece and abrasive cloth are made of alternating lamellae of these two grinding materials. Both types of lamellae are fastened fan-like around the tool's axis. The level of abrasiveness of the combined mounted flap wheel FAPI-KOMBI during operation - because of its abrasive fleece and abrasive cloth facing - lies between that of a mounted flap wheel FAPI-FLEECE with only abrasive fleece and a mounted flap wheel FAPI-SAND with only abrasive cloth lamellae.

Dimensions:	Diameter:	40 to 80 mm
	Width:	20 to 50 mm
	Shaft:	6 mm
Grain sizes:	Medium/K60, Medium/K80, Fine/K100, Fine/K150, Fine/K240	
Applications:	Cleaning, deru	sting, pre-grinding, structuring, roughening



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# **CLEANING ROLLERS / CLEANING PLATES / CLEANING DISCS**

### CLEANING ROLLERS FAPI-CLEAN

The cleaning rollers FAPI-CLEAN are made of nylon fabric interspersed with grinding grain. The high-quality processing of the carefully selected material, makes the cleaning roller FAPI-CLEAN a tool that is perfect for use in the metalworking, wood processing and stone industries.

Dimensions:	Diameter:	100 mm
	Hole/Thread:	19 mm keyway / M14
Applications:	Cleaning and des	scaling welding seams, deep pore removal of rust
	oxide lavers and	paint, cleaning wooden beams and bricks



### CLEANING PLATES FAPI-CLEAN

Cleaning plates FAPI-CLEAN produce very good results when grinding and cleaning metal, stainless steel and wood, and are therefore ideal for use in the preliminary stage before grinding/polishing.

Dimensions:	Diameter:	115 mm / 125 mm / 180 mm
	Hole/Thread:	22 mm / M14

**Applications:** Removing paint, rust, scale and weld pits from metal without scratching, cleaning wood and plastics, removing paint from wood, removing blue colouration from stainless steel



### CLEANING DISCS FAPI-CLEAN

The cleaning discs FAPI-CLEAN can only be used in conjunction with a mandrel. They produce top results when grinding and cleaning metal, stainless steel, wood or plastic, and are therefore ideal for use in the preliminary stage before grinding/ polishing.

Dimensions:	Diameter:	100 mm / as per specification
	Hole:	22 mm / as per specification

**Applications:** Removing paint, rust, scale and weld pits from metal without scratching, cleaning wood and plastics, removing paint from wood, removing blue colouration from stainless steel

For cleaning discs the principle of course applies that they should only be used in conjunction with a mandrel!! Please have a look at page 108 to get more information about mandrels FAPI-SPANN!



# SERRATION GRINDING WHEELS / WOOD PROFILE WHEELS

### SERRATION GRINDING WHEELS FAPI-SERRA

Serration grinding wheels FAPI-SERRA for grinding knives, scissors, tweezers, tongs, surgical instruments, etc. are produced on a customer-specific basis with the most appropriate serration.

Dimensions:	Diameter:	150 to 300 mm
	Width:	80 mm / 120 mm
	Hole:	as per specification
Serration types:	wavy serration / pointed serration / micro serration / special serration	
Profiles:	0,25 to 9,0 mm	I
Applications:	Household knives, table knives, tweezers, tongs, surgical instrumen	
	household scis	sors, hairdressing scissors





### WOOD PROFILE WHEELS FAPI-ELASTIK

Solid and veneered wood profiles and profiled MDF panels are ground after milling, for example to remove chatter marks on the workpiece or to improve excessive roughness at plank. Using our adaptable wood profile wheels FAPI-ELASTIK enables an optimum surface quality to be obtained on profiles, edges and mouldings of any wood types.

Dimensions:	Diameter:	40 to 200 mm
	Width:	20 to 50 mm
	Hole:	as per specification
Applications:	CNC routers	
	Carousel milling n	nachines
	Longitudinal copy	milling machines



### SISAL AND SISAL COTTON TOOLS

### MATERIAL "SISAL"

Sisal is a relatively new natural fibre which is derived from the agave which grows in South Africa and South America. This high-quality and highly robust natural fibre is characterised by its toughness, its tensile strength and, in particular, its stiffness.

Because of these outstanding mechanical and chemical properties, the sisal fibre has become extremely popular for (pre-)polishing.

We exclusively use high-quality sisal fibres in our products.

### PROCESS STEP "(PRE-)POLISHING"

Sisal and sisal cotton tools are used predominantly for (pre-)polishing. Sisal and sisal cotton tools differ in hardness. Pure sisal tools have a harder effect, whereas sisal cotton tools are softer. The pre-polishing stage is often preceded by grinding and followed by high gloss polishing.



#### Picard tip:

To save time when "(pre-)polishing", we recommend grinding up to a <u>minimum</u> grain size of 240, so that a high-quality surface can be polished.

#### BRUSHING AND POLISHING COMPOUNDS

High-quality surfaces can be achieved by using suitable brushing and polishing compounds with our sisal and sisal cotton tools, making subsequent processing unnecessary. The polishing result corresponds to a good industrial finish (no high-polish or mirror finish).

#### **I**MPREGNATIONS

The choice of impregnation depends primarily on the use and the material to be processed by the customer.

#### Advantages of impregnations:

- Longer service life (up to 100%)
- Stronger polishing effect
- Saving grinding compound
- Environmental compatibility

IMPREG- NATIONS	Colour	DESCRIPTION	Material
001	orange	Increases service life Improves adhesion of polishing compound	universal usable
002	blue	Very sticky Fibre-stiffening effect Specially for stainless steel	Aluminium Stainless steel
003	orange- red	Very sticky Greater fibre-stiffening effect	Aluminium Stainless steel, Steel
004	white yellow	Hard and firm Extremely aggressive action	Steel
005	yellow	Very hard and firm Extremely aggressive action	Steel
006	green	Very hard, firm and brittle Very extreme aggressive action	Steel
007	brown	Increases service life Improves adhesion of polishing compound Very sticky	Steel



# SISAL WHEELS / SISAL CLOTH WHEELS / SISAL FABRIC RINGS

#### SISAL WHEELS FAPI-SLAB

The sisal wheels FAPI-SLAB are made of dense, full-round sisal fabric. This structure increases the strength of sisal wheels FAPI-SLAB.

Model:	Cardboard core / without cardboard core		
Structure:	Full-round sisal fabric layers		
Dimensions:	Diameter:	50 to 1.500 mm	
	Width:	5 to 30 mm on the number of layers	
	Hole:	as per specification	
Applications:	Pre-polishing, fine grinding, brushing and matting of flat and lightly sh		
	workpieces. Pro	ocessing of raw surfaces and scratched workpieces on automated	
	polishers and/or manually on pedestal polishers.		



Sisal cloth wheels FAPI-C are made of a combination of dense, full-round sisal and cotton cloth. The structure of full wheels made of sisal and cloth significantly increases the strength of the sisal cloth wheels FAPI-C.

Model:	Cardboard core / without cardboard core		
Structure:	Full-round sisa	nd sisal fabric layers / full-round cloth layers	
	(layer ratio 1:2)		
	Other numbers of layers possible		
Dimensions:	Diameter:	50 to 1.	.500 mm
	Width:	5 to	30 mm on the number of layers
	Hole:	as per s	specification
Applications:	Pre-polishing,	fine grind	ing, brushing and matting of flat a





### SISAL FABRIC RINGS FAPI-RGZ

Solid sisal fabric rings made of 8-layer sisal fabric in a 45° angle cut, i.e. warp and weft fabrics are at an angle of 45° to the outer diameter. This prevents the fabrics from pulling out and therefore also prevents fraying of the sisal fabric rings FAPI-RGZ, enabling clean working and significantly increasing tool service life. The sisal fabric rings FAPI-RGZ have a good aggressive effect whilst being quiet-running during operation.

Model:	Cardboard core / Without cardboard core / Steel ring insert		
Structure:	8 layers of sisal fabric		
	Other numbers	of layers possible	
Dimensions:	Diameter:	200 to 500 mm	
	Width:	5 to 30 mm on the number of layers	
	Hole:	as per specification	
Applications:	Pre-polishing, fine grinding, brushing and matting of flat and lightly shap		
	workpieces (flatware, cooking pots, aluminium components etc.). For pre-polishing or polishing all workpieces/materials on automated polishing		
	machines and/or when processing manually on a pedestal polisher.		



# SISALCORD BRUSHES / SISALCORD RINGS / SISALCORD-LEATHERBRUSHES

### SISALCORD BRUSHES FAPI-SCC

The flexible sisalcord brushes FAPI-SCC are made of 8-fold braided sisalcord. The sisalcord prevents grinding streaks on the workpiece.

Model:	Cardboard core / Cardboard ring / Steel ring insert		
Dimensions:	Diameter: 150 to 600 mm		
	Width:	30 to 200 mm	
	Hole:	as per specification	
Applications:	Pre-polishing, fine grinding, brushing and matting of flat, lightly and heavily		
	shaped workpieces. Sisalcord brushes FAPI-SCC are used primarily for cutlery, pipes and aluminium profiles worked on automated polishers		
	and/or manually on polishing stands.		



### SISALCORD RINGS FAPI-SC

The flexible sisalcord rings FAPI-SC are made of 8-fold braided sisalcord. The sisalcord prevents grinding streaks on the workpiece.

Model:	Cardboard core / Cardboard ring / Steel ring insert		
Dimensions:	Diameter:	150 to 600 mm	
	Width:	15 to 30 mm	
	Hole:	as per specification	
Applications: Pre-polishing, fine grinding, brushing and matting of flat, light		ne grinding, brushing and matting of flat, lightly and heavily	
	shaped workpieces. Sisalcord rings FAPI-SC are used primarily for		
	pipes and alun	ninium profiles worked on automated polishers and/or	
	manually on peo	lestal polishers.	



### SISALCORD LEATHERBRUSHES FAPI-SKL

The sisal cord leather brushes FAPI-SKL are used for the smoothening of hot wax coatings on wooden parts such as cabinets or furniture parts. When due to the wax coating, single wood fibers are generated and the surface is too rough, the sisal cord leather brushes are ideally used. While the wax is expelled by the sisal, the leather provides the bright shine.

Model:	Cardboard core		
Structure:	3 x 3 mm strong sisalcords and leather (1:1 division)		
	Other divisions p	oossible	
Dimensions:	Diameter:	160 to 400 mm	
	Width:	30 to 100 mm	
	Hole:	as per specification	
Applications:	Cleaning and lig	ht bevel of foil-coated components	
	Finishing painted and waxed components		
	Finishing hot wa	x on laminated furniture	
	Removing glue residues Polishing untreated wood		



# SISAL COTTON RINGS

### SISAL COTTON RINGS FAPI-UNI WITH UNIVERSAL FOLD

The universal fold gives the sisal cotton rings FAPI-UNI a lightly flexible facing. This provides for both a brushing effect and a polishing effect.

Model:	Cardboard core / without cardboard core / steel ring insert		
Structure:	3 layers of sisal fabric and 6 layers of cloth (cotton)		
	Other numbers of layers possible		
Dimensions:	Holes, widths and diameters of the sisal cotton rings with universal fold		
	can be selected individually.		
Applications:	For pre-polishing, fine grinding, brushing and matting of flat, lightly and		
	heavily shaped workpieces/materials on automated polishers and/or		
	when polishing by hand at a pedestal polisher.		

Sisal cotton rings with universal fold are especially suited for polishing aluminium and stainless steel.

### SISAL COTTON RINGS FAPI-PR WITH PR-FOLD

The special contra rotating PR fold provides the sisal cotton rings FAPI-PR with a large and resilient facing mass. This achieves a strong brushing effect and at the same time a polishing effect.

Model:	Cardboard core / Cardboard ring		
Structure:	3 layers of sisal fabric and 6 layers of cloth		
	Other numbers of layers possible		
Dimensions:	Holes, widths and diameters of the sisal cotton rings with PR fold		
	can be selected individually.		
Applications:	For pre-polishing, fine grinding, brushing and matting of flat and shape		
	workpieces/materials on automated polishers and/or when polishing by		
	hand at a pedestal polisher.		

### SISAL COTTON RINGS FAPI-WAVE WITH WAVE FOLD

The wave fold provides the sisal cotton rings FAPI-WAVE with a lightly flexible facing. Both layers - cotton and sisal - are laid over the ring in even waves. This simultaneously delivers an even brushing effect as well as an even polishing effect.

Model:	Cardboard core / without cardboard core
Structure:	3 layers of sisal fabric and 6 layers of cloth
	Other numbers of layers possible
Dimensions:	Holes, widths and diameters of the sisal cotton rings with wave fold
	can be selected individually.
Applications:	For pre-polishing, fine grinding, brushing and matting of flat and lightly
	shaped workpieces/materials on automated polishers and/or when

polishing by hand at a pedestal polisher.







# CLOTH LAPPERS / SISAL CLOTH LAPPERS / CLOTH LEATHER LAPPERS

### CLOTH LAPPERS FAPI-T

Cloth lappers are used in place of polishing rings to remove especially strong hotmelt adhesive residues. They are also used for polishing the edges of thick-walled plastic claddings.

Dimensions:	Diameter: Width: Hole:	160 mm / 200 mm 20 to 50 mm as per specification
Applications:	Removing hot-melt adhesive residues on wood veneers Polishing the edges of veneer sheets Polishing thick-walled plastic claddings	
	Deburring plastic	s
	Deburring or poli	shing metals (cutter knives, etc.)



### SISAL CLOTH LAPPERS FAPI-ST

Sisal cloth lappers are used in place of polishing rings to remove especially strong hot-melt adhesive residues. They are also used for pre-polishing and polishing the edges of thick-walled plastic claddings.

Dimensions:	Diameter:	160 mm / 200 mm
	Width:	20 to 50 mm
	Hole:	as per specification

Applications:Removing hot-melt adhesive residues on wood veneers<br/>Pre-polishing/polishing the edges of veneer sheets<br/>(Pre-)polishing thick-walled plastic claddings<br/>Deburring plastics<br/>Deburring or polishing metals (cutter knives, etc.)



### CLOTH LEATHER LAPPERS FAPI-TL

The combination of leather and cloth delivers a long service life for our cloth leather lappers, improves polishing results and achieves a more even and better shape (rounding) of the plastic edge than, for example, a polishing ring, which is made only from cloth.

Dimensions:	Diameter:	160 mm / 200 mm
	Width:	20 to 50 mm
	Hole:	as per specification
Applications:	Removing hot-melt adhesive residues	


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# **COMBI ROLLERS / LEATHER ROLLERS**

## COMBI ROLLERS FAPI-WAX

Combi rollers FAPI-WAX with a lamella structure made of top quality materials (sisal, leather, fleece, etc.) have been developed in cooperation with our customers for final finishing of oil/wax coatings on furniture fronts. It is important to ensure correct timing with the dried wax coating because this can differ depending on the structure of the wax. On average the drying time is approx. 2 hours.

Dimensions:	Diameter:	200 to 400 mm
	Width:	100 to 1.500 mm
	Hole:	as per specification

Examples of uses: Finishing of oil/wax coatings on furniture fronts





## LEATHER ROLLERS FAPI-BRIGHT

Width:

Hole:

These days, the very highest quality finish is called for on steel strips. With our leather rollers FAPI-BRIGHT you can achieve an optimum grinding/polishing finish on steel strips. Many companies in the steel strip sector work with our leather rollers today, attaining an optimum surface finish on their products.

**Dimensions:** 

Diameter: 200 to 400 mm 100 to 490 mm as per specification

#### Process:

The steel strips are fed to a grinding/polishing chamber - predominantly directly from the coil. In this chamber one leather roller is installed at the top and another at the bottom. These achieve the desired grinding/polishing effect during subsequent processing. Emery with the required grain size is introduced by means of compressed air via the blower unit installed at the opening on the top side of the chamber. This is distributed over the rotating leather rollers as well as over the steel strip. The finer the emery, the finer the subsequent surface finish on the steel strapping. Decisive variables that influence the process are the steel strapping feed, the speed of the leather rollers FAPI-BRIGHT and the correct dosing of the emery feed.



milling/polishing chamber

leather rollers

# **POLISHING TOOLS MADE OF COTTON**

# MATERIAL "COTTON"

Cotton is a natural fibre made of the seed hairs of the *Gossypium* plant species.

Besides being very strong and stiff, cotton fibres are extremely resilient. Cotton fibres are alkali resistant, but not acid resistant.

# PROCESS STEP "MIRROR FINISHING"

Cotton polishing tools are mainly used for (pre-)polishing and mirror finishing. Thanks to the wide range of cloth qualities and folds, custom polishing tools can be produced to suit each individual application. With the right polishing tool, it is often possible to achieve a perfect surface quality.



#### BRUSHING AND POLISHING COMPOUNDS

High gloss and mirror finishes can be achieved by using suitable polishing compounds with our polishing tools.

# Folds

Folds are a determining factor in the strength of polishing tools. Basically, there are three types of folds:

#### **Closed fold**

Very firm to hard ring for aggressive pre-polishing

#### Universal fold

Standard fold in medium-hard version

#### Open fold

Soft to very soft with good cooling properties for deep insertion into workpiece

## **CLOTH QUALITIES**

Designation	WEIGHT	DESCRIPTION
New coloured	150-170 g/m²	
New ticking		
Cotton 150	150 g/m²	
Cotton 190	190 g/m²	Standard cloth
Cotton 210	210 g/m <sup>2</sup>	
Cotton 230	230 g/m <sup>2</sup>	
Cotton 250	250 g/m²	
Cotton 280	280 g/m²	
Molton A	185 g/m²	Cloth roughened on both sides, medium soft
Molton B	169 g/m²	Cloth roughened on both sides, soft
Molton C	225 g/m <sup>2</sup>	Cloth roughened on both sides, very soft

#### **I**MPREGNATIONS

The service life of our polishing tools can sometimes be increased with our impregnations.



# POLISHING WHEELS / BUFFING WHEELS / FLAP POLISHING WHEELS

## POLISHING WHEELS FAPI-SEAM

The stitched polishing wheels FAPI-SEAM are assembled from sheets of even sizes. The specific lay is held together by tightly spaced and adjacent stitching seams.

#### Special feature:

The stability of the polishing wheel can be influenced by increasing the number of stitches.

Dimensions:	Diameter:	30 to 1.500 mm
	Width:	freely selectable
	Hole:	35 mm (Standard)
		Other holes on request.

**Applications:** For pre-polishing, polishing and finishing of flat and lightly shaped workpieces/materials on automated polishing machines and/or when processing manually on a pedestal polisher.

# BUFFING WHEELS FAPI-BUFF

The buffing wheels FAPI-BUFF are made of individual sheets of various cloth qualities. Due to this design, buffing wheels FAPI-BUFF are also called loose, completely rounded polishing wheels.

#### Special feature:

The polishing wheels FAPI-BUFF are very soft and flexible due to only one stitch near the hole.

Dimensions:	Diameter:	30 to 1.500 mm
	Width:	freely selectable
	Hole:	35 mm (Standard)
		Other holes on request

**Applications:** For pre-polishing, polishing and finishing flat and lightly shaped workpieces. Workpieces/materials on automated polishing machines and/or when processing manually on a pedestal polisher.



Flap polishing wheels FAPI-WOBBLE are made from tailored, star shaped wedges, strips or larger pieces which are guaranteed to reach to the wheel's centre point. The top sheets of the flap polishing wheel FAPI-WOBBLE and intermediate layers are made from full round material. The specific lay is held together by stitching which can be varied as desired.

- Dimensions: Diameter: Width: Hole:
- 200 to 1.500 mm freely selectable 35 mm (Standard) Other holes on request.
- **Applications:** When polishing, flap polishing wheels are more aggressive than buffing wheels, i.e. they work on the workpiece surface more intensely. They are ideal especially when pre-polishing, polishing and finishing flat and lightly shaped workpieces.







# **POLISHING RINGS**

# POLISHING RINGS FAPI-UNI WITH UNIVERSAL FOLD

The polishing rings FAPI-UNI will be produced in a 45° diagonal cut in open, cooling fold and various layers and densities. This produces a solid, aggressive facing, and yet soft, yielding facing for all materials. The air cooled ring allows strong contact pressure and high speed without warming or burning. Polishing rings FAPI-UNI are often used in the car industry.

Model:	Cardboard core / without cardboard core / steel ring insert		
Structure:	16 layers in a large variety of cloth qualities		
	Other number	ers of layers possible	
Fold:	universal		
Dimensions:	Diameter:	150 to 600 mm	
	Width:	10 to 25 mm depending on the number of layers	
Applications:	: Can be used universally for pre-polishing and polishing of all workpiece materials on automated polishing machines and/or when processing manual		
	on a pedesta	al polisher.	



# POLISHING RINGS FAPI-Z WITH Z FOLD

The polishing rings FAPI-Z will be made of cotton cloth in four groups of folds each with four layers of cloth in rough folds That implies a large facing mass with good resilience. Polishing rings FAPI-Z will be used in the fittings industry, but also universally usable

Model:	Cardboard core / without cardboard core		
Structure:	4 x 4 layers or 8 x 2 layers in a large variety of cloth qualities		
	Other number	ers of layers possible	
Fold:	open		
Dimensions:	Diameter:	100 to 1.000 mm	
	Width:	10 to 25 mm depending on the number of layers	
Applications:	For pre-polishing or polishing of flat and lightly shaped workpieces		
materials on automated polishing machin		automated polishing machines and/or when processing manually	
	on a pedesta	al polisher.	



# POLISHING RINGS FAPI-PR WITH PR FOLD

The polishing rings FAPI-PR are made of cotton cloth in four groups of folds each with four layers of cloth in rough folds. That implies a large facing mass with good resilience.

Model:	Cardboard core / without cardboard core		
Structure:	4 x 4 layers or 8 x 2 layers in a large variety of cloth qualities		
	Other numbers of layers possible		
Fold:	open		
Dimensions:	Diameter: 150 to 1.000 mm		
	Width: 10 to 25 mm depending on the number of layers		
Applications:	For pre-polishing or polishing all workpieces/materials on automated		
	polishing machines and/or when processing manually on a pedestal polisher.		



# **POLISHING RINGS / POLISHING ROLLERS**

## POLISHING RINGS FAPI-WAVE WITH WAVE FOLD

Polishing rings FAPI-WAVE are made of cotton cloth with a regular wave fold. They are the most aggressive polishing rings with, at the same time, optimum cooling.

Model: Cardboard core / Cardboard ring Structure: 15 layers in a large variety of cloth qualities Other numbers of layers possible Faltung: compact Diameter: 300 to 500 mm **Dimensions:** Width: 10 to 25 mm depending on the number of layers For pre-polishing, polishing and finishing of all flat workpieces. Applications: These polishing rings are used particularly on automated polishing machines, but also when processing manually on a pedestal polisher.



# POLISHING RINGS FAPI-V WITH V FOLD

Our polishing rings FAPI-V made with V-shaped cotton cloth fold provide excellent cooling. The V- fold makes the polishing rings FAPI-V very flexible during polishing.

Model:	Cardboard core / Cardboard ring		
Structure:	16 layers in a large variety of cloth qualities		
	Other numb	ers of layers possible	
Faltung:	compact		
Dimensions:	Diameter:	200 to 600 mm	
	Width:	10 to 25 mm depending on the number of layers	
Applications:	For pre-polishing, polishing and finishing of all (even heavily shaped) workpieces. These polishing rings can also be used to polish and finish plastics and painted surfaces. They are used mainly on automated polishing machines and/or when processing manually on a pedestal polisher.		



#### POLISHING ROLLERS FAPI-GLAM

Due to their design the polishing rollers FAPI-GLAM are flexible and adapt optimally to the treated workpiece. They should be used together with polishing compound to reach most different polishing results on steel, stainless steel, non-ferrous metals, glass, plastic, marble and stone.

Dimensions:	Diameter:	100 mm
	Width:	100 mm
	Hole:	19 mm mit Keilnut
Cloth qualities:	Cotton	(medium)
	Molton A	(soft)
	Molton B	(super soft)



#### Advice:

For the mounting and working with polishing wheels, polishing rings and similar tools safety instructions of the Industrieverband Garne - Gewebe - Technische Textilien e.V. have to be observed. You may download them at our website at www.picard-kg.com/download as pdf-file or directly by phone or e-mail.

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# **FELT TOOLS**

# MATERIAL "WOOL FELT"

Felts can be divided into wool felts, needle felts and fleeces. Wool felt is the most popular version in the polishing industry. Its raw material is the very fine, high-quality Merino sheep's wool. This wool can be felted and stiffened by exposing it to moisture, heat and friction. This creates a homogeneous textile surface: wool felt. Wool felt has the following advantages:

- Flame-resistant
- Very good die-cutting properties
- · Constantly maintains its elasticity
- Produced without chemical additives
- Age-resistant
- Temperature range from -40°C to 110°C
- Highly abrasion resistant

# PROCESS STEP "MIRROR FINISHING"

Besides pre-polishing and polishing, felt tools are primarily used to achieve a mirror finish. The hardness (specific weight) of the felt tools is a decisive factor in the polishing process. Before mirror finishing, it is necessary to perform a grinding and possibly also a pre-polishing or polishing step.



#### Picard tip:

To save time when mirror finishing, we recommend grinding up to a <u>minimum</u> grain size of 400, possibly followed by a pre-polish, so that a high-quality mirror finish can be achieved in a short space of time.

#### **POLISHING COMPOUNDS**

High-quality surfaces can be achieved by using suitable polishing compounds with our felt tools.

The result will be a very good high-gloss polish or a mirror finish.

#### TECHNICAL SPECIFICATION OF WOOL FELT

The specific weight (for felt, also known as the gross density) is the measure of strength of a felt. The specific weight is defined in DIN 61200 (see table) and is calculated according to the following formula:

Specific weight = - [in kg/dm <sup>3</sup> ]		= Thickness [in r	Mass [in kg] Thickness [in mm] x Length [in mm] x Width [in mm]		
	Soft	Medium	Solid	Hard	
	W1 0,08	M1 0,18	F1 0,32	H1 0,52	
	W2 0,10	M2 0,20	F2 0,36	H2 0,56	
	W3 0,12	M3 0,22	F3 0,40	H3 0,60	
	W4 0,14	M4 0,25	F4 0,44	H4 0,64	
	W5 0,16	M5 0,28	F5 0,48	H5 0,68	
ſ		M6 0,30			

#### **Recommended** Applications

Based on our own experience we recommend specific weights for felt tools for use on different materials.

Material	Pre- Polishing	Polishing	Mirror Finishing
Iron	H2 to H4	H2	F5 to H1
Steel	H2	H2	H1
Brass	H1 to H2	F5 to H1	F3 to F4
Copper	H1	F4 to H1	F3 to F4
Gold, silver	H1 to H2	F4 to H1	F2 to F5
Glass	H1 to H4	H1 to H2	H1
Marble	H2	F5 to H1	F3 to H1
Granite	H2 to H4	H1 to H2	F5
lvory	H1 to H2	F4 to H1	F3

# FELT WHEELS / FELT BELTS / FELT SLEEVES

### FELT WHEELS FAPI-FILZ

Felt wheels FAPI-FILZ are used predominantly for mirror finishing. They are used both, in the metal industry with polishing compound, and in the plastic industry with polishing wax. Other uses of felt wheels FAPI-FILZ include the polishing of gems and the rough and fine finishing of light metals.

Dimensions:	Diameter:	100 to 500 mm	
	Width:	10 to 50 mm	
	Hole:	as per specification	
Material:	Hair felt / Merino wool felt / wool felt		
Specific weights:	0,36 to 0,68 g/cm <sup>3</sup>		
Applications:	Metalworking		
	Wood processing		
	Plastics processing		
	Stone processing		



# FELT BELTS FAPI-FILZ

Felt belts FAPI-FILZ are in use in industry today for mirror finishing, i.e. for surface finishing. In this process the polishing grain is applied to the surface of the felt belts in form of solid or liquid polishing compound or polishing emulsion and held in the dense felt fibre structure. During processing, and with the correct choice of technical felt, it is possible for temperatures of up to 700°C to occur without having an effect on the felt belt FAPI-FILZ. In practical use, felt belts FAPI-FILZ can attain surface roughness on workpieces in the  $\mu$  range.

Dimensions:	Thickness:	5 to 2	5 mm
	Width:	up to	2.100 mm
	Length:	up to	23.000 mm
Applications:	Metalworking		
	Wood processing		
	Plastics processing		
	Stone processing		



# FELT SLEEVES FAPI-FILZ

The felt sleeves FAPI-FILZ will be used combined with an expander roller and polishing compound for the mirror polishing. Attention should be paid to use only one polishing compound on one felt sleeve.

Dimensions: 100/110 x 100 mm Applications: Metalworking Plastics processing Stone processing



# **FELT POLISHING DISCS**

# Felt polishing discs Fapi-M14

The felt polishing discs FAPI-M14 in various felt qualities are ideal for mirror finishing. Felt polishing discs FAPI-M14 work best on an adjustable angle grinder. These tools can be used to attain surfaces with a mirror finish above all in metalworking, particularly stainless steel finishing.

Dimensions:	Diameter:		115 mm				
	Facing height:		30 mm / as per specific		er specifica	ation	
	Thread:		M14				
Applications:	Steel,	stainless	steel,	non-ferrous	metals,	glass,	plastic
	marble	and stone					



# FELT POLISHING DISCS FAPI-TRIM

The felt polishing discs FAPI-TRIM in various felt qualities are ideal for mirror finishing. With their tool mountings, felt polishing discs FAPI-TRIM are ideal for use in stone processing.

Dimensions:	Diameter:		115 mm			
	Facing heigl	nt:	30 mm / as per specification			
	Hole:		14 mm with qu	iick releas	e system	ı
Applications:	Steel, stai	nless steel,	non-ferrous	metals,	glass,	plastic,
	marble and	stone				



# Felt polishing discs Fapi-Mirror

The felt polishing discs FAPI-MIRROR M14 can be made with different felt qualities. They are ideal particularly for mirror finishing.

Dimensions:	Diameter:		1	15 mm			
	Facing	height:		35 mm			
	Hole:		Ν	/14			
Applications:	Steel,	stainless	steel,	non-ferrous	metals,	glass,	plastic
	marble	and stone					



# Felt polishing discs Fapi-Edge

The felt polishing disc FAPI-EDGE is particularly suitable for mirror fishing. Though especially semi-circulars and edges can be treated with the felt polishing disc FAPI-EDGE.

Dimensions:	Diameter:		1	25 mm			
	Facing height:		25 mm				
	Thread	:	Ν	114			
Applications:	Steel, marble	stainless and stone	steel,	non-ferrous	metals,	glass,	plastic,



# FELT ROLLERS / FELT POLISHING POINTS

## Felt Rollers Fapi-Shine

Polished finishes right up to mirror finishes can be achieved on steel, stainless steel, non-ferrous metals, glass, plastic, marble and stone with felt rollers FAPI-SHINE. Felt rollers FAPI-SHINE are used with polishing compound to achieve a high gloss mirror finish.

Dimensions:

Diameter: Width: Hole/Thread:

100 mm 50 to 100 mm 19 mm with keyway / M14



## Felt Rollers Fapi-Gloss

Felt rollers FAPI-GLOSS are made with high-quality, hard-compressed wool felt. The high edge stability and effectiveness of the felt roller FAPI-GLOSS are attained due to the hardness and density of the felt body. Our felt rollers FAPI-GLOSS, which possess superb elasticity, are used in particular on large and easily accessible surfaces. In order to attain an optimum surface finish, our felt rollers FAPI-GLOSS are used with polishing compound.

Dimensions:

Diameter: Width: Hole:

r: 100 mm 100 mm 19 mm with keyway, as per specification

# Felt polishing Points Fapi-Filz

Felt polishing points FAPI-FILZ are made with high-quality, hard-compressed wool felt. The high edge stability and effectiveness of the felt polishing point are attained due to the hardness and density of the felt body. Our felt polishing points FAPI-FILZ, which are highly elastic, are used in particular for complicated shapes or very hard-to-reach areas like corners, edges and angles. To achieve an optimum surface finish, very hard felt polishing points are often used with diamond compound.

Shapes:Cylindrical / arch pointed nose / spherical / conical round noseDimensions:depending on the shape



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# **BRUSHING TOOLS**

# MATERIAL

Our brushes are made of the very best quality materials. By selecting the materials carefully we guarantee a high safety standard for our brushes.

Designation	FACING THICKNESS	APPLICATION
Steel wire	0,06 to 1,00 mm	Derusting, deburring, descaling, roughening, paint removal, stripping
Bessemer wire	0,06 to 0,25 mm	Surface technique with additional use of oils, greases or grinding pastes, polishing and matting
Brass-plated steel wire	0,15 to 0,40 mm	Heavy-duty deburring Roughening of leather and rubber Pipe deburring Wire and wood processing
VA-wire	0,08 to 0,80 mm	Processing of VA-workpieces and VA-tools, e.g. surgical instruments
Non-ferrous metals (new silver,copper, phosphor- bronze)	0,06 to 0,50 mm	Processing of brass parts, colouring, textile industry
Brass (Non-ferrous metals)	0,06 to 0,30 mm	Processing of brass parts, colouring, textile industry
Nylon	0,10 to 1,50 mm	Cleaning conveyor belts, sorting, washing / dedusting
Grinding bristles	0,45 mm grain 500 0,55 mm grain 320 0,89 mm grain 180 1,00 mm grain 120 1,20 mm grain 80 1,40 mm grain 46	Edge rounding, deburring, wood processing, rubber roughening, intermediate varnish
Horsehair		Application, greasing, washing, dedusting, polishing, cleaning
Fibre		Application, greasing, washing, dedusting, grinding, polishing

## **B**RUSH DIAMETER

The diameter and length of the brush facing selected for the particular application are the deciding factors in the ultimate surface quality of the workpiece to be brushed.

A soft or flexible brush design with a combination of a small brush body diameter and a high facing length is ideal for processing curved or profiled workpieces or for gentle, careful surface processing.

Brushes can be made more aggressive by choosing a larger brush body diameter and facing material with a short length. Aggressive brushing is used for deburring or removing heavy soiling, for example.

#### **FACING DENSITY**

The facing density depends on the number of wire tips per surface unit.



#### High facing densities

A high facing density is the basis for optimum brush cutting performance and service life, as well as optimum results for tasks like deburring.

#### Lower facing densities

The flexibility of the brush is increased, enabling easy processing of workpieces with highly profiled surfaces.

## **CONTACT PRESSURE**

The contact pressure of a brush is largely defined by the immersion depth of the workpiece being processed in the brush.



#### Picard tip:

The recommended depth for immersion of a workpiece in the respective brush can be easily worked out using the following rule of thumb:

#### Immersion depth (in mm) = 3 x wire thickness (in mm)

For example, the recommended immersion depth for a wire thickness of 0,40 mm is exactly 1,20 mm.

# **BRUSHING TOOLS**

#### STRUCTURE OF TECHNICAL BRUSHES

# 1) Centring covers

The centring covers attached to the right and left of the brush are designed to centre the brush on the shaft. Flanges should be used to clamp the brush axially; their external diameter should be the same as the external diameter of the centring cover.

# **2**) Mounting pipe

The mounting pipe is a high-quality precision steel pipe designed to clamp the single brush rings or the spiral winding. The size of the pipe diameter has a significant influence on the quantity of material used, i.e. the number of wire tips available for use on the finished brush. The indicated maximum hole on our brushes corresponds to the mounting pipe diameter.

### Cover flange / body

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The cover flanges are primarily designed to stabilise the facing material at the sides. The free facing length is influenced by different diameters. A bigger flange diameter than usual stabilises the working area but reduces the useful length.

#### 🖡 ) Single brush rings / spiral winding

The single brush rings are pressed onto the mounting pipe. The number of mounted rings is referred to as "rows". To achieve the required brush width, one or more rows must be fitted and the length of the mounting pipe adapted accordingly. The number of fitted rows determines the working width and the installation width. As an alternative to single brush rings, the facing can also be applied in a spiral round the mounting pipe ("spiral winding").

The working width or the facing width is the dimension measured across the facing. This dimension can vary on account of different facing materials, corrugations of the facing material and diameter of the facing material. The installation width is the dimension measured over the centring covers. This dimension will be observed to regardless of the facing on the brush.



#### **GENERAL SAFETY INSTRUCTIONS**

During the brushing process, safety clothing and safety goggles must be worn at all times to prevent injury from foreign objects, dirt, rust, burrs etc. Any persons standing in close environment of the brushing area must also wear protective clothing.



# **ROUND BRUSHES**

# ROUND BRUSHES FAPI-ROUND

Round brushes FAPI-ROUND are used in a wide range of surface finishing processes. The right facing material is selected on a customer-specific basis dependent on the respective application.

Dimensions:	Diameter:	40 to 450 mm
	Width:	10 to 100 mm
	Hole:	as per specification
Facing types:	Steel wire /	VA-wire / non-ferrous metals / nylon / horsehair /
	fibre / brass-	plated steel wire
Applications:	Removing ru	st, paint, dirt and dust
	Deburring, ro	bughening, stripping or polishing
	wood proces	sing (especially texturing)



# ROUND BRUSHES FAPI-ROUND

Round brushes FAPI-ROUND are primarily used for deburring in stationary machines and processing centres. The flexible grinding bristles adapt to the shape of the workpiece. Being very gentle, the round brushes FAPI-ROUND are the perfect deburring tool for many applications.

Dimensions:	Diameter:	40 to 450 mm	
	Width:	8 to 100 mm	
	Hole:	as per specification	
Facing types:	Silicon carbide	/ aluminium oxide	
Grinding bristles-Ø:	0,45 / 0,55 / 0,8	39 / 1,00 / 1,20 / 1,40	
Grain sizes:	500 / 320 / 180	/ 120 / 80 / 46	
Applications:	Deburring of sta	ainless steel, light metals, plastics	
	Edge rounding, rubber roughening, wood processing (especially		
	texturing)		



# ROUND BRUSHES FAPI-PLASTIC

With the plastic bonded round brush FAPI-PLASTIC it is possible to attain very even surface qualities on workpieces - despite their highly aggressive effect. The facing materials bonded in plastic guarantee - in conjunction with optimum cutting performance - that the working widths on the processed workpiece can be precisely adhered to.

Dimensions:	Diameter: 40 to 40	00 mm
	Facing height: 8 to	40 mm / as per specification
	Hole: as per s	specification
Facing types:	Steel wire / VA-wire / br	ass / grinding bristles
Applications:	deburring, paint strippir	g, derusting, descaling and cleaning
	Processing of rubber/m	etal connections



# **ROUND BRUSHES / RING BRUSHES**

# ROUND BRUSHES FAPI-SINSEC

Round brushes FAPI-SINSEC are used when narrow workpieces or profiled surfaces need to be processed precisely. The working width of the round brushes FAPI-SINSEC is relatively small, although it can be varied by lining up multiple round brushes in a row. Depending on the surface material, the robust round brushes FAPI-SINSEC can be produced from soft up to highly aggressive working.

Dimensions:	Diameter:	100 to 450 mm
	Width:	15 to 35 mm
	Hole:	as per specification
Facing types:	Steel wire / Be	essemer wire / brass-plated steel wire / VA-wire /
	non-ferrous me	tals / grinding bristles / nylon / horsehair
Applications:	Derusting, clear	ning, deburring, processing welding seams, removing
	scale, removing	l paint



## **RING BRUSHES FAPI-RING**

Ring brushes FAPI-RING are used when narrow workpieces or profiled surfaces need to be processed precisely. The working width of the ring brushes FAPI-RING is relatively small, although it can be varied by lining up multiple ring brushes in a row. Depending on the facing material, ring brushes FAPI-RING can be produced from soft up to highly aggressive working.

Dimensions:	Diameter:	30 to 100 mm
	Width:	4 to 30 mm
	Hole:	as per specification
Facing types:	Steel wire /	Bessemer wire / brass-plated steel wire / VA-wire /
	non-ferrous n	netals / grinding bristles / nylon / horsehair
Applications:	Derusting, cle	eaning, deburring, processing welding seams, removing
	scale, removi	ing paint



# ROUND BRUSHES FAPI-SCRATCH

The round brushes FAPI-SCRATCH are characterized by their outstanding processing performance. Due to the bend of the bristles, the tip of the material touches the surface perpendicularly, providing a rougher (like sandblasted) surface.

Dimensions:	Diameter:	100 mm
	Width:	20 mm
	Thread:	M14
Facing types:	0,6 mm steel wi	re
Applications:	Ideal for the pro	cessing and removal of soft materials (oxide coating
	removal, underb	ody coating, paints, anti-drumming compound, etc.)



# **ROLLER BRUSHES**

# ROLLER BRUSHES FAPI-ROLL

All roller brushes FAPI-ROLL are designed for extremely long durability. We offer a wide selection of facing materials. Roller brushes FAPI-ROLL are characterized by their extremely dense facing, designed for high-performance processes in the enterprises.



Roller brush FAPI-ROLL with brass-plated steel wire facing



roller brush FAPI-Roll with silicon carbide bristles

Dimensions:	Diameter:	40 to 400 mm			
	Width:	85 to 600 mm			
	Hole:	as per specificati	on		
	Wider roller bru	shes can be made	e by placing several roller br	ushes in a row.	
Facing types:	Steel wire		0,10 to 0,50 mm	1.800 to 2.000 N/mm	
	VA-wire		0,10 to 0,50 mm	1.600 to 1.800 N/mm	
	Brass-plated ste	eel wire	0,15 to 0,40 mm	2.400 to 2.600 N/mm	
	Non-ferrous metals			800 to 1.000 N/mm	
	Grinding bristles with silicon carbide/aluminium oxide			grain 46 to 500	
	Fibre				
	Horsehair				
Applications:	Removing scale, rust, paint, slag, rubber				
	Deburring pipe ends				
	Structuring wood				
	Polishing				
	Intermediate varnish sanding				
	Dedusting				
	Cleaning				
	Oil wax distribution				
	Wood smoothing				
	Wood treatment (removal of patina)				

#### Picard Info:

Roller brushes are brushes whose working width is bigger than their external diameter.

# SHAFT ROUND BRUSHES / END BRUSHES / CUP BRUSHES

## SHAFT ROUND BRUSHES FAPI-ROUND

Shaft round brushes FAPI-ROUND are used for working at hard-to-reach places. Shaft round brushes FAPI-ROUND, which can be used on many machines, can be applied to a wide range of surfaces.

Dimensions:	Diameter: 30 to 80 mm	
	Facing width:	5 to 17 mm
	Shaft:	6 mm
Facing types:	Steel wire / VA-wire / brass / grinding bristles / nylon / fibre	
Applications:	Smoothing surfaces, snagging casting seams and rubber/metal	
	parts, light deburring, removal of corrosions and paints	



## END BRUSHES FAPI-TWIT

End brushes FAPI-TWIT are used for deburring, cleaning and derusting in holes, at hard-to-reach areas and cavities. It is possible to process a wide range of materials, such as structural steel, carbon steel, alloyed and non-alloyed steels and plastics. End brushes FAPI-TWIT, which can be used on many different machines, have therefore proven themselves in practice for decades.

Dimensions:	Diameter:	11 to 70 mm
	Facing width:	20 to 30 mm
	Body length:	45 or 100 mm
	Shaft:	6 mm
Facing types:	Steel wire / VA-wire / brass / grinding bristles / nylon / horsehai	
Applications:	Deburring, cleaning, derusting	



#### CUP BRUSHES FAPI-CUP

Cup brushes FAPI-CUP are used for deburring, cleaning and derusting, mainly on larger areas. It is possible to process a wide range of materials, such as structural steel, carbon steel, alloyed and non-alloyed steels and plastics. Cup brushes FAPI-CUP, which can be used on many different machines, have therefore proven themselves in practice for decades.

Dimensions:	Diameter:	50 to 200 mm
	Facing width:	12 to 45 mm
	Body length:	45 or 100 mm
	Hole/Thread:	as per specification
Facing types:	Steel wire / VA-wire / brass / grinding bristles / nylon / horsehair	
Applications:	Deburring, cleaning, derusting, deslagging	



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# **KNOTTED ROUND BRUSHES**

## KNOTTED ROUND BRUSHES FAPI-ROUND

Knotted round brushes FAPI-ROUND are used in angle grinders and in stationary systems. Knotted round brushes FAPI-ROUND are used mainly for pre- and post-treatment of welding seams (fillet and butt joints). Knotted round brushes are also used as a tool for deburring.

Dimensions:	Diameter:	100 to 400 mm	
	Width:	20 to 60 mm	
	Hole:	10 to 120 mm	
Facing types:	Steel wire /	VA-wire	
Wire diameter:	0,30 to 1,00	mm	
Applications:	Pre- and post-treatment of welding seams (fillet and butt joint)		
	Removing scale, rust, paint, slag		
	Roughening rubber		
	Deburring		



## KNOTTED ROUND BRUSHES FAPI-SINSEC

Dimensions:	Diameter:	110 to 380 mm
	Width:	6 to 16 mm
	Hole:	10 to 120 mm
Facing types:	Steel wire / V	A-wire
Wire diameter:	0,30 to 1,00 n	nm
Applications:	Pre- and post	-treatment of welding seams(fillet and butt joint)
	Removing sca	ale, rust, paint, slag, rubber
	Deburring	



# KNOTTED ROUND BRUSHES FAPI-RING

Dimensions:	Diameter:	100 to 380 mm
	Width:	6 to 15 mm
	Hole:	42 to 200 mm
Facing types:	Steel wire / V/	A-wire
Wire diameter:	0,30 to 1,00 mm	
Applications:	Pre- and post-treatment of welding seams (fillet and butt joint)	
	Removing scale, rust, paint, slag, rubber	
	Deburring	



# FIBRE CARDBOARD CORE BRUSHES / ROUND BRUSHES / BRUSH GRINDING SYSTEM

## FIBRE CARDBOARD CORE BRUSHES FAPI-FIBRE

Fibre cardboard core brushes FAPI-FIBRE are versatile brushes that can be used in a wide range of industrial fields (metal, wood, etc.). With their individually adjustable diameter, width and facing length, they can be adapted to many different processing jobs. The fibre cardboard core brushes FAPI-FIBRE generally produce a slightly rougher finish than the sisal wheels FAPI-SLAB.

Model:	Cardboard c	ore	
Structure:	Fibre wrappe	Fibre wrapped round a cardboard core	
Dimensions:	Diameter:	60 to 960 mm	
	Width:	5 to 100 mm	
	Hole:	10 to 130 mm	
Facing type:	Fibre		
Applications:	For polishing	, waxing, oiling and dedusting of flat and lightly or heavily	
	shaped workpieces/materials on automated polishers and/or whe polishing by hand at a pedestal polisher.		



# ROUND BRUSHES FAPI-ROUND FIBRE

The round brush FAPI-ROUND FIBRE is specifically designed for polishing jobs. The fibre material is a heat-resistant, hard and aggressive natural fibre. Adhesion of the polishing medium to the rough fibre structure is guaranteed throughout the entire processing period, which contributes to the optimum polishing results.

Dimensions:	Diameter:	40 to 400 mm	
	Width:	10 to 120 mm	
	Hole:	as per specification	
Facing type:	Fibre		
Applications:	For polishing, waxing, oiling and dedusting of flat and lightly or h		
	shaped workpieces/materials.		



#### BRUSH GRINDING SYSTEM FAPI-CLEVER-FLEX

The brush grinding system FAPI-CLEVER-FLEX is used in the metalworking and wood processing industry. Flexible grinding brushes made of abrasive cloth and, usually, fibre facing, are inserted into plastic or aluminium cores with dovetail grooves.

The main task of the fibre facing behind the abrasive cloth is to generate relatively high grinding pressure on the workpiece even at slow speeds. To achieve the required surface finish, the brush grinding system FAPI-CLEVER-FLEX offers versatile facing options such as a pure fibre facing.

as per specification
Abrasive cloth with supporting fibre facing
Pure fibre facing
Metalworking, wood processing



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# **MACHINES**

## GENERAL

We offer you a wide assortment of manual-operated and stationary machines. Upon request, we have also second-hand machines available as a cost-efficient alternative.

For all grinding machines we offer a wide range of accessories. This way the rapid conversion to other uses is achieved.

Of course, our machines abide by the legal regulations, and we consider this as top priority just as the durable, targeted and high manufacturing quality of our products.

# HAND-OPERATED MACHINES

At our company you will find a great variety of hand-operated machines for the most diverse application. Jointly with our Picard tools, we would also like to offer you our different hand machines in a compact grinding, polishing, deburring and brushing tool-set.







# STATIONARY MACHINES

We offer belt grinding and deburring machines that meet the very highest quality and performance standards. Our extensive product portfolio ranges from small pedestal polishers to large, mainly robot-controlled grinding centres. We will be happy to advise you on the best machine for your requirements. Alternatively, we can develop a custom tailored solution to meet your specific machining requirements.

# SECOND-HAND MACHINES / DEMONSTRATION MODELS

Apart from that we sell second-hand / demo machines. This way we can provide you with a cost-efficient second-hand machine as an alternative for a new investment.

Check our website for our latest offers:

www.picard-kg.com/machines

# DEBURRING CASE KIT / ANGLE GRINDERS

# DEBURRING CASE KIT FAPI-FIX

With the deburring case kit FAPI-FIX, the deburring / edge rounding of metal sheet parts becomes very simple. The great variety of tools leads to a rapid and high-quality processing performance.

#### The advantages at a glance:

- slight but very strong edge rounding
- Constant uniform edge rounding of outer edges cuttings and bores
- Little effort required from the user
- Multiple tools

#### Content:

Next to the angle grinder FAPI-UPC-2R, a round brush FAPI-SCRATCH as well as a sharpening stone FAPI-SHARP, you can select among 3 models with various grinding and deburring tools:

model 1:	5 deburring discs FAPI-M14
model 2:	4 deburring discs FAPI-M14
	1 velcro supporter FAPI-M14
	10 grinding discs FAPI-KLETT
model 3:	3 deburring discs FAPI-M14
	1 velcro supporter FAPI-M14
	6 abrasive fleece discs FAPI-KLETT











model 3

# ANGLE GRINDER FAPI-UPC 2-R

With its highly effective moto, the angle grinder FAPI-UPC-2R is extremely resilient. Its compact design makes it light, easy to handle and robust at the same time. The initial current limitation protects the device against overloading the main network. The angle grinder FAPI-UPC-2R also has a very flat cross head and jam protection

#### Technical Data:

work spindle:	M14
Idling speed:	1.000 to 2.000 1/min
Power input:	500 Watt
Weight:	1,5 kg



# ANGLE GRINDER FAPI-UPK 5-R

The angle grinder FAPI-UPK 5-R offers a high performance with a low machine weight and is mostly used in the grinding, separating and polishing process. The exchangeable work spindle can be retrofit effortlessly to a 19 x 100 mm intake.

#### Technical Data:

work spindle:	M14
Idling speed:	1.800 to 4.000 1/min
Power input:	1.530 Watt
Weight:	3,0 kg



M A C H I N E S

# LONGITUDINAL GRINDING SYSTEM / FILLET WELD GRINDERS / TUBE BELT GRINDERS

# LONGITUDINAL GRINDING SYSTEM POLY-PTX® 800

The longitudinal grinding system POLY-PTX<sup>®</sup> 800 - the all-rounder with the intelligent grinding system - can grind from ultra-rough to ultra-smooth, produces satin and mirror finishes, and improves surfaces of stainless and other steel, non-ferrous metals like brass, copper and aluminium, and even wood.

# Technical data:

Max. Tool diameter:	115 mm
Tool width:	up to 150 mm
Power input:	1.750 Watt
Tool mount:	quick release adapter
Idling speed:	1.000 to 3.800 1/min
Weight:	3,9 kg



#### Advantages:

- New rubberised grip for fatigue-free, comfortable use of the machine even under full load
- Infinitely variable speed control by means of a practical thumbwheel

# FILLET WELD GRINDER FAPI-FINIT-EASY

The fillet weld grinder FAPI-FINIT-EASY gives you the mobility you need for professional surface finishing in hard-to-reach places and angles. Working internal angles and removing welds is child's play with the innovative extension arm on the fillet weld grinder FAPI-FINIT-EASY. With its powerful drive and compact design, the fillet weld grinder FAPI-FINIT-EASY can be used for both, light finishes and heavy-duty industrial jobs.

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## Technical data:

Idling speed:	1.300 to 4.000 1/min
Power input:	1.200 Watt
Weight:	3,5 kg
Applications:	Processing of fillet welds in various materials
	(stainless steel, aluminium, etc.)

# TUBE BELT GRINDER FAPI-FINITUBE

The tube belt grinder FAPI-FINITUBE is suitable for all tubes, cylinders or pipe constructions made of steel, stainless steel, aluminium, plastic or wood. Large and small diameters, oval shapes, open and closed, straight or curved constructions can be processed with this machine.

#### Technical data:

Idling speed: Power input: Wrap angle: Weight: Applications: 1.300 to 4.000 1/min 1.200 Watt 270 angular degree 4,8 kg Finishing of stainless steel railings, balustrades, design furniture, industrial tubes etc.



# **PNEUMATIC HAND SANDER UNITS / FLEXIBLE SHAFT**

#### PNEUMATIC HAND SANDER UNIT FAPI-F3

The pneumatic hand sander unit FAPI-F3 can be used with a wide range of Picard tools such as deburring and profile sanding wheels, sisalcord leatherbrushes or fibre brushes. The very light weight machine allows work to be done without fatiguing.

#### Technical data:

Max. Speed:	1.700 1/min
Max. Air pressure:	6,0 bar
Air consumption:	5,0 I/Sec.
Output:	170 Watt
Hose length 1/4":	3,0 m
Spindle length:	50 mm
Max. Tool diameter:	200 mm
Max. Tool width:	50 mm
Net weight:	0.7 kg



## PNEUMATIC HAND SANDER UNIT FAPI-F6

The pneumatic hand sander unit FAPI-F6 can be used with a wide range of Picard tools such as deburring and profile sanding wheels, sisalcord leatherbrushes or fibre brushes. The light weight and size of this powerful machine allow work to be done without fatiguing.

Technical data:	
Max. Speed:	900 1/min
Max. Air pressure:	6,0 bar
Air consumption:	4,8 I/Sec.
Output:	190 Watt
Hose length 1/4":	3,0 m
Spindle length:	85 mm
Max. Tool diameter:	300 mm
Max. Tool width:	75 mm
Net weight:	1,1 kg



## GEAR MACHINE WITH FLEXIBLE SHAFT FAPI-ROTOFERA

By separating the drive and tool, the gear machine FAPI-ROTOFERA enables effortless operation also in continuous duty. The light and easily managed flexible shaft can be operated smoothly, particularly at places with difficult access. The machine is equipped with a mounted On-Off switch and gear-switching is hand-operated during stationary. The motor and gear unit are fully enclosed with ventilated housing and the very robust alu-housing is ideally suited for industrial use.

#### Technical Data:

Motor: Protection class: Output: Voltage: Speed range:

Weight: other:

three-phase motor IP 44 1.000 Watt 400 V, 50 Hz 850, 1.600, 2.100, 3.200 5.700, 8.000 and 12.000 1/min 16,8 kg 3 m cable, with carrying handle, swivel mounting



M A C H I N E S

# **BELT GRINDING AND POLISHING MACHINES (SINGLE-SIDED MODEL)**

# Belt grinding and polishing machine Fapi-72711

The belt grinding and polishing machine FAPI-72711 is a machine with single-sided format. It is a sturdy machine that can be used for belt grinding or polishing. With a motor output of 3,0 to 7,5 kW the 72711 series is suitable for industrial applications with high removal rate.

Туре	FAPI-72711
Belt dimensions	100 x 3.500 mm 100 x 4.000 mm
Shaft diameter	Ø 35 mm
Motor speed	1.500 1/min
Spindle speeds (3 speeds selectable)	2 x 3-stage or infinitely variable (700 to 2.800 1/min)
Spindle height	630 mm(low pedestal) 900 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	3,0 kW / 4,0 kW / 5,5 kW / 7,5 kW



# Belt grinding and polishing machine Fapi-SMB

The single-sided belt grinding and polishing machine FAPI-SMB is the most popular manually operated contact grinding machine with V-belt on the market. The universal belt grinding and polishing machine with motor outputs from 1,5 to 5,5 kW can be produced by us for belt grinding or polishing as required. Due to its stable, low-vibration construction it guarantees a long service life and precise work without chatter marks.

Туре	FAPI-SMB
Belt dimensions	100 x 3.500 mm
Shaft diameter	Conical shaft Ø 40 / Ø 42 mm Cylindrical shaft Ø 45 mm
Spindle speeds	1.000 / 1.500 / 2.000 1/min
Spindle height	475 mm
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output (pole-changing)	1,5 kW / 3,0 kW / 4,0 kW / 5,5 kW



# BELT GRINDING AND POLISHING MACHINES (DOUBLE-SIDED MODEL)

# Belt grinding and polishing machine Fapi-72730

The belt grinding and polishing machine FAPI-72730 is a versatile machine with motor outputs from 2.2 kW to 5.5 kW and is an ideal, powerful entry-level model. The double-sided design of the FAPI-72730 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them universal machines for industrial use. The machine is driven with a built-in motor on the continuous spindle shaft.

Туре	FAPI-72730
Belt dimensions	100 x 3.500 mm 100 x 4.000 mm
Shaft diameter	Ø 35 mm
Motor speed	1.500 1/min
Spindle speeds	1.500 / 3.000 1/min
Spindle height	630 mm (low pedestal) 900 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	2,2 kW / 3,0 kW / 4,0 kW / 5,5 kW



# Belt grinding and polishing machine Fapi-PM 75

The belt grinding and polishing machines FAPI-PM 75 have low motor outputs, making them economical yet high-quality entry-level models. The double-sided design of the FAPI-PM 75 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them universal machines for industrial use. Three different speeds can be preset via a V-belt drive on the continuous shaft.

Туре	FAPI-PM 75
Belt dimensions	100 x 3.500 mm
Shaft diameter	Ø 35 mm
Spindle speeds	1 x 3-stage (1.200 to 3.500 1/min)
Spindle height	600 mm (low pedestal) 1.000 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Ppolishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	2,2 kW



# **BELT GRINDING AND POLISHING MACHINES (DOUBLE-SIDED MODEL)**

## Belt grinding and polishing machine Fapi-SMG56

The belt grinding and polishing machines of the SMG 56 series have different motor outputs, making them suitable for many different uses. The double-sided design of the SMG 56 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them universal machines for industrial use.

Highlights are the two built-in motors that can be switched off separately and drive the machine's divided spindle shafts.

Туре	FAPI-SMG 56
Belt dimensions	100 x 3.500 mm
Shaft diameter	Ø 35 mm
Spindle speeds (3 speeds selectable)	2 x 3-stage (1.200 to 3.500 1/min)
Spindle height	600 mm (low pedestal) 1.000 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diamater	500 mm
Voltage	400 V, 50 Hz
Motor output	2,2 kW / 3,0 kW / 4,0 kW / 5,5 kW / 7,5 kW



# Belt grinding and polishing machine Fapi-SMZ 57

The belt grinding and polishing machines FAPI-SMZ 57 have different motor outputs, making them suitable for many different uses. The double-sided design of the FAPI-SMZ 57 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them universal machines for industrial use.

Highlights are the machine's divided spindle shafts, allowing three different speeds to be preset on each shaft via a V-belt drive. The FAPI-SMZ 57 has a built-in motor.

Туре	FAPI-SMZ 57
Belt dimensions	100 x 3.500 mm
Shaft diameter	Ø 35 mm
Spindle speeds (3 speeds selectable)	2 x 3-stage (1.200 to 3.500 1/min)
Spindle height	600 mm (low pedestal) 1.000 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	4,0 kW / 5,5 kW / 7,5 kW



# BELT GRINDING AND POLISHING MACHINES (DOUBLE-SIDED MODEL)

# Belt grinding and polishing machine Fapi-72780

The belt grinding and polishing machine FAPI-72780 is a universal, heavy-duty belt grinding and polishing machine with motor outputs per spindle of between 3,0 and 7,5 kW, making it perfect for industrial applications involving high stock removal. The double-sided design of the FAPI-72780 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them an universal machine. Highlights are the two built-on motors that can be switched off separately and drive the machine's divided spindle shafts.

Туре	FAPI-72780
Belt dimensions	100 x 3.500 mm 100 x 4.000 mm
Shaft diameter	Ø 35 mm
Motor speeds	1.500 1/min
Spindle speed (3 speeds selectable)	2 x 3-stage or infinetly variable (700 to 2.800 1/min)
Spindle height	630 mm (low pedestal) 900 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	3,0 kW / 4,0 kW / 5,5 kW / 7,5 kW



# Belt grinding and polishing machine Fapi-SMG 58

The belt grinding and polishing machines FAPI-SMG 58 have different motor outputs, making them suitable for many different uses. The double-sided design of the FAPI-SMG 58 series, available with a combination of belt grinding and polishing, only belt grinding or only polishing, makes them an universal machine for industrial use. Highlights are the two built-on motors that can be switched off separately and drive the machine's divided spindle shafts.

Туре	FAPI-SMG 58
Belt dimensions	100 x 3.500 mm
Shaft diameter	Ø 35 mm
Spindle speeds (3 speeds selectable)	2 x 3-stage or infinetly variable (1.200 to 3.500 1/min)
Spindle height	600 mm (low pedestal) 1.000 mm (high pedestal)
Max. Contact wheel diameter	450 mm
Max. Polishing wheel diameter	500 mm
Voltage	400 V, 50 Hz
Motor output	2,2 kW / 3,0 kW / 4,0 kW



# SURFACE BELT GRINDING MACHINES

# SURFACE BELT GRINDING MACHINE FAPI-BS75 / FAPI-BS200 / FAPI-BS300

These surface belt grinding machines are particularly versatile, easy to use, sturdily built and functional in design. They can be used for any dry grinding job. Machines with belt widths of 100 mm, 200 mm or 300 mm are available.

Туре	FAPI-BS75	FAPI-BS200	FAPI-BS300
Belt dimensions	100 x 950 mm	200 x 1.500 mm	300 x 2.000 mm
Max. Grinding surface	100 x 225 mm	200 x 410 mm	300 x 530 mm
Belt speed	8 m/s; 16 m/s	8 m/s; 16 m/s	8 m/s; 16 m/s
Voltage	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Motor output (pole-changing)	0,55 kW / 0,7 kW	1,8 kW / 2,2 kW	3,0 kW



# SURFACE BELT GRINDING MACHINE FAPI-BS75-A / FAPI-BS200-A / FAPI-BS300-A (WITH BUILT-IN EXTRACTION)

The surface belt grinding machines with built-in dust extraction system offer extremely effective extraction of the grinding dust. The extraction system is built into the machine's stand.

Туре	FAPI-BS75-A	FAPI-BS200-A
Belt dimensions	100 x 950 mm	200 x 1.500 mm
Max. Grinding surface	100 x 225 mm	200 x 410 mm
Belt speed	8 m/s; 16 m/s	8 m/s; 16 m/s
Voltage	400 V, 50 Hz	400 V, 50 Hz
Motor output (pole-changing)	0,55 kW / 0,7 kW	1,8 kW / 2,2 kW



# SURFACE BELT GRINDING MACHINES

# SURFACE BELT GRINDING MACHINE FAPI-BS75-W / FAPI-BS200-W / FAPI-BS300-W

Special attention was placed on compact and high-quality even so economical design in the development of our surface belt grinding machines for wet grinding. For example, this compact surface belt grinding machine can grind aluminium completely safely.

Туре	FAPI-BS75-W	FAPI-BS200-W	FAPI-BS300-W
Belt dimensions	100 x 950 mm	200 x 1.500 mm	300 x 2.000 mm
Max. Grinding surface	100 x 225 mm	200 x 410 mm	300 x 530 mm
Belt speed	16 m/s	10 m/s; 20 m/s	15 m/s
Voltage	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Motor output (pole-changing)	1,1 kW	2,0 kW / 2,4 kW	4,0 kW



# SURFACE BELT GRINDING MACHINE FAPI-B200/150S

The surface belt grinding machine FAPI-B200/150S is a robust and solid machine for heavy and maximum duty, in single and multi- shift operations. Even the basic model is suitable for a variety of grinding applications on a great variety of materials.

Туре	FAPI-B200/150S
Belt dimensions	200 x 1.800 mm 150 x 1.800 mm
Max. Grinding surface	200 x 600 mm
Belt speed	5 m/s, 10 m/s, 20m/s, 30 m/s
Voltage	400 V, 50 Hz
Motor output (pole-changing)	3,0 kW
Weight	165 kg



# SURFACE BELT GRINDING MACHINES

## SURFACE BELT GRINDING MACHINE FAPI-K100

The surface belt grinding machine FAPI-K100 is perfect for grinding, polishing, deburring, bevelling, chamfering or snagging almost all materials (steel, cast iron, non-ferrous metals, plastics, ceramics). With its universal equipment, it can be used for a wide variety of grinding tasks in industry and trade, making it an irreplaceable tool for rational manufacturing.

Туре	FAPI-K100
Belt dimensions	100 x 1.000 mm
Max. Grinding surface	100 x 300 mm
Belt speed	10 m/s, 20 m/s
Voltage	400 V, 50 Hz
Motor Output (pole-changing)	0,3 kW / 0,5 kW
Weight	45 kg



# SURFACE BELT GRINDING MACHINE FAPI-C100S / FAPI-C200/150S / FAPI-C300S

These surface belt grinding machines are particularly versatile, easy to use, sturdily built and functional in design. Suitable for any grinding job, this series of surface belt grinding machines are available with belt widths of 100 mm, 150/200 mm or 300 mm.

Туре	FAPI-C100S	FAPI-C200/150S	FAPI-C300S
Belt dimensions	100 x 1.000 mm	150 x 1.800 mm 200 x 1.800 mm	300 x 2.000 mm
Max. Grinding surface	100 x 270 mm	200 x 640 mm	300 x 750 mm
Belt speed	10 m/s; 20 m/s	10 m/s; 20 m/s	10 m/s; 20 m/s
Voltage	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Motor output (pole-changing)	0,65 kW / 0,9 kW	1,4 kW / 1,85 kW	3,4 kW / 4,2 kW
Weight	35 kg	55 kg	75 kg



# **TUBE GRINDING MACHINES / DEBURRING MACHINES**

# TUBE GRINDING MACHINE FAPI-TP80-S / FAPI-TP100-S

The tube grinding machine is suitable for grinding tubes with circular or elliptical cross sections. What makes this machine special is that it can even grind bent pipes. The easy handling, the speed and the quality of the results make the tube grinding machine a must in all industries working with tubes.

Туре	FAPI-TP80-S	FAPI-TP100-S
Largest grinding diameter	80 mm	100 mm
Belt dimensions	30 x 740 mm	30 x 740 mm
Wet grinding set-up	present	present
Voltage	400 V, 50 Hz	400 V, 50 Hz
Motor output	4,0 kW	4,0 kW
Speed	1.450 1/min	1.450 1/min
Weight	160 kg	160 kg



# DEBURRING MACHINES FAPI-MANUAL GRINDER

The deburring machine FAPI-MANUAL GRINDER is a cost-efficient variant to the conventional grinding and deburring machines. The head is rotated lightly over the workpiece and has a weight-mounted arm with at one side a deburring disc FAPI-150 and on the other side a velcro supporter FAPI-150 for the adjustment of the velcro-backed grinding discs. Additionally, the head has a rotation of 180° and allows the rapid exchange of individual tools.

Туре	FAPI-MANUAL GRINDER
Working width	1.300 x 800 mm
Voltage	230 V
Motor output	1,5 kW
Dimensions	1.339 x 888 x 980/1.498 mm
Weight	230 kg



# **WORKSHOP GRINDING MACHINES**

# WORKSHOP GRINDING MACHINE FAPI-DS / FAPI-WS (WITHOUT EXTRACTION)

We offer a wide range of workshop grinders to fulfil our customers' specific wishes and requirements. The grinding machines are developed with practical professional orientation and designed in accordance with the latest scientific findings. Moreover, in addition to developing new grinding machines, we constantly enhance our existing ones to ensure that they can be put to rational and economical use.

Туре		Dimensions Spindle wheel speed		Weight [ in kg ]	
		[ in mm ]	[ in 1/min ]	bench	pedestal
DS 04/150	0.25	150 x 25 x 51	2 000	14	42
WS 04 / 150	0,25	150 x 25 x 51	2.900	14	
DS 04/175	0.25	175 y 25 y 51	2 000	15	43
WS 04 / 175	0,25	175 X 25 X 51	2.900	15	43
DS 07/200	0,5	200 x 25 x 51	2 000	20	57
WS 07 / 200	0,37	200 x 25 x 51	2.900	50	57
DS 12/200	0,9	200 x 22 x 51	2 000	40	77
WS 12 / 200	0,55	200 x 32 x 31	2.900	40	11
DS 12/250	0,73	250 x 32 x 51	1.450	47	84
DS 15/300	1,1	300 x 40 x 76	1.450	80	118
DS 25/300	1,8	300 x 40 x 76	1.450	90	148
DS 30 / 350	2,2	350 x 40 x 76	1.450	107	165
DS 30 / 400	2,2	400 x 40 x 127	1.450	134	192
DS 40 / 400	3,0	400 x 50 x 127	1.450	190	225
DS 45 /500	3,3	500 x 60 x 127	950	240	305



#### DS = three-phase current WS = alternating current

#### ws = alternating current

# Workshop grinding machine Fapi-DS / Fapi-WS (with built-in extraction)

The workshop grinders with built-in extraction effectively remove dust using a patented system. The extraction system is built into the machine's stand. The dust is filtered by a water filter and downstream plastic pre- and post-filter (also built into the stand).

Туре	Output [ in kW ]	Dimensions wheel [ in mm ]	Spindle speed [ in 1/min ]	Weight [ in mm ]
DS 04 / 175 A	0,25	175 x 25 x 51	2.900	83
DS 07 / 200 A	0,5	200 x 25 x 51	2.900	95
DS 12/200 A	0,9	200 x 32 x 51	2.900	108
DS 12/250 A	0,73	250 x 32 x 51	1.450	115
DS 15/300 A	1,1	300 x 40 x 76	1.450	160
DS 25/300 A	1,8	300 x 40 x 76	1.450	195
DS 30 / 350 A	2,2	350 x 40 x 76	1.450	210
DS 30 / 400 A	2,2	400 x 40 x 127	1.450	240
DS 40 / 400 A	3,0	400 x 50 x 127	1.450	305



DS = three-phase current

# SERRATION GRINDING MACHINES / KNIFE SHARPENING MACHINE

# SERRATION GRINDING MACHINE FAPI-WS 300 EXPERT

The FAPI-WS 300 EXPERT is a very high performance, sturdy serration grinding machine with a continuous protective hood on the left and right side. In addition to grinding and sharpening knives and scissors using serrated grinding wheels, the machine can also be used for grinding and polishing work using tools.

Technical data:	
Dimensions:	650 x 350 x 400 mm
Mains supply:	240 or 400 V
Output:	0,55 kW
Speed:	1.400 1/min
Max. Tool diameter:	300 mm
Max. Width serration grinding wheel	l: 120 mm

# SERRATION GRINDING MACHINE FAPI-WS 150 FLEX

The serration grinding machine FAPI-WS 150 FLEX is used to grind and sharpen serrated knives and scissors. However it can also be used for other grinding and polishing work. It is provided with a bayonet quick release system both on the right and the left side and a flexible 360° rotable protective hood.

Technical data:	
Dimensions:	520 x 220 x 230 mm
Mains supply:	240 V
Output:	0,2 kW
Speed:	2.800 1/min
Max. Tool diameter:	150 mm
Max. Width serration grinding wheel	: 80 mm

# SERRATION GRINDING MACHINE FAPI-WS 150 PERFECT

The FAPI-WS 150 PERFECT allows for the sharpening and stripping of knives and scissors. With the integrated left- and right-side bayonet rapid-lock, the tools are rapidly exchanged. This machine is also suitable for the application in other grinding and polishing works.

#### Technical data:

520 x 220 x 230 mm Dimensions: Mains supply: 240 V Output: 0,2 kW Speed: 2.800 1/min Max. Tool diameter: 150 mm Max. Width serration grinding wheel: 80 mm

# Knife sharpening machine Fapi-150 6NE

The Knife sharpening machine FAPI-150 6NE is the ideal machine for the professional workplace. The dust-protected ball bearings ensure a silent machine operation without vibrations. Due to the wide range of accessories and additional equipment, the machine can be easily used.

#### Technical data:

Dimensions:	460 x 240 x 430 mm
Mains supply:	230 V
Output:	0,48 kW
Speed:	3.000 1/min
Grinding belt:	50 x 800 mm
Grinding disc:	Ø 150 x 25 x 13 mm









101

### GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

# **EXTRACTION SYSTEMS**

# ESTA - AUTHORISED DEALER

As a long-standing and experienced authorised dealer for ESTA Apparatebau GmbH & Co. KG, we offer extraction systems as part of our product range.

We specialise in extraction technology for grinding, polishing, deburring and brushing technology.

Our customers see us as a highly competent point of contact for all matters relating to extraction technology. You also can benefit from our expertise - for your safety and the safety of your staff.

# STATIONARY EXTRACTION SYSTEMS

Stationary extraction systems are a permanent fixture alongside the processing machine or in production halls. With the appropriate filter material, almost all kinds of chips and dust can be separated off. The dust is either collected directly at the unit's port or via suitable extraction elements (e.g. hoods or extraction arms).

#### MOBILE EXTRACTION SYSTEMS

Mobile dedusters extract almost all kinds of dust and chips at dust-generating machinery. The dust is usually collected directly in the processing machine and extracted to the filter unit via an existing extraction port installed at a suitable point. If there is no port available, the dust is collected in appropriate collection components such as hoods or extraction arms, guaranteeing a clean working environment.

#### INDUSTRIAL VACUUM CLEANERS

All industrial vacuum cleaners are characterized by superior vacuum performance and high quality workmanship. The compact design of these industrial strength vacuum cleaners and the high manoeuvrability with casters gives them high mobility. These industrial vacuum cleaners are flexible in use, they have a comprehensive range of accessories and their processing quality is TÜV-approved, so they are perfect for sporadic or continuous operation in an industrial setting.





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# STATIONARY EXTRACTION SYSTEMS

# STATIONARY EXTRACTION SYSTEM FAPI-DUSTMAC-S

The stationary FAPI-DUSTMAC S dust extractors (with hose filter) are used as central extraction systems or for single-station extraction with high air volume requirements. They are ideal for extracting dusts which tend to stick due to their temperature, moisture and hygroscopicity (e.g, cement dust, chalk, soot and fibreglass). Additionally, higher filter surface loads can be achieved compared to cartridge filters.

A DESCRIPTION OF

The modular design means the system can be expanded as and when required.

Тур		S-5	S-10	S-17	S-25	S-33
Max. Air flow	m³/h	ca. 2.600	ca. 3.500	ca. 4.500	ca. 5.400	ca. 9.700
Intake/outlet-Ø	mm	160/280	200/300	224/355	280/400	355/400
Max. Negative pressure	Ра	2.000	2.600	3.200	3.200	3.800
Voltage	V	400	400	400	400	400
Motor	kW	2,2	3,0	4,0	5,5	7,5
Filter surface	m²	5	10,5	17	25	33
Filter elements	piece	13	20	32	48	48
Dust collection container	I	50	50	50	50	50
Sound level	dB(A)	67	69	74	76	82
Dimensions (L/W/H)	mm	1.400 x 1.055 x 3.456	1.400 x 1.310 x 3.470	1.820 x 1.310 x 3.875	1.820 x 1.750 x 3.990	1.880 x 1.75 x 4.400



# STATIONARY WET SEPARATORS FAPI-NA-K-SERIES

The stationary wet separators in the FAPI-NA-K series have been designed for the extraction of moist and sticky substances as well as for applications that produce a lot of flying sparks. The devices in the NA-K series are also available in ATEX format and can be used for both single and multi-station extraction.

#### Feature:

Moreover, the stainless steel wet separators FAPI-NA-K VA and FAPI-NA-K B have prototype test certification (BGR 109 [trade association rule 109]) which eliminates the need for additional on-site trade association testing. Furthermore they have DEKRA prototype test certification as approval for aluminium dust.

Тур		NA-K 1800	NA-K 3600	NA-K 6000
Max. Air flow	m³/h	2.160	3.125	5.150
Intake/outlet-Ø	mm	180 / 280	224 / 280	280 / 300
Max. Negative pressure	Ра	4.300	3.500	3.600
Motor	kW	3,0	5,5	7,5
Water content	I	290	390	390
Water connection		G 3/4"	G 3/4"	G 3/4"
Sludge container	I	50	50	50
Weight (without water)	kg	340	510	530
Sound level	dB(A)	83	86	89
Dimensions (L/W/H)	mm	800 x 800 x 2.940	950 x 950 x 3.460	950 x 950 x 3.460



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# SMALL DUST COLLECTOR / MOBILE EXTRACTION SYSTEMS

## SMALL DUST COLLECTOR FAPI-OM

The small dust extractors in the FAPI-OM series can be used for a wide range of applications with machines that produce dust. They are suitable for almost any type of dust and are characterised by their strong suction performance and low operating noise. They are just as suitable for occasional use as for continuous operation with moderate amounts of dust. These devices are often used in the electrical industry, surface engineering and metals processing.

Тур		OM-8	OM-10	OM-12
Max. Air flow	m³/h	500	600	800
Intake-Ø	mm	80	100	150
Height of intake connection	mm	300	300	300
Max. Negative pressure	Pa	1.600	1.500	1.800
Voltage	V	400	400	400
Motor	kW	0,55	0,55	1,10
Overall depth	mm	670	670	670
Weight	kg	65	65	70
Sound level	dB(A)	65	66	72
Dimensions (L/W/H)	mm	550 x 550 x 1.220		



## MOBILE EXTRACTION SYSTEMS FAPI-DUSTOMAT 4

The new FAPI-DUSTOMAT 4 mobile dust extractors offer significantly enhanced suction power and greater energy efficiency. Thanks to the innovative housing design this means improved extraction results and reduced power and compressed air consumption. The devices are suitable for virtually all sectors and work to effectively remove the dusts and shavings which are produced when machining metal, plastic and wood amongst other things. The permanent filter cartridges can be cleaned and offer a long service life.

Тур		4-10	4-24
Max Air flow	m³/h	2.000	3.300
Intake-Ø	mm	160	200
Max. Negative pressure	Ра	2.600	3.600
Voltage	V	400	400
Motor	kW	2,2	4,0
Filter elements	piece	2	2
Filter surface	m²	10	24
Dust collection container	I	90 (42*)	90 (42*)
Weight	kg	230	280
Sound level	dB(A)	68	72
Dimensions (L/W/H)	mm	1.400 x 840 x 1.440	1.600 x 840 x 1.640



\* with disposal box

# **MOBILE WET SEPARATORS / INDUSTRIAL VACUUM CLEANERS**

# MOBILE WET SEPARATORS FAPI-NA-SERIE

The mobile wet separators in the FAPI-NA series are ideal for extracting sticky materials and for work processes that give off a lot of spark.

They come in three versions:

a) dust extractor for connection to processing machines

with intake connection piece diameters of up to 100 mm (NA-1.1)

- b) cleaning vacuum for a 50 mm hose diameter (NA-2.2)
- c) pre-separator for connection to an existing extraction system (NA-500).

All three versions are also available as ATEX models.

Тур		NA-500 Pre-Separator	NA-1.1 Dust Extractor	NA-2.2 SK Vacuum unit
Max Air flow	m³/h	500	560	300
Intake-Ø	mm	100 / 100	100 /	50 /
Max. Negative pressure	Ра		1.700	21.000
Voltage	kW		1,1	2,2
Water capacity	I	40	40	40
Collection container	I	100	100	100
Weight (without water)	kg	80	120	130
Sound level	dB(A)		78	68
Dimensions (L/W/H)	mm	1.260x630x1.560	1.310x530x1.560	1.260x630x1.560





# INDUSTRIAL VACUUM CLEANER FAPI-EUROSOG

The powerful industrial vacuum cleaner FAPI-EUROSOG is ideally suited for gross, fine and free-flowing dust. The patented tilting device removes the dust effortlessly and the vacuum cleaner is easily moved by means of the smoothly-operated rollers. The AC-model is fit for the sporadic use in cleaning works at the workplace; on the other hand, the DC-model is designed for permanent operation.

Тур		EUROSOG W	EUROSOG-I-D
Max Air flow	m³/h	360	260
Intake-Ø	mm	50	50
Max. Negative pressure	Pa	22.000	20.000
Voltage	V	230	400
Motor	kW	3 x 1,0	2,2
Filter surface	m²	2 / 5	2 / 5
Dust collection container	I	80	80
Weight	kg	74	81
Sound level	dB(A)	74	77
Dimensions (L/W/H)	mm	920 X 655 X 1.230	1.030 X 670 X 1.240



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# GRINDING TECHNOLOGY • DEBURRING TECHNOLOGY • POLISHING TECHNOLOGY • BRUSHING TECHNOLOGY

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ACCESSORIES

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# ACCESSORIES

The right accessory for grinding, deburring, polishing and brushing is essential for achieving top quality when processing workpieces. Our product range includes a wide range of accessories to support and enhance your processing work.

# Accessories "mounting"

We turn and mill mountings for all common tools in our in-house turning shop. We also keep standard mountings for satin finishing wheels etc. in stock. Special mountings for tools can be produced customised.

# Accessories "Polishing"

To achieve a high-quality surface on your workpieces, you need the optimal tool and the right polishing additives. Our polishing accessories guarantee a trouble-free, high-quality processing workflow at all times.

# Accessories "(Belt-)GRINDING"

Explicit for (belt) grinding processes, we offer accessories that increase tool service life and to maintain the surface quality of the workpiece at the highest possible level. Our (belt) grinding accessories for the (belt) grinding are designed for companies that want to achieve high performance processes.






PICAPD

# FLANGE CONNECTOR / MOUNTING ADAPTER / TRIM MOUNTING

### FLANGE CONNECTOR FAPI-CONNECT

Flange connectors are used for grinding and polishing tools on a grinding and polishing machine with a conical shaft. They allow the tools being used on the grinding and polishing machine (contact wheels, polishing rings, felt wheels, flap grinding wheels, etc.) to be changed extremely fast.

Types:	39 / 41
	40 / 42
	41 / 43
	42 / 44

Flange connectors FAPI-CONNECT are optionally deliverable with right- or left-hand thread.



#### MOUNTING ADAPTER FAPI-M14

More and more applications in small and medium-sized enterprises need to be able to be run on just a few machines. And the trend clearly tends more and more towards using a single adjustable angle grinder to do the work. Because not all tools are equipped with an M14 thread, we have developed a mounting adapter with an M14 thread for tools with a 19 mm hole diameter and keyway. With this adapter, all tools can be quickly prepared for use with the angle grinder.

## TRIM-MOUNTING FAPI-M14

Our TRIM-mounting FAPI-M14 submit the use of our deburring discs of the FAPI-TRIM series on an adjustable angle grinder with M14-mounting.

Due to the quick release system the deburring discs can be exchanged easily without using an extra tool.

*Dimensions:* 100 x 14 mm x M14







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PICAPI

# CLAMPING COVERS / ALUMINIUM FLANGES / MANDREL

#### CLAMPING COVERS FAPI-SPANN

Our clamping covers FAPI-SPANN are made of steel or aluminium. They must be used for all flap grinding wheels FAPI-RING. The correct mounting of the clamping covers is very important. Clamping covers FAPI-SPANN must sit securely on the inner edge of the flap grinding wheels retaining groove.

Diameter Clamping cover [ in mm ]	Diameter Flap grinding wheel [ in mm ]	Hole [ in mm ]	Expansion possible up to
55	100	10	20 mm
55	140	10	20 mm
79	165	12	40 mm
121	200	14	50 mm
121	250	14	50 mm
155	300	20	50 mm
201	350	25	80 mm
228	380	25,4	80 mm
228	410	25,4	80 mm





## Aluminium flanges Fapi-Spann

The aluminium flanges FAPI-SPANN are made of aluminium. They are used in combination with our satin finishing wheels. Here as well the correct mounting of the aluminium flanges is very important. Attaching the aluminium flanges FAPI-SPANN in the wrong way can lead to imbalance and injury.

Diameter Aluminium Flange [ in mm ]	Hole [ in mm ]
50	10
76	10
115	10
150	10
250	10

The hole diameter can be changed according to specifications.

## MANDREL FAPI-SPANN

Our mandrels FAPI-SPANN are reusable tool holders for mounting polishing wheels, buffing wheels, etc. Mandrels FAPI-SPANN are designed to be retracted into the tool to be mounted. For this reason, it is also possible to work on very narrow edges and angles on the face side.

Designation / Shaft-Ø / Tool hole [ in mm ]	Tool diameter [ in mm ]	Expansion width [ in mm ]		
8 /10	100 to 150	5 to 25		
6 /13	100 to 150	15		
8 / 13	150 to 200	30		
12 / 20	200 to 250	55		
Socket 8 / 18	max. 150	25		
Angle grinder M14 / 14	max. 150	40		





PICAPE

# **VELCRO SUPPORTERS / VELCRO SUPPORTS / POLISHING WHEEL DRESSER**

#### VELCRO SUPPORTER - SERIES

With our velcro supporters you can mount all kinds of velcro-backed grinding discs easily. Due to the different mountings and diameter they are usable for many purposes. On handmachines as well as on stationary grinding and deburring machines.

Diameter: 115 mm, 150 mm, 250 mm Mountings: M14-Thread (115 mm) Quick release system (115 mm) 25 mm Hole (150 mm) 30 mm Hole (250 mm)



## SELF-ADHESIVE VELCRO SUPPORT FAPI-KLETT

The self-adhesive velcro support FAPI-KLETT allows abrasive materials with different grain sizes to be exchanged fast. The velcro support FAPI-KLETT is stuck onto the disc of the grinding machine, so that the abrasive material with the required grain size can simply be "Velcroed" onto it. The self-adhesive velcro supports FAPI-KLETT can be used on all standard commercial grinding machines.

Dimensions: Ø 100 to Ø 600 mm





New polishing tools (polishing wheels, polishing rings, etc.) can be roughened safely and easily with the polishing wheel dresser FAPI-PLANER. Thus enables the tool to collect the polishing compound or emulsion significantly faster.

Any tools already in use can also be stripped or opened with the polishing wheel dresser FAPI-PLANER if they have become encrusted after long time of nonuse.

Worn-out facings of the polishing wheel dresser FAPI-PLANER can be changed easily.

*Dimension:* 130 x 90 mm *Facing width:* 120 mm



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#### PICAPI

# BRUSHING AND POLISHING COMPOUNDS / GRINDING SOAP / GRINDING GREASE

#### BRUSHING AND POLISHING COMPOUNDS

To give workpieces a high gloss polish, the correct brushing or polishing tool and a brushing or polishing compound tailored to the purpose must be used. As a rule, a distinction is made between solid and liquid polishing compounds. The polishing compound is applied to the polishing tool (polishing wheel, polishing ring, etc.) before or during the process.

#### Solid polishing compound

The heat generated by the friction from the pressure applied to the rotating polishing tool melts the solid polishing compounds so that that these have no problem adhering to the polishing tool.

#### Liquid polishing compound

With the liquid polishing compound this procedure is easier because of the liquid state, so that the polishing tool can be injected with the assistance of a sprayer.



MATERIAL	Grinding	Brushing	PRE-POLISHING	<b>M</b> IRROR FINISHING	PURIFICATION
Aluminium	Langsol <sup>®</sup> S4	Athos 127 (black)	7012 (brown)	0462 (light blue)	
Chrome				0017 (green)	
Stainless steel		Langsol <sup>®</sup> S4	5333		
Iron			(white)		
Steel		Langsol <sup>®</sup> S4 Athos 127 (black)			
Brass		Athos 127	Chrysophor 190 (brown)	0462 (light blue)	Langsol <sup>®</sup> 1003 A
Copper		(black)	7012 (brown)	(light blue)	(pink)
Nickel			2043JF (light green)		
Zinc die casting		Athos 127 (black)	7012 (brown)		
Duroplast	Langsol <sup>®</sup> strong cut		4398	5796	Langsol <sup>®</sup> Complete
Thermoplast	liquid		(brown)	(beige)	liquid

## GRINDING SOAP FAPI-SOAP / GRINDING GREASE FAPI-ATHOS

Grinding soap FAPI-SOAP and grinding grease FAPI-ATHOS are used during grinding to keep the abrasive belt open for longer. Our grinding soap and grinding grease have been shown to extend service life even when grinding aluminium, which as a rule quickly clogs the belt.

Dimenions:Grinding soap FAPI-SOAP:380 x 40 x 55 mmGrinding grease FAPI-ATHOS:170 x 70 x 60 mmAdvantages:Increases the abrasive belt's service lifeImprovement in grinding performanceExtremely low grinding costsCooler cutting resp.lower grinding temperature



PICAPD

# BELT GRINDING OIL / VIENNA LIME / CLEANING STONES

#### Belt grinding oil Fapi-Oil

The use of belt grinding oil prevents the loading-up of the abrasive belt caused by very fine grinding dust. The running abrasive belt is sprayed with oil at intervals of approx. 10 to 15 cm by putting pressure on the nozzle head. This procedure should be repeated at appropriate intervals if possible, to constantly work against the loading-up of the abrasive belt.

Advantages Increases the abrasive belt's service life Improvement in grinding performance Significant reduction in grinding costs Cooler cutting resp. lower grinding temperature

Content: 400 ml – spray can 10 litre canister



## VIENNA LIME FAPI-VIENNA

Vienna lime is a tried and tested and highly efficient cleaning and polishing medium that dates back to "great grandma's days". It is a pure, natural mineral product with no chemical additives, made of milled quartz and kaolinite. Vienna lime is applied to a damp cloth which is used to polish workpieces or objects until the desired surface is obtained. The polished surface is then rinsed with water and dried.

Unit: 25 kg-Trading unit

Applications: Stainless steel, silver, brass, copper, metals, glass, ceramic glass, cooktops and hobs, plastics, porcelain, ceramics, painted surfaces



## CLEANING STONES FAPI-STONE

Cleaning stones FAPI-STONE are used in many companies to keep abrasive belts and flap grinding wheels clean and open. Cleaning stones have completely replaced the previously used pumice stone.

 Dimension:
 100 x 50 x 50 mm

 Advantage:
 20 - 40 fold lifetime of abrasive belts

 no spray or grease necessary →> less dirt

 no fire risk



GRINDING TECHNOLOGY	DEBURRING	TECHNOLOGY	• POLISHING	TECHNOLOGY •	Brushing	TECHNOLOGY
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# **GRINDING TECHNOLOGY**



# DEBURRING TECHNOLOGY



# **POLISHING TECHNOLOGY**



BRUSHING TECHNOLOGY



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