

PICARD

● Friedrich August Picard
GmbH & Co. KG

WISSEN WORUM ES SICH DREHT

*So that everything works -
Contact wheels for
every application*



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FAPI

Friedrich-August-Picard

since 1907...

*over 110 years a competent partner around grinding,
deburring, brushing and polishing*



Remscheid-Lennep 1927



Friedrich August Picard GmbH & Co. KG -

A family business run by the fourth generation!

We belong to the leading manufacturers of grinding, deburring, polishing and brushing tools, as well as contact wheels resp. contact rollers and are acknowledged partner for different sectors of industry. Our quality, besides a wide (standard-)product range, is the flexibility to react as soon as possible on customer demands.

Belt grinding with PICARD-contact wheels

In order to achieve an optimum performance profile, which demands great economy and the highest possible grinding performance, the coordination between grinding belt and contact wheel is of decisive importance in the belt grinding process.

Due to our many years of experience in the production of contact wheels and sale of abrasives, we can always offer our customers the best possible solution for their applications.



CONTACT WHEELS

MAIN TASKS

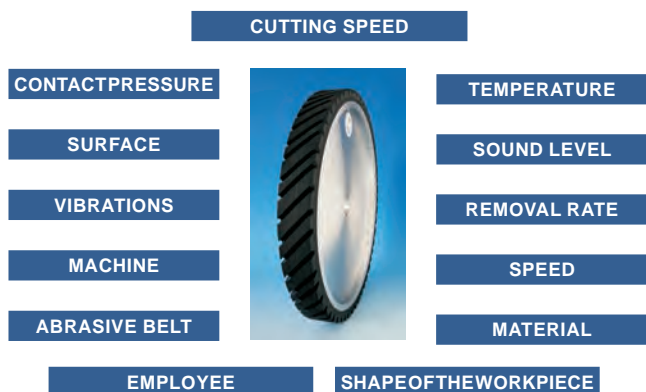
The choice of the contact wheel plays a **DECISIVE ROLE** in the quality, cost and duration of the belt grinding process.

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

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

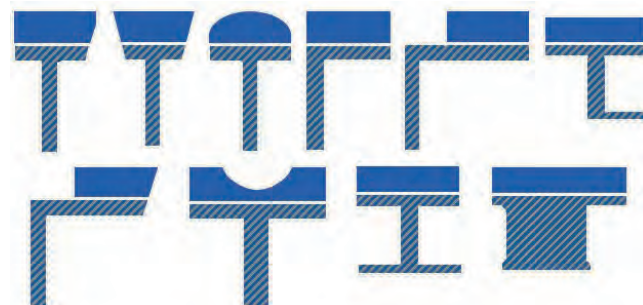
RECOVERING / RECYCLING

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

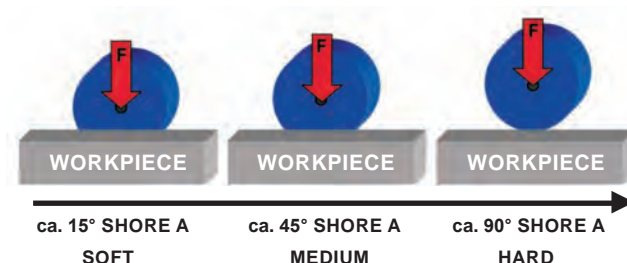
We can produce contact wheels in various shapes and profiles, depending on the application.

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.

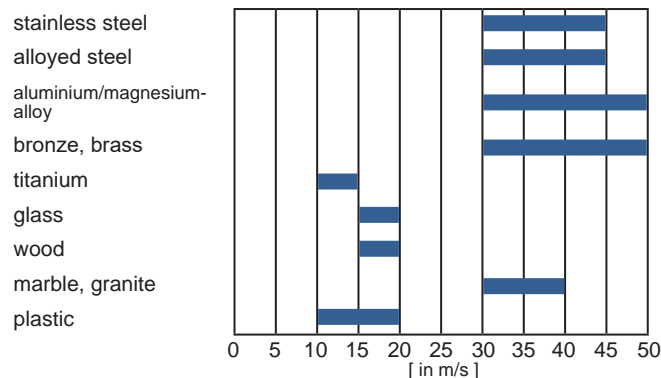


Rule of thumb for contact wheels:

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.



CONTACT WHEELS FULL VERSION

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

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

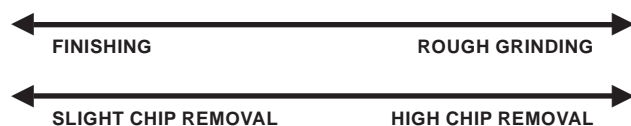
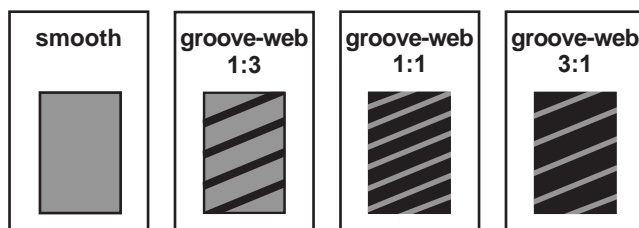
GROOVE-WEB RATIO

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 are shown in the table below. Other millings (e.g. special Picard millings) are also available.

outer- \varnothing [in mm]	STANDARD MILLINGS		
	groove depth [in mm]	groove width [in mm]	web width [in mm]
100	10	6	10
125			
150			
175	10	6	12
200			
250	10	8	12
300			
350			
400			
450			

MILLING ANGLES

The milling angle of the grooves 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 CONTACT WHEEL	MILLED CONTACT WHEEL
LOW	HIGH
DOWNFORCE TO THE SINGLE GRAIN	
HIGH	LOW
ADAPTABILITY TO THE WORKPIECE	
LOW	HIGH
STOCK REMOVAL	
FINE	COARSE
GRAIN	
FINE	COARSE
SURFACE	
PROFILED	FLAT
WORKPIECE CONTOUR	
SOFT CONTACT WHEEL	HARD CONTACT WHEEL

CONTACT WHEELS FAPI-PA

PRODUCT DESCRIPTION FAPI-PA – SERIES

The contact wheels of the FAPI-PA series are covered only with NBR (formerly: PArubber 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:

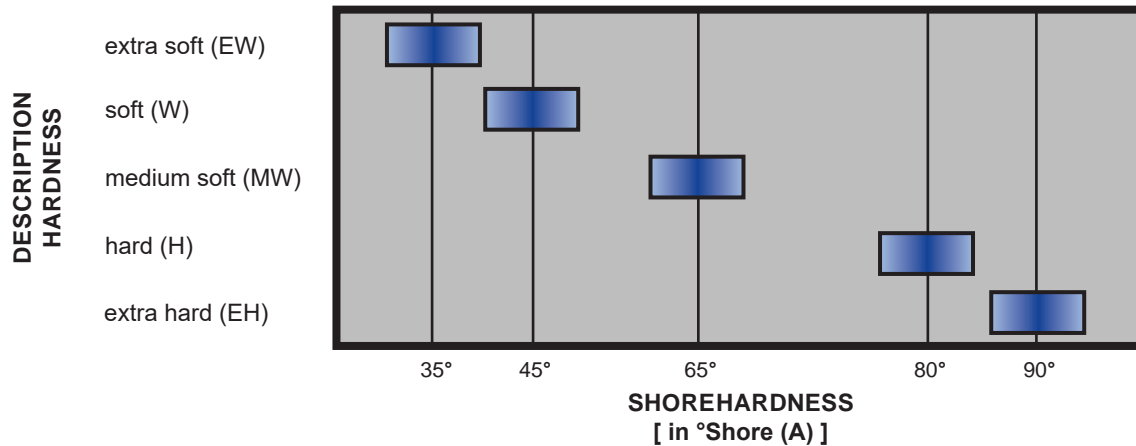
- Maximum service life
- Wear-resistance
- Oil-resistance
- Grease-resistance
- Emulsion-resistance



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.

RECOMMENDED 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

Used in: Automatic grinding, portable machines, pedestal grinder/backstand, robotic grinding

Cutting speeds: maximal 50 m/s

recommended 36 m/s

Areas of use: Pipe manufacturing, aerospace industry, foundries, etc

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: 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 22

Applications: Metal working, 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 into 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 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-PA MILLED FREQUENCY DAMPED TYPE

Structure: The contact wheel FAPI-PA MILLED FREQUENCY DAMPED is a further development of the milled type. It has grooves cut into the NBR coating in our specially developed ratio of groove width to groove depth to web width. This results in significant frequency attenuation and a reduction of the sound level up to 5 dB(A) during the belt grinding process.

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 22

Applications: Metal working, wood processing, plastic processing, stone processing



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CONTACT WHEELS FAPI-VU

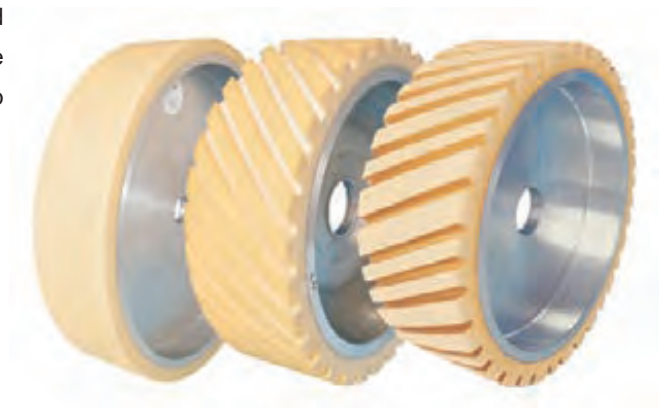
PRODUCT DESCRIPTION FAPI-VU – SERIES

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

Advantages of contact wheels with a coating of foamed up Vulkollan®:

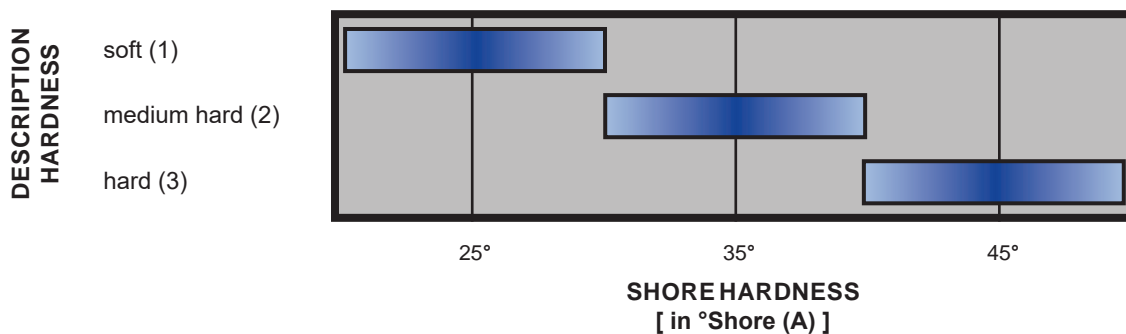
- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance
- Acid-resistance

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® coating can be divided into three levels ranging from a soft foamed up Vulkollan® coating with 25° Shore (A) to a hard foamed up Vulkollan® coating with 45° 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 coating will be.

RECOMMENDED APPLICATIONS

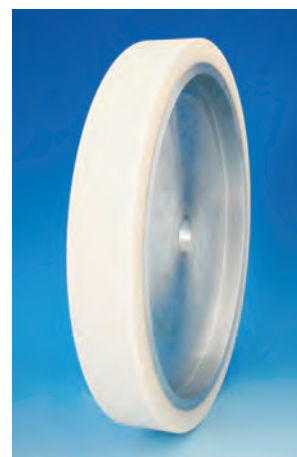
Contact wheels of the FAPI-VU series are especially suitable for achieving a fine finish on (heavily) rounded and profiled parts. In addition, there is almost no fatiguing of the contact wheel when used correctly, even after long and intensive use.

- 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.

CONTACT WHEELS FAPI-VU

CONTACT WHEEL FAPI-VU SMOOTH TYPE

- Structure:** As the name suggests, 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 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 22
- Applications:** Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-VU MILLED TYPE

- Structure:** The contact wheel 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
- Core shapes:** as per specification, have a look at page 22
- Applications:** Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-VU MILLED FREQUENCY DAMPED TYPE

- Structure:** The contact wheel FAPI-VU MILLED FREQUENCY DAMPED is a further development of the milled type. It has grooves cut into the coating of foamed up Vulkollan® in our specially developed ratio of groove width to groove depth to web width. This results in significant frequency attenuation and a reduction of the sound level up to 5 dB(A) during the belt grinding process.
- 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 22
- Applications:** Metal working, wood processing, plastic processing, stone processing



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CONTACT WHEELS

OVERVIEW CONTACT WHEEL – SERIES



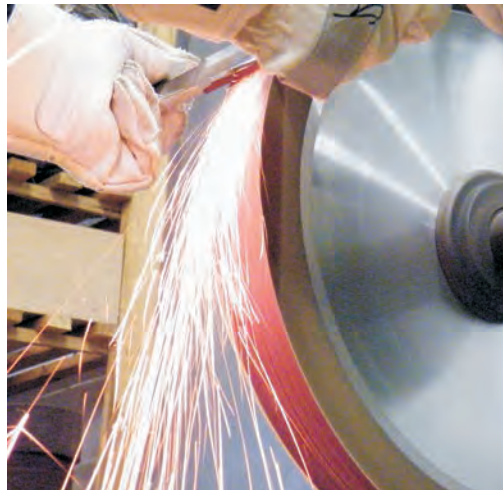
FAPI-PA – series



FAPI-BW – series



FAPI-VU – 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.

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**
FAPV-KS/V – series
FAPV-VUS – series
FAPV-PUS – series
FAPV-BW – series

COATING

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

DESIGNATION	DESCRIPTION
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 lamellae 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	HIGH
DOWN FORCE TO THE SINGLE GRAIN	
HIGH	LOW
ADAPTABILITY TO THE WORKPIECE	
LOW	HIGH
STOCK REMOVAL	
FINE	COARSE
GRAIN	
FINE	COARSE
SURFACE	
PROFILED	FLAT
WORKPIECE CONTOUR	
SOFT CONTACT WHEEL	HARD CONTACT WHEEL

CONTACT WHEELS FAPI-KS/V

PRODUCT DESCRIPTION FAPI-KS/V – SERIES

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

Advantages of contact wheels with this structure:

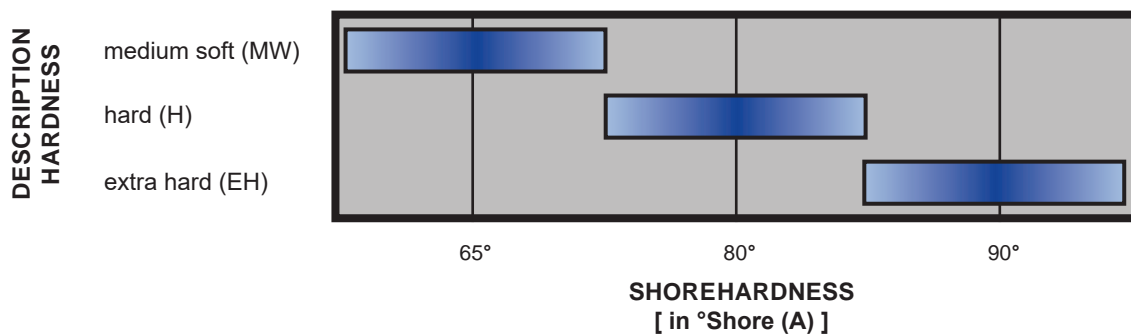
- Maximum removal rate
- Plastic lamellae provide optimum cooling of the abrasive belt
- Wear-resistance
- Oil-resistance
- Grease-resistance



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® lamellae are available in three hardness levels, ranging from a medium soft Vulkollan® lamella with 60° Shore (A) to an extra hard Vulkollan® 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® 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.

RECOMMENDED 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 industry, aerospace industry, etc.

CONTACT WHEELS FAPI-KS/V

CONTACT WHEEL FAPI-KS/V STANDARD TYPE

Structure: Vulkollan® and plastic 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 constant, the width of the plastic foam lamellae can be varied. The wider the plastic 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 22

Applications: Metal working, wood processing, plastic processing, stone processing



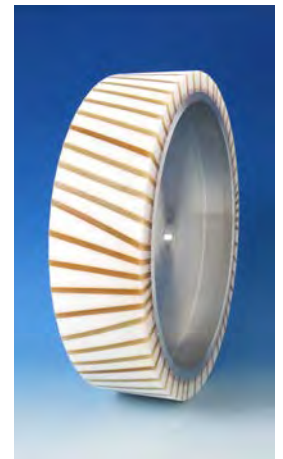
CONTACT WHEEL FAPI-KS/V SPECIAL TYPE

Structure: Uniformly wide Vulkollan® lamellae are attached to the aluminium core of the contact wheel FAPI-KS/V SPECIAL at alternating angles with plastic foam lamellae attached in the spaces between them. The alternating angles of the lamellae result 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 22

Applications: Metal working, wood processing, plastic processing, stone processing



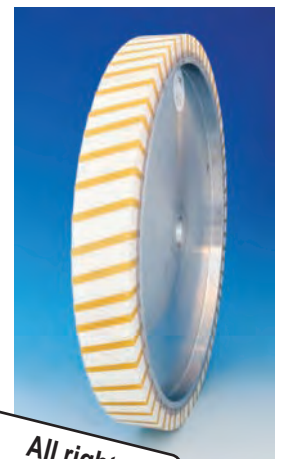
CONTACT WHEEL FAPI-KS/V FREQUENCY DAMPED TYPE

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. This results in significant frequency attenuation and a reduction of the sound level up to 5 dB(A) during the belt grinding process..

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 22

Applications: Metal working, wood processing, plastic processing, stone processing



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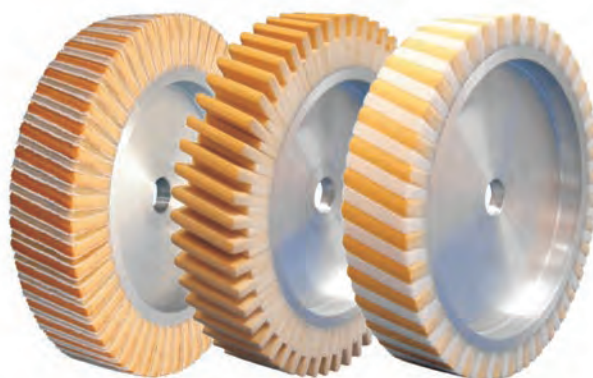
CONTACT WHEELS FAPI-VUS

PRODUCT DESCRIPTION FAPI-VUS – SERIES

Our contact wheels of the FAPI-VUS series are coated with foamed up Vulkollan® 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®:

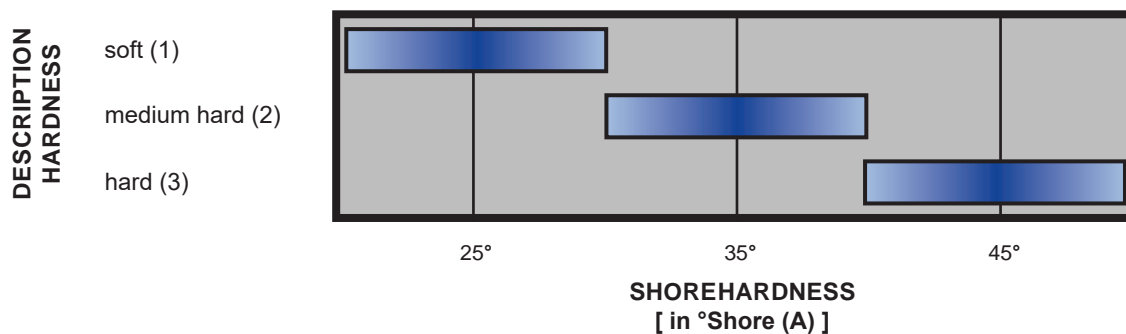
- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance



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® lamella coating is available in three hardness levels, ranging from a soft coating of foamed up Vulkollan® lamella with 25° Shore (A) to a hard coating of foamed up Vulkollan® 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® lamellae can be varied depending on the application (standard: 20 mm or 35 mm). The longer lamellae of the foamed up Vulkollan®, the softer/more adaptable the contact wheel will be, with the same shore hardness rating

RECOMMENDED 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: Findings industry, car industry, aerospace industry, foundries, etc.

CONTACT WHEELS FAPI-VUS

CONTACT WHEEL FAPI-VUS DENSE TYPE

Structure: The aluminium core of the contact wheel FAPI-VUS DENSE is covered with dense, adjoining lamellae of foamed up Vulkollan®.

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 on request! -

Core shapes: as per specification, have a look at page 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-VUS OPEN TYPE

Structure: The contact wheel FAPI-VUS OPEN is an enhancement of the dense type. The aluminium core of this wheel is coated with alternately long and short lamellae of foamed up Vulkollan®.

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 on request! -

Core shapes: as per specification, have a look at page 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-VUS/KS

Structure: The contact wheel FAPI-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 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-VUS/RE

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.

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 22

Applications: Metal working, wood processing, plastic processing, stone processing



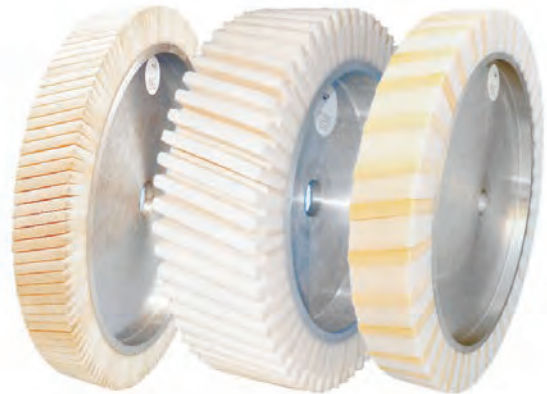
CONTACT WHEELS FAPI-PUS

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:

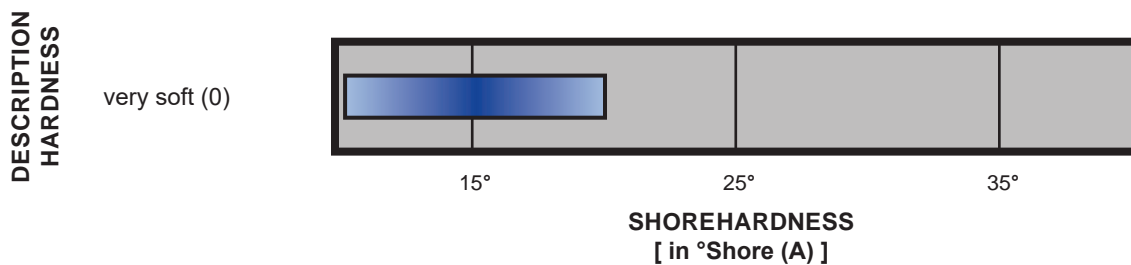
- Highly elastic (adaptable)
- Wear-resistance
- Oil-resistance
- Grease-resistance



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.

RECOMMENDED 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, 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 industry, foundries, etc.

CONTACT WHEELS FAPI-PUS

CONTACT WHEEL FAPI-PUS DENSE TYPE

Structure: The aluminium core of the contact wheel FAPI-PUS DENSE is coated with dense, adjoining 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 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-PUS OPEN TYPE

Structure: The contact wheel FAPI-PUS OPEN is an enhancement of the dense type. On the open 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 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-PUS/KS

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 22

Applications: Metal working, wood processing, plastic processing, stone processing



CONTACT WHEEL FAPI-PUS/KS FREQUENCY DAMPED TYPE

Structure: The contact wheel FAPI-PUS/KS FREQUENCY DAMPED is a further development of the contact wheel FAPI-PUS/KS. Due to the special lamella spacing a significant frequency attenuation and a reduction of the sound level up to 5 dB(A) is achieved during the belt grinding process.

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 22

Applications: Metal working, 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:

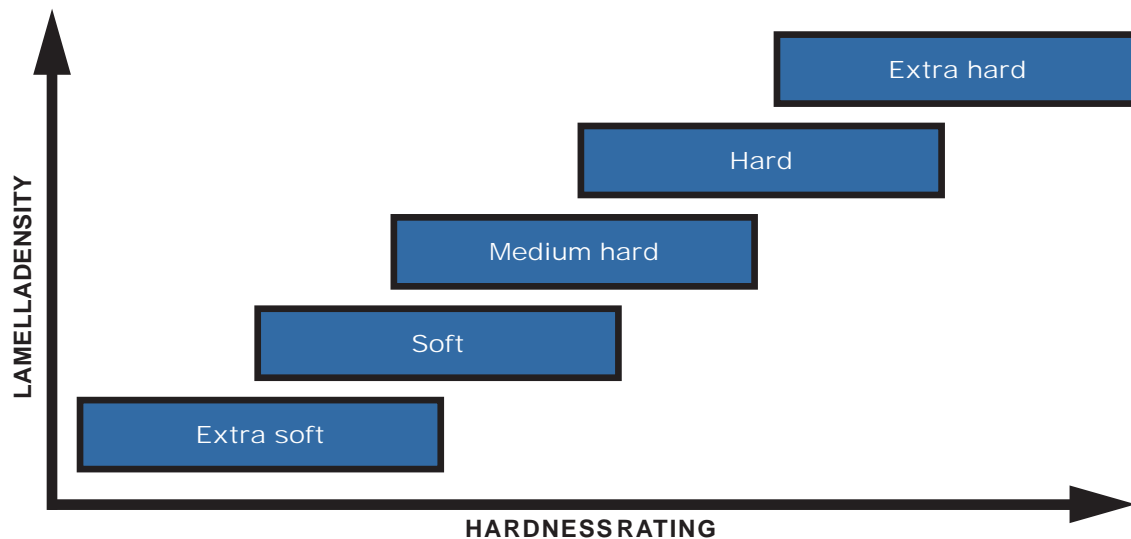
- Highly elastic (adaptable)
- Wear-resistance

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).



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.

RECOMMENDED 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 industry, etc.

CONTACT WHEELS FAPI-BW

CONTACT WHEEL FAPI-BW

Structure: The contact wheel FAPI-BW is made of cotton cloth lamellae attached around an aluminium core. Predominantly, the contact wheel FAPI-BW with a softer coating contributes significantly 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: Metal working, wood processing, plastic processing, stone processing

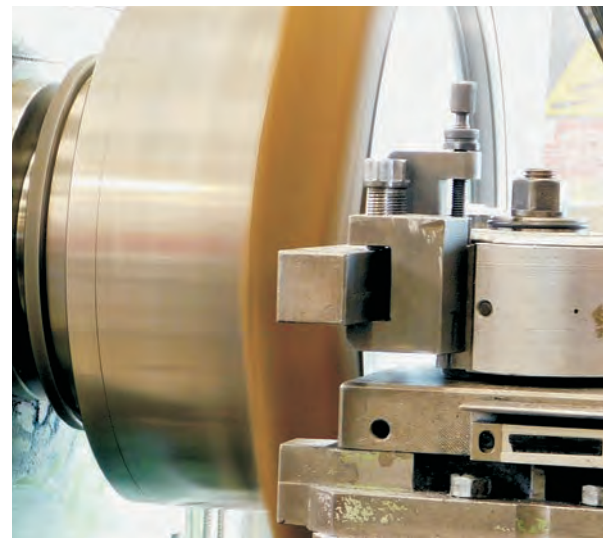


RECOVERING OF CONTACT WHEELS

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



Contact wheel with an old coating made of lamellae of foamed Vulkollan®



contact wheel core after the first turn off process



contact wheel core after the final turn off - ready for new coating

Vulkollan® = registered trade mark of the Covestro-Group

ROLLS AND ROLLERS

PRODUCT 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 butadiene 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:

GEOMETRY	SKETCH
cylindrical	
crowned (convex and concave)	
trapezoidal	
conical	

EDGES

EDGES	SKETCH
right-angled	
stepped	
rounded	
bevelled	

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.

PROFILES	SKETCH
Spiral grooves	
Axial slits / axial grooves	
Waffle profiles	
Radial recesses	

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.

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 or foamed up Vulkollan®. This coating can be supplied in 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 on the machines.

Dimensions: Diameter: 30 mm / 50 mm
Width: 30 mm / 50 mm
- Further dimensions 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 grinders, 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"

Model: **FAPI-METALL VUG**

The folding contact wheel FAPI-METALL VUG is covered with a slitted coating made of foamed up Vulkollan®.

FAPI-METALL KS/V

The folding contact wheel FAPI-METALL KS/V is coated with lamellae made of Vulkollan® and plastic foam. Compared to the type FAPI-METALL VUG she is harder and therefore more aggressive in stock removal

Applications: Metal working, container construction, etc.



FOLDING CONTACT ROLLERS FAPI-HOLZ

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: Metal working, container construction, orthopaedics, wood processing, etc.



Vulkollan® = registered trade mark of the Covestro-Group

RETURN PULLEYS FAPI-SWITCH

PRODUCT FEATURES FAPI-SWITCH – SERIES

With our FAPI-SWITCH series, we have succeeded in designing return pulleys in a light system format that are very 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.



RETURN PULLEYS FAPI-SWITCH

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

Return pulleys FAPI-SWITCH are made with a Vulkollan® coating as standard. The highly wear-resistant elastomer Vulkollan® 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 solvents

Coating type: Vulkollan®

Coating hardness: 90° Shore (A)

Comment: Single or double sided shaft ends for mounting

Dimensions: Diameter: 100 to 250 mm
Width: 50 to 500 mm
Shaft: as per specification
- Further dimensions 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® coating. However, return pulleys with an NBR coating have a much shorter service life than those with a Vulkollan® 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 mounting

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 LONGLIFE coating

Remark: Single or double sided shaft ends for mounting

Dimensions: Diameter: 100 to 250 mm
Width: 50 to 500 mm
Shaft: as per specification
- Further dimensions on request! -

Picard tip:

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.

Design: ground for grain side } absolutely necessary!
rough for abrasive belt back }



Vulkollan® = registered trade mark of the Covestro-Group

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 specification	
Coating hardness:	45° Shore (A) or 65° Shore (A)		
Cutting speeds:	up to 200 mm outer diameter	not less than	10 m/s
		max.	36 m/s
	from 200 mm outer diameter	not less than	13 m/s
		max.	36 m/s
Applications:	Metal working, 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®, whereby the abrasive sleeve is clamped by the centrifugal force during operation. The expander wheels coated with the foamed up Vulkollan® (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 specification	
Coating hardness:	25° / 35° / 45° Shore (A)		
Cutting speeds:	up to 200 mm outer diameter	not less than	10 m/s
		max.	36 m/s
	from 200 mm outer diameter	not less than	13 m/s
		max.	36 m/s
Applications:	Metal working, wood 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® 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-M14 can be found on page 107!

Coating hardness:	45° Shore (A)	
Cutting speeds:	not less than	10 m/s
	max.	36 m/s
Applications:	Metal working, wood processing	



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	10 m/s
	max.	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.

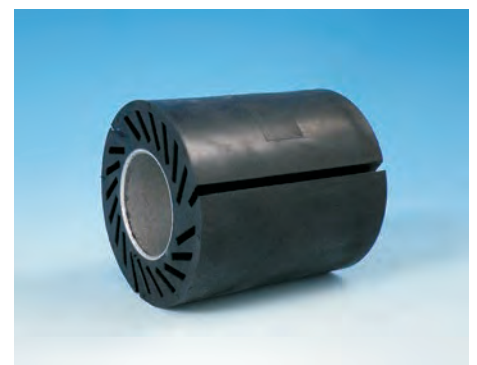
Dimensions:	Diameter:	8 to 100 mm
	Width:	10 to 40 mm
	Shaft:	3 mm / 6 mm / 8 mm
Coating types:	NBR	
Coating hardness:	65° or 85° Shore (A).	
Applications:	Removal of weld joints in steel construction	
	Edge and contour processing in turbine construction	
	Post-treatment in construction work	



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	10 m/s
	max.	36 m/s
Applications:	Removal of weld joints in steel construction	
	Edge processing	



AIR CONTACT ROLLS / PRESSURE ROLLS / BAND SAW WHEELS

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)
Metal working, 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 independent 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 welds in steel construction
Edge and contour processing in turbine construction
Post-treatment in construction work



BAND SAW WHEELS FAPI-SAW (RECOVERING)

The band saw blade continues to move from its original position when the machines are constantly in use. This is due to the fact that the band saw blade runs into the coating. Therefore a recovering is inescapable

Depending on the band saw machine producer, the band saw wheels FAPI-SAW can be recovered with a straight or crowned surface.

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



PRESSURE- AND FEEDING ROLLS

PRESSURE 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®, 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.

PICARD



Friedrich August Picard
GmbH & Co. KG
WISSEN WORUM ES SICH DREHT



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