



# PRODUCT OVERVIEW DICHTOMATIK BRAND



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The information presented here is based on laboratory tests and is not necessarily indicative of the performance of the final product. Full tests and the performance of the final product are the responsibility of the user.





## COMPANY

The Freudenberg Group was founded in 1849 and is still owned by the approximately 300 descendants of the company founder. The resulting financial stability and social consciousness are decisive success factors that create trust. Today, Freudenberg is a global, broadly diversified Group that is divided into Business Groups that operate in a wide variety of different sectors. The company has always been considered an innovation and technology leader, from Vileda® brand household products to technically complex sealing solutions.

Freudenberg Sealing Technologies (FST) is the largest Business Group in the Freudenberg Group and part of the Seals and Vibration Control Technology Division. It is a supplier as well as a development and service partner to customers in a wide range of market segments, such as the automotive industry, civil aviation, mechanical engineering and shipbuilding, the food and pharmaceutical industry and the agricultural and construction machinery industry.

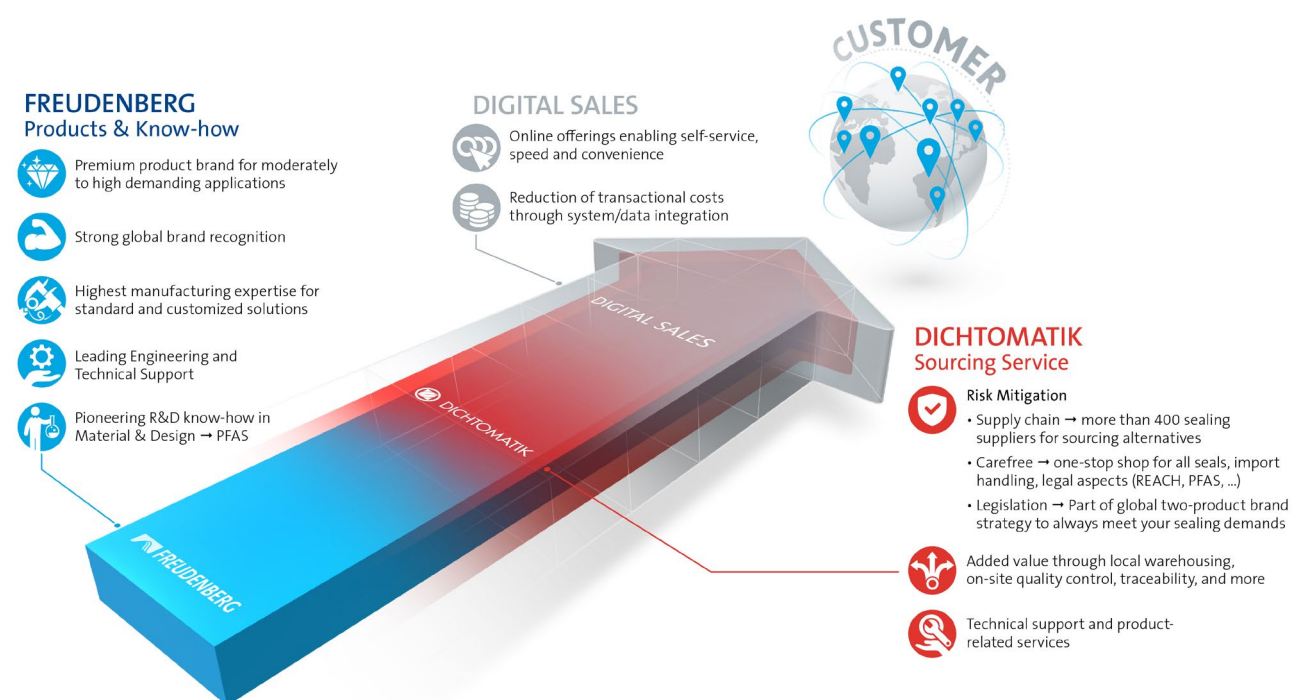
Starting with the Simmerring® developed in 1929, FST can today offer through its Freudenberg product brand a broad, continuously customer-oriented product portfolio of premium sealing technology for moderately to high demanding applications – from tailor-made individual solutions to complete sealing packages. The Freudenberg brand globally stands for uncompromising and high quality as well as state-of-the-art sealing solutions setting market benchmarks. It benefits from FSTs more than 175 years of engineering and materials experience in the research, development and introduction of innovative product and process solutions.

In addition, Dichtomatik brand products are ideal for several moderately demanding applications in general industry. The wide range of products is characterized by a very good price-performance ratio. Manufactured by certified external suppliers, the sealing products and solutions reliably meet common industrial market standards. Additional services such as general technical support complement the range.

With a worldwide network of more than 400 seal suppliers for the Dichtomatik brand, Freudenberg Sealing Technologies is in a position to offer a suitable procurement alternative at any time and thus avoid supply bottlenecks and risk mitigation. With its sourcing service, FST makes life easier for its customers by offering a crisis-resistant source, reducing the administrative burden, and thus ensuring a carefree supply for industrial standard seals. Quality controls along the supply chain and a good negotiating position thanks to large purchasing volumes create an attractive overall package.

Freudenberg Sealing Technologies offers technical services such as the preparation of drawings, radial force measurements, comprehensive quality and material documentation as well as material modifications and testing to ensure that all seals function reliably even in individual applications. Furthermore, local availability ensures short distances and fast response times to best serve customer needs. Digital service offerings like the online-ordering platform EASY, online configurators and resistance tools enable self-service, speed and convenience.

**FREUDENBERG SEALING TECHNOLOGIES SERVES THE ENTIRE SEALING MARKET WITH THIS COMPLEMENTARY PRODUCT PORTFOLIO AND THUS MEETS ALL MARKET REQUIREMENTS – QUICKLY, RELIABLY AND FROM A SINGLE SOURCE**

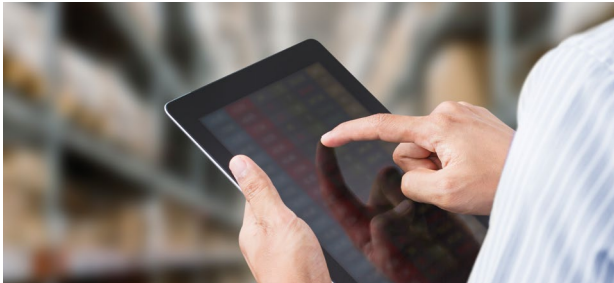




# INDUSTRY-SPECIFIC AND CUSTOMIZED SERVICE CONCEPTS

## ONLINE ORDERING PLATFORM EASY

The EASY online ordering platform enables straightforward order processing and provides real time information regarding the price, delivery time and availability of stock. The primary details for each product are displayed on a summary page where drawings of the installation space and cross-section are also available for download. The EASY Business Connector is used to transfer your orders directly to your SAP system; this ensures that you are always up to date on the status of your order. Register today if you do not yet have an EASY account.



## APPLICATION KNOW-HOW

Dichtomatik brand products are also certified for special applications. This enables us to find the right solution for every application. To ensure the safe functionality of the seals, even in individual applications, our team of specialists offer technical services such as drawing preparation, radial force measurements, comprehensive quality and material documentation as well as material modifications and testing based on their extensive technical and application expertise. Customer-specific sealing solutions, kitting and single packaging are just some of the other services that can be offered (country-specific).



## LOGISTICAL SERVICES AND QUALITY STANDARDS

The 6,500 m<sup>2</sup> warehouse in Hamburg, which functions as a European logistics hub, has just one objective - delivering the uniquely high number of Dichtomatik brand products as quickly as possible to the locations they are needed at. In addition to the roughly 60,000 standard designs, around 15,000 customer-specific seals are available from stock. Additional warehouse locations around the world support the supply chain to ensure rapid delivery to our customers..



Special logistics solutions, such as Kanban or vendor-managed inventory, quality testing and simplified customs processes due to certifications, simplify order processing. The warehouse in Hamburg is certified according to DIN ISO 9001 and DIN ISO 14001, thus guaranteeing standardized processes in the quality and environmental management system. In addition, current processes are analyzed and improved in regular Kaizen workshops. Furthermore, warehouse processes are supported by new technologies.

For example, the forklifts have been converted into mobile workstations by using tablets and portable printers, and innovative glove scanners are used for scanning processes. Our other warehouses also meet the highest quality requirements and are part of regular certifications. Our other warehouses also meet the highest quality requirements and are regularly inspected and certified by internal and external organizations.

# PRODUCT PORTFOLIO OF THE DICHTOMATIK BRAND

## PRODUCTS FOR STATIC APPLICATIONS



The whole range of static seals – O-rings, cords, x-rings, cover seals, bolt seals, flange and profile seals, etc. – are available in large number of dimensions, in both metric and imperial units, for a wide range of international standards. The variety of materials on offer leaves nothing to be desired, with a selection of materials certified for a diverse cross section of application-specific requirements.

## PRODUCTS FOR ROTATING MOVEMENTS



Rotary shaft seals are available in standard profiles with and without protective lips and in the compounds NBR and FKM. In addition to these standard designs, the product range also includes special designs of rotary shaft seals, axial seals, shaft sleeves and radial seals for rotary and swivel movements.

## PRODUCTS FOR TRANSLATIONAL MOVEMENTS



Piston seals, rod seals, wipers, guide belts and guide rings for hydraulic applications are readily available in countless standard dimensions in the materials NBR, PTFE, TPU, hard fabric and fabric-reinforced NBR. Application-specific modifications of the design or compound can also be accommodated.

## IMPORTANT NOTE

Dichtomatik brand products meet common industrial market quality standards and are therefore suitable for moderately demanding and non-safety-critical applications. Dichtomatik products are not approved for use in the automotive industry, aerospace and other safety-critical applications. An overview of complementary premium sealing solutions can be found at [www.fst.com](http://www.fst.com).



















e-Catalog



# STATIC SEALS

The values indicated here are maximum values.

## O-RINGS



Profile	Design	Material	Hardness [Shore A]	Color	Temperature [°C]	Special Feature
	O-ring	NBR	70	black	-30 to +100	Bag in bag (BiB) packaging is possible
	O-ring	NBR	75	black	-30 to +100	
	O-ring	NBR	80	black	-30 to +100	
	O-ring	NBR	90	black	-30 to +100	
	O-ring	HNBR	70	black	-30 to +140	
	O-ring	EPDM	70	black	-45 to +130	
	O-ring	EPDM	70	black	-50 to +150	Peroxide cross-linked
	O-ring	FKM	70	black	-20 to +200	
	O-ring	FKM	75	green	-20 to +200	
	O-ring	FKM	80	black	-20 to +200	
	O-ring	FKM	90	green	-20 to +200	
	O-ring	FKM	75	black	-20 to +200	Peroxide cross-linked
	O-ring	VMQ	70	red	-55 to +200	
	O-ring	PTFE		white	static use -200 to +260 dynamic use -100 bis +260	
	O-ring FEP	FEP-encapsulated FKM		transparent/ black	-20 to +205	
	O-ring FEP	FEP-encapsulated VMQ		transparent/ red	-60 to +205	






## ROUND CORD AND ROUND CORD RINGS

Profile	Design	Material	Hardness [Shore A]	Color	Temperature [°C]	Special Feature
	RS	NBR	70	black	-30 to +100	
	RS	EPDM	70	black	-50 to +150	Peroxide cross-linked
	RS	FKM	75	black	-20 to +200	
	RS	VMQ	60	red	-55 to +200	FDA- and EC 1935/2004-compliant

## X-RINGS







Profile	Design	Material	Hardness [Shore A]	Color	Temperature [°C]	Special Feature
	X-ring	NBR	70	black	-30 to +100	
	X-ring	FKM	70	black	-20 to +200	

## BACK-UP RINGS


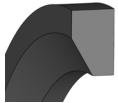
Profile	Design	Material	Hardness	Color	Temperature [°C]	Special Feature
	STU	NBR	90 Shore A	black	-30 to +100	
	STR END	PTFE	≥ 50 Shore D	white	-200 to +260	
	STR GS	PTFE	≥ 50 Shore D	white	-200 to +260	
	STR END	POM	≥ 80 Shore D	white	-50 to +90	
	STR GS	POM	≥ 80 Shore D	white	-50 to +90	



BONDED SEALS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Pressure [MPa (bar)]	Temperature [°C]	Special Feature
	US	NBR	70	black	25 (250)	-30 to +100	
	US	NBR	70	black	25 (250)	-30 to +100	Metal ring consists of rust and acid resistant steel 1.4301 (AISI 304)
	US	FKM	70	brown	25 (250)	-20 to +200	
	USS	NBR	70	black	25 (250)	-30 to +100	Additional centering
	USS	NBR	70	black	25 (250)	-30 to +100	Additional centering, Metal ring consists of rust and acid resistant steel 1.4301 (AISI 304)
	USS	FKM	70	brown	25 (250)	-20 to +200	Additional centering
	USS	FKM	70	brown	25 (250)	-20 to +200	Additional centering, Metal ring consists of rust and acid resistant steel 1.4301 (AISI 304)

PROFILE RINGS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Pressure [MPa (bar)]	Temperature [°C]	Special Feature
	PRR	NBR	85	black	60 (600)	-30 to +100	DIN EN 549 B1/H3 certified
	PRR	EPDM	80	violet	60 (600)	-45 to +150	Peroxide cross-linked
	PRR	FKM	80	green	60 (600)	-20 to +200	DIN EN 549 B1/H3 certified



SAE FLANGE SEALS

Profile	Design	Material	Hardness [Shore A]	Max. Pressure [MPa (bar)]	Temperature [°C]	Special Feature
	FLAN89	TPU	95	40 (400)	-30 to +100	


FORMED PARTS

Formed parts (design FOR) are customer-specific sealing elements. They can be manufactured based on a reference sample, a drawing or a special layout. In this way, they can be adjusted to the precise installation conditions. Elastomers and thermoplastics are available in a variety of grades.



ASSORTMENT BOXES

These boxes are equipped with various selections of seals, providing the required dimension for every repair needed on-site.

Box	Design	Material	Hardness [Shore A]	Color
	BOX OR	NBR	70 90	black
	BOX OR	FKM	80	black
	BOX OR	EPDM	70	black
	BOX OR	VMQ	70	red
	BOX RS	NBR	70	black
	BOX RS	FKM	75	black
	BOX XR	NBR	70	black
	BOX XR	FKM	70	black

# ROTATING SEALS

The values indicated here are maximum values. These peak values should not be implemented simultaneously.

## RADIAL SHAFT SEALS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	WA	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WA	FKM	80	brown	34	0,05 (0,5)	-25 to +150
	WAS	NBR	70	black	8	0,05 (0,5)	-40 to +80 (briefly +100)
	WAS	FKM	80	brown	8	0,05 (0,5)	-25 to +150
	WAK	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WAK	FKM	80	brown	34	0,05 (0,5)	-25 to +150
	WAG	NBR	70	black	8	0,05 (0,5)	-40 to +80 (briefly +100)
	WAG	FKM	80	brown	8	0,05 (0,5)	-25 to +150
	WAY	NBR	80	blue	10	1 (10)	-40 to +80 (briefly +100)
	WAY	FKM	80	brown	10	1 (10)	-25 to +150
	WASY	NBR	80	blue	8	1 (10)	-40 to +80 (briefly +100)
	WASY	FKM	80	brown	8	1 (10)	-25 to +150
	WAD	NBR	70	black	6	0,03 (0,3)	-40 to +80 (briefly +100)
	WAO	NBR	70	black	6	0 (0)	-40 to +80 (briefly +100)

Profile	Design	Material	Hardness [Shore A]	Color	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	WAO	FKM	80	brown	8	0 (0)	-25 to +150
	WAOK	NBR	70	green	6	0 (0)	-40 to +80 (briefly +100)
	WAOK	FKM	80	brown	8	0 (0)	-25 to +150
	WB	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WBS	NBR	70	black	8	0,05 (0,5)	-40 to +80 (briefly +100)
	WBD	NBR	70	black	6	0,03 (0,3)	-40 to +80 (briefly +100)
	WBO	NBR	70	black	6	0 (0)	-40 to +80 (briefly +100)
	WBO	FKM	80	brown	8	0 (0)	-25 to +150
	WC	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WC	FKM	80	brown	34	0,05 (0,5)	-25 to +150
	WCS	NBR	70	black	8	0,05 (0,5)	-40 to +80 (briefly +100)
	WCL	NBR	70	black	10	0,05 (0,5) optional 1 (10)	-40 to +80 (briefly +100)
	WCL	FKM	75	black	15	0,05 (0,5) optional 1 (10)	-25 to +150
	WCP	PTFE		grey	25	1 (10)	-90 to +250

RADIAL SHAFT SEALS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	WE5	NBR	80	black	20	0,05 (0,5)	-30 to +80 (briefly +100)
	WE5	HNBR	80	black	25	0,05 (0,5)	-30 to +130
	WE5	FKM	80	black	25	0,05 (0,5)	-20 to +180
	WE6	NBR	80	black	20	0,05 (0,5)	-30 to +80 (briefly +100)
	WE6	FKM	80	black	25	0,05 (0,5)	-20 to +180
	WE7	NBR	80	black	20	0,05 (0,5)	-30 to +80 (briefly +100)
	WE7	FKM	80	black	25	0,05 (0,5)	-20 to +180
	WEPO	PTFE		black	15	1 (10)	depending on the selected OR material
	WAX	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)

AXIAL SEALS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Speed [m/s]	Temperature [°C]
	VRM01	NBR	70	black	12	-40 to +80 (briefly +100)
	VRM01	FKM	70	brown	12	-30 to +180
	VRM02	NBR	70	black	12	-40 to +80 (briefly +100)
	VRM02	FKM	70	brown	12	-30 to +180

V-RINGS




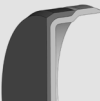


Profile	Design	Material	Hardness [Shore A]	Color	Temperature [°C]	Special Feature
	VA	NBR	60	black	-40 to +100	ozone-resistant
	VA	FKM	60 70	brown	-20 to +200	
	VS	NBR	60	black	-40 to +100	ozone-resistant
	VS	FKM	60	brown	-20 to +200	
	VL	NBR	60	black	-40 to +100	ozone-resistant
	VL	FKM	60	brown	-20 to +200	
	VE	NBR	60	black	-40 to +100	ozone-resistant
	VE	FKM	60 70	brown	-20 to +200	

Circumferential speed [m/s]

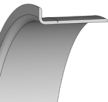
NBR: ≤ 8; axially secured starting at ≥ 8; radially secured starting at ≥12  
FKM: ≤ 6.5; axially secured starting at ≥ 6.5; radially secured starting at ≥10



END CAPS

Profile	Design	Material	Hardness [Shore A]	Color	Max. Pressure [MPa (bar)]	Temperature [°C]
	VER01	NBR	70	black	0,05 (0,5)	-30 to +100
	VER01	FKM	80	brown	0,05 (0,5)	-20 to +200
	VER02	NBR	70	black	0,05 (0,5)	-30 to +100
	VER02	FKM	80	brown	0,05 (0,5)	-20 to +200
	VER03	NBR	70	black	0,05 (0,5)	-30 to +100
	VER03	FKM	80	brown	0,05 (0,5)	-20 to +200







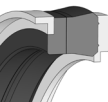




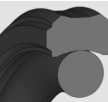

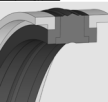
SHAFT SLEEVES

Profile	Design	Material
	WSH	Rust and acid resistant steel 1.4301 (AISI 304)

HYDRAULIC SEALS

The values indicated here are maximum values. These peak values should not be implemented simultaneously.



PISTON SEALS

Profile	Design	Material	Hardness [Shore A]	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	N21	NBR	90	0,5	16 (160)	-30 to +100
	N25	TPU	95	0,5	30 (300)	-30 to +100
	N36	TPU	95	0,5	40 (400)	-30 to +100
	N05	NBR	80	0,5	20 (200)	-30 to +100
	KNA23	NBR	90	0,5	16 (160)	-30 to +100
	KNA28	TPU	95	0,5	40 (400)	-30 to +100
	KNA16	NBR	80	0,5	50 (500)	-30 to +100
	KNA44	PTFE carbon + graphite		15	35 (350)	-150 to +250
	KPOR04	PTFE-bronze with NBR O-ring*		2	16 (160)	-30 to +100
	KPOR30	PTFE-bronze with NBR O-ring*		15	40 (400)	-30 to +100
	KPOR31	PTFE-bronze with NBR O-ring*		15	40 (400)	-30 to +100
	K70	TPU	95	0,5	25 (250)	-30 to +100
	K84	TPU	98	0,5	40 (400)	-30 to +100
	KK03	NBR	80	0,5	40 (400)	-30 to +100

\* other O-ring compounds available upon request













PISTON SEALS



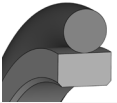

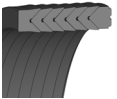
Profile	Design	Material	Hardness [Shore A]	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	KK22	NBR F *	90	0,5	40 (400)	-30 to +100
	KDS01	NBR F *	90	0,5	40 (400)	-30 to +100

	KDS01	FKM F *	75	0,5	40 (400)	-15 to +150
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\* F: fabric (fabric-reinforced material)

ROD SEALS



Profile	Design	Material	Hardness [Shore A]	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	N21	NBR	90	0,5	16 (160)	-30 to +100
	N25	TPU	95	0,5	30 (300)	-30 to +100
	N36	TPU	95	0,5	40 (400)	-30 to +100
	N05	NBR	80	0,5	20 (200)	-30 to +100
	SNI24	NBR	90	0,5	16 (160)	-30 to +100
	SNI30	TPU	95	0,5	40 (400)	-30 to +100
	SNI35	TPU	95	0,5	40 (400)	-30 to +100
	SNI39	TPU	95	0,5	40 (400)	-30 to +100
	SNI07	NBR	80	0,5	40 (400)	-30 to +100
	S72	TPU	95	0,5	40 (400)	-30 to +100

Profile	Design	Material	Hardness [Shore A]	Max. Speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	SNI43	PTFE carbon + graphite		15	35 (350)	-150 to +250
	SPOR06	PTFE-bronze with NBR O-ring**		2	16 (160)	-30 to +100
	SPOR30	PTFE-bronze with NBR O-ring**		15	40 (400)	-30 to +100
	SPOR31	PTFE-bronze with NBR O-ring**		15	40 (400)	-30 to +100
	SDS01 3/2	NBR F*/NBR	90	0,5	40 (400)	-30 to +100

\* F: fabric (fabric-reinforced material)

\*\*other O-ring compounds available upon request





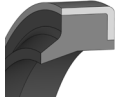
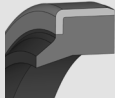








ROTARY/SWIVEL SEALS

Profile	Design	Material	Circumferential speed [m/s]	Max. Pressure [MPa (bar)]	Temperature [°C]
	RPORI32	PTFE carbon + graphite with NBR O-ring*	≤ 2	30 (300)	-30 to +100
	RPORA32	PTFE carbon + graphite with NBR O-ring*	≤ 2	30 (300)	-30 to +100

\*other O-ring compounds available upon request





WIPERS

Profile	Design	Material	Hardness [Shore A]	Max. Speed [m/s]	Temperature [°C]
	AE40	NBR	90	1	-30 to +100
	AE42	TPU	90	2	-30 to +100
	AE41	NBR	90	1	-30 to +100
	AE47	TPU	90	2	-30 to +100
	AM43	NBR	90	1	-30 to +100
	AM44	TPU	95	2	-30 to +100
	AM45	NBR	90	1	-30 to +100
	AM54	TPU	95	1	-30 to +100
	AE80	PTFE-bronze with NBR O-ring*		15	-30 to +100
	AD60	PTFE-bronze with NBR O-ring*		15	-30 to +100
	AD61	PTFE-bronze with NBR O-ring*		15	-30 to +100
	AD48	TPU	95	1	-30 to +100
	AD51	NBR	90	1	-30 to +100
	ADM55	TPU	95	1	-30 to +100

\* other O-ring compounds available upon request

GUIDE ELEMENTS

Profile	Design	Material	Sliding Speed [m/s]	Contact Pressure [N/mm2]	Temperature [°C]	Delivered Form	Surface
	GS01	PTFE, bronze-filled	≤ 15	dynamic: ≤ 15	-60 to +200	Roll	structured
	GS10	PTFE, bronze-filled	≤ 15	dynamic: ≤ 15	-60 to +200	Roll	smooth
	FRK01	PTFE, bronze-filled	≤ 15	dynamic: ≤ 15	-60 to +200	Strip, 30° diagonal cut	structured
	FRS01	PTFE, bronze-filled	≤ 15	dynamic: ≤ 15	-60 to +200	Strip, 30° diagonal cut	structured
	GS05	Hard fabric with PTFE	≤ 1	dynamic: ≤ 100	-50 to +120	Roll	smooth
	FRK05	Hard fabric with PTFE	≤ 1	dynamic: ≤ 100	-50 to +120	Ring, 45° diagonal cut	smooth
	FRS05	Hard fabric with PTFE	≤ 1	dynamic: ≤ 100	-50 to +120	Ring, 45° diagonal cut	smooth





# INSTALLATION AND DISMANTLING TOOLS

Installation tools facilitate easy assembly and disassembly of seals and are available on the EASY online ordering platform.



**Set of dismantling tools for O-rings and U-rings. Robust 8-part set with protective case.**

**Application areas:**  
The dismantling tools are suited for use with nearly any dimension.



**Set of installation tools for U-rings. 5-part set, incl. case and a holding block which locks the pliers in position.**

**Application areas:**  
The installation pliers can be used for U-rings with a diameter of up to 165 mm.

**Installation pliers S:** 22–30 mm  
**Installation pliers M:** 30–50 mm  
**Installation pliers L:** 50–70 mm  
**Installation pliers XL:** 70–165 mm



**Calibration pliers for PTFE seals**

**Application areas:**  
Calibration pliers can be used on PTFE seals within the range of 50 – 360 mm.



**Dismantling tool for radial shaft seals, U-rings and end caps**

**Application areas:**  
These dismantling tools are suited for use with nearly any dimension.



**PTFE cutter for PTFE guide band**

**Application areas:** The cutting pliers cut the PTFE guide band at a 45° angle. The cleanly cut edges require no additional surface refinement. The maximum width of the PTFE guide band is 25 mm.

**Replacement blades for PTFE cutter (10 units)**

# CERTIFIED MATERIALS

LAST UPDATED: APRIL 2023

GAS DEVICES AND SYSTEMS IN DOMESTIC INSTALLATIONS OR IN HOME APPLIANCES

Certified	Certifying authority	Temperature range	Compound
DIN EN 549	DVGW	B1/H3 (0 to +80 °C)	NB 90 18 03
DIN EN 549	DVGW	B1/H3 (0 to +80 °C)	NB 70 28 22
DIN EN 549	DVGW	B2/H3 (-20 to +80 °C)	NB 70 28 07
DIN EN 549	DVGW	B2/H3 (-20 to +80 °C)	NB 70 27 17
DIN EN 549	DVGW	C2/H3 (-20 to +100 °C)	HN 70 27 04
DIN EN 549	DVGW	C2/H3 (-20 to +100 °C)	HN 70 18 10
DIN EN 549	DVGW	D2/H3 (-20 to +125 °C)	HN 70 78 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 27 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 18 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 18 04

GAS SUPPLY LINES AND GAS PIPELINES

Certified	Certifying authority	Temperature range	Compound
DIN EN 682	DVGW	GBL (-15 to +50 °C)	NB 70 27 32

DRINKING WATER

Certified	Certifying authority	Temperature range	Compound
DVGW type examination	DVGW	WA/WB	EP 70 39 01
ACS	eurofins		EP 70 39 01
BS6920	WRAS	up to +85 °C	EP 70 39 01

WATER SUPPLY AND DRAINAGE

Certified	Certifying authority	Temperature range	Compound
DVGW type examination	DVGW	WA/WB	EP 70 39 01

FOOD CONTACT AND PHARMACEUTICAL INDUSTRY

Conformity	Certifying authority	Specification	Compound
FDA 21 CFR	CERISIE	§ 177.2600	EP 70 27 03
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 70 27 14
FDA 21 CFR	SGS Fresenius	§ 177.2600	EP 70 39 01
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 60 41 01
FDA 21 CFR	SGS Fresenius	§ 177.2600	FP 75 94 12
LFGB (EG 1935/2004)	SGS Fresenius	BRF-Recommendation XV	SI 70 27 14
LFGB (EG 1935/2004)	SGS Fresenius	BRF-Recommendation XV	SI 60 41 01
CIP-/SIP-resistant	ECOLAB		EP 70 39 01
USP Class VI, 121 °C	BSL	Chapter 88 (in vivo)	EP 70 39 01
USP 32	BSL	Chapter 87 (in vitro)	EP 70 39 01
CIP-/SIP-resistant	ECOLAB		FP 75 94 12

Elastomer	Hardness [Shore A]	Color
NBR	90	black
NBR	70	black
NBR	70	black
NBR	70	black
HNBR	70	black
HNBR	70	black
HNBR	70	yellow
FKM	80	black
FKM	80	black
FKM	80	green

Elastomer	Hardness [Shore A]	Color
NBR	70	black

Elastomer	Hardness [Shore A]	Color
EPDM perox.	70	black
EPDM perox.	70	black
EPDM perox.	70	black

Elastomer	Hardness [Shore A]	Color
EPDM perox.	70	black

Elastomer	Hardness [Shore A]	Color
EPDM perox.	70	black
VMQ	70	red
EPDM perox.	70	black
VMQ	60	red
FKM perox.	75	black
VMQ	70	red
VMQ	60	red
EPDM perox.	70	black
EPDM perox.	70	black
EPDM perox.	70	black
FKM perox.	75	black

# INDUSTRY PROVEN



## COMPREHENSIVE PRODUCT PORT- FOLIO FOR SEALING APPLICATIONS

Freudenberg Sealing Technologies has a broad, customer-oriented product portfolio of premium Freudenberg brand products for all applications – from customized individual solutions to complete sealing packages.

In addition, Dichtomatik brand products are ideal for several moderately demanding applications in general industry. The wide range of products is characterized by a very good price-performance ratio. Manufactured by certified external suppliers, the sealing products and solutions reliably meet

common industrial market quality standards. Additional services such as general technical support round off the range.

Freudenberg Sealing Technologies serves the entire sealing market with this complementary product portfolio and thus meets all market requirements – quickly, reliably and from a single source.

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