

# **Seal Maker**

*The system for flexible seal production*



***Profile Range - Seals***

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**Seal Maker**

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**Wipers**

**Rod Seals**

**Piston Seals**

**Symmetrical Seals**

**Back Up Rings**

**Bushings & Wear Rings**

















**Rotary Seals**

**Static Seals & O-Rings**

**Customer Specific Seals**

**Mining Seals**

### Wipers

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	WR01	PU NBR	-	-30 to 105 -25 to 100	4
	WR01A	PU NBR	-	-30 to 105 -25 to 100	4
	WR02	PU NBR	-	-30 to 105 -25 to 100	4
	WR02A	PU NBR	-	-30 to 105 -25 to 100	4
	WR02B	PU NBR	-	-30 to 105 -25 to 100	4
	WR02C	PU NBR	-	-30 to 105 -25 to 100	4
	WR03	PU/POM NBR/POM	-	-30 to 100 -25 to 100	4
	WR04	PU NBR	-	-30 to 100 -25 to 100	4
	WR11	PU NBR	-	-30 to 105 -25 to 100	4
	WR12	PU NBR	-	-30 to 105 -25 to 100	4
	WR13	PTFE-F/NBR	-	-25 to 100	10
	WR13_E2	PTFE-F/NBR	-	-25 to 100	10
	WR14	PTFE-F/NBR	-	-25 to 100	10
	WR15	PU NBR	-	-30 to 100 -25 to 100	5
	WR17	PU NBR	-	-30 to 100 -25 to 100	4
	WR18	PU NBR	-	-30 to 100 -25 to 100	4

The seal geometries contained in the **profile catalogue** are **standard-profiles**.

Due to our special production technology we also supply **rapid, tailor-made sealing solutions for special applications**.















All seals **up to 1000 mm outside diameter** are available at short notice.

All profiles can additionally be modified to your special operating conditions.

Should you need further information **please contact our application engineers**.

**NOTE:** The indicated operation parameters represent **maximum values** of individual material combinations. These **limiting values should not coincide**.

### Rod Seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	RS01	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	RS01A	PU NBR FPM	25	-30 to 105 -25 to 100 -20 to 210	1
	RS01B	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	RS02	PU/POM NBR/POM FPM/PTFE-F	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	RS02A	PU/POM NBR/POM FPM/PTFE-F	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	RS03	PU/NBR	400	-25 to 100	0,5
	RS04	PU/NBR/POM	700	-25 to 100	0,5
	RS05	NBR	25	-25 to 100	1
	RS08	PU NBR	400 160	-30 to 105 -25 to 100	0,3
	RS09	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	RS09A	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	RS09B	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	RS91	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	RS16	NBR	160	-25 to 100	0,5

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### Rod seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	RS17	PU	400	-30 to 105	0,5
	RS17A	PU/POM	700	-30 to 100	0,5
	RS17B	PU/NBR	400	-25 to 100	0,5
	RS17C	PU/NBR/POM	700	-25 to 100	0,5
	RS17D	PU NBR	400 160	-30 to 105 -25 to 100	0,3
	RS19	PTFE-F / 1.4310	160	-200 to 260	15
	RS20	NBR/POM	700	-25 to 100	0,5

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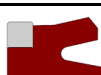




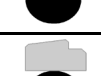
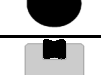


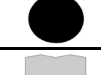


All seals **up to 1000 mm outside diameter** are available at short notice.

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### Piston Seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	PS01	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	PS01A	PU NBR FPM	25	-30 to 105 -25 to 100 -20 to 210	1
	PS01B	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	PS02	PU/POM NBR/POM FPM/PTFE-F	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	PS02A	PU/POM NBR/POM FPM/PTFE-F	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	PS03	PU/NBR	400	-25 to 100	0,5
	PS04	PU/NBR/POM	700	-25 to 100	0,5
	PS05	NBR	25	-25 to 100	1
	PS08	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 15
	PS08B	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	PS08C	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 2
	PS08D	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 3
	PS08E	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	PS08F	PU/NBR	250	-25 to 100	1
	PS81	PU/NBR PTFE-F/NBR	250 400	-25 to 100	1 10
	PS09	PU/NBR/POM	400	-25 to 100	0,5

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### Piston Seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	PS16	NBR	160	-25 to 100	0,5
	PS17	PU/POM NBR/POM	-400 -250	-25 to 100	0,5
	PS19	PTFE-F / V-Spring	160	-200 to 260	15
	PS20	NBR/POM	700	-25 to 100	0,5
	PS23	PU/NBR/POM	400	-25 to 100	0,5
	PS35	PU	400	-30 to 105	0,4

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





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### Symmetrical Seals (Piston-/Rod Seals)

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	PRS06	PU NBR	400 160	-30 to 105 -25 to 100	0,5
	PRS06A	PU NBR	400 160	-30 to 105 -25 to 100	0,5
	PRS06B	PU NBR	400 160	-30 to 105 -25 to 100	0,5
	PRS06C	PU NBR	400 160	-30 to 105 -25 to 100	0,3
	PRS07	PU/NBR	400	-25 to 100	0,5
	PRS10SP	PU FPM POM	-	-30 to 105 -20 to 210 -60 to 100	-
	PRS18	PU/NBR	400	-25 to 100	0,5
	PRS19B	PTFE/Helicoil Spring	160	-60 to 200	15
	PRS22	PU/POM NBR/POM FPM/PTFE-F	400 160 160	-30 to 100 -25 to 100 -20 to 210	0,5
	PRS99	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	PRS10-12	PU/POM NBR/POM	500 250	-30 to 100 -25 to 100	0,5

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### Back Up Rings

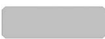







Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	BUR08	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR09	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR10	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR11	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR12	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR13	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-

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### Bushings & Wear Rings


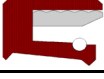












Profil	Type	Standardwerkstoff	Druck (bar)	Temperatur (°C)	Gleitgeschw. (m/sec)
	BWR01	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR02	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR03	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR04	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR05	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR06	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR07	POM PTFE-F	-	-60 bis 100 -200 bis 260	4
	BWR08	POM PTFE-F	-	-60 bis 100 -200 bis 260	4

All profiles can additionally be modified to your special operating conditions.

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### Rotary Seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	OS01	PU/POM	0,5	-30 to 100	5
		NBR/POM	0,5	-25 to 100	10
		FPM/PTFE-F	0,5	-20 to 210	15
	OS02	PU/POM	0,5	-30 to 100	5
		NBR/POM	0,5	-25 to 100	10
		FPM/PTFE-F	0,5	-20 to 210	15
	OS08	NBR	-	-25 to 100	10
	R03	PU NBR/POM	400	-30 to 100	0,2
			250	-25 to 100	0,2
	R04	PU NBR	160	-30 to 105	0,2
			100	-25 to 100	0,2
	R05	PU NBR	160	-30 to 105	0,2
			100	-25 to 100	0,2
	R06	NBR	-	-25 to 100	25
	R07	NBR	-	-25 to 100	25
	R08	PTFE-F/NBR	350	-25 to 100	0,4
	R09	PTFE-F/NBR	350	-25 to 100	0,4
	R10	PTFE-F/NBR	350	-25 to 100	0,4
	R11	PTFE-F/NBR	350	-25 to 100	0,4
	RS19A	PTFE-F / 1.4310	150	-200 to 260	2
	PS19A	PTFE-F / V-Spring	150	-200 to 260	2

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### Static Seals & O-Rings

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	FL01A	PU	400	-30 to 100	-
		FPM	250	-20 to 210	
		EPDM	250	-50 to 130	
	FL02B	PU	400	-30 to 100	-
		FPM	250	-20 to 210	
		EPDM	250	-50 to 130	













Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	OR	PU	600	-30 to 105	-
		NBR	160	-25 to 100	
		FPM	160	-20 to 210	
	ORH	PU	600	-30 to 105	-
		NBR	160	-25 to 100	
		FPM	160	-20 to 210	
	ORV	PU	600	-30 to 105	-
		NBR	160	-25 to 100	
		FPM	160	-20 to 210	

O - Ringe sind in sämtlichen Standard und Sonderwerkstoffen kurzfristig verfügbar.

	QR01	PU	600	-30 to 105	-
		NBR	160	-25 to 100	
		FPM	160	-20 to 210	

	SS01	PU	600	-30 to 105	-
		NBR	160	-25 to 100	
		FPM	160	-20 to 210	

### Customer Specific Seals and machined parts

Profile					
					
					

In addition to the above listed standardized profiles we also deliver special profiles and machined parts according to a customer design, as well as profile geometries individually designed by us for your special requirements.

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### Mining Seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	P50	PU/POM	400	-30 to 100	0,1
	P51	PU/NBR/POM	400	-25 to 100	0,5
	P51G	PU/NBR/POM	400	-25 to 100	0,5
	P52	PU/POM	700	-30 to 100	0,5
	P53	PU/NBR/POM	700	-25 to 100	0,5
	P54	PU/NBR/POM	400	-25 to 100	0,5
	R50	PU/NBR/POM	700	-25 to 100	0,5
	R51	PU/NBR	400	-25 to 100	0,5
	R52	PU/POM	700	-30 to 100	0,5
	R53	PU	400	-30 to 100	0,5
	W50	PU	-	-30 to 105	2
	W51	PU	-	-30 to 100	2
	W53	PU/POM	-	-30 to 100	2
	W54	PU	-	-30 to 105	2
	BWR01-P BWR01-R	POM PTFE	-	-60 to 100 -200 to 260	4
	P58	PU	400	-30 to 100	0,3

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## Material Specification

Description	Application temp	Hardn. at 20°C	Main application
PU red U203-R95	-30 to +105°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water resistant against hydrolysis
PU green U203-G95	-30 to +105°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water resistant against hydrolysis
PU FDA light blue U203-B95	-30 to +105°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water resistant against hydrolysis
PU FDA natural U203-95FDA	-30 to +100°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements contact with food resistant against hydrolysis
PU MoS <sub>2</sub> grey U203-GM95	-30 to +105°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water for heavy duty applications, resistant against hydrolysis
PU 54 Shore D dark blue U203-D54	-30 to +90°C	Shore D 54 +/-2	Back-up rings or composite seals with preload element Mineral oil, Compressed air, Water resistant against hydrolysis
PU 54 Shore D + MoS <sub>2</sub> grey U203-GM95	-30 to +90°C	Shore D 54+MoS <sub>2</sub> 85 +/-2	Back-up rings or composite seals with preload element Mineral oil, Compressed air, Water resistant against hydrolysis
NBR black N107-B85	-25 to +100°C	Shore A 85 +/- 5	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water
NBR 95 black 10N109-B95	-25 to +100°C	Shore A 95 +/-5	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water
NBR FDA white N111-W85	-22 to +100°C	Shore A 85 +/- 3	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water
H-NBR black HN112-B85	-25 to +150°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Mineral oil, Compressed air, Water
FPM brown F109-BR85	-20 to +210°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements high temperatures and aggressive media
FPM FDA brown F110-BR85	-20 to +210°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements high temperatures and aggressive media
FPM black F111-B85	-25 to +210°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements high temperatures and aggressive media
EPDM black E131-B85	-50 to +130°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements hot water and steam, diluted acids and alkaline solutions. EPDM is <b>NOT</b> resistant against mineral oil
EPDM FDA white E132-W85	-50 to +100°C	Shore A 85 +/-3	U-rings, wiper rings and other seal elements hot water and steam, diluted acids and alkaline solutions. EPDM is <b>NOT</b> resistant against mineral oil

## Material specifications

Description		Application temp.	Hardn. at 20°C	Main application
Silicone FDA red S102-R85		-55 to +210°C	Shore A 85 +/-5	Flange seals, gaskets and other static seals For dynamic applications not recommended
Silicone FDA blue S103-BL85		-55 to +180°C	Shore A 85 +/- 3	Flange seals, gaskets and other static seals For dynamic applications not recommended
AFLAS black AF101-B85		-15 to +180°C	Shore A 85+/- 5	U-rings, wiper rings and other seal elements Sour oil and gas, amines, steam/hot water high electrical insulation properties
POM FDA white P101-WE		-60 to +100°C	-	Back-up and guide rings, machined parts
PA FDA natural A112-WC		-30 to +105°C	-	Back-up and guide rings, machined parts
PTFE-F grey T105-G		-200 to +260°C	Shore D 55 - 64	Composite seals with elastomer preload elements Spring loaded seals, Back-up and Guide elements Glass fibre / MoS <sub>2</sub> reinforced
PTFE-P FDA white T101-W		-200 to +260°C	Shore D 51 - 60	Composite seals with elastomer preload elements, spring loaded seals Back-up and guide rings, low friction for food industry, excellent chemical resistance
PTFE-40% Bronze brown T110-BR40		-200 to +260°C	Shore D 62 - 67	Composite seals with elastomer preload elements, spring loaded seals Back-up and guide rings, low friction,
PTFE-40% Bronze blue T115-BR40		-200 to +260°C	Shore D 62 - 67	Composite seals with elastomer preload elements, spring loaded seals Back-up and guide rings, low friction
PTFE-60% Bronze brown T120-BR60		-200 to +260°C	Shore D 65 - 70	Composite seals with elastomer preload elements, spring loaded seals Back-up and guide rings, low friction
PTFE-25% Carbon grey T125-C25		-200 to +260°C	Shore D 62 - 67	Composite seals with elastomer preload elements, spring loaded seals Back-up and guide rings, low friction

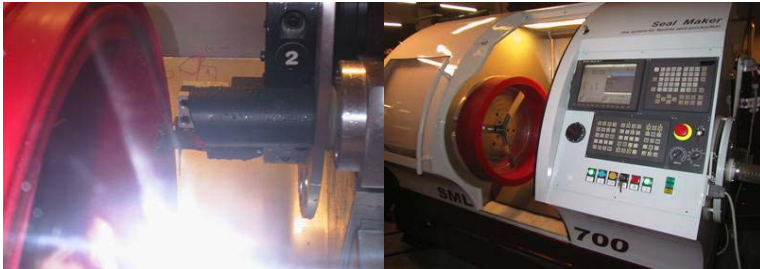
Further more we supply parts from various PTFE Compounds, as well as PEEK, various Polyamide and -imides, PETP, etc..

Please take further information from our material data sheets and/or ask our application engineers.

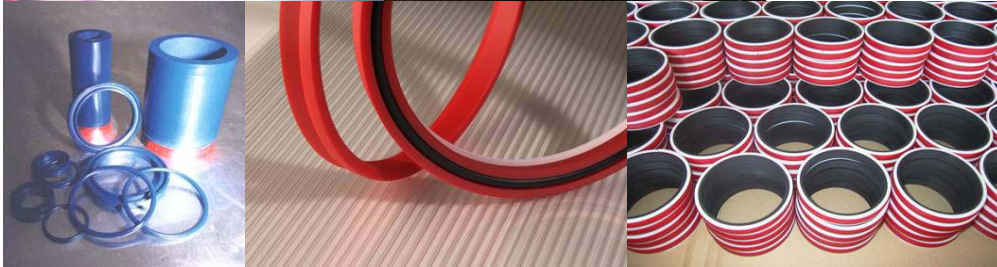
The indicated minimum temperatures are considered as general guidelines. The proper function at low temperature is depending on the type of seal, the operating conditions and the adjacent metal parts. The indicated maximum temperatures can be exceeded, however this may reduce the service life of seal.

# Seal Maker

*The system for flexible seal production*



Newest machines, most modern technology, outstanding raw materials and many years of experience form the base for our high quality products.



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The data in this catalogue are based on many years of experience in the production and use of sealing elements. Despite this experience, unknown factors from the application might restrict the general statements given herein.

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