Seal Maker®

The system for flexible seal production

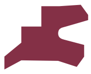
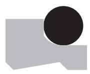
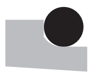
Profile Range

Seal Maker®

The system for flexible seal production

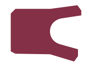
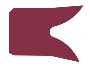
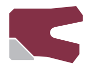
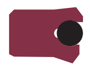
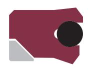
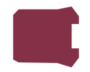
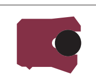
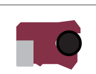
Content

Wipers

Profil	Type	Standard-werkstoff	Druck (bar)	Temperatur (°C)	Gleitgeschw. (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
	WR02D	PU PU-D57	-	-30 to 105	4
	WR03	PU/POM * NBR/POM *	-	-30 to105 -25 to100	4
	WR04	PU NBR	-	-30 to 105 -25 to 100	4
	WR07	POM PA PU-D57	-	-60 to 100 -60 to 100 -30 to 105	1
	WR08	POM PA PU-D57	-	-60 to 100 -60 to 100 -30 to 105	1
	WR11	PU NBR	-	-30 to 105 -25 to 100	4
	WR12	PU NBR	-	-30 to 105 -25 to 100	4
	WR13	PTFE/NBR	-	-25 to 100	10
	WR13_E2	PTFE/NBR	-	-25 to100	10
	WR14	PTFE/NBR	-	-25 to 100	10
	WR15	PTFE/NBR	-	-25 to100	10
	WR17	PU NBR	-	-30 to 105 -25 to 100	4
	WR18	PU NBR	-	-30 to 105 -25 to 100	4

* For technical reasons POM should be used up to a maximum temperature of 80° C only. For higher temperature we recommend Aluminum/Steel.

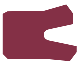
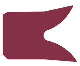
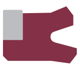
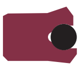
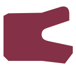
Rod seals

Profil	Type	Standard-werkstoff	Druck (bar)	Temperatur (°C)	Gleitgeschw. (m/sec)
	RS01	PU NBR FPM	400 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	RS01A	PU NBR FPM	160 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	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	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	RS02A	PU/POM NBR/POM FPM/PTFE	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	RS02B	PU/PTFE	700	-30 to 105	0,5
	RS03	PU/NBR	400	-25 to 100	0,5
	RS04	PU/NBR/POM	700	-25 to 100	0,5
	RS05	PU NBR	25	-30 to 105 -25 to 100	1
	RS08	PU NBR	400 160	-30 to 105 -25 to 100	0,3
	RS09	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	RS09A	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	RS09B	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	RS91	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	RS91B	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	RS16	NBR	160	-25 to 100	0,5
	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

Rod seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	RS17D	PU NBR	400 160	-30 to 105 -25 to 100	0,3
	RS17E	PU/POM	700	-30 to 100	0,3
	RS19	PTFE / V-spring	160	-200 to 260	15
	RS20	NBR/POM	700	-25 to 100	0,5
	RS31-33	PU/POM	500	-30 to 100	0,5
	RS35	PU	400	-30 to 105	0,4

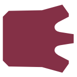
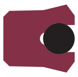
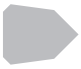
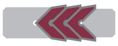
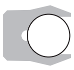
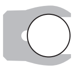
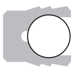
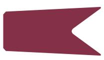
Piston seals

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	160 160 160	-30 to 105 -25 to 100 -20 to 210	0,5
	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	700 250 250	-30 to 100 -25 to 100 -20 to 210	0,5
	PS02A	PU/POM NBR/POM FPM/PTFE	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	PU NBR	25	-30 to 105 -25 to 100	1
	PS08	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 15
	PS08A	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 15
	PS08B	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10

Piston seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	PS08C	PTFE/NBR	400	-25 to 100	2
	PS08D	PTFE/NBR	400	-25 to 100	3
	PS08E	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	PS08F	PU-D57/NBR	250	-25 to 100	1
	PS81	PU-D57/NBR PTFE/NBR	250 400	-25 to 100	1 10
	PS09	PU/NBR/POM	400	-25 to 100	0,5
	PS09A	PTFE/NBR/POM	400	-25 to 100	1
	PS16	NBR	160	-25 to 100	0,5
	PS16A	NBR	160	-25 to 100	0,5
	PS17	PU/POM NBR/POM	400 250	-25 to 100	0,5
	PS17A	PU/POM NBR/POM	400 250	-25 to 100	0,5
	PS17B	PU/POM NBR/POM	400 250	-25 to 100	0,5
	PS19	PTFE/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

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	160 160	-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	0,5
	PRS06D	PU NBR	160 160	-30 to 105 -25 to 100	0,5
	PRS06E	PU NBR	400 160	-30 to 105 -25 to 100	0,5
	PRS07	PU/NBR	400	-25 to 100	0,5
	PRS10SP	PU FPM POM	-	-30 to 105 -20 to 210 -60 to 100	-
	PRS10-12	PU/POM NBR/POM	500 250	-30 to 100 -25 to 100	0,5
	PRS13-15	PU/POM NBR/POM	500 250	-30 to 100 -25 to 100	0,5
	PRS18	PU/NBR	400	-25 to 100	0,5
	PRS19B	PTFE/Helicoil Spring	160	-60 to 200	15
	PRS19C	PTFE/Helicoil Spring	160	-60 to 200	15
	PRS19D	PTFE/Helicoil Spring	160	-60 to 200	15
	PRS22	PU/POM NBR/POM FPM/PTFE	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

Back-up rings

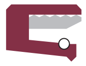
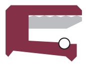
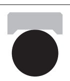
Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	BUR08	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR09	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR10	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to 260	-
	BUR11	PU POM PTFE	-	-30 to 105 -60 to 100 -200 to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

Guide rings

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	BWR01	POM PTFE Polyester-fabric*	-	-60 to 100 -200 to 260 -40 to 130	4
	BWR01A	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR03	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR04	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR05	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR06	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR07	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR08	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR09	-	-	-	-

*Various dimensions available in reels.

Rotary seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	OS01	PU/POM* NBR/POM* FPM/PTFE	0,5 0,5 0,5	-30 to 100 -25 to 100 -20 to 210	5 10 25
	OS02	PU/POM* NBR/POM* FPM/PTFE	0,5 0,5 0,5	-30 to 100 -25 to 100 -20 to 210	5 10 25
	OS08	PU NBR	-	-30 to 105 -25 to 100	5 10
	R03	PU/POM NBR/POM	400 250	-30 to 100 -25 to 100	0,2 0,2
	R04	PU NBR	160 100	-30 to 105 -25 to 100	0,2 0,2
	R04A	PU NBR	160 100	-30 to 105 -25 to 100	0,2 0,2
	R05	PU NBR	160 100	-30 to 105 -25 to 100	0,2 0,2
	R05A	PU NBR	160 100	-30 to 105 -25 to 100	0,2 0,2
	VR06	NBR	-	-25 to 100	25
	VR07	NBR	-	-25 to 100	25
	R08	PTFE/NBR	350	-25 to 100	0,4
	R08D	PTFE/NBR	350	-25 to 100	0,4
	R09	PTFE/NBR	350	-25 to 100	0,4
	R09A	PTFE/NBR	350	-25 to 100	0,4
	R10	PTFE/NBR	350	-25 to 100	0,4
	R10A	PTFE/NBR	350	-25 to 100	0,4
	R11	PTFE/NBR	350	-25 to 100	0,4
	RS19A	PTFE/V-spring	150	-200 to 260	2
	PS19A	PTFE/V-spring	150	-200 to 260	2

* For technical reasons POM should be used up to a maximum temperature of 80° C only. For higher temperature we recommend Aluminum/Steel.

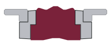
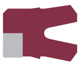
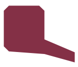
Static seals and O-rings

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	FL01A	PU FPM EPDM	400 250 250	-30 to 105 -20 to 210 -50 to 130	-
	FL02B	PU FPM EPDM	400 250 250	-30 to 105 -20 to 210 -50 to 130	-
	FL03	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-
	OR	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-
	ORH	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-
	ORV	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-
	QR01	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-
	SS01	PU NBR FPM	600 160 160	-30 to 105 -25 to 100 -20 to 210	-

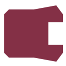
Customized seals and machined parts

Profile					
					
					

Mining seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	P50	PU/POM	400 dyn. 1500 stat.**	-30 to 100	0,5/0,2
	P50A	PU/POM	400 dyn. 1500 stat.**	-30 to 100	0,5/0,2
	P51	PU/NBR/POM	400 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P51A	PU/NBR/POM	400 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P51G	PU/NBR/POM	400 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P52	PU/POM	700 dyn. 1500 stat.**	-30 to 100	0,5/0,2
	P53	PU/NBR/POM	700 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P54	PU/NBR/POM	400 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P54A	PU/NBR/POM	400 dyn. 1500 stat.**	-25 to 100	0,5/0,2
	P55	PU/POM NBR/POM	700 dyn./1500 stat.** 400 dyn./1500 stat.**	-25 to 100	0,5/0,2
	R50	PU/NBR/POM	700	-25 to 100	0,5
	R50A	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 105	2

Mining seals

Profile	Type	Standard material	Pressure (bar)	Temp. (°C)	Surface speed (m/sec)
	W53	PU/POM*	-	-30 to 100	2
	W54	PU	-	-30 to 105	2
	BWR01-P	POM PTFE	-	-60 to 100 -200 to 260	4
	BWR01-R	POM PTFE	-	-60 to 100 -200 to 260	4
	P58	PU	400	-30 to 100	0,3

* For technical reasons POM should be used up to a maximum temperature of 80° C only. For higher temperature we recommend Aluminum/Steel.
** The maximum pressure allowance for dynamic and static application is dependent on the profile design.

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The seal geometries as shown in the profile tables are standard profiles.

All profiles can also get adapted to specific working conditions.

In addition to our standard profiles we can now also supply special profiles and engineered plastic products according to customer drawings or specific demands.

All seals up to an outside diameter of 1.850 mm are available very rapidly.

Table of materials

	Description	Col.	Application temp.	Hardn. at 20°C	Main application
POLYURETHANE	PU red U500-R95		-30 to +125°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oils, compressed air, water, resistant against hydrolysis, improved chemical and thermal resistance
	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_2 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 LT dark blue U203-B95-LT		-50 to +105°C	Shore A 95 +/-2	U-rings, wiper rings and other seal elements Mineral oils, compressed air, water, resistant against hydrolysis, for low temperature applications and fluids
	PU 57 Shore D dark blue U203-D57		-30 to +90°C	Shore D 57 +/-2	Back-up rings or composite seals with preload element Mineral oil, compressed air, water Resistant against hydrolysis
	PU 57 Shore D + MoS_2 grey U203-D57G		-30 to +90°C	Shore D 57 +/-2	Back-up rings or composite seals with preload element Mineral oil, compressed air, water Resistant against hydrolysis
NBR	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	H-NBR black HN112-B85		-25 to +150°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Mineral oils and compressed air at high temperature, water
	H-NBR RGD black HN900-B85-RGD		-20 to +150°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Mineral oils, compressed air, water, RGD (ED) optimized for use in Oil & Gas Industry
	H-NBR RGD LT black HN901-B85-RGD		-35 to +150°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Mineral oils, compressed air, water, RGD (ED) optimized for low temperature use in Oil & Gas Industry
FPM	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
	FPM-RGD black F800-B85-RGD		-30 to +200°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Mineral oils, compressed air, water, RGD (ED) optimized for high temperature use in Oil & Gas Industry

	Description	Col.	Application temp.	Hardn. at 20°C	Main application
EPDM	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 NOT resistant against mineral oil
EPDM	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 NOT resistant against mineral oil
EPDM	EPDM KTW black E133-W270		-40 to +120°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Hot water and steam, diluted acids and alkaline solutions. EPDM is NOT resistant against mineral oil
SILICONE	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	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	AFLAS black AF101-B85		-15 to +210°C	Shore A 85 +/-5	U-rings, wiper rings and other seal elements Sour oil and gas, amines, steam/hot water, brake fluids High electrical insulation properties
PTFE	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_2 reinforced
PTFE	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 restistance
PTFE	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 For food industry, excellent chemical restistance
PTFE	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 For food industry, excellent chemical restistance
PTFE	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 For food industry, excellent chemical restistance
PTFE	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 For food industry, excellent chemical restistance
PLAST	POM FDA white P101-WE		-60 to +100°C	-	Back-up and guide rings, machined parts
PLAST	PA FDA natural A112-WC		-30 to +105°C	-	Back-up and guide rings, machined parts
PLAST	PEEK natural beige PK100-CN		-50 to +250°C	Shore D 90	Composite seals with elastomer preload elements, Spring loaded seals, Back-up and guide rings, low friction, high precision parts.
PLAST	UHMW - PE white PE1000-HD		-200 to +80°C	Shore D 60 - 65	Back-up and guide rings, spring loaded seals for food industry, very low water absorption

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The indicated minimum application temperatures are thought as a general guideline, because a seal's function at low temperatures is dependent on the kind of the seal, the general application conditions, and on the kind of the surrounding metal parts the seal is in touch with. The indicated upper temperature limits may be exceeded, but this reduces the service life. Other materials available on request.

In case of doubt you are always welcome to contact our application engineers.

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