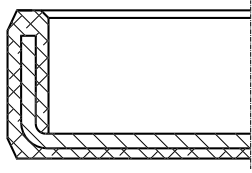


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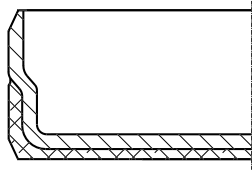
Cover seals



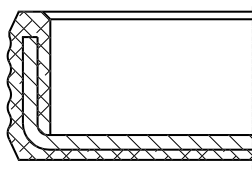
Cover seals



VER 01



VER 02



VER 03

Types

VER 01

Cover seal with a smooth elastomer outer coating and a metal partly-coated stiffening ring.

VER 02

Cover seal, semi-shoulder design with a smooth partly rubber-coated outer surface.

VER 03

Cover seal with a grooved elastomer outer coating and a partly-coated metal stiffening ring.

Standard materials

NBR 70 black

FPM 80 brown

Stiffening ring: unalloyed steel in accordance with DIN EN 10139

Areas of application

Cover seals serve the secure sealing of openings for shaft or axle apertures. They are often used in transmissions and for bearing blocks.

Special models

Any special model required can be manufactured according to the customer's specifications or developed by our engineering department according to the customer's requirements and made ready for production.

Function

VER 01

The smooth elastomer outer coating provides good static sealing. Secure sealing especially in silt and light-metal housings as well as for thin fluid or gaseous media.

VER 02

The semi-shoulder design combines the advantages of an elastomer and metal outer coating, the secure static sealing and firm seating and exact fit in the bore. Due to the influence of the metal outer surface, good centring is ensured during installation.

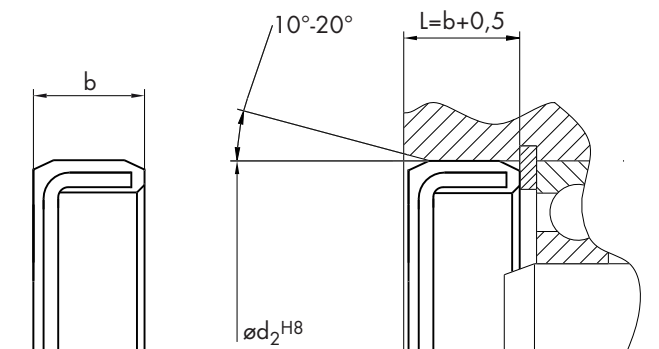
VER 03

The grooved elastomer outer coating enables easier installation because less press-in force is required. Through grooving permanent skew of the cover seal is avoided. Provides good applicability in housings with high thermal expansion, as the grooved, rubber-encased outer surface is made with a higher press-fit allowance.

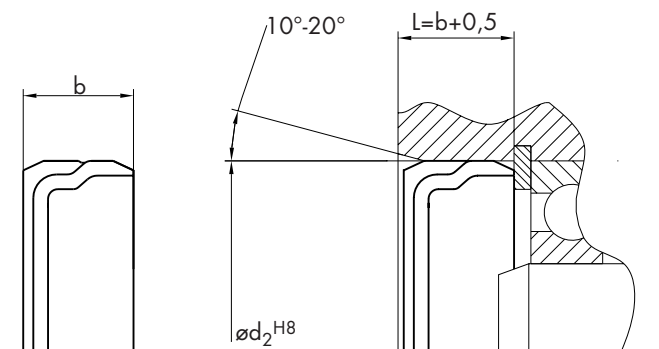
Media

NBR: Good chemical resistance to many mineral oils and lubricants. Medium ageing resistance.

FPM: Mineral oils and lubricants, synthetic oils and lubricants, engine, transmission, ATF oils and fuels. Wide chemical and solvents resistance as well as very good ageing/ozone resistance.



VER 01



VER 02

Construction notes

The construction design of the bore-hole should be in accordance with the guidelines for rotary shaft seals contained in DIN 3760. For the bore diameter d_2 the ISO tolerance field H8 in accordance with DIN ISO 286 is to be allowed.

Operational application limits

Pressure (MPa/bar): 0,05/0,5

With higher pressures the cover seal should be secured by e.g. a circlip.

NBR: Temperature -30°C to $+100^{\circ}\text{C}$

FPM: Temperature -20°C to $+200^{\circ}\text{C}$

Installation

It is important to ensure correct installation. It is preferable to use a hydraulic or mechanical press device to press the sealing cap into the housing bore-hole. This grips the sealing cap on a broad area of its outer side so that the pressure is applied as closely as possible to the outside diameter. Please note that the press device should be held at its highest setting for a while. This will reduce the recoil or slanted positioning of the sealing cap to a minimum.

Storage

Generally speaking, elastomers are suitable for storage. They remain almost unchanged in their properties for years, provided that certain minimum requirements regarding storage conditions are observed. These are described in DIN 7716 and ISO 2230.

The seals must be stored stress-free, i.e. without tension, pressure or other forms of deformation.

The seals should be protected from excessive ventilation, especially draughts. Storage in packaging, e.g. polythene bags or airtight containers, is recommended.

The storage location should be cool, dry, dust-free and moderately ventilated. A constant storage temperature is optimal. It should be no lower than -10°C and no higher than $+20^{\circ}\text{C}$.

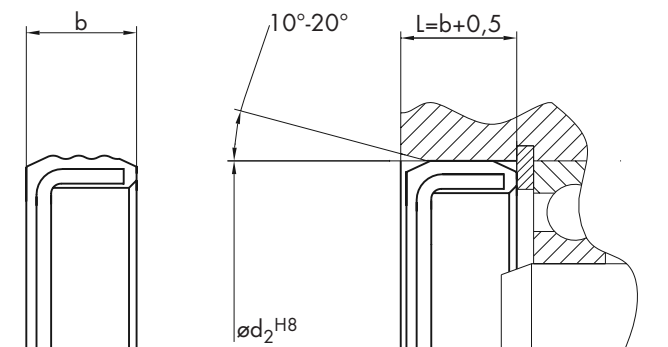
Heaters in storage rooms should be screened and placed at a distance of at least 1 m from the stored goods.

Relative humidity should not exceed 65%. Strong light, especially UV rays and direct sunlight should be avoided.

Electrical devices that produce ozone should not be placed in storage rooms for elastomers.

Remarks

The nominal widths mentioned on the following pages represent the standard dimensions.



VER

**Sizes
metric**

Part No.	Type	Com- pound	Dim. øD	b	Part No.	Type	Com- pound	Dim. øD	b
108672	VER01	FP	13	4,5	108711	VER01	FP	62	12
110224	VER01	FP	14	3	108712	VER01	FP	68	8
108673	VER01	FP	16	4	108713	VER01	FP	68	8,5
108674	VER01	FP	19	3,2	108714	VER01	FP	72	9
108675	VER01	FP	19	7	108715	VER01	FP	72	10
108676	VER01	FP	19	7,5	108716	VER01	FP	75	7
108677	VER01	FP	20	4	156418	VER01	FP	75	8
108678	VER01	FP	21	4	108717	VER01	FP	75	12
108679	VER01	FP	22	4	108718	VER01	FP	80	7
108680	VER01	FP	22	7	108719	VER01	FP	80	10
108681	VER01	FP	25	15	108720	VER01	FP	80	12
108682	VER01	FP	26	4	108720	VER01	FP	80	12
108683	VER01	FP	26	6,5	108721	VER01	FP	85	12
108684	VER01	FP	28	4	108722	VER01	FP	90	8
108685	VER01	FP	28	7	108723	VER01	FP	90	10
156412	VER01	FP	30	7	108724	VER01	FP	90	12
108686	VER01	FP	30	8	108725	VER01	FP	100	10
110226	VER01	FP	32	5	108726	VER01	FP	100	12
108687	VER01	FP	32	7	110237	VER01	FP	106	15
108688	VER01	FP	32	9,5	108727	VER01	FP	110	10
110227	VER01	FP	35	4,5	108728	VER01	FP	110	12
108689	VER01	FP	35	7	108729	VER01	FP	120	12
108690	VER01	FP	35	8	110238	VER01	FP	120	13
108691	VER01	FP	35	13	108730	VER01	FP	125	12
108692	VER01	FP	37	5	108731	VER01	FP	130	12
156413	VER01	FP	37	7	110239	VER01	FP	130	13
108693	VER01	FP	37	10	108732	VER01	FP	140	15
110228	VER01	FP	39	4,5	110240	VER01	FP	145	12
110229	VER01	FP	39	5	110241	VER01	FP	150	13
110230	VER01	FP	40	4,5	108733	VER01	FP	150	15
72778	VER01	FP	40	7	108734	VER01	FP	160	15
110231	VER01	FP	42	6	108735	VER01	FP	168	12
108694	VER01	FP	42	7	108736	VER01	FP	170	15
108695	VER01	FP	42	9,5	108737	VER01	FP	180	12
110232	VER01	FP	45	7	108738	VER01	FP	200	13
115032	VER01	FP	47	4	110242	VER01	FP	210	15
108696	VER01	FP	47	6,5	108739	VER01	FP	230	14
108697	VER01	FP	47	7	160708	VER02	FP	62	8
108698	VER01	FP	47	10	122326	VER03	FP	55	10
108699	VER01	FP	48	4	160702	VER03	FP	60	7
108700	VER01	FP	48	5	70484	VER01	NB	13	4,5
108701	VER01	FP	48	6,6	43522	VER01	NB	14	3
110233	VER01	FP	50	5	70485	VER01	NB	16	4
110234	VER01	FP	50	10	117809	VER01	NB	18	3
108702	VER01	FP	52	6,5	70486	VER01	NB	19	3,2
108703	VER01	FP	52	7	133021	VER01	NB	19	5,5
108704	VER01	FP	52	10	70487	VER01	NB	19	7
108705	VER01	FP	55	9	70488	VER01	NB	19	7,5
108706	VER01	FP	55	10	70489	VER01	NB	20	4
108707	VER01	FP	60	7	117810	VER01	NB	21	3
110235	VER01	FP	60	8	70490	VER01	NB	21	4
110236	VER01	FP	60	10	70491	VER01	NB	22	4
108708	VER01	FP	62	7	120753	VER01	NB	22	5
108709	VER01	FP	62	8	153012	VER01	NB	22	6
108710	VER01	FP	62	10	58906	VER01	NB	22	7

VER**Sizes
metric**

Part No.	Type	Com- pound	Dim. øD	b	Part No.	Type	Com- pound	Dim. øD	b
66367	VER01	NB	24	5	74778	VER01	NB	60	10
117509	VER01	NB	24	7	70505	VER01	NB	62	7
162149	VER01	NB	25	5	37673	VER01	NB	62	8
118153	VER01	NB	25	7	70506	VER01	NB	62	10
70492	VER01	NB	25	15	70507	VER01	NB	62	12
55893	VER01	NB	26	4	148893	VER01	NB	63,7	7,8
58907	VER01	NB	26	6,5	125009	VER01	NB	65	10
130618	VER01	NB	26	7	58913	VER01	NB	68	8
70493	VER01	NB	28	4	70508	VER01	NB	68	8,5
128142	VER01	NB	28	5	134067	VER01	NB	70	9
56946	VER01	NB	28	7	116810	VER01	NB	72	7
66369	VER01	NB	30	5	24175	VER01	NB	72	9
124820	VER01	NB	30	6	70509	VER01	NB	72	10
43363	VER01	NB	30	7	58914	VER01	NB	75	7
58908	VER01	NB	30	8	34909	VER01	NB	75	12
82949	VER01	NB	32	5	81534	VER01	NB	76,2	10
70494	VER01	NB	32	7	69451	VER01	NB	80	7
56185	VER01	NB	32	9,5	70510	VER01	NB	80	10
84187	VER01	NB	35	4,5	24383	VER01	NB	80	12
130619	VER01	NB	35	5	130621	VER01	NB	85	10
70495	VER01	NB	35	7	58915	VER01	NB	85	12
24249	VER01	NB	35	8	58916	VER01	NB	90	8
128122	VER01	NB	35	10	70511	VER01	NB	90	10
70496	VER01	NB	35	13	25954	VER01	NB	90	12
70497	VER01	NB	37	5	134116	VER01	NB	92	10
130620	VER01	NB	37	7	159472	VER01	NB	95	10
58909	VER01	NB	37	10	70512	VER01	NB	100	10
48454	VER01	NB	39	4	58917	VER01	NB	100	12
82267	VER01	NB	39	5	43536	VER01	NB	106	15
84188	VER01	NB	40	4,5	70513	VER01	NB	110	10
34908	VER01	NB	40	7	58918	VER01	NB	110	12
156495	VER01	NB	40	10	118776	VER01	NB	115	12
87131	VER01	NB	42	6	58919	VER01	NB	120	12
70498	VER01	NB	42	7	43538	VER01	NB	120	13
58910	VER01	NB	42	9,5	58920	VER01	NB	125	12
134066	VER01	NB	45	5	144544	VER01	NB	128,6	12
84133	VER01	NB	45	7	58921	VER01	NB	130	12
43535	VER01	NB	47	4	43564	VER01	NB	130	13
58911	VER01	NB	47	6,5	130623	VER01	NB	140	12
70499	VER01	NB	47	7	58922	VER01	NB	140	15
156189	VER01	NB	47	8	84936	VER01	NB	145	12
24173	VER01	NB	47	10	5052	VER01	NB	150	13
70500	VER01	NB	48	4	58923	VER01	NB	150	15
70501	VER01	NB	48	5	130624	VER01	NB	160	12
70502	VER01	NB	48	6,6	58924	VER01	NB	160	15
82268	VER01	NB	50	5	58925	VER01	NB	168	12
130622	VER01	NB	50	9	130625	VER01	NB	170	12
90042	VER01	NB	50	10	58926	VER01	NB	170	15
58912	VER01	NB	52	6,5	58927	VER01	NB	180	12
70503	VER01	NB	52	7	117539	VER01	NB	190	12
24174	VER01	NB	52	10	58928	VER01	NB	200	13
70504	VER01	NB	55	9	21320	VER01	NB	210	15
36520	VER01	NB	55	10	117540	VER01	NB	215	15
68992	VER01	NB	60	7	134423	VER01	NB	220	15
81544	VER01	NB	60	8	58929	VER01	NB	230	14

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