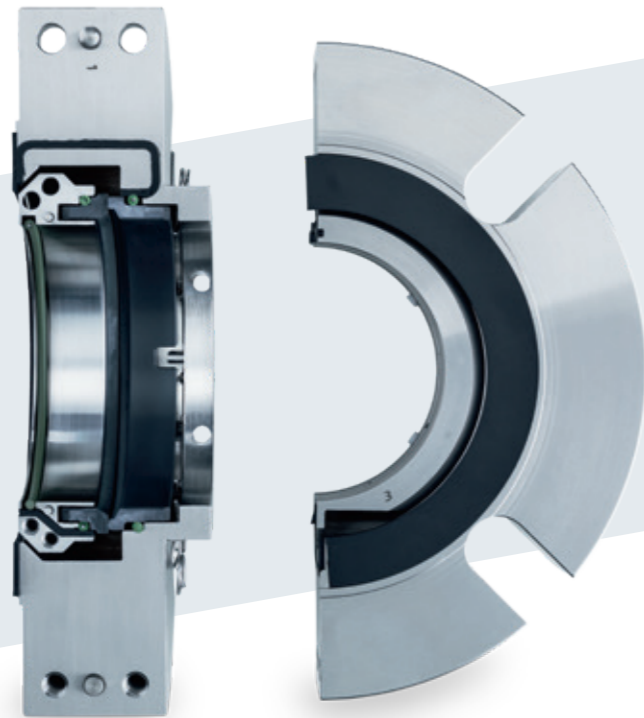




# Split mechanical seals

## Split mechanical seal Type 390



With the split mechanical seal type 390 DEPAC provides proof once again of its corporate and product philosophy, which is oriented to customer benefit. The emphasis is on perfect technology, high reliability and the lowest possible procurement and operating costs. Units with split mechanical seals are leakage-free, but despite that they don't need to be dismantled in order to replace the seal or its spare parts. Production losses and expensive, complex maintenance work are avoided. This applies in particular to large and complicated units. The extra cost of a reliably operating split mechanical seal bears no comparison to the possible mounting costs of a non-split mechanical seal.

### Advantages

- Stationary design principle
- No dismantling of the units necessary
- Easy installation, simple conversion from packings to mechanical seal
- High operational reliability, reliable in use even with media containing solids
- Short design
- Pressure balanced
- Independent of the direction of rotation
- Multi-springs made of Hastelloy C, springs outside the medium

## Split mechanical seal Type 390

### Technical specifications

#### Area of application\*

Pressure:	up to 12 bar
Temperature:	depending on elastomer
Sliding speed:	up to 15 m/s
Shaft movements:	axial $\leq \varnothing 140 \pm 1,0 \text{ mm} \mid \geq \varnothing 145 \pm 2,0 \text{ mm}$ radial $\leq \varnothing 140 \pm 0,5 \text{ mm} \mid \geq \varnothing 145 \pm 1,0 \text{ mm}$

\* The maximum specifications for temperature, pressure and sliding speed apply in each case to independent higher operating conditions. However, this does not mean that the seal will function with all extreme conditions at the same time. If in doubt contact DEPAC.

#### Dimensions

Shaft diameter:	50 – 140 mm 2" – 7 3/4" Special sizes on request
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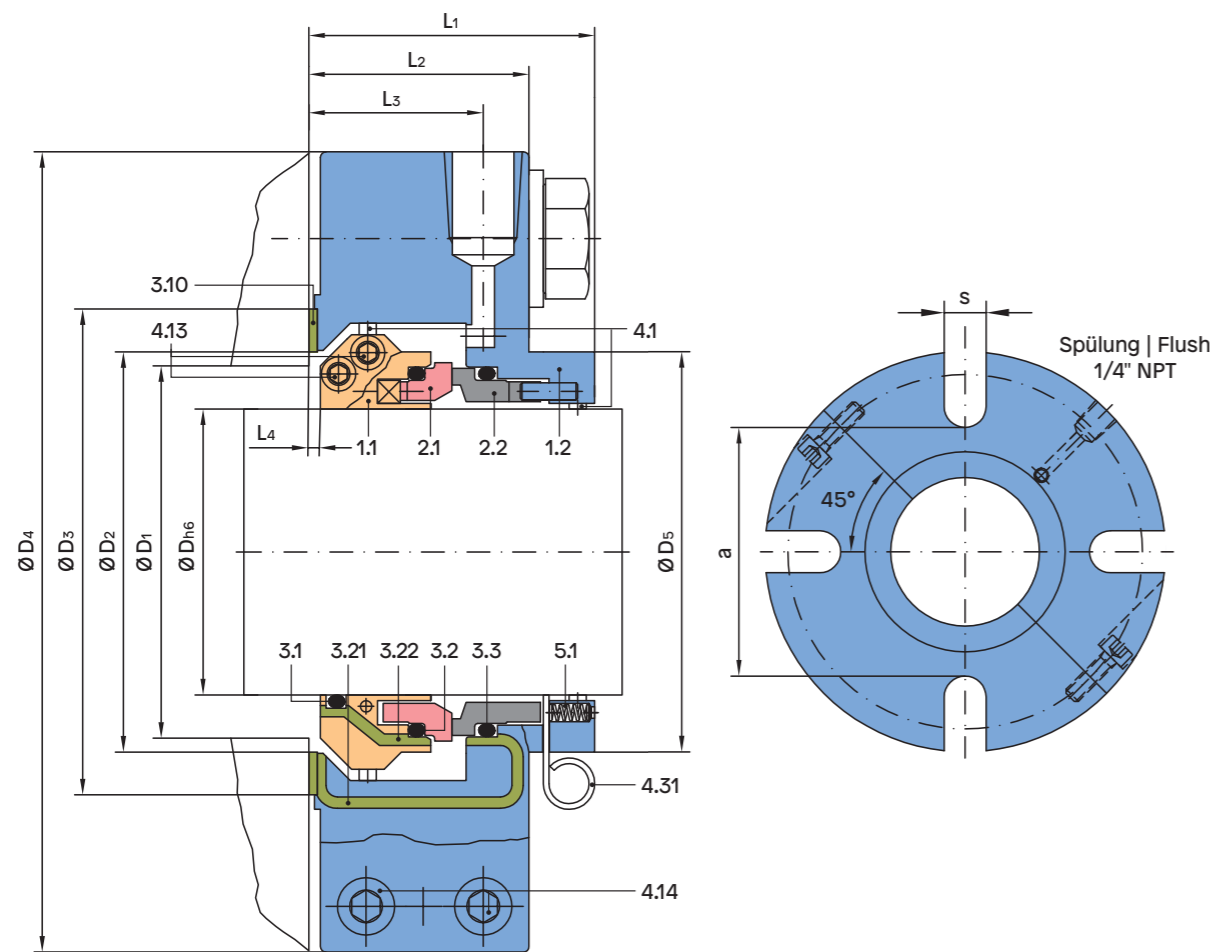
#### Bill of materials

Item	Description	Material
1.1	Dynamic retainer	1.4571
1.2	Gland	1.4571
2.1	Dynamic seal face	SC/SSIC
2.2	Stationary seal face	CA/SC/SSIC
3.1, 3.2, 3.3	O-ring	FKM, EPDM
3.10	Flat gasket	FKM, EPDM
3.21, 3.22	Edge seal	FKM, EPDM
4.1	Centering pin	PTFE
4.13, 4.14	Socket screw	A2
4.31, 4.32	Mounting cotter pin	A2
5.1	Spring	2.4610

Other materials on request!



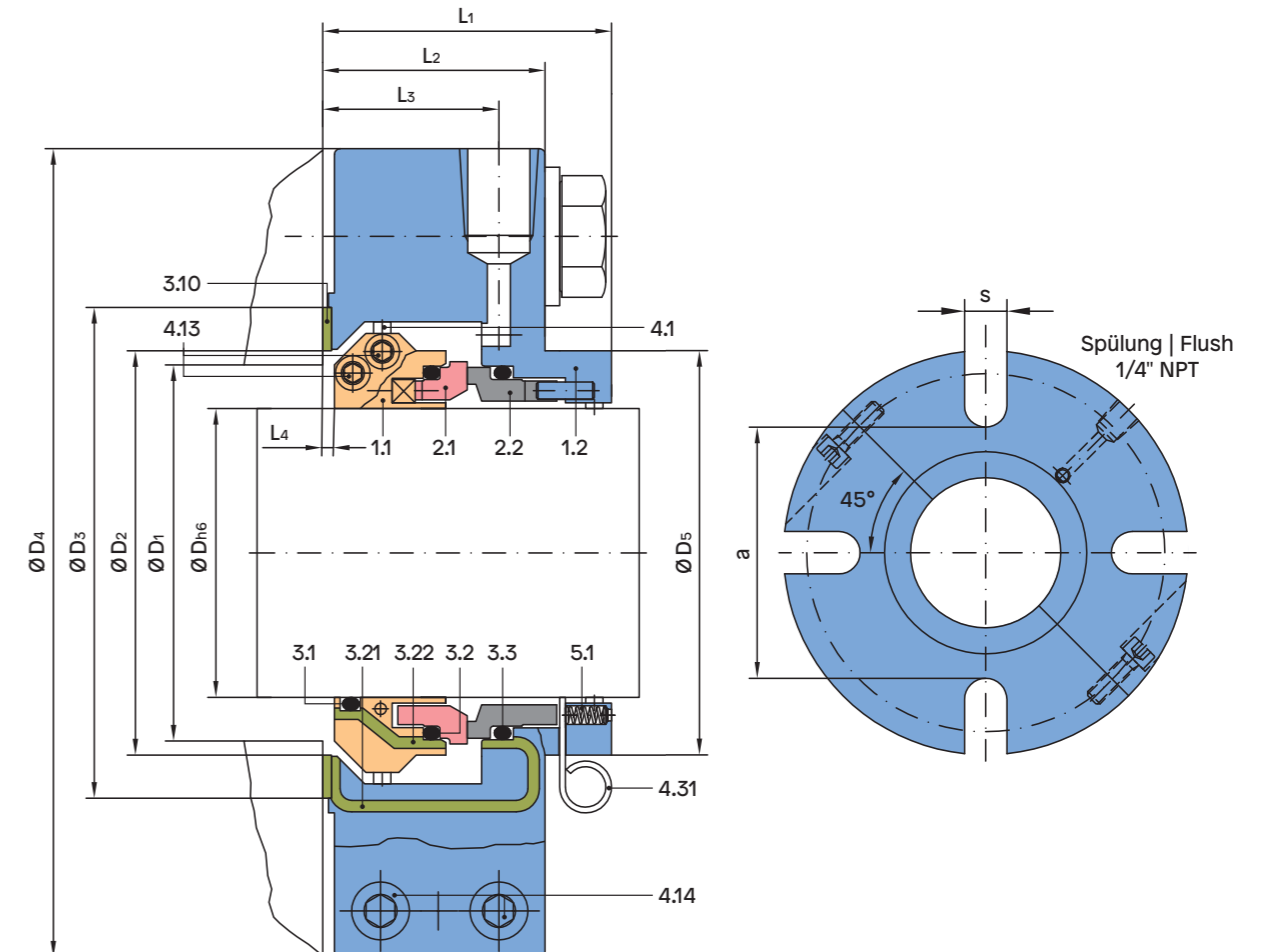
# Split mechanical seal Type 390



Dimension table Ø 50 – 95 mm

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	O-rings DASH no.						3.1	3.2	3.3
							L1	L2	L3	L4	a	s			
50	54	62	70	85	140	70	50	38,5	30,5	2	87	14,7	136	141	141
55	59	67	75	90	150	75	50	38,5	30,5	2	92	17,5	139	145	145
60	64	72	80	98	160	80	50	38,5	30,5	2	100	17,5	142	148	148
65	69	77	85	103	165	85	50	38,5	30,5	2	105	17,5	145	150	150
70	74	82	90	118	180	90	50	38,5	30,5	2	120	17,5	148	151	151
75	79	94	102	123	190	99	57,5	46	37,5	2	125	17,5	234	237	237
80	84	99	107	128	190	104	57,5	46	37,5	2	130	17,5	235	239	239
85	89	104	112	133	220	109	57,5	46	37,5	2	135	21,5	237	241	241
90	94	109	117	138	220	114	57,5	46	37,5	2	140	21,5	238	242	242
95	99	114	122	143	220	119	57,5	46	37,5	2	145	21,5	240	244	244

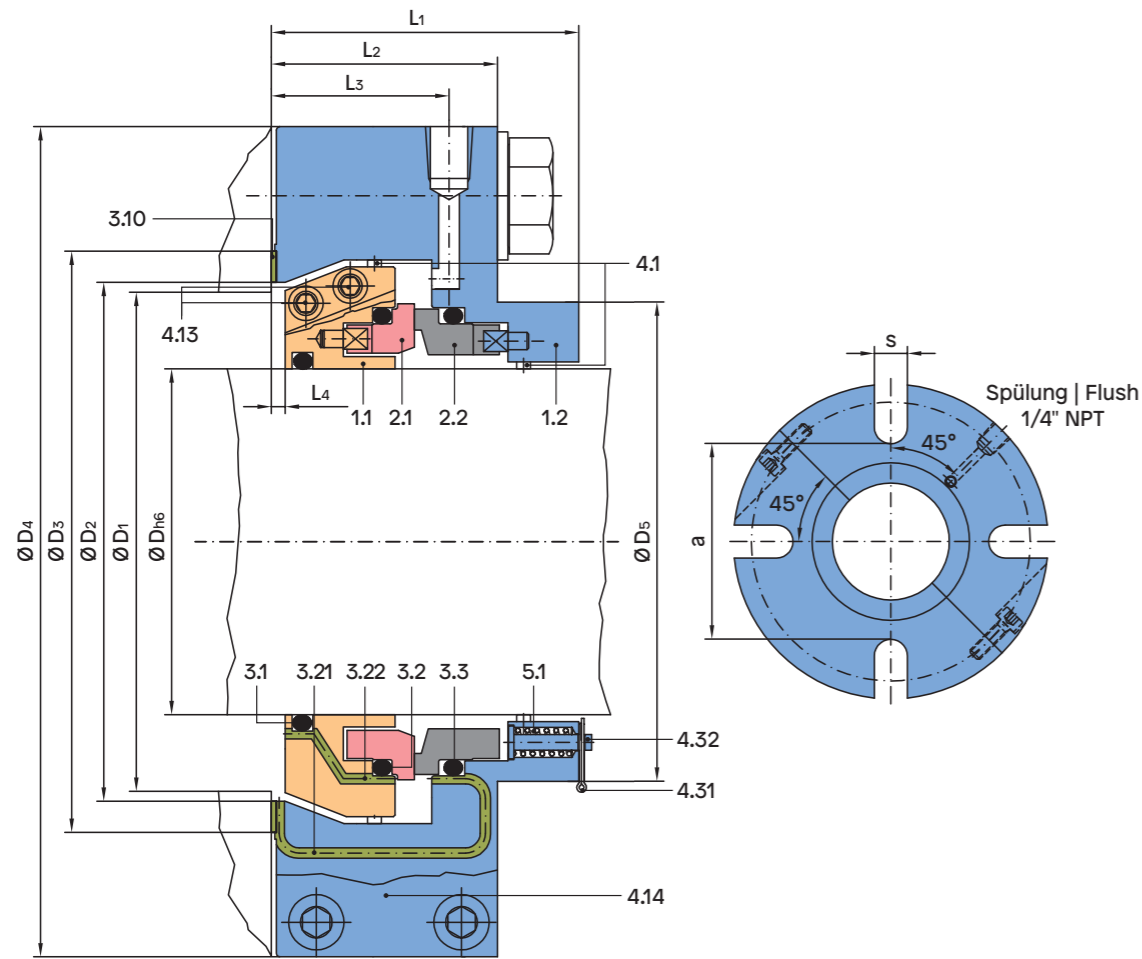
# Split mechanical seal Type 390



Dimension table Ø 100 – 140 mm

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	O-rings DASH no.						3.1	3.2	3.3
							L1	L2	L3	L4	a	s			
100	104	119	127	148	220	124	57,5	46	37,5	2	150	21,5	241	245	245
105	109	124	132	153	240	129	57,5	46	37,5	2	155	21,5	243	247	247
110	114	129	137	158	240	134	57,5	46	37,5	2	160	21,5	245	248	248
115	119	134	142	163	240	139	57,5	46	37,5	2	165	21,5	246	250	250
120	124	139	147	168	240	144	57,5	46	37,5	2	170	21,5	248	252	252
125	129	144	152	173	260	149	57,5	46	37,5	2	175	21,5	249	253	253
130	134	149	157	178	260	154	57,5	46	37,5	2	180	21,5	251	255	255
135	139	154	162	183	260	159	57,5	46	37,5	2	185	21,5	252	256	256
140	144	159	167	188	260	164	57,5	46	37,5	2	190	21,5	254	258	258

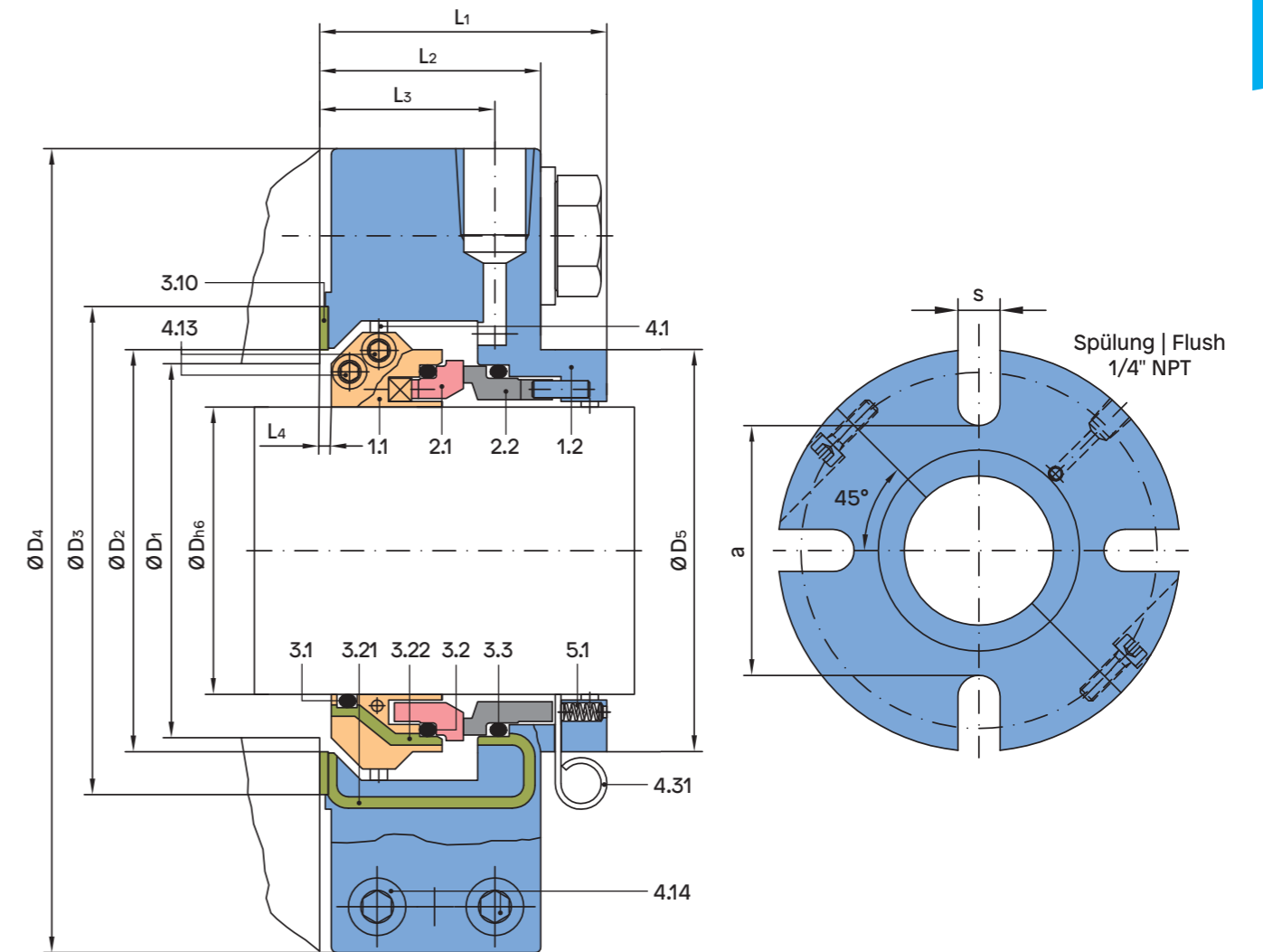
# Split mechanical seal Type 390



Dimension table Ø 145 – 200 mm

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	L1	L2	L3	L4	a	s	O-rings DASH no.		
													3.1	3.2	3.3
145	153	205	195	213	285	183,5	93	65,5	51,5	4	217	21,5	359	364	364
150	158	210	200	218	290	188,5	93	65,5	51,5	4	222	21,5	360	364	364
155	163	215	205	223	295	193,5	93	65,5	51,5	4	227	21,5	361	365	365
160	168	220	210	228	300	198,5	93	65,5	51,5	4	232	21,5	362	366	366
165	173	225	215	233	305	203,5	93	65,5	51,5	4	237	21,5	363	367	367
170	178	230	220	238	310	208,5	93	65,5	51,5	4	242	21,5	364	367	367
175	183	235	225	243	315	213,5	93	65,5	51,5	4	247	21,5	364	368	368
180	188	240	230	248	320	218,5	93	65,5	51,5	4	252	21,5	365	369	369
185	193	245	235	253	325	223,5	93	65,5	51,5	4	257	21,5	366	370	370
190	198	250	240	258	330	228,5	93	65,5	51,5	4	262	21,5	367	371	371
195	203	255	245	263	335	233,5	93	65,5	51,5	4	267	21,5	367	371	371
200	208	260	250	268	340	238,5	93	65,5	51,5	4	272	21,5	368	372	372

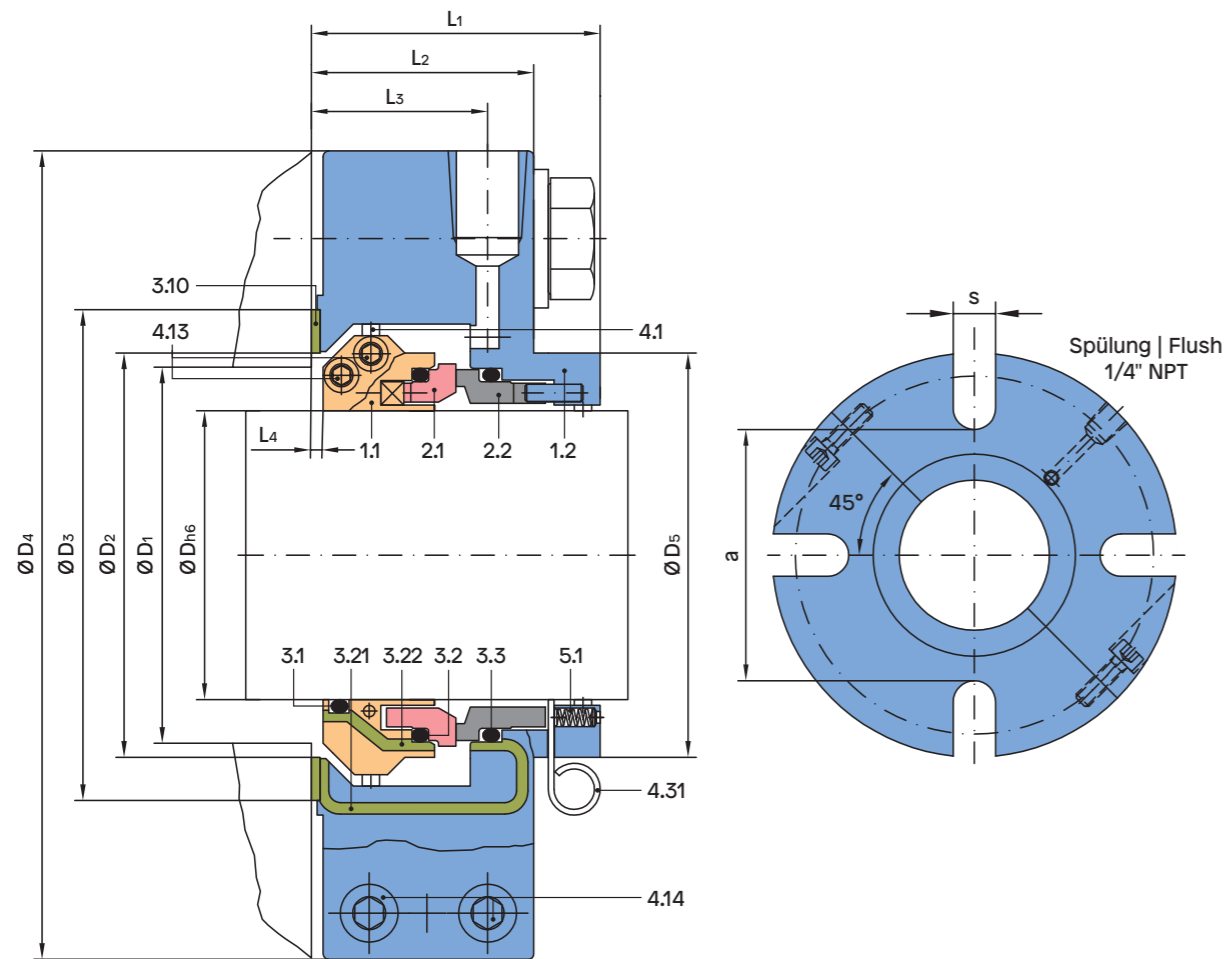
# Split mechanical seal Type 390



Dimension table Ø 2 – 3 1/8 inches

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	L1	L2	L3	L4	a	s	O-rings DASH no.		
													3.1	3.2	3.3
2	2,157	2,441	2,756	3,346	5,906	2,756	1,968	1,515	1,201	0,079	3,425	0,578	136	141	141
2 1/8	2,282	2,638	2,953	3,543	6,299	2,953	1,968	1,515	1,201	0,079	3,622	0,689	138	145	145
2 1/4	2,407	2,835	3,150	3,858	6,299	3,150	1,968	1,515	1,201	0,079	3,937	0,689	140	148	148
2 3/8	2,532	2,835	3,150	3,858	6,299	3,150	1,968	1,515	1,201	0,079	3,937	0,689	142	148	148
2 1/2	2,657	3,031	3,346	4,055	6,496	3,346	1,968	1,515	1,201	0,079	4,134	0,689	144	150	150
2 5/8	2,782	3,228	3,543	4,646	7,087	3,543	1,968	1,515	1,201	0,079	4,724	0,689	146	151	151
2 3/4	2,907	3,228	3,543	4,646	7,087	3,543	1,968	1,515	1,201	0,079	4,724	0,689	148	151	151
2 7/8	3,032	3,701	4,016	4,843	7,480	3,898	2,264	1,811	1,476	0,079	4,921	0,689	233	237	237
3	3,157	3,898	4,213	5,039	7,480	4,094	2,264	1,811	1,476	0,079	5,118	0,689	234	239	239
3 1/8	3,282	3,898	4,213	5,039	7,480	4,094	2,264	1,811	1,476	0,079	5,118	0,689	235	239	239

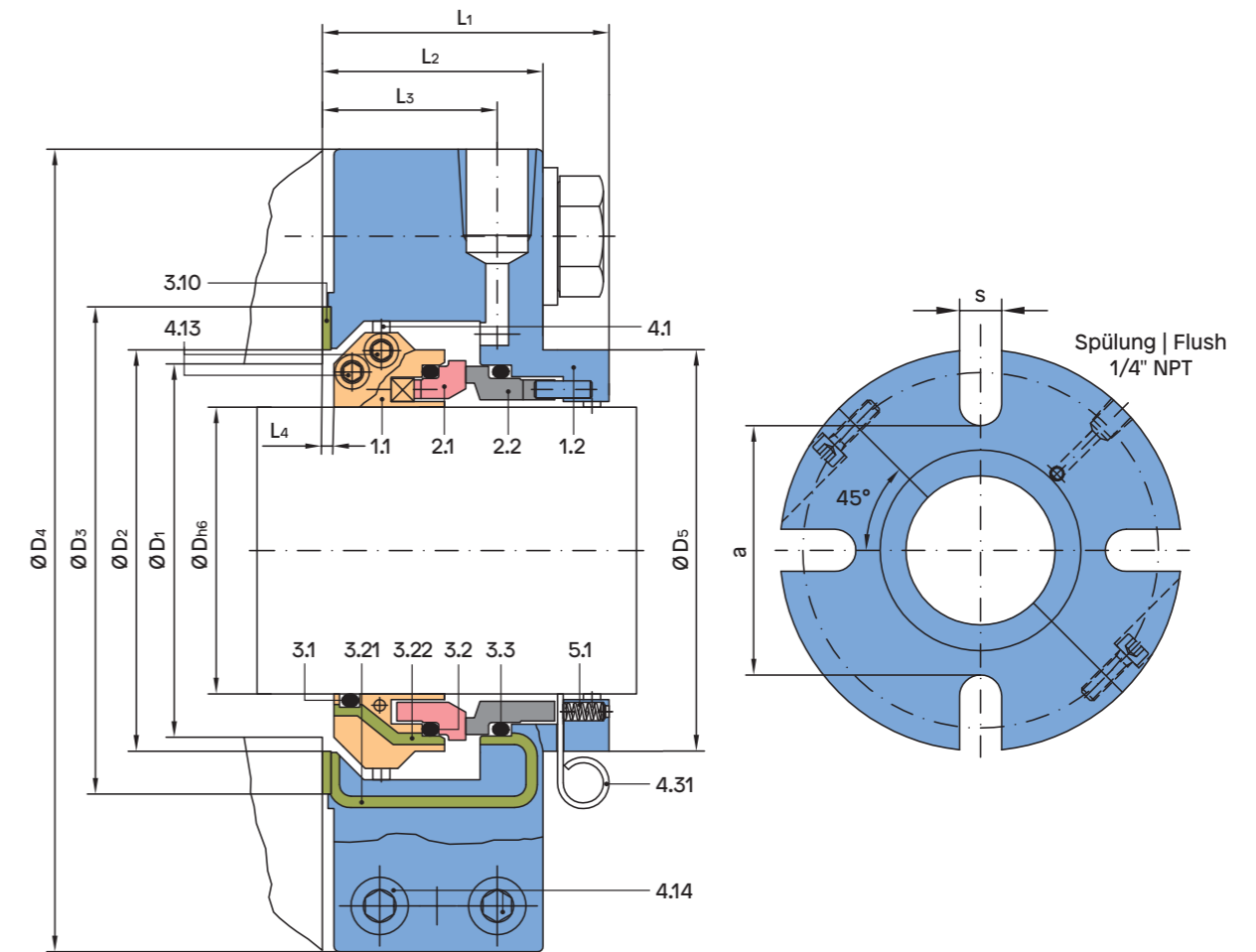
# Split mechanical seal Type 390



Dimension table  $\varnothing$  3 1/4 – 4 3/8 inches

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	L1	L2	L3	L4	a	s	O-rings DASH no.		
													3.1	3.2	3.3
3 1/4	3,407	4,094	4,409	5,236	8,661	4,291	2,264	1,811	1,476	0,079	5,315	0,846	236	241	241
3 5/8	3,532	4,094	4,409	5,236	8,661	4,291	2,264	1,811	1,476	0,079	5,315	0,846	237	241	241
3 1/2	3,657	4,291	4,606	5,433	8,661	4,488	2,264	1,811	1,476	0,079	5,512	0,846	238	242	242
3 5/8	3,782	4,488	4,803	5,630	8,661	4,685	2,264	1,811	1,476	0,079	5,709	0,846	239	244	244
3 3/4	3,907	4,488	4,803	5,630	8,661	4,685	2,264	1,811	1,476	0,079	5,709	0,846	240	244	244
3 7/8	4,032	4,685	5,000	5,827	8,661	4,882	2,264	1,811	1,476	0,079	5,906	0,846	241	245	245
4	4,157	4,882	5,197	6,024	9,449	5,079	2,264	1,811	1,476	0,079	6,102	0,846	242	247	247
4 1/8	4,282	4,882	5,197	6,024	9,449	5,079	2,264	1,811	1,476	0,079	6,102	0,846	243	247	247
4 1/4	4,407	5,079	5,394	6,220	9,449	5,276	2,264	1,811	1,476	0,079	6,299	0,846	244	248	248
4 3/8	4,532	5,276	5,591	6,417	9,449	5,472	2,264	1,811	1,476	0,079	6,496	0,846	245	250	250

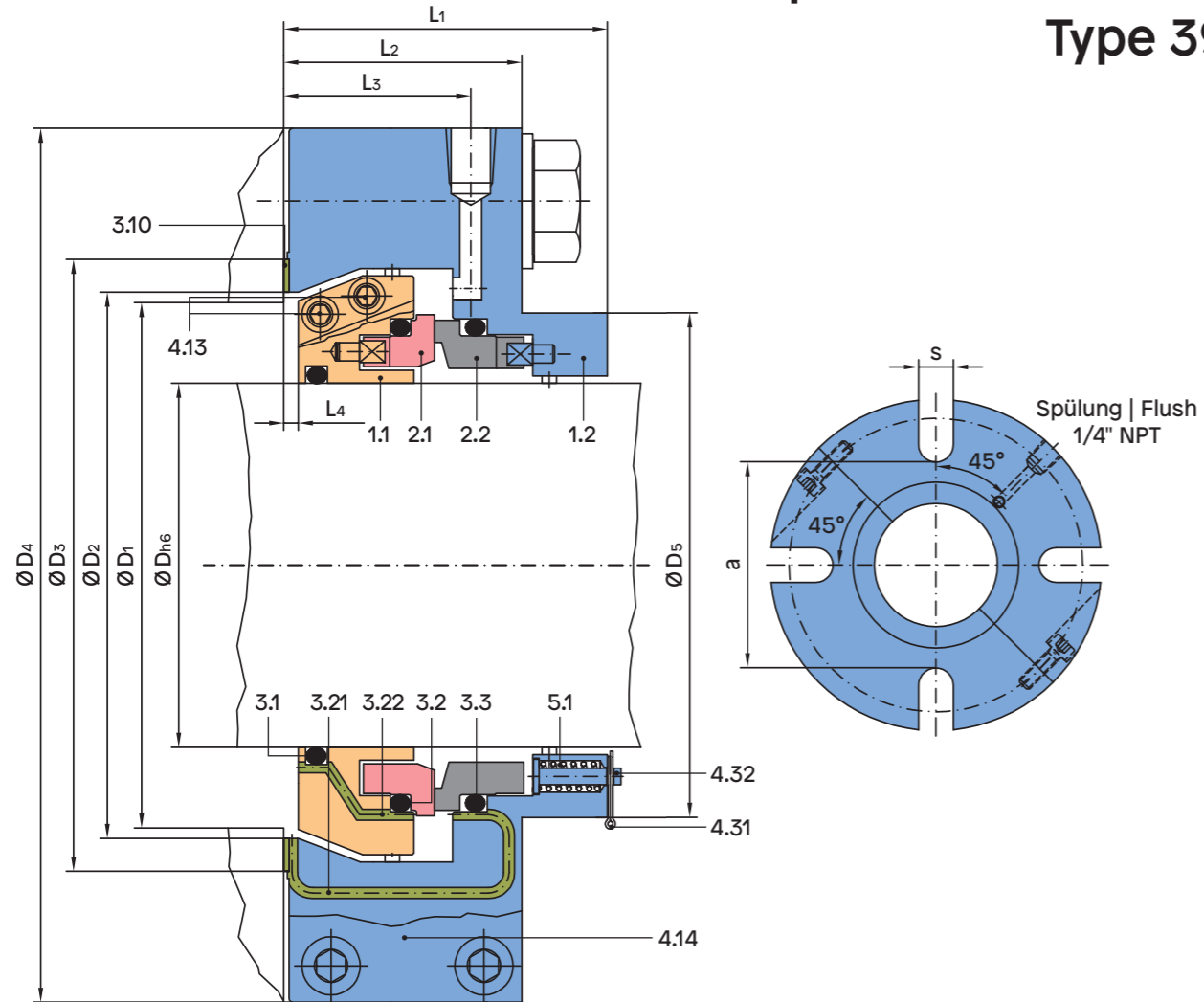
# Split mechanical seal Type 390



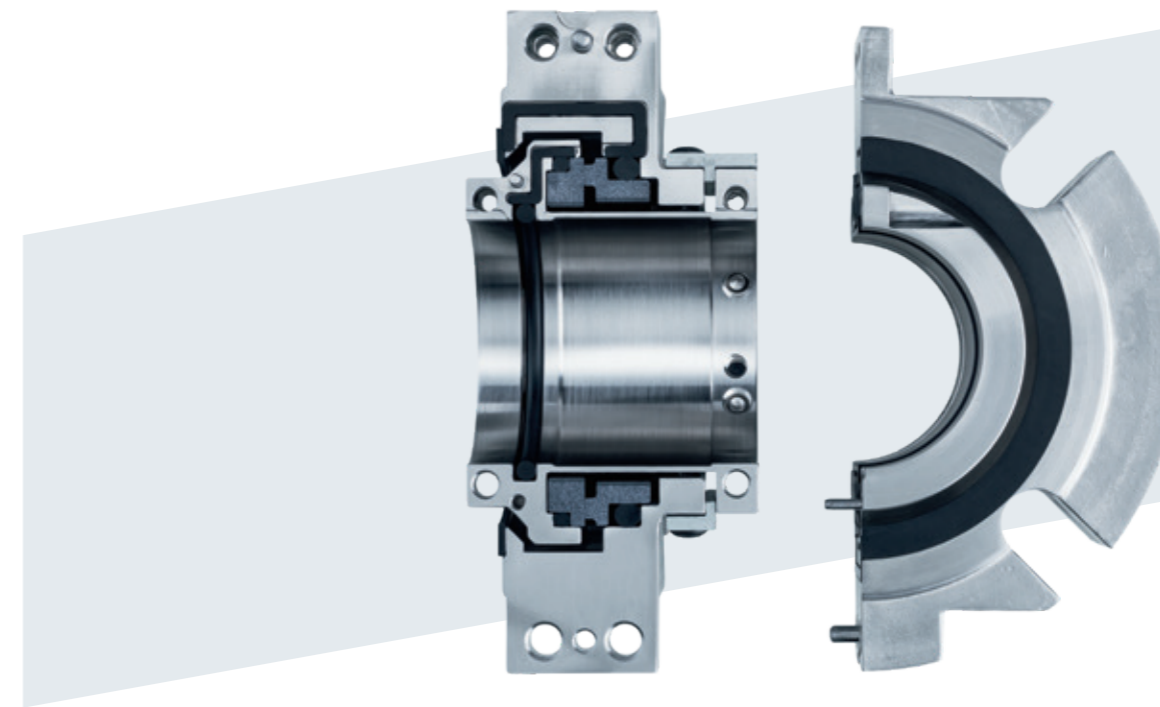
Dimension table  $\varnothing$  4 1/2 – 5 1/2 inches

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	L1	L2	L3	L4	a	s	O-rings DASH no.		
													3.1	3.2	3.3
4 1/2	4,657	5,276	5,591	6,417	9,449	5,472	2,264	1,811	1,476	0,079	6,496	0,846	246	250	250
4 5/8	4,782	5,472	5,787	6,614	9,449	5,669	2,264	1,811	1,476	0,079	6,693	0,846	247	252	252
4 3/4	4,907	5,472	5,787	6,614	9,449	5,669	2,264	1,811	1,476	0,079	6,693	0,846	248	252	252
4 7/8	5,032	5,669	5,984	6,811	10,236	5,866	2,264	1,811	1,476	0,079	6,890	0,846	249	253	253
5	5,157	5,866	6,181	7,008	10,236	6,063	2,264	1,811	1,476	0,079	7,087	0,846	250	255	255
5 1/8	5,282	5,866	6,181	7,008	10,236	6,063	2,264	1,811	1,476	0,079	7,087	0,846	251	255	255
5 1/4	5,407	6,063	6,378	7,205	10,236	6,260	2,264	1,811	1,476	0,079	7,283	0,846	252	256	256
5 3/8	5,532	6,260	6,575	7,402	10,236	6,457	2,264	1,811	1,476	0,079	7,480	0,846	253	258	258
5 1/2	5,657	6,260	6,575	7,402	10,236	6,457	2,264	1,811	1,476	0,079	7,480	0,846	254	258	258

## Split mechanical seal Type 390



## Split mechanical seal Type D85



The mechanical seal type D85 is the world's only cartridge mounted split seal. The pre-assembled seal, which consists of two half-shells, enables uncomplicated mounting without shims, special tools, measurement or gluing. The mechanical seal is characterised by its universal usage possibilities.

Dimension table  $\varnothing 5\frac{3}{4} - 7\frac{3}{4}$  inches

Dh6	D1 min.	D1 max.	D2	D3	D4	D5	L1	L2	L3	L4	a	s	O-rings DASH no.		
													3.1	3.2	3.3
5 ¾	5,900	8,433	7,874	8,583	11,417	7,421	3,661	2,579	2,028	0,157	8,740	0,846	359	364	364
6	6,150	8,630	8,071	8,780	11,614	7,618	3,661	2,579	2,028	0,157	8,937	0,846	361	365	365
6 ¼	6,400	8,826	8,268	8,976	11,811	7,815	3,661	2,579	2,028	0,157	9,134	0,846	362	366	366
6 ½	6,650	9,023	8,465	9,173	12,008	8,012	3,661	2,579	2,028	0,157	9,331	0,846	363	367	367
6 ¾	6,900	9,417	8,858	9,567	12,402	8,406	3,661	2,579	2,028	0,157	9,724	0,846	364	368	368
7	7,150	9,614	9,055	9,764	12,598	8,602	3,661	2,579	2,028	0,157	9,921	0,846	365	369	369
7 ¼	7,400	9,811	9,252	9,961	12,795	8,799	3,661	2,579	2,028	0,157	10,118	0,846	366	370	370
7 ½	7,650	10,204	9,646	10,354	13,189	9,193	3,661	2,579	2,028	0,157	10,512	0,846	367	371	371
7 ¾	7,900	10,401	9,843	10,551	13,386	9,390	3,661	2,579	2,028	0,157	10,709	0,846	368	372	372

### Advantages

- No unit dismantling required
- Cartridge-mounted
- Pressure balanced
- Independent of the direction of rotation
- Multiple springs made of Hastelloy C
- Gland with axial flushing
- Springs outside the medium - no blockage of the springs
- Vibration-damped rotating face
- Replaces packings

# Split mechanical seal Type D85

# Split mechanical seal Type D85

## Technical specifications

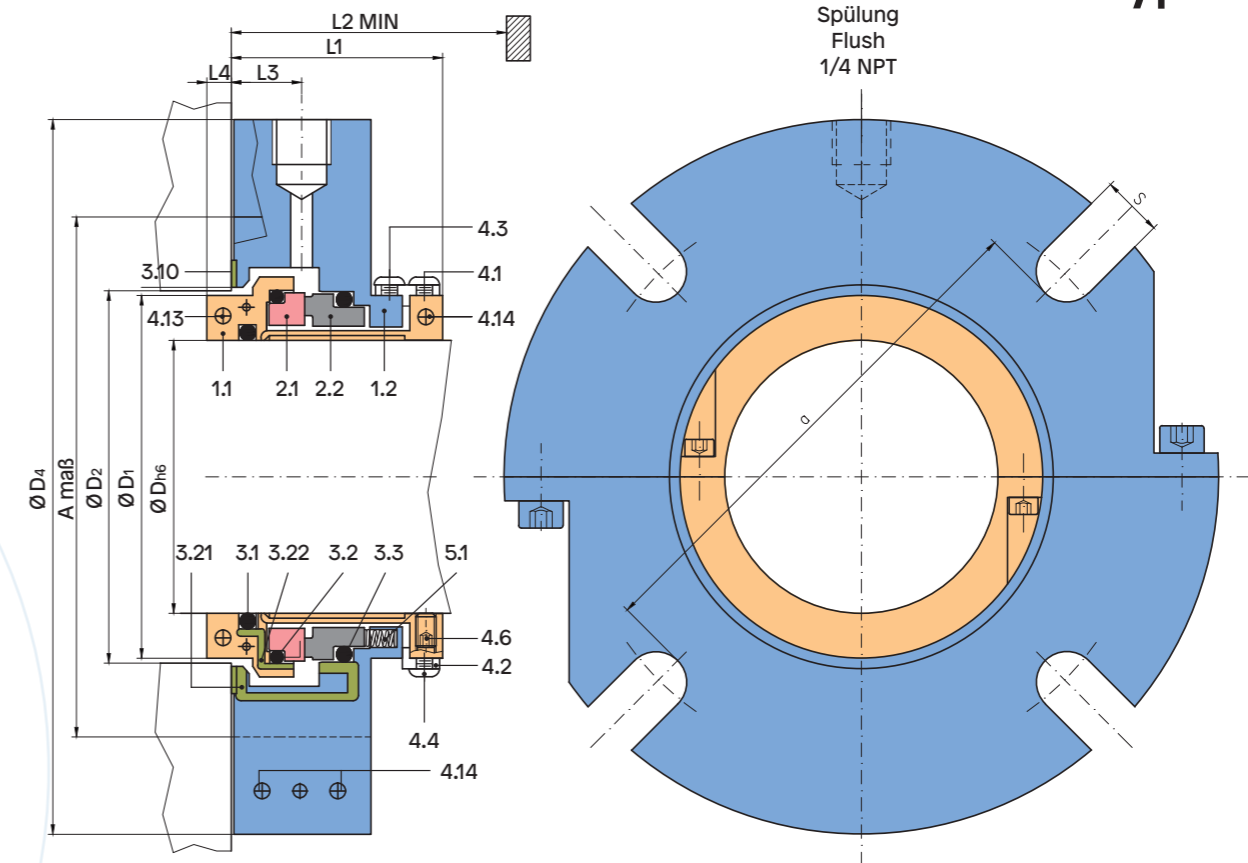
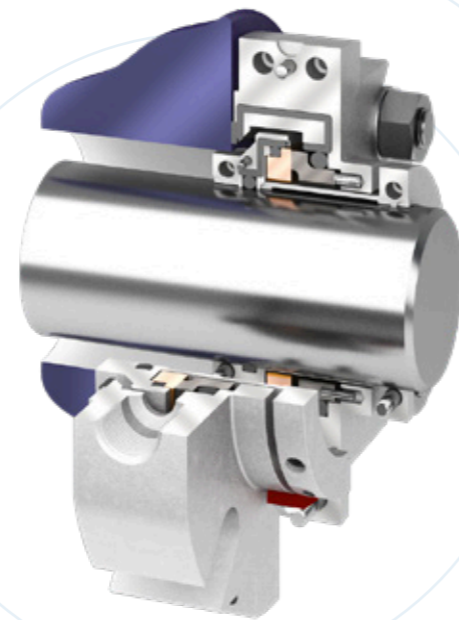
### Area of application\*

- Pressure: up to 12 bar
- Temperature: depending on elastomer
- Sliding speed: up to 15 m/s
- Shaft movements: axial  $\leq \varnothing 140 \pm 1,0 \text{ mm} \mid \geq \varnothing 145 \pm 2,0 \text{ mm}$   
radial  $\leq \varnothing 140 \pm 0,5 \text{ mm} \mid \geq \varnothing 145 \pm 1,0 \text{ mm}$

\* The maximum specifications for temperature, pressure and sliding speed apply in each case to independent higher operating conditions. However, this does not mean that the seal will function with all extreme conditions at the same time. If in doubt contact DEPAC.

### Dimensions

- Shaft diameter: 45 – 180 mm  
2" – 7"
- Special sizes on request



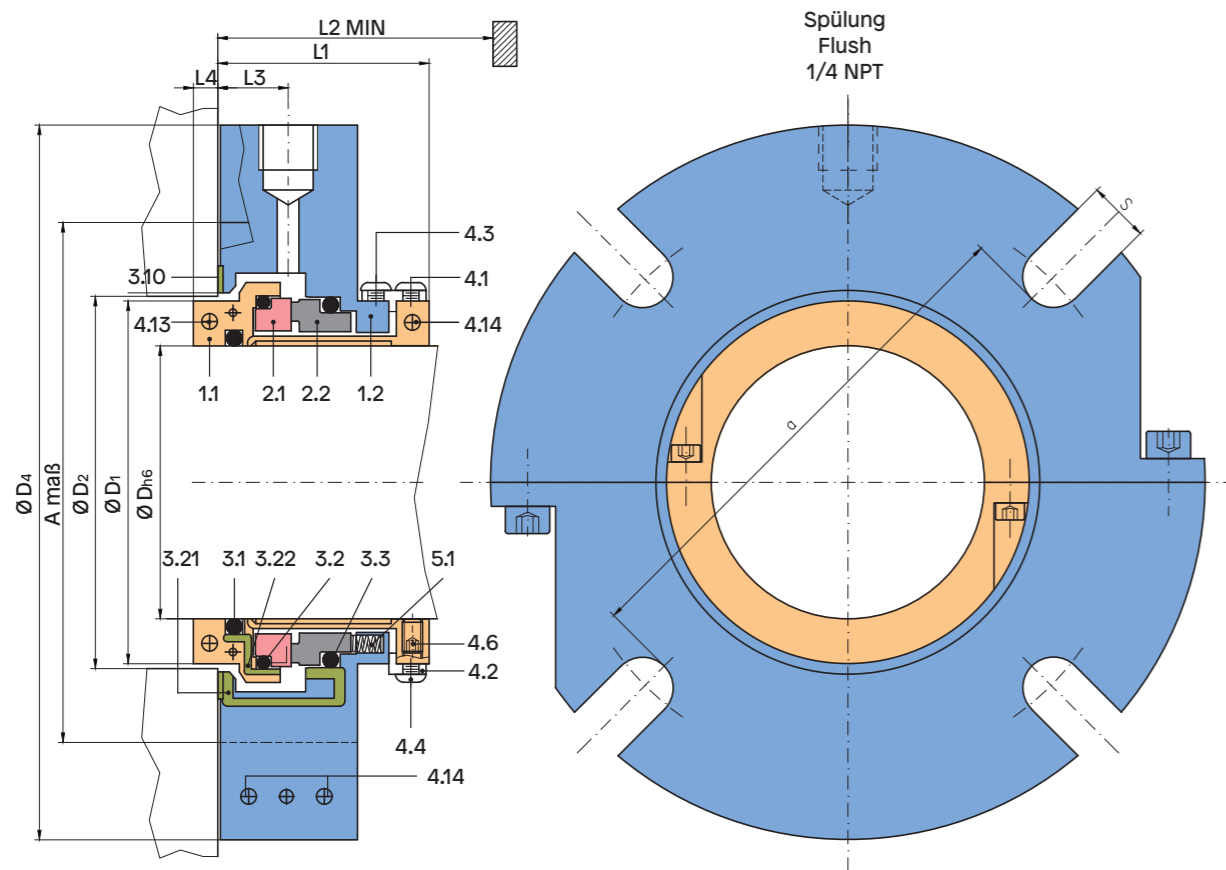
### Bill of materials

Item	Description	Material
1.1	Dynamic retainer	1.4571
1.2	Gland	1.4571
2.1	Dynamic seal face	SC / SSIC
2.2	Stationary seal face	CA / SC / SSIC
3.1 / 3.2 / 3.3	O-ring	FKM, EPDM
3.10	Flat gasket	FKM, EPDM
3.21 / 3.22	Elastomer seal	FKM, EPDM
4.13 / 4.14	Socket screw	A2
4.1	Centering part	1.4571
4.2	Spacer	A2
4.3	Centering screw	1.4571
4.4	Spacer screw	A2
4.6	Set screw	A2
5.1	Spring	2.4610

### Dimension table $\varnothing 45 - 180 \text{ mm}$

D	D1	D2 min.	D2 max.	D4	L1	L2 min.	L3	L4	a	s
45	65,1	66,68	76,20	140	54,0	64,0	16,7	6,35	84,9	14,3
48	68,2	68,85	79,38	140	54,0	64,0	16,7	6,35	90,5	14,3
50	68,2	68,85	79,38	140	54,0	64,0	16,7	6,35	90,5	14,3
55	77,8	79,40	88,90	159	54,0	64,0	16,7	6,35	100,0	17,4
60	81,0	85,73	95,25	165	54,0	64,0	16,7	6,35	104,8	17,4
65	85,0	88,90	98,40	165	54,0	64,0	16,7	6,35	112,8	17,4
70	90,5	92,08	104,77	197	54,0	64,0	16,7	6,35	112,8	17,4
75	96,8	100,00	111,10	203	54,0	64,0	16,7	6,35	125,4	17,4
80	106,4	108,00	120,65	210	62,0	72,0	20,6	7,14	131,8	20,6
90	115,9	117,50	130,20	219	62,0	72,0	20,6	7,14	141,3	20,6
95	117,5	119,05	130,18	222	62,0	72,0	20,6	7,14	144,5	20,6
100	125,4	127,00	136,52	224	62,0	72,0	20,6	7,14	147,6	20,6
110	135,0	136,50	149,20	235	62,0	72,0	20,6	7,14	163,5	20,6
115	140,5	142,90	155,60	248	62,0	72,0	20,6	7,14	173,0	20,6
120	143,7	146,05	158,75	248	62,0	72,0	20,6	7,14	176,2	20,6
125	157,2	160,36	171,40	273	77,8	96,8	23,4	9,50	185,7	23,8
130	162,0	165,10	184,10	279	77,8	96,8	23,4	9,50	198,4	23,8
145	176,2	179,40	193,70	305	77,8	96,8	23,4	9,50	207,2	23,8
150	182,6	185,70	200,00	311	77,8	96,8	23,4	9,50	214,3	23,8
160	195,3	198,40	212,70	311	77,8	96,8	23,4	9,50	223,8	23,8
180	214,3	217,50	231,80	343	82,6	101,6	23,4	9,50	247,6	23,8

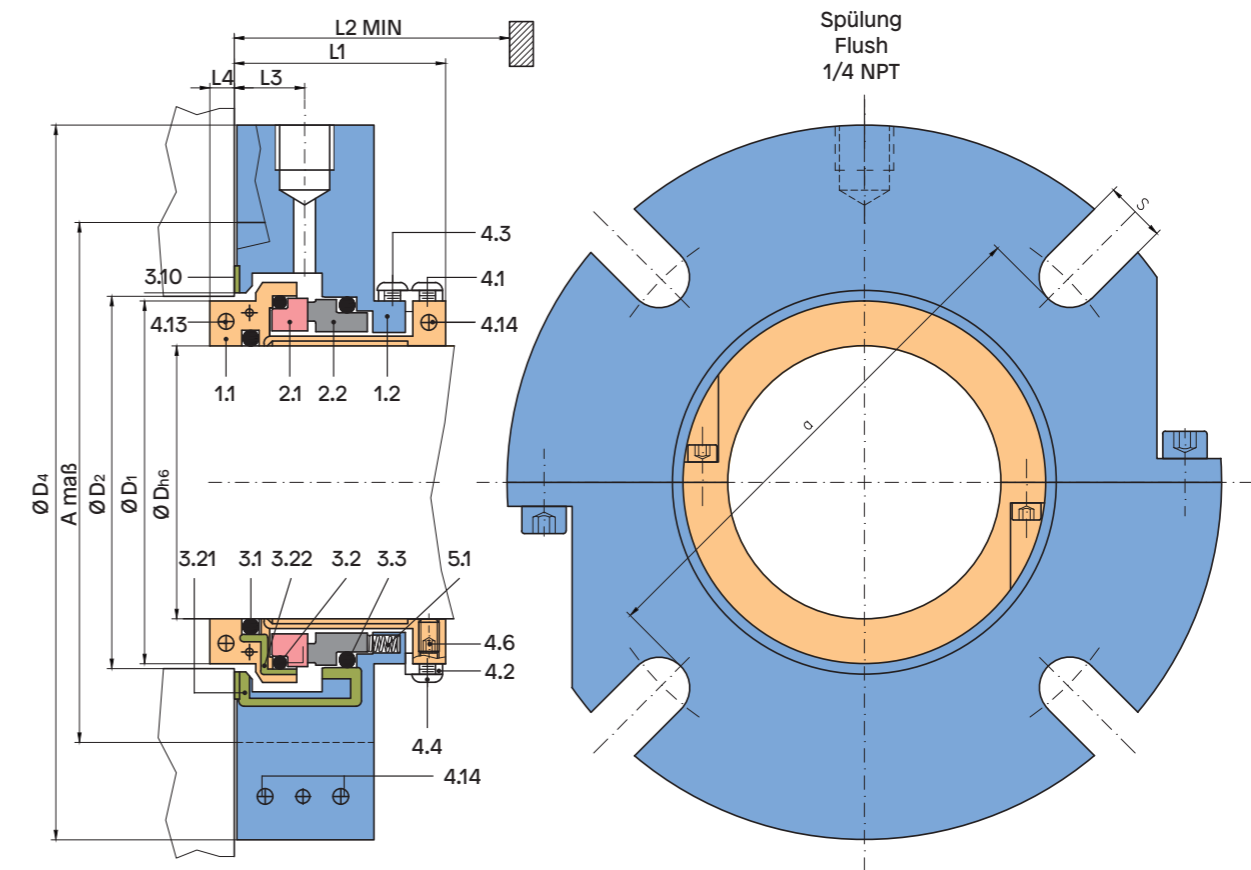
## Split mechanical seal Type D85



Dimension table Ø 2 – 4 inches

D	D1	D2 min.	D2 max.	D4	L1	L2 min.	L3	L4	a	s
2	2,687	2,750	3,125	5,440	2,125	2,500	0,656	0,250	3,563	0,562
2 1/8	2,812	2,875	3,375	6,000	2,125	2,500	0,656	0,250	3,688	0,687
2 1/4	3,062	3,125	3,500	6,250	2,125	2,500	0,656	0,250	3,937	0,687
2 3/8	3,188	3,250	3,500	6,250	2,125	2,500	0,656	0,250	4,062	0,687
2 1/2	3,188	3,375	3,625	6,440	2,125	2,500	0,656	0,250	4,125	0,687
2 5/8	3,347	3,500	3,875	6,440	2,125	2,500	0,656	0,250	4,438	0,687
2 3/4	3,562	3,625	4,125	7,820	2,125	2,500	0,656	0,250	4,438	0,687
2 7/8	3,687	3,812	4,250	7,820	2,125	2,500	0,656	0,250	4,812	0,687
3	3,812	3,937	4,375	7,880	2,125	2,500	0,656	0,250	4,938	0,687
3 1/8	4,188	4,250	4,750	8,250	2,437	2,812	0,812	0,281	5,188	0,812
3 1/4	4,312	4,375	4,875	8,250	2,437	2,812	0,812	0,281	5,313	0,812
3 1/2	4,437	4,500	5,000	8,500	2,437	2,812	0,812	0,281	5,437	0,812
3 3/8	4,562	4,625	5,125	8,630	2,437	2,812	0,812	0,281	5,562	0,812
3 1/2	4,625	4,687	5,125	8,820	2,437	2,812	0,812	0,281	5,688	0,812
3 5/8	4,812	4,875	5,250	8,820	2,437	2,812	0,812	0,281	5,813	0,812
4	4,937	5,000	5,375	8,820	2,437	2,812	0,812	0,281	5,813	0,812

## Split mechanical seal Type D85



Dimension table Ø 4 1/4 – 7 inches

D	D1	D2 min.	D2 max.	D4	L1	L2 min.	L3	L4	a	s
4 1/4	5,188	5,250	5,750	9,250	2,437	2,812	0,812	0,281	6,063	0,812
4 3/8	5,312	5,375	5,875	9,250	2,437	2,812	0,812	0,281	6,437	0,812
4 1/2	5,406	5,500	6,000	9,690	2,437	2,812	0,812	0,281	6,500	0,812
4 5/8	5,531	5,625	6,125	9,690	2,437	2,812	0,812	0,281	6,812	0,812
4 3/4	5,656	5,750	6,250	9,750	2,437	2,812	0,812	0,281	6,938	0,812
5	6,188	6,312	6,750	10,750	3,062	3,812	0,923	0,375	7,312	0,937
5 1/8	6,375	6,500	7,250	11,000	3,062	3,812	0,923	0,375	7,812	0,937
5 1/4	6,375	6,500	7,250	11,000	3,062	3,812	0,923	0,375	7,812	0,937
5 1/2	6,688	6,812	7,375	11,500	3,062	3,812	0,923	0,375	7,813	0,937
5 3/4	6,938	7,062	7,625	12,000	3,062	3,812	0,923	0,375	8,156	0,937
6	7,188	7,312	7,875	12,250	3,062	3,812	0,923	0,375	8,437	0,937
6 1/4	7,438	7,562	8,125	12,500	3,062	3,812	0,923	0,375	8,656	0,937
6 1/2	7,688	7,812	8,375	12,250	3,062	3,812	0,923	0,375	8,813	0,937
6 3/4	7,938	8,062	8,625	12,500	3,250	4,000	0,923	0,375	9,312	0,937
7	8,188	8,312	8,750	12,750	3,250	4,000	0,923	0,375	9,562	0,937





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