



The DEPAC mechanical seal type 321 is a stationary, tandem-active, double-cartridge mechanical seal with a venting facility. The double pressure relief of the seal faces on the product side also ensures that the seal faces do not open in case of pressure reversal - and that the pressure relief for reducing the friction values is present under all pressure conditions.

The product variants in the form of the type 322 and the type 323, which are intended especially for larger seal chamber cross sections, round off the universal range of application for this mechanical seal.

Advantages

- Cartridge-mounted
- Double balanced
- Tandem active
- Independent of the direction of rotation
- Multiple springs made of Hastelloy C
- Springs outside the medium - no blockage of the springs
- Vibration-dampend stationary face support

Mechanical seal

Type 321

Technical specifications

Area of application*

Pressure:	700 mm Hg to 28 bar
Temperature:	dependent on elastomer
Sliding speed:	up to 35 m/s
Shaft movements:	axial $\leq \varnothing 22 \pm 0.5 \text{ mm} \mid \geq \varnothing 24 \pm 1.0 \text{ mm}$ radial $\leq \varnothing 22 \pm 0.4 \text{ mm} \mid \geq \varnothing 24 \pm 0.5 \text{ mm}$

* 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.

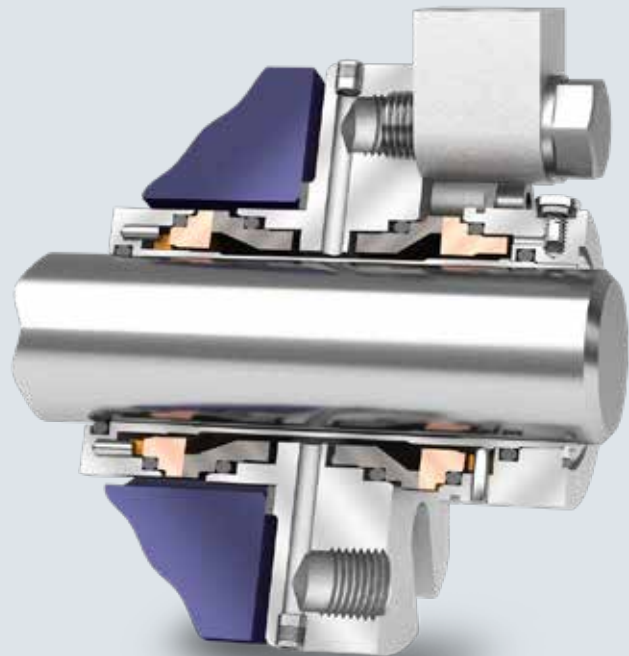
Dimensions

Shaft diameter:	16 – 160 mm $\frac{5}{8}$ " – 6 $\frac{1}{4}$ " Special sizes on enquiry
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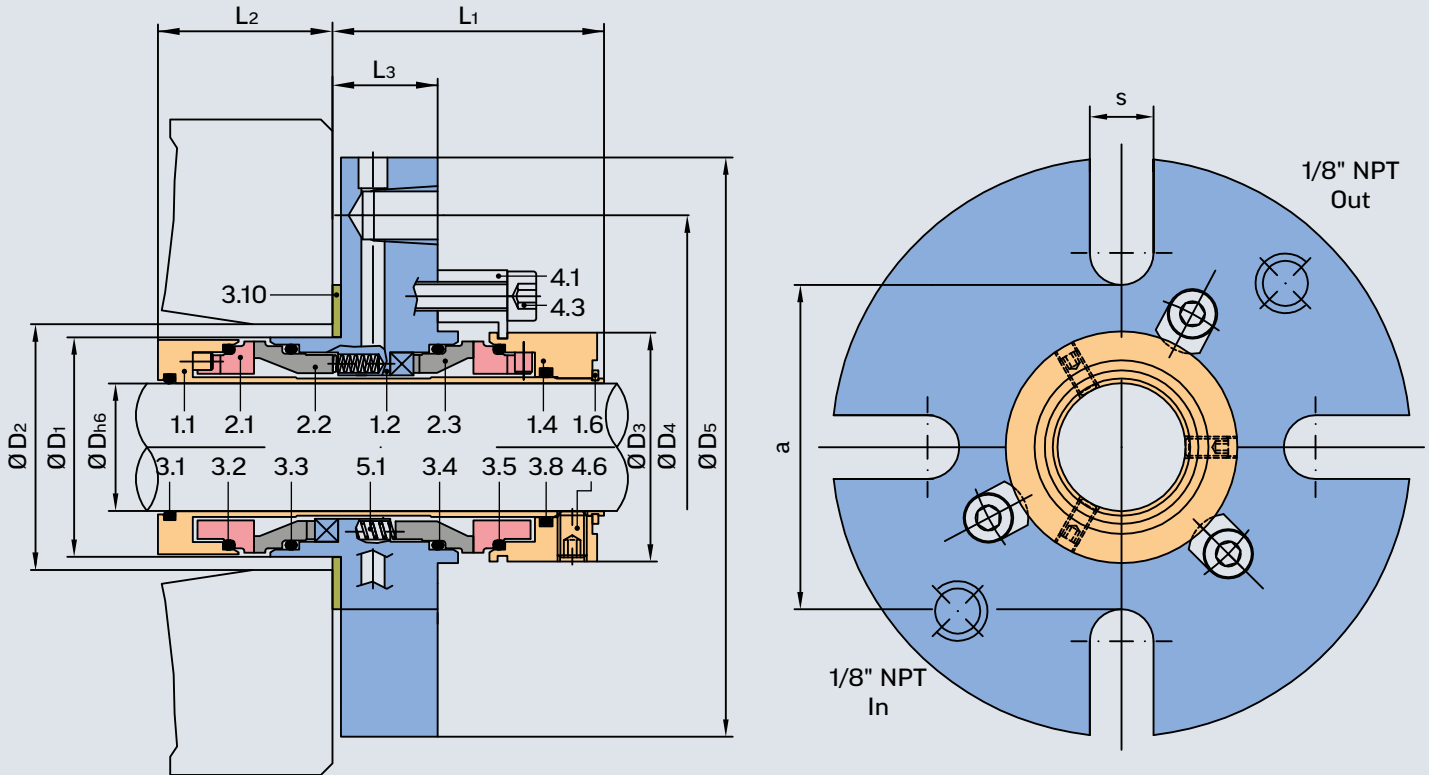
Bill of materials

Item	Description	Material
1.1	Sleeve	1.4571
1.2	Gland	1.4571
1.4	Adjusting ring	1.4571
1.6	Circlip	1.4310
2.1, 2.4	Dynamic seal face	SC/SSIC/TC
2.2, 2.3	Stationary seal face	CA/SC/SSIC/TC
3.1, 3.2, 3.3 3.4, 3.5, 3.8 3.11	O-ring	FKM, EPDM, Kalrez®, PTFE,...
3.10	Flat gasket	Klingersil® C-4300
4.1	Centering piece	Al
4.3	Cheesehead screw	A2
4.6	Threaded pin	A4
4.7	Bleed screw	A2
5.1	Spring	2.4610

Other materials on enquiry!



Mechanical seal Type 321 Data sheet



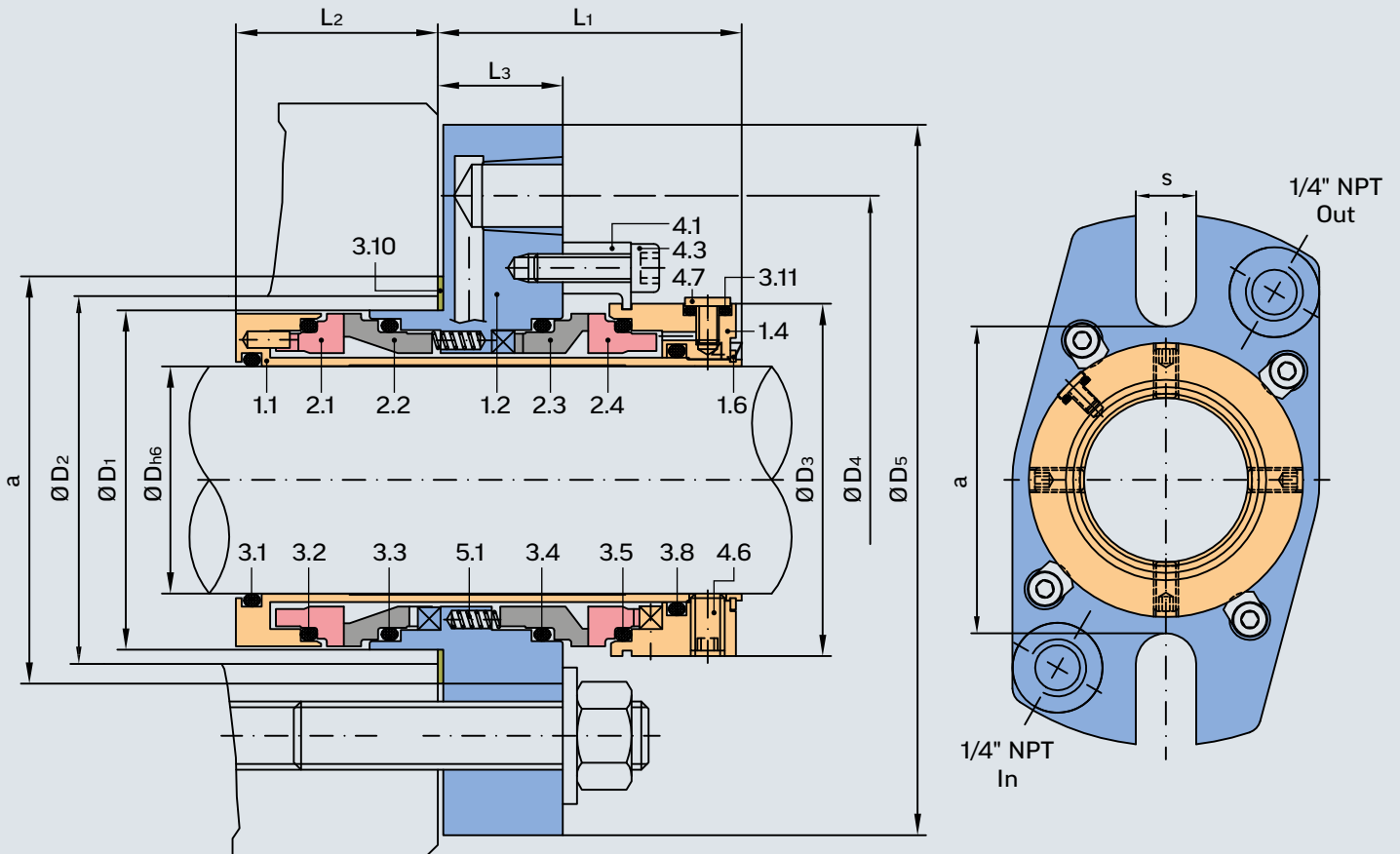
Dimension table Ø 16 – 22 millimetres

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.					
									3.1	3.2	3.3	3.4	3.5	3.8
16	31.9	32.4	42	33.5	70	90	50	11	017	022	022	022	022	018
18	33.9	34.4	44	35.5	70	90	52	11	018	024	024	024	024	019
20	35.9	36.4	46	37.5	78	100	54	11	019	025	025	025	025	020
22	37.9	38.4	48	39.5	78	100	56	11	020	026	026	026	026	022

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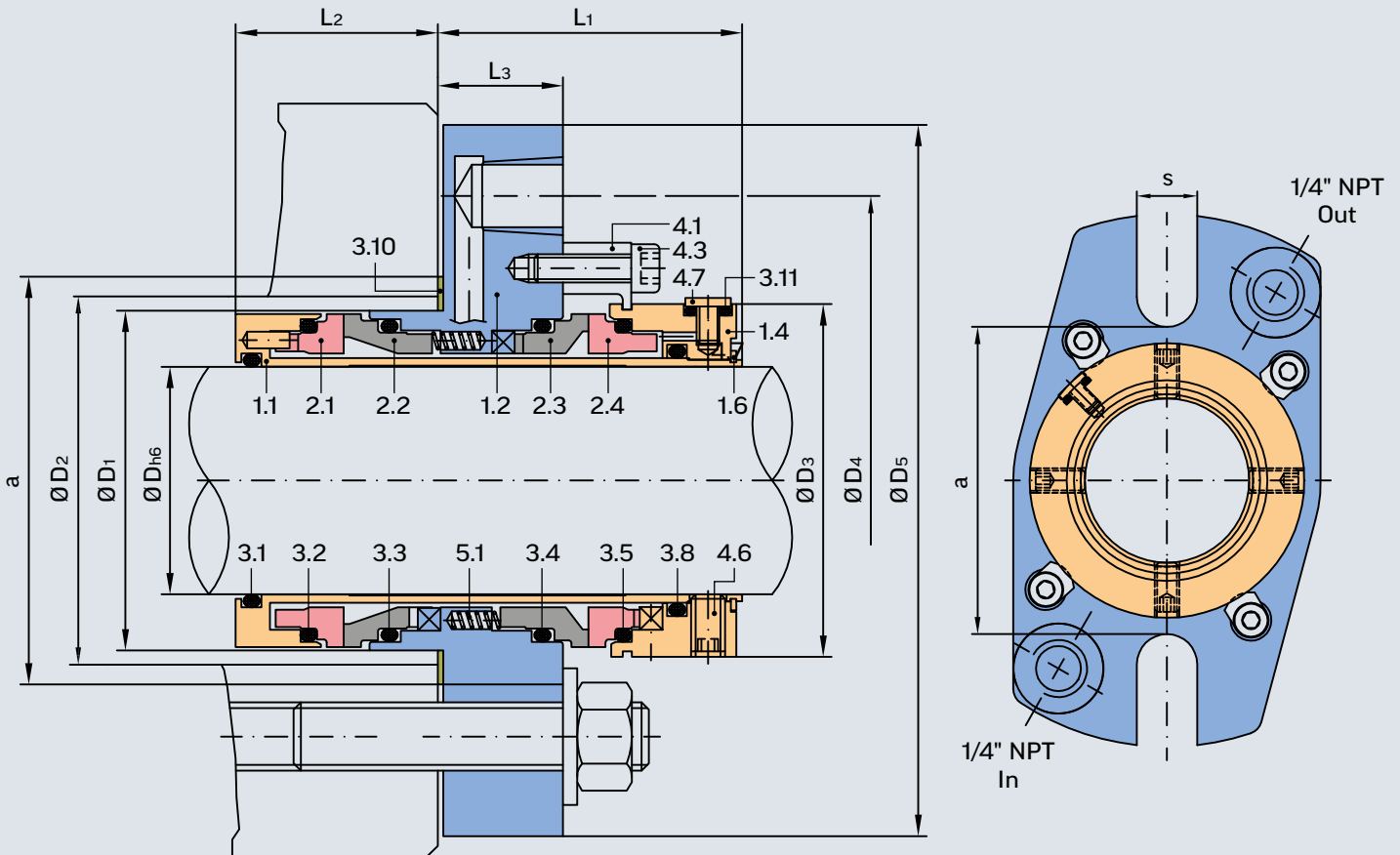
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Dimension table Ø 24 – 50 millimetres

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.							
									3.1	3.2	3.3	3.4	3.5	3.8	3.11	
24	44.7	45.2	52	47	82	105	60	12.5	119	127	127	127	127	127	122	007
25	44.7	45.2	52	47	82	105	60	12.5	120	127	127	127	127	127	122	007
28	47.7	48.2	52	50	82	105	60	12.5	122	129	129	129	129	129	124	007
30	49.7	50.2	52	52	82	105	60	12.5	123	130	130	130	130	130	125	007
32	50.9	51.4	52	54	82	105	60	12.5	124	131	131	131	131	131	127	007
33	50.9	51.4	52	55	82	105	60	12.5	125	131	131	131	131	131	127	007
35	54.7	55.2	59	57	89	115	67	12.5	126	133	133	133	133	133	128	007
38	57.7	58.2	67	60	102	130	75	14.7	128	136	136	136	136	136	130	007
40	59.7	60.2	67	62	102	130	75	14.7	130	137	137	137	137	137	132	007
42	61.7	62.2	74	64	114	140	82	14.7	131	138	138	138	138	138	133	007
43	62.7	63.2	74	65	114	140	82	14.7	132	138	138	138	138	138	133	007
45	64.7	65.2	74	67	114	140	82	14.7	133	140	140	140	140	140	135	007
48	67.7	68.2	74	70	114	140	82	14.7	135	142	142	142	142	142	137	007
50	69.7	70.2	74	72	114	140	82	14.7	136	143	143	143	143	143	138	007

Mechanical seal Type 321 Data sheet



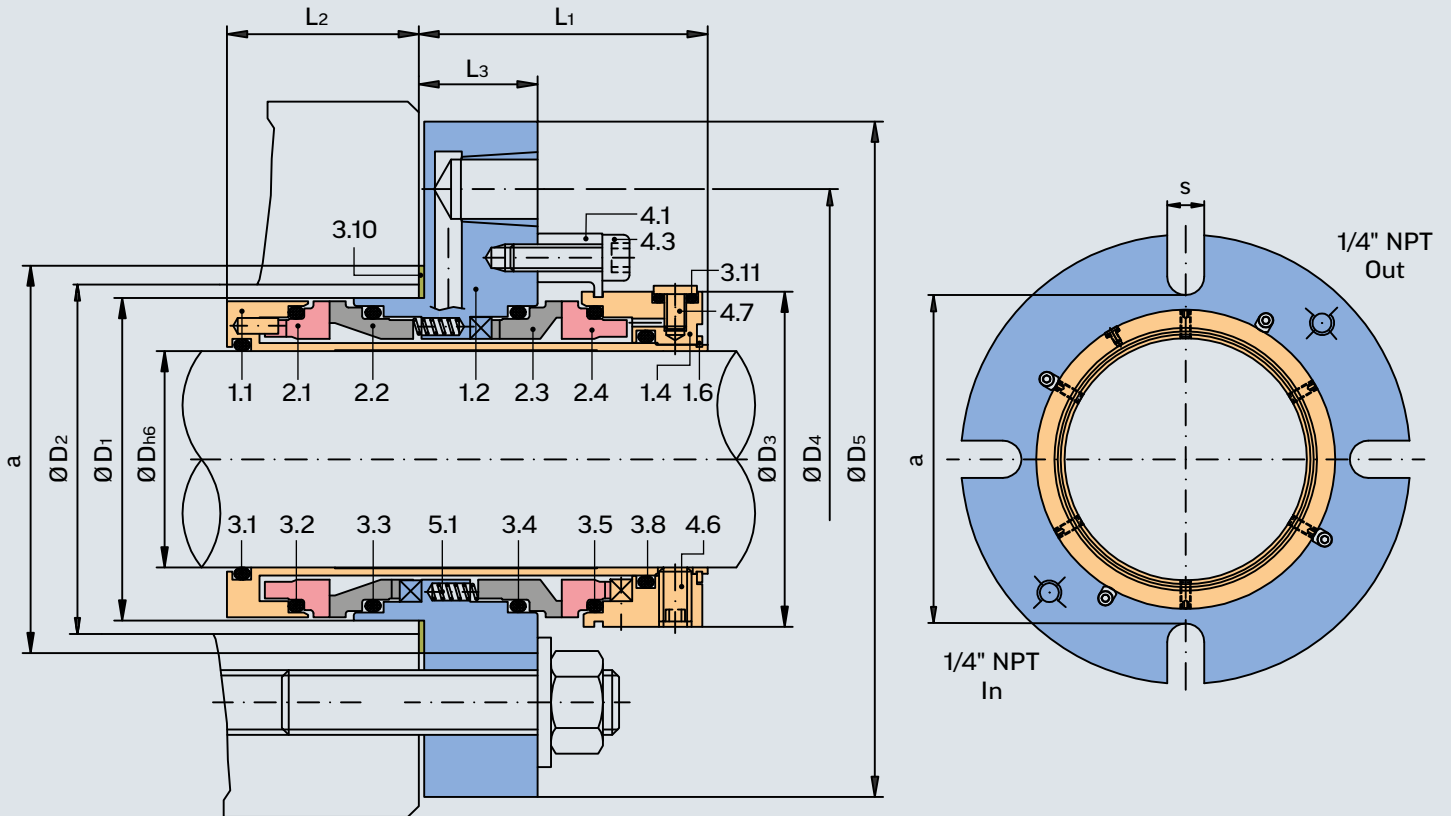
Dimension table Ø 53 – 70 millimetres

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
53	72.7	73.2	84	75	122	150	92	17.5	138	145	145	145	145	140	007
55	74.7	75.2	84	77	122	150	92	17.5	139	146	146	146	146	141	007
58	77.7	78.2	84	80	122	150	92	17.5	141	148	148	148	148	143	007
60	79.7	80.2	92	82	129	160	100	17.5	142	149	149	149	149	144	007
63	82.7	83.2	92	85	129	160	100	17.5	144	150	150	150	150	146	007
65	84.7	85.2	92	87	140	160	100	17.5	145	151	151	151	151	147	007
68	87.7	88.2	104	90	140	180	112	17.5	147	151	151	151	151	149	007
70	89.7	90.2	104	92	140	180	112	17.5	149	152	152	152	152	150	007

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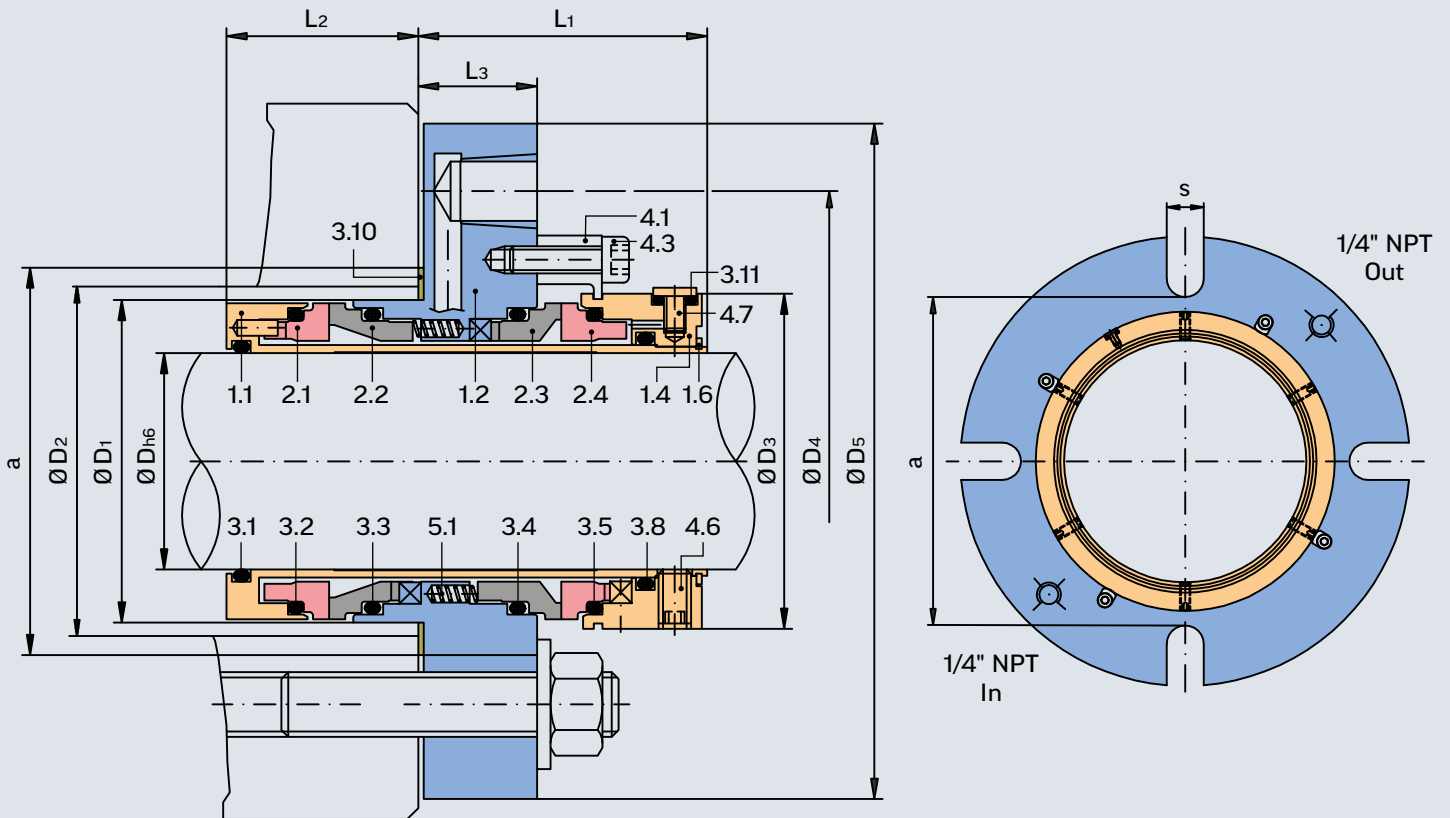
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Dimension table Ø 75 - 140 millimetres

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
75	102.8	103.3	117	103	160	190	125	17.5	234	238	238	238	238	152	007
80	107.8	108.3	122	108	160	190	130	17.5	236	240	240	240	240	153	007
85	112.8	113.3	127	113	190	220	135	21.5	237	242	242	242	242	153	007
90	117.8	118.3	132	118	190	220	140	21.5	239	243	243	243	243	154	007
95	122.8	123.3	137	123	190	220	145	21.5	240	245	245	245	245	155	007
100	127.8	128.3	142	128	190	220	150	21.5	242	246	246	246	246	156	007
105	132.8	133.3	147	133	210	240	155	21.5	243	248	248	248	248	157	007
110	137.8	138.3	152	138	210	240	160	21.5	245	250	250	250	250	157	007
115	142.8	143.3	157	143	210	240	165	21.5	247	251	251	251	251	158	007
120	147.8	148.3	162	148	210	240	170	21.5	248	253	253	253	253	159	007
125	152.8	153.3	167	153	230	260	175	21.5	250	254	254	254	254	160	007
130	157.8	158.3	172	158	230	260	180	21.5	251	256	256	256	256	161	007
135	162.8	163.3	177	163	230	260	185	21.5	253	257	257	257	257	161	007
140	167.8	168.3	182	168	230	260	190	21.5	255	258	258	258	258	162	007

Mechanical seal Type 321 Data sheet



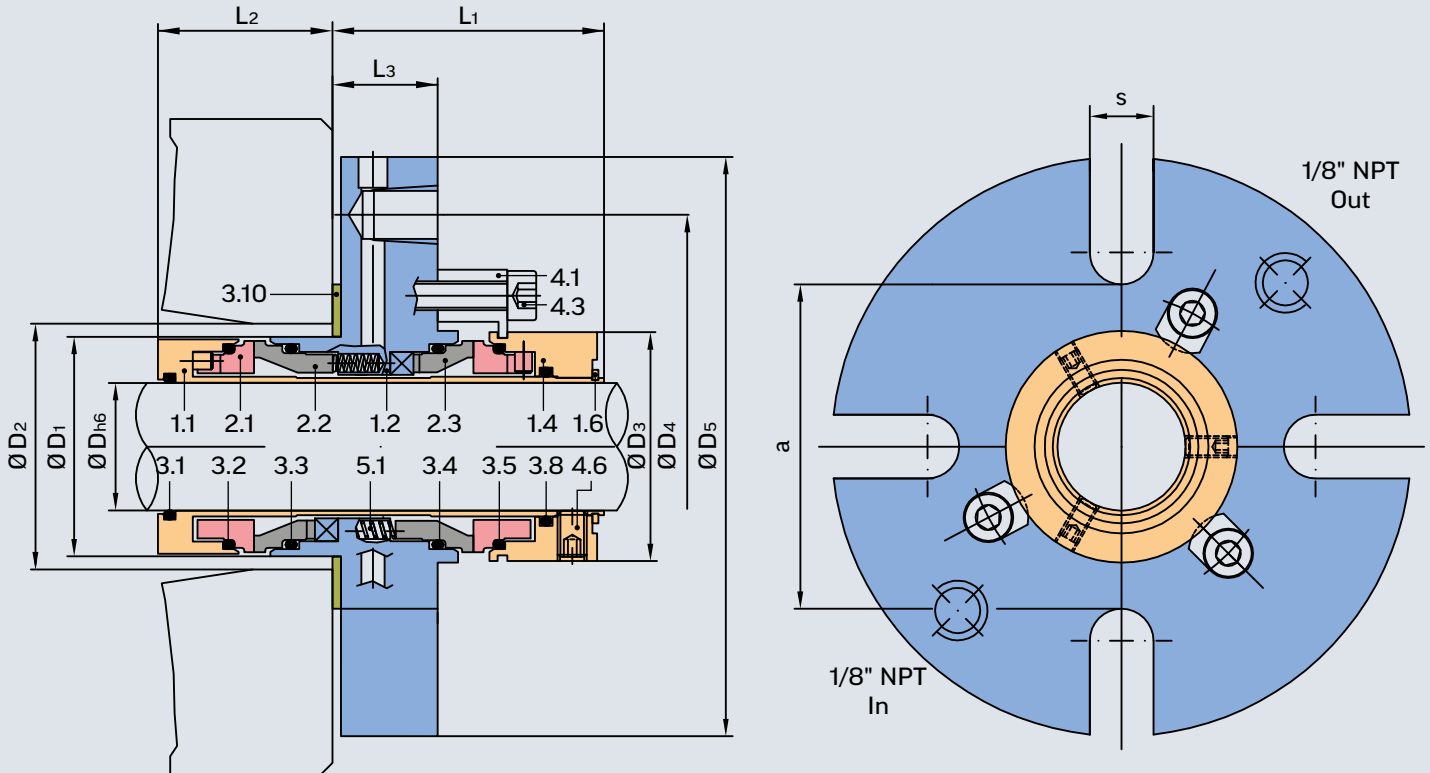
Dimension table Ø 145 - 160 millimetres

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
145	172.8	173.3	187	173	250	280	195	21.5	256	259	259	259	259	163	007
150	177.8	178.3	192	178	250	280	200	21.5	258	260	260	260	260	164	007
155	182.8	183.3	197	183	250	280	205	21.5	259	261	261	261	261	164	007
160	187.8	188.3	202	188	250	280	210	21.5	260	261	261	261	261	165	007

Mechanical seal

Type 321

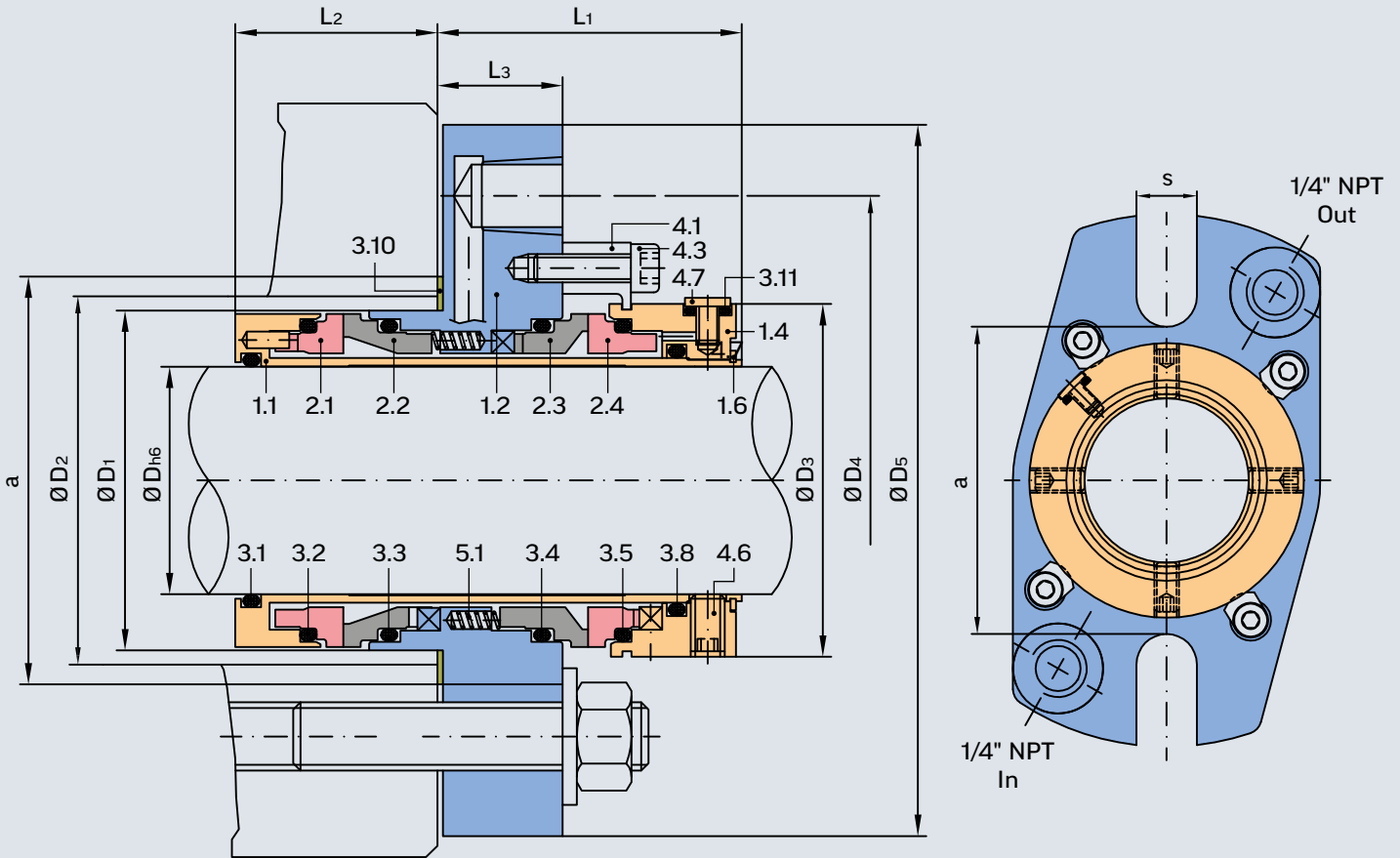
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Dimension table Ø 5/8 - 7/8 inches

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.					
									3.1	3.2	3.3	3.4	3.5	3.8
5/8	1.256	1.276	1.654	1.319	2.756	3.543	1.969	0.433	016	022	022	022	022	018
3/4	1.374	1.394	1.772	1.476	3.071	3.543	2.087	0.433	018	024	024	024	024	020
7/8	1.492	1.512	1.890	1.555	3.071	3.937	2.205	0.433	020	026	026	026	026	022

Mechanical seal Type 321 Data sheet



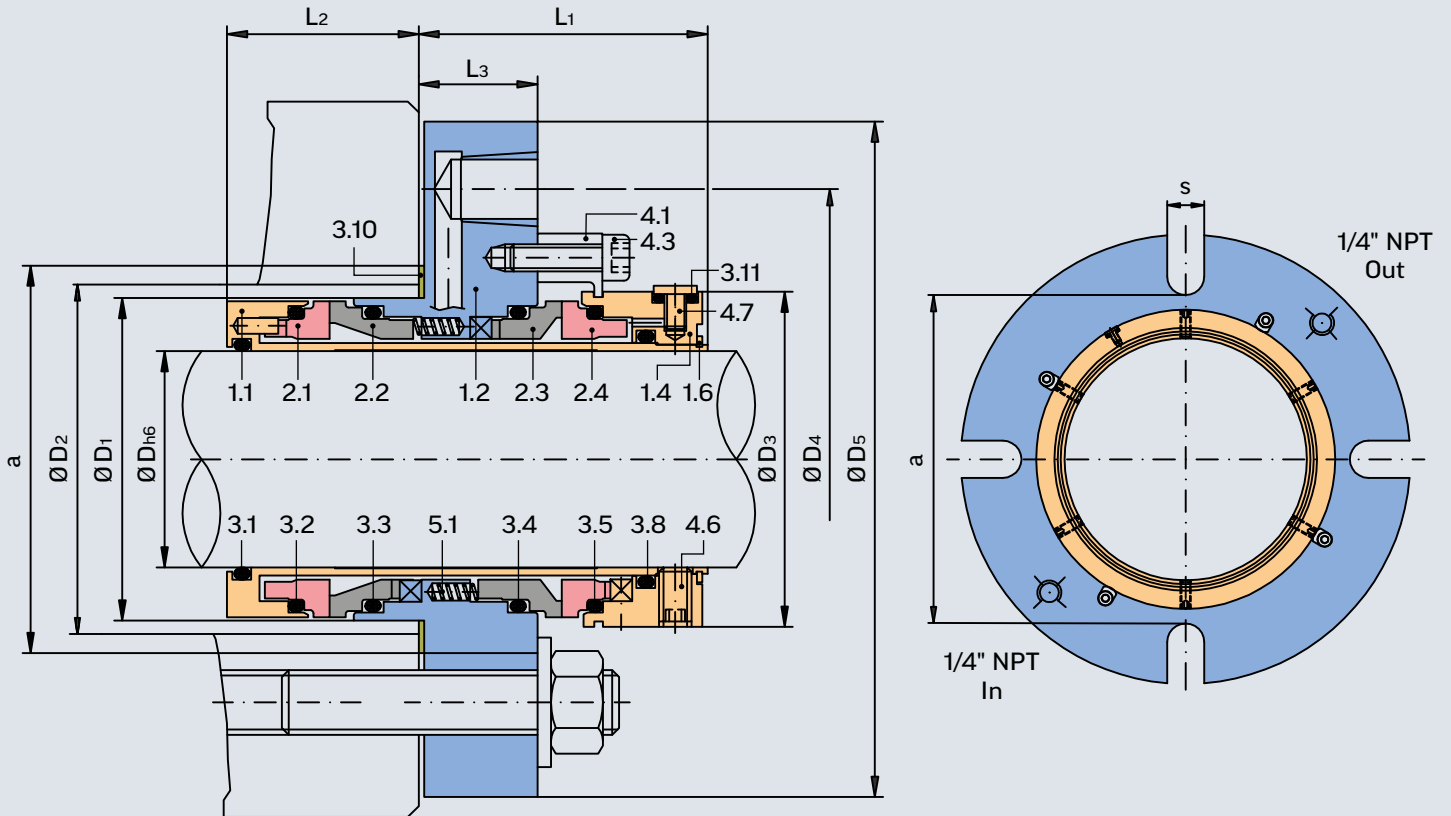
Dimension table $\text{Ø } \frac{15}{16} - 2 \frac{3}{4}$ inches

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
$\frac{15}{16}$	1.760	1.780	2.047	1.850	3.228	4.134	2.362	0.492	119	127	127	127	127	122	007
1	1.760	1.780	2.047	1.850	3.228	4.134	2.362	0.492	120	127	127	127	127	122	007
$1 \frac{1}{8}$	1.878	1.898	2.047	1.969	3.228	4.134	2.362	0.492	122	129	129	129	129	124	007
$1 \frac{1}{4}$	2.004	2.024	2.047	2.126	3.228	4.134	2.362	0.492	124	131	131	131	131	126	007
$1 \frac{3}{8}$	2.154	2.174	2.323	2.244	3.504	4.528	2.638	0.492	126	133	133	133	133	128	007
$1 \frac{7}{16}$	2.232	2.252	2.638	2.323	4.016	5.118	2.953	0.579	127	135	135	135	135	130	007
$1 \frac{1}{2}$	2.272	2.292	2.638	2.362	4.016	5.118	2.953	0.579	128	136	136	136	136	130	007
$1 \frac{5}{8}$	2.429	2.449	2.913	2.520	4.488	5.512	3.228	0.579	131	138	138	138	138	133	007
$1 \frac{3}{4}$	2.547	2.567	2.913	2.638	4.488	5.512	3.228	0.579	133	140	140	140	140	135	007
$1 \frac{7}{8}$	2.665	2.685	2.913	2.756	4.488	5.512	3.228	0.579	135	142	142	142	142	137	007
2	2.744	2.764	2.913	2.835	4.488	5.512	3.228	0.579	136	143	143	143	143	138	007
$2 \frac{1}{8}$	2.862	2.882	3.307	2.953	4.803	5.906	3.622	0.689	138	145	145	145	145	140	007
$2 \frac{1}{4}$	3.020	3.040	3.307	3.110	4.803	5.906	3.622	0.689	140	147	147	147	147	142	007
$2 \frac{3}{8}$	3.138	3.158	3.622	3.228	5.079	6.299	3.937	0.689	142	149	149	149	149	144	007
$2 \frac{1}{2}$	3.256	3.276	3.622	3.346	5.079	6.299	3.937	0.689	144	150	150	150	150	146	007
$2 \frac{5}{8}$	3.413	3.433	4.094	3.504	5.512	7.087	4.409	0.689	146	151	151	151	151	148	007
$2 \frac{3}{4}$	3.531	3.551	4.094	3.622	5.512	7.087	4.409	0.689	149	152	152	152	152	150	007

Mechanical seal

Type 321

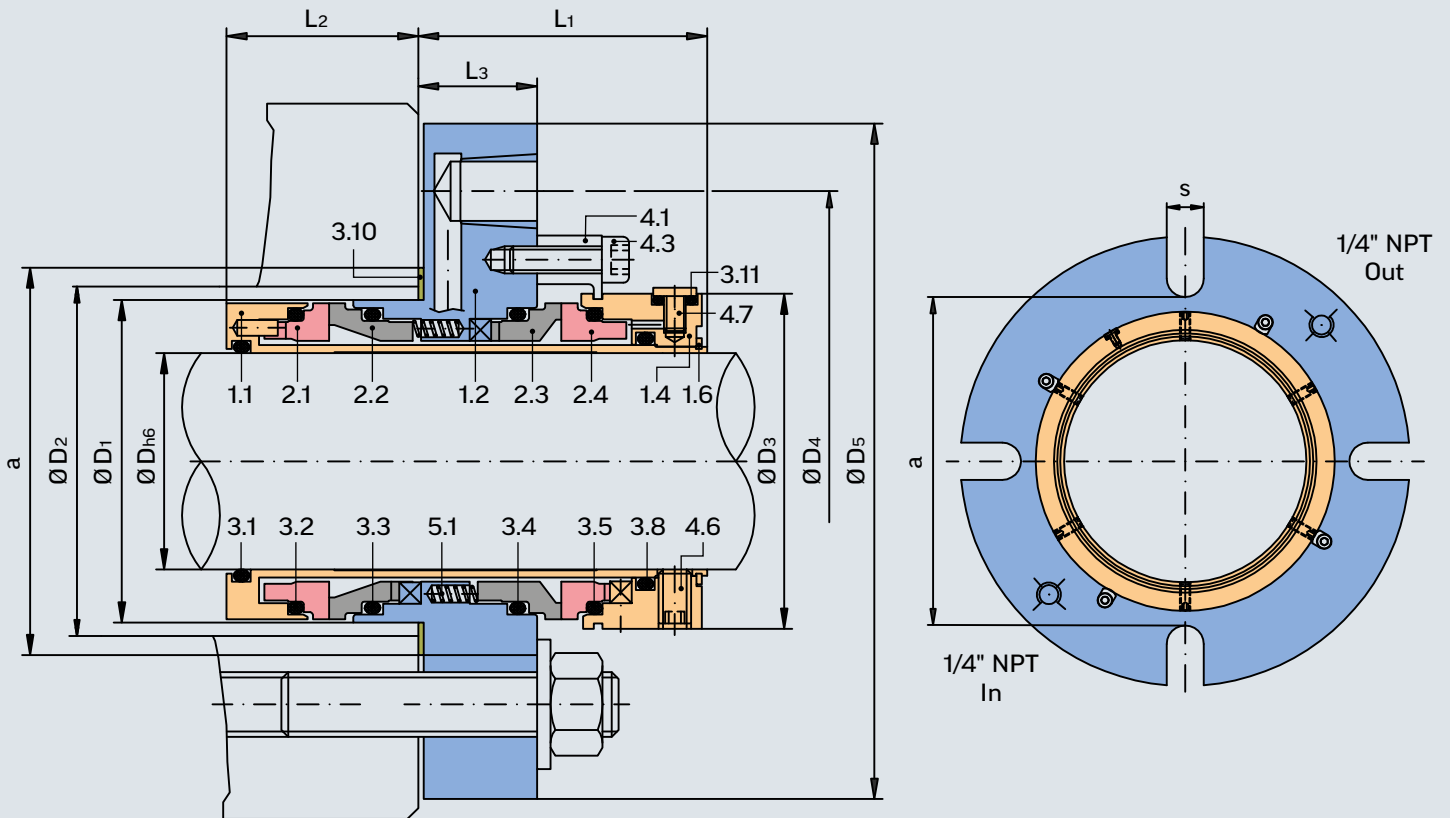
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Dimension table $\varnothing 2 \frac{7}{8} - 5 \frac{1}{4}$ inches

D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
2 $\frac{7}{8}$	3.969	3.989	4.528	3.976	6.299	7.480	4.843	0.689	233	238	238	238	238	152	007
3	4.047	4.067	4.606	4.055	6.299	7.480	4.921	0.689	234	238	238	238	238	152	007
3 $\frac{1}{8}$	4.244	4.264	4.803	4.252	6.299	7.480	5.118	0.689	236	240	240	240	240	153	007
3 $\frac{1}{4}$	4.362	4.382	4.921	4.370	7.480	7.480	5.236	0.689	236	241	241	241	241	153	007
3 $\frac{3}{8}$	4.441	4.461	5.000	4.449	7.480	8.661	5.315	0.846	237	242	242	242	242	153	007
3 $\frac{1}{2}$	4.638	4.658	5.197	4.646	7.480	8.661	5.512	0.846	239	243	243	243	243	154	007
3 $\frac{5}{8}$	4.717	4.737	5.276	4.724	7.480	8.661	5.591	0.846	239	244	244	244	244	155	007
3 $\frac{3}{4}$	4.835	4.855	5.394	4.843	7.480	8.661	5.709	0.846	240	245	245	245	245	155	007
4	5.031	5.051	5.591	5.039	7.480	8.661	5.906	0.846	242	246	246	246	246	156	007
4 $\frac{1}{8}$	4.134	4.154	5.787	5.236	8.268	9.449	6.102	0.846	243	248	248	248	248	157	007
4 $\frac{1}{4}$	4.331	4.351	5.984	5.433	8.268	9.449	6.299	0.846	244	250	250	250	250	157	007
4 $\frac{5}{16}$	4.331	4.351	5.984	5.433	8.268	9.449	6.299	0.846	244	250	250	250	250	157	007
4 $\frac{1}{2}$	4.528	4.548	6.181	5.630	8.268	9.449	6.496	0.846	246	251	251	251	251	158	007
4 $\frac{3}{4}$	4.724	4.744	6.378	5.827	8.268	9.449	6.693	0.846	248	253	253	253	253	159	007
5	5.118	5.138	6.772	6.220	9.055	10.236	7.087	0.846	250	256	256	256	256	161	007
5 $\frac{1}{8}$	5.118	5.138	6.772	6.220	9.055	10.236	7.087	0.846	251	256	256	256	256	161	007
5 $\frac{1}{4}$	5.315	5.335	6.968	6.417	9.055	10.236	7.283	0.846	252	257	257	257	257	161	007

Mechanical seal Type 321 Data sheet

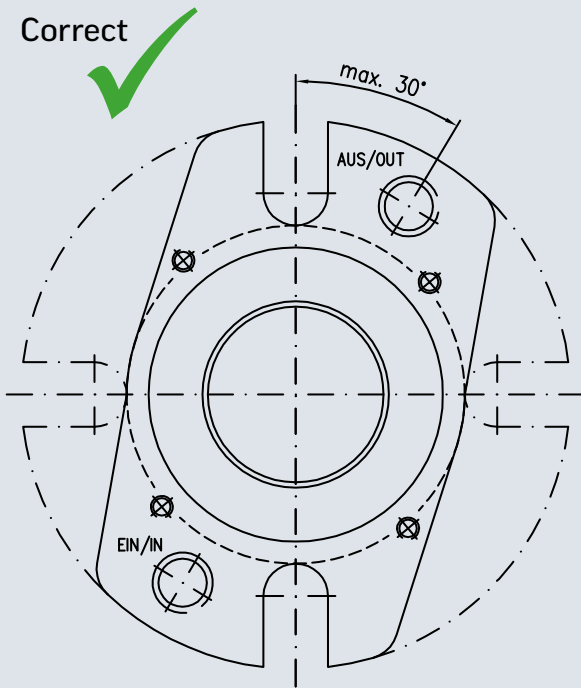


Dimension table $\varnothing 5 \frac{1}{2} - 6 \frac{1}{4}$ inches

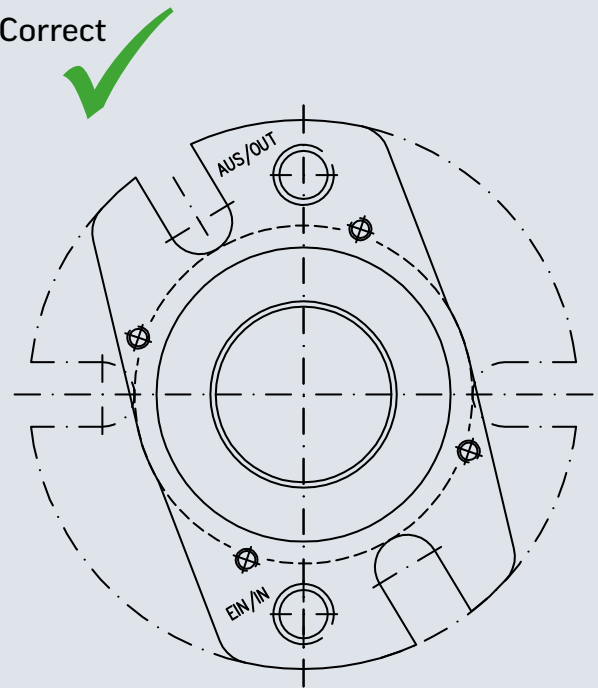
D _{h6}	D ₁	D ₂ min.	D ₂ max.	D ₃	D ₄	D ₅	a	s	O-rings DASH no.						
									3.1	3.2	3.3	3.4	3.5	3.8	3.11
5 ½	5.512	5.532	7.165	6.614	9.055	10.236	7.480	0.846	254	258	258	258	258	162	007
5 ¾	5.709	5.729	7.362	6.811	9.843	11.024	7.677	0.846	256	259	259	259	259	163	007
6	6.102	6.122	7.756	7.205	9.843	11.024	8.071	0.846	258	261	261	261	261	164	007
6 ¼	6.299	6.319	7.953	7.402	9.843	11.024	8.268	0.846	259	261	261	261	261	262	007

Mechanical seal Type 321 Installation position

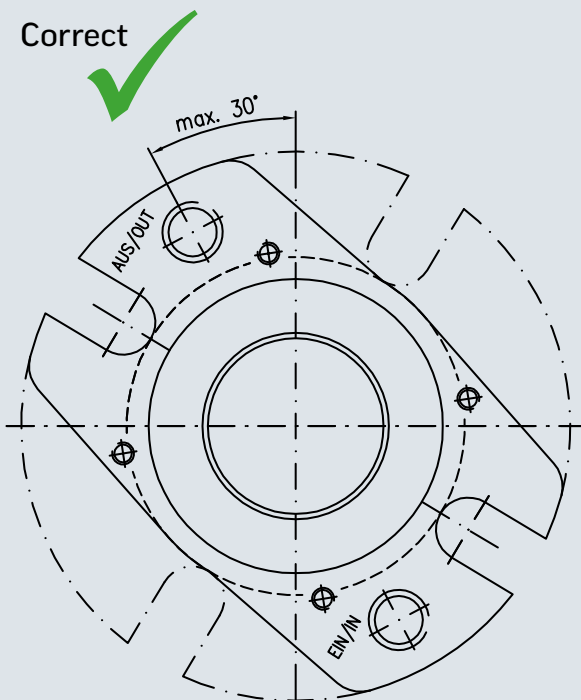
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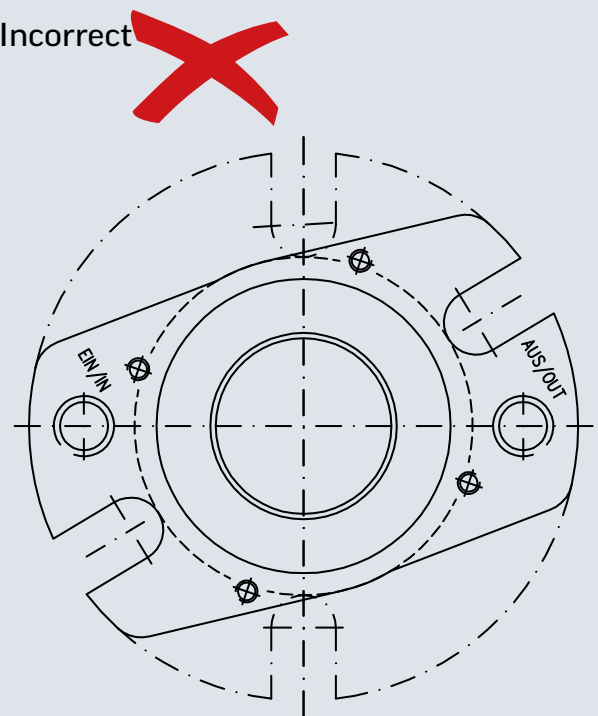
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Correct

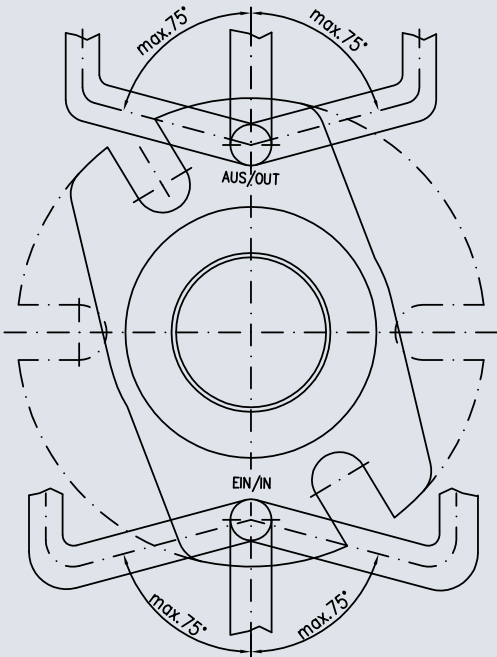


Incorrect



Mechanical seal Type 321 Pipe installation

Correct



Incorrect

