

RATO

INDUSTRIAL SOLUTIONS

Catalog

RIS Mechanical Seals

• EDITION VI



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Materials

SYMBOL	NAME	OPERATING TEMPERATURE RANGE	DESCRIPTION AND APPLICATION
MATERIALS FOR STATIONARY RINGS AND ROTARY RINGS			
TC	TUNGSTEN CARBIDE	-	HIGHLY RESISTANT TO HEAT, ABRASION, AND CORROSION. USED IN INDUSTRIAL, MUNICIPAL, AND FOOD PUMPS, ETC. IDEAL FOR OPERATING UNDER EXTREMELY DIFFICULT CONDITIONS. NOTED FOR ITS HIGH DURABILITY AND EFFICIENCY.
Q1	SILICON CARBIDE (HARD METAL)	-	VERY RESISTANT TO HEAT, ABRASION, AND CORROSION. USED IN INDUSTRIAL, COMMUNAL, AND FOOD PUMPS, ETC. MORE DURABLE AND RESILIENT THAN SILICON CARBIDE (Q2).
Q2	SILICON CARBIDE CHEMICALLY BONDED	-	RESISTANT TO HEAT, ABRASION, AND CORROSION. USED IN INDUSTRIAL, COMMERCIAL, AND FOOD PUMPS, ETC. MORE DURABLE AND RESILIENT THAN TUNGSTEN CARBIDE.
V	Ceramics	-	HARD, ECONOMICAL, ABRASION-RESISTANT FOR USE WITH CONTAMINATED WATER AND LUBRICANTS. SUSCEPTIBLE TO LARGE TEMPERATURE FLUCTUATIONS ("THERMAL SHOCK").
A	Carbon grafite antimony imprq.	-100° C DO +200° C	AN ECONOMICAL MATERIAL WITH GOOD LUBRICATION PROPERTIES. IT HAS LOWER FRICTION THAN SILICON CARBIDE (Q2).
B	Carbon graphit RESIN IMPREQ.	-	AN ECONOMICAL MATERIAL WITH GOOD LUBRICATION PROPERTIES. IT HAS LOWER FRICTION THAN ANTIMONY-IMPREGNATED CARBON (A).
F	STEEL 304	-	STAINLESS STEEL WITH ENHANCED CORROSION RESISTANCE.
G	STEEL 316	-	ACID-RESISTANT STEEL USED FOR CORROSIVE CHEMICAL COMPOUNDS.
TYPES OF ELASTOMERS USED			
P	NBR (NITRILE-BUTADIENE-RUBBER)	-30°C to +100°C up to +80°C (water, oil)	RESISTANT TO MINERAL OILS, LUBRICANTS, AND PRESSURE FLUCTUATIONS. SUSCEPTIBLE TO CORROSIVE CHEMICALS.
E	EPDM (ETYHLEN PROPYLENE RUBBER)	-40°C to +140°C Temporarily up to +180°C (gas) up to +150°C (water, steam)	RESISTANT TO FREEZING, GLYCOL COMPOUNDS, AND OTHER CHEMICALS. SUSCEPTIBLE TO MINERAL OILS.
V	VITON® (FLUOROELASTOMER)	-20°C to +200°C Temporarily up to 300°C (gas) up to +110°C (water, petroleum substances)	A RUBBER WITH A WIDE RANGE OF APPLICATIONS. RESISTANT TO MINERAL OILS, HEAT, ACETONE, AND LUBRICANTS. USED IN HYDRAULIC AND VACUUM EQUIPMENT OPERATING AT ELEVATED TEMPERATURES AND IN CORROSIVE ENVIRONMENTS.
K	KALREZ® (PERFLUOROELASTOMER)	-40°C to +260°C	VERY HIGH RESISTANCE TO AGGRESSIVE MEDIA AND HIGH TEMPERATURES. OFTEN USED IN PETROLEUM PROCESSING.

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Mechanical Seals

RIS 1 · L3 · L34

With elasomer bellows. Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +120°C

Pressure: 1,2MPa

Speed: 10 m/s

MATERIALS:

Stationary seats: Q2, V, TC

Rotary unit: A, B, Q2, TC

Secondary seal: E, P, V

Metal parts: F, G

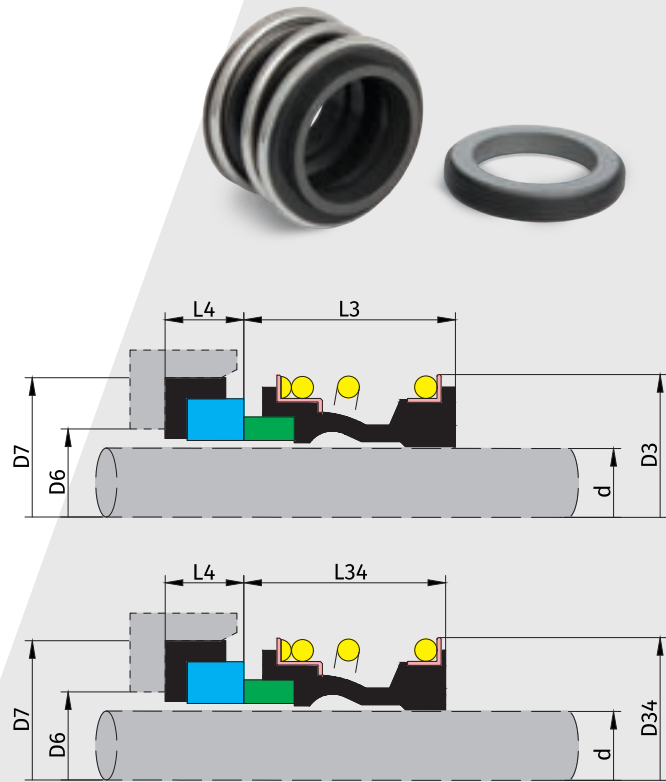
STATIONARY SEATS:

Standard: L60, O6

Alternative: L0, L10, L50, LC60, L90, O4, K0, K9

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.



SIZE	d	D3	D6	D7	L3	L4	D34	L34
10	10	22,5	17	21	14,5	6,6	20	13,4
12	12	25	19	23	15,0	6,6	22	14,4
13	13	28,5	21	25	17,0	6,6	-	-
14	14	28,5	21	25	17,0	6,6	24	14,4
15	15	28,5	23	27	17,0	6,6	25	14,4
16	16	28,5	23	27	17,0	6,6	26	14,4
17	17	32	27	33	19,5	7,5	-	-
18	18	32	27	33	19,5	7,5	32	18,5
19	19	37	29	35	21,5	7,5	-	-
20	20	37	29	35	21,5	7,5	34	18,5
22	22	37	31	37	21,5	7,5	36	18,5
24	24	42	33	39	22,5	7,5	38	18,5
25	25	42	34	40	23,0	7,5	39	18,5
28	28	49	37	43	26,5	7,5	42	24,5
30	30	49	39	45	26,5	7,5	44	25,5
32	32	53,5	42	48	27,5	7,5	46	25,5
33	33	53,5	42	48	27,5	7,5	47	25,5
35	35	57	44	50	28,5	7,5	49	26,5
38	38	59	49	56	30,0	9,0	54	29
40	40	62	51	58	30,0	9,0	56	29
43	43	65,5	54	61	30,0	9,0	59	29
45	45	68	56	63	30,0	9,0	61	29
48	48	70,5	59	66	30,5	9,0	64	31
50	50	74	62	70	30,5	9,5	66	30,5
53	53	78,5	65	73	33,0	11,0	69	29
55	55	81	67	75	35,0	11,0	71	29
60	60	88,5	72	80	38,0	11,0	80	34
65	65	93,5	77	85	40,0	11,0	85	34
68	68	96,5	81	90	40,0	11,3	88	33,7
70	70	99,5	83	92	40,0	11,3	90	33,7
75	75	107	88	97	40,0	11,3	99	40,7
80	80	112	95	105	40,0	12,0	104	40,5
85	85	120	100	110	41,0	14,0	109	38,5
90	90	127	105	115	45,0	14,0	114	38,5
95	95	132	110	120	46,0	14,0	119	38,5
100	100	137	115	125	47,0	14,0	124	38,5

RIS 1 · L31 · L32 · L33

With elastomer bellows. Unbalanced, independent of the shaft rotation direction.

OPERATING PARAMETERS:

Temperature: -20°C to +120°C

Pressure: ≤1,2 MPa

Speed: ≤10 m/s

MATERIALS:

Stationary seats: Q2, V, TC

Rotating unit: A, B, Q2, TC

Secondary seal: E, P, V

Metal parts: F, G

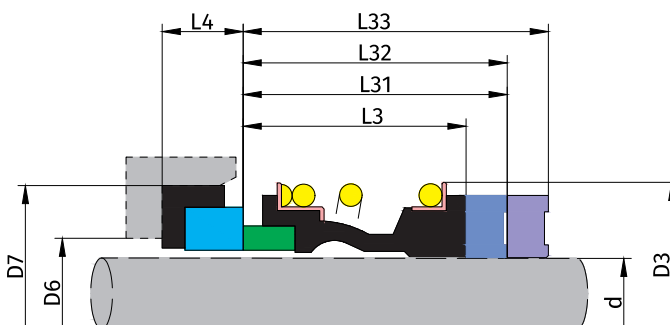
STATIONARY SEATS:

Standard: L60, O6

Alternativ: L0, L10, L50, LC60, L90, O4, K0, K9

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D3	D6	D7	L31	L32	L33	L4
10	10	22,5	17	21	25,9	25	33,4	6,6
12	12	25	19	23	25,9	25	33,4	6,6
14	14	28,5	21	25	28,4	25	33,4	6,6
15	15	28,5	23	27	28,4	25	33,4	6,6
16	16	28,5	23	27	28,4	25	33,4	6,6
18	18	32	27	33	30,0	25	37,5	7,5
19	19	37	29	35	30,0	25	37,5	7,5
20	20	37	29	35	30,0	25	37,5	7,5
22	22	37	31	37	30,0	25	37,5	7,5
24	24	42	33	39	32,5	25	42,5	7,5
25	25	42	34	40	32,5	25	42,5	7,5
28	28	49	37	43	35,0	33	42,5	7,5
30	30	49	39	45	35,0	33	42,5	7,5
32	32	53,5	42	48	35,0	33	47,5	7,5
33	33	53,5	42	48	35,0	33	47,5	7,5
35	35	57	44	50	35,0	33	47,5	7,5
38	38	59	49	56	36,0	33	46,0	9,0
40	40	62	51	58	36,0	33	46,0	9,0
42	42	65,5	-	-	36,0	41	51,0	-
43	43	65,5	54	61	36,0	41	51,0	9,0
45	45	68	56	63	36,0	41	51,0	9,0
48	48	70,5	59	66	36,0	41	51,0	9,0
50	50	74	62	70	38,0	41	50,5	9,5
53	53	78,5	65	73	36,5	41	59,0	11,0
55	55	81	67	75	36,5	41	59,0	11,0
58	58	85,5	70	78	41,5	41	59,0	11,0
60	60	88,5	72	80	41,5	41	59,0	11,0
65	65	93,5	77	85	41,5	49	69,0	11,0
68	68	96,5	81	90	41,2	49	68,7	11,3
70	70	99,5	83	92	48,7	49	68,7	11,3
75	75	107	88	97	48,7	52	68,7	11,3

RIS 3 · L3A

Unbalanced with conical spring, dependent on the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +180°C

Pressure: ≤1,0 MPa

Speed: ≤15 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: A, B, Q2

Secondary seal: E, P, V

Metal parts: F, G

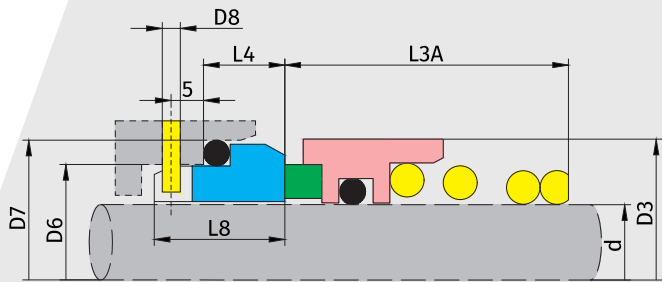
STATIONARY SEATS:

Standard: K0, K9

Alternativ: O5, O6

APPLICATION:

Clean water, steam, wastewater, oils, and other moderately corrosive liquids.



SIZE (d)	D3	D6	D7	D8	L3A	L4	L8
12	22	19	23	3	21	10	16
14	24	21	25	3	24	10	16
16	27	23	27	3	26	10	16
18	32	27	33	3	26	11,5	18
20	34	29	35	3	26	11,5	18
22	36	31	37	3	26	11,5	18
24	38	33	39	3	28,5	11,5	18
25	39	34	40	3	28,5	11,5	18
28	42	37	43	3	31	11,5	18
30	44	39	45	3	31	11,5	18
32	46	42	48	3	31	11,5	18
33	47	42	48	3	31	11,5	18
35	49	44	50	3	31	11,5	18
38	54	49	56	4	36,5	14	20,5
40	56	51	58	4	36,5	14	20,5
43	59	54	61	4	39,5	14	20,5
45	61	56	63	4	39,5	14	20,5
48	64	59	66	4	39,5	14	20,5
50	66	62	70	4	40,5	15	21,5
53	69	65	73	4	40,5	15	21,5
55	71	67	75	4	46,5	15	21,5
58	78	70	78	4	49	15	21,5
60	80	72	80	4	51	15	21,5
63	83	75	83	4	51	15	21,5
65	85	77	85	4	55	15	21,5
68	88	81	90	4	55	18	21,5
70	90	83	92	4	55	18	23
75	99	88	97	4	58	18	23
80	104	95	105	4	58	18,2	23,2

RIS 3 · L3B

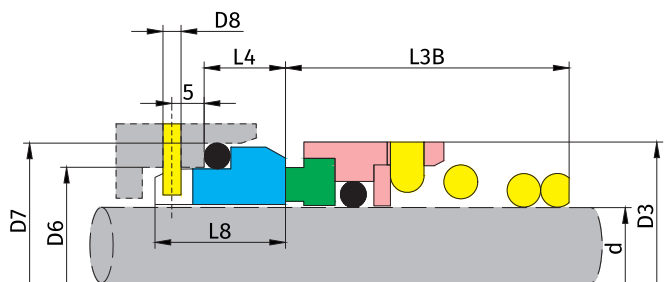
Unbalanced with conical spring, dependent on the shaft rotation direction.

OPERATING-PARAMETERS:
 Temperature : -20°C bis 80°C
 Pressure: ≤1,0 MPa
 Speed: ≤15 m/s

MATERIALS:
 Stationary seats: Q2
 Rotating unit: A, B, Q2
 Secondary seal: E, P, V
 Metal parts: F, G

STATIONARY SEATS:
 Standard: K0, K9
 Alternativ: O5, O6

APPLICATION:
 Clean water, steam, wastewater, oils, and other moderately corrosive liquids.



SIZE (d)	D3	D6	D7	D8	L3B	L4	L8
10	20	17	21	3	16,9	10	17,5
12	22	19	23	3	17,4	10	17,5
14	24	21	25	3	17,4	10	17,5
16	26	23	27	3	19,5	10	17,5
18	31	27	33	3	20,5	11,5	19,5
20	34	29	35	3	22	11,5	19,5
22	36	31	37	3	23,5	11,5	19,5
24	38	33	39	3	25	11,5	19,5
25	39	34	40	3	26,5	11,5	19,5
28	42	37	43	3	26,5	11,5	19,5
30	44	39	45	3	25	11,5	19,5
32	46	42	48	3	28,5	11,5	19,5
33	47	42	48	3	-	11,5	19,5
35	49	44	50	3	28,5	11,5	19,5
38	54	49	56	4	32,2	14	22
40	56	51	58	4	34,7	14	22
43	59	54	61	4	-	14	22
45	61	56	63	4	39,2	14	22
48	64	59	66	4	44,7	14	22
50	66	62	70	4	45,7	15	23
53	69	65	73	4	-	15	23
55	71	67	75	4	49	15	23
58	78	70	78	4	52	15	23
60	79	72	80	4	53	15	23
63	83	75	83	4	-	15	23
65	85	77	85	4	54,3	15	23
68	88	81	90	4	55,3	18	26
70	90	83	92	4	56,3	18	26
75	98	88	97	4	56,3	18	26
80	103	95	105	4	59,3	18,2	26,2

RIS 7 · RIS 7N

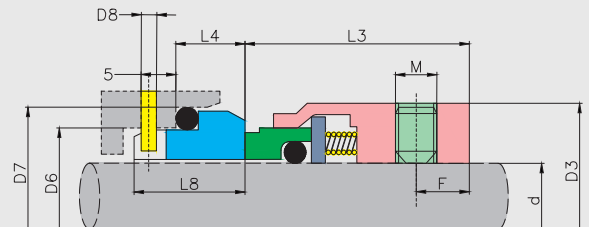
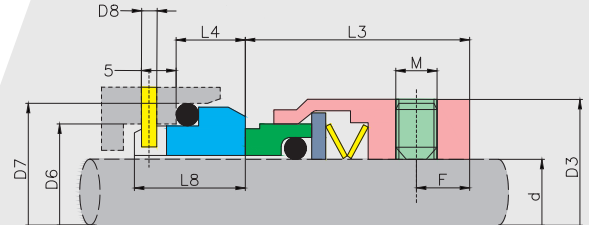
Multi-spring. Flat spring. Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:
 Temperature: -20°C bis +220°C
 Pressure: ≤1,6 MPa
 Speed: ≤20 m/s

MATERIALS:
 Stationary seats: Q1, Q2
 Rotating unit: A, B, Q2
 Secondary seal: V, K, E
 Metal parts: F, G

STATIONARY SEATS:
 Standard: K0, K9
 Alternativ: O6, L60

APPLICATION:
 Clean water, wastewater, oils, and other



SIZE				D7	D8	L3	L4	L8	F	M
14	14	25	21	25	3	25	10	17.5	6	M5
16	16	27	23	27	3	25	10	17.5	6	M5
18	18	33	27	33	3	26	11.5	19.5	7	M5
20	20	35	29	35	3	26	11.5	19.5	7	M5
22	22	37	31	37	3	26	11.5	19.5	7	M5
24	24	39	33	39	3	28.5	11.5	19.5	8	M5
25	25	40	34	40	3	28.5	11.5	19.5	8	M5
28	28	43	37	43	3	31	11.5	19.5	8	M6
30	30	45	39	45	3	31	11.5	19.5	8	M6
32	32	47	42	48	3	31	11.5	19.5	8	M6
33	33	48	42	48	3	31	11.5	19.5	8	M6
35	35	50	44	50	3	31	11.5	19.5	8	M6
38	38	55	49	56	4	31	14	22	8	M6
40	40	57	51	58	4	31	14	22	8	M6
43	43	60	54	61	4	31	14	22	8	M6
45	45	62	56	63	4	31	14	22	8	M6
48	48	65	59	66	4	31	14	22	8	M6
50	50	67	62	70	4	32.5	15	23	8	M6
53	53	70	65	73	4	32.5	15	23	8	M6
55	55	72	67	75	4	32.5	15	23	8	M6
58	58	79	70	78	4	37.5	15	23	9	M8
60	60	81	72	80	4	37.5	15	23	9	M8
63	63	84	75	83	4	37.5	15	23	9	M8
65	65	86	77	85	4	37.5	15	23	9	M8
68	68	89	81	90	4	34.5	18	26	9	M8
70	70	91	83	92	4	42	18	26	9	M8
75	75	99	88	97	4	42	18	26	10	M8
80	80	104	95	105	4	41.8	18.2	26.2	10	M8
85	85	109	100	110	4	41.8	18.2	26.2	10	M8
90	90	114	105	115	4	46.8	18.2	26.2	10	M8
95	95	119	110	120	4	47.8	17.2	25.2	10	M8
100	100	124	115	125	4	47.8	17.2	25.2	10	M8

RIS 8

Unbalanced, depending on the shaft rotation direction. Conical spring.

OPERATING-PARAMETERS:

Temperature : -20°C bis +180°C

Pressure: ≤1,0 MPa

Speed: ≤20 m/s

MATERIALS:

Stationary seats: B, Q2

Rotating unit: V, Q2

Secondary seal: V, P, E

Metal parts: F, G

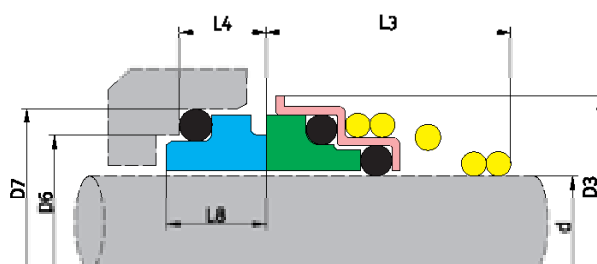
STATIONARY SEATS:

Standard: O8, O8U

Alternativ: OS6, KS9, KS16

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.



SIZE	d	D3	D6	D7	L3	L4	L8
10	10	20	14,0	18,1	15	5,5	7,0
11	11	22	16,5	20,6	18	5,5	7,0
12	12	22	16,5	20,6	18	5,5	7,0
13	13	25	19,0	23,1	22	6,0	7,5
14	14	25	19,0	23,1	22	6,0	7,5
15	15	29	21,0	26,9	22	7,0	7,5
16	16	29	21,0	26,9	23	7,0	9,2
17	17	29	21,0	26,9	23	7,0	9,2
18	18	33	25,0	30,9	24	8,0	10,0
19	19	33	25,0	30,9	25	8,0	10,0
20	20	33	25,0	30,9	25	8,0	10,0
21	21	38	30,0	35,4	25	8,0	10,0
22	22	38	30,0	35,4	25	8,0	10,0
23	23	38	30,0	35,4	27	8,0	10,0
24	24	38	30,0	35,4	27	8,0	10,0
25	25	40	33,0	38,2	27	8,5	10,0
28	28	46	38,0	43,3	29	9,0	11,0
29	29	46	38,0	43,3	30	9,0	11,0
30	30	46	38,0	43,3	30	9,0	11,0
32	32	46	38,0	43,3	30	9,0	11,0
33	33	50	45,0	53,5	39	11,5	13,0
35	35	50	45,0	53,5	39	11,5	13,0
38	38	55	52,0	60,5	39	11,5	13,0
40	40	55	52,0	60,5	39	11,5	13,0

RIS 9

Unbalanced with cylindrical spring,
independent of the shaft rotation
direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +150°C

Pressure: ≤ 0,6 MPa

Speed: ≤10 m/s

MATERIALS:

Stationary seats: Q2,V

Rotating unit: B, A, Q2

Secondary seal: V, P, E

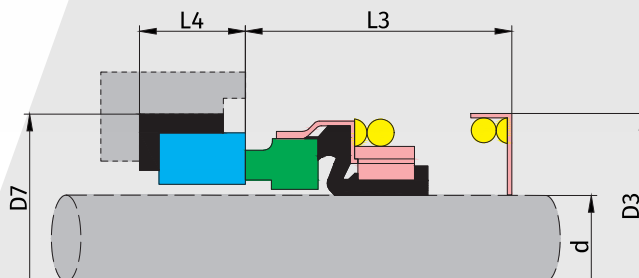
Metal parts: F, G

STATIONARY SEATS:

Standard: L90

APPLICATION:

Clean water, wastewater, oils, and other
moderately corrosive liquids.



SIZE	d	D3	D7	L3	L4
8	8	18,2	21	11,2	7
9	9	18,2	24	16,2	7
10	10	20,6	24	16,2	7
11	11	20,6	24	16,2	7
12	12	21,8	26	17,2	7
13	13	21,8	26	17,2	7
14	14	26,4	28	18,2	7
15	15	26,4	28	18,2	7
16	16	26,4	32	19,2	8
17	17	27,5	32	19,2	8
18	18	29,5	35	19,2	8
19	19	29,5	35	19,2	8
20	20	31,6	38	20,2	8
22	22	33,6	40	20,2	8
25	25	39,6	44	20,2	9
28	28	45,0	46	21,2	9
30	30	46,6	50	22,2	9
32	32	46,6	54	24,2	9
35	35	50,8	58	26,2	10
38	38	54,3	60	27,2	10
40	40	57,3	64	28,2	10
45	45	61,3	66	30,2	10
50	50	67,8	72	32,2	10

RIS 9D

Double (acting), with cylindrical spring, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature : $\leq 70^{\circ}\text{C}$

Pressure: $\leq 0,3 \text{ MPa}$

Speed: $\leq 10 \text{ m/s}$

MATERIALS:

Stationary seats: Q2

Stationary seats on the atmospheric side: V

Rotating unit: Q2

Rotating unit on the atmospheric side: B

Secondary seal: P, V

Metal parts: F

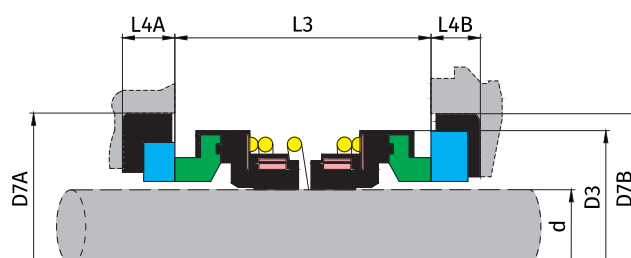
STATIONARY SEATS:

Standard: LD90

Alternativ: L60, L90, O6

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D7A	D7B	D3	L3	L4A	L4B
14A	14	28	28	24,5	26	5,5	5,5
14B	14	30	30	24,5	26	5	5
15	15	30	30	26,5	26	5	5
16A	16	28	28	26,5	26	5,5	5,5
16B	16	30	30	27	26	5	5
20A	20	35	35	34	35	7,5	7,5
20B	20	38	38	35,5	35	8	8
20C	20	38	44	35,5	35	7	7
25A	25	44	44	42	35	7	7
25B	25	44	50	42	35	7	9
30	30	45	45	48	42	7,5	7,5
35	35	50	50	54,5	43	7,5	7,5

RIS 10

With short-design elastomer bellows. Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +100°C

Pressure: ≤0,3 MPa

Speed: ≤10 m/s

MATERIALS:

Stationary seats: V, Q2

Rotating unit: B, Q2

Secondary seal: V, P, E

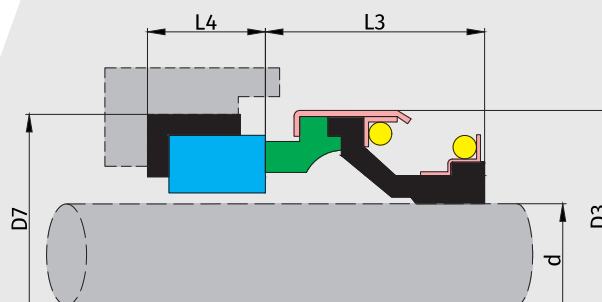
Metal parts: F

STATIONARY SEATS:

Standard: L10, L10A

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D3	D7	L3	L4
6	6	18	18/22	8	4,8/4
8	8	24	26	11	5,5/8
8S	8	20	22	11	4
10	10	24	26	11	5,5/8
11	11	24	26	11	5,5/8
12S	12	24	26	11	5,5/8
12	12	24	25/26	12,8	5/5,5/8
13	13	24	26	12,8	5,5/8
14	14	32	29,5	12,8	8
14S	14	28	28,5/29,5	12,8	7,5/8
14L	14	28	28,5	15,3	7,5
15	15	32	29,5/30	12,8	6/8
16	16	39	42	12,8	8
16S	16	32	29,5/30/38	12,8	8/6/8
17	17	39	42	12,8	8
18	18	39	42	12,8	8
19	19	39	42	12,8	8
20	20	39	42	12,8	8
20L	20	42	35	17,8	7,5
22	22	42	45	12,8	10
23	23	47	50	13,5	10
24	24	47	50	13,5	10
25	25	42	45/50	13,5	10
25L	25	47	50	13,5	10
26	26	47	50	13,5	10
27	27	47	50	13,5	10
28	28	54	57	15	10
30	30	54	57	15	10
32	32	54	57	15	10
35	35	60	63	16	10
38	38	65	68	18	12
40	40	65	68	18	12
45	45	70	73	20	12
50	50	85	88	23	15
55	55	85	88	23	15
60	60	105	110	30	15
70	70	105	110	32	15

RIS 16

Compact seal.

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+200^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s

MATERIALS:

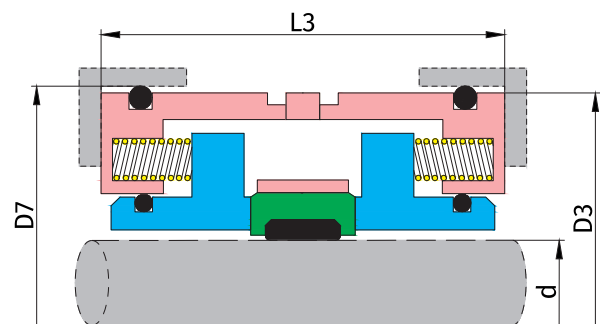
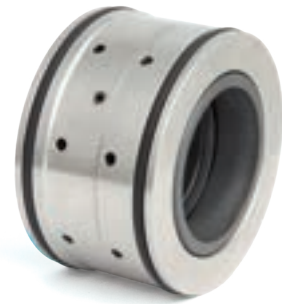
Ring: Q2, TC

Secondary seal: V

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D3	D7	L3
35	35	72	72	47
50	50	90	92	52
75	75	128	130	75

RIS 21 · L3 · L31 · L32

With elastomer bellows. Unbalanced,
independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +150°C

Pressure: ≤ 1 , 2 MPa

Speed: ≤ 1 0 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: B, A, Q2

Secondary seal: V, E

Metal parts: F, G

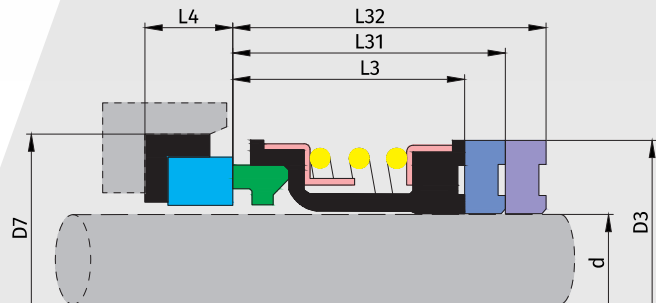
STATIONARY SEATS:

Standard: LC60, OC6

Alternativ: O6, L60

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D3	D7	L3	L31	L32	L4
10	10	20	21	15	27,5	35	5
12	12	22	23	15	26,5	34	6
14	14	24	25	15	29	34	6
15	15	25	26	15	29	34	6
16	16	26	27	15	29	34	6
18	18	32	33	20	31,5	39	6
20	20	34	35	20	31,5	39	6
22	22	36	37	20	31,5	39	6
24	24	38	39	20	34	44	6
25	25	39	40	20	34	44	6
28	28	42	43	26	36,5	44	6
30	30	44	45	26	35,5	43	7
32	32	46	48	26	35,5	48	7
33	33	47	48	26	35,5	48	7
35	35	49	50	26	34,5	47	8
38	38	54	56	30	37	47	8
40	40	56	58	30	37	47	8
43	43	59	61	30	37	52	8
45	45	61	63	30	37	52	8
48	48	64	66	30	35	50	10
50	50	66	70	30	37,5	50	10
53	53	69	73	30	37,5	60	10
55	55	71	75	30	37,5	60	10
58	58	78	78	33	42,5	60	10
60	60	80	80	33	40,5	58	12
63	63	83	83	33	40,5	58	12
65	65	85	85	33	40,5	68	12
68	68	88	90	33	40,5	68	12
70	70	90	92	33	48	68	12
85	85	109	110	40	47,5	77,5	13

RIS 31

Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -20°C bis +200°C

Pressure: ≤ 1,7 MPa

Speed: ≤ 25 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: B, A, Q2

Secondary seal: V, P, E

Metal parts: F, G

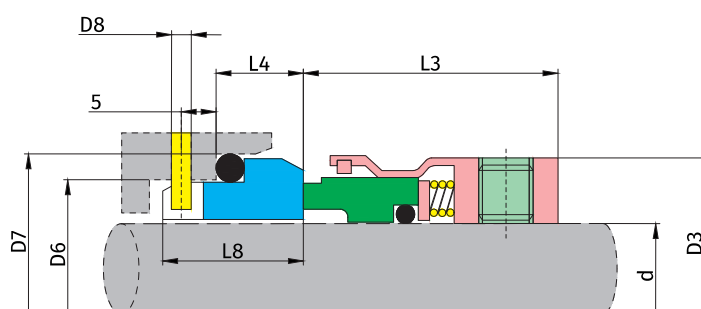
STATIONARY SEATS:

Standard: K9

Alternativ: O6

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	d	D3	D6	D7	L3	L4	L8
14	14	24	21	25	23,0	10	17,5
16	16	26	23	27	23,0	10	17,5
18	18	32	27	33	24,0	11,5	19,5
20	20	34	29	35	24,0	11,5	19,5
22	22	36	31	37	24,0	11,5	19,5
24	24	38	33	39	26,7	11,5	19,5
25	25	39	34	40	27,0	11,5	19,5
28	28	42	37	43	30,0	11,5	19,5
30	30	44	39	45	30,5	11,5	19,5
32	32	46	42	48	30,5	11,5	19,5
33	33	47	42	48	30,5	11,5	19,5
35	35	49	44	50	30,5	11,5	19,5
38	38	54	49	56	32,0	14	22
40	40	56	51	58	32,0	14	22
43	43	59	54	61	32,0	14	22
45	45	61	56	63	32,0	14	22
48	48	64	59	68	32,0	14	22
50	50	66	62	70	34,0	15	23
53	53	69	65	73	34,0	15	23
55	55	71	67	75	34,0	15	23
58	58	78	70	78	39,0	15	23
60	60	80	72	80	39,0	15	23
63	63	83	75	83	39,0	15	23
65	65	85	77	85	39,0	15	23
68	68	88	81	90	39,0	18	26
70	70	90	83	92	45,5	18	26
75	75	95	88	97	45,5	18	26
80	80	104	95	105	45,0	18,2	26
85	85	109	100	110	45,0	18,2	26
90	90	114	105	115	50,0	18,2	26
95	95	119	110	120	50,0	18,2	26
100	100	124	115	125	50,0	18,2	26

RIS 34

Unbalanced, regardless of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature : 20°C bis +180°C Pressure: ≤ 2,5 MPa

Speed: ≤15 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: B, A, Q2

Secondary seal: V, P, E

Metal part: F, G

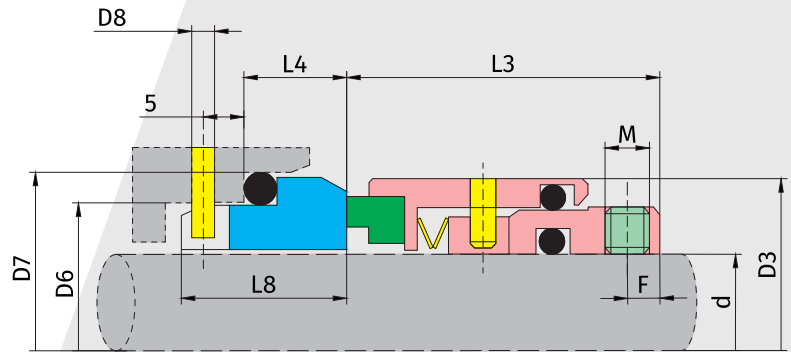
STATIONARY SEATS:

Standard: K9

Alternativ: O4, K0

APPLICATION:

Clean water, wastewater, oils, and mildly aggressive chemicals.



SIZE	d	D3	D6	D7	D8	L3	L4	L8	F	M
18	18	32	27	33	3	30,5	11,5	19,5	3,0	M4
20	20	34	29	35	3	30,5	11,5	19,5	3,0	M4
22	22	36	31	37	3	30,5	11,5	19,5	3,0	M4
24	24	38	33	39	3	33,0	11,5	19,5	3,5	M5
25	25	39	34	40	3	33,0	11,5	19,5	3,5	M5
28	28	42	37	43	3	35,5	11,5	19,5	3,5	M5
30	30	44	39	45	3	35,5	11,5	19,5	3,5	M5
32	32	46	42	48	5	32,2	11,5	19,5	3,5	M5
33	33	47	42	48	3	35,5	11,5	19,5	3,5	M5
35	35	49	44	50	3	35,5	11,5	19,5	3,5	M5
38	38	54	49	56	5	34,0	14	22	4,0	M5
40	40	56	51	58	4	37,0	14	22	4,0	M5
43	43	59	54	61	4	37,0	14	22	4,0	M5
45	45	61	56	63	4	37,0	14	22	4,0	M5
48	48	64	59	66	4	37,0	14	22	4,0	M5
50	50	66	62	70	4	38,0	15	23	4,5	M6
53	53	69	65	73	4	38,0	15	23	4,5	M6
55	55	71	67	75	4	38,0	15	23	4,5	M6
58	58	78	70	78	4	42,0	15	23	4,5	M6
60	60	80	72	80	4	42,0	15	23	4,5	M6
63	63	83	75	83	4	42,0	15	23	4,5	M6
65	65	85	77	85	4	42,0	15	23	4,5	M6
68	68	88	81	90	4	41,5	18	26	4,5	M6
70	70	90	83	92	4	48,5	18	26	5,0	M6
75	75	99	88	97	4	48,5	18	26	5,5	M8
80	80	104	95	105	4	48,5	18,2	26	5,5	M8
85	85	109	100	110	4	48,5	18,2	26	5,5	M8
90	90	114	105	115	4	52,0	18,2	26	5,5	M8
95	95	119	110	120	4	52,0	18,2	26	5,5	M8
100	100	124	115	125	4	52,0	18,2	26	5,5	M8

RIS 34SL

Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature : 20°C to +180°C

Pressure: ≤2,5 MPa

Speed: ≤15 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: Q2

Secondary seal: V

Metal part: F, G

APPLICATION:

Clean water, wastewater, oils, and mildly aggressive chemicals.



RIS 34S

Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperatura: -20°C bis +180°C

Pressure: ≤2,5 MPa

Speed: ≤15 m/s

MATERIALS:

Stationary seats: Q2

Rotating unit: B, A, Q2

Secondary seal: V, P, E

Metal part: F, G

APPLICATION:

Clean water, wastewater, oils, and mildly aggressive chemicals.



ORIGINAL CONFIGURATIONS ("MEDIUM" / "OIL"):

32 mm / 38 mm

38 mm / 50 mm

50 mm / 65 mm

65 mm / 65 mm

RIS 51

Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature : -20°C bis +150°C

Pressure: ≤3,0 MPa

Speed: ≤15 m/s

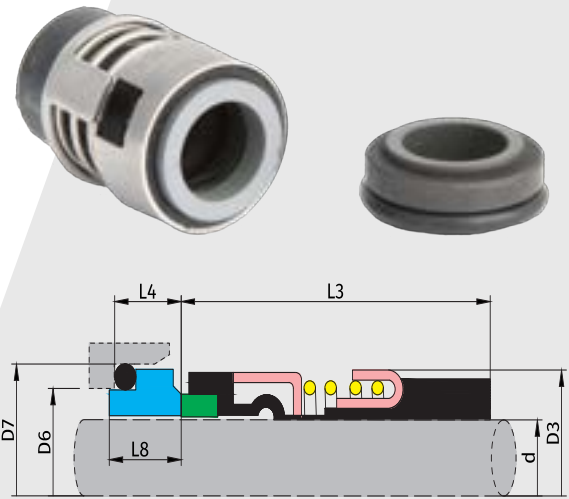
MATERIALS:

Stationary seats: V, Q2, B, A Rotating unit: B, A, Q2

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and mildly aggressive chemicals.



SIZE	D3	D6	D7	L3	L4	L8
12	22	19	23	31	8,5	9
16	26	23	27	32	8,5	9

RIS 52

Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperatur: -20°C bis +180°C

Pressure: ≤3,0 MPa

Speed: ≤15 m/s

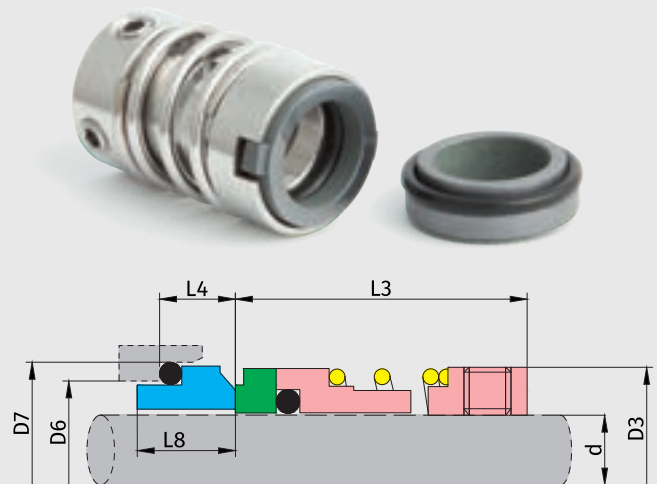
Stationary seats: V, Q2, B, A

Rotating part: B, A, Q2

Metal part: F, G

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



SIZE	D3	D6	D7	L4	L3	L8
12	22	19	23	8,5	31	9
16	26	23	27	8,5	32	9

RIS 53

Compact seal.

OPERATING-PARAMETERS:

Temperature: -30°C bis +180°C

MATERIALS:

Stationary seats: Q2, B

Rotating unit: Q2

Secondary : V, E

Metal part: F, G

AVAILABLE SIZES:

12mm

16mm

22 mm



RIS 54

Compact seal.

OPERATING-PARAMETERS:
Temperature: -30°C bis +180°C

MATERIALS:
Stationary seats: Q2, B
Rotating unit: Q2
Secondary seal: V, E
Metal parts: F, G

AVAILABLE SIZES:
12mm
16mm
22mm



RIS 55

Unbalanced, Independent of the shaft rotation direction.

OPERATING-PARAMETERS:
Temperature: -30°C bis +180°C

MATERIALS:
Stationary seats: TC, B
Rotating unit: Q2
Secondary seal: E
Metal parts: F, G

AVAILABLE SIZES:
12mm
16mm
22mm



RIS 56

Unbalanced.

OPERATING-PARAMETERS:
Temperature:
-30°C bis +150°C

MATERIALS:
Stationary seats: Q2
Rotating unit: Q2
Secondary seal: E
Metal parts: F, G

AVAILABLE SIZES:
12 mm



RIS 57

Unbalanced.

OPERATING-PARAMETERS:
Temperature:
-30°C bis +150°C

MATERIALS:
Stationary seats: Q2
Rotating unit: Q2
Secondary seal: E
Metal parts: F, G

AVAILABLE SIZES:
12mm
16 mm



RIS 66

With elastomer bellows. Unbalanced, independent of the shaft rotation direction.

OPERATING-PARAMETERS:

Temperature: -30°C bis +100°C

Pressure: 0,6 MPa

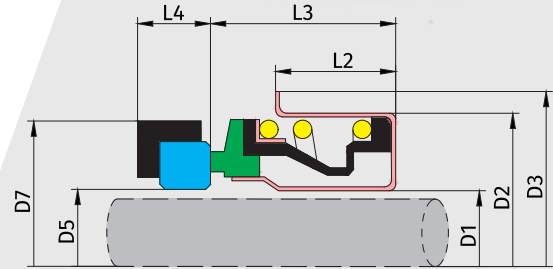
STATIONARY PART:

Standard: L60

Alternativ: L10, L0

APPLICATION:

Clean water, wastewater, oils, and other moderately corrosive liquids.



MODELL	SIZE	D1	D2	D3	D5	D7	L3	L2	L4
10	10	11	24	29	12	23	13	7	4
12S	12	14.2	28.55	32	14	25	13.2	8	5
12M	12	14.2	30	35	15	24/23	10	8	5
12L	12	14.2	33.4	38	14	25	11.3	6.7	5
16	16	18.2	36.45	41.5	18	31	11.8	8	5
16L	16	18.2	38.1	43.5	18	31	11.8	8	5
16LD	16	18.2	38.1	43.5	18	31	11.8	8	5
20S	20	21.2	38	43.8	21	35	11	9.5	5
20	20	21.2	40	43.8	21	35	11	9.5	5
25S	25	26.4	46	51	26	44	15	10	7
25M	25	26.4	47	51	26	44	13	12	7
25L	25	26.4	52	57	27	48	13	12	7
30	30	31	52	57	32	48	16	11	8

RIS 86

OPERATING-PARAMETERS:

Temperatur: -20°C bis +140°C

Pressure: ≤1,0 MPa

Speed: ≤15 m/s

MATERIALIEN:

Stationary seats: Q2, B

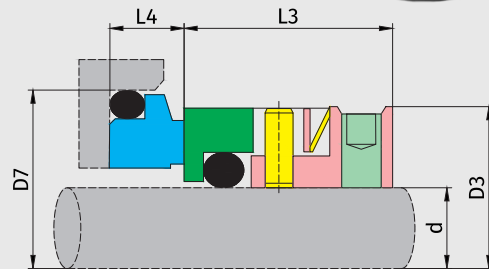
Rotating unit: Q2, SS

Secondary seals: V, E

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and food industry media.



SIZE	D7	D3	L4	L3
20	35	32	7,5	19,1
28	42	40	7,6	19,1
35	47,6	45,5	7,6	19,1
50	63,9	61,9	8,1	21,1

RIS MTH

Dual seal.

OPERATING-PARAMETERS:

Temperature : -20°C bis +180°C

Pressure: $\leq 1,0$ MPa

Speed: ≤ 15 m/s

MATERIALS:

Stationary seats: Q

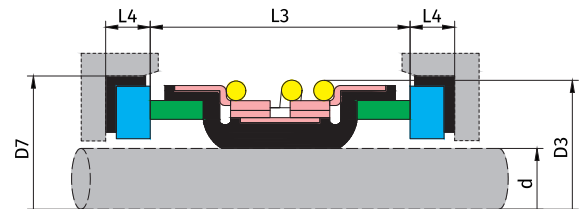
Rotating unit: Q, A

Secondary seal: V

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils,
and other mildly corrosive
liquids.



SIZE	D3	D7	L3	L4
18	33	33	26,8	4,6

RIS BSK



OPERATING-PARAMETERS:

Temperature: -20°C bis +150°C

Pressure: $\leq 1,0$ MPa

Speed: ≤ 15 m/s

MATERIALS:

Stationary seats: Q

Rotating unit: Q

Secondary seal: V

Metal parts: F, G

AVAILABLE SIZES:

22mm

33mm

55mm

RIS LWR



OPERATING-PARAMETERS:

Temperature: -20°C bis +150°C

Pressure: $\leq 1,0$ MPa

Speed: ≤ 15 m/s

MATERIALS:

Stationary seats: Q

Rotating unit: B

Secondary seal: E

Metal parts: F, G

AVAILABLE SIZES:

22 mm

RIS F

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s

MATERIALS:

Stationary seats: TC

Rotating unit: A, TC

Secondary seal: V

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.

AVAILABLE SIZES:

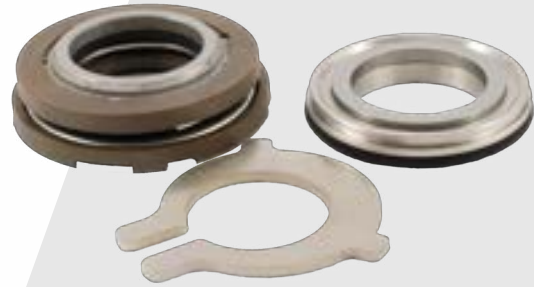
20 mm

22 mm

25 mm

35 mm

OEM-VERSION



NEW DESIGN-VERSION



IMBUS-VERSION



MODELL	STATIONARY SEATS	d	D3	D7
3057 / 3068 / 3085	O-RING	20	45	36
2102	"L" type with position determination	22	45	46
3102	„L”	25	54	42
3127	„L”	35	65	60
3152	O-RING	45	67/60	69/65
3201	O-RING / „L”	60	84/92	80/85
3300	O-RING	80/90	106/121	101/115

RIS F 2201



RIS F 3152



RIS F 3201



RIS F CT

Compact seal.

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s

MATERIALS:

Stationary seats: TC

Rotating unit: A, TC

Secondary seal: V

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.



MODELL	D
2610 / 2620 / 2630 / 2640 / 4610 / 4620	20
2660 / 4630 / 4640	25
2670 / 3153 / 4451	35
3171 / 4501 / 4650* / 4660* / 5100*	45
3202 / 4670* / 4680* / 5100.300 & 310 / 5150.300 & 310	60
3301 / 5150.350 & 360	90

RIS F
2102



RIS F
2720



RIS F
2125



RIS F
5560



RIS F
2400



RIS MMD

OPERATING-PARAMETERS:
Temperature: $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$
Pressure: $\leq 2\text{ MPa}$
Speed: $\leq 15\text{ m/s}$



RIS ZMD

OPERATING-PARAMETERS:
Temperature: $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$
Pressure: $\leq 2\text{ MPa}$
Speed: $\leq 15\text{ m/s}$



RIS SAR

OPERATING-PARAMETERS:
Temperatur: $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$
Pressure: $\leq 1,2\text{ MPa}$
Speed: $\leq 20\text{ m/s}$

AVAILABLE SIZES:
16 mm
18 mm
25 mm
35 mm



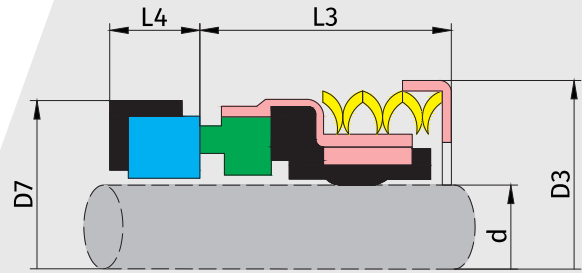
RIS SBA 9

OPERATING-PARAMETERS:

Temperature: $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s



SIZE	D3	D7	L4	L3
50	67	72	10	20
65	86,5	85	11	27

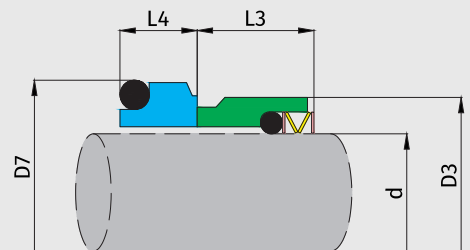
RIS SBA

OPERATING-PARAMETERS:

Temperature: $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s



SIZE	D7	D3	L4	L3
20	52	31	6	13,5
48	67	62	14,5	15,8
65	86	79	15,3	17,8
80	104	98	16,3	19,5
90	114	105	16,3	19,5
100	123	116	17,1	21

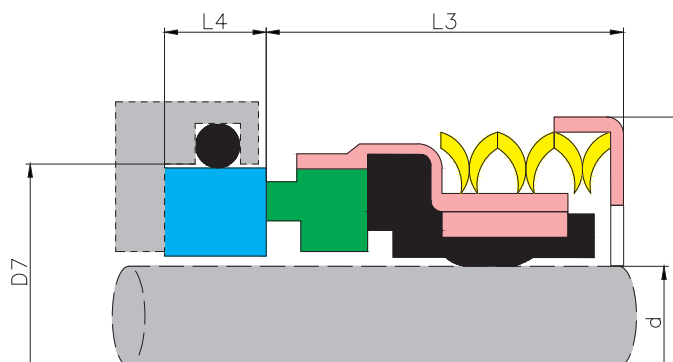
RIS SBA 9 / OB5

OPERATING-PARAMETERS:

Temperature: $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s



SIZE	D7	D3	L4	L3
32	46,5	47,6	5,4	20
40	56	57,9	6,8	20
48	67	62	14,5	15,6
55	72	73,4	7,9	20
60	75	80,5	10,9	21

RIS 85N

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ to $+220^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

APPLICATION:

Hot oils, chemicals used in the chemical industry.



RIS DW

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ to $+180^{\circ}\text{C}$

Pressure: ≤ 2 MPa

Speed: ≤ 20 m/s

APPLICATION:

Clean water, wastewater, oils, and food industry media.



RIS GES

OPERATING-PARAMETERS:
 Temperature : $\leq -40^{\circ}\text{C}$ bis $+150^{\circ}\text{C}$
 Pressure: $\leq 2,5$ MPa
 Speed: ≤ 20 m/s

APPLICATION:
 Wastewater, contaminated water.

AVAILABLE SIZES:
 22 mm
 32 mm



RIS SBA PX

OPERATING-PARAMETERS:
 Temperature : $\leq -40^{\circ}\text{C}$ bis $+150^{\circ}\text{C}$
 Pressure: $\leq 2,5$ MPa
 Speed: ≤ 20 m/s

APPLICATION:
 Wastewater, contaminated water.

AVAILABLE SIZES:
 25 mm



OIL SEAL



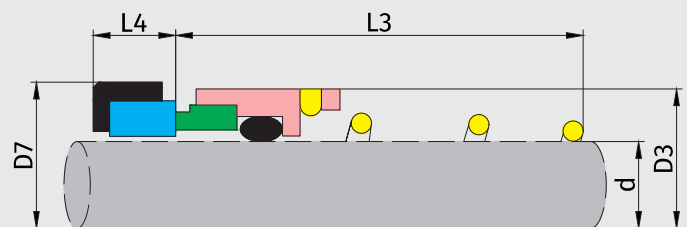
Drain seal

RIS 3K

OPERATING-PARAMETERS:
 Temperatur: $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$
 Pressure: $\leq 1,2$ MPa
 Speed: ≤ 20 m/s

MATERIALS:
 Stationary seats: Q2
 Rotating unit: A
 Secondary seals: V
 Metal parts: F, G

APPLICATION:
 Clean water, wastewater, oils,
 and other mildly corrosive
 liquids.



SIZE	D7	D3	L4	L3
28	43	40	7,5	42,5
33	48	47	7,5	44
38	56	53	9	46
48	66	64	9	51

RIS T

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+180^{\circ}\text{C}$

Pressure: $\leq 1,2$ MPa

Speed: ≤ 20 m/s

MATERIALS:

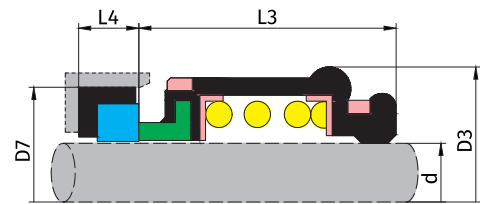
Stationary seats: TC, Q2

Rotating unit: TC

Metal parts: F, G

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.



SIZE	D3	D7	L4	L3
28,60	50,80	44,45	10,58	28,58
38,10	60,33	53,98	11,10	34,93
50,80	74,50	69,85	12,70	45,25

RIS BRG

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+200^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

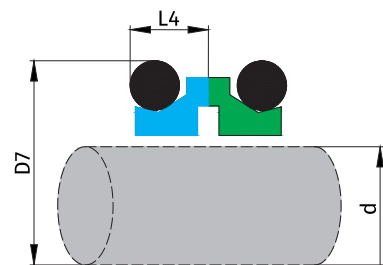
Stationary seats: Q2

Rotating unit: Q2

Secondary seals: V

APPLICATION:

Clean water, wastewater, oils, and other mildly corrosive liquids.



SIZE	D7	L4
33	45,5	6,5
45	62,6	9
70	82	9

RIS SH

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+200^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

Stationary seats A, B

Rotating unit: G

Secondary seals: E

APPLICATION:

Clean water, vacuum pumps, media used in the food industry.

AVAILABLE SIZES:

19mm

28mm

38mm

43mm



RIS ALF TC

OPERATING-PARAMETERS:

Temperatur: $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

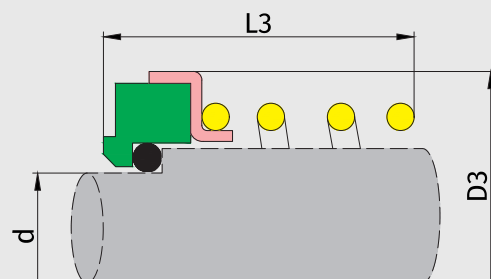
Stationary seats: SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place), media used in the food industry.



SIZE	D3	L3
19,1	47	39,5
28,6	54	39
38,1	66,6	33,5

RIS ALF F

MATERIALIEN:

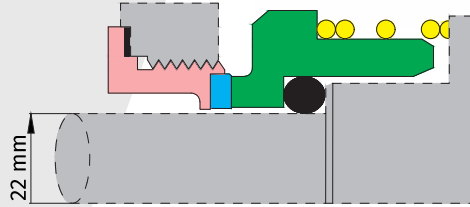
Stationary seats: SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



RIS ALF L

MATERIALS:

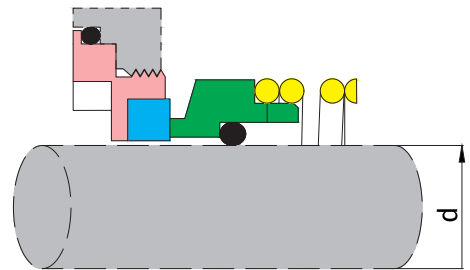
Stationary seats: SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



AVAILABLE SIZES:

32mm

42 mm

RIS ALF AL

OPERATING-PARAMETERS:

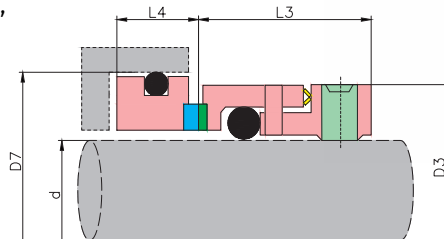
Temperatur: $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

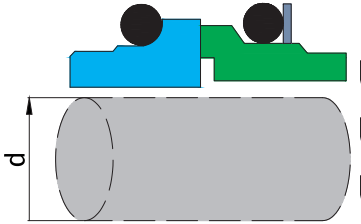
APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE	D7	D3	L4	L3
30	41,7	41	14	22,2
34,9	47,6	46,75	15,8	20,6
50,8	66,6	65,4	12	23,8
76,2	95,2	98,6	12	39,7

RIS ALF P



RIS ALF LD

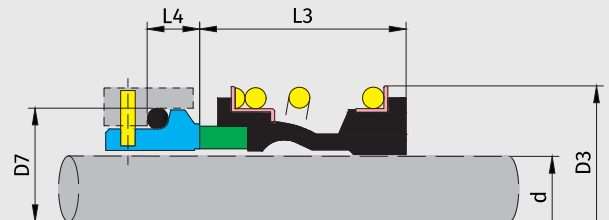


RIS ALF A

OPERATING-PARAMETERS:
 Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$
 Pressure: $\leq 2,5$ MPa
 Speed: ≤ 20 m/s

MATERIALS:
 Stationary seats: SS, Q2
 Rotating unit: B
 Secondary seals: E

APPLICATION:
 Clean water, CIP (Clean-in-Place),
 media used in the food industry.



SIZE	D3	D7	L4	L3
40	58	58	14	30
53	76	73	15	33

RIS TUH A

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

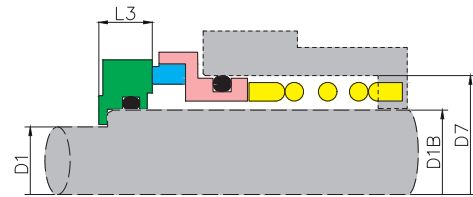
Stationary seats: S, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE (D1B)	D1	D7	L3
16	12	30	7
24	18	50	11
25	21	50	11
35	28	50	11

RIS TUH T

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

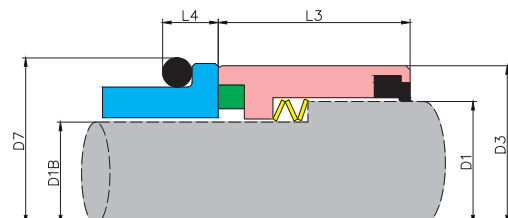
Stationary seats: SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE (D1)	D1B	D7	L4	D3	L3
30	25	40	7	39	24,5
35	30	45	7	44	25,5

RIS APP

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

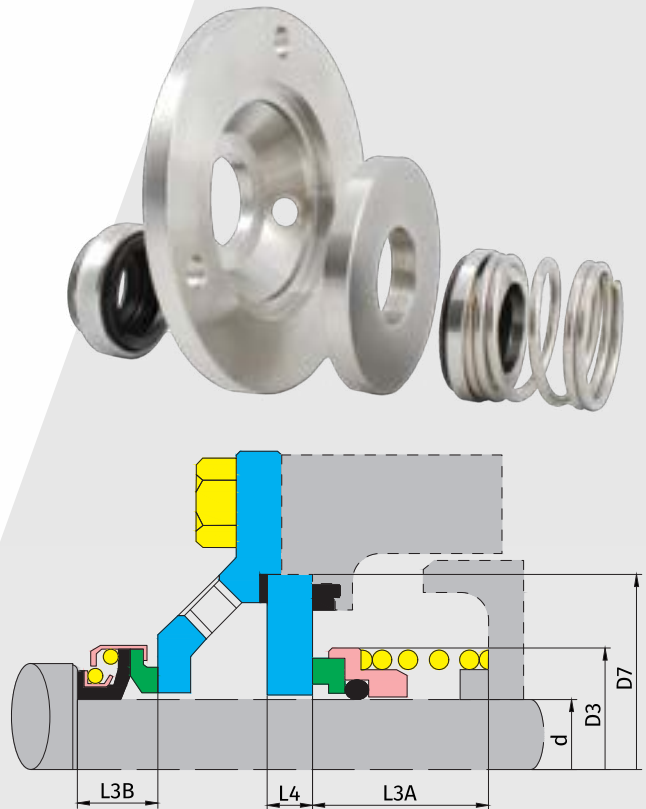
Stationary seats SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE	D3	D7	L4	L3A	L3B
25,4	41,2	68,2	7,8	25,4	14
38,1	55,7	80,1	9	33,3	17

RIS APW

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ to $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

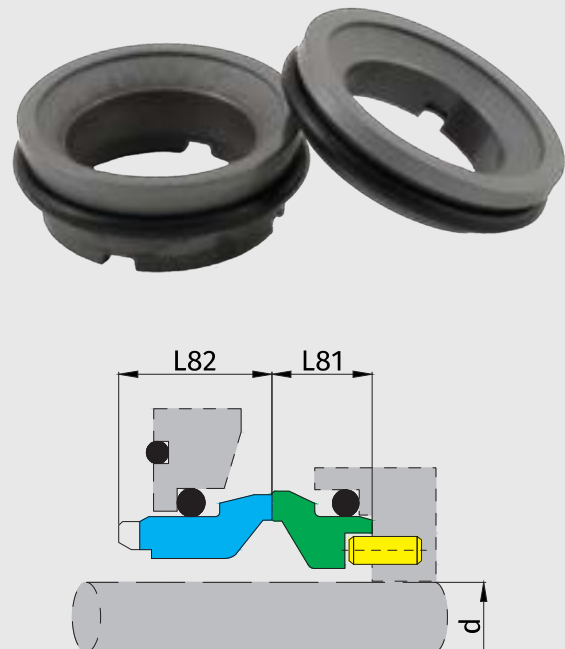
Stationary seats: SS, Q2

Rotating unit: B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE	L81	L82
25	11,5	17,5
35	11,5	17,5

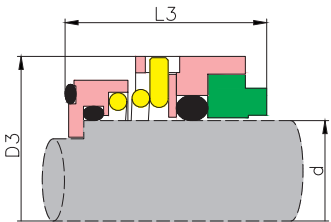
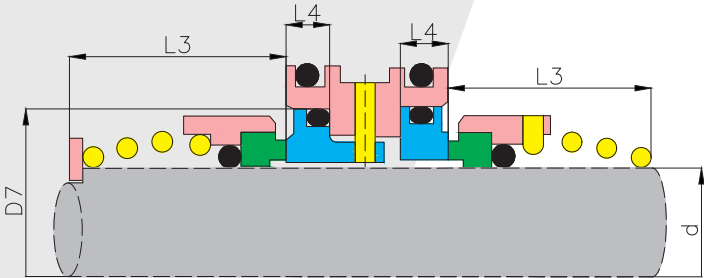
RIS FS1



RIS FS2



RIS FS1N



OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$
 Pressure: $\leq 2,5$ MPa
 Speed: ≤ 20 m/s

MATERIALS:

Stationary seats: SS, Q2, B, V
 Rotating unit: SS, Q2, B
 Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
 media used in the food industry.



SIZE	L3	D7	L4
22	20	41,2	7,5
30	22	48	7,6
35	26	55,5	8,6

RIS FS OD-35



RIS FS OD-30



RIS FS OD-22



RIS FSM1



RIS FSM2



RIS FSM3



APPLICATION:

Clean water, CIP (Clean-in-Place), media used in the food industry

AVAILABLE SIZES:

22 mm

RIS INX SLR

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

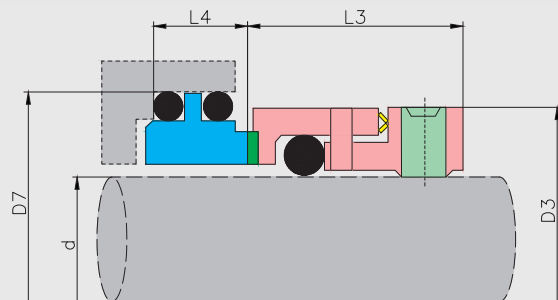
Stationary seats: S, Q2

Rotating unit: Q2, B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place), media used in the food industry.



SIZE	D7	D3	L4	L3
28	45	39	12	19,1
35	53	45,5	12	19,1
50	70	63,5	12	23
65	90/92	82,3	14	25,8

RIS INX P

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALS:

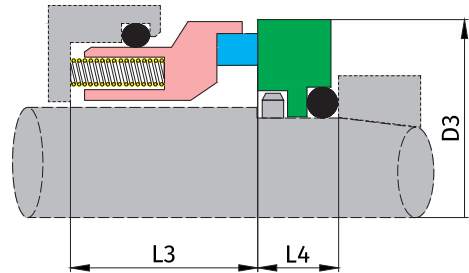
Stationary seats: S, Q2

Rotating unit: Q2, B

Secondary seals: E

APPLICATION:

Clean water, CIP (Clean-in-Place),
media used in the food industry.



SIZE	L3	D3	L4
15,8	26	44,5	10,5
25,4	26	53,5	10
38,1	31	74	15,5

RIS H12

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+200^{\circ}\text{C}$

Pressure: ≤ 2 MPa

Speed: ≤ 15 m/s



RIS SGM

OPERATING-PARAMETERS:

Temperature : $\leq -40^{\circ}\text{C}$ bis $+140^{\circ}\text{C}$

Pressure: $\leq 2,5$ MPa

Speed: ≤ 20 m/s

MATERIALIEN:

Stationary seats: TC

Rotating unit: TC

Secondary seals: V

APPLICATION:

Contaminated water, wastewater,
oils.



Stationary seats

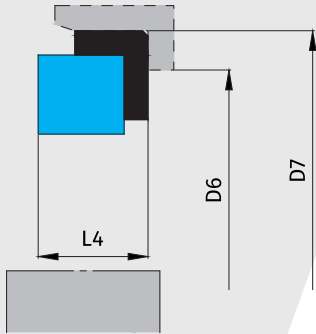
L60

„L”-type

MATERIALS:

V / Q2

Viton® / EPDM / NBR



SIZE	D6	D7	L4
10	17	21	6,6
12	19	23	6,6
14	21	25	6,6
15	23	27	6,6
16	23	27	6,6
18	27	33	7,5
20	29	35	7,5
22	31	37	7,5
24	33	39	7,5
25	34	40	7,5
28	37	43	7,5
30	39	45	7,5
32	42	48	7,5
33	42	48	7,5
35	44	50	7,5
38	49	56	9
40	51	58	9
43	54	61	9
45	56	63	9
48	59	66	9
50	62	70	9,5
53	65	73	11
55	67	75	11
58	70	78	11
60	72	80	11
63	75	83	11
65	77	85	11
68	81	90	11,3
70	83	92	11,3
75	88	97	11,3
80	95	105	12
85	100	110	14
90	105	115	14
95	110	120	14
100	115	125	14

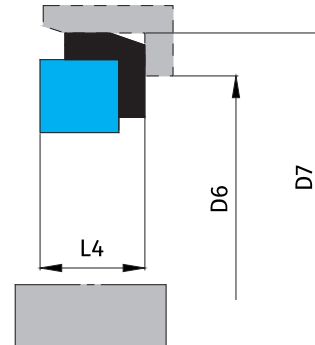
LC60

„L”-type

MATERIALS:

Q2

Viton® / EPDM



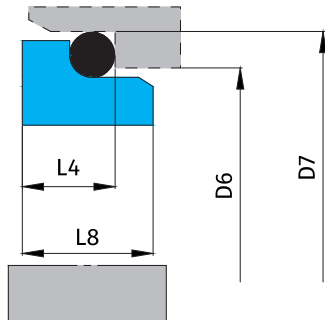
SIZE	D6	D7	L4
10	15	21	5
12	17	23	6
14	19	25	6
15	20	26	6
16	23	27	6
18	25	33	6
20	27	35	6
22	29	37	6
24	31	39	6
25	32	40	6
28	35	43	6
30	37	45	7
32	40	48	7
33	40	48	7
35	42	50	8
38	47	56	8
40	49	58	8
43	52	61	8
45	54	63	8
48	57	66	10
50	60	70	10
53	63	73	10
55	65	75	10
58	68	78	10
60	70	80	12
63	73	83	12
65	75	85	12
68	79	90	12
70	81	92	12
75	86	97	12
80	92	105	13
85	97	110	13
90	102	115	13
95	117	120	13
100	122	125	13

O4

„O-ring“-type

MATERIALS:

Q2/ Viton® / EPDM / NBR



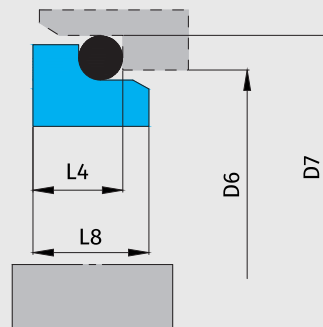
SIZE	D6	D7	L4	L8
10	15,5	19,2	6,6	7,5
12	17,5	21,6	5,6	6,5
14	20,5	24,6	5,6	6,5
15	20,5	24,6	6,6	7,5
16	22	28	7,5	8,5
18	24	30	8	9
20	29,5	35	7,5	8,5
22	29,5	35	7,5	8,5
24	32	38	7,5	8,5
25	32	38	7,5	8,5
28	36	42	9	10
30	39,2	45	10,5	11,5
32	42,2	48	10,5	11,5
33	44,2	50	11	12
35	46,2	52	11	12
38	49,2	55	10,3	11,3
40	52,2	58	10,8	11,8
43	53,3	62	12	13,2
45	55,3	64	11,6	12,8
48	59,7	68,4	11,6	12,8
50	60,8	69,3	11,6	12,8
53	63,8	72,3	12,3	13,5
55	66,5	75,4	13,3	14,5
58	69,5	78,4	13,3	14,5
60	71,5	80,4	13,3	14,5
65	76,5	85,4	13	14,2
68	82,7	91,5	13,7	14,9
70	83	92	13	14,2
75	90,2	99	14	15,2
80	95,2	104	15	16,2
85	100,2	109	14,8	16
90	105,2	114	14,8	16
95	111,6	120,3	15,8	17
100	114,5	123,3	15,8	17

O6

„O-ring“-type

MATERIALS:

Q2/ Viton® / EPDM / NBR



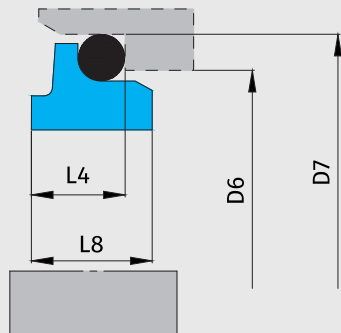
SIZE	D6	D7	L4	L8
10	17	21	6,6	7,5
12	19	23	6,6	7,5
14	21	25	6,6	7,5
15	23	27	6,6	7,5
16	23	27	6,6	7,5
18	27	33	7,5	8,5
20	29	35	7,5	8,5
22	31	37	7,5	8,5
24	33	39	7,5	8,5
25	34	40	7,5	8,5
28	37	43	7,5	8,5
30	39	45	7,5	8,5
32	42	48	7,5	8,5
33	42	48	7,5	8,5
35	44	50	7,5	8,5
38	49	56	9	10
40	51	58	9	10
43	54	61	9	10
45	56	63	9	10
48	59	66	9	10
50	62	70	9,5	10,5
53	65	73	11	12
55	67	75	11	12
58	70	78	11	12
60	72	80	11	12
63	75	83	11	12
65	77	85	11	12
68	81	90	11,3	12,5
75	88	97	11,3	12,5
80	95	105	12	13
85	100	110	14	15
90	105	115	14	15
95	110	120	14	15
100	115	125	14	15

O8

„O-ring“-type

MATERIALS:

B, Q2, Viton® / EPDM / NBR



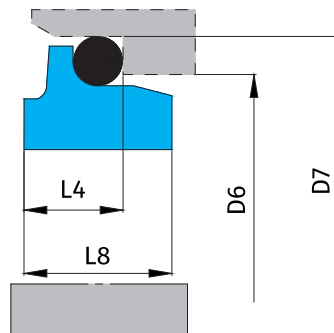
SIZE	D6	D7	L4	L8
10	14	18,1	5,5	7
11	16,5	20,6	5,5	7
12	16,5	20,6	5,5	7
13	19	23,1	6	7,5
14	19	23,1	6	7,5
15	21	26,9	7	9
16	21	26,9	7	9
17	21	26,9	7	9
18	25	30,9	8	9,5
19	25	30,9	8	9,5
20	25	30,9	8	9,5
22	30	35,4	8	9,5
24	30	35,4	8	9,5
25	33	38,2	8,5	9,5
28	38	43,3	9	11
30	38	43,3	9	11
32	38	43,3	9	11
35	45	53,5	11,5	13
38	52	60,5	11,5	13
40	52	60,5	11,5	13

O8U

„O-ring“-type

MATERIALS:

B, Q2, Viton® / EPDM / NBR

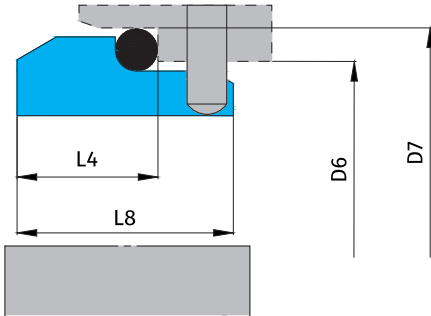


SIZE	D6	D7	L4	L8
10	17	21	7	9
12	19	23	7	9
14	21	25	7	9
16	23	27	7	9
18	27	33	10	12,5
20	29	35	10	12,5
22	31	37	10	12,5
24	33	39	10	12,5
25	34	40	10	12,5
28	37	43	10	12,5
30	39	45	10	12,5
32	42	48	10	12,5
35	44	50	10	12,5
38	49	56	13	15,5
40	51	58	13	15,5

K9 · K0

"O-ring" type with positioning

MATERIALS:
Q2 / Q1 / Viton® / EPDM /
NBR / Kalrez

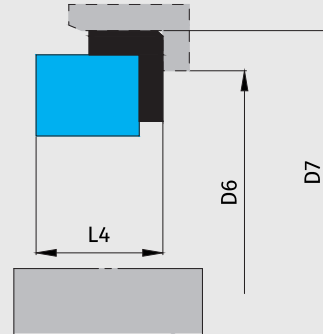


SIZE	D6	D7	L4	L8	L8 FOR K0
10	17	21	10	17,5	16
12	19	23	10	17,5	16
14	21	25	10	17,5	16
16	23	27	10	17,5	16
18	27	33	11,5	19,5	18
20	29	35	11,5	19,5	18
22	31	37	11,5	19,5	18
24	33	39	11,5	19,5	18
25	34	40	11,5	19,5	18
28	37	43	11,5	19,5	18
30	39	45	11,5	19,5	18
32	42	48	11,5	19,5	18
33	42	48	11,5	19,5	18
35	44	50	11,5	19,5	18
38	49	56	14	22	20,5
40	51	58	14	22	20,5
43	54	61	14	22	20,5
45	56	63	14	22	20,5
48	59	66	14	22	20,5
50	62	70	15	23	21,5
53	65	73	15	23	21,5
55	67	75	15	23	21,5
58	70	78	15	23	21,5
60	72	80	15	23	21,5
63	75	83	15	23	21,5
65	77	85	15	23	21,5
68	81	90	18	26	21,5
70	83	92	18	26	23
75	88	97	18	26	23
80	95	105	18,2	26,2	23,2
85	100	110	18,2	26,2	23,2
90	105	115	18,2	26,2	23,2
95	110	120	17,2	25,2	23,2
100	115	125	17,2	25,2	23,2

L0

„L”-type

MATERIALS:
V / Q2 / Viton® /
EPDM / NBR



SIZE	D6	D7	L4
10	11	24	8,5
12	13	26	8,5
14	15	28	8,5
16	17	32	8,5
18	19	35	9,5
20	21	38	9,5
22	23	38	9,5
24	25	42	9,5
25	26	42	9,5
28	29	46	9,5
30	31,5	48	9,5
32	33,5	54	9,5
33	34,5	54	9,5
35	36,5	54	9,5
38	39,5	57	12
40	41,5	60	12
43	44,5	64	12
45	46,5	64	12
48	49,5	66	12
50	52	70	12,5
53	55	73	12,5
55	57	75	12,5
58	60	80	12,5
60	62	80	12,5
63	65	82	12,5
65	67	90	12,5
68	70	90	12,5
70	72	95	14,5
75	77	100	14,5
80	82	105	16
85	87	110	16
90	92	115	16
95	97	120	16
100	102	120	16

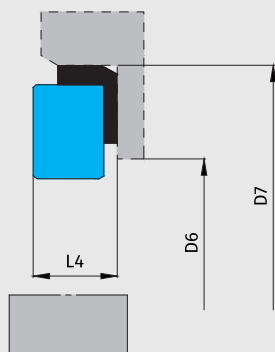
L10 · L10A

„L”-type

MATERIALS:

V / Q2

Viton® / EPDM / NBR



SIZE	D6	D7	L4	L4 FOR L10A
10	12	26	8	5,5
11	13	26	8	5,5
12	14	25/26	8	5,5
13	15	26	8	5,5
14	16	29,5	8	-
15	17	29,5/30	8	6
16	18	42	8	-
17	19	42	8	-
18	20	42	8	-
19	21	42	8	-
20	22	42	8	-
22	24	45	10	-
23	25	50	10	-
24	26	50	10	-
25	27	50	10	-
26	29	50	10	-
27	30	50	10	-
28	31	57	10	-
30	33	57	10	-
32	35	57	10	-
35	38	63	10	-
38	41	68	12	-
40	43	68	12	-
45	48	73	12	-
50	53	88	15	-
55	58	88	15	-
60	63	110	15	-
70	73	110	15	-

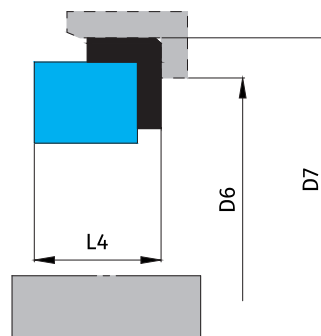
L50

„L”-type

MATERIALS:

V / Q2

Viton® / EPDM / NBR



SIZE	D6	D7	L4
10	11	24,6	9
12	13,5	27,8	9
14	17	30,95	10,5
15	17	30,95	10,5
16	17	30,95	10,5
18	20	34,15	10,5
19	20	34,15	10,5
20	21,5	35,7	10,5
22	23	37,3	10,5
24	26,5	40,5	10,5
25	26,5	40,5	10,5
28	29,5	47,65	12
30	32,5	50,8	12
32	32,5	50,8	12
33	36,5	54	12
35	36,5	54	12
38	39,5	57,15	12
40	42,5	60,35	12
43	46	63,5	12
45	46	63,5	12
48	49	66,7	12
50	52	69,85	13,5
53	55,5	73,05	13,5
55	58,5	76,2	13,5
58	61,5	79,4	13,5
60	61,5	79,4	13,5
65	68	92,1	16
68	71	95,25	16
70	71	95,25	16
75	77,5	101,6	16
80	84	114,3	20
85	87	117,5	20
90	93,5	123,85	20
95	96,5	127	20
100	103	133,35	20



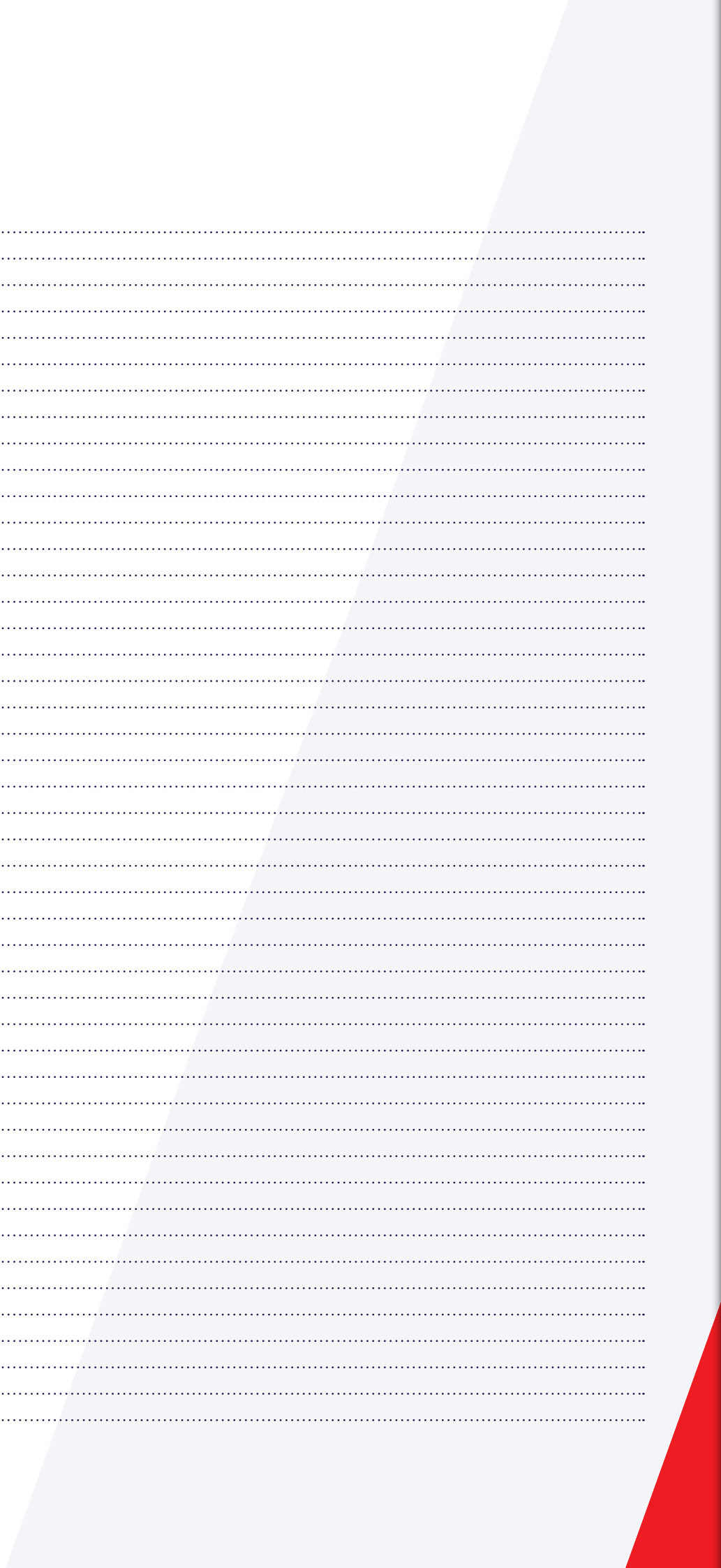
INDUSTRIAL SOLUTIONS

A series of horizontal dotted lines for writing, spanning most of the page width. A large, light gray diagonal shape is on the right side, and a red triangle is at the bottom right corner.



INDUSTRIAL SOLUTIONS

A series of horizontal dotted lines for writing, spanning the width of the page. The lines are evenly spaced and extend across most of the page's width, with a slight gap on the right side where a large grey triangle is located.





INDUSTRIAL SOLUTIONS

A series of horizontal dotted lines for writing, spanning the width of the page. The lines are evenly spaced and extend across most of the page's width, with a slight gap on the right side where a large grey triangle is located.



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