



NINGBO HUAQIU INDUSTRY AND TRADE CO.,LTD

NingBo HuaQiang Mechanical Seal Factory



2025 HQ Catalogue 2-B

(Cartridge and Metal Bellow Seals)

🏠 Add:NO.45Lane 578 TianTong Southern Road YinZhou NingBo City China

☎ Tel:0086-574-87338199

📠 Fax:0086-574-87338119

🌐 Site:[Http://www.hqseal.com](http://www.hqseal.com), www.hqseals.com

✉ Email:hq@hqseal.com

hq1@hqseal.com

hq2@hqseal.com

hq3@hqseal.com

DESCRIPTION

Standard Mechanical Seals.....	Catalogue-1
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O.E.M Seals(A.B.S., Alfa Laval, APV, Andritz, Compressor, Fristam, Flygt, Grundfos, Hilge, Lowara, K.S.B., Sulzer, Tsurumi Seals and so on).....	Catalogue-3
Seat Series.....	Catalogue-4
Mixer and Agitator, Kettle, Desulfurization, Slurry Seals, Nozzle, Rotary Joint.....	Catalogue-5



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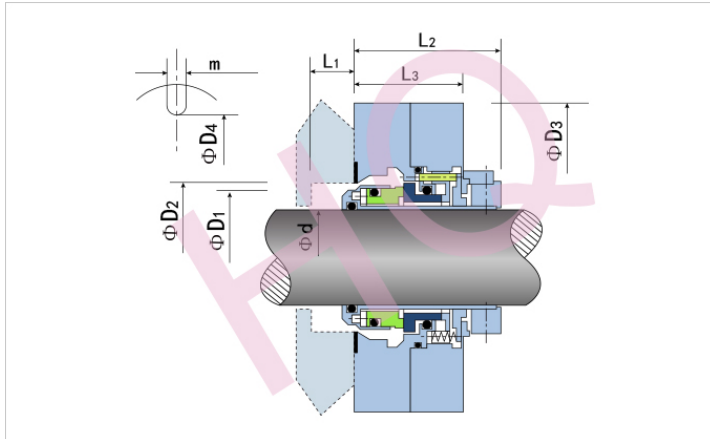
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HQCS-C01(180)

Type: Single Cartridge Seal
 Replacement: Chesterton 180
 Temperature: -40 to +204°C
 Pressure: ≤4Mpa
 Speed: ≤20m/s
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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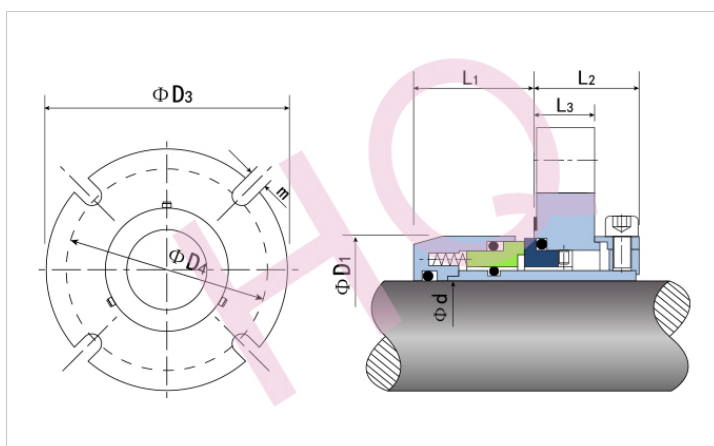


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d (mm)	D1	D2		D3	D4			L1	L2	L3	m
	max	min	max	max	10mm	12mm	16mm	min	max	max	
25	39	41	51	104	73	*	*	6	54	41	11
28	42	44	52	104	73	*	*	6	54	41	11
30	44	46	57	104	78	*	*	6	54	41	11
32	46	48	58	104	80	*	*	6	54	41	11
33	47	49	59	113	81	83	*	6	54	41	14
35	49	51	59	111	80	82	*	6	54	41	14
38	52	54	61	114	85	87	*	6	54	41	14
40	54	56	68	127	90	92	*	6	54	41	13
42	56	58	66	127	88	90	*	6	54	41	13
43	57	59	69	127	91	93	*	6	54	41	13
45	63	64	73	139	95	97	*	18	49	43	13
48	66	67	73	139	95	97	*	18	49	43	13
50	68	69	78	139	100	102	*	18	49	43	13
53	72	73	87	152	109	111	115	18	49	43	17
55	73	74	83	152	105	107	111	18	49	43	17
58	78	80	91	152	114	116	120	18	49	43	17
60	78	80	91	152	114	116	120	18	49	43	17
					12mm	16mm	20mm				
65	90	92	103	164	127	131	*	22	64	45	17
70	93	96	111	196	137	141	*	22	64	45	17
75	100	102	119	202	143	147	*	22	64	45	17
80	103	106	122	203	150	154	*	22	64	45	17
85	109	111	128	211	152	156	161	22	64	45	20
90	113	116	132	214	160	164	168	22	64	45	20
95	119	121	137	221	161	165	170	22	64	45	20
100	125	127	144	226	168	172	177	22	64	45	20
110	134	137	154	237	178	182	186	22	64	45	20
120	144	146	164	266	187	191	195	22	64	45	20

HQCS-C02(ZF)

Type: Single Cartridge Seal
 Replacement: Chesterton ZF
 Temperature: -0 to +260°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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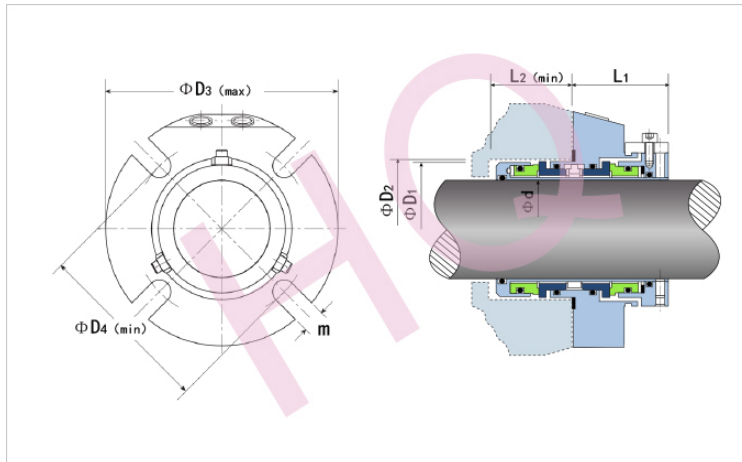


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d (mm)	D1	D3	D4			L1	L2	L3	m	D
		max	10mm	12mm	16mm					
35	60	118	95	*	*	39	34	20	12	55
38	95	137	114	*	*	39	34	20	12	58
40	70	128	105	*	*	39	34	20	12	60
45	70	128	105	*	*	39	34	20	12	65
48	105	147	124	*	*	39	34	20	12	68
50	85	150	*	125	*	39	34	20	12	70
50	85	150	*	*	145	39	34	20	18	70
55	85	150	*	125	*	39	34	20	18	75
60	85	160	*	135	145	39	34	20	14	80
60	85	160	*	*	*	39	34	20	18	80
65	95	160	*	135	*	39	34	26	18	93
65	102	173	150	*	*	39	46	26	14	93
70	131	200	*	*	175	50	46	26	12	96
75	117	183	160	*	*	50	46	26	18	103
80	140	199	*	*	170	50	46	26	12	107
85	122	199	*	*	170	50	46	26	18	112
85	122	199	*	*	190	50	46	26	18	112
90	132	209	*	*	180	50	46	26	18	117
95	132	209	*	*	180	50	46	26	18	122
100	132	213	190	*	*	50	46	26	12	128

HQCS-C03(280)

Type: Double Cartridge Seal
 Replacement: Chesterton 280
 Temperature: $\leq 205^{\circ}\text{C}$
 Pressure: $\leq 3.1\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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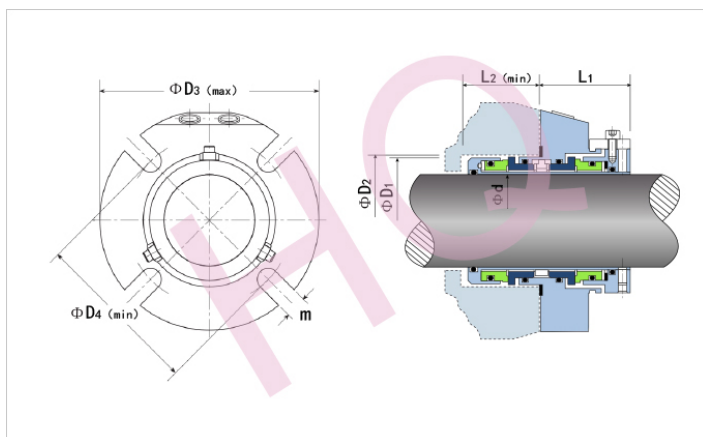


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d	D1	D2		D3	D4				L1	L2	m
(mm)	max	min	max	max	10mm	12mm	16mm	20mm	max	min	
25	44	45	51	104	74	*	*	*	54	40	11
28	47	48	52	104	74	*	*	*	54	40	11
30	49	50	56	104	78	*	*	*	54	40	11
32	51	52	57	104	80	*	*	*	54	40	11
33	52	53	58	113	81	83	*	*	54	40	14
35	53	54	59	111	80	82	*	*	54	40	14
38	57	60	61	114	85	87	*	*	54	40	14
40	59	60	68	127	90	92	*	*	54	40	13
43	62	63	68	127	91	93	*	*	54	40	13
45	64	65	73	139	95	97	*	*	54	40	13
48	67	68	73	139	96	98	*	*	54	40	13
50	69	70	78	139	100	102	*	*	54	40	13
55	74	75	83	152	105	107	111	*	54	40	17
60	79	80	91	152	114	116	120	*	54	40	17
65	91	92	100	164	*	127	131	*	64	52	17
70	95	96	113	196	*	137	141	*	64	52	17
75	101	102	119	202	*	143	147	*	64	52	17
80	105	106	122	203	*	147	151	*	64	52	17
85	110	111	129	211	*	152	156	160	64	52	21
90	115	116	132	214	*	160	164	168	64	52	21
95	120	121	138	221	*	161	165	169	64	52	21
100	126	127	144	228	*	168	172	176	64	52	21
110	136	137	154	237	*	178	182	186	64	52	21
120	145	146	163	266	*	187	191	195	64	52	21

HQCS-C05(280M)

Type: Double Cartridge Seal
 Replacement: Chesterton 280M
 Temperature: -20 to +180°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: A,B,U1,U2,Q1,Q2,G,M5



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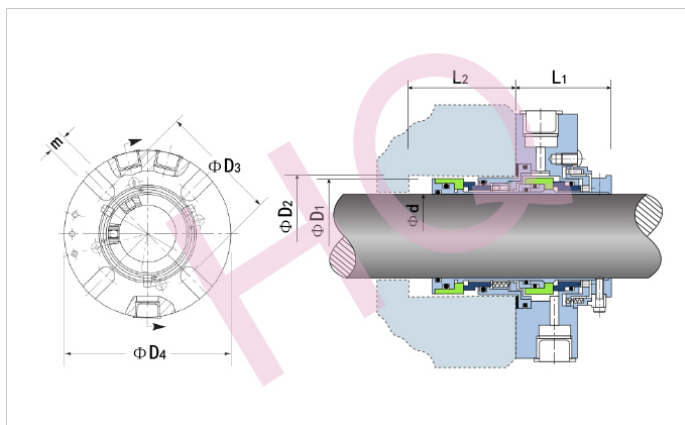
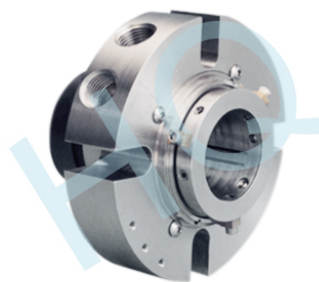
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d (mm)	D1 (max)	D2		D3	D4			L1 (max)	L2 (min)	m
		min	max		10	12	16			
35	56	60	62	114	91	92	-	54	40	14
38	59	63	68	127	94	95	-	54	40	14
60	82	86	97	165	122	124	128	54	40	18
					12	16	20			
65	98	102	116	199	139	143		64	52	18
70	101	108	119	202	143	147		64	52	18
75	107	114	125	208	150	154		64	52	18
80	110	117	129	211	152	156	160	64	52	21
85	117	124	135	216	160	164	168	64	52	21
92	123	130	141	225	165	169	173	64	52	21
95	126	133	144	228	168	172	176	64	52	21
100	132	140	151	228	175	179	183	64	52	21
110	142	149	160	241	184	188	191	64	52	21
					20	24	30			
120	162	171	-	279	227	230	236	104	83	-
130	175	184	-	292	239	242	248	104	83	-
140	181	191	-	298	246	249	255	104	83	-
150	194	203	-	311	258	261	267	104	83	-
160	207	216	-	323	271	274	280	104	83	-
170	213	222	-	330	277	280	286	104	83	-
180	226	235	-	343	290	293	299	104	83	-
190	232	241	-	349	296	299	305	104	83	-
200	245	254	-	362	309	312	318	104	83	-



HQCS-C07(225)

Type: Double Cartridge Seal
 Replacement: Cherston 225
 Temperature: $\leq 205^{\circ}\text{C}$
 Pressure: $\leq 6\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



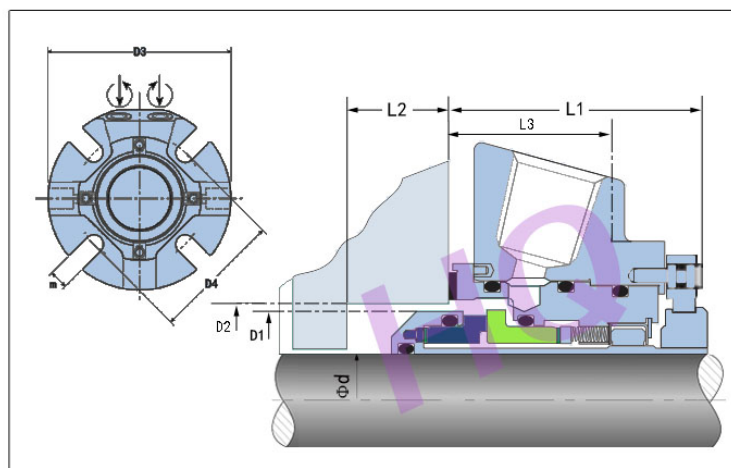
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d (Inch)	D1	D2		D3				D4	L1	L2	m
	max	min	max	3/8"	1/2"	5/8"	3/4"	max	max	min	
1.000	1.73	1.75	2.00	2.86	2.98	*	*	4.11	2.13	1.92	0.57
1.125	1.85	1.88	2.13	2.98	3.11	*	*	4.11	2.13	1.92	0.57
1.25	1.98	2.00	2.25	3.11	3.23	*	*	4.11	2.13	1.92	0.57
1.375	2.10	2.13	2.38	3.23	3.36	*	*	4.36	2.13	1.92	0.57
1.500	2.23	2.25	2.50	3.36	3.48	*	*	4.49	2.13	1.92	0.57
1.625	2.35	2.38	2.50	3.48	3.61	*	*	4.99	2.13	1.92	0.57
1.750	2.48	2.50	2.63	3.62	3.75	*	*	5.49	2.13	1.92	0.57
1.875	2.60	2.63	2.75	3.75	3.87	*	*	5.49	2.13	1.92	0.57
2.000	2.73	2.75	2.88	4.00	4.12	*	*	5.49	2.13	1.92	0.57
2.125	2.85	2.88	3.00	4.25	4.37	4.50	*	5.99	2.13	1.92	0.69
2.250	2.98	3.00	3.13	4.37	4.50	4.62	*	5.99	2.13	1.92	0.69
2.375	3.10	3.13	3.25	4.41	4.55	4.67	*	5.99	2.13	1.92	0.69
2.500	3.23	3.25	3.38	4.63	4.75	4.87	*	6.49	2.13	1.92	0.69
2.625	3.60	3.63	3.89	*	5.37	5.50	*	6.45	2.75	2.48	0.68
2.750	3.73	3.75	4.19	*	5.50	5.62	*	7.71	2.75	2.48	0.68
2.875	3.85	3.88	4.32	*	5.62	5.75	*	7.83	2.75	2.48	0.68
3.000	3.98	4.00	4.44	*	5.75	5.87	*	7.94	2.75	2.48	0.68
3.125	4.10	4.13	4.57	*	5.87	6.00	*	7.99	2.75	2.48	0.68
3.250	4.23	4.25	4.69	*	6.00	6.12	*	8.19	2.75	2.48	0.68
3.375	4.35	4.38	4.82	*	6.12	6.25	6.37	8.31	2.75	2.48	0.82
3.500	4.48	4.50	4.94	*	6.25	6.37	6.50	8.44	2.75	2.48	0.82
3.625	4.60	4.63	5.07	*	6.37	6.50	6.62	8.50	2.75	2.48	0.82
3.750	4.73	4.75	5.19	*	6.50	6.62	6.75	8.72	2.75	2.48	0.82
3.875	4.85	4.88	5.32	*	6.62	6.75	6.87	8.40	2.75	2.48	0.82
4.000	4.98	5.00	5.44	*	6.75	6.87	7.00	8.96	2.75	2.48	0.82
4.125	5.10	5.13	5.57	*	6.87	7.00	7.12	8.99	2.75	2.48	0.82
4.250	5.23	5.25	6.59	*	7.00	7.12	7.25	8.99	2.75	2.48	0.82
4.375	5.35	5.38	5.82	*	7.12	7.25	7.37	9.34	2.75	2.48	0.82
4.500	5.48	5.50	5.94	*	7.25	7.37	7.50	9.49	2.75	2.48	0.82
4.625	5.60	5.63	6.07	*	7.37	7.50	7.62	9.49	2.75	2.48	0.82
4.750	5.73	5.75	6.19	*	7.50	7.62	7.75	10.49	2.75	2.48	0.82

HQCS-C11(S10)



Type: Single Cartridge Seal
 Replacement: Chesterton S10
 Temperature: -40 to +204°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,PE,V,T,F,G,T2,M5



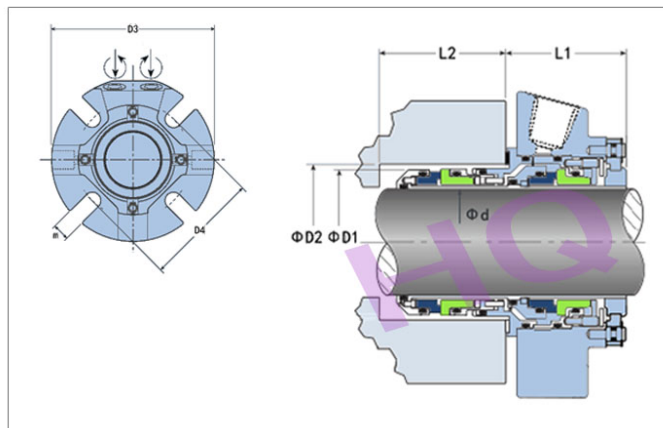
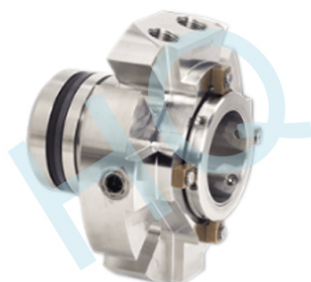
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d (mm)	D1	D2		D3 max	D4 min			L1	L2 min	L3	m
		min	max		10mm	12mm	16mm				
25	39.9	41.0	51.1	104	73.0	*	*	52	13.0	30.4	11.5
28	42.4	44.0	51.8	104	73.0	*	*	52	13.0	30.4	13.5
30	44.5	46.0	56.6	104	78.0	*	*	52	13.0	30.4	13.5
32	46.5	48.0	57.7	104	80.0	*	*	52	13.0	30.4	13.5
33	47.4	49.0	58.8	113	80.0	83.0	*	52	13.0	30.4	15.0
35	49.4	51.0	59.2	111	82.0	83.7	*	52	13.0	30.4	15.0
38	55.6	57.2	62.0	114	84.0	89.9	*	54	13.5	30.4	13.5
40	57.5	60.0	68.3	127	89.2	91.7	*	54	13.5	30.4	13.5
43	60.5	63.0	68.8	127	91.9	94.7	*	54	13.5	30.4	13.5
45	62.5	65.0	73.4	140	94.2	96.8	*	54	13.5	30.4	13.5
48	65.5	68.0	73.8	140	97.0	99.8	*	54	13.5	30.4	13.5
50	67.5	70.0	78.5	140	99.3	101.9	*	54	13.5	30.4	17.5
53	72.5	75.0	83.6	153	104.4	106.4	112.0	54	13.5	30.4	17.5
55	72.5	75.0	83.6	153	104.4	106.4	112.0	54	13.5	30.4	17.5
60	77.8	80.0	92.2	153	112.8	114.8	118.9	54	13.5	30.4	17.5
65	84.2	88.9	100.1	164	124.0	126.0	129.8	54	13.5	30.4	17.5
					12mm	16mm	20mm				
70	93	95	110	196	137	141	*	63	21	41	17
75	99	104	119	202	143	147	*	63	21	41	17
80	103	109	122	203	150	154	*	63	21	41	17
85	109	114	128	211	152	156	161	63	21	41	20
90	113	119	132	214	160	164	168	63	21	41	20
95	118	124	137	221	161	165	170	63	21	41	20
100	125	129	144	228	168	172	177	63	21	41	20
110	134	137	154	237	178	182	186	63	21	41	20
120	144	146	164	266	187	191	196	63	21	41	20

HQCS-C12(S20)



Type: Double Cartridge Seal

Replacement: Chesterton S20

Temperature: -40 to +204°C

Pressure: ≤4.0Mpa

Speed: ≤20m/s

Material: Q1,Q2,A,B,U1,U2,P,E,V,T,F,G,T2,M5



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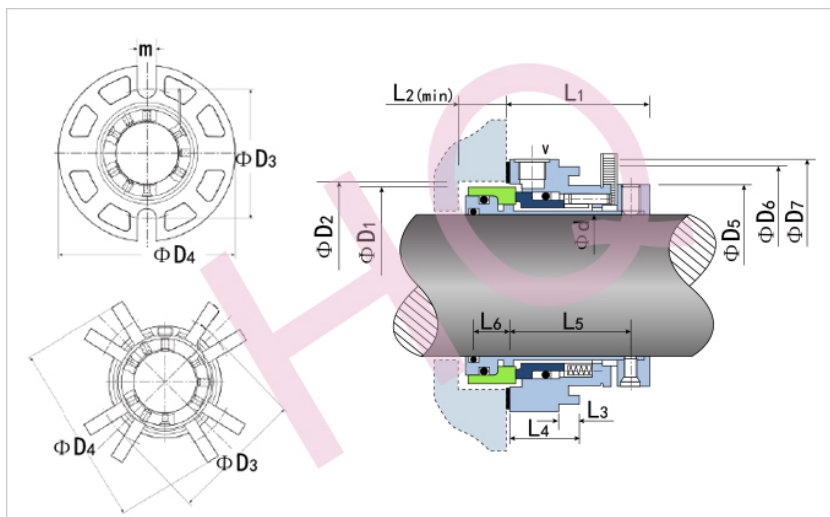
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d (mm)	D1	D2		D3 max	D4 min			L1	L2 min	L3	m
		min	max		10mm	12mm	16mm				
25	39.9	41.0	51.1	104	73.0	*	*	52	48	30.4	11.5
28	42.4	44.0	51.8	104	73.0	*	*	52	48	30.4	13.5
30	44.5	46.0	56.6	104	78.0	*	*	52	48	30.4	13.5
32	46.5	48.0	57.7	104	80.0	*	*	52	48	30.4	13.5
33	47.4	49.0	58.8	113	80.0	83.0	*	52	48	30.4	15.0
35	49.4	51.0	59.2	111	82.0	83.7	*	52	48	30.4	15.0
38	55.6	57.2	62.0	114	84.0	89.9	*	54	50	30.4	13.5
40	57.5	60.0	68.3	127	89.2	91.7	*	54	50	30.4	13.5
43	60.5	63.0	68.8	127	91.9	94.7	*	54	50	30.4	13.5
45	62.5	65.0	73.4	140	94.2	96.8	*	54	50	30.4	13.5
48	65.5	68.0	73.8	140	97.0	99.8	*	54	50	30.4	13.5
50	67.5	70.0	78.5	140	99.3	101.9	*	54	50	30.4	17.5
53	72.5	75.0	83.6	153	104.4	106.4	112.0	54	50	30.4	17.5
55	72.5	75.0	83.6	153	104.4	106.4	112.0	54	50	30.4	17.5
60	77.8	80.0	92.2	153	112.8	114.8	118.9	54	50	30.4	17.5
65	84.2	88.9	100.1	164	124	126	129.8	54	50	30.4	17.5
70	93.0	95.0	110	196	137	141	*	63	63	41.0	17.0
75	99.0	104	119	202	143	147	*	63	63	30.4	17.0
80	103	109	122	203	150	154	*	63	63	30.4	17.0
85	109	114	128	211	152	156	161	63	63	30.4	20.0
90	113	119	132	214	160	164	168	63	63	30.4	20.0
95	118	124	137	221	161	165	170	63	63	30.4	20.0
100	125	129	144	228	168	172	177	63	63	30.4	20.0
110	134	137	154	237	178	182	186	63	63	30.4	20.0
120	144	146	164	266	187	191	196	63	63	30.4	20.0

HQCS-C06(155)



Type: Single Cartridge Seal
 Replacement: Chesterton 155
 Temperature: -40 to +204°C
 Pressure: $\leq 4\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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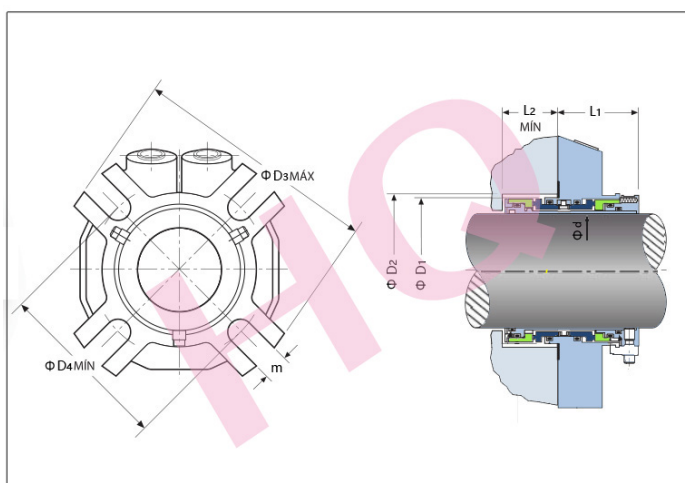
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d (mm)	D1	D2		D3(TABS)			D3(Gland)			D4		D5	D6	D7	L1	L2	L3	L4	L5	L6	M
		min	max	8mm	10mm	12mm	8mm	10mm	12mm	TABS	Gland										
28	46	47	52	70	72	74	71	73		118	108	47	57	62	48	16	9	24	40	12	11
30	48	49	57	76	78	80	77	79		124	111	49	60	68	48	16	9	24	40	12	11
32	50	51	58	77	79	81	78	80		124	114	51	62	69	48	16	9	24	40	12	11
33	51	52	59	76	78	80	78	80		124	114	52	62	69	48	16	9	24	40	12	11
35	52	54	62	80	82	84	86	88		128	127	54	70	72	48	16	9	24	40	12	11
38	56	57	67	85	87	89	86	88		133	127	57	70	77	48	16	9	24	40	12	11
40	58	59	68	86	88	90	86	88	90	134	127	59	73	78	48	16	9	24	40	12	15
43	61	62	69	86	88	90	86	88	90	134	127	62	73	78	48	16	9	24	40	12	15
45	63	64	73	92	94	96	92	94	96	140	139	64	79	84	48	16	9	24	40	12	15
48	66	67	74	91	93	95	92	94	96	139	139	67	79	84	48	16	9	24	40	12	15
50	68	69	78	97	99	101	96	96	100	145	139	69	82	89	48	16	9	24	40	12	15
55	73	74	83	102	104	106	112	114	116	150	158	74	94	94	48	16	9	24	40	12	17
60	78	79	91	112	114	116	113	115	117	160	158	80	99	104	48	16	9	24	40	12	17

HQCS-C08(255)



Type: double Cartridge Seal
 Replacement: Chesterton 255
 Temperature: -40°C to $+204^{\circ}\text{C}$
 Pressure: $\leq 4\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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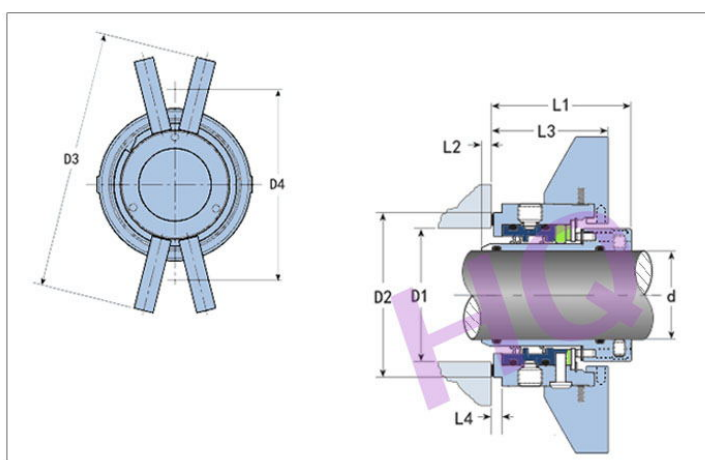
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d (mm)	D1	D2		D3			D4	L1	L2	m
	max	min	max	8mm	10mm	12mm	max	max	max	
25	43	44	46	70	72	74	105	55	35	14
28	46	47	49	73	75	77	105	55	35	14
30	48	49	51	76	78	80	105	55	35	14
32	50	51	52	77	79	81	105	55	35	14
33	53	54	58	78	80	82	114	55	35	14
35	53	54	59	80	82	84	111	55	35	14
38	57	57	62	83	85	87	114	55	35	14
40	58	59	61	86	88	90	127	55	35	14
43	63	64	69	89	91	93	127	55	35	14
45	63	64	66	93	95	97	140	55	35	14
48	68	69	74	94	96	98	140	55	35	14
50	68	69	71	98	100	102	140	55	35	14
55	73	74	76	*	103	105	153	55	35	17
60	79	79	85	*	113	115	153	55	35	17

HQCS-C13(HVS)



Type: Single Cartridge Seal
 Replacement: Chesterton HVS
 Temperature: -40 to +204°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



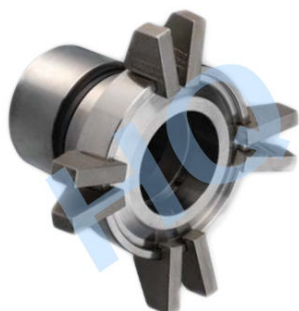
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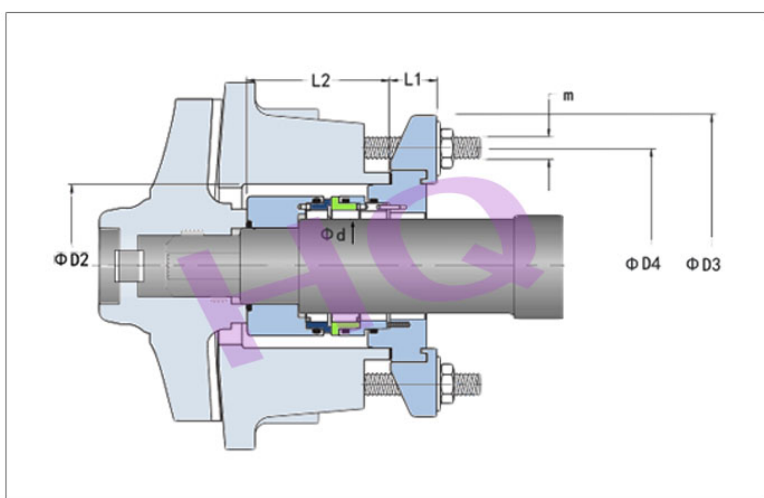
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d (mm)	D2	D1		D3	D4(min)				L1	L2		L3	L4
		min	max		8mm	10mm	12mm	20mm		min			
25	59.9	37.7	40.6	120.8	72.8	74.8	76.8	*	58	3.6		52.2	0.18
28	63.7	40.8	49.8	124.7	76.4	78.4	80.4	*	58	3.6		52.2	0.18
30	63.7	40.8	49.8	124.7	76.4	78.4	80.4	*	58	3.6		52.2	0.18
32	67.1	44.2	54.4	128.1	79.8	81.8	83.8	87.8	63	4.9		52.2	0.18
35	70.0	40.8	56.4	131.0	82.7	84.7	86.7	90.7	63	4.9		52.2	0.18
40	71.8	52.2	57.9	125.5	87.8	89.8	91.8	95.8	63	4.9		52.2	0.18
45	76.8	57.2	62.9	130.5	92.8	94.8	96.8	100.8	63	4.9		52.2	0.18
50	82.6	63.1	66.8	147.2	98.6	100.6	102.6	106.6	63	4.9		52.2	0.18
53	85.8	66.2	84.1	150.1	101.8	103.8	105.8	109.8	63	4.9		52.2	0.18
55	89.0	69.4	75.4	156.9	104.9	106.9	135.1	137.1	63	4.9		52.2	0.18
60	110.4	74.1	93.9	172.6	124.4	126.4	128.4	132.4	63	4.9		54.1	0.18
65	105.6	77.2	91.9	176.4	127.5	129.5	131.5	135.5	63	4.9		53.5	0.18
70	110.4	81.9	96.8	181.2	*	*	136.4	140.4	63	4.9		53.5	0.18
75	131.0	89.2	115.7	188.4	*	*	143.5	147.5	63	4.9		52.4	0.00
80	136.0	94.2	120.9	193.4	*	*	148.5	152.5	63	4.9		52.4	0.00
85	143.3	100.8	113.8	215	*	*	156.8	160.8	63	4.9		52.4	0.00
100	157.6	115.8	141.1	214.9	*	*	170.1	174.1	63	4.9		52.4	0.00

HQCS-C14(DFS)



Type: Single Cartridge Seal
 Replacement: Chesterton DFS
 Temperature: -40 to +204°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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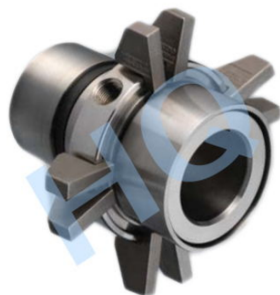


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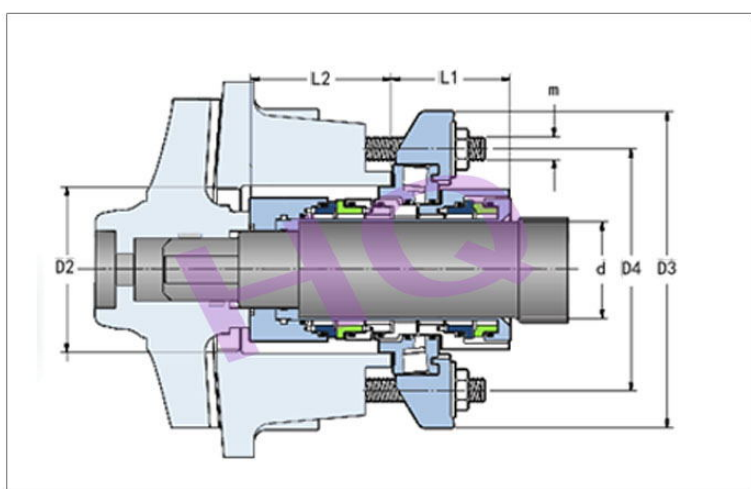
d (mm)	D2		D3	D4	L1	L2	m
	min	max					
30	60	60.05	135.6	95	31.1	60.0	M10
40	70	70.05	143.8	105	31.1	60.0	M10
50	85	85.05	161.3	125	31.1	73.1	M12
60	95	95.05	170.1	135	31.1	73.1	M12
80	122	122.06	212.1	170	31.5	92.0	M16
90	132	132.06	224.3	180	31.5	92.0	M16

d (inch)	D2		D3	D4	L1	L3	m
	min	max					
1.181	2.375	2.377	5.34	3.74	1.22	2.36	3/8-16
1.575	3.750	3.752	5.66	4.13	1.22	2.36	3/8-16
1.969	3.375	3.377	6.35	4.92	1.22	2.88	1/2-13
2.362	3.750	3.752	6.70	5.32	1.22	2.88	1/2-13
3.150	4.750	4.753	8.35	6.69	1.24	3.62	5/8-11
3.543	5.197	5.200	8.83	7.09	1.24	3.62	5/8-11

HQCS-C15(DFD)



Type: Double Cartridge Seal
 Replacement: Chesterton DFD
 Temperature: -40 to +204°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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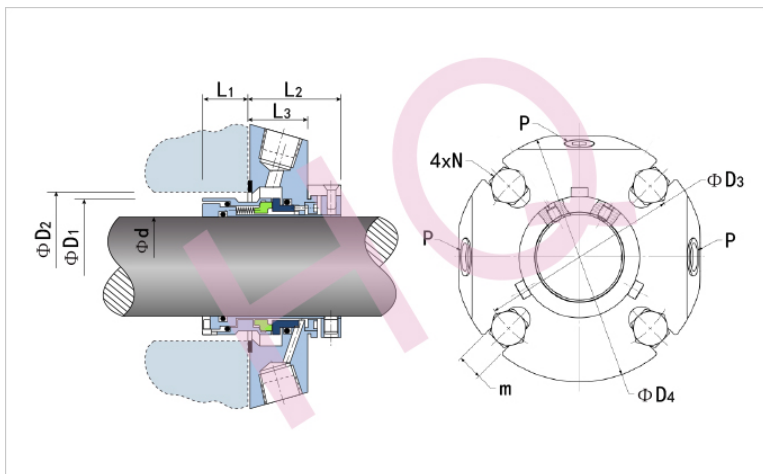
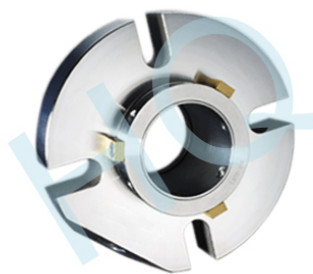
d (mm)	D2		D3	D4	L1	L2	m
	min	max					
30	60	60.05	136.6	95	60.7	60	M10
40	70	70.05	148.3	105	61.4	60	M10
50	85	85.05	164.2	125	61.5	73	M12
60	95	95.05	170.1	135	61.5	73	M12
80	122	122.06	212.1	170	69.8	92	M16
90	132	132.06	224.8	180	69.8	92	M16

d (inch)	D2		D3	D4	L1	L2	m
	min	max					
1.181	2.375	2.377	5.38	3.74	2.39	2.36	3/8-16
1.575	2.750	2.752	5.84	4.13	4.42	2.36	3/8-16
1.969	3.375	3.377	6.47	4.92	2.42	2.87	1/2-13
2.362	3.750	3.752	6.70	5.32	2.42	2.87	1/2-13
3.150	4.750	4.753	8.35	6.69	2.75	3.62	5/8-11
3.543	5.197	5.200	8.85	7.09	2.75	3.62	5/8-11



HQCS-C04(150)

Type: Single Cartridge Seal
 Replacement: Chesterton 150
 Temperature: -40 to +204°C
 Pressure: $\leq 4\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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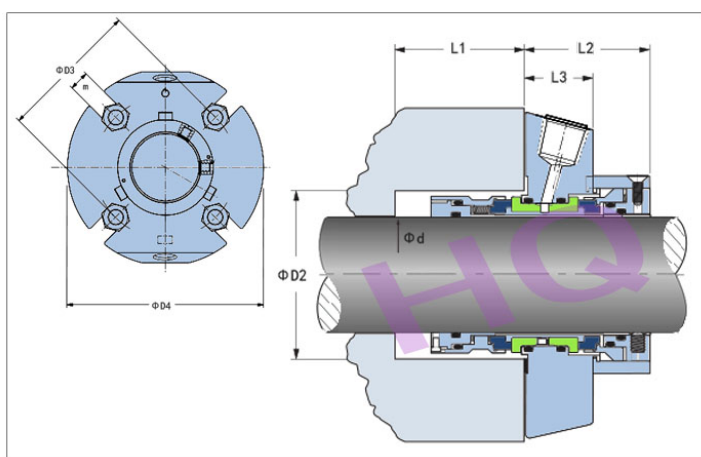
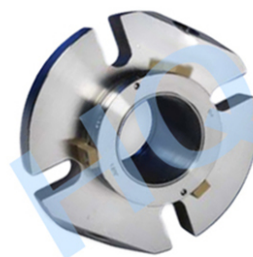
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d (mm)	D1	D2		D3				D4	L1	L2	L3	m	P (NPT)
	max	min	max	10mm	12mm	16mm	20mm						
25	40.0	41	51	73	*	*	*	104	19.8	46.0	28	11.2	1/4-18
28	42.6	44	52	73	*	*	*	104	19.8	46.0	28	11.2	1/4-18
30	44.6	46	57	78	*	*	*	104	19.8	46.0	28	11.2	1/4-18
32	46.6	48	58	80	*	*	*	104	19.8	46.0	28	11.2	1/4-18
33	47.6	49	59	81	83	*	*	113	19.8	46.0	28	14.5	1/4-18
35	49.6	51	59	80	82	*	*	111	19.8	46.0	28	14.5	1/4-18
38	55.6	57	67	85	87	*	*	114	21.9	44.5	28	14.5	1/4-18
40	57.6	59	68	90	92	*	*	126	21.9	44.5	28	13.6	3/8-18
43	60.5	62	69	91	93	*	*	126	21.9	44.5	28	13.6	3/8-18
45	62.5	64	73	95	97	*	*	139	21.9	44.5	28	13.6	3/8-18
48	65.5	67	73	95	97	*	*	139	21.9	44.5	28	13.6	3/8-18
50	67.5	69	78	100	102	*	*	139	21.9	44.5	28	13.6	3/8-18
53	71.5	73	87	109	111	115		152	21.9	44.5	28	17.5	3/8-18
55	72.5	74	83	105	107	111	*	152	21.9	44.5	28	17.5	3/8-18
58	77.9	80	91	114	116	120		152	21.9	44.5	28	17.5	3/8-18
60	77.9	80	91	114	116	120	*	152	21.9	44.5	28	17.5	3/8-18
63	81.0	83	97	119	121	125		165	21.9	44.5	28	17.5	3/8-18
65	84.2	86	100	125	127	131	*	164	21.9	44.5	28	17.5	3/8-18
68	85.5	87	100	125	127	131		165	21.9	44.5	28	17.5	3/8-18
70	93.6	96	111	*	137	141	*	196	21.9	44.5	37	17.5	1/2-14
75	99.8	102	119	*	143	147	*	202	35.1	57.1	37	17.5	1/2-14
80	103.6	106	122	*	147	151	*	203	35.1	57.1	37	17.5	1/2-14
85	109.3	111	128	*	152	156	160	211	35.1	57.1	37	20.6	1/2-14
90	113.6	116	132	*	156	160	164	214	35.1	57.1	37	20.6	1/2-14
95	118.8	121	137	*	161	165	169	221	35.1	57.1	37	20.6	1/2-14
100	125.2	127	144	*	168	172	176	228	35.1	57.1	37	20.6	1/2-14
105	128.6	131	148		172	176	180	228	35.1	57.1	37	20.6	1/2-14
110	134.7	137	154	*	177	181	185	237	35.1	57.1	37	20.6	1/2-14
115	141.0	143	160		182	186	190	241	35.1	57.1	37	20.6	1/2-14
120	144.2	146	164	*	187	191	195	266	35.1	57.1	37	20.6	1/2-14



HQCS-C09(250)

Type: Double Cartridge Seal
 Replacement: Chesterton 250
 Temperature: -40°C to +204°C
 Pressure: $\leq 4.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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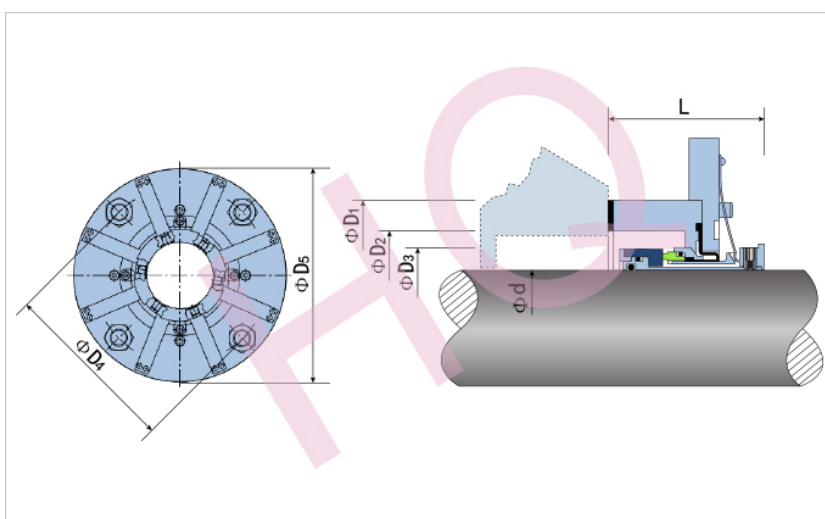
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d (mm)	D2		D3			D4	L1	L2	L3	m
	min	max	10mm	12mm	16mm					
25	41	51	73	*	*	104	36.6	52.3	28	11.2
28	44	52	73	*	*	104	36.6	52.3	28	11.2
30	46	57	78	*	*	104	36.6	52.3	28	11.2
32	48	58	80	*	*	104	36.6	52.3	28	11.2
33	49	59	81	83	*	113	36.6	52.3	28	14.5
35	51	59	80	82	*	111	36.6	52.3	28	14.5
38	57	67	85	87	*	114	38.8	52.3	29	14.5
40	59	68	90	92	*	126	38.8	52.3	29	13.6
43	62	69	91	93	*	126	38.8	52.3	29	13.6
45	64	73	95	97	*	139	38.8	52.3	29	13.6
48	67	73	95	97	*	139	38.8	52.3	29	13.6
50	69	78	100	102	*	139	38.8	52.3	29	13.6
53	73	87	109	111	115	152	38.8	52.3	29	17.5
55	74	83	105	107	111	152	38.8	52.3	29	17.5
58	80	91	114	116	120	152	38.8	52.3	29	17.5
60	80	91	114	116	120	152	38.8	52.3	29	17.5
63	83	97	119	121	125	165	38.8	52.3	29	17.5
65	86	100	125	127	131	164	38.8	52.3	29	17.5
68	87	100	125	127	131	165	38.8	52.3	29	17.5
			12mm	16mm	20mm					
70	96	111	*	137	141	196	58.2	63.5	35.8	17.5
75	102	119	*	143	147	202	58.2	63.5	35.8	17.5
80	106	122	*	147	151	203	58.2	63.5	35.8	17.5
85	111	128	*	152	156	211	58.2	63.5	35.8	20.6
90	116	132	*	156	160	214	58.2	63.5	35.8	20.6
95	121	137	*	161	165	221	58.2	63.5	35.8	20.6
100	127	144	*	168	172	228	58.2	63.5	35.8	20.6

HQCS-C10(156)



Type: Single Cartridge Seal
 Replacement: Chesterton 156
 Temperature: -20 to +180°C
 Pressure: $\leq 0.8\text{Mpa}$
 Speed: $\leq 10\text{m/s}$
 Material: A,Q2,Graphite,
 M5,M6,F,G,M



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d (mm)	D1	D2	D3	D4 (min)					D5 (min)	L (max)
				8	10	12	16	20		
45	105	79	63	95	99	102	-	-	158	68
48	108	82	69	98	102	105	-	-	161	68
50	110	84	68	100	104	107	-	-	163	68
55	115	89	73	105	109	112	-	-	168	68
60	120	94	78	110	114	117	-	-	173	68
65	143	105	90	-	120	124	127	-	191	85
70	146	108	93	-	124	127	130	-	195	85
75	152	114	100	-	130	133	136	-	201	85
80	159	121	106	-	136	140	143	-	207	85
85	162	124	109	-	139	143	146	-	210	85
90	168	130	115	-	146	149	152	-	217	85
95	171	133	119	-	149	152	155	-	220	85
100	178	140	125	-	155	159	162	-	226	85
110	187	149	134	-	165	168	171	-	236	85
120	197	159	144	-	174	178	181	-	245	85
125	215	176	162	-	-	200	203	206	260	117
135	227	189	175	-	-	213	216	219	273	117

HQS-C170



Type: Slurry Pump Seal

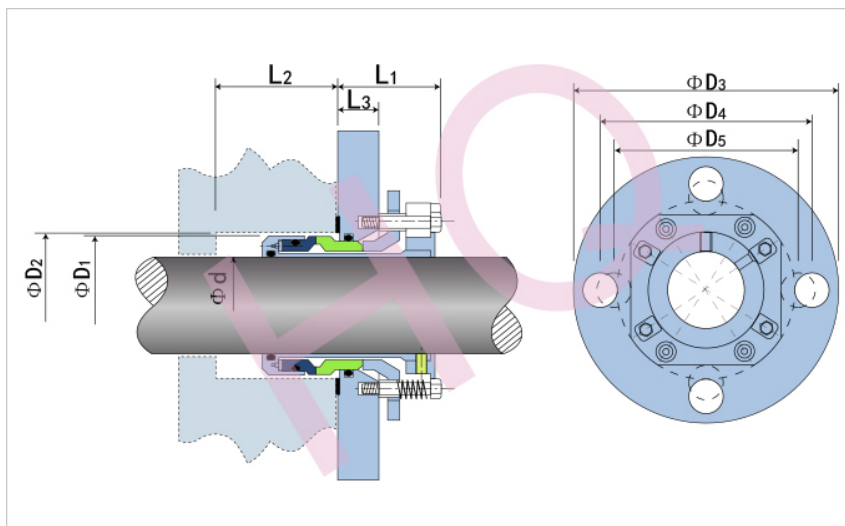
Replacement: Chesterton 170

Temperature: $\leq 180^{\circ}\text{C}$

Pressure: $\leq 0.8\text{Mpa}$

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

Material: A,B,Q2,U2,P,K,E,G,M5



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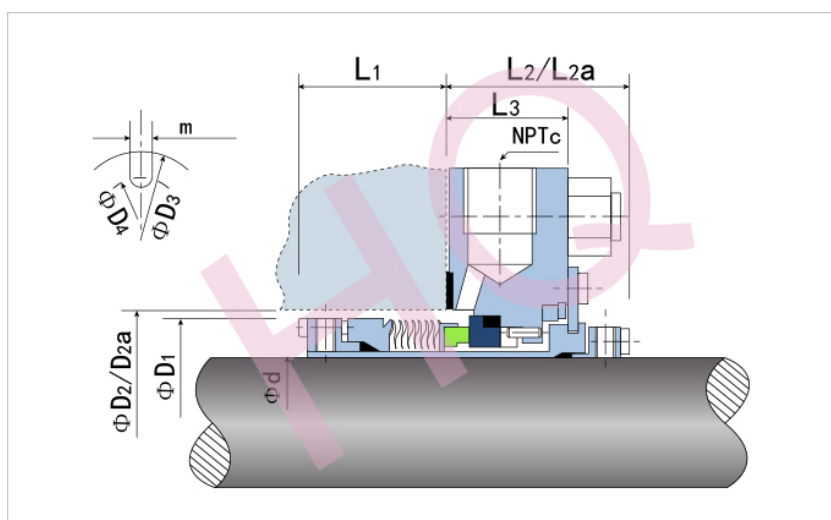


17

HQMB-C01(186HT)



Type: Metal Bellow Seal
 Replacement: Chesterton 186HT
 Temperature: -73 to +427°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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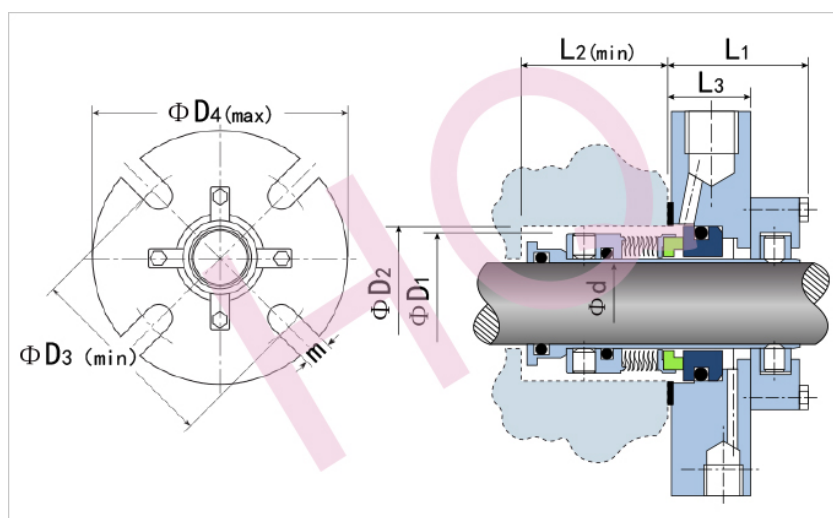
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d (mm)	D1	D2	D2a	D3	D4			L1	L2	L2a	L3	m	NPT
	max	min	min	max	10mm	12mm	16mm	min	max	max	max	max	
25	46	48	54	108	76	78	*	42	49	52	32	13	3/8
30	49	51	57	108	79	82	*	42	49	52	32	13	3/8
32	55	57	60	114	81	89	*	43	49	52	32	13	3/8
35	58	60	67	121	89	92	*	43	50	54	34	14	3/8
38	61	64	70	133	92	95	*	43	50	54	34	14	1/2
40	65	67	73	140	95	98	*	43	50	54	34	14	1/2
42	65	67	73	140	95	98	*	43	50	54	34	14	1/2
45	68	70	76	146	98	101	*	43	50	54	34	14	1/2
50	74	76	80	159	108	111	114	46	52	55	35	18	1/2
55	77	79	89	159	111	114	117	46	52	55	35	18	1/2
60	84	86	92	165	114	117	120	46	54	57	37	18	1/2
65	87	89	95	165	117	120	123	46	54	57	37	18	1/2

HQMB-C02(186)



Type: Metal Bellow Seal
 Replacement: Chesterton 186
 Temperature: 150°C to +205°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



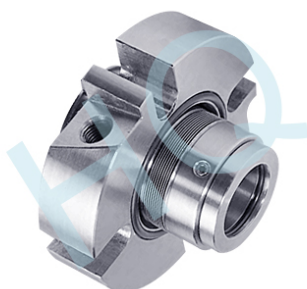
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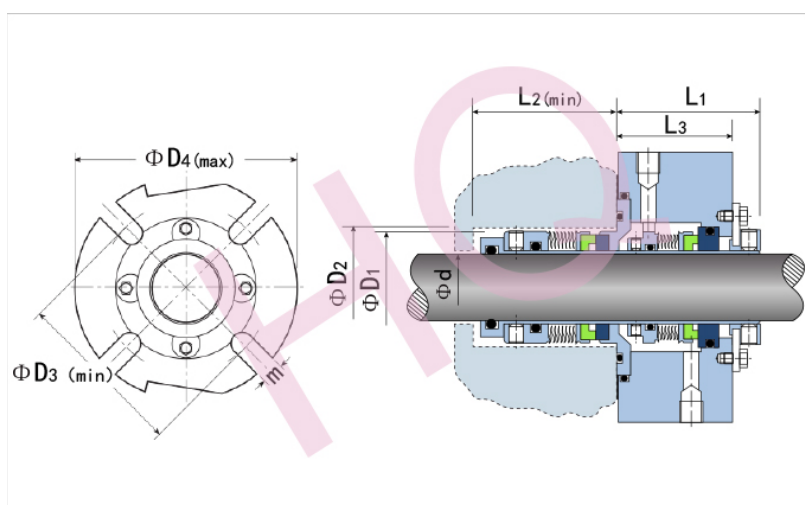
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d	D1	D2		D3			D4	L1	L2	L3	m
(inch)	max	mix	max	3/8"	1/2"	5/8"	max	max	min	max	max
1.000	1.69	1.75	1.86	2.81	*	*	4.25	1.79	1.45	1.03	0.44
1.125	1.69	1.75	2.11	2.90	*	*	4.25	1.79	1.51	1.03	0.44
1.250	1.94	2.00	2.23	3.02	*	*	4.25	1.79	1.63	1.03	0.44
1.375	1.94	2.00	2.36	3.15	*	*	4.25	1.79	1.63	1.03	0.44
1.500	2.19	2.25	2.61	3.39	3.51	*	4.50	1.79	1.70	1.03	0.56
1.625	2.31	2.38	2.74	3.51	3.64	*	5.00	1.79	1.76	1.03	0.56
1.750	2.44	2.50	2.86	3.62	3.75	*	5.50	1.79	1.82	1.03	0.56
1.875	2.56	2.63	2.98	3.75	3.88	*	5.50	1.79	1.82	1.03	0.56
2.000	2.69	2.75	3.24	4.00	4.13	4.25	5.50	1.85	1.82	1.09	0.56
2.125	2.81	2.88	3.36	4.13	4.25	4.38	6.00	1.85	1.88	1.09	0.69
2.250	2.94	3.00	3.48	4.25	4.38	4.50	6.25	1.91	1.88	1.16	0.69
2.375	3.19	3.25	3.61	4.38	4.50	4.63	6.25	1.91	1.98	1.16	0.69
2.500	3.31	3.38	3.61	4.38	4.50	4.63	6.50	1.98	2.04	1.22	0.69

HQMB-C03(286)



Type: Metal Bellow Seal
 Replacement: Chesterton 286
 Temperature: 150°C to +205°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,A,B,U1,U2,P,
 E,V,T,F,G,T2,M5



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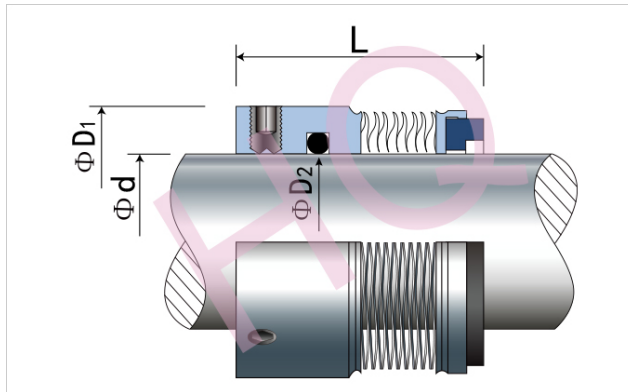
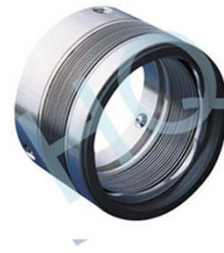
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d	D1	D2		D3			D4	L1	L2	L3	m
(inch)	max	min	max	3/8"	1/2"	5/8"	max	max	min	max	max
1.000	1.69	1.75	1.88	2.90	*	*	4.13	2.06	2.03	1.7	0.44
1.125	1.69	1.75	1.88	2.90	*	*	4.25	2.06	2.03	1.7	0.44
1.250	1.94	2.00	2.13	3.02	*	*	4.25	2.13	2.06	1.76	0.44
1.375	1.94	2.00	2.19	3.25	*	*	4.25	2.03	2.06	1.67	0.44
1.500	2.19	2.25	2.38	3.50	3.63	*	4.50	2.13	2.25	1.75	0.56
1.625	2.31	2.38	2.50	3.56	3.69	*	5.00	2.13	2.21	1.76	0.56
1.750	2.44	2.50	2.56	3.63	3.75	*	5.50	2.13	2.34	1.76	0.56
1.875	2.56	2.63	2.69	3.75	3.88	*	5.50	2.13	2.34	1.76	0.56
2.000	2.69	2.75	2.94	4.01	4.13	*	5.50	2.13	2.34	1.76	0.56
2.125	2.81	3.00	3.19	4.25	4.38	4.50	6.00	2.13	2.4	1.76	0.69
2.250	2.94	3.13	3.19	4.25	4.38	4.50	6.25	2.13	2.4	1.76	0.69
2.375	3.19	3.25	3.44	4.38	4.50	4.63	6.25	2.25	2.31	1.88	0.69
2.500	3.31	3.38	3.44	4.56	4.81	4.81	6.50	2.19	2.41	1.77	0.69



HQMB-C04(886)

Type: Metal Bellow Seal
 Replacement: Chestern 886
 Temperature: -20 to +200°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 23\text{m/s}$
 Material: A,B,Q1,Q2,T,V,M1,F,G,T6,M



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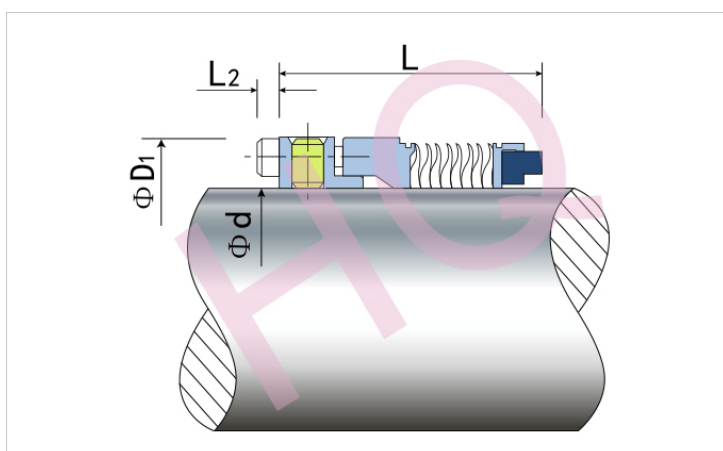
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d	D1	L	D2-O-ring
0.750	1.457	1.250	116
0.875	1.457	1.250	118
1.000	1.457	1.250	120
1.125	1.687	1.250	123
1.250	1.812	1.312	124
1.250 OS	1.694	1.312	124
1.375	1.937	1.437	126
1.500	2.062	1.437	128
1.500 OS	1.944	1.437	128
1.625	2.187	1.437	130
1.750	2.312	1.437	132
1.875	2.497	1.500	134
2.000	2.562	1.500	226
2.125	2.687	1.500	138
2.250	2.812	1.562	140
2.375	2.937	1.562	142
2.500	3.187	1.562	144
2.625	3.312	1.625	146
2.750	3.437	1.625	148
2.875	3.625	1.687	150
3.000	3.750	1.687	151
3.125	3.875	1.750	235
3.250	4.000	1.750	236
3.375	4.125	1.750	237
3.500	4.250	1.875	238
3.625	4.375	1.875	239
3.750	4.500	1.875	240
3.875	4.625	1.875	244
4.000	4.750	1.875	242
4.125	5.125	1.875	243
4.250	5.125	1.875	244
4.375	5.375	1.875	245
4.500	5.375	1.875	246

HQMB-C05(886HT)



Type: Metal Bellow Seal
 Replacement: Chesterton 886TH
 Temperature: -20 to +200°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 22\text{m/s}$
 Material: B,A1,Q1,Q2,U2,P,
 E,N,V,F,G,Alfa



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d (mm)	D1	L	L2
25	39.7	42.8	3.2
28	42.8	39.7	3.2
30	46.0	42.8	3.2
32	46.0	42.8	3.2
33	49.2	44.5	3.2
35	49.2	44.5	3.2
38	55.1	44.5	4.2
40	58.3	44.5	4.2
43	61.5	44.5	4.2
45	62.3	44.5	4.2
48	64.6	44.5	4.2
50	67.8	44.5	4.2
53	71.1	44.5	4.2
55	74.2	47.6	4.2
60	77.3	47.6	4.2
63	80.9	47.6	4.2
65	84.1	47.6	4.2



23



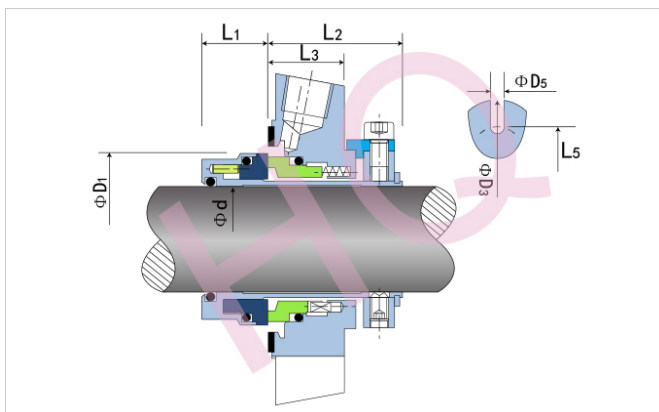
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HQCS-DP300

Type: Single Cartridge Seal
 Replacement: DEPAC 270
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: Q1, Q2, U2, T, P,
 M1, F, G, M



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d (mm)	D1	D3	D5	L1	L2	L3	L5
24	43.5	104	12.5	19.0	38.0	25	62
25	43.5	104	12.5	19.0	38.0	25	62
28	46.5	104	12.5	19.0	38.0	25	62
30	48.5	104	12.5	19.0	38.0	25	67
32	50.5	104	12.5	19.0	38.0	25	67
33	50.5	104	12.5	19.0	38.0	25	67
35	53.5	110	12.5	19.0	38.0	25	70
38	56.5	125	14.7	19.0	38.0	25	75
40	58.5	125	14.7	19.0	38.0	25	75
42	60.5	133	14.7	19.0	38.0	25	80
43	61.5	133	14.7	19.0	38.0	25	80
45	63.5	140	14.7	19.0	38.0	25	82
48	66.5	140	14.7	19.0	38.0	25	82
50	68.5	140	14.7	19.0	38.0	25	87
53	71.5	150	17.5	19.0	38.0	25	92
55	73.5	150	17.5	19.0	38.0	25	92
60	78.5	160	17.5	19.0	38.0	25	100
65	83.5	165	17.5	19.0	38.0	25	105
70	88.5	180	17.5	19.0	38.0	25	120
75	100	190	17.5	20.5	41.5	30	125
80	105	190	17.5	20.5	41.5	30	130
85	110	220	21.5	20.5	41.5	30	135
90	115	220	21.5	20.5	41.5	30	140
95	120	220	21.5	20.5	41.5	30	145
100	125	220	21.5	20.5	41.5	30	150

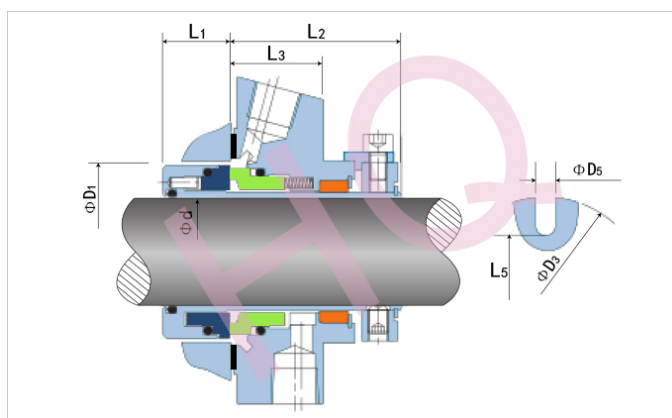
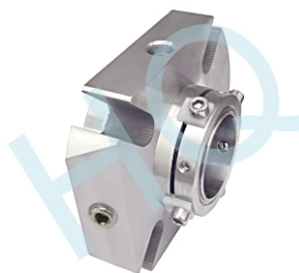
d (inch)	D1	D3	D5	L1	L2	L3	L5
1.000	1.713	4.094	0.492	0.748	1.496	0.984	2.441
1.125	1.831	4.094	0.492	0.748	1.496	0.984	2.441
1.250	1.988	4.094	0.492	0.748	1.496	0.984	2.638
1.375	2.107	4.331	0.492	0.748	1.496	0.984	2.756
1.500	2.225	4.921	0.579	0.748	1.496	0.984	2.953
1.625	2.382	5.236	0.579	0.748	1.496	0.984	3.150
1.750	2.500	5.512	0.579	0.748	1.496	0.984	3.228
1.875	2.618	5.512	0.579	0.748	1.496	0.984	3.228
2.000	2.697	5.906	0.579	0.748	1.496	0.984	3.425
2.125	2.815	6.102	0.689	0.748	1.496	0.984	3.622
2.250	3.012	6.299	0.689	0.748	1.496	0.984	3.937
2.375	3.091	6.469	0.689	0.748	1.496	0.984	3.937
2.500	3.209	6.693	0.689	0.748	1.496	0.984	4.055
2.625	3.406	7.067	0.689	0.748	1.496	0.984	4.724
2.750	3.484	7.480	0.689	0.748	1.496	0.984	4.724
2.875	3.858	7.480	0.689	0.807	1.634	1.181	4.843
3.000	3.937	7.480	0.689	0.807	1.634	1.181	4.921
3.125	4.134	8.661	0.689	0.807	1.634	1.181	5.118
3.250	4.252	8.661	0.846	0.807	1.634	1.181	5.236
3.375	4.331	8.661	0.846	0.807	1.634	1.181	5.315
3.500	4.528	8.661	0.846	0.807	1.634	1.181	5.512
3.625	4.606	8.661	0.846	0.807	1.634	1.181	5.591
3.750	4.725	8.661	0.846	0.807	1.634	1.181	5.709
3.875	4.921	8.661	0.846	0.807	1.634	1.181	5.906
4.000	4.921	8.661	0.846	0.807	1.634	1.181	5.906





HQCS-DP300Q

Type: Single Cartridge Seal
 Replacement: DEPAC 270P
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: Q1, Q2, U2, T, P,
 M1, F, G, M



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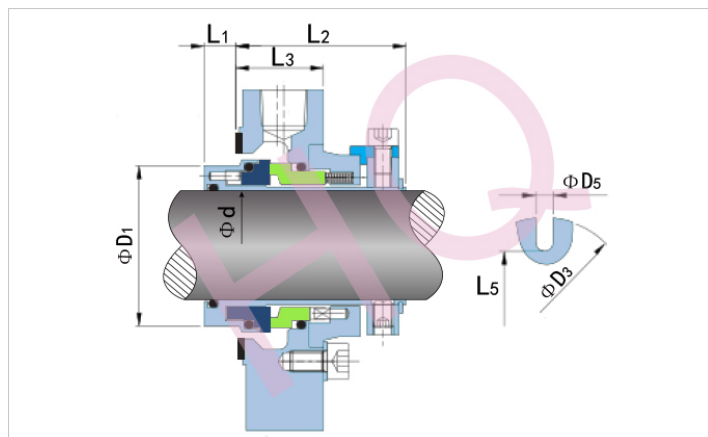
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d (mm)	D1	D3	D5	L1	L2	L3	L5
24	43.5	104	12.5	19	48.0	25	62
25	43.5	104	12.5	19	48.0	25	62
28	46.5	104	12.5	19	48.0	25	62
30	48.5	104	12.5	19	48.0	25	67
32	50.5	104	12.5	19	48.0	25	67
33	50.5	104	12.5	19	48.0	25	67
35	53.5	110	12.5	19	48.0	25	70
38	56.5	125	14.7	19	48.0	25	75
40	58.5	125	14.7	19	48.0	25	75
42	60.5	133	14.7	19	48.0	25	80
43	61.5	133	14.7	19	48.0	25	80
45	63.5	140	14.7	19	48.0	25	82
48	66.5	140	14.7	19	48.0	25	82
50	68.5	140	14.7	19	48.0	25	87
53	71.5	150	17.5	19	48.0	25	92
55	73.5	150	17.5	19	48.0	25	92
60	78.5	160	17.5	19	48.0	25	100
65	83.5	165	17.5	19	48.0	25	105
70	88.5	180	17.5	19	48.0	25	120
75	100.0	190	17.5	20.5	51.5	30	125
80	105.0	190	17.5	20.5	51.5	30	130
85	110.0	220	21.5	20.5	51.5	30	135
90	115.0	220	21.5	20.5	51.5	30	140
95	120.0	220	21.5	20.5	51.5	30	145
100	125.0	220	21.5	20.5	51.5	30	150



HQCS-DP300A

Type: Single Cartridge Seal
 Replacement: DEPAC 301
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: Q1, Q2, U2, T, P,
 M1, F, G, M

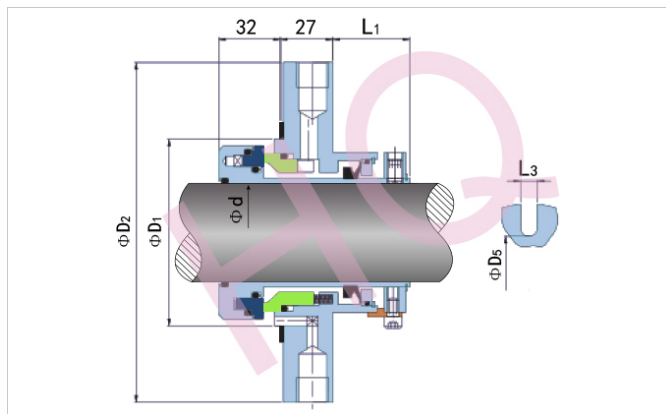
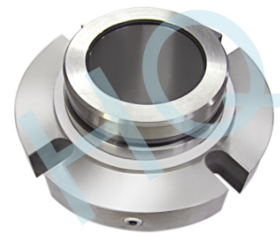


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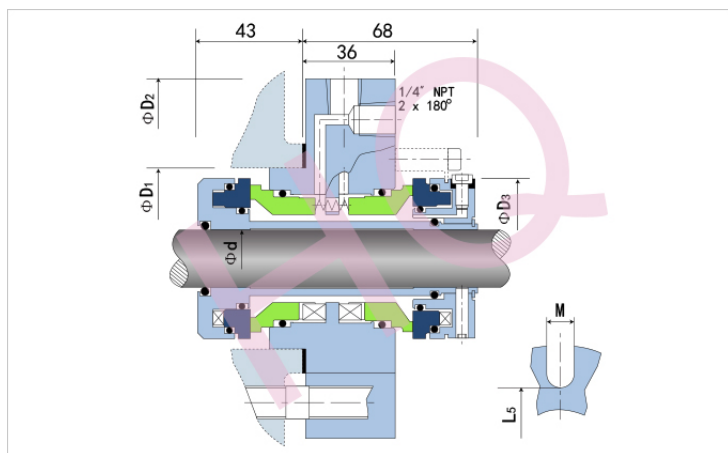
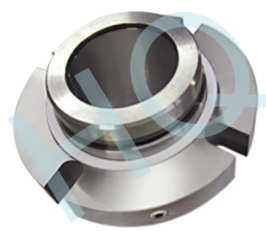
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d (mm)	D1	D3	D5	L1	L2	L3	L5
24	40	104	12.5	9	48	25	62
25	40	104	12.5	9	48	25	62
28	43	104	12.5	9	48	25	62
30	45	104	12.5	9	48	25	67
32	47	104	12.5	9	48	25	67
33	47	104	12.5	9	48	25	67
35	50	110	12.5	9	48	25	70
38	53	125	14.7	9	48	25	75
40	55	125	14.7	9	48	25	75
42	57	133	14.7	9	48	25	80
43	58	133	14.7	9	48	25	80
45	60	140	14.7	9	48	25	82
48	63	140	14.7	9	48	25	82
50	65	140	14.7	9	48	25	87
53	68	150	17.5	9	48	25	92
55	70	150	17.5	9	48	25	92
60	75	160	17.5	9	48	25	100
65	80	165	17.5	9	48	25	105
70	85	180	17.5	9	48	25	120
75	95	190	17.5	8	54	30	125
80	100	190	17.5	8	54	30	130
85	105	220	21.5	8	54	30	135
90	110	220	21.5	8	54	30	140
95	115	220	21.5	8	54	30	145
100	120	220	21.5	8	54	30	150



Type: Single Cartridge Seal
 Replacement: DEPAC 380
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: Q1, Q2, U2, T, P, M1, F, G, M

d (mm)	D1	D2	L1	L3	D5
50	95	180	37.6	17.5	11
55	100	185	37.6	17.5	11
60	105	190	37.6	17.5	123
65	111	195	39.6	17.5	128
70	111	200	39.6	17.5	133
75	120	205	39.6	17.5	138
80	125	210	39.6	17.5	143
85	130	215	39.6	21.5	148
90	135	220	39.6	21.5	153
95	140	225	39.6	21.5	158
100	145	230	38.6	21.5	163
105	150	235	38.6	21.5	168
110	155	240	38.6	21.5	173
115	160	245	38.6	21.5	178
120	165	250	38.6	21.5	183
125	170	255	38.6	21.5	188
130	175	260	38.6	21.5	193
135	180	265	38.6	21.5	198
140	185	270	38.6	21.5	203
145	190	275	38.6	21.5	208
150	195	280	38.6	21.5	213
155	200	285	38.6	21.5	218
160	205	290	38.6	21.5	223
165	210	295	38.6	21.5	228
170	215	300	38.6	21.5	233
175	220	305	38.6	21.5	238
180	225	310	38.6	21.5	243
185	230	315	38.6	21.5	248
190	235	320	38.6	21.5	253
195	240	325	38.6	21.5	258
200	245	330	38.6	21.5	263
205	250	335	38.6	21.5	268
210	255	340	38.6	21.5	273
215	260	345	38.6	21.5	278
220	265	350	38.6	21.5	283



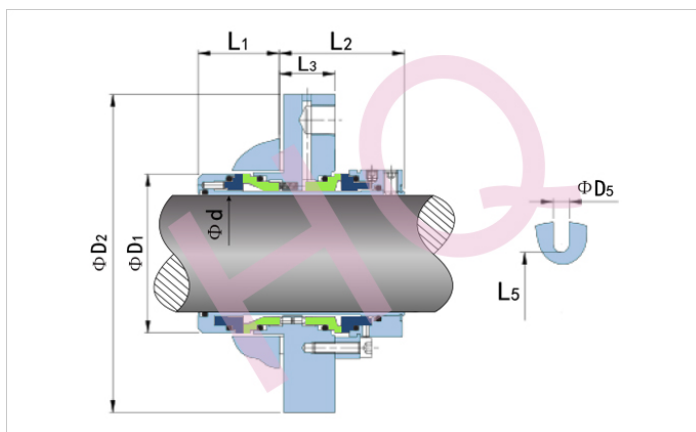
Type: Double Cartridge Seal
 Replacement: DEPAC 365
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: Q1, Q2, U2, T, P,
 M1, F, G, M

d (mm)	D1	D2	D3	L5	M
50	95	180	89	113	17.5
55	100	185	94	118	17.5
60	105	190	99	123	17.5
65	110	195	104	128	17.5
70	115	200	109	133	17.5
75	120	205	114	138	17.5
80	125	210	119	143	17.5
85	130	215	124	148	21.5
90	135	220	129	153	21.5
95	140	225	134	158	21.5
100	145	230	139	163	21.5
105	150	235	144	168	21.5
110	155	240	149	173	21.5
115	160	245	154	178	21.5
120	165	250	159	183	21.5
125	170	255	164	188	21.5
130	175	260	169	193	21.5
135	180	265	174	198	21.5
140	185	270	179	203	21.5
145	190	275	184	208	21.5
150	195	280	189	213	21.5
155	200	290	194	218	21.5
160	205	295	199	223	21.5
165	210	295	204	228	21.5
170	215	300	209	233	21.5
175	220	305	214	238	21.5
180	225	310	219	243	21.5
185	230	315	224	248	21.5
190	235	320	229	253	21.5
195	240	325	234	258	21.5
200	245	330	239	263	21.5



HQCS-DP320

Type: Double Cartridge Seal
 Replacement: DEPAC 320
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: Q1, Q2, U2, T, P,
 M1, F, G, M



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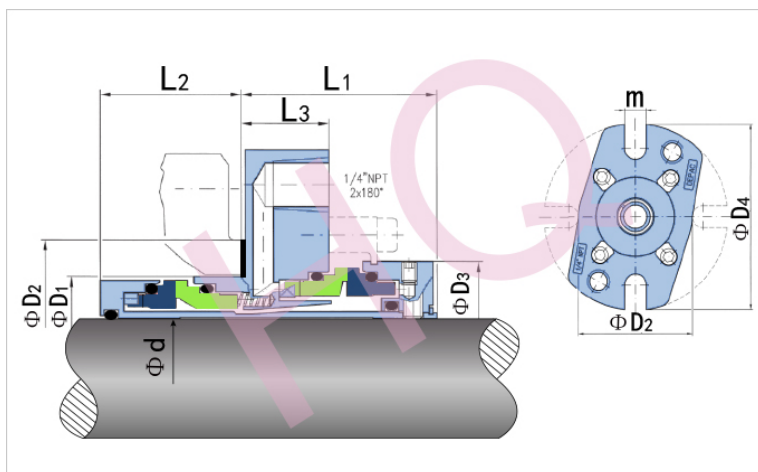
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d (mm)	D1	D2	D5	L1	L2	L3	L5
24	44.5	104	12.5	35	54	24	62
25	44.5	104	12.5	35	54	24	62
28	47.5	104	12.5	35	54	24	62
30	49.5	104	12.5	35	54	24	67
32	51.5	104	12.5	35	54	24	67
33	51.5	104	12.5	35	54	24	67
35	54.5	110	12.5	35	54	24	70
38	57.5	125	14.7	35	54	24	75
40	59.5	125	14.7	35	54	24	75
42	61.5	133	14.7	35	54	24	80
43	62.5	133	14.7	35	54	24	80
45	64.5	140	14.7	35	54	24	82
48	67.5	140	14.7	35	54	24	82
50	69.5	140	14.7	35	54	24	87
53	72.5	150	17.5	35	54	24	92
55	74.5	150	17.5	35	54	24	92
60	79.5	160	17.5	35	54	24	100
65	84.5	165	17.5	35	54	24	105
70	89.5	180	17.5	35	54	24	120
75	102.0	190	17.5	39	58	26	125
80	107.0	190	17.5	39	58	26	130
85	112.0	220	21.5	39	58	26	135
90	117.0	220	21.5	39	58	26	140
95	122.0	220	21.5	39	58	26	145
100	127.0	220	21.5	39	58	26	150



HQCS-DP321/322/323/326

Type: Double Cartredge Seal
 Replacement: DEPAC 321/322/323/326
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: B, A, Q1, Q2, E,
 N, V, G



321

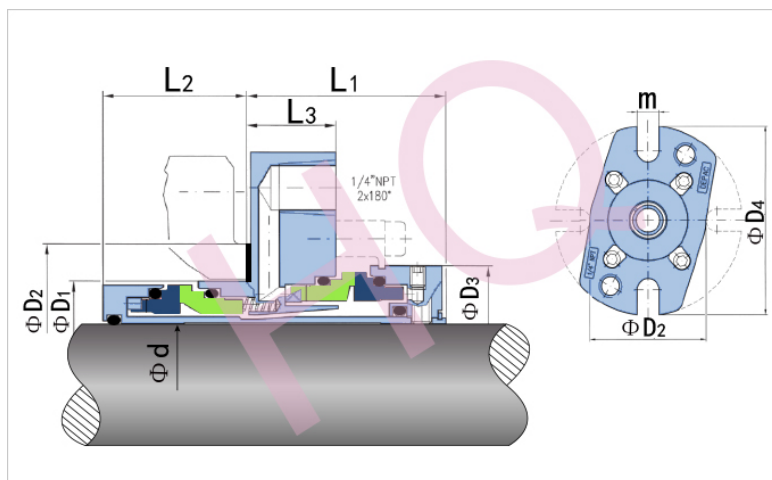


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d (mm)	D1	D2	D3	D4	L1	L2	L3	M
24	44.7	60	47	105	54	35	24	12.5
25	44.7	60	47	105	54	35	24	12.5
28	44.7	60	50	105	54	35	24	12.5
30	49.7	60	52	105	54	35	24	12.5
32	50.9	60	54	105	54	35	24	12.5
33	50.9	60	55	105	54	35	24	12.5
35	54.7	67	57	115	54	35	24	12.5
38	57.7	75	60	130	54	35	24	14.7
40	59.7	75	62	130	54	35	24	14.7
43	62.7	82	65	140	54	35	24	14.7
45	64.7	82	67	140	54	35	24	14.7
48	67.7	82	70	140	54	35	24	17.5
50	69.7	82	72	140	54	35	24	17.5
53	72.7	92	75	150	54	35	24	17.5
55	74.7	92	77	150	54	35	24	17.5
60	79.7	100	82	160	54	35	24	17.5
65	84.7	100	87	160	54	35	24	17.5
70	89.7	112	92	180	54	35	24	17.5
75	102.8	125	103	190	58	39	25	17.5
80	107.8	130	108	190	58	39	25	17.5
85	112.8	135	113	220	58	39	25	21.5
90	117.8	140	118	220	58	39	25	21.5
95	122.8	145	123	220	58	39	25	21.5
100	127.8	150	128	220	58	39	25	21.5



322

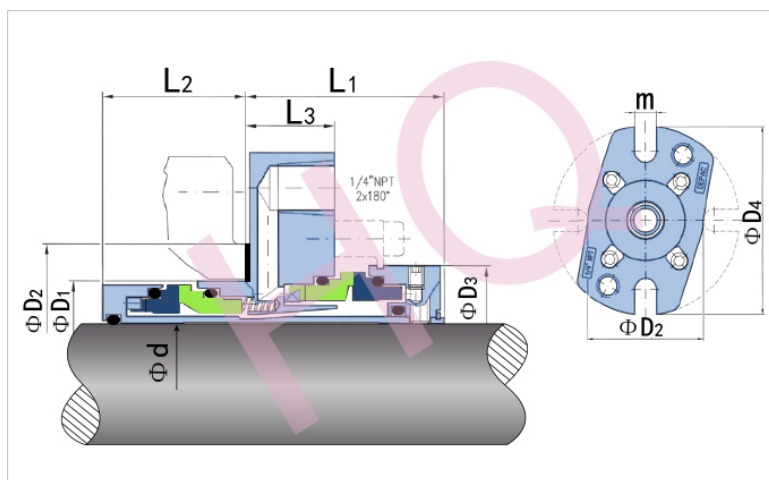


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d (mm)	D1	D2	D3	D4	L1	L2	L3	M
24	44.7	60	52	105	50	35	24	12.5
25	44.7	60	52	105	50	35	24	12.5
28	44.7	60	55	105	50	35	24	12.5
30	49.7	60	57	105	50	35	24	12.5
32	50.9	60	60	105	50	35	24	12.5
33	50.9	60	60	105	50	35	24	12.5
35	54.7	67	62	115	50	35	24	12.5
38	57.7	75	65	130	50	35	24	14.7
40	59.7	75	67	130	50	35	24	14.7
43	62.7	82	70	130	50	35	24	14.7
45	64.7	82	72	140	50	35	24	14.7
48	67.7	82	75	140	50	35	24	17.5
50	69.7	82	77	140	50	35	24	17.5
53	72.7	92	80	150	50	35	24	17.5
55	74.7	92	82	150	50	35	24	17.5
60	79.7	100	87	160	50	35	24	17.5
65	84.7	100	92	160	50	35	24	17.5
70	89.7	112	97	180	50	35	24	17.5
75	102.8	125	108	190	54	39	25	17.5
80	107.8	130	113	190	54	39	25	17.5
85	112.8	135	118	220	54	39	25	21.5
90	117.8	140	123	220	54	39	25	21.5
95	122.8	145	128	220	54	39	25	21.5
100	127.8	150	133	220	54	39	25	21.5



323

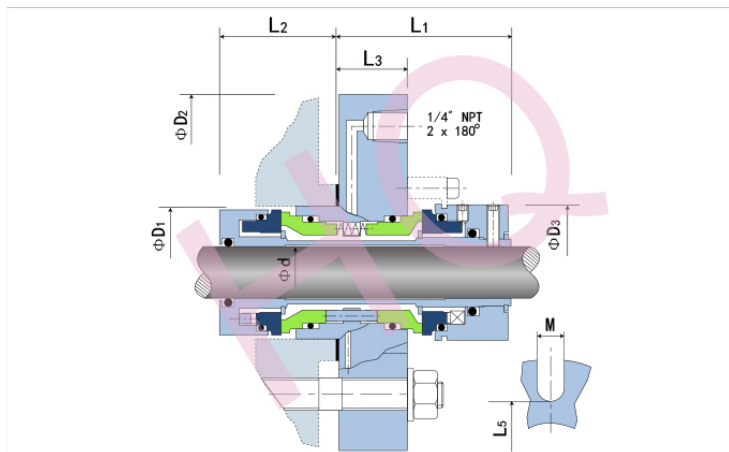


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d (mm)	D1	D2	D3	D4	L1	L2	L3	M
24	49.7	67	52	115	50	35	24	12.5
25	49.7	67	52	115	50	35	24	12.5
28	52.7	67	55	115	50	35	24	12.5
30	54.7	67	57	115	50	35	24	12.5
32	57.5	75	60	130	50	35	24	14.7
33	57.7	75	60	130	50	35	24	14.7
35	59.7	75	62	130	50	35	24	14.7
38	62.7	82	65	140	50	35	24	14.7
40	64.7	82	67	140	50	35	24	14.7
43	67.7	82	70	140	50	35	24	14.7
45	69.7	82	72	140	50	35	24	14.7
48	72.7	92	75	150	50	35	24	17.5
50	74.7	92	77	150	50	35	24	17.5
53	77.7	92	80	150	50	35	24	17.5
55	79.7	100	82	160	50	35	24	17.5
60	84.7	100	87	160	50	35	24	17.5
65	89.7	112	92	180	50	35	24	17.5
70	94.7	112	97	180	50	35	24	17.5
75	107.8	130	108	190	54	39	25	17.5
80	112.8	135	113	220	54	39	25	17.5
85	117.8	140	118	220	54	39	25	21.5
90	122.8	145	123	220	54	39	25	21.5
95	127.8	150	128	220	54	39	25	21.5
100	132.8	155	133	240	54	39	25	21.5



323



<http://www.hqseal.com>

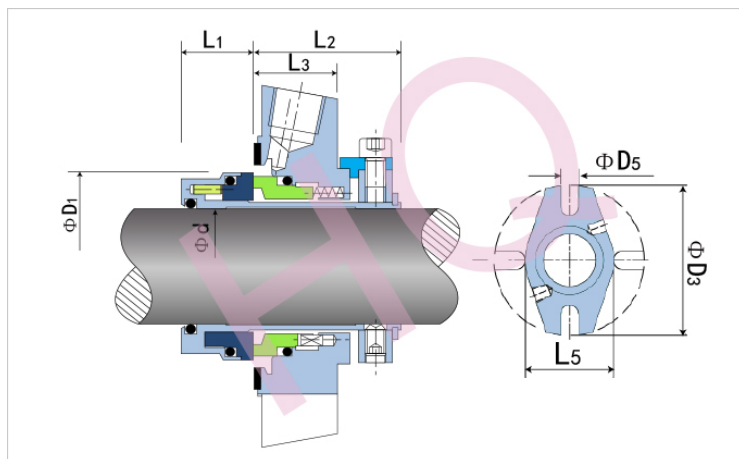


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d (mm)	D1	D2	D3	L1	L2	L3	L5	M
24	45.7	105	47	56.0	33.0	24.5	60	13
25	45.7	105	47	56.0	33.0	24.5	60	13
28	48.7	105	50	56.0	33.0	24.5	60	13
30	50.7	115	52	56.0	33.0	24.5	67	13
32	52.7	115	54	56.0	33.0	24.5	67	13
33	53.7	115	55	56.0	33.0	24.5	67	13
35	55.7	115	57	56.0	33.0	24.5	67	13
38	58.7	130	60	56.0	33.0	24.5	75	15
40	60.7	130	62	56.0	33.0	24.5	75	15
42	62.7	140	64	56.0	33.0	24.5	82	15
43	63.7	140	65	56.0	33.0	24.5	82	15
45	65.7	140	67	56.0	33.0	24.5	82	15
48	68.7	140	70	56.0	33.0	24.5	82	15
50	70.7	140	72	56.0	33.0	24.5	82	15
53	73.7	150	75	56.0	33.0	24.5	92	18
55	75.7	150	77	56.0	33.0	24.5	92	18
60	80.7	160	82	56.0	33.0	24.5	100	18
65	85.7	160	87	56.0	33.0	24.5	100	18
70	90.7	180	92	56.0	33.0	24.5	112	18
75	102.8	190	103	58.4	38.6	25.5	125	18
80	107.8	190	108	58.4	38.6	25.5	130	18
85	112.8	220	113	58.4	38.6	25.5	135	22
90	117.8	220	118	58.4	38.6	25.5	140	22
95	122.8	220	123	58.4	38.6	25.5	145	22
100	127.8	220	128	58.4	38.6	25.5	150	22

HQCS-DP270

Type: Single Cartridge Seal
 Replacement: DEPA 270
 Temperature: Elastomer dependent
 Pressure: $\leq 2.80\text{Mpa}$
 Speed: $\leq 35\text{m/s}$
 Material: B,Q2,U2,V,E,P,F,G,T6



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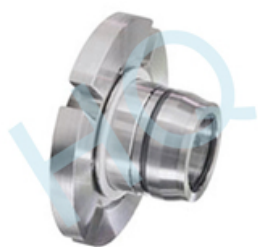
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d (mm)	D1	D3	D5	L1	L2	L3	L5
24	43.5	104	12.5	19	38	25	62
25	43.5	104	12.5	19	38	25	62
28	46.5	104	12.5	19	38	25	62
30	48.5	104	12.5	19	38	25	67
32	50.5	104	12.5	19	38	25	67
33	50.5	104	12.5	19	38	25	67
35	53.5	110	12.5	19	38	25	70
38	56.5	125	14.7	19	38	25	75
40	58.5	125	14.7	19	38	25	75
42	60.5	133	14.7	19	38	25	80
43	61.5	133	14.7	19	38	25	80
45	63.5	140	14.7	19	38	25	82
48	66.5	140	14.7	19	38	25	82
50	68.5	140	14.7	19	38	25	87
53	71.5	150	17.5	19	38	25	92
55	73.5	150	17.5	19	38	25	92
60	78.5	160	17.5	19	38	25	100
65	83.5	165	17.5	19	38	25	105
70	88.5	180	17.5	19	38	25	120
75	100	190	17.5	20.5	41.5	30	125
80	105	190	17.5	20.5	41.5	30	130
85	110	220	21.5	20.5	41.5	30	135
90	115	220	21.5	20.5	41.5	30	140
95	120	220	21.5	20.5	41.5	30	145
100	125	220	21.5	20.5	41.5	30	150

d (inch)	D1	D3	D5	L1	L2	L3	L5
1.000	1.713	4.094	0.492	0.748	1.496	0.984	2.441
1.125	1.831	4.094	0.492	0.748	1.496	0.984	2.441
1.250	1.988	4.094	0.492	0.748	1.496	0.984	2.638
1.375	2.107	4.331	0.492	0.748	1.496	0.984	2.756
1.500	2.225	4.921	0.579	0.748	1.496	0.984	2.953
1.625	2.382	5.236	0.579	0.748	1.496	0.984	3.150
1.750	2.500	5.512	0.579	0.748	1.496	0.984	3.228
1.875	2.618	5.512	0.579	0.748	1.496	0.984	3.228
2.000	2.697	5.906	0.579	0.748	1.496	0.984	3.425
2.125	2.815	6.102	0.689	0.748	1.496	0.984	3.622
2.250	3.012	6.299	0.689	0.748	1.496	0.984	3.937
2.375	3.091	6.469	0.689	0.748	1.496	0.984	3.937
2.500	3.209	6.693	0.689	0.748	1.496	0.984	4.055
2.625	3.406	7.067	0.689	0.748	1.496	0.984	4.724
2.750	3.484	7.480	0.689	0.748	1.496	0.984	4.724
2.875	3.858	7.480	0.689	0.807	1.634	1.181	4.843
3.000	3.937	7.480	0.689	0.807	1.634	1.181	4.921
3.125	4.134	8.661	0.689	0.807	1.634	1.181	5.118
3.250	4.252	8.661	0.846	0.807	1.634	1.181	5.236
3.375	4.331	8.661	0.846	0.807	1.634	1.181	5.315
3.500	4.528	8.661	0.846	0.807	1.634	1.181	5.512
3.625	4.606	8.661	0.846	0.807	1.634	1.181	5.591
3.750	4.725	8.661	0.846	0.807	1.634	1.181	5.709
3.875	4.921	8.661	0.846	0.807	1.634	1.181	5.906
4.000	4.921	8.661	0.846	0.807	1.634	1.181	5.906



HQCS-F40(PHS)



Type: Single Cartridge Seal

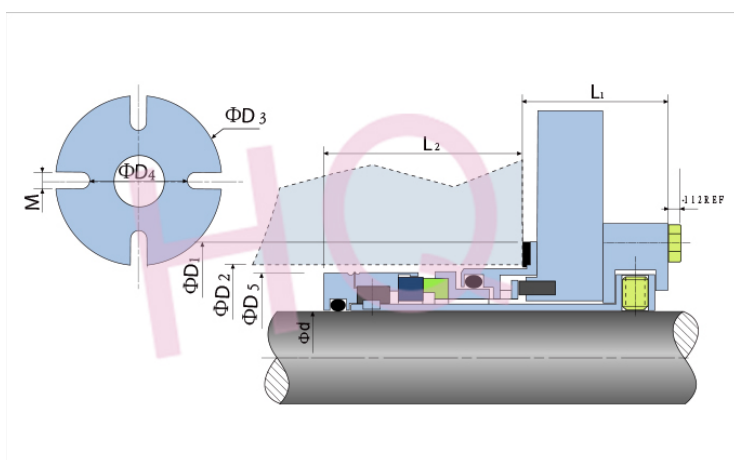
Replacement: FLEXA PHS

Temperature: -30°C to $+204^{\circ}\text{C}$

Pressure: $\leq 20\text{Bar}$

Speed: $\leq 22\text{m/s}$

Material: B,A,Q1,Q2,U2,E,V,K,
G,F,G,M5,T6



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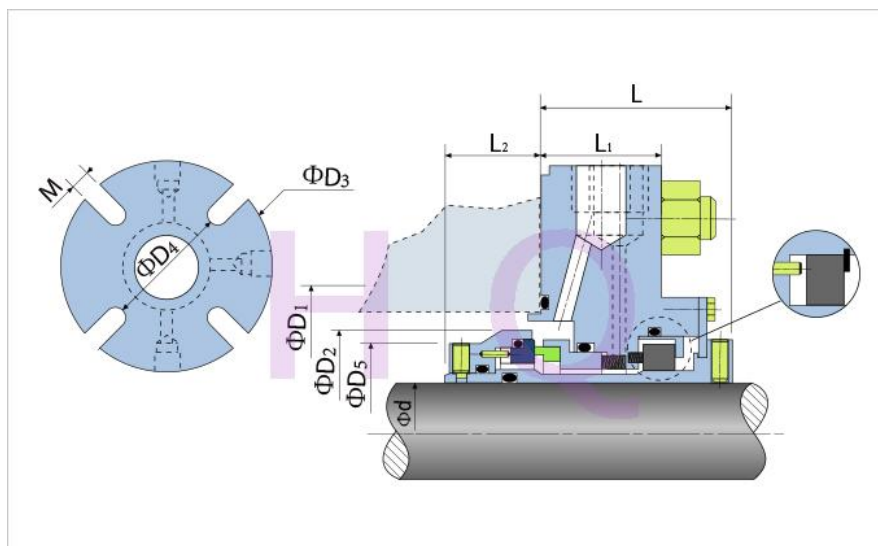
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d (inch)	D1	D2	D3	D4	D5	L1	L2	M
1.125	2.230	1.790	4.250	2.462	1.700	1.387	1.900	0.437
1.250								
1.375	2.480	2.040	4.250	2.712	1.950	1.387	1.900	0.437
1.500	2.605	2.165	4.500	2.950	2.200	1.387	1.900	0.562
1.625								
1.750	2.990	2.540	5.500	3.188	2.450	1.387	1.900	0.562
1.875	3.105	2.665	5.500	3.313	2.575	1.387	1.900	0.562
2.000	3.230	2.79	5.500	3.570	2.700	1.407	1.894	0.562
2.125	3.490	3.040	6.000	3.687	2.825	1.407	1.894	0.687
2.250								
2.375								
2.500	3.855	3.415	6.500	3.937	3.320	1.453	1.914	0.687
2.625	4.070	3.570	6.500	4.188	3.560			0.687
2.750	4.320	3.820	7.500	4.438	3.650			0.687
2.875								
3.000	4.700	4.075	8.000	5.063	3.900	1.711	2.018	0.687
3.125								
3.250	4.950	4.325	8.250	5.188	4.175	1.550	2.043	0.687

HQCS-F41(58)



Type: Single Cartridge Seal
 Replacement: FLEXA 58
 Temperature: -30°C to $+290^{\circ}\text{C}$
 Pressure: $\leq 80\text{Bar}$
 Speed: $\leq 50\text{m/s}$
 Material: B,A,Q1,Q2,U2,E,
 V,K,G,F,G,M5,T6



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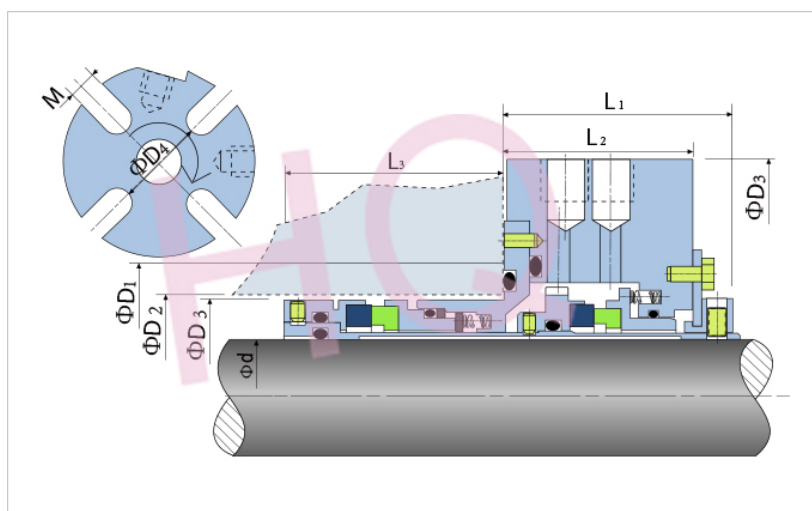
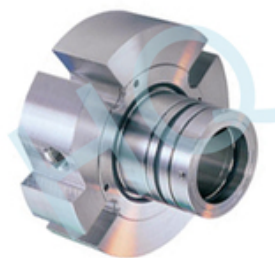


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HQCS-F42(79)

Type: Double Cartridge Seal
 Replacement: FLEXA 79
 Temperature: -30°C to +290°C
 Pressure: $\leq 27\text{Bar}$
 Speed: $\leq 22\text{m/s}$
 Material: B,A,Q1,Q2,U2,E,V,
 K,G,F,G,M5,T6



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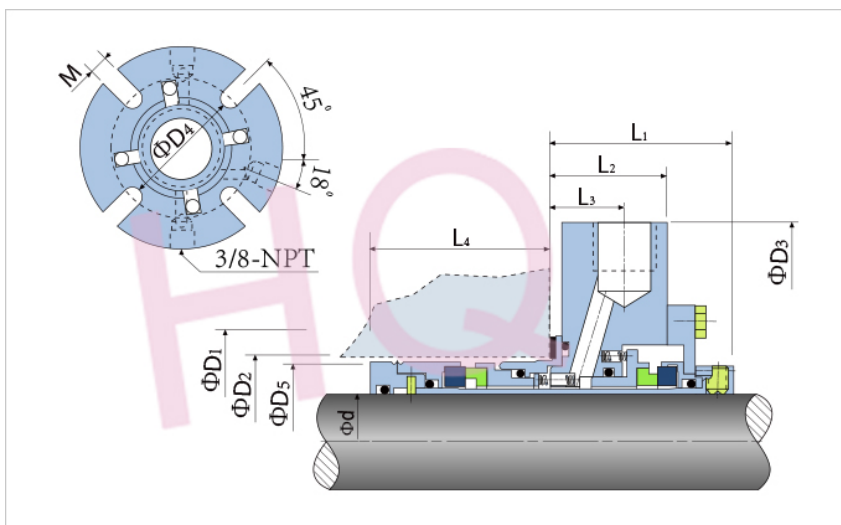
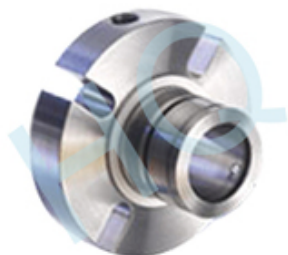
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d (inch)	D1	D2	D3	D4	D5	L1	L2	L3	M
1.125	2.219	1.750	4.250	2.463	1.700	2.062	1.693	2.031	0.437
1.250	2.344	2.000	4.250	2.749	1.950	2.125	1.699	2.000	0.563
1.375	2.395	2.000	4.250	2.813	1.950	2.062	1.698	2.031	0.437
1.500	2.657	2.250	4.500	2.949	2.200	2.125	1.699	2.062	0.563
1.625	2.782	2.375	5.000	3.124	2.325	2.125	1.699	2.062	0.563
1.750	2.844	2.500	5.500	3.312	2.450	2.125	1.699	2.062	0.563
1.875	2.970	2.625	5.500	3.249	2.575	2.125	1.699	2.062	0.563
2.000	3.095	2.750	5.500	3.569	2.700	2.125	1.699	2.062	0.563
2.125	3.572	2.875	6.00	3.687	2.825	2.125	1.699	2.062	0.688
2.250	3.714	3.000	6.250	3.812	2.950	2.125	1.699	2.062	0.688
2.375	3.750	3.250	6.250	4.000	3.195	2.125	1.699	2.062	0.688
2.500	3.822	3.375	6.500	4.124	3.320	2.125	1.699	2.062	0.688
2.625	4.072	3.625	6.500	4.249	3.560	2.125	1.699	2.062	0.688
2.750	4.250	3.750	7.500	4.438	3.660	2.23	1.729	2.312	0.688
2.875									
3.000	4.718	4.000	8.000	5.062	3.920	2.415	1.916	2.460	0.688
3.125									
3.250	4.750	4.250	8.250	5.188	4.175	2.375	1.874	2.462	0.750
3.375									
3.500	5.215	4.750	8.500	5.437	4.450	2.375	1.874	2.355	0.813
3.625									
3.750	5.469	4.750	8.750	5.688	4.680	2.415	1.916	2.460	0.813
4.750	6.469	5.750	9.750	6.688	5.680	2.525	2.023	2.475	0.813



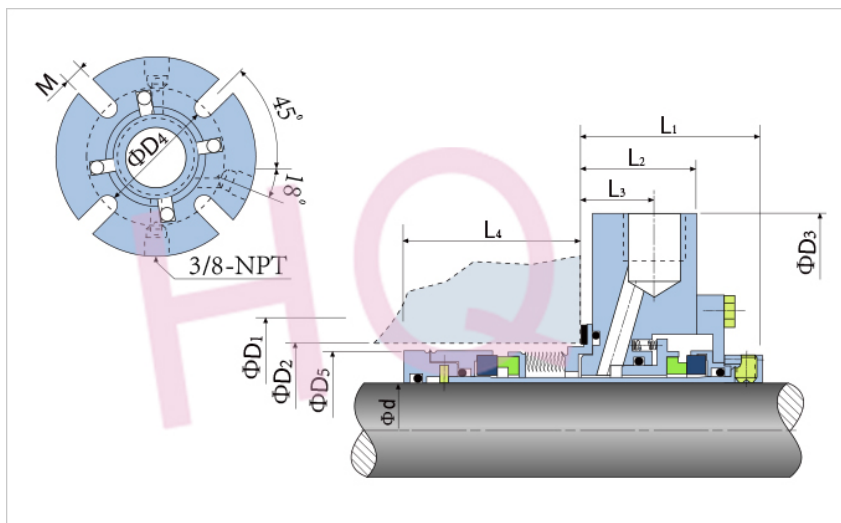
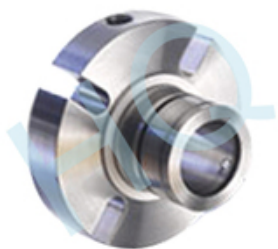
HQCS-F43(75)

Type: Double Cartridge Seal
 Placement: FLEXA 75
 Temperature: -30°C to +290°C
 Pressure: ≤80Bar
 Speed: ≤50m/s
 Material: B,A,Q1,Q2,U2,E,
 V,K,G,F,G,M5,T6



d (mm)	D1	D2	D3	D4	D5	L1	L2	L3	L4	M
24	56.6	44.5	101.6	60.3	43.2	50.8	32.5	19.0	49.7	11.1
25	56.6	44.5	101.6	60.3	43.2	50.8	32.5	19.0	49.7	11.1
28	56.6	44.5	108.0	62.7	43.2	50.8	32.5	19.0	49.7	11.1
30	59.8	50.8	108.0	65.6	49.5	50.8	32.5	19.0	49.7	11.1
32	59.8	50.8	108.0	65.6	49.5	50.8	32.5	19.0	49.7	11.1
33	63.0	50.8	108.0	68.9	49.5	50.8	32.5	19.0	49.7	11.1
35	63.0	50.8	108.0	68.9	49.5	50.8	32.5	19.0	49.7	11.1
38	66.2	57.2	114.3	74.9	55.9	50.8	32.5	19.0	49.7	14.3
40	72.5	60.3	127.0	78.1	59.1	50.8	32.5	19.0	49.7	14.3
43	75.9	63.5	139.7	81.0	62.2	50.8	32.5	20.6	49.7	14.3
45	75.9	63.5	139.7	81.0	62.2	50.8	32.5	20.6	49.7	14.3
48	78.9	66.7	139.7	84.2	65.4	50.8	32.5	19.0	49.7	14.3
50	82.0	69.9	139.7	90.7	68.6	50.8	32.5	19.0	49.7	14.3
53	88.6	73.0	152.4	93.7	71.8	50.8	32.5	19.0	49.7	17.5
55	91.6	76.2	158.8	96.9	74.9	50.8	32.5	19.0	49.7	17.5
58	94.7	82.6	158.8	100.0	81.2	58.5	33.4	19.0	52.8	17.5
60	94.7	82.6	158.8	100.0	81.2	58.8	33.4	19.0	52.8	17.5
63	97.9	85.7	165.1	100.0	84.3	51.7	33.4	19.0	51.0	17.5
65	103.4	92.1	165.1	106.4	90.4	51.7	33.4	19.0	52.1	17.5
68	109.7	95.2	190.5	112.7	92.7	51.7	33.4	19.0	52.1	17.5
70	109.7	95.2	190.5	112.7	92.7	51.7	33.4	19.0	52.1	17.5
72	113.0	98.4	190.5	117.5	96.1	58.5	40.1	19.0	56.0	17.5
75	119.4	101.6	203.2	128.6	99.1	58.4	40.1	19.0	55.9	17.5
80	125.7	108.0	209.6	131.7	106.0	57.2	38.8	19.0	58.8	17.5
85	128.9	111.	215.9	134.9	109.2	58.5	40.1	19.0	57.2	20.6
90	135.3	117.5	215.9	141.3	115.7	58.5	40.1	19.0	57.2	20.6
95	138.4	120.6	222.2	164.3	118.9	58.5	40.1	19.0	56.0	20.6

HQMB-F40(73)



Type: Metal Bellow Seal

Replacement: FLEXA 73P

Temperature: -30°C to +204°C

Pressure: ≤ 2.0 Mpa

Speed: ≤ 18 m/s

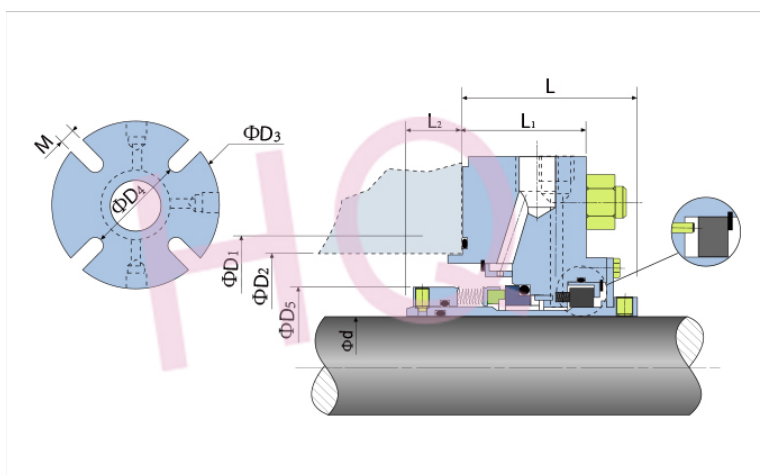
Material: A,B,Q1,Q2,U1,U2,E,V,K,G,F,M,M5,T6

d (mm)	D1	D2	D3	D4	D5	L1	L2	L3	L4	M
24	56.6	44.5	101.6	60.3	43.2	50.8	32.5	19.0	49.7	11.1
25	56.6	44.5	101.6	60.3	43.2	50.8	32.5	19.0	49.7	11.1
28	56.6	44.5	108.0	62.7	43.2	50.8	32.5	19.0	49.7	11.1
30	59.8	50.8	108.0	65.6	49.5	50.8	32.5	19.0	49.7	11.1
32	59.8	50.8	108.0	65.6	49.5	50.8	32.5	19.0	49.7	11.1
33	63.0	50.8	108.0	68.9	49.5	50.8	32.5	19.0	49.7	11.1
35	63.0	50.8	108.0	68.9	49.5	50.8	32.5	19.0	49.7	11.1
38	66.2	57.2	114.3	74.9	55.9	50.8	32.5	19.0	49.7	14.3
40	72.5	60.3	127	78.1	59.1	50.8	32.5	19.0	49.7	14.3
43	75.9	63.5	139.7	81.0	62.2	50.8	32.5	20.6	49.7	14.3
45	75.9	63.5	139.7	81.0	62.2	50.8	32.5	20.6	49.7	14.3
48	78.9	66.7	139.7	84.2	65.4	50.8	32.5	19.0	49.7	14.3
50	82.0	69.9	139.7	90.7	68.6	50.8	32.5	19.0	49.7	14.3
53	88.6	73.0	152.4	93.7	71.8	50.8	32.5	19.0	49.7	17.5
55	91.6	76.2	158.8	96.9	74.9	50.8	32.5	19.0	49.7	17.5
58	94.7	82.6	158.8	100.0	81.2	58.5	33.4	19.0	52.8	17.5
60	94.7	82.6	158.8	100.0	81.2	58.8	33.4	19.0	52.8	17.5
63	97.9	85.7	165.1	100.0	84.3	51.7	33.4	19.0	51.0	17.5
65	103.4	92.1	165.1	106.4	90.4	51.7	33.4	19.0	52.1	17.5
68	109.7	95.2	190.5	112.7	92.7	51.7	33.4	19.0	52.1	17.5
70	109.7	95.2	190.5	112.7	92.7	51.7	33.4	19.0	52.1	17.5
72	113.0	98.4	190.5	117.5	96.1	58.5	40.1	19.0	56.0	17.5
75	119.4	101.6	203.2	128.6	99.1	58.4	40.1	19.0	55.9	17.5
80	125.7	108.0	209.6	131.7	106.0	57.2	38.8	19.0	58.8	17.5
85	128.9	111.	215.9	134.9	109.2	58.5	40.1	19.0	57.2	20.6
90	135.3	117.5	215.9	141.3	115.7	58.5	40.1	19.0	57.2	20.6
95	138.4	120.6	222.2	164.3	118.9	58.5	40.1	19.0	56.0	20.6

HQMB-F41(53A)



Type: Cartridge Seal
 Replacement: FLEXA 53A
 Temperature: -30°C to $+204^{\circ}\text{C}$
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,E,
 V,K,G,F,M,M5,T6



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HQMB-F42 (78)



Type: Metal Bellow Seal

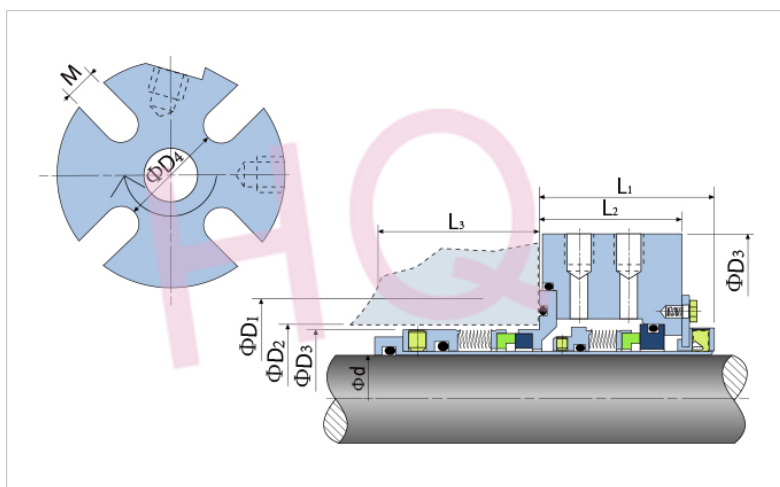
Replacement: FLEXA 78

Temperature: -30°C to +204°C

Pressure: $\leq 2.0\text{Mpa}$

Speed: $\leq 22\text{m/s}$

Material: A,B,Q1,Q2,U1,U2,E,
V,K,G,F,M,M5,T6



<http://www.hqseal.com>



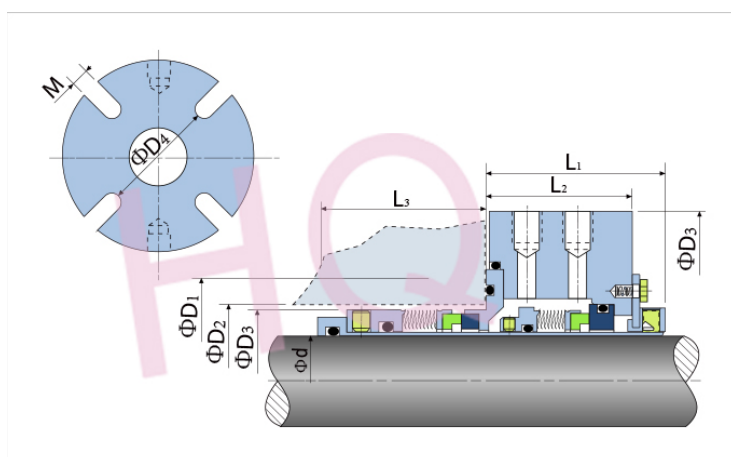
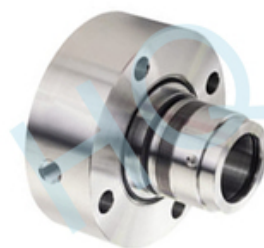
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d (inch)	D1	D2	D3	D4	D5	L1	L2	L3	M
1.000	2.152	1.750	4.125	2.463	1.687	2.062	1.696	2.025	0.437
1.125	2.152	1.750	4.250	2.463	1.649	2.062	1.696	2.031	0.437
1.250	2.400	2.000	4.250	2.583	1.937	2.125	1.760	2.062	0.437
1.375	2.462	2.000	4.250	2.813	1.944	2.031	1.665	2.062	0.437
1.500	2.652	2.250	4.500	3.063	2.188	2.125	1.760	2.250	0.563
1.625	2.812	2.375	5.000	3.125	2.312	2.125	1.760	2.210	0.563
1.750	2.834	2.500	5.500	3.188	2.437	2.125	1.760	2.337	0.563
1.875	2.959	2.625	5.500	3.313	2.562	2.125	1.760	2.337	0.563
2.000	3.250	2.750	5.500	3.570	2.687	2.125	1.760	2.337	0.563
2.125	3.464	3.000	6.000	3.813	2.812	2.125	1.760	2.400	0.688
2.250	3.464	3.125	6.250	3.813	2.937	2.125	1.760	2.400	0.688
2.375	3.822	3.250	6.250	3.938	3.187	2.250	1.884	2.312	0.688
2.500	3.714	3.375	6.500	4.125	3.312	2.194	1.828	2.407	0.688
2.625	4.250	3.625	6.500	4.375	3.437	2.625	2.260	2.462	0.688
2.750	4.250	3.750	7.500	4.625	3.625	2.469	2.103	2.500	0.688
3.375	5.250	4.750	8.750	5.688	4.625	2.750	2.312	2.719	0.813



HQMB-F43(76)

Type: Metal Bellow Seal
 Replacement: FLEXA 76
 Temperature: -30°C to +204°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 22\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,E,
 V,K,G,F,M,M5,T6



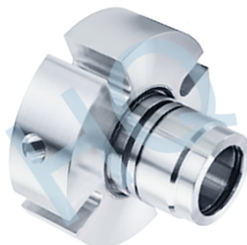
<http://www.hqseal.com>



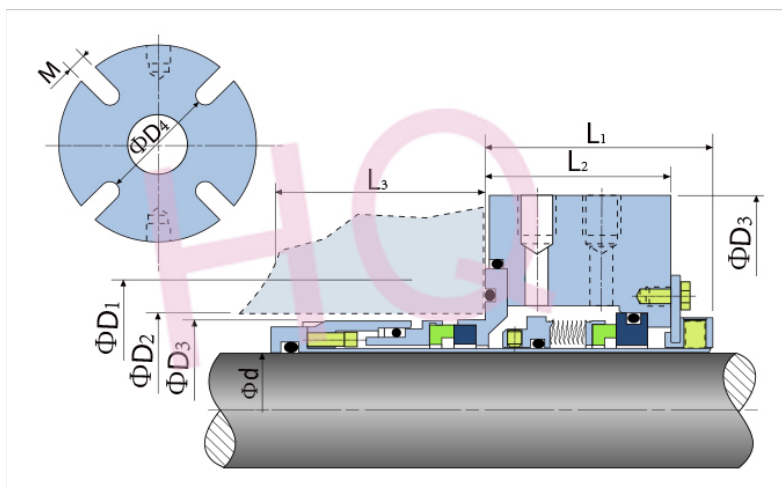
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d (inch)	D1	D2	D3	D4	D5	L1	L2	L3	M
1.000	2.152	1.750	4.125	2.463	1.687	2.062	1.696	2.025	0.437
1.125	2.152	1.750	4.25	2.463	1.649	2.062	1.696	2.031	0.437
1.250	2.400	2.000	4.25	2.583	1.937	2.125	1.760	2.062	0.437
1.375	2.462	2.000	4.25	2.813	1.944	2.031	1.665	2.062	0.437
1.500	2.652	2.250	4.50	3.063	2.188	2.125	1.760	2.250	0.563
1.625	2.812	2.375	5.00	3.125	2.312	2.125	1.760	2.210	0.563
1.750	2.834	2.500	5.50	3.188	2.437	2.125	1.760	2.337	0.563
1.875	2.959	2.625	5.50	3.313	2.562	2.125	1.760	2.337	0.563
2.000	3.250	2.750	5.50	3.570	2.687	2.125	1.760	2.337	0.563
2.125	3.464	3.000	6.00	3.813	2.812	2.125	1.760	2.400	0.688
2.250	3.464	3.125	6.25	3.813	2.937	2.125	1.760	2.400	0.688
2.375	3.822	3.250	6.25	3.938	3.187	2.250	1.884	2.312	0.688
2.500	3.714	3.375	6.50	4.125	3.312	2.194	1.828	2.407	0.688
2.625	4.250	3.625	6.50	4.375	3.437	2.625	2.260	2.462	0.688
2.750	4.250	3.750	7.50	4.625	3.625	2.469	2.103	2.500	0.688
3.375	5.250	4.750	8.75	5.688	4.625	2.75	2.312	2.719	0.813

HQMB-F44(72)



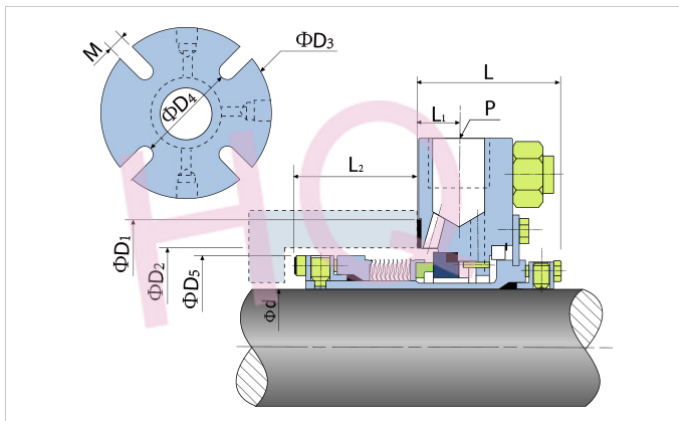
Type: Metal Bellow Seal
 Replacement: FLEXA 72
 Temperature: -30°C to $+204^{\circ}\text{C}$
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 22\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,E,V,K,G,F,M,M5,T6



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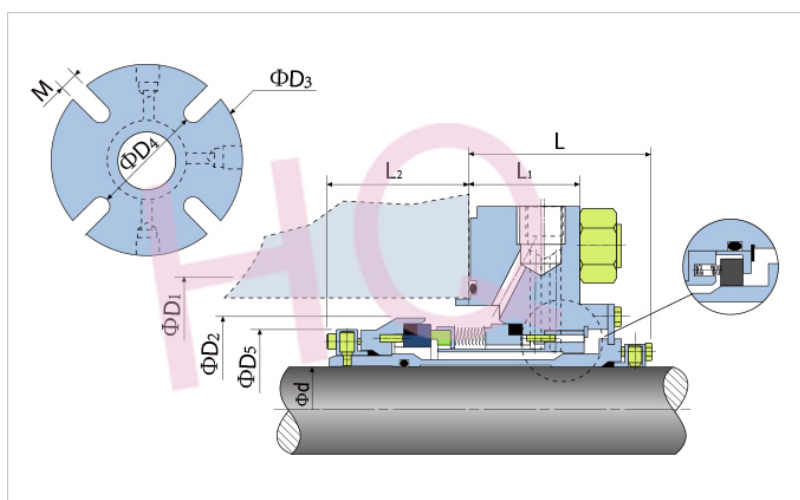
Type: Metal Bellow Seal
 Replacement: FLEXA 66
 Temperature: -30°C to +425°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 22\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,E,V,K,G,F,M,M5,T6

d (inch)	D1	D2	D5	D3	D4	L	L1	L2	M	P
1.000	2.375	2.000	1.812							3/8
1.125	2.625	2.125	1.937							3/8
1.250	2.750	2.250	2.170							3/8
1.375	3.000	2.500	2.295	4.75	3.075	1.965	0.500	1.68	9/16	3/8
1.500	3.125	2.625	2.420	5.25	3.200	1.965	0.593	1.68	9/16	1/2
1.625	3.250	2.750	2.545	5.50	3.320	1.965	0.593	1.68	9/16	1/2
1.750	3.375	2.875	2.670	5.75	3.450	1.965	0.593	1.68	9/16	1/2
1.875	3.625	3.125	2.795	4.00	3.700	2.045	0.710	1.68	9/16	1/2
2.000	3.750	3.250	2.920	6.25	3.825	2.045	0.710	1.83	11/16	1/2
2.125	3.875	3.375	3.045	6.25	3.950	2.045	0.710	1.83	11/16	1/2
2.250	4.000	3.500	3.187	6.50	4.075	2.045	0.710	1.83	11/16	1/2
2.375	4.000	3.500	3.312	6.50	4.075	2.111	0.710	1.83	11/16	1/2
2.500	4.125	3.625	3.437	6.50	4.200	2.100	0.757	1.83	11/16	1/2
2.625	4.375	3.625	3.625	6.75	4.450	2.111	0.757	1.83	11/16	1/2
2.750	4.500	4.000	3.750	7.50	4.575	2.125	0.762	1.80	11/16	1/2
2.875	4.625	4.125	3.875			2.125		1.80	11/16	1/2
3.000	4.750	4.250	4.000			2.125		1.80	11/16	1/2
3.125	4.875	4.375	4.125						11/16	1/2
3.250	5.000	4.500	4.250						11/16	1/2
3.375	5.125	4.625	4.375						11/16	1/2
3.500	5.250	4.750	4.500						11/16	1/2
3.625	5.375	4.875	4.325						11/16	1/2
3.750	5.500	5.000	4.750						11/16	1/2
3.875	5.875	5.375	5.125						11/16	1/2
4.000	5.875	5.375	5.125						11/16	1/2

HQMB-F46(63)



Type: Metal Bellow Seal
 Replacement: FLEXA 63
 Temperature: -30°C to $+425^{\circ}\text{C}$
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 22\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,E,V,K,G,F,M,M5,T6

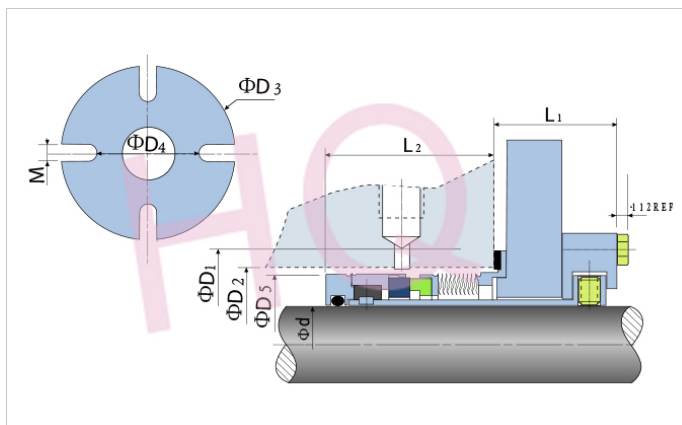


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HQMB-F47(PHB)



Type: Metal Bellow Seal

Replacement: FLEXA PHB

Temperature: -30°C to +204°C

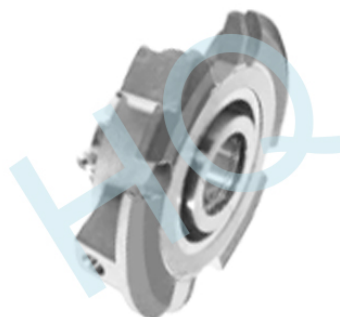
Pressure: $\leq 2.0\text{Mpa}$

Speed: $\leq 22\text{m/s}$

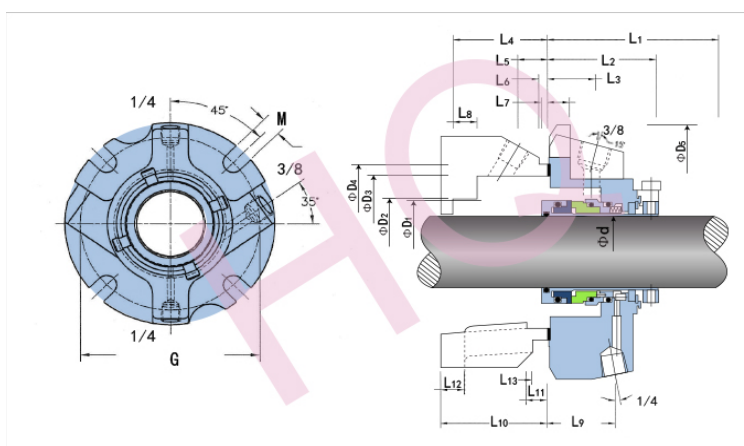
Material: A,B,Q1,Q2,U1,U2,E,V,K,G,F,M,M5,T6

d (inch)	D1	D2	D3	D4	D5	L1	L2	M
1.125	2.230	1.790	4.25	2.462	1.700	1.387	1.900	0.437
1.250								
1.375	2.480	2.040	4.25	2.712	1.950	1.387	1.900	0.437
1.500	2.605	2.165	4.50	2.950	2.200	1.387	1.900	0.562
1.625								
1.750	2.990	2.540	5.50	3.188	2.450	1.387	1.900	0.562
1.875	3.105	2.665	5.50	3.313	2.575	1.387	1.900	0.562
2.000	3.230	2.790	5.50	3.570	2.700	1.407	1.894	0.562
2.125	3.490	3.040	6.00	3.687	2.825	1.407	1.894	0.687
2.250								
2.375								
2.500	3.855	3.415	6.50	3.937	3.320	1.453	1.914	0.687
2.625	4.070	3.570	6.50	4.188	3.560			0.687
2.750	4.320	3.820	7.50	4.438	3.650			0.687
2.875								
3.000	4.700	4.075	8.00	5.063	3.900	1.711	2.018	0.687
3.125								
3.250	4.950	4.325	8.25	5.188	4.175	1.550	2.043	0.687

HQCS-F07(ISC1)



Type: Double Cartridge Seal, Suit Sulzer Process Pumps
 Replacement: Flowserve ISC1
 Temperature: -40 to +180°C
 Pressure: ≤ 25 Bar
 Speed: ≤ 10 m/s
 Material: Q1, Q2, U2, T, V, M1, F, G, M



Equivalent with
 Flowserve ISC1 seal



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HQCS-F01(ISC1EX)



Type: Single Cartridge Seal

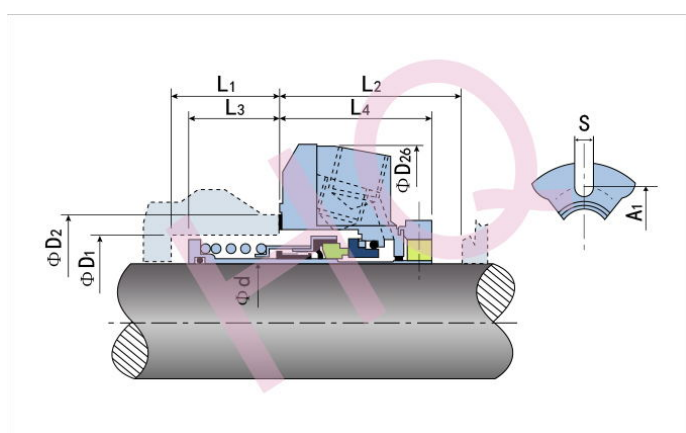
Replacement: Flowserve ISC1EX

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

Pressure: $\leq 2.0\text{Mpa}$

Speed: $\leq 23\text{m/s}$

Material: A,B,Q1,Q2,T,V,K,F,G,M



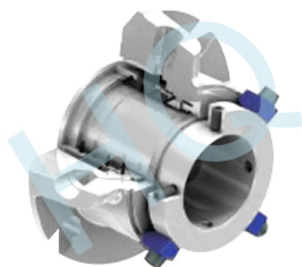
<http://www.hqseal.com>



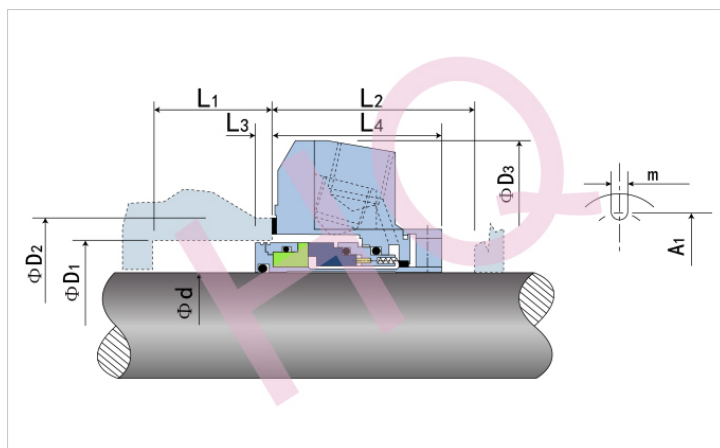
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d (inch)	D1		D2	D26	L1	L2	L3	L4	A1	S
	min	max								
1.000	1.625	1.875	2.115	3.69~3.75	1.024	1.975	0.962	1.913	2.750	0.440
1.125	1.750	2.000	2.240	3.69~3.75	\	1.975	\	1.913	2.875	0.440
1.250	1.890	2.245	2.495	4.19~4.25	\	1.975	\	1.913	3.125	0.562
1.375	2.000	2.375	2.615	3.94~4.00	1.189	1.975	1.127	1.913	3.250	0.440
1.437	2.250	2.688	2.775	4.72~4.78	\	2.035	\	1.973	3.750	0.560
1.500	2.250	2.525	2.775	4.69~4.75	\	2.035	\	1.973	3.750	0.560
1.625	2.375	2.780	3.030	4.69~4.75	\	2.035	\	1.973	3.750	0.560
1.750	2.500	2.875	3.150	4.94~5.00	1.214	2.035	1.152	1.973	3.875	0.560
1.875	2.625	2.875	3.150	4.94~5.00	1.214	2.035	1.153	1.973	3.875	0.560
1.937	2.690	2.920	\	\	\	2.035	\	1.973	\	\
2.000	2.750	3.030	3.280	5.00~5.12	\	2.035	\	1.973	4.120	0.688
2.125	2.875	3.125	3.430	5.94~6.00	1.154	2.035	1.092	1.973	4.250	0.750
2.250	3.000	3.280	\	\	\	2.035	\	1.973	\	\
2.375	3.125	3.687	3.975	6.32~6.38	1.349	2.035	1.287	1.973	4.875	0.750
2.437	3.375	3.450	\	6.32~6.38	\	2.004	\	1.942	4.875	0.750
2.500	3.375	3.687	3.975	6.32~6.38	1.349	2.035	1.287	1.973	4.870	0.750
2.625	3.625	4.312	4.615	7.19~7.25	1.191	2.788	1.129	2.726	5.625	0.880
2.750	3.750	4.312	4.615	7.19~7.25	1.191	2.788	1.129	2.726	5.625	0.880

HQCS-F04(ISC1PX)



Type: Single Cartridge Seal
 Replacement: Flowserve ISC1PX
 Temperature: -40°C to $+220^{\circ}\text{C}$
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 23\text{r/mim}$
 Material: A,B,Q1,Q2,T,V,K,F,G,M



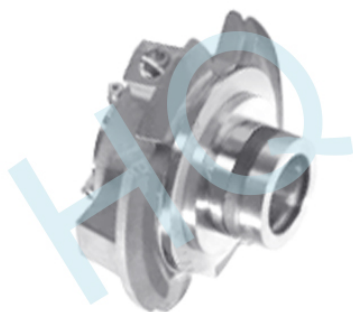
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d (inch)	D1		D2	D3	L1	L2	L3	L4	A1	S
	min	max								
1.000	1.625	1.875	2.115	3.69~3.75	0.274	1.975	0.212	1.913	2.750	0.440
1.125	1.750	2.000	2.240	3.69~3.75	0.274	1.975	0.212	1.913	2.875	0.440
1.250	1.890	2.245	2.495	4.19~4.25	0.274	1.975	0.212	1.913	3.125	0.562
1.375	2.000	2.375	2.615	3.94~4.00	0.264	1.975	0.212	1.913	3.250	0.440
1.437	2.250	2.688	2.775	4.72~4.78	0.284	2.035	0.222	1.973	3.750	0.560
1.500	2.250	2.525	2.775	4.69~4.75	0.264	2.035	0.202	1.973	3.750	0.560
1.625	2.375	2.780	3.030	4.69~4.75	0.264	2.035	0.202	1.973	3.750	0.560
1.750	2.500	2.875	3.150	4.94~5.00	0.264	2.035	0.202	1.973	3.875	0.560
1.875	2.625	2.875	3.150	4.94~5.00	0.264	2.035	0.202	1.973	3.875	0.560
1.937	2.690	2.920	\	\	0.269	2.035	0.207	1.973	3.875	0.560
2.000	2.750	3.030	3.280	5.00~5.12	0.264	2.035	0.207	1.973	4.120	0.688
2.125	2.875	3.125	3.430	5.94~6.00	0.264	2.035	0.207	1.973	4.250	0.750
2.250	3.000	3.280	\	\	0.268	2.035	0.206	1.973	4.250	0.750
2.375	3.125	3.687	3.975	6.32~6.38	0.264	2.035	0.206	1.973	4.875	0.750
2.437	3.375	3.450	\	6.32~6.38	0.295	2.004	0.233	1.942	4.875	0.750
2.500	3.375	3.687	3.975	6.32~6.38	0.264	2.035	0.233	1.973	4.870	0.750
2.625	3.625	4.312	4.615	7.19~7.25	0.266	2.788	0.204	2.726	5.625	0.880
2.750	3.750	4.312	4.615	7.19~7.25	0.266	2.788	0.204	2.726	5.625	0.880

HQCS-F08(ISC2)



Type: Double Cartridge Seal
Replacement: Flowserve ISC2
Temperature: -40 to +205°C
Pressure: $\leq 2.5\text{Mpa}$
Speed: $\leq 20\text{m/s}$
Material: Q1,Q2,U2,T,V,M1,F,G,M

Equivalent with Flowserve ISC2 series seal



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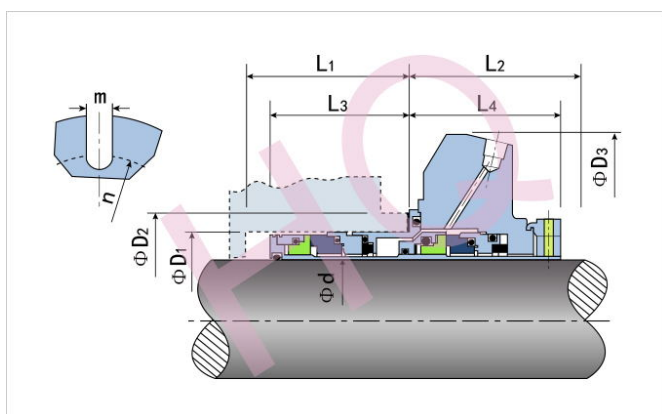


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HQCS-F03(ISC2PP)



Type: Double Cartridge Seal
 Replacement: Flowserve ISC2PP
 Temperature: -30°C to +205°C
 Pressure: $\leq 2.1\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: A,B,Q1,Q2,T,V,K,F,G,M



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d (inches)	D1		D2	D3	L1	L2	L3	L4	N	M
	min	max								
1.000	1.625	1.875	2.115	3.69 ~ 3.75	1.900	2.124	1.838	2.062	2.750	0.440
1.125	1.750	2.000	2.240	3.69 ~ 3.75	1.900	2.124	1.838	2.062	2.875	0.440
1.250	1.89	2.245	2.495	4.19 ~ 4.25	1.900	2.124	1.838	2.062	3.125	0.562
1.375	2.000	2.375	2.615	3.94 ~ 4.00	1.900	2.124	1.838	2.062	3.25	0.440
1.437	2.250	2.688	2.775	4.72 ~ 4.78	1.965	2.184	1.903	2.122	3.75	0.560
1.500	2.250	2.525	2.775	4.69 ~ 4.75	1.965	2.184	1.903	2.122	3.75	0.560
1.625	2.375	2.780	3.030	4.69 ~ 4.75	1.965	2.184	1.903	2.122	3.75	0.560
1.750	2.500	2.875	3.150	4.94 ~ 5.00	1.965	2.184	1.903	2.122	3.875	0.560
1.875	2.625	2.875	3.150	4.94 ~ 5.00	1.965	2.184	1.903	2.122	3.875	0.560
1.937	2.690	2.920	\	\	1.965	2.184	1.903	2.122	\	\
2.000	2.750	3.030	3.280	5.00 ~ 5.12	1.965	2.184	1.903	2.122	4.120	0.688
2.125	2.875	3.125	3.430	5.94 ~ 6.00	1.965	2.184	1.903	2.122	4.250	0.7500
2.250	3.000	3.280	\	\	1.965	2.184	1.903	2.122	\	\
2.375	3.125	3.687	3.975	6.32 ~ 6.38	1.965	2.184	1.903	2.122	4.875	0.750
2.437	3.375	3.450	3.975	6.32 ~ 6.38	1.996	2.153	1.934	2.091	4.875	0.750
2.500	3.375	3.687	3.975	6.32 ~ 6.38	1.965	2.184	1.903	2.122	4.875	0.750
2.625	3.625	4.312	4.615	7.19 ~ 7.25	2.491	2.968	2.429	2.906	5.625	0.880
2.750	3.750	4.312	4.615	7.19 ~ 7.25	2.491	2.968	2.429	2.906	5.625	0.880

HQCS-F06(ISC2PX)



Type: Single Cartridge Seal
Replacement: Flowserve ISC2PX
Temperature: -40 to +220°C
Pressure: $\leq 2.0\text{Mpa}$
Speed: $\leq 20\text{m/s}$
Material: Q1,Q2,U2,T,P,M1,F,G,M

*Model No: HQCS-F06



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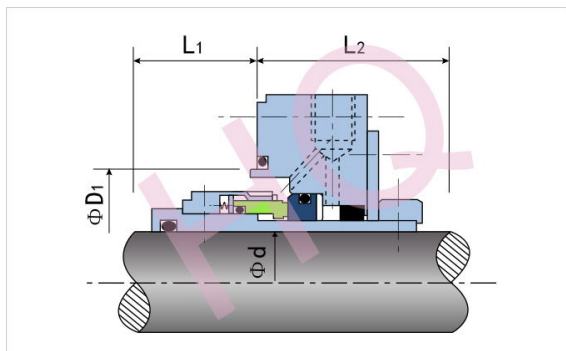
*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size: as request

*Description:

Equivalent with Flowserve ISC2PX series seal

HQCS-F02(QB)



Type: Single Cartridge Seal
 Replacement: Flowserve QB
 Temperature: -40°C to +204°C
 Pressure: ≤5.17Mpa
 Speed: ≤23m/s
 Material: A,B,Q1,Q2,T,V,K,F,G,M

d(inch) (max)	D1 (min)	L1 (min)	L2 (min)
0.500	1.718	1.406	2.031
0.563	1.750	1.406	2.031
0.625	1.843	1.406	2.031
0.750	1.968	1.468	2.031
0.813	2.093	1.437	2.063
0.875	2.218	1.437	2.063
1.000	2.343	1.437	2.219
1.125	2.593	1.781	2.219
1.250	2.718	1.781	2.219
1.375	2.843	1.781	2.375
1.500	2.968	1.937	2.500
1.625	3.156	2.000	2.500
1.750	3.281	2.000	2.500
1.875	3.406	1.968	2.594

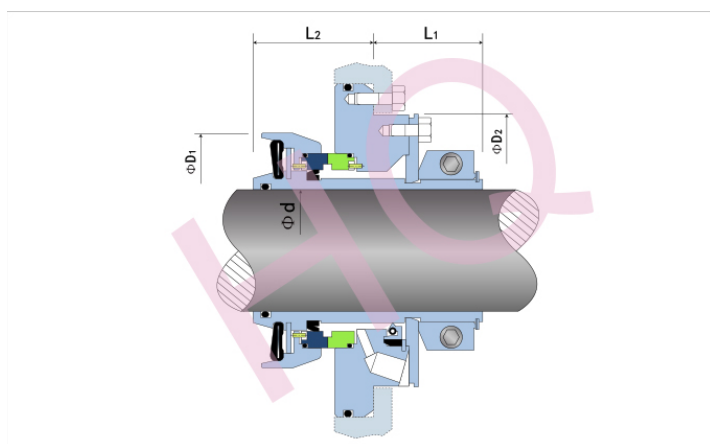
d(inch) (max)	D1 (min)	L1 (min)	L2 (min)
2.000	3.531	1.968	2.594
2.125	3.843	2.250	2.625
2.250	3.968	2.250	2.625
2.375	4.093	2.250	2.625
2.500	4.218	2.250	2.781
2.625	4.343	2.250	2.781
2.750	4.468	2.250	2.781
2.875	4.593	2.250	2.906
3.000	4.687	2.156	3.000
3.125	4.843	2.156	3.000
3.250	4.968	2.125	3.031
3.375	5.062	2.215	3.031
3.500	5.187	2.125	3.031
3.625	5.562	2.218	3.188

d(inch) (max)	D1 (min)	L1 (min)	L2 (min)
3.750	5.687	2.218	3.188
3.875	5.812	2.218	3.219
4.000	5.937	2.218	3.219
4.125	6.062	2.125	3.313
4.250	6.187	2.125	3.313
4.375	6.312	2.125	3.313
4.500	6.437	2.125	3.313
4.625	6.562	2.125	3.313
4.750	6.937	2.312	3.313
4.875	7.062	2.312	3.313
5.125	7.312	2.312	3.313
5.2500	7.437	2.312	3.313
5.375	7.562	2.437	3.563
5.500	7.687	2.437	3.563

HQCS-F05(SLC)



Type: Single Cartridge Seal
 Replacement: Flowserve SLC,
 Suit for Warman Pump
 Temperature: $\leq 110^{\circ}\text{C}$
 Pressure: ≤ 20.7 Bar
 Speed: $\leq 15\text{m/s}$
 Material: A,B,U1,U2,Q1,Q2,G,M5



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Group	d (mm)	D1	D2	wet end		dry end	
				L1	L2	L1	L2
1	35-54	99.7	127.8	52.4	62.2	56.2	55.5
2	54-82	136.0	156.5	57.9	62.7	58.6	58.1
3	82-106	170.0	186.4	59.9	67.3	61.6	65.5
4	106-138	202.1	229.6	77.7	67.8	67.4	69.2
5	168-181	257.9	280.9	83.6	78.5	66.5	77.4
6	181-220	313.2	329.6	99.3	92.4	99.3	92.1

Group	d (inch)	D1	D2	wet end		dry end	
				L1	L2	L1	L2
1	1.375-2.125	3.91	5.03	2.06	2.45	2.21	2.18
2	2.125-3.125	5.35	6.19	2.28	2.47	2.31	2.29
3	3.125-4.125	6.69	7.34	2.36	2.65	2.42	2.58
4	4.125-5.438	7.96	9.04	3.06	2.67	2.65	2.72
5	5.438-7.125	10.15	11.06	3.29	3.09	2.62	3.05
6	7.125-8.661	12.33	12.98	3.91	3.63	3.91	3.63

HQCS-F13(2R)



Type: Cartridge Seal
Replacement: Flowserve 2R
Temperature: -40 to +180°C
Pressure: ≤ 16 Bar
Speed: ≤ 10 m/s
Material: Q1, Q2, U2, T, V, M1, F, G, M

*Model No: HQCS-F13

*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size : as request

*Description

Equivalent with Flowserve 2R series seal



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HQCS-F14(BX)



Type: Cartridge Seal
Replacement: Flowserve BX
Temperature: $\leq 110^{\circ}\text{C}$
Pressure: ≤ 16 Bar
Speed: $\leq 15\text{m/s}$
Material: Q1, Q2, U2, T, V, M1, F, G, M

*Model No: HQCS-F14

*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size: as request

*Description:

Equivalent with Flowserve BX series seal



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HQCS-F15(BXH)



Type: Cartridge Seal
Replacement: Flowserve BXH
Temperature: -10 to +150°C
Pressure: ≤ 16 Bar
Speed: ≤ 5 m/s
Material: Q1, Q2, U2, T, V, M1, F, G, M

*Model No: HQCS-F15

*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size: as request

*Description:

Equivalent with Flowserve BXH series seal



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HQCS-F18(PTO)



Type: Cartridge Seal
Replacement: Flowserve PTO
Temperature: -10 to +150°C
Pressure: $\leq 3\text{Mpa}$
Speed: $\leq 10\text{m/s}$
Material: Q1, Q2, U2, T, V, M1, F, G, M

*Model No: HQCS-F18



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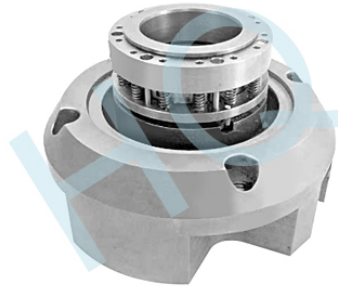
*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size: as request

* Description:

Equivalent with Flowserve PTO series seal

HQCS-F19(LE)



Type: Cartridge Seal
Replacement: Flowserve LE
Temperature: -10 to +150°C
Pressure: $\leq 3\text{Mpa}$
Speed: $\leq 10\text{m/s}$
Material: Q1,Q2,U2,T,V,M1,F,G,M

*Model No: HQCS-F19

*Materials:

Stationary Ring: Q2/V/Q1/U
Rotary Ring: A/B/Q1/Q2/U2
Secondary Seal: B/E/K/N/P/S/V/M
Spring and Metal Parts: F/G/M
Shaft size: as request

*Description:

Equivalent with Flowseve LE series seal



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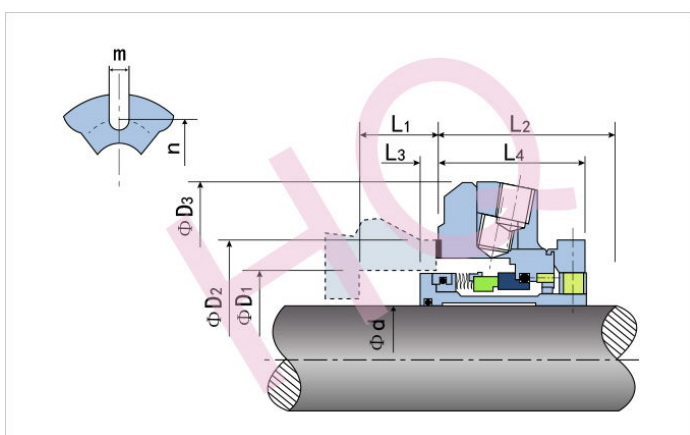


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HQMB-F01(ISC1BX)



Type: Metal Bellow Seal
 Replacement: Flowserve ICS1BX
 Temperature: -40°C to $+220^{\circ}\text{C}$
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 23\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,
 T,T6,V,G,F,M,M1



<http://www.hqseal.com>

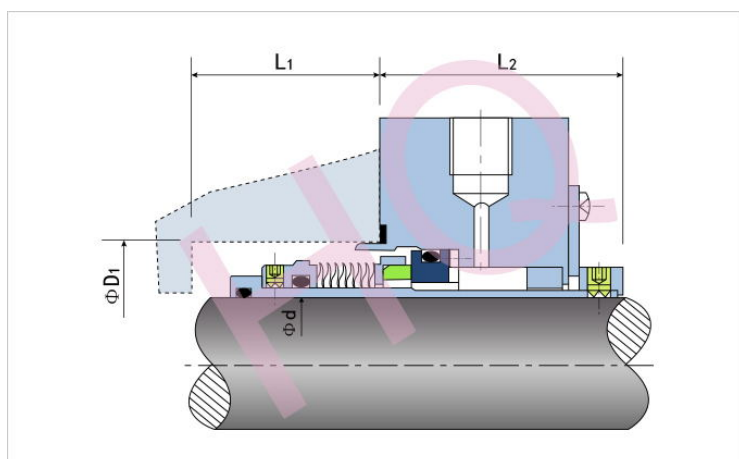


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d (inch)	D1		D2	D3	L1 (min)	L2	L3	L4	N	M
	min	max								
1.000	1.625	1.875	2.115	3.69 ~ 3.75	0.274	1.975	0.212	1.913	2.750	0.440
1.125	1.750	2.000	2.240	3.69 ~ 3.75	0.274	1.975	0.212	1.913	2.875	0.440
1.250	1.89	2.245	2.495	4.19 ~ 4.25	0.274	1.975	0.212	1.913	3.125	0.562
1.375	2.000	2.375	2.615	3.94 ~ 4.00	0.264	1.975	0.212	1.913	3.250	0.440
1.437	2.250	2.688	2.775	4.72 ~ 4.78	0.284	2.035	0.222	1.973	3.750	0.560
1.500	2.250	2.525	2.775	4.69 ~ 4.75	0.264	2.035	0.202	1.973	3.750	0.560
1.625	2.375	2.780	3.030	4.69 ~ 4.75	0.264	2.035	0.202	1.973	3.750	0.560
1.750	2.500	2.875	3.150	4.94 ~ 5.00	0.264	2.035	0.202	1.973	3.875	0.560
1.875	2.625	2.875	3.150	4.94 ~ 5.00	0.264	2.035	0.202	1.973	3.875	0.560
1.937	2.690	2.920	\	\	0.269	2.035	0.207	1.973	\	\
2.000	2.750	3.030	3.280	5.00 ~ 5.12	0.264	2.035	0.202	1.973	1.120	0.688
2.125	2.875	3.125	3.430	5.94 ~ 6.00	0.264	2.035	0.202	1.973	4.250	0.750
2.250	3.000	3.280	\	\	0.268	2.035	0.206	1.973	\	\
2.375	3.125	3.687	3.975	6.32 ~ 6.38	0.264	2.035	0.202	1.973	4.875	0.750
2.437	3.375	3.450	\	6.32 ~ 6.38	0.295	2.004	0.233	1.942	4.875	0.750
2.500	3.375	3.687	3.975	6.32 ~ 6.38	0.264	2.035	0.202	1.973	4.875	0.750
2.625	3.625	4.312	4.615	7.19 ~ 7.25	0.266	2.788	0.204	2.726	5.625	0.880
2.750	3.750	4.312	4.615	7.19 ~ 7.25	0.266	2.788	0.204	2.726	5.625	0.880

HQMB-F02(BX)

Type: Metal Bellow Seal
 Replacement: Flowserve BX
 Temperature: -30°C to +204°C
 Pressure: $\leq 2.7\text{Mpa}$
 Speed: $\leq 23\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,
 T,T6,V,G,F,M,M1



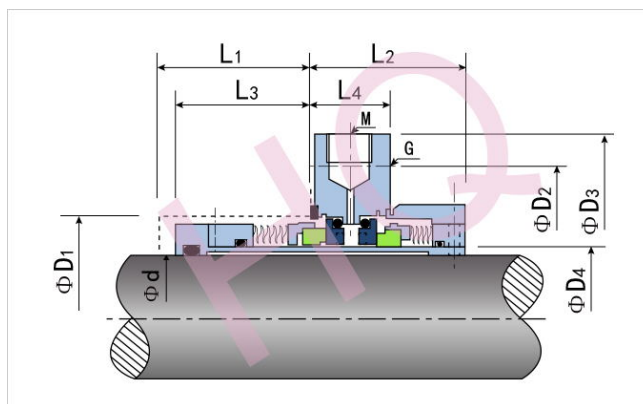
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d (inch)	D1	L1	L2
0.750	1.625	1.437	1.937
0.812	1.687	1.468	1.968
0.875	1.750	1.468	1.968
1.000	1.875	1.406	2.000
1.125	2.000	1.281	2.312
1.250	2.125	1.375	2.312
1.375	2.250	1.531	2.343
1.437	2.562	1.625	2.375
1.562	2.687	1.937	2.500
1.687	2.812	1.968	2.500
1.812	2.937	1.937	2.531
1.937	3.187	1.906	2.656
2.062	3.312	1.906	2.656
2.187	3.437	1.906	2.718
2.250	3.562	2.062	2.718
2.375	3.562	2.062	2.718
2.500	3.687	2.125	2.875
2.625	3.937	2.062	3.000
2.750	4.062	2.062	3.000
2.875	4.250	2.156	3.156
3.000	4.375	2.156	3.156
3.125	4.500	2.156	3.156
3.250	4.625	2.156	3.156
3.500	4.875	2.156	3.156
3.750	5.187	2.156	3.375
4.000	5.500	2.156	3.406
4.250	5.750	2.156	3.406
4.750	6.250	2.250	3.406

HQMB-F03(X-200)



Type: Metal Bellow Seal

Replacement: Flowserve X-200

Temperature: -30°C to +204°C

Pressure: $\leq 2.0\text{Mpa}$

Speed: $\leq 25\text{m/s}$

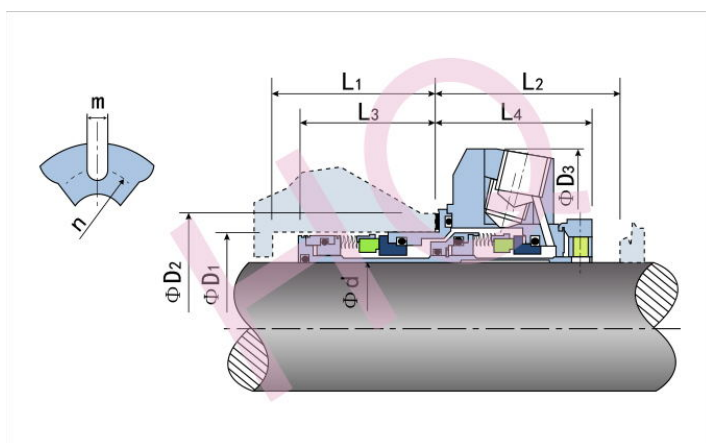
Material: A,B,Q1,Q2,U1,U2,T,T6,V,G,F,M,M1

d (inch)	D1		D4	L1	L2	L3	L4	G	D2	D3	M
	min	max		min				max	min		
1.000	1.750	1.875	1.125	1.78	2.00	1.69	1.02	0.375	2.75	3.75	3/8
1.125	1.750	2.000	*1.250	1.78	2.00	1.69	1.02	0.500	3.00	3.88	3/8
1.250	2.000	2.125	1.375	1.97	2.00	1.88	1.02	0.500	3.12	4.25	3/8
1.375	2.000	2.250	*1.500	1.97	2.00	1.88	1.02	0.375	3.25	4.25	3/8
1.500	2.250	2.500	1.625	1.97	2.00	1.88	1.02	0.375	3.75	4.75	3/8
1.625	2.375	2.625	1.750	1.97	2.00	1.88	1.02	0.500	3.75	4.75	3/8
1.750	2.500	2.750	1.875	1.97	2.00	1.88	1.02	0.500	3.75	5.00	3/8
1.875	2.625	2.875	2.000	1.97	2.00	1.88	1.02	0.500	3.88	5.00	3/8
2.000	2.750	3.000	2.125	1.97	2.00	1.88	1.02	0.625	4.12	5.12	3/8
2.125	2.875	3.250	2.250	1.97	2.00	1.88	1.02	0.625	4.38	6.00	3/8
2.250	3.000	3.375	2.375	1.97	2.00	1.88	1.02	0.625	4.62	6.50	3/8
2.375	3.25	3.625	2.500	2.16	2.09	2.06	1.11	0.625	5.00	6.38	3/8
2.500	3.375	3.750	2.625	2.16	2.09	2.06	1.11	0.625	5.00	6.62	3/8
2.625	3.500	3.875	2.750	2.16	2.09	2.06	1.11	0.750	5.75	7.25	3/8
2.750	3.750	\	2.875	2.16	2.62	2.06	1.58	As Required			3/4
2.750	3.875	\	**3.000	2.16	2.62	2.06	1.58				3/4
2.875	3.875	\	3.000	2.16	2.62	2.06	1.58				3/4
2.875	4.000	\	**3.125	2.16	2.62	2.06	1.58				3/4
3.000	4.000	\	3.125	2.16	2.62	2.06	1.58				3/4
3.000	4.125	\	**3.250	2.16	2.62	2.06	1.58				3/4
3.125	4.250	\	3.375	2.16	2.62	2.06	1.58				3/4
3.250	4.375	\	3.500	2.28	2.75	2.19	1.71				3/4
3.375	4.500	\	3.625	2.28	2.75	2.19	1.71				3/4
3.500	4.625	\	3.750	2.28	2.75	2.19	1.71				3/4
3.625	4.750	\	3.875	2.28	2.75	2.19	1.71				3/4
3.750	4.875	\	4.000	2.28	2.75	2.19	1.71				3/4
3.875	5.000	\	4.125	2.28	2.75	2.19	1.71				3/4



HQMB-F04(ISC2BB)

Type: Metal Bellow Seal
 Replacement: Flowserve ISC2BB
 Temperature: -30°C to $+205^{\circ}\text{C}$
 Pressure: $\leq 1.3\text{Mpa}$ - 2.1Mpa
 Speed: $\leq 25\text{m/s}$
 Material: A,B,Q1,Q2,U1,U2,T,
 T6,V,G,F,M,M1



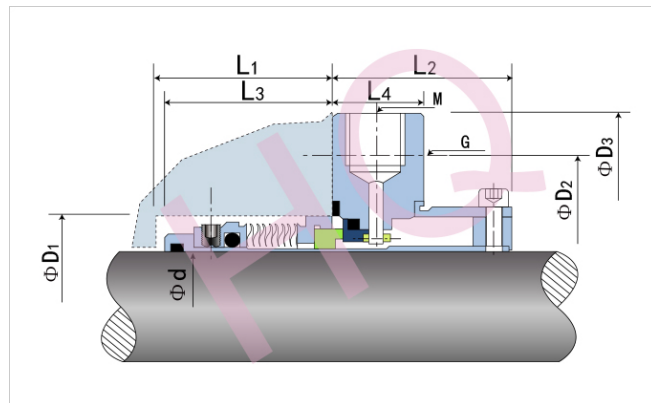
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d inch	D1		D2	D3	L1	L2	L3	L4	M	N
	min	max								
1.000	1.625	1.875	2.115	3.69-3.75	1.900	2.124	1.838	2.062	0.44	2.750
1.125	1.750	2.000	2.240	3.69-3.75	1.900	2.124	1.838	2.062	0.44	2.875
1.250	1.890	2.245	2.495	4.19-4.25	1.900	2.124	1.838	2.062	0.562	3.125
1.375	2.000	2.575	2.615	3.94-4.00	1.900	2.124	1.838	2.062	0.44	3.250
1.437	2.250	2.688	2.775	4.72-4.78	1.965	2.184	1.903	2.122	0.56	3.750
1.500	2.250	2.525	2.775	4.69-4.75	1.965	2.184	1.903	2.122	0.56	3.750
1.625	2.375	2.780	3.030	4.69-4.75	1.965	2.184	1.903	2.122	0.56	3.750
1.750	2.500	2.875	3.150	4.94-5.00	1.965	2.184	1.903	2.122	0.56	3.875
1.875	2.625	2.875	3.150	4.94-5.00	1.965	2.184	1.903	2.122	0.56	3.875
1.957	2.690	2.920	TBD	TBD	1.965	2.184	1.903	2.122	TBD	TBD
2.000	2.750	3.030	3.280	5.00-5.12	1.965	2.184	1.903	2.122	0.688	4.120
2.125	2.875	3.125	3.430	5.94-6.00	1.965	2.184	1.903	2.122	0.75	4.250
2.250	3.000	3.280	TBD	TBD	1.965	2.184	1.903	2.122	TBD	TBD
2.375	3.125	3.687	3.975	6.32-6.38	1.965	2.184	1.903	2.122	0.75	4.875
2.437	2.375	3.450	TBD	6.32-6.38	1.996	2.153	1.934	2.091	0.75	4.875
2.500	3.375	3.687	3.975	6.32-6.38	1.965	2.184	1.903	2.122	0.75	4.875
2.625	3.625	4.512	4.615	7.19-7.25	2.491	2.968	2.429	2.906	0.88	5.625
2.750	3.750	4.512	4.615	7.19-7.25	2.491	2.968	2.429	2.906	0.88	5.625

HQMB-F05(X-100)



Type: Metal Bellow Seal
 Replacement: Flowserve X-100
 Temperature: -30°C to +204°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 25\text{m/s}$
 Material: Q2,B,U2,P,E,V,F,G



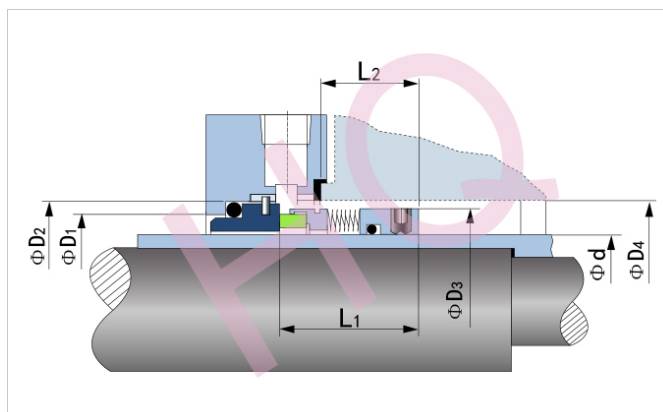
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d (inch)	D1		D2	D3	G	L1	L2	L3	L4	M
	min	max	min		max	min				
1.000	1.750	1.875	2.75	3.75	0.375	1.78	2.00	1.69	1.02	3/8
1.125	1.750	2.000	3.00	3.88	0.500	1.78	2.00	1.69	1.02	3/8
1.250	2.000	2.125	3.12	4.25	0.500	1.97	2.00	1.88	1.02	3/8
1.375	2.000	2.250	3.25	4.25	0.375	1.97	2.00	1.88	1.02	3/8
1.500	2.250	2.500	3.75	4.75	0.375	1.97	2.00	1.88	1.02	3/8
1.625	2.375	2.625	3.75	4.75	0.500	1.97	2.00	1.88	1.02	3/8
1.750	2.500	2.750	3.75	5.00	0.500	1.97	2.00	1.88	1.02	3/8
1.875	2.625	2.875	3.88	5.00	0.500	1.97	2.00	1.88	1.02	3/8
2.000	2.750	3.000	4.12	5.12	0.625	1.97	2.00	1.88	1.02	3/8
2.125	2.875	3.250	4.38	6.00	0.625	1.97	2.00	1.88	1.02	3/8
2.250	3.000	3.375	4.62	6.50	0.625	1.97	2.00	1.88	1.02	3/8
2.375	3.250	3.625	5.00	6.38	0.625	2.16	2.09	2.06	1.11	3/8
2.500	3.375	3.750	5.00	6.62	0.625	2.16	2.09	2.06	1.11	3/8
2.625	3.500	3.875	5.75	7.25	0.750	2.16	2.09	2.06	1.11	3/8
2.750	3.750	3.875	As Required			2.16	2.62	2.06	1.58	3/4
2.750	3.875	3.875				2.16	2.62	2.06	1.58	3/4
2.875	3.875	3.875				2.16	2.62	2.06	1.58	3/4
2.875	4.000	3.875				2.16	2.62	2.06	1.58	3/4
3.000	4.000	3.875				2.16	2.62	2.06	1.58	3/4
3.000	4.125	3.875				2.16	2.62	2.06	1.58	3/4
3.125	4.250	3.875				2.16	2.62	2.06	1.58	3/4
3.250	4.375	/				2.75	2.19	1.71	1.58	3/4
3.375	4.500	/				2.75	2.19	1.71	1.58	3/4
3.500	4.625	/				2.75	2.19	1.71	1.58	3/4
3.625	4.750	/				2.75	2.19	1.71	1.58	3/4
3.750	4.875	/				2.75	2.19	1.71	1.58	3/4
3.875	5.000	/				2.75	2.19	1.71	1.58	3/4

HQMB-F06(CBR)



Type: Metal Bellow Seal
 Replacement: Flowserve CBR
 Temperature: -30 to +200°C
 Pressure: $\leq 2.5\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1, Q2, U2, T, V, M1, F, G, M



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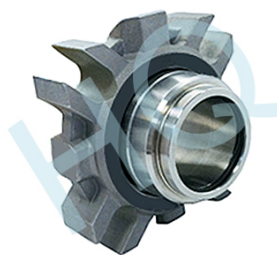


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d (inch)	D1	D2	D3	D4	L1	L2
0.750	1.140	1.375	1.312	1.375	1.38	1.00
0.875	1.265	1.500	1.437	1.500	1.38	1.00
1.000	1.390	1.625	1.562	1.625	1.38	1.00
1.125	1.515	1.750	1.687	1.750	1.38	1.00
1.250	1.640	1.875	1.812	1.875	1.38	1.00
1.375	1.765	2.000	1.937	2.000	1.56	1.19
1.500	1.890	2.125	2.062	2.125	1.56	1.19
1.625	2.015	2.375	2.187	2.25	1.56	1.19
1.750	2.140	2.500	2.312	2.375	1.56	1.19
1.875	2.265	2.625	2.437	2.500	1.56	1.19
2.000	2.390	2.750	2.562	2.625	1.56	1.19
2.125	2.515	2.875	2.687	2.75	1.56	1.19
2.250	2.640	3.000	2.812	2.875	1.56	1.19
2.375	2.765	3.125	2.937	3.0000	1.56	1.19
2.500	3.015	3.375	3.187	3.250	1.75	1.38
2.625	3.140	3.500	3.312	3.375	1.75	1.38
2.750	3.265	3.625	3.437	3.500	1.75	1.38
2.875	3.390	3.750	3.625	3.687	1.75	1.38
3.000	3.515	3.875	3.75	3.812	1.75	1.38
3.125	3.765	4.125	3.875	3.937	1.75	1.38
3.250	3.890	4.250	4.000	4.062	1.75	1.38
3.375	4.015	4.375	4.125	4.187	1.75	1.38
3.500	4.140	4.500	4.250	4.312	1.88	1.50



HQCS-FT01(C2K)



Type: Single Cartridge Seal,
Recommended for low duty service.

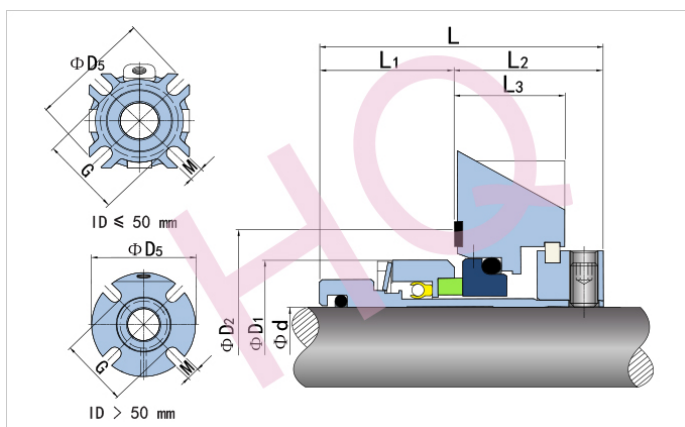
Replacement: Fluiten C2K

Temperature: -50°C to +204°C

Pressure: ≤15.0Bar

Speed: ≤12m/s

Material: Q1,Q2,U2,T,V,M1,F,G,M



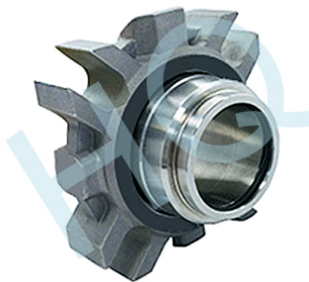
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	42	44	53	98	63	51.5	24.5	27.0	20.0	12	1/4"
28	45	47	53	98	63	51.5	24.5	27.0	20.0	12	1/4"
30	47	49	55	98	65	51.5	24.5	27.0	20.0	12	1/4"
33	54	56	60	106	68	55.0	27.0	28.0	20.0	12	1/4"
35	54	56	60	106	68	55.0	27.0	28.0	20.0	12	1/4"
38	57	59	68	120	76	56.0	27.0	29.0	21.0	14	1/4"
40	59	61	68	120	76	56.0	27.0	29.0	21.0	14	1/4"
43	62	64	73	135	81	56.0	27.0	29.0	21.0	14	1/4"
45	64	66	73	135	81	56.0	27.0	29.0	21.0	14	1/4"
48	67	69	79	148	87	56.0	27.0	29.0	21.0	14	3/8"
50	69	71	79	148	87	59.0	29.5	29.5	21.5	14	3/8"
55	78	80	84	148	95	60.5	30.0	30.5	22.0	18	3/8"
60	83	85	92	158	102	60.5	30.0	30.5	22.0	18	3/8"
65	88	90	102	163	112	60.5	30.0	30.5	22.0	18	3/8"
70	99	101	112	178	125	64.5	33.0	31.5	23.0	18	3/8"
75	104	106	117	185	130	64.5	33.0	31.5	23.0	18	3/8"
80	109	111	122	193	135	70.0	34.0	36.0	25.5	18	3/8"
85	114	116	126	198	140	70.0	34.0	36.0	25.5	22	3/8"
90	119	121	134	205	145	70.0	34.0	36.0	25.5	22	3/8"
95	124	126	139	209	150	70.0	34.0	36.0	25.5	22	3/8"
100	129	131	144	218	155	70.0	34.0	36.0	25.5	22	3/8"

HQCS-FT02(C2KC)



Type: Single Cartridge Seal with connection for flushing, Recommended for low duty service.

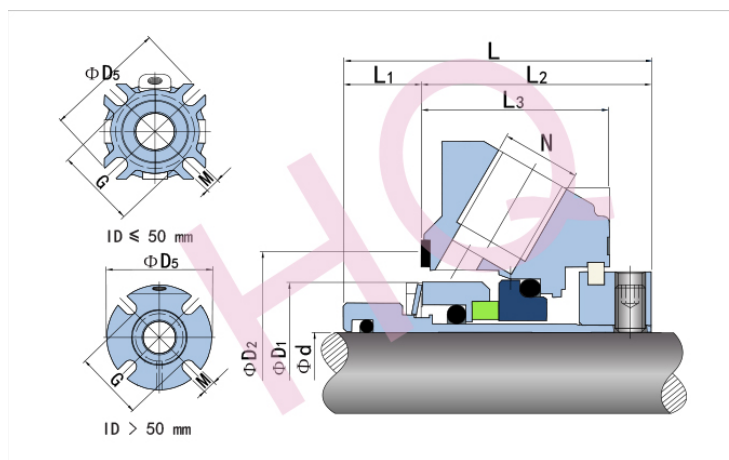
Replacement: Fluiten C2KC

Temperature: -40 to +180°C

Pressure: ≤ 15.0 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M

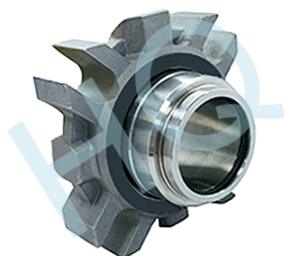


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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	42	44	53	98	63	51.5	13.0	38.5	31.5	12	1/4"
28	45	47	53	98	63	51.5	13.0	38.5	31.5	12	1/4"
30	47	49	55	98	65	51.5	13.0	38.5	31.5	12	1/4"
33	54	56	60	106	68	55.0	15.5	39.5	31.5	12	1/4"
35	54	56	60	106	68	55.0	15.5	39.5	31.5	12	1/4"
38	57	59	68	120	76	56.0	16.5	39.5	31.5	14	1/4"
40	59	61	68	120	76	56.0	16.5	39.5	31.5	14	1/4"
43	62	64	73	135	81	56.0	16.5	39.5	31.5	14	1/4"
45	64	66	73	135	81	56.0	16.5	39.5	31.5	14	1/4"
48	67	69	79	148	87	56.0	16.5	39.5	31.5	14	3/8"
50	69	71	79	148	87	59.0	19.5	39.5	31.5	14	3/8"
55	78	80	84	148	95	60.5	20.5	40.0	31.5	18	3/8"
60	83	85	92	158	102	60.5	20.5	40.0	31.5	18	3/8"
65	88	90	102	163	112	60.5	20.5	40.0	31.5	18	3/8"
70	99	101	112	178	125	64.5	24.5	40.0	31.5	18	3/8"
75	104	106	117	185	130	64.5	24.5	40.0	31.5	18	3/8"
80	109	111	122	193	135	70.0	24.5	45.5	35.0	18	3/8"
85	114	116	126	198	140	70.0	24.5	45.5	35.0	22	3/8"
90	119	121	134	205	145	70.0	24.5	45.5	35.0	22	3/8"
95	124	126	139	209	150	70.0	24.5	45.5	35.0	22	3/8"
100	129	131	144	218	155	70.0	24.5	45.5	35.0	22	3/8"



Type: Single Cartridge Seal, Recommended for general purpose.

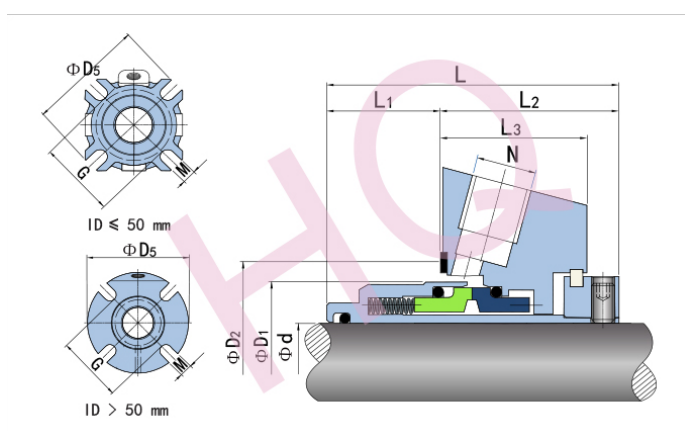
Replacement: Fluiten C2S

Temperature: -40 to +260°C

Pressure: ≤ 25 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



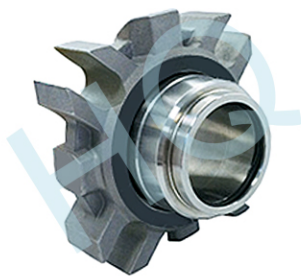
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	63.5	25	38.5	31.5	12	1/4"
28	46	47.0	52.0	98	63	63.5	25	38.5	31.5	12	1/4"
30	48	49.0	56.0	98	65	63.5	25	38.5	31.5	12	1/4"
32	50	51.0	57.0	106	68	63.5	25	38.5	31.5	12	1/4"
33	53	54.0	61.5	106	68	64.5	25	39.5	31.5	12	1/4"
35	53	54.0	61.5	106	68	64.5	25	39.5	31.5	12	1/4"
38	56	57.0	66.0	120	76	64.5	25	39.5	31.5	14	1/4"
40	58	59.0	68.0	120	76	64.5	25	39.5	31.5	14	1/4"
43	61	62.0	70.5	135	81	64.5	25	39.5	31.5	14	1/4"
45	63	64.0	73.0	135	81	64.5	25	39.5	31.5	14	1/4"
48	66	67.0	75.0	148	87	64.5	25	39.5	31.5	14	1/4"
50	68	69.0	78.0	148	87	64.5	25	39.5	31.5	14	1/4"
55	73	74.0	83.0	148	95	65.0	25	40.0	31.5	18	3/8"
60	78	79.0	91.0	158	102	65.0	25	40.0	31.5	18	3/8"
65	83	84.5	98.5	163	112	65.0	25	40.0	31.5	18	3/8"
70	93	95.0	108.0	178	125	65.0	25	40.0	31.5	18	3/8"
75	98	100.0	113.0	185	130	65.0	25	40.0	31.5	18	3/8"
80	105	107.0	118.0	193	135	77.0	30	47.0	36.5	18	3/8"
85	110	113.0	123.0	198	140	77.0	30	47.0	36.5	22	3/8"
90	115	118.0	130.0	205	145	77.0	30	47.0	36.5	22	3/8"
95	120	124.0	135.0	209	150	78.0	31	47.0	36.5	22	3/8"
100	126	129.0	140.0	218	155	78.0	31	47.0	36.5	22	3/8"

HQCS-FT04(C2SQ)



Type: Single Cartridge Seal with throttle bushing
for low pressure, Recommended for general
purpose.

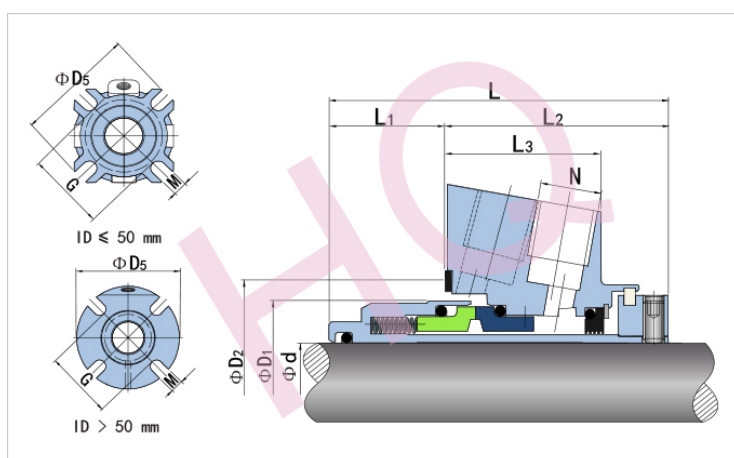
Replacement: Fluiten C2SQ

Temperature: -40 to +260°C

Pressure: ≤ 25 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



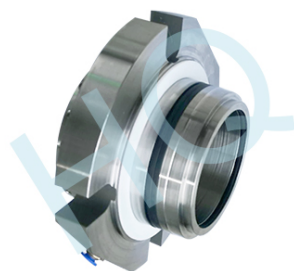
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	74.5	25	49.5	33.5	12	1/4"
28	46	47.0	52.0	98	63	74.5	25	49.5	33.5	12	1/4"
30	48	49.0	56.0	98	65	74.5	25	49.5	33.5	12	1/4"
32	50	51.0	57.0	106	68	74.5	25	49.5	33.5	12	1/4"
33	53	54.0	61.5	106	68	78.0	25	53.0	36.0	12	1/4"
35	53	54.0	61.5	106	68	78.0	25	53.0	36.0	12	1/4"
38	56	57.0	66.0	120	76	79.0	25	54.0	37.0	14	1/4"
40	58	59.0	68.0	120	76	79.0	25	54.0	37.0	14	1/4"
43	61	62.0	70.5	135	81	79.0	25	54.0	37.0	14	1/4"
45	63	64.0	73.0	135	81	79.0	25	54.0	37.0	14	1/4"
48	66	67.0	75.0	148	87	79.0	25	54.0	37.0	14	1/4"
50	68	69.0	78.0	148	87	81.0	25	56.0	39.0	14	1/4"
55	73	74.0	83.0	148	95	82.5	25	57.5	40.0	18	3/8"
60	78	79.0	91.0	158	102	82.5	25	57.5	40.0	18	3/8"
65	83	84.5	98.5	163	112	82.5	25	57.5	40.0	18	3/8"
70	93	95.0	108.0	178	125	87.5	25	62.5	45.0	18	3/8"
75	98	100.0	113.0	185	130	87.5	25	62.5	45.0	18	3/8"
80	105	107.0	118.0	193	135	99.0	30	69.0	49.0	18	3/8"
85	110	113.0	123.0	198	140	99.0	30	69.0	49.0	22	3/8"
90	115	118.0	130.0	205	145	99.0	30	69.0	49.0	22	3/8"
95	120	124.0	135.0	209	150	100.0	31	69.0	49.0	22	3/8"
100	126	129.0	140.0	218	155	100.0	31	69.0	49.0	22	3/8"

HQCS-FT05(C2D)



Type: Double Cartridge Seal,
Recommended for high duty service.

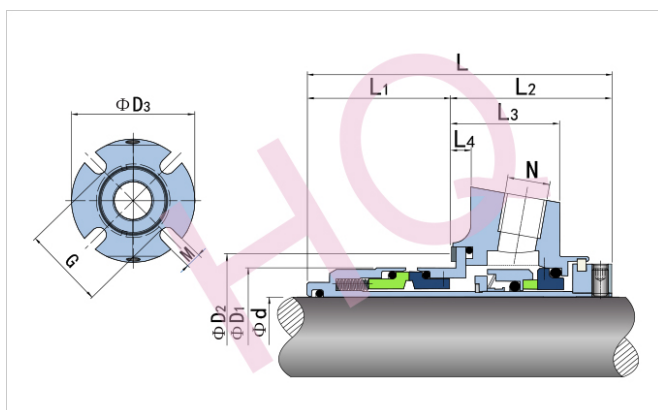
Replacement: Fluiten C2D

Temperature: -40 to +260°C

Pressure: ≤25 Bar

Speed: ≤12m/s

Material: Q1,Q2,U2,T,V,M1,F,G,M



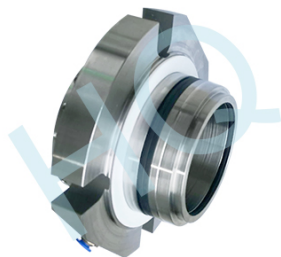
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
25	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
28	46	47.0	52.0	98	28	94.0	44.5	49.5	33.5	6	12	1/4"
30	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
32	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
33	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
35	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
38	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
40	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
43	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	12	1/4"
45	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	12	1/4"
48	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	12	1/4"
50	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	12	1/4"
55	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	1/4"
60	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
65	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
70	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
75	98	100.0	113.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
80	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
85	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
90	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
95	121	124.0	135.0	209	150	123.0	54.0	69.0	49.0	6	22	3/8"
100	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

HQCS-FT06(C2DQ)



Type: Single Cartridge Seal with throttle bushing
for low pressure quench, Recommended for
high duty service.

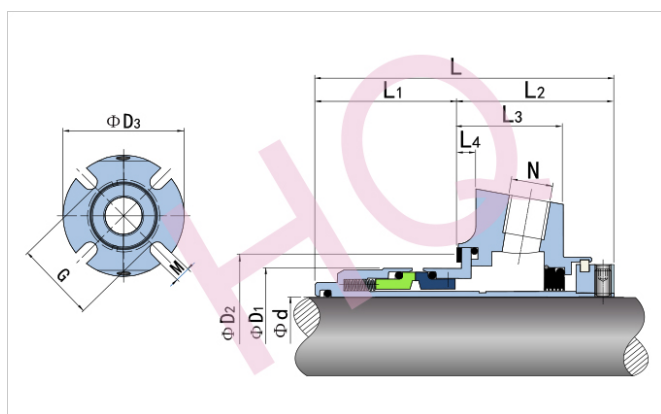
Replacement: Fluitten C2DQ

Temperature: -40 to +260°C

Pressure: ≤ 25 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
25	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
28	46	47.0	52.0	98	28	94.0	44.5	49.5	33.5	6	12	1/4"
30	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
32	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
33	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
35	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
38	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
40	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
43	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	12	1/4"
45	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	12	1/4"
48	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	12	1/4"
50	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	12	1/4"
55	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	1/4"
60	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
65	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
70	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
75	98	100.0	113.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
80	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
85	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
90	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
95	121	124.0	135.0	209	150	123.0	54.0	69.0	49.0	6	22	3/8"
100	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

Type: Single Cartridge Seal,
Recommended for low duty service.

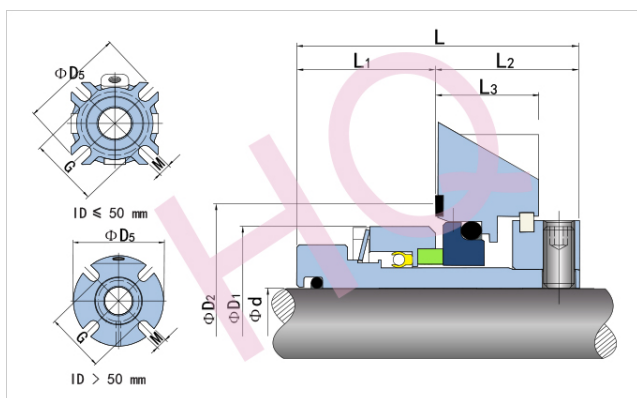
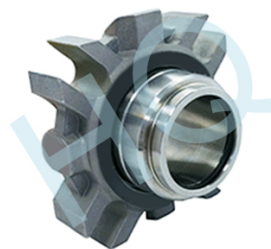
Replacement: Fluiten C3K

Temperature: -40 to +180°C

Pressure: ≤ 20.7 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



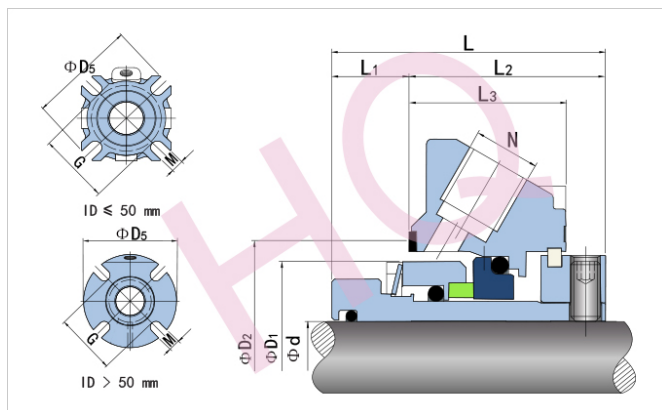
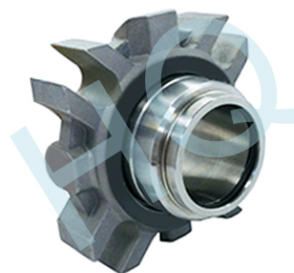
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	42	44	53	98	63	51.5	24.5	27.0	20.0	12	1/4"
22	45	47	53	98	63	51.5	24.5	27.0	20.0	12	1/4"
25	47	49	55	98	65	51.5	24.5	27.0	20.0	12	1/4"
30	54	56	60	106	68	55.0	27.0	28.0	20.0	12	1/4"
33	57	59	68	120	76	56.0	27.0	29.0	21.0	14	1/4"
35	59	61	68	120	76	56.0	27.0	29.0	21.0	14	1/4"
38	62	64	73	135	81	56.0	27.0	29.0	21.0	14	1/4"
40	64	66	73	135	81	56.0	27.0	29.0	21.0	14	1/4"
43	67	69	79	148	87	56.0	27.0	29.0	21.0	14	1/4"
45	69	71	79	148	87	59.0	29.5	29.5	21.5	14	1/4"
48	78	80	84	148	95	60.5	30.0	30.5	22.0	18	3/8"
50	78	80	84	148	95	60.5	30.0	30.5	22.0	18	3/8"
53	83	85	92	158	102	60.5	30.0	30.5	22.0	18	3/8"
55	83	85	92	158	102	60.5	30.0	30.5	22.0	18	3/8"
58	88	90	102	163	112	60.5	30.0	30.5	22.0	18	3/8"
60	88	90	102	163	112	60.5	30.0	30.5	22.0	18	3/8"
63	99	101	112	178	125	64.5	33.0	31.5	23.0	18	3/8"
65	99	101	112	178	125	64.5	33.0	31.5	23.0	18	3/8"
68	104	106	117	185	130	64.5	33.0	31.5	23.0	18	3/8"
70	109	111	122	193	135	70.0	34.0	36.0	25.5	18	3/8"
75	114	116	126	198	140	70.0	34.0	36.0	25.5	22	3/8"
80	119	121	134	205	145	70.0	34.0	36.0	25.5	22	3/8"
85	124	126	139	208	150	70.0	34.0	36.0	25.5	22	3/8"
90	129	131	144	218	155	70.0	34.0	36.0	25.5	22	3/8"

Type: Single Cartridge Seal with connection for flushing, Recommended for low duty service.
 Replacement: Fluiten C3KC
 Temperature: -40 to +180°C
 Pressure: ≤15.0Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



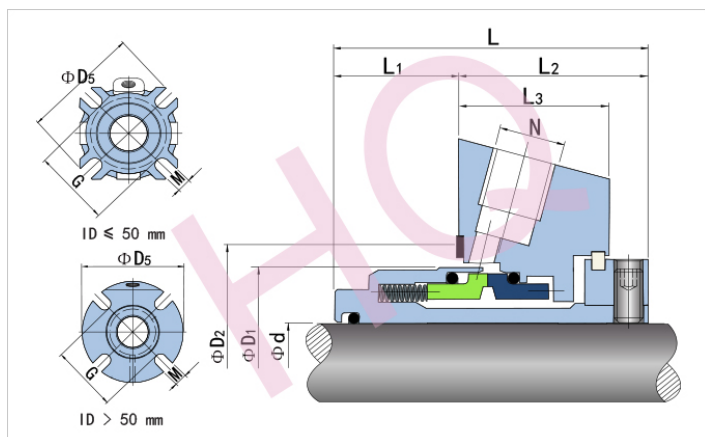
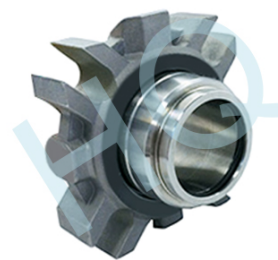
 <http://www.hqseal.com>

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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	42	44	53	98	63	51.5	13	38.5	31.5	12	1/4"
22	45	47	53	98	63	51.5	13	38.5	31.5	12	1/4"
25	47	49	55	98	65	51.5	13	38.5	31.5	12	1/4"
30	54	56	60	106	68	55.0	15.5	39.5	31.5	12	1/4"
33	57	59	68	120	76	56.0	16.5	39.5	31.5	14	1/4"
35	59	61	68	120	76	56.0	16.5	39.5	31.5	14	1/4"
38	62	64	73	135	81	56.0	16.5	39.5	31.5	14	1/4"
40	64	66	73	135	81	56.0	16.5	39.5	31.5	14	1/4"
43	67	69	79	148	87	56.0	16.5	39.5	31.5	14	1/4"
45	69	71	79	148	87	59.0	19.5	39.5	31.5	14	1/4"
48	78	80	84	148	95	60.5	20.5	40.0	31.5	18	3/8"
50	78	80	84	148	95	60.5	20.5	40.0	31.5	18	3/8"
53	83	85	92	158	102	60.5	20.5	40.0	31.5	18	3/8"
55	83	85	92	158	102	60.5	20.5	40.0	31.5	18	3/8"
58	88	90	102	163	112	60.5	20.5	40.0	31.5	18	3/8"
60	88	90	102	163	112	60.5	20.5	40.0	31.5	18	3/8"
63	99	101	112	178	125	64.5	24.5	40.0	31.5	18	3/8"
65	99	101	112	178	125	64.5	24.5	40.0	31.5	18	3/8"
68	104	106	117	185	130	64.5	24.5	40.0	31.5	18	3/8"
70	109	111	122	193	135	70.0	24.5	45.5	35.0	18	3/8"
75	114	116	126	198	140	70.0	24.5	45.5	35.0	22	3/8"
80	119	121	134	205	145	70.0	24.5	45.5	35.0	22	3/8"
85	124	126	139	208	150	70.0	24.5	45.5	35.0	22	3/8"
90	129	131	144	218	155	70.0	24.5	45.5	35.0	22	3/8"

HQCS-FT09(C3S)

Type: Single Cartridge Seal, for general purpose.
 Replacement: Fluiten C3S
 Temperature: -40 to +260°C
 Pressure: 20 Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	63	98	63.5	25	38.5	31.5	12	1/4"
22	46	47.0	52.0	63	98	63.5	25	38.5	31.5	12	1/4"
25	48	49.0	56.0	65	98	63.5	25	38.5	31.5	12	1/4"
28	50	51.0	57.0	68	106	63.5	25	39.5	31.5	12	1/4"
30	53	54.0	61.5	68	120	64.5	25	39.5	31.5	12	1/4"
32	56	57.0	66.0	76	120	64.5	25	39.5	31.5	12	1/4"
33	56	57.0	66.0	76	120	64.5	25	39.5	31.5	14	1/4"
35	58	59.0	68.0	76	135	64.5	25	39.5	31.5	14	1/4"
38	61	62.0	70.5	81	135	64.5	25	39.5	31.5	14	1/4"
40	63	64.0	73.0	81	148	64.5	25	39.5	31.5	14	1/4"
43	66	67.0	76.0	87	148	64.5	25	39.5	31.5	14	1/4"
45	68	69.0	78.0	87	148	64.5	25	39.5	31.5	14	1/4"
48	73	74.0	83.0	95	148	65.0	25	40.0	31.5	18	3/8"
50	73	74.0	83.0	95	148	65.0	25	40.0	31.5	18	3/8"
53	78	79.0	91.0	102	158	65.0	25	40.0	31.5	18	3/8"
55	78	79.0	91.0	102	158	65.0	25	40.0	31.5	18	3/8"
58	83	84.5	98.5	112	163	65.0	25	40.0	31.5	18	3/8"
60	83	84.5	98.5	112	163	65.0	25	40.0	31.5	18	3/8"
63	93	95.0	108.0	125	178	65.0	25	40.0	31.5	18	3/8"
65	93	95.0	108.0	125	178	65.0	25	40.0	31.5	18	3/8"
68	98	100.0	113.0	130	185	65.0	25	40.0	31.5	18	3/8"
70	105	107.0	118.0	135	193	77.0	30	47.0	36.5	18	3/8"
75	110	113.0	123.0	140	198	77.0	30	47.0	36.5	22	3/8"
80	115	118.0	130.0	145	205	77.0	30	47.0	36.5	22	3/8"
85	121	124.0	135.0	150	208	78.0	31	47.0	36.5	22	3/8"
90	126	129.0	140.0	155	218	78.0	31	47.0	36.5	22	3/8"



HQCS-FT10(C3SQ)

Type: Single Cartridge Seal with throttle bushing
for low pressure quench, Recommended for
general purpose.

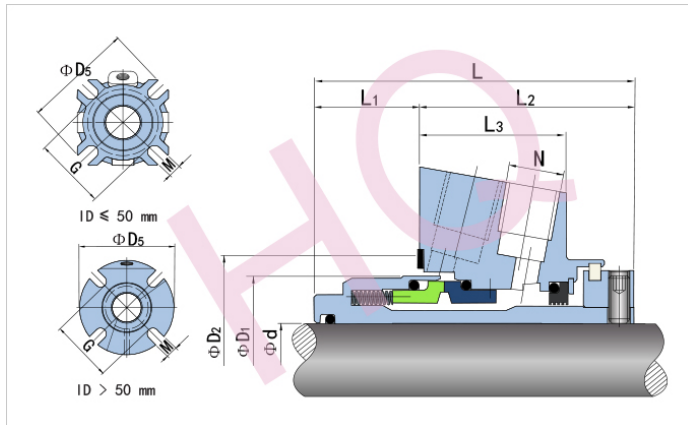
Replacement: Fluiten C3SQ

Temperature: -40 to +260°C

Pressure: ≤ 25 Bar

Speed: ≤ 12 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



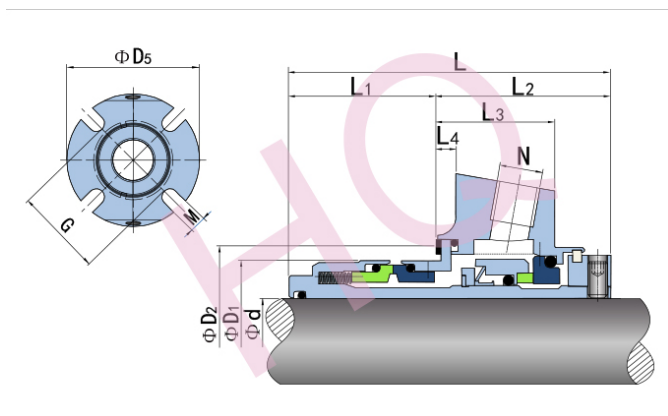
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	63	98	74.5	25	49.5	33.5	12	1/4"
22	46	47.0	52.0	63	98	74.5	25	49.5	33.5	12	1/4"
25	48	49.0	56.0	65	98	74.5	25	49.5	33.5	12	1/4"
28	50	51.0	57.0	68	106	74.5	25	49.5	33.5	12	1/4"
30	53	54.0	61.5	68	120	78.0	25	53.0	36.0	12	1/4"
32	56	57.0	66.0	76	120	79.0	25	84.0	37.0	12	1/4"
33	56	57.0	66.0	76	120	79.0	25	84.0	37.0	14	1/4"
35	58	59.0	68.0	76	135	79.0	25	84.0	37.0	14	1/4"
38	61	62.0	70.5	81	135	79.0	25	84.0	37.0	14	1/4"
40	63	64.0	73.0	81	148	79.0	25	84.0	37.0	14	1/4"
43	66	67.0	76.0	87	148	79.0	25	84.0	37.0	14	1/4"
45	68	69.0	78.0	87	148	81.0	25	56.0	39.0	14	1/4"
48	73	74.0	83.0	95	148	82.5	25	57.5	40.0	18	3/8"
50	73	74.0	83.0	95	148	82.5	25	57.5	40.0	18	3/8"
53	78	79.0	91.0	102	158	82.5	25	57.5	40.0	18	3/8"
55	78	79.0	91.0	102	158	82.5	25	57.5	40.0	18	3/8"
58	83	84.5	98.5	112	163	82.5	25	57.5	40.0	18	3/8"
60	83	84.5	98.5	112	163	82.5	25	57.5	40.0	18	3/8"
63	93	95.0	108.0	125	178	87.5	25	62.5	45.0	18	3/8"
65	93	95.0	108.0	125	178	87.5	25	62.5	45.0	18	3/8"
68	98	100.0	113.0	130	185	87.5	25	62.5	45.0	18	3/8"
70	105	107.0	118.0	135	193	99.0	30	69.0	49.0	18	3/8"
75	110	113.0	123.0	140	198	99.0	30	69.0	49.0	22	3/8"
80	115	118.0	130.0	145	205	99.0	30	69.0	49.0	22	3/8"
85	121	124.0	135.0	150	208	100.0	31	69.0	49.0	22	3/8"
90	126	129.0	140.0	155	218	100.0	31	69.0	49.0	22	3/8"

Type: Double Cartridge Seal
 Replacement: Fluiten C3D
 Temperature: -40 to +260°C
 Pressure: ≤25 Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
20	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
22	46	47.0	52.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
25	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
28	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
30	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
32	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
33	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
35	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	14	1/4"
38	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	14	1/4"
40	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	14	1/4"
43	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	14	1/4"
45	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	14	1/4"
48	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
50	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
53	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
55	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
58	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
60	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
63	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
65	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
68	98	100.0	118.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
70	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
75	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
80	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
85	121	124.0	135.0	208	150	123.0	54.0	69.0	49.0	6	22	3/8"
90	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

HQCS-FT12(C3DQ)

Type: Single Cartridge Seal with throttle bushing
for low pressure quench, Recommended for
high duty service.

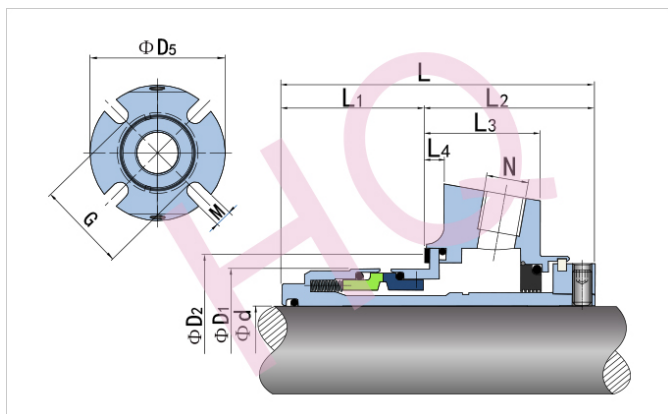
Replacement: Fluiten C3DQ

Temperature: - 40 to +260°C

Pressure: ≤25 Bar

Speed: ≤12m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
20	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
22	46	47.0	52.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
25	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
28	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
30	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
32	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
33	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
35	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	14	1/4"
38	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	14	1/4"
40	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	14	1/4"
43	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	14	1/4"
45	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	14	1/4"
48	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
50	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
53	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
55	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
58	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
60	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
63	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
65	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
68	98	100.0	118.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
70	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
75	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
80	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
85	121	124.0	135.0	208	150	123.0	54.0	69.0	49.0	6	22	3/8"
90	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

HQCS-FT13(C4D)

Type: Double Cartridge Dry-Running Seal with connections purchaser's use.

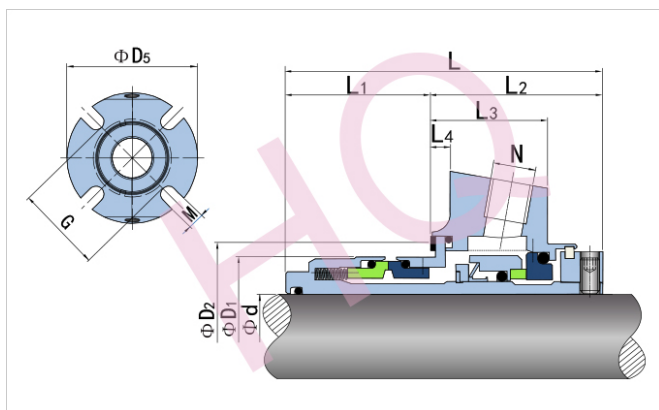
Replacement: Fluten C4D

Temperature: -40 to +260°C

Pressure: ≤25 Bar

Speed: ≤12m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M



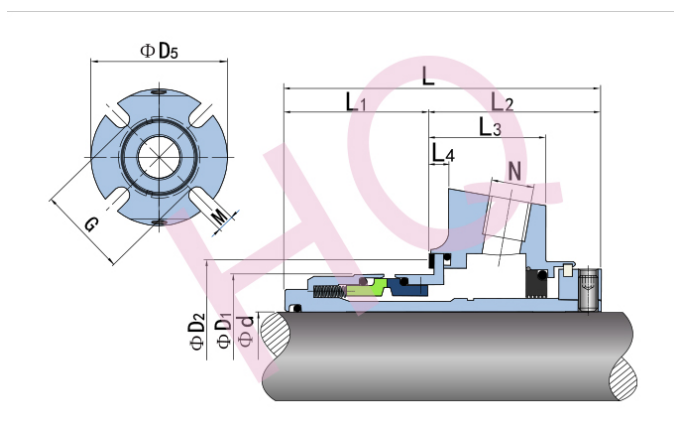
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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
20	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
22	46	47.0	52.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
25	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
28	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
30	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
32	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
33	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
35	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	14	1/4"
38	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	14	1/4"
40	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	14	1/4"
43	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	14	1/4"
45	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	14	1/4"
48	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
50	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
53	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
55	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
58	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
60	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
63	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
65	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
68	98	100.0	118.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
70	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
75	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
80	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
85	121	124.0	135.0	208	150	123.0	54.0	69.0	49.0	6	22	3/8"
90	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

Type: Single Cartridge Dry-Runnung Seal,with
throttle bushing.
Replacement: Fluiten C4DQ
Temperature: -40 to +260°C
Pressure: ≤25 Bar
Speed: ≤12m/s
Material: Q1,Q2,U2,T,V,M1,F,G,M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	L4	M	N
		min	max									
20	43	44.0	51.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
22	46	47.0	52.0	98	63	94.0	44.5	49.5	33.5	6	12	1/4"
25	48	49.0	56.0	98	65	94.0	44.5	49.5	33.5	6	12	1/4"
28	50	51.0	57.0	106	67	94.0	44.5	49.5	33.5	6	12	1/4"
30	53	54.0	61.5	106	71	97.5	44.5	53.0	36.0	6	12	1/4"
32	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
33	56	57.0	66.0	120	76	98.5	44.5	54.0	37.0	6	12	1/4"
35	58	59.0	68.0	120	76	98.5	44.5	54.0	37.0	6	14	1/4"
38	61	62.0	70.5	130	81	98.5	44.5	54.0	37.0	6	14	1/4"
40	63	64.0	73.0	135	81	98.5	44.5	54.0	37.0	6	14	1/4"
43	66	67.0	75.0	135	87	98.5	44.5	54.0	37.0	6	14	1/4"
45	68	69.0	78.0	148	87	100.5	44.5	56.0	39.0	6	14	1/4"
48	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
50	73	74.0	83.0	148	95	102.0	44.5	57.5	40.0	6	18	3/8"
53	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
55	78	79.0	91.0	158	102	102.0	44.5	57.5	40.0	6	18	3/8"
58	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
60	83	84.5	98.5	163	112	102.0	44.5	57.5	40.0	6	18	3/8"
63	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
65	93	95.0	108.0	178	125	107.0	44.5	62.5	45.0	6	18	3/8"
68	98	100.0	118.0	185	130	107.0	44.5	62.5	45.0	6	18	3/8"
70	105	107.0	118.0	193	135	121.0	52.0	69.0	49.0	6	18	3/8"
75	110	113.0	123.0	198	140	121.0	52.0	69.0	49.0	6	22	3/8"
80	115	118.0	130.0	205	145	121.0	52.0	69.0	49.0	6	22	3/8"
85	121	124.0	135.0	208	150	123.0	54.0	69.0	49.0	6	22	3/8"
90	126	129.0	140.0	218	155	123.0	54.0	69.0	49.0	6	22	3/8"

HQCS-FT15(CB8S)



Type: Single Cartridge Seal, Balanced with flange and fixed bushing.

Replacement: Fluiten CB8S

Temperature: -40 to +180°C

Pressure: ≤ 25 Bar

Speed: ≤ 23 m/s

Material: Q1, Q2, U2, T, V, M1, F, G, M

Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- Single cartridge seal, balanced, with flange and fixed bushing
- Dual direction of rotation
- Springs outside the pumped product
- Solid sealing ring
- Tested and unique driving system of the rotary ring, developed to be efficient in case of vibrations, misalignment and wear of the sealing rings
- Connections for flushing, quench and/or drain
- Possibility of sizing the shaft's flange and sleeve according to customer requirement
- Recommended for ANSI horizontal and vertical pump
- $d=20$ mm to 110 mm.



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HQCS-FT16(CB8D-T)



Type: Balanced Double Cartridge Seal
 Replacement: Fluiten CB8D-T
 Temperature: -40 to +180°C
 Pressure: ≤ 25 Bar
 Speed: ≤ 22 m/s
 Material: Q1, Q2, U2, T, V, M1, F, G, M

Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- The balanced dual cartridge solution is ideal for arrangement 2 and 3 or with auxiliary fluid at atmospheric pressure (buffer) CB8T or pressurised (barrier)

CB8D

- Emission CB8D: zero emission into the atmosphere
- Dual direction of rotation
- Springs outside the product
- Solid sealing rings on process side
- Tested and unique driving system of the rotary ring, developed to be efficient in case of vibration, misalignment and wear of the sealing rings
- Connection for flushing or vent and IN-OUT for auxiliary liquid
- Circulation device of the auxiliary liquid with high heat dissipation capacity preventing the need for an external pump
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for ANSI horizontal and vertical pump
- $d = 20$ mm to 110 mm

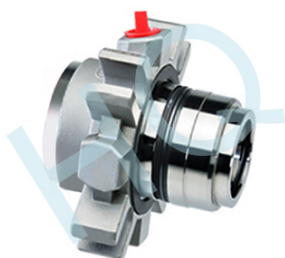


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HQCS-FT17(CB2D)



Type: Double Cartridge Seal

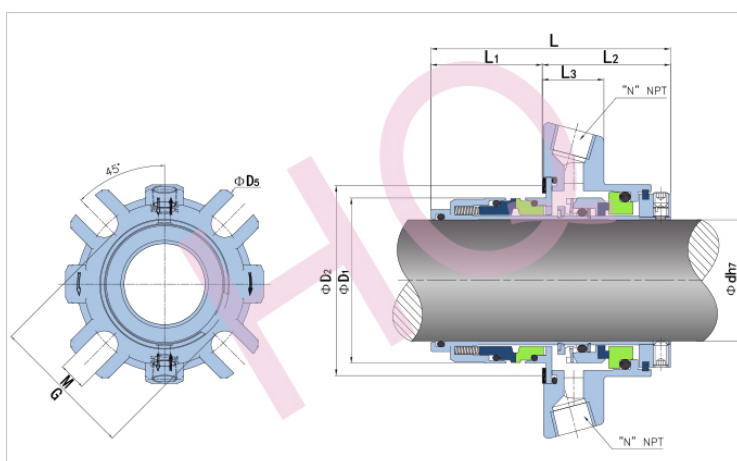
Replacement: Fluiten CB2D

Temperature: -50 to +250°C

Pressure: 25 Bar

Speed: $\leq 12\text{m/s}$

Material: Q1,Q2,U2,T,V,M1,F,G,M



<http://www.hqseal.com>



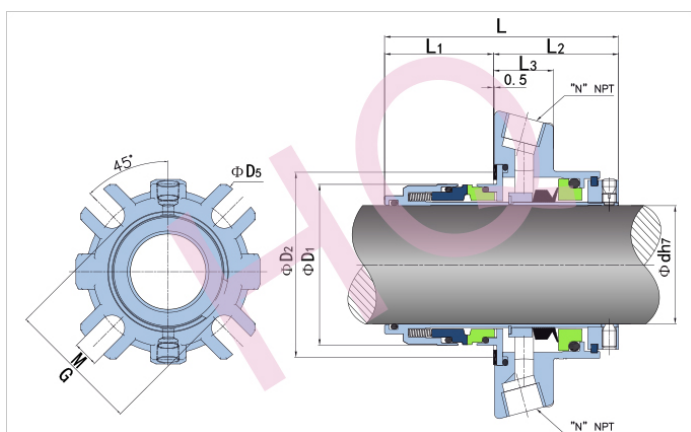
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	96.0	46	50.0	25.5	14	1/4 "
28	46	47.0	52.0	98	63	96.0	46	50.0	25.5	14	1/4 "
30	48	49.0	56.0	98	65	96.0	46	50.0	25.5	14	1/4 "
32	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4 "
33	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4 "
35	53	54.0	61.5	106	72	97.0	46	51.0	25.5	14	1/4 "
38	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4 "
40	58	59.0	68.0	120	76	97.0	46	51.0	25.5	14	1/4 "
43	61	62.0	70.5	130	81	98.0	46	52.0	25.5	14	3/8 "
45	63	64.0	73.0	135	81	97.0	46	51.0	25.5	14	3/8 "
48	66	67.0	75.0	135	87	98.0	46	52.0	25.5	14	3/8 "
50	68	69.0	78.0	148	87	99.0	46	53.0	25.5	14	3/8 "
53	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8 "
55	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8 "
60	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8 "
65	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8 "
70	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8 "
75	98	100.0	113.0	185	130	106.0	46	60.0	28.5	18	3/8 "
80	105	107.0	118.0	193	135	115.5	52	63.5	28.5	18	3/8 "
85	110	113.0	123.0	198	140	115.5	52	63.5	28.5	18	3/8 "
90	115	118.0	130.0	205	145	115.5	52	63.5	28.5	18	3/8 "
95	121	124.0	135.0	209	150	117.5	54	63.5	28.5	22	3/8 "
100	126	129.0	140.0	218	155	117.5	54	63.5	28.5	22	3/8 "

HQCS-FT18(CB2Q)



Type: Single Cartridge Seal
 Replacement: Fluiten CB2Q
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: $\leq 12\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,F,G,M



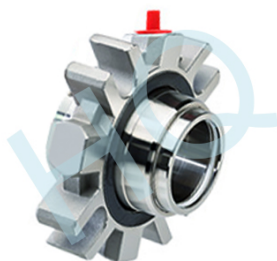
<http://www.hqseal.com>



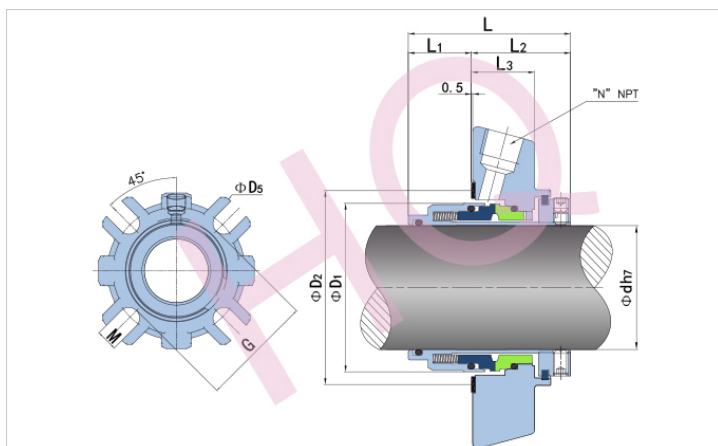
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	96.0	46	50.0	25.5	14	1/4 "
28	46	47.0	52.0	98	63	96.0	46	50.0	25.5	14	1/4"
30	48	49.0	56.0	98	65	96.0	46	50.0	25.5	14	1/4 "
32	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4"
33	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4 "
35	53	54.0	61.5	106	72	97.0	46	51.0	25.5	14	1/4"
38	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4 "
40	58	59.0	68.0	120	76	97.0	46	51.0	25.5	14	1/4"
43	61	62.0	70.5	130	81	98.0	46	52.0	25.5	14	3/8"
45	63	64.0	73.0	135	81	97.0	46	51.0	25.5	14	3/8 "
48	66	67.0	75.0	135	87	98.0	46	52.0	25.5	14	3/8"
50	68	69.0	78.0	148	87	99.0	46	53.0	25.5	14	3/8 "
53	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8"
55	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8 "
60	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8"
65	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8"
70	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8"
75	98	100.0	113.0	185	130	106.0	46	60.0	28.5	18	3/8 "
80	105	107.0	118.0	193	135	115.5	52	63.5	28.5	18	3/8"
85	110	113.0	123.0	198	140	115.5	52	63.5	28.5	18	3/8"
90	115	118.0	130.0	205	145	115.5	52	63.5	28.5	18	3/8"
95	121	124.0	135.0	209	150	117.5	54	63.5	28.5	22	3/8 "
100	126	129.0	140.0	218	155	117.5	54	63.5	28.5	22	3/8 "

HQCS-FT19(CB2S)



Type: Single Cartridge Seal
 Replacement: Fluiten CB2S
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



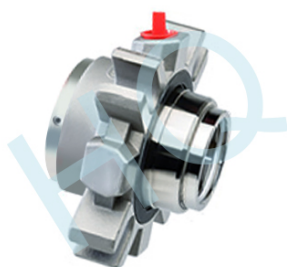
<http://www.hqseal.com>



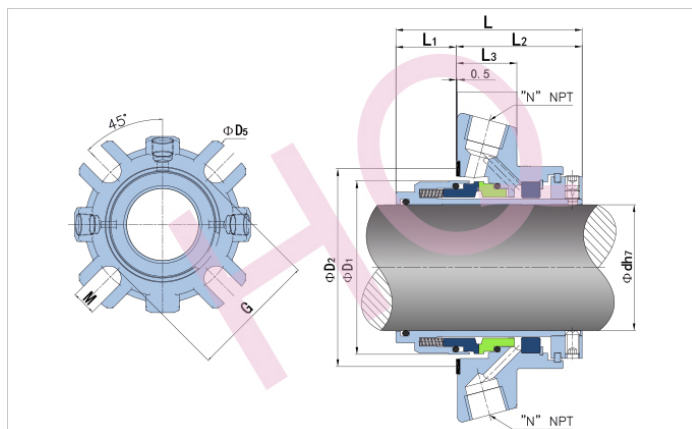
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	64.5	24.5	40	25.5	14	1/4 "
28	46	47.0	52.0	98	63	64.5	24.5	40	25.5	14	1/4"
30	48	49.0	56.0	98	65	64.5	24.5	40	25.5	14	1/4 "
32	50	51.0	57.0	106	67	64.5	24.5	40	25.5	14	1/4"
33	50	51.0	57.0	106	67	64.5	24.5	40	25.5	14	1/4 "
35	53	54.0	61.5	106	72	65.5	25.5	40	25.5	14	1/4"
38	56	57.0	66.0	120	76	65.5	25.5	40	25.5	14	1/4 "
40	58	59.0	68.0	120	76	65.5	25.5	40	25.5	14	1/4"
43	61	62.0	70.5	130	81	65.5	25.5	40	25.5	14	3/8"
45	63	64.0	73.0	135	81	65.5	25.5	40	25.5	14	3/8 "
48	66	67.0	75.0	135	87	65.5	25.5	40	25.5	14	3/8"
50	68	69.0	78.0	148	87	65.5	25.5	40	25.5	14	3/8 "
53	73	74.0	83.0	148	94	65.5	25.5	40	25.5	18	3/8"
55	73	74.0	83.0	148	94	65.5	25.5	40	25.5	18	3/8 "
60	78	79.0	91.0	158	102	66.0	26.0	40	25.5	18	3/8"
65	83	84.5	98.5	163	112	66.0	26.0	40	25.5	18	3/8"
70	93	95.0	108.0	178	125	64.5	24.5	40	25.5	18	3/8"
75	98	100.0	113.0	185	130	66.5	23.5	47	28.5	18	3/8 "
80	105	107.0	118.0	193	135	76.0	29.0	47	28.5	18	3/8"
85	110	113.0	123.0	198	140	76.0	29.0	47	28.5	22	3/8"
90	115	118.0	130.0	205	145	76.0	29.0	47	28.5	22	3/8"
95	121	124.0	135.0	209	150	78.0	31.0	47	28.5	22	3/8 "
100	126	129.0	140.0	218	155	78.0	31.0	47	28.5	22	3/8 "

HQCS-FT20(CB2T)



Type: Single Cartridge Seal
 Replacement: Fluiten CB2T
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



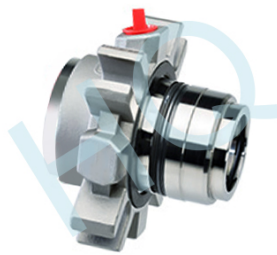
<http://www.hqseal.com>



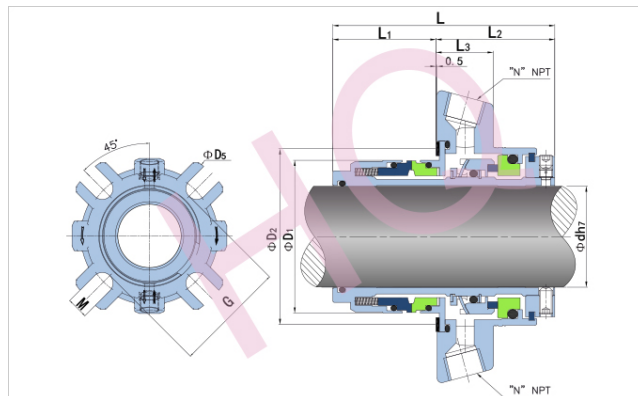
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
25	43	44.0	51.0	98	63	74.5	24.5	50.0	25.5	14	1/4"
28	46	47.0	52.0	98	63	74.5	24.5	50.0	25.5	14	1/4"
30	48	49.0	56.0	98	65	74.5	24.5	50.0	25.5	14	1/4"
32	50	51.0	57.0	106	67	74.5	24.5	50.0	25.5	14	1/4"
33	50	51.0	57.0	106	67	74.5	24.5	50.0	25.5	14	1/4"
35	53	54.0	61.5	106	72	76.5	25.5	51.0	25.5	14	1/4"
38	56	57.0	66.0	120	76	77.5	25.5	52.0	25.5	14	1/4"
40	58	59.0	68.0	120	76	77.5	25.5	52.0	25.5	14	1/4"
43	61	62.0	70.5	130	81	77.5	25.5	52.0	25.5	14	3/8"
45	63	64.0	73.0	135	81	77.5	25.5	52.0	25.5	14	3/8"
48	66	67.0	75.0	135	87	77.5	25.5	52.0	25.5	14	3/8"
50	68	69.0	78.0	148	87	78.5	25.5	53.0	25.5	14	3/8"
53	73	74.0	83.0	148	94	78.5	25.5	53.0	25.5	18	3/8"
55	73	74.0	83.0	148	94	78.5	25.5	53.0	25.5	18	3/8"
60	78	79.0	91.0	158	102	79.5	26.0	53.5	25.5	18	3/8"
65	83	84.5	98.5	163	112	79.5	26.0	53.5	25.5	18	3/8"
70	93	95.0	108.0	178	125	78	24.5	53.5	25.5	18	3/8"
75	98	100.0	113.0	185	130	83.5	23.5	60.0	28.5	18	3/8"
80	105	107.0	118.0	193	135	92.5	29.0	63.5	28.5	18	3/8"
85	110	113.0	123.0	198	140	92.5	29.0	63.5	28.5	22	3/8"
90	115	118.0	130.0	205	145	92.5	29.0	63.5	28.5	22	3/8"
95	121	124.0	135.0	209	150	94.5	31.0	63.5	28.5	22	3/8"
100	126	129.0	140.0	218	155	94.5	31.0	63.5	28.5	22	3/8"

HQCS-FT21(CB3D)/FT22(CB4D)



Type: Double Cartridge Mechanical Seal
 Replacement: Fluiten CB3D/CB4D
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: $\leq 12\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,F,G,M



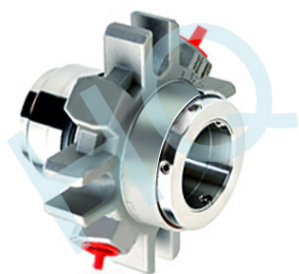
<http://www.hqseal.com>



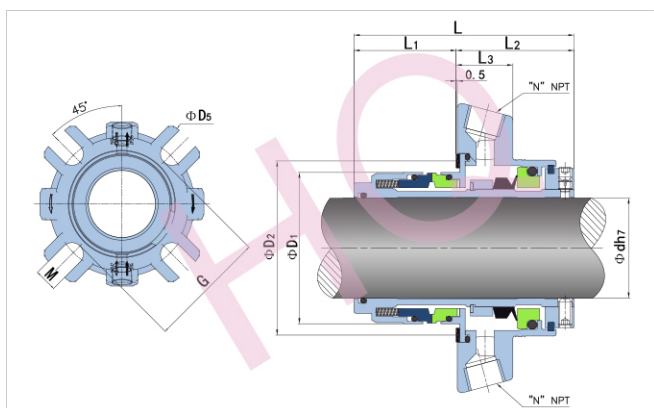
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	98	63	96.0	46	50.0	25.5	14	1/4"
22	46	47.0	52.0	98	63	96.0	46	50.0	25.5	14	1/4"
25	48	49.0	56.0	98	65	96.0	46	50.0	25.5	14	1/4"
28	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4"
30	53	54.0	61.5	106	72	97.0	46	51.0	25.5	14	1/4"
32	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4"
33	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4"
35	58	59.0	68.0	120	76	98.0	46	52.0	25.5	14	1/4"
38	61	62.0	70.5	127	81	98.0	46	52.0	25.5	14	1/4"
40	63	64.0	73.0	135	81	98.0	46	52.0	25.5	14	3/8"
43	66	67.0	75.0	135	87	98.0	46	52.0	25.5	14	1/4"
45	68	69.0	78.0	148	87	99.0	46	53.0	25.5	14	3/8"
48	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8"
50	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8"
53	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8"
55	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8"
58	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8"
60	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8"
63	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8"
65	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8"
68	98	100.0	113.0	185	130	106.0	46	60.0	28.5	18	3/8"
70	105	107.0	118.0	193	135	115.5	52	63.5	28.5	18	3/8"
75	110	113.0	123.0	198	140	115.5	52	63.5	28.5	22	3/8"
80	115	118.0	130.0	205	145	115.5	52	63.5	28.5	22	3/8"
85	121	124.0	135.0	208	150	117.5	54	63.5	28.5	22	3/8"
90	126	129.0	140.0	218	155	117.5	54	63.5	28.5	22	3/8"

HQCS-FT23(CB3Q)/FT24(CB4Q)



Type: Single Cartridge Seal
 Replacement: Fluiten CB3Q/CB4Q
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: ≤12m/s
 Material: Q1,Q2,U2,T,V,M1,F,G,M



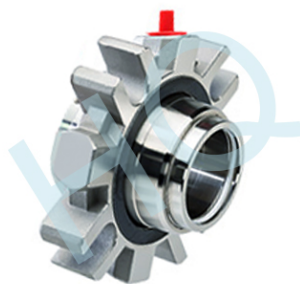
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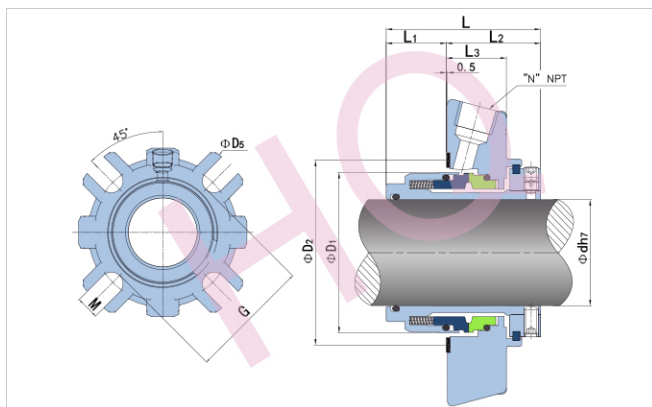
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	98	63	96.0	46	50.0	25.5	14	1/4"
22	46	47.0	52.0	98	63	96.0	46	50.0	25.5	14	1/4"
25	48	49.0	56.0	98	65	96.0	46	50.0	25.5	14	1/4"
28	50	51.0	57.0	106	67	96.0	46	50.0	25.5	14	1/4"
30	53	54.0	61.5	106	72	97.0	46	51.0	25.5	14	1/4"
32	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4"
33	56	57.0	66.0	120	76	98.0	46	52.0	25.5	14	1/4"
35	58	59.0	68.0	120	76	98.0	46	52.0	25.5	14	1/4"
38	61	62.0	70.5	127	81	98.0	46	52.0	25.5	14	1/4"
40	63	64.0	73.0	135	81	98.0	46	52.0	25.5	14	3/8"
43	66	67.0	75.0	135	87	98.0	46	52.0	25.5	14	1/4"
45	68	69.0	78.0	148	87	99.0	46	53.0	25.5	14	3/8"
48	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8"
50	73	74.0	83.0	148	94	99.0	46	53.0	25.5	18	3/8"
53	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8"
55	78	79.0	91.0	158	102	99.5	46	53.5	25.5	18	3/8"
58	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8"
60	83	84.5	98.5	163	112	99.5	46	53.5	25.5	18	3/8"
63	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8"
65	93	95.0	108.0	178	125	99.5	46	53.5	25.5	18	3/8"
68	98	100.0	113.0	185	130	106.0	46	60.0	28.5	18	3/8"
70	105	107.0	118.0	193	135	115.5	52	63.5	28.5	18	3/8"
75	110	113.0	123.0	198	140	115.5	52	63.5	28.5	22	3/8"
80	115	118.0	130.0	205	145	115.5	52	63.5	28.5	22	3/8"
85	121	124.0	135.0	208	150	117.5	54	63.5	28.5	22	3/8"
90	126	129.0	140.0	218	155	117.5	54	63.5	28.5	22	3/8"

HQCS-FT25(CB3S)/FT26(CB4S)



Type: Single Cartridge Seal
 Replacement: Fluiten CB3S/CB4S
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: $\leq 12\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,F,G,M



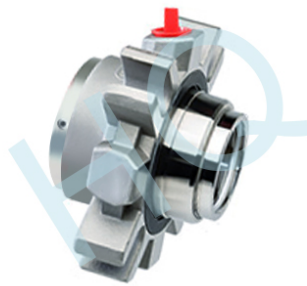
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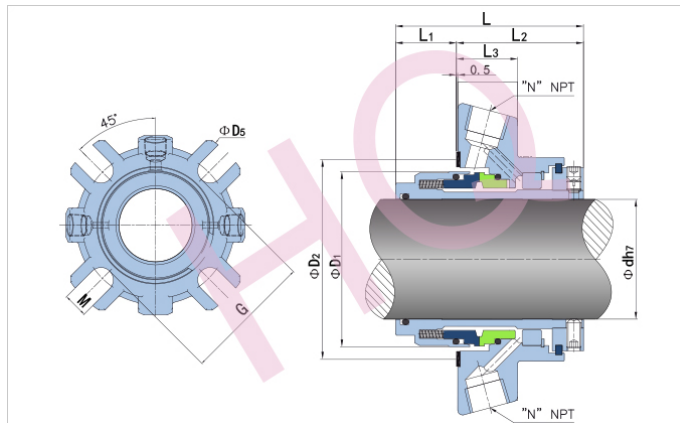
hq@hqseal.com

d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	98	63	64.5	24.5	40	25.5	14	1/4"
22	46	47.0	52.0	98	63	64.5	24.5	40	25.5	14	1/4"
25	48	49.0	56.0	98	65	64.5	24.5	40	25.5	14	1/4"
28	50	51.0	57.0	106	67	64.5	24.5	40	25.5	14	1/4"
30	53	54.0	61.5	106	72	65.5	25.5	40	25.5	14	1/4"
32	56	57.0	66.0	120	76	65.5	25.5	40	25.5	14	1/4"
33	56	57.0	66.0	120	76	65.5	25.5	40	25.5	14	1/4"
35	58	59.0	68.0	120	76	65.5	25.5	40	25.5	14	1/4"
38	61	62.0	70.5	127	81	65.5	25.5	40	25.5	14	1/4"
40	63	64.0	73.0	135	81	65.5	25.5	40	25.5	14	3/8"
43	66	67.0	75.0	135	87	65.5	25.5	40	25.5	14	1/4"
45	68	69.0	78.0	148	87	65.5	25.5	40	25.5	14	3/8"
48	73	74.0	83.0	148	94	65.5	25.5	40	25.5	18	3/8"
50	73	74.0	83.0	148	94	65.5	25.5	40	25.5	18	3/8"
53	78	79.0	91.0	158	102	66.0	26.0	40	25.5	18	3/8"
55	78	79.0	91.0	158	102	66.0	26.0	40	25.5	18	3/8"
58	83	84.5	98.5	163	112	66.0	26.0	40	25.5	18	3/8"
60	83	84.5	98.5	163	112	66.0	26.0	40	25.5	18	3/8"
63	93	95.0	108.0	178	125	64.5	24.5	40	25.5	18	3/8"
65	93	95.0	108.0	178	125	64.5	24.5	40	25.5	18	3/8"
68	98	100.0	113.0	185	130	66.5	23.5	43	28.5	18	3/8"
70	105	107.0	118.0	193	135	76.0	29.0	47	28.5	18	3/8"
75	110	113.0	123.0	198	140	76.0	29.0	47	28.5	22	3/8"
80	115	118.0	130.0	205	145	76.0	29.0	47	28.5	22	3/8"
85	121	124.0	135.0	208	150	78.0	31.0	47	28.5	22	3/8"
90	126	129.0	140.0	218	155	78.0	30.0	47	28.5	22	3/8"

HQCS-FT27(CB3T)



Type: Single Cartridge Seal
 Replacement: Fluiten CB3T
 Temperature: -50 to +250°C
 Pressure: 25 Bar
 Speed: $\leq 12\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,F,G,M



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d (mm)	D1	D2		D5	G	L	L1	L2	L3	M	N
		min	max								
20	43	44.0	51.0	98	63	74.5	24.5	50.0	25.5	14	1/4"
22	46	47.0	52.0	98	63	74.5	24.5	50.0	25.5	14	1/4"
25	48	49.0	56.0	98	65	74.5	24.5	50.0	25.5	14	1/4"
28	50	51.0	57.0	106	67	74.5	24.5	50.0	25.5	14	1/4"
30	53	54.0	61.5	106	72	76.5	25.5	51.0	25.5	14	1/4"
32	56	57.0	66.0	120	76	77.5	25.5	52.0	25.5	14	1/4"
33	56	57.0	66.0	120	76	77.5	25.5	52.0	25.5	14	1/4"
35	58	59.0	68.0	120	76	77.5	25.5	52.0	25.5	14	1/4"
38	61	62.0	70.5	127	81	77.5	25.5	52.0	25.5	14	1/4"
40	63	64.0	73.0	135	81	77.5	25.5	52.0	25.5	14	3/8"
43	66	67.0	75.0	135	87	77.5	25.5	52.0	25.5	14	1/4"
45	68	69.0	78.0	148	87	78.5	25.5	53.0	25.5	14	3/8"
48	73	74.0	83.0	148	94	78.5	25.5	53.0	25.5	18	3/8"
50	73	74.0	83.0	148	94	78.5	25.5	53.0	25.5	18	3/8"
53	78	79.0	91.0	158	102	79.5	26.0	53.5	25.5	18	3/8"
55	78	79.0	91.0	158	102	79.5	26.0	53.5	25.5	18	3/8"
58	83	84.5	98.5	163	112	79.5	26.0	53.5	25.5	18	3/8"
60	83	84.5	98.5	163	112	79.5	26.0	53.5	25.5	18	3/8"
63	93	95.0	108.0	178	125	78.0	24.5	53.5	25.5	18	3/8"
65	93	95.0	108.0	178	125	78.0	24.5	53.5	25.5	18	3/8"
68	98	100.0	113.0	185	130	83.5	23.5	60.0	28.5	18	3/8"
70	105	107.0	118.0	193	135	92.5	29.0	63.5	28.5	18	3/8"
75	110	113.0	123.0	198	140	92.5	29.0	63.5	28.5	22	3/8"
80	115	118.0	130.0	205	145	92.5	29.0	63.5	28.5	22	3/8"
85	121	124.0	135.0	208	150	94.5	31.0	63.5	28.5	22	3/8"
90	126	129.0	140.0	218	155	94.5	31.0	63.5	28.5	22	3/8"

HQCS-FT28(CB4F)



Type: Mixer/Gas Mechanical Seal
 Replacement: Fluiten CB4F
 Temperature: -20 to +150°C
 Pressure: 25 Bar
 Speed: $\leq 25\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,F,G,M

*Product description:

The seal is designed with “Fluilift” non contacting face technology and is pressurised with an inert gas that lubricates the faces and provides a gas barrier between process and atmosphere.

The seal incorporates laser etched grooves that maintain a controlled gap between the faces, even at low rotating speeds, eliminating friction, heat generation and process contamination. Power consumption is also reduced.

*Features

- Seal rings designed using FEA to ensure correct flatness in all operating conditions.
- Springs outside the product for high reliability even with viscous media.
- Clean profile enables seal to tolerate products that crystallise during manufacture.
- Increased sleeve thicknesses and space under the seal rings to prevent deformation and enable the seal to tolerate.
- Connection for gas flushing.
- Slotted flange for greater versatility.
- Fluistrip: seal setting device easily pulled clear after seal is installed.
- $d=20-90\text{mm}$



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Type: Single Cartridge Seal
 Replacement: Fluiten BM6S
 Temperature: -40 to +176°C
 Pressure: ≤ 40 Bar
 Speed: ≤ 23 m/s
 Material: Q1, Q2, U2, T, V, M1, F, G, M

*Product description:

Single cartridge seal designed in compliance with standard API 682 4th edition. Seal widely used and appreciated thanks to its sturdiness and capability to withstand high mechanical stress.

Very versatile and also suitable for applications with hot water or feed pumps with plan 23.

Possibility of exceeding the limits set forth by the standard of reference when assessed by Fluiten.

*Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- Single cartridge seal, balanced and flange with floating bushing
- Dual direction of rotation
- Solid sealing rings
- Drive system with three “Fluiten designed spine” recognised as being the only one reliable and resistant to vibrations and shaft misalignments
- Connections for flushing, quench and/or drain
- Uniform distribution system of multipoint injection flushing
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- d=20-110mm



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HQCS-FT30(BM6D-T)



Type: Double Cartridge Mechanical Seal
 Replacement: Fluiten BM6D-T
 Temperature: -40 to +176°C
 Pressure: ≤ 20 Bar
 Speed: ≤ 23 m/s
 Material: Q1, Q2, U2, T, V, M1, F, G, M

*Features

- Standard solution resulting from tested designs and made in compliance with standard API

682 4th edition

- The balanced dual cartridge solution is ideal for arrangement 2 and 3 with auxiliary fluid at atmospheric pressure (buffer) BM6T or pressurised (barrier) BM6D
- Reverse pressure balanced cartridge seal, hydraulically sized to accept the greater reverse pressure in case of accident
- Dual direction of rotation
- Solid sealing rings
- Drive system with three “Fluiten designed spine” recognised as being the only one reliable and resistant to vibrations and shaft misalignments
- Connection for flushing or vent and IN-OUT for auxiliary liquid
- Uniform distribution system of multipoint injection flushing
- Efficient circulation device of the auxiliary liquid
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- $d=20-110$ mm



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Type: Single Cartridge with Metal Bellows
Designed
Replacement: Fluiten TR6S
Temperature: -60 to +176°C
Pressure: 40 Bar
Speed: $\leq 23\text{m/s}$
Material: A,B,Q2,U2,P,K,E,G,M5

*Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- Rotary metal bellows and flange with floating bushing
- Dual direction of rotation
- Uniform distribution system of multipoint injection flushing
- The bellows solution in category 2, with O-rings as secondary gaskets, is especially suitable for fluids which tend to crystallize in contact with the atmosphere where the possibility of an external wash is not guaranteed.
- Connections for flushing, washing and/or drain of any leaks
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- $d=20-110\text{mm}$



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HQMB-FT02(TR6D-T)



Type: Double Cartridge Seal with Metal Bellows
Designed
Replacement: Fluiten TR6D-T
Temperature: -60 to +176°C
Pressure: 40 Bar
Speed: $\leq 23\text{m/s}$
Material: A,B,Q1,Q2,V,E,P,F,G,M,T6

*Features

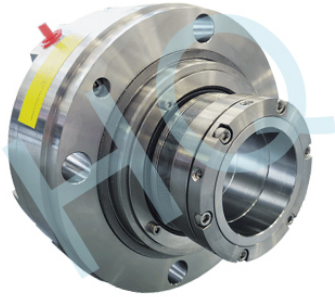
- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- Balanced dual cartridge solution suitable for arrangement 2 and 3
- Rotary metal bellows and flange with fixed bushing
- Uniform distribution system of multipoint injection flushing on the product side seal
- The bellows solution in Category 2, with O-rings as secondary gaskets
- Efficient circulation device of the auxiliary liquid
- Connection for flushing or vent and in-out for auxiliary liquid
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- $d=20-110\text{mm}$



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Type: Double Cartridge Seal with Metal Bellows
Designed
Replacement: Fluiten TRHD
Temperature: -80 to +400°C
Pressure: 40 Bar
Speed: $\leq 23\text{m/s}$
Material: Q1, Q2, U2, T, V, M1, F, G, M

*Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- The balanced dual cartridge solution is ideal for arrangement 2 and 3 or with auxiliary fluid at atmospheric pressure (buffer) or pressurised (barrier)
- Metal rotary bellows
- Dual direction of rotation
- Uniform distribution system of multipoint injection flushing on the product side seal
- The bellows solution with secondary gaskets in graphoil is recommended with liquids at temperature $> 176\text{ }^{\circ}\text{C}$ where emissions into the atmosphere must be controlled or where “Zero emission” is required
- Efficient circulation device of the auxiliary liquid
- Connections for flushing or vent and IN-OUT for auxiliary liquid
- Possibility of sizing the shaft flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- $d=20-110\text{mm}$



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HQMB-FT04(TRHS)

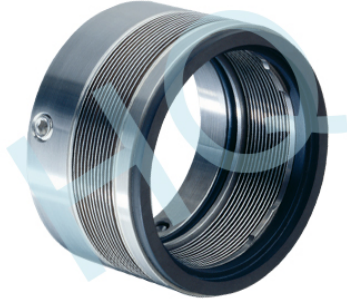


Type: Single Cartridge with Rotary Metal Bellows
Designed
Replacement: Fluiten TRHS
Temperature: -80 to +400°C
Pressure: 40 Bar
Speed: $\leq 23\text{m/s}$
Material: Q1,Q2,U2,T,V,M1,F,G,M

*Features

- Standard solution resulting from tested designs and made in compliance with standard API 682 4th edition
- Balanced single cartridge seal with rotary metal bellows and flange with floating bushing
- Dual direction of rotation
- The bellows solution with secondary gaskets in graphoil is recommended with liquids at temperature $> 176\text{ }^{\circ}\text{C}$
- Connections for the flushing and quench with vapour or drain and labyrinth device to force vapour circulation to touch and completely cool the seal and sliding surfaces
- Uniform distribution system of multipoint injection flushing
- Possibility of sizing the shaft's flange and sleeve according to customer request
- Recommended for API horizontal and vertical pumps
- $d=20-110\text{mm}$





Type: Metal Bellows Seal

Replacement: Fluiten TSMA

Temperature: -70 to +300°C

Pressure: 22 Bar

Speed: $\leq 30\text{m/s}$

Material: B,A,Q1,Q2,U2,E,V,K,G,F,G,M5,T6

*Features

- Single seal
- Bi-directional
- Balanced
- Suitable for Crystallizing Products
- Resistant to acids and bases
- Comply with UNI EN 12756
- Available also inches measures
- $d=20-100\text{mm}$



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HQMB-FT06(TRHA)



Type: Metal Bellow Seal
Replacement: Fluiten TSHA
Temperature: -70 to +420°C
Pressure: 22 Bar
Speed: $\leq 20\text{m/s}$
Material: A,B,Q2,U2,P,K,E,G,M5

*Features

- Single Seal
- Bi-directional
- Balanced
- Resistant to acids and bases
- Resistant to high temperature
- Available inches measures
- $d=25\text{-}100\text{mm}$



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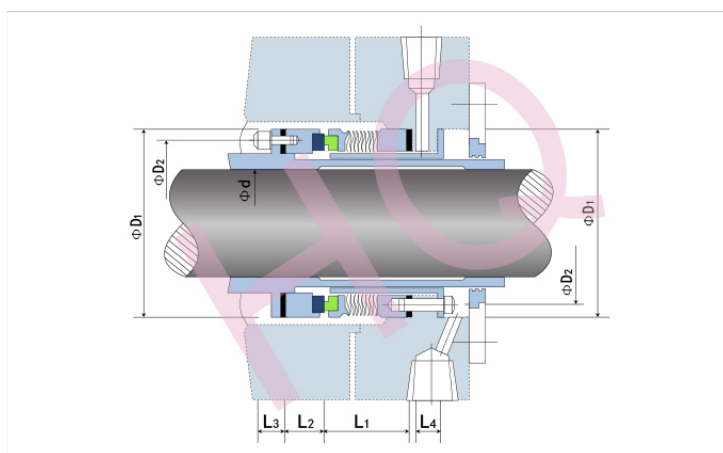


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HQMB-B



Type: Metal Bellow Seal
 Temperature: -40 to +220°C
 Pressure: $\leq 1.6\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1,Q2,U2,T,V,M1,
 F,G,M



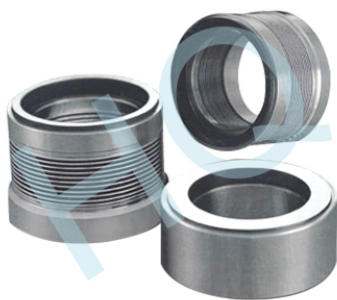
<http://www.hqseal.com>



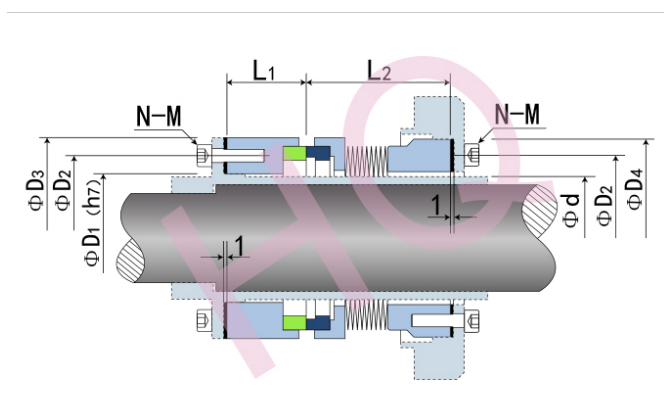
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Spec	d (mm)	D1	D2	L1 (+/-0.5)	L2	L3	L4
30	20	48	39.0	53	25	10.0	11.0
35	25	53	44.0	53	25	10.0	11.0
40	28	63	51.5	53	25	10.0	11.0
45	30,35	67	56.0	53	25	11.0	11.0
50	40	72	61.5	53	25	11.0	11.0
55	45	78	67.0	56	30	12.0	12.0
60	45	83	72.0	56	30	12.0	12.0
65	50,55	88	78.0	56	30	12.0	12.0
75	65	98	89.0	56	30	12.0	12.0
80	65	103	90.0	59	30	12.5	12.5
85	70,75	108	97.0	59	30	12.5	12.5
90	75,80	115	103.0	59	30	12.5	12.5
95	80,85	120	106.0	60	30	12.5	12.5
100	85,90	125	115.0	61	30	12.5	12.5

HQMB-DC



Type: Metal Bellow Seal
 Temperature: -20 to +200°C
 Pressure: $\leq 2.0\text{Mpa}$
 Speed: $\leq 20\text{m/s}$
 Material: Q1, Q2, U2, T, V, M1, F, G, M



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Model	d (mm)	D1	D2	D3	D4	L1	L2	N-M
DC-30	27.0	32.5	40	47	47	18	30	8-M4
DC-35	31.5	36.0	44	51	51	20	30	8-M4
DC-40	37.0	42.5	52	62	62	25	40	6-M6
DC-45	41.5	46.5	56	67	67	25	45/52	6-M6
DC-50	46.5	51.5	62	72	72	25	45/52	6-M6
DC-55	51.5	56.5	67	78	78	30	45/55	6-M6
DC-60	53.0	61.0	72	83	83	30	45/55	6-M6
DC-65	58.5	66.0	76	88	88	30	45/55	6-M6
DC-70	67.0	72.5	84	97	97	30	50/55	6-M6
DC-75	73.0	77.5	88	98	98	30	50	6-M6
DC-80	73.5	79.5	91	103	103	30	50	6-M6
DC-85	78.0	85.5	97	108	108	30	50	6-M6
DC-90	86.0	92.5	103	115	115	30	50/58	6-M6
DC-95	90.0	97.5	110	121	121	30	50	8-M6
DC-100	95.0	102.5	113	124	124	30	50	8-M6

Cross Reference Charts

HQ	BURGMANN	AES	CRANE	DEPAC	Chesterton	FLOWERVE	FLEXA	APEX
Cartridge, Metal Seals								
HQCS-C01					180			
HQCS-C02					ZF			
HQCS-C03					280			
HQCS-C04					150			
HQCS-C05					280M			
HQCS-C06					155			
HQCS-C07					225			
HQCS-C08					255			
HQCS-C09					250			
HQCS-C10					156			
HQCS-C11					S10			
HQCS-C12					S20			
HQCS-C13					HVS			
HQCS-C14					DFS			
HQCS-C15					DFD			
HQS-06					170			
HQMB-C01					186HT			
HQMB-C02					186			
HQMB-C03					286			
HQMB-C04					886			
HQMB-C05					886HT			



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Cross Reference Charts

HQ	BURGMANN	AES	CRANE	DEPAC	Chesterton	FLOWSERVE	FLEXA	APEX
Cartridge, Metal Bellow Seals								
HQCS-DP270				270				
HQCS-DP300				270				
HQCS-DP300Q				270P				
HQCS-DP300A				301				
HQCS-DP380Q				380				
HQCS-DP365				365				
HQCS-DP320				320				
HQCS-DP321				321				
HQCS-DP322				322				
HQCS-DP323				323				
HQCS-DP326				326				
HQCS-F40							PHS	
HQCS-F41							58	
HQCS-F42							79	
HQCS-F43							75	
HQMB-F40							73	
HQMB-F41							53A	
HQMB-F42							78	
HQMB-F43							76	
HQMB-F44							72	
HQMB-F45							66	
HQMB-F46							63	
HQMB-F47							PHB	



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Cross Reference Charts

HQ	BURGMANN	AES	CRANE	DEPAC	Chesterton	FLOWSERVE	FLEXA	APEX
Cartridge,Metal Bellow Seals								
HQCS-F01						ISC1EX		
HQCS-F02						QB		
HQCS-F03						ISC2PP		
HQCS-F04						ISC1PX		
HQCS-F05						SLC		
HQCS-F06						ISC2PX		
HQCS-F07						ISC1		
HQCS-F08						ISC2		
HQCS-F09						CBR		
HQCS-F10						UC		
HQCS-F11						QBQ		
HQCS-F12						QBQW		
HQMB-F01						ISC1BX		
HQMB-F02						BX		
HQMB-F03						X-200		
HQMB-F04						ISC2BB		
HQMB-F05						X-100		
HQMB-F06						CBR		

HQ	Fluiten	AES	CRANE	VULCAN	ROTEN	Chesteron
Cartridge Seals						
HQCS-FT01	C2K					
HQCS-FT02	C2KC					
HQCS-FT03	C2S					
HQCS-FT04	C2CS					
HQCS-FT05	C2D					
HQCS-FT06	C2DQ					
HQCS-FT07	C3K					
HQCS-FT08	C3KC					
HQCS-FT09	C3S					
HQCS-FT10	C3SQ					
HQCS-FT11	C3D					
HQCS-FT12	C3DQ					
HQCS-FT13	C4D					
HQCS-FT14	C4DQ					
HQCS-FT15	CB8S					
HQCS-FT15	CB8D-T					

Metal Materials			
Type	Material Description	Symbol	Code
	Normal Stainless Steel	2Cr13	F2
	Stainless Steel	304	F
	Stainless Steel	304L	F1
	Stainless Steel	316	G
	Stainless Steel	316L	G1
	Hastelloy C-4 Alloy	Hast C4	M
	Hastelloy B-2 Alloy	Hast B2	M1
	Carpenter	Carp.20	M3
	Monel	Monel.K50	M4
	Hastelloy C-4C-276 Alloy	Hast.C-276	M5
	Pure Titanim	TA2	T2
	Carpenter	Carp.42	T4
	Deposit induration Stainless Steel	Am350	T6
	08F Coated with Chrome	Q235-A	C
	Brass	H62	H
Secondary Seal Materials			
Type	Material Description	Symbol	Code
Rubber	Nitrile(NBR)	NBR	P
	Ethylene Propylene(EPDM)	EPR	E
	Fluorocarbon Rubber(Viton)	FPM	V
	Silicon Rubber	SI	S
	Chloroprene Rubber	CR	N
	Hydrogen Nitrile	HNBR	H
	Perfluoroelastomer(Kalrez,Chemraz)	FFKM	K
PTFE	Pure PTFE	PTFE	T
	PTFE, glassfibre reinforced		T2
	PTFE,Carbon Reinforced		T3
PTFE Wrapped	FPM,with PTFE wrapped	PTFE+FPM	M1
	EPR,with PTFE wrapped	PTFE+EPR	M2
	MVQ,with PTFE wrapped	PTFE+MVQ	M3
Expended graphite	Expanded Graphite		G



Seal Ring Materials			
Type	Material Description	Symbol	Code
SIC	Silicon Carbide,Sintered Pressureless	SSIC	Q1
	Silicon Carbide,Sintered Pressureless(shrunk-in)		Q12
	Silicon Carbide,Reaction bonded	RBSIC	Q2
	Silicon Carbide,Reaction bonded(shrunk-in)		Q22
	Reaction Silicon Carbide with graphite		Q3
	Sintered Silocon Carbide with SB		Q4
AL203	Ceramic(Alumina)	99.5% AL203	V
	Ceramic(Alumina)	99% AL203	V1
	Ceramic(Alumina)	95% AL203	V2
	Cermet	Fe+AL203	V3
TC	Co-binder Tungsten Carbide	YG6,GY8	U1
	Co-binder Tungsten Carbide(shrunk-in)		U12
	Ni-binder Tungsten Carbide	M106,M108	U2
	Ni-binder Tungsten Carbide(shrunk-in)		U22
	NiCrmo-binder Tungsten Carbide		U3
	NiCrmo-binder Tungsten Carbide(shrunk-in)		U32
Carbon	Antimony Impreg,Carbon Graphite		A
	Babbit Alloy Impreg,Carbon Graphite		A1
	Copper Impreg,Carbon Graphite		A2
	Resin Impregnated Carbon Graphite(Furan)		B
	Resin Impregnated Carbon Graphite(Epoxy)		B1
	Resin Impregnated Carbon(Phedol-formaldehyde)		B2
	Hot-pressing Carbon		B5
Metal	Stainless Steel	304	F
	Stainless Steel	304L	F1
	Stainless Steel	316	G
	Stainless Steel	316L	G1
	Tin bronze	ZQSn6-6-3	S1
	High silicon cast iron		S2
	High nickel cast iron		S3
Plastic	PTFE,glassfibre reinforced		Y1
	PTFE,carbon reinforced		Y2
Spring Materials			
Type	Material Description	Symbol	Code
	Hastelloy C-4 Alloy	Hast.C4	M
	Stainless Steel	304	F
	Stainless Steel	304L	F1
	Stainless Steel	316	G
	Stainless Steel	316L	G1
	65Mn Coated with Chrome	65Mn	G8