Mechanical Seal 2021 Brochure

Sizonke Trading

S141

Materials

Stationary - Car / SiC / SSiC / TC
Rotary - SiC / SSiC / TC
Elastomer - NBR / EPDM / Viton / Aflas / FFKM

Working Conditions

Pressure < 28 bar
Speed < 25 m/s
Temperature up to 205°C

Features:

- Stationary Design
- Monlithic Faces
- Cushioned Faces
- Pressure balanced
- Springs outside the media

Gasket Sizes
ID = ØD2 + 2.5mm
OD = L5 - 1.5mm

S141
Standard

S141M
Modified for Quench

S141S
Small Bore
ANSI Stuffing Box

Inches ØD	Metric ØD	ØD2	ØD3	ØD4	ØD5	L1	L2	L3	L5	ØD2 S141Z
1.000"	24	43.5	105	40.10	12.5	19.0	38	21.5	62	40.3
	25	43.5	105	40.10	12.5	19.0	38	21.5	62	40.3
1.125"	28	46.5	105	43.10	12.5	19.0	38	21.5	62	43.5
	30	48.5	105	45.10	12.5	19.0	38	21.5	65	46.6
1.250"	32	50.0	105	47.10	12.5	19.0	38	21.5	67	49.8
	33	50.0	105	47.10	12.5	19.0	38	21.5	67	49.8
1.375"	35	53.5	115	50.10	12.5	19.0	38	21.5	70	
1.500"	38	56.5	125	53.10	14.7	19.0	38	21.5	75	
	40	58.5	125	55.10	14.7	19.0	38	21.5	75	
1.625"		60.5	133	57.10	14.7	19.0	38	21.5	80	
	43	61.5	133	58.10	14.7	19.0	38	21.5	80	
1.750"	45	63.5	140	60.10	14.7	19.0	38	21.5	81	
1.875"	48	66.5	140	63.10	14.7	19.0	38	21.5	84	
2.000"	50	68,5	140	65.10	14.7	19.0	38	21.5	86	
2.125"	53	71,5	150	68.10	17.5	19.0	38	21.5	92	
	55	73,5	150	70.10	17.5	19.0	38	21.5	92	
2.250"		76.5	160	73.10	17.5	19.0	38	21.5	100	
2.375"	60	78,5	160	75.10	17.5	19.0	38	21.5	100	
2.500"		81.5	165	78.10	17.5	19.0	38	21.5	109	
	65	83,5	165	80.10	17.5	19.0	38	21.5	109	
2.625"		86.5	165	83.10	17.5	19.0	38	21.5	109	

*S141Z for small stuffing box cross sections shaft ØD 1.000"-1.375"

S145

Materials

Stationary - Car / SiC / SSiC / TC
Rotary - SiC / SSiC / TC
Elastomer - NBR / EPDM / Viton / Aflas / FFKM

Working Conditions

Pressure < 28 bar
Speed < 25 m/s
Temperature up to 205°C

S145 and S145Q Gasket Sizes
<73mm ID = ØD2 + 2.5mm
OD = L5 - 1.5mm
≥73mm ID = ØD2 + 3mm
OD = L5 - 1.5mm

Inches ØD	Metric ØD	ØD2	ØD3	ØD4	ØD5	L1	L2	L3	L5
1.000"	24	43.5	104	40.10	12.5	19.0	38	21.5	62
	25	43.5	104	40.10	12.5	19.0	38	21.5	62
1.125"	28	46.5	104	43.10	12.5	19.0	38	21.5	62
	30	48.5	104	45.10	12.5	19.0	38	21.5	65
1.250"	32	50.0	104	47.10	12.5	19.0	38	21.5	67
	33	50.0	104	47.10	12.5	19.0	38	21.5	67
1.375"	35	53.5	110	50.10	12.5	19.0	38	21.5	70
1.500"	38	56.5	125	53.10	14.7	19.0	38	21.5	75
	40	58.5	125	55.10	14.7	19.0	38	21.5	75
1.625"		60.5	133	57.10	14.7	19.0	38	21.5	80
	43	61.5	133	58.10	14.7	19.0	38	21.5	80
1.750"	45	63.5	140	60.10	14.7	19.0	38	21.5	81
1.875"	48	66.5	140	63.10	14.7	19.0	38	21.5	84
2.000"	50	68,5	140	65.10	14.7	19.0	38	21.5	87
2.125"	53	71,5	150	68.10	17.5	19.0	38	21.5	90
	55	73,5	150	70.10	17.5	19.0	38	21.5	92
2.250"		76.5	160	73.10	17.5	19.0	38	21.5	95
2.375"	60	78,5	160	75.10	17.5	19.0	38	21.5	100
2.500"		81.5	170	78.10	17.5	19.0	38	21.5	103
	65	83,5	165	80.10	17.5	19.0	38	21.5	105
2.625"		86.5	180	83.10	17.5	19.0	38	21.5	110
2.750"	70	88,5	180	85.10	17.5	19.0	38	21.5	120
2.875"		98.0	190	98.0	17.5	20.5	41.5	24.0	123
3.000"	75	100,0	190	100,0	17.5	20.5	41.5	24.0	125
3.125"		105,0	190	105,0	17.5	20.5	41.5	24.0	130
	80	105,0	190	105,0	17.5	20.5	41.5	24.0	130
3.250"		108.0	220	108.0	17.5	20.5	41.5	24.0	133
3.375"	85	110,0	220	110,0	21.5	20.5	41.5	24.0	135
3.500"	90	115,0	220	115,0	21.5	20.5	41.5	24.0	140
3.625"		117.0	220	117.0	21.5	20.5	41.5	24.0	142
3.750"	95	120,0	220	120,0	21.5	20.5	41.5	24.0	145
3.875"	100	125,0	220	125,0	21.5	20.5	41.5	24.0	150
4.000"		125,0	220	125,0	21.5	20.5	41.5	24.0	150
4.125	105	130.0	240	130.0	21.5	20.5	43.5	30.0	170
4.250"	110	135.0	240	135.0	21.5	20.5	43.5	30.0	170
4.375"	110	135.0	240	135.0	21.5	20.5	43.5	30.0	170
4.500"	115	140.0	250	140.0	21.5	20.5	43.5	30.0	180
4.625"	120	145.0	250	145.0	21.5	20.5	43.5	30.0	180
4.750"	120	145.0	250	145.0	21.5	20.5	43.5	30.0	180
4.875"	125	150.0	250	150.0	21.5	20.5	43.5	30.0	180
5.000"	130	155.0	260	155.0	21.5	20.5	43.5	30.0	190

S145 - Standard

S145Q - Quench
*for S145Q L2 size, add 6mm

S145+ Large Bore
ANSI Stuffing Box

S241

Materials

Stationary - Car, Sic, SSic, TC
Rotary - Sic, SSic, TC
Elastomer - NBR, EPDM, Viton, Aflas

Working Conditions

Pressure < 28 bar
Speed < 35 m/s
Temperature up to 205°C

Inches ØD	Metric ØD	ØD2	ØD3	ØD5	L1	L2	L3	L5
1.000	24	44,7	104	12.5	54	35	24	62
	25							
1.125	28	47,7	104	12.5	54	35	24	62
	30	49,7	104	12.5	54	35	24	65
1.250	32	50,9	104	12.5	54	35	24	67
	33							
1.375	35	54,7	110	12.5	54	35	24	70
1.500	38	57,7	125	14.7	54	35	24	75
	40	59,7	125	14.7	54	35	24	75
1.625		61.7	133	14.7	54	35	24	80
	43	62,7	133	14.7	54	35	24	80
1.750	45	64,7	140	14.7	54	35	24	81
1.875	48	67,7	140	14.7	54	35	24	84
2.000	50	69,7	140	14.7	54	35	24	87
2.125	53	72,7	150	17.5	54	35	24	90
	55	74,7	150	17.5	54	35	24	92
2.250		76.7	160	17.5	54	35	24	95
2.375	60	79,7	160	17.5	54	35	24	100
2.500		82.7	170	17.5	54	35	24	103
	65	84,7	165	17.5	54	35	24	105
2.625		86.7	180	17.5	54	35	24	110
2.750	70	89,7	180	17.5	54	35	24	120
2.875		100.8	190	17.5	54	35	24	123
3.000	75	102,8	190	17.5	58	39	25	125
3.125		107,8	190	17.5	58	39	25	130
	80	107,8	190	17.5	58	39	25	130
3.250		110.8	220	21.5	58	39	25	133
3.375	85	112,8	220	21.5	58	39	25	135
3.500	90	117,8	220	21.5	58	39	25	140
3.625		119.8	220	21.5	58	39	25	142
3.750	95	122,8	220	21.5	58	39	25	145
3.875	100	127,8	220	21.5	58	39	25	150
4.000								

S241C

EXOTIC METAL WETTED PARTS

Materials

Stationary - Car / SiC / SSiC / TC
Rotary - SiC / SSiC / TC
Elastomer - NBR / EPDM / Viton / Aflas

Working Conditions

Pressure < 28 bar
Speed < 35 m/s
Temperature up to 205°C

Shaft ØD		ØD2	ØD3	ØD5	L1	L2	L3	L5
Inches	Metric							
1.000	24	44,7	104	12.5	54	40	24	62
	25							
1.125	28	47,7	104	12.5	54	40	24	62
	30	49,7	104	12.5	54	40	24	65
1.250	32	50,9	104	12.5	54	40	24	67
	33							
1.375	35	54,7	110	12.5	54	40	24	70
1.500	38	57,7	125	14.7	54	40	24	75
	40	59,7	125	14.7	54	40	24	75
1.625		61.7	133	14.7	54	40	24	80
	43	62,7	133	14.7	54	40	24	80
1.750	45	64,7	140	14.7	54	40	24	81
1.875	48	67,7	140	14.7	54	40	24	84
2.000	50	69,7	140	14.7	54	40	24	87
2.125	53	72,7	150	17.5	54	40	24	90
	55	74,7	150	17.5	54	40	24	92
2.250		76.7	160	17.5	54	40	24	95
2.375	60	79,7	160	17.5	54	40	24	100
2.500		82.7	170	17.5	54	40	24	103
	65	84,7	165	17.5	54	40	24	105
2.625		86.7	180	17.5	54	40	24	110
2.750	70	89,7	180	17.5	54	40	24	120
2.875		100.8	190	17.5	54	40	24	123
3.000	75	102,8	190	17.5	58	44	25	125
3.125		107,8	190	17.5	58	44	25	130
	80	107,8	190	17.5	58	44	25	130
3.250		110.8	220	21.5	58	44	25	133
3.375	85	112,8	220	21.5	58	44	25	135
3.500	90	117,8	220	21.5	58	44	25	140
3.625		119.8	220	21.5	58	44	25	142
3.750	95	122,8	220	21.5	58	44	25	145
3.875	100	127,8	220	21.5	58	44	25	150
4.000								

S222

Materials

Stationary - Car / SiC / SSiC / TC
Rotary - SiC / SSiC / TC
Elastomer - NBR / EPDM / Viton / Aflas / FFKM

Working Conditions

Pressure < 28 bar
Speed < 25 m/s
Temperature up to 205°C

Features

- Manual venting possible
- Full pressure reversal possible
- Automatic closing by pressure reversal
- Double pressure balanced
- Shock and vibration dampened secondary faces
- Axial and radial 1/4" NPT barrier fluid connections
- Extreme motion tolerances of up to 5mm Axial, radial and oscillating.

Shaft ØD		ØD2	ØD3	ØD5	ØD6	L1	L2
Inches	Metric						
	50	17.5	95	89	180	70	113
2.000"	55	17.5	100	94	185	70	118
2.125"		17.5	100	94	185	70	118
2.250"	60	17.5	105	99	190	70	123
2.375"		17.5	105	99	190	70	123
2.500"	65	17.5	110	104	195	70	128
2.625"	70	17.5	115	109	200	70	133
2.750"		17.5	115	109	200	70	133
2.875"	75	17.5	120	114	205	70	138
3.000"	80	17.5	125	119	210	70	143
3.125"		17.5	125	119	210	70	143
3.250"	85	21.5	130	124	215	70	148
3.375"	90	21.5	135	129	220	70	153
3.500"		21.5	135	129	220	70	153
3.625"	95	21.5	140	134	225	70	158
3.750"		21.5	140	134	225	70	158
3.875"	100	21.5	145	139	230	70	163
4.000"	105	21.5	150	144	235	72	168
4.250"	110	21.5	155	149	240	72	173
4.500"	115	21.5	160	154	245	72	178
	120	21.5	165	159	250	72	183
4.750"	125	21.5	170	164	255	72	188
5.000"	130	21.5	175	169	260	72	193
5.250"	135	21.5	180	174	265	72	198
5.500"	140	21.5	185	179	270	72	203
	145	21.5	190	184	275	72	208
5.750"	150	21.5	195	189	280	72	213
6.000"	155	21.5	200	194	285	73	218
6.250"	160	21.5	205	199	290	73	223
6.500"	165	21.5	210	204	295	73	228
	170	21.5	215	209	300	73	233
6.750"	175	21.5	220	214	305	73	238
7.000"	180	21.5	225	219	310	73	243
7.250"	185	21.5	230	224	315	73	248
	190	21.5	235	229	320	73	253
7.500"	195	21.5	240	234	325	73	258
	200	21.5	245	239	330	73	263

S333

Features:

- Double seal - Controlled sealing environment
- 28 bar design pressure - Only limited by PV, not seal construction
- Easy Impeller Adjustment - No need to find parts, or hope for the best

Features:

1 - Stationary design - Springs do not rotate
2 - Springs out of the fluid - No clogging
3 - Monolithic faces - No inserts
4 - Reverse pressure capability - No immediate failure if barrier fluid pressure drops
5 - Large barrier fluid cavity - Increased cooling
6 - No grubscrew damage to the shaft / sleeve
7 - Double stationary holder o-ring - First o-ring prevents slurry from disturbing second o-ring
8 - Large stationary holder o-ring - Ease of responding to required movement
9 - Four simple setting plates slide out of position, No need to find setting clips for impeller adjustments

ØD1	ØD4	ØD3	ØD5	ØD6	ØD7	L1	No. of Holes	Barrier In/Out
40	110	160	145	177	18	187	4	G 3/8
50	176	178	210	240	18	195	8	G 3/8
60	176	188	210	240	18	197	8	G 3/8
80	204	217	240	280	22	220	8	G 1/2
100	234	234	270	310	22	214	8	G 1/2
125	260	266	295	335	22	255	8	G 1/2
140	313	300	350	390	22	275	12	G 1/2
160	313	310	350	390	22	290	12	G 1/2
180	364	340	400	440	22	295	12	G 1/2
200	364	360	400	440	22	300	12	G 1/2
220	422	380	460	500	22	315	16	G 1/2

AHLSTAR® AUP PUMP SERIES

Common Shaft Sizes: 30mm, 40mm, 50mm, 60mm, 80mm, 85mm, 90mm

SJCS1

- Single Seal
- ±2.00mm Axial Movement
- Tried and trusted components

SJCS2

- Double Seal
- ±2.00mm Axial Movement
- Tried and trusted components

S2AUP

- Double Seal
- Stationary Cartridge Design
- ±2.5mm Axial/ Radial Movement
- Monolithic Faces
- Double Pressure Balanced
- Narrow Face Design

AHLSTAR® APP PUMP SERIES

Common Shaft Sizes: 30mm, 40mm, 50mm, 60mm, 80mm, 90mm

SE1AP

- Double Seal
- Tried and trusted components

SE2AP

- Double Seal
- Tried and trusted components

S2APP

- Double Seal
- Stationary Cartridge Design
- ±2.5mm Axial Movement
- Monolithic Faces
- Double Pressure Balanced
- Narrow Face Design
- Easy To Install

SMG1/12/13

Materials

Stationary	- Cer / SiC / SSiC / TC
Rotary	- Car / SiC / SSiC / TC
Elastomer	- NBR / EPDM / Viton

Working Conditions

Pressure	< 12 bar
Speed	< 12 m/s
Temperature	up to 150°C

Metric		ØD3	L1 (SMG1)	L12 (SMG12)	L13 (SMG13)	L4	ØD7
Code	Shaft ØD						
0100	10	24.0	14.5	25.9	33.4	6.6	21
0120	12	24.0	15.0	25.9	33.4	6.6	23
0140	14	28.0	17.0	28.4	33.4	6.6	25
0150	15	28.0	17.0	28.4	33.4	6.6	25
0160	16	28.0	17.0	28.4	33.4	6.6	27
0170	17	31.0	19.5	30.0	37.5	7.5	33
0180	18	31.0	19.5	30.0	37.5	7.5	33
0190	19	36.0	21.5	30.0	37.5	7.5	35
0200	20	36.0	21.5	30.0	37.5	7.5	35
0220	22	36.0	21.5	30.0	37.5	7.5	37
0240	24	40.5	22.5	32.5	42.5	7.5	39
0250	25	41.0	23.0	32.5	42.5	7.5	40
0280	28	47.0	26.5	35.0	42.5	7.5	43
0300	30	47.0	26.5	35.0	42.5	7.5	45
0320	32	51.0	27.5	35.0	47.5	7.5	48
0330	33	51.0	27.5	35.0	47.5	7.5	48
0350	35	55.0	28.5	35.0	47.5	7.5	50
0380	38	58.0	30.0	36.0	46.0	9.0	56
0400	40	60.0	30.0	36.0	46.0	9.0	58
0430	43	63.0	30.0	36.0	51.0	9.0	61
0450	45	65.0	30.0	36.0	51.0	9.0	63
0480	48	69.0	30.5	36.0	51.0	9.0	66
0500	50	71.0	30.5	38.0	50.5	9.5	70
0530	53	76.0	33.0	36.5	59.0	11.0	73
0550	55	78.0	35.0	36.5	59.0	11.0	75
0580	58	82.0	37.0	41.5	59.0	11.0	78
0600	60	85.0	38.0	41.5	59.0	11.0	80
0650	65	90.0	40.0	41.5	69.0	11.0	85
0680	68	94.0	40.0	48.7	68.7	11.3	90
0700	70	97.0	40.0	48.7	68.7	11.3	92
0750	75	102.0	40.0	48.0	68.7	11.3	97
0800	80	108.0	40.0	48.0	78.0	12.0	105
0850	85	117.0	41.0	46.0	76.0	14.0	110
0900	90	126.0	45.0	51.0	76.0	14.0	115
0950	95	131.0	46.0	51.0	76.0	14.0	120
1000	100	136.0	47.0	51.0	76.0	14.0	125

S502

Materials

Rotary	- Car / SiC / SSiC / TC
Elastomer	- NBR / EPDM / Viton

Working Conditions

Pressure	up to 35 bar
Speed	< 12 m/s
Temperature	up to 150°C

Metric		ØD3	L1
Code	Shaft ØD		
0140	14	24	23.0
0160	16	26	23.0
0180	18	32	24.0
0200	20	34	24.0
0220	22	36	24.0
0240	24	38	26.7
0250	25	39	27.0
0280	28	42	30.0
0300	30	44	30.5
0320	32	46	30.5
0330	33	47	30.5
0350	35	49	30.5
0380	38	54	32.0
0400	40	56	32.0
0430	43	59	32.0
0450	45	61	32.0
0480	48	64	32.0
0500	50	66	34.0
0530	53	69	34.0
0550	55	71	34.0
0580	58	78	39.0
0600	60	80	39.0
0630	63	83	39.0
0650	65	85	39.0
0680	68	88	39.0
0700	70	89	45.5
0750	75	96	45.5
0800	80	104	45.0
0850	85	108	45.0
0900	90	114	50.0
0950	95	118	50.0
1000	100	124	50.0

S10R/ S10T

Materials

Stationary - Cer, Sic, SSic
Rotary - Car, Sic, SSic, PTFE
Elastomer - PTFE

Working Conditions

Pressure < 10 bar
Speed < 12 m/s
Temperature up to 120°C

Seat Size	
ØD	Code
19.1	0191
22.2	0222
25.4	0254
31.7	0317
34.9	0349
38.1	0381
41.2	0412
44.4	0444
47.6	0476
50.8	0508
53.9	0539
57.1	0571
60.3	0603
63.5	0635
66.6	0666
69.8	0698
73.0	0730
76.2	0762
79.2	0792

Metric	Imperial		ØD3	L10R	L10T	ØD7	ØD10	L2
ØD	ØD	Code						
16-19	0.750	0191	54	31	33	36.51	48	17.6
20-22	0.875	0222	57	31	33	39.69	51	17.6
23-25	1.000	0254	61	33	37	42.86	54	17.6
26-29	1.125	0285	67	36	41	50.80	68	27.0
30-32	1.250	0317	70	37	42	53.98	71	27.0
33-35	1.375	0349	73	38	42	57.15	78	27.0
36-38	1.500	0381	76	38	42	63.50	81	27.0
39-42	1.625	0412	80	40	43	66.68	84	27.0
43-45	1.750	0444	83	40	43	69.85	87	27.0
46-48	1.875	0476	86	43	43	73.03	97	27.0
49-51	2.000	0508	89	43	43	79.38	100	33.3
52-54	2.125	0539	103	53	43	82.55	103	33.3
55-58	2.250	0572	107	53	53	85.73	106	33.3
59-60	2.375	0603	110	53	53	88.90	110	33.3
61-64	2.500	0635	113	53	53	92.08	113	33.3
65-66	2.625	0666	116	53	53	95.25	116	33.3
67-70	2.750	0698	118	53	53	98.43	117	33.3
71-73	2.875	0730	122	53	53	100.01	121	33.3
74-76	3.000	0762	126	53	53	103.19	132	33.3

SM37G/SM37GN

Materials

Stationary - Sic, SSic, TC
Rotary - Sic, SSic, TC
Elastomer - NBR / EPDM / Viton

Working Conditions

Pressure < 10 bar
Speed < 10 m/s
Temperature up to 180°C

SM37G uses SS4 Stationary
SM37GN uses SS9 Stationary (Pinned)

Metric		ØD3	L1	SM37G - SS4			SM37GN - SS9		
Shaft ØD	Code			L1K	ØD7	L4	L1K	ØD7	L4
14	0140	24	16.5	22.1	24.6	5.6	26.5	25.0	10.0
16	0160	26	16.5	24.0	28.0	7.5	26.5	27.0	10.0
18	0180	31	18.0	26.0	30.0	8.0	29.5	33.0	11.5
20	0200	34	19.0	26.5	35.0	7.5	30.5	35.0	11.5
22	0220	36	20.5	28.0	35.0	7.5	32.0	37.0	11.5
24	0240	38	22.0	29.5	38.0	7.5	33.5	39.0	11.5
25	0250	39	23.5	31.0	38.0	7.5	35.0	40.0	11.5
28	0280	42	24.5	33.5	42.0	9.0	36.0	43.0	11.5
30	0300	44	24.5	35.0	45.0	10.5	36.0	45.0	11.5
32	0320	46	28.0	38.5	48.0	10.5	39.5	48.0	11.5
35	0350	49	28.0	39.0	52.0	11.0	39.5	50.0	11.5
38	0380	54	31.0	41.3	55.0	10.3	45.0	56.0	14.0
40	0400	56	34.0	44.8	58.0	10.8	48.0	58.0	14.0
45	0450	61	36.5	48.1	64.0	11.6	50.5	63.0	14.0
48	0480	64	42.0	53.6	68.4	11.6	56.0	66.0	14.0
50	0500	66	43.0	54.6	69.3	11.6	58.0	70.0	15.0
55	0550	71	47.0	60.3	75.4	13.3	62.0	75.0	15.0
58	0580	78	50.0	63.3	78.4	13.3	65.0	78.0	15.0
60	0600	79	51.0	64.3	80.4	13.3	66.0	80.0	15.0
65	0650	85	52.0	65.0	85.4	13.0	67.0	85.0	15.0
68	0680	88	52.7	66.4	91.5	13.7	70.7	90.0	18.0
70	0700	90	54.0	67.0	92.0	13.0	72.0	92.0	18.0
75	0750	98	54.0	68.0	99.0	14.0	72.0	97.0	18.0
80	0800	103	58.0	73.0	104.0	15.0	76.2	105.0	18.2

S680

Materials

Face - Car, Sic, SSic, TC
Elastomer - NBR, EPDM, Viton, PTFE

Working Conditions

Pressure < 15 bar
Speed < 12 m/s
Temperature -40° to 260°

Imperial		ØD3	L1
Shaft ØD	Code		
19.1	0191	33.3	31.8
22.2	0222	36.8	31.8
23.8	0238	38.1	31.8
25.4	0254	39.7	31.8
28.6	0286	42.8	31.8
31.7	0317	46.0	33.3
34.9	0349	49.2	36.5
38.1	0318	52.4	36.5
41.3	0412	55.5	36.5
44.5	0444	58.7	36.5
47.6	0476	61.9	38.1
50.8	0508	65.1	38.1
54.0	0539	68.2	38.1
57.2	0571	71.4	39.7
60.3	0603	74.6	39.7
63.5	0635	80.9	39.7
66.7	0666	84.1	41.3
69.9	0698	87.3	41.3
73.0	0730	92.1	42.8
76.2	0762	95.3	42.8
79.4	0794	98.4	44.50
82.1	0821	101.6	44.50
85.7	0857	104.8	44.50
88.9	0889	108.0	47.60
92.1	0921	111.1	47.60
95.3	0953	114.3	47.60
98.4	0984	117.5	47.60
101.6	1016	120.7	47.60

Metric		ØD3	L1
Shaft ØD	Code		
18	0180	32.00	27.50
20	0200	33.30	27.50
22	0220	36.00	27.50
24	0240	38.10	30.00
25	0250	39.00	30.00
28	0280	42.00	32.50
30	0300	44.00	32.50
32	0320	46.00	32.50
33	0330	47.00	32.50
35	0350	49.00	32.50
38	0380	52.40	34.00
40	0400	55.60	34.00
43	0430	58.70	34.00
45	0450	58.70	34.00
48	0480	61.90	34.00
50	0500	65.10	34.50
53	0530	68.30	34.50
55	0550	71.00	34.50
60	0600	74.60	39.50
65	0650	84.10	39.50
70	0700	87.30	45.00
75	0750	95.30	45.00
80	0800	98.40	44.50
85	0850	104.80	44.50
90	0900	108.00	49.50
95	0950	114.30	49.50
100	1000	120.70	49.50

S58B/S59B

Materials

Rotary - Car, Sic, SSic, TC
Elastomer S59B - PTFE
Elastomer S58B - NBR, EPDM, Vit

Working Conditions

Pressure S59B < 50 bar
S58B < 62 bar
Speed < 25 m/s
Temperature S59B up to 260°C
S58B up to 205°C

Metric			ØD3	L1	L2
Seat ØD	Code	Rotary ØD2			
14	0140	18	32.00	30.50	24.50
16	0160	20	34.00	30.50	24.50
18	0180	22	36.00	31.50	25.00
20	0200	24	38.00	31.50	25.00
22	0220	26	40.00	31.50	25.00
24	0240	28	42.00	34.20	27.50
25	0250	30	44.00	34.50	27.50
28	0280	32	47.00	37.50	30.00
30	0300	33	49.00	38.00	30.00
32	0320	35	54.00	38.00	30.00
33	0330	38	54.00	38.00	30.00
35	0350	40	56.00	38.00	30.00
38	0380	43	59.00	39.50	29.50
40	0400	45	61.00	39.50	29.50
43	0430	48	64.00	39.50	29.50
45	0450	50	66.00	39.50	29.50
48	0480	53	69.00	39.50	29.50
50	0500	55	71.00	44.00	32.50
53	0530	58	78.00	44.00	32.50
55	0550	60	80.00	44.00	32.50
58	0580	63	83.00	49.00	37.50
60	0600	65	85.00	49.00	37.50
63	0630	68	88.00	49.00	37.50
65	0650	70	90.00	49.00	37.50
70	0700	75	95.00	55.50	42.00
75	0750	80	104.00	55.50	42.00
80	0800	85	109.00	55.00	42.00
85	0850	90	114.00	60.00	47.00
90	0900	95	119.00	60.00	47.00
95	0950	100	124.00	60.00	47.00
100	1000	105	129.00	60.00	47.00

SSPG

Materials

Stationary - Cer, Sic, SSic, TC

Elastomer - NBR, EPDM, Viton, PTFE

Metric		ØD1	ØD2	ØD3	ØD4	ØD5	L1	L2
Shaft ØD	Code							
12.7	0127	25.40	25.60	27.40	16.79	31.52	7.92	2
15.8	0158	31.75	31.95	33.75	23.09	37.87	10.31	2
19.1	0191	34.93	35.13	36.93	26.29	41.05	10.31	2
22.2	0222	38.10	38.30	40.10	29.49	44.22	10.31	2
25.4	0254	41.28	41.48	43.28	32.69	47.40	11.10	2
28.6	0286	44.45	44.65	46.45	35.10	50.57	11.10	3
31.7	0317	47.63	47.83	49.63	38.40	53.75	11.10	3
34.9	0349	50.80	51.00	52.80	41.61	56.92	11.10	3
36.5	0365	53.98	54.18	55.98	44.81	60.10	11.10	3
38.1	0381	53.98	54.18	55.98	44.81	60.10	11.10	3
41.2	0412	60.33	60.53	62.33	49.58	66.45	12.70	3
42.8	0428	66.68	66.88	68.68	56.03	72.80	12.70	3
44.4	0444	63.50	63.70	65.50	54.31	69.62	12.70	3
47.6	0476	66.68	66.88	68.68	56.03	72.80	12.70	3
50.8	0508	69.85	70.05	71.85	60.71	75.97	12.70	3
53.9	0539	76.20	76.40	78.20	62.79	82.32	14.27	3
57.1	0571	79.38	79.58	81.38	65.99	85.50	14.27	3
60.3	0603	82.55	82.75	84.55	69.19	88.67	14.27	3
61.9	0619	85.73	85.93	87.73	70.79	91.85	14.27	3
63.5	0635	85.73	85.93	87.73	72.44	91.85	14.27	3
66.6	0666	85.73	85.93	87.73	76.99	91.85	15.88	3
69.8	0698	88.90	89.10	90.90	78.84	95.02	15.88	3
72.0	0720	92.08	92.28	94.08	82.60	98.20	15.88	3
73.0	0730	95.25	95.45	97.25	85.09	101.37	15.88	3
76.2	0762	98.43	98.63	100.43	86.79	104.55	15.88	3
79.3	0793	101.60	101.80	103.60	90.02	107.72	19.84	3
82.5	0825	104.78	104.98	106.78	94.69	110.90	19.84	3
85.7	0857	107.95	108.15	109.95	97.89	114.07	19.84	3
87.3	0873	111.13	111.33	113.13	101.09	117.25	19.84	3
88.9	0889	111.13	111.33	113.13	101.09	117.25	19.84	3
90.4	0904	114.30	114.50	116.30	104.34	120.42	19.84	3
92.1	0921	114.30	114.50	116.30	104.34	120.42	19.84	3
93.6	0936	117.48	117.68	119.48	107.49	123.60	19.84	3
95.2	0952	117.48	117.68	119.48	108.25	123.60	19.84	3
96.8	0968	120.65	120.85	122.65	110.74	126.77	19.84	3
98.4	0984	120.65	120.85	122.65	110.74	126.77	19.84	3
99.9	0999	123.83	124.03	125.83	110.74	129.95	19.84	3
101.6	1016	123.83	124.03	125.83	113.94	129.95	19.84	3
108.0	1080	133.35	133.55	135.35	118.70	139.47	19.84	4
127.0	1270	152.40	152.60	154.40	141.10	158.52	19.84	4

SSN

Materials

Stationary - Cer, Sic, SSic, TC, ChrStl

Elastomer - NBR, EPDM, Viton

Shaft ØD			L1	ØD1	ØD2	L5
Inches	Code	Metric				
0.375	0095	10	8.7	24.60	11.0	7.5
0.500	0127	12	8.7	27.80	13.5	7.5
0.625	0158	14	10.3	30.95	17.0	9.0
		16				
0.750	0191	17	10.3	34.15	20.0	9.0
		18				
		19				
0.810	0206	20	10.3	35.70	21.5	9.0
0.875	0222	22	10.3	37.30	23.0	9.0
1.000	0254	24	10.3	40.50	26.5	9.0
		25				
1.125	0285	27	11.9	47.65	29.5	10.5
		28				
		29				
1.250	0317	30	11.9	50.80	32.5	10.5
		32				
1.375	0349	34	11.9	54.00	36.5	10.5
		35				
1.500	0381	38	11.9	57.15	39.5	10.5
1.625	0412	40	11.9	60.35	42.5	10.5
1.750	0444	42	11.9	63.50	46.0	10.5
		43				
		45				
1.875	0476	48	11.9	66.70	49.0	10.5
2.000	0508	50	13.5	69.85	52.0	12.0
2.125	0539	53	13.5	73.05	55.5	12.0
		54				
2.250	0571	55	13.5	76.20	58.5	12.0
2.375	0603	60	13.5	79.40	61.5	12.0
2.500	0635	63	13.5	82.55	–	–
2.625	0666	65	15.9	92.10	68.0	14.5
2.750	0698	70	15.9	95.25	71.0	14.5
2.875	0730	73	15.9	98.45		
3.000	0762	75	15.9	101.60	77.5	14.5
3.125	0793	-	19.9	111.15		
3.250	0825	80	19.9	114.30	84.0	18.5
3.375	0857	85	19.9	117.50	87.0	18.5
3.500	0889	90	19.9	120.65	93.5	18.5
3.625	0920	-	19.9	123.85		
3.750	0952	95	19.9	127.00	96.5	18.5
3.875	0984	-	19.9	130.20		
4.000	1016	100	19.9	133.35	103.0	18.5

Orbit/Mono PCP

Materials

Faces	- Car / SiC / SSiC / TC
Elastomers	- NBR / EPDM / Viton / Aflas / Perlast

Working Conditions

Pressure	< 28 bar
Temperature	up to 205°C with Viton

Single Seal

1	Flange Cap Screw
2	Sleeve O-ring
3	Rotary Seat
4	Stationary Face
5	Drive Collar
6	Criclip
7	Orbit/Indura Flange
8	Sleeve
9	Rotary Seat O-ring
10	Stationary Face O-ring
11	Springs
12	Drive Grub Screw
13	1/4" NPT Flush Port
14	Flange O-ring
15	Setting Clip
16	Gland
17	Setting Cap Screw

Double Seal

1	Flange Cap Screw
2	Sleeve O-ring
3	Inboard Rotary Seat
4	Inboard Stationary Face
5	Springs
6	Outboard Stationary Face
7	Outboard Rotary Seat
8	Drive Collar
9	Drive Grub Screws
10	Circlip
11	Orbit/Indura Flange
12	Sleeve
13	Inboard Rotary Seat O-ring
14	Inboard Stationary Face O-ring
15	1/4" NPT Barrier I/O
16	Outboard Stationary Face O-ring
17	Outboard Rotary Seat O-ring
18	Drive Collar O-ring
19	Flange O-ring
20	Gland
21	Setting Clip Cap Screws
22	Setting Clips

SLURRY SEALS

S111Q

SLI

S222

S156

SWMS

WATER MANAGEMENT SYSTEM

Pressure
Max Set Pressure: 13 bar g
Max Design Pressure: 20 bar g

Temperature
Max Temperature: 80ºC
Min Temperature: 0ºC

Double seals have often been avoided despite being the best solution for the application. The reason for this is that historically Barrier Fluid Systems have relied on a Nitrogen blanket with or without a “bladder” system. Maintenance engineers have opted to use double seals only when absolutely necessary, however, this has been detrimental to the integrity of the equipment.

The SWMS (Water Management System) barrier fluid system connects directly to the plant water line. Through the Pressure Regulator the plant water line pressure is set to achieve a 1.0 - 1.5 bar above stuffing box pressure. By viewing the flow indicator any mechanical seal failure can be detected, optionally an electronic flow switch can be provided to set off an alarm. The Barrier Fluid is circulated in the system through thermosiphon effect.

The pressure regulator will allow plant water to flow into the tank and re-establish the higher pressure Barrier Fluid automatically. The technician will notice the flow indicator turning and either notice water leakage to atmosphere to indicate outboard seal face leakage, or if no water is present, the cause of the water flow is due to inboard seal face leakage.

Item	Description	Function
1	Non-return valve	Protects plant water supply from potential contamination from the seal and assists with protection against pressure fluctuation.
2	Pressure regulator	Enables the plant water pressure to be set at 1 - 1.5 bar above the stuffing box pressure and allows the automatic replenishing of water in the tank if required.
3	Flow indicator	Provides a visual indication of a mechanical seal upset by turning as the water flows through.
4	Pressure gauge	Barrier fluid pressure display in the tank.
5	Inlet Arm Connection	Used for supplying water to, and refilling the pressure pot.
6	Flange	Used to mount the pressure vessel onto a support structure.
7	Pressure Pot	10 litre 304 Stainless Steel water storage tank.
8	2-Way Valve	Allows for the draining of the tank, or flushing of the tank.
9	Seal Water Supply Connection	Outlet for barrier fluid to be supplied to the seal.
10	Seal Water Return Connection, 3-Way Valve	3-Way valve is used as an inlet for the barrier fluid to return into the pressure pot from the seal, or allowing the flushing of the seal (if required) dependent on the direction the valve handle is set.