



Vulcan Elastomeric Bellows Type Seals



Section 4

Introduction

Vulcan offer an extensive range of technically efficient and highly versatile, elastomeric bellows seals, suitable for any application dimensions, via our comprehensive standard range or through special manufacture to individual requirements.

Applications

The Vulcan bellows seals designs are highly recommended for duties with media containing solids and for hygienic applications, due to their non-clogging, self adjusting and robust design. These very reliable seals are also customisable, as they can be specially produced to any working length and seat housing configuration.

Suited for pumps, mixers, agitators, compressors and other rotary shaft equipment.

Standard Vulcan Bellows Types

Type 14 Series

Universal compact DIN seals to suit three standard DIN working lengths.

Type 19 Series

Compact or extended working lengths, with a non DIN cross-section, for optimum flexibility and durability.

Types 1511/1522

Compact DIN profile seal Types to suit American standard working lengths. Types 1511 and 1522 are bellows equivalents to the Parallel Types 11 and 22 as well as Types A4 and A5.

Type 1520

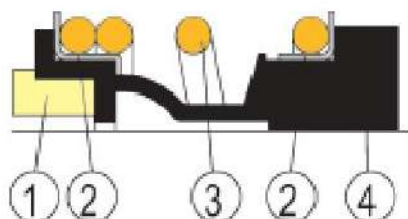
DIN profiled bellows seal to suit common international standard working length. Seal has same working length and seat as the Type 20, and Type A2 Parallel Seals.

Type 1724

Metal encased, rubber bellows seal to fit DIN profiles and DIN L1K. The Vulcan seal face is retained to avoid the most common cause of seal installation failure on competitor seal manufacture.

STANDARD COMPONENTS.

(All Types except Type 1724)



No	Description	No	Description
1	Face	3	Coil
2	Retaining Plates	4	Bellows

Vulcan Design Advantages

Range

Widest standard range of Bellows Seals, with more working lengths and seat choices and our compact DIN profile designs, than any other mechanical seal manufacturer.

Material Quality

Wide range of high quality elastomers and seal face materials readily available.

Design

An ingenious robust, non-fretting and non-clogging bellows design, capable of accommodating seal face wear, shaft misalignment and tolerances, due to Vulcan's attention to detail during the design process.

The rotary face is resiliently mounted with no bonded joints and therefore will not sustain wear nor damage when in contact with a hard face material, such as Silicon Carbide. The bellows have no moulded joints and are not subjected to torsional stresses.

These design features and our proven design face width and loading standards, provide increased seal performance, capability and life.

Retained Components

One sole unit, with no loose parts. The result is an easy fitting, bi-directional seal which is less prone to damage.

Designed for OEM's

The Type 14/15/17 Series have been designed as Vulcan's OEM range of seals and offer;

Better performance, capability and life compared to standard Parallel Spring Seals. Suitable for a wide variety of applications and media.

Customisable to any working length, seat housing dimensions, elastomer colours and name etc. Allowing a unique seal to be marketed by O.E.M.'s, as their own design, which won't be sold elsewhere.

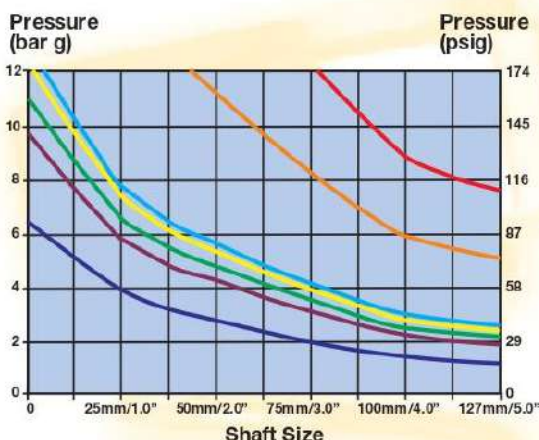
Very cost competitive to produce, especially in larger sizes and hard faces.

Reliability

These are proven very effective designs, highly utilised in many applications. They give extremely reliable performance based upon the bellows' design, high strength and flexibility.

Vulcan's thorough Quality Control Systems ensure correct and reliable supply.

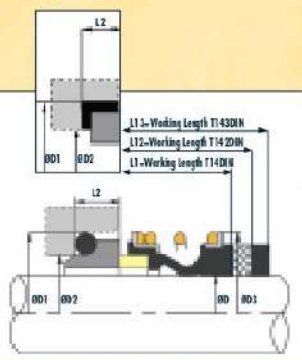
VULCAN BELLOWS TYPE SEALS PV CHART



Notes:
For information on how to utilise this PV chart please refer to the technical section.



TYPE 14 /TYPE 142 /TYPE 143



Universal compact DIN seal and seat with a choice of standard DIN working lengths. The robust, heavy duty bellows design provides excellent flexibility and durability. The seal is supplied as standard with the Type 19B seat. Alternatively specify Type 14S, 142S or 143S for this seal to be supplied with a Type 8 DIN Short Seat.

VULCAN STANDARD SIZES

Metric Shaft Size D	Size Code	D1	D2	D3	L1	L12	L13	L2
10	0100	21.0	17.0	20.0	13.4	25.9	33.4	6.6
12	0120	23.0	19.0	22.0	14.4	25.9	33.4	6.6
14	0140	25.0	21.0	24.0	14.4	28.4	33.4	6.6
15	0150	27.0	23.0	25.0	14.4	28.4	33.4	6.6
16	0160	27.0	23.0	26.0	14.4	28.4	33.4	6.6
18	0180	33.0	27.0	32.0	18.5	30.0	37.5	7.5
20	0200	35.0	29.0	34.0	18.5	30.0	37.5	7.5
22	0220	37.0	31.0	36.0	18.5	30.0	37.5	7.5
24	0240	39.0	33.0	38.0	18.5	32.5	42.5	7.5
25	0250	40.0	34.0	39.0	18.5	32.5	42.5	7.5
28	0280	43.0	37.0	42.0	24.5	35.0	42.5	7.5
30	0300	45.0	39.0	44.0	25.5	35.0	42.5	7.5
32	0320	48.0	42.0	46.0	25.5	35.0	47.5	7.5
33	0330	48.0	42.0	47.0	25.5	35.0	47.5	7.5
35	0350	50.0	44.0	49.0	26.5	35.0	47.5	7.5
38	0380	56.0	49.0	54.0	29.0	36.0	46.0	9.0
40	0400	58.0	51.0	56.0	29.0	36.0	46.0	9.0
43	0430	61.0	54.0	59.0	29.0	36.0	51.0	9.0
45	0450	63.0	56.0	61.0	29.0	36.0	51.0	9.0
48	0480	66.0	59.0	64.0	31.0	36.0	51.0	9.0
50	0500	70.0	62.0	66.0	30.5	38.0	50.5	9.5
53	0530	73.0	65.0	69.0	29.0	36.5	59.0	11.0
55	0550	75.0	67.0	71.0	29.0	36.5	59.0	11.0
58	0580	78.0	70.0	78.0	32.0	41.5	59.0	11.0
60	0600	80.0	72.0	80.0	34.0	41.5	59.0	11.0
65	0650	85.0	77.0	85.0	34.0	41.5	69.0	11.0
68	0680	90.0	81.0	88.0	33.7	41.2	68.7	11.3
70	0700	92.0	83.0	90.0	33.7	48.7	68.7	11.3
75	0750	97.0	88.0	99.0	40.7	48.7	68.7	11.3
80	0800	105.0	95.0	104.0	40.5	48.0	78.0	12.0
85	0850	110.0	100.0	109.0	38.5	46.0	76.0	14.0
90	0900	115.0	105.0	114.0	38.5	51.0	76.0	14.0
95	0950	120.0	110.0	119.0	38.5	51.0	76.0	14.0
100	1000	125.0	115.0	124.0	38.5	51.0	76.0	14.0

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER

Suggested Operating Limits

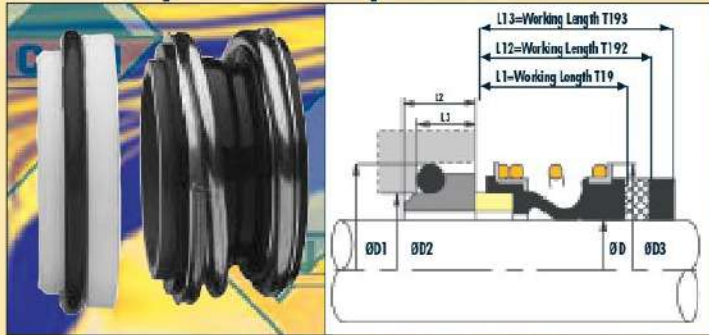
PRESSURE 170psi

SPEED 15m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

TYPE 19/TYPE 192/ TYPE 193



A robust rubber bellows seal, with a wide non-DIN cross section, for optimum flexibility and durability. Available with a non DIN seat (as shown) or a wide range of 'O'-Ring or Boot Mounted DIN seats (see Vulcan seats pages). Types 192 and 193 have an extended bellows to meet DIN LTK and LTN working lengths, when fitted with a Type 8 DIN Short 'O'-Ring or 19B boot mounted Seat.

VULCAN STANDARD SIZES

Metric Shaft Size D	Size Code	D1	D2	D3	L1	L12	L13	L2	L3
10	0100	19.2	15.5	20.0	14.5	25.9	33.4	9.0	6.6
12	0120	21.6	17.5	23.2	15.0	25.9	33.4	8.0	5.6
14	0140	24.6	20.5	27.1	17.0	28.4	33.4	8.0	5.6
15	0150	24.6	20.5	28.0	17.0	28.4	33.4	9.0	6.6
16	0160	28.0	22.0	27.1	17.0	28.4	33.4	10.0	7.5
18	0180	30.0	24.0	31.0	19.5	30.0	37.5	10.5	8.0
20	0200	35.0	29.5	36.0	21.5	30.0	37.5	10.0	7.5
22	0220	35.0	29.5	36.0	21.5	30.0	37.5	10.0	7.5
24	0240	38.0	32.0	40.5	22.5	32.5	42.5	10.0	7.5
25	0250	40.0	32.0	41.0	23.0	32.5	42.5	10.0	7.5
28	0280	42.0	36.0	47.0	26.5	35.0	42.5	11.5	9.0
30	0300	45.0	39.2	47.0	26.5	35.0	42.5	13.0	10.5
32	0320	48.0	44.2	51.0	27.5	35.0	47.5	13.0	10.5
33	0330	50.0	42.2	51.0	27.5	35.0	47.5	13.5	11.0
35	0350	52.0	46.2	55.0	28.5	35.0	47.5	13.5	11.0
38	0380	55.0	49.2	57.3	30.0	36.0	46.0	13.0	10.3
40	0400	58.0	52.2	60.0	30.0	36.0	46.0	13.5	10.8
43	0430	62.0	53.3	62.2	30.0	36.0	51.0	14.5	12.0
45	0450	64.0	55.3	64.3	30.0	36.0	51.0	14.5	11.6
48	0480	68.4	59.7	69.0	30.5	36.0	51.0	14.5	11.6
50	0500	69.3	60.8	70.2	30.5	38.0	50.5	14.5	11.6
53	0530	72.3	63.8	76.0	33.0	36.5	59.0	15.0	12.3
55	0550	75.4	66.5	78.0	35.0	36.5	59.0	16.0	13.3
58	0580	78.4	69.5	82.0	37.0	41.5	59.0	16.0	13.3
60	0600	80.4	71.5	85.0	38.0	41.5	59.0	16.0	13.3
65	0650	85.4	76.5	90.0	40.0	41.5	69.0	16.0	13.0
68	0680	91.5	82.7	94.0	40.0	41.5	68.7	16.0	13.7
70	0700	92.0	83.0	97.0	40.0	48.7	68.7	16.0	13.0
75	0750	99.0	90.2	102.0	40.0	48.0	68.7	17.0	14.0
80	0800	104.0	95.2	106.5	40.0	48.0	78.0	18.0	15.0
85	0850	109.0	100.2	117.0	41.0	46.0	76.0	18.0	14.8
90	0900	114.0	105.2	126.0	45.0	51.0	76.0	18.0	14.8
95	0950	120.3	111.6	130.0	46.0	51.0	76.0	19.0	15.8
100	1000	123.3	114.5	130.0	47.0	51.0	76.0	19.0	15.8

Suggested Operating Limits

PRESSURE 200psi SPEED 20m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

STANDARD STOCK FACE MATERIALS

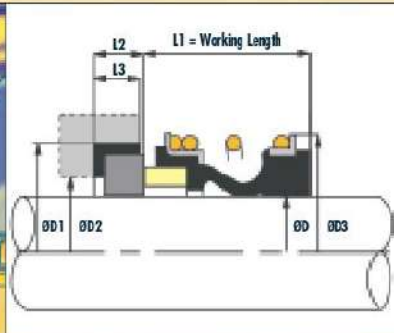
Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER



TYPE 1520



Metric DIN profile seal and a standard seat with working length to suit a common International standard. Seal has same working length and the same seat as our Type 20, and is suitable for general duties.

VULCAN STANDARD SIZES

Metric Shaft Size D	Size Code	D1	D2	D3	L1	L2	L3
10	0100	24.60	16.00	20.00	25.40	8.74	7.47
12	0120	27.79	19.05	22.00	25.40	8.74	7.47
13	0130	27.79	19.05	22.00	25.40	8.74	7.47
14	0140	30.95	22.23	24.00	25.40	10.32	8.97
15	0150	30.95	22.23	25.00	25.40	10.32	8.97
16	0160	30.95	22.23	26.00	25.40	10.32	8.97
18	0180	34.15	25.40	32.00	25.40	10.32	8.97
19	0190	34.15	25.40	32.00	25.40	10.32	8.97
20	0200	35.70	26.99	34.00	25.40	10.32	8.97
22	0220	37.30	28.58	36.00	25.40	10.32	8.97
24	0240	40.50	31.75	38.00	25.40	10.32	8.97
25	0250	40.50	31.75	39.00	25.40	10.32	8.97
28	0280	47.63	35.72	42.00	33.34	11.99	10.46
30	0300	50.80	38.89	44.00	33.34	11.99	10.46
32	0320	50.80	38.89	46.00	33.34	11.99	10.46
33	0330	53.98	42.07	47.00	33.34	11.99	10.46
34	0340	53.98	42.07	49.00	33.34	11.99	10.46
35	0350	53.98	42.07	49.00	33.34	11.99	10.46
38	0381	57.15	45.24	54.00	33.34	11.99	10.46
40	0400	60.35	48.82	56.00	33.34	11.99	10.46
42	0420	63.50	51.59	59.00	40.48	11.99	10.46
43	0430	63.50	51.59	59.00	40.48	11.99	10.46
44	0440	63.50	51.59	61.00	40.48	11.99	10.46
45	0450	63.50	51.59	61.00	40.48	11.99	10.46
48	0480	66.70	54.75	64.00	40.48	11.99	10.46
50	0500	69.85	58.00	66.00	40.48	13.50	11.96
53	0530	73.05	62.00	69.00	41.00	13.50	11.96
55	0550	76.20	65.00	71.00	41.00	13.50	11.96
58	0580	79.40	68.00	78.00	41.00	13.50	11.96
60	0600	79.40	68.00	80.00	41.00	13.50	11.96
63	0630	82.55	71.20	83.00	41.00	13.50	11.96
65	0650	92.10	78.35	85.00	49.00	15.90	14.50
70	0700	95.25	81.10	90.00	49.00	15.90	14.50
73	0730	98.45	84.50	96.00	49.00	15.90	14.50
75	0750	101.65	88.10	99.00	49.00	15.90	14.50
80	0800	114.30	97.00	104.00	56.00	20.00	18.50
85	0850	117.50	100.00	109.00	56.00	20.00	18.50
90	0900	123.85	107.00	114.00	59.00	20.00	18.50
95	0950	127.00	110.00	119.00	59.00	20.00	18.50
100	1000	133.35	116.00	124.00	62.00	20.00	18.50

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER

Suggested Operating Limits

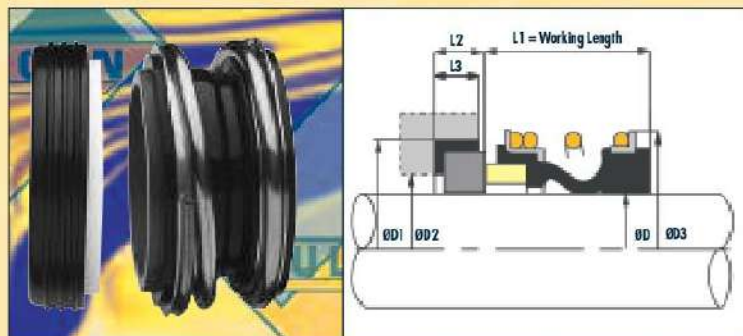
PRESSURE 170psi

SPEED 15m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

TYPE 1520



Imperial DIN profile seal and a standard seat, with working length to suit a common International standard. Seal has same working length and the same seat as our Type 20, and is suitable for general duties.

VULCAN STANDARD SIZES

Inch Shaft Size D	Size Code	D1	D2	D3	L1	L2	L3
0.375	0095	24.60	16.00	20.00	25.40	8.74	7.47
0.500	0127	27.79	19.05	22.00	25.40	8.74	7.47
0.625	0158	30.95	22.23	26.00	25.40	10.32	8.97
0.750	0191	34.15	25.40	32.00	25.40	10.32	8.97
0.875	0222	37.30	28.58	36.00	25.40	10.32	8.97
1.000	0254	40.50	31.75	39.00	25.40	10.32	8.97
1.125	0286	47.63	35.72	42.00	33.34	11.99	10.46
1.250	0317	50.80	38.89	46.00	33.34	11.99	10.46
1.375	0349	53.98	42.07	49.00	33.34	11.99	10.46
1.500	0381	57.15	45.24	54.00	33.34	11.99	10.46
1.625	0412	60.35	48.42	56.00	33.34	11.99	10.46
1.750	0444	63.50	51.59	61.00	40.48	11.99	10.46
1.875	0476	66.70	54.75	64.00	40.48	11.99	10.46
2.000	0508	69.85	58.00	66.00	40.48	13.50	11.96
2.125	0539	73.05	62.00	69.00	41.00	13.50	11.96
2.250	0571	76.20	65.00	78.00	41.00	13.50	11.96
2.375	0603	79.40	68.00	80.00	41.00	13.50	11.96
2.500	0635	82.55	71.20	83.00	41.00	13.50	11.96
2.625	0666	92.10	78.35	85.00	49.00	15.90	14.50
2.750	0698	95.25	81.10	90.00	49.00	15.90	14.50
2.875	0730	98.45	84.50	96.00	49.00	15.90	14.50
3.000	0762	101.65	88.10	99.00	49.00	15.90	14.50
3.125	0794	111.15	93.68	104.00	56.00	20.00	18.50
3.250	0826	114.30	96.85	104.00	56.00	20.00	18.50
3.375	0857	117.50	100.00	109.00	56.00	20.00	18.50
3.500	0889	120.65	103.18	114.00	56.00	20.00	18.50
3.625	0921	123.85	106.35	114.00	59.00	20.00	18.50
3.750	0953	127.00	109.52	119.00	59.00	20.00	18.50
3.875	0984	130.20	112.65	122.00	62.00	20.00	18.50
4.000	1016	133.35	115.88	124.00	62.00	20.00	18.50

Suggested Operating Limits

PRESSURE 170psi SPEED 15m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

STANDARD STOCK FACE MATERIALS

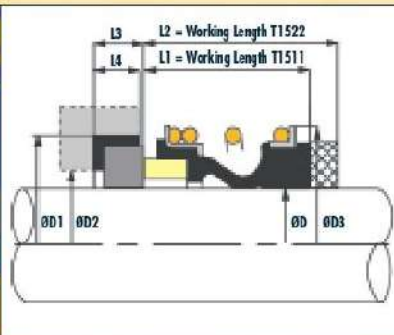
Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER



TYPE 1511/TYPE 1522



DIN profile seal and a standard seat, with a choice of working lengths to suit common American standards. Seal has same working length and the same seat as our Type 11 or Type 22, and is suitable for general duties.

VULCAN STANDARD SIZES

Shaft Size DØ			Shaft Size DØ			D1		D2		D3		L1		L2		L3		L4	
Inch	Metric	Code Size	Metric	Inch	Code Size	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
0.500	12.70	0127	12	0.472	0120	25.40	1.000	19.05	0.750	22.00	0.866	20.62	0.812	31.75	1.250	7.93	0.312	6.35	0.250
-	-	-	14	0.551	0140	31.75	1.250	23.80	0.937	24.00	0.945	22.22	0.875	34.93	1.375	10.28	0.405	8.71	0.343
0.625	15.88	0158	16	0.630	0160	31.75	1.250	23.80	0.937	26.00	1.024	22.22	0.875	34.93	1.375	10.28	0.405	8.71	0.343
0.750	19.05	0191	18	0.709	0180	34.93	1.375	26.98	1.062	32.00	1.260	22.22	0.875	34.93	1.375	10.28	0.405	8.71	0.343
-	-	-	20	0.787	0200	38.10	1.500	30.15	1.187	34.00	1.339	23.80	0.937	36.50	1.437	10.28	0.405	8.71	0.343
0.875	22.23	0222	22	0.866	0220	38.10	1.500	30.15	1.187	36.00	1.417	23.80	0.937	36.50	1.437	10.28	0.405	8.71	0.343
-	-	-	24	0.945	0240	41.28	1.625	33.32	1.312	38.00	1.496	25.40	1.000	41.28	1.625	11.10	0.437	9.53	0.375
1.000	25.40	0254	25	0.984	0250	41.28	1.625	33.32	1.312	39.00	1.535	25.40	1.000	41.28	1.625	11.10	0.437	9.53	0.375
1.125	28.58	0286	28	1.102	0280	44.44	1.750	36.50	1.437	42.00	1.654	26.97	1.062	42.85	1.687	11.10	0.437	9.53	0.375
-	-	-	30	1.181	0300	47.63	1.875	37.90	1.492	44.00	1.732	26.97	1.062	42.85	1.687	11.10	0.437	9.53	0.375
1.250	31.75	0317	32	1.260	0320	47.63	1.875	37.90	1.492	46.00	1.811	26.97	1.062	42.85	1.687	11.10	0.437	9.53	0.375
-	-	-	33	1.299	0330	50.80	2.000	42.84	1.687	47.00	1.850	28.58	1.125	42.85	1.687	11.10	0.437	9.53	0.375
1.375	34.93	0349	35	1.378	0350	50.80	2.000	42.84	1.687	49.00	1.929	28.58	1.125	42.85	1.687	11.10	0.437	9.53	0.375
1.500	38.10	0381	38	1.496	0380	53.98	2.125	46.05	1.813	54.00	2.126	28.58	1.125	42.85	1.687	11.10	0.437	9.53	0.375
1.625	41.28	0412	40	1.575	0400	60.33	2.375	50.80	2.000	56.00	2.205	34.93	1.375	50.80	2.000	12.70	0.500	11.10	0.437
-	-	-	43	1.693	0430	63.50	2.500	53.97	2.125	59.00	2.323	34.93	1.375	50.80	2.000	12.70	0.500	11.10	0.437
1.750	44.45	0444	44	1.732	0440	63.50	2.500	53.97	2.125	61.00	2.402	34.93	1.375	50.80	2.000	12.70	0.500	11.10	0.437
1.875	47.63	0476	45	1.772	0450	66.68	2.625	57.15	2.250	61.00	2.402	38.10	1.500	53.98	2.125	12.70	0.500	11.10	0.437
-	-	-	48	1.890	0480	69.85	2.750	60.32	2.375	64.00	2.520	38.10	1.500	53.98	2.125	12.70	0.500	11.10	0.437
2.000	50.80	0508	50	1.969	0500	69.85	2.750	60.32	2.375	66.00	2.598	38.10	1.500	53.98	2.125	12.70	0.500	11.10	0.437
2.125	53.98	0539	53	2.087	0530	76.20	3.000	60.32	2.375	69.00	2.717	42.88	1.688	60.32	2.375	14.28	0.562	12.70	0.500
2.250	57.15	0571	55	2.165	0550	79.38	3.125	61.90	2.437	78.00	3.071	42.88	1.688	60.32	2.375	14.28	0.562	12.70	0.500
-	-	-	58	2.283	0580	82.55	3.250	67.39	2.653	78.00	3.071	46.02	1.812	63.50	2.500	14.28	0.562	12.70	0.500
2.375	60.33	0603	60	2.362	0600	82.55	3.250	67.39	2.653	80.00	3.150	46.02	1.812	63.50	2.500	14.28	0.562	12.70	0.500
2.500	63.50	0635	63	2.480	0630	85.73	3.375	68.25	2.687	83.00	3.268	46.02	1.812	63.50	2.500	14.28	0.562	12.70	0.500
2.625	66.68	0666	65	2.559	0650	85.73	3.375	71.24	2.805	85.00	3.346	49.20	1.937	69.85	2.750	15.90	0.626	14.50	0.571
-	-	-	68	2.677	0680	88.90	3.500	74.60	2.937	88.00	3.465	49.20	1.937	69.85	2.750	15.90	0.626	14.50	0.571
2.750	69.85	0698	70	2.756	0700	88.90	3.500	74.60	2.937	90.00	3.543	49.20	1.937	69.85	2.750	15.90	0.626	14.50	0.571
2.875	73.03	0730	73	2.874	0730	95.25	3.750	77.77	3.062	96.00	3.780	52.37	2.062	73.03	2.875	15.90	0.626	14.50	0.571
3.000	76.20	0762	75	2.953	0750	98.43	3.875	80.95	3.187	99.00	3.898	52.37	2.062	73.03	2.875	15.90	0.626	14.50	0.571

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER

Suggested Operating Limits

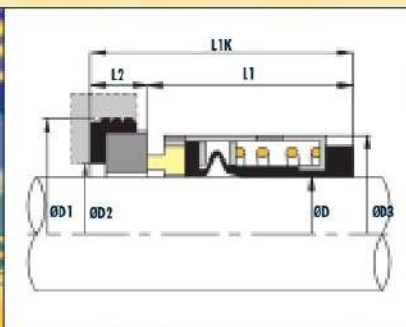
PRESSURE 170psi

SPEED 15m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

TYPE 1724



High performance, wide duty, full convolution rubber bellows seal inside a stainless steel housing. Type 1724 features a non-dogging spring and self alignment capability, and is offered with a choice of Type 24 boot mounted or 'O'-Ring Short or Long DIN seats

VULCAN STANDARD SIZES

Metric Shaft Size D	Size Code	D1	D2	D3	L1	L2	L1K
14	0140	25.00	21.00	24.00	26.40	8.60	35.00
16	0160	27.00	23.00	26.00	26.40	8.60	35.00
18	0180	33.00	27.00	32.00	27.50	10.00	37.50
20	0200	35.00	29.00	34.00	27.50	10.00	37.50
22	0220	37.00	31.00	36.00	27.50	10.00	37.50
24	0240	39.00	33.00	38.00	30.00	10.00	40.00
25	0250	40.00	34.00	39.00	30.00	10.00	40.00
28	0280	43.00	37.00	42.00	32.50	10.00	42.50
30	0300	45.00	39.00	44.00	32.50	10.00	42.50
32	0320	48.00	42.00	46.00	32.50	10.00	42.50
33	0330	48.00	42.00	47.00	32.50	10.00	42.50
35	0350	50.00	44.00	49.00	32.50	10.00	42.50
38	0380	56.00	49.00	54.00	34.00	11.00	45.00
40	0400	58.00	51.00	56.00	34.00	11.00	45.00
43	0430	61.00	54.00	59.00	34.00	11.00	45.00
45	0450	63.00	56.00	61.00	34.00	11.00	45.00
48	0480	66.00	59.00	64.00	34.00	11.00	45.00
50	0500	70.00	62.00	66.00	34.50	13.00	47.50
53	0530	73.00	65.00	69.00	34.50	13.00	47.50
55	0550	75.00	67.00	71.00	34.50	13.00	47.50
58	0580	78.00	70.00	78.00	39.50	13.00	52.50
60	0600	80.00	72.00	80.00	39.50	13.00	52.50
63	0630	83.00	75.00	83.00	39.50	13.00	52.50
65	0650	85.00	77.00	85.00	39.50	13.00	52.50
68	0680	90.00	81.00	88.00	37.20	15.30	52.50
70	0700	92.00	83.00	89.00	44.70	15.30	60.00
75	0750	97.00	88.00	96.00	44.70	15.30	60.00
80	0800	105.00	95.00	104.00	44.30	15.70	60.00
85	0850	110.00	100.00	108.00	44.30	15.70	60.00
90	0900	115.00	105.00	114.00	49.30	15.70	65.00
95	0950	120.00	110.00	118.00	49.30	15.70	65.00
100	1000	125.00	115.00	124.00	49.30	15.70	65.00

Suggested Operating Limits

PRESSURE 260psi

SPEED 18m/s

TEMPERATURE -40 +200°C

Dependent upon shaft diameter and speed + Temperature and media to be sealed

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

OTHER FACE MATERIALS TO ORDER