



Vulcan Water Pump Type Seals



Section

10

Introduction

Vulcan supply a substantial range of cost effective and reliable water pump seals, that are commonly utilised in high volume commercial, domestic and industrial water systems.

These seal types generally serve applications such as swimming pools, spa pools, shower pumps, central heating systems, irrigation and light fluid duties.

Standard Vulcan Water Type Seals

Types 60 and 65

Sleeve mounted, rubber bellows seals of compact unitised design. Suitable for small shaft diameter, general low pressure applications.

These rubber driven, rotary seal types are easily fitted and mass produced, under Vulcan's stringent quality procedures.

Type 70 and 75

Stationary based, unitised rubber bellows seals, utilised in high volume, small shaft diameter applications. These seals are successfully used in engine coolant pumps, as well as many other general water applications, proving the reliability of the seal design and construction.

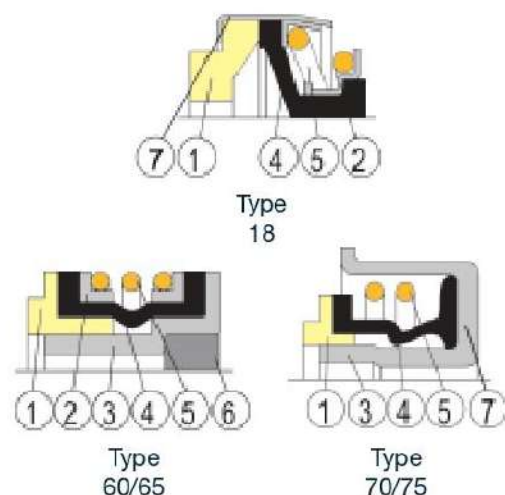
The adequate shaft clearance enables one size to be used on a number of shaft sizes, whilst being stationary seal based increases rotational speed capabilities.

Type 18

Enclosed rubber bellows seal, with short axial fitting length, ideal for equipment where space is restricted.

In addition to the standard carbon face, Vulcan also offer hard face alternatives for the more demanding applications. The seal is also fitted with an internal plug as standard to aid assembly.

STANDARD COMPONENTS



No	Description	4	Bellows
1	Face	5	Coil
2	Retaining Plates	6	Drive Ring
3	Sleeve	7	Retainer

Swimming Pool Seals

With over fifteen years extensive specific experience, Vulcan are leading manufacturers of seals for the International Swimming Pool Industry. We have a comprehensive range of seal assemblies and designs, backed by an ex-stock service.

Vulcan seal and seat face materials, as standard, are superior to industry norms. Exact designs, excellent materials, a wide stock range and the ability to manufacture to any industry design or requirement, complement the Vulcan Swimming Pool Seal Range.

Vulcan Design Advantages

Material Quality

Wide range of high quality elastomers and seal face materials readily available. Superior seal material selection especially Ceramic purity and Carbon quality increases reliability, capability, performance and life.

Design

The Vulcan Water Pump seals are high quality, bi-directional, seal designs containing positively designed, material benefits and features.

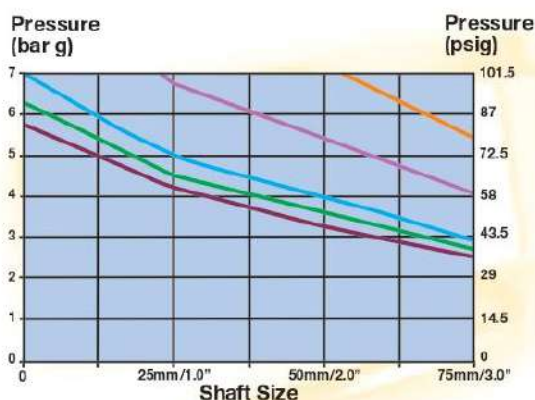
For instance, Vulcan Type 18;

- The Type 18 is supplied with a fitting plug, as standard, which provides support when fitting these seals.
- The Type 18 is of robust bellows design, compared to some competitors' equivalents, which are prone to falling apart on assembly.
- Type 18 is designed to eliminate bellows wear during operation, which can be a fault in competitors designs.
- The Type 18 is fitted with our M106K + Carbon and 99.5% Pure Ceramic.

Cost Effective

These proven, mass produced seals, with their additional benefits and superior material quality, result in an exceptional, cost effective choice of seal.

VULCAN WATER PUMP TYPE SEALS PV CHART



Carbon/Ceramic
SIC/SIC
Carbon/SIC
Carbon/TC
TC/TC

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



VULCAN SEALS TO SUIT SWIMMING POOL AND SPA PUMP APPLICATIONS

With over fifteen years specific experience, Vulcan are leading manufacturers of seals for the International Swimming Pools Industry. We have a comprehensive range of seal assemblies and designs, backed by an ex-stock service.

Water is a poor lubricant and this in combination with frequent high shaft speeds, possible dry running and the chemicals utilised in pool systems, creates demanding environments for mechanical seal faces. Vulcan seal and seat face materials, as standard, are superior to industry norms. Please see our Face Material Section. In addition, we have specialist Carbon Grades available to exceed the requirements of particularly difficult applications and duties.

Exact designs, excellent materials, a wide stock range and the ability to manufacture to any industry design or requirement further enhance the Vulcan Swimming Pool range.



For American products® 397102,
G. G. Industries 1000®, Premier® 31-81 3 &
P19-0, Swim-Rite®, Waterway® & Wet
Institute® Models.



For Calpeda® pumps



For Doll®, Hydronaut® 100, Kripsol® Ondina,
Polaris® XNF7M & Structural® 100



For Hayward® Cup Mount, Jacuzzi®
10.486.10.487, Showerlux® 0755L, Vico® &
Premier®



For Sta-Rite® SP2R

VULCAN STANDARD SEALS OFFERED FOR OEM PUMP REFERENCES

American Products® 395005
American Products® 397102
Ampro® 304
Aqua Flo® RS1000SS
Aqua Flo® 92500150
Arneson® Poolsweep A-8
Astral® Flipper (pre 1986)
Astral® Flipper (post 1986)
Astral® Sprint
Astral® 4HP
Badu® (Speck®) 20mm
Calpeda® M203.04.05
Calpeda® 50-12H 12D
Calpeda® 65-16F
Calpeda® 65-16E
Calpeda® 65-16C
Certikin® Mini pump 0.5-1.0hp
Certikin® FD pumps SPBP002 seal
Challenger® 5/8"
Doll® Models 15mm Shaft
Doughboy® 306-1002 & 306-1005
Doughboy® 1128-1006 & 306-1007
Espa® Models, 3/4" Shaft
Espa® Squipper 80
Eurostar®
Fluvo® 21147
G. G. Industries® 1000
Hayward® (Cup Mount)
Hayward® SP1250 XZ2
Hayward® SP16007 (1" O-Ring Mount)
Hydra-Bath® Models
Hydronaut® (Structural®) 100
ITT® Gemini
ITT® Marlow 25353
ITT® Marlow / Argonaut 38592

VULCAN STANDARD SEALS OFFERED FOR OEM PUMP REFERENCES

Jacuzzi® 10.1203
Jacuzzi® 10.478.10.506
Jacuzzi® 10.486.10.487
Kripsol® Ondina 0.5-1.0hp
Kripsol® 4.5-5.5hp
Lee Howl® 4270 3-5.5hp
Lee Howl® 4277/4778
Lee Howl® 4275 0.5-10.0hp
Lowara® CEA 70/3-5
Lowara® CEA 70/3-5 AV
Lowara® CM70 Pool Sweep
Modern® 1.5-4.0
Modern® 10-12.5
Modern® 5.5
Modern® 7.5
Pacific Fabrications® 35-002-354894
Polaris® XNF7M
Premier® 31-812
Premier® 31-813 & P19-0
Purex Aquatron® P28322
Showerlux® 0755L
Sta-Rite® 5P2R U109-93 & U109-6A
Sta-Rite® 5P4R 9372 SS
Sta-Rite® U109-136 SS (old type)
Sta-Rite® U109-170
Sta-Rite® U109-47
Sta-Rite® U109-220
Sta-Rite® U9358-SS
Swim-Quip® 37407-0009
Swim-Rite® 60-828-813
Structural® (Hydronaut®) 100
Stuart Turner® XB90
Vico® Models, 3/4" Shaft
Waterway® Models 5/8" Shaft
Wet Institute® 1000



For Astral Flipper® (post 1986) & Sprint®



For Lee Howl® 4277/78



For Modern®



For Showerlux® 0755L

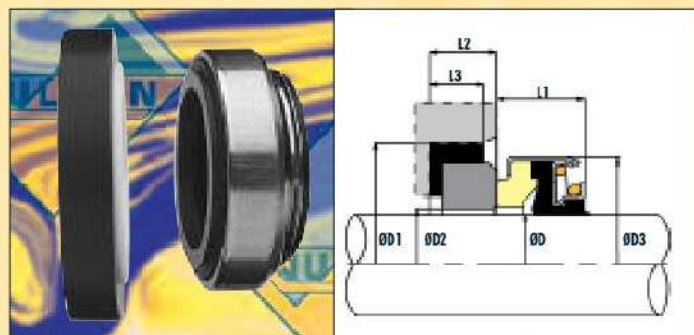


For Sta-Rite® U109-220



For Sta-Rite® U109-136 SS

TYPE 18



Compact, enclosed rubber bellows seal with a wide stationary seat.
Very short working length makes the Type 18 ideal for equipment where space for a seal is restricted. Seal is supplied with a top hat retainer (remove upon installation)

VULCAN STANDARD SIZES

Metric Shaft Size D	Size Code	D1	D2	D3	L1	L2	L3
8	0080	26.00	12.00	24.00	11.00	8.00	6.00
10	0100	26.00	12.00	24.00	11.00	8.00	6.00
11	0110	26.00	13.00	24.00	11.00	8.00	6.00
12	0120	26.00	14.00	24.00	11.00	8.00	6.00
12	0120.B	26.00	13.00	24.00	13.00	8.00	6.00
12	0120.C	35.00	16.00	32.00	13.00	8.00	6.00
13	0130	26.00	14.00	24.00	13.00	8.00	6.00
14	0140	35.00	17.00	32.00	13.00	8.00	6.00
15	0150	38.00	18.00	35.00	13.00	8.00	6.00
16	0160	38.00	18.00	35.00	13.00	8.00	6.00
16	0160.B	42.00	21.00	39.00	13.00	8.00	6.00
17	0170	42.00	21.00	39.00	13.00	8.00	6.00
18	0180	42.00	21.00	39.00	13.00	8.00	6.00
19	0190	42.00	21.00	39.00	13.00	8.00	6.00
20	0200	42.00	21.00	39.00	13.00	8.00	6.00
20	0200.B	45.00	23.00	42.00	13.00	10.00	8.00
22	0220	45.00	23.00	42.00	13.00	10.00	8.00
23	0230	50.00	27.00	47.00	14.00	10.00	8.00
24	0240	50.00	27.00	47.00	14.00	10.00	8.00
25	0250	50.00	27.00	47.00	14.00	10.00	8.00
28	0280	57.00	31.00	54.00	15.00	10.00	8.00
30	0300	57.00	31.00	54.00	15.00	10.00	8.00
32	0320	57.00	34.00	54.00	15.00	10.00	8.00
35	0350	63.00	37.00	60.00	16.00	10.00	8.00
38	0380	68.00	42.00	65.00	17.00	12.00	9.00
40	0400	68.00	42.00	65.00	17.00	12.00	9.00
45	0450	73.00	47.00	70.00	20.00	12.00	9.00
50	0500	88.00	52.00	85.00	23.00	15.00	12.00
60	0600	110.00	67.00	105.00	30.00	15.00	12.00
65	0650	110.00	67.00	105.00	30.00	15.00	12.00
70	0700	110.00	72.00	105.00	32.00	15.00	12.00

Suggested Operating Limits

PRESSURE 120psi

SPEED 10m/s

TEMPERATURE -20 +160°C

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

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon, Silicon Carbide, Tungsten Carbide.

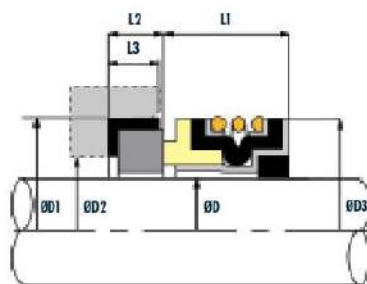
Stat Ring: Ceramic, Silicon Carbide, Tungsten Carbide.

N.B. Sic or T.C. stocked in certain common sizes only.

OTHER FACE MATERIALS TO ORDER



TYPE 60

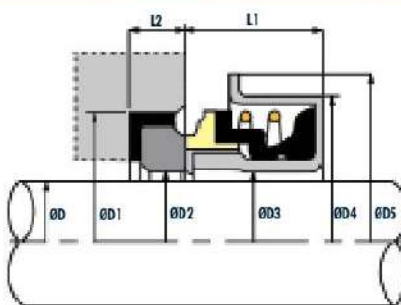


Sleeve mounted, rubber bellows seal with shaft drive ring. Mass produced and easily fitted for low pressure, general applications on small diameter shafts.

VULCAN STANDARD SIZES

Shaft Size ØD			D1		D2		D3		L1		L2		L3	
Inch	Metric	Size Code	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
0.375	9.53	0095	22.22	0.875	14.30	0.563	23.80	0.937	16.02	0.631	6.20	0.244	4.76	0.187
0.500	12.70	0127	25.40	1.000	17.45	0.687	26.97	1.062	16.60	0.654	6.20	0.244	4.76	0.187
0.625	15.88	0158	31.75	1.250	20.63	0.812	30.94	1.218	18.71	0.737	10.29	0.405	8.71	0.343
0.750	19.05	0191	34.93	1.375	23.80	0.937	34.11	1.343	18.71	0.737	10.29	0.405	8.71	0.343
1.000	25.40	0254	41.28	1.625	30.15	1.187	42.85	1.687	20.63	0.812	11.10	0.437	9.53	0.375

TYPE 70



Coolant pump seal primarily utilised in combustion engine water pumps. The clearance of the seal and seat above the shaft allows one size to be used on several shaft diameters.

VULCAN STANDARD SIZES

Shaft Size ØD			D1		D2		D3		D4		D5		L1		L2	
Inch	Metric	Size Code	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
0.512	13.00	0127	25.00	0.984	14.00	0.551	14.20	0.559	28.55	1.124	31.70	1.248	13.20	0.520	5.00	0.197
0.669	17.00	0158	31.00	1.220	18.00	0.709	18.20	0.717	36.45	1.435	41.30	1.626	14.80	0.583	5.00	0.197
0.787	20.00	0191	35.00	1.378	21.00	0.827	21.40	0.843	40.00	1.575	43.70	1.720	15.50	0.610	5.00	0.197
1.181	30.00	0286	48.00	1.890	32.00	1.260	31.00	1.220	52.00	2.047	57.00	2.244	19.00	0.748	8.00	0.315

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon.

Stat Ring: Ceramic (Silicon Carbide, Tungsten Carbide also available).

OTHER FACE MATERIALS TO ORDER

Suggested Operating Limits

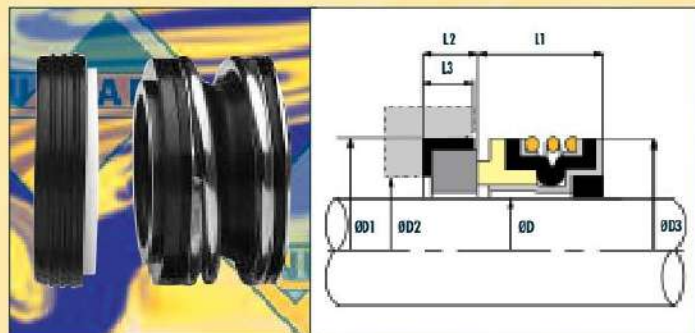
PRESSURE 120psi

SPEED 10m/s

TEMPERATURE -40 +200°C

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

TYPE 65

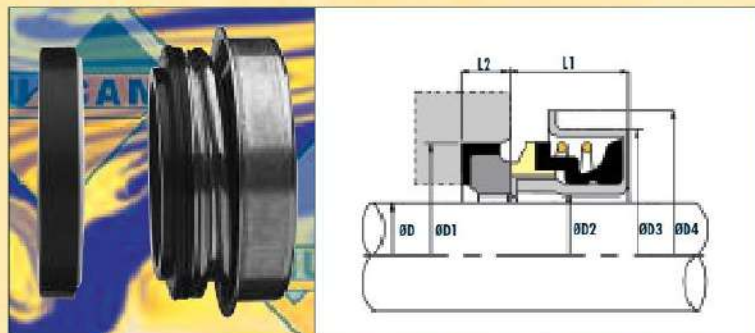


Sleeve mounted, rubber bellows seal, with dimensions to equate to the common American seal standard. Mass produced and easily fitted for low pressure, general applications on small shaft diameters.

VULCAN STANDARD SIZES

Shaft Size DØ			D1		D2		D3		L1		L2		L3	
Inch	Metric	Size Code	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
0.375	9.53	0095	25.40	1.000	14.30	0.563	26.97	1.062	16.66	0.656	7.92	0.312	6.35	0.250
0.500	12.70	0127	25.40	1.000	17.45	0.687	26.97	1.062	16.66	0.656	7.92	0.312	6.35	0.250
0.625	15.88	0158	31.75	1.250	20.63	0.812	30.94	1.218	18.24	0.718	10.31	0.406	8.71	0.343
0.750	19.05	0191	34.93	1.375	23.80	0.937	34.11	1.343	18.24	0.718	10.31	0.406	8.71	0.343
1.000	25.40	0254	41.28	1.625	30.15	1.187	42.85	1.687	20.62	0.812	11.10	0.437	9.53	0.375

TYPE 75



Coolant pump seal primarily utilised in combustion engine water pumps, with dimensions to equate to the common American seal standard.

VULCAN STANDARD SIZES

Shaft Size DØ			D1		D2		D3		D4		L1		L2	
Inch	Metric	Size Code	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch	Metric	Inch
0.500	12.70	0127	25.40	1.000	14.20	0.559	28.55	1.124	31.70	1.248	13.79	0.543	7.93	0.312
0.625	15.88	0158	31.75	1.250	18.20	0.717	36.45	1.435	41.30	1.626	15.36	0.605	10.31	0.406
0.750	19.05	0191	34.93	1.375	21.40	0.843	40.00	1.575	43.70	1.720	15.36	0.605	10.31	0.406

Suggested Operating Limits

PRESSURE 120psi SPEED 10m/s

TEMPERATURE -40 +200°C

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

STANDARD STOCK FACE MATERIALS

Rotary Face: Carbon.

Stat Ring: Ceramic (Silicon Carbide, Tungsten Carbide also available).

OTHER FACE MATERIALS TO ORDER