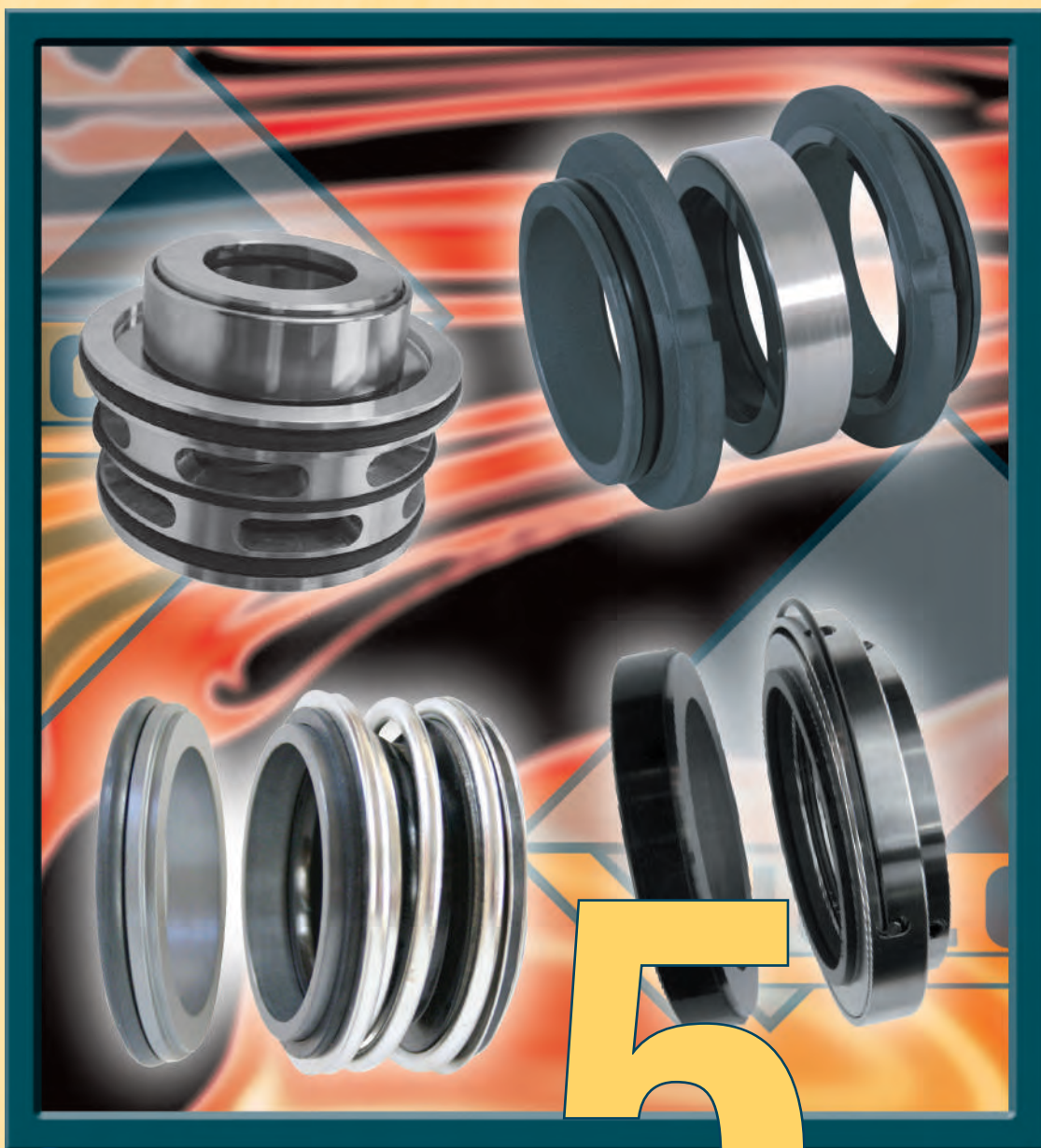




# Vulcan Wastewater Pump Seals

I.T.T. FLYGT®, I.T.T. GRINDEX®, (THEN ALPHABETICALLY ) A.B.S.®, EBARA®, GORMANN-RUPP®, GODWIN®, GRUNDFOS®, HONDA®, K.S.B.®, TEREX-PEGSON®, TSURUMI®, WEMCO/HIDROSTAL®, WILO EMU®



## Section 5



# VULCAN MECHANICAL SEALS FOR FLYGT® AND I.T.T.. GRINDEX® PUMPS

Flygt® design and manufacture excellent Pumps. However, in our opinion and long experience, the designs, materials and performance of the O.E.M Mechanical Seals in these Pumps are not optimum for the demanding conditions that these Pumps routinely encounter. The O.E.M Seals rely upon plastic materials and design features and principles that you would not find on any Vulcan design Mechanical Seal within this catalogue. Most particularly, these Flygt® Pumps frequently, in fact routinely, operate in highly demanding mechanical and abrasive media conditions, usually remote and often Down-Well. The combination of highly demanding Mechanical Seal conditions and costly Pump removal, over-haul or replacement and then re-installation, also make preferable the specification and use of the optimum design engineering and materials within the Mechanical Seal. The Vulcan Type 06 and Type 06X Ranges have specifically been developed to meet these needs. They are designed and engineered to provide superior Mechanical Seal performance, capability, reliability and life.

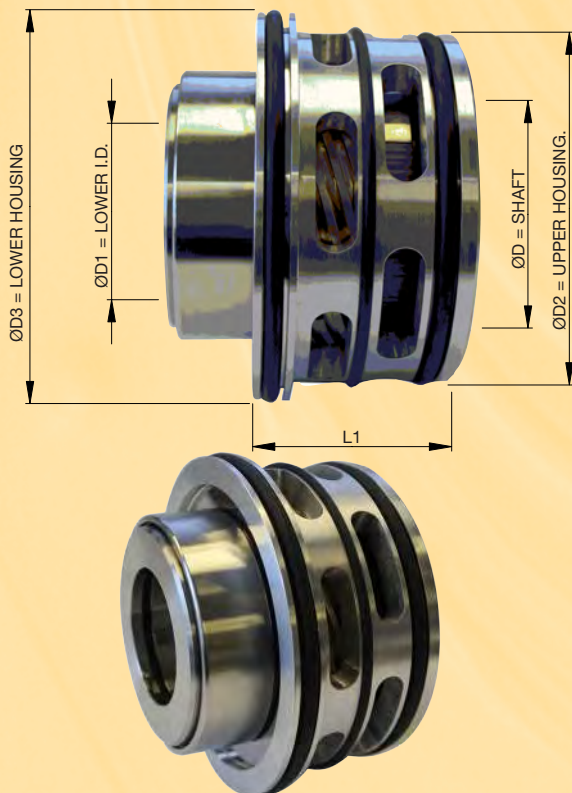
The Vulcan Type 06 Range (over-leaf) reduces costs through it's Mechanical Seal engineered designs, materials, easier more assured fitting and installation (with no expensive fitting tool nor Pump modification necessary), combined with leading market competitive pricing and most especially; application designed Mechanical Seal performance, reliability and life.

Vulcan's Range of speciality Mechanical Seal designs for Flygt® and other Wastewater and Submersible Pump O.E.M's is unrivalled in the Mechanical Seal industry. The most commonly requested examples of this Range follow in this Section, but this is only a partial stock Seal representation of what is available from Vulcan. If the specific Seal Type or O.E.M you are looking for is not shown here, please contact us so we can progress your requirement. Further details on this exceptional Range from Vulcan are shown on this and the following two pages.

## VULCAN SEALS TO REPLACE FLYGT® 'PLUG-IN'™ CARTRIDGE SEALS

Flygt® and Grindex® have introduced a Range of Pumps (detailed below) designed with unitized Double Seals, instead of the previous Upper- & Lower- Seal arrangement. With the intention of providing an easier to install, pre-tensioned Mechanical Seal unit; one that on sizes of 35mm and above, also helps to circulate cooling fluid around the Pump internals. The original Seal's feature plastic bodies that are glued together and are easily damaged. The sealing faces are frequently retained by plastic anti-rotation lugs that can quickly wear, or are driven by thin-section pressed metal sleeves that can become worn and subsequently lock the Seal internals together. Resulting in Seal failure and the Pump requiring service or replacement. The original plastic body Seals are permanently joined and cannot be repaired. Thus they must be replaced each time at considerable cost. The Vulcan Type 06X is specifically designed to solve these issues, by providing a direct replacement, best-for-purpose, engineered Seal, that installs in the same way and in the same dimensions, located using the Shaft-Mounted circlip supplied with each Vulcan Seal for convenience.

The Type 06X features a strong one-piece metal body with Tungsten or Silicon Carbide Seal faces on the product side and on 35mm sizes or above, an internal circulation system to move cooling fluid around the Pump internals. The relevant Pump models with 'Plug-In'™ Seals, suitable for the Type 06X direct replacement, are detailed in the Table below. For a full listing of all Flygt® Pump models, along with the part codes for the Vulcan Mechanical Seal and 'O'-Ring Sets, please see the following two pages.



TYPE 06X SHAFT SIZE RANGE

| SHAFT SIZE D | SIZE CODE | D1    | D2     | D3     | L1    | GUARANTEED STOCK MATERIALS |    |     |
|--------------|-----------|-------|--------|--------|-------|----------------------------|----|-----|
| 20.00        | 0200      | 18.00 | 55.00  | 60.50  | 35.50 | V                          | XV | 304 |
| 25.00        | 0250      | 22.00 | 60.00  | 66.00  | 36.00 | V                          | XV | 304 |
| 35.00        | 0350      | 32.00 | 80.00  | 90.00  | 44.50 | V                          | ZR | 304 |
| 45.00        | 0450      | 38.00 | 90.00  | 99.00  | 60.00 | V                          | ZR | 304 |
| 60.00        | 0600      | 50.00 | 115.00 | 126.00 | 60.00 | V                          | ZR | 304 |

FLYGT® MODEL NUMBER TO SIZE CODE X-REFERENCE

| O.E.M                     | TYPE 06X SIZE CODE |
|---------------------------|--------------------|
| 2610 - Series             | 0200               |
| 2620 - Series             | 0200               |
| 2630 - Series             | 0200               |
| 2640 - Series             | 0200               |
| 2660 - Series             | 0250               |
| 2670 - Series             | 0350               |
| 3171 - Series             | 0450               |
| 3202 - Series             | 0600               |
| 4610 - Series             | 0200               |
| 4620 - Series             | 0200               |
| 4630 - Series             | 0250               |
| 4640 - Series             | 0250               |
| 4650 - Series             | 0450               |
| 4660 - Series             | 0450               |
| 4670 - Series             | 0600               |
| 4680 - Series             | 0600               |
| 5100 - 210 to -221 Models | 0350               |
| 5100 - 250 to -261 Models | 0450               |
| 5100 -300 and -310 Models | 0600               |
| 5150 -300 and -310 Models | 0600               |



# VULCAN MECHANICAL SEALS FOR FLYGT® PUMPS

## FLYGT® PUMPS - TYPE 06 RANGE FOR SUPERIOR PERFORMANCE



0200.06G.U.N.E.



0350.06M.U.N.E.



0600.06R.U.N.E.



0600.06Q.U.N.E.

The Vulcan Range of Type 06 Seals are designed as superior replacement Seals for Flygt® and Grindex® Submersible Pumps and mixers, with no Pump modifications necessary. The Type 06 designs require no additional fitting tool and most Types have pre-set working lengths, operated by a removable setting clip for easy installation. All Vulcan Type 06 Seals are stocked and fitted with optimal Nitrile elastomers and Carbon vs. T.C (with an option of Carbon vs. SiC) faces for Upper Seals and optimum Viton® elastomers with T.C vs. T.C (with an option of SiC vs. SiC) faces for the Lower Seals. The stock codes tabulated below are for a complete Seal and Stationary.

Vulcan also stock Lip Seals and sets of 'O'-Rings for Flygt® Pumps to complement our Type 06 Range. The contents of each set is dependent upon Pump model. Their Vulcan stock code is constructed from the shaft size of the Upper Seal, our Type code "06" and the Flygt® Pump model preceded by a "V" and the material letter for the 'O'-Rings, either "N" or "V", e.g.; To order Vulcan 'O'-Ring set for Pump model "2102-040", use Vulcan code "0220.06.N.V2102-000". The stock codes shown below are for the preferred T.C face options

| Flygt® Pump Model Series               | Seal Shaft Sizes | Vulcan Upper Seal Stock Code | Vulcan Lower Seal Stock Code       | Vulcan 'O'-Ring Set Code | Vulcan Additional Parts Code |
|----------------------------------------|------------------|------------------------------|------------------------------------|--------------------------|------------------------------|
| 2004, 2008, 2012, 2016                 | 15mm             | Lower Seal Only              | 0150.06D.N.Z.                      |                          |                              |
| 2024                                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    |                          |                              |
| 2050, 2052                             | 15mm             | Lower Seal Only              | 0150.06D.N.Z.                      |                          |                              |
| 2060                                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H.                    |                          |                              |
| 2066                                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    | 0200.06.N.V2066-000      |                              |
| 2070                                   | 22mm             | 0220.06E.U.N.E.              | 0220.06E.L.V.H.                    | 0220.06.V.V2070-000      |                              |
| 2071                                   | 22mm             | 0220.06F.U.N.E.              | 0220.06F.L.V.H.                    | 0220.06.V.V2070-000      |                              |
| 2075                                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    | 0200.06.N.V2075-000      |                              |
| 2082-330                               | 28mm             | 0280.06I.U.N.E.              | 0280.06I.L.V.H.                    | 0280.06.N.V2082-330      |                              |
| 2084                                   | 35mm             | 0350.06K.U.N.E.              | 0350.06K.L.V.H.                    | 0350.06.N.V2084-000      |                              |
| 2090, 2125, 2140                       | 28mm             | 0280.06I.U.N.E.              | 0280.06I.L.V.H.                    | 0280.06.N.V2125-000      |                              |
| 2135                                   | 35mm             | 0350.06K.U.N.E.              | 0350.06K.L.V.H.                    | 0350.06.N.V2135-000      |                              |
| 2101                                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    |                          |                              |
| 2102                                   | 22mm             | 0220.06C.U.N.E.              | 0220.06C.L.V.H.                    | 0220.06.V.V2102-000      |                              |
| 2151-010, -011, -050                   | 35mm             | 0350.06K.U.N.E.              | 0350.06K.L.V.H.                    | 0350.06.N.V2151-000      | 0350.06.LIP                  |
| 2201-010                               | 45/35mm          | 0450.06O.U.N.E.              | 0350.06K.L.V.H.                    | 0450.06.V.V2201-000      |                              |
| 2201-011 HT or MT                      | 45/35mm          | 0450.06O.U.N.E.              | 0350.06N.L.V.H.                    | 0450.06.V.V2201-000      | 0450.06.LIP                  |
| 2201-011 LT                            | 45/35mm          | 0450.06O.U.N.E.              | 0450.06O.L.V.H.                    | 0450.06.V.V2201-000      |                              |
| 2201-080, -320, -430, -480, -590, -690 | 45/35mm          | 0450.06O.U.N.E.              | 0350.06N.L.V.H.                    | 0450.06.V.V2201-000      |                              |
| 2250                                   | 60mm             | 0600.06P.U.N.E.              | 0600.06P.L.V.H.                    | 0600.06.N.V2250-000      |                              |
| 2400                                   | 60mm             | 0600.06R.U.N.E.              | 0600.06R.L.V.H.                    | 0600.06.N.V2400-000      | 0600.06.LIP                  |
| 2610, 2620                             | 20mm             | Lower Seal Only              | 0200.06X.V.XV.                     | 0200.06.N.V2610-000      |                              |
| 2630, 2640                             | 20mm             | Lower Seal Only              | 0200.06X.V.XV.                     | 0200.06.N.V2630-000      |                              |
| 2660                                   | 25mm             | Lower Seal Only              | 0250.06X.V.XV.                     | 0250.06.N.V2660-000      |                              |
| 2670                                   | 35mm             | Lower Seal Only              | 0350.06X.V.ZR.                     | 0350.06.N.V2670-000      |                              |
| 3041 (NOT -250 SIZE)                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H. OR 0200.06H.L.V.H. |                          |                              |
| 3057                                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H. OR 0200.06H.L.V.H. | 0200.06.N.V3057-000      |                              |
| 3065                                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    |                          |                              |
| 3067                                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H. OR 0200.06H.L.V.H. | 0200.06.V.V3067-000      |                              |
| 3068                                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H. OR 0200.06H.L.V.H. | 0200.06.V.V3068-000      |                              |
| 3080 (NOT -330 SIZE)                   | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.                    | 0200.06.V.V3080-000      |                              |
| 3080-330                               | 35mm             | 0350.06K.U.N.E.              | 0350.06K.L.V.H.                    |                          |                              |
| 3082                                   | 22mm             | 0220.06E.U.N.E.              | 0220.06E.L.V.H.                    | 0220.06.N.V3082-000      |                              |
| 3085                                   | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H. OR 0200.06H.L.V.H. | 0200.06.N.V3085-000      |                              |
| 3101                                   | 28mm             | 0280.06B.U.N.E.              | 0280.06B.L.V.H.                    | 0280.06.N.V3101-000      |                              |
| 3102                                   | 25mm             | 0250.06J.U.N.E.              | 0250.06J.L.V.H.                    | 0250.06.N.V3102-000      |                              |
| 3126-090, 3126-180                     | 35mm             | 0350.06K.U.N.E.              | 0350.06K.L.V.H.                    | 0350.06.N.V3126-000      | 0350.06.LIP                  |
| 3126-091, -180, -280, -290, -998       | 35mm             | 0350.06K.U.N.E.              | 0350.06M.L.V.H.                    | 0350.06.N.V3126-000      |                              |
| 3126-181                               | 35mm             | 0350.06M.U.N.E.              | 0350.06M.L.V.H.                    | 0350.06.N.V3126-000      |                              |
| 3127                                   | 35mm             | 0350.06M.U.N.E.              | 0350.06M.L.V.H.                    | 0350.06.N.V3127-000      |                              |
| 3140 (NOT -980 SIZE)                   | 45mm             | 0450.06O.U.N.E.              | 0450.06O.L.V.H.                    |                          | 0450.06.LIP                  |
| 3152                                   | 45mm             | 0450.06O.U.N.E.              | 0450.06O.L.V.H.                    | 0450.06.N.V3152-000      | 0450.06.LIP                  |
| 3170                                   | 60mm             | 0600.06Q.U.N.E.              | 0600.06Q.L.V.H.                    | 0600.06.N.V3170-000      | 0600.06.LIP                  |
| 3171                                   | 45mm             | Lower Seal Only              | 0450.06X.V.ZR.                     | 0450.06.V.V3171-000      |                              |
| 3200                                   | 60mm             | 0600.06P.U.N.E.              | 0600.06P.L.V.H.                    |                          |                              |
| 3201                                   | 60mm             | 0600.06Q.U.N.E.              | 0600.06Q.L.V.H.                    | 0600.06.N.V3170-000      | 0600.06.LIP                  |
| 3202                                   | 60mm             | Lower Seal Only              | 0600.06X.V.ZR.                     | 0600.06.V.V3202-000      |                              |
| 3230, 3305, 3357                       | 90/80mm          | 0900.06S.U.N.H. <sup>i</sup> | 0800.06S.L.V.H.                    |                          |                              |

For any Pump models not listed above, please contact us, as models continually evolve. For all Seals annotated with "i", the part code shown for this model is the applicable one in the vast majority of instances. However some alternatives do exist; please check the Part Number found on the O.E.M database

# VULCAN MECHANICAL SEALS FOR FLYGT® AND I.T.T. GRINDEX®



## FLYGT® PUMPS - TYPE 06 RANGE FOR SUPERIOR PERFORMANCE



0200.06H.L.V.H.



0350.06M.L.V.H.



0600.06X.V.ZR.



0600.06Q.L.V.H.

Robust, superior design replacement Mechanical Seal designs, with Stainless Steel Parts and Monolithic Carbide faces, provide higher Seal capability, performance, reliability and pro-longed operating life. Pre-set, easy to install, with no Pump modifications necessary. No plastic working Seal Parts, no brazed nor inserted faces, no wave-springs nor any other design features or material which are prone to wear and failure, Particularly in such arduous applications. Highly successful, proven designs, with over two decades of service, have now been even further developed with the enhancements.

The Vulcan Type 06 Range is designed to dimensionally replace the original Seals and provide a more engineered, longer life sealing solution. We recommend the Type 06 Range for their greater Seal performance, capability and life. However, we also offer direct replacement like for like designs, as our Type 04 Range. Contact us for details should you require.

| Flygt® Pump Model Series                | Seal Shaft Sizes | Vulcan Upper Seal Stock Code | Vulcan Lower Seal Stock Code | Vulcan 'O'-Ring Set Code | Vulcan Additional Parts Code |
|-----------------------------------------|------------------|------------------------------|------------------------------|--------------------------|------------------------------|
| 3231, 3306, 3356                        | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              | 0900.06.N.V3231-000      |                              |
| 3300                                    | 90/80mm          | 0900.06S.U.N.H.              | 0800.06S.L.V.H.              | 0900.06.N.V3300-000      |                              |
| 3310, 3350                              | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              |                          |                              |
| 3311, 3312                              | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              | 1200.06.N.V3311-000      |                              |
| 3351                                    | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              | 0900.06.N.V3400-000      |                              |
| 3355                                    | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              | 1200.06.N.V3311-000      |                              |
| 3400, 3501, 3531, 3602                  | 90mm             | 0900.06S.U.N.H.¹             | 0900.06U.L.V.H.¹             | 0900.06.N.V3400-000      |                              |
| 3500, 3530, 3600, 3601                  | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              | 1200.06.N.V3500-000      |                              |
| 3800                                    | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              | 1200.06.N.V3800-000      |                              |
| 4351, 4352, 4400                        | 20mm             | 0200.06G.U.N.E.              | 0200.06H.L.V.H.              |                          |                              |
| 4410, 4430, 4460                        | 60mm             | Lower Seal Only              | 0600.06Q.L.V.H.              | 0600.06.N.V4410-000      | 0600.06.LIP                  |
| 4450                                    | 35mm             | Lower Seal Only              | 0350.06M.L.V.H.              |                          |                              |
| 4630, 4640                              | 45mm             | Lower Seal Only              | 0250.06X.V.X.V.              | 0250.06.V.V4630-000      |                              |
| 4650, 4660                              | 45mm             | Lower Seal Only              | 0450.06X.V.ZR.               | 0450.06.V.V4650-000      |                              |
| 4670, 4680                              | 60mm             | 0600.06Q.U.N.E.              | 0600.06Q.L.V.H.              |                          | 0600.06.LIP                  |
| 5100-210, -211, -220, -221              | 35mm             | Lower Seal Only              | 0350.06X.V.ZR.               | 0350.06.V.V5100-211      |                              |
| 5100-250, -251, -260, -261              | 45mm             | Lower Seal Only              | 0450.06X.V.ZR.               | 0450.06.V.V5100-250      |                              |
| 5100-300, -310                          | 60mm             | Lower Seal Only              | 0600.06X.V.ZR.               | 0600.06.V.V5100-350      |                              |
| 5150-300, -310                          | 60mm             | Lower Seal Only              | 0600.06X.V.ZR.               | 0600.06.V.V5150-300      |                              |
| 5150-350, -360                          | 90mm             | Lower Seal Only              | 0900.06X.V.ZH.               | 0900.06.V.V5150-350      |                              |
| 5530                                    | 35mm             | 0350.06M.U.N.E.              | 0350.06M.L.V.H.              |                          |                              |
| 5540                                    | 45mm             | 0450.06O.U.N.E.              | 0450.06O.N.L.V.H.            |                          |                              |
| 7045                                    | 60mm             | 0600.06Q.U.N.E.¹             | 0600.06Q.L.V.H.              | 0800.06.N.V7045-000      |                              |
| 7050, 7051                              | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              | 0800.06.N.V7045-000      |                              |
| 7060, 7076                              | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              | 0800.06.N.V7045-000      |                              |
| 7055, 7061                              | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              | 0800.06.N.V7045-000      |                              |
| 7080                                    | 90/80mm          | 0900.06S.U.N.H.¹             | 0800.06S.L.V.H.              |                          |                              |
| 7081, 7101, 7121                        | 90mm             | 0900.06S.U.N.H.¹             | 0900.06U.L.V.H.              | 0900.06.N.V7081-000      |                              |
| 7100, 7115, 7120, 7140                  | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              |                          |                              |
| 7570, 7585                              | 90/120mm         | 0900.06S.U.N.H.¹             | 1200.06T.L.V.H.              |                          |                              |
| 600-SERIES MOTORS, NOT 600 OR 680 SIZES | 90mm             | 0900.06S.U.N.H.¹             | N/A                          | 0900.06.N.V605-000       |                              |
| 700-SERIES MOTORS                       | 90mm             | 0900.06S.U.N.H.¹             | N/A                          | 0900.06.N.V705-000       |                              |
| 800-SERIES MOTORS                       | 105mm            | CONTACT US                   | N/A                          | 1050.06.N.V805-000       |                              |
| 900-SERIES MOTORS                       | 105mm            | CONTACT US                   | N/A                          | 1050.06.N.V905-001       |                              |
| <b>I.T.T. GRINDEX® MODELS</b>           |                  |                              |                              |                          |                              |
| MAJOR 8116                              | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| MASTER 8105 180                         | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| MATADOR                                 | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| MAXI 5154, 8107 H & N                   | 45/35mm          | 0450.06O.U.N.E.              | 0350.06O.N.L.V.H.            |                          |                              |
| MAXI 8107 LOW                           | 45mm             | 0450.06O.U.N.E.              | 0450.06O.L.V.H.              |                          |                              |
| MIDI, MINEX, MINI                       | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| MINETTE 8115                            | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| MINOR 2501                              | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| SALVADOR 7121,                          |                  |                              |                              |                          |                              |
| 8118 280                                | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| SANDY 8120 280                          | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| SENIOR 8119 280                         | 25/24mm          | 0250.06Z.U.N.E.¹             | 0240.06Z.L.V.H.              |                          |                              |
| READY 4, 8, 12, 16                      | 15mm             | Lower Seal Only              | 0150.06D.N.Z.                |                          |                              |
| READY 24                                | 20mm             | 0200.06A.U.N.E.              | 0200.06A.L.V.H.              |                          |                              |
| READY 90                                | 28mm             | 0280.06I.U.N.E.              | 0280.06I.L.V.H.              |                          |                              |
| STEADY 7                                | 20mm             | 0200.06G.U.N.E.              | 0200.06G.L.V.H.              |                          |                              |

For any Pump models not listed above, please contact us, as models continually evolve. For all Seals annotated with "¹", the part code shown for this model is the applicable one in the vast majority of instances. However some alternatives do exist; please check the Part Number found on the O.E.M database



# VULCAN STOCK SEALS FOR WASTEWATER PUMPS

| Vulcan Part Number       | Head Type | Seat Type | Seat O.D. | Shaft Diameter | Material Code | Pump Nameplate Data | Manufacturer Part Number |
|--------------------------|-----------|-----------|-----------|----------------|---------------|---------------------|--------------------------|
| <b>A.B.S® PUMPS USA®</b> |           |           |           |                |               |                     |                          |
| VS851                    | A         | 1         | 1.375     | .750 (3/4")    | BCFJF         |                     | 11107939                 |
| VS446                    | C         | 1         | 2.5       | 1.750 (1-3/4") | BCFJF         |                     | 11116013                 |
| VS267                    | C         | 1         | 2.75      | 2.000 (2")     | BCFJF         |                     | 11116014                 |
| VS1679                   | C         | 1         | 3.125     | 2.250 (2-1/4") | BCFJF         |                     | 11116015                 |
| VS2116                   | C         | 3         | 3.875     | 3.000 (3")     | BCFJF         |                     | 11116016                 |

## A.B.S® PUMPS USA® - TYPE 195 TO SUIT AFP- SERIES PUMPS

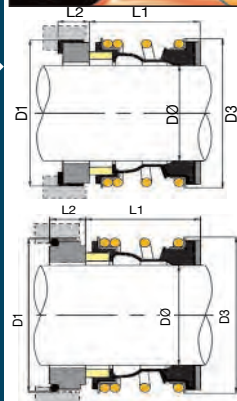


Elastomeric bellows Seals for Lower position in many common Submersible Pumps, including "AFP"-Ranges. Each is supplied with a back-washer, unless stated. Commonly paired with either Type 282, Type 1577 or Type 1632 Upper Seals, details of which are below. For identification purposes, please Cross-Reference the O.E.M Part Number shown below, or enquire.

The first Table shows those size assemblies stocked and supplied with a Boot Mounted Stationary.

Whilst the second Table shown is for those with an 'O'-Ring Mounted Stationary.

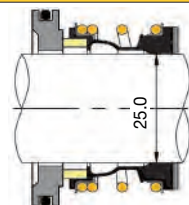
**N V** **P** 304



| SHAFT SIZE DØ | SIZE CODE | D1     | D3     | L1    | L2    | O.E.M PART NUMBER |
|---------------|-----------|--------|--------|-------|-------|-------------------|
| 15.00         | 0150      | 35.00  | 28.00  | 17.00 | 4.00  | 11110172          |
| 20.00         | 0200      | 35.00  | 36.00  | 21.50 | 7.50  | 11110001          |
| 25.00         | 0250      | 40.50  | 41.00  | 22.50 | 8.50  | 11110095          |
| 30.00         | 0300      | 50.80  | 47.00  | 24.00 | 9.50  | 11110096          |
| 40.00*        | 0400.B    | 58.00  | 60.00  | 33.50 | 11.00 | 11110144          |
| 45.00         | 0450      | 65.50  | 64.30  | 30.50 | 12.50 | 11110093          |
| 55.00*        | 0550      | 76.20  | 78.00  | 37.50 | 13.50 | 11110135          |
| 80.00         | 0800      | 104.00 | 106.50 | 40.00 | 15.00 | 11110051          |

| SHAFT SIZE DØ | SIZE CODE | D1     | D3     | L1    | L2    | O.E.M PART NUMBER |
|---------------|-----------|--------|--------|-------|-------|-------------------|
| 40.00         | 0400      | 58.00  | 60.00  | 33.50 | 11.00 | 11110055          |
| 48.00         | 0480      | 67.00  | 69.00  | 30.50 | 10.00 | 11110003          |
| 65.00         | 0650      | 86.00  | 90.00  | 39.00 | 12.00 | 11110050          |
| 90.00         | 0900      | 114.00 | 125.00 | 46.00 | 13.30 | 11110052          |
| 100.00        | 1000      | 123.30 | 130.00 | 46.00 | 13.30 | 11110053          |

## A.B.S® PUMPS USA® - TYPE 195P (UPPER & LOWER SEAL)

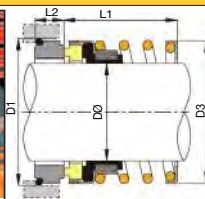
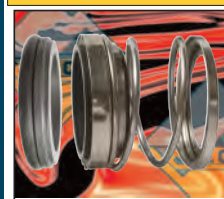


Upper and Lower 25 mm shaft size Seals for use together, but available separately, to suit various A.B.S® Submersible Pumps, including certain "JUMBO", "SP" and "RP" Series, which were previously supplied as the "Pumpex®" brand.

Upper Seal **N** **G** 304

Lower Seal **N V** **S** 304

## A.B.S® PUMPS USA® - TYPE 215 TO SUIT JUMBO® J- SERIES AND PIRANHA® SERIES PUMPS



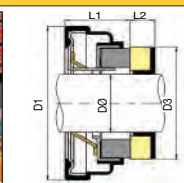
Elastomer Diaphragm Seals with parallel-springs, either with cup-mounted (20mm size) or 'O'-Ring Mounted, Bezel-face Seat Rings, to suit certain models of "Jumbo® J-" or "Piranha®" Series Pumps. The Vulcan Type 215 design Seal will interchange with elastomer bellows version Seals sometimes found in recently produced "J- Series" Pumps.

**N** **S** 304

| SHAFT SIZE DØ | SIZE CODE | D1    |       | D2    |       | L1    |       | L2    |       | O.E.M PART NUMBER |
|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|
| 0.787         | 0200~     | 1.378 | 35.00 | 1.339 | 34.00 | 0.866 | 22.00 | 0.283 | 7.20  | 11110086          |
| 0.984         | 0250*     | 1.496 | 38.00 | 1.496 | 38.00 | 0.965 | 24.50 | 0.374 | 9.50  | 11110087          |
| 1.181         | 0300      | 1.772 | 45.00 | 1.732 | 44.00 | 0.984 | 25.00 | 0.413 | 10.50 | 11110088          |
| 1.771         | 0450*     | 2.520 | 64.00 | 2.402 | 61.00 | 1.465 | 37.20 | 0.535 | 13.60 | 11110089          |

\*Please note the Size Code 0200 Seal has a cup-mounted Seat ring.

## A.B.S® PUMPS USA® - TYPE 282 TO SUIT AF - AND PIRANHA® SERIES PUMPS

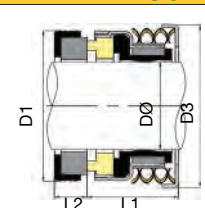


Rubber-encased Upper Seals primarily for "Piranha®-M or -S" Range Submersible Pumps. The Lower Seal is normally 25mm or 30mm Type 195 Seal, detailed above. For identification purposes, please Cross-Reference the O.E.M Part Number, or enquire.

**N** **P** 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D3    | L1    | L2   | O.E.M PART NUMBER |
|---------------|-----------|-------|-------|-------|------|-------------------|
| 25.00         | 0250      | 52.00 | 41.30 | 12.00 | 5.00 | 11100027 & 28     |
| 30.00         | 0300      | 57.00 | 41.30 | 12.00 | 5.50 | 11100029          |

## A.B.S® PUMPS USA® - TYPE 1577 TO SUIT AFP® SERIES PUMPS



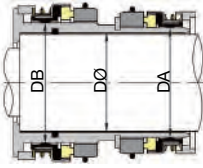
Elastomer Diaphragm Seals with sinusoidal wave-springs. 50mm size is routinely used as Upper Seal in certain "AFP" Range Submersible Pumps, with 45mm Type 195 as the Lower Seal. The 65mm Type 1577 is a Lower Seal, and is normally paired with the 55mm Type 195. For identification purposes, please Cross-Reference the O.E.M Part Number shown below, or enquire.

| SHAFT SIZE DØ | SIZE CODE | D1    | D3    | L1    | L2    | O.E.M PART NUMBER | GUARANTEED STOCK MATERIALS |
|---------------|-----------|-------|-------|-------|-------|-------------------|----------------------------|
| 50.00         | 0500      | 72.00 | 66.10 | 19.00 | 10.00 | 11100083          | <b>N</b> <b>A</b> 304      |
| 65.00         | 0650      | 85.00 | 86.50 | 27.00 | 13.00 | 11110173          | <b>N</b> <b>S</b> 304      |

# VULCAN STOCK SEALS FOR WASTEWATER PUMPS



## A.B.S.® PUMPS USA ® - TYPE 1578 TO SUIT K-SERIES PUMPS

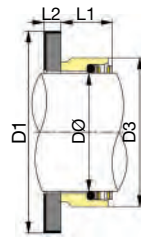
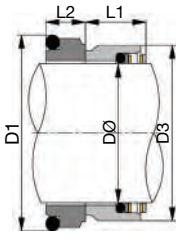


Elastomer Diaphragm Seals with sinusoidal wave-springs, supplied as Upper and Lower Seals, ready mounted on a shaft sleeve, for installation directly into the bell-chamber style housing of A.B.S.® / Pumpex® "K" Series Pumps. For 25mm, 32mm or 35mm shaft sizes, please enquire.

✓ WA 304

| SHAFT SIZE DØ | SIZE CODE | DA    | DB    |
|---------------|-----------|-------|-------|
| 50.00         | 0500      | 55.00 | 60.00 |

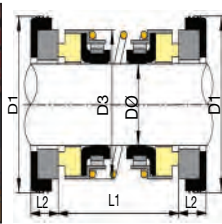
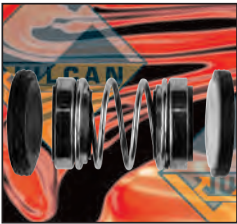
## A.B.S.® PUMPS USA ® - TYPE 1632 TO SUIT AFP- SERIES PUMPS



'O'-Ring Mounted Wave-Spring Seals, routinely utilized in the Upper-position of "AFP" Series Submersible Pumps. The Lower Seal will normally be of Type 195, please see opposite. For identification purposes, please Cross-Reference the O.E.M Part Number, or enquire

| SHAFT SIZE DØ | SIZE CODE | D1     | D3     | L1    | L2    | O.E.M PART NUMBER | GUARANTEED STOCK MATERIALS |
|---------------|-----------|--------|--------|-------|-------|-------------------|----------------------------|
| 20.00         | 0200      | 52.00  | 31.00  | 13.50 | 6.00  | 11100066          | N Q 304                    |
| 48.00         | 0480      | 67.00  | 62.00  | 15.80 | 14.50 | 11100058          | N P 304                    |
| 65.00         | 0650      | 86.00  | 79.00  | 17.80 | 15.30 | 11100059          | N P 304                    |
| 80.00         | 0800      | 104.00 | 98.00  | 19.50 | 16.30 | 11100053          | N P 304                    |
| 90.00         | 0900      | 114.00 | 105.00 | 19.50 | 16.30 | 11100055          | N P 304                    |
| 100.00*       | 1000      | 123.00 | 116.00 | 21.00 | 17.10 | 11100052          | N P 304                    |

## EBARA® PUMPS - TYPE 260A TO SUIT BEST-, RIGHT- AND DW SERIES PUMPS

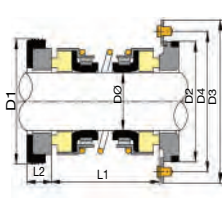
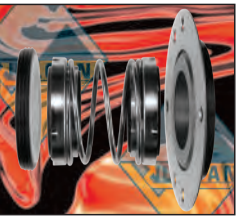


Rubber Diaphragm Double-Ended Seals with Boot Mounted stationaries, to suit the internal dimensions of Ebara® "Best-" "Right-" and "DW-" Series, small Submersible Pumps. This common Seal Type is also utilized by other Pump manufacturers for small portable Submersible Pumps.

✓ WA 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D3    | L1    | L2   |
|---------------|-----------|-------|-------|-------|------|
| 14.00         | 0140      | 30.00 | 20.00 | 26.00 | 5.00 |
| 15.00         | 0150      | 30.00 | 20.00 | 26.00 | 5.00 |
| 16.00         | 0160      | 30.00 | 20.00 | 26.00 | 5.00 |

## EBARA® PUMPS - VULCAN TYPE 260B TO SUIT EBARA® PUMPS



Vulcan manufacture and stock a Range of elastomer Diaphragm Double-Ended Seals, with boot stationaries at oil side and Bezel Stationaries at impeller side, to suit the Seal chamber of various Ebara® Submersible Pumps.

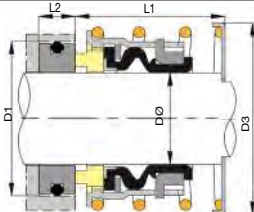
Type 260B Seals are supplied complete with Bezel plates for the inboard Seat.

For information on Vulcan Seals to suit other Ranges of Ebara® Pumps please see the alphabetical listing in Section 4.

✓ WA 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D2    | D3     | D4 P.C.D. | L1    | L2   |
|---------------|-----------|-------|-------|--------|-----------|-------|------|
| 20.00         | 0200      | 38.00 | 44.00 | 72.00  | 60.00     | 34.00 | 8.00 |
| 25.00         | 0250      | 44.00 | 50.00 | 72.00  | 60.00     | 34.00 | 8.00 |
| 30.00         | 0300      | 50.00 | 57.00 | 82.00  | 70.00     | 42.00 | 8.00 |
| 35.00         | 0350      | 58.00 | 65.00 | 94.00  | 80.00     | 42.00 | 9.00 |
| 40.00         | 0400      | 64.00 | 70.00 | 100.00 | 85.00     | 44.50 | 9.00 |
| 45.00         | 0450      | 66.00 | 70.00 | 105.00 | 90.00     | 45.00 | 9.00 |
| 50.00         | 0500      | 72.00 | 80.00 | 109.00 | 95.00     | 49.50 | 9.00 |

## GORMAN - RUPP® PUMPS - VULCAN TYPE 207A TO SUIT T- SERIES® PUMPS



Vulcan manufacture a Range of Seals to suit Gorman-Rupp® Pumps. The most specific of which is the Type 207A to suit the common T-Series®. The Vulcan design features a single piece Monolithic Carbide Seat, to remove the existing face and sub housing arrangement. Shims are supplied with the Seals, Sleeves are also available. For information on Vulcan Seals to suit other Ranges of Gorman-Rupp® Pumps please see the alphabetical listing in Section 4.

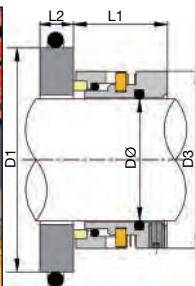
N V H 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D3    | L1    | L2    | O.E.M PART NUMBER                 |
|---------------|-----------|-------|-------|-------|-------|-----------------------------------|
| 1.500         | 0381      | 2.375 | 60.32 | 2.329 | 59.15 | 1.125 28.58 0.500 12.70 46512-047 |
| 1.625         | 0412      | 2.375 | 60.32 | 2.636 | 66.96 | 1.375 34.93 0.500 12.70 25271-922 |



# VULCAN STOCK SEALS FOR WASTEWATER PUMPS

## GODWIN® PUMPS - TYPE 1653 TO SUIT DRI-PRIME® SERIES PUMPS

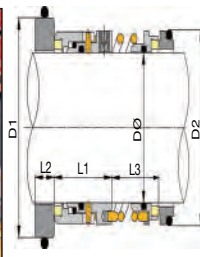


Vulcan manufacture and stock a Range of specific Seal Types to suit Godwin® "Dri-Prime®" Pumps, in materials suitable for all clean and dirty water transfer duties. 40mm and 50mm sizes normally operate as Single Seals. Please contact us if you require 60mm size Seals. The Type 1653 is a robust heavy-duty design for more abrasive media's, for lower solid content fluids, the Type 1724P can be used, please see details below.

(N) (S) 304

| SHAFT SIZE<br>DØ | SIZE CODE | D1    | D3    | L1    | L2    |
|------------------|-----------|-------|-------|-------|-------|
| 40.00            | 0400      | 69.90 | 56.00 | 32.00 | 7.50  |
| 50.00            | 0500      | 89.90 | 71.00 | 34.00 | 13.00 |

## GODWIN® PUMPS - TYPE 1653D TO SUIT DRI-PRIME® SERIES PUMPS

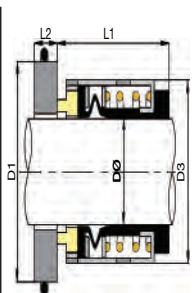


For larger "Dri-Prime®" Pumps with 75mm shaft sizes, a Double Seal is required. The most common arrangement is directly replaced by the Vulcan Type 1653D, which shares a similar construction to the Type 1653 but with an additional single-spring component Seal assembly to Seal the oil-bath. For all Godwin® Pumps, please contact us with the O.E.M details for Cross-Reference and identification.

(N) (Z) 304

| SHAFT SIZE<br>DØ | SIZE CODE | D1     | D2    | L1    | L2    | L3    |
|------------------|-----------|--------|-------|-------|-------|-------|
| 75.00            | 0750      | 109.90 | 98.00 | 45.50 | 14.90 | 37.00 |

## GODWIN® PUMPS - TYPES 1724P AND 1725P TO SUIT DRI-PRIME® SERIES PUMPS

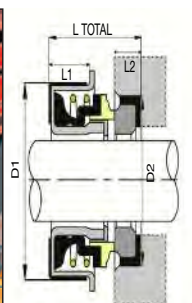


Vulcan Types 1724P and 1725P are designed to suit smaller models of "Dri-Prime®" Pumps, and offer an easy to install elastomer bellows Seal that is designed to suit the length of the Seal chamber, removing the need to set the Seal on the shaft with set screws. Type 1724 uses a standard Vulcan Rotary, Type 1725 has the same design but with a reduced working length. For a heavy-duty alternative design, please see the Type 1653 detailed at the top of the Page.

(N) (S) 304

| SHAFT SIZE<br>DØ | SIZE CODE | D1    | D3    | L1    | L2    | VULCAN TYPE |
|------------------|-----------|-------|-------|-------|-------|-------------|
| 40.00            | 0400      | 69.90 | 56.00 | 32.00 | 7.35  | 1725P       |
| 50.00            | 0500      | 89.90 | 66.00 | 34.00 | 13.00 | 1724P       |

## HONDA® PUMPS - TYPE 78 TO SUIT PORTABLE 'TRASH' PUMPS

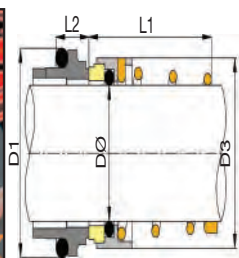


Vulcan manufacture a Range of Seals to suit portable petrol or diesel powered Honda® Pumps. The Vulcan Seals utilize Silicon Carbide Seal faces and full elastomer boots to ensure secure mounting in the Pump housings.

(N) (S) 304

| SHAFT<br>SIZE DØ | SIZE<br>CODE | D1    |       | D2    |       | L1    |       | L2    |      | L TOTAL |       |
|------------------|--------------|-------|-------|-------|-------|-------|-------|-------|------|---------|-------|
| 0.669            | 0170         | 1.614 | 41.00 | 1.220 | 31.00 | 0.354 | 9.00  | 0.207 | 5.25 | 0.886   | 22.50 |
| 0.787            | 0200         | 1.772 | 45.00 | 1.378 | 35.00 | 0.433 | 11.00 | 0.197 | 5.00 | 0.886   | 22.50 |
| 0.984            | 0250         | 2.047 | 52.00 | 1.732 | 44.00 | 0.472 | 12.00 | 0.276 | 7.00 | 1.063   | 27.00 |
| 1.181            | 0300         | 2.283 | 58.00 | 1.890 | 48.00 | 0.492 | 12.50 | 0.315 | 8.00 | 1.142   | 29.00 |

## GRUNDFOS® PUMPS - TYPE 81 SEALS TO SUIT S-SERIES SUBMERSIBLE PUMPS



Vulcan manufacture and stock 'O'-Ring Mounted Conical Spring Seals with positive drive, specifically designed to suit Grundfos® "S-" Series Pumps, with the older generation Seal style installed. The O.E.M older style Seal is a conical Single Spring Seal. For newer style Seals, being Multiple-Spring, please see Types 40S8 and 42, on the following Page.

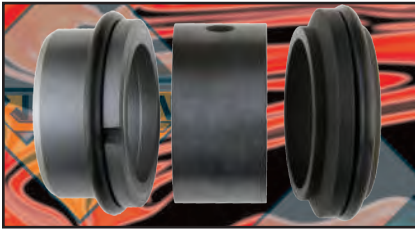
(V) (S) (D) 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D3    | L1    | L2    |
|---------------|-----------|-------|-------|-------|-------|
| 25.00         | 0250      | 38.00 | 36.00 | 26.50 | 10.00 |
| 32.00         | 0320      | 48.00 | 46.00 | 28.50 | 11.00 |
| 38.00         | 0380      | 55.00 | 53.00 | 33.50 | 11.50 |

# VULCAN STOCK SEALS FOR WASTEWATER PUMPS

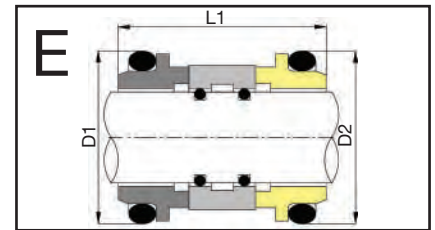
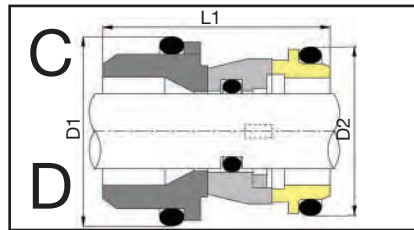
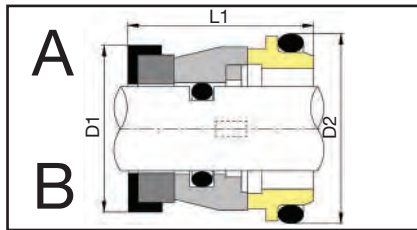


## GRUNDFOS® PUMPS - TYPE 86 SEALS TO SUIT SE- AND SV-SERIES PUMPS



Vulcan manufacture and stock 'O'-Ring Mounted Double Seals with varying face profiles, specifically designed for Grundfos® "SE-" and "SV-" Series Submersible Pumps. Each size has a unique face profile, Particularly relating to the central Rotary face. Inboard Seal and Stationary faces are Monolithic Silicon Carbide, whilst the oil-bath side Stationary is Monolithic Carbon.

✓ Z N/A

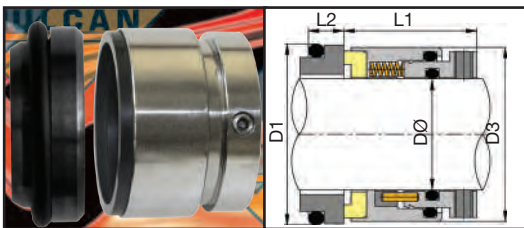


| DIAGRAM | SHAFT SIZE<br>DØ | SIZE CODE | TYPE CODE | D1    | D2    | L1    |
|---------|------------------|-----------|-----------|-------|-------|-------|
| A       | 16.00            | 0160      | 86B       | 28.00 | 35.00 | 30.00 |
| B       | 16.00            | 0160      | 86        | 28.00 | 35.00 | 30.00 |
| C       | 24.00            | 0240      | 86        | 48.00 | 45.00 | 50.00 |
| D       | 24.00            | 0300      | 86        | 48.00 | 45.00 | 50.00 |
| E       | 38.00            | 0380      | 86        | 53.00 | 56.00 | 65.50 |

## GRUNDFOS® PUMPS - TYPES 40S8 AND 42 SEALS TO SUIT S- SERIES PUMPS

Vulcan manufacture and stock 'O'-Ring Mounted Multi-Spring, Balanced Seals, specifically designed for Grundfos® "S-" Series Submersible Pumps; Upper and Lower positions. Type 40S8 is for the Upper, oil bath position, and Type 42 with the distinctive Stationary profile, is for the Lower, impeller position. 65mm Size Type 42 Lower Seal has a distinctive extended barrel with two 'O'-Rings to Seal inside impeller recess, as per the original O.E.M Seal.

### TYPE 40S8 - UPPER SEAL

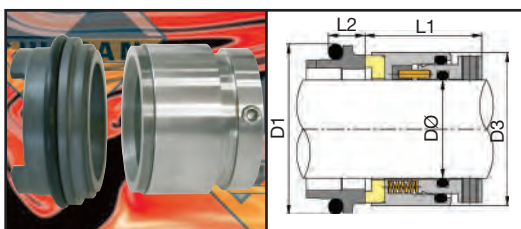


✓ DS 316

| SHAFT SIZE<br>DØ | SIZE CODE | TYPE CODE | D1    | D3    | L1    | L2    |
|------------------|-----------|-----------|-------|-------|-------|-------|
| 38.00            | 0380      | 40S       | 56.00 | 53.00 | 34.00 | 11.00 |
| 50.00            | 0500      | 40S8      | 70.00 | 65.60 | 34.50 | 9.50  |
| 65.00            | 0650      | 40S8      | 85.00 | 84.20 | 36.50 | 11.00 |

Please refer to our extensive O.E.M database in our Web Portal or contact us with the O.E.M details or part numbers for Cross-Reference and identification.

### TYPE 42 - LOWER SEAL



✓ S 304

| SHAFT SIZE<br>DØ | SIZE CODE | D1    | D3    | L1    | L2    |
|------------------|-----------|-------|-------|-------|-------|
| 32.00            | 0320      | 48.00 | 46.00 | 34.00 | 11.00 |
| 38.00            | 0380      | 55.00 | 53.00 | 34.00 | 11.50 |
| 50.00            | 0500      | 70.00 | 65.60 | 34.50 | 14.00 |
| 65.00            | 0650      | 85.00 | 84.20 | 66.00 | 15.00 |

Vulcan have an extensive Cross-Reference for Grundfos® part numbers and Pump models. The above are only common examples from specific Wastewater Pump Ranges. Please contact Vulcan with your part numbers so we can progress with your requirement.



# VULCAN STOCK SEALS FOR WASTEWATER PUMPS

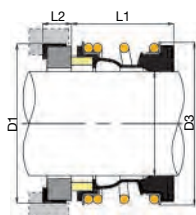
## K.S.B® PUMPS - TYPE 197 TO SUIT AMA-, KRT- AND SEWA SERIES PUMPS



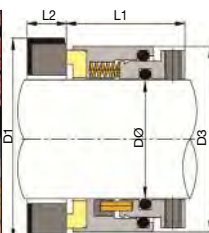
Vulcan produce a Range of elastomer bellows Seals to replace the "SU" Range of K.S.B.® Seals, commonly utilized in "Amarex KRT-" Series Pumps.  
Vulcan has an extensive Range of Seals available for other K.S.B.® Pumps in all industries, please see proceeding Section for further examples.

✓ SS 304

| SHAFT SIZE DØ | SIZE CODE | D1    |       | D3    |        | L1    |       | L2    |       | O.E.M SEAL CODE |
|---------------|-----------|-------|-------|-------|--------|-------|-------|-------|-------|-----------------|
| 10mm*         | 0100      | 0.827 | 21.00 | 0.866 | 22.00  | 0.567 | 14.40 | 0.260 | 6.60  | SU 010          |
| 15mm*         | 0150      | 0.945 | 24.00 | 1.102 | 28.00  | 0.669 | 17.00 | 0.276 | 7.00  | SU 015          |
| 25mm          | 0250      | 1.496 | 38.00 | 1.614 | 41.00  | 0.906 | 23.00 | 0.295 | 7.50  | ✓ SS 304        |
| 28mm*         | 0280      | 1.398 | 35.50 | 1.850 | 47.00  | 1.043 | 26.50 | 0.354 | 9.00  | SU 028          |
| 30mm          | 0300      | 1.457 | 37.00 | 1.890 | 48.00  | 1.043 | 26.50 | 0.413 | 10.50 | SU 030          |
| 33mm          | 0330      | 1.516 | 38.50 | 2.008 | 51.00  | 1.083 | 27.50 | 0.433 | 11.00 | SU 033          |
| 43mm*         | 0430      | 1.654 | 42.00 | 2.480 | 63.00  | 1.181 | 30.00 | 0.472 | 12.00 | SU 043          |
| 48mm*         | 0480      | 1.654 | 42.00 | 2.717 | 69.00  | 1.201 | 30.50 | 0.453 | 11.50 | SU 048          |
| 75mm*         | 0750      | 2.126 | 54.00 | 4.016 | 102.00 | 1.575 | 40.00 | 0.551 | 14.00 | SU 075          |
| 90mm*         | 0900      | 2.362 | 60.00 | 4.843 | 123.00 | 1.772 | 45.00 | 0.591 | 15.00 | SU 090          |



## TEREX® PUMPS - TYPE 47 TO SUIT TEREX - PEGSON® TRANSPORTABLE PUMPS

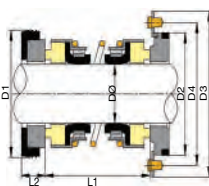


Vulcan Manufacture and stock Balanced Multi-Spring Seals with cup-mount stationaries suitable for the high Head and suction found in this Range of diesel powered trailer Pumps.

✓ SS 316

| SHAFT SIZE DØ | SIZE CODE | D1    |       | D3    |       | L1    |       | L2    |       |
|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.575         | 0400      | 2.480 | 63.00 | 2.205 | 56.00 | 1.339 | 34.00 | 0.433 | 11.00 |
| 1.771         | 0450      | 2.756 | 70.00 | 2.323 | 59.00 | 1.339 | 34.00 | 0.512 | 13.00 |
| 2.165         | 0550      | 3.150 | 80.00 | 2.787 | 70.80 | 1.358 | 34.50 | 0.512 | 13.00 |

## TSURUMI® PUMPS - VULCAN TYPE 260B TO SUIT TSURUMI® PUMPS



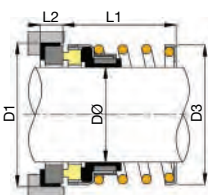
Vulcan manufacture and stock a Range of elastomer Diaphragm Double-Ended Seals, with boot stationaries at oil side and Bezel Stationaries at impeller side, to suit the Seal chamber of various Tsurumi® Submersible Pumps.

Type 260B Seals are supplied complete with Bezel plates for the inboard Seat.

✓ WA 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D2    | D3     | D4 P.C.D. | L1    | L2   |
|---------------|-----------|-------|-------|--------|-----------|-------|------|
| 20.00         | 0200      | 38.00 | 44.00 | 72.00  | 60.00     | 34.00 | 8.00 |
| 25.00         | 0250      | 44.00 | 50.00 | 72.00  | 60.00     | 34.00 | 8.00 |
| 30.00         | 0300      | 50.00 | 57.00 | 82.00  | 70.00     | 42.00 | 8.00 |
| 35.00         | 0350      | 58.00 | 65.00 | 94.00  | 80.00     | 42.00 | 9.00 |
| 40.00         | 0400      | 64.00 | 70.00 | 100.00 | 85.00     | 44.50 | 9.00 |
| 45.00         | 0450      | 66.00 | 70.00 | 105.00 | 90.00     | 45.00 | 9.00 |
| 50.00         | 0500      | 72.00 | 80.00 | 109.00 | 95.00     | 49.50 | 9.00 |

## WEMCO® / HIDROSTAL® PUMPS - TYPE 11



Vulcan standard Type 11 Diaphragm Seals to replace O.E.M "C-" and "V-" Type Seals.

NB:- SIZE CODE 0250 is a Type 20 not our Type 11.

These Seals are fitted in the inner oil bath position.

Product side Seals are either a Rubber Bellows Type Seal, as per our Type 194, shown on the following Page. Or rubber encased Seals which can be replaced by our Type 41, as detailed on the following Page.

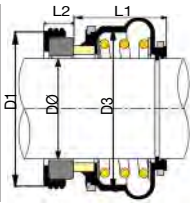
✓ NV 304

| SHAFT SIZE DØ |        | SIZE CODE | D1       |        | D3       |         | L1       |        | L2       |        | O.E.M SEAL CODE |
|---------------|--------|-----------|----------|--------|----------|---------|----------|--------|----------|--------|-----------------|
| IMPERIAL      | METRIC |           | IMPERIAL | METRIC | IMPERIAL | METRIC  | IMPERIAL | METRIC | IMPERIAL | METRIC |                 |
| 0.875         | 22.23  | 0222      | 1.500    | 38.10  | 1.315    | 33.400  | 0.937    | 23.80  | 0.405    | 10.28  | C0.6 , V0.6     |
| 0.984         | 25.00  | 0250      | 1.594    | 40.50  | 1.543    | 39.200  | 1.000    | 25.40  | 0.406    | 10.32  | C025            |
| 1.125         | 28.58  | 0286      | 1.750    | 44.44  | 1.823    | 46.300  | 1.062    | 26.97  | 0.437    | 11.10  | C1.1 , V1.1     |
| 1.375         | 34.93  | 0349      | 2.000    | 50.80  | 2.071    | 52.600  | 1.125    | 28.58  | 0.437    | 11.10  | C1.3            |
| 1.500         | 38.10  | 0381      | 2.125    | 53.98  | 2.197    | 55.800  | 1.125    | 28.58  | 0.437    | 11.10  | C1.5            |
| 2.000         | 50.80  | 0508      | 2.750    | 69.85  | 2.874    | 73.000  | 1.500    | 38.10  | 0.500    | 12.70  | C2.0            |
| 2.500         | 63.50  | 0635      | 3.375    | 85.73  | 3.343    | 84.900  | 1.812    | 46.02  | 0.562    | 14.28  | C2.5            |
| 3.000         | 76.20  | 0762      | 3.875    | 98.43  | 4.043    | 102.700 | 2.062    | 52.37  | 0.625    | 15.88  | C3.0            |

# VULCAN STOCK SEALS FOR WASTEWATER PUMPS



## WEMCO® / HIDROSTAL® PUMPS - TYPE 68

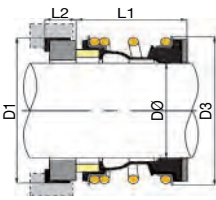


Vulcan manufacture and stock a direct replacement for the rubber encased 'M'-Type Seals. Available in the three common sizes from stock with Tungsten Carbide faces. If a robust steel body Seal is preferred the Vulcan Type 41 detailed below can be utilized without modification.

✓ H 304

| SHAFT SIZE DØ | SIZE CODE | D1    |       | D3    |       | L1    |       | L2    |       | O.E.M REF. |
|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| 1.125         | 0286      | 1.750 | 44.45 | 2.000 | 50.80 | 1.125 | 28.58 | 0.417 | 10.58 | M 1.1      |
| 1.500         | 0381      | 2.125 | 53.98 | 2.375 | 60.33 | 1.375 | 34.93 | 0.437 | 11.10 | M 1.5      |
| 2.000         | 0508      | 2.750 | 69.85 | 2.933 | 74.50 | 1.781 | 45.25 | 0.500 | 12.70 | M 2.0      |

## WEMCO® / HIDROSTAL® PUMPS - TYPE 194



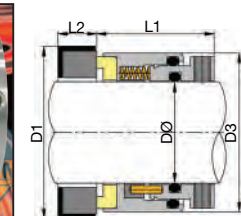
Vulcan Type 194 robust Rubber Bellows Seals to replace O.E.M "G-" Type Seals. Seal sizes from 0286 and up are supplied with Steel back-washer, to separate the Seal bellows from the shaft circlip. Size code 0200 to replace O.E.M "G020K" is standard Vulcan Type 19B Seal.

Usually fitted in tandem with our Type 11 Seals, detailed above, or our Type 41 Seals, shown below.

✓ SS 304

| SHAFT SIZE DØ |        | SIZE CODE | D1       |        | D3       |        | L1       |        | L2       |        | O.E.M SEAL CODE |
|---------------|--------|-----------|----------|--------|----------|--------|----------|--------|----------|--------|-----------------|
| IMPERIAL      | METRIC |           | IMPERIAL | METRIC | IMPERIAL | METRIC | IMPERIAL | METRIC | IMPERIAL | METRIC |                 |
| 0.625         | 15.88  | 0158      | 1.187    | 30.14  | 1.102    | 28.00  | 0.875    | 22.23  | 0.405    | 10.28  | G016 , M0.6     |
| 0.787         | 20.00  | 0200      | 1.500    | 38.10  | 1.417    | 36.00  | 1.181    | 30.00  | 0.394    | 10.00  | G020            |
| 0.787         | 20.00  | 0200      | 1.378    | 35.00  | 1.594    | 40.50  | 0.846    | 21.50  | 0.295    | 7.50   | G020K           |
| 1.125         | 28.58  | 0286      | 1.750    | 44.44  | 1.850    | 47.00  | 1.062    | 26.97  | 0.437    | 11.10  | G1.1            |
| 1.500         | 38.10  | 0381      | 2.125    | 53.98  | 2.283    | 58.00  | 1.125    | 28.58  | 0.437    | 11.10  | G1.5            |
| 2.000         | 50.80  | 0508      | 2.750    | 69.85  | 2.795    | 71.00  | 1.500    | 38.10  | 0.500    | 12.70  | G2.0            |
| 2.500         | 63.50  | 0635      | 3.375    | 85.73  | 3.543    | 90.00  | 1.812    | 46.02  | 0.562    | 14.28  | G2.5            |
| 3.000         | 76.20  | 0762      | 3.875    | 98.43  | 4.016    | 102.00 | 2.062    | 52.37  | 0.625    | 15.88  | G3.0            |
| 3.740         | 95.00  | 0950      | 4.876    | 123.85 | 5.157    | 131.00 | 2.375    | 60.33  | 0.752    | 19.10  | G095            |
| 3.937*        | 100.00 | 1000      | 4.876    | 123.85 | 5.157    | 131.00 | 2.375    | 60.33  | 0.752    | 19.10  | G100            |

## WEMCO® / HIDROSTAL® PUMPS - TYPE 41



Vulcan Type 41 is a unitized, highly robust, Balanced Multi-Spring Seal to replace O.E.M "M-" and "X-" Type Seals. Type 41 is designed to replace the single-spring rubber-encased O.E.M Seals, that can often fail when the rubber loses its bond with the Seal faces and metal Parts. Seal size 0950 has an 'O'-Ring Type Stationary, not Boot Mounted.

Usually fitted in tandem with either our Type 11 or Type 194 Seals, shown on the previous Page

| SHAFT SIZE DØ |        | SIZE CODE | D1       |        | D3       |        | L1       |        | L2       |        | O.E.M SEAL CODE | GUARANTEED STOCK MATERIALS |
|---------------|--------|-----------|----------|--------|----------|--------|----------|--------|----------|--------|-----------------|----------------------------|
| IMPERIAL      | METRIC |           | IMPERIAL | METRIC | IMPERIAL | METRIC | IMPERIAL | METRIC | IMPERIAL | METRIC |                 |                            |
| 1.125         | 25.58  | 0286      | 1.750    | 44.44  | 1.732    | 44.00  | 1.181    | 30.00  | 0.319    | 8.10   | M1.1            | ✓ H 316                    |
| 1.500         | 38.10  | 0381      | 2.125    | 53.98  | 2.157    | 54.80  | 1.244    | 31.60  | 0.319    | 8.10   | M1.5            | ✓ H 316                    |
| 2.000         | 50.80  | 0508      | 2.750    | 69.85  | 2.661    | 67.60  | 1.500    | 38.10  | 0.500    | 12.70  | M2.0 , X2.0     | ✓ S 316                    |
| 2.500         | 63.50  | 0635      | 3.375    | 85.73  | 3.082    | 78.30  | 1.812    | 46.20  | 0.562    | 14.28  | M2.5 , X2.5     | ✓ S 316                    |
| 3.000*        | 76.20  | 0762      | 3.875    | 98.43  | 3.689    | 93.70  | 2.063    | 52.40  | 0.625    | 15.88  | M3.0 , X3.0     | ✓ S 316                    |
| 3.740         | 95.00  | 0950      | 4.876    | 123.85 | 5.039    | 128.00 | 2.477    | 62.90  | 0.649    | 16.50  | X095            | ✓ S 316                    |

## WILO® PUMPS - VULCAN TYPE 1640 AND 1642 TO SUIT WILO® E.M.U. SUBMERSIBLE PUMPS.



Vulcan manufacture and stock several standard Range Seals to suit Wilo® E.M.U. Submersible Pumps, as well as Type 1640 and 1642 Seals to replace the O.E.M "EBS" Enclosed-Block Seals.

The Vulcan Type 1640 is a direct replacement for the older-generation "EBS" O.E.M Seals. Newer Pumps have a slightly modified Seal installed, which is directly replaced by the Vulcan Type 1642. Please check the outer dimensions of the Seal housing for correct identification, utilizing the Table below, D3 dimension.

Type 1640 is available as complete Mechanical Seal assemblies or in repair kit form. The kits comprise both Stationary faces, with 'O'-Rings, central Rotary with elastomer Diaphragm, anti-rotation pins and springs for stationaries, and retaining pins for the collets. Specify .KIT as a suffix on the stock code.

Type 1640 Dimensions ✓ ZS 304

| SHAFT SIZE DØ | SIZE CODE | D1     | D2     | D3    | L1    |
|---------------|-----------|--------|--------|-------|-------|
| 35.00         | 0350      | 72.00  | 72.00  | 47.00 | 47.50 |
| 50.00         | 0500      | 92.00  | 90.00  | 63.00 | 52.00 |
| 75.00         | 0750      | 130.00 | 128.00 | 95.50 | 75.00 |

Type 1642 Dimensions ✓ ZS 304

| SHAFT SIZE DØ | SIZE CODE | D1    | D2    | D3    | L1    |
|---------------|-----------|-------|-------|-------|-------|
| 35.00         | 0350      | 72.00 | 72.00 | 49.00 | 47.00 |
| 50.00         | 0500      | 92.00 | 90.00 | 65.00 | 52.00 |

