

Hydraulic Seals Catalogue



Product Catalogue

Hydraulic Seals

HYD.981015 - C



The information contained in this catalogue is based on many years of experience in the fluid power industry, specifically in the manufacturing and application of fluid sealing and bearing systems. This information is a product of extensive in-house testing & vast international experience across all types of industries since 1959. However, unknown parameters and conditions may restrict general statements during usage.

We would be obliged to offer our recommendations and sealing solutions for your particular application. However, no warranty or guarantee is expressed since the conditions of use are beyond our control.

The proportions of all the seal ranges have been determined to give a satisfactory performance when used with the recommended operating conditions.

The material from which each seal type is made could be found in the description under each seal type.

Spareage is continuously improving its ranges and reserves the right to withdraw or modify any item shown in this catalogue without notice.

Dear Customer,

Spareage Seals Ltd. had its inception in 1959. Since the beginning, it has been specializing in the area of high pressure hydraulic and pneumatic seals, rotary seals, chevron packings, O-rings, bearing elements, etc. Today after investing nearly four decades into this specialized area of business with high emphasis on quality, innovation and customer support, Spareage Seals Ltd. can rightly claim leadership in its chosen line of business.

Our aspiration for constant growth and continuous improvement has led us to be equipped with the latest machinery for manufacturing. The manufacturing process is ably supported by state of the art testing laboratory and an advanced quality assurance system. The **ISO 9001 Certificate** for our company provides a testimony for the same.

Spareage always provides total quality products and service with emphasis on product quality and delivery period at a competitive price.

Spareage take pride in research and development activities. Pursuing new material and material combinations coupled with newer/improved processes and profiles, keeping in mind the end application for the seal is a continuous process here at Spareage. The technical collaboration with one of the leading Seal manufacturers of Europe, **UK Seals & Polymers Ltd.**, has provided a new impetus to the same.

Our dedicated services have ensured a high level of customer satisfaction for more than 900 clients. Some of our esteemed clients are in the Indian Defence Organization, Indian Railways, Steel Plants and Hydraulic Cylinder manufacturers, Automobile Industries, etc. A well established sales and service network covering 10 major Indian cities makes it possible for us to respond at a short notice.

It would be difficult to attempt a truly comprehensive coverage of all the seals manufactured by Spareage in a catalogue of limited pages. Our aim, therefore has been to provide a standard format to our customers to facilitate their seal selection process. We are presenting as many different profiles and sizes as feasible in this catalogue, though there are many more in our production range. We therefore encourage you to contact us with any specific requirement of yours even though it may not be covered in this catalogue. With more than 1,00,000 moulds in our stock, we are confident of meeting your requirements.

We look forward to render our products and services to you.







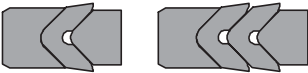









Yours truly,






















U. S. Sabharwal,
Managing Director
(Spareage Seals Ltd.)



INDEX

Content		Page No.
Other Profiles -		
Piston Seals		1
Rod Seals		5
Symmetrical Seals		8
Wiper Seals		10
Dowty Seals / Guide Rings / Flange		12
SealsSeal combination for specific applications		13
Piston Seals		PCA 16
		PTA 21
		PCC 28
		PUB 30
		PCS 33
		PCI 37
		PVA & PVB 40
		PPB 48
Rod Seals		RUB 49
		RUC 58
		RFD 61
		RFA 66
		RTA 68
		RVA & RVB 75
		RBD 83
		RVF 84

Content			Page No.
Symetrical Seals		SUA	85
		SUJ	107
		SFA	111
		SFD	113
		SFC	116
		STB	117
Wiper Seals		WRB	118
		WDD	123
		WDA	126
		WRC	131
		WCA	142
		WCE	146
		WTC	149
		WCC	152
		WCF	153
Bonded Seals		GA & GB	154
		GC	158
		GE	161
		BA	164
Installation Tools			171
Assembly instructions, storage & cleaning			173
Sealing ring materials			174
Sealing ring material & compatibility			182
Seal engineering request			185

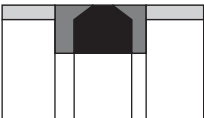
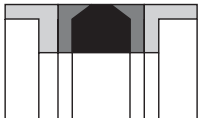
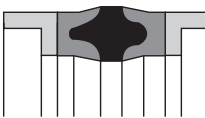
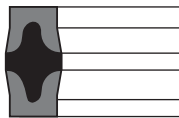
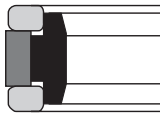

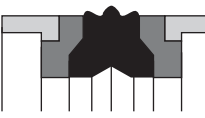
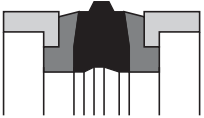
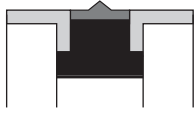
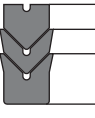
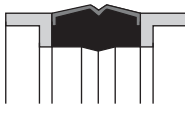
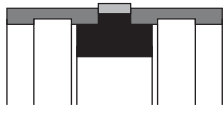

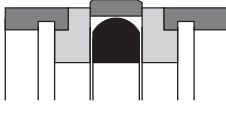
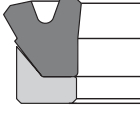

SPAREAGE OTHER PROFILES - PISTON SEALS

 <p>PUB</p> <p>Pressure: 400/160 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P6</p>	 <p>PBA</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P8</p>	 <p>PUC</p> <p>Pressure: 16 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P7</p>	 <p>PBB</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P9</p>
 <p>PUD</p> <p>Pressure: 80/250 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P15</p>	 <p>PTA</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - GR</p>	 <p>PCK</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P27</p>	 <p>PTC</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - S15P4</p>
 <p>PTE</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - S15P8</p>	 <p>PTF</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S15P9</p>	 <p>PCQ</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P38</p>	 <p>PTG</p> <p>Pressure: 500 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S15P10</p>
 <p>PCE</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P17</p>	 <p>PCM</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P30</p>	 <p>PCN</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P35</p>	 <p>PEL</p> <p>Pressure: 315 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P28</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton®), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.

SPAREAGE OTHER PROFILES - PISTON SEALS

 <p>PCO</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P36</p>	 <p>PCP</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P37</p>	 <p>PFB</p> <p>Pressure: 700 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P11</p>	 <p>SFB</p> <p>Pressure: 300 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P2</p>
 <p>PCC</p> <p>Pressure: 500 Bar</p> <p>Speed: 1.5 m/s</p> <p>Old Style - CT</p>	 <p>PCB</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P11</p>	 <p>PCA</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - CS</p>	 <p>PCH</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P22</p>
 <p>PCF</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P18</p>	 <p>PVA</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - CA</p>	 <p>PCD</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P13</p>	 <p>PCL</p> <p>Pressure: 600 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P29</p>
 <p>PCJ</p> <p>Pressure: 700 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P24</p>	 <p>PCI</p> <p>Pressure: 500 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P23</p>	 <p>PBF</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P48</p>	 <p>PBG</p> <p>Pressure: 160 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P49</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.


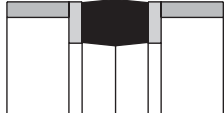

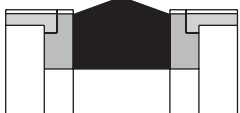
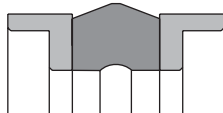
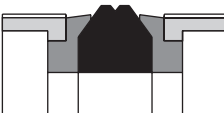
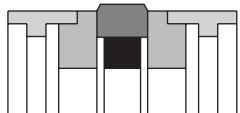



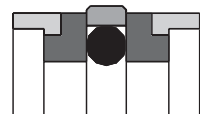


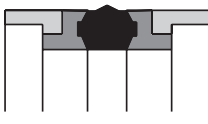


SPAREAGE OTHER PROFILES - PISTON SEALS

 <p>PBH</p> <p>Pressure: 250 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P57</p>	 <p>PBD</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P59</p>	 <p>PBE</p> <p>Pressure: 700 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P62</p>	 <p>RVI</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P12</p>
 <p>PFC</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P13</p>	 <p>PTH</p> <p>Pressure: 400 Bar</p> <p>Speed: 5.0 m/s</p> <p>Old Style - S15P16</p>	 <p>PTI</p> <p>Pressure: 600 Bar</p> <p>Speed: 3.0 m/s</p> <p>Old Style - S15P20</p>	 <p>PUM</p> <p>Pressure: 150 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P42</p>
 <p>PBC</p> <p>Pressure: 250 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P44</p>	 <p>PCV</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P47</p>	 <p>PCX</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P47</p>	 <p>PCY</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P53</p>
 <p>PEF</p> <p>Pressure: 350 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P63</p>	 <p>PCG</p> <p>Pressure: 210 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P19</p>	 <p>PCR</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P41</p>	 <p>PCS</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P43</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.





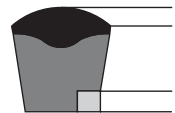
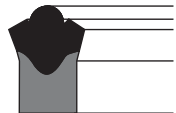
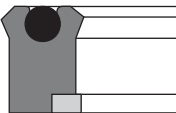
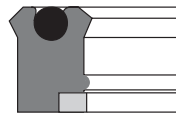

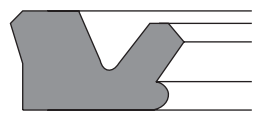

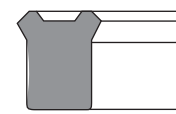

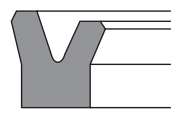
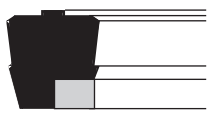
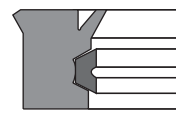
SPAREAGE OTHER PROFILES - PISTON SEALS

 <p>PCU</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P46</p>	 <p>PCW</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P50</p>	 <p>PCZ</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P54</p>	 <p>PEA</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P55</p>
 <p>PEB</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P56</p>	 <p>PEC</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P58</p>	 <p>PED</p> <p>Pressure: 500 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P60</p>	 <p>PEE</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P61</p>
 <p>PUQ</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEF</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEG</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEH</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>
 <p>PEI</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEJ</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEK</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>	 <p>PEL</p> <p>Pressure: Bar</p> <p>Speed: m/s</p> <p>Old Style -</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.


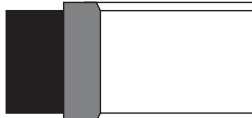

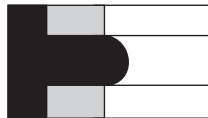
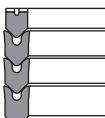
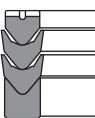
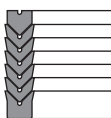
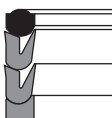
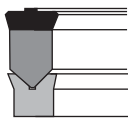
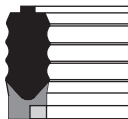

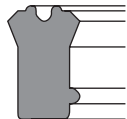

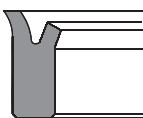

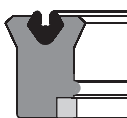
SPAREAGE OTHER PROFILES - ROD SEALS

 <p>RUB</p> <p>Pressure: 300/160 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - UB</p>	 <p>RBC</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P12</p>	 <p>RUD</p> <p>Pressure: 600 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P13</p>	 <p>RFD</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P8</p>
 <p>RFA</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - SB</p>	 <p>RFC</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.2 m/s</p> <p>Old Style - S13P3</p>	 <p>RBI</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P27</p>	 <p>RBF</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P24</p>
 <p>SFE</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P12</p>	 <p>RUJ</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S65P23</p>	 <p>RBY</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P9</p>	 <p>RUL</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P31</p>
 <p>RBJ</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S6P28</p>	 <p>RUC</p> <p>Pressure: 400/160 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P8</p>	 <p>RBB</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P10</p>	 <p>RBD</p> <p>Pressure: 450/300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S6P16</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton®), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.


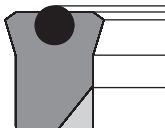


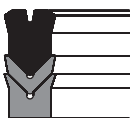
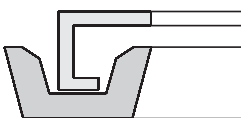

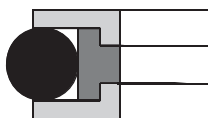

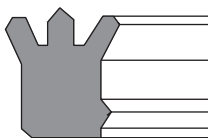
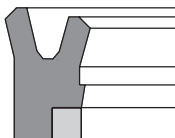
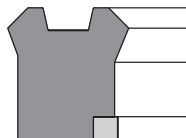
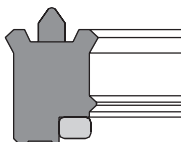
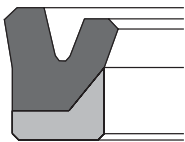

SPAREAGE OTHER PROFILES - ROD SEALS

 <p>RTC</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - S15P11</p>	 <p>RTD</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - S15P12</p>	 <p>RTA</p> <p>Pressure: 400 Bar</p> <p>Speed: 10.0 m/s</p> <p>Old Style - SS</p>	 <p>RBK</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P29</p>
 <p>RVF</p> <p>Pressure: 600 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P8</p>	 <p>RVC</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P3</p>	 <p>RVB</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - CC</p>	 <p>RVD</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S8P4</p>
 <p>RFE</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P9</p>	 <p>RBG</p> <p>Pressure: 315 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P25</p>	 <p>RBH</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P26</p>	 <p>RUI</p> <p>Pressure: 400/200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P22</p>
 <p>RUP</p> <p>Pressure: 300 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P39</p>	 <p>RUN</p> <p>Pressure: 150 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P36</p>	 <p>RUM</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P11</p>	 <p>RBN</p> <p>Pressure: 700 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S6P35</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.




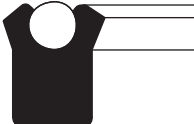
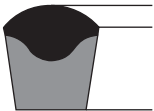


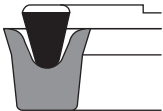


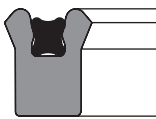

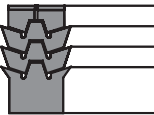

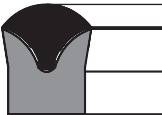
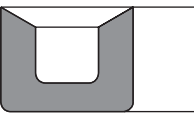
SPAREAGE OTHER PROFILES - ROD SEALS

 <p>RBO</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P37</p>	 <p>RBP</p> <p>Pressure: 400 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P40</p>	 <p>RBQ</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P41</p>	 <p>RBM</p> <p>Pressure: 250 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S6P43</p>
 <p>RVQ</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P9</p>	 <p>RBE</p> <p>Pressure: 150 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S6P18</p>	 <p>RTE</p> <p>Pressure: 400 Bar</p> <p>Speed: 5.0 m/s</p> <p>Old Style - S15P13</p>	 <p>RTF</p> <p>Pressure: 450 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S15P15</p>
 <p>RBR</p> <p>Pressure: 500 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S6P42</p>	 <p>RUQ</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>RBW</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>RBX</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>
 <p>RBY</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>RBZ</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>RTG</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	

NOTE: The Standard material for the above range are NBR, FPM (Viton®), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.

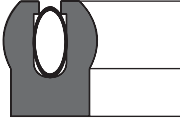




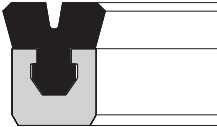
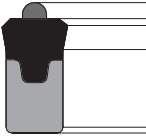
SPAREAGE OTHER PROFILES - SYMETRICAL SEALS

 <p>SUA</p> <p>Pressure: 300/160 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - UA</p>	 <p>SUH</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P15</p>	 <p>SUI</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P16</p>	 <p>SUJ</p> <p>Pressure: 350 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P17</p>
 <p>SFA</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - SA</p>	 <p>PUK</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S5P32</p>	 <p>SNB</p> <p>Pressure: 315 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S11P2</p>	 <p>SVA</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P7</p>
 <p>SFD</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P10</p>	 <p>SUE</p> <p>Pressure: 80 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P7</p>	 <p>SUG</p> <p>Pressure: 300 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S7P14</p>	 <p>SNC</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S11P3</p>
 <p>RVM</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S8P5</p>	 <p>SUF</p> <p>Pressure: 100 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P10</p>	 <p>SFF</p> <p>Pressure: 170 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S13P16</p>	 <p>SUM</p> <p>Pressure: 150 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P21</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.






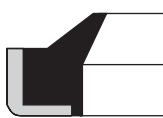


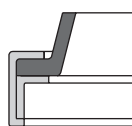





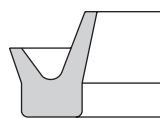

SPAREAGE OTHER PROFILES - SYMETRICAL SEALS

 <p>STA</p> <p>Pressure: 160 Bar</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S7P22</p>	 <p>SUO</p> <p>Pressure: 300 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P24</p>	 <p>STB</p> <p>Pressure: 250 Bar</p> <p>Speed: 5.0 m/s</p> <p>Old Style - S7P25</p>	 <p>SUP</p> <p>Pressure: 200 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S7P26</p>
 <p>SUR</p> <p>Pressure: 250 Bar</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S5P28</p>	 <p>SUS</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>SFG</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.




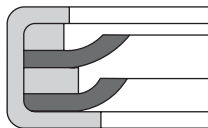
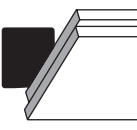
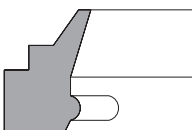
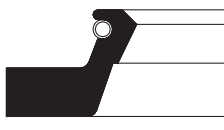


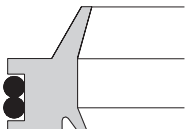
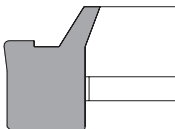
SPAREAGE OTHER PROFILES - WIPER SEALS

 <p>WRC</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P5</p>	 <p>WRG</p> <p>Pressure: NA</p> <p>Speed: 4.0 m/s</p> <p>Old Style - S4P25</p>	 <p>WRH</p> <p>Pressure: NA</p> <p>Speed: 4.0 m/s</p> <p>Old Style - S4P26</p>	 <p>WIA</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P9</p>
 <p>WCB</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P8</p>	 <p>WCA</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - WC</p>	 <p>WCD</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P24</p>	 <p>WCC</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P22</p>
 <p>WCG</p> <p>Pressure: NA</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S4P32</p>	 <p>WCH</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P34</p>	 <p>WID</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P38</p>	 <p>WRK</p> <p>Pressure: NA</p> <p>Speed: 1.0 m/s</p> <p>Old Style - S4P39</p>
 <p>WRM</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P42</p>	 <p>WRN</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P43</p>	 <p>WTD</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P44</p>	 <p>WCJ</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P46</p>

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.


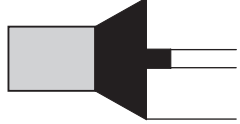
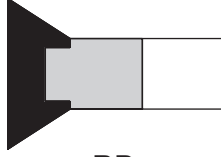

SPAREAGE OTHER PROFILES - WIPER SEALS

 <p>WCK</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P47</p>	 <p>WRO</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P48</p>	 <p>WTE</p> <p>Pressure: NA</p> <p>Speed: 5.0 m/s</p> <p>Old Style - S4P49</p>	 <p>WCI</p> <p>Pressure: NA</p> <p>Speed: 5.0 m/s</p> <p>Old Style - S4P45</p>
 <p>WRL</p> <p>Pressure: NA</p> <p>Speed: 0.5 m/s</p> <p>Old Style - S4P41</p>	 <p>WRQ</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>WRR</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>WRS</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>
 <p>WRT</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>WTF</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	 <p>WTG</p> <p>Pressure:</p> <p>Speed:</p> <p>Old Style -</p>	

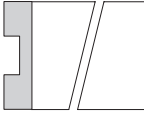
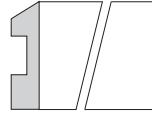
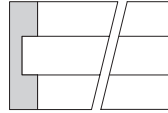
NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.

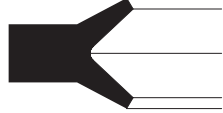
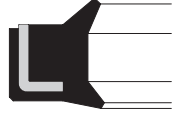
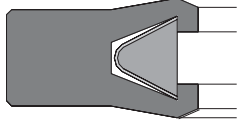
SPAREAGE OTHER PROFILES - DOWTY SEALS

			
BB	BC	BD	BE
Old Style - S12P3	Old Style - S12P4	Old Style -	Old Style -

SPAREAGE OTHER PROFILES - GUIDE RINGS

		
GC	GD	GE
Old Style - S15P17	Old Style - S15P18	Old Style - S15P19

SPAREAGE OTHER PROFILES - FLANGE SEALS

		
LB	LD	LE
Old Style - S19P1	Old Style - S19P3	Old Style -

NOTE: The Standard material for the above range are NBR, FPM (Viton[®]), Polyurethane, Fabric & Composite PTFE for temperature from -40°C to + 200°C and upto 2000 mm dia. Other materials are also available on request.

Please contact our sales team for your requirements.

SEAL COMBINATIONS FOR SPECIFIC APPLICATIONS

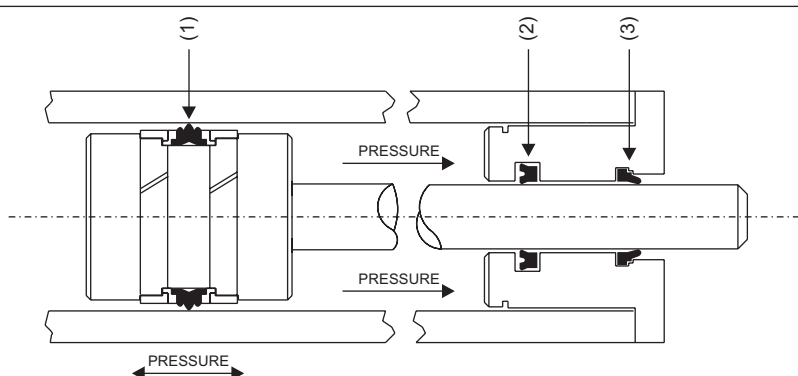
1) LIGHT DUTY, LOW SPEED HYDRAULIC CYLINDER

Pressure: 160 BAR

Speed: 0.5 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PCA	SUA/RUB	WRB/WDD	NOT APPLICABLE	DOUBLE ACTING COMPACT CYLINDER
SPAREAGE STYLE	SUA (1 X 2 Nos.)	SUA/RUB	WRB/WDD	NOT APPLICABLE	GENERAL PURPOSE CYLINDER
SPAREAGE STYLE	PVA (1 X 2 Nos.)	SUA/RUB	WRB/WDD	NOT APPLICABLE	HIGH PERFORMANCE & LARGE DIA. CYLINDER



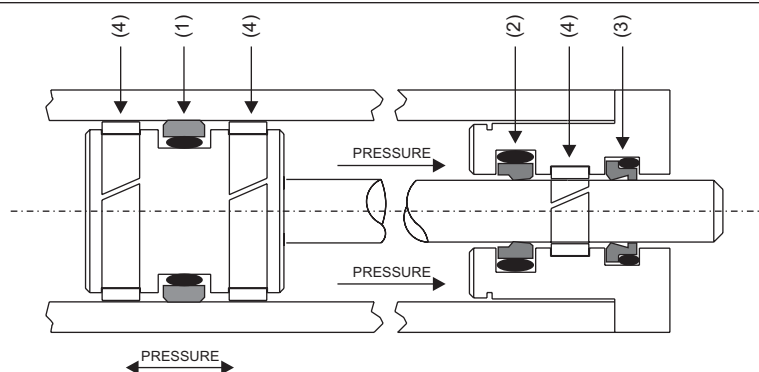
2) LIGHT DUTY, HIGH SPEED HYDRAULIC CYLINDER

Pressure: 400 BAR

Speed: 10 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PTA	RTA	WTC	GA (1 X 3 Nos.)	DOUBLE ACTING, CAN ALSO BE USED FOR MEDIUM DUTY APPLICATIONS



SEAL COMBINATIONS FOR SPECIFIC APPLICATIONS

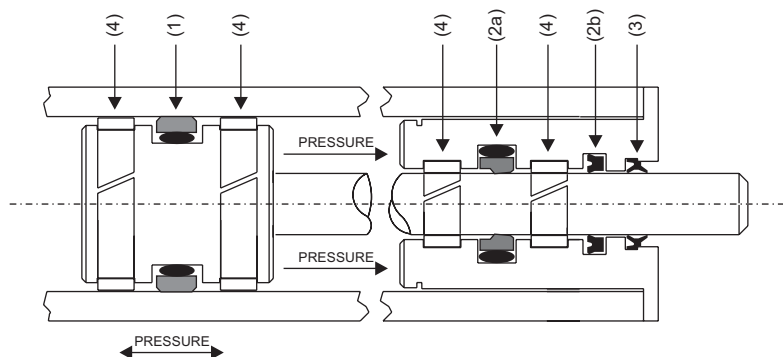
3) MEDIUM DUTY, LOW SPEED HYDRAULIC CYLINDER

Pressure: 300 BAR

Speed: 1.0 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PTA	(a) RTA+ (b) RUB	WRB/WDD	GA (60%) (1 X 4 Nos.)	DOUBLE ACTING MOBILE CYLINDER
SPAREAGE STYLE	PTA	(a) RTA + RFA	WRB/WDD	GA (60%) (1 X 4 Nos.)	SAME AS ABOVE BUT SPLIT HOUSING FOR SB



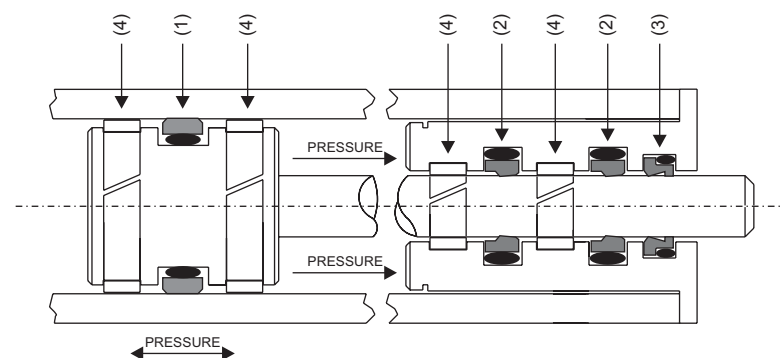
4) MEDIUM DUTY, HIGH SPEED HYDRAULIC CYLINDER

Pressure: 400 BAR

Speed: 10 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PTA	RTA (1 X 2 Nos.)	WTC	GA (1 X 4 Nos.)	DOUBLE ACTING CYLINDER BEST SUITED FOR HYDRAULIC PRESSES OR MOULDING MACHINES



SEAL COMBINATIONS FOR SPECIFIC APPLICATIONS

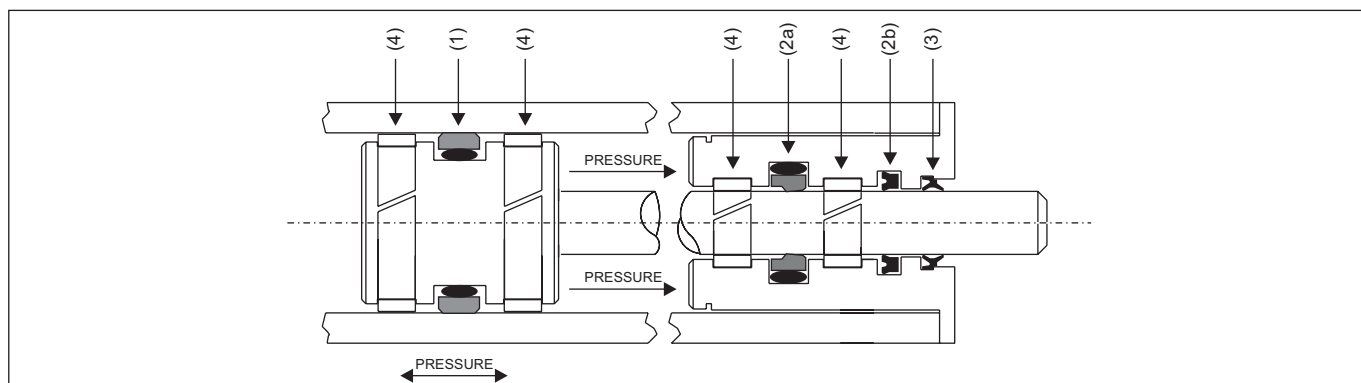
5) HEAVY DUTY, LOW SPEED, LOW PRESSURE HYDRAULIC CYLINDER

Pressure: 300 BAR

Speed: 0.5 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PTA	(a) RTA + (b) SUA	WRB/WDD	a) GA (1X4 Nos.) b) GB (1x4 Nos.)	Double Acting Compact Cylinder for Tough Conditions Preferred for Mobile Equipment
SPAREAGE STYLE	PVA (1 X 2 Nos.)	SFA/RVA	WRB/WDD	a) GA (1X4 Nos.) b) GB (1x3 Nos.)	Double Acting Compact Cylinder for Tough Conditions Preferred for Mobile Equipment but split housing & preferred for large cylinder elements.



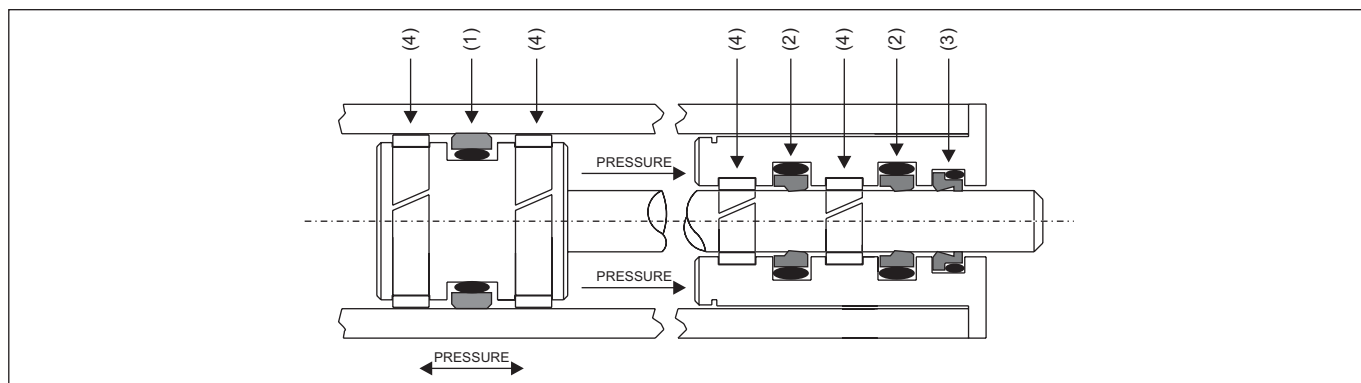
6) HEAVY DUTY, MEDIUM SPEED, HIGH PRESSURE HYDRAULIC CYLINDER

Pressure: 400 BAR

Speed: 5 m/sec.

Temp.: -30°C to + 100°C (upto +200°C on request)

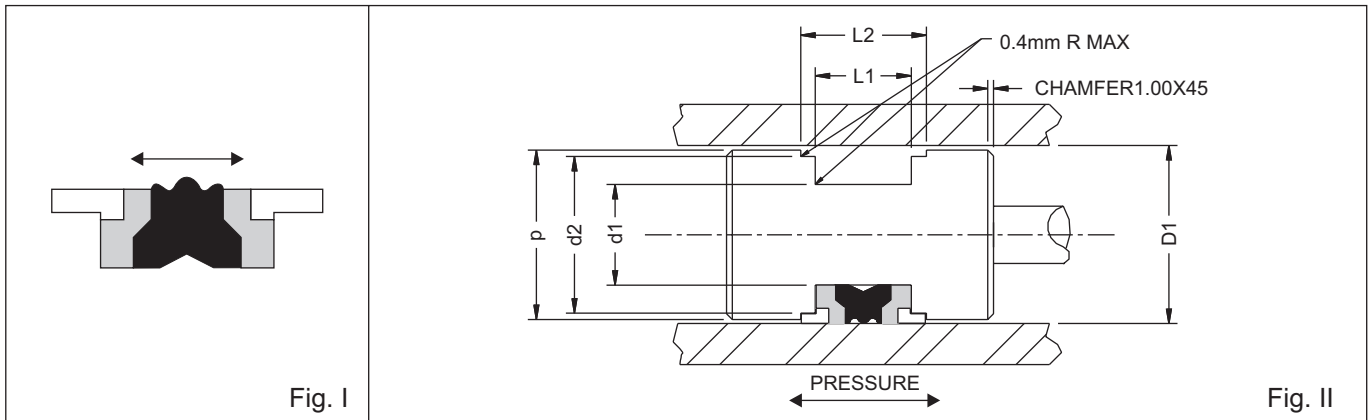
	PISTON SEALS	ROD SEALS	WIPER SEALS	WEAR RINGS	TYPE
SPAREAGE STYLE	PCC	RTA (1 X 2 Nos.)	WTC	GA (1 X 4 Nos.) GB (1 X 3 Nos.)	Double Acting Compact Hydraulic Cylinder, Good Characteristics at Speeds upto 4 m/sec. Excellent for Mobile Equipment.



SECTION: PISTON SEAL

STYLE: PCA

TYPE: Double Acting Compact Seal



MATERIAL:

SEAL RING: NT5/a.

SPAREAGE NT5/a is a Acrylonitrile Butadiene Rubber (NBR) compound with a hardness of 75⁰/80⁰ shore 'A'.

BACK UP RINGS:

Polyurethane shore hardness 63 D.

BEARING RINGS:

Thermoplastic Polymer.

MAX. OPERATING CONDITIONS:

Temp. range : -30°C to +100°C (Upto +200°C on request).

Pressure: 400 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty cylinders.

Static load holding (boom lifting to hold hydraulic platforms).

Compact cylinders.

DETAILS:

PCA is a robust compact double acting seal assembly designed specifically for one piece pistons. It uses a nitrile sealing element which has proven itself in service to be extremely wear resistant and capable of working most effectively in a wide variety of medium duty applications. The seal is also suitable for two piece piston applications.

FEATURES:

Well proven design.

Long life.

Short overall length of piston.

Excellent load holding capability.

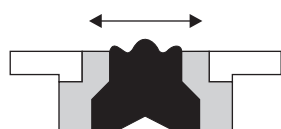
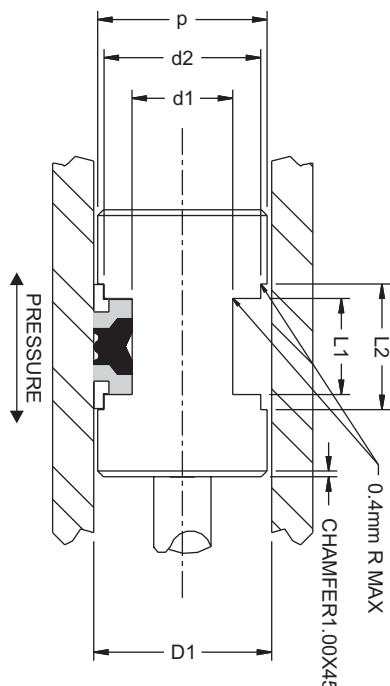
Any size upto 500mm available on request.

SECTION: PISTON SEAL

STYLE: PCA

TYPE: Double Acting Compact Seal

Style PCA Metric Ordering Information (Dimensions in mm)



Tolerance Table

D1	d1	d2	L1	L2	p
H9	h9	h9	+0.2	+0.2	h11

Other sizes available on request.
Standard sizes for housing according to ISO 5597 are printed in bold.

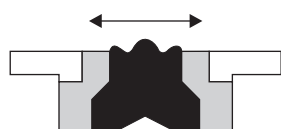
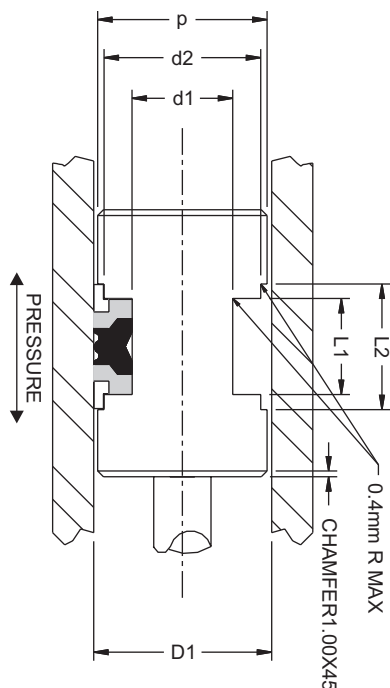
Part No.	D1	d1	d2	L1	L2	p
PCA 0110901 (Stock Size)	20.0	11.0	17.00	13.5	17.7	19.00
PCA 0130901	22.0	13.0	19.00	13.5	17.7	21.00
PCA 0150901 (Stock Size)	25.0	15.0	21.00	12.0	20.0	23.00
PCA 0150902 (Stock Size)	25.0	15.0	21.45	16.4	29.1	23.50
PCA 0160901	25.0	16.0	22.00	13.5	17.7	24.00
PCA 0190901	28.0	19.0	25.00	13.5	17.7	27.00
PCA 0170901 (Stock Size)	30.0	17.0	26.50	15.4	28.1	28.50
PCA 0210901 (Stock Size)	30.0	21.0	27.00	13.5	17.7	29.00
PCA 0220901 (Stock Size)	32.0	22.0	28.50	16.4	29.1	30.50
PCA 0240901 (Stock Size)	32.0	24.0	29.00	10.0	18.0	31.00
PCA 0220902	32.0	22.0	28.00	15.5	20.7	31.00
PCA 0250901 (Stock Size)	35.0	25.0	31.40	16.4	29.1	33.50
PCA 0250902	35.0	25.0	31.00	15.5	20.7	34.00
PCA 0300901 (Stock Size)	40.0	30.0	35.40	16.4	29.1	38.50
PCA 0240902 (Stock Size)	40.0	24.0	35.40	18.4	31.1	38.50
PCA 0300902 (Stock Size)	40.0	30.0	37.00	12.5	20.5	39.00
PCA 0320901 (Stock Size)	40.0	32.0	36.00	15.5	21.9	39.40
PCA 0260901 (Stock Size)	40.0	26.0	36.00	15.5	20.7	39.00
PCA 0280901 (Stock Size)	42.0	28.0	38.00	15.5	20.7	41.00
PCA 0290901 (Stock Size)	45.0	29.0	40.40	18.4	31.1	43.70
PCA 0350901 (Stock Size)	45.0	35.0	40.40	16.4	29.1	43.50
PCA 0310901	45.0	31.0	41.00	15.5	20.7	44.00
PCA 0380901	48.0	38.0	43.40	16.4	29.1	47.00
PCA 0340901 (Stock Size)	50.0	34.0	45.40	18.4	31.1	48.50
PCA 0340902 (Stock Size)	50.0	34.0	46.00	20.0	26.2	49.00
PCA 0350902 (Stock Size)	50.0	35.0	46.00	20.0	30.0	48.50
PCA 0380902 (Stock Size)	50.0	38.0	46.00	20.5	28.9	49.40
PCA 0390901 (Stock Size)	55.0	39.0	50.36	18.4	31.1	53.50
PCA 0390902	55.0	39.0	51.00	20.5	26.7	54.00
PCA 0400901	56.0	40.0	52.00	20.5	26.7	55.00
PCA 0440901 (Stock Size)	60.0	44.0	55.40	18.4	31.1	58.50
PCA 0480901 (Stock Size)	60.0	48.0	56.00	20.5	28.9	59.40
PCA 0440902 (Stock Size)	60.0	44.0	56.00	20.5	26.7	59.00
PCA 0470901 (Stock Size)	63.0	47.0	58.40	18.4	31.1	61.50
PCA 0470902 (Stock Size)	63.0	47.0	59.00	20.5	28.9	62.00
PCA 0480902 (Stock Size)	63.0	48.0	59.00	20.0	30.0	61.50
PCA 0510901 (Stock Size)	63.0	51.0	59.00	20.5	28.9	62.40
PCA 0470901	63.0	47.0	58.40	18.4	32.1	61.63
PCA 0500901 (Stock Size)	65.0	50.0	60.40	18.4	31.1	65.00

SECTION: PISTON SEAL

STYLE: PCA

TYPE: Double Acting Compact Seal

Style PCA Metric Ordering Information (Dimensions in mm)



Tolerance Table

D1	d1	d2	L1	L2	p
H9	h9	h9	+0.2	+0.2	h11

Other sizes available on request.
Standard sizes for housing according to ISO 5597 are printed in bold.

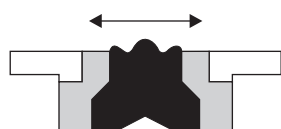
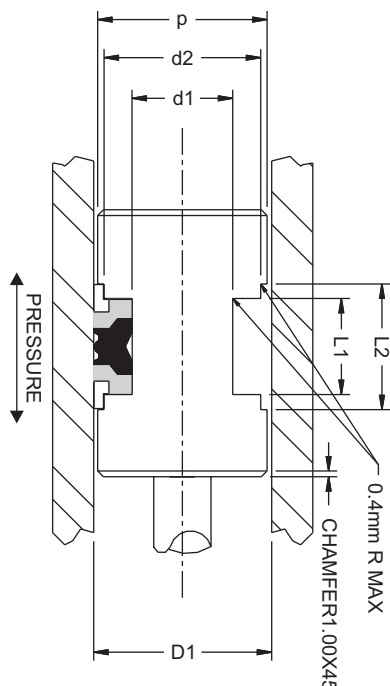
Part No.	D1	d1	d2	L1	L2	p
PCA 0490901	65.0	49.0	61.00	20.5	26.7	64.00
PCA 0500902 (Stock Size)	70.0	50.0	64.20	22.4	35.1	68.34
PCA 0540901 (Stock Size)	70.0	54.0	66.00	20.5	26.7	69.00
PCA 0580901 (Stock Size)	70.0	58.0	66.00	20.5	28.9	68.50
PCA 0550901 (Stock Size)	75.0	55.0	69.20	22.4	35.1	73.32
PCA 0600901 (Stock Size)	80.0	60.0	74.15	22.4	35.1	78.34
PCA 0620901 (Stock Size)	80.0	62.0	76.00	22.5	29.7	79.00
PCA 0600902 (Stock Size)	80.0	60.0	75.00	25.4	38.1	78.00
PCA 0650901 (Stock Size)	80.0	65.0	76.00	20.0	30.0	79.00
PCA 0660901	80.0	66.0	76.00	22.5	32.9	79.40
PCA 0650902 (Stock Size)	85.0	65.0	79.15	22.4	35.1	83.34
PCA 0650903	85.0	65.0	79.15	22.0	28.4	83.34
PCA 0680901	88.0	68.0	82.20	22.4	35.1	87.00
PCA 0700901 (Stock Size)	90.0	70.0	84.15	22.4	35.1	88.30
PCA 0720901	90.0	72.0	86.00	22.5	29.7	89.00
PCA 0760901	90.0	76.0	86.00	22.5	32.9	88.50
PCA 0750901 (Stock Size)	95.0	75.0	89.15	22.4	35.1	93.30
PCA 0750902 (Stock Size)	100.0	75.0	93.15	22.4	35.1	98.00
PCA 0800901 (Stock Size)	100.0	80.0	95.00	25.4	38.1	98.00
PCA 0820901 (Stock Size)	100.0	82.0	96.00	22.5	29.7	99.00
PCA 0860901 (Stock Size)	100.0	86.0	96.00	22.5	32.9	98.50
PCA 0800902 (Stock Size)	105.0	80.0	98.10	22.4	35.1	103.00
PCA 0830901	108.0	83.0	101.10	22.4	35.1	107.00
PCA 0850901 (Stock Size)	110.0	85.0	103.10	22.4	35.1	108.00
PCA 0920901 (Stock Size)	110.0	92.0	106.00	22.5	29.7	109.00
PCA 0960901	110.0	96.0	106.00	22.5	32.9	109.40
PCA 0900901 (Stock Size)	115.0	90.0	108.10	22.4	35.1	113.00
PCA 0970901	115.0	97.0	111.00	22.5	29.7	114.00
PCA 0950901 (Stock Size)	120.0	95.0	113.10	22.4	35.1	118.00
PCA 1060901	120.0	106.0	116.00	22.5	32.9	118.50
PCA 1000901 (Stock Size)	125.0	100.0	118.10	25.4	38.1	122.96
PCA 1050901 (Stock Size)	125.0	105.0	120.00	25.4	38.1	123.00
PCA 1030901 (Stock Size)	125.0	103.0	121.00	26.5	36.7	124.00
PCA 1080901 (Stock Size)	125.0	108.0	121.00	26.5	40.9	124.40
PCA 1030902	128.0	103.0	121.10	25.4	38.1	127.00
PCA 1050902 (Stock Size)	130.0	105.0	122.60	25.4	44.4	127.50
PCA 1050903	130.0	105.0	123.10	25.4	38.1	128.00
PCA 1100901 (Stock Size)	135.0	110.0	127.60	25.4	44.4	132.50
PCA 1100902 (Stock Size)	135.0	110.0	128.10	25.4	38.1	133.00

SECTION: PISTON SEAL

STYLE: PCA

TYPE: Double Acting Compact Seal

Style PCA Metric Ordering Information (Dimensions in mm)



Tolerance Table

D1	d1	d2	L1	L2	p
H9	h9	h9	+0.2	+0.2	h11

Other sizes available on request.
Standard sizes for housing according to ISO 5597 are printed in bold.

Part No.	D1	d1	d2	L1	L2	p
PCA 1150901 (Stock Size)	140.0	115.0	132.60	25.4	44.4	137.50
PCA 1150902	140.0	115.0	134.00	32.0	52.0	138.00
PCA 1150903 (Stock Size)	140.0	115.0	133.00	25.4	38.1	138.00
PCA 1180901 (Stock Size)	140.0	118.0	136.00	26.5	36.7	139.00
PCA 1230901	140.0	123.0	136.00	26.5	40.9	138.50
PCA 1200901 (Stock Size)	145.0	120.0	137.60	25.4	44.4	142.50
PCA 1200902 (Stock Size)	145.0	120.0	138.30	25.4	38.1	142.95
PCA 1230902	148.0	123.0	140.60	25.4	44.4	147.00
PCA 1250901 (Stock Size)	150.0	125.0	142.60	25.4	44.4	147.50
PCA 1250902 (Stock Size)	150.0	125.0	143.00	25.4	38.1	148.00
PCA 1280901 (Stock Size)	150.0	128.0	146.00	26.5	36.7	149.00
PCA 1330901	150.0	133.0	146.00	26.5	40.9	149.50
PCA 1300901 (Stock Size)	155.0	130.0	147.60	25.4	44.4	152.50
PCA 1350901 (Stock Size)	160.0	135.0	152.60	25.4	44.4	157.50
PCA 1350902	160.0	135.0	154.00	32.0	52.0	158.00
PCA 1380901 (Stock Size)	160.0	138.0	156.00	26.5	36.7	159.00
PCA 1430901	160.0	143.0	156.00	26.5	40.9	159.40
PCA 1300902 (Stock Size)	160.0	130.0	153.00	25.4	38.1	158.00
PCA 1300903 (Stock Size)	160.0	130.0	152.60	25.4	44.4	157.50
PCA 1400901 (Stock Size)	165.0	140.0	157.60	25.4	44.4	162.50
PCA 1400902	165.0	140.0	159.66	25.4	38.1	163.00
PCA 1430902	168.0	143.0	160.60	25.4	44.4	167.00
PCA 1450901 (Stock Size)	170.0	145.0	161.70	25.4	50.8	167.00
PCA 1450902	170.0	145.0	162.98	25.4	38.1	167.60
PCA 1500901 (Stock Size)	175.0	150.0	166.70	25.4	50.8	172.10
PCA 1550901 (Stock Size)	180.0	155.0	171.70	25.4	50.8	177.00
PCA 1500902	180.0	150.0	171.70	36.0	61.4	177.00
PCA 1500903 (Stock Size)	180.0	150.0	172.95	35.4	48.1	177.87
PCA 1580901 (Stock Size)	180.0	158.0	176.00	26.5	36.7	179.00
PCA 1600901 (Stock Size)	185.0	160.0	176.70	25.4	50.8	182.00
PCA 1630901	188.0	163.0	179.70	25.4	50.8	187.00
PCA 1650901 (Stock Size)	190.0	165.0	181.70	25.4	50.8	187.00
PCA 1700901 (Stock Size)	195.0	170.0	186.70	25.4	50.8	198.00
PCA 1750901 (Stock Size)	200.0	175.0	191.60	25.4	50.8	197.00
PCA 1700902 (Stock Size)	200.0	170.0	193.00	35.4	48.1	198.00
PCA 1750902 (Stock Size)	200.0	175.0	196.00	31.5	44.7	199.00
PCA 1850901 (Stock Size)	210.0	185.0	201.60	25.4	50.8	207.00
PCA 1900901	215.0	190.0	206.60	25.4	50.8	240.00
PCA 1950901 (Stock Size)	220.0	195.0	211.60	25.4	50.8	270.00

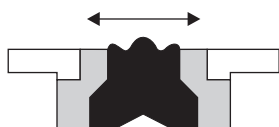
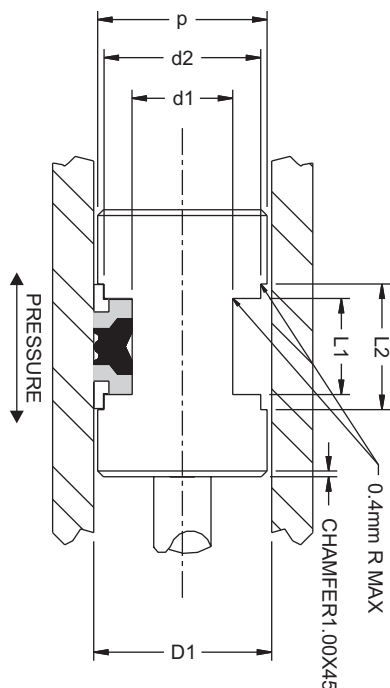
SECTION: PISTON SEAL

STYLE: PCA

TYPE: Double Acting Compact Seal

Style PCA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	d2	L1	L2	p
PCA 1900902 (Stock Size)	220.0	190.0	212.70	35.4	48.1	270.00
PCA 2050901 (Stock Size)	230.0	205.0	221.60	25.4	50.8	227.00
PCA 2150901 (Stock Size)	240.0	215.0	231.60	25.4	50.8	237.00
PCA 2250901 (Stock Size)	250.0	225.0	241.60	25.4	50.8	247.00
PCA 2200901 (Stock Size)	250.0	220.0	242.90	35.4	48.1	247.00
PCA 2350901	260.0	235.0	252.90	25.4	50.8	258.00
PCA 2450901	270.0	245.0	262.90	25.4	50.8	268.00
PCA 2500901	280.0	250.0	271.60	25.4	50.8	278.00
PCA 2750901 (Stock Size)	300.0	275.0	291.60	25.4	50.8	298.00



Tolerance Table

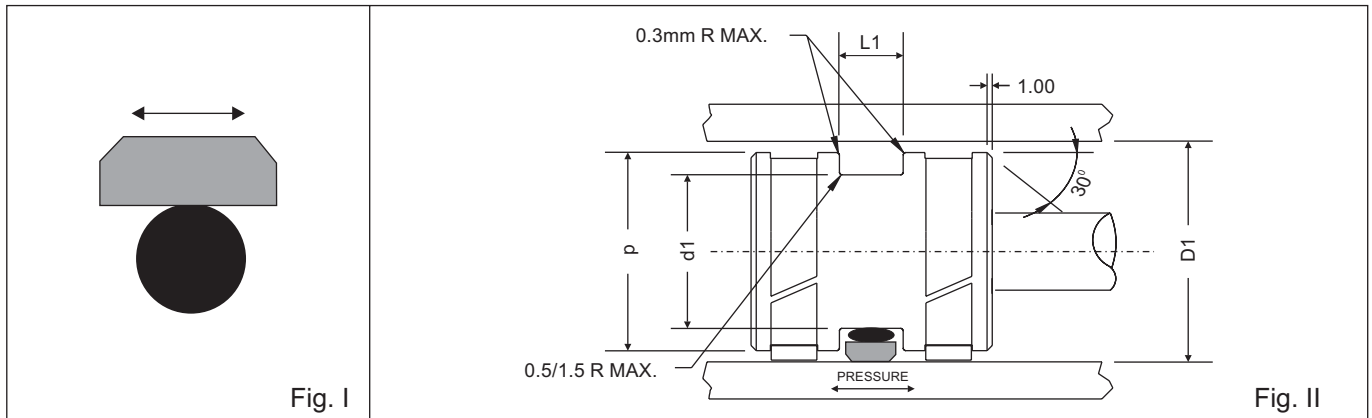
D1	d1	d2	L1	L2	p
H9	h9	h9	+0.2	+0.2	h11

Other sizes available on request.
Standard sizes for housing according to ISO 5597 are printed in bold.

SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal



MATERIAL:

INNER O'RING : NT4/b.

Spareage NT4/b is Acrylonitrile Butadiene Rubber (NBR) compound with a hardness of 70°/75° shore 'A'. (FKM O'ring for 200°C Temp.)

OUTER SEAL RING: BFT.

Spareage BFT is a Bronze Filled with PTFE Compound with Bronze content of 40% (for higher pressure 60% BFT is recommended).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (Upto +200°C on request).

Pressure: 400 BAR.

Speed: 10 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty cylinders.

Stick slip free operation.

Machine tools.

Injection moulding machines.

Earthmoving equipment.

DETAILS:

PTA is a double acting piston seal suitable for light to medium duty hydraulic cylinders & suitable for cylinders with small groove dimensions thus enabling a compact piston.

The PTA is a combination of NBR O'Ring energiser & outer seal ring made of PTFE added with a filler to increase the resistance of seal ring to high pressure.

Generally, Bronze is the used filler. But, Glass/Graphite filled PTFE PTA compact seal can also be made.

The PTA seal can be easily mounted on a single piece piston and is also suitable for two piece piston application. Refer pg. 182 for installation method.

The Bronze filled PTFE outer seal ring, when in contact the cylinder bore, the PTFE ensures a stick slip free movement & reduces friction to a minimum. The filler increases the strength in the seal ring to prevent it from extruding & to withstand pressures as high as 400 BAR.

FEATURES:

Well proven design.

Self lubricating seal ring.

High surface speed.

Friction at minimum.

Compact piston.

Any size upto 1200mm available on request.

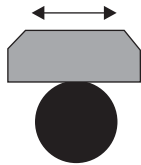
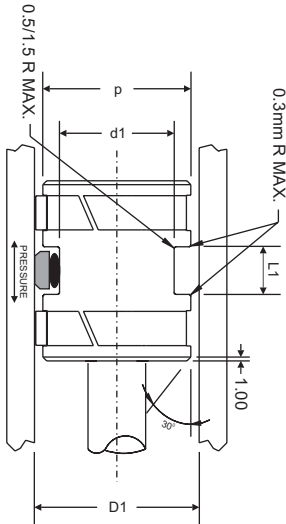
SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

Style PTA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L1	p 100 Bar	p 200 Bar	p 400 Bar	O-Ring Part No.
PTA 0030801	8.0	3.1	2.2	7.40	7.60	7.70	OR 17800257
PTA 0050801 (Stock Size)	10.0	5.1	2.2	9.40	9.60	9.70	OR 17800447
PTA 0060801	11.0	6.1	2.2	10.40	10.60	10.70	OR 17800528
PTA 0070801 (Stock Size)	12.0	7.1	2.2	11.40	11.60	11.70	OR 17800675
PTA 0090801	14.0	9.1	2.2	13.40	13.60	13.70	OR 17800874
PTA 0070802 (Stock Size)	15.0	7.5	3.2	14.20	14.50	14.70	OR 26200710
PTA 0080801 (Stock Size)	16.0	8.5	3.2	15.20	15.50	15.70	OR 26200800
PTA 0090802	17.0	9.5	3.2	16.20	16.50	16.70	OR 26209200
PTA 0100801 (Stock Size)	18.0	10.5	3.2	17.20	17.50	17.70	OR 26200100
PTA 0120801 (Stock Size)	20.0	12.5	3.2	19.20	19.50	19.70	OR 26201191
PTA 0140801 (Stock Size)	22.0	14.5	3.2	21.20	21.50	21.70	OR 26201394
PTA 0160801	24.0	16.5	3.2	23.20	23.50	23.70	OR 26201588
PTA 0170801 (Stock Size)	25.0	17.5	3.2	24.20	24.50	24.70	OR 26201712
PTA0140802 (Stock Size)	25.0	14.0	4.2	24.20	24.50	24.60	OR35301387
PTA 0180801 (Stock Size)	26.0	18.5	3.2	25.20	25.50	25.70	OR 26201796
PTA 0190801	27.0	19.5	3.2	26.20	26.50	26.70	OR 26201872
PTA 0200801 (Stock Size)	28.0	20.5	3.2	27.20	27.50	27.70	OR 26202029
PTA 0220801 (Stock Size)	30.0	22.5	3.2	29.20	29.50	29.70	OR 26202189
PTA 0240801 (Stock Size)	32.0	24.5	3.2	31.20	31.50	31.70	OR 26202347
PTA 0260801	34.0	26.5	3.2	33.20	33.50	33.70	OR 26202507
PTA 0270801 (Stock Size)	35.0	27.5	3.2	34.20	34.50	34.70	OR 26202664
PTA 0280801 (Stock Size)	36.0	28.5	3.2	35.20	35.50	35.70	OR 26202824
PTA 0300801 (Stock Size)	38.0	30.5	3.2	37.20	37.50	37.70	OR 26202982
PTA 0310801	39.0	31.5	3.2	38.20	38.50	38.70	OR 26203130
PTA 0290801 (Stock Size)	40.0	29.0	4.2	39.20	39.50	39.60	OR 35302817
PTA 0310802 (Stock Size)	42.0	31.0	4.2	41.20	41.50	41.60	OR 35302974
PTA 0330801	44.0	33.0	4.2	43.20	43.50	43.60	OR 35303200
PTA 0340801 (Stock Size)	45.0	34.0	4.2	44.20	44.50	44.60	OR 35303292
PTA 0350801	46.0	35.0	4.2	45.20	45.50	45.60	OR 35303452
PTA 0370801 (Stock Size)	48.0	37.0	4.2	47.20	47.50	47.60	OR 35303609
PTA 0390801 (Stock Size)	50.0	39.0	4.2	49.20	49.50	49.60	OR 35303769
PTA 0410801	52.0	41.0	4.2	51.20	51.50	51.60	OR 35304000
PTA 0420801	53.0	42.0	4.2	52.20	52.50	52.60	OR 35304128
PTA 0430801	54.0	43.0	4.2	53.20	53.50	53.60	OR 35304200
PTA 0440801 (Stock Size)	55.0	44.0	4.2	54.20	54.50	54.60	OR 35304285
PTA 0450801 (Stock Size)	56.0	45.0	4.2	55.20	55.50	55.60	OR 35304470
PTA 0460801	57.0	46.0	4.2	56.20	56.50	56.60	OR 35304536
PTA 0470801	58.0	47.0	4.2	57.20	57.50	57.60	OR 35304602
PTA 0490801 (Stock Size)	60.0	49.0	4.2	59.20	59.50	59.60	OR 35304722



Tolerance Table

D1	d1	L1
H9	h9	+0.2

Other sizes available on request.

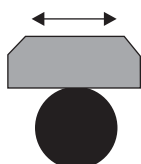
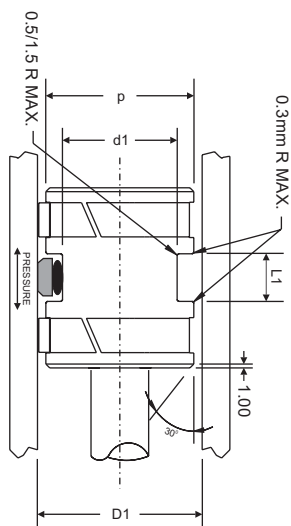
SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

Style PTA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L1	p 100 Bar	p 200 Bar	p 400 Bar	O-Ring Part No.
PTA 0500802	61.0	50.0	4.2	60.2	60.5	60.6	OR 35304950
PTA 0510801	62.0	51.0	4.2	61.2	61.5	61.6	OR 35305040
PTA 0520801 (Stock Size)	63.0	52.0	4.2	62.2	62.5	62.6	OR 35305080
PTA0470804 (Stock Size)	63.0	47.5	6.3	62.0	62.4	62.6	OR53304699
PTA 0530801	64.0	53.0	4.2	63.2	63.5	63.6	OR 35305200
PTA 0540801 (Stock Size)	65.0	54.0	4.2	64.2	64.5	64.6	OR 35305357
PTA 0570801	68.0	57.0	4.2	67.2	67.5	67.6	OR 35305600
PTA 0590801 (Stock Size)	70.0	59.0	4.2	69.2	69.5	69.6	OR 35305674
PTA 0540802 (Stock Size)	70.0	54.5	6.3	69.0	69.4	69.6	OR 53305334
PTA 0610801	72.0	61.0	4.2	71.2	71.5	71.6	OR 35305992
PTA 0640803 (Stock Size)	75.0	64.0	4.2	74.2	74.5	74.6	OR 35306309
PTA 0590802	75.0	59.5	6.3	74.0	74.4	74.6	OR 53305652
PTA 0660801	77.0	66.0	4.2	76.2	76.5	76.6	OR 35306500
PTA 0640801 (Stock Size)	80.0	64.5	6.3	79.0	79.4	79.6	OR 53306287
PTA0690803 (Stock Size)	80.0	69.0	4.2	79.2	79.5	79.6	OR35306627
PTA 0590803	80.0	59.0	8.1	78.8	79.3	79.5	OR 69905730
PTA 0690801 (Stock Size)	85.0	69.5	6.3	84.0	84.4	84.6	OR 53306922
PTA 0640802	85.0	64.0	8.1	83.8	84.3	84.5	OR 69906300
PTA 0740801 (Stock Size)	90.0	74.5	6.3	89.0	89.4	89.6	OR 53307239
PTA 0690802 (Stock Size)	90.0	69.0	8.1	88.8	89.3	89.5	OR 69906800
PTA 0790801 (Stock Size)	95.0	79.5	6.3	94.0	94.4	94.6	OR 53307874
PTA 0740802	95.0	74.0	8.1	93.8	94.3	94.5	OR 69907300
PTA 0840801 (Stock Size)	100.0	84.5	6.3	98.8	99.3	99.5	OR 53308192
PTA 0790802 (Stock Size)	100.0	79.0	8.1	98.8	99.3	99.5	OR 69907800
PTA 0890801 (Stock Size)	105.0	89.5	6.3	104.0	104.4	104.6	OR 53308827
PTA 0840802	105.0	84.0	8.1	103.8	104.3	104.5	OR 69908300
PTA 0940801 (Stock Size)	110.0	94.5	6.3	109.0	109.4	109.6	OR 53309144
PTA 0890802 (Stock Size)	110.0	89.0	8.1	108.8	109.3	109.5	OR 69908800
PTA 0990801 (Stock Size)	115.0	99.5	6.3	114.0	114.4	114.6	OR 53309779
PTA 0940802 (Stock Size)	115.0	94.0	8.1	113.8	114.3	114.5	OR 69909100
PTA 1040801 (Stock Size)	120.0	104.5	6.3	119.0	119.4	119.6	OR 53310414
PTA 0990802 (Stock Size)	120.0	99.0	8.1	118.8	119.3	119.5	OR 69909800
PTA 1090801 (Stock Size)	125.0	109.5	6.3	124.0	124.4	124.6	OR 53310732
PTA 1040802 (Stock Size)	125.0	104.0	8.1	123.8	124.3	124.5	OR 69910300
PTA 1140801 (Stock Size)	130.0	114.5	6.3	129.0	129.4	129.6	OR 53311367
PTA 1090803 (Stock Size)	130.0	109.0	8.1	128.8	129.3	129.5	OR 69910800
PTA 1140802 (Stock Size)	135.0	114.0	8.1	133.8	134.3	134.5	OR 69911200
PTA 1190801 (Stock Size)	140.0	119.0	8.1	138.8	139.3	139.5	OR 69911684
PTA1240802 (Stock Size)	140.0	124.5	6.3	139.0	139.4	139.6	OR53312319



Tolerance Table

D1	d1	L1
H9	h9	+0.2

Other sizes available on request.

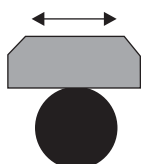
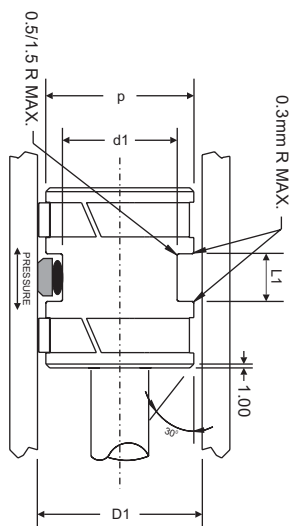
SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

Style PTA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L1	p 100 Bar	p 200 Bar	p 400 Bar	O-Ring Part No.
PTA 1240801 (Stock Size)	145.0	124.0	8.1	143.8	144.3	144.5	OR 69912319
PTA 1290801 (Stock Size)	150.0	129.0	8.1	148.8	149.3	149.5	OR 69912637
PTA1340802 (Stock Size)	150.0	134.5	6.3	149.0	149.4	149.6	OR53313272
PTA 1340801 (Stock Size)	155.0	134.0	8.1	153.8	154.3	154.5	OR 69913272
PTA 1390801 (Stock Size)	160.0	139.0	8.1	158.8	159.3	159.5	OR 69913589
PTA1440802 (Stock Size)	160.0	144.5	6.3	159.0	159.4	159.6	OR53314224
PTA 1440801 (Stock Size)	165.0	144.0	8.1	163.8	164.3	164.5	OR 69914224
PTA 1490801 (Stock Size)	170.0	149.0	8.1	168.8	169.3	169.5	OR 69914859
PTA 1540801 (Stock Size)	175.0	154.0	8.1	173.8	174.3	174.5	OR 69915177
PTA 1590801 (Stock Size)	180.0	159.0	8.1	178.8	179.3	179.5	OR 69915812
PTA1640802 (Stock Size)	180.0	164.5	6.3	179.0	179.4	179.6	OR53316447
PTA 1640801 (Stock Size)	185.0	164.0	8.1	183.8	184.3	184.5	OR 69916129
PTA 1690801 (Stock Size)	190.0	169.0	8.1	188.8	189.3	189.5	OR 69916447
PTA 1740801 (Stock Size)	195.0	174.0	8.1	193.8	194.3	194.5	OR 69917082
PTA 1790801 (Stock Size)	200.0	179.0	8.1	198.8	199.3	199.5	OR 69917717
PTA1840801 (Stock Size)	200.0	184.5	6.3	199.0	199.4	199.6	OR53318352
PTA 1890801 (Stock Size)	210.0	189.0	8.1	208.8	209.3	209.5	OR 69918644
PTA 1990801 (Stock Size)	220.0	199.0	8.1	218.8	219.3	219.5	OR 69919622
PTA2040802 (Stock Size)	225.0	204.0	8.1	223.8	224.3	224.5	OR 69920257
PTA 2090801 (Stock Size)	230.0	209.0	8.1	228.8	229.3	229.5	OR 69920800
PTA 2190801 (Stock Size)	240.0	219.0	8.1	238.8	239.3	239.5	OR 69921800
PTA 2290801 (Stock Size)	250.0	229.0	8.1	248.8	249.3	249.5	OR 69922797
PTA 2390801 (Stock Size)	260.0	239.0	8.1	258.8	259.3	259.5	OR 69923600
PTA 2490801 (Stock Size)	270.0	249.0	8.1	268.8	269.3	269.5	OR 69924800
PTA 2590801 (Stock Size)	280.0	259.0	8.1	278.8	279.3	279.5	OR 69925337
PTA 2690801 (Stock Size)	290.0	269.0	8.1	288.8	289.3	289.5	OR 69926600
PTA 2790801 (Stock Size)	300.0	279.0	8.1	298.8	299.3	299.5	OR 69927750
PTA 2890801	310.0	289.0	8.1	308.8	309.3	309.5	OR 69928600
PTA 2990801	320.0	299.0	8.1	318.8	319.3	319.5	OR 69929750
PTA 3050801	330.0	305.5	8.1	328.8	329.3	329.5	OR 69930417
PTA 3150801	340.0	315.5	8.1	338.8	339.3	339.5	OR 69931400
PTA 3250801	350.0	325.5	8.1	348.8	349.3	349.5	OR 69932500
PTA 3350801 (Stock Size)	360.0	335.5	8.1	358.8	359.3	359.5	OR 69932957
PTA 3450801	370.0	345.5	8.1	368.8	369.3	369.5	OR 69934227
PTA 3550801	380.0	355.5	8.1	378.8	379.3	379.5	OR 69935497
PTA 3650801	390.0	365.5	8.1	388.8	389.3	389.5	OR 69935600
PTA 3750801 (Stock Size)	400.0	375.5	8.1	398.8	399.3	399.5	OR 69937000
PTA 3850801	410.0	385.5	8.1	408.8	409.3	409.5	OR 69938037
PTA 3950801	420.0	395.5	8.1	418.8	419.3	419.5	OR 69939307



Tolerance Table

D1	d1	L1
H9	h9	+0.2

Other sizes available on request.

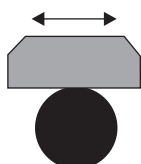
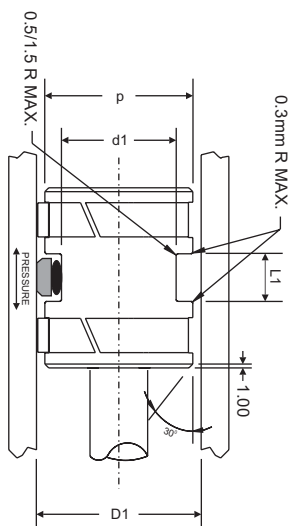
SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

Style PTA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L1	p 100 Bar	p 200 Bar	p 400 Bar	O-Ring Part No.
PTA 4050801	430.0	405.5	8.1	428.8	429.3	429.5	OR 69940000
PTA 4150801	440.0	415.5	8.1	438.8	439.3	439.5	OR 69940900
PTA 4250801 (Stock Size)	450.0	425.5	8.1	448.8	449.3	449.5	OR 69941796
PTA 4350801	460.0	435.5	8.1	458.8	459.3	459.5	OR 69943066
PTA 4450801	470.0	445.5	8.1	468.8	469.3	469.5	OR 69944336
PTA 4550801	480.0	455.5	8.1	478.8	479.3	479.5	OR 69945000
PTA 4650801	490.0	465.5	8.1	488.8	489.3	489.5	OR 69946300
PTA 4750801 (Stock Size)	500.0	475.5	8.1	498.8	499.3	499.5	OR 69946876
PTA 4850801	510.0	485.5	8.1	508.8	509.3	509.5	OR 69948146
PTA 4950801	520.0	495.5	8.1	518.8	519.3	519.5	OR 69949416
PTA 5050801	530.0	505.5	8.1	528.8	529.3	529.5	OR 69950000
PTA 5150801	540.0	515.5	8.1	538.8	539.3	539.5	OR 69950686
PTA 5250801 (Stock Size)	550.0	525.5	8.1	548.8	549.3	549.5	OR 69952100
PTA 5350801	560.0	535.5	8.1	558.8	559.3	559.5	OR 69953226
PTA 5450801	570.0	545.5	8.1	568.8	569.3	569.5	OR 69954350
PTA 5550801	580.0	555.5	8.1	578.8	579.3	579.5	OR 69954600
PTA 5650801	590.0	565.5	8.1	588.8	589.3	589.5	OR 69955766
PTA 5750801 (Stock Size)	600.0	575.5	8.1	598.8	599.3	599.5	OR 69956500
PTA 5850801	610.0	585.5	8.1	608.8	609.3	609.5	OR 69958268
PTA 5950801	620.0	595.5	8.1	618.8	619.3	619.5	OR 69959400
PTA 6050801	630.0	605.5	8.1	628.8	629.3	629.5	OR 69960000
PTA 6150801	640.0	615.5	8.1	638.8	639.3	639.5	OR 69961400
PTA 6250801	650.0	625.5	8.1	648.8	649.3	649.5	OR 69962400
PTA 6350801	660.0	635.5	8.1	658.8	659.3	659.5	OR 69963348
PTA 6420801	670.0	642.0	9.5	668.6	669.0	669.4	OR 84064000
PTA 6520801	680.0	652.0	9.5	678.6	679.0	679.4	OR 84064950
PTA 6620801	690.0	662.0	9.5	688.6	689.0	689.4	OR 84065950
PTA 6720801	700.0	672.0	9.5	698.6	699.0	699.4	OR 84066950
PTA 6820801	710.0	682.0	9.5	708.6	709.0	709.4	OR 84067950
PTA 6920801	720.0	692.0	9.5	718.6	719.0	719.4	OR 84068950
PTA 7020801	730.0	702.0	9.5	728.6	729.0	729.4	OR 84069950
PTA 7120801	740.0	712.0	9.5	738.6	739.0	739.4	OR 84070950
PTA 7220801	750.0	722.0	9.5	748.6	749.0	749.4	OR 84071950
PTA 7320801	760.0	732.0	9.5	758.6	759.0	759.4	OR 84072950
PTA 7420801	770.0	742.0	9.5	768.6	769.0	769.4	OR 84073950
PTA 7520801	780.0	752.0	9.5	778.6	779.0	779.4	OR 84074950
PTA 7620801	790.0	762.0	9.5	788.6	789.0	789.4	OR 84075950
PTA 7720801	800.0	772.0	9.5	798.6	799.0	799.4	OR 84076450
PTA 7820801	810.0	782.0	9.5	808.6	809.0	809.4	OR 84077900



Tolerance Table

D1	d1	L1
H9	h9	+0.2

Other sizes available on request.

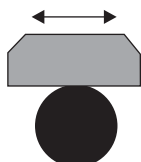
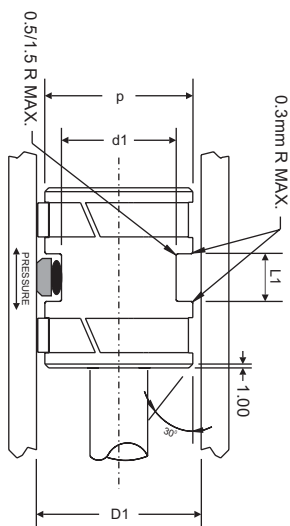
SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

Style PTA Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L1	p 100 Bar	p 200 Bar	p 400 Bar	O-Ring Part No.
PTA 7920801	820.0	792.0	9.5	818.6	819.0	819.4	OR 84078900
PTA 8020801	830.0	802.0	9.5	828.6	829.0	829.4	OR 84080000
PTA 8120801	840.0	812.0	9.5	838.6	839.0	839.4	OR 84081100
PTA 8220801	850.0	822.0	9.5	848.6	849.0	849.4	OR 84081500
PTA 8320801	860.0	832.0	9.5	858.6	859.0	859.4	OR 84082900
PTA 8420801	870.0	842.0	9.5	868.6	869.0	869.4	OR 84083700
PTA 8520801	880.0	852.0	9.5	878.6	879.0	879.4	OR 84084700
PTA 8620801	890.0	862.0	9.5	888.6	889.0	889.4	OR 84085800
PTA 8720801	900.0	872.0	9.5	898.6	899.0	899.4	OR 84086500
PTA 8820801	910.0	882.0	9.5	908.6	909.0	909.4	OR 84088000
PTA 8920801	920.0	892.0	9.5	918.6	919.0	919.4	OR 84089000
PTA 9020801	930.0	902.0	9.5	928.6	929.0	929.4	OR 84090000
PTA 9120801	940.0	912.0	9.5	938.6	939.0	939.4	OR 84091000
PTA 9220801	950.0	922.0	9.5	948.6	949.0	949.4	OR 84092000
PTA 9370801	965.0	937.0	9.5	963.6	964.0	964.4	OR 84089000



Tolerance Table

D1	d1	L1
H9	h9	+0.2

Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PTA

TYPE: Double Acting Composite Seal

ISO Standard Grooves (5597 - 1980 E)

At present, the International Standard Organization (ISO) is preparing parameters for the standard housing for piston and rod seals.

Glyd Ring groove dimensions confirm basically to this proposal.

Glyd Ring series can be installed directly in the ISO grooves according to the table below.

Diameter Groups Bore Diameter (H9)	Groove Dimensions Groove Diameter (h9)	
	Radial Depth	Radial (+0.2 Depth -0.0)
16 - 20	2.5	2.2
16 - 39.9 40	3.75	3.2
25 - 39.9 40 - 79.9 80 - 100	5.5	4.2
50 - 79.9 80 - 132.9 133 - 320	7.75	6.3
125 - 132.9 133 - 320	10.5	8.1
250 - 329.9 330 - 500	12.25	8.1

- Draft proposal DP - 7425 1 hydraulic fluid power.
- Piston seals housings.
- Elastomer energized, plastic face seals.
- Dimensions and tolerances.

SECTION: PISTON SEAL

STYLE: PCC

TYPE: Double Acting Compact Seal

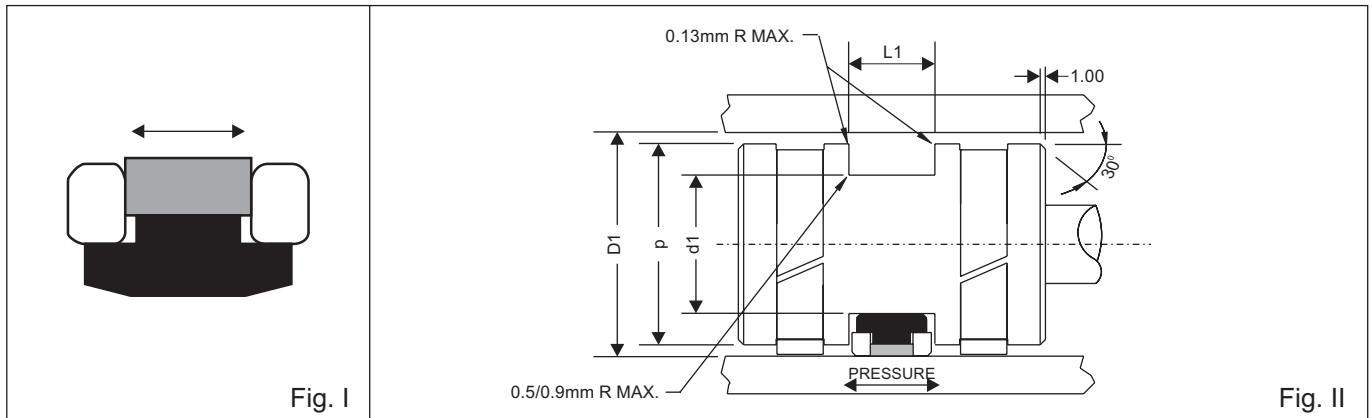


Fig. I

Fig. II

MATERIAL:

Energizer: NT5/a (Spareage NT5/a is a Acrylonitrile Butadiene Rubber Compound (NBR) with a hardness of 75°/80° shore 'A'.)

Back-up rings: Thermoplastic Polymer.

Seal Ring: Composite PTFE.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C.

Pressure: 500 bar.

Speed: 1.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Heavy duty application.

Stick slip free operation.

Earthmoving equipment.

Frequent pressure surges of high magnitudes.

DETAILS:

The Spareage Style PCC is a robust heavy duty double acting piston seal commonly used for the most demanding high pressure application. It comprises of a T-shaped elastomer (NBR) which provides the initial energizing for effective sealing at low and high pressures. The elastomer preloads a PTFE ring against the tube wall and the polyamide back-up ring provides resistance to extrusion to the NBR sealing element. The PCC seal integrates the benefits of compact design, low friction and high performance in a single piston seal. Its design offers overall stability, wear resistance, sealability, low friction compact grooves, easy installation and maintenance free long life.

FEATURES:

High pressure capability (up to 800 bar).

Excellent pressure surge absorption capability.

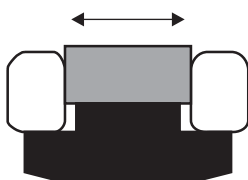
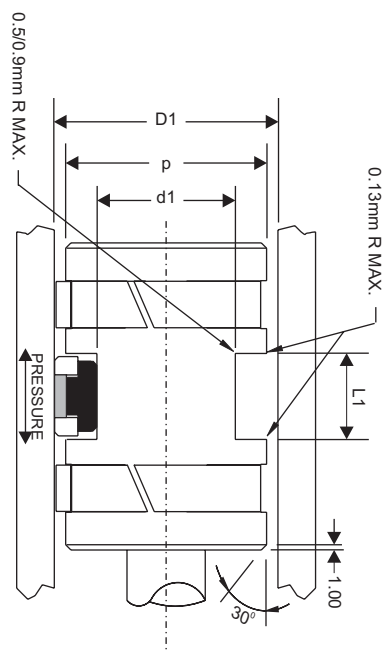
Best combination for load holding and low friction sealing.

SECTION: PISTON SEAL

STYLE: PCC

TYPE: Double Acting Compact Seal

Style PCC Metric Ordering Information (Dimensions in mm)



Tolerance Table		
D1	d1	L1
H9	h9	+0.2

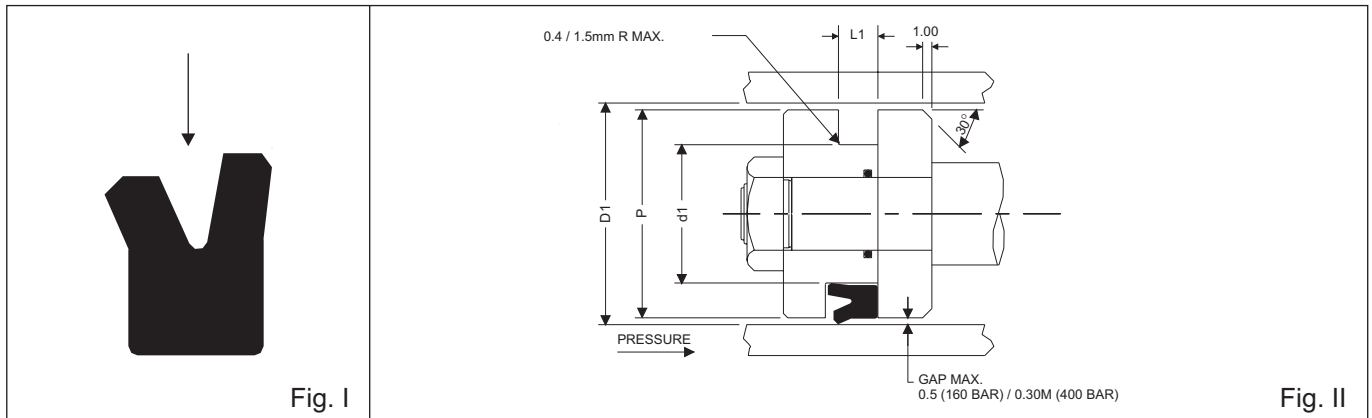
Part No.	D1	d1	L1	P 350 Bar	P 500 Bar
PCC 0360901	50.0	36.0	9.0	49.45	49.60
PCC 0460901	60.0	46.0	9.0	59.46	59.61
PCC 0500901	65.0	50.0	11.0	64.33	64.59
PCC 0550901	70.0	55.0	11.0	69.33	69.59
PCC 0650901	80.0	65.0	11.0	79.33	79.59
PCC 0700901	85.0	70.0	11.0	84.35	84.61
PCC 0750901	90.0	75.0	11.0	89.35	89.61
PCC 0800901	95.0	80.0	12.5	94.20	94.58
PCC 0850901	100.0	85.0	12.5	99.20	99.58
PCC 0900901	105.0	90.0	12.5	104.20	104.58
PCC 0950901	110.0	95.0	12.5	109.20	109.58
PCC 1000901	115.0	100.0	12.5	114.20	114.58
PCC 1050901	120.0	105.0	12.5	119.20	119.58
PCC 1020901	125.0	102.0	16.0	124.19	124.54
PCC 1070901	130.0	107.0	16.0	129.19	129.54
PCC 1120901	135.0	112.0	16.0	134.19	134.54
PCC 1170901	140.0	117.0	16.0	139.19	139.54
PCC 1270901	150.0	127.0	16.0	149.19	149.54
PCC 1370901	160.0	137.0	16.0	159.19	159.54
PCC 1470901	170.0	147.0	16.0	169.19	169.54
PCC 1570901	180.0	157.0	16.0	179.19	179.54
PCC 1620901	185.0	162.0	16.0	184.21	184.56
PCC 1670901	190.0	167.0	16.0	189.21	189.56
PCC 1770901	200.0	177.0	16.0	199.21	199.56
PCC 1870901	210.0	187.0	16.0	209.21	209.56
PCC 2020901	225.0	202.0	16.0	224.21	224.56
PCC 2070901	230.0	207.0	16.0	229.21	229.56
PCC 2170901	240.0	217.0	16.0	239.21	239.50
PCC 2220901	250.0	222.0	17.5	249.15	249.51
PCC 2320901	260.0	232.0	17.5	259.16	259.52
PCC 2420901	270.0	242.0	17.5	269.16	269.52
PCC 2520901	280.0	252.0	17.5	279.16	279.52
PCC 2920901	320.0	292.0	17.5	319.17	319.53

Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PUB

TYPE: Single Acting Seal



MATERIAL:

PUX - is a polyurethane compound of 92° shore 'A' hardness.

NT6/a - is a Acrylonitrile Butadiene Rubber (NBR) compound of shore 'A' 90°.

MAX. OPERATING CONDITIONS:

Temp range: - 30°C to +100°C (upto 200°C on request)

Pressure: PUX - 400 BAR.

NT6/a - 160 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty hydraulic cylinders.

Also suitable for double acting cylinders.

Can also be used in an equivalent of SUA piston seal.

DETAILS:

The Spareage style PUB seal is a general purpose seal & has a good overall performance. It is a seal suited for split piston but can also be used with a single piston if made in NBR.

The PUB seal is available in 2 materials: i.e. NBR and polyurethane. Due to its typical piston sealing design having a shorter external lip it allows pressure to act into the groove ensuring a maximum lip contact with the bore in pressurised conditions. Due to excellent wear resistance properties of polyurethane the life expected is 3 times that of NBR.

FEATURES:

Good overall performance.

Typical piston seal design.

Any size upto 1500 mm dia. available on request.

SECTION: PISTON SEAL
STYLE: PUB
TYPE: Single Acting Seal
Style PUB Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)
PUB0061101	PUB0065901	12.70	6.30	5.55	PUB0501104	PUB0505904	64.00	50.00	11.00
PUB0081101	PUB0085901	17.50	8.70	4.76	PUB0551101	PUB0555901	65.00	55.00	11.00
PUB0121101	PUB0125902	19.05	12.70	4.36	PUB0351103	PUB0355904	65.00	35.00	7.00
PUB0111101	PUB0115901	19.05	11.11	5.55	PUB0521103	PUB0525902	68.00	52.00	9.00
PUB0141101	PUB0145901	22.00	14.00	6.50	PUB0601102	PUB0605902	70.00	60.00	8.50
PUB0171101	PUB0175901	25.00	17.00	6.30	PUB0501101	PUB0505902	70.00	50.00	17.50
PUB0181101	PUB0185901	26.00	18.00	8.00	PUB0651102	PUB0655902	72.00	65.00	7.00
PUB0111102	PUB0115902	26.00	11.80	13.00	PUB0651101	PUB0655901	75.00	65.00	11.00
PUB0201101	PUB0205902	28.00	20.00	6.30	PUB0501105	PUB0505901	76.20	50.80	14.00
PUB0221102	PUB0225902	28.00	22.00	11.00	PUB0601103	PUB0605904	76.20	60.32	14.28
PUB0161101	PUB0165901	28.00	16.00	8.00	PUB0631101	PUB0635901	78.00	63.00	11.00
PUB0151101	PUB0155902	28.00	15.00	7.50	PUB0601101	PUB0605903	80.00	60.00	11.00
PUB0201102	PUB0205901	30.00	20.00	7.00	PUB0671101	PUB0675901	80.00	67.00	9.00
PUB0221101	PUB0225901	30.00	22.00	6.30	PUB0631102	PUB0635902	80.00	63.00	17.50
PUB0231101	PUB0235901	31.65	23.46	5.70	PUB0751101	PUB0755904	88.00	75.00	10.50
PUB0241101	PUB0245901	32.00	24.00	6.30	PUB0801101	PUB0805903	90.00	80.00	11.00
PUB0251103	PUB0255901	38.00	25.00	11.00	PUB0881102	PUB0885901	100.00	88.00	8.00
PUB0251102	PUB0255903	38.10	25.40	7.30	PUB0891101	PUB0895901	101.00	89.00	7.93
PUB0281103	PUB0285903	39.00	28.57	6.00	PUB0881101	PUB0885904	101.60	88.90	7.93
PUB0301101	PUB0305901	40.00	30.00	6.30	PUB0821101	PUB0825901	102.10	82.55	11.11
PUB0251104	PUB0255902	40.00	25.00	13.00	PUB0901101	PUB0905902	107.00	90.00	13.50
PUB0251105	PUB0255904	40.00	25.50	9.50	PUB0881103	PUB0885903	120.65	88.90	15.87
PUB0281101	PUB0285901	42.00	28.00	8.00	PUB1101103	PUB1105903	125.00	110.00	10.50
PUB0281102	PUB0285902	42.00	28.50	8.00	PUB1101101	PUB1105901	125.00	110.00	11.00
PUB0351101	PUB0355902	45.00	35.00	9.70	PUB1051102	PUB1055901	125.00	105.00	17.50
PUB0331101	PUB0335901	45.00	33.00	10.00	PUB1101102	PUB1105902	130.00	110.00	13.00
PUB0351102	PUB0355903	47.70	35.00	10.50	PUB1051101	PUB1055902	130.00	105.00	16.00
PUB0381101	PUB0385901	50.00	38.00	11.00	PUB1201101	PUB1205902	135.00	120.00	12.00
PUB0401101	PUB0405902	50.00	40.00	8.00	PUB1151102	PUB1155902	135.00	115.00	14.00
PUB0321101	PUB0325902	50.00	32.00	7.00	PUB1151101	PUB1155901	140.00	115.00	27.00
PUB0421102	PUB0425901	50.00	42.00	9.00	PUB1301101	PUB1305901	152.60	130.00	17.50
PUB0421101	PUB0425902	55.00	42.00	11.00	PUB1501101	PUB1505902	180.00	150.00	27.00
PUB0521102	PUB0525901	62.00	52.00	8.00	PUB1801104	PUB1805902	200.00	180.00	11.00
PUB0501103	PUB0505903	63.00	50.00	13.00	PUB1801101	PUB1805903	200.00	180.00	15.00
PUB0481101	PUB0485901	63.00	48.00	9.00	PUB1701101	PUB1705901	200.00	170.00	17.50
PUB0511101	PUB0515901	63.50	51.00	10.00	PUB1801102	PUB1805904	203.20	180.00	14.50

Other sizes available on request.

Moulds are available for all the above listed sizes.

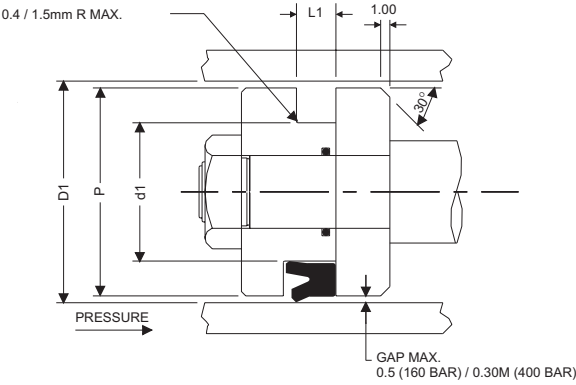
SECTION: PISTON SEALS

STYLE: PUB

TYPE: Single Acting Seal

Style PUB Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)
PUB1801103	PUB1805905	203.20	180.00	19.00
PUB2151101	PUB2155901	240.00	215.00	17.00
PUB2301101	PUB2305901	250.00	230.00	15.00
PUB2201101	PUB2205902	250.00	220.00	20.50
PUB2251101	PUB2255901	250.00	225.00	20.50
PUB2461101	PUB2465901	258.00	246.80	12.00
PUB2401101	PUB2405901	260.00	240.00	16.00
PUB3021101	PUB3025901	312.00	302.00	11.50
PUB2801101	PUB2805901	320.00	280.00	34.00
PUB3751101	PUB3755901	395.00	375.00	13.00
PUB4221101	PUB4225901	457.20	422.20	19.00



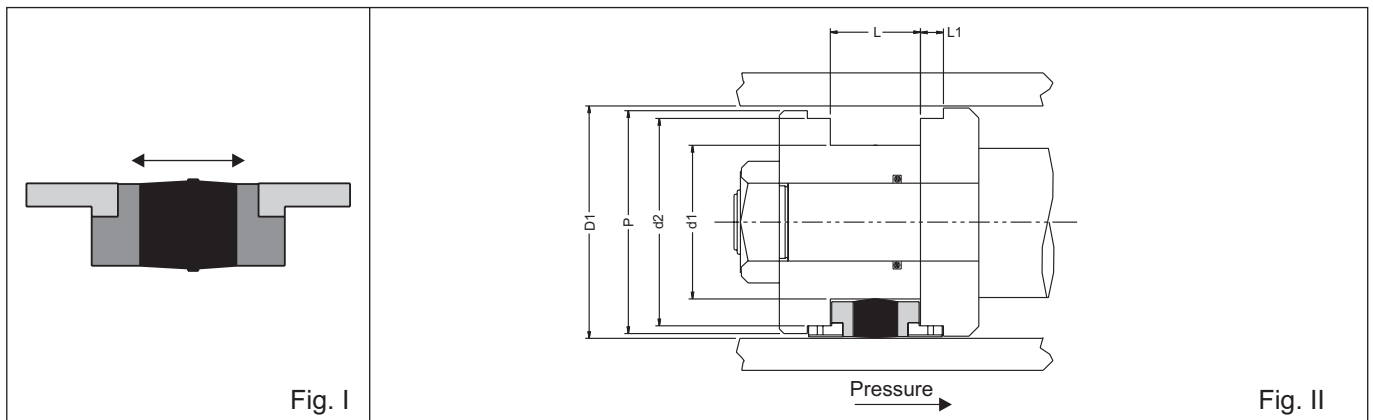
Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: PISTON SEAL

STYLE: PCS

TYPE: Compact Seal



MATERIAL:

Energizer - NT5/b (Spareage NT5/b is a Acrylonitrile Butadiene Rubber Compound (NBR) with a hardness of 80°/85° shore 'A')

Backup Rings - Fabric Impregnated Rubber, bonded with sealing element thus forming integral component.

Guide Rings - Thermoplastic Polymer.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto 200°C on request)

Pressure : 500 Bar.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Heavy duty application.

Earth moving cylinders.

DETAILS:

The Spareage style PCS is a robust heavy duty double acting piston seal suitable for split piston. PCS style seal comprising of an elastomeric sealing element which automatically adjust itself with the changes in pressure and had an integral fabric reinforcement for backup to avoid extrusion of the elastomeric element during high pressure. Two guide rings minimise the extrusion gap thus provide extra backup and guides the piston in cylinder bore.

FEATURES:

High pressure capability upto 500 bar.

Small section.

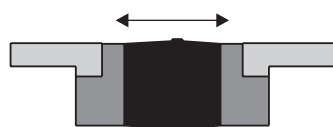
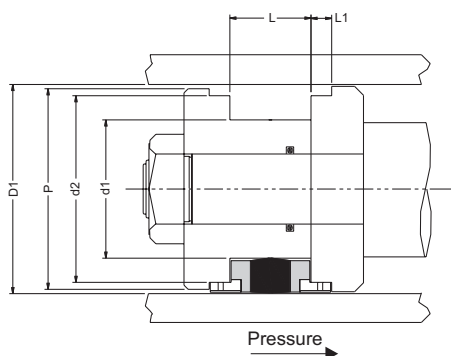
Easy to assemble.

SECTION: PISTON SEAL

STYLE: PCS

TYPE: Compact Seal

Style PCS Metric Ordering Information (Dimensions in mm)



Tolerance Table

D	d1	L	L1	d2	p
H9	h9	+0.2	+0.2	h9	h11

Part No.	D1	d1	L	L1	d2	p
PCS 0128301	25.00	12.00	12.40	6.35	21.45	23.73
PCS 0198304	28.57	19.05	14.68	6.35	25.65	27.64
PCS 0178301	30.00	17.00	15.40	6.35	26.50	29.00
PCS 0198305	32.00	19.00	15.40	6.35	28.50	30.90
PCS 0228301	35.00	22.00	15.40	6.35	31.40	33.70
PCS 0228302	34.92	22.22	16.27	6.35	31.39	33.87
PCS 0258302	38.10	25.40	16.27	6.35	34.54	37.05
PCS 0248301	40.00	24.00	18.40	6.35	35.40	38.70
PCS 0258304	41.27	25.40	19.45	6.35	36.70	39.97
PCS 0328301	42.07	32.54	13.10	6.35	39.11	41.09
PCS 0288301	44.45	28.57	19.45	6.35	39.87	43.14
PCS 0298301	45.00	29.00	18.40	6.35	40.40	43.70
PCS 0308301	50.00	30.00	25.40	6.35	44.30	48.30
PCS 0348304	50.00	34.00	18.40	6.35	45.40	48.70
PCS 0348301	50.80	34.92	19.45	6.35	46.22	49.50
PCS 0388302	53.97	38.10	19.45	6.35	49.37	52.68
PCS 0398301	55.00	39.00	18.40	6.35	50.40	53.70
PCS 0418301	57.15	41.27	19.45	6.35	52.55	55.80
PCS 0448301	60.00	44.00	18.50	6.35	55.40	58.70
PCS 0448302	60.32	44.45	19.45	6.35	55.72	59.98
PCS 0478305	63.00	47.00	19.40	6.35	58.40	61.65
PCS 0478301	63.50	47.62	19.45	6.35	58.90	62.13
PCS 0508301	65.00	50.00	18.40	6.35	60.40	63.70
PCS 0508303	69.85	50.80	24.21	6.35	64.05	68.20
PCS 0508304	69.85	50.80	30.50	6.35	62.99	68.20
PCS 0508302	70.00	50.00	22.40	6.35	64.20	68.30
PCS 0538301	73.02	53.97	24.21	6.35	67.23	71.39
PCS 0558301	75.00	55.00	22.40	6.35	69.20	73.30
PCS 0568301	75.00	56.00	24.40	6.35	69.20	73.30
PCS 0578304	76.20	57.15	24.21	6.35	70.40	74.55
PCS 0608301	80.00	60.00	22.40	6.35	74.20	78.30
PCS 0638302	82.55	63.50	24.21	6.35	76.73	80.90
PCS 0638301	83.00	63.00	22.40	6.35	76.16	81.30
PCS 0658301	85.00	65.00	22.40	6.35	79.20	83.35
PCS 0698303	88.90	69.85	24.21	6.35	83.08	87.22
PCS 0708301	90.00	70.00	22.40	6.35	84.15	88.30
PCS 0708302	90.00	70.00	25.40	6.35	84.15	88.30
PCS 0738301	92.07	73.02	24.21	6.35	86.23	80.41
PCS 0758302	95.00	75.00	22.40	6.35	89.15	93.30

Other sizes available on request.

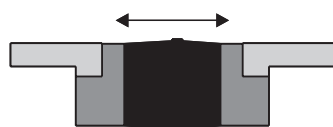
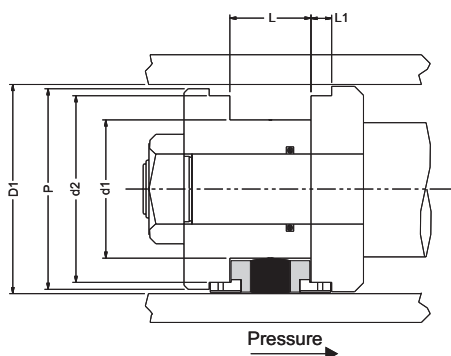
Moulds are available for all the above listed sizes.

SECTION: PISTON SEAL

STYLE: PCS

TYPE: Compact Seal

Style PCS Metric Ordering Information (Dimensions in mm)



Tolerance Table

D	d1	L	L1	d2	p
H9	h9	+0.2	+0.2	h9	h11

Part No.	D1	d1	L	L1	d2	p
PCS 0768301	95.25	76.20	24.21	6.35	89.41	93.56
PCS 0758301	100.00	75.00	22.40	6.35	93.15	98.05
PCS 0808301	100.00	8.00	25.40	6.35	94.15	98.31
PCS 0828304	101.60	82.55	24.21	6.35	95.76	99.90
PCS 0808302	105.00	80.00	22.40	6.35	98.10	103.00
PCS 0888302	107.95	88.90	24.21	6.35	102.08	106.23
PCS 0858301	110.00	85.00	25.40	6.35	103.10	108.00
PCS 0858302	110.00	85.00	22.40	6.35	103.10	108.00
PCS 0908301	110.00	90.00	25.40	6.35	104.15	108.30
PCS 0888303	114.30	88.90	32.15	6.35	107.42	112.33
PCS 0908302	115.00	90.00	22.40	6.35	108.10	113.00
PCS 0958301	120.00	95.00	22.40	6.35	113.10	118.00
PCS 1008301	120.00	100.00	25.40	6.35	114.10	118.30
PCS 0958302	120.65	95.25	32.15	6.35	113.74	118.65
PCS 1008302	125.00	100.00	25.40	6.35	118.10	123.00
PCS 1008303	125.00	100.00	32.40	6.35	118.10	123.00
PCS 1058302	125.00	105.00	25.40	6.35	119.15	123.30
PCS 1018301	127.00	101.60	32.15	6.35	120.09	124.98
PCS 1048301	130.00	104.00	32.40	6.35	123.10	128.00
PCS 1058303	130.00	105.00	25.40	6.35	123.10	128.00
PCS 1078301	133.35	107.95	32.15	6.35	126.42	131.30
PCS 1108301	135.00	110.00	25.40	6.35	128.10	133.00
PCS 1148301	139.70	114.30	32.15	6.35	132.77	137.65
PCS 1158301	140.00	115.00	25.40	6.35	133.00	138.00
PCS 1208304	140.00	120.00	25.40	6.35	134.10	138.30
PCS 1208301	145.00	120.00	25.40	6.35	138.30	142.95
PCS 1208303	146.05	120.65	32.15	6.35	139.10	144.00
PCS 1208305	150.00	120.00	38.40	6.35	143.00	148.00
PCS 1258301	150.00	125.00	25.40	6.35	143.00	148.00
PCS 1278301	152.40	127.00	32.15	6.35	145.44	150.35
PCS 1308302	155.00	130.00	25.40	6.35	148.00	153.00
PCS 1308301	160.00	130.00	25.40	6.35	153.00	157.90
PCS 1398301	165.10	139.70	32.15	6.35	158.12	163.01
PCS 1408302	170.00	140.00	25.40	6.35	162.95	167.87
PCS 1458301	175.00	145.00	35.40	6.35	167.95	172.87
PCS 1508301	180.00	150.00	35.40	6.35	172.95	177.87
PCS 1608302	180.00	160.00	31.40	6.35	172.95	177.87
PCS 1608301	190.00	160.00	35.40	6.35	182.93	187.87
PCS 1708301	200.00	170.00	35.40	6.35	192.96	197.84

Other sizes available on request.

Moulds are available for all the above listed sizes.

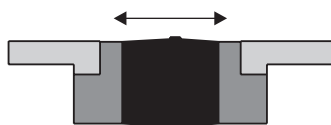
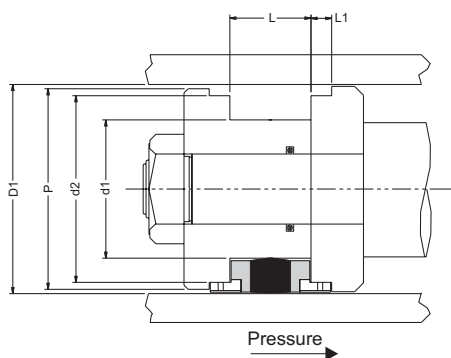
SECTION: PISTON SEAL

STYLE: PCS

TYPE: Compact Seal

Style PCS Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	L	L1	d2	p
PCS 1778301	203.20	177.80	32.15	6.35	196.16	201.03
PCS 1908301	220.00	190.00	35.40	6.35	212.70	217.90
PCS 2208301	250.00	220.00	35.40	6.35	242.90	247.86
PCS 2708301	300.00	270.00	35.40	6.35	292.90	297.86



Tolerance Table

D	d1	L	L1	d2	p
H9	h9	+0.2	+0.2	h9	h11

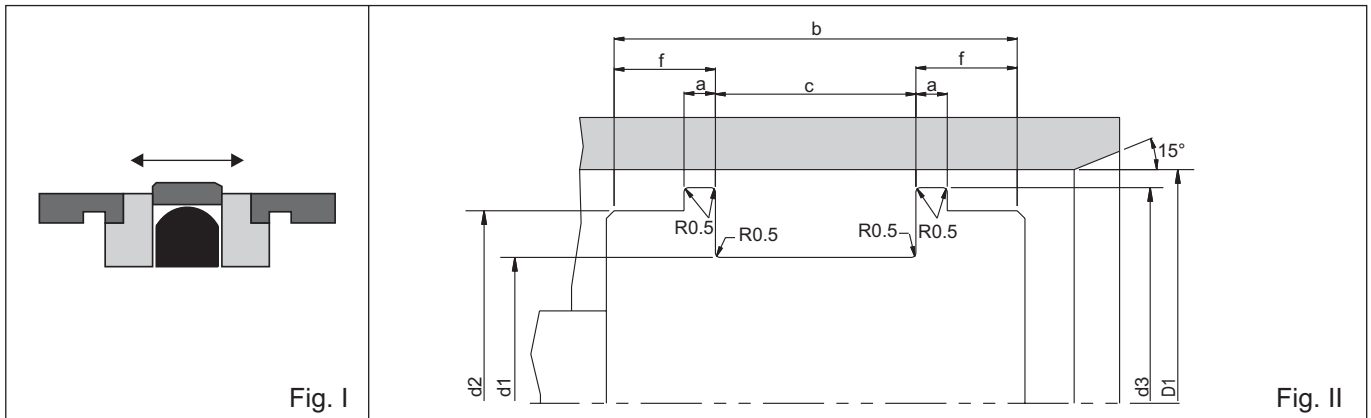
Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: PISTON SEAL

STYLE: PCI

TYPE: Compact Seal



MATERIAL:

Energizer - NT5/a (Spareage NT5/a is a Acrylonitrile Butadiene Rubber Compound (NBR) with a hardness of 75°/80° shore 'A')
Backup Rings - Thermoplastic Polymer
Seal Ring - Composite PTFE
Guide Rings - Phenolic Resin Fabric

MAX. OPERATING CONDITIONS:

Speed (max.): 1.0 mtrs./sec.
Temp. range: -30°C to +100°C (upto 200°C on request)
Pressure: 400 Bar. (upto 700 bar with modified piston grooves, contact Spareage for more details)

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.
Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Construction machine cylinders.
Stick slip free operation.
Big diameters & long stroke cylinders.

DETAILS:

The Spareage style PCI is a robust heavy duty double acting piston seal. PCI style seal comprising of a elastomeric energiser ring, Bronze Filled PTFE sealing ring. Two support rings made of Thermoplastic polymers and two guide rings.
The elastomeric ring energises the sealing ring to force it against cylinder bore, providing a sealing function at low pressure. The two support rings prevent extrusion a sealing ring in high pressure. Two guide ring make contact with cylinder bore thus guide the piston in heavy load condition.

FEATURES:

High pressure capability upto 700 bar.
Wide Guiding, to take maximum load.
Easy to assembled.

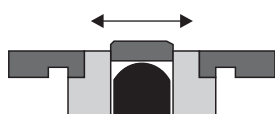
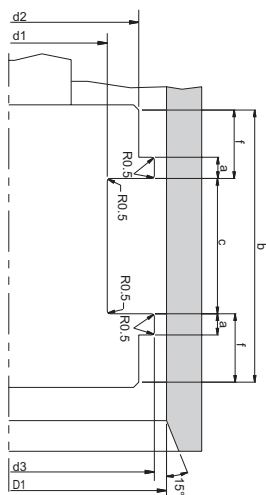
SECTION: PISTON SEAL

STYLE: PCI

TYPE: Compact Seal

Style PCI Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	b	d2	d3	a	c	f
PCI 0260901	40.0	26.0	32.0	32.0	36.0	3.50	15.50	8.25
PCI 0310901	45.0	31.0	32.0	37.0	41.0	3.00	15.50	8.25
PCI 0340902	50.0	34.0	39.0	42.0	46.0	3.00	20.50	9.25
PCI 0400902	56.0	40.0	39.0	48.0	52.0	3.00	20.50	9.25
PCI 0440902	60.0	44.0	39.0	52.0	56.0	3.00	20.50	9.25
PCI 0470901	63.0	47.0	39.0	55.0	59.0	3.00	20.50	9.25
PCI 0490901	65.0	49.0	39.0	57.0	61.0	3.00	20.50	9.25
PCI 0540901	70.0	54.0	39.0	62.0	66.0	3.00	20.50	9.25
PCI 0590901	75.0	59.0	39.0	67.0	71.0	3.00	20.50	9.25
PCI 0620901	80.0	62.0	43.0	72.0	76.0	3.00	22.50	10.25
PCI 0670901	85.0	67.0	43.0	77.0	81.0	3.00	22.50	10.25
PCI 0720901	90.0	72.0	43.0	82.0	86.0	3.00	22.50	10.25
PCI 0770901	95.0	77.0	43.0	87.0	91.0	3.00	22.50	10.25
PCI 0820901	100.0	82.0	43.0	92.0	96.0	3.00	22.50	10.25
PCI 0870901	105.0	87.0	43.0	97.0	101.0	3.00	22.50	10.25
PCI 0920901	110.0	92.0	43.0	102.0	106.0	3.00	22.50	10.25
PCI 0970901	115.0	97.0	43.0	107.0	111.0	3.00	22.50	10.25
PCI 1020901	120.0	102.0	43.0	112.0	116.0	3.00	22.50	10.25
PCI 1030901	125.0	103.0	53.0	115.0	121.0	4.00	26.50	13.25
PCI 1080901	130.0	108.0	53.0	120.0	126.0	4.00	26.50	13.25
PCI 1180902	140.0	118.0	53.0	130.0	136.0	4.00	26.50	13.25
PCI 1280901	150.0	128.0	53.0	140.0	146.0	4.00	26.50	13.25
PCI 1380901	160.0	138.0	53.0	150.0	156.0	4.00	26.50	13.25
PCI 1430901	165.0	143.0	57.0	155.0	161.0	6.00	26.50	15.25
PCI 1480901	170.0	148.0	57.0	160.0	166.0	6.00	26.50	15.25
PCI 1530901	175.0	153.0	57.0	165.0	171.0	6.00	26.50	15.25
PCI 1580901	180.0	158.0	57.0	170.0	176.0	6.00	26.50	15.25
PCI 1650901	190.0	165.0	64.0	180.0	186.0	4.50	31.50	16.25
PCI 1700901	195.0	170.0	64.0	185.0	191.0	4.50	31.50	16.25
PCI 1750901	200.0	175.0	64.0	190.0	196.0	4.50	31.50	16.25
PCI 1850901	210.0	185.0	71.0	200.0	206.0	8.00	31.50	19.75
PCI 1950902	220.0	195.0	71.0	210.0	216.0	8.00	31.50	19.75
PCI 2000901	225.0	200.0	71.0	215.0	221.0	8.00	31.50	19.75
PCI 2050901	230.0	205.0	85.0	220.0	226.0	15.0	31.50	26.75
PCI 2100901	235.0	210.0	85.0	225.0	231.0	15.0	31.50	26.75
PCI 2150901	240.0	215.0	85.0	230.0	236.0	15.0	31.50	26.75
PCI 2250901	250.0	225.0	85.0	240.0	246.0	15.0	31.50	26.75
PCI 2300901	255.0	230.0	85.0	245.0	251.0	15.0	31.50	26.75
PCI 2450901	270.0	245.0	85.0	260.0	266.0	15.0	31.50	26.75



Tolerance Table

D1	d1	d2
H9	h9	f8
d3	a	c
f8	d10	D10

Other sizes available on request.

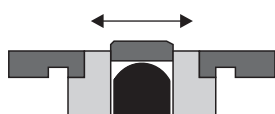
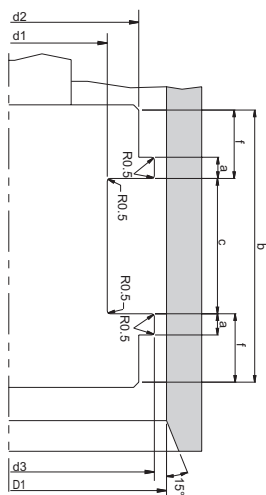
SECTION: PISTON SEAL

STYLE: PCI

TYPE: Compact Seal

Style PCI Metric Ordering Information (Dimensions in mm)

Part No.	D1	d1	b	d2	d3	a	c	f
PCI 2500901	275.0	250.0	85.0	265.0	271.0	15.0	31.50	26.75
PCI 2550901	280.0	255.0	85.0	270.0	276.0	15.0	31.50	26.75
PCI 2650902	290.0	265.0	85.0	280.0	286.0	15.0	31.50	26.75
PCI 2750901	300.0	275.0	85.0	290.0	296.0	15.0	31.50	26.75
PCI 2800901	310.0	280.0	80.0	298.0	304.0	8.50	36.50	21.75
PCI 2900901	320.0	290.0	80.0	308.0	314.0	8.50	36.50	21.75
PCI 3000901	330.0	300.0	80.0	318.0	324.0	8.50	36.50	21.75
PCI 3100901	340.0	310.0	80.0	328.0	334.0	8.50	36.50	21.75
PCI 3200901	350.0	320.0	80.0	338.0	344.0	8.50	36.50	21.75
PCI 3300901	360.0	330.0	80.0	348.0	354.0	8.50	36.50	21.75
PCI 3500901	380.0	350.0	80.0	368.0	374.0	8.50	36.50	21.75
PCI 3700901	400.0	370.0	80.0	388.0	394.0	8.50	36.50	21.75
PCI 3900901	420.0	390.0	80.0	408.0	414.0	8.50	36.50	21.75
PCI 4200901	450.0	420.0	80.0	438.0	444.0	8.50	36.50	21.75
PCI 4500901	480.0	450.0	80.0	468.0	474.0	8.50	36.50	21.75
PCI 4700901	500.0	470.0	80.0	488.0	494.0	8.50	36.50	21.75
PCI 5300901	560.0	530.0	80.0	548.0	554.0	8.50	36.50	21.75
PCI 5400901	570.0	540.0	80.0	558.0	564.0	8.50	36.50	21.75
PCI 5700901	600.0	570.0	80.0	588.0	594.0	8.50	36.50	21.75
PCI 6000901	630.0	600.0	80.0	618.0	624.0	8.50	36.50	21.75
PCI 6200901	650.0	620.0	80.0	638.0	644.0	8.50	36.50	21.75
PCI 6700901	700.0	670.0	80.0	688.0	694.0	8.50	36.50	21.75
PCI 7200901	750.0	720.0	80.0	738.0	744.0	8.50	36.50	21.75
PCI 7500901	780.0	750.0	80.0	768.0	774.0	8.50	36.50	21.75
PCI 7700901	800.0	770.0	80.0	788.0	794.0	8.50	36.50	21.75



Tolerance Table

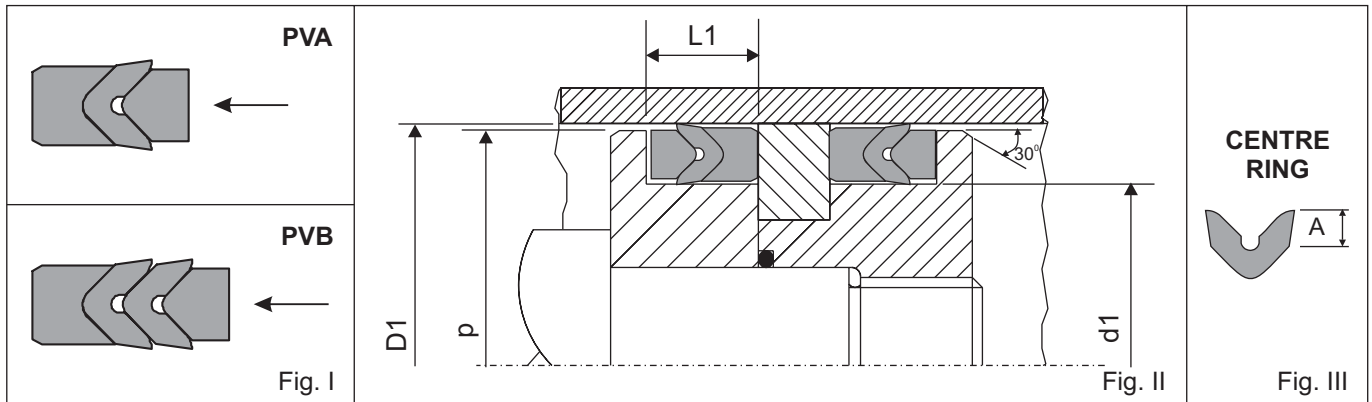
D1	d1	d2
H9	h9	f8
d3	a	c
f8	d10	D10

Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing



MATERIAL:

Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +80°C (upto +200°C on request).

Pressure: 400 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty single acting cylinder with split piston.

Also suitable for double acting cylinders.

DETAILS:

The Spareage style PVA seal is robust seal. Though it is suitable for split piston it is extremely suitable for medium duty to heavy duty application. The PVA seal accepts low & high pressure, vigorous conditions & also any misalignment between sealing gaps.

The seal is a combination of a bottom seal, centre ring & pressure ring. The centre ring is the main seal being flexible enough to retain high & low pressures. The bottom seal supports the centre ring from getting extruded against high pressures. The top ring helps in retaining the centre ring profile & distributing the pressure equally. Besides, PVB (1+2+1) is available with 1 extra Centre Ring to adjust Groove Height.

FEATURES:

Long life.

Accepts misalignment & uneven surfaces.

Any size upto 1500 mm dia. available.

IMPORTANT NOTE:

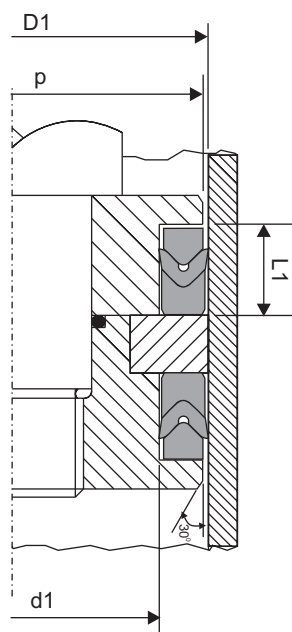
The Vee Packing height can be adjusted by increasing or reducing centre rings (Fig. III). The calculation can be done by noting height "A" as shown in table.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 0108301	PVB 0108301	20.00	10.00	19.00	7.4	9.20	1.80
PVA 0128301	PVB 0128301	25.00	12.00	24.00	9.56	11.94	2.38
PVA 0128302	PVB 0128302	25.40	12.70	24.40	12.71	15.88	3.17
PVA 0148301	PVB 0148301	27.00	14.00	26.00	9.56	11.94	2.38
PVA 0188301	PVB 0188301	28.57	18.25	27.57	10.71	13.38	2.67
PVA 0168301	PVB 0168301	29.00	16.00	28.00	9.56	11.94	2.38
PVA 0208301	PVB 0208301	30.00	20.00	29.00	14.32	17.92	3.58
PVA 0188302	PVB 0188302	31.00	18.00	30.00	9.56	11.94	2.38
PVA 0208302	PVB 0208302	31.50	20.00	30.50	11.68	14.59	2.91
PVA 0208303	PVB 0208303	32.00	20.00	31.00	12.11	15.13	3.02
PVA 0208304	PVB 0208304	33.00	20.00	32.00	9.56	11.94	2.38
PVA 0254601	PVB 0254601	35.00	25.00	34.00	11.54	14.42	2.88
PVA 0208305	PVB 0208305	36.00	20.00	35.00	16.00	20.00	4.00
PVA 0228301	PVB 0228301	38.00	22.00	37.00	17.34	21.67	4.33
PVA 0258305	PVB 0258305	38.10	25.40	37.10	12.97	16.21	3.24
PVA 0258302	PVB 0258302	40.00	25.00	39.00	13.24	16.54	3.30
PVA 0288301	PVB 0288301	40.00	28.00	39.00	11.34	14.17	2.83
PVA 0308301	PVB 0308301	40.00	30.00	39.00	14.54	18.17	3.63
PVA 0288302	PVB 0288302	41.27	28.57	40.27	13.24	16.54	3.30
PVA 0258303	PVB 0258303	42.00	25.00	41.00	16.94	21.17	4.23
PVA 0308302	PVB 0308302	42.00	30.00	41.00	13.34	16.67	3.33
PVA 0328301	PVB 0328301	42.00	32.00	41.00	11.54	14.42	2.88
PVA 0288303	PVB 0288303	44.00	28.00	43.00	11.76	14.69	2.93
PVA 0288304	PVB 0288304	44.00	28.00	43.00	16.00	20.00	4.00
PVA 0318301	PVB 0318301	44.45	31.75	43.45	12.71	15.86	3.17
PVA 0318302	PVB 0318302	44.45	31.75	43.45	10.85	13.55	2.70
PVA 0258304	PVB 0258304	45.00	25.00	44.00	16.94	21.17	4.23
PVA 0268301	PVB 0268301	45.00	26.00	44.00	19.59	24.48	4.89
PVA 0308303	PVB 0308303	45.00	30.00	44.00	18.50	18.50	3.70
PVA 0358301	PVB 0358301	45.00	35.00	44.00	14.52	18.50	3.63
PVA 0318303	PVB 0318303	47.62	31.75	46.62	19.37	24.21	4.84
PVA 0348301	PVB 0348301	47.62	34.92	46.62	13.76	17.20	3.44
PVA 0328302	PVB 0328302	48.00	32.00	47.00	11.77	14.70	2.93
PVA 0308304	PVB 0308304	50.00	30.00	49.00	19.59	24.48	4.89
PVA 0358302	PVB 0358302	50.00	35.00	49.00	15.00	18.75	3.75
PVA 0408301	PVB 0408301	50.00	40.00	49.00	11.54	14.42	2.88
PVA 0348302	PVB 0348302	50.80	34.92	49.80	16.15	20.18	4.03
PVA 0368301	PVB 0368301	51.00	36.00	50.00	16.00	20.00	4.00
PVA 0388301	PVB 0388301	50.80	38.10	49.80	12.97	16.21	3.24

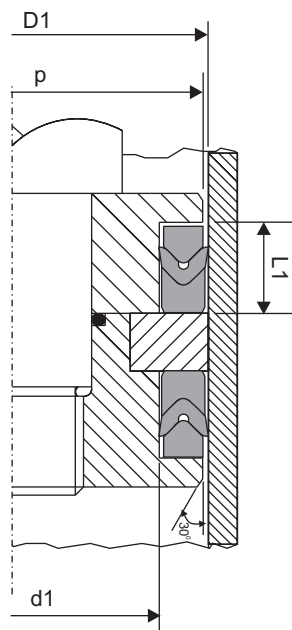
Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 0368302	PVB 0368302	52.00	36.00	51.00	11.80	14.70	2.9
PVA 0388302	PVB 0388302	53.97	38.10	52.97	16.53	20.09	4.37
PVA 0388303	PVB 0388303	53.97	38.10	52.97	18.52	23.15	4.63
PVA 0388304	PVB 0388304	55.00	38.00	54.00	18.68	23.34	4.66
PVA 0398301	PVB 0398301	55.00	39.00	54.00	16.94	21.17	4.23
PVA 0408302	PVB 0408302	55.00	40.00	54.00	15.08	18.85	3.77
PVA 0408303	PVB 0408303	55.00	40.00	54.00	18.69	22.44	4.36
PVA 0458301	PVB 0458301	55.00	45.00	54.00	11.68	14.59	2.91
PVA 0408304	PVB 0408304	56.00	40.00	55.00	11.77	14.70	2.93
PVA 0448301	PVB 0448301	57.15	44.45	56.15	14.57	18.20	3.63
PVA 0408305	PVB 0408305	60.00	40.00	59.00	20.00	25.00	5.00
PVA 0458302	PVB 0458302	60.00	45.00	59.00	14.82	18.52	3.70
PVA 0488301	PVB 0488301	60.00	48.00	59.00	16.68	20.84	4.16
PVA 0448302	PVB 0448302	60.32	44.45	59.32	18.54	23.17	4.63
PVA 0488302	PVB 0488302	62.00	48.00	61.00	14.82	18.52	3.70
PVA 0508301	PVB 0508301	63.50	50.80	62.50	13.24	16.54	3.30
PVA 0538301	PVB 0538301	63.50	53.97	62.50	11.13	13.90	2.77
PVA 0408306	PVB 0408306	65.00	40.00	64.00	23.82	29.77	5.95
PVA 0458303	PVB 0458303	65.00	45.00	64.00	18.68	23.34	4.66
PVA 0508302	PVB 0508302	65.00	50.00	64.00	17.34	21.67	4.33
PVA 0508303	PVB 0508303	65.00	50.00	64.00	16.40	20.50	4.10
PVA 0508304	PVB 0508304	66.67	50.80	65.67	15.34	19.17	3.83
PVA 0508305	PVB 0508305	66.67	50.80	65.67	16.85	21.06	4.21
PVA 0538302	PVB 0538302	66.67	53.97	65.67	12.68	15.75	3.24
PVA 0558301	PVB 0558301	67.00	55.00	66.00	16.68	20.84	4.16
PVA 0518301	PVB 0518301	69.00	51.00	68.00	18.68	23.34	4.66
PVA 0508306	PVB 0508306	69.85	50.80	68.85	22.34	27.92	5.58
PVA 0538303	PVB 0538303	69.85	53.97	68.85	16.85	21.06	4.21
PVA 0578301	PVB 0578301	69.85	57.15	68.85	12.70	15.90	3.17
PVA 0508307	PVB 0508307	70.00	50.00	69.00	14.64	18.29	3.65
PVA 0508308	PVB 0508308	70.00	50.00	69.00	20.00	25.00	5.00
PVA 0558302	PVB 0558302	70.00	55.00	69.00	17.68	22.09	4.41
PVA 0508309	PVB 0508309	70.80	50.80	69.80	25.68	32.09	6.41
PVA 0538304	PVB 0538304	73.02	53.97	72.02	21.17	26.46	5.29
PVA 0578302	PVB 0578302	73.02	57.15	72.02	18.52	23.15	4.63
PVA 0558303	PVB 0558303	75.00	55.00	74.00	20.00	25.00	5.00
PVA 0558304	PVB 0558304	75.00	55.00	74.00	20.68	25.84	5.16
PVA 0558305	PVB 0558305	75.00	55.00	74.00	25.68	32.09	6.41
PVA 0608301	PVB 0608301	75.00	60.00	74.00	12.68	15.84	3.16

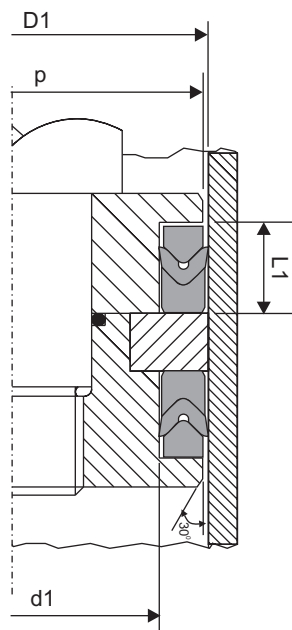
Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 0568301	PVB 0568301	76.00	56.00	75.00	14.65	18.30	3.65
PVA 0568302	PVB 0568302	76.00	56.00	75.00	22.28	27.84	5.56
PVA 0608302	PVB 0608302	76.00	60.00	75.00	19.34	24.17	4.83
PVA 0578303	PVB 0578303	76.20	57.15	75.20	21.70	27.12	5.42
PVA 0638301	PVB 0638301	76.20	63.50	75.20	12.17	15.21	3.04
PVA 0608303	PVB 0608303	77.00	60.00	76.00	18.00	22.50	4.50
PVA 0658301	PVB 0658301	77.00	65.00	76.00	14.00	17.50	3.50
PVA 0638302	PVB 0638302	79.37	63.50	78.37	15.89	19.85	3.96
PVA 0558306	PVB 0558306	80.00	55.00	79.00	22.49	28.11	5.62
PVA 0608304	PVB 0608304	80.00	60.00	79.00	21.45	26.80	5.35
PVA 0638303	PVB 0638303	80.00	63.50	79.00	18.68	23.34	4.66
PVA 0648301	PVB 0648301	80.00	64.00	79.00	17.20	21.50	4.30
PVA 0658303	PVB 0658303	80.00	65.00	79.00	17.34	21.67	4.33
PVA 0638304	PVB 0638304	82.50	63.50	81.50	17.73	22.16	4.43
PVA 0638305	PVB 0638305	82.50	63.50	81.50	21.08	26.35	5.27
PVA 0638306	PVB 0638306	83.00	63.00	82.00	14.64	18.29	3.65
PVA 0708301	PVB 0708301	83.00	70.00	82.00	16.68	20.84	4.16
PVA 0638307	PVB 0638307	85.00	63.00	84.00	21.34	26.67	5.33
PVA 0658304	PVB 0658304	85.00	65.00	84.00	29.00	33.83	4.83
PVA 0668301	PVB 0668301	85.00	66.30	84.00	24.13	28.15	4.02
PVA 0708302	PVB 0708302	85.00	70.00	84.00	18.68	23.34	4.66
PVA 0698301	PVB 0698301	85.72	69.85	84.72	15.89	19.85	3.96
PVA 0688301	PVB 0688301	88.00	68.00	87.00	20.00	25.00	5.00
PVA 0698302	PVB 0698302	88.90	69.85	87.90	16.94	21.17	4.23
PVA 0698303	PVB 0698303	88.90	69.85	87.90	22.34	27.92	5.58
PVA 0738301	PVB 0738301	88.90	73.02	87.90	17.72	22.15	4.43
PVA 0768301	PVB 0768301	88.90	76.20	87.90	10.85	13.56	2.71
PVA 0658305	PVB 0658305	90.00	65.00	89.00	20.00	25.00	5.00
PVA 0708303	PVB 0708303	90.00	70.00	89.00	20.00	25.00	5.00
PVA 0708304	PVB 0708304	90.00	70.00	89.00	14.65	18.30	3.65
PVA 0728301	PVB 0728301	90.00	72.00	89.00	20.12	25.14	5.02
PVA 0758301	PVB 0758301	90.00	75.00	89.00	15.00	18.75	3.75
PVA 0758302	PVB 0758302	95.00	75.00	94.00	20.00	25.00	5.00
PVA 0758303	PVB 0758303	95.00	75.00	94.00	21.00	26.25	5.25
PVA 0808301	PVB 0808301	95.00	80.00	94.00	11.68	14.59	2.91
PVA 0768302	PVB 0768302	95.25	76.20	94.25	19.33	24.15	4.82
PVA 0768303	PVB 0768303	95.25	76.20	94.25	17.02	21.27	4.25
PVA 0828301	PVB 0828301	95.25	82.55	94.25	14.48	18.10	3.62
PVA 0758304	PVB 0758304	100.00	75.00	99.00	20.00	25.00	5.00

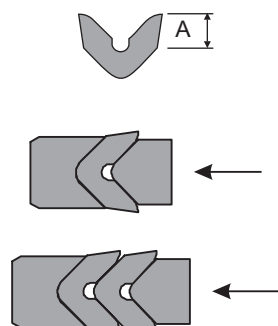
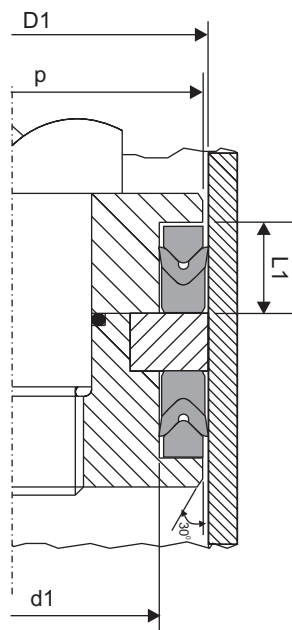
Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 0758305	PVB 0758305	100.00	75.00	99.00	25.00	31.25	6.25
PVA 0808302	PVB 0808302	100.00	80.00	99.00	20.00	25.00	5.00
PVA 0858301	PVB 0858301	100.00	85.00	99.00	11.54	14.42	2.88
PVA 0828302	PVB 0828302	101.60	82.55	100.60	19.33	24.15	4.82
PVA 0858302	PVB 0858302	101.60	85.72	100.60	17.85	22.30	4.45
PVA 0888301	PVB 0888301	101.60	88.90	100.60	11.34	14.17	2.83
PVA 0858303	PVB 0858303	104.77	85.72	103.77	19.59	24.48	4.89
PVA 0808303	PVB 0808303	105.00	80.00	104.00	18.29	22.85	4.56
PVA 0858304	PVB 0858304	105.00	85.00	104.00	20.00	25.00	5.00
PVA 0898301	PVB 0898301	105.00	89.00	104.00	17.20	21.50	4.30
PVA 0908301	PVB 0908301	105.00	90.00	104.00	21.17	26.46	5.29
PVA 0908302	PVB 0908302	105.00	90.00	104.00	22.37	27.95	5.58
PVA 0888302	PVB 0888302	107.95	88.90	106.95	20.68	25.84	5.16
PVA 0888303	PVB 0888303	107.95	88.90	106.95	22.23	27.78	5.55
PVA 0908303	PVB 0908303	110.00	90.00	109.00	17.92	22.40	4.48
PVA 0908304	PVB 0908304	110.00	90.00	109.00	16.68	20.84	4.16
PVA 0958301	PVB 0958301	110.00	95.00	109.00	16.00	20.00	4.00
PVA 0928301	PVB 0928301	111.13	92.07	110.13	19.59	24.48	4.89
PVA 0958302	PVB 0958302	111.13	95.25	110.13	16.18	20.24	4.06
PVA 0888304	PVB 0888304	114.30	88.90	113.30	23.56	29.44	5.88
PVA 0958303	PVB 0958303	114.30	95.25	113.30	16.94	21.17	4.23
PVA 0988301	PVB 0988301	114.30	98.42	113.30	17.73	22.16	4.43
PVA 1008307	PVB 1008301	114.30	100.00	113.30	13.76	17.20	3.44
PVA 0908305	PVB 0908306	115.00	90.00	114.00	18.29	22.85	4.56
PVA 1008302	PVB 1008302	115.00	100.00	114.00	16.88	21.09	4.21
PVA 0958304	PVB 0958304	120.00	95.00	119.00	27.40	34.20	6.80
PVA 1008303	PVB 1008303	120.00	100.00	119.00	18.80	23.40	4.60
PVA 1008304	PVB 1008304	120.00	100.00	119.00	20.68	25.84	5.16
PVA 1058301	PVB 1058301	120.00	105.00	119.00	16.68	20.84	4.16
PVA 0988302	PVB 0988302	123.82	98.42	122.82	24.64	30.80	6.16
PVA 1008305	PVB 1008305	125.00	100.00	124.00	18.28	22.84	4.56
PVA 1008306	PVB 1008306	125.00	100.00	124.00	24.60	30.75	6.15
PVA 1058302	PVB 1058302	125.00	105.00	124.00	19.84	24.80	4.96
PVA 1058303	PVB 1058303	125.00	105.00	124.00	18.00	22.50	4.50
PVA 1018301	PVB 1018301	127.00	101.60	126.00	21.45	26.80	5.35
PVA 1078301	PVB 1078301	127.00	107.95	126.00	20.00	25.00	5.00
PVA 1148301	PVB 1148301	127.00	114.30	126.00	12.29	15.35	3.06
PVA 1048301	PVB 1048301	130.00	104.00	129.00	24.68	30.84	6.16
PVA 1108301	PVB 1108301	130.00	110.00	129.00	20.00	25.00	5.00

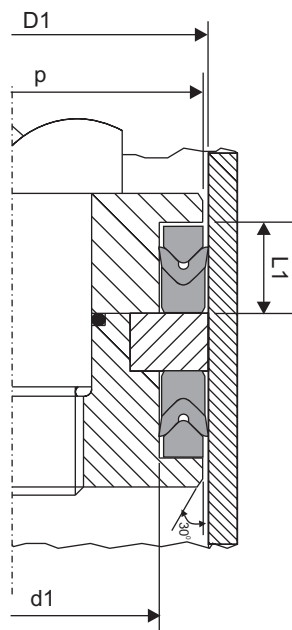
Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 1108302	PVB 1108302	130.00	110.00	129.00	18.00	22.50	4.50
PVA 1148305	PVB 1148305	130.00	114.00	129.00	17.20	21.50	4.30
PVA 1158302	PVB 1158302	130.00	115.00	129.00	17.01	21.25	4.24
PVA 1108303	PVB 1108303	132.00	110.00	131.00	24.32	30.42	6.08
PVA 1148304	PVB 1148304	133.35	114.30	132.35	18.80	23.49	4.69
PVA 1058304	PVB 1058304	135.00	105.00	134.00	23.00	28.75	5.75
PVA 1068301	PVB 1068301	135.00	106.00	134.00	22.00	27.50	5.50
PVA 1108304	PVB 1108304	135.00	110.00	134.00	27.68	34.59	6.91
PVA 1118301	PVB 1118301	136.52	111.12	135.52	25.93	32.41	6.48
PVA 1148302	PVB 1148302	139.70	114.30	138.70	21.17	26.46	5.29
PVA 1148303	PVB 1148303	139.70	114.30	138.70	22.34	27.92	5.58
PVA 1158301	PVB 1158301	140.00	115.00	139.00	24.76	30.94	6.18
PVA 1208301	PVB 1208301	140.00	120.00	139.00	20.00	25.00	5.00
PVA 1178301	PVB 1178301	142.87	117.47	141.87	24.08	30.09	6.01
PVA 1208302	PVB 1208302	145.00	120.00	144.00	26.34	32.92	6.58
PVA 1258301	PVB 1258301	145.00	125.00	144.00	19.76	24.69	4.93
PVA 1208303	PVB 1208303	150.00	120.00	149.00	29.34	36.67	7.33
PVA 1258302	PVB 1258302	150.00	125.00	149.00	18.28	22.84	4.56
PVA 1308301	PVB 1308301	150.00	130.00	149.00	19.84	24.80	4.96
PVA 1278301	PVB 1278301	152.40	127.00	151.40	25.77	32.20	6.43
PVA 1258303	PVB 1258303	155.00	125.00	154.00	23.00	28.75	5.75
PVA 1308302	PVB 1308302	155.00	130.00	154.00	26.68	33.34	6.66
PVA 1358301	PVB 1358301	155.00	135.00	154.00	20.37	25.46	5.09
PVA 1308303	PVB 1308303	160.00	130.00	159.00	27.68	34.59	6.91
PVA 1308304	PVB 1308304	160.00	130.00	159.00	29.00	36.25	7.25
PVA 1408301	PVB 1408301	160.00	140.00	159.00	19.00	23.75	4.75
PVA 1408302	PVB 1408302	165.00	140.00	164.00	27.97	34.96	6.99
PVA 1398301	PVB 1398301	165.10	139.70	164.10	24.88	31.09	6.21
PVA 1408303	PVB 1408303	170.00	140.00	169.00	21.99	27.48	5.49
PVA 1458301	PVB 1458301	170.00	145.00	169.00	25.40	31.75	6.35
PVA 1508301	PVB 1508301	170.00	150.00	169.00	20.38	25.47	5.09
PVA 1468301	PVB 1468301	171.45	146.05	170.45	25.93	32.41	6.48
PVA 1548301	PVB 1548301	175.00	154.00	174.00	19.64	25.54	4.90
PVA 1528301	PVB 1528301	177.80	152.40	176.80	22.24	27.79	5.55
PVA 1508302	PVB 1508302	180.00	150.00	179.00	26.68	33.34	6.66
PVA 1608301	PVB 1608301	180.00	160.00	179	20.00	25.00	5.00
PVA 1618301	PVB 1618301	180.97	161.92	179.97	19.05	23.81	4.76
PVA 1578301	PVB 1578301	182.00	157.00	181.00	20.17	25.21	5.04
PVA 1718301	PVB 1718301	187.32	171.45	186.32	16.14	20.17	4.03

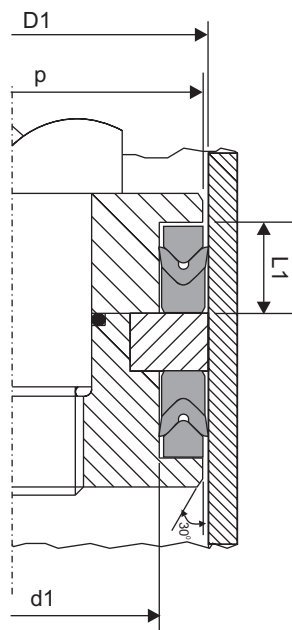
Other sizes available on request.

SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)



Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 1608302	PVB 1608302	190.00	160.00	189.00	21.99	27.48	5.49
PVA 1708301	PVB 1708301	195.00	170.00	194.00	24.75	31.00	6.25
PVA 1778301	PVB 1778301	196.85	177.80	195.85	20.68	25.84	5.16
PVA 1708302	PVB 1708302	200.00	170.00	199.00	33.34	41.67	8.33
PVA 1758301	PVB 1758301	200.00	175.00	199.00	28.00	35.00	7.00
PVA 1878301	PVB 1878301	200.00	187.32	199.00	14.50	18.12	3.62
PVA 1778302	PVB 1778302	203.20	177.80	202.20	21.70	27.12	5.42
PVA 1808301	PVB 1808301	203.20	180.97	202.20	21.17	26.46	5.29
PVA 1808302	PVB 1808302	210.00	180.00	209.00	21.99	27.48	5.49
PVA 2008301	PVB 2008301	220.00	200.00	219.00	20.00	25.00	5.00
PVA 1908301	PVB 1908301	222.25	190.50	221.25	33.34	41.67	8.33
PVA 2058301	PVB 2058301	225.00	205.00	224.00	13.00	16.24	3.24
PVA 2008302	PVB 2008302	230.00	200.00	229.00	21.99	27.48	5.49
PVA 2108301	PVB 2108301	240.00	210.00	239.00	23.00	28.75	5.75
PVA 2108302	PVB 2108302	240.00	210.00	239.00	28.08	35.09	7.01
PVA 2208301	PVB 2208301	250.00	220.00	249.00	34.68	43.34	8.66
PVA 2248301	PVB 2248301	254.00	224.00	253.00	21.99	27.48	5.49
PVA 2288301	PVB 2288301	254.00	228.60	253.00	25.40	31.75	6.35
PVA 2288302	PVB 2288302	260.35	228.60	259.35	32.28	40.35	8.07
PVA 2408301	PVB 2408301	270.00	240.00	269.00	30.00	37.50	7.50
PVA 2508301	PVB 2508301	270.00	250.00	269.00	21.34	26.67	5.33
PVA 2548301	PVB 2548301	279.40	254.00	278.40	25.40	31.75	6.35
PVA 2508302	PVB 2508302	280.00	250.00	279.00	21.99	27.48	5.49
PVA 2688301	PVB 2688301	298.45	268.29	297.45	30.16	37.70	7.54
PVA 2698301	PVB 2698301	307.98	269.88	306.98	35.99	44.98	8.99
PVA 2888301	PVB 2888301	307.98	288.93	306.98	19.05	23.81	4.76
PVA 2808301	PVB 2808301	315.00	280.00	314.00	26.65	33.05	6.40
PVA 2908301	PVB 2908301	320.00	290.00	319.00	33.38	41.84	8.46
PVA 3008301	PVB 3008301	320.00	300.00	319.00	21.34	26.67	5.33
PVA 3108301	PVB 3108301	330.00	310.00	329.00	20.00	25.00	5.00
PVA 3048301	PVB 3048301	330.20	304.80	329.20	25.40	31.75	6.35
PVA 3158301	PVB 3158301	350.00	315.00	349.00	25.65	32.05	6.40
PVA 3208301	PVB 3208301	365.00	320.00	364.00	36.68	45.84	9.16
PVA 3408301	PVB 3408301	380.00	340.00	379.00	40.00	50.00	10.00
PVA 3558301	PVB 3558301	381.00	355.60	380.00	25.40	31.75	6.35
PVA 3508301	PVB 3508301	390.00	350.00	389.00	40.00	50.00	10.00
PVA 3698301	PVB 3698301	400.00	369.00	399.00	30.00	37.50	7.50
PVA 3688301	PVB 3688301	406.40	368.30	405.40	38.11	47.63	9.52
PVA 4008301	PVB 4008301	440.00	400.00	439.00	36.00	45.00	9.00

Other sizes available on request.

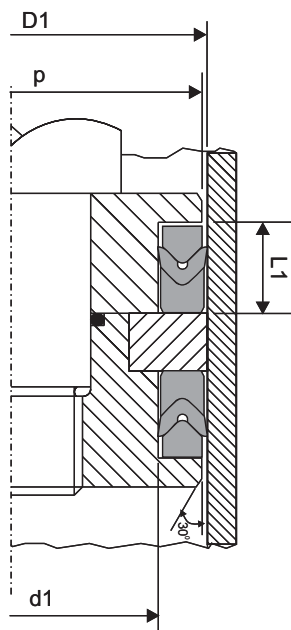
SECTION: PISTON SEAL

STYLE: PVA / PVB

TYPE: Single Acting V Packing

Style PVA & PVB Metric Ordering Information (Dimensions in mm)

Part No. PVA	Part No. PVB	D1	d1	p	L1 (PVA)	L1 (PVB)	A
PVA 4168301	PVB 4168301	450.00	416.00	449.00	33.34	41.67	8.33
PVA 4208301	PVB 4208301	460.00	420.00	459.00	34.40	43.00	8.60
PVA 5058301	PVB 5058301	545.00	505.00	544.00	40.00	50.00	10.00
PVA 7008301	PVB 7008301	750.00	700.00	749.00	48.68	60.84	12.16



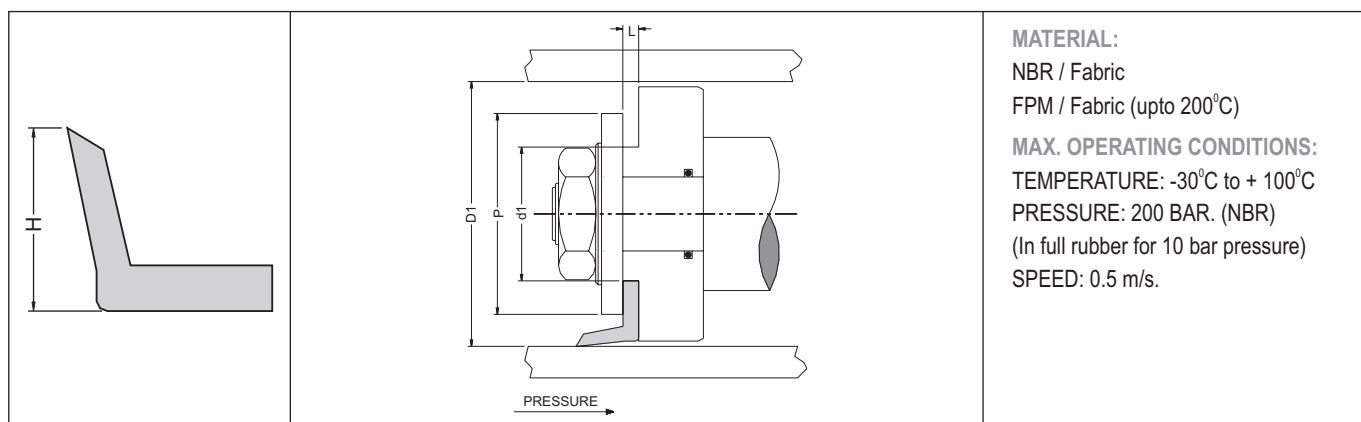
Tolerance Table	
D1	d1
H9	h9
p	L1
h9	+0.2

Other sizes available on request.

SECTION: PISTON SEALS

STYLE: PPB

TYPE: Single Acting



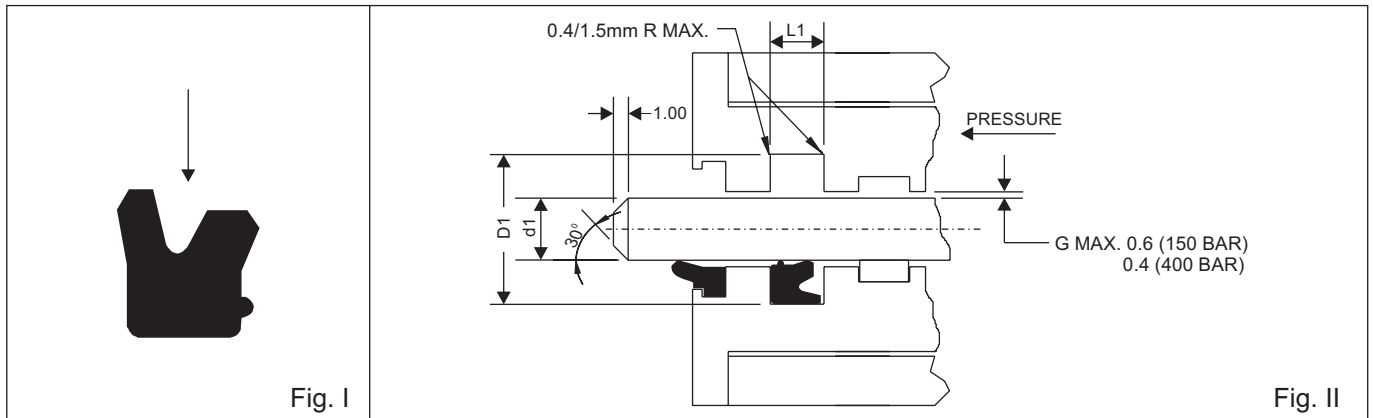
Style PPB Metric Ordering Information (Dimensions in mm)

Internal Part No.	d1 (h9)	D1 (H9)	L (+0.2)	H	Internal Part No.	d1 (h9)	D1 (H9)	L (+0.2)	H
CWC-400	0.00	50.80	3.50	13.00	CWD-262	48.00	101.60	3.50	13.00
CWC-401	0.00	63.50	3.50	13.00	CWC-385	50.00	80.00	3.00	10.00
CWC-402	0.00	69.85	3.00	13.00	CWD-269	70.00	120.00	8.00	6.00
CWC-403	0.00	76.20	4.50	16.75	CWE-260	74.70	255.00	4.00	25.00
CWC-404	0.00	88.90	4.50	16.50	CWD-248	90.00	120.00	4.00	14.00
CWD-257	0.00	127.00	5.50	20.00	CWD-249	95.00	125.00	5.00	14.00
CWD-258	0.00	101.60	4.50	16.00	CWE-293	95.00	157.00	5.50	20.00
CWB-501	12.00	32.00	3.00	7.00	CWD-266	108.00	150.00	6.00	23.00
CWC-130	13.00	70.00	2.00	22.00	CWD-184	108.00	150.00	3.00	23.00
CWB-496	15.00	40.00	4.00	12.50	CWD-263	117.00	150.00	3.00	18.00
CWB-511	15.87	38.10	1.98	8.73	CWE-243	130.00	160.00	3.00	14.00
CWD-241	19.05	107.95	4.70	28.57	CWE-112	133.10	216.69	4.60	30.00
CWC-196	25.00	90.00	5.00	18.00	CWE-246	160.00	200.00	5.00	17.00
CWB-510	25.40	44.45	3.17	12.70	CWE-245	205.00	250.00	5.00	17.00
CWC-384	25.40	50.80	3.17	12.70	CWE-277	216.00	304.80	6.50	32.00
CWC-397	28.57	63.50	3.17	12.70	CWE-244	275.00	320.00	5.00	20.00
CWB-500	30.00	50.00	3.00	8.00	CWE-254	350.00	400.00	4.70	20.00
CWC-383	34.92	76.20	2.17	12.70	CWE-279	379.10	460.71	5.00	36.30
CWC-419	38.10	69.85	3.17	12.70	CWE-283	462.00	580.00	6.00	36.00
CWC-386	40.00	63.00	3.00	8.00	CWE-285	488.95	558.80	6.35	22.00
CWD-161	41.27	101.60	5.80	15.87	CWE-280	759.72	865.30	6.00	44.30

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal



MATERIAL:

PUX - is a polyurethane compound of 92° shore 'A' hardness.

NT6/a - It is a Acrylonitrile Butadiene Rubber (NBR) compound of shore 'A' 90°.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Pressure: PUX- 400 BAR.

NT6/a - 160 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS :

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty hydraulic cylinders.

Can also be used in conjunction with RTA style rod seals for heavy duty applications.

Mining equipment.

Hydraulic props & presses.

DETAILS:

The Spareage type RUB seal is a flexible seal suited for sealing piston rod.

The additional O'ring profile at the bottom provides as a back-up to the main sealing lip, providing lubrication, abrasion resistance & remains unaffected with varying pressures. Also available in nitrile (NBR) upto 160 BAR besides Polyurethane for 300 BAR. Due to excellent wear resistance properties of polyurethane, the life expected is 3 times that of NBR. Pl. refer pg. no. 181 for easy installation tools.

FEATURES:

Simple installation.

An O'ring profile at bottom improves sealing & serves as a good back-up to the main sealing lip. It wipes off small traces of oil that passes the sealing lip with every stroke.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 0045901	4.00	12.00	7.00	RUB 0145902	14.00	24.00	8.00
RUB 0055902	5.42	12.00	4.00	RUB 0155901	15.00	25.00	9.00
RUB 0065902	6.00	11.20	6.75	RUB 0155902	15.37	25.50	7.40
RUB006L501 (Stock Size)	6.00	14.00	5.50	RUB 0155903	15.87	22.22	7.35
RUB 0065901	6.00	14.00	6.50	RUB 0155904	15.87	28.57	7.35
RUB 0065903	6.25	11.00	6.00	RUB016L501 (Stock Size)	16.00	22.00	4.50
RUB 0085903	8.00	13.00	5.00	RUB 0165901	16.00	22.00	5.00
RUB008L502 (Stock Size)	8.00	16.00	5.70	RUB 0165905	16.00	22.00	6.60
RUB 0085901	8.00	16.00	6.50	RUB016L503 (Stock Size)	16.00	23.00	5.00
RUB 0085902	8.00	18.00	9.00	RUB 0165908	16.00	23.00	6.00
RUB 0095901	9.00	16.00	6.30	RUB016L502 (Stock Size)	16.00	24.00	5.70
RUB 0105901	10.00	15.00	4.00	RUB 0165903	16.00	24.00	6.30
RUB 0105905	10.00	16.00	5.30	RUB 0165909	16.00	25.40	8.50
RUB 0105905	10.00	16.00	5.50	RUB 0165904	16.00	25.40	9.00
RUB010L501 (Stock Size)	10.00	18.00	5.50	RUB 0165910	16.00	26.00	5.50
RUB 0105903	10.00	18.00	6.50	RUB016L504 (Stock Size)	16.00	26.00	7.30
RUB 0105904	10.00	20.00	8.00	RUB 0165902	16.00	26.00	8.00
RUB 0105902	10.00	22.00	9.00	RUB 0165906	16.00	26.00	9.00
RUB 0125902	12.00	18.00	6.30	RUB 0175901	17.00	25.00	6.00
RUB 0125911	12.00	18.40	6.25	RUB018L502 (Stock Size)	18.00	24.00	4.80
RUB 0125901	12.00	19.00	5.00	RUB 0185904	18.00	24.00	5.20
RUB 0125907	12.00	19.00	6.30	RUB 0185905	18.00	24.00	6.00
RUB012L505 (Stock Size)	12.00	20.00	5.70	RUB018L508 (Stock Size)	18.00	25.00	5.00
RUB 0125905	12.00	20.00	6.30	RUB 0185901	18.00	25.00	6.00
RUB 0125904	12.00	20.00	9.00	RUB018L506 (Stock Size)	18.00	26.00	5.70
RUB012L503 (Stock Size)	12.00	22.00	7.30	RUB 0185903	18.00	26.00	6.30
RUB 0125906	12.00	22.00	8.00	RUB018L510 (Stock Size)	18.00	28.00	7.30
RUB 0125903	12.00	22.00	9.00	RUB018L503 (Stock Size)	18.00	28.00	8.00
RUB 0125909	12.70	18.00	5.00	RUB 0185906	18.00	28.00	9.00
RUB 0125908	12.70	18.00	6.00	RUB019L503 (Stock Size)	19.00	25.00	6.00
RUB 0195901	13.00	19.00	5.50	RUB 0195904	19.00	25.00	7.00
RUB 0135901	13.00	20.00	5.00	RUB 0195903	19.00	26.00	6.00
RUB 0145903	14.00	19.00	4.50	RUB019L502 (Stock Size)	19.00	30.00	7.00
RUB014L502 (Stock Size)	14.00	21.00	5.00	RUB 0195905	19.00	32.00	13.00
RUB 0145901	14.00	22.00	6.30	RUB 0205910	20.00	24.80	5.60
RUB014L501 (Stock Size)	14.00	24.00	7.30	RUB 0205901	20.00	26.00	5.50

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB020L502 (Stock Size)	20.00	28.00	5.70	RUB 0255909	25.00	45.00	13.00
RUB020L506 (Stock Size)	20.00	28.00	6.30	RUB 0255916	25.40	31.75	7.50
RUB 0205903	20.00	28.00	7.00	RUB 0255919	25.40	34.92	5.76
RUB 0205907	20.00	28.00	11.00	RUB026L501 (Stock Size)	26.00	33.00	8.00
RUB020L504 (Stock Size)	20.00	30.00	5.70	RUB 0265901	26.00	36.00	8.00
RUB020L503 (Stock Size)	20.00	30.00	7.30	RUB 0265902	26.00	36.00	11.00
RUB 0205904	20.00	30.00	8.00	RUB 0285904	28.00	36.00	6.40
RUB020L507 (Stock Size)	20.00	30.00	10.00	RUB028L503 (Stock Size)	28.00	36.00	7.30
RUB 0205905	20.00	30.00	11.00	RUB 0285917	28.00	36.00	7.50
RUB 0205906	20.00	35.00	11.00	RUB028L501 (Stock Size)	28.00	38.00	7.30
RUB 0215901	21.00	29.50	6.00	RUB 0285901	28.00	38.00	8.00
RUB022L502 (Stock Size)	22.00	29.00	5.00	RUB 0285901	28.00	38.00	8.30
RUB 0225906	22.00	29.00	6.00	RUB 0285903	28.00	38.00	11.00
RUB022L501 (Stock Size)	22.00	30.00	5.70	RUB 0285905	28.00	40.00	10.00
RUB 0225902	22.00	30.00	6.30	RUB 0285902	28.00	43.00	12.50
RUB 0225902	22.00	30.00	6.70	RUB 0285906	28.57	44.45	11.70
RUB 0225903	22.00	30.00	8.00	RUB 0295901	29.50	45.00	12.00
RUB022L504 (Stock Size)	22.00	32.00	7.30	RUB 0305907	30.00	38.00	6.40
RUB 0225901	22.00	32.00	8.00	RUB030L503 (Stock Size)	30.00	38.00	8.00
RUB 0225904	22.00	32.00	11.00	RUB030L504 (Stock Size)	30.00	40.00	6.50
RUB 0225905	22.00	35.00	11.00	RUB030L501 (Stock Size)	30.00	40.00	7.30
RUB 0225910	22.22	28.57	5.76	RUB030L505 (Stock Size)	30.00	40.00	8.00
RUB 0235901	23.00	35.00	11.00	RUB030L502 (Stock Size)	30.00	40.00	10.00
RUB025L505 (Stock Size)	25.00	33.00	5.70	RUB 0305902	30.00	40.00	11.00
RUB025L515 (Stock Size)	25.00	33.00	6.00	RUB 0305903	30.00	42.00	12.00
RUB 0255902	25.00	33.00	6.30	RUB 0305905	30.00	45.00	11.00
RUB025L506 (Stock Size)	25.00	33.00	7.30	RUB 0305904	30.00	50.00	11.00
RUB 0255903	25.00	33.00	7.50	RUB 0305906	30.00	50.00	13.00
RUB 0255904	25.00	33.00	11.00	RUB 0315904	31.75	41.27	8.93
RUB025L501 (Stock Size)	25.00	35.00	5.70	RUB032L513 (Stock Size)	32.00	40.00	5.70
RUB 0255906	25.00	35.00	6.30	RUB 0325902	32.00	40.00	6.50
RUB025L502 (Stock Size)	25.00	35.00	7.30	RUB 0325906	32.00	40.00	9.00
RUB025L504 (Stock Size)	25.00	35.00	8.00	RUB 0325903	32.00	41.50	8.90
RUB025L507 (Stock Size)	25.00	35.00	10.00	RUB032L504 (Stock Size)	32.00	42.00	5.70
RUB 0255907	25.00	37.00	11.00	RUB 0325904	32.00	42.00	6.30
RUB 0255908	25.00	40.00	11.00	RUB032L502 (Stock Size)	32.00	42.00	7.30

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 0325901	32.00	42.00	8.00	RUB 0365905	36.00	51.00	11.00
RUB032L501 (Stock Size)	32.00	42.00	10.00	RUB 0365909	36.00	56.00	13.00
RUB 0325907	32.00	42.00	11.00	RUB 0375901	37.00	47.00	9.00
RUB 0325908	32.00	45.00	11.00	RUB 0375902	37.00	47.00	11.00
RUB032L503 (Stock Size)	32.00	47.00	10.00	RUB 0385902	38.00	46.00	11.00
RUB 0325910	32.00	47.00	11.00	RUB 0385904	38.00	48.00	8.30
RUB 0325909	32.00	47.00	12.50	RUB 0385906	38.00	48.00	11.00
RUB 0345902	34.92	43.25	5.76	RUB 0385901	38.00	55.00	11.00
RUB 0345901	34.92	44.45	8.94	RUB 0385907	38.10	44.45	12.11
RUB 0355905	35.00	43.00	6.50	RUB 0385909	38.10	46.62	7.35
RUB 0355903	35.00	43.00	9.00	RUB 0385908	38.10	50.80	10.52
RUB035L502 (Stock Size)	35.00	45.00	7.30	RUB 0385905	38.10	57.15	13.70
RUB 0355901	35.00	45.00	8.00	RUB040L503 (Stock Size)	40.00	48.00	5.70
RUB035L506 (Stock Size)	35.00	45.00	10.00	RUB 0405910	40.00	48.00	6.00
RUB 0355902	35.00	45.00	11.00	RUB 0405912	40.00	48.00	8.30
RUB035L503 (Stock Size)	35.00	46.00	7.30	RUB 0405911	40.00	48.00	9.00
RUB 0355909	35.00	46.00	7.60	RUB 0405917	40.00	48.00	12.00
RUB 0355906	35.00	46.00	8.00	RUB 0405904	40.00	49.50	10.50
RUB 0355908	35.00	47.00	9.00	RUB040L501 (Stock Size)	40.00	50.00	7.30
RUB 0355907	35.00	47.00	17.50	RUB 0405901	40.00	50.00	8.00
RUB035L507 (Stock Size)	35.00	50.00	10.00	RUB 0405901	40.00	50.00	8.30
RUB 0355904	35.00	50.00	11.00	RUB040L502 (Stock Size)	40.00	50.00	10.00
RUB 0365901	36.00	43.00	6.50	RUB 0405903	40.00	50.00	11.00
RUB036L508 (Stock Size)	36.00	44.00	5.70	RUB 0405906	40.00	52.00	9.00
RUB036L506 (Stock Size)	36.00	44.00	6.30	RUB 0405905	40.00	52.00	12.00
RUB 0365906	36.00	44.00	7.50	RUB 0405907	40.00	55.00	9.00
RUB 0365907	36.00	44.00	9.00	RUB040L506 (Stock Size)	40.00	55.00	11.30
RUB 0365908	36.00	46.00	6.30	RUB 0405908	40.00	55.00	12.50
RUB036L502 (Stock Size)	36.00	46.00	7.30	RUB 0405909	40.00	60.00	13.0
RUB 0365903	36.00	46.00	8.00	RUB 0415901	41.27	47.62	7.35
RUB036L512 (Stock Size)	36.00	46.00	10.00	RUB 0415902	41.27	50.80	8.93
RUB 0365904	36.00	46.00	11.00	RUB042L501 (Stock Size)	42.00	50.00	8.00
RUB 0365913	36.00	47.00	10.00	RUB 0425902	42.00	52.00	8.00
RUB 0365910	36.00	48.00	9.50	RUB 0425903	42.00	52.00	11.00
RUB 0365902	36.00	48.00	11.00	RUB 0435901	43.00	53.00	8.00
RUB 0365914	36.00	50.00	11.00	RUB 0445904	44.45	53.97	5.76

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 0445901	44.45	57.15	9.00	RUB 0505906	50.00	62.00	11.00
RUB 0445903	44.45	57.15	10.52	RUB 0505910	50.00	62.70	10.50
RUB045L509 (Stock Size)	45.00	53.00	5.70	RUB 0505911	50.00	63.00	11.00
RUB 0455906	45.00	53.00	6.30	RUB050L502 (Stock Size)	50.00	65.00	10.00
RUB045L510 (Stock Size)	45.00	53.00	8.00	RUB 0505907	50.00	65.00	11.00
RUB 0455904	45.00	53.00	9.00	RUB050L505 (Stock Size)	50.00	65.00	11.40
RUB 0455905	45.00	53.00	13.00	RUB 0505902	50.00	65.00	12.00
RUB045L504 (Stock Size)	45.00	55.00	7.30	RUB 0505905	50.00	65.00	13.00
RUB 0455901	45.00	55.00	8.00	RUB 0505908	51.00	70.00	13.00
RUB045L501 (Stock Size)	45.00	55.00	10.00	RUB 0525901	52.00	62.00	11.00
RUB 0455907	45.00	55.00	11.00	RUB 0535901	53.00	63.00	14.30
RUB045L508 (Stock Size)	45.00	55.00	11.50	RUB 0535902	53.00	63.00	14.30
RUB 0455920	45.00	57.00	9.00	RUB055L506 (Stock Size)	55.00	65.00	7.30
RUB 0455908	45.00	57.70	10.50	RUB 0555907	55.00	65.00	8.00
RUB 0455903	45.00	58.00	9.52	RUB 0555901	55.00	65.00	9.00
RUB 0455909	45.00	60.00	11.00	RUB 0555902	55.00	65.00	11.00
RUB045L506 (Stock Size)	45.00	60.00	11.40	RUB 0555903	55.00	65.00	13.00
RUB 0455910	45.00	60.00	12.50	RUB 0555908	55.00	67.00	11.00
RUB 0455913	45.00	63.00	11.00	RUB055L501 (Stock Size)	55.00	68.00	10.00
RUB 0455911	45.00	65.00	11.00	RUB 0555909	55.00	68.00	11.00
RUB 0455902	45.00	65.00	13.00	RUB 0555904	55.00	70.00	11.00
RUB 0465901	46.00	56.00	11.00	RUB055L503 (Stock Size)	55.00	70.00	11.80
RUB 0465902	46.00	60.00	11.00	RUB 0555905	55.00	70.00	12.80
RUB 0475901	47.62	63.50	10.52	RUB 0555905	55.00	70.00	13.00
RUB 0485903	48.00	56.00	12.50	RUB 0555906	55.00	75.00	13.00
RUB 0485901	48.00	60.00	11.00	RUB056L504 (Stock Size)	56.00	66.00	7.00
RUB 0485902	48.00	68.00	13.00	RUB056L502 (Stock Size)	56.00	66.00	10.00
RUB050L504 (Stock Size)	50.00	58.00	11.50	RUB 0565901	56.00	66.00	11.00
RUB 0505918	50.00	60.00	7.00	RUB056L503 (Stock Size)	56.00	71.00	10.00
RUB050L501 (Stock Size)	50.00	60.00	7.30	RUB 0565902	56.00	71.00	11.00
RUB 0505901	50.00	60.00	8.00	RUB056L501 (Stock Size)	56.00	71.00	11.50
RUB 0505901	50.00	60.00	8.30	RUB 0565904	56.00	71.00	12.50
RUB050L503 (Stock Size)	50.00	60.00	10.00	RUB 0565903	56.00	76.00	13.00
RUB 0505903	50.00	60.00	11.00	RUB 0575901	57.00	67.00	10.00
RUB 0505904	50.00	60.00	13.00	RUB 0575902	57.15	67.50	7.35
RUB 0505909	50.00	62.00	9.50	RUB 0605911	60.00	68.00	14.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 0605904	60.00	70.00	6.50	RUB 0655912	65.00	80.00	12.40
RUB060L501 (Stock Size)	60.00	70.00	7.30	RUB 0655901	65.00	80.00	13.00
RUB 0605905	60.00	70.00	8.00	RUB 0655913	65.00	80.00	14.00
RUB060L506 (Stock Size)	60.00	70.00	10.00	RUB065L503 (Stock Size)	65.00	85.00	12.00
RUB 0605910	60.00	70.00	11.00	RUB 0655903	65.00	85.00	13.00
RUB060L502 (Stock Size)	60.00	70.00	11.80	RUB 0665901	66.67	76.20	10.52
RUB 0605908	60.00	70.00	12.80	RUB 0695901	69.00	79.00	14.30
RUB 0605908	60.00	70.00	13.00	RUB 0665902	69.85	88.90	16.87
RUB 0605906	60.00	70.00	14.50	RUB070L510 (Stock Size)	70.00	80.00	7.30
RUB 0605907	60.00	72.00	10.00	RUB 0705913	70.00	80.00	8.30
RUB 0605912	60.00	73.00	11.00	RUB070L504 (Stock Size)	70.00	80.00	12.00
RUB 0605902	60.00	75.00	11.00	RUB 0705904	70.00	80.00	13.00
RUB060L508 (Stock Size)	60.00	75.00	11.80	RUB 0705907	70.00	82.00	9.50
RUB 0605916	60.00	75.00	12.80	RUB 0705903	70.00	82.00	11.00
RUB 0605901	60.00	75.00	13.00	RUB 0705909	70.00	83.00	11.00
RUB 0605909	60.00	75.00	22.50	RUB 0705917	70.00	85.00	7.00
RUB 0605903	60.00	80.00	13.00	RUB070L511 (Stock Size)	70.00	85.00	10.00
RUB063L506 (Stock Size)	63.00	70.00	12.00	RUB 0705902	70.00	85.00	10.80
RUB 0635907	63.00	71.00	9.03	RUB070L502 (Stock Size)	70.00	85.00	11.40
RUB063L505 (Stock Size)	63.00	73.00	12.00	RUB 0705901	70.00	85.00	12.50
RUB 0635903	63.00	73.00	13.00	RUB 0705908	70.00	85.00	22.50
RUB063L502 (Stock Size)	63.00	75.00	11.80	RUB 0705905	70.00	90.00	13.00
RUB 0635902	63.00	75.00	12.80	RUB 0705906	70.00	90.00	16.00
RUB 0635902	63.00	75.00	13.00	RUB075L503 (Stock Size)	75.00	83.00	11.50
SRUB063L504	63.00	78.00	11.40	RUB075L501 (Stock Size)	75.00	85.00	12.00
RUB 0635901	63.00	78.00	12.50	RUB 0755903	75.00	85.00	13.00
RUB 0635910	63.00	80.00	17.00	RUB 0755904	75.00	88.00	11.00
RUB 0635905	63.00	83.00	13.00	RUB 0755901	75.00	90.00	11.00
RUB 0655914	65.00	73.00	9.50	RUB075L504 (Stock Size)	75.00	90.00	12.00
RUB 0655907	65.00	73.00	12.50	RUB 0755902	75.00	90.00	13.00
RUB 0655904	65.00	75.00	9.00	RUB 0765902	76.20	88.90	10.52
RUB 0655905	65.00	75.00	12.50	RUB 0765901	76.20	92.07	10.52
RUB 0655906	65.00	77.70	10.50	RUB 0775901	77.00	87.00	13.00
RUB 0685901	65.00	78.00	13.00	RUB 0785901	78.00	86.00	12.50
RUB065L504 (Stock Size)	65.00	80.00	9.00	RUB 0785902	78.00	88.00	14.50
RUB 0655902	65.00	80.00	11.00	RUB 0805908	80.00	88.00	12.50

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL
STYLE: RUB
TYPE: Single Acting Seal
Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 0805903	80.00	90.00	11.00	RUB 0975901	97.00	105.00	14.00
RUB080L505 (Stock Size)	80.00	90.00	12.00	RUB 0995901	99.00	109.00	13.50
RUB 0805902	80.00	90.00	13.00	RUB 1005903	100.00	108.00	12.50
RUB 0805907	80.00	95.00	10.00	RUB 1005902	100.00	110.00	12.00
RUB080L502 (Stock Size)	80.00	95.00	11.70	RUB 1005904	100.00	110.00	14.50
RUB 0805903	80.00	95.00	12.50	RUB100L505 (Stock Size)	100.00	115.00	10.00
RUB080L501 (Stock Size)	80.00	100.00	12.00	RUB100L501 (Stock Size)	100.00	115.00	12.00
RUB 0805906	80.00	100.00	13.00	RUB 1005905	100.00	115.00	13.00
RUB080L503 (Stock Size)	80.00	100.00	15.00	RUB100L504 (Stock Size)	100.00	120.00	12.00
RUB 0805905	80.00	100.00	16.00	RUB 1005901	100.00	120.00	13.00
RUB 0805904	80.00	110.00	18.00	RUB100L503 (Stock Size)	100.00	120.00	14.50
RUB 0825901	82.55	101.60	12.90	RUB 1005906	100.00	120.00	16.00
RUB 0855902	85.00	93.00	11.00	RUB 1005907	100.00	125.00	16.00
RUB 0855903	85.00	93.00	12.50	RUB 1015901	101.00	111.00	14.30
RUB 0855904	85.00	95.00	14.30	RUB 1015903	101.60	117.47	15.28
RUB085L501 (Stock Size)	85.00	100.00	11.80	RUB 1015904	101.60	120.65	13.70
RUB 0855901	85.00	100.00	12.50	RUB 1055901	105.00	113.00	11.00
RUB085L503 (Stock Size)	85.00	105.00	12.00	RUB 1055902	105.00	115.00	14.50
RUB 0855905	85.00	105.00	13.00	RUB105L501 (Stock Size)	105.00	120.00	9.00
RUB 0875901	87.00	95.00	14.00	RUB 1055903	105.00	120.00	10.00
RUB 0905904	90.00	98.00	12.50	RUB 1055904	105.00	120.00	16.00
RUB 0905909	90.00	100.00	8.30	RUB 1075901	107.95	127.00	13.70
RUB 0905902	90.00	100.00	10.00	RUB 1085901	108.00	123.00	12.00
RUB090L505 (Stock Size)	90.00	100.00	11.50	RUB 1105901	110.00	120.00	13.00
RUB 0905903	90.00	100.00	13.00	RUB110L505 (Stock Size)	110.00	125.00	9.60
RUB 0905905	90.00	102.00	9.60	RUB 1105902	110.00	125.00	10.00
RUB090L509 (Stock Size)	90.00	105.00	9.00	RUB110L504 (Stock Size)	110.00	125.00	11.40
RUB090L503 (Stock Size)	90.00	105.00	11.50	RUB 1105903	110.00	125.00	15.50
RUB 0905901	90.00	105.00	12.50	RUB 1105903	110.00	125.00	16.00
RUB090L502 (Stock Size)	90.00	110.00	12.00	RUB110L508 (Stock Size)	110.00	130.00	12.00
RUB 0905906	90.00	110.00	13.00	RUB 1105904	110.00	130.00	13.00
RUB 0925901	92.00	107.00	12.50	RUB110L502 (Stock Size)	110.00	130.00	14.50
RUB095L502 (Stock Size)	95.00	110.00	12.00	RUB 1105905	110.00	130.00	15.50
RUB095L501 (Stock Size)	95.00	115.00	12.00	RUB 1105905	110.00	130.00	16.00
RUB 0955901	95.00	115.00	13.00	RUB 1105906	110.00	135.00	16.00
RUB 0965901	96.00	104.00	12.00	RUB 1155906	115.00	125.00	13.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB115L501 (Stock Size)	115.00	130.00	10.00	RUB135L503 (Stock Size)	135.00	143.00	12.50
RUB 1155902	115.00	130.00	12.00	RUB135L502 (Stock Size)	135.00	150.00	11.40
RUB 1155903	115.00	130.00	16.00	RUB 1395901	139.70	152.40	10.52
RUB 1155904	115.00	140.00	16.00	RUB140L503 (Stock Size)	140.00	150.00	6.00
RUB 1185901	118.00	126.00	14.50	RUB 1405901	140.00	150.00	12.00
RUB 1185902	118.00	133.00	10.00	RUB140L504 (Stock Size)	140.00	155.00	13.00
RUB 1205901	120.00	130.00	12.00	RUB 1405902	140.00	160.00	13.00
RUB 1205902	120.00	130.00	14.50	RUB140L502 (Stock Size)	140.00	160.00	14.50
RUB 1205903	120.00	131.00	14.30	RUB 1405903	140.00	160.00	15.50
RUB 1205904	120.00	135.00	16.00	RUB 1405903	140.00	160.00	16.00
RUB 1205905	120.00	140.00	13.00	RUB 1405904	140.00	165.00	16.00
RUB120L502 (Stock Size)	120.00	140.00	14.50	RUB 1405905	140.00	170.00	18.40
RUB 1205902	120.00	140.00	15.50	RUB 1405905	140.00	170.00	19.00
RUB 1205902	120.00	140.00	16.00	RUB 1415902	141.28	151.58	15.00
RUB 1205907	120.65	130.04	10.52	RUB 1435901	143.00	151.00	14.00
RUB 1205909	120.65	130.95	15.00	RUB 1455901	145.00	153.00	12.50
RUB 1245901	124.00	131.00	6.00	RUB150L501 (Stock Size)	150.00	170.00	14.50
RUB 1255901	125.00	133.00	12.00	RUB 1505902	150.00	170.00	16.00
RUB 1255902	125.00	145.00	13.00	RUB 1505903	150.00	180.00	19.00
RUB125L501 (Stock Size)	125.00	145.00	14.50	RUB 1525902	152.00	160.00	12.50
RUB 1255901	125.00	145.00	15.50	RUB 1525901	152.40	171.45	16.87
RUB 1255903	125.00	145.00	16.00	RUB 1555901	155.00	170.00	16.00
RUB125L502 (Stock Size)	125.00	150.00	13.00	RUB 1585901	158.75	177.80	10.52
RUB 1255904	125.00	150.00	14.00	RUB 1605904	160.00	175.00	12.00
RUB 1255905	125.00	150.00	16.00	RUB160L501 (Stock Size)	160.00	180.00	14.50
RUB 1255906	125.00	155.00	19.00	RUB 1605901	160.00	180.00	15.50
RUB 1265901	126.50	141.60	7.00	RUB 1605901	160.00	180.00	16.00
RUB 1275903	127.00	136.52	7.70	RUB 1605902	160.00	185.00	16.00
RUB 1275902	127.00	152.40	13.70	RUB 1605905	160.00	185.00	20.00
RUB 1305901	130.00	140.00	16.00	RUB 1605903	160.00	190.00	19.00
RUB 1305904	130.00	145.00	13.00	RUB 1625901	162.00	172.00	16.00
RUB 1305902	130.00	150.00	13.00	RUB 1625902	162.71	173.01	15.00
RUB130L502 (Stock Size)	130.00	150.00	14.50	RUB165L501 (Stock Size)	165.00	190.00	15.00
RUB 1305903	130.00	150.00	15.50	RUB 1655901	165.10	190.50	20.00
RUB 1305903	130.00	150.00	16.00	RUB 1675901	167.00	175.00	12.50
RUB 1325901	132.50	157.50	14.50	RUB170L501 (Stock Size)	170.00	190.00	14.50

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUB

TYPE: Single Acting Seal

Style RUB Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
RUB 1705901	170.00	190.00	15.50	RUB 2075901	207.00	217.00	14.50
RUB 1705901	170.00	190.00	16.00	RUB 2085901	208.76	219.06	15.00
RUB170L502 (Stock Size)	170.00	200.00	15.00	RUB 2105901	210.00	230.00	16.00
RUB 1705902	171.00	179.00	14.00	RUB 2105902	210.00	240.00	19.00
RUB 1775902	177.80	203.20	20.05	RUB 2155901	215.00	240.00	28.60
RUB 1715901	180.00	200.00	13.00	RUB 2205901	220.00	250.00	19.00
RUB180L503 (Stock Size)	180.00	200.00	14.50	RUB220L501 (Stock Size)	220.00	250.00	23.00
RUB 1805901	180.00	200.00	16.00	RUB 2205902	220.00	250.00	25.00
RUB180L502 (Stock Size)	180.00	205.00	15.00	RUB 2235901	223.00	231.00	12.50
RUB 1805904	180.00	205.00	16.00	RUB 2305901	230.00	260.00	25.00
RUB 1805902	180.00	210.00	19.00	RUB 2355901	235.00	254.00	11.00
RUB 1805904	180.00	250.00	16.00	RUB 2405901	240.00	260.00	25.00
RUB 1835901	183.00	193.00	14.50	RUB 2505901	250.00	270.00	16.00
RUB 1845902	184.15	194.45	15.00	RUB250L501 (Stock Size)	250.00	280.00	23.00
RUB 1855901	185.00	200.00	12.00	RUB 2505902	250.00	280.00	25.00
RUB 1935901	193.00	201.00	12.50	RUB 2705901	270.00	300.00	19.00
RUB200L501 (Stock Size)	200.00	220.00	14.50	RUB 2805901	280.00	300.00	16.00
RUB 2005901	200.00	220.00	16.00	RUB 2805902	280.00	310.00	19.00
RUB200L502 (Stock Size)	200.00	225.00	16.00	RUB 3205901	320.00	350.00	21.00
RUB 2005902	200.00	225.00	20.00	RUB 3605901	360.00	390.00	21.00
RUB 2005904	200.00	230.00	19.00				

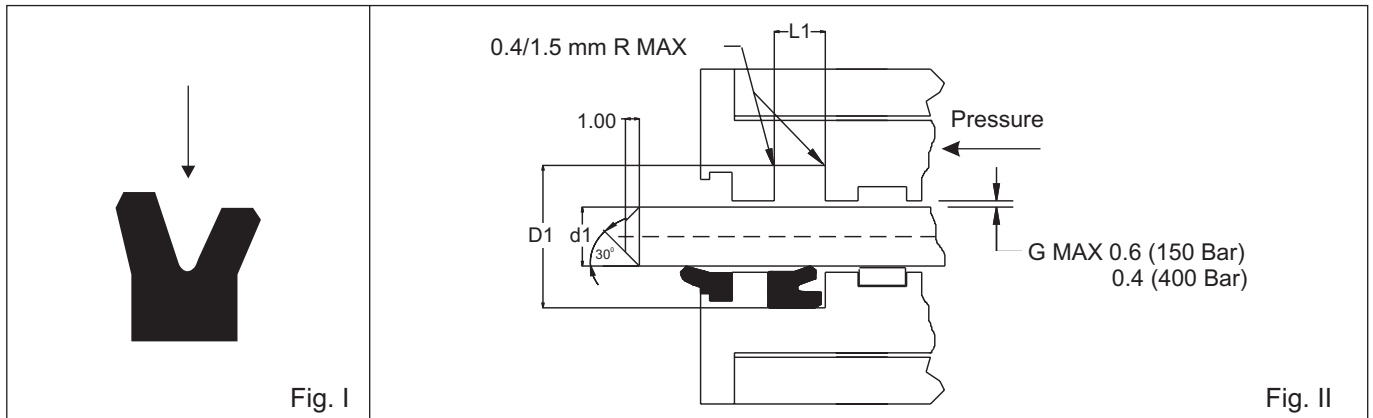
Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: ROD SEAL

STYLE: RUC

TYPE: Single Acting Seal



MATERIAL:

PUX - is a polyurethane compound of shore 'A' hardness 92°.

NT6/a - is a Acrylonitrile Butadiene Rubber (NBR) compound of shore 'A' 90°.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Pressure: PUX - 300 BAR.

NT6/a - 160 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty hydraulic cylinders.

Can also be used in conjunction with RTA style rod seals for heavy duty applications.

Mining equipment.

Hydraulic presses.

DETAILS:

The Spareage type RUC seal is suited for solid gland.

Easy to snap into groove thus makes installation easy for this seal. Pl. refer pg. no. 181 for easy installation tools.

The RUC seal is available in 2 versions, NBR & Polyurethane compound.

Due to excellent wear resistance properties of polyurethane, the life expected is 3 times that of NBR.

FEATURES:

Simple installation.

Good media resistance.

Used as an individual seal or as a secondary seal possible within sealing system.

SECTION: ROD SEAL

STYLE: RUC

TYPE: Single Acting Seal

Style RUC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1 (f8)	D1 (H9)	L1 (+0.2)	Part No. Nitrile	Part No. Polyurethane	d1 (f8)	D1 (H9)	L1 (+0.2)
RUC0031101	RUC0035901	3.00	6.00	3.50	RUC0251103	RUC0255907	25.00	32.00	11.00
RUC0031102	RUC0035902	3.50	13.00	7.00	RUC0251104	RUC0255906	25.00	35.00	9.20
RUC0041101	RUC0045901	4.00	10.00	5.00	RUC0271101	RUC0275901	27.00	36.50	7.30
RUC0051101	RUC0055901	5.00	12.25	5.55	RUC0271102	RUC0275902	27.50	38.50	11.00
RUC0051102	RUC0055902	5.00	12.00	6.00	RUC0271103	RUC0275903	27.50	36.50	9.00
RUC0061101	RUC0065904	6.00	12.00	5.00	RUC0281103	RUC0285904	28.00	34.30	6.00
RUC0061102	RUC0065902	6.00	13.00	9.00	RUC0281102	RUC0285905	28.00	38.00	8.00
RUC0061103	RUC0065903	6.00	10.00	5.00	RUC0281104	RUC0285906	28.00	36.00	6.50
RUC0061104	RUC0065901	6.00	13.00	6.00	RUC0281105	RUC0285902	28.00	35.50	6.00
RUC0081101	RUC0085902	8.00	12.00	5.00	RUC0281106	RUC0285903	28.57	41.27	9.00
RUC0081102	RUC0085901	8.00	13.00	4.00	RUC0301101	RUC0305901	30.00	40.00	7.00
RUC0091101	RUC0095902	9.24	19.26	6.86	RUC0301102	RUC0305903	30.00	38.00	9.00
RUC0091102	RUC0095901	9.50	14.00	3.00	RUC0301103	RUC0305904	30.00	40.00	8.00
RUC0101101	RUC0105901	10.00	14.00	4.00	RUC0321102	RUC0325901	32.00	44.00	10.00
RUC0111101	RUC0115901	11.80	26.00	13.00	RUC0321101	RUC0325905	32.50	43.70	7.50
RUC0121102	RUC0125904	12.00	25.40	7.30	RUC0331101	RUC0335901	33.00	40.00	5.00
RUC0121103	RUC0125905	12.00	20.00	7.00	RUC0351101	RUC0355904	35.00	45.00	8.00
RUC0121104	RUC0125903	12.00	19.00	5.50	RUC0351103	RUC0355902	35.00	47.00	11.00
RUC0121101	RUC0125906	12.00	18.50	5.20	RUC0351102	RUC0355903	35.00	45.00	11.00
RUC0141101	RUC0145902	14.00	30.00	11.00	RUC0361101	RUC0365903	36.54	44.50	9.00
RUC0151101	RUC0155901	15.00	20.00	4.50	RUC0371101	RUC0375902	37.00	47.00	9.00
RUC0151102	RUC0155902	15.87	22.22	5.55	RUC0371102	RUC0375901	37.00	47.00	7.00
RUC0161103	RUC0165902	16.00	27.12	7.50	RUC0381101	RUC0385901	38.00	50.00	11.00
RUC0161104	RUC0165901	16.00	24.00	6.60	RUC0401102	RUC0405908	40.00	48.00	6.70
RUC0181101	RUC0185902	18.00	24.00	5.80	RUC0401101	RUC0405909	40.00	52.00	9.00
RUC0181102	RUC0185903	18.00	28.00	8.00	RUC0401103	RUC0405902	40.00	50.00	11.00
RUC0181103	RUC0185904	18.00	24.40	5.50	RUC0411101	RUC0415901	41.28	50.80	6.35
RUC0191101	RUC0195902	19.00	25.40	7.50	RUC0441102	RUC0445902	44.00	54.00	8.00
RUC0191102	RUC0195904	19.00	27.00	7.00	RUC0441103	RUC0445903	44.45	57.94	9.00
RUC0201101	RUC0205902	20.00	28.00	8.50	RUC0441104	RUC0445904	44.45	57.15	9.00
RUC0201102	RUC0205903	20.00	28.00	6.50	RUC0441105	RUC0445901	44.45	57.15	10.52
RUC0201103	RUC0205904	20.00	30.00	6.50	RUC0451101	RUC0455903	45.00	60.00	11.00
RUC0201104	RUC0205905	20.00	36.00	9.50	RUC0451102	RUC0455904	45.00	63.00	13.00
RUC0201105	RUC0205906	20.63	28.58	5.55	RUC0501101	RUC0505902	50.00	60.00	8.30
RUC0221101	RUC0225902	22.40	30.00	6.00	RUC0501102	RUC0505905	50.00	60.00	13.50
RUC0251102	RUC0255902	25.00	34.00	8.50	RUC0511101	RUC0515901	51.50	60.00	9.25

Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: ROD SEAL

STYLE: RUC

TYPE: Single Acting Seal

Style RUC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1 (f8)	D1 (H9)	L1 (+0.2)	Part No. Nitrile	Part No. Polyurethane	d1 (f8)	D1 (H9)	L1 (+0.2)
RUC0521101	RUC0525902	52.00	70.00	11.00	RUC1001102	RUC1005904	100.00	115.00	16.00
RUC0551101	RUC0555902	55.00	69.00	16.00	RUC1001103	RUC1005903	100.00	109.00	16.00
RUC0581101	RUC0585901	58.00	80.00	11.00	RUC1001101	RUC1005901	100.00	120.00	13.00
RUC0581102	RUC0585902	58.74	72.64	10.50	RUC1011101	RUC1015901	101.60	114.50	20.00
RUC0601101	RUC0605910	60.00	73.00	9.00	RUC1041101	RUC1045901	104.94	120.30	10.80
RUC0601102	RUC0605905	60.00	75.00	13.50	RUC1051101	RUC1055903	105.00	120.00	10.00
RUC0601103	RUC0605907	60.00	75.00	13.00	RUC1051102	RUC1055904	105.00	120.00	13.00
RUC0601104	RUC0605911	60.00	70.00	15.00	RUC1071101	RUC1075901	107.95	117.47	7.20
RUC0601105	RUC0605906	60.00	80.00	13.50	RUC1111101	RUC1115901	111.12	120.65	7.30
RUC0601106	RUC0605908	60.00	80.00	13.00	RUC1151102	RUC1155901	115.00	124.00	16.00
RUC0601107	RUC0605912	60.32	74.61	11.00	RUC1151103	RUC1155902	115.00	130.00	10.00
RUC0631101	RUC0635903	63.50	76.20	12.75	RUC1181101	RUC1185901	118.00	133.00	10.00
RUC0701102	RUC0705903	70.00	82.00	8.00	RUC1231101	RUC1235901	123.00	133.00	7.20
RUC0701101	RUC0705905	70.00	90.00	13.00	RUC1271101	RUC1275901	127.00	139.70	20.00
RUC0701103	RUC0705912	70.00	85.00	13.00	RUC1271102	RUC1275902	127.00	142.87	13.70
RUC0701104	RUC0705911	70.00	79.00	16.00	RUC1301101	RUC1305903	130.00	139.00	16.00
RUC0701105	RUC0705910	70.00	90.00	13.50	RUC1301102	RUC1305902	130.00	145.00	10.00
RUC0751101	RUC0755903	75.00	88.00	11.00	RUC1301103	RUC1305904	130.00	150.00	13.00
RUC0751102	RUC0755902	75.00	90.00	13.00	RUC1361101	RUC1365901	136.00	150.00	9.50
RUC0761101	RUC0765901	76.20	88.90	20.00	RUC1401101	RUC1405905	140.00	150.00	16.00
RUC0781101	RUC0785901	78.00	88.00	15.00	RUC1401102	RUC1405903	140.00	150.00	7.00
RUC0801101	RUC0805906	80.00	100.00	13.50	RUC1401103	RUC1405906	140.00	160.00	16.00
RUC0801102	RUC0805907	80.00	93.00	11.00	RUC1451101	RUC1455901	145.00	154.00	16.00
RUC0801103	RUC0805905	80.00	95.00	11.00	RUC1521101	RUC1525901	152.40	165.10	20.00
RUC0851101	RUC0855901	85.00	94.00	16.00	RUC1601101	RUC1605902	160.00	170.00	16.00
RUC0901101	RUC0905906	90.00	100.00	14.00	RUC1601102	RUC1605903	160.00	185.00	19.00
RUC0901102	RUC0905907	90.00	105.00	12.50	RUC1601103	RUC1605904	160.00	190.00	27.00
RUC0901103	RUC0905908	90.00	105.00	13.00	RUC1601104	RUC1605905	160.00	190.00	16.50
RUC0901104	RUC0905911	90.00	105.00	10.00	RUC1801101	RUC1805902	180.00	190.00	16.00
RUC0901105	RUC0905903	90.00	110.00	13.00	RUC2201101	RUC2205901	220.00	250.00	20.00
RUC0901106	RUC0905906	90.00	110.00	14.00	RUC4821101	RUC4825901	482.00	522.00	22.00
RUC0901107	RUC0905912	90.00	100.00	12.30					
RUC0951101	RUC0955903	95.00	110.00	14.50					
RUC0951102	RUC0955902	95.00	110.00	13.00					
RUC0951103	RUC0955901	95.00	110.00	11.00					
RUC0991101	RUC0995901	99.00	109.00	15.00					

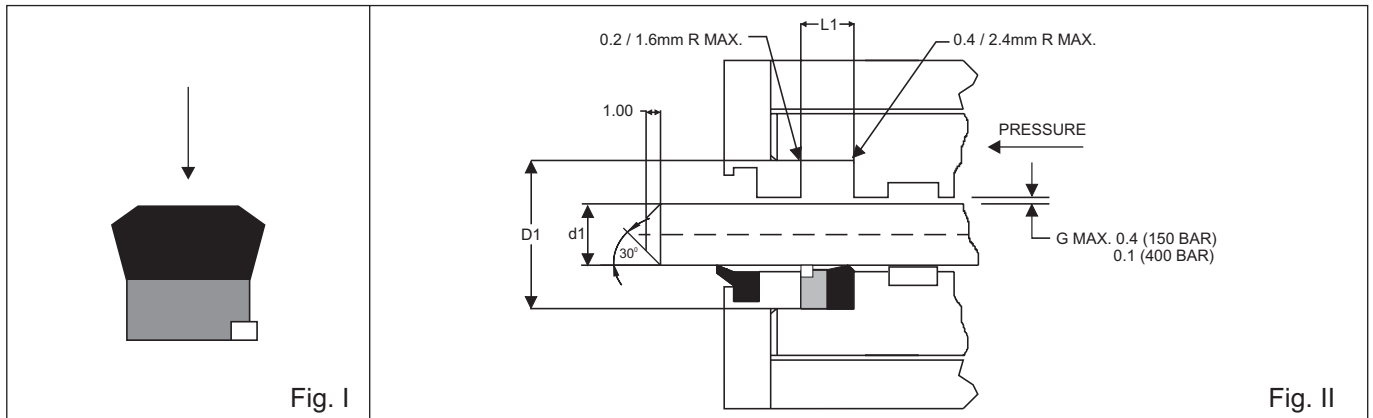
Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: ROD SEAL

STYLE: RFD

TYPE: Single Acting Fluid Seal



MATERIAL:

Seal Ring - Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).
Back Up Ring - PTFE / POM / PA

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).
Pressure: 400 BAR.
Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.
Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty hydraulic presses.
Steel mills. Earth moving equipments.
Requires split gland.

DETAILS:

The type RFD is a heavy duty single acting rod seal with the advantage of an anti-extrusion ring. The seal comprises of a rubberized fabric which gives strength and durability to a nitrile energizer which is moulded. It needs a split housing. The seal section is pre-loaded by the housing when installed to ensure effective sealing at low pressure. When the pressure increases, the nitrile energizes the fabric to increase the sealing area and hence the efficiency of the seal. The strength and durability of the rubberized fabric combines with its ability to retain lubricant keeping friction and wear to a minimum. A re-inforced plastic anti-extrusion ring at the internal heel of the seal, to protect it against damage by extrusion, which enables the designer to use a large clearance between the rod and housing.

FEATURES:

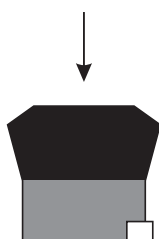
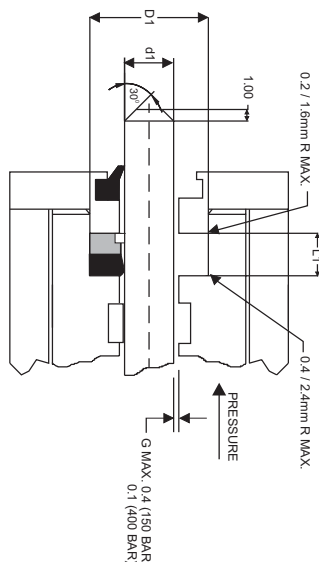
High pressures capability.
Contamination resistant.
General purpose seal.
Long life.

SECTION: ROD SEAL

STYLE: RFD

TYPE: Single Acting Fluid Seal

Style RFD Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Part No.	d1	D1	L1	Part No.	d1	D1	L1
RFD0158301	15.87	22.22	5.25	RFD0318301	31.75	47.62	11.60
RFD0168303	16.00	24.00	6.00	RFD0318302	31.75	44.45	7.35
RFD0168301	16.00	28.00	7.50	RFD0318304	31.75	44.45	9.00
RFD0168302	16.75	26.00	6.30	RFD0328308	32.00	40.00	6.50
RFD0208301	20.00	28.00	6.30	RFD0328302	32.00	40.00	9.00
RFD0208302	20.00	30.00	8.50	RFD0328304	32.00	42.00	8.50
RFD0208305	20.00	35.00	10.00	RFD0328301	32.00	40.00	6.00
RFD0208306	20.00	32.00	8.00	RFD0328306	32.00	42.00	10.00
RFD0208307	20.00	32.00	10.00	RFD0328305	32.00	40.00	8.00
RFD0208303	20.00	35.00	12.00	RFD0328307	32.00	45.00	10.00
RFD0208304	20.00	28.00	7.00	RFD0328303	32.00	50.00	9.00
RFD0228305	22.00	32.00	10.00	RFD0348301	34.92	47.62	9.50
RFD0228306	22.00	33.00	6.00	RFD0348302	34.92	50.80	10.00
RFD0228303	22.00	34.00	9.50	RFD0358303	35.00	43.00	6.50
RFD0228307	22.00	30.00	7.00	RFD0358301	35.00	50.00	11.50
RFD0228304	22.22	31.75	9.20	RFD0358302	35.00	45.00	10.50
RFD0258301	25.00	33.00	6.00	RFD0358304	35.00	55.00	11.00
RFD0258310	25.00	38.00	9.00	RFD0368303	36.00	48.00	9.50
RFD0258309	25.00	40.00	10.00	RFD0368301	36.00	46.00	8.50
RFD0258307	25.00	38.00	10.00	RFD0368302	36.00	43.00	6.50
RFD0258305	25.00	35.00	8.50	RFD0378301	37.72	50.80	9.00
RFD0258306	25.40	31.75	4.76	RFD0388308	38.00	46.00	9.50
RFD0258302	25.40	38.10	10.00	RFD0388302	38.00	48.00	6.50
RFD0278301	27.00	35.00	6.50	RFD0388306	38.00	48.00	10.00
RFD0288303	28.00	40.00	9.50	RFD0388307	38.00	50.00	9.50
RFD0288302	28.00	36.00	6.00	RFD0388304	38.10	53.97	12.83
RFD0288301	28.00	38.00	8.00	RFD0388303	38.10	47.62	7.50
RFD0288306	28.00	41.00	11.00	RFD0388301	38.10	50.80	10.00
RFD0288304	28.19	39.68	8.00	RFD0408303	40.00	50.00	10.50
RFD0308304	30.00	45.00	9.00	RFD0408301	40.00	50.00	10.00
RFD0308305	30.00	50.00	14.50	RFD0408305	40.00	50.00	13.50
RFD0308302	30.00	40.00	7.50	RFD0408307	40.00	48.00	6.50
RFD0308301	30.00	38.00	6.40	RFD0408310	40.00	52.00	10.00
RFD0308307	30.00	40.00	10.00	RFD0408311	40.00	52.00	8.00
RFD0308306	30.00	40.00	10.50	RFD0408309	40.00	55.00	10.00
RFD0318303	31.71	44.45	9.90	RFD0408314	40.00	55.00	11.00

Other sizes available on request.

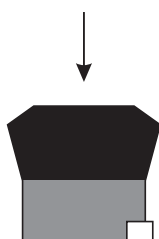
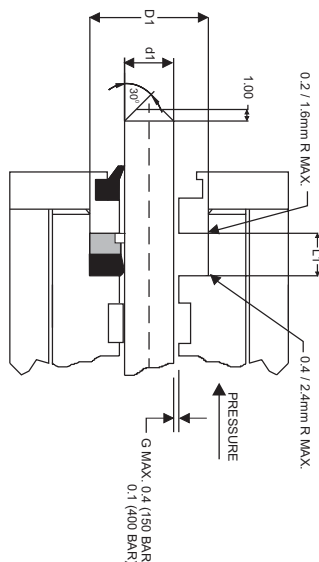
Moulds are available for all the above listed sizes.

SECTION: ROD SEAL

STYLE: RFD

TYPE: Single Acting Fluid Seal

Style RFD Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Part No.	d1	D1	L1	Part No.	d1	D1	L1
RFD0408313	40.00	50.00	7.00	RFD0578302	57.15	76.20	10.00
RFD0418302	41.14	50.80	9.50	RFD0578301	57.15	69.85	10.50
RFD0418303	41.27	57.15	11.60	RFD0578303	57.15	76.20	13.50
RFD0428301	42.00	52.00	9.00	RFD0608307	60.00	75.00	10.00
RFD0448304	44.00	53.00	8.00	RFD0608308	60.00	75.00	13.00
RFD0448303	44.14	53.84	9.50	RFD0608305	60.00	70.00	8.00
RFD0458304	45.00	60.00	10.50	RFD0608304	60.00	80.00	14.50
RFD0458303	45.00	57.00	10.00	RFD0608302	60.00	70.00	13.00
RFD0458301	45.00	55.00	10.50	RFD0608303	60.00	70.00	11.00
RFD0458311	45.00	55.00	10.00	RFD0608309	60.00	80.00	12.00
RFD0458312	45.00	55.00	7.50	RFD0608306	60.00	70.00	7.50
RFD0458309	45.00	65.00	14.50	RFD0608310	60.00	80.00	10.00
RFD0458308	45.00	65.00	12.50	RFD0608312	60.00	75.00	12.50
RFD0458307	45.00	65.00	10.00	RFD0608313	60.00	75.00	12.00
RFD0458306	45.00	53.00	7.00	RFD0608311	60.00	80.00	13.00
RFD0458305	45.00	65.00	10.50	RFD0608314	60.00	80.00	13.50
RFD0478301	47.62	63.50	11.50	RFD0638304	63.00	78.00	12.50
RFD0508304	50.00	60.00	10.00	RFD0638301	63.00	75.00	11.00
RFD0508302	50.00	70.00	14.50	RFD0638303	63.00	80.00	14.00
RFD0508305	50.00	62.00	9.50	RFD0638306	63.50	76.20	10.50
RFD0508301	50.00	60.00	8.00	RFD0638302	63.50	77.78	11.50
RFD0508307	50.00	65.00	11.00	RFD0638305	63.50	76.20	8.50
RFD0508310	50.00	70.00	10.00	RFD0648301	64.77	75.95	10.50
RFD0508311	50.00	70.00	12.00	RFD0658301	65.00	85.00	14.50
RFD0508309	50.80	63.50	10.00	RFD0658304	65.00	80.00	10.00
RFD0508312	50.80	66.67	11.50	RFD0658303	65.00	80.00	11.50
RFD0548301	54.00	66.00	9.50	RFD0658302	65.00	75.00	13.50
RFD0558305	55.00	70.00	10.50	RFD0658306	65.00	85.00	12.00
RFD0558301	55.00	65.00	7.50	RFD0658305	65.00	85.00	10.00
RFD0558303	55.00	75.00	14.50	RFD0668301	66.67	85.72	14.80
RFD0558304	55.00	65.00	11.00	RFD0708303	70.00	90.00	14.50
RFD0568301	56.00	66.00	10.50	RFD0708302	70.00	85.00	12.50
RFD0568302	56.00	66.00	8.00	RFD0708301	70.00	82.00	10.50
RFD0568304	56.00	71.00	10.00	RFD0708311	70.00	95.00	12.50
RFD0578305	57.00	67.00	6.00	RFD0708305	70.00	80.00	10.50
RFD0578304	57.00	67.00	8.00	RFD0708306	70.00	80.00	12.50

Other sizes available on request.

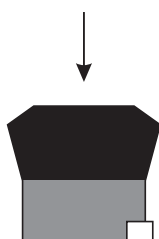
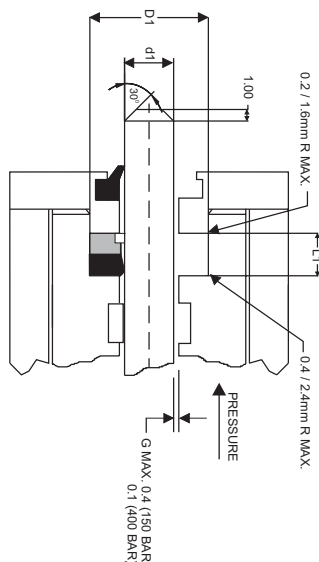
Moulds are available for all the above listed sizes.

SECTION: ROD SEAL

STYLE: RFD

TYPE: Single Acting Fluid Seal

Style RFD Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Part No.	d1	D1	L1	Part No.	d1	D1	L1
RFD0708307	70.00	80.00	8.00	RFD0858303	85.00	95.00	9.00
RFD0708308	70.00	84.00	12.50	RFD0858301	85.00	100.00	12.00
RFD0708309	70.00	85.00	10.00	RFD0858304	85.00	105.00	14.50
RFD0708310	70.00	90.00	12.50	RFD0888301	88.90	101.60	10.00
RFD0708313	70.00	80.00	13.00	RFD0888303	88.90	114.30	12.50
RFD0708314	70.00	95.00	10.00	RFD0888302	88.90	107.95	12.70
RFD0708315	70.00	85.00	13.50	RFD0908307	90.00	105.00	12.50
RFD0708316	70.00	90.00	13.50	RFD0908308	90.00	105.00	13.50
RFD0708304	70.00	90.00	11.50	RFD0908306	90.00	105.00	11.50
RFD0758304	75.00	85.00	7.00	RFD0908303	90.00	105.00	9.50
RFD0758304	75.00	90.00	13.50	RFD0908301	90.00	100.00	14.00
RFD0758305	75.00	95.00	12.00	RFD0908309	90.00	100.00	10.50
RFD0758303	75.00	90.00	11.50	RFD0908304	90.00	110.00	12.50
RFD0758302	75.00	95.00	14.50	RFD0908310	90.00	110.00	13.50
RFD0758301	75.00	85.00	11.00	RFD0958305	95.00	115.00	13.50
RFD0768302	76.20	92.07	10.00	RFD0958304	95.00	110.00	13.00
RFD0768301	76.20	88.90	9.40	RFD0958303	95.00	110.00	12.50
RFD0768304	76.20	95.25	14.80	RFD0958301	95.00	105.00	11.00
RFD0808307	80.00	100.00	12.00	RFD0958302	95.00	115.00	14.50
RFD0808306	80.00	100.00	10.50	RFD1008302	100.00	115.00	11.50
RFD0808308	80.00	100.00	12.50	RFD1008306	100.00	115.00	14.50
RFD0808301	80.00	93.00	14.50	RFD1008305	100.00	120.00	14.50
RFD0808302	80.00	95.00	12.00	RFD1008303	100.00	113.00	13.50
RFD0808303	80.00	96.00	10.50	RFD1008301	100.00	120.00	12.00
RFD0808304	80.00	100.00	14.50	RFD1008310	100.00	120.00	13.50
RFD0808314	80.00	95.00	10.00	RFD1008309	100.00	115.00	13.50
RFD0808315	80.00	95.00	13.50	RFD1008311	100.00	125.00	14.50
RFD0808316	80.00	100.00	13.50	RFD1008304	100.00	120.00	13.00
RFD0808312	80.00	92.00	10.50	RFD1008308	100.00	115.00	12.50
RFD0808310	80.00	95.00	15.00	RFD1008313	100.00	125.00	19.00
RFD0808311	80.00	90.00	10.00	RFD1018302	101.60	127.00	19.50
RFD0808309	80.00	90.00	8.00	RFD1018301	101.60	117.47	14.00
RFD0808305	80.00	95.00	12.50	RFD1058305	105.00	120.00	15.50
RFD0828301	82.55	101.60	10.00	RFD1058306	105.00	115.00	11.00
RFD0828302	82.55	101.60	14.80	RFD1058304	105.00	125.00	14.50
RFD0858302	85.00	97.00	9.50	RFD1058303	105.00	125.00	12.50

Other sizes available on request.

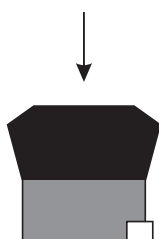
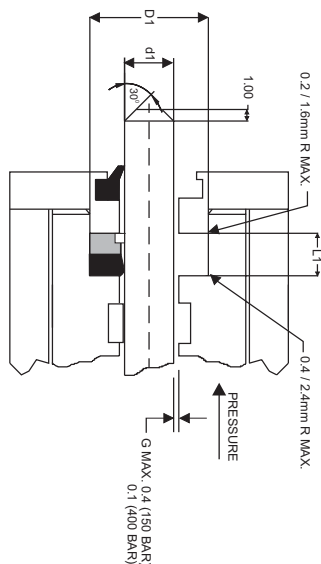
Moulds are available for all the above listed sizes.

SECTION: ROD SEAL

STYLE: RFD

TYPE: Single Acting Fluid Seal

Style RFD Metric Ordering Information (Dimensions in mm)



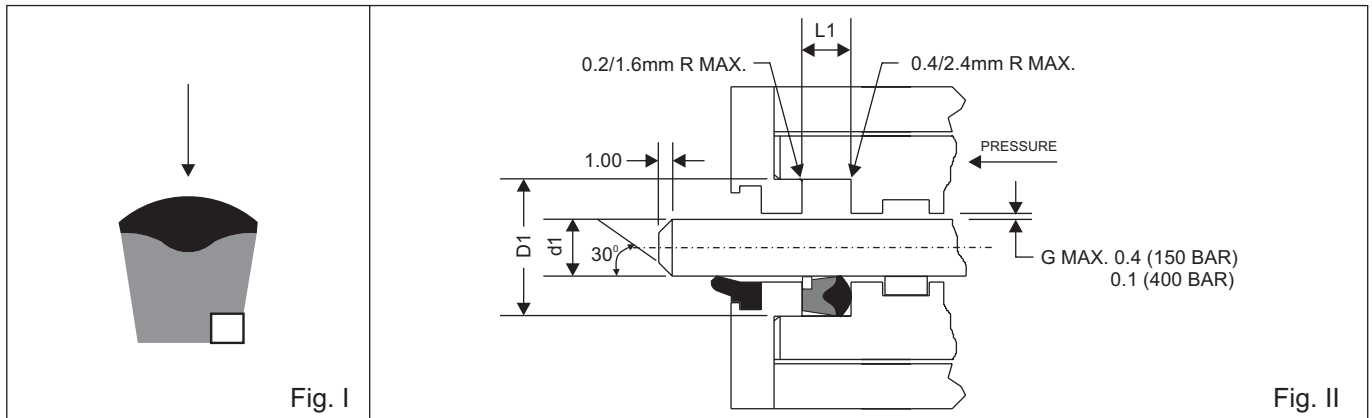
Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Part No.	d1	D1	L1	Part No.	d1	D1	L1
RFD1058302	105.00	120.00	14.50	RFD1278302	127.00	139.70	10.00
RFD1058301	105.00	120.00	12.00	RFD1308303	130.00	155.00	18.80
RFD1078302	107.95	133.35	19.50	RFD1308306	130.00	145.00	9.50
RFD1078301	107.95	127.00	12.50	RFD1308304	130.00	145.00	13.00
RFD1108302	110.00	135.00	15.50	RFD1308301	130.00	140.00	10.00
RFD1108301	110.00	130.00	12.50	RFD1308302	130.00	145.00	15.00
RFD1108303	110.00	130.00	13.50	RFD1338301	133.35	149.22	11.11
RFD1118301	111.12	123.82	11.11	RFD1358302	135.00	150.00	13.00
RFD0958301	95.00	105.00	11.00	RFD1358303	135.00	150.00	9.50
RFD1158306	115.00	140.00	25.40	RFD1358304	135.00	150.00	14.00
RFD1158302	115.00	130.00	14.50	RFD1358305	135.00	155.00	18.80
RFD1158301	115.00	130.00	12.50	RFD1358301	135.00	155.00	16.00
RFD1158305	115.00	125.00	10.00	RFD1408302	140.00	160.00	12.50
RFD1158303	115.00	125.00	11.19	RFD1408304	140.00	160.00	14.50
RFD1158304	115.00	130.00	13.50	RFD1408303	140.00	155.00	13.00
RFD1208307	120.00	132.00	10.00	RFD1458301	145.00	157.70	10.00
RFD1208306	120.00	140.00	13.50	RFD1528301	152.40	177.80	19.50
RFD1208301	120.00	140.00	14.50	RFD1538301	153.00	168.00	12.00
RFD1208302	120.00	140.00	12.50	RFD1558301	155.00	180.00	15.00
RFD1208308	120.00	150.00	15.00	RFD1608304	160.00	180.00	13.50
RFD1258303	125.00	150.00	14.50	RFD1658302	165.00	195.00	20.40
RFD1258301	125.00	140.00	12.00	RFD1658303	165.00	185.00	16.00
RFD1258304	125.00	145.00	12.00	RFD2208301	220.00	250.00	20.50
RFD1278301	127.00	152.40	19.50				

SECTION: ROD SEAL

STYLE: RFA

TYPE: Single Acting Fluid Seal



MATERIAL:

Seal Ring - Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).
Back Up Ring - PTFE / POM / PA

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).
Pressure: 400 BAR.
Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.
Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty hydraulic presses.
Steel mills. Earth moving equipments.
Requires split gland.

DETAILS:

The type RFA is a heavy duty single acting rod seal with the advantage of an anti-extrusion ring. The seal comprises of a rubberized fabric which gives strength and durability to a nitrile energizer which is moulded. It needs a split housing. The seal section is pre-loaded by the housing when installed to ensure effective sealing at low pressure. When the pressure increases, the nitrile energizes the fabric to increase the sealing area and hence the efficiency of the seal. The strength and durability of the rubberized fabric combines with its ability to retain lubricant keeping friction and wear to a minimum. A re-inforced plastic anti-extrusion ring at the internal heel of the seal, to protect it against damage by extrusion, which enables the designer to use a large clearance between the rod and housing.

FEATURES:

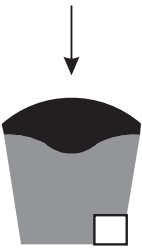
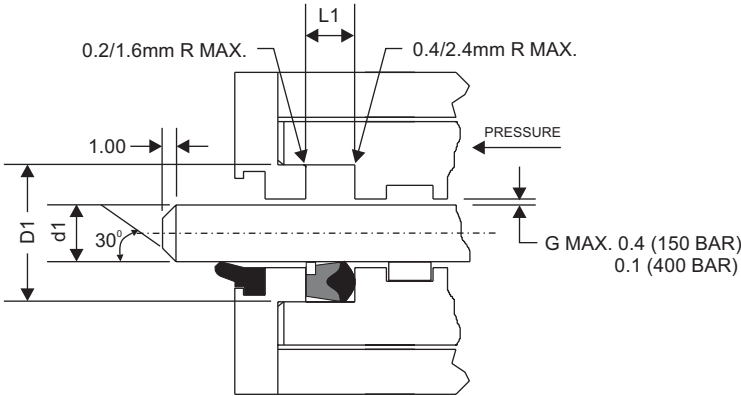
High pressure capability.
Contamination resistant.
General purpose seal.
Long life.

SECTION: ROD SEAL

STYLE: RFA

TYPE: Single Acting Fluid Seal

Style RFA Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

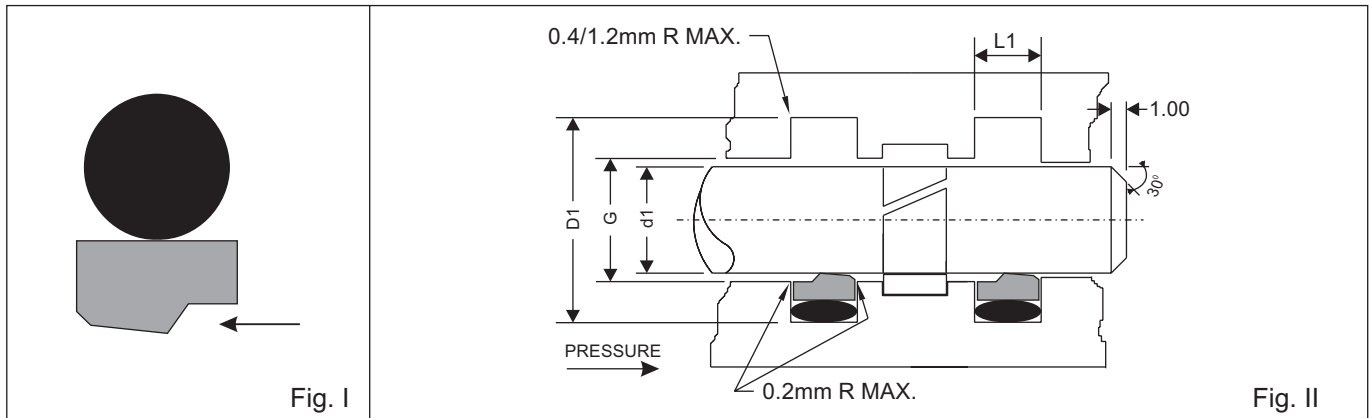
Part No.	d1	D1	L1
RFA 0188301	18.0	23.0	5.0
RFA 0208301	20.0	28.0	6.4
RFA 0258301	25.0	33.0	6.4
RFA 0258302	25.0	38.0	9.5
RFA 0288301	28.0	38.0	8.0
RFA 0368301	36.0	46.0	8.0
RFA 0408301	40.0	50.0	8.0
RFA 0508301	50.0	60.0	8.0
RFA 0558301	55.0	65.0	10.5
RFA 0568301	56.0	71.0	12.5
RFA 0708301	70.0	85.0	12.5
RFA 0758301	75.0	95.0	14.0
RFA 0808301	80.0	95.0	12.5
RFA 0858301	85.0	100.0	12.0
RFA 0908301	90.0	105.0	12.5
RFA 1008301	100.0	120.0	14.0
RFA 1108301	110.0	130.0	16.0

Other sizes available on request.

SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal



MATERIAL:

Outer O'Ring NT4/b - Spareage NT4/b is Acronitrile Butadine Rubber (NBR) with a shore 'A' Hardness of 70°/75°.

Inner Seal Ring BFT - Spareage BFT is a Bronze filled with PTFE compound with Bronze content of 40% (For higher pressure, 60% BFT is recommended.)

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Pressure: 400 BAR.

Speed: 10 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty cylinders.

Stick slip free operation.

Machine tool.

Injection moulding machines.

Earthmoving equipment.

Can also be used in conjunction with SUA/RUB rod seals for heavy duty application.

DETAILS:

RTA is a single acting rod seal suitable for light to medium duty hydraulic cylinders & suitable for cylinders with small groove dimensions, thus enabling a compact gland.

The RTA rod seal is a combination of a NBR O'ring energiser & an inner seal ring made of PTFE added with a filler to increase the resistance of the seal ring to high pressure. Generally, Bronze is the used filler but also Glass & Graphite filled PTFE SS rod seals can be made.

The RTA seal can easily be fitted in a single gland and also suitable for a 2 piece Gland application. The Bronze filled PTFE inner seal ring, when in contact with the piston rod, the PTFE ensure a stick slip free movement & reduces friction to a minimum. Whereas the filler increase the strength in the seal ring to prevent it from extruding & to withstand pressure as high as 400 BAR.

FEATURES:

Well proven design.

Self lubricating seal ring.

High surface speed.

Friction at minimum.

Compact gland.

Any size upto 1200 mm available on request.

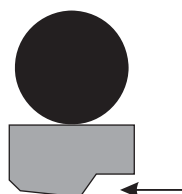
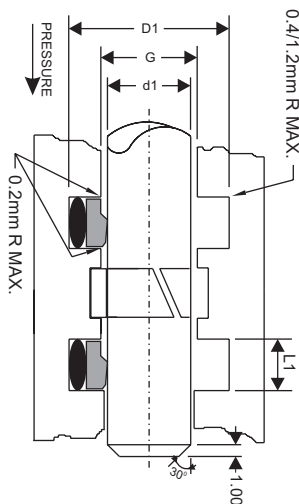
SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

Style RTA Metric Ordering Information (Dimensions in mm)

Part No.	d1	D1	L1	G 100 Bar	G 200 Bar	G 400 Bar	O-Ring Part No.
RTA 0040801	4.0	8.9	2.2	4.6	4.4	4.3	OR 17800528
RTA 0050801	5.0	9.9	2.2	5.6	5.4	5.3	OR 17800675
RTA 0060801 (Stock Size)	6.0	10.9	2.2	6.6	6.4	6.3	OR 17800765
RTA 0070801	7.0	11.9	2.2	7.6	7.4	7.3	OR 17800874
RTA 0080801	8.0	12.9	2.2	8.6	8.4	8.3	OR 17800975
RTA 0080802	8.0	15.3	3.2	8.8	8.5	8.3	OR 26201077
RTA 0100801	10.0	14.9	2.2	10.6	10.4	10.3	OR 17800110
RTA 0100802 (Stock Size)	10.0	17.3	3.2	10.8	10.5	10.3	OR 26201237
RTA 0120801	12.0	16.9	2.2	12.6	12.4	12.3	OR 17800140
RTA 0120802 (Stock Size)	12.0	19.3	3.2	12.8	12.5	12.3	OR 26201395
RTA 0140801	14.0	18.9	2.2	14.6	14.4	14.3	OR 17801717
RTA 0140802 (Stock Size)	14.0	21.3	3.2	14.8	14.5	14.3	OR 26201654
RTA 0150801	15.0	19.9	2.2	15.6	15.4	15.3	OR 17801717
RTA 0150802	15.0	22.3	3.2	15.8	15.5	15.3	OR 26201796
RTA 0160801	16.0	20.9	2.2	16.6	16.4	16.3	OR 17801760
RTA 0160802 (Stock Size)	16.0	23.3	3.2	16.8	16.5	16.3	OR 26201872
RTA 0180801	18.0	22.9	2.2	18.6	18.4	18.3	OR 17802000
RTA 0180802 (Stock Size)	18.0	25.3	3.2	18.8	18.5	18.3	OR 26202063
RTA 0200801 (Stock Size)	20.0	27.3	3.2	20.8	20.5	20.3	OR 26202222
RTA 0200802 (Stock Size)	20.0	30.7	4.2	20.8	20.5	20.4	OR 35302340
RTA 0220801	22.0	29.3	3.2	22.8	22.5	22.3	OR 26202500
RTA 0220802 (Stock Size)	22.0	32.7	4.2	22.8	22.5	22.4	OR 35302657
RTA 0240801	24.0	34.7	4.2	24.8	24.5	24.4	OR 35302864
RTA 0250801	25.0	32.3	3.2	25.8	25.5	25.3	OR 26202824
RTA 0250802 (Stock Size)	25.0	35.7	4.2	25.8	25.5	25.4	OR 35302974
RTA 0280801 (Stock Size)	28.0	35.3	3.2	28.8	28.5	28.3	OR 26203142
RTA 0280802 (Stock Size)	28.0	38.7	4.2	28.8	28.5	28.4	OR 35303292
RTA 0300801	30.0	37.3	3.2	30.8	30.5	30.3	OR 26203459
RTA 0300802 (Stock Size)	30.0	40.7	4.2	30.8	30.5	30.4	OR 35303452
RTA 0320801	32.0	39.3	3.2	32.8	32.5	32.3	OR 26203459
RTA 0320802 (Stock Size)	32.0	42.7	4.2	32.8	32.5	32.4	OR 35303609
RTA 0330801	33.0	43.7	4.2	33.8	33.5	33.4	OR 35303769
RTA 0340801	34.0	44.7	4.2	34.8	34.5	34.4	OR 35303864
RTA 0350802	35.0	42.3	3.2	35.8	35.5	35.3	OR 26203777
RTA 0350801 (Stock Size)	35.0	45.7	4.2	35.8	35.5	35.4	OR 35303970
RTA 0360801	36.0	43.3	3.2	36.8	36.5	36.3	OR 26203934
RTA 0360802 (Stock Size)	36.0	46.7	4.2	36.8	36.5	36.4	OR 35304128
RTA 0380801 (Stock Size)	38.0	48.7	4.2	38.8	38.5	38.4	OR 35304286
RTA 0380802	38.0	53.1	6.3	39.0	38.6	38.4	OR 53304382



Tolerance Table

d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

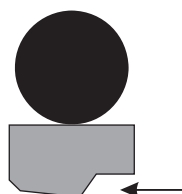
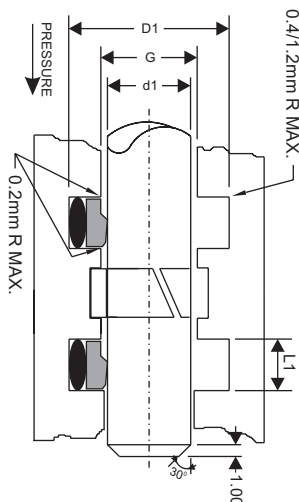
SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

Style RTA Metric Ordering Information (Dimensions in mm)

Part No.	d1	D1	L1	G 100 Bar	G 200 Bar	G 400 Bar	O-Ring Part No.
RTA 0400801 (Stock Size)	40.0	50.7	4.2	40.8	40.5	40.4	OR 35304400
RTA 0400802 (Stock Size)	40.0	55.1	6.3	41.0	40.6	40.4	OR 53304548
RTA 0410801	41.0	56.1	6.3	42.0	41.6	41.4	OR 53304699
RTA 0420801	42.0	52.7	4.2	42.8	42.5	42.4	OR 35304722
RTA 0420802	42.0	57.1	6.3	43.0	42.6	42.4	OR 53304699
RTA 0430801	43.0	58.1	6.3	44.0	43.6	43.4	OR 53304890
RTA 0450801 (Stock Size)	45.0	55.7	4.2	45.8	45.5	45.4	OR 35305039
RTA 0450802 (Stock Size)	45.0	60.1	6.3	46.0	45.6	45.4	OR 53305017
RTA 0480801	48.0	63.1	6.3	49.0	48.6	48.4	OR 53305334
RTA 0500801 (Stock Size)	50.0	60.7	4.2	50.8	50.5	50.4	OR 35305400
RTA 0500802 (Stock Size)	50.0	65.1	6.3	51.0	50.6	50.4	OR 53305652
RTA 0520801	52.0	67.1	6.3	53.0	52.6	52.4	OR 53305710
RTA 0540801	54.0	69.1	6.3	55.0	54.6	54.4	OR 53306000
RTA 0550801 (Stock Size)	55.0	65.7	4.2	55.8	55.5	55.4	OR 35305900
RTA 0550802 (Stock Size)	55.0	70.1	6.3	56.0	55.6	55.4	OR 53306150
RTA 0560801 (Stock Size)	56.0	66.7	4.2	56.8	56.5	56.4	OR 35306124
RTA 0560802 (Stock Size)	56.0	71.1	6.3	57.0	56.6	56.4	OR 53-306250
RTA 0570801	57.0	72.1	6.3	58.0	57.6	57.4	OR 53306287
RTA 0600801	60.0	70.7	4.2	60.8	60.5	60.4	OR 35306500
RTA 0600802 (Stock Size)	60.0	75.1	6.3	61.0	60.6	60.4	OR 53306604
RTA 0630801 (Stock Size)	63.0	78.1	6.3	64.0	63.6	63.4	OR 53306922
RTA 0640801	64.0	79.1	6.3	65.0	64.6	64.4	OR 53307044
RTA 0650801 (Stock Size)	65.0	80.1	6.3	66.0	65.6	65.4	OR 53307239
RTA 0700801 (Stock Size)	70.0	85.1	6.3	71.0	70.6	70.4	OR 53307557
RTA 0720801	72.0	87.1	6.3	73.0	72.6	72.4	OR 53307874
RTA 0750801 (Stock Size)	75.0	90.1	6.3	76.0	75.6	75.4	OR 53308192
RTA 0800801 (Stock Size)	80.0	95.1	6.3	81.0	80.6	80.4	OR 53308509
RTA 0850801 (Stock Size)	85.0	100.1	6.3	86.0	85.6	85.4	OR 53309144
RTA 0900801 (Stock Size)	90.0	105.1	6.3	91.0	90.6	90.4	OR 53309462
RTA 0920801	92.0	107.1	6.3	93.0	92.6	92.4	OR 53309779
RTA 0950801 (Stock Size)	95.0	110.1	6.3	96.0	95.6	95.4	OR 53310097
RTA 1000801 (Stock Size)	100.0	115.1	6.3	101.0	100.6	100.4	OR 53310732
RTA 1040801	104.0	119.1	6.3	105.0	104.6	104.4	OR 53311049
RTA 1050801 (Stock Size)	105.0	120.1	6.3	106.0	105.6	105.4	OR 53311367
RTA 1060801	106.0	121.1	6.3	107.0	106.6	106.4	OR 53311430
RTA 1100801 (Stock Size)	110.0	125.1	6.3	111.0	110.6	110.4	OR 53311684
RTA1100802 (Stock Size)	110.0	130.5	8.1	111.2	110.7	110.5	OR 69911684
RTA 1150801 (Stock Size)	115.0	130.1	6.3	116.0	115.6	115.4	OR 53312000
RTA 1200801 (Stock Size)	120.0	135.1	6.3	121.0	120.6	120.4	OR 53312637



Tolerance Table

d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

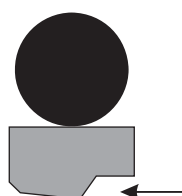
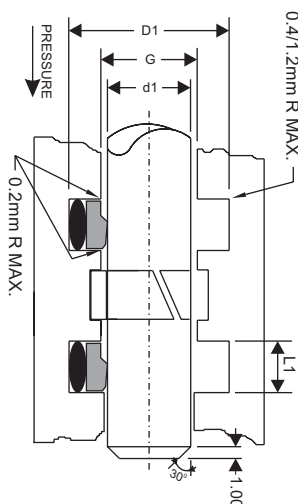
SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

Style RTA Metric Ordering Information (Dimensions in mm)

Part No.	d1	D1	L1	G 100 Bar	G 200 Bar	G 400 Bar	O-Ring Part No.
RTA 1250801 (Stock Size)	125.0	140.1	6.3	126.0	125.6	125.4	OR 53313272
RTA1250802 (Stock Size)	125.0	145.5	8.1	126.2	125.7	125.5	OR 69913272
RTA 1270801	127.0	142.1	6.3	128.0	127.6	127.4	OR 53313335
RTA 1300801 (Stock Size)	130.0	145.1	6.3	131.0	130.6	130.4	OR 53313589
RTA1300802 (Stock Size)	130.0	150.5	8.1	131.2	130.7	130.5	OR 69913907
RTA 1350801 (Stock Size)	135.0	150.1	6.3	136.0	135.6	135.4	OR 53314224
RTA 1400801 (Stock Size)	140.0	155.1	6.3	141.0	140.6	140.4	OR 53314542
RTA1400802 (Stock Size)	140.0	160.5	8.1	141.0	140.6	140.4	OR 69914859
RTA 1500801 (Stock Size)	150.0	165.1	6.3	151.0	150.6	150.4	OR 53315812
RTA1550801 (Stock Size)	155.0	170.1	6.3	156.0	155.6	155.4	OR 53315812
RTA 1600801 (Stock Size)	160.0	175.1	6.3	161.0	160.6	160.4	OR 53301650
RTA1600802 (Stock Size)	160.0	180.5	8.1	161.2	160.7	160.5	OR 69917082
RTA1657001 (Stock Size)	165.0	180.1	6.3	166.0	165.6	165.4	OR 53317082
RTA 1700801 (Stock Size)	170.0	185.1	6.3	171.0	170.6	170.4	OR 53317717
RTA 1800801 (Stock Size)	180.0	195.1	6.3	181.0	180.6	180.4	OR 53301860
RTA1800802 (Stock Size)	180.0	200.5	8.1	181.2	180.7	180.5	OR 69918987
RTA1850801 (Stock Size)	185.0	200.1	6.3	186.0	185.6	185.4	OR 53318987
RTA 1900801 (Stock Size)	190.0	205.1	6.3	191.0	190.6	190.4	OR 53319622
RTA 2000801 (Stock Size)	200.0	220.5	8.1	201.2	200.7	200.5	OR 69921024
RTA 2050801	205.0	225.5	8.1	206.2	205.7	205.5	OR 69921527
RTA 2100801 (Stock Size)	210.0	230.5	8.1	211.2	210.7	210.5	OR 69902180
RTA 2200801 (Stock Size)	220.0	240.5	8.1	221.2	220.7	220.5	OR 69923340
RTA 2300801 (Stock Size)	230.0	250.5	8.1	231.2	230.7	230.5	OR 69924067
RTA 2350801	235.0	255.5	8.1	236.2	235.7	235.5	OR 69924500
RTA 2400801 (Stock Size)	240.0	260.5	8.1	241.2	240.7	240.5	OR 69924700
RTA 2500801 (Stock Size)	250.0	270.5	8.1	251.2	250.7	250.5	OR 69925960
RTA 2600801 (Stock Size)	260.0	284.0	8.1	261.2	260.7	260.5	OR 69927000
RTA 2700801 (Stock Size)	270.0	294.0	8.1	271.2	270.7	270.5	OR 69928500
RTA 2800801 (Stock Size)	280.0	304.0	8.1	281.2	280.7	280.5	OR 69929147
RTA 2900801 (Stock Size)	290.0	314.0	8.1	291.2	290.7	290.5	OR 69930417
RTA 3000801 (Stock Size)	300.0	324.0	8.1	301.2	300.7	300.5	OR 69931400
RTA 3100801	310.0	334.0	8.1	311.2	310.7	310.5	OR 69932500
RTA 3200801 (Stock Size)	320.0	344.0	8.1	321.2	320.7	320.5	OR 69933400
RTA 3300802 (Stock Size)	330.0	354.0	8.1	331.2	330.7	330.5	OR 69934227
RTA 3400801	340.0	364.0	8.1	341.2	340.7	340.5	OR 69935497
RTA 3500802 (Stock Size)	350.0	374.0	8.1	351.2	350.7	350.5	OR 69936767
RTA 3600801 (Stock Size)	360.0	384.0	8.1	361.2	360.7	360.5	OR 69937000
RTA 3700802	370.0	394.0	8.1	371.2	370.7	370.5	OR 69938040
RTA 3800801	380.0	404.0	8.1	381.2	380.7	380.5	OR 69939305



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

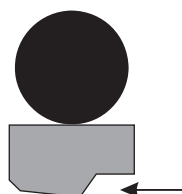
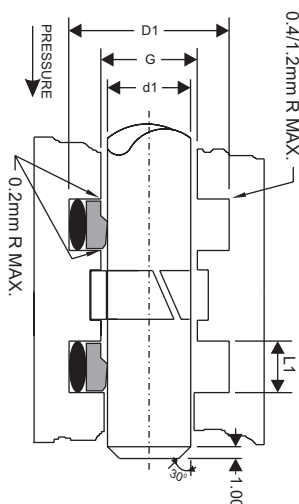
SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

Style RTA Metric Ordering Information (Dimensions in mm)

Part No.	d1	D1	L1	G 100 Bar	G 200 Bar	G 400 Bar	O-Ring Part No.
RTA 3900801	390.0	414.0	8.1	391.2	390.7	390.5	OR 69940526
RTA 4000801	400.0	424.0	8.1	401.2	400.7	400.5	OR 69941600
RTA 4100801	410.0	434.0	8.1	411.2	410.7	410.5	OR 69942352
RTA 4200801	420.0	440.0	8.1	421.2	420.7	420.5	OR 69943000
RTA 4300802	430.0	454.0	8.1	431.2	430.7	430.5	OR 69944336
RTA 4400801	440.0	464.0	8.1	441.2	440.7	440.5	OR 69945600
RTA 4500801 (Stock Size)	450.0	474.0	8.1	451.2	450.7	450.5	OR 69946876
RTA 4600802	460.0	484.0	8.1	461.2	460.7	460.5	OR 69948146
RTA 4700801	470.0	494.0	8.1	471.2	470.7	470.5	OR 69948500
RTA 4800801	480.0	504.0	8.1	481.2	480.7	480.5	OR 69949100
RTA 4900801	490.0	514.0	8.1	491.2	490.7	490.5	OR 69950686
RTA 5000802 (Stock Size)	500.0	524.0	8.1	501.2	500.7	500.5	OR 69951600
RTA 5100801	510.0	534.0	8.1	511.2	510.7	510.5	OR 69952600
RTA 5200802	520.0	544.0	8.1	521.2	520.7	520.5	OR 69953226
RTA 5300801	530.0	554.0	8.1	531.2	530.7	530.5	OR 69954600
RTA 5400801	540.0	564.0	8.1	541.2	540.7	540.5	OR 69955766
RTA 5500802	550.0	574.0	8.1	551.2	550.7	550.5	OR 69956500
RTA 5600801	560.0	584.0	8.1	561.2	560.7	560.5	OR 69957300
RTA 5700801	570.0	594.0	8.1	571.2	570.7	570.5	OR 69958268
RTA 5800801	580.0	604.0	8.1	581.2	580.7	580.5	OR 69959670
RTA 5900801	590.0	614.0	8.1	591.2	590.7	590.5	OR 69960800
RTA 6000801 (Stock Size)	600.0	624.0	8.1	601.2	600.7	600.5	OR 69961400
RTA 6100801	610.0	634.0	8.1	611.2	610.7	610.5	OR 69962400
RTA 6200801	620.0	644.0	8.1	621.2	620.7	620.5	OR 69963348
RTA 6300801	630.0	654.0	8.1	631.2	630.7	630.5	OR 69964487
RTA 6400801	640.0	664.0	8.1	641.2	640.7	640.5	OR 69965800
RTA 6500801	650.0	677.3	9.5	651.4	651.0	650.6	OR 84068000
RTA 6600801	660.0	687.3	9.5	661.4	661.0	660.6	OR 84067950
RTA 6700801	670.0	697.3	9.5	671.4	671.0	670.6	OR 84070100
RTA 6800801	680.0	707.3	9.5	681.4	681.0	680.6	OR 84069500
RTA 6900801	690.0	717.3	9.5	691.4	691.0	690.6	OR 84070700
RTA 7000801	700.0	727.3	9.5	701.4	701.0	700.6	OR 84071600
RTA 7100801	710.0	737.3	9.5	711.4	711.0	710.6	OR 84072400
RTA 7200801	720.0	747.3	9.5	721.4	721.0	720.6	OR 84073660
RTA 7300801	730.0	757.3	9.5	731.4	731.0	730.6	OR 84074700
RTA 7400801	740.0	767.3	9.5	741.4	741.0	740.6	OR 84075565
RTA 7500801	750.0	777.3	9.5	751.4	751.0	750.6	OR 84076450
RTA 7600801	760.0	787.3	9.5	761.4	761.0	760.6	OR 84077470
RTA 7700801	770.0	797.3	9.5	771.4	771.0	770.6	OR 84078740



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

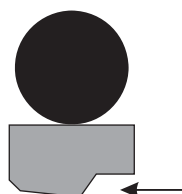
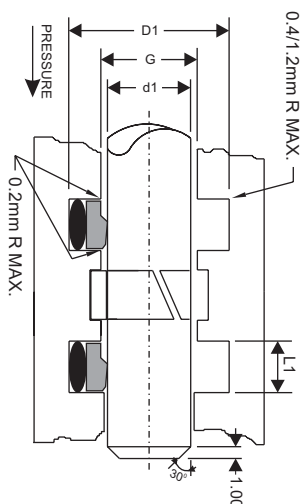
SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

Style RTA Metric Ordering Information (Dimensions in mm)

Part No.	d1	D1	L1	G 100 Bar	G 200 Bar	G 400 Bar	O-Ring Part No.
RTA 7800801	780.0	807.3	9.5	781.4	781.0	780.6	OR 84079375
RTA 7900801	790.0	817.3	9.5	791.4	791.0	790.6	OR 84081100
RTA 8000801	800.0	827.3	9.5	801.4	801.0	800.6	OR 84081500
RTA 8100801	810.0	837.3	9.5	811.4	811.0	810.6	OR 84082550
RTA 8200801	820.0	847.3	9.5	821.4	821.0	820.6	OR 84083700
RTA 8300801	830.0	857.3	9.5	831.4	831.0	830.6	OR 84084455
RTA 8400801	840.0	867.3	9.5	841.4	841.0	840.6	OR 84085725
RTA 8500801	850.0	877.3	9.5	851.4	851.0	850.6	OR 84086500
RTA 8600801	860.0	887.3	9.5	861.4	861.0	860.6	OR 84087630
RTA 8700801	870.0	897.3	9.5	871.4	871.0	870.6	OR 84088265
RTA 8800801	880.0	907.3	9.5	881.4	881.0	880.6	OR 84089535
RTA 8900801	890.0	917.3	9.5	891.4	891.0	890.6	OR 84090500
RTA 9000801	900.0	927.3	9.5	901.4	901.0	900.6	OR 84091440
RTA 9100801	910.0	937.3	9.5	911.4	911.0	910.6	OR 84092710
RTA 9200801	920.0	947.3	9.5	921.4	921.0	920.6	OR 84093345
RTA 9300801	930.0	957.3	9.5	931.4	931.0	930.6	OR 84094615
RTA 9400801	940.0	967.3	9.5	941.4	941.0	940.6	OR 84095377
RTA 9500801	950.0	977.3	9.5	951.4	951.0	950.6	OR 84096520



Tolerance Table

d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

SECTION: ROD SEAL

STYLE: RTA

TYPE: Single Acting Composite Seal

ISO Standard Grooves (5597 - 1980 E)

At present, the International Standard Organization (ISO) is preparing parameters for the standard housing for piston and rod seals.

Step Seal groove dimensions confirm basically to this proposal.

Step Seal series can be installed directly in the ISO grooves according to the table below.

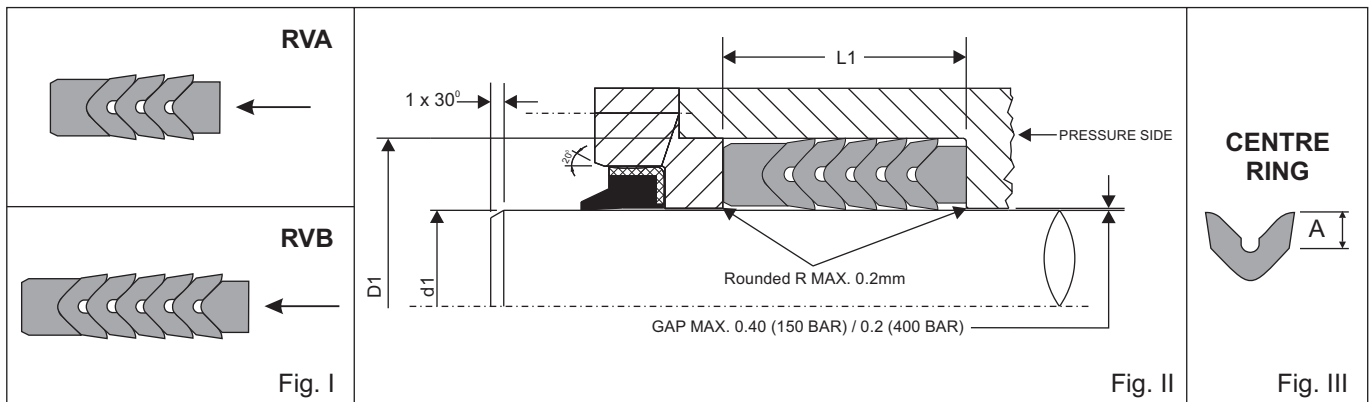
Diameter Groups Rod Diameter (f8)	Groove Dimensions Groove Diameter (h9)	
	Radial Depth	Radial (+0.2 Width -0.0)
6 - 7.9 8 - 14	2.5	2.2
12 - 18.9 19 - 25	3.75	3.2
20 - 37.9 38 - 63	5.5	4.2
56 - 180	7.75	6.3
160 - 199.9 200 - 250	10.5	8.1
280 - 360	12.25	8.1

- Draft proposal DP - 7425 1 Hydraulic fluid power.
- Piston seal housings.
- Elastomer energized, plastic face seals.
- Dimensions and tolerances.

SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing



MATERIAL:

Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +90°C (upto +200°C on request).

Pressure: 400 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty single acting cylinder with split piston.

DETAILS:

The Spareage style RVA seal is robust seal. Though it is suitable for split piston, it is extremely suitable for medium duty to heavy duty application. The RVA seal accepts low & high pressure, vigorous conditions & also any misalignment between sealing gaps.

The seal is a combination of a bottom seal, centre ring & pressure ring. The centre ring is the main seal being flexible enough to retain high & low pressures. The bottom seal supports the centre ring from getting extruded against high pressures. The top ring helps in retaining the centre ring profile & distributing pressure equally. In many cases, the RVA seals can also be split to enable ease of fitment. Besides, RVB (1+5+1) is available with 2 extra Centre Rings to adjust Groove Height.

FEATURES:

Long life.

Accepts misalignment & uneven surfaces.

Any size upto 1500 mm dia. available.

IMPORTANT NOTE:

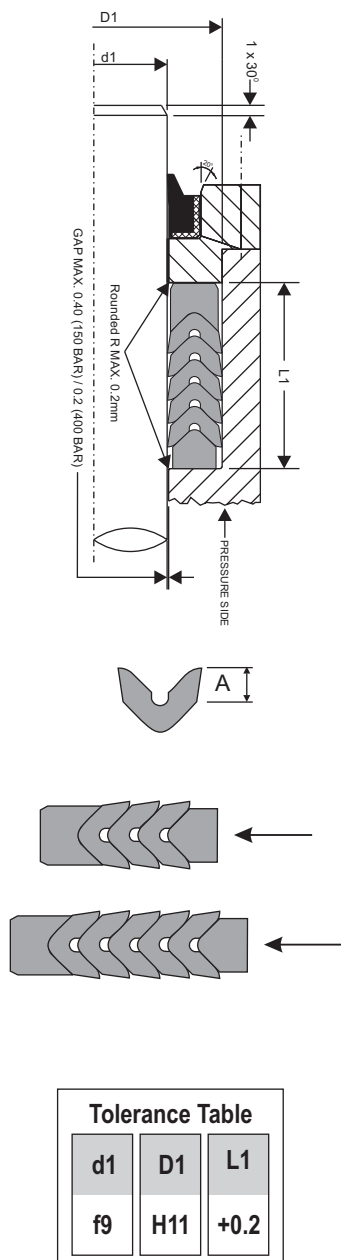
The Vee Packing height can be adjusted by increasing or reducing centre rings (Fig. III). The calculation can be done by noting height "A" as shown in table.

SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)



Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 0108301	RVB 0108301	10.00	20.00	11.00	14.60	1.80
RVA 0128302	RVB 0128301	12.00	25.00	14.32	19.08	2.38
RVA 0128303	RVB 0128302	12.70	25.40	19.05	25.39	3.17
RVA 0148301	RVB 0148301	14.00	27.00	14.32	19.08	2.38
RVA 0168301	RVB 0168301	16.00	29.00	14.32	19.08	2.38
RVA 0188301	RVB 0188301	18.00	31.00	14.32	19.08	2.38
RVA 0188303 (Stock Size)	RVB 0188303	18.00	28.00	16.50	26.50	5.00
RVA 0188302	RVB 0188302	18.25	28.57	16.05	21.40	2.67
RVA 0208301	RVB 0208301	20.00	30.00	21.50	28.66	3.58
RVA 0208303	RVB 0208302	20.00	31.50	17.50	23.32	2.91
RVA 0208302	RVB 0208303	20.00	32.00	18.15	24.19	3.02
RVA 0208304	RVB 0208304	20.00	33.00	14.32	19.08	2.38
RVA 0208305	RVB 0208305	20.00	36.00	24.00	32.00	4.00
RVA 0208306 (Stock Size)	RVB 0208306	20.00	32.00	17.00	22.50	2.75
RVA 0228301 (Stock Size)	RVB 0228301	22.00	38.00	26.00	34.66	4.33
RVA 0258301	RVB 0258301	25.00	35.00	17.30	23.06	2.88
RVA 0258306 (Stock Size)	RVB 0258306	25.00	40.00	26.00	34.00	4.00
RVA 0258302	RVB 0258302	25.00	40.00	19.84	26.44	3.30
RVA 0258303	RVB 0258303	25.00	42.00	25.40	33.86	4.23
RVA 0258304	RVB 0258304	25.00	45.00	25.40	33.86	4.23
RVA 0258305	RVB 0258305	25.40	38.10	19.45	25.93	3.24
RVA 0268301	RVB 0268301	26.00	45.00	29.37	39.15	4.89
RVA 0288301 (Stock Size)	RVB 0288301	28.00	40.00	17.00	22.66	2.83
RVA 0288302	RVB 0288302	28.00	44.00	17.62	23.48	2.93
RVA 0288303 (Stock Size)	RVB 0288309	28.00	43.00	22.00	30.00	4.00
RVA 0288304	RVB 0288304	28.57	41.27	19.84	26.44	3.30
RVA 0308304 (Stock Size)	RVB 0308301	30.00	40.00	21.80	29.06	3.63
RVA 0308305	RVB 0308302	30.00	42.00	20.00	26.66	3.33
RVA 0308302 (Stock Size)	RVB 0308303	30.00	45.00	22.20	29.60	3.70
RVA 0308303 (Stock Size)	RVB 0308304	30.00	50.00	29.37	39.15	4.89
RVA 0318301 (Stock Size)	RVB 0318301	31.75	44.45	19.05	25.39	3.17
RVA 0318302	RVB 0318302	31.75	44.45	16.25	21.69	2.70
RVA 0318303	RVB 0318303	31.75	47.62	29.05	38.73	4.84
RVA 0328301	RVB 0328301	32.00	42.00	17.30	23.06	2.88
RVA 0328302	RVB 0328302	32.00	48.00	17.63	23.49	2.93
RVA 0348301	RVB 0348301	34.92	47.62	20.64	27.52	3.44
RVA 0348302 (Stock Size)	RVB 0348302	34.92	50.80	24.21	32.27	4.03
RVA 0358304	RVB 0358301	35.00	45.00	21.78	29.04	3.63
RVA 0358322 (Stock Size)	RVB 0358317	35.00	47.00	17.20	22.80	3.00
RVA 0358303	RVB 0358302	35.00	50.00	22.50	30.00	3.75

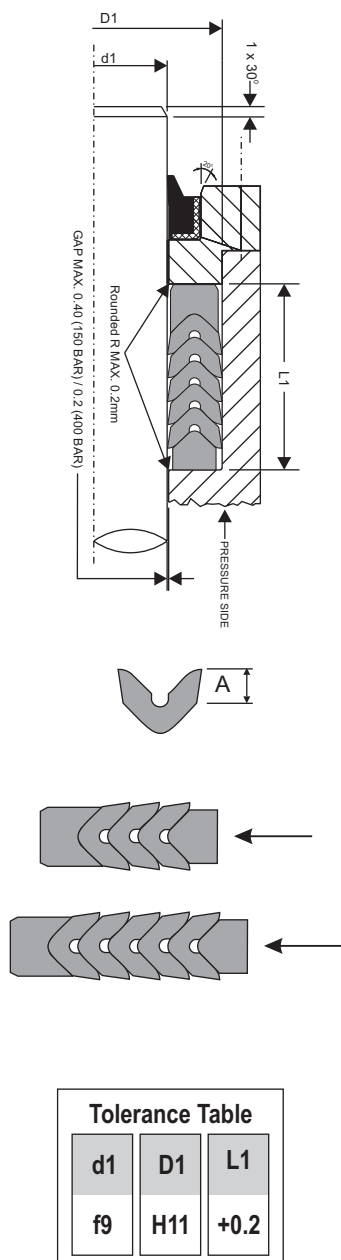
Other sizes available on request.

SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)



Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 0358305 (Stock Size)	RVB 0358303	35.00	50.00	27.00	33.00	3.00
RVA 0368305 (Stock Size)	RVB 0368305	36.00	40.00	17.00	32.50	2.70
RVA 0368301	RVB 0368301	36.00	51.00	24.00	32.00	4.00
RVA 0368302	RVB 0368302	36.00	52.00	17.60	23.40	2.90
RVA 0368303 (Stock Size)	RVB 0368303	36.00	50.00	22.50	29.50	3.50
RVA 0388301	RVB 0388301	38.00	55.00	28.00	37.32	4.66
RVA 0388302 (Stock Size)	RVB 0388302	38.10	50.80	19.45	25.93	3.24
RVA 0388303	RVB 0388303	38.10	53.97	25.27	34.01	4.37
RVA 0388304	RVB 0388304	38.10	53.97	27.78	37.04	4.63
RVA 0398301	RVB 0398301	39.00	55.00	25.40	33.86	4.23
RVA 0408302	RVB 0408301	40.00	50.00	17.30	23.06	2.88
RVA 0408323 (Stock Size)	RVB 0408308	40.00	52.00	17.00	22.50	2.70
RVA 0408303	RVB 0408302	40.00	55.00	22.62	30.16	3.77
RVA 0408301 (Stock Size)	RVB 0408301	40.00	55.00	26.19	34.91	4.36
RVA 0408304 (Stock Size)	RVB 0408304	40.00	56.00	17.63	23.49	2.93
RVA 0408305 (Stock Size)	RVB 0408305	40.00	60.00	30.00	40.00	5.00
RVA 0408306	RVB 0408306	40.00	65.00	35.72	47.62	5.95
RVA 0448301	RVB 0448301	44.45	57.15	21.83	29.09	3.63
RVA 0448302	RVB 0448302	44.45	60.32	27.80	37.06	4.63
RVA 0458302	RVB 0458301	45.00	55.00	17.50	23.32	2.91
RVA 0458301 (Stock Size)	RVB 0458302	45.00	60.00	22.22	29.62	3.70
RVA 0458303	RVB 0458303	45.00	65.00	28.00	37.32	4.66
RVA 0488303	RVB 0488301	48.00	60.00	25.00	33.32	4.16
RVA 0488304	RVB 0488302	48.00	62.00	20.22	29.62	3.70
RVA 0488306 (Stock Size)	RVB 0488303	40.00	63.00	28.50	38.00	4.70
RVA 0508305	RVB 0508301	50.00	65.00	26.00	34.66	4.33
RVA 0508306 (Stock Size)	RVB 0508302	50.00	65.00	24.60	32.80	4.10
RVA 0508303	RVB 0508303	50.00	70.00	21.94	29.24	3.65
RVA 0508304	RVB 0508304	50.00	70.00	30.00	35.00	5.00
RVA 0508311 (Stock Size)	RVB 0508310	50.00	70.00	35.00	45.00	5.00
RVA 0508301	RVB 0508305	50.80	63.50	19.84	26.44	3.30
RVA 0508302	RVB 0508306	50.80	66.67	23.00	30.66	3.83
RVA 0508308	RVB 0508307	50.80	66.67	25.27	33.69	4.21
RVA 0508309 (Stock Size)	RVB 0508308	50.80	69.85	33.50	44.66	5.58
RVA 0508310	RVB 0508309	50.80	70.80	38.50	51.32	6.41
RVA 0518301	RVB 0518301	51.00	69.00	28.00	37.32	4.66
RVA 0538301	RVB 0538301	53.97	66.67	19.45	25.36	3.24
RVA 0538302	RVB 0538302	53.97	63.50	16.62	22.21	2.77
RVA 0538303 (Stock Size)	RVB 0538303	53.97	69.85	25.27	33.69	4.21
RVA 0538304	RVB 0538304	53.97	73.02	31.75	42.83	5.29

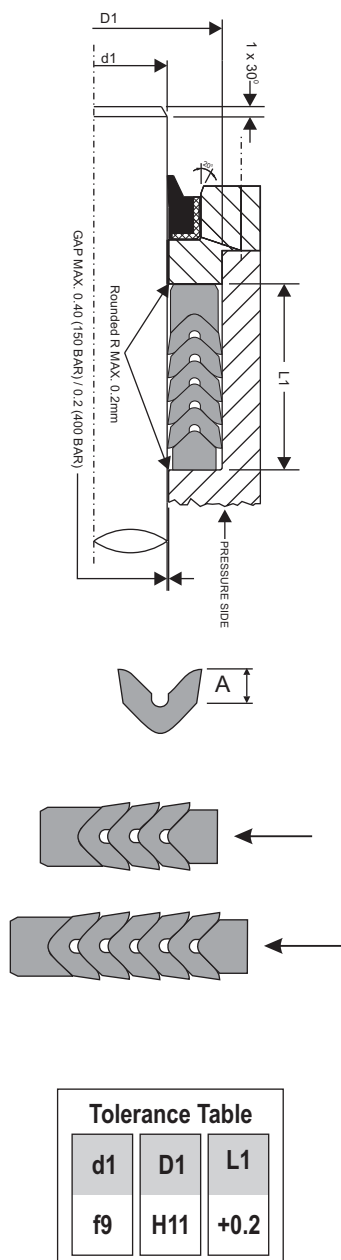
Other sizes available on request.

SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)



Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 0558301	RVB 0558301	55.00	70.00	26.50	35.32	4.41
RVA 0558302	RVB 0558302	55.00	75.00	30.00	35.00	5.00
RVA 0558303	RVB 0558303	55.00	75.00	31.00	41.32	5.16
RVA 0558304 (Stock Size)	RVB 0558304	55.00	75.00	38.50	51.32	6.41
RVA 0558305	RVB 0558305	55.00	67.00	25.00	29.25	4.16
RVA 0558306	RVB 0558306	55.00	80.00	33.73	44.97	5.62
RVA 0568301	RVB 0568301	56.00	76.00	21.95	29.25	3.65
RVA 0568302 (Stock Size)	RVB 0568302	56.00	76.00	33.40	44.52	5.56
RVA 0578301	RVB 0578301	57.15	69.85	19.05	25.40	3.17
RVA 0578302	RVB 0578302	57.15	73.02	27.78	37.04	4.63
RVA 0578303	RVB 0578303	57.15	76.20	32.54	42.38	5.42
RVA 0608301	RVB 0608301	60.00	75.00	19.50	25.32	3.16
RVA 0608302	RVB 0608302	60.00	76.00	29.00	38.66	4.83
RVA 0608303	RVB 0608303	60.00	77.00	27.00	36.00	4.50
RVA 0608304 (Stock Size)	RVB 0608304	60.00	80.00	32.15	42.85	5.35
RVA 0638304	RVB 0638301	63.00	83.00	21.94	29.24	3.65
RVA 0638336 (Stock Size)	RVB 0638327	63.00	78.00	24.00	32.00	4.00
RVA 0638305	RVB 0638302	63.00	85.00	32.00	42.66	5.33
RVA 0638309 (Stock Size)	RVB 0638308	63.00	80.00	28.00	36.00	4.00
RVA 0638301	RVB 0638303	63.50	76.20	18.25	24.33	3.04
RVA 0638306	RVB 0638304	63.50	82.50	26.59	35.45	4.43
RVA 0638307	RVB 0638305	63.50	82.50	31.62	42.16	5.25
RVA 0638303	RVB 0638306	63.50	79.37	23.81	31.68	3.96
RVA 0638308	RVB 0638307	63.50	80.00	28.00	37.32	4.66
RVA 0648301	RVB 0648301	63.50	80.00	25.80	34.40	4.30
RVA 0658303	RVB 0658301	64.00	77.00	21.00	28.00	3.50
RVA 0658304 (Stock Size)	RVB 0658302	65.00	80.00	26.00	34.66	4.33
RVA 0658302 (Stock Size)	RVB 0658303	65.00	85.00	29.00	38.66	4.83
RVA 0658305	RVB 0658304	65.00	90.00	30.00	40.00	5.00
RVA 0668301	RVB 0668301	66.30	85.00	24.13	32.17	4.02
RVA 0688301	RVB 0688301	68.00	88.00	30.00	40.00	5.00
RVA 0698301	RVB 0698301	69.85	85.72	23.81	31.68	3.96
RVA 0698302	RVB 0698302	69.85	88.90	25.40	33.86	4.23
RVA 0698303	RVB 0698303	69.85	88.90	33.50	44.66	5.58
RVA 0708303	RVB 0708301	70.00	90.00	30.00	40.00	5.00
RVA 0708304	RVB 0708302	70.00	90.00	21.95	29.25	3.65
RVA 0708305	RVB 0708303	70.00	83.00	25.00	33.32	4.16
RVA 0708302	RVB 0708304	70.00	85.00	28.00	37.32	4.66
RVA 0708306 (Stock Size)	RVB 0708305	70.00	90.00	27.00	36.00	4.50
RVA 0708321 (Stock Size)	RVB 0708307	70.00	85.00	16.70	22.50	2.90

Other sizes available on request.

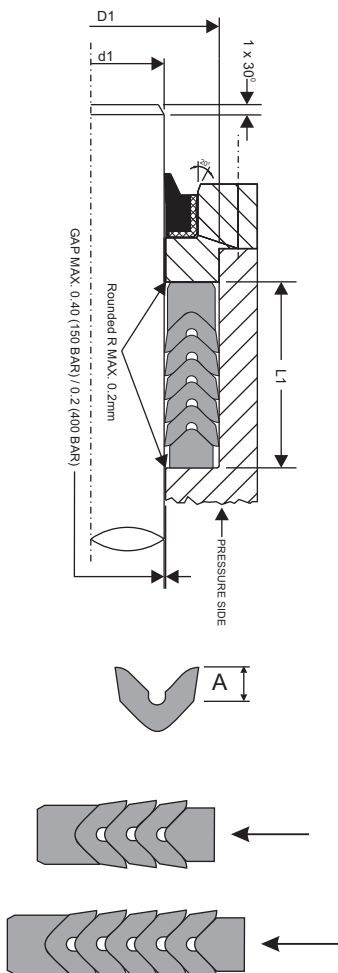
SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)

Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 0728301	RVB 0728301	72.00	90.00	30.16	40.20	5.02
RVA 0738301	RVB 0738301	73.02	88.90	26.58	35.44	4.43
RVA 0758302 (Stock Size)	RVB 0758301	75.00	95.00	30.00	40.00	5.00
RVA 0758303	RVB 0758302	75.00	95.00	31.50	42.00	5.25
RVA 0758301	RVB 0758303	75.00	90.00	22.50	30.00	3.75
RVA 0758304 (Stock Size)	RVB 0758304	75.00	100.00	30.00	40.00	5.00
RVA 0758305	RVB 0758305	75.00	100.00	37.50	50.00	6.25
RVA 0768301	RVB 0768301	76.20	95.25	28.97	38.61	4.82
RVA 0768302	RVB 0768302	76.20	95.25	25.52	34.02	4.25
RVA 0768303	RVB 0768303	76.20	88.90	16.27	21.69	2.71
RVA 0808302 (Stock Size)	RVB 0808302	80.00	95.00	17.50	23.32	2.91
RVA 0808301 (Stock Size)	RVB 0808301	80.00	100.00	30.00	40.00	5.00
RVA 0808303	RVB 0808303	80.00	105.00	27.41	36.53	4.56
RVA 0828302	RVB 0828301	82.55	95.25	21.72	28.96	3.62
RVA 0838301 (Stock Size)	RVB 0838302	82.55	101.60	28.97	38.61	4.82
RVA 0858301	RVB 0858302	85.00	100.00	17.30	23.06	2.88
RVA 0858302 (Stock Size)	RVB 0858303	85.00	105.00	30.00	40.00	5.00
RVA 0858303	RVB 0858304	85.72	101.60	27.75	36.65	4.45
RVA 0858304	RVB 0858305	85.72	104.77	29.37	39.15	4.89
RVA 0888301	RVB 0888301	88.90	101.60	17.00	22.66	2.83
RVA 0888302	RVB 0888302	88.90	107.95	31.00	41.32	5.16
RVA 0888303	RVB 0888303	88.90	107.95	33.33	44.43	5.55
RVA 0888304 (Stock Size)	RVB 0888304	88.90	114.30	35.32	47.08	5.88
RVA 0898301	RVB 0898301	89.00	105.00	25.80	34.40	4.30
RVA 0908307 (Stock Size)	RVB 0908308	90.00	105.00	16.90	22.50	2.80
RVA 0908303	RVB 0908302	90.00	105.00	31.75	42.33	5.29
RVA 0908304	RVB 0908303	90.00	105.00	33.53	44.69	5.58
RVA 0908301	RVB 0908304	90.00	110.00	26.88	35.84	4.48
RVA 0908305 (Stock Size)	RVB 0908305	90.00	110.00	25.00	33.32	4.16
RVA 0908302	RVB 0908306	90.00	115.00	27.41	36.53	4.56
RVA 0908310 (Stock Size)	RVB 0908312	90.00	110.00	30.00	40.00	5.00
RVA 0928301	RVB 0928301	92.07	111.13	29.37	39.15	4.89
RVA 0958301	RVB 0958301	95.00	110.00	24.00	32.00	4.00
RVA 0958306 (Stock Size)	RVB 0958307	95.00	115.00	30.00	40.00	5.00
RVA 0958303 (Stock Size)	RVB 0958302	95.00	120.00	41.00	54.60	6.80
RVA 0958304	RVB 0958303	95.25	111.13	24.30	32.42	4.06
RVA 0958305	RVB 0958304	95.25	114.30	25.40	33.86	4.23
RVA 0988301	RVB 0988301	98.42	114.30	26.59	35.45	4.43
RVA 0988302	RVB 0988302	98.42	123.82	36.96	49.28	6.16
RVA 1008301	RVB 1008301	100.00	114.30	20.64	27.52	3.44



Tolerance Table		
d1	D1	L1
f9	H11	+0.2

Other sizes available on request.

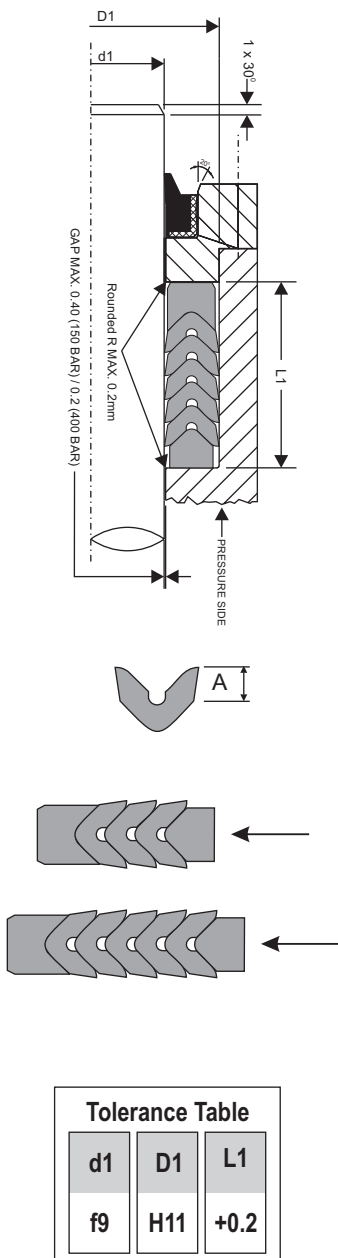
SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)

Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 1008324 (Stock Size)	RVB 1008308	100.00	115.00	22.50	30.00	3.75
RVA 1008302	RVB 1008302	100.00	115.00	25.30	33.72	4.21
RVA 1008303	RVB 1008303	100.00	120.00	28.00	32.70	4.60
RVA 1008325 (Stock Size)	RVB 1008309	100.00	120.00	30.00	40.00	5.00
RVA 1008304	RVB 1008304	100.00	120.00	31.00	41.32	5.16
RVA 1008305	RVB 1008305	100.00	125.00	27.40	36.52	4.56
RVA 1008306	RVB 1008306	100.00	125.00	36.90	49.20	6.15
RVA 1008307 (Stock Size)	RVB 1008307	100.00	125.00	38.50	51.50	6.50
RVA 1018301 (Stock Size)	RVB 1018301	101.60	127.00	32.15	42.85	5.35
RVA 1048301	RVB 1048301	104.00	130.00	37.00	49.32	6.16
RVA 1058302	RVB 1058301	105.00	125.00	29.76	39.68	4.96
RVA 1058303	RVB 1058302	105.00	125.00	27.00	36.00	4.50
RVA 1058304	RVB 1058303	105.00	135.00	34.50	46.00	5.75
RVA 1068301	RVB 1068301	106.00	135.00	33.00	44.00	5.50
RVA 1078302	RVB 1078301	107.95	127.00	30.00	40.00	5.00
RVA 1108301 (Stock Size)	RVB 1108301	110.00	130.00	30.00	40.00	5.00
RVA 1108313 (Stock Size)	RVB 1108315	110.00	125.00	22.50	30.00	3.75
RVA 1108302	RVB 1108302	110.00	130.00	27.00	36.00	4.50
RVA 1108303	RVB 1108303	110.00	132.00	36.50	48.66	6.08
RVA 1108304	RVB 1108304	110.00	135.00	41.50	55.32	6.91
RVA 1108305 (Stock Size)	RVB 1108305	110.00	135.00	42.50	57.00	7.25
RVA 1108322 (Stock Size)	RVB 1108323	110.00	140.00	47.00	60.00	6.50
RVA 1118301	RVB 1118301	111.12	136.52	38.89	51.85	6.48
RVA 1148307	RVB 1148301	114.00	130.00	25.80	34.40	4.30
RVA 1148302	RVB 1148302	114.30	130.00	37.00	49.32	6.16
RVA 1148303	RVB 1148303	114.30	133.35	28.18	37.56	4.69
RVA 1148304	RVB 1148304	114.30	127.00	18.41	24.53	3.06
RVA 1148305	RVB 1148305	114.30	139.70	31.75	42.33	5.29
RVA 1148306	RVB 1148306	114.30	139.70	33.50	44.66	5.58
RVA 1158301 (Stock Size)	RVB 1158301	115.00	140.00	37.13	49.48	6.18
RVA 1158302	RVB 1158302	115.00	130.00	25.49	33.97	6.24
RVA 1178301	RVB 1178301	117.47	142.87	36.10	48.12	6.01
RVA 1208301	RVB 1208301	120.00	140.00	30.00	40.00	5.00
RVA 1208302	RVB 1208302	120.00	145.00	39.50	52.66	6.58
RVA 1208303	RVB 1208303	120.00	150.00	44.00	58.66	7.33
RVA 1208305 (Stock Size)	RVB 1208308	120.00	150.00	38.50	51.00	6.25
RVA 1208304 (Stock Size)	RVB 1208304	120.00	145.00	36.50	48.50	6.00
RVA 1258302	RVB 1258302	125.00	145.00	29.62	39.48	4.93
RVA 1258323 (Stock Size)	RVB 1258305	125.00	145.00	33.00	45.00	6.00
RVA 1258303	RVB 1258303	125.00	150.00	27.40	36.52	4.56



Other sizes available on request.

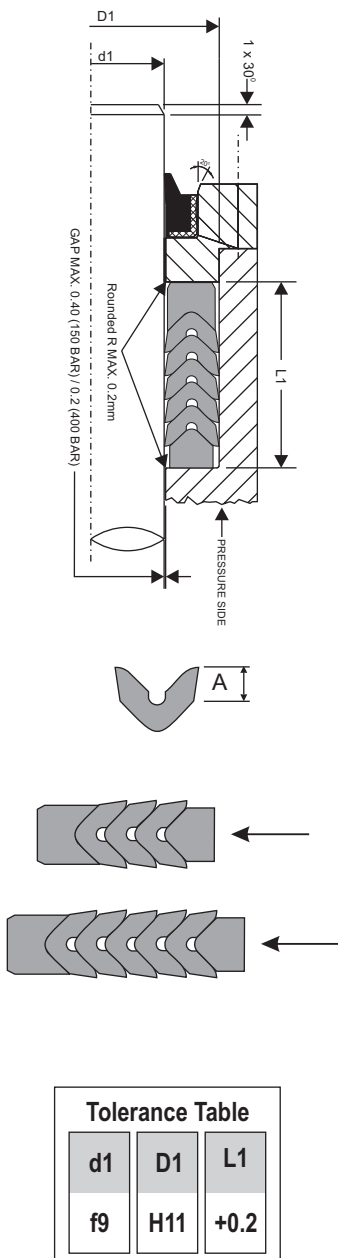
SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)

Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 1258301	RVB 1258304	125.00	155.00	34.50	46.00	5.75
RVA 1258304 (Stock Size)	RVB 1258305	125.00	140.00	22.75	30.25	3.75
RVA 1278301 (Stock Size)	RVB 1278301	127.00	152.40	38.63	51.49	6.43
RVA 1308301 (Stock Size)	RVB 1308301	130.00	150.00	30.00	40.00	5.00
RVA 1308302	RVB 1308302	130.00	155.00	40.00	53.32	6.66
RVA 1308303	RVB 1308303	130.00	160.00	43.50	58.00	7.25
RVA 1358301	RVB 1358301	135.00	155.00	30.55	40.73	5.09
RVA 1358303 (Stock Size)	RVB 1358307	135.00	160.00	42.00	56.00	7.00
RVA 1398301	RVB 1398301	139.70	165.10	37.30	49.72	6.21
RVA 1408301	RVB 1408301	140.00	160.00	28.50	38.00	4.75
RVA 1408302	RVB 1408302	140.00	165.00	41.95	55.93	6.99
RVA 1408303 (Stock Size)	RVB 1408303	140.00	170.00	32.97	43.95	5.49
RVA 1408304 (Stock Size)	RVB 1408304	140.00	160.00	30.00	40.00	5.00
RVA 1408315 (Stock Size)	RVB 1408305	140.00	155.00	25.50	34.00	4.25
RVA 1458301 (Stock Size)	RVB 1458301	145.00	170.00	38.10	50.80	6.35
RVA 1468301	RVB 1468301	146.05	171.45	38.89	51.85	6.48
RVA 1508303	RVB 1508301	150.00	170.00	30.56	40.74	5.09
RVA 1508301	RVB 1508302	150.00	180.00	40.00	53.32	6.66
RVA 1508304 (Stock Size)	RVB 1508303	150.00	180.00	43.00	58.00	7.50
RVA 1528301	RVB 1528301	152.40	177.80	33.34	44.44	5.55
RVA 1548301	RVB 1548301	154.00	175.00	29.44	39.24	4.90
RVA 1578301	RVB 1578301	157.00	182.00	30.25	40.33	5.04
RVA 1608301 (Stock Size)	RVB 1608301	160.00	180.00	30.00	40.00	5.00
RVA 1608302 (Stock Size)	RVB 1608302	160.00	190.00	32.97	43.95	5.49
RVA 1618301	RVB 1618301	161.92	180.97	28.57	38.09	4.76
RVA 1708301	RVB 1708301	170.00	195.00	37.50	50.00	6.25
RVA 1708302	RVB 1708302	170.00	200.00	50.00	60.32	5.16
RVA 1708303 (Stock Size)	RVB 1708303	170.00	200.00	49.50	65.50	8.00
RVA 1718301	RVB 1718301	171.45	187.32	24.20	32.26	4.03
RVA 1758301	RVB 1758301	175.00	200.00	42.00	56.00	7.00
RVA 1778301	RVB 1778301	177.80	203.20	32.54	43.38	5.42
RVA 1778302	RVB 1778302	177.80	196.85	31.00	41.32	5.16
RVA 1808301	RVB 1808301	180.00	210.00	32.97	43.97	5.49
RVA 1808308 (Stock Size)	RVB 1808304	180.00	200.00	30.00	40.00	5.00
RVA 1808303 (Stock Size)	RVB 1808303	180.00	210.00	45.00	61.00	8.00
RVA 1808302	RVB 1808302	180.97	203.20	31.75	42.33	5.29
RVA 1878301	RVB 1878301	187.32	200.00	21.74	28.98	3.62
RVA 1908301	RVB 1908301	190.50	222.25	50.00	66.66	8.33
RVA 2008302	RVB 2008301	200.00	220.00	30.00	40.00	5.00
RVA 2008303	RVB 2008302	200.00	230.00	32.97	43.95	5.49



Other sizes available on request.

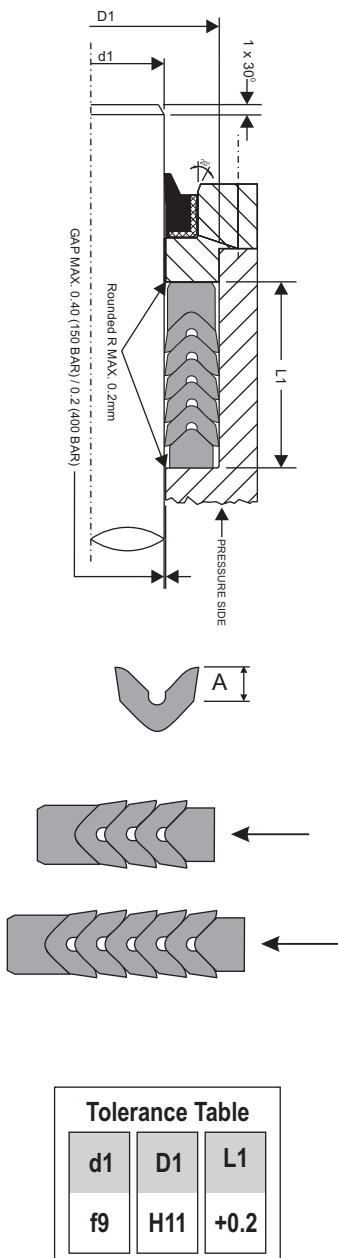
SECTION: ROD SEAL

STYLE: RVA / RVB

TYPE: Single Acting V Packing

Style RVA & RVB Metric Ordering Information (Dimensions in mm)

Part No. RVA	Part No. RVB	d1	D1	L1 (RVA)	L1 (RVB)	A
RVA 2008304 (Stock Size)	RVB 2008303	200.00	230.00	33.00	45.00	6.00
RVA 2058301	RVB 2058301	205.00	225.00	19.48	25.96	3.24
RVA 2108303	RVB 2108301	210.00	240.00	34.50	46.00	5.75
RVA 2108302	RVB 2108302	210.00	240.00	42.10	56.12	7.01
RVA 2208301	RVB 2208301	220.00	250.00	52.00	69.32	8.66
RVA 2248301	RVB 2248301	224.00	254.00	32.97	43.95	5.49
RVA 2288301	RVB 2288301	228.60	254.00	38.10	50.80	6.35
RVA 2288302	RVB 2288302	228.60	260.34	48.42	64.56	8.07
RVA 2408301	RVB 2408301	240.00	270.00	45.00	60.00	7.50
RVA 2508301	RVB 2508301	250.00	270.00	32.00	42.66	5.33
RVA 2508302	RVB 2508302	250.00	280.00	32.97	43.95	5.49
RVA 2508303 (Stock Size)	RVB 2508303	250.00	280.00	60.50	80.50	10.00
RVA 2548301	RVB 2548301	254.00	279.40	38.10	50.80	6.35
RVA 2688301	RVB 2688301	268.29	298.45	45.24	60.32	7.54
RVA 2698301	RVB 2698301	269.88	307.98	50.97	71.95	8.99
RVA 2808301	RVB 2808301	280.00	315.00	38.45	51.25	6.40
RVA 2888301	RVB 2888301	288.93	307.98	28.57	38.08	4.76
RVA 2908301	RVB 2908301	290.00	320.00	50.80	63.60	8.46
RVA 3008301	RVB 3008301	300.00	320.00	32.00	42.66	5.33
RVA 3048301	RVB 3048301	304.80	330.20	38.10	50.80	6.35
RVA 3108301	RVB 3108301	310.00	330.00	30.00	40.00	5.00
RVA 3158301	RVB 3158301	315.00	350.00	38.45	51.25	6.40
RVA 3208301	RVB 3208301	320.00	365.00	55.00	73.32	9.16
RVA 3408301	RVB 3408301	340.00	380.00	60.00	80.00	10.00
RVA 3508301	RVB 3508301	350.00	390.00	60.00	80.00	10.00
RVA 3558301	RVB 3558301	355.60	381.00	38.10	50.80	6.35
RVA 3688301	RVB 3688301	368.30	406.40	57.15	76.16	9.52
RVA 3698301	RVB 3698301	369.00	400.00	45.00	60.00	7.50
RVA 4008301	RVB 4008301	400.00	440.00	54.00	72.00	9.00
RVA 4168301	RVB 4168301	416.00	450.00	50.00	66.66	8.33
RVA 4208301	RVB 4208301	420.00	460.00	51.60	68.80	8.60
RVA 5058301	RVB 5058301	505.00	545.00	60.00	80.00	10.00
RVA 7008301	RVB 7008301	700.00	750.00	73.00	97.32	12.16

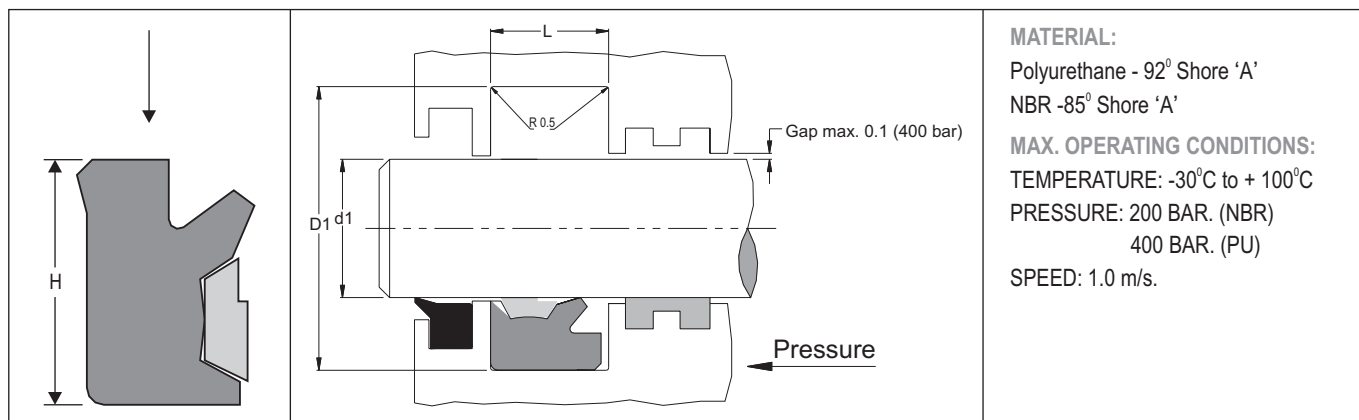


Other sizes available on request.

SECTION: ROD SEALS

STYLE: RBD

TYPE: Single Acting Seal



Style RBD Metric Ordering Information (Dimensions in mm)

Internal Part No.	d1	D1	H	Internal Part No.	d1	D1	H
SUB-1383	19.05	25.40	4.30	SUD-636	65.00	77.00	9.00
PUB-179	25.00	33.00	7.00	SUD-750	70.00	85.00	12.00
SUB-1233	28.00	36.00	7.00	PUD-164	70.00	85.00	12.00
PUB-191	30.00	38.00	7.00	PUD-134	80.00	95.00	12.00
SUB-671	35.00	43.00	7.00	SUD-635	80.00	92.00	9.00
SUB-1232	36.00	44.00	8.00	SUE-304	90.00	105.00	12.00
PUB-187	36.00	44.00	8.00	PUE-228	90.00	105.00	12.00
PUB-183	40.00	48.00	8.00	SUE-164	100.00	115.00	12.00
PUC-144	45.00	55.00	10.00	PUE-253	110.00	125.00	12.00
SUC-772	45.00	55.00	10.00	PUF-213	120.00	140.00	15.00
SUC-859	50.00	60.00	10.00	SUF-413	120.00	140.00	16.00
SUC-878	50.00	62.00	10.00	SUF-374	125.00	145.00	16.00
PUC-152	50.00	60.00	10.00	PUG-168	150.00	170.00	15.00
PUC-145	50.80	63.50	9.70	SUH-225	160.00	180.00	16.00
PUC-182	56.00	71.00	12.00	SUH-265	180.00	200.00	16.00
SUC-879	56.00	71.50	11.00	PUH-122	180.00	200.00	16.00
SUC-951	56.00	71.00	12.00	PUM-139	280.00	300.00	16.00
PUD-133	63.00	78.00	12.00	PUM-131	300.00	320.00	16.00

Tolerance Table

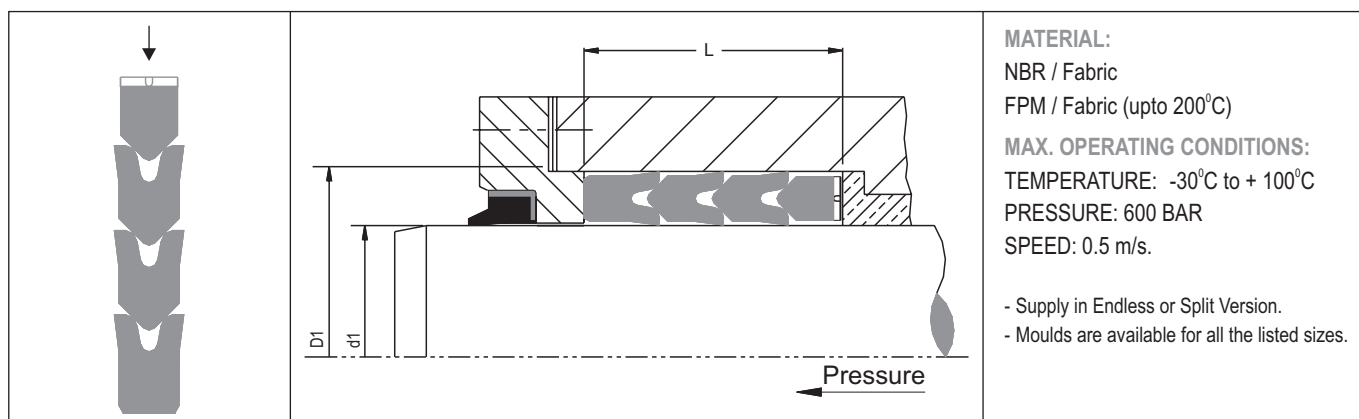
d1	D1
f8	H9

Moulds are available for all the above listed sizes.

SECTION: ROD SEALS

STYLE: RVF

TYPE: Single Acting Seal



Style RVF Metric Ordering Information (Dimensions in mm)

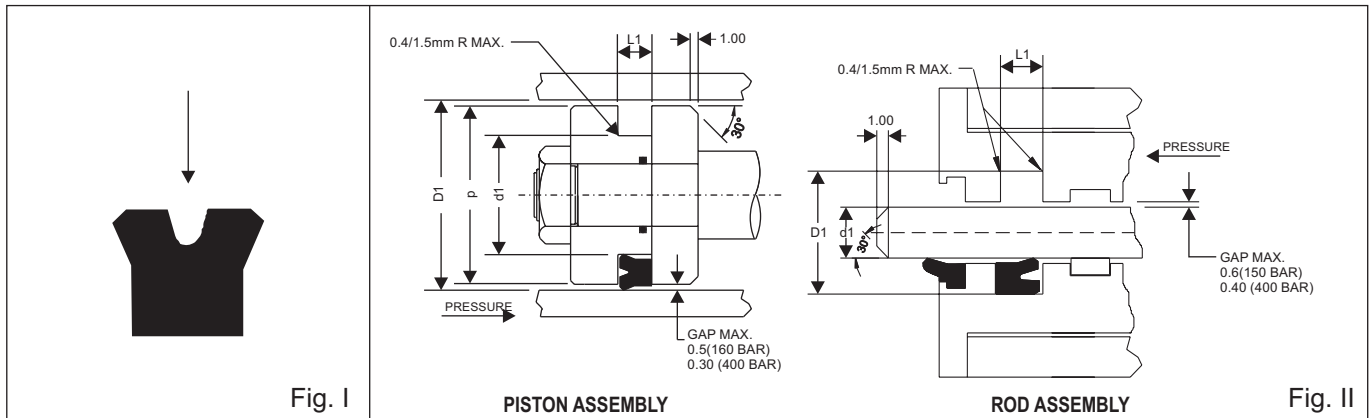
Internal Part No.	d1 f8	D1 H9	L	Make
SBT-559	89.53	100.96	8.66	Center Ring
SCPD-275	114.30	139.70	17.50	Center Ring
SBT-215	120.00	150.00	125.00	Center Ring
SCPE-356	142.87	152.54	7.62	Center Ring
SBT-443	150.00	180.00	100.00	Center Ring
SBT-762	153.00	190.00	110.00	1+3+1
SBT-497	160.00	185.00	86.00	1+3+2
SBT-720	160.00	190.00	120.00	Center Ring
SBT-390	168.00	198.00	125.00	1+3+1
SUJ-193	175.00	205.00	32.00	Center Ring
SBT-642	178.00	210.00	95.00	1+2+1
SBT-417	180.00	210.00	95.00	1+2+1
SBT-738	190.00	230.00	100.00	1+2+1
SBT-739	190.00	220.00	100.00	1+2+1
SBT-763	200.00	233.00	90.00	1+2+1
SBT-716	230.00	260.00	110.00	1+3+0
SBT-686	246.50	280.00	95.00	Center Ring
SCT-214	270.00	310.00	177.00	1+4+1
SCT-237	276.22	314.32	158.75	1+5+1
SCT-355	293.00	340.00	130.00	1+2+1
SCT-213	300.00	330.00	29.50	1+3+1
SCT-286	300.00	340.00	113.00	1+2+1
SCT-206	320.00	360.00	145.00	Center Ring
SCT-303	320.00	370.00	150.00	1+2+1
SCT-223	360.00	400.00	145.00	Center Ring

Internal Part No.	d1 f8	D1 H9	L	Make
SCT-207	395.00	440.00	145.00	1+3+1
SCT-298	399.00	440.00	145.00	1+3+1
SCT-276	400.00	460.00	150.00	1+2+1
SCT-235	420.00	460.00	160.00	1+3+1
SCT-265	434.70	480.00	140.00	1+3+1
SCT-238	482.60	520.70	88.90	1+5+1
SCT-257	510.00	550.00	100.00	1+3+1
SCT-287	520.00	580.00	150.00	1+2+1
SCT-304	520.00	560.00	155.00	1+3+1
SCT-305	560.00	600.00	165.00	1+4+1
SCT-311	560.00	600.00	185.00	1+4+1
SCT-309	580.00	620.00	158.00	1+4+1
SCT-308	600.00	650.00	165.00	1+3+1
SCT-192	609.60	673.10	158.75	Center Ring
SUVG-266	610.00	650.00	28.00	Center Ring
SCT-174	700.00	750.00	230.00	Center Ring
SCT-307	745.00	785.00	100.00	1+2+1
SUVG-265	760.00	800.00	28.00	Center Ring
SCT-248	762.00	806.45	127.00	1+2+1
SCT-218	914.40	952.50	104.77	1+5+1
SCT-312	950.00	1000.00	165.00	1+4+1
SCT-300	1000.00	1050.00	190.00	Center Ring
SCT-266	1004.60	1065.00	160.00	1+3+1
SCT-335	1085.00	1135.00	230.00	1+4+0
SCT-162	1310.00	1376.00	219.10	Center Ring

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal



MATERIAL:

PUX - is a polyurethane compound of 92° shore 'A' hardness.

NT6/a - is a Acrylonitrile Butadiene Rubber (NBR) compound of shore 'A' 90°.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto 200°C on request)

Pressure: PUX - 300 BAR.

NT6/a - 160 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty hydraulic cylinders.

Also suitable for double acting cylinders.

Can also be used as a rod seal in conjunction with RTA style rod seal for heavy duty application.

DETAILS:

The Spareage style SUA seal is a general purpose seal & has good overall performance. It is a seal suited for split piston but can also be used with a single piston.

The SUA seal is available in 2 varieties of materials: i.e. NBR and polyurethane. Considering the economic factor with our seal performance, the SUA seals made out of NBR are most suitable upto a pressure of 160 BAR and extremely economical. Also another good factor is the preload pressure applied by the seal ensures good sealing at low pressures & also misalignment in the movement of the Piston Rod. Due to excellent wear resistance properties of polyurethane the life expected is 3 times that of NBR. Pl. refer pg. no. 181 for easy installation tools.

FEATURES:

Good overall performance.

Preload squeeze ensures good sealing.

Good temperature resistance.

Any size upto 1500 mm dia. available on request.

Can also be use as a Rod Seal.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0035901	7.00	3.00	4.00	SUA 0075902	12.00	7.00	4.00
SUA 0045910	7.50	4.00	5.10	SUA 0075904	12.00	7.00	5.00
SUA 0045902	8.00	4.00	5.00	SUA 0085905	12.00	8.00	4.00
SUA 0045911	8.00	4.50	3.50	SUA 0085915	12.00	8.00	5.00
SUA 0045913	8.00	4.50	4.00	SUA 0035905	12.50	3.20	5.20
SUA 0045916	8.00	4.80	3.80	SUA 0045901	12.50	4.50	5.00
SUA 0055912	8.00	5.00	3.10	SUA 0065909	12.50	6.00	8.00
SUA 0055909	8.00	5.00	4.00	SUA 0065920	12.50	6.10	5.50
SUA 0045912	8.50	4.50	3.80	SUA 0075901	12.50	7.00	3.41
SUA 0045914	8.50	4.50	4.20	SUA 0065924	12.80	6.60	6.00
SUA 0055907	9.50	5.00	4.00	SUA 0065918	13.00	6.00	5.00
SUA 0045903	10.00	4.00	4.00	SUA 0065903	13.00	6.00	9.00
SUA 0045903	10.00	4.00	5.00	SUA 0085913	13.00	8.00	4.00
SUA 0045909	10.00	4.00	5.50	SUA 0085913	13.00	8.00	5.00
SUA 0055911	10.00	5.00	3.50	SUA 0085919	13.50	8.50	5.50
SUA 0055910	10.00	5.00	5.00	SUA 0045907	14.00	4.00	6.00
SUA 0055914	10.00	5.50	4.00	SUA 0065916	14.00	6.00	7.00
SUA 0065914	10.00	6.00	5.30	SUA 0065904	14.00	6.00	9.00
SUA 0055906	11.00	5.00	6.00	SUA 0075903	14.00	7.00	4.10
SUA 0055915	11.00	5.84	4.58	SUA 0085917	14.00	8.00	3.50
SUA 0065913	11.00	6.00	7.00	SUA 0085906	14.00	8.00	5.00
SUA 0085909	11.00	8.00	3.50	SUA 0085904	14.00	8.00	7.00
SUA 0045915	11.11	4.76	3.17	SUA 0095908	14.00	9.00	5.00
SUA 0065921	11.11	6.35	3.50	SUA 0095905	14.00	9.50	3.50
SUA 0065911	11.11	6.35	4.68	SUA 0105922	14.00	10.00	4.00
SUA 0065923	11.50	6.60	4.00	SUA 0095910	14.27	9.52	4.17
SUA 0045905	12.00	4.00	7.00	SUA 0065922	14.29	6.35	4.17
SUA 0045908	12.00	4.00	9.00	SUA 0085901	15.00	8.00	5.70
SUA005L501 (Stock Size)	12.00	5.00	5.00	SUA 0085910	15.00	8.00	7.00
SUA 005L501	12.00	5.00	6.00	SUA 0095904	15.00	9.00	5.00
SUA 0055902	12.00	5.00	7.50	SUA 0095907	15.00	9.00	6.00
SUA 0055902	12.00	5.00	9.00	SUA 0105912	15.00	10.00	7.00
SUA 0055913	12.00	5.50	6.30	SUA 0095909	15.80	9.50	4.20
SUA006L501 (Stock Size)	12.00	6.00	5.50	SUA 0065905	16.00	6.00	9.00
SUA 006L501	12.00	6.00	6.50	SUA008L502 (Stock Size)	16.00	8.00	5.70
SUA 0065902	12.00	6.00	8.00	SUA 0085911	16.00	8.00	6.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 008L502	16.00	8.00	6.70	SUA 0095901	19.05	9.52	7.35
SUA 0085903	16.00	8.00	9.00	SUA 0125930	19.05	12.70	4.17
SUA 0095906	16.00	9.00	6.00	SUA 0115910	19.20	11.20	5.00
SUA 0105928	16.00	10.00	5.00	SUA 0105921	19.50	10.00	6.00
SUA 0105918	16.00	10.00	5.50	SUA 0065915	20.00	6.00	9.00
SUA 0105913	16.00	10.00	7.00	SUA 0065917	20.00	6.00	10.00
SUA012L508 (Stock Size)	16.00	12.00	5.50	SUA010L503 (Stock Size)	20.00	10.00	5.00
SUA 0125917	16.00	12.00	7.00	SUA 0105902	20.00	10.00	5.40
SUA 0135904	16.00	13.00	5.00	SUA 0105903	20.00	10.00	9.00
SUA 0085916	17.00	8.00	7.00	SUA 0105923	20.00	10.00	11.00
SUA 0115909	17.00	11.00	4.00	SUA012L503 (Stock Size)	20.00	12.00	4.40
SUA 0115905	17.00	11.00	5.00	SUA 0125902	20.00	12.00	5.00
SUA011L502 (Stock Size)	17.00	11.00	7.00	SUA 0125902	20.00	12.00	5.50
SUA 0105920	17.40	10.00	6.70	SUA012L505 (Stock Size)	20.00	12.00	5.80
SUA 0055908	17.50	5.00	4.00	SUA 0125904	20.00	12.00	6.30
SUA 0065919	18.00	6.00	9.00	SUA012L509 (Stock Size)	20.00	12.00	8.00
SUA 0075905	18.00	7.40	8.00	SUA 0135905	20.00	13.00	6.00
SUA 0085901	18.00	8.00	7.00	SUA 0145919	20.00	14.00	3.50
SSUA010L501	18.00	10.00	5.00	SUA 0145921	20.00	14.00	4.00
SUA 0105901	18.00	10.00	6.60	SUA 0145915	20.00	14.00	9.00
SUA010L505 (Stock Size)	18.00	10.00	7.00	SUA 0165918	20.00	16.00	3.50
SUA 0105914	18.00	10.00	8.00	SUA 0165911	20.00	16.00	6.70
SUA 0105915	18.00	10.00	9.00	SUA 0125923	21.00	12.00	9.00
SUA 0115907	18.00	11.00	5.00	SUA 0155901	21.00	15.00	3.00
SUA012L501 (Stock Size)	18.00	12.00	6.00	SUA 0145922	21.40	14.60	5.00
SUA 0125901	18.00	12.00	7.00	SUA 0105917	22.00	10.00	5.00
SUA 0135903	18.00	13.00	5.00	SUA 0105904	22.00	10.00	9.00
SUA 0105907	19.00	10.00	8.00	SUA 0115901	22.00	11.00	8.00
SUA 0105906	19.00	10.00	9.00	SUA 0115911	22.00	11.70	7.60
SUA012L513 (Stock Size)	19.00	12.00	5.00	SUA 0125926	22.00	12.00	6.50
SUA 0125927	19.00	12.00	5.50	SUA 0125928	22.00	12.00	7.00
SUA 0125906	19.00	12.00	6.00	SUA012L504 (Stock Size)	22.00	12.00	7.30
SUA 0125925	19.00	12.00	7.00	SUA012L506 (Stock Size)	22.00	12.00	8.00
SUA 0125922	19.00	12.70	5.76	SUA 0125912	22.00	12.00	9.00
SUA 0135901	19.00	13.00	5.00	SUA 0135902	22.00	13.00	7.00
SUA 0145913	19.00	14.00	4.50	SUA 0145901	22.00	14.00	5.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA014L503 (Stock Size)	22.00	14.00	6.00	SUA 0165916	24.00	16.00	3.50
SUA 0145908	22.00	14.00	7.00	SUA 0165903	24.00	16.00	5.00
SUA 0145917	22.00	14.00	7.50	SUA016L503 (Stock Size)	24.00	16.00	5.80
SUA 0145918	22.00	14.00	8.00	SUA 0165912	24.00	16.00	7.50
SUA 0145907	22.00	14.00	9.00	SUA 0165920	24.00	16.00	10.00
SUA 0155913	22.00	15.00	5.50	SUA017L501 (Stock Size)	24.00	17.00	5.00
SUA 0155908	22.00	15.00	6.00	SUA 0185913	24.00	18.00	4.00
SUA 0155910	22.00	15.00	7.00	SUA 0185915	24.00	18.00	6.20
SUA 0165915	22.00	16.00	3.50	SUA 0185912	24.00	18.00	7.20
SUA016L505 (Stock Size)	22.00	16.00	4.00	SUA018L503 (Stock Size)	24.00	18.00	9.00
SUA016L504 (Stock Size)	22.00	16.00	5.50	SUA 0205930	24.00	20.00	5.00
SUA 0165902	22.00	16.00	6.00	SUA 0105929	25.00	10.00	6.00
SUA 0175906	22.00	17.00	6.00	SUA 0105924	25.00	10.00	8.50
SUA 0185914	22.00	18.00	7.00	SUA 0105927	25.00	10.00	10.00
SUA 0125934	22.20	12.70	6.50	SUA 0115908	25.00	11.00	9.00
SUA 0125935	22.20	12.70	7.35	SUA 0125907	25.00	12.00	9.00
SUA 0125936	22.20	12.70	8.93	SUA 0125908	25.00	12.00	11.00
SUA 0125933	22.22	12.70	5.76	SUA014L504 (Stock Size)	25.00	14.00	6.00
SUA 0155918	22.22	15.87	4.17	SUA 0145920	25.00	14.00	7.00
SUA 0155919	22.22	15.87	5.76	SUA 0145909	25.00	15.00	7.00
SUA 0165917	22.50	16.00	5.50	SUA015L501 (Stock Size)	25.00	15.00	7.30
SUA012L510 (Stock Size)	23.00	12.00	5.75	SUA 0155902	25.00	15.00	8.00
SUA 0145909	23.00	14.00	4.50	SUA 0155904	25.00	15.00	9.00
SUA 0155914	23.00	15.00	4.50	SUA015L503 (Stock Size)	25.00	15.00	10.00
SUA 0155911	23.00	15.00	6.00	SUA 0165913	25.00	16.00	6.00
SUA 0175907	23.00	17.00	5.50	SUA 0165919	25.00	16.00	7.50
SUA 0085918	24.00	8.00	8.00	SUA 0165904	25.00	16.00	8.00
SUA 0105930	24.00	10.00	4.00	SSUA017L502	25.00	17.00	5.70
SUA 0105919	24.00	10.00	5.00	SUA 0175901	25.00	17.00	6.30
SUA012L511 (Stock Size)	24.00	12.00	6.00	SUA 0175902	25.00	17.00	10.00
SUA 0125906	24.00	12.00	11.00	SUA 0185911	25.00	18.00	5.00
SUA 0145910	24.00	14.00	5.00	SUA 0185917	25.00	18.00	7.00
SUA014L502 (Stock Size)	24.00	14.00	6.00	SUA 0185907	25.00	18.00	8.00
SUA 0145916	24.00	14.00	8.50	SUA 0195916	25.00	19.00	4.00
SUA 0145902	24.00	14.00	9.00	SUA 0195920	25.00	19.00	6.00
SUA015L505 (Stock Size)	24.00	15.00	7.00	SUA 0195909	25.00	19.50	5.67

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0205922	25.00	20.00	5.00	SUA 0205917	27.00	20.00	5.00
SUA 0125913	25.40	12.70	7.00	SUA 0205925	27.00	20.00	6.00
SUA 0125932	25.40	12.70	7.60	SUA 0105925	28.00	10.00	6.00
SUA 0125931	25.40	12.70	10.00	SUA 0155905	28.00	15.00	11.00
SUA 0155907	25.40	15.87	5.00	SUA 0165908	28.00	16.00	6.00
SUA 0155917	25.40	15.87	5.76	SUA 0165910	28.00	16.00	7.00
SUA 0195910	25.40	19.00	5.70	SUA 0165914	28.00	16.00	9.00
SUA 0105926	26.00	10.00	6.00	SUA 0185918	28.00	18.00	5.50
SUA 0125909	26.00	12.00	11.00	SUA 0185919	28.00	18.00	6.00
SUA 0145911	26.00	14.00	6.00	SUA 0185916	28.00	18.00	7.00
SUA 0145912	26.00	14.00	7.00	SUA018L502 (Stock Size)	28.00	18.00	7.30
SUA 0145903	26.00	14.00	8.00	SUA 0185902	28.00	18.00	8.00
SUA016L502 (Stock Size)	26.00	16.00	5.00	SUA 0185903	28.00	18.00	9.00
SUA 0165909	26.00	16.00	8.00	SUA019L503 (Stock Size)	28.00	19.00	5.70
SUA 0165905	26.00	16.00	9.00	SUA 0195915	28.00	19.00	6.00
SUA 0165905	26.00	16.00	9.00	SUA 0195917	28.00	19.00	6.70
SUA018L501 (Stock Size)	26.00	18.00	5.00	SUA020L504 (Stock Size)	28.00	20.00	5.00
SUA018L504 (Stock Size)	26.00	18.00	5.50	SUA 0205901	28.00	20.00	5.70
SUA 0185901	26.00	18.00	5.70	SUA020L501 (Stock Size)	28.00	20.00	6.00
SUA 0185920	26.00	18.00	7.50	SUA 0205920	28.00	20.00	7.00
SUA 0195919	26.00	19.00	6.70	SUA 0205933	28.00	20.00	9.00
SUA 0195901	26.00	19.00	7.00	SUA 0225918	28.00	22.00	5.50
SUA 0205918	26.00	20.00	4.50	SUA 0225931	28.00	22.00	5.80
SUA 0205926	26.00	20.00	5.00	SUA 0225932	28.00	22.00	7.00
SUA 0205910	26.00	20.00	6.00	SUA 0205931	28.50	20.00	6.00
SUA 0205919	26.00	20.00	7.00	SUA 0205935	28.50	20.50	7.00
SUA 0205934	26.00	20.00	9.00	SUA 0225938	28.50	22.22	7.35
SUA 0215904	26.00	21.00	4.00	SUA 0195904	28.57	19.05	8.62
SUA021L501 (Stock Size)	26.00	21.00	5.00	SUA 0195921	28.58	19.05	6.00
SUA 0425914	26.00	42.00	17.00	SUA 0185906	29.00	18.00	7.00
SUA 0155916	26.04	15.87	6.00	SUA 0185921	29.00	18.50	9.00
SUA016L506 (Stock Size)	26.50	16.00	8.00	SUA 0195913	29.00	19.00	6.00
SUA 0125929	27.00	12.00	11.00	SUA 0215902	29.00	21.00	8.00
SUA 0155915	27.00	15.00	6.00	SUA 0225910	29.00	22.00	6.70
SUA 0175904	27.00	17.00	6.00	SUA 0225901	29.00	22.00	7.00
SUA019L501 (Stock Size)	27.00	19.00	5.00	SUA015L504 (Stock Size)	30.00	15.00	7.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0155906	30.00	15.00	11.00	SUA 0165907	32.00	16.00	11.00
SUA 0175905	30.00	17.00	8.00	SUA 0185909	32.00	18.00	9.00
SUA018L505 (Stock Size)	30.00	18.00	8.00	SUA 0205905	32.00	20.00	9.00
SUA 0185904	30.00	18.00	9.00	SUA 0225920	32.00	22.00	7.00
SSUA019L502	30.00	19.00	7.00	SUA022L501 (Stock Size)	32.00	22.00	7.30
SUA 0205916	30.00	20.00	6.00	SUA022L504 (Stock Size)	32.00	22.00	8.00
SUA 0205916	30.00	20.00	6.00	SUA 0225904	32.00	22.00	8.30
SUA 0205903	30.00	20.00	7.00	SUA 0225905	32.00	22.00	10.00
SUA020L505 (Stock Size)	30.00	20.00	8.00	SUA 0225924	32.00	22.00	11.00
SUA 0205902	30.00	20.00	9.00	SUA 0235904	32.00	23.00	6.00
SUA 0205914	30.00	20.00	9.00	SUA 0245921	32.00	24.00	4.00
SUA 0205902	30.00	20.00	9.00	SUA 0245923	32.00	24.00	5.30
SUA 0205929	30.00	20.00	9.50	SUA024L504 (Stock Size)	32.00	24.00	5.70
SUA020L503 (Stock Size)	30.00	20.00	10.00	SUA 0245918	32.00	24.00	6.00
SUA 0205904	30.00	20.00	11.00	SUA 0245901	32.00	24.00	6.30
SUA 0225937	30.00	22.00	4.75	SUA 0245911	32.00	24.00	8.00
SUA 0225902	30.00	22.00	5.00	SUA 0245919	32.00	24.00	12.50
SUA 0225926	30.00	22.00	6.50	SUA 0255936	32.00	25.00	6.50
SUA 0225919	30.00	22.00	7.00	SUA 0255948	32.00	25.00	7.00
SUA 0225934	30.00	22.00	7.50	SUA 0285920	32.00	28.00	3.00
SUA 0225912	30.00	22.00	8.00	SUA 0225906	32.40	22.40	9.00
SUA 0225927	30.00	22.00	11.00	SUA 0165921	33.00	16.00	11.00
SUA 0225903	30.00	22.40	5.70	SUA 0205932	33.00	20.00	7.00
SUA 0235906	30.00	23.00	6.50	SUA 0205923	33.00	20.00	9.00
SUA 0245910	30.00	24.00	7.00	SUA025L507 (Stock Size)	33.00	25.00	5.00
SUA 0165922	30.50	16.50	7.00	SUA025L505 (Stock Size)	33.00	25.00	5.80
SUA 0205911	30.60	20.00	6.00	SUA 0255926	33.00	25.00	7.50
SUA 0165923	31.00	16.50	8.50	SUA025L503 (Stock Size)	33.00	25.00	8.00
SUA 0235905	31.00	23.00	7.20	SUA 0225936	33.25	22.00	6.70
SUA 0245917	31.00	24.00	6.00	SUA 0255901	33.40	22.40	5.00
SUA 0255945	31.00	25.00	6.00	SUA 0205924	34.00	20.00	11.00
SUA 0255927	31.00	25.00	7.00	SUA 0225929	34.00	22.00	9.00
SUA 0215903	31.20	21.00	7.00	SUA 0225907	34.00	22.00	11.00
SUA 0195912	31.75	19.00	7.50	SUA 0245907	34.00	24.00	6.00
SUA 0195918	31.75	19.00	10.30	SUA 0245906	34.00	24.00	8.00
SUA 0255950	31.80	25.40	4.90	SUA 0255940	34.00	25.00	5.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0255949	34.00	25.00	6.00	SUA 0245912	36.00	24.00	9.00
SUA 0265904	34.00	26.00	5.00	SUA 0245920	36.00	24.00	11.00
SUA 0195914	34.90	19.00	13.70	SUA 0255947	36.00	25.00	7.50
SUA 0155912	35.00	15.00	11.00	SUA 0255941	36.00	25.00	9.00
SUA 0185905	35.00	18.00	13.00	SUA 0265908	36.00	26.00	7.00
SUA 0195911	35.00	19.00	10.00	SUA 0285916	36.00	28.00	5.00
SUA 0195922	35.00	19.21	9.00	SUA028L508 (Stock Size)	36.00	28.00	5.40
SUA 0205928	35.00	20.00	7.00	SUA 0285902	36.00	28.00	7.00
SUA 0205906	35.00	20.00	11.00	SUA028L506 (Stock Size)	36.00	28.00	8.00
SUA 0225922	35.00	22.00	6.50	SUA 0305912	36.00	30.00	4.00
SUA022L506 (Stock Size)	35.00	22.00	7.00	SUA 0305925	36.00	30.00	4.50
SUA 0225933	35.00	22.00	7.50	SUA 0305931	36.00	30.00	9.00
SUA 0225923	35.00	22.00	8.00	SUA 0215901	37.00	21.00	13.00
SUA 0225917	35.00	22.00	9.00	SUA 0265905	37.00	26.00	10.00
SUA 0225917	35.00	22.00	9.00	SUA 0285903	37.00	28.00	3.70
SUA 0225908	35.00	22.00	11.00	SUA 0305902	37.00	30.00	9.00
SUA 0235902	35.00	23.00	9.00	SUA 0245924	37.50	24.75	7.00
SUA 0235903	35.00	23.00	11.00	SUA 0225909	38.00	22.00	11.00
SUA 0245915	35.00	24.00	6.00	SUA 0255942	38.00	25.00	7.00
SUA025L514 (Stock Size)	35.00	25.00	6.00	SUA025L511 (Stock Size)	38.00	25.00	8.00
SUA025L506 (Stock Size)	35.00	25.00	7.00	SUA025L508 (Stock Size)	38.00	25.00	9.00
SUA025L504 (Stock Size)	35.00	25.00	8.00	SUA025L501 (Stock Size)	38.00	25.00	10.00
SUA 0255912	35.00	25.00	9.00	SUA025L509 (Stock Size)	38.00	25.00	12.00
SUA 0255906	35.00	25.00	11.00	SUA 0265901	38.00	26.00	9.00
SUA 0275906	35.00	27.00	4.00	SUA 0285922	38.00	28.00	6.00
SUA 0275901	35.00	27.00	6.00	SUA 0285928	38.00	28.00	6.50
SUA 0275907	35.00	27.00	8.00	SUA028L504 (Stock Size)	38.00	28.00	7.00
SUA 0285916	35.00	28.00	7.50	SUA 0285926	38.00	28.00	9.00
SUA 0285915	35.00	28.00	9.00	SUA 0285918	38.00	28.00	11.00
SUA 0285904	35.00	29.00	11.00	SUA 0285905	38.00	29.00	6.00
SUA028L502 (Stock Size)	35.50	28.00	5.00	SUA030L507 (Stock Size)	38.00	30.00	5.70
SUA 0285901	35.50	28.00	5.70	SUA 0305932	38.00	30.00	6.00
SUA 0205907	36.00	20.00	11.00	SUA030L506 (Stock Size)	38.00	30.00	7.00
SUA 0225928	36.00	22.00	6.00	SUA 0305930	38.00	30.00	7.50
SUA 0225930	36.00	22.00	9.00	SUA 0305915	38.00	30.00	8.00
SUA024L503 (Stock Size)	36.00	24.00	6.50	SUA 0305918	38.00	30.00	11.0

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0255932	38.10	25.40	10.52	SUA 0315904	40.00	31.00	9.00
SUA 0315907	38.10	31.75	6.50	SUA032L514 (Stock Size)	40.00	32.00	5.00
SUA 0255952	38.20	25.70	8.50	SUA032L513 (Stock Size)	40.00	32.00	5.80
SUA 0205927	39.00	20.00	11.00	SUA 0325901	40.00	32.00	6.30
SUA 0275902	39.00	27.00	7.00	SUA032L501 (Stock Size)	40.00	32.00	8.00
SUA 0285913	39.00	28.00	9.00	SUA 0345903	40.00	34.00	11.00
SUA030L508 (Stock Size)	39.00	30.00	8.00	SUA 0255939	40.70	25.00	7.00
SUA020L507 (Stock Size)	40.00	20.00	10.00	SUA 0285923	41.00	28.00	11.00
SUA 0205909	40.00	20.00	13.00	SUA 0355917	41.00	35.00	6.00
SUA 0225915	40.00	22.00	11.00	SUA 0255951	41.27	25.40	12.11
SUA 0225915	40.00	22.00	11.00	SUA 0315906	41.27	31.75	7.35
SUA 0245914	40.00	24.00	6.00	SUA 0285924	41.28	28.58	7.35
SUA024L501 (Stock Size)	40.00	24.00	8.00	SUA 0345908	41.28	34.43	4.98
SUA 0245913	40.00	24.00	9.00	SUA 0315901	41.50	31.50	7.00
SUA 0245916	40.00	24.00	11.00	SUA 0245922	42.00	24.00	8.00
SUA 0245909	40.00	24.50	12.00	SUA 0255930	42.00	25.00	9.00
SUA 0255918	40.00	25.00	7.00	SUA 0255924	42.00	25.00	11.00
SUA025L513 (Stock Size)	40.00	25.00	8.00	SUA 0255937	42.00	25.00	11.00
SUA 0255946	40.00	25.00	9.00	SUA 0285919	42.00	28.00	8.00
SUA025L512 (Stock Size)	40.00	25.00	10.00	SUA 0285930	42.00	28.00	11.00
SUA 0255910	40.00	25.00	11.00	SUA 0305917	42.00	30.00	8.00
SUA025L510 (Stock Size)	40.00	25.00	12.00	SUA 0305906	42.00	30.00	10.00
SUA 0265906	40.00	26.00	10.00	SUA032L502 (Stock Size)	42.00	32.00	5.50
SUA 0275905	40.00	27.00	7.00	SUA032L507 (Stock Size)	42.00	32.00	6.00
SUA 0275904	40.00	27.00	8.00	SUA 0325902	42.00	32.00	6.30
SUA 0275903	40.00	27.00	9.00	SUA 0325909	42.00	32.00	8.00
SUA027L501 (Stock Size)	40.00	27.00	10.00	SUA 0325903	42.00	32.00	10.00
SUA 0285911	40.00	28.00	7.00	SUA 0335902	42.00	33.00	9.00
SUA 0285925	40.00	28.00	8.00	SUA 0345907	42.00	34.00	5.00
SUA028L503 (Stock Size)	40.00	28.00	10.00	SUA 0355927	42.00	35.00	6.00
SUA 0285906	40.00	28.00	11.00	SUA 0345910	42.68	34.72	5.00
SUA030L504 (Stock Size)	40.00	30.00	6.00	SUA 0285902	42.80	29.00	10.00
SUA030L505 (Stock Size)	40.00	30.00	7.00	SUA 0345912	42.86	34.92	6.00
SUA 0305905	40.00	30.00	8.00	SUA 0345913	42.86	34.92	8.49
SUA030L502 (Stock Size)	40.00	30.00	9.00	SUA028L507 (Stock Size)	43.00	28.00	6.00
SUA030L503 (Stock Size)	40.00	30.00	10.00	SUA 0285907	43.00	28.00	11.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0305924	43.00	30.00	8.00	SUA034L502 (Stock Size)	45.00	34.00	7.00
SUA 0305920	43.00	30.00	11.00	SUA 0345904	45.00	34.00	10.00
SUA 0335901	43.00	33.00	10.00	SUA035L502 (Stock Size)	45.00	35.00	6.00
SSUA035L511	43.00	35.00	6.00	SUA035L507 (Stock Size)	45.00	35.00	7.00
SUA 0355924	43.00	35.00	7.00	SUA035L513 (Stock Size)	45.00	35.00	8.00
SUA035L506 (Stock Size)	43.00	35.00	8.00	SUA 0355920	45.00	35.00	9.00
SUA 0355934	43.00	35.00	9.00	SUA035L504 (Stock Size)	45.00	35.00	10.00
SUA 0355918	43.00	35.00	11.00	SUA035L505 (Stock Size)	45.00	35.50	6.00
SUA 0305921	43.50	30.00	10.50	SUA 0355910	45.00	35.50	7.00
SUA 0325919	43.50	32.50	7.50	SUA038L501 (Stock Size)	45.00	38.00	8.00
SUA 0325916	44.00	32.00	8.00	SUA 0385905	45.00	39.00	5.00
SUA 0325904	44.00	32.00	9.50	SUA 0255943	46.00	25.00	12.00
SUA 0345905	44.00	34.00	6.00	SUA 0285927	46.00	28.00	11.00
SUA 0345902	44.00	34.00	13.00	SUA 0305903	46.00	30.00	11.00
SUA 0355925	44.00	35.00	8.00	SUA 0305927	46.00	30.00	13.00
SUA 0365904	44.00	36.00	5.00	SUA 0355914	46.00	35.00	11.00
SUA 0365909	44.00	36.00	5.50	SUA 0365902	46.00	36.00	6.30
SUA 0365907	44.00	36.00	7.00	SUA036L503 (Stock Size)	46.00	36.00	7.00
SUA 0315905	44.50	31.50	10.00	SUA 0385911	46.00	38.00	7.50
SUA 0325917	44.50	32.00	11.00	SUA 0405930	46.00	40.00	5.00
SUA022L505 (Stock Size)	45.00	22.00	10.00	SUA 0355931	46.50	35.00	8.00
SUA 0255935	45.00	25.00	11.00	SUA 0385925	46.62	38.10	7.35
SUA 0255938	45.00	25.00	12.00	SUA 0355929	47.00	35.00	8.00
SUA 0265907	45.00	26.00	11.00	SUA 0375906	47.00	37.00	6.00
SUA 0285921	45.00	28.00	11.00	SUA 0345907	47.00	37.00	8.00
SUA 0285903	45.00	29.00	9.00	SUA 0385917	47.00	38.00	6.00
SUA 0305926	45.00	30.00	7.00	SUA 0355928	47.60	35.00	7.00
SUA030L509 (Stock Size)	45.00	30.00	8.00	SUA 0315908	47.62	31.75	12.11
SUA0305907 (Stock Size)	45.00	30.00	9.00	SUA 0345911	47.62	34.92	7.00
SUA030L514 (Stock Size)	45.00	30.00	10.00	SUA 0305928	48.00	30.00	11.00
SUA 0305908	45.00	30.00	11.00	SUA 0325913	48.00	32.00	7.00
SUA 0305929	45.00	30.00	13.00	SUA 0325915	48.00	32.00	9.00
SUA032L506 (Stock Size)	45.00	32.00	8.00	SUA032L503 (Stock Size)	48.00	32.00	10.00
SUA 0325918	45.00	32.00	9.00	SUA 0355932	48.00	35.00	7.00
SUA032L504 (Stock Size)	45.00	32.00	10.00	SUA035L512 (Stock Size)	48.00	35.00	9.00
SUA 0325905	45.00	32.00	11.00	SUA 0355903	48.00	35.00	10.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0365908	48.00	36.00	9.00	SUA 0425913	50.00	42.00	7.00
SUA 0385901	48.00	38.00	7.00	SUA 0425901	50.00	42.00	9.00
SUA038L502 (Stock Size)	48.00	38.00	8.00	SUA 0425915	50.00	42.50	6.00
SUA 0405903	48.00	40.00	6.00	SUA 0465907	50.50	46.00	5.00
SUA 0405932	48.00	40.00	7.50	SUA 0375908	50.80	37.75	9.52
SUA040L507 (Stock Size)	48.00	40.00	8.00	SUA 0385909	50.80	38.10	7.35
SUA 0405931	48.00	40.00	9.00	SUA 0385924	50.80	38.10	10.10
SUA 0405904	48.00	40.00	10.00	SUA 0385926	50.80	38.10	13.70
SUA 0255911	50.00	25.00	10.00	SUA 0415902	50.98	41.20	5.50
SUA030L510 (Stock Size)	50.00	30.00	10.00	SUA 0345909	51.00	34.50	6.00
SUA 0305910	50.00	30.00	12.00	SUA 0355923	51.00	35.00	9.00
SUA 0345906	50.00	34.00	8.00	SUA 0385920	51.30	38.00	7.50
SUA034L503 (Stock Size)	50.00	34.00	12.00	SUA 0305922	52.00	30.00	10.50
SUA035L508 (Stock Size)	50.00	35.00	8.00	SUA035L514 (Stock Size)	52.00	35.00	10.00
SUA 0355926	50.00	35.00	9.00	SUA 0355915	52.00	35.00	11.00
SUA035L503 (Stock Size)	50.00	35.00	10.00	SUA 0355933	52.00	35.00	13.00
SUA035L509 (Stock Size)	50.00	35.00	11.00	SUA 0365911	52.00	36.00	11.00
SUA 0355905	50.00	35.00	12.50	SUA 0365906	52.00	36.00	13.00
SUA036L504 (Stock Size)	50.00	36.00	8.00	SUA 0405927	52.00	40.00	11.00
SUA 0365910	50.00	36.00	11.00	SUA 0425902	52.00	42.00	9.00
SUA 0385915	50.00	38.00	7.00	SUA 0425905	52.00	42.00	10.00
SUA 0385916	50.00	38.00	9.00	SUA 0425907	52.00	42.00	11.00
SUA 0385907	50.00	38.00	11.00	SUA044L503 (Stock Size)	52.00	44.00	5.50
SUA 0385927	50.00	38.50	7.50	SUA 0445906	52.00	44.00	6.50
SUA 0385904	50.00	39.00	8.00	SUA 0455930	52.00	45.00	7.50
SUA040L508 (Stock Size)	50.00	40.00	5.00	SUA 0455829	53.00	45.00	7.00
SUA040L503 (Stock Size)	50.00	40.00	6.00	SUA045L509 (Stock Size)	53.00	45.00	9.30
SUA 0405908	50.00	40.00	6.30	SUA 0455913	53.00	45.00	11.00
SUA040L505 (Stock Size)	50.00	40.00	7.00	SUA 0345914	53.97	34.92	10.52
SUA040L509 (Stock Size)	50.00	40.00	8.00	SUA 0385923	53.97	38.10	9.25
SUA 0405906	50.00	40.00	9.00	SUA 0445903	53.97	44.45	7.35
SUA040L504 (Stock Size)	50.00	40.00	10.00	SUA 0385919	54.00	38.00	12.00
SUA 0405907	50.00	40.00	11.00	SUA 0405934	54.00	40.00	11.00
SUA040L510 (Stock Size)	50.00	40.00	12.00	SUA 0425912	54.00	42.00	7.00
SUA042L501 (Stock Size)	50.00	42.00	5.00	SUA 0445905	54.00	44.00	6.50
SUA 0425902	50.00	42.00	7.00	SUA 0445908	54.75	44.45	7.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0305923	55.00	30.00	13.00	SUA 0485901	58.00	48.00	10.00.
SUA 0355906	55.00	35.00	11.00	SUA 0355916	60.00	35.00	13.00
SUA 0355907	55.00	35.00	13.00	SUA 0405928	60.00	40.00	9.00
SUA 0365912	55.00	36.00	11.00	SUA040L502 (Stock Size)	60.00	40.00	10.00
SUA 0365913	55.00	36.00	11.50	SUA 0405917	60.00	40.00	11.00
SUA 0385921	55.00	38.00	9.00	SSUA040L511	60.00	40.00	12.00
SUA 0385902	55.00	38.00	11.00	SUA 0405913	60.00	40.00	14.00
SUA 0405912	55.00	40.00	9.00	SUA 0405911	60.00	40.00	18.00
SUA040L501 (Stock Size)	55.00	40.00	10.00	SUA043L501 (Stock Size)	60.00	43.00	6.00
SUA 0405918	55.00	40.00	11.00	SUA045L505 (Stock Size)	60.00	45.00	10.00
SUA 0425904	55.00	42.00	8.00	SUA045L519 (Stock Size)	60.00	45.00	11.00
SUA 0425910	55.00	42.00	9.00	SUA045L506 (Stock Size)	60.00	45.00	12.00
SUA045L503 (Stock Size)	55.00	45.00	6.00	SUA 0455923	60.00	45.00	13.00
SUA045L507 (Stock Size)	55.00	45.00	7.00	SUA 0465901	60.00	46.00	10.00
SUA045L524 (Stock Size)	55.00	45.00	7.50	SUA 0485907	60.00	48.00	9.00
SUA 0455931	55.00	45.00	9.00	SUA 0495901	60.00	49.00	7.00
SUA045L501 (Stock Size)	55.00	45.00	10.00	SUA050L502 (Stock Size)	60.00	50.00	6.00
SUA 0455921	55.0	45.00	13.00	SUA 0505901	60.00	50.00	7.00
SUA 0465905	55.00	46.00	9.00	SUA050L506 (Stock Size)	60.00	50.00	7.30
SUA 0455903	55.50	45.50	10.00	SUA050L508 (Stock Size)	60.00	50.00	8.00
SUA 0365903	56.00	36.00	11.00	SUA050L503 (Stock Size)	60.00	50.00	10.00
SUA045L504 (Stock Size)	56.00	45.00	7.30	SUA 0505906	60.00	50.00	11.00
SUA 0455904	56.00	45.00	8.00	SUA050L509 (Stock Size)	60.00	50.00	12.00
SUA045L510 (Stock Size)	56.00	45.00	10.00	SUA 0425911	62.00	42.00	13.00
SUA 0415901	57.00	41.00	11.00	SUA045L511 (Stock Size)	62.00	45.00	8.50
SUA042L502 (Stock Size)	57.00	42.00	8.00	SUA 0455924	62.00	45.00	11.00
SUA048L504 (Stock Size)	57.00	48.00	10.00	SUA 0455925	62.00	45.00	13.00
SUA 0315909	57.15	31.75	20.55	SUA050L510 (Stock Size)	62.00	50.00	8.50
SUA 0445907	57.15	44.45	8.92	SUA050L523 (Stock Size)	62.00	50.00	10.00
SUA 0395903	57.50	39.50	13.50	SUA 0505926	62.00	50.00	11.00
SUA 0345905	58.00	37.00	11.00	SUA 0525909	62.00	52.00	8.00
SUA 0375904	58.00	37.00	14.00	SUA 0525904	62.00	52.00	11.00
SUA 0385918	58.00	38.00	11.00	SUA 0525901	62.00	52.00	13.00
SUA 0385922	58.00	38.00	14.00	SUA 0385910	62.99	38.10	26.40
SUA 0405933	58.00	40.00	11.00	SUA045L512 (Stock Size)	63.00	45.00	9.00
SUA 0455922	58.00	45.00	11.00	SUA045L502 (Stock Size)	63.00	45.00	10.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0455927	63.00	45.00	11.00	SUA 0355908	65.00	35.00	12.00
SUA045L518 (Stock Size)	63.00	45.00	12.00	SUA035L501 (Stock Size)	65.00	35.00	15.00
SUA 0455910	63.00	45.00	13.00	SUA040L513 (Stock Size)	65.00	40.00	10.00
SUA 0485904	63.00	48.00	9.50	SUA 0405922	65.00	40.00	11.00
SUA048L501 (Stock Size)	63.00	48.00	10.00	SUA040L506 (Stock Size)	65.00	40.00	12.00
SUA 0485902	63.00	48.00	11.00	SUA 0405923	65.00	40.00	13.00
SUA 0485903	63.00	48.00	13.00	SUA045L513 (Stock Size)	65.00	45.00	10.00
SUA 0495903	63.00	49.50	8.00	SUA045L516 (Stock Size)	65.00	45.00	12.00
SUA050L518 (Stock Size)	63.00	50.00	6.50	SUA 0455908	65.00	45.00	13.00
SUA 0505919	63.00	50.00	7.50	SUA 0465906	65.00	46.00	10.00
SUA050L516 (Stock Size)	63.00	50.00	8.00	SUA 0495902	65.00	49.00	10.00
SUA050L517 (Stock Size)	63.00	50.00	9.00	SUA050L512 (Stock Size)	65.00	50.00	7.00
SUA050L511 (Stock Size)	63.00	50.00	10.00	SUA 0505920	65.00	50.00	8.50
SUA 0525911	63.00	52.00	6.50	SUA 0505903	65.00	50.00	10.00
SUA 0525910	63.00	52.00	8.00	SUA050L504 (Stock Size)	65.00	50.00	10.00
SUA 0535907	63.00	53.00	5.00	SUA 0505908	65.00	50.00	11.00
SUA 0535910	63.00	53.00	5.50	SUA050L505 (Stock Size)	65.00	50.00	11.40
SUA053L505 (Stock Size)	63.00	53.00	6.00	SUA 0505927	65.00	50.50	7.35
SUA053L510 (Stock Size)	63.00	53.00	6.50	SUA 0525902	65.00	52.00	10.00
SUA 0535902	63.00	53.00	7.00	SUA 0545903	65.00	54.00	8.30
SUA053L503 (Stock Size)	63.00	53.00	7.30	SUA 0555908	65.00	55.00	6.00
SUA 0535909	63.00	53.00	10.00	SUA055L503 (Stock Size)	65.00	55.00	8.00
SUA 0535911	63.00	53.00	11.00	SUA055L504 (Stock Size)	65.00	55.00	10.00
SUA 0535901	63.00	53.00	12.00	SUA055L502 (Stock Size)	65.00	55.00	12.00
SUA053L504 (Stock Size)	63.00	53.00	12.50	SUA 0555907	65.00	55.00	13.00
SUA 0555914	63.00	55.00	12.00	SUA 0565911	65.65	56.00	7.35
SUA 0475901	63.50	47.62	13.70	SUA 0465904	66.00	46.00	11.00
SUA 0505928	63.50	50.50	9.00	SUA050L513 (Stock Size)	66.00	50.00	10.00
SUA 0505930	63.50	50.80	7.00	SUA 0555909	66.00	55.00	11.00
SUA 0505934	63.50	50.80	7.35	SUA 0565901	66.00	56.00	7.00
SUA 0505932	63.50	50.80	10.52	SUA 0565902	66.00	56.00	9.00
SUA 0505935	63.50	50.80	10.52	SUA056L502 (Stock Size)	66.00	56.00	10.00
SUA 0535912	63.50	53.97	5.76	SUA 0575902	66.67	57.15	5.77
SUA 0465908	64.00	46.00	10.00	SUA 0555915	67.00	55.00	7.00
SUA 0505917	64.00	50.00	11.00	SUA 0405924	68.00	40.00	16.00
SUA 0505921	64.00	50.00	13.70	SUA 0425906	68.00	42.00	16.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA045L514 (Stock Size)	68.00	45.00	12.00	SUA063L503 (Stock Size)	70.00	63.00	5.00
SUA 0525906	68.00	52.00	11.00	SUA 0555911	71.00	55.00	13.00
SUA055L505 (Stock Size)	68.00	55.00	10.00	SUA 0565903	71.00	56.00	9.50
SUA 0585904	68.00	58.00	12.00	SUA056L505 (Stock Size)	71.00	56.00	10.00
SUA 0605931	68.00	60.00	9.00	SUA056L501 (Stock Size)	71.00	56.00	11.50
SUA 0505929	69.85	50.80	10.52	SUA 0565909	71.00	56.00	12.00
SUA 0505931	69.85	50.80	13.70	SUA 0605904	71.00	60.00	8.00
SUA 0405929	70.00	40.00	13.00	SUA 0505924	72.00	50.00	11.00
SUA 0405925	70.00	40.00	16.00	SUA 0505912	72.00	50.00	13.00
SUA 0455919	70.00	45.00	16.00	SUA 0525903	72.00	52.00	11.00
SUA 0485906	70.00	48.00	13.00	SUA 0525908	72.00	52.00	13.00
SUA050L514 (Stock Size)	70.00	50.00	10.00	SUA 0565907	72.00	56.00	13.00
SUA050L501 (Stock Size)	70.00	50.00	11.00	SUA 0585907	72.00	58.00	9.00
SUA050L519 (Stock Size)	70.00	50.00	12.00	SUA 0585903	72.00	58.00	11.00
SUA050L515 (Stock Size)	70.00	50.00	14.00	SUA 0605915	72.00	60.00	7.00
SUA 0525905	70.00	52.00	11.00	SUA062L502 (Stock Size)	72.00	62.00	8.00
SUA 0535908	70.00	53.00	10.00	SUA 0625901	72.00	62.00	13.00
SUA 0545902	70.00	54.00	9.00	SUA 0645902	72.00	64.00	13.00
SUA 0545904	70.00	54.00	11.00	SUA053L502 (Stock Size)	73.00	53.00	12.00
SUA 0545901	70.00	54.00	13.00	SUA 0535903	73.00	53.00	13.00
SUA055L506 (Stock Size)	70.00	55.00	7.00	SUA 0635901	73.00	63.00	7.00
SUA 0555917	70.00	55.00	9.00	SUA063L504 (Stock Size)	73.00	63.00	8.00
SUA 0559054	70.00	55.00	11.00	SUA063L505 (Stock Size)	73.00	63.00	10.00
SUA055L509 (Stock Size)	70.00	55.00	12.00	SUA 0635902	73.00	63.00	13.00
SUA056L503 (Stock Size)	70.00	56.00	8.00	SUA 0505923	75.00	50.00	17.00
SUA056L504 (Stock Size)	70.00	56.00	10.00	SUA055L508 (Stock Size)	75.00	55.00	10.00
SUA 0565910	70.00	56.00	13.00	SUA 0555906	75.00	55.00	11.00
SUA 0575901	70.00	57.00	9.00	SUA055L501 (Stock Size)	75.00	55.00	12.00
SUA 0585908	70.00	58.00	7.00	SUA 0555905	75.00	55.00	13.00
SUA 0585906	70.00	58.00	9.50	SUA060L505 (Stock Size)	75.00	60.00	11.00
SUA060L506 (Stock Size)	70.00	60.00	6.00	SUA 0605905	75.00	60.00	12.00
SUA 0605901	70.00	60.00	7.00	SUA063L512 (Stock Size)	75.00	63.00	8.50
SUA060L503 (Stock Size)	70.00	60.00	7.20	SUA 0635903	75.00	63.00	9.50
SUA060L501 (Stock Size)	70.00	60.00	10.00	SUA063L506 (Stock Size)	75.00	63.00	10.00
SUA060L511 (Stock Size)	70.00	60.00	12.00	SUA065L510 (Stock Size)	75.00	65.00	6.00
SUA 0605903	70.00	60.00	13.00	SUA 0655901	75.00	65.00	7.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA065L505 (Stock Size)	75.00	65.00	8.00	SUA 0625902	80.00	62.00	11.00
SUA 0655916	75.00	65.00	9.75	SUA 0625908	80.00	62.50	9.00
SUA065L501 (Stock Size)	75.00	65.00	11.40	SUA 0635910	80.00	63.00	9.50
SUA065L511 (Stock Size)	75.00	65.00	12.00	SUA063L508 (Stock Size)	80.00	63.00	10.00
SUA 0655907	75.00	65.00	13.00	SSUA063L509	80.00	63.00	12.00
SUA 0675901	75.00	67.00	9.70	SUA 0645901	80.00	64.00	9.00
SUA 0555910	76.00	55.00	11.00	SUA065L506 (Stock Size)	80.00	65.00	9.00
SUA 0565908	76.00	56.00	13.00	SUA 0655903	80.00	65.00	9.50
SUA 0585909	76.00	58.50	9.00	SSUA065L507	80.00	65.00	10.00
SUA 0605929	76.00	60.00	9.00	SUA065L503 (Stock Size)	80.00	65.00	12.00
SUA 0605926	76.00	60.00	10.00	SUA 0655904	80.00	65.00	12.40
SUA 0605925	76.00	60.00	13.00	SUA 0665906	80.00	66.00	9.00
SUA 0605928	76.00	60.00	14.00	SUA 0665904	80.00	66.00	14.00
SUA 0655912	76.00	65.00	11.00	SUA 0675904	80.00	67.00	7.00
SUA 0665901	76.00	66.00	5.00	SUA 0685902	80.00	68.00	6.00
SUA 0665905	76.00	66.00	8.00	SUA 0695902	80.00	69.00	7.00
SUA 0575904	76.20	57.15	9.00	SUA 0705927	80.00	70.00	5.00
SUA 0575903	76.20	57.15	16.87	SUA 0705929	80.00	70.00	5.25
SUA 0635908	76.20	63.50	10.52	SUA070L501 (Stock Size)	80.00	70.00	6.00
SUA 0675902	77.00	67.00	7.00	SUA 0705901	80.00	70.00	7.00
SUA 0555916	78.00	55.00	11.00	SUA070L507 (Stock Size)	80.00	70.00	8.00
SUA 0625903	78.00	62.00	11.00	SUA 0705916	80.00	70.00	9.00
SUA 0625904	78.00	62.00	13.00	SUA070L525 (Stock Size)	80.00	70.00	10.00
SUA063L507 (Stock Size)	78.00	63.00	8.00	SUA070L503 (Stock Size)	80.00	70.00	12.00
SUA 0635904	78.00	63.00	9.50	SUA071L502 (Stock Size)	80.00	71.00	6.00
SUA 0655917	78.00	65.00	10.00	SUA 0715901	80.00	71.00	7.00
SUA 0505901	80.00	51.50	9.00	SUA 0715902	80.00	71.00	7.50
SUA 0605927	80.00	60.00	9.00	SUA 0725901	80.00	72.00	11.00
SUA060L508 (Stock Size)	80.00	60.00	10.00	SUA 0705919	81.00	70.00	11.00
SUA060L502 (Stock Size)	80.00	60.00	12.00	SUA 0625905	82.00	62.00	11.00
SUA 0605909	80.00	60.00	13.00	SUA 0625906	82.00	62.00	13.00
SUA 0605930	80.00	60.00	15.50	SUA 0655913	82.00	65.00	13.00
SUA 0605908	80.00	60.00	16.00	SUA 0705928	82.00	70.00	9.50
SUA 0605907	80.00	60.00	18.00	SUA 0705921	82.00	70.00	11.00
SUA 0605901	80.00	61.00	13.00	SUA 0705922	82.00	70.00	13.00
SUA 0625907	80.00	62.00	10.50	SUA 0505933	82.50	50.80	13.70

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0635913	82.55	63.50	10.52	SUA080L502 (Stock Size)	90.00	80.00	6.00
SUA 0695901	82.55	69.85	10.52	SUA 0805902	90.00	80.00	7.00
SUA 0635911	83.00	63.00	16.00	SUA080L506 (Stock Size)	90.00	80.00	11.00
SUA 0705923	83.00	70.00	11.00	SUA 0805901	90.00	80.00	12.00
SUA 0735901	83.00	73.00	6.00	SUA080L508 (Stock Size)	90.00	80.00	13.00
SUA 0705926	84.00	70.00	13.50	SUA071L503 (Stock Size)	91.00	71.00	12.00
SUA 0655908	85.00	65.00	11.00	SUA 0805918	91.00	80.00	11.00
SUA065L502 (Stock Size)	85.00	65.00	12.00	SUA 0705906	92.00	70.00	13.00
SUA 0655905	85.00	65.00	13.00	SUA 0825901	92.00	82.00	6.00
SUA 0705903	85.00	70.00	9.50	SUA 0855911	93.00	85.00	13.00
SUA 0705924	85.00	70.00	10.00	SUA 0705920	95.00	70.00	13.00
SUA070L508 (Stock Size)	85.00	70.00	12.00	SUA 0725902	95.00	72.00	11.00
SUA 0705910	85.00	70.00	13.50	SUA 0755912	95.00	75.00	11.00
SUA 0755904	85.00	75.00	7.00	SUA075L509 (Stock Size)	95.00	75.00	12.00
SUA075L510 (Stock Size)	85.00	75.00	8.00	SUA 0755905	95.00	75.00	12.80
SUA 0755911	85.00	75.00	9.00	SUA 0755905	95.00	75.00	13.00
SUA 0755907	85.00	75.00	11.00	SUA 0805903	95.00	80.00	9.50
SUA075L503 (Stock Size)	85.00	75.00	12.00	SUA080L509 (Stock Size)	95.00	80.00	10.00
SUA 0755902	85.00	75.00	13.00	SUA080L511 (Stock Size)	95.00	80.00	12.00
SUA 0755917	86.00	75.00	11.00	SUA 0805913	95.00	80.00	12.40
SUA 0665903	87.00	66.00	10.50	SUA 0805904	95.00	80.00	13.00
SUA 0675903	87.00	67.00	13.00	SUA 0855913	95.00	85.00	11.00
SUA 0705930	88.00	70.00	7.00	SUA 0765904	95.25	76.20	10.00
SUA 0785901	88.00	78.00	16.00	SUA 0825902	95.25	82.55	10.52
SUA 0765901	88.90	76.20	10.52	SUA 0885903	95.25	88.90	15.28
SUA 0775901	88.90	77.78	6.55	SUA 0805920	96.00	80.00	13.00
SUA 0605922	90.00	60.00	13.00	SUA 0855908	96.00	85.00	11.00
SUA065L508 (Stock Size)	90.00	65.00	12.00	SUA 0855912	96.50	85.00	10.00
SUA070L506 (Stock Size)	90.00	70.00	10.00	SUA 0765903	98.42	76.20	10.52
SUA 0705914	90.00	70.00	11.00	SUA 0855915	98.42	85.72	10.52
SUA070L502 (Stock Size)	90.00	70.00	12.00	SUA 0865902	99.00	86.30	10.50
SUA 0705907	90.00	70.00	14.00	SUA 0705908	100.00	70.00	16.00
SUA 0755910	90.00	75.00	11.00	SUA 0735902	100.00	73.00	16.00
SUA075L506 (Stock Size)	90.00	75.00	12.00	SUA 0755915	100.00	75.00	13.00
SUA 0755909	90.00	75.00	13.00	SUA075L505 (Stock Size)	100.00	75.00	15.00
SUA075L507 (Stock Size)	90.00	75.00	15.00	SUA 0755908	100.00	75.00	16.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 0795901	100.00	79.00	16.50	SUA 0905918	105.00	90.00	16.00
SUA080L518 (Stock Size)	100.00	80.00	10.00	SUA095L502 (Stock Size)	105.00	95.00	12.00
SUA080L507 (Stock Size)	100.00	80.00	11.00	SUA 0955911	105.00	95.00	13.00
SUA080L505 (Stock Size)	100.00	80.00	12.00	SUA 0865903	106.00	86.70	11.00
SUA080L503 (Stock Size)	100.00	80.00	13.00	SUA090L506 (Stock Size)	106.00	90.00	12.00
SUA 0805908	100.00	80.00	14.00	SUA090L507 (Stock Size)	106.00	90.00	14.00
SUA 0805906	100.00	80.00	16.00	SUA 0935901	107.00	93.00	8.00
SUA 0805921	100.00	80.00	19.00	SUA 0975901	107.00	97.00	16.00
SUA 0855914	100.00	85.00	8.50	SUA 0955907	107.95	95.25	10.52
SUA085L502 (Stock Size)	100.00	85.00	9.00	SUA 0785902	108.00	78.00	21.00
SUA 0855907	100.00	85.00	9.90	SUA 0885904	108.00	88.00	14.00
SUA 0855901	100.00	85.00	10.00	SUA093L501 (Stock Size)	108.00	93.00	15.00
SUA085L503 (Stock Size)	100.00	85.00	12.00	SUA 0955910	109.00	95.00	11.00
SUA 0855903	100.00	85.00	13.00	SUA 0995901	109.00	99.00	14.50
SUA 0875901	100.00	87.80	10.00	SUA083L501 (Stock Size)	110.00	83.00	13.00
SUA 0885902	100.00	88.00	9.50	SUA 0905911	110.00	90.00	9.40
SUA 0885905	100.00	88.00	10.00	SUA 0905914	110.00	90.00	11.00
SSUA090L512	100.00	90.00	6.00	SUA090L502 (Stock Size)	110.00	90.00	12.00
SUA 0905901	100.00	90.00	7.00	SUA 0905905	110.00	90.00	12.80
SUA 0905919	100.00	90.00	10.00	SUA 0905905	110.00	90.00	13.00
SUA 0905902	100.00	90.00	11.00	SUA 0905916	110.00	90.00	16.00
SUA090L503 (Stock Size)	100.00	90.00	12.00	SUA 0925901	110.00	92.00	13.00
SUA 0905912	100.00	90.00	13.00	SUA095L503 (Stock Size)	110.00	95.00	9.00
SUA076L501 (Stock Size)	101.60	76.20	12.70	SUA 0955901	110.00	95.00	10.00
SUA 0805922	101.60	80.00	11.00	SUA095L506 (Stock Size)	110.00	95.00	14.00
SUA 0885907	101.60	88.90	7.35	SUA 0955902	110.00	95.00	15.00
SUA088L501 (Stock Size)	101.60	88.90	9.52	SUA 0955903	110.00	95.00	15.00
SUA 0885901	101.60	88.90	10.52	SUA 1005914	110.00	100.00	6.00
SUA085L504 (Stock Size)	105.00	85.00	10.00	SUA 1005916	110.00	100.00	9.00
SUA 0855909	105.00	85.00	11.00	SUA 1005918	110.00	100.00	12.00
SUA085L501 (Stock Size)	105.00	85.00	11.80	SUA 0955913	111.12	95.25	7.35
SUA 0855904	105.00	85.00	12.80	SUA 0985901	112.00	98.00	10.00
SUA 0855904	105.00	85.00	13.00	SUA 1055912	113.00	105.00	12.00
SUA090L514 (Stock Size)	105.00	90.00	9.00	SUA090L508 (Stock Size)	114.00	90.00	13.00
SUA090L504 (Stock Size)	105.00	90.00	10.00	SUA 0885906	114.30	88.90	13.70
SUA090L505 (Stock Size)	105.00	90.00	12.00	SUA088L502 (Stock Size)	115.00	88.00	13.50

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA090L509 (Stock Size)	115.00	90.00	13.00	SUA110L505 (Stock Size)	125.00	110.00	9.00
SUA090L510 (Stock Size)	115.00	90.00	15.00	SUA 1105912	125.00	110.00	10.00
SUA095L504 (Stock Size)	115.00	95.00	12.00	SUA110L503 (Stock Size)	125.00	110.00	11.00
SUA095L505 (Stock Size)	115.00	95.00	13.00	SUA110L504 (Stock Size)	125.00	110.00	12.00
SUA 0955912	115.00	95.00	16.00	SUA 1105904	125.00	110.00	13.00
SUA100L506 (Stock Size)	115.00	100.00	9.00	SUA110L501 (Stock Size)	125.00	110.00	15.00
SUA100L507 (Stock Size)	115.00	100.00	10.00	SUA112L502 (Stock Size)	125.00	112.00	9.00
SUA100L509 (Stock Size)	115.00	100.00	11.60	SUA 1125901	125.00	112.00	10.00
SUA 1055911	115.00	105.00	14.50	SUA 1155910	125.00	115.00	13.00
SUA 1015901	117.47	101.60	10.52	SUA115L501 (Stock Size)	125.00	115.00	15.00
SUA 0905917	120.00	90.00	13.00	SUA 1155902	125.00	115.00	16.00
SUA 0905920	120.00	90.00	19.00	SUA 1165901	126.00	116.00	16.00
SUA 0955906	120.00	95.00	13.00	SUA 1015902	127.00	101.60	13.70
SUA100L501 (Stock Size)	120.00	100.00	11.00	SUA 1075901	127.00	107.00	13.00
SUA100L504 (Stock Size)	120.00	100.00	12.00	SUA 1075902	127.00	107.95	15.87
SUA 1005920	120.00	100.00	14.00	SUA 1145901	127.00	114.30	7.35
SUA100L510 (Stock Size)	120.00	100.00	15.00	SUA100L513 (Stock Size)	130.00	100.00	15.00
SUA 1055906	120.00	105.00	9.00	SUA 1005917	130.00	100.00	16.00
SUA 1055915	120.00	105.00	10.50	SUA 1045902	130.00	104.00	16.00
SUA 1055905	120.00	105.00	16.00	SUA 1055913	130.00	105.00	13.00
SUA 1105917	120.00	110.00	12.00	SUA105L503 (Stock Size)	130.00	105.00	15.00
SUA100L512 (Stock Size)	125.00	100.00	11.50	SUA 1055910	130.00	105.00	16.00
SUA100L503 (Stock Size)	125.00	100.00	12.00	SUA 1105911	130.00	110.00	11.00
SUA100L511 (Stock Size)	125.00	100.00	13.00	SUA110L509 (Stock Size)	130.00	110.00	12.00
SUA100L502 (Stock Size)	125.00	100.00	15.00	SUA 1105902	130.00	110.00	12.50
SUA 1005919	125.00	100.00	15.50	SUA110L502 (Stock Size)	130.00	110.00	15.00
SUA 1005901	125.00	100.00	16.00	SUA 1105914	130.00	110.00	15.60
SUA 1005905	125.00	100.00	20.00	SUA 1105903	130.00	110.00	16.00
SUA 1035901	125.00	103.00	16.00	SUA 1125902	130.00	112.00	10.00
SUA 1055914	125.00	105.00	9.00	SUA 1135902	130.00	113.00	14.00
SUA 1055908	125.00	105.00	11.00	SUA115L506 (Stock Size)	130.00	115.00	9.00
SSUA105L501	125.00	105.00	12.00	SUA 1155905	130.00	115.00	14.50
SUA 1055902	125.00	105.00	13.00	SUA 1205916	130.00	120.00	6.00
SUA105L502 (Stock Size)	125.00	105.00	15.00	SUA 1205901	130.00	120.00	14.00
SUA 1055916	125.00	105.00	15.50	SUA 1205901	130.00	120.00	14.50
SUA 1055903	125.00	105.00	16.00	SUA 1205917	130.00	120.00	16.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 1245901	131.00	124.00	6.00	SUA 1305907	145.00	130.00	10.00
SUA 1125903	132.00	112.00	16.00	SUA 1305905	145.00	130.00	13.00
SUA 1205907	132.00	120.00	13.00	SUA 1305906	145.00	130.00	16.0
SUA 1105913	135.00	110.00	13.00	SUA 1325901	145.00	132.00	9.50
SUA115L503 (Stock Size)	135.00	115.00	15.00	SUA 1355908	145.00	135.00	16.00
SUA 1155901	135.00	115.00	16.00	SUA 1205908	150.00	120.00	13.00
SUA 1205911	135.00	120.00	10.00	SUA 1205903	150.00	120.00	16.00
SUA 1205912	135.00	120.00	11.00	SUA 1255906	150.00	125.00	12.80
SUA 1205913	135.00	120.00	13.00	SUA125L502 (Stock Size)	150.00	125.00	13.00
SUA120L502 (Stock Size)	135.00	120.00	15.00	SUA130L502 (Stock Size)	150.00	130.00	14.50
SUA 1205906	135.00	120.00	16.00	SUA 1305901	150.00	130.00	16.00
SUA 1255901	135.00	125.00	15.00	SUA 1335901	150.00	133.00	19.00
SUA 1105916	140.00	110.00	19.00	SUA 1365901	150.00	136.00	10.00
SUA 1155908	140.00	115.00	14.00	SUA 1505907	150.00	140.00	6.00
SUA115L502 (Stock Size)	140.00	115.00	15.00	SUA 1405914	150.00	140.00	6.50
SUA 1155909	140.00	115.00	19.00	SUA 1405915	150.00	140.00	11.00
SUA120L514 (Stock Size)	140.00	120.00	12.00	SUA 1405909	150.00	140.00	12.00
SUA 1205914	140.00	120.00	13.00	SUA 1405901	150.00	140.00	15.00
SUA 1205915	140.00	120.00	14.00	SUA 1415901	151.00	141.00	15.00
SUA120L501 (Stock Size)	140.00	120.00	14.50	SUA 1305908	152.00	130.00	11.00
SUA 1205902	140.00	120.00	15.50	SUA 1335903	152.40	133.35	10.52
SUA 1205902	140.00	120.00	16.00	SUA 1365901	152.40	136.52	8.80
SUA 1255917	140.00	125.00	8.50	SUA 1395901	152.40	139.70	10.52
SUA125L501 (Stock Size)	140.00	125.00	9.00	SUA 1375901	152.50	137.50	8.00
SUA 1255902	140.00	125.00	10.00	SUA 1355909	155.00	135.00	13.00
SUA 1255914	140.00	125.00	14.00	SUA135L503 (Stock Size)	155.00	135.00	14.50
SUA125L506 (Stock Size)	140.00	125.00	15.00	SUA 1355901	155.00	135.00	16.00
SUA 1255916	140.00	125.00	15.70	SUA140L507 (Stock Size)	155.00	140.00	9.00
SUA 1255903	140.00	125.00	16.00	SUA 1405902	155.00	140.00	10.00
SUA 1285903	140.00	128.00	11.00	SUA140L503 (Stock Size)	155.00	140.00	15.00
SUA 1285904	140.00	128.00	13.00	SUA 1455905	155.00	145.00	10.00
SUA 1345901	144.00	134.00	16.00	SUA 1305910	157.00	130.00	19.00
SUA 1205909	145.00	120.00	13.00	SUA 1335902	157.50	133.00	17.10
SUA 1205910	145.00	120.00	19.00	SUA 1405911	158.00	140.00	16.00
SUA 1255905	145.00	125.00	12.50	SUA130L503 (Stock Size)	160.00	130.00	16.00
SUA125L507 (Stock Size)	145.00	125.00	15.00	SUA135L502 (Stock Size)	160.00	135.00	15.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 1355902	160.00	135.00	20.00	SUA 1525902	177.80	152.40	16.80
SUA 1355910	160.00	135.00	22.00	SUA150L504 (Stock Size)	180.00	150.00	16.00
SUA 1385901	160.00	138.00	13.00	SUA 1505908	180.00	150.00	17.00
SUA140L502 (Stock Size)	160.00	140.00	14.00	SUA 1555901	180.00	155.00	17.00
SUA140L501 (Stock Size)	160.00	140.00	14.50	SUA 1605903	180.00	160.00	11.00
SUA 1405904	160.00	140.00	15.50	SUA160L501 (Stock Size)	180.00	160.00	15.00
SUA 1405904	160.00	140.00	16.00	SUA 1605901	180.00	160.00	16.00
SUA 1405903	160.00	140.00	19.00	SUA 1655901	180.00	165.00	10.00
SUA 1405903	160.00	140.00	20.00	SUA 1555903	185.00	155.00	16.00
SUA145L503 (Stock Size)	160.00	145.00	9.00	SUA 1605902	185.00	160.00	17.00
SUA 1455901	160.00	145.00	10.00	SUA 1655905	185.00	165.00	16.00
SUA 1455902	160.00	145.00	17.00	SUA 1705901	185.00	170.00	14..00
SUA 1495901	161.00	149.00	11.00	SUA 1755907	185.00	175.00	16.00
SUA130L504 (Stock Size)	165.00	130.00	15.00	SUA 1605910	190.00	160.00	16.00
SUA 1355907	165.00	135.00	20.00	SUA 1605909	190.00	160.00	23.00
SUA145L502 (Stock Size)	165.00	145.00	16.00	SUA 1605911	190.00	160.00	26.00
SUA 1455903	165.00	145.00	17.00	SUA165L503 (Stock Size)	190.00	165.00	15.00
SUA 1505901	165.00	150.00	10.00	SUA 1655904	190.00	165.00	16.00
SUA 1505904	165.00	150.00	13.00	SUA 1655902	190.00	165.00	17.00
SUA 1505905	165.00	150.00	16.00	SUA170L504 (Stock Size)	190.00	170.00	15.00
SUA 1555901	165.00	155.00	16.00	SUA 1705902	190.00	170.00	16.00
SUA 1495901	165.10	149.22	8.93	SUA 1835901	193.00	183.00	15.00
SUA 1455906	170.00	145.00	17.00	SUA 1705907	195.00	170.00	13.00
SUA 1505902	170.00	150.00	10.00	SUA 1755908	195.00	175.00	16.00
SUA150L502 (Stock Size)	170.00	150.00	12.00	SUA 1765901	196.00	176.00	16.00
SUA150L503 (Stock Size)	170.00	150.00	16.00	SUA165L502 (Stock Size)	200.00	165.00	20.00
SUA 1505902	170.00	150.00	17.00	SUA 1685901	200.00	168.00	16.00
SUA155L506 (Stock Size)	170.00	155.00	10.00	SUA170L501 (Stock Size)	200.00	170.00	15.00
SUA 1625901	172.00	162.00	15.00	SUA 1705905	200.00	170.00	16.00
SUA 1505907	175.00	150.00	20.00	SUA170L502 (Stock Size)	200.00	170.00	18.00
SUA 1555905	175.00	155.00	8.50	SUA 1705903	200.00	170.00	19.00
SUA 1555904	175.00	155.00	11.00	SUA 1705910	200.00	170.00	23.00
SUA 1555906	175.00	155.00	14.00	SUA 1705904	200.00	170.00	25.00
SUA 1605912	175.00	160.00	8.50	SUA175L501 (Stock Size)	200.00	175.00	15.00
SUA 1605906	175.00	160.00	10.00	SUA 1755903	200.00	175.00	16.00
SUA 1605904	175.00	160.00	16.00	SUA 1755901	200.00	175.00	17.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 1755902	200.00	175.00	20.00	SUA 1905906	220.00	190.00	17.00
SUA 1805907	200.00	180.00	11.00	SUA 1905903	220.00	190.00	23.00
SUA 1805902	200.00	180.00	13.00	SUA 1955902	220.00	195.00	16.00
SUA180L503 (Stock Size)	200.00	180.00	14.00	SUA200L503 (Stock Size)	220.00	200.00	12.00
SUA180L502 (Stock Size)	200.00	180.00	15.00	SUA 2005911	220.00	200.00	12.80
SUA 1805910	200.00	180.00	15.50	SUA 2005902	220.00	200.00	13.00
SUA 1805901	200.00	180.00	16.00	SUA200L501 (Stock Size)	220.00	200.00	14.50
SUA 1835905	200.00	185.00	8.50	SUA 2005912	220.00	200.00	15.00
SUA 1855904	200.00	185.00	10.60	SUA 2005901	220.00	200.00	15.50
SUA 1855906	200.00	185.00	13.00	SUA 2005901	220.00	200.00	16.00
SUA 1775902	203.20	177.80	13.70	SUA 2055903	220.00	205.00	13.00
SUA 1775901	203.20	177.80	19.00	SUA 2025901	222.00	202.00	11.00
SUA 1775903	203.20	177.80	21.00	SUA 1995901	224.00	199.00	17.00
SUA 1905908	203.20	190.50	16.87	SUA 1995902	224.00	199.00	20.00
SUA 1755905	205.00	175.00	16.00	SUA 2045901	224.00	204.00	13.00
SUA180L504 (Stock Size)	205.00	180.00	15.00	SUA 1955904	225.00	195.00	16.00
SUA 1805904	205.00	180.00	17.00	SUA200L505 (Stock Size)	225.00	200.00	15.00
SUA 1855903	205.00	185.00	13.00	SUA 2005910	225.00	200.00	19.00
SUA 1855902	205.00	185.00	16.00	SUA200L502 (Stock Size)	230.00	200.00	17.00
SUA 1965901	206.00	196.00	16.00	SUA 2005903	230.00	200.00	18.00
SUA 1955903	207.00	195.00	16.00	SUA 2005904	230.00	200.00	23.00
SUA 1705908	210.00	170.00	21.00	SUA 2055904	230.00	205.00	20.00
SUA180L506 (Stock Size)	210.00	180.00	15.00	SUA 2105902	230.00	210.00	13.00
SUA 1805909	210.00	180.00	16.00	SUA 2105903	230.00	210.00	18.00
SUA190L501 (Stock Size)	210.00	190.00	14.50	SUA 2205907	230.00	220.00	6.00
SUA 1905901	210.00	190.00	15.50	SUA 2205905	230.00	220.00	16.00
SUA 1905901	210.00	190.00	16.00	SUA 2125901	237.00	212.00	19.00
SUA 1805905	210.00	190.00	23.00	SUA 2125901	237.00	212.00	20.00
SUA 2005906	212.00	200.00	16.00	SUA210L501 (Stock Size)	240.00	210.00	18.00
SUA 1905905	215.00	190.00	16.00	SUA 2105901	240.00	210.00	19.00
SUA 1905902	215.00	190.00	17.00	SUA 2205904	240.00	220.00	16.00
SUA 1955901	215.00	195.00	16.00	SUA220L501 (Stock Size)	250.00	220.00	18.00
SUA 2005909	215.00	200.00	16.00	SUA 2205901	250.00	220.00	19.00
SUA 2075901	217.00	207.00	15.00	SUA 2205910	250.00	220.00	23.00
SUA 2065901	218.00	206.00	11.00	SUA 2205901	250.00	220.00	25.00
SUA 1805908	220.00	180.00	21.00	SUA225L501 (Stock Size)	250.00	225.00	18.20

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUA

TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 2255901	250.00	225.00	20.00	SUA 2705905	300.00	270.00	15.50
SUA 2265901	250.00	226.00	17.00	SUA270L501 (Stock Size)	300.00	270.00	19.00
SUA230L503 (Stock Size)	250.00	230.00	12.00	SUA 2705902	300.00	270.00	20.00
SUA 2305901	250.00	230.00	13.00	SUA 2705903	300.00	270.00	20.00
SUA 2305906	250.00	230.00	15.00	SUA 2705902	300.00	270.00	20.00
SUA 2305904	250.00	230.00	16.00	SUA 2805903	300.00	280.00	15.00
SUA230L502 (Stock Size)	250.00	230.00	17.00	SUA 2805904	300.00	280.00	16.00
SUA 2205909	252.00	220.00	21.00	SUA 2805902	300.00	280.00	16.00
SUA 2355903	254.00	235.00	8.50	SUA 2805901	310.00	280.00	20.00
SUA 2255902	255.00	225.00	17.00	SUA 2855902	320.00	285.00	20.00
SUA 2455901	255.00	245.00	16.00	SUA290L501 (Stock Size)	320.00	290.00	20.00
SUA 2415901	255.50	241.50	10.15	SUA 2905901	320.00	290.00	21.00
SUA 2305902	260.00	230.00	23.00	SUA 3005901	330.00	300.00	20.00
SUA 2305907	260.00	230.00	23.00	SUA 3005902	330.00	300.00	23.00
SUA 2405904	260.00	240.00	11.00	SUA 3105901	330.00	310.00	18.00
SUA 2405901	260.00	240.00	18.00	SUA 3005903	340.00	300.00	21.00
SUA 2505903	260.00	250.00	6.00	SUA 3105903	340.00	310.00	19.00
SUA 2365901	261.00	236.00	20.00	SUA 3205901	350.00	320.00	17.00
SUA 2365901	261.00	236.00	20.00	SUA 3205901	350.00	320.00	17.00
SUA240L501 (Stock Size)	270.00	240.00	17.50	SUA 3205902	350.00	320.00	23.00
SUA240L502 (Stock Size)	270.00	240.00	18.00	SUA 3255901	350.00	325.00	16.00
SUA 2505901	275.00	250.00	20.00	SUA 3235901	355.60	323.85	26.40
SUA250L501 (Stock Size)	280.00	250.00	18.00	SUA 3305902	360.00	330.00	21.00
SUA250L502 (Stock Size)	280.00	250.00	20.00	SUA 3505902	360.00	350.00	6.00
SUA 2505902	280.00	250.00	23.00	SUA 3305903	361.95	330.20	23.22
SUA 2505905	280.00	250.00	23.00	SUA 3505903	370.00	350.00	15.00
SUA 2505908	280.00	250.00	26.00	SUA 3305901	380.00	330.00	18.00
SUA 2555902	280.00	255.00	19.00	SUA 3505904	390.00	350.00	21.00
SUA 2555901	280.00	255.00	20.00	SUA 3505905	390.00	350.00	29.00
SUA 2605904	280.00	260.00	11.00	SUA 3605901	390.00	360.00	23.00
SUA 2505906	290.00	250.00	20.00	SUA 3705901	395.00	370.00	17.00
SUA 2705906	290.00	270.00	17.00	SUA 3605902	400.00	360.00	29.00
SUA 2705901	290.00	270.00	18.00	SUA 3705901	400.00	370.00	26.00
SUA 2705904	292.00	270.00	12.00	SUA 3805901	400.00	380.00	14.50
SUA 2655901	295.00	265.00	20.00	SUA 3655901	405.00	365.00	26.00
SUA 2505907	300.00	250.00	18.00	SUA 3755901	407.00	375.00	25.00

Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

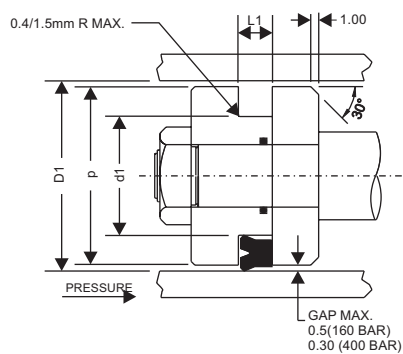
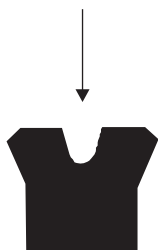
SECTION: SYMETRICAL SEAL

STYLE: SUA

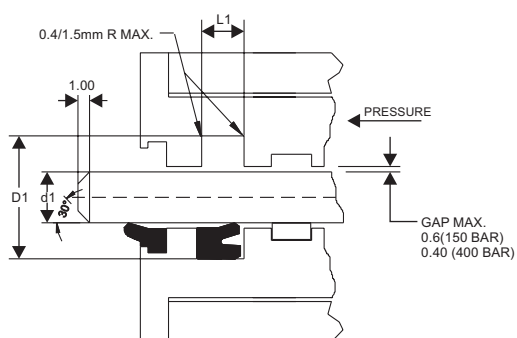
TYPE: Single Acting Seal

Style SUA Metric Ordering Information (Dimensions in mm)

Part No.	D1 (H9)	d1 (h9)	L1 (+0.2)
SUA 4005901	430.00	400.00	26.00
SUA 4135901	438.00	413.00	17.00
SUA 4405901	480.00	440.00	30.00
SUA 4505901	490.00	450.00	33.00
SUA 5105901	555.00	510.00	26.00
SUA 5305901	566.00	530.00	23.00
SUA 6005902	630.00	600.00	26.00
SUA 6305901	669.00	630.00	24.00
SUA 6705901	710.00	670.00	26.00
SUA 7005901	727.00	700.00	21.00



PISTON ASSEMBLY



ROD ASSEMBLY

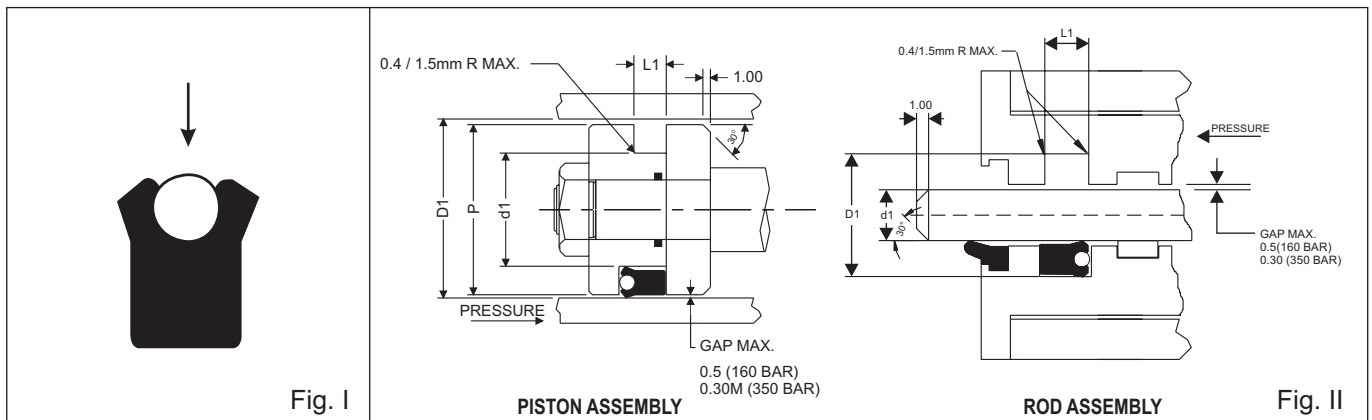
Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION: SYMETRICAL SEAL

STYLE: SUJ

TYPE: Single Acting Seal



MATERIAL:

PUX - is a polyurethane compound of 92° shore 'A' hardness.

NT6/a - is a Acrylonitrile Butadiene Rubber (NBR) compound of shore 'A' 90°.

O-Ring - NT4/b - Acrylonitrile Butadiene Rubber (NBR) compound of hardness shore 70°A.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto 200°C on request)

Pressure: PUX - 350 BAR.

NT6/a - 160 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty hydraulic cylinders, holding platforms.

Suitable for double acting cylinders.

Can also be used as a Rod Seal in conjunction with RTA style Rod Seal for heavy applications.

Can also be used in equivalent to RUB Rod Seal.

DETAILS:

The Spareage style SUJ seal is a combination of U-cup with O-Ring inserted in between to energised the lip. It is a conventional lip type seal to produce a unique sealing capable of sealing in vaccum & high and low pressure application.

The SUJ style seal is available in 2 varieties of materials: i.e. NBR and Polyurethane. Due to excellent wear resistance properties of polyurethane the life expected is 3 times that of NBR.

FEATURES:

Excellent sealability during low & high pressure.

Long service life.

Easily retrofits other seals.

SECTION: SYMETRICAL SEAL

STYLE: SUJ

TYPE: Single Acting Seal

Style SUJ Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)
SUJ0061101	SUJ0065901	11.11	6.35	3.17	SUJ0441102	SUJ0445901	60.32	44.45	14.00
SUJ0061102	SUJ0065902	12.70	6.35	3.96	SUJ0531102	SUJ0535901	63.00	53.00	7.50
SUJ0091101	SUJ0095901	15.87	9.52	3.81	SUJ0451102	SUJ0455902	63.00	45.00	7.00
SUJ0111101	SUJ0115901	17.46	11.11	3.81	SUJ0531103	SUJ0535902	63.50	53.97	6.00
SUJ0141101	SUJ0145901	20.63	14.28	3.81	SUJ0531104	SUJ0535903	63.50	53.97	10.00
SUJ0171101	SUJ0175901	23.81	17.46	3.81	SUJ0501107	SUJ0505905	63.50	50.80	10.70
SUJ0181101	SUJ0185902	26.00	18.00	6.50	SUJ0561102	SUJ0565901	65.00	56.00	9.00
SUJ0141102	SUJ0145902	26.98	14.28	7.00	SUJ0551101	SUJ0555901	65.00	55.00	8.00
SUJ0221101	SUJ0225901	29.00	22.00	6.50	SUJ0501108	SUJ0505903	65.00	50.00	13.00
SUJ0201101	SUJ0205901	30.00	20.00	8.00	SUJ0561103	SUJ0565902	66.00	56.00	11.00
SUJ0251101	SUJ0255904	31.75	25.40	7.00	SUJ0501109	SUJ0505910	69.85	50.80	11.00
SUJ0141103	SUJ0145903	31.75	14.27	7.00	SUJ0561104	SUJ0565903	70.00	56.00	13.50
SUJ0261102	SUJ0265901	32.00	26.00	5.55	SUJ0501110	SUJ0505907	70.00	50.00	11.00
SUJ0201102	SUJ0205902	33.33	20.63	8.73	SUJ0601101	SUJ0605903	75.00	60.00	13.50
SUJ0251102	SUJ0255902	35.00	25.00	8.00	SUJ0551102	SUJ0555902	75.00	55.00	15.50
SUJ0281101	SUJ0285901	36.00	28.00	6.50	SUJ0631103	SUJ0635902	76.20	63.50	10.50
SUJ0301101	SUJ0305902	40.00	30.00	11.00	SUJ0661101	SUJ0665902	76.20	66.75	8.00
SUJ0351101	SUJ0355902	41.00	35.00	7.00	SUJ0571102	SUJ0575902	76.20	57.15	10.50
SUJ0381102	SUJ0385901	44.45	38.10	5.38	SUJ0631102	SUJ0635901	79.37	63.50	14.00
SUJ0381103	SUJ0385902	44.50	38.10	7.10	SUJ0701101	SUJ0705904	80.00	70.00	11.00
SUJ0361101	SUJ0365901	47.00	36.00	10.50	SUJ0701102	SUJ0705905	80.00	70.00	8.00
SUJ0381104	SUJ0385903	47.50	38.50	8.00	SUJ0701103	SUJ0705906	80.00	70.00	12.00
SUJ0421101	SUJ0425901	50.00	42.00	7.50	SUJ0651101	SUJ0655901	80.00	65.00	11.00
SUJ0401101	SUJ0405901	50.00	40.00	8.50	SUJ0601102	SUJ0605902	80.00	60.00	13.50
SUJ0351102	SUJ0355903	50.00	35.00	11.50	SUJ0701104	SUJ0705903	82.00	70.00	10.00
SUJ0381101	SUJ0385904	50.80	38.10	10.50	SUJ0691102	SUJ0695901	82.55	69.85	10.50
SUJ0411101	SUJ0415901	50.80	41.28	10.50	SUJ0711101	SUJ0715901	85.00	71.00	10.00
SUJ0381105	SUJ0385905	51.50	38.10	8.00	SUJ0761102	SUJ0765901	88.90	76.20	8.00
SUJ0351103	SUJ0355901	51.50	35.50	13.00	SUJ0761103	SUJ0765902	88.90	76.20	11.30
SUJ0451101	SUJ0455901	55.00	45.00	8.00	SUJ0731101	SUJ0735901	88.90	73.02	11.50
SUJ0471101	SUJ0475901	57.15	47.62	10.50	SUJ0701105	SUJ0705902	90.00	70.00	13.50
SUJ0501102	SUJ0505909	57.15	50.80	3.57	SUJ0701106	SUJ0705907	90.00	70.00	12.50
SUJ0501103	SUJ0505901	60.00	50.00	11.00	SUJ0801102	SUJ0805902	95.00	80.00	14.00
SUJ0501104	SUJ0505908	60.00	50.00	14.00	SUJ0821101	SUJ0825901	95.25	82.55	10.50
SUJ0501105	SUJ0505906	60.32	50.80	5.38	SUJ0821102	SUJ0825902	96.00	82.00	10.00
SUJ0501106	SUJ0505902	60.32	50.80	10.50	SUJ0821103	SUJ0825903	98.42	82.55	10.00

Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: SYMETRICAL SEAL

STYLE: SUJ

TYPE: Single Acting Seal

Style SUJ Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)	Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)
SUJ0881102	SUJ0885902	98.42	88.90	5.38	SUJ1461101	SUJ1465901	158.75	146.05	15.87
SUJ0851101	SUJ0855901	98.42	85.72	7.00	SUJ1391102	SUJ1395902	158.75	139.70	17.50
SUJ0901101	SUJ0905901	100.00	90.00	7.00	SUJ1451101	SUJ1455901	160.00	145.00	11.20
SUJ0801103	SUJ0805903	100.00	80.00	12.50	SUJ1411101	SUJ1415901	160.00	141.00	11.00
SUJ0801104	SUJ0805901	100.00	80.00	14.00	SUJ1401101	SUJ1405901	160.00	140.00	16.00
SUJ0881103	SUJ0885901	101.60	88.90	10.50	SUJ1401102	SUJ1405902	160.00	140.00	15.50
SUJ0761104	SUJ0765903	101.60	76.20	17.50	SUJ1491101	SUJ1495901	165.10	149.22	17.50
SUJ0881104	SUJ0885903	101.60	88.90	7.00	SUJ1391103	SUJ1395903	165.10	139.70	32.00
SUJ0881105	SUJ0885904	104.75	88.90	14.00	SUJ1501101	SUJ1505901	170.00	150.00	17.00
SUJ0901102	SUJ0905902	105.00	90.00	12.50	SUJ1521101	SUJ1525901	171.45	152.40	17.50
SUJ0981101	SUJ0985902	107.95	98.50	8.00	SUJ1651102	SUJ1645901	177.80	165.10	15.30
SUJ0951101	SUJ0955902	107.95	95.25	15.87	SUJ1581101	SUJ1585901	177.80	158.75	17.50
SUJ0881101	SUJ0885905	109.50	88.90	14.00	SUJ1521102	SUJ1525902	177.80	152.40	21.00
SUJ0891101	SUJ0895901	112.00	89.50	14.00	SUJ1711101	SUJ1715901	184.15	171.45	15.87
SUJ0981102	SUJ0985903	114.30	98.42	9.00	SUJ1651101	SUJ1655902	184.15	165.10	17.50
SUJ0971101	SUJ0975901	115.00	97.00	14.50	SUJ1601101	SUJ1605901	185.00	160.00	17.00
SUJ1001103	SUJ1005901	120.00	100.00	8.00	SUJ1771101	SUJ1775901	196.85	177.80	10.50
SUJ1001104	SUJ1005902	120.00	100.00	11.00	SUJ1701101	SUJ1705901	197.20	170.00	12.00
SUJ1101102	SUJ1105902	125.00	110.00	13.00	SUJ1801101	SUJ1805901	200.00	180.00	15.00
SUJ1101103	SUJ1105903	125.00	110.00	15.00	SUJ1701102	SUJ1705902	200.00	170.00	26.50
SUJ1051101	SUJ1055901	125.00	105.00	11.00	SUJ1841102	SUJ1845901	203.20	184.16	10.50
SUJ1001105	SUJ1005903	125.00	100.00	16.00	SUJ1901103	SUJ1905903	203.20	190.50	15.00
SUJ1141101	SUJ1145902	127.00	114.30	14.00	SUJ1901101	SUJ1905904	203.20	190.50	16.00
SUJ1011101	SUJ1015901	127.00	101.60	14.00	SUJ1771102	SUJ1775902	203.20	177.80	21.00
SUJ1141102	SUJ1145901	127.00	114.30	10.50	SUJ1841101	SUJ1845902	203.20	184.15	11.00
SUJ1071102	SUJ1075901	127.00	107.95	10.50	SUJ1801102	SUJ1805902	205.00	180.00	16.00
SUJ1071101	SUJ1075902	127.00	107.95	14.00	SUJ2001101	SUJ2005902	215.00	200.00	16.00
SUJ1011102	SUJ1015902	127.00	101.60	19.05	SUJ2031101	SUJ2035902	228.60	203.20	21.00
SUJ1071103	SUJ1075903	127.00	107.95	15.72	SUJ2201101	SUJ2205901	250.00	220.00	19.00
SUJ1101101	SUJ1105904	130.00	110.00	16.00	SUJ2341101	SUJ2345901	254.00	234.95	10.50
SUJ1331101	SUJ1335901	146.05	133.35	15.87	SUJ2301101	SUJ2305902	260.00	230.00	22.22
SUJ1271103	SUJ1275901	146.05	127.00	17.50	SUJ2501101	SUJ2505901	269.87	250.82	17.50
SUJ1301101	SUJ1305901	150.00	130.00	16.00	SUJ2801101	SUJ2805901	300.00	280.00	15.00
SUJ1391101	SUJ1385901	152.40	139.70	10.50	SUJ2511101	SUJ2515901	301.62	251.40	27.50
SUJ1271104	SUJ1275902	152.40	127.00	21.00	SUJ2541101	SUJ2545902	304.80	254.00	27.94
SUJ1331102	SUJ1335902	152.40	133.35	17.50	SUJ2791101	SUJ2795902	304.80	279.40	21.00

Other sizes available on request.

Moulds are available for all the above listed sizes.

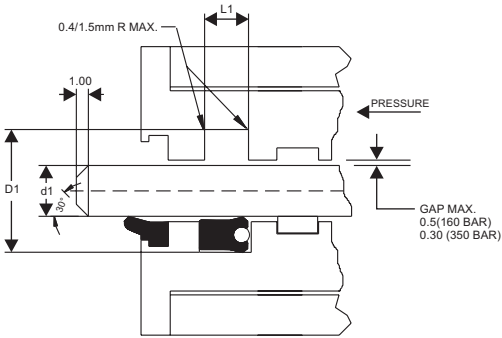
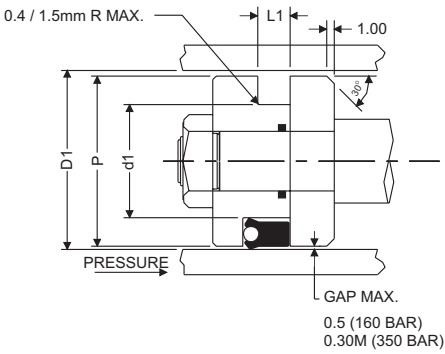
SECTION: SYMETRICAL SEAL

STYLE: SUJ

TYPE: Single Acting Seal

Style SUJ Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	D1 (H9)	d1 (h9)	L1 (+0.2)
SUJ2661101	SUJ2665901	304.80	266.70	27.94
SUJ2791102	SUJ2795903	304.80	279.40	14.00
SUJ2921101	SUJ2925901	311.15	292.10	21.00
SUJ3041101	SUJ3045901	323.85	304.80	17.50
SUJ3001101	SUJ3005901	330.00	300.00	22.22
SUJ3541101	SUJ3545901	378.00	354.00	22.22
SUJ3551101	SUJ3555901	381.00	355.60	21.00
SUJ3681101	SUJ3685901	406.40	368.30	21.00
SUJ4821101	SUJ4825901	508.00	482.60	14.00



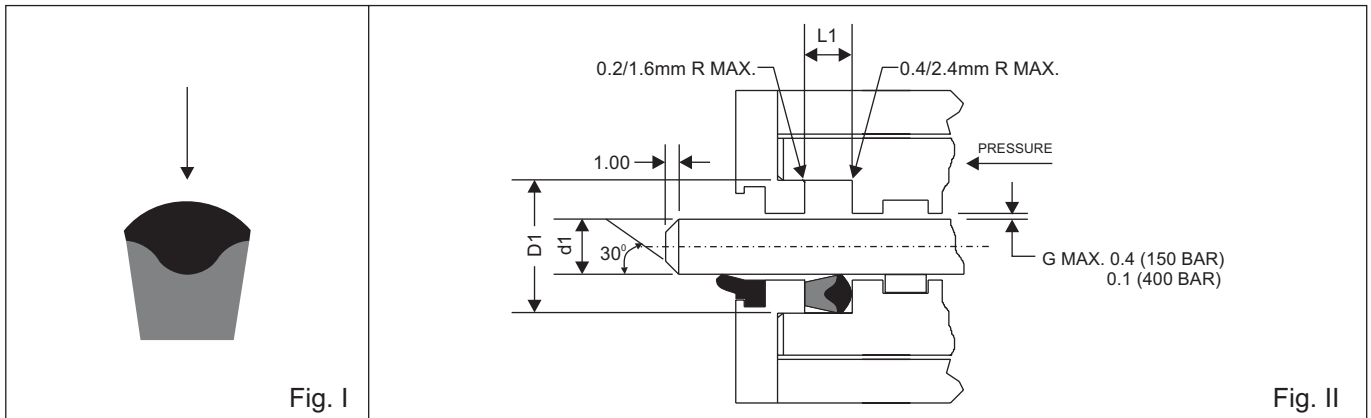
Other sizes available on request.

Moulds are available for all the above listed sizes.

SECTION: SYMETRICAL SEAL

STYLE: SFA

TYPE: Single Acting Fluid Seal



MATERIAL:

Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Pressure: 250 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty hydraulic presses.

Steel mills, earthmoving equipments

Requires split gland.

Can also be used as a piston seal.

DETAILS:

The type SFA is a medium to heavy duty single acting rod seal which can also be used for piston application. Over the years, it has proven itself to be an effective and robust seal over a wide range of applications.

The seal comprises a rubberized fabric which is bonded to a nitrile energizer and needs a split housing.

The seal section is pre-loaded by the housing when installed to ensure effective sealing at low pressure. When the pressure increases, the nitrile energizes the fabric to increase the sealing area and hence improving the efficiency of the seal. The strength and durability of the rubberized fabric combines with its ability to retain lubricant keeping friction and wear to a minimum.

FEATURES:

General purpose seal.

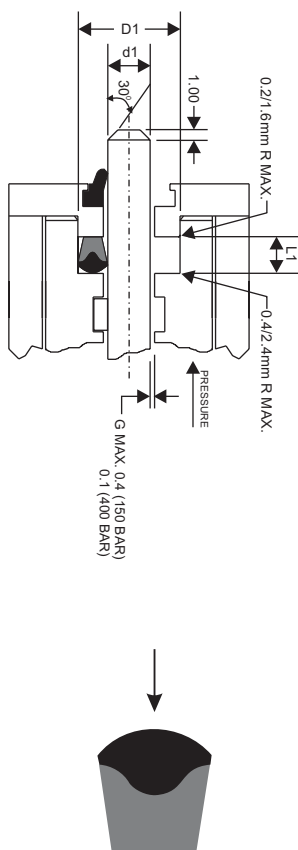
Long life.

SECTION: SYMETRICAL SEAL

STYLE: SFA

TYPE: Single Acting Fluid Seal

Style SFA Metric Ordering Information (Dimensions in mm)



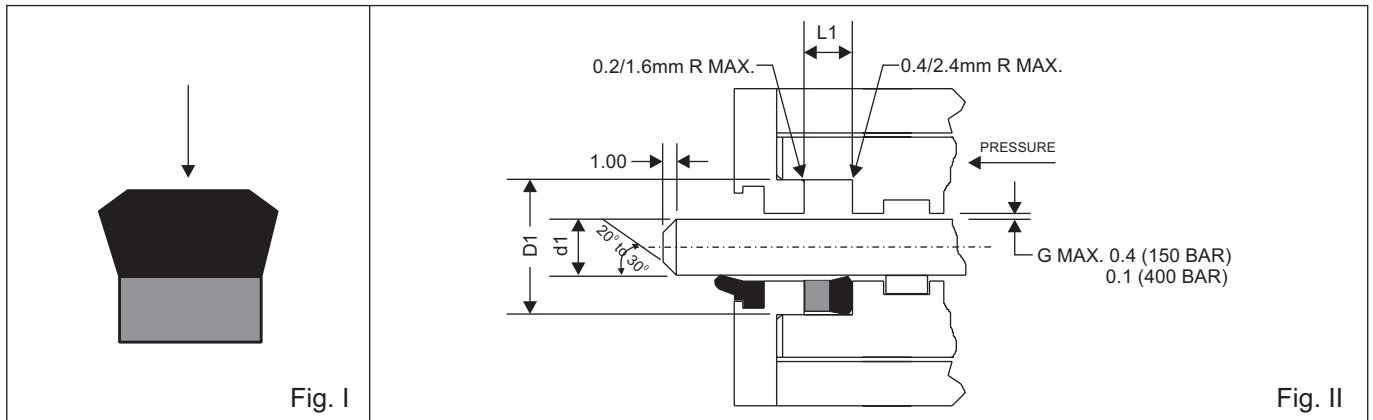
Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)	Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)
SFA 0108301	10.0	17.0	6.30	SFA 0458301	45.0	60.0	11.0
SFA 0128301	12.0	19.0	6.30	SFA 0458302	45.0	65.0	14.0
SFA 0128302	12.0	20.0	6.30	SFA 0508301	50.0	60.0	7.50
SFA 0148301	14.0	22.0	6.50	SFA 0508302	50.0	62.0	9.0
SFA 0158301	15.0	23.0	5.80	SFA 0508303	50.0	65.0	11.0
SFA 0158302	15.0	25.0	7.50	SFA 0558301	55.0	70.0	10.5
SFA 0168301	16.0	24.0	5.90	SFA 0608301	60.0	70.0	7.5
SFA 0188301	18.0	26.0	6.50	SFA 0608302	60.0	80.0	14.0
SFA 0188302	18.0	28.0	5.80	SFA 0658301	65.0	80.0	11.0
SFA 0208301	20.0	28.0	6.50	SFA 0658302	65.0	85.0	14.0
SFA 0228301	22.0	30.0	6.5	SFA 0708301	70.0	85.0	9.5
SFA 0258301	25.0	35.0	8.50	SFA 0708302	70.0	90.0	14.0
SFA 0258302	25.0	35.0	10.0	SFA 0758301	75.0	85.0	7.5
SFA 0288301	28.0	36.0	6.0	SFA 0858301	85.0	95.0	7.5
SFA 0308302	30.0	40.0	7.0	SFA 0908301	90.0	100.0	10.0
SFA 0328301	32.0	40.0	6.0	SFA 0908302	90.0	105.0	9.0
SFA 0358301	35.0	45.0	7.5	SFA 0958301	95.0	107.0	12.0
SFA 0358302	35.0	50.0	12.0	SFA 1008301	100.0	115.0	11.0
SFA 0368301	36.0	43.0	6.0	SFA 1008302	100.0	120.0	14.0
SFA 0408301	40.0	50.0	7.5	SFA 1158301	115.0	125.0	7.5
SFA 0408302	40.0	50.0	13.0	SFA 1258301	125.0	150.0	14.0
SFA 0408303	40.0	55.0	7.5	SFA 1308301	130.0	145.0	14.5
SFA 0408304	40.0	60.0	10.0	SFA 1508301	150.0	170.0	14.0
SFA 0458303	45.0	53.0	9.0				

Other sizes available on request.

SECTION: SYMETRICAL SEAL

STYLE: SFD

TYPE: Single Acting Fluid Seal



MATERIAL:

Fabric Reinforced Acrylonitrile Butadiene Rubber (NBR).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Pressure: 250 BAR.

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, water soluble & water glycol fluids.

APPLICATION:

Medium to heavy duty hydraulic cylinders.

Valves spindles.

Can also be used as a piston seal.

DETAILS:

The type SFD is a medium duty single acting rod seal which can also be used for piston application. Over the years, it has proven itself to be an effective and robust seal over a wide range of applications.

The seal comprises a rubberized fabric which is bonded to a nitrile energizer and needs a split housing.

The seal section is pre-loaded by the housing when installed to ensure effective sealing at low pressure. When the pressure increases, the nitrile energizes the fabric to increase the sealing area and hence improving the efficiency of the seal. The strength and durability of the rubberized fabric combines with its ability to retain lubricant keeping friction and wear to a minimum.

FEATURES:

General purpose seal.

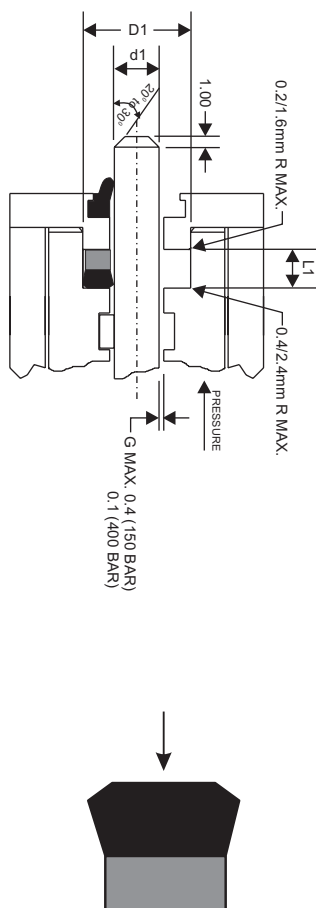
Long life.

SECTION: SYMETRICAL SEAL

STYLE: SFD

TYPE: Single Acting Fluid Seal

Style SFD Metric Ordering Information (Dimensions in mm)



Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)	Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)
SFD0048301	4.76	12.70	6.35	SFD0358301	35.00	45.00	7.50
SFD0058301	5.00	11.10	6.00	SFD0368301	36.00	44.00	6.40
SFD0108301	10.00	17.00	6.40	SFD0388301	38.10	57.15	11.80
SFD0118301	11.00	20.63	7.65	SFD0388302	38.10	47.62	7.50
SFD0128302	12.00	20.00	6.30	SFD0408301	40.00	48.00	6.50
SFD0128301	12.70	22.22	7.65	SFD0408302	40.00	50.00	10.50
SFD0158301	15.87	22.22	4.76	SFD0408304	40.00	50.00	7.50
SFD0188302	18.00	26.00	6.50	SFD0458303	45.00	55.00	8.00
SFD0188301	18.00	24.00	5.20	SFD0478301	47.62	63.50	11.50
SFD0208308	20.00	30.00	8.50	SFD0508305	50.00	60.00	10.00
SFD0208307	20.00	28.00	5.00	SFD0508301	50.00	60.00	8.00
SFD0208305	20.00	35.00	11.50	SFD0508309	50.00	58.00	12.50
SFD0208302	20.00	28.00	7.00	SFD0508308	50.00	60.00	10.50
SFD0208303	20.00	30.00	8.00	SFD0508310	50.80	66.67	11.50
SFD0228301	22.00	30.00	6.50	SFD0508304	50.80	69.85	11.10
SFD0248301	24.00	32.00	7.50	SFD0548301	54.00	66.00	9.00
SFD0258307	25.00	38.00	9.00	SFD0558301	55.00	67.00	11.00
SFD0258311	25.00	45.00	10.00	SFD0608306	60.00	71.00	9.00
SFD0258305	25.00	35.00	8.50	SFD0608307	60.00	80.00	11.00
SFD0258306	25.00	37.00	10.50	SFD0608301	60.00	70.00	8.00
SFD0258301	25.00	33.00	6.00	SFD0608303	60.00	80.00	10.00
SFD0258303	25.40	31.75	5.25	SFD0658302	65.00	75.00	8.50
SFD0258310	25.40	44.45	9.52	SFD0658301	65.00	77.00	9.60
SFD0278301	27.00	35.00	6.50	SFD0658303	65.00	75.00	12.00
SFD0308307	30.00	42.00	9.50	SFD0708303	70.00	78.00	5.50
SFD0308303	30.00	38.00	6.40	SFD0708301	70.00	82.00	10.50
SFD0308301	30.00	41.00	8.00	SFD0758302	75.00	85.00	11.00
SFD0308309	30.00	37.00	6.50	SFD0758301	75.00	85.00	7.50
SFD0308308	30.00	40.00	7.00	SFD0778301	77.00	87.00	8.00
SFD0308304	30.00	37.50	6.50	SFD0808304	80.00	95.00	11.30
SFD0308305	30.00	40.00	8.00	SFD0858303	85.00	95.00	8.50
SFD0318302	31.75	47.62	11.60	SFD0858301	85.00	100.00	11.52
SFD0318301	31.75	44.45	9.52	SFD0888305	88.00	96.00	8.00
SFD0328301	32.00	42.00	10.00	SFD0888301	88.90	101.60	10.00
SFD0348301	34.92	50.80	11.00	SFD0888303	88.90	114.30	14.27
SFD0358303	35.00	50.00	11.50	SFD0958301	95.00	110.00	12.00

Other sizes available on request.

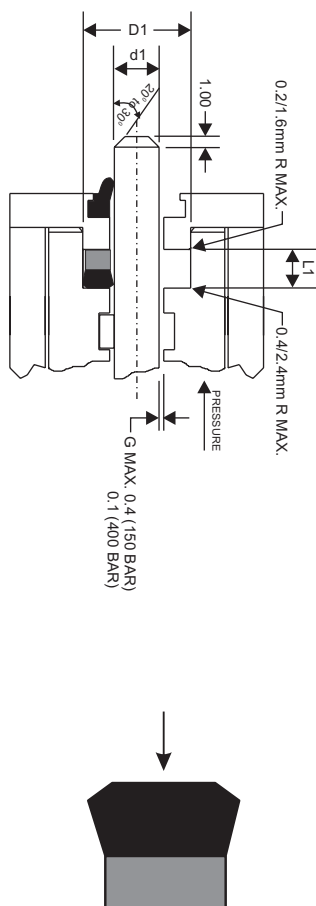
Moulds are available for all the above listed sizes.

SECTION: SYMETRICAL SEAL

STYLE: SFD

TYPE: Single Acting Fluid Seal

Style SFD Metric Ordering Information (Dimensions in mm)



Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)	Part No.	d1 (f8)	D1 (H9)	L1 (+0.2)
SFD0968301	96.00	105.00	11.00	SFD1608303	160.00	180.00	14.00
SFD0978301	97.00	108.00	11.52	SFD1608304	160.00	174.00	11.50
SFD1008301	100.00	113.00	12.50	SFD1658302	165.10	177.80	10.00
SFD1018302	101.00	111.00	6.00	SFD1758301	175.00	200.00	14.50
SFD1018301	101.60	127.00	19.05	SFD1858301	185.00	197.00	8.00
SFD1018304	101.60	127.00	15.87	SFD1878301	187.00	202.00	11.50
SFD1038301	103.00	115.00	12.50	SFD2008301	200.00	230.00	24.00
SFD1048301	104.00	113.00	18.25	SFD2038302	203.20	234.95	25.65
SFD1048302	104.10	129.30	18.70	SFD2308301	230.00	260.00	20.50
SFD1128301	112.00	125.00	8.50	SFD2348301	234.95	254.00	9.52
SFD1158301	115.00	130.00	12.50	SFD2708301	270.00	300.00	22.50
SFD1188301	118.00	130.00	12.50	SFD2708302	270.00	300.00	38.00
SFD1208301	120.00	140.00	14.50	SFD3048302	304.80	355.60	31.75
SFD1208302	120.00	140.00	12.00	SFD3808301	380.00	420.00	30.00
SFD1278302	127.00	145.00	11.50	SFD4008301	400.00	430.00	22.70
SFD1278303	127.00	139.70	10.00	SFD4608301	460.00	500.00	30.00
SFD1278301	127.00	152.40	19.50				
SFD1308302	130.00	150.00	16.00				
SFD1308301	130.00	150.00	9.00				
SFD1408301	140.00	150.00	10.00				
SFD1588301	158.75	177.80	14.27				

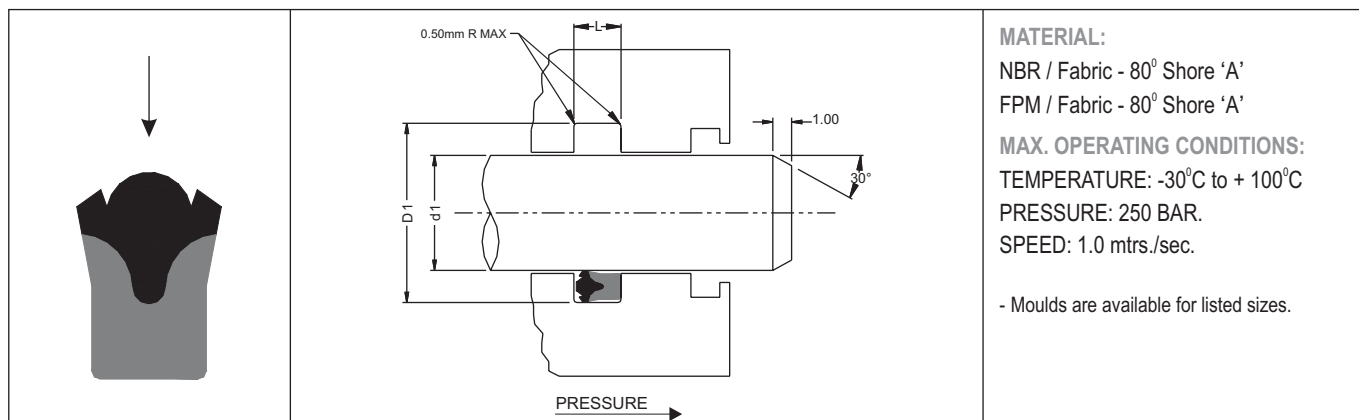
Moulds are available for all the above listed sizes.

Other sizes available on request.

SECTION: SYMETRICAL SEAL

STYLE: SFC

TYPE: Single Acting



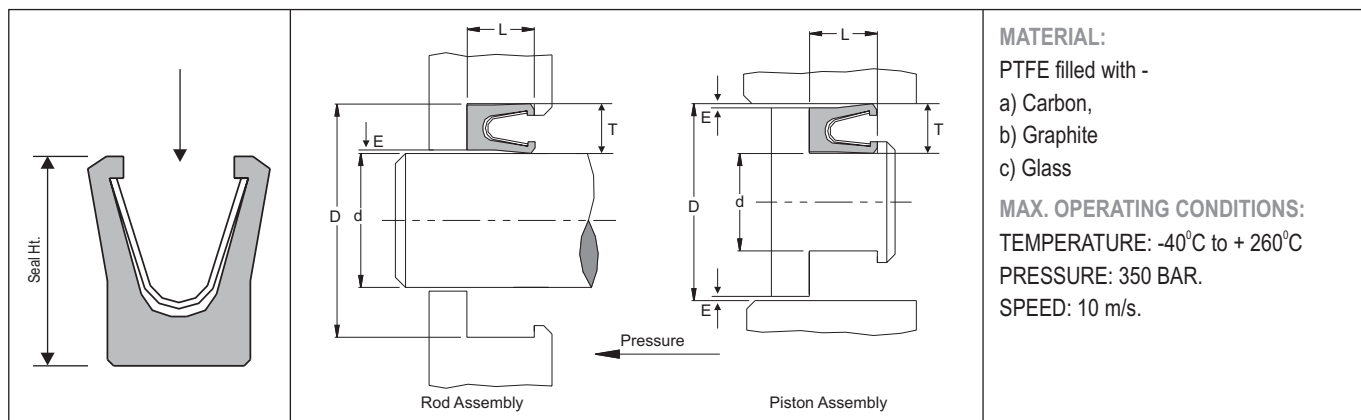
Style SFC Metric Ordering Information (Dimensions in mm)

Internal Part No.	d1 (f8)	D1 (H9)	L (+0.2)	Internal Part No.	d1 (f8)	D1 (H9)	L (+0.2)	Internal Part No.	d1 (f8)	D1 (H9)	L (+0.2)
SRV-614	5.00	12.00	6.00	SRV-633	45.00	55.00	7.50	SRV-621	85.00	110.00	11.50
SRV-176	6.35	12.74	4.76	SRV-468	45.00	53.00	8.00	SRV-629	90.00	105.00	11.30
SRV-182	10.00	17.00	6.00	SRV-540	45.00	55.00	10.00	SRV-153	90.00	102.00	8.00
SRV-466	10.00	18.00	6.00	SRV-569	50.00	60.00	11.50	SRV-424	100.00	115.00	11.30
SRV-766	10.00	17.00	7.00	SRV-535	50.00	66.00	12.00	SRV-772	105.00	125.00	12.00
SRV-498	12.00	20.00	7.00	SRV-481	50.00	60.00	10.00	SRV-714	108.00	130.00	14.00
SRV-380	14.00	22.00	6.00	SRV-412	50.00	62.00	10.00	SRV-636	110.00	130.00	15.00
SRV-462	15.00	23.00	6.00	SRV-446	50.00	62.00	9.00	SRV-762	110.00	133.00	16.00
SRV-697	16.00	24.00	6.40	SRV-645	50.00	63.00	10.00	SRV-190	110.00	125.00	11.30
SRV-519	18.00	26.00	6.00	SRV-733	50.00	60.00	7.50	SRV-534	110.00	130.00	10.00
SRV-580	20.00	30.00	8.00	SRV-758	50.00	70.00	16.00	SRV-503	110.00	130.00	11.00
SRV-397	20.00	28.00	7.00	SRV-174	50.80	60.73	5.56	SRV-532	112.00	132.00	13.00
SRV-637	22.00	30.00	6.00	SRV-161	52.00	62.00	5.50	SRV-763	112.00	132.00	16.00
SRV-760	25.00	40.00	12.00	SRV-537	55.00	67.00	10.00	SRV-616	115.00	130.00	11.50
SRV-162	25.00	33.00	5.50	SRV-581	56.00	68.00	10.00	SRV-148	115.00	125.00	7.00
SRV-612	25.00	33.00	7.00	SRV-650	56.00	66.00	7.50	SRV-635	125.00	145.00	15.00
SRV-398	28.00	36.00	6.00	SRV-658	60.00	70.00	7.50	SRV-691	125.00	140.00	11.30
SRV-405	30.00	38.00	6.00	SRV-705	60.00	72.00	10.00	SRV-491	127.00	142.00	11.30
SRV-512	30.00	38.00	7.50	SRV-702	60.00	75.00	12.00	SRV-529	127.70	154.00	21.00
SRV-700	30.00	40.00	9.00	SRV-159	60.00	70.00	5.50	SRV-530	130.00	160.00	24.00
SRV-567	32.00	44.00	10.00	SRV-259	60.00	70.00	10.00	SRV-516	132.00	152.00	14.00
SRV-385	32.00	40.00	7.00	SRV-447	63.00	75.00	12.00	SRV-639	140.00	160.00	15.00
SRV-388	35.00	43.40	6.00	SRV-254	63.00	75.00	9.00	SRV-242	160.00	180.00	15.00
SRV-406	35.00	43.00	8.00	SRV-630	65.00	77.00	9.00	SRV-486	160.00	168.00	12.00
SRV-626	35.00	43.00	7.00	SRV-631	65.00	75.00	7.50	SRV-688	170.00	182.00	9.00
SRV-518	36.00	44.00	8.00	SRV-770	65.00	80.00	9.50	SRV-695	177.00	185.00	6.00
SRV-747	36.00	48.00	9.00	SRV-716	68.00	80.00	10.00	SRV-515	180.00	200.00	11.00
SRV-638	36.00	44.00	6.00	SRV-154	70.00	82.00	7.50	SRV-573	190.00	210.00	15.00
SRV-563	38.10	47.62	11.11	SRV-155	70.00	90.00	11.00	SRV-487	190.00	198.00	12.00
SRV-640	40.00	60.00	12.00	SRV-617	70.00	82.00	9.00	SRV-490	195.00	220.00	20.00
SRV-706	40.00	50.00	7.50	SRV-517	75.00	88.00	10.00	SRV-244	200.00	220.00	15.00
SRV-729	40.00	48.00	7.00	SRV-116	80.00	92.00	10.00	SRV-749	200.00	220.00	16.00
SRV-704	40.00	55.00	10.00	SRV-488	80.00	88.00	10.00	SRV-679	200.00	220.00	16.50
SRV-768	40.00	50.00	9.00	SRV-692	80.00	92.00	9.60	SRV-696	225.00	240.00	15.00
SRV-590	40.00	50.00	10.00	SRV-649	80.00	92.00	9.00	SRV-489	250.00	280.00	16.00
SRV-611	40.00	48.00	8.00	SRV-641	82.55	101.60	15.87	SRV-400	290.00	320.00	18.00
SRV-409	40.00	48.00	6.00	SRV-632	85.00	100.00	11.30	SRV-520	300.00	330.00	22.50
SRV-169	40.00	56.00	9.00	SRV-771	85.00	100.00	13.00	SRV-613	321.00	335.00	15.00
SRV-712	42.00	50.00	7.00	SRV-619	85.00	97.00	9.00	SRV-680	321.00	335.00	16.00

SECTION: SYMETRICAL SEAL

STYLE: STB

TYPE: Single Acting



Style STB Metric Ordering Information (Dimensions in mm)

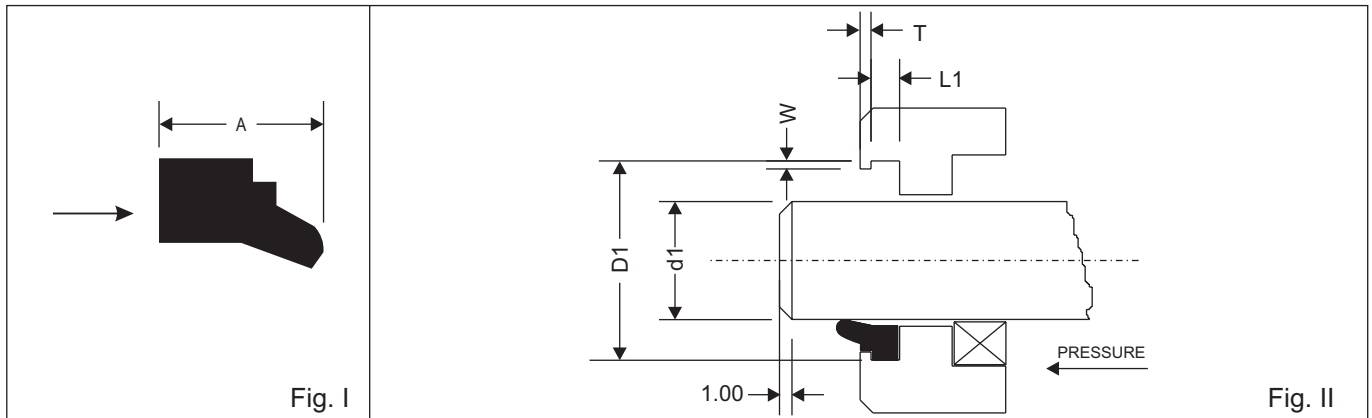
Series	Nominal C/S T	Groove Width L	Seal Ht.	Maximum Extrusion Gap 'E' at Pressure			
				300 psi	1500 psi	3000 psi	5000 psi
100	2.26	3.58	3.35	0.25	0.15	0.10	0.07
200	3.10	4.78	4.29	0.35	0.20	0.15	0.08
300	4.70	7.14	6.50	0.50	0.25	0.20	0.10
400	6.07	9.53	8.89	0.60	0.30	0.25	0.12
500	9.50	15.00	13.51	0.75	0.37	0.30	0.15

Contact Spareage for your require size as per ϕ d & ϕ D.

SECTION: WIPER SEAL

STYLE: WRB

TYPE: Medium Duty



MATERIAL:

NT6/a is an Acrylonitrile Butadiene Rubber (NBR) Compound of Hardness Shore 'A' 88° approx.

PUX - is a polyurethane compound of 92° shore 'A' hardness.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 2 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty. For heavy duty application, select polyurethane as the material.

Hydraulic and Pneumatic cylinders.

DETAILS:

The Spareage type WRB wiper has a lip designed to remove dirt, mud, dust, moisture, etc. accumulating on the rod.

The wiper is manufactured from a high hardness NBR compound suitable for installing in a grooved housing.

To prevent dirt passing the outside of wiper and to reduce the pumping action, the outside diameter has an interference fit with the housing. Due to excellent wear resistance of polyurethane the life expected is 3 times that of NBR.

Spareage Type WRB wiper is also available in FKM (viton).

FEATURES:

General purpose seal.

Precision trimmed sealing lip.

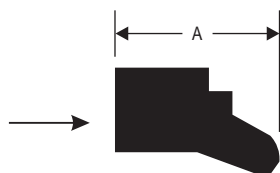
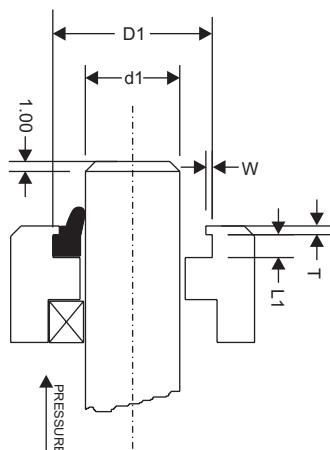
Wide size ranges.

SECTION: WIPER SEAL

STYLE: WRB

TYPE: Medium Duty

Style WRB Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2
T	W	
±0.1	±0.10	

Part No. Nitrile	Part No. Polyurethane	d1	D1	A	L1	T	W
WRB 0041101	WRB 0045901	4.0	12.0	7.0	4.0	1.0	1.0
WRB 0051101	WRB 0055901	5.0	8.0	4.0	2.2	1.0	0.5
WRB 0061101	WRB 0065901	6.0	10.0	4.0	2.2	1.0	0.5
WRB 0081101	WRB 0085901	8.0	14.0	5.0	2.6	1.0	1.0
WRB 0081102	WRB 0085902	8.0	16.0	7.0	4.0	1.0	1.0
WRB 0101101	WRB 0105901	10.0	16.0	5.0	2.6	1.0	1.0
WRB 0101102	WRB 0105902	10.0	18.0	7.0	4.0	1.0	1.0
WRB 0121101	WRB 0125901	12.0	18.0	5.0	2.6	1.0	1.0
WRB 0121102	WRB 0125902	12.0	20.0	7.0	4.0	1.0	1.0
WRB 0141101	WRB 0145901	14.0	20.0	5.0	3.1	1.0	1.0
WRB 0141102	WRB 0145902	14.0	22.0	7.0	4.0	1.0	1.0
WRB 0151101	WRB 0155901	15.0	23.0	7.0	4.0	1.0	1.0
WRB 0161101 (Stock Size)	WRB 0165901	16.0	24.0	7.0	4.0	1.0	1.0
WRB 0171101	WRB 0175901	17.0	25.0	7.0	4.0	1.0	1.0
WRB 0181101	WRB 0185901	18.0	24.0	5.0	3.1	1.0	1.0
WRB 0181102 (Stock Size)	WRB 0185902	18.0	26.0	7.0	4.0	1.0	1.0
WRB 0201101 (Stock Size)	WRB 0205901	20.0	28.0	7.0	4.0	1.0	1.0
WRB 0221101 (Stock Size)	WRB 0225901	22.0	30.0	7.0	4.0	1.0	1.0
WRB 0231101	WRB 0235901	23.0	31.0	7.0	4.0	1.0	1.0
WRB 0241101	WRB 0245901	24.0	32.0	7.0	4.0	1.0	1.0
WRB 0251101 (Stock Size)	WRB 0255901	25.0	33.0	7.0	4.0	1.0	1.0
WRB 0261101	WRB 0265901	26.0	34.0	7.0	4.0	1.0	1.0
WRB 0281101 (Stock Size)	WRB 0285901	28.0	36.0	7.0	4.0	1.0	1.0
WRB 0301101 (Stock Size)	WRB 0305901	30.0	38.0	7.0	4.0	1.0	1.0
WRB 0321101 (Stock Size)	WRB 0325901	32.0	40.0	7.0	4.0	1.0	1.0
WRB 0331101	WRB 0335901	33.0	41.0	7.0	4.0	1.0	1.0
WRB 0341101	WRB 0345901	34.0	42.0	7.0	4.0	1.0	1.0
WRB 0351101 (Stock Size)	WRB 0355901	35.0	43.0	7.0	4.0	1.0	1.0
WRB 0361101 (Stock Size)	WRB 0365901	36.0	44.0	7.0	4.0	1.0	1.0
WRB 0381101 (Stock Size)	WRB 0385901	38.0	46.0	7.0	4.0	1.0	1.0
WRB 0401101 (Stock Size)	WRB 0405901	40.0	48.0	7.0	4.0	1.0	1.0
WRB 0411101	WRB 0415901	41.0	49.0	7.0	4.0	1.0	1.0
WRB 0421101 (Stock Size)	WRB 0425901	42.0	50.0	7.0	4.0	1.0	1.0
WRB 0441101	WRB 0445901	44.0	52.0	7.0	4.0	1.0	1.0
WRB 0451102 (Stock Size)	WRB 0455902	45.0	53.0	7.0	4.0	1.0	1.0
WRB 0451101 (Stock Size)	WRB 0455901	45.0	57.0	10.0	5.5	1.5	1.5
WRB 0461101	WRB 0465901	46.0	54.0	7.0	4.0	1.0	1.0
WRB 0471101	WRB 0475901	47.0	55.0	7.0	4.0	1.0	1.0
WRB 0481101	WRB 0485901	48.0	56.0	7.0	4.0	1.0	1.0

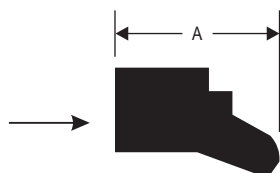
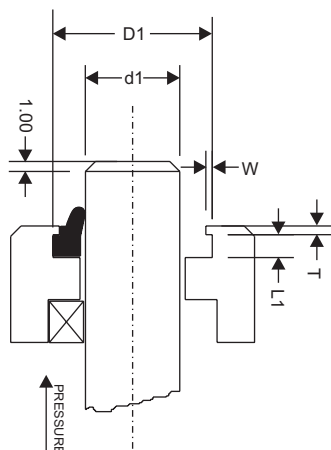
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRB

TYPE: Medium Duty

Style WRB Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2
T	W	
±0.1	±0.10	

Part No. Nitrile	Part No. Polyurethane	d1	D1	A	L1	T	W
WRB 0501101 (Stock Size)	WRB 0505901	50.0	58.0	7.0	4.0	1.0	1.0
WRB 0501102	WRB 0505902	50.0	62.0	10.0	5.5	1.5	1.5
WRB 0511101	WRB 0515901	51.0	59.0	7.0	4.0	1.0	1.0
WRB 0521101	WRB 0525901	52.0	60.0	7.0	4.0	1.0	1.0
WRB 0541101	WRB 0545901	54.0	62.0	7.0	4.0	1.0	1.0
WRB 0551101 (Stock Size)	WRB 0555901	55.0	63.0	7.0	4.0	1.0	1.0
WRB 0561101 (Stock Size)	WRB 0565901	56.0	64.0	7.0	4.0	1.0	1.0
WRB 0571101	WRB 0575901	57.0	65.0	7.0	4.0	1.0	1.0
WRB 0581101	WRB 0585901	58.0	66.0	7.0	4.0	1.0	1.0
WRB 0601101 (Stock Size)	WRB 0605901	60.0	68.0	7.0	4.0	1.0	1.0
WRB 0601102	WRB 0605902	60.0	72.0	10.0	5.5	1.5	1.5
WRB 0621101	WRB 0625901	62.0	70.0	7.0	4.0	1.0	1.0
WRB 0631101 (Stock Size)	WRB 0635901	63.0	71.0	7.0	4.0	1.0	1.0
WRB 0641101	WRB 0645901	64.0	72.0	7.0	4.0	1.0	1.0
WRB 0651101 (Stock Size)	WRB 0655901	65.0	73.0	7.0	4.0	1.0	1.0
WRB 0661101	WRB 0665901	66.0	74.0	7.0	4.0	1.0	1.0
WRB 0671101	WRB 0675901	67.0	75.0	7.0	4.0	1.0	1.0
WRB 0681101	WRB 0685901	68.0	76.0	7.0	4.0	1.0	1.0
WRB 0701101	WRB 0705901	70.0	82.0	10.0	5.5	1.5	1.5
WRB 0701102 (Stock Size)	WRB 0705902	70.0	78.0	7.0	4.0	1.0	1.0
WRB 0721101	WRB 0725901	72.0	80.0	7.0	4.0	1.0	1.0
WRB 0731101	WRB 0735901	73.0	81.0	7.0	4.0	1.0	1.0
WRB 0751101 (Stock Size)	WRB 0755901	75.0	83.0	7.0	4.0	1.0	1.0
WRB 0781101	WRB 0785901	78.0	86.0	7.0	4.0	1.0	1.0
WRB 0801101 (Stock Size)	WRB 0805901	80.0	92.0	10.0	5.5	1.5	1.5
WRB 0801102	WRB 0805902	80.0	88.0	7.0	4.0	1.0	1.0
WRB 0821101	WRB 0825901	82.0	90.0	7.0	4.0	1.0	1.0
WRB 0831101	WRB 0835901	83.0	91.0	7.0	4.0	1.0	1.0
WRB 0851101 (Stock Size)	WRB 0855901	85.0	93.0	7.0	4.0	1.0	1.0
WRB 0861101	WRB 0865901	86.0	94.0	7.0	4.0	1.0	1.0
WRB 0881101	WRB 0885901	88.0	96.0	7.0	4.0	1.0	1.0
WRB 0901101 (Stock Size)	WRB 0905901	90.0	98.0	7.0	4.0	1.0	1.0
WRB 0901102	WRB 0905902	90.0	102.0	10.0	5.5	1.5	1.5
WRB 0921101	WRB 0925901	92.0	100.0	7.0	4.0	1.0	1.0
WRB 0931101	WRB 0935901	93.0	101.0	7.0	4.0	1.0	1.0
WRB 0951101 (Stock Size)	WRB 0955901	95.0	103.0	7.0	4.0	1.0	1.0
WRB 0971101	WRB 0975901	97.0	105.0	7.0	4.0	1.0	1.0
WRB 1001101 (Stock Size)	WRB 1005901	100.0	108.0	7.0	4.0	1.0	1.0
WRB 1021101	WRB 1025901	102.0	114.0	10.0	5.5	1.5	1.5

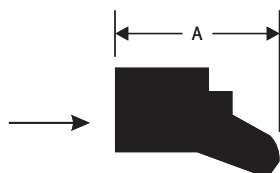
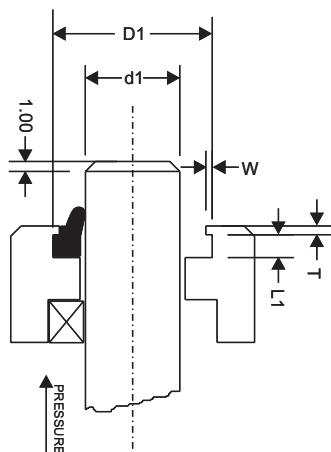
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRB

TYPE: Medium Duty

Style WRB Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H9	+0.2
T	W	
±0.1	±0.10	

Part No. Nitrile	Part No. Polyurethane	d1	D1	A	L1	T	W
WRB 1051101 (Stock Size)	WRB 1055901	105.0	117.0	10.0	5.5	1.5	1.5
WRB 1061101	WRB 1065901	106.0	118.0	10.0	5.5	1.5	1.5
WRB 1101103 (Stock Size)	WRB 1105901	110.00	117.00	11.0	8.2	1.5	1.5
WRB 1101101 (Stock Size)	WRB 1105901	110.0	118.0	7.0	4.0	1.0	1.0
WRB 1101102 (Stock Size)	WRB 1105902	110.0	122.0	10.0	5.5	1.5	1.5
WRB 1121101	WRB 1125901	112.0	124.0	10.0	5.5	1.5	1.5
WRB 1131101	WRB 1135901	113.0	121.0	7.0	4.0	1.0	1.0
WRB 1141101	WRB 1145901	114.0	122.0	7.0	4.0	1.0	1.0
WRB 1151101 (Stock Size)	WRB 1155901	115.0	127.0	10.0	5.5	1.5	1.5
WRB 1181101	WRB 1185901	118.0	130.0	10.0	5.5	1.5	1.5
WRB 1201101 (Stock Size)	WRB 1205901	120.0	132.0	10.0	5.5	1.5	1.5
WRB 1251101 (Stock Size)	WRB 1255901	125.0	137.0	10.0	5.5	1.5	1.5
WRB 1281101	WRB 1285901	128.0	140.0	10.0	5.5	1.5	1.5
WRB 1301101 (Stock Size)	WRB 1305901	130.0	142.0	10.0	5.5	1.5	1.5
WRB 1311101	WRB 1315901	131.0	139.0	7.0	4.0	1.0	1.0
WRB 1351101 (Stock Size)	WRB 1355901	135.0	147.0	10.0	5.5	1.5	1.5
WRB 1401101 (Stock Size)	WRB 1405901	140.0	152.0	10.0	5.5	1.5	1.5
WRB 1421101	WRB 1425901	142.0	154.0	10.0	5.5	1.5	1.5
WRB 1451101	WRB 1455901	145.0	157.0	10.0	5.5	1.5	1.5
WRB 1491101	WRB 1495901	149.0	157.0	7.0	4.0	1.0	1.0
WRB 1501101 (Stock Size)	WRB 1505901	150.0	162.0	10.0	5.5	1.5	1.5
WRB 1521101	WRB 1525901	152.0	164.0	10.0	5.5	1.5	1.5
WRB 1541101	WRB 1545901	154.0	166.0	10.0	5.5	1.5	1.5
WRB 1551101	WRB 1555901	155.0	167.0	10.0	5.5	1.5	1.5
WRB 1601101 (Stock Size)	WRB 1605901	160.0	172.0	10.0	5.5	1.5	1.5
WRB 1651101	WRB 1655901	165.0	177.0	10.0	5.5	1.5	1.5
WRB 1661101	WRB 1665901	166.0	178.0	10.0	5.5	1.5	1.5
WRB 1681101	WRB 1685901	168.0	176.0	7.0	4.0	1.0	1.0
WRB 1701101 (Stock Size)	WRB 1705901	170.0	182.0	10.0	5.5	1.5	1.5
WRB 1751101	WRB 1755901	175.0	187.0	10.0	5.5	1.5	1.5
WRB 1801101 (Stock Size)	WRB 1805901	180.0	192.0	10.0	5.5	1.5	1.5
WRB 1851101	WRB 1855901	185.0	197.0	10.0	5.5	1.5	1.5
WRB 1881101	WRB 1885901	188.0	196.0	7.0	4.0	1.0	1.0
WRB 1901101 (Stock Size)	WRB 1905901	190.0	202.0	10.0	5.5	1.5	1.5
WRB 1951101	WRB 1955901	195.0	207.0	10.0	5.5	1.5	1.5
WRB 2001101 (Stock Size)	WRB 2005901	200.0	212.0	10.0	5.5	1.5	1.5
WRB 2101101	WRB 2105901	210.0	218.0	7.0	4.0	1.0	1.0
WRB 2101102 (Stock Size)	WRB 2105902	210.0	225.0	13.0	6.5	2.0	2.0
WRB 2201101	WRB 2205901	220.0	235.0	13.0	6.5	2.0	2.0

Other sizes available on request.

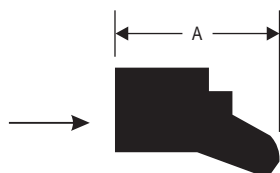
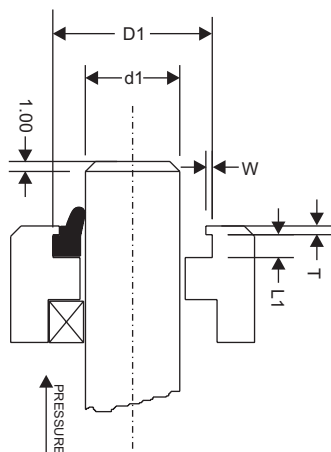
SECTION: WIPER SEAL

STYLE: WRB

TYPE: Medium Duty

Style WRB Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	A	L1	T	W
WRB 2301101 (Stock Size)	WRB 2305901	230.0	245.0	13.0	6.5	2.0	2.0
WRB 2351101	WRB 2355901	235.0	250.0	13.0	6.5	2.0	2.0
WRB 2401101 (Stock Size)	WRB 2405901	240.0	255.0	13.0	6.5	2.0	2.0
WRB 2501101 (Stock Size)	WRB 2505901	250.0	265.0	13.0	6.5	2.0	2.0
WRB 2601101 (Stock Size)	WRB 2605901	260.0	275.0	13.0	6.5	2.0	2.0
WRB 2651101	WRB 2655901	265.0	280.0	13.0	6.5	2.0	2.0
WRB 2751101	WRB 2755901	275.0	290.0	13.0	6.5	2.0	2.0
WRB 3001101 (Stock Size)	WRB 3005901	300.0	315.0	13.0	6.5	2.0	2.0
WRB 3051101	WRB 3055901	305.0	320.0	13.0	6.5	2.0	2.0
WRB 3101101	WRB 3105901	310.0	325.0	13.0	6.5	2.0	2.0
WRB 3151101	WRB 3155901	315.0	330.0	13.0	6.5	2.0	2.0
WRB 3201101	WRB 3205901	320.0	335.0	13.0	6.5	2.0	2.0
WRB 3401101	WRB 3405901	340.0	355.0	13.0	6.5	2.0	2.0
WRB 3651101	WRB 3655901	365.0	380.0	13.0	6.5	2.0	2.0
WRB 4001101 (Stock Size)	WRB 4005901	400.0	415.0	13.0	6.5	2.0	2.0
WRB 4201101	WRB 4205901	420.0	435.0	13.0	6.5	2.0	2.0
WRB 4501101	WRB 4505901	450.0	465.0	13.0	6.5	2.0	2.0
WRB 5001101	WRB 5005901	500.0	515.0	13.0	6.5	2.0	2.0



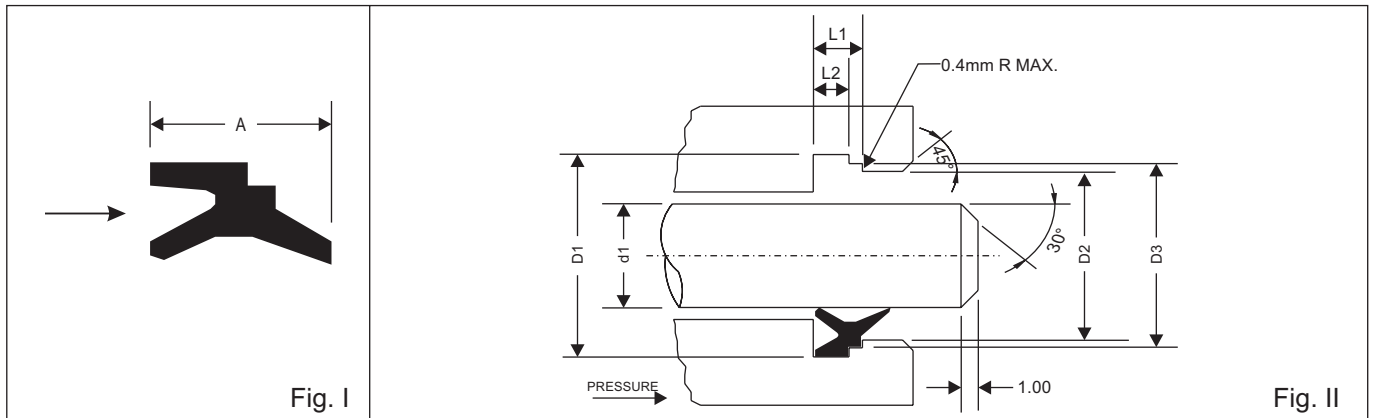
Tolerance Table		
d1	D1	L1
f8	H9	+0.2
T	W	
±0.1	±0.10	

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WDD

TYPE: Medium Duty



MATERIAL:

NT6/a is an Acrylonitrile Butadiene Rubber (NBR) compound of Hardness Shore 'A' 88° approx.

PUX - is a polyurethane compound of 92° shore 'A' hardness.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 2 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty. For heavy duty application, elect polyurethane as the material.

DETAILS:

The Spareage type WDD wiper is a double function seal.

This wiper is designed to exclude dirt and moisture from entering the cylinder and to collect traces of fluid passing the rod seal. Opposite the wiper lip are two sealing lips to collect fluid passing the rod seal.

Providing a simple groove design and dual function, the type WDD wiper offers excellent scraping action, even with high accumulating dirt, dust and moisture conditions.

Though the standard material is NBR type WDD wiper is also available in polyurethane. Due to excellent wear resistance properties of polyurethane, the life expected is three times that of NBR.

FEATURES:

Twins lip ensures drier sealing system.

Good stability.

NOTE:

Step shown in Fig. II to retain wiper may or may not be required. In case step is not designed, then groove width shall be 'L2' as shown in the tables.

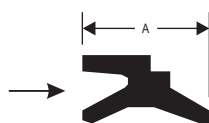
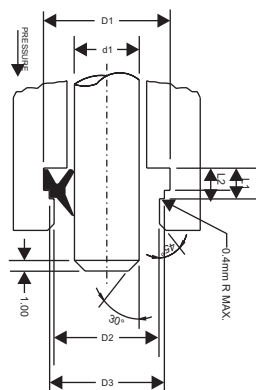
SECTION: WIPER SEAL

STYLE: WDD

TYPE: Medium Duty

Style WDD Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	L2	D2	D3	A
WDD 0101101 (Stock Size)	WDD 0105901	10.0	18.0	6.0	4.0	13.5	16.0	8.0
WDD 0121101 (Stock Size)	WDD 0125901	12.0	20.0	6.0	4.0	15.5	18.0	8.0
WDD 0141101 (Stock Size)	WDD 0145901	14.0	22.0	6.0	4.0	17.5	20.0	8.0
WDD 0151101 (Stock Size)	WDD 0155901	15.0	23.0	6.0	4.0	18.5	21.0	8.0
WDD 0161101 (Stock Size)	WDD 0165901	16.0	24.0	6.0	4.0	19.5	22.0	8.0
WDD 0181101 (Stock Size)	WDD 0185901	18.0	26.0	6.0	4.0	21.5	24.0	8.0
WDD 0201101 (Stock Size)	WDD 0205901	20.0	28.0	6.0	4.0	23.5	26.0	8.0
WDD 0221101 (Stock Size)	WDD 0225901	22.0	30.0	6.0	4.0	25.5	28.0	8.0
WDD 0251101 (Stock Size)	WDD 0255901	25.0	33.0	6.0	4.0	28.5	31.0	8.0
WDD 0281101 (Stock Size)	WDD 0285901	28.0	36.0	6.0	4.0	31.5	34.0	8.0
WDD 0301101 (Stock Size)	WDD 0305901	30.0	38.0	6.0	4.0	33.5	36.0	8.0
WDD 0321101 (Stock Size)	WDD 0325901	32.0	40.0	6.0	4.0	35.5	38.0	8.0
WDD 0351101 (Stock Size)	WDD 0355901	35.0	43.0	6.0	4.0	38.5	41.0	8.0
WDD 0361101 (Stock Size)	WDD 0365901	36.0	44.0	6.0	4.0	39.5	42.0	8.0
WDD 0381101 (Stock Size)	WDD 0385901	38.0	46.0	6.0	4.0	41.5	44.0	8.0
WDD 0401101 (Stock Size)	WDD 0405901	40.0	48.0	6.0	4.0	43.5	46.0	8.0
WDD 0421101 (Stock Size)	WDD 0425901	42.0	50.0	6.0	4.0	45.5	48.0	8.0
WDD 0451101 (Stock Size)	WDD 0455901	45.0	53.0	6.0	4.0	48.5	51.0	8.0
WDD 0501101 (Stock Size)	WDD 0505901	50.0	58.0	6.0	4.0	53.5	56.0	8.0
WDD 0551101 (Stock Size)	WDD 0555901	55.0	63.0	6.0	4.0	58.5	61.0	8.0
WDD 0561101 (Stock Size)	WDD 0565901	56.0	64.0	6.0	4.0	59.5	62.0	8.0
WDD 0601101 (Stock Size)	WDD 0605901	60.0	68.0	6.0	4.0	63.5	66.0	8.0
WDD 0631101 (Stock Size)	WDD 0635901	63.0	71.0	6.0	4.0	66.5	69.0	8.0
WDD 0651101 (Stock Size)	WDD 0655901	65.0	73.0	6.0	4.0	68.5	71.0	8.0
WDD 0701101 (Stock Size)	WDD 0705901	70.0	78.0	6.0	4.0	73.5	76.0	8.0
WDD 0751101 (Stock Size)	WDD 0755901	75.0	83.0	6.0	4.0	78.5	81.0	8.0
WDD 0801101 (Stock Size)	WDD 0805901	80.0	88.0	6.0	4.0	83.5	86.0	8.0
WDD 0851101 (Stock Size)	WDD 0855901	85.0	93.0	6.0	4.0	88.5	91.0	8.0
WDD 0901101 (Stock Size)	WDD 0905901	90.0	98.0	6.0	4.0	93.5	96.0	8.0
WDD 0951101 (Stock Size)	WDD 0955901	95.0	103.0	6.0	4.0	98.5	101.0	8.0
WDD 1001101 (Stock Size)	WDD 1005901	100.0	108.0	6.0	4.0	103.5	106.0	8.0
WDD 1051101 (Stock Size)	WDD 1055901	105.0	117.0	8.2	5.5	110.0	114.0	11.0
WDD 1101101 (Stock Size)	WDD 1105901	110.0	122.0	8.2	5.5	115.0	119.0	11.0
WDD 1151101 (Stock Size)	WDD 1155901	115.0	127.0	8.2	5.5	120.0	124.0	11.0
WDD 1201101 (Stock Size)	WDD 1205901	120.0	132.0	8.2	5.5	125.0	129.0	11.0
WDD 1251101 (Stock Size)	WDD 1255901	125.0	137.0	8.2	5.5	130.0	134.0	11.0
WDD 1301101 (Stock Size)	WDD 1305901	130.0	142.0	8.2	5.5	135.0	139.0	11.0
WDD 1351101 (Stock Size)	WDD 1355901	135.0	147.0	8.2	5.5	140.0	144.0	11.0
WDD 1401101 (Stock Size)	WDD 1405901	140.0	152.0	8.2	5.5	145.0	149.0	11.0



Tolerance Table

d1	D1	L1
f8	H9	+0.2
L2	D2	D3
+0.2	H11	H11

Other sizes available on request.

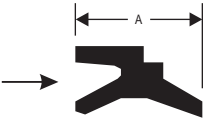
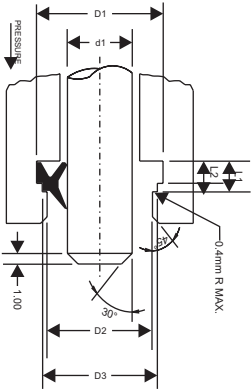
SECTION: WIPER SEALS

STYLE: WDD

TYPE: Medium Duty

Style WDD Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	L2	D2	D3	A
WDD 1501101 (Stock Size)	WDD 1505901	150.0	162.0	8.2	5.5	155.0	159.0	11.0
WDD 1601101 (Stock Size)	WDD 1605901	160.0	172.0	8.2	5.5	165.0	169.0	11.0
WDD 1701101 (Stock Size)	WDD 1705901	170.0	182.0	8.2	5.5	175.0	179.0	11.0
WDD 1801101 (Stock Size)	WDD 1805901	180.0	192.0	8.2	5.5	185.0	189.0	11.0
WDD 2001101 (Stock Size)	WDD 2005901	200.0	212.0	8.2	5.5	205.0	209.0	11.0
WDD 2201101 (Stock Size)	WDD 2205901	220.0	235.0	9.5	6.7	227.0	232.6	13.0



Tolerance Table

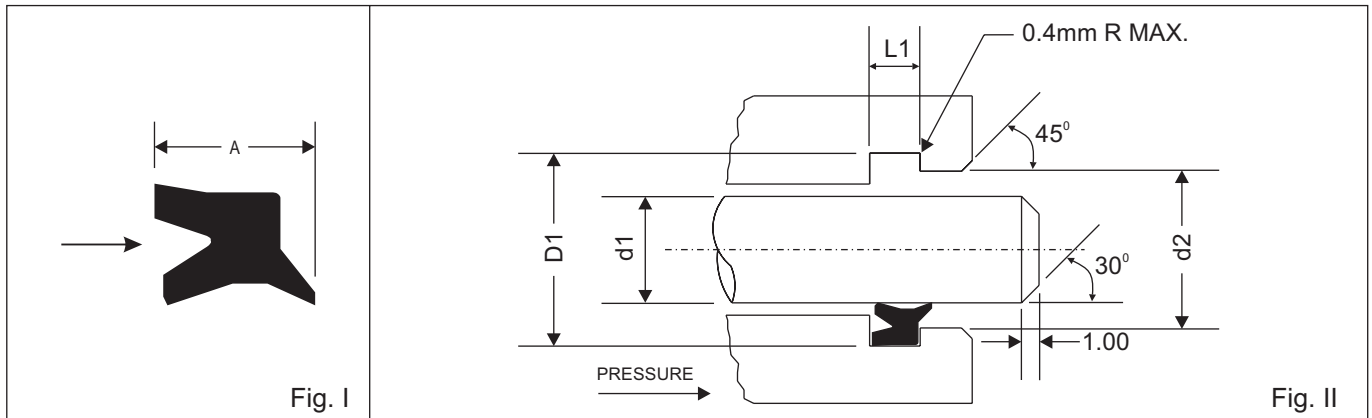
d1	D1	L1
f8	H9	+0.2
L2	D2	D3
+0.2	H11	H11

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WDA

TYPE: Heavy Duty



MATERIAL:

NT6/a is an Acrylonitrile Butadiene Rubber (NBR) compound of Hardness Shore 'A' 88° approx.

PUX - is a polyurethane compound of 92° shore 'A' hardness.

MAX. OPERATING CONDITIONS:

Temp. range: -40°C to +100°C (upto +200°C on request).

Speed: 2 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty. For heavy duty application, select polyurethane material.

DETAILS:

The Spareage type WDA wiper is a double function seal.

The function of the double lip wiper WDA is to prevent dust, dirt and moisture from entering in cylinder. This is achieved by a special design which largely prevents scoring, protects the guiding parts and extends the service life of the seal. In addition, the sealing lip facing the media reduces the residual oil film. Providing a simple groove design this wiper is supplied as a continuous ring for easy installation into the groove. Spareage type WDA wiper is also available in polyurethane. Due to excellent wear resistance properties of polyurethane, the life expected is three times that of NBR.

FEATURES:

Twins lip ensures drier sealing.

Easy installation.

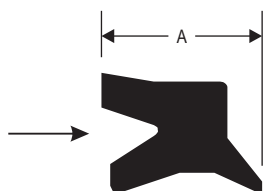
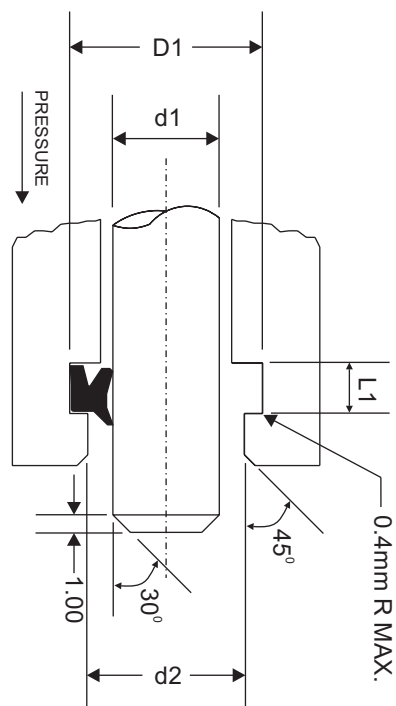
Good stability.

SECTION: WIPER SEAL

STYLE: WDA

TYPE: Heavy Duty

Style WDA Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1
f8	H11
L1	d2
+0.2	H11

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	d2	A
WDA 0051101	WDA 0055901	5.0	10.0	3.5	7.5	4.1
WDA 0081101	WDA 0085901	8.0	13.0	3.5	10.5	4.1
WDA 0101101	WDA 0105901	10.0	16.0	4.0	12.5	4.8
WDA 0111101	WDA 0115901	11.2	19.2	5.0	15.5	6.0
WDA 0121101	WDA 0125901	12.0	18.0	4.0	14.5	4.8
WDA 0141101	WDA 0145901	14.0	20.0	4.0	16.5	4.8
WDA 0141102	WDA 0145902	14.0	22.0	5.0	18.3	6.0
WDA 0161101	WDA 0165901	16.0	22.0	4.0	18.5	4.8
WDA 0181101	WDA 0185901	18.0	24.0	4.0	20.5	4.8
WDA 0181102	WDA 0185902	18.0	26.0	5.0	22.3	6.0
WDA 0201101	WDA 0205901	20.0	26.0	4.0	22.5	4.8
WDA 0201102	WDA 0205902	20.0	28.0	5.0	24.3	6.0
WDA 0221101	WDA 0225901	22.0	28.0	4.0	24.5	4.8
WDA 0221102	WDA 0225902	22.4	30.4	5.0	26.7	6.0
WDA 0231101	WDA 0235901	23.5	31.5	5.0	27.8	6.0
WDA 0251101	WDA 0255901	25.0	31.0	4.0	27.5	4.8
WDA 0251102	WDA 0255902	25.0	33.0	5.0	29.3	6.0
WDA 0281101	WDA 0285901	28.0	36.0	5.0	31.0	5.8
WDA 0281102	WDA 0285902	28.0	36.0	5.0	32.3	6.0
WDA 0301101	WDA 0305901	30.0	38.0	5.0	33.0	5.8
WDA 0301102	WDA 0305902	30.0	38.0	6.0	34.0	6.5
WDA 0311101	WDA 0315901	31.5	39.5	6.0	35.5	6.5
WDA 0321101	WDA 0325901	32.0	40.0	5.0	35.0	5.8
WDA 0351101	WDA 0355901	35.0	43.0	6.0	39.0	6.5
WDA 0351102	WDA 0355902	35.5	43.5	6.0	39.5	6.5
WDA 0361101	WDA 0365901	36.0	44.0	5.0	39.0	5.8
WDA 0371101	WDA 0375901	37.0	45.0	5.0	40.0	5.8
WDA 0401101	WDA 0405901	40.0	48.0	5.0	43.0	5.8
WDA 0401102	WDA 0405902	40.0	48.0	6.0	44.0	6.5
WDA 0451101	WDA 0455901	45.0	53.0	5.0	48.0	5.8
WDA 0451102	WDA 0455902	45.0	53.0	6.0	49.0	6.5
WDA 0461101	WDA 0465901	46.0	54.0	5.0	49.0	5.8
WDA 0501101	WDA 0505901	50.0	58.0	5.0	53.0	5.8
WDA 0501102	WDA 0505902	50.0	58.0	6.0	54.0	6.5
WDA 0531101	WDA 0535901	53.0	61.0	6.0	57.0	6.5
WDA 0551101	WDA 0555901	55.0	65.0	6.0	58.0	6.8
WDA 0551102	WDA 0555902	55.0	63.0	6.0	59.0	6.5
WDA 0561101	WDA 0565901	56.0	66.0	6.0	59.0	6.8
WDA 0561102	WDA 0565902	56.0	64.0	6.0	60.0	6.5

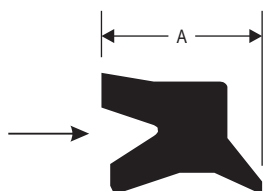
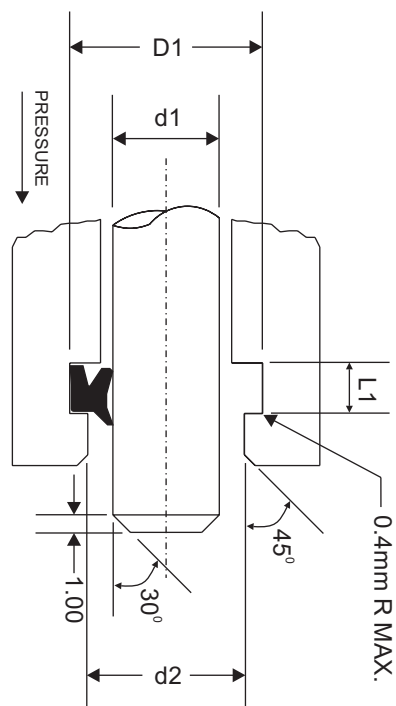
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WDA

TYPE: Heavy Duty

Style WDA Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1
f8	H11
L1	d2
+0.2	H11

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	d2	A
WDA 0601101	WDA 0605901	60.0	70.0	6.0	63.0	6.8
WDA 0601102	WDA 0605902	60.0	68.0	6.0	64.0	6.5
WDA 0631101	WDA 0635901	63.0	73.0	6.0	66.0	6.8
WDA 0631102	WDA 0635902	63.0	71.0	6.0	67.0	6.5
WDA 0651101	WDA 0655901	65.0	75.0	6.0	68.0	6.8
WDA 0651102	WDA 0655902	65.0	73.0	6.0	69.0	6.5
WDA 0671101	WDA 0675901	67.0	75.0	6.0	71.0	6.5
WDA 0701101	WDA 0705901	70.0	80.0	6.0	73.0	6.8
WDA 0701102	WDA 0705902	70.0	80.0	7.0	75.0	8.0
WDA 0711101	WDA 0715901	71.0	81.0	7.0	76.0	8.0
WDA 0751101	WDA 0755901	75.0	85.0	6.0	78.0	6.8
WDA 0751102	WDA 0755902	75.0	85.0	7.0	80.0	8.0
WDA 0801101	WDA 0805901	80.0	90.0	6.0	83.0	6.8
WDA 0801102	WDA 0805902	80.0	90.0	7.0	85.0	8.0
WDA 0851101	WDA 0855901	85.0	95.0	6.0	88.0	6.8
WDA 0851102	WDA 0855902	85.0	95.0	7.0	90.0	8.0
WDA 0901101	WDA 0905901	90.0	100.0	6.0	93.0	6.8
WDA 0901102	WDA 0905902	90.0	100.0	7.0	95.0	8.0
WDA 0981101	WDA 0985901	98.0	108.0	7.0	103.0	8.0
WDA 1001101	WDA 1005901	100.0	110.0	6.0	103.0	7.0
WDA 1001102	WDA 1005902	100.0	110.0	7.0	105.0	8.0
WDA 1101101	WDA 1105901	110.0	125.0	8.5	114.0	9.5
WDA 1121101	WDA 1125901	112.0	122.0	7.0	117.0	8.0
WDA 1141104	WDA 1145901	114.0	129.0	8.0	118.0	9.0
WDA 1251101	WDA 1255901	125.0	140.0	8.5	129.0	9.5
WDA 1251102	WDA 1255902	125.0	138.0	8.0	132.0	9.5
WDA 1361101	WDA 1365901	136.0	149.0	8.0	143.0	9.5
WDA 1401102	WDA 1405902	140.0	155.0	8.5	144.0	9.5
WDA 1401101	WDA 1405901	140.0	153.0	8.0	147.0	9.5
WDA 1451101	WDA 1455901	145.0	158.0	8.0	152.0	9.5
WDA 1501101	WDA 105L503	150.00	165.00	8.5	154.0	11.0
WDA 1551101	WDA 155L501	155.00	165.00	5.5	158.0	8.35
WDA 1601101	WDA 1605901	160.0	175.0	8.5	164.0	9.5
WDA 1601102	WDA 1605902	160.0	174.0	8.0	167.0	9.5
WDA 1651101	WDA 1655901	165.0	179.0	8.0	172.0	9.5
WDA 1801101	WDA 1805901	180.0	195.0	8.5	184.0	9.5
WDA 1801102	WDA 1805902	180.0	194.0	8.0	187.0	9.5
WDA 2001101	WDA 2005901	200.0	214.0	8.0	207.0	9.5
WDA 2041101	WDA 2045901	204.0	218.0	8.0	211.0	9.5

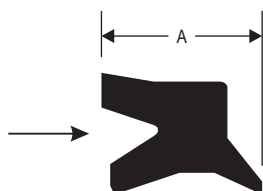
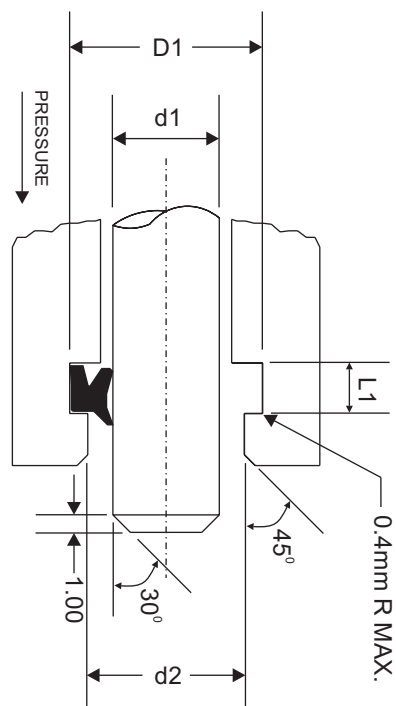
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WDA

TYPE: Heavy Duty

Style WDA Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1
f8	H11
L1	d2
+0.2	H11

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	d2	A
WDA 2101101	WDA 2105901	210.0	230.0	10.2	220.0	18.0
WDA 2201101	WDA 2205901	220.0	240.0	10.2	230.0	18.0
WDA 2301101	WDA 2305901	230.0	244.0	8.0	237.0	9.5
WDA 2301102	WDA 2305902	230.0	250.0	10.2	240.0	18.0
WDA 2401101	WDA 2405901	240.0	260.0	10.2	250.0	18.0
WDA 2501101	WDA 2505901	250.0	275.0	16.0	262.6	22.5
WDA 2601101	WDA 2605901	260.0	285.0	16.0	272.6	22.5
WDA 2651101	WDA 2655901	265.0	290.0	16.0	277.6	22.5
WDA 2701101	WDA 2705901	270.0	295.0	16.0	282.6	22.5
WDA 2801101	WDA 2805901	280.0	305.0	16.0	292.6	22.5
WDA 2901101	WDA 2905901	290.0	315.0	16.0	302.6	22.5
WDA 3001101	WDA 3005901	300.0	325.0	16.0	312.6	22.5
WDA 3101101	WDA 3105901	310.0	340.0	18.0	325.0	27.0
WDA 3201101	WDA 3205901	320.0	350.0	18.0	335.0	27.0
WDA 3301101	WDA 3305901	330.0	360.0	18.0	345.0	27.0
WDA 3351101	WDA 3355901	335.0	365.0	18.0	350.0	27.0
WDA 3401101	WDA 3405901	340.0	370.0	18.0	355.0	27.0
WDA 3501101	WDA 3505901	350.0	380.0	18.0	365.0	27.0
WDA 3601101	WDA 3605901	360.0	390.0	18.0	375.0	27.0
WDA 3701101	WDA 3705901	370.0	400.0	18.0	385.0	27.0
WDA 3801101	WDA 3805901	380.0	410.0	18.0	395.0	27.0
WDA 3901101	WDA 3905901	390.0	420.0	18.0	405.0	27.0
WDA 4001101	WDA 4005901	400.0	430.0	18.0	415.0	27.0
WDA 4101101	WDA 4105901	410.0	440.0	18.0	425.0	27.0
WDA 4201101	WDA 4205901	420.0	450.0	18.0	435.0	27.0
WDA 4301101	WDA 4305901	430.0	460.0	18.0	445.0	27.0
WDA 4401101	WDA 4405901	440.0	470.0	18.0	455.0	27.0
WDA 4501101	WDA 4505901	450.0	480.0	18.0	465.0	27.0
WDA 4601101	WDA 4605901	460.0	490.0	18.0	475.0	27.0
WDA 4701101	WDA 4705901	470.0	500.0	18.0	485.0	27.0
WDA 4801101	WDA 4805901	480.0	510.0	18.0	495.0	27.0
WDA 4901101	WDA 4905901	490.0	520.0	18.0	505.0	27.0
WDA 5001101	WDA 5005901	500.0	530.0	18.0	515.0	27.0
WDA 5101101	WDA 5105901	510.0	540.0	18.0	525.0	27.0
WDA 5201101	WDA 5205901	520.0	550.0	18.0	535.0	27.0
WDA 5301101	WDA 5305901	530.0	560.0	18.0	545.0	27.0
WDA 5401101	WDA 5405901	540.0	570.0	18.0	555.0	27.0
WDA 5501101	WDA 5505901	550.0	580.0	18.0	565.0	27.0
WDA 5601101	WDA 5605901	560.0	590.0	18.0	575.0	27.0

Other sizes available on request.

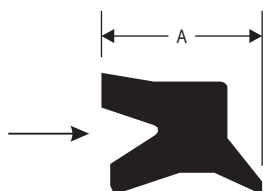
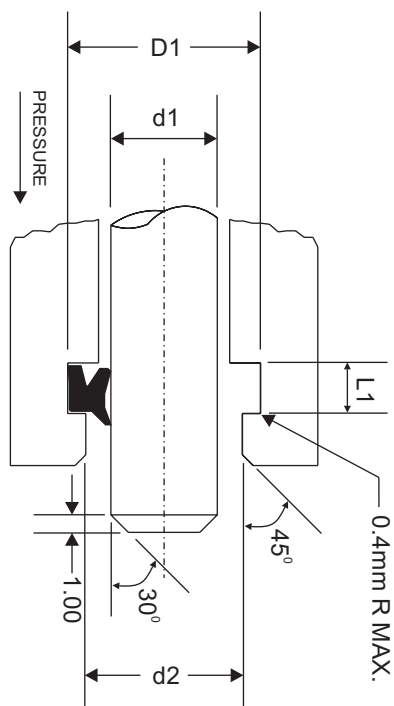
SECTION: WIPER SEAL

STYLE: WDA

TYPE: Heavy Duty

Style WDA Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	d2	A
WDA 5701101	WDA 5705901	570.0	600.0	18.0	585.0	27.0
WDA 5801101	WDA 5805901	580.0	610.0	18.0	595.0	27.0
WDA 5901101	WDA 5905901	590.0	620.0	18.0	605.0	27.0
WDA 6001101	WDA 6005901	600.0	630.0	18.0	615.0	27.0
WDA 6201101	WDA 6205901	620.0	650.0	18.0	635.0	27.0
WDA 6501101	WDA 6505901	650.0	680.0	18.0	665.0	27.0
WDA 6701101	WDA 6705901	670.0	700.0	18.0	685.0	27.0
WDA 7001101	WDA 7005901	700.0	730.0	18.0	715.0	27.0
WDA 7201101	WDA 7205901	720.0	750.0	18.0	735.0	27.0
WDA 7401101	WDA 7405901	740.0	770.0	18.0	755.0	27.0
WDA 7601101	WDA 7605901	760.0	790.0	18.0	775.0	27.0
WDA 7801101	WDA 7805901	780.0	810.0	18.0	795.0	27.0
WDA 8001101	WDA 8005901	800.0	830.0	18.0	815.0	27.0
WDA 8201101	WDA 8205901	820.0	850.0	18.0	835.0	27.0
WDA 8401101	WDA 8405901	840.0	870.0	18.0	855.0	27.0
WDA 8501101	WDA 8505901	850.0	880.0	18.0	865.0	27.0
WDA 8601101	WDA 8605901	860.0	890.0	18.0	875.0	27.0
WDA 8801101	WDA 8805901	880.0	910.0	18.0	895.0	27.0
WDA 9001101	WDA 9005901	900.0	930.0	18.0	915.0	27.0
WDA 9601101	WDA 9605901	960.0	990.0	18.0	975.0	27.0
WDA 10001101	WDA 10005901	1000.0	1030.0	18.0	1015.0	27.0



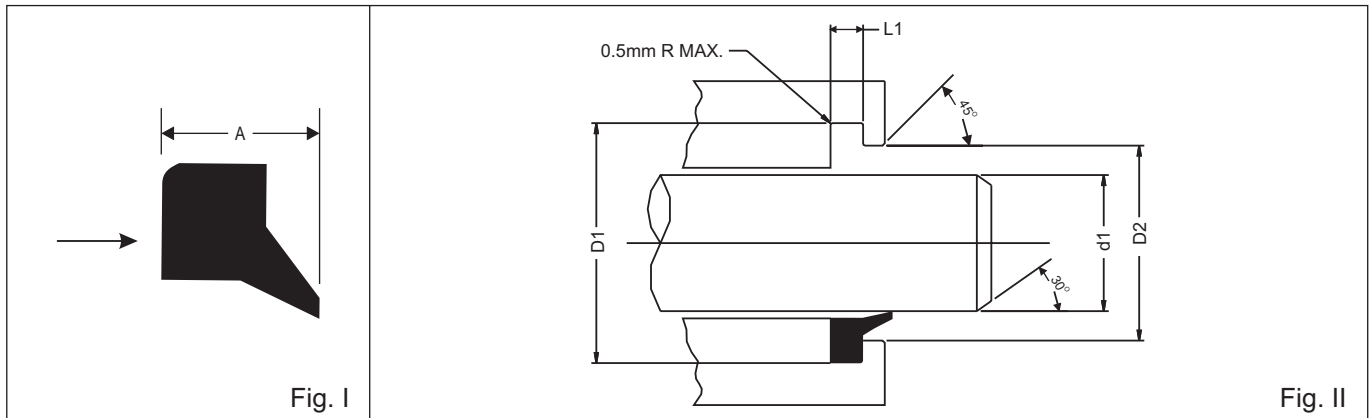
Tolerance Table	
d1	D1
f8	H11
L1	d2
+0.2	H11

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty



MATERIAL:

NT6/a is an Acrylonitrile Butadiene Rubber compound (NBR) of Hardness Shore 'A' 88° Approx.

PUX - is a polyurethane compound of 92° shore 'A' hardness.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 2 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty.

Hydraulic cylindrical.

DETAILS :

The Spareage type WRC wiper has a lip designed to remove dirt, mud, dust, moisture etc. accumulating on the rod.

The wiper is manufactured from a high hardness NBR compound suitable for installing in a simple groove design.

The lip of this wiper does not project beyond the cylinder cover so that it is protected from damage. Due to excellent wear resistance of polyurethane the life expected is 3 times that of NBR.

Spareage's type WRC wiper is also available in FKM (viton) on request.

FEATURES :

Can be subjected to heavy duty.

Long life.

Seal retainer not required.

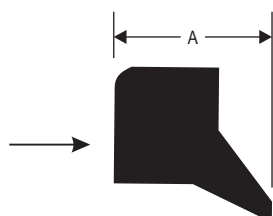
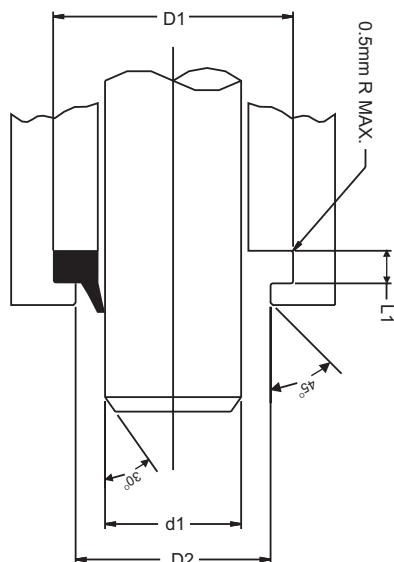
SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0101101	WRC0105901	10.00	18.00	5.30	7.00	14.00
WRC0121108	WRC0125901	12.00	24.00	7.30	9.00	18.00
WRC0121104	WRC0125902	12.00	18.00	3.20	6.00	15.00
WRC0121106	WRC0125903	12.00	17.00	3.20	5.00	14.00
WRC0121107	WRC0125904	12.50	20.50	4.70	6.00	16.50
WRC0141103	WRC0145902	14.00	18.00	3.20	4.00	16.00
WRC0141104	WRC0145901	14.28	20.69	2.80	4.77	17.70
WRC0151103	WRC0155902	15.87	22.62	2.70	4.30	19.62
WRC0151101	WRC0155901	15.87	25.40	5.00	7.50	20.60
WRC0161106	WRC0165902	16.00	22.00	2.20	5.00	19.00
WRC0161106	WRC0165903	16.00	20.00	5.30	8.00	18.00
WRC0161104	WRC0165904	16.00	24.00	5.30	7.00	20.00
WRC0161103 (Stock Size)	WRC0165902	16.00	24.60	5.30	7.00	19.00
WRC0181105	WRC0185903	18.00	24.60	4.00	5.30	21.60
WRC0181103	WRC0185904	18.00	28.00	5.30	7.00	23.00
WRC0181102 (Stock Size)	WRC0185902	18.00	26.60	5.30	7.00	21.00
WRC0181106	WRC0185905	18.00	26.00	5.30	7.00	22.00
WRC0181107	WRC0185906	18.00	28.00	7.30	10.00	23.00
WRC0181108	WRC0185907	18.00	24.50	6.30	8.00	21.50
WRC0181109	WRC0185908	18.00	26.00	6.30	8.00	22.00
WRC0181110	WRC0185909	18.00	30.00	5.30	8.00	24.00
WRC0181104	WRC0185910	18.00	30.60	3.20	6.50	24.20
WRC0191101	WRC0195905	19.00	28.60	5.30	8.00	23.80
WRC0191103	WRC0195906	19.05	29.05	5.30	7.00	24.00
WRC0201104	WRC0205902	20.00	28.00	3.70	5.00	24.00
WRC0201102 (Stock Size)	WRC0205901	20.00	28.60	5.30	7.00	23.00
WRC0201106	WRC0205903	20.00	30.00	7.30	10.00	25.00
WRC0201105	WRC0205904	20.00	30.00	4.20	7.00	25.00
WRC0201109 (Stock Size)	WRC0205905	20.00	28.00	5.30	7.00	24.00
WRC0201107	WRC0205906	20.00	24.00	3.20	4.00	22.00
WRC0221101	WRC0225903	22.00	28.00	4.20	6.00	25.00
WRC0221107 (Stock Size)	WRC0225901	22.00	33.00	4.70	6.00	28.00
WRC0221105	WRC0225904	22.00	32.00	7.30	10.00	27.00
WRC0221108 (Stock Size)	WRC0225905	22.00	30.60	5.30	7.00	26.00
WRC0221106 (Stock Size)	WRC0225902	22.00	32.00	5.30	7.00	27.00
WRC0251101 (Stock Size)	WRC0255905	25.00	33.00	4.30	6.00	29.00
WRC0251104 (Stock Size)	WRC0255907	25.00	33.60	5.30	7.00	29.00
WRC0251116	WRC0255909	25.00	35.00	3.20	6.00	30.00
WRC0251118	WRC0255910	25.00	32.00	6.70	8.00	29.00
WRC0251119	WRC0255911	25.00	35.00	7.30	9.00	30.00



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

Other sizes available on request.

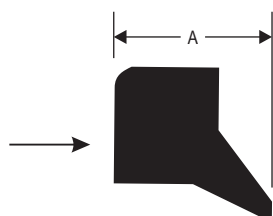
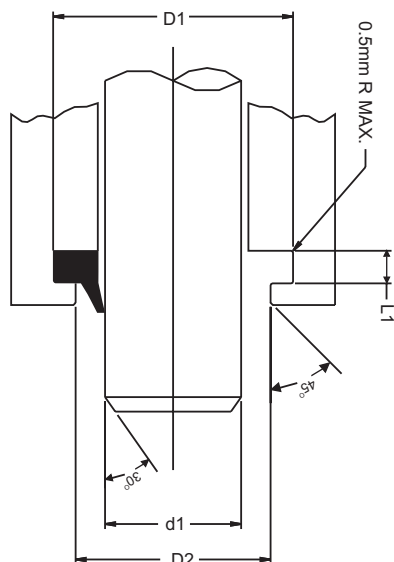
SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0251103	WRC0255912	25.00	32.00	3.20	4.50	29.00
WRC0251107	WRC0255906	25.00	33.00	3.70	5.00	29.00
WRC0251105	WRC0255901	25.00	35.00	4.70	7.50	30.00
WRC0251114	WRC0255908	25.00	35.00	4.20	7.00	30.00
WRC0251113	WRC0255904	25.00	35.00	5.30	7.00	30.00
WRC0251109	WRC0255913	25.00	34.00	4.80	7.50	29.60
WRC0251112	WRC0255914	25.00	31.00	5.30	7.00	28.00
WRC0251120	WRC0255915	25.00	40.70	7.30	10.00	32.70
WRC0251108	WRC0255916	25.00	35.00	7.30	10.00	30.00
WRC0251110	WRC0255917	25.40	35.00	5.30	8.00	30.50
WRC0251111	WRC0255918	25.40	32.38	2.70	4.50	29.20
WRC0251121	WRC0255919	25.40	31.75	2.70	4.80	28.75
WRC0251122	WRC0255920	25.40	31.75	5.30	8.00	28.75
WRC0251102	WRC0255921	25.40	35.56	3.40	6.35	30.56
WRC0261102	WRC0265901	26.00	33.00	4.20	7.00	29.80
WRC0281110	WRC0285905	28.00	36.00	5.30	8.00	32.00
WRC0281111	WRC0285906	28.00	35.00	5.30	7.00	31.80
WRC0281102	WRC0285907	28.00	34.00	6.60	9.65	31.00
WRC0281101	WRC0285902	28.00	36.00	5.30	7.00	32.00
WRC0281108	WRC0285908	28.00	36.00	4.20	7.00	32.00
WRC0281109	WRC0285909	28.00	38.00	7.30	10.00	33.00
WRC0281107	WRC0285910	28.00	37.00	5.30	7.00	32.40
WRC0281103	WRC0285911	28.57	38.10	6.30	7.50	33.30
WRC0281112	WRC0285903	28.57	34.92	2.70	4.70	31.92
WRC0281105 (Stock Size)	WRC0285902	28.00	36.00	5.30	7.00	31.00
WRC0301112 (Stock Size)	WRC0305903	30.00	38.00	5.30	7.00	33.00
WRC0301106	WRC0305901	30.00	37.00	4.20	6.00	33.80
WRC0301111	WRC0305904	30.00	42.00	5.30	7.00	36.00
WRC0301109	WRC0305905	30.00	40.00	6.30	8.50	35.00
WRC0301108	WRC0305906	30.00	42.00	5.30	11.00	36.00
WRC0301107	WRC0305907	30.00	40.00	5.30	8.00	35.00
WRC0301113	WRC0305908	30.00	40.00	7.30	10.00	35.00
WRC0301110	WRC0305909	30.00	35.00	4.20	7.00	32.60
WRC0321103	WRC0325904	32.00	43.50	5.30	9.00	38.00
WRC0321106	WRC0325905	32.00	38.00	6.70	9.65	35.00
WRC0321101 (Stock Size)	WRC0325901	32.00	40.00	5.30	7.00	36.00
WRC0331101	WRC0335901	33.00	41.60	5.30	8.00	37.40
WRC0341102	WRC0345901	34.92	42.86	2.60	4.76	34.86
WRC0351108	WRC0355901	35.00	45.00	5.30	7.00	40.00
WRC0351109 (Stock Size)	WRC0355903	35.00	44.00	5.30	8.00	39.60



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

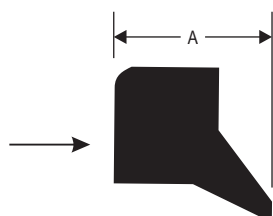
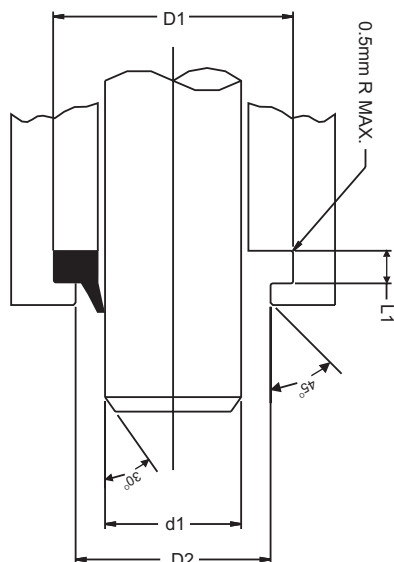
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0351107	WRC0355904	35.00	48.00	7.30	10.00	42.00
WRC0351103 (Stock Size)	WRC0355902	35.00	43.00	5.30	7.00	38.00
WRC0361103 (Stock Size)	WRC0365902	36.00	44.00	5.30	7.00	40.00
WRC0361105 (Stock Size)	WRC0365901	36.00	45.00	5.30	7.00	39.00
WRC0361109 (Stock Size)	WRC0365903	36.00	46.00	7.30	10.00	41.00
WRC0361110	WRC0365904	36.00	45.00	3.20	5.00	40.60
WRC0361108	WRC0365905	36.00	44.00	4.20	7.00	40.00
WRC0361107	WRC0365906	36.00	48.00	7.30	10.00	42.00
WRC0361101	WRC0365907	36.00	45.00	7.30	10.00	40.60
WRC0361111 (Stock Size)	WRC0365908	36.00	43.00	4.20	7.00	39.60
WRC0361112	WRC0365909	36.00	44.00	5.30	8.00	40.00
WRC0381101	WRC0365901	38.00	48.00	6.30	8.50	43.00
WRC0381106	WRC0385902	38.00	50.00	5.30	7.00	44.00
WRC0381103	WRC0385903	38.00	47.00	5.30	8.00	42.60
WRC0381107	WRC0385904	38.00	48.00	7.30	10.00	43.00
WRC0381105	WRC0385905	38.00	46.00	2.70	4.20	42.00
WRC0381108	WRC0385906	38.00	45.00	4.20	7.00	41.60
WRC0381109	WRC0385907	38.10	46.18	3.00	4.00	42.18
WRC0401110 (Stock Size)	WRC0405901	40.00	48.00	5.30	7.00	44.00
WRC0401104 (Stock Size)	WRC0405902	40.0	48.60	5.30	7.00	43.00
WRC0401112	WRC0405904	40.00	48.00	4.20	7.50	44.00
WRC0401107	WRC0405905	40.00	50.00	4.20	7.00	45.00
WRC0401108	WRC0405906	40.00	52.00	5.30	7.00	46.00
WRC0401113	WRC0405907	40.00	50.00	5.30	7.00	45.00
WRC0401111	WRC0405908	40.00	56.00	5.30	7.00	48.00
WRC0401114	WRC0405909	40.00	46.00	2.20	3.00	43.00
WRC0401115	WRC0405910	40.00	50.00	3.20	5.00	45.00
WRC0401101	WRC0405911	40.00	48.00	5.30	8.00	44.00
WRC0401116	WRC0405903	40.00	48.00	4.90	6.50	44.00
WRC0401105	WRC0405912	40.00	50.00	7.30	12.00	45.00
WRC0411102	WRC0415902	41.28	50.80	4.80	6.98	46.00
WRC0421103	WRC0425901	42.00	50.60	5.30	8.00	46.00
WRC0421102	WRC0425902	42.00	54.00	6.30	9.00	48.00
WRC0421104 (Stock Size)	WRC0425903	42.00	50.00	5.30	7.00	46.00
WRC0441102	WRC0445902	44.00	54.76	2.80	5.30	49.38
WRC0441103	WRC0445903	44.00	55.00	4.20	7.00	49.50
WRC0441104	WRC0445904	44.45	50.80	2.80	4.75	47.62
WRC0451109	WRC0455905	45.00	53.00	4.20	7.50	49.00
WRC0451110	WRC0455906	45.00	60.00	4.20	7.00	52.50
WRC0451111	WRC0455907	45.00	55.00	6.30	9.00	50.00

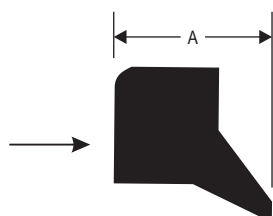
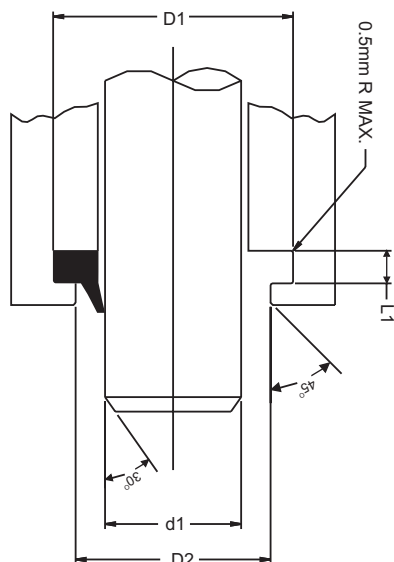
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1		
f8	H11		
L1	d2		
+0.2	H11		

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0451112	WRC0455908	45.00	56.00	5.30	7.00	50.50
WRC0451107	WRC0455903	45.00	55.60	5.30	7.00	50.30
WRC0451104	WRC0455909	45.00	55.00	7.30	10.00	50.00
WRC0451113	WRC0455910	45.00	53.00	5.30	7.00	49.00
WRC0451114	WRC0455911	45.00	55.00	9.70	11.50	50.00
WRC0451108	WRC0455912	45.00	54.00	6.30	8.00	49.50
WRC0451101 (Stock Size)	WRC0455901	45.00	55.00	5.30	7.00	48.00
WRC0451106	WRC0455913	45.00	50.00	4.20	6.00	47.50
WRC0451105	WRC0455914	45.00	54.50	6.30	8.50	49.75
WRC0481103	WRC0485901	48.00	60.00	5.30	11.00	54.00
WRC0501115	WRC0505906	50.00	70.00	7.30	10.00	60.00
WRC0501110	WRC0505905	50.00	60.00	5.30	7.00	55.00
WRC0501107 (Stock Size)	WRC0505902	50.00	58.60	5.30	7.00	53.00
WRC0501109	WRC0505907	50.00	60.00	4.20	7.00	55.00
WRC0501116	WRC0505908	50.00	56.00	5.30	7.00	53.00
WRC0501104 (Stock Size)	WRC0505903	50.00	58.00	5.30	7.00	54.00
WRC0501112	WRC0505909	50.00	60.00	7.30	10.00	55.00
WRC0501113 (Stock Size)	WRC0505910	50.00	60.00	5.30	8.00	55.00
WRC0501102	WRC0505911	50.00	60.00	7.30	12.00	55.00
WRC0501117	WRC0505912	50.00	58.00	5.30	8.00	54.00
WRC0501118	WRC0505904	50.00	58.00	4.70	7.00	54.00
WRC0501119	WRC0505913	50.80	58.60	2.70	4.60	54.70
WRC0501120	WRC0505914	50.80	66.67	4.20	6.80	58.73
WRC0501121	WRC0505915	50.80	58.50	2.80	4.76	54.65
WRC0511101	WRC0515901	51.00	58.00	2.70	4.50	54.50
WRC0551102	WRC0555901	55.00	70.00	7.30	10.00	62.50
WRC0551103 (Stock Size)	WRC0555902	55.00	65.00	5.30	7.00	60.00
WRC0561107 (Stock Size)	WRC0565903	56.00	66.60	5.30	7.00	59.00
WRC0561109	WRC0565904	56.00	67.00	5.30	7.00	61.50
WRC0561110	WRC0565905	56.00	66.00	5.70	8.00	61.00
WRC0561111	WRC0565906	56.00	64.00	5.30	7.00	60.00
WRC0561103 (Stock Size)	WRC0565907	56.00	66.00	5.30	7.00	61.00
WRC0561105	WRC0565908	56.00	64.00	5.30	8.00	60.00
WRC0561112	WRC0565909	56.00	64.00	4.20	7.00	60.00
WRC0561113	WRC0565910	56.00	65.00	6.30	8.00	60.50
WRC0561114	WRC0565911	56.00	67.00	3.20	8.00	61.50
WRC0561115	WRC0565901	56.00	66.00	5.30	7.00	61.00
WRC0571101	WRC0575901	57.15	65.50	2.80	4.76	61.32
WRC0581102	WRC0585902	58.74	71.37	6.40	9.30	65.00
WRC0601110	WRC0605902	60.00	73.00	6.30	9.50	66.50

Other sizes available on request.

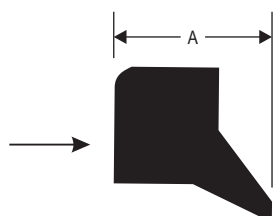
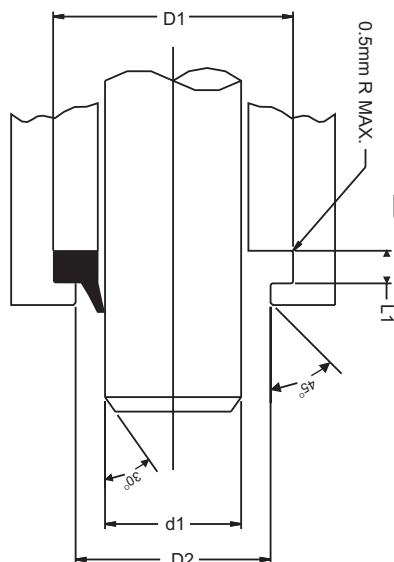
SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0601111	WRC0605905	60.00	70.00	7.30	12.00	65.00
WRC0601112	WRC0605901	60.00	70.00	6.00	10.00	65.00
WRC0601113	WRC0605906	60.00	70.00	6.50	10.00	65.00
WRC0601106	WRC0605907	60.00	68.00	7.30	10.00	64.00
WRC0601109	WRC0605908	60.00	70.00	7.30	10.00	65.00
WRC0601114	WRC0605903	60.00	70.00	5.30	7.00	65.00
WRC0601101	WRC0605909	60.00	68.00	6.70	10.00	64.00
WRC0601115	WRC0605910	60.00	74.00	6.30	9.00	67.00
WRC0601107	WRC0605911	60.00	72.00	7.30	10.00	66.00
WRC0601116	WRC0605912	60.00	70.00	5.30	7.00	65.00
WRC0601103 (Stock Size)	WRC0605904	60.00	68.00	5.30	7.00	63.00
WRC0631102 (Stock Size)	WRC0605901	63.00	73.00	5.30	7.00	66.00
WRC0631103	WRC0635902	63.00	71.00	4.20	7.00	67.00
WRC0631106	WRC0635903	63.00	76.50	6.70	10.00	69.75
WRC0631107 (Stock Size)	WRC0635904	63.00	73.00	6.30	10.00	68.00
WRC0631108	WRC0635905	63.50	76.20	5.30	7.00	69.85
WRC0631109	WRC0635906	63.50	82.55	9.30	13.08	73.02
WRC0631110	WRC0635907	63.50	76.20	3.40	6.35	69.85
WRC0631111	WRC0635908	63.50	71.00	2.70	4.76	67.25
WRC0631105	WRC0635909	63.50	71.50	2.80	4.60	67.50
WRC0631112	WRC0635910	63.50	73.02	6.30	8.00	68.26
WRC0631113	WRC0635911	63.50	73.20	7.30	10.00	68.35
WRC0651104	WRC0655902	65.00	75.00	7.30	10.00	70.00
WRC0651101 (Stock Size)	WRC0655901	65.00	75.00	5.30	7.00	68.00
WRC0651103	WRC0655903	65.00	80.00	5.30	8.00	72.50
WRC0651105	WRC0655904	65.00	77.00	6.30	9.00	71.00
WRC0651106	WRC0655905	65.00	74.60	5.30	7.00	69.80
WRC0691102	WRC0695903	69.80	88.90	6.30	9.50	79.35
WRC0691101	WRC0695904	69.85	79.37	5.00	6.35	74.61
WRC0691103	WRC0695902	69.85	82.55	6.50	9.52	76.20
WRC0691104	WRC0695905	69.85	79.09	3.30	5.08	74.50
WRC0701103 (Stock Size)	WRC0705902	70.00	80.00	5.30	7.00	75.00
WRC0701107	WRC0705905	70.00	78.00	5.30	7.00	74.00
WRC0701108	WRC0705906	70.00	80.60	5.50	7.00	75.30
WRC0701109	WRC0705907	70.00	78.60	5.30	7.00	74.30
WRC0701101	WRC0705908	70.00	80.00	7.30	10.00	75.00
WRC0701104 (Stock Size)	WRC0705909	70.00	80.60	5.30	7.00	73.00
WRC0701110	WRC0705910	70.00	87.80	6.30	8.00	78.90
WRC0701111	WRC0705911	70.00	85.00	7.30	10.00	77.50
WRC0701112	WRC0705912	70.00	85.00	3.20	8.00	77.50



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

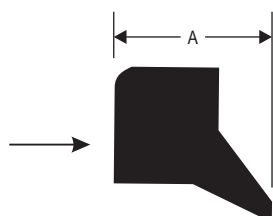
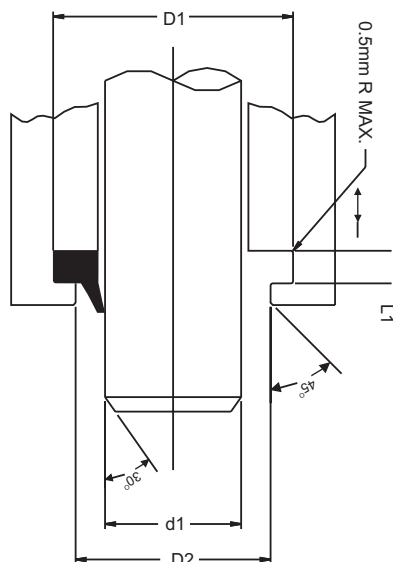
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1		
f8	H11		
L1	d2		
+0.2	H11		

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0701113	WRC0705913	70.00	78.60	5.30	7.00	74.30
WRC0701105	WRC0705914	70.00	80.00	6.30	10.00	75.00
WRC0701114	WRC0705915	70.00	82.00	5.30	7.00	76.00
WRC0711102	WRC0715901	71.45	83.34	4.30	7.92	77.40
WRC0751104 (Stock Size)	WRC0755901	75.00	83.60	5.30	7.00	78.00
WRC0751105	WRC0755902	75.00	88.50	3.50	11.00	81.75
WRC0751101 (Stock Size)		75.00	87.20	7.10	12.00	81.00
WRC0761103	WRC0765902	76.20	95.25	3.20	5.00	85.72
WRC0761102	WRC0765903	76.20	88.90	6.50	9.52	82.55
WRC0761101	WRC0765904	76.20	85.64	3.20	5.00	80.92
WRC0801113	WRC0805905	80.00	90.00	5.30	7.00	85.00
WRC0801107	WRC0805906	80.00	90.00	6.30	8.00	85.00
WRC0801114	WRC0805907	80.00	88.60	5.30	8.00	84.30
WRC0801110 (Stock Size)	WRC0805908	80.00	90.00	7.30	10.00	85.00
WRC0801108 (Stock Size)	WRC0805902	80.00	92.20	7.20	12.00	86.00
WRC0801111	WRC0805909	80.00	90.00	6.30	9.00	85.00
WRC0801101	WRC0805910	80.00	92.00	7.30	12.00	86.00
WRC0821101	WRC0825901	82.55	95.50	5.30	7.00	89.00
WRC0841102	WRC0845901	84.00	92.07	3.20	5.00	88.00
WRC0851103	WRC0855903	85.00	95.00	4.20	8.00	90.00
WRC0851107	WRC0855904	85.00	93.60	5.50	7.00	89.30
WRC0851102	WRC0855905	85.00	94.00	4.20	7.00	89.50
WRC0851104	WRC0855906	85.00	95.00	4.20	7.00	90.00
WRC0851105 (Stock Size)	WRC0855907	85.00	95.00	7.20	12.00	91.00
WRC0851109	WRC0855908	85.72	98.42	6.30	9.52	92.07
WRC0881102	WRC0885903	88.90	101.60	6.50	9.52	95.25
WRC0881105	WRC0885904	88.90	101.60	5.30	7.00	95.25
WRC0881103	WRC0885905	88.90	100.00	7.30	12.00	94.45
WRC0881106	WRC0885906	88.90	107.23	8.30	15.87	98.06
WRC0881107	WRC0885907	88.90	95.25	6.50	9.52	92.07
WRC0881108	WRC0885908	88.90	112.80	6.50	10.00	100.85
WRC0901110	WRC0905906	90.00	100.00	4.20	7.00	95.00
WRC0901111	WRC0905907	90.00	100.00	5.30	7.00	95.00
WRC0901101 (Stock Size)	WRC0905904	90.00	102.20	7.20	12.00	96.00
WRC0901112	WRC0905908	90.00	100.00	3.20	5.00	95.00
WRC0901114 (Stock Size)		90.00	100.20	7.10	12.00	94.00
WRC0901108	WRC0905909	90.00	100.00	6.30	8.00	95.00
WRC0901113 (Stock Size)	WRC0905910	90.00	105.00	7.30	10.00	97.50
WRC0901114 (Stock Size)	WRC0905911	90.00	100.00	7.30	12.00	95.00
WRC0951104 (Stock Size)	WRC0955901	95.00	108.00	5.30	10.00	101.50

Other sizes available on request.

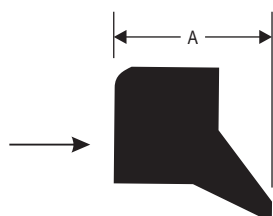
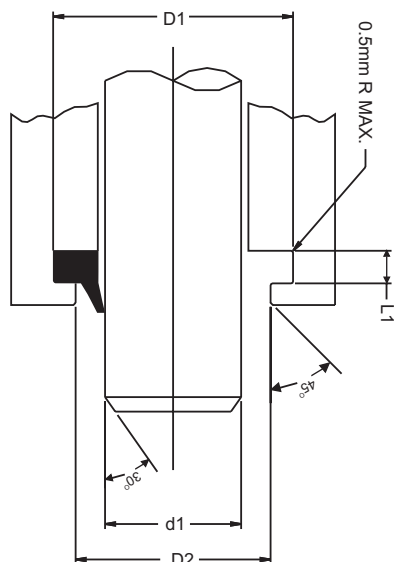
SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC0951103	WRC0955902	95.00	103.60	5.30	7.00	99.30
WRC0951105	WRC0955903	95.25	103.50	3.20	4.50	99.40
WRC1001111	WRC1005906	100.00	108.00	5.30	7.00	104.00
WRC1001112	WRC1005907	100.00	108.60	5.50	7.00	104.30
WRC1001113	WRC1005908	100.00	110.00	7.30	10.00	105.00
WRC1001103	WRC1005909	100.00	110.00	5.30	7.00	105.00
WRC1001101 (Stock Size)	WRC1005901	100.00	112.20	7.20	12.00	106.00
WRC1001114	WRC1005902	100.00	115.00	9.70	14.00	107.50
WRC1001110	WRC1005911	100.00	110.00	6.30	8.00	105.00
WRC1001115	WRC1005913	100.00	108.60	5.30	7.00	104.30
WRC1011101	WRC1015901	101.60	112.40	3.70	6.50	107.00
WRC1011102	WRC1015902	101.60	113.80	7.30	12.00	107.70
WRC1051103	WRC1055903	105.00	113.00	4.20	7.00	109.00
WRC1051101	WRC1055904	105.00	117.00	7.30	12.00	111.00
WRC1051104	WRC1055901	105.00	119.00	5.30	7.00	112.00
WRC1051102	WRC1055905	105.00	114.00	4.20	7.00	109.50
WRC1071102	WRC1075901	107.95	120.65	8.30	11.11	114.30
WRC1071103	WRC1075902	107.95	119.06	3.60	5.70	113.50
WRC1071104	WRC1075903	107.95	120.65	6.50	10.16	114.30
WRC1081101	WRC1085901	108.00	118.00	5.30	8.00	113.00
WRC1101108	WRC1105902	110.00	122.00	12.30	18.00	116.00
WRC1101103	WRC1105903	110.00	125.00	8.70	12.00	117.50
WRC1101109	WRC1105904	110.00	126.00	8.30	12.00	118.00
WRC1101106	WRC1105905	110.00	120.00	4.20	7.00	115.00
WRC1101107	WRC1105906	110.00	120.00	6.30	8.00	115.00
WRC1101101 (Stock Size)	WRC1105901	110.00	122.20	7.20	12.00	116.00
WRC1101110	WRC1105907	110.00	121.00	3.80	6.00	115.50
WRC1101104	WRC1105908	110.00	120.00	4.20	8.00	115.00
WRC1101102	WRC1105909	110.00	118.60	5.30	7.00	114.30
WRC1111101	WRC1115903	111.12	117.47	6.50	9.52	114.30
WRC1121102	WRC1125902	112.00	122.00	6.30	8.00	117.00
WRC1121101	WRC1125901	112.00	120.00	5.30	7.00	116.00
WRC1141101	WRC1145901	114.30	133.35	10.00	14.28	123.82
WRC1181101	WRC1185901	118.00	141.30	9.50	15.24	129.65
WRC1201104	WRC1205903	120.00	130.00	5.30	7.00	125.00
WRC1201101 (Stock Size)		120.00	132.20	7.10	12.00	126.00
WRC1201105	WRC1205901	120.00	132.00	6.30	9.50	126.00
WRC1201103 (Stock Size)	WRC1205902	120.00	130.60	5.30	7.00	125.00
WRC1251102	WRC1255902	125.00	140.00	9.30	16.00	132.50
WRC1251104	WRC1255903	125.00	133.00	5.30	9.00	129.00



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

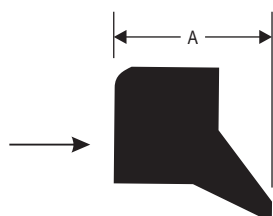
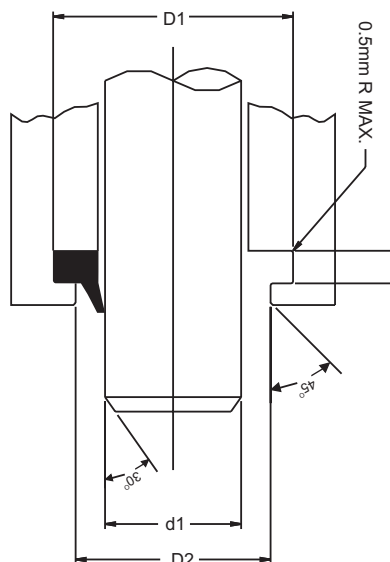
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1		
f8	H11		
L1	d2		
+0.2	H11		

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC1251103 (Stock Size)	WRC1255901	125.00	140.00	10.20	16.00	132.50
WRC1251105	WRC1255904	125.00	137.00	5.30	7.00	131.00
WRC1251106 (Stock Size)	WRC1255905	125.00	137.00	7.30	12.00	131.00
WRC1271103	WRC1275901	127.00	141.28	8.70	11.50	134.14
WRC1271104	WRC1275902	127.00	139.70	5.30	7.00	133.35
WRC1271101	WRC1275903	127.00	139.70	10.00	14.28	133.35
WRC1271102	WRC1275904	127.00	135.60	5.50	7.00	131.30
WRC1301102	WRC1305903	130.00	141.00	4.20	7.00	135.50
WRC1301101 (Stock Size)	WRC1305904	130.00	142.00	7.30	10.00	136.00
WRC1301105	WRC1305905	130.00	144.00	6.70	12.50	137.00
WRC1301101	WRC1305902	130.00	142.00	7.20	12.00	136.20
WRC1301103	WRC1305906	130.00	138.00	5.30	7.00	134.00
WRC1321101	WRC1325901	132.86	152.40	8.50	15.87	142.63
WRC1331102	WRC1335903	133.35	144.00	3.20	4.50	138.70
WRC1351103	WRC1355902	135.00	143.00	5.50	7.00	139.00
WRC1351104	WRC1355901	135.00	147.00	7.40	12.00	141.00
WRC1351105	WRC1355903	135.00	147.00	7.30	12.00	141.00
WRC1351101	WRC1355904	135.00	155.00	8.30	10.00	145.00
WRC1401109	WRC1405904	140.00	155.00	12.30	18.00	147.50
WRC1401106 (Stock Size)	WRC1405903	140.00	150.00	5.30	7.00	144.00
WRC1401110	WRC1405905	140.00	152.00	7.30	11.50	146.00
WRC1401108	WRC1405906	140.00	153.00	7.30	9.50	146.50
WRC1401101	WRC1415901	141.00	151.00	5.30	7.00	146.00
WRC1451101	WRC1455901	145.00	165.00	7.30	12.00	155.00
WRC1451102	WRC1455902	145.00	157.20	7.30	10.00	151.10
WRC1461101	WRC1465901	146.05	161.0	8.30	12.70	153.50
WRC1461102	WRC1465902	146.05	158.75	4.30	6.35	152.40
WRC1501103	WRC1505902	150.00	162.00	4.20	8.20	156.00
WRC1501104	WRC1505903	150.00	167.28	8.30	12.00	158.65
WRC1501105	WRC1505905	150.00	165.00	7.30	13.00	157.60
WRC1501101 (Stock Size)	WRC1505901	150.00	165.00	10.20	16.00	157.60
WRC1521101	WRC1525901	152.40	171.45	10.00	14.48	161.92
WRC1521102	WRC1525903	152.40	171.45	4.80	9.30	161.92
WRC1551101	WRC1555902	155.00	175.00	10.30	18.00	165.00
WRC1551102	WRC1555903	155.00	167.20	7.30	12.00	161.00
WRC1581101	WRC1585901	158.75	177.80	10.00	14.85	168.27
WRC1601101	WRC1605903	160.00	172.70	7.90	12.00	166.35
WRC1601105 (Stock Size)	WRC1605902	160.00	175.20	10.30	16.00	167.60
WRC1601106	WRC1605904	160.00	173.00	7.30	9.50	166.50
WRC1621101	WRC1625901	162.00	172.00	5.30	7.00	167.00

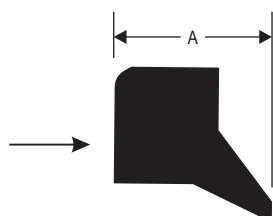
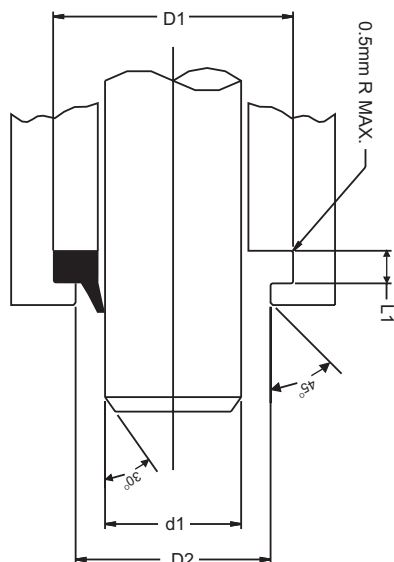
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC1651101	WRC1655903	165.00	184.00	7.30	11.00	174.50
WRC1651102	WRC1655904	165.10	190.50	12.50	19.05	177.80
WRC1651103	WRC1655905	165.10	184.15	9.50	14.00	174.62
WRC1701102	WRC1705902	170.00	182.00	5.70	10.00	176.00
WRC1701101 (Stock Size)	WRC1705903	170.00	182.00	7.20	12.00	176.00
WRC1711101	WRC1715901	171.45	184.15	3.80	5.10	177.80
WRC1771102	WRC1775901	177.80	190.50	4.00	6.35	184.15
WRC1771103	WRC1775902	177.80	203.20	12.90	20.50	190.50
WRC1801103 (Stock Size)	WRC1805901	180.00	200.00	10.20	18.00	190.00
WRC1801106	WRC1805903	180.00	194.00	7.30	10.00	187.00
WRC1801107	WRC1805904	180.00	198.00	7.30	12.00	189.00
WRC1801104	WRC1805905	180.00	188.00	5.30	7.00	184.00
WRC1801105	WRC1805906	180.00	192.00	9.30	15.00	186.00
WRC1831101	WRC1835901	183.00	193.00	5.30	7.00	188.00
WRC1901102	WRC1905902	190.00	210.00	10.30	18.00	200.00
WRC1901103	WRC1905903	190.00	210.00	10.50	18.00	200.00
WRC1901101	WRC1905904	190.00	205.00	10.30	15.00	197.50
WRC2001103	WRC2005902	200.00	208.00	10.30	16.00	204.00
WRC2001104	WRC2005903	200.00	220.00	9.70	18.00	210.00
WRC2001105	WRC2005904	200.00	215.00	3.70	13.00	207.50
WRC2001101 (Stock Size)	WRC2005901	200.00	220.00	10.20	18.00	210.00
WRC2001106	WRC2005905	200.00	215.20	10.30	16.00	207.60
WRC2001107	WRC2005906	200.00	219.07	6.50	9.52	209.53
WRC2001102	WRC2005907	200.00	212.20	7.30	12.00	206.00
WRC2001108	WRC2005908	200.00	230.00	12.30	16.00	215.00
WRC2001109	WRC2005909	200.00	215.00	8.70	13.00	207.50
WRC2031101	WRC2035901	203.20	215.90	3.40	6.35	209.55
WRC2031102	WRC2035902	203.20	222.25	9.70	17.50	212.72
WRC2071101	WRC2075901	207.00	217.00	5.30	7.00	212.00
WRC2121101	WRC2125902	212.00	236.20	11.30	14.00	224.10
WRC2151101	WRC2155901	215.90	228.60	4.00	6.35	222.25
WRC2191102	WRC2195901	219.50	233.70	7.30	10.00	226.60
WRC2251101	WRC2255901	225.00	240.00	7.70	12.00	232.50
WRC2411101	WRC2415901	241.69	256.29	4.80	7.80	249.00
WRC2501107	WRC2505902	250.00	274.20	10.70	17.00	262.10
WRC2501101	WRC2505901	250.00	270.00	10.30	18.00	260.00
WRC2501102	WRC2505903	250.00	262.50	4.20	6.70	256.25
WRC2501106	WRC2505904	250.00	275.00	7.30	11.00	262.50
WRC2501108	WRC2505905	250.00	270.00	12.30	18.00	260.00
WRC2541102	WRC2545901	254.00	287.02	12.30	18.00	270.51

Other sizes available on request.

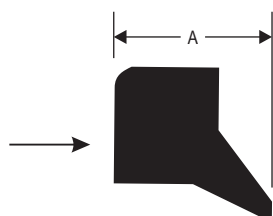
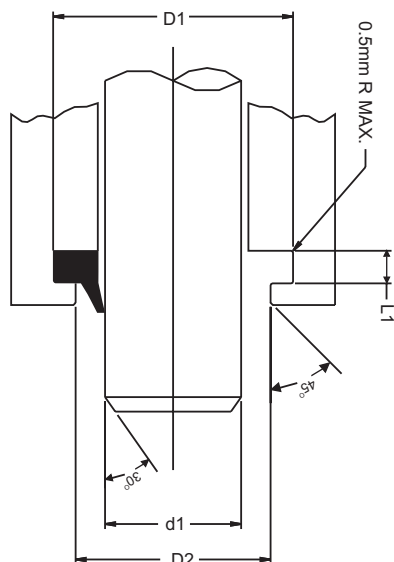
SECTION: WIPER SEAL

STYLE: WRC

TYPE: Medium Duty

Style WRC Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	Part No. Polyurethane	d1	D1	L1	A	d2
WRC2541101	WRC2545902	254.00	266.70	3.90	6.25	260.35
WRC2541103	WRC2545903	254.00	287.00	9.70	12.70	270.50
WRC2551101	WRC2555901	255.00	275.00	10.30	18.00	265.00
WRC2901101	WRC2905901	290.00	310.00	8.30	23.00	300.00
WRC3001102	WRC3005901	300.00	320.00	10.30	18.00	310.00
WRC3041101	WRC3045901	304.00	324.00	15.30	20.00	314.00
WRC3041102	WRC3045902	304.80	330.20	12.90	19.05	317.50
WRC3201102	WRC3205901	320.00	340.00	10.30	18.00	330.00
WRC3401101	WRC3405901	340.00	360.00	10.30	18.00	350.00
WRC3481101	WRC3485901	348.00	382.00	12.30	16.00	365.00
WRC3481102	WRC3485902	348.40	377.82	10.00	15.87	363.11
WRC3501101	WRC3505901	350.00	375.00	12.70	20.00	362.50
WRC3801102	WRC3805901	380.00	410.00	15.30	25.00	395.00
WRC4001101	WRC4005901	400.00	420.00	10.30	18.00	410.00
WRC4101101	WRC4105901	410.00	440.00	15.30	25.00	425.00
WRC4501102	WRC4505901	450.00	490.00	10.30	18.00	470.00
WRC4501101	WRC4505902	450.00	465.00	9.30	13.00	475.50
WRC4901101	WRC4905901	490.00	514.00	10.30	18.00	502.00
WRC5001101	WRC5005901	500.00	520.00	10.30	18.00	510.00
WRC5001102	WRC5005902	500.00	530.00	8.30	20.00	515.00
WRC5301101	WRC5305902	530.00	560.00	15.30	25.00	545.00
WRC5501101	WRC5505902	550.00	570.00	10.30	18.00	560.00
WRC5601102	WRC5605901	560.00	590.00	15.30	25.00	575.00
WRC5901101	WRC5905901	590.00	620.00	15.30	25.00	605.00
WRC6001103	WRC6005901	600.00	618.00	9.90	17.50	609.00
WRC6001102	WRC6005902	600.00	620.00	10.30	18.00	610.00
WRC6201101	WRC6205901	620.00	653.00	13.50	19.50	636.50
WRC6301101	WRC6305901	630.00	659.00	15.30	25.00	645.00
WRC6471101	WRC6475901	647.00	667.00	10.30	18.00	657.00
WRC6501101	WRC6505901	650.00	680.00	15.30	25.00	665.00
WRC8001101	WRC8005901	800.00	830.00	15.30	25.00	815.00
WRC9001101	WRC9005901	900.00	930.00	15.30	25.00	915.00
WRC9271101	WRC9275901	927.10	960.12	12.30	18.00	943.61
WRC9991102	WRC9995901	1098.55	1123.95	12.90	19.05	1111.25



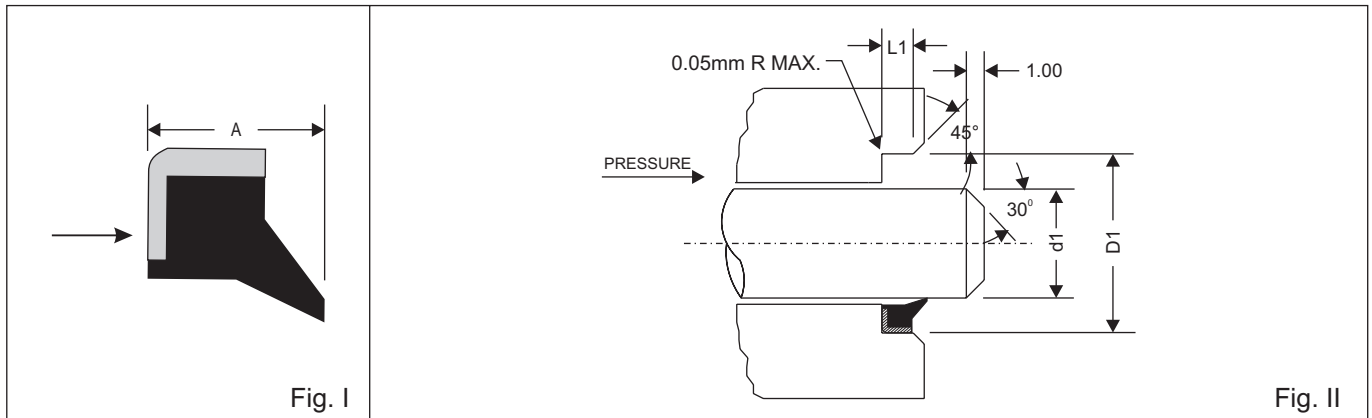
Tolerance Table			
d1	D1	L1	d2
f8	H11	+0.2	H11

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WCA

TYPE: Heavy Duty



MATERIAL:

NT6/a is an Acrylonitrile Butadiene Rubber compound (NBR) of Hardness Shore 'A' 88°.

PUX - is a polyurethane compound of 92° shore 'A' hardness.

(The standard material is NT6/a).

Metal Cup - C.R.C.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 0.5 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Heavy duty.

Earth moving.

DETAILS:

The Spareage type WCA wiper is designed to be press fitted in the housing and is suitable for heavy duty application. A corrosion resistant metal ring houses NBR wiping element.

The proportion of the wiping lip allows it to follow the side movement on the rod and to clear away heavily deposited dirt.

Due to excellent wear resistance properties of polyurethane, the life expected is 3 times that of NBR.

FEATURES:

Can be subjected to heavy duty.

Long life.

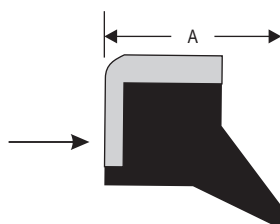
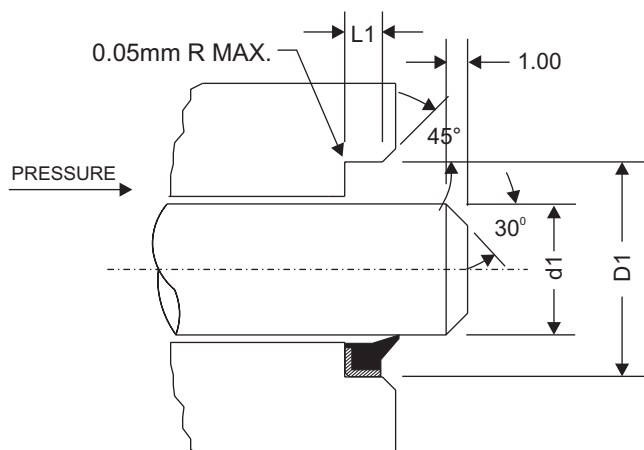
Seal retainer not required.

SECTION: WIPER SEAL

STYLE: WCA

TYPE: Heavy Duty

Style WCA Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H8	+0.2

Part No. Nitrile	d1	D1	L1	A
WCA 0061101	6.0	13.0	3.0	4.5
WCA 0101101 (Stock Size)	10.0	16.0	3.0	4.5
WCA 0101102	10.0	20.0	5.0	8.0
WCA 0101103	10.0	20.0	5.0	6.0
WCA 0101104	10.0	18.0	5.0	7.0
WCA 0121101	12.0	18.0	3.5	5.0
WCA 0121102	12.0	20.0	4.0	6.0
WCA 0121103	12.0	22.0	5.0	8.0
WCA 0141101	14.0	22.0	3.0	4.0
WCA 0151101	15.0	25.0	5.0	8.0
WCA 0151102	15.0	25.0	7.0	10.0
WCA 0161101 (Stock Size)	16.0	22.0	3.0	4.0
WCA 0161102	16.0	24.0	3.0	4.0
WCA 0161103 (Stock Size)	16.0	26.0	5.0	8.0
WCA 0181101	18.0	28.0	5.0	7.0
WCA 0181102 (Stock Size)	18.0	28.0	7.0	10.0
WCA 0181103	18.0	26.0	5.0	7.0
WCA 0201101	20.0	26.0	5.0	8.0
WCA 0201102	20.0	28.0	3.5	5.0
WCA 0201103 (Stock Size)	20.0	28.0	5.0	8.0
WCA 0201104	20.0	30.0	5.0	8.0
WCA 0201105 (Stock Size)	20.0	30.0	7.0	10.0
WCA 0201106	20.0	35.0	7.0	10.0
WCA 0201107	20.0	40.0	7.0	10.0
WCA 0201108	20.0	30.0	4.0	6.0
WCA 0221101	22.0	28.0	5.0	8.0
WCA 0221102 (Stock Size)	22.0	32.0	7.0	10.0
WCA 0221103	22.0	35.0	5.0	8.0
WCA 0241101	24.0	35.0	7.0	10.0
WCA 0241102	24.0	37.0	7.0	10.0
WCA 0251101 (Stock Size)	25.0	35.0	7.0	10.0
WCA 0251102	25.0	35.0	5.0	7.0
WCA 0281101	28.0	38.0	5.0	8.0
WCA 0281102	28.0	38.0	7.0	10.0
WCA 0301102	30.0	40.0	5.0	8.0
WCA 0301101 (Stock Size)	30.0	40.0	7.0	10.0
WCA 0321101	32.0	40.0	4.0	7.0
WCA 0321102	32.0	42.0	7.0	10.0
WCA 0321105	32.0	42.0	5.0	7.0

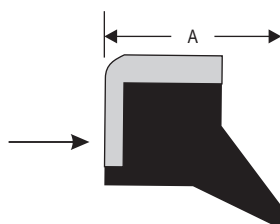
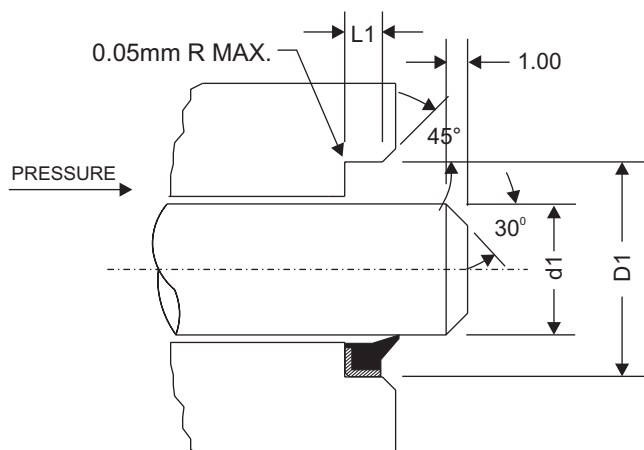
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WCA

TYPE: Heavy Duty

Style WCA Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H8	+0.2

Part No. Nitrile	d1	D1	L1	A
WCA 0321106	32.0	45.0	4.0	8.0
WCA 0321103	32.0	45.0	5.0	7.0
WCA 0321104	32.0	45.0	7.0	10.0
WCA 0331101	33.5	43.0	7.0	10.0
WCA 0351101	35.0	45.0	5.0	8.0
WCA 0351102 (Stock Size)	35.0	45.0	7.0	10.0
WCA 0351103	35.0	47.0	7.0	10.0
WCA 0351104	35.0	52.0	6.0	10.0
WCA 0351105	35.0	52.0	7.0	10.0
WCA 0361101 (Stock Size)	36.0	45.0	7.0	10.0
WCA 0381101	38.0	48.0	7.0	10.0
WCA 0401101	40.0	50.0	5.0	7.0
WCA 0401102	40.0	50.0	5.0	8.0
WCA 0401103 (Stock Size)	40.0	50.0	7.0	10.0
WCA 0401104	40.0	52.0	5.0	8.0
WCA 0401105	40.0	52.0	7.0	10.0
WCA 0421101	42.0	52.0	7.0	10.0
WCA 0451101 (Stock Size)	45.0	55.0	7.0	7.0
WCA 0451102	45.0	60.0	5.0	8.0
WCA 0451103	45.0	60.0	7.0	10.0
WCA 0481101	48.0	60.0	7.0	8.0
WCA 0501101	50.0	56.0	5.0	10.0
WCA 0501102	50.0	60.0	5.0	10.0
WCA 0501103 (Stock Size)	50.0	60.0	7.0	10.0
WCA 0501104	50.0	65.0	5.0	7.0
WCA 0501105	50.0	65.0	7.0	10.0
WCA 0551101	55.0	63.0	7.0	10.0
WCA 0551102	55.0	65.0	7.0	8.0
WCA 0561101	56.0	65.0	7.0	7.0
WCA 0561102 (Stock Size)	56.0	66.0	7.0	10.0
WCA 0601101	60.0	70.0	5.0	7.0
WCA 0601102 (Stock Size)	60.0	70.0	7.0	10.0
WCA 0601103	60.0	74.0	5.0	8.0
WCA 0601104	60.0	75.0	7.0	10.0
WCA 0601105	60.0	80.0	7.0	10.0
WCA 0631101 (Stock Size)	63.0	75.0	7.0	10.0
WCA 0651101 (Stock Size)	65.0	75.0	7.0	10.0
WCA 0701101 (Stock Size)	70.0	80.0	7.0	10.0
WCA 0701102	70.0	82.0	7.0	10.0

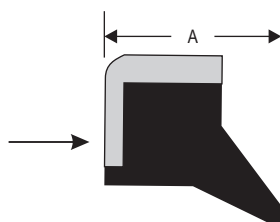
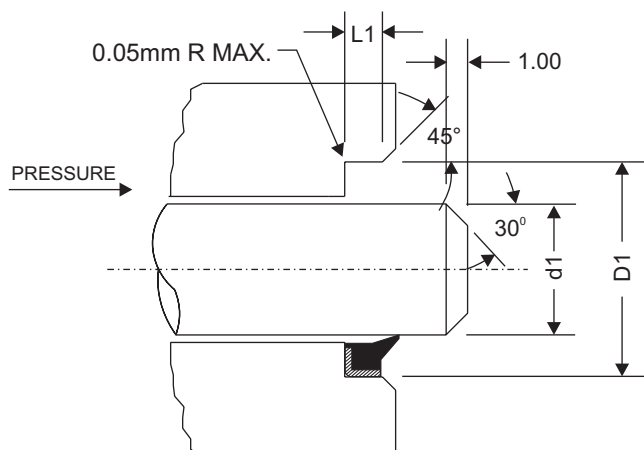
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WCA

TYPE: Heavy Duty

Style WCA Metric Ordering Information (Dimensions in mm)



Tolerance Table		
d1	D1	L1
f8	H8	+0.2

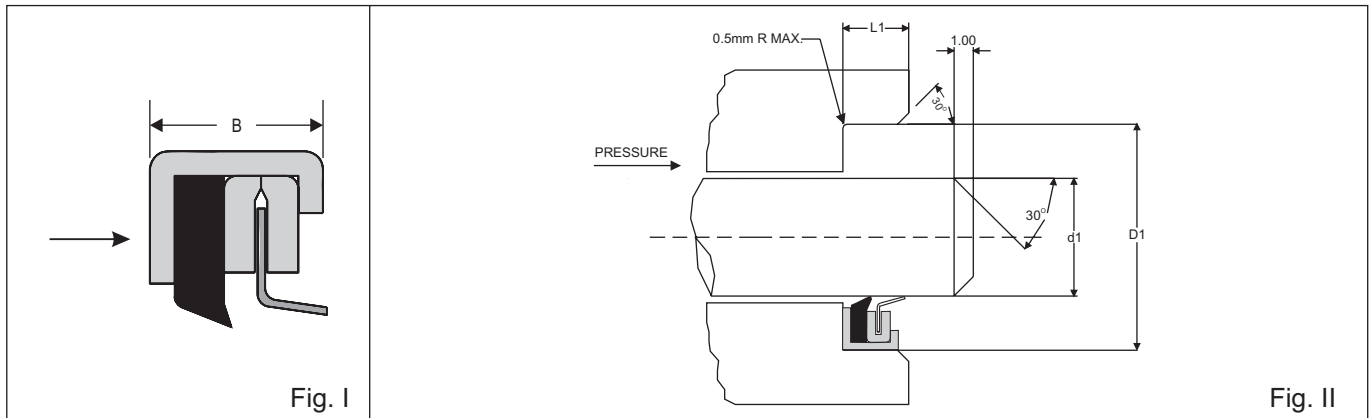
Part No. Nitrile	d1	D1	L1	A
WCA 0751101 (Stock Size)	75.0	85.0	7.0	10.0
WCA 0751102	75.0	87.0	5.0	7.0
WCA 0781101	78.0	88.0	7.0	10.0
WCA 0801101 (Stock Size)	80.0	90.0	7.0	10.0
WCA 0821101	82.0	92.0	7.0	10.0
WCA 0851101 (Stock Size)	85.0	95.0	7.0	10.0
WCA 0901101 (Stock Size)	90.0	100.0	7.0	10.0
WCA 0901102 (Stock Size)	90.0	110.0	7.0	10.0
WCA 0951101	95.0	105.0	7.0	10.0
WCA 1001101 (Stock Size)	100.0	110.0	7.0	10.0
WCA 1051101	105.0	115.0	7.0	10.0
WCA 1101101 (Stock Size)	110.0	120.0	7.0	10.0
WCA 1151101	115.0	125.0	7.0	10.0
WCA 1201101 (Stock Size)	120.0	130.0	7.0	10.0
WCA 1251101 (Stock Size)	125.0	140.0	9.0	12.0
WCA 1301101 (Stock Size)	130.0	145.0	9.0	12.0
WCA 1351101	135.0	145.0	7.0	10.0
WCA 1351102	135.0	150.0	9.0	12.0
WCA 1401101 (Stock Size)	140.0	155.0	9.0	12.0
WCA 1451101	145.0	160.0	9.0	12.0
WCA 1501101 (Stock Size)	150.0	165.0	9.0	12.0
WCA 1601101 (Stock Size)	160.0	175.0	9.0	10.0
WCA 1631101	163.0	175.0	7.0	12.0
WCA 1651101	165.0	180.0	8.0	12.0
WCA 1701101 (Stock Size)	170.0	185.0	9.0	12.0
WCA 1701102	170.0	185.0	10.0	14.0
WCA 1701002	178.6	193.5	8.0	11.0
WCA 1801101 (Stock Size)	180.0	195.0	10.0	14.0
WCA 1851101	185.0	200.0	10.0	14.0
WCA 2001101	200.0	230.0	12.0	16.0
WCA 2001102 (Stock Size)	200.0	220.0	12.0	16.0
WCA 2101101	210.0	230.0	12.0	16.0
WCA 2201101	220.0	240.0	12.0	16.0
WCA 2201102	220.0	235.0	10.0	14.0
WCA 2701101	270.0	295.0	12.0	16.0
WCA 2801101	280.0	300.0	12.0	16.0
WCA 3201101	320.0	340.0	12.0	16.0
WCA 4001101	400.0	420.0	12.0	16.0

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WCE

TYPE: Heavy Duty



MATERIAL:

Primary Lip: Brass Metal

Secondary Lip: NT6/a is an Acrylonitrile Butadiene Rubber compound (NBR) of Hardness 90°A.

Metal Cup: CRC

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 1 m/s.

MAX. SURFACE ROUGHNESS:

Static: 0.8 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Heavy duty.

Earth moving.

Mining equipments.

Steel plants.

DETAILS

The WCE type metal wiper is a single acting wiper with 2 different wiping lips. A thin metallic brass lip & a rubber lip arranged one behind another in a metal cup. The brass lip is designed to remove solid dust particles like mud, ice particles, steel scale, coal etc. and the secondary rubber lip for fine particles like dust, oil, water etc. These wipers are mainly used in dusty environment like mining & steel works.

FEATURES:

Subjected to heavy & dusty areas.

Long life.

Seal retainer not required.

Easy installation.

Maximum advantages compared to elastomeric material wipers.

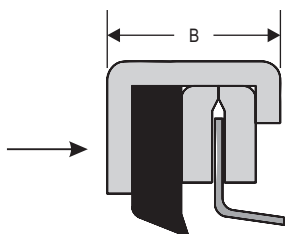
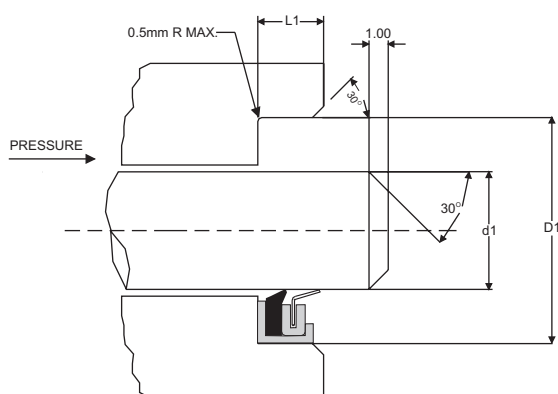
SECTION: WIPER SEAL

STYLE: WCE

TYPE: Heavy Duty

Style WCE Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	d1	D1	L1	B
WCE0121101	12.00	25.00	7.00	6.50
WCE0141101	14.00	27.00	7.00	6.50
WCE0151103	15.00	28.00	7.00	6.50
WCE0161101	16.00	29.00	7.00	6.50
WCE0181101	18.00	31.00	7.00	6.50
WCE0191101	19.05	31.85	7.50	7.14
WCE0201101	20.00	33.00	7.00	6.50
WCE0221102	22.00	35.00	7.00	6.50
WCE0221101	22.22	34.90	7.50	7.14
WCE0251101	25.00	38.00	7.00	6.50
WCE0281101	28.00	41.00	7.00	6.50
WCE0301101	30.00	43.00	7.50	7.00
WCE0321102	32.00	42.00	7.50	7.00
WCE0321101	32.00	44.50	7.50	7.14
WCE0321103	32.00	45.00	7.50	7.00
WCE0351101	35.00	47.70	7.50	7.14
WCE0351102	35.00	48.00	7.50	7.14
WCE0361101	36.00	45.00	5.50	5.00
WCE0361102	36.00	49.00	7.50	7.00
WCE0381101	38.00	51.00	7.50	7.00
WCE0381102	38.10	50.80	7.50	7.14
WCE0401101	40.00	52.00	7.50	7.14
WCE0401102	40.00	53.00	7.50	7.00
WCE0411101	41.28	54.08	7.50	7.14
WCE0441101	44.45	57.15	7.50	7.14
WCE0451101	45.00	58.00	7.50	7.00
WCE0501102	50.00	60.00	5.50	5.00
WCE0501103	50.00	64.00	8.00	7.50
WCE0501101	50.00	65.00	7.50	7.14
WCE0551101	55.00	69.00	8.00	7.50
WCE0561101	56.00	70.00	8.00	7.50
WCE0571101	57.15	69.85	7.50	7.14
WCE0581101	58.00	72.00	8.00	7.50
WCE0601101	60.00	74.00	8.00	7.50
WCE0631101	63.00	77.00	8.00	7.50
WCE0631102	63.50	76.20	8.50	7.90
WCE0651101	65.00	79.00	8.00	7.50
WCE0691101	69.85	82.70	7.50	7.14
WCE0701101	70.00	84.00	8.00	7.50



Tolerance Table		
d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

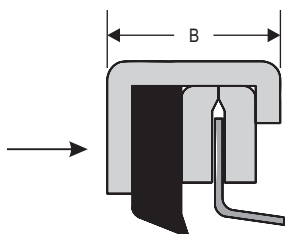
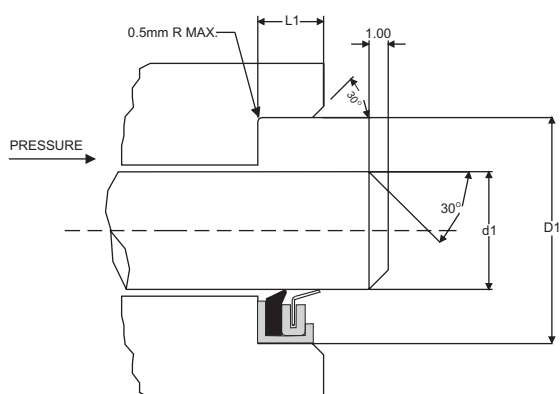
SECTION: WIPER SEAL

STYLE: WCE

TYPE: Heavy Duty

Style WCE Metric Ordering Information (Dimensions in mm)

Part No. Nitrile	d1	D1	L1	B
WCE0751101	75.00	89.00	8.00	7.50
WCE0761101	76.20	88.90	7.50	7.14
WCE0801102	80.00	96.00	8.50	8.00
WCE0801101	80.00	96.00	8.50	8.33
WCE0851101	85.00	101.00	8.50	8.00
WCE0901101	90.00	106.00	8.50	8.00
WCE0901102	90.00	110.00	8.50	8.33
WCE0951101	95.00	111.00	8.50	8.00
WCE1001102	100.00	115.00	5.50	5.00
WCE1001101	100.00	120.00	9.00	8.50
WCE1101102	110.00	130.00	9.00	8.50
WCE1101101	110.00	144.75	15.00	14.00
WCE1201101	120.00	140.00	9.00	8.50
WCE1301101	130.00	150.00	9.00	8.50
WCE1391101	139.70	155.60	9.50	9.10
WCE1401102	140.00	160.00	9.00	8.50
WCE1501101	150.00	170.00	9.00	8.50
WCE1601101	160.00	180.00	9.00	8.50
WCE1701101	170.00	190.00	9.00	8.50
WCEWCE1101	178.00	193.50	8.50	8.00
WCE1801101	180.00	200.00	12.00	10.00
WCE2001101	200.00	230.00	12.00	10.00
WCE2101101	210.00	230.00	12.00	10.00
WCE2201101	220.00	240.00	13.00	12.00
WCE2201102	220.00	250.00	12.00	10.00
WCE2501101	250.00	285.00	12.00	10.00



Tolerance Table

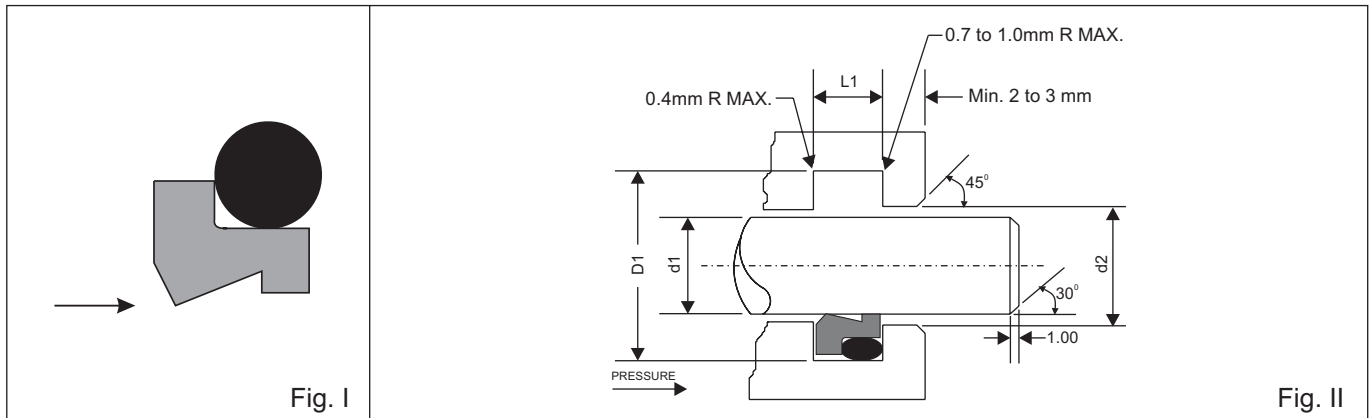
d1	D1	L1
f8	H9	+0.2

Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WTC

TYPE: Medium Duty



MATERIAL:

Outer O'Ring NT4/b : Acrylonitrile Butadiene Rubber (NBR) compound of hardness of shore 'A' 73°.

Inner seal ring BFT : Bronze Filled PTFE compound with Bronze content of 40% (for higher pressure, 60% BFT is recommended).

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +100°C (upto +200°C on request).

Speed: 10 m/s.

MAX. SURFACE ROUGHNESS:

Static: 1.6 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Medium duty can also be used with heavy duty cycle applications.

Indoor type machines.

DETAILS:

The WTC style wiper seal is suitable for medium, heavy duty hydraulic & for cylinders with small groove dimensions. The WTC wiper seal is a combination of a NBR O'ring energiser & an inner seal ring made of PTFE added with a filler to increase the resistance of the seal ring to wear & tear.

Generally Bronze is used as filler but also Glass/Graphite filled PTFE can be provided on request. The Bronze filled PTFE liner seal ring when in contact with the piston rod ensures a stick slip free movement & reduces friction to a minimum.

FEATURES :

Self lubricating seal ring.

High surface speed.

Friction at minimum.

Compact gland.

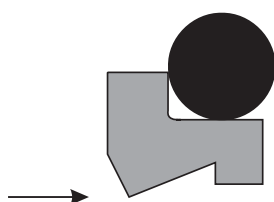
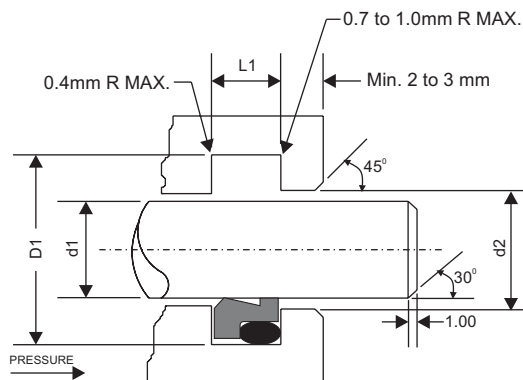
Any size upto 1200 mm available on request.

SECTION: WIPER SEAL

STYLE: WTC

TYPE: Medium Duty

Style WTC Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1
f8	H9
L1	d2
+0.2	H11

Part No. Nitrile	d1	D1	L1	d2	O-Ring Part No.
WTC 0060801	6.0	10.8	3.7	7.5	OR 17807650
WTC 0080801	8.0	12.8	3.7	9.5	OR 17809500
WTC 0100801	10.0	14.8	3.7	11.5	OR 17801140
WTC 0120801	12.0	18.8	5.0	13.5	OR 26201394
WTC 0140801	14.0	20.8	5.0	15.5	OR 26201588
WTC 0150801	15.0	21.8	5.0	16.5	OR 26201733
WTC 0160801	16.0	22.8	5.0	17.5	OR 26201872
WTC 0180801	18.0	24.8	5.0	19.5	OR 26202030
WTC 0200801	20.0	26.8	5.0	21.5	OR 26202180
WTC 0220801	22.0	28.8	5.0	23.5	OR 26202380
WTC 0240801	24.0	30.8	5.0	25.5	OR 26202664
WTC 0250801	25.0	31.8	5.0	26.5	OR 26202786
WTC 0280801	28.0	34.8	5.0	29.5	OR 26202990
WTC 0300801	30.0	36.8	5.0	31.5	OR 26203299
WTC 0320801	32.0	38.8	5.0	33.5	OR 26203459
WTC 0330801	33.0	39.8	5.0	34.5	OR 26203500
WTC 0340801	34.0	40.8	5.0	35.5	OR 26203576
WTC 0350801	35.0	41.8	5.0	36.5	OR 26203700
WTC 0360801	36.0	42.8	5.0	37.5	OR 26203770
WTC 0380801	38.0	44.8	5.0	39.5	OR 26204094
WTC 0400801	40.0	46.8	5.0	41.5	OR 26204252
WTC 0410801	41.0	47.8	5.0	42.5	OR 26204300
WTC 0420801	42.0	48.8	5.0	43.5	OR 26204412
WTC 0430801	43.0	49.8	5.0	44.5	OR 26204569
WTC 0450801	45.0	51.8	5.0	46.5	OR 26204729
WTC 0480801	48.0	54.8	5.0	49.5	OR 26205047
WTC 0500801	50.0	56.8	5.0	51.5	OR 26205207
WTC 0520801	52.0	58.8	5.0	53.5	OR 26205520
WTC 0540801	54.0	60.8	5.0	55.5	OR 26205682
WTC 0550801	55.0	61.8	5.0	56.5	OR 26205710
WTC 0560801	56.0	62.8	5.0	57.5	OR 26205842
WTC 0570801	57.0	63.8	5.0	58.5	OR 26205990
WTC 0600801	60.0	66.8	5.0	61.5	OR 26206160
WTC 0630801	63.0	69.8	5.0	64.5	OR 26206477
WTC 0640801	64.0	70.8	5.0	65.5	OR 26206634
WTC 0650801	65.0	73.8	6.0	66.5	OR 35306800
WTC 0700801	70.0	78.8	6.0	71.5	OR 35307262
WTC 0720801	72.0	80.8	6.0	73.5	OR 35307400
WTC 0750801	75.0	83.8	6.0	76.5	OR 35307800

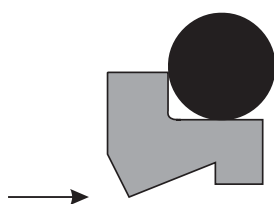
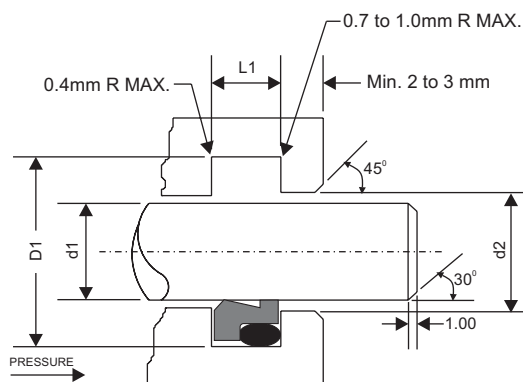
Other sizes available on request.

SECTION: WIPER SEAL

STYLE: WTC

TYPE: Medium Duty

Style WTC Metric Ordering Information (Dimensions in mm)



Tolerance Table			
d1	D1	L1	d2
f8	H9	+0.2	H11

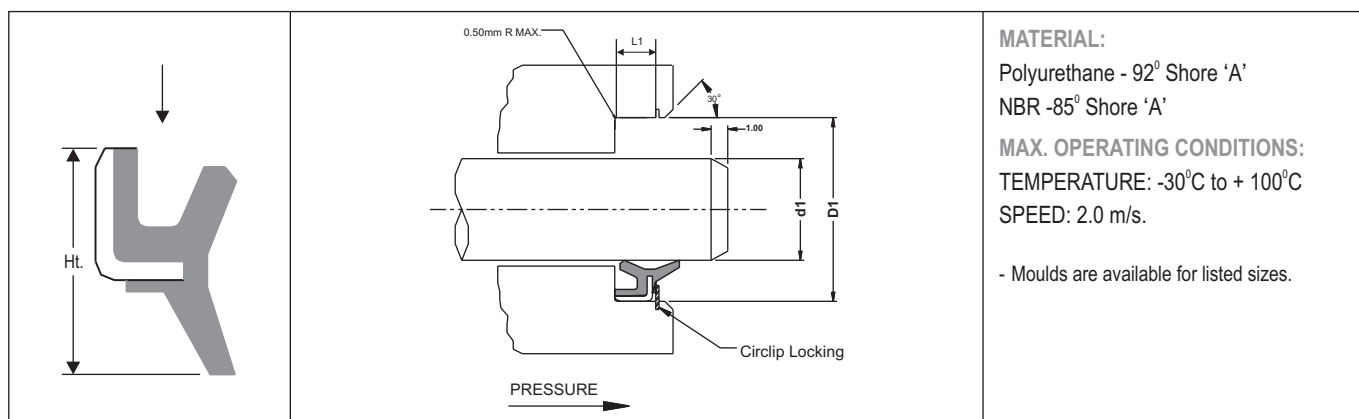
Part No. Nitrile	d1	D1	L1	d2	O-Ring Part No.
WTC 0800801	80.0	88.8	6.0	81.5	OR 35308350
WTC 0850801	85.0	93.8	6.0	86.5	OR 35308800
WTC 0900801	90.0	98.8	6.0	91.5	OR 35309400
WTC 0920801	92.0	100.8	6.0	93.5	OR 35309484
WTC 0950801	95.0	103.8	6.0	96.5	OR 35309800
WTC 1000801	100.0	108.8	6.0	101.5	OR 35310438
WTC 1040801	104.0	112.8	6.0	105.5	OR 35310754
WTC 1050801	105.0	113.8	6.0	106.5	OR 35310800
WTC 1060801	106.0	114.8	6.0	107.5	OR 35311000
WTC 1100801	110.0	118.8	6.0	111.5	OR 35311300
WTC 1150801	115.0	123.8	6.0	116.5	OR 35311800
WTC 1200801	120.0	128.8	6.0	121.5	OR 35312250
WTC 1250801	125.0	133.8	6.0	126.5	OR 35312800
WTC 1270801	127.0	135.8	6.0	128.5	OR 35312977
WTC 1300801	130.0	138.8	6.0	131.5	OR 35313300
WTC 1350801	135.0	143.8	6.0	136.5	OR 35313920
WTC 1400801	140.0	148.8	6.0	141.5	OR 35314250
WTC 1500801	150.0	158.8	6.0	151.5	OR 35315200
WTC 1600801	160.0	168.8	6.0	161.5	OR 35316300
WTC 1700801	170.0	178.8	6.0	171.5	OR 35317300
WTC 1800801	180.0	188.8	6.0	181.5	OR 35318374
WTC 1900801	190.0	198.8	6.0	191.5	OR 35319400
WTC 2000801	200.0	208.8	6.0	201.5	OR 35320300
WTC 2050801	205.0	213.8	6.0	206.5	OR 35320900
WTC 2100801	210.0	218.8	6.0	211.5	OR 35321550
WTC 2200801	220.0	228.8	6.0	221.5	OR 35322184
WTC 2300801	230.0	238.8	6.0	231.5	OR 35323364
WTC 2350801	235.0	243.8	6.0	236.5	OR 35324089
WTC 2400801	240.0	248.8	6.0	241.5	OR 35324460
WTC 2500801	250.0	258.8	6.0	251.5	OR 35325400
WTC 2600801	260.0	272.2	8.4	262.0	OR 53326600
WTC 2700801	270.0	282.2	8.4	272.0	OR 53327880
WTC 2800801	280.0	292.2	8.4	282.0	OR 53328300
WTC 2900801	290.0	302.2	8.4	292.0	OR 53329300
WTC 3000801	300.0	312.2	8.4	302.0	OR 53330300
WTC 3200801	320.0	332.2	8.4	322.0	OR 53332500
WTC 3500801	350.0	362.2	8.4	352.0	OR 53335497
WTC 3600801	360.0	372.2	8.4	362.0	OR 53336500
WTC 4000801	400.0	412.2	8.4	402.0	OR 53340526

Other sizes available on request.

SECTION: WIPER SEALS

STYLE: WCC

TYPE: Single Acting



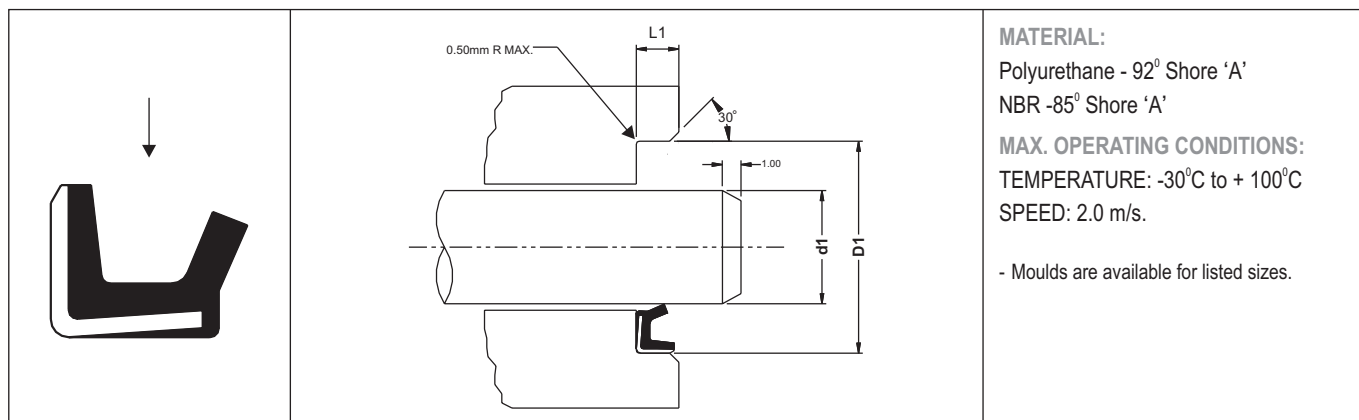
Style WCC Metric Ordering Information (Dimensions in mm)

Internal Part No.	d1 (f8)	D1 (H8)	L1 (+0.2)	Ht.	Internal Part No.	d1 (f8)	D1 (H8)	L1 (+0.2)	Ht.
WPH-513	8.00	14.00	7.00	10.00	WPS-898	50.00	60.00	7.00	10.00
WPS-847	9.52	14.27	2.38	3.66	WPH-132	55.00	69.00	8.00	11.50
WPH-174	16.00	23.00	5.00	7.00	WPH-131	60.00	74.00	8.00	11.50
WPH-349	18.90	27.30	5.50	7.00	WPS-664	60.00	73.00	7.00	10.00
WPH-216	19.00	27.00	4.00	6.00	WPS-899	63.00	73.00	7.00	10.00
WPH-477	19.00	27.00	5.00	7.00	WPH-122	65.00	79.00	8.00	11.50
WPH-478	19.00	26.00	5.00	7.00	WPH-123	70.00	84.00	8.00	11.50
WPS-1698	19.00	27.00	4.00	5.00	WPS-900	70.00	80.00	7.00	10.00
WPS-1706	19.00	27.00	4.00	6.00	WPH-126	75.00	89.00	8.00	11.50
WPH-514	20.00	26.00	7.00	10.00	WPH-130	80.00	94.00	8.00	11.50
WPH-515	22.00	32.00	7.00	10.00	WPH-173	85.00	99.00	8.00	12.00
WPH-516	25.00	35.00	7.00	10.00	WPH-404	90.00	104.00	8.00	11.00
WPH-350	25.25	33.60	4.00	6.00	WPS-1284	90.00	105.00	7.00	10.00
WPS-1699	25.40	32.00	4.00	6.00	WPH-129	95.00	109.00	8.00	11.50
WPS-1697	25.40	34.92	5.00	5.60	WPH-222	100.00	114.00	8.00	12.00
WPS-1915	25.40	34.93	4.50	6.50	WPS-1502	105.00	130.00	12.00	16.00
WPH-247	35.00	47.00	7.00	10.00	WPH-450	110.00	126.00	9.00	12.50
WPH-136	36.00	48.00	7.00	10.00	WPH-480	130.00	146.00	9.00	12.00
WPH-137	40.00	52.00	7.00	10.00	WPH-479	160.00	180.00	10.00	14.00
WPS-2013	40.00	48.60	5.00	7.00	WPS-1017	200.00	228.60	9.50	15.80
WPS-1424	45.00	57.00	7.00	10.50	WPS-1015	450.85	482.60	12.70	19.00
WPH-135	50.00	62.00	7.00	10.00	WPS-1018	454.00	488.95	12.70	19.00

SECTION: WIPER SEALS

STYLE: WCF

TYPE: Single Acting



MATERIAL:

Polyurethane - 92° Shore 'A'

NBR -85° Shore 'A'

MAX. OPERATING CONDITIONS:

TEMPERATURE: -30°C to + 100°C

SPEED: 2.0 m/s.

- Moulds are available for listed sizes.

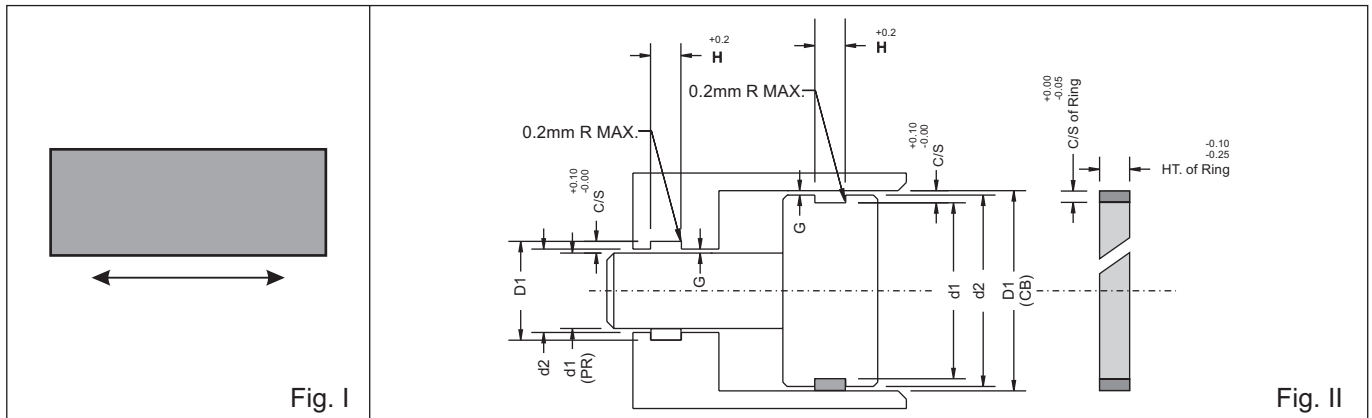
Style WCF Metric Ordering Information (Dimensions in mm)

Internal Part No.	d1 (f8)	D1 (H8)	L1 (+0.2)	Internal Part No.	d1 (f8)	D1 (H8)	L1 (+0.2)	Internal Part No.	d1 (f8)	D1 (H8)	L1 (+0.2)
WPH-296	6.00	14.00	5.00	WPS-1707	50.80	68.26	9.52	WPH-397	80.00	90.00	4.50
WPS-271	15.87	28.57	3.17	WPS-1891	50.80	63.50	9.52	WPS-1934	80.00	95.00	9.00
WPS-1929	16.00	24.00	4.70	WPS-1388	50.80	63.50	7.94	WPS-1513	82.55	107.95	12.70
WPH-406	25.40	36.51	6.35	WPS-1548	52.00	68.00	6.00	WPS-1489	85.00	97.00	6.75
WPS-1873	26.70	42.00	7.00	WPH-407	53.98	73.02	9.52	WPH-398	85.00	100.00	4.00
WPS-1930	26.98	38.10	4.70	WPH-568	55.00	65.00	3.18	WPH-405	87.31	114.30	11.11
WPS-1872	28.00	42.00	10.00	WPS-1371	55.00	65.00	3.50	WPS-1517	88.90	114.30	12.70
WPH-467	28.00	38.00	7.00	WPH-191	57.12	69.85	7.94	WPS-897	88.90	105.00	8.00
WPH-402	31.75	44.45	6.35	WPS-1519	57.15	76.20	9.52	WPH-395	90.00	100.00	4.50
WPH-510	31.75	52.37	9.52	WPS-1400	60.00	75.00	4.00	WPH-138	90.00	105.00	5.00
WPH-512	31.75	44.45	8.00	WPS-1478	60.00	75.00	8.00	WPS-1935	95.00	115.00	9.00
WPS-2035	32.00	42.00	4.50	WPS-1137	60.00	70.00	4.50	WPH-105	100.00	114.00	8.00
WPS-1715	33.00	36.22	3.17	WPH-140	60.00	75.00	5.00	WPS-1514	101.60	127.00	14.28
WPH-411	38.00	50.00	4.00	WPH-133	60.32	79.58	9.52	WPS-856	101.60	120.65	7.92
WPH-412	38.00	48.00	4.00	WPH-190	63.50	76.20	7.93	WPH-400	110.00	125.00	7.00
WPH-297	38.10	50.80	6.35	WPH-339	63.50	82.55	9.52	WPH-410	114.30	130.17	7.95
WPH-337	38.10	57.15	9.52	WPS-1518	63.50	82.55	9.52	WPS-855	114.30	139.70	12.70
WPS-1521	38.10	57.15	9.52	WPS-1890	63.50	76.20	7.93	WPS-2008	115.00	130.00	14.00
WPS-1686	38.10	50.80	8.00	WPS-1392	64.00	74.00	5.00	WPH-469	120.65	136.52	7.93
WPS-1401	40.00	50.00	4.00	WPH-141	65.00	80.00	5.00	WPS-1065	125.00	140.00	7.00
WPH-340	44.45	61.91	9.52	WPS-1515	69.85	95.25	12.70	WPH-553	125.00	140.00	7.00
WPH-144	45.00	55.00	4.50	WPS-1397	70.00	85.00	4.00	WPH-489	139.70	155.57	9.52
WPS-1398	45.00	55.00	4.00	WPS-1402	70.00	80.00	4.00	WPH-468	152.40	168.28	9.53
WPS-1399	45.00	60.00	4.00	WPH-142	70.00	85.00	5.00	WPH-420	177.80	203.20	12.70
WPH-567	45.00	55.00	3.18	WPH-396	70.00	80.00	5.00	WPH-391	177.80	196.85	7.94
WPS-1135	45.00	55.00	4.50	WPH-399	75.00	90.00	4.50	WPS-1739	177.80	203.20	12.70
WPS-1520	45.00	62.00	9.50	WPH-418	75.00	90.00	7.50	WPH-383	203.20	222.25	9.52
WPS-1363	48.00	58.00	5.00	WPH-147	75.00	90.00	5.00	WPH-552	203.20	222.25	9.52
WPS-1136	50.00	60.00	4.00	WPS-1490	75.00	87.00	6.00	WPH-458	228.60	250.82	7.93
WPH-566	50.00	63.00	4.00	WPS-1516	76.20	101.60	12.70	WPH-522	440.00	480.00	20.00
WPS-1403	50.00	65.00	4.00	WPH-491	79.37	95.25	7.93				
WPH-139	50.00	65.00	5.00	WPH-484	79.37	92.07	4.76				
WPS-1663	50.00	62.00	6.80	WPH-143	80.00	95.00	5.00				

SECTION: WEAR RING

STYLE: GA

TYPE: Medium Duty Bearing Rings



MATERIAL:

BFT : Bronze filled PTFE compound with Bronze content of 40%. (For higher load bearing, 60% BFT is recommended).

MAX. OPERATING CONDITIONS:

Temp. range: -50°C to +200°C.

Compressive Strength at Yield: 20 N/m² (23°C) 9 N/m² (80°C).

Speed: 6 m/s. (+80°C) 15 m/s. (20°C).

MAX. SURFACE ROUGHNESS:

Static: 3.2 µmRa.

Dynamic: 0.4 µmRa.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

Light to medium duty hydraulic cylinders.

Suitable for pneumatic cylinders.

High speed.

High temperature resistance.

Dry operation.

DETAILS:

The GA wear ring is supplied usually in split form. (The split is oblique for Reciprocating / Oscillating application & straight for rotary). If required running lengths are also readily available. The GA wear ring is the most widely used general purpose wear ring.

The material used is PTFE with a Bronze content of 40%. For further improvement in performance, a Bronze content of 60% can be made available on request.

The GA wear ring can be cut to length to suit your specific requirements. Length not only has to be calculated depending on the Rod/Cylinder bore diameter, but also considering thermal expansion in the GA wear ring in operation.

CALCULATION OF LENGTH:

The centre line diameter multiplied by π (3.14) gives us the circumference length of wear ring. But allowance for thermal expansion is to be provided. Therefore we reduce the π i.e 3.14 to 3.13 & to a minimum gap of 1.5 mm for small diameters.

FEATURES:

General purpose.

Stick slip free operation.

Dirt ring to protect piston / rod seal.

High temperature resistance.

Improved resistance to high speed cylinders.

Low co-efficient of friction.

Very economical.

SECTION : WEAR RINGS

STYLE : GA

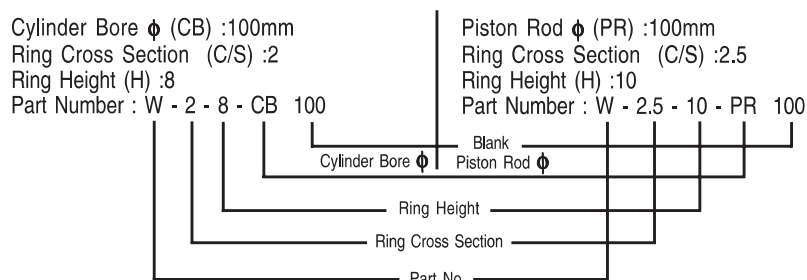
TYPE : Medium Duty Bearing Rings

Style GA Metric Ordering Information (Dimensions in mm)

Part No.	Ring Cross Section C/S	Ring Height H +0.00 -0.20	GAP Min./Max. G	Cylinder Bore ϕ CB (H11)	Piston Rod ϕ PR (f8)
W-1.5 - 4.0- CB ϕ ----- mm PR ϕ ----- mm	1.5	4.0	0.65 / 1.00	10 to 25	8 to 20
W-1.5 - 5.6- CB ϕ ----- mm PR ϕ ----- mm	1.5	5.6 (Stock Size)	0.65 / 1.00	10 to 25	8 to 20
W-2.0 - 8.0- CB ϕ ----- mm PR ϕ ----- mm	2.0	8.0 (Stock Size)	0.75 / 1.10	40 to 320	35 to 300
W-2.0 - 10.0- CB ϕ ----- mm PR ϕ ----- mm	2.0	10.0 (Stock Size)	0.75 / 1.10	40 to 320	35 to 300
W-2.5 - 5.6- CB ϕ ----- mm PR ϕ ----- mm	2.5	5.6 (Stock Size)	0.85 / 1.60	25 to 80	20 to 75
W-2.5 - 6.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	6.0	0.85 / 1.60	25 to 80	20 to 75
W-2.5 - 8.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	8.0	0.85 / 1.60	40 to 320	35 to 300
W-2.5 - 9.7- CB ϕ ----- mm PR ϕ ----- mm	2.5	9.7 (Stock Size)	0.85 / 1.60	40 to 320	35 to 300
W-2.5 - 10.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	10.0	0.85 / 1.60	40 to 320	35 to 300
W-2.5 - 12.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	12.0	0.85 / 1.60	90 to 800	95 to 800
W-2.5 - 15.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	15.0 (Stock Size)	0.85 / 1.60	125 to 900	120 to 900
W-2.5 - 20.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	20.0	0.85 / 1.60	200 to 900	200 to 900
W-2.5 - 25.0- CB ϕ ----- mm PR ϕ ----- mm	2.5	25.0	0.85 / 1.60	300 to 900	300 to 900
W-3.0 - 20.0- CB ϕ ----- mm PR ϕ ----- mm	3.0	20.0 (Stock Size)	0.85 / 1.60	300 to 900	300 to 900
W-3.17 - 9.5- CB ϕ ----- mm PR ϕ ----- mm	3.17	9.5 (Stock Size)	0.85 / 1.60	300 to 900	300 to 900
W-3.17 - 15.8- CB ϕ ----- mm PR ϕ ----- mm	3.17	15.8	0.85 / 1.60	300 to 900	300 to 900
W-3.17 - 25.4- CB ϕ ----- mm PR ϕ ----- mm	3.17	25.4 (Stock Size)	0.85 / 1.60	300 to 900	300 to 900

Note : GAP 'G' is normally determined while closing the Piston / Rod Seal. The Wear Ring performance depends largely on the selection of the gap chosen.

Example :

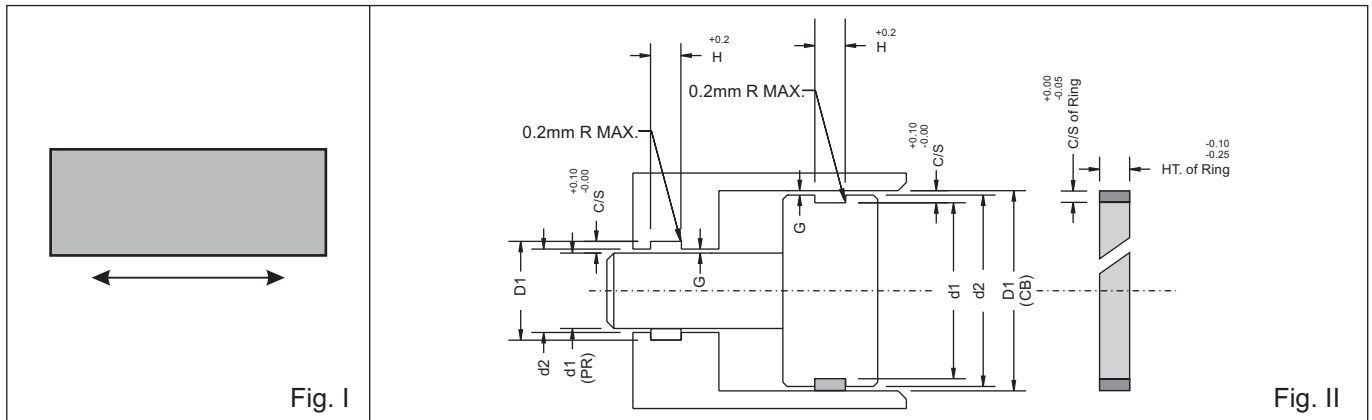


Other sizes available on request.

SECTION : WEAR RINGS

STYLE : GB

TYPE : Heavy Duty Bearing Rings



MATERIAL:

Phenolic Resin Fabric.

MAX. OPERATING CONDITIONS:

Temp. range: $-30^{\circ}C$ to $+120^{\circ}C$.

Composite Strength Yield: $90 N/mm^2$ ($80^{\circ}C$).

Speed: $2 m/s.$ ($+20^{\circ}C$) $0.5 m/s.$ ($+80^{\circ}C$).

MAX. SURFACE ROUGHNESS:

Static: $1.0\mu mRa$.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

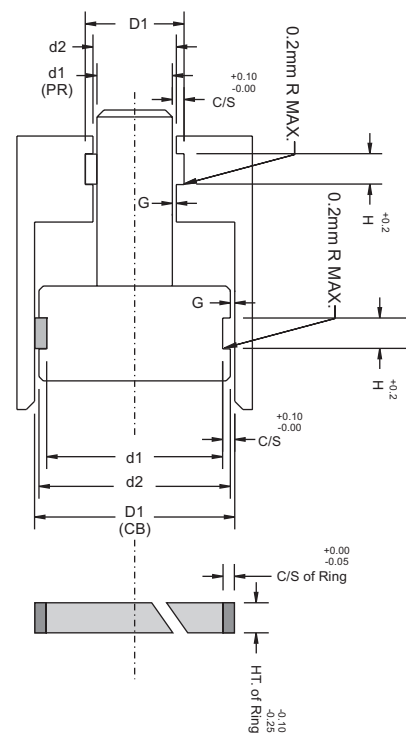
Heavy duty operation, preferably in conjunction with type GA wear rings.

SECTION : WEAR RINGS

STYLE : GB

TYPE : Heavy Duty Bearing Rings

Style GB Metric Ordering Information (Dimensions in mm)



Tolerance Table		
D1	d1	d2
H11	f8	H11

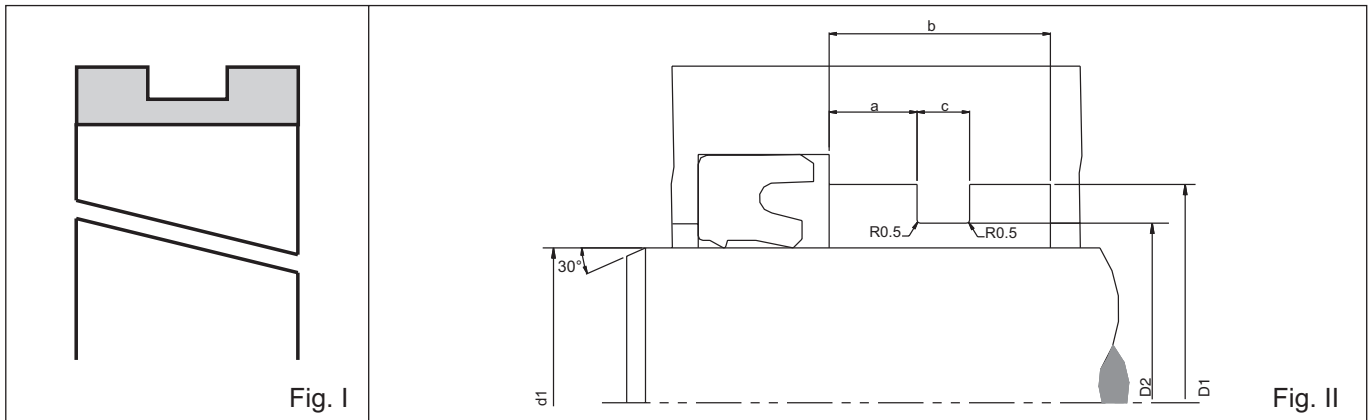
Part No.	D1	d1	H	d2
GB 0258101	31	25	10	28
GB 0348101	40	34	10	37
GB 0358101	41	35	10	38
GB 0468101	50	46	10.5	48
GB 0548101	60	54	10	57
GB 0558101	61	55	26	58
GB 0648101	70	64	13	67
GB 0658102	70	65	9.3	68
GB 0658101	71	65	13	68
GB 0708101	75	70	9.3	73
GB 0748101	80	74	13	77
GB 0758102	80	75	9.3	78
GB 0758101	81	75	13	78
GB 0808102	85	80	9.3	83
GB 0808101	85	80	15	83
GB 0848101	90	84	13	87
GB 0858101	91	85	13	88
GB 0908101	95	90	15	93
GB 0948101	100	94	13	97
GB 0958101	100	95	9.3	98
GB 0988101	105	98.8	19.4	102
GB 1008101	106	100	13	103
GB 1108101	115	110	15	113
GB 1158101	120	115	15	118
GB 1198101	125	119	19.5	122
GB 1258101	131	125	13	128
GB 1288101	135	128.8	19.4	132
GB 1308101	136	130	13	133
GB 1348101	140	134	13	137

Other sizes available on request.

SECTION : WEAR RINGS

STYLE : GC

TYPE : Heavy Duty Bearing Rings



MATERIAL :

Phenolic Resin Fabric.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +120°C.

Composite Strength Yield: 90 N/mm² (80°C).

Speed: 2 m/s. (+20°C) 0.5 m/s. (+80°C).

MAX. SURFACE ROUGHNESS :

Static : 1.0µmRa.

COMPATIBILITY :

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION :

Earth moving equipments.

Construction machines.

Heavy duty hydraulic cylinders.

DETAILS:

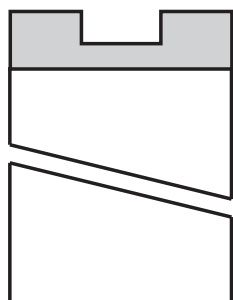
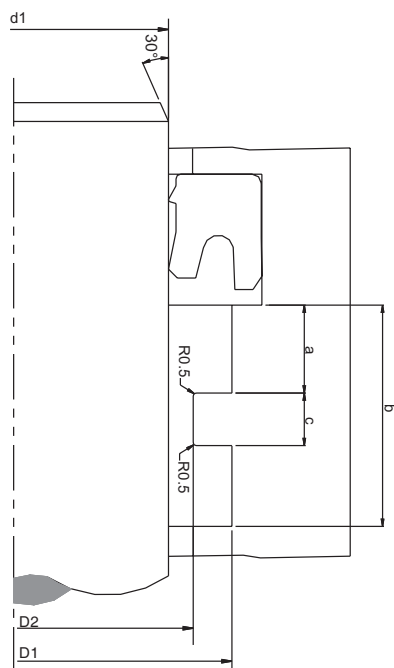
Spareage GC style rod guide ring is a heavy duty bearing ring mostly used in heavy load conditions. It can be use as a single or multiple rings arranged adjacent to each other. The number of bearing rings depend on the expected side load.

SECTION : WEAR RINGS

STYLE : GC

TYPE : Heavy Duty Bearing Rings

Style GC Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1	D2	b	c	a
f8	H9	H9	D10	d10	D10

Part No.	d1	b	D1	D2	c	a
GC0228201	22.0	19.0	28.0	25.0	6.00	6.50
GC0258201	25.0	19.0	31.0	28.0	6.00	6.50
GC0288201	28.0	19.0	34.0	31.0	6.00	6.50
GC0308201	30.0	19.0	36.0	33.0	6.00	6.50
GC0328201	32.0	19.0	38.0	35.0	6.00	6.50
GC0358201	35.0	19.0	41.0	38.0	6.00	6.50
GC0368201	36.0	19.0	42.0	39.0	6.00	6.50
GC0408201	40.0	19.0	46.0	43.0	6.00	6.50
GC0428201	42.0	19.0	48.0	45.0	6.00	6.50
GC0458201	45.0	19.0	51.0	48.0	6.00	6.50
GC0508201	50.0	19.0	56.0	53.0	6.00	6.50
GC0558201	55.0	19.0	61.0	58.0	6.00	6.50
GC0568201	56.0	19.0	62.0	59.0	6.00	6.50
GC0608201	60.0	24.0	70.0	65.0	7.00	8.50
GC0638201	63.0	24.0	73.0	68.0	7.00	8.50
GC0658201	65.0	24.0	75.0	70.0	7.00	8.50
GC0708201	70.0	24.0	80.0	75.0	7.00	8.50
GC0728201	72.0	24.0	82.0	77.0	7.00	8.50
GC0738201	73.0	24.0	84.0	78.0	7.00	8.50
GC0758201	75.0	24.0	85.0	80.0	7.00	8.50
GC0788201	78.0	24.0	88.0	83.0	7.00	8.50
GC0808201	80.0	24.0	90.0	85.0	7.00	8.50
GC0838201	83.0	24.0	93.0	88.0	7.00	8.50
GC0858201	85.0	24.0	95.0	90.0	7.00	8.50
GC0908201	90.0	24.0	100.0	95.0	7.00	8.50
GC0958201	95.0	24.0	105.0	100.0	7.00	8.50
GC0968201	96.0	24.0	106.0	101.0	7.00	8.50
GC1008202	100.0	19.0	106.0	103.0	6.00	6.50
GC1008201	100.0	24.0	110.0	105.0	7.00	8.50
GC1058201	105.0	24.0	115.0	110.0	7.00	8.50
GC1108201	110.0	24.0	120.0	115.0	7.00	8.50
GC1158201	115.0	24.0	125.0	120.0	7.00	8.50
GC1208201	120.0	24.0	130.0	125.0	7.00	8.50
GC1258202	125.0	24.0	135.0	130.0	7.00	8.50
GC1308201	130.0	24.0	140.0	135.0	7.00	8.50
GC1408201	140.0	24.0	150.0	145.0	7.00	8.50
GC1458201	145.0	24.0	155.0	150.0	7.00	8.50
GC1508201	150.0	35.0	162.0	156.0	15.0	10.0
GC1558201	155.0	35.0	167.0	161.0	15.0	10.0

Other sizes available on request.

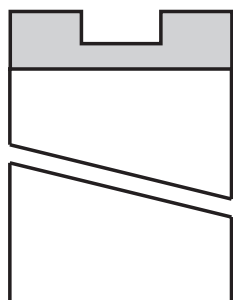
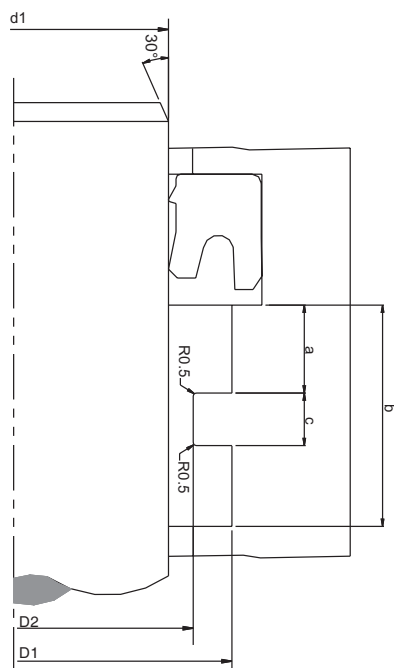
Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION : WEAR RINGS

STYLE : GC

TYPE : Heavy Duty Bearing Rings

Style GC Metric Ordering Information (Dimensions in mm)



Tolerance Table

d1	D1	D2	b	c	a
f8	H9	H9	D10	d10	D10

Part No.	d1	b	D1	D2	c	a
GC1608201	160.0	24.0	170.0	165.0	7.00	8.50
GC1608202	160.0	35.0	172.0	166.0	15.0	10.0
GC1658201	165.0	35.0	177.0	171.0	15.0	10.0
GC1678201	167.0	24.0	177.0	172.0	7.00	8.50
GC1708201	170.0	35.0	182.0	176.0	15.0	10.0
GC1808201	180.0	24.0	190.0	185.0	7.00	8.50
GC1808202	180.0	35.0	192.0	186.0	15.0	10.0
GC1908201	190.0	35.0	202.0	196.0	15.0	10.0
GC2008201	200.0	35.0	212.0	206.0	15.0	10.0
GC2208201	220.0	35.0	232.0	226.0	15.0	10.0
GC2258201	225.0	35.0	237.0	231.0	15.0	10.0
GC2408201	240.0	35.0	252.0	246.0	15.0	10.0
GC2508201	250.0	35.0	262.0	256.0	15.0	10.0
GC2608201	260.0	35.0	272.0	266.0	15.0	10.0
GC2808201	280.0	35.0	292.0	286.0	15.0	10.0
GC2908201	290.0	35.0	303.0	296.0	15.0	10.0
GC3008201	300.0	24.0	310.0	305.0	7.00	8.50
GC3008202	300.0	35.0	312.0	306.0	15.0	10.0
GC3208201	320.0	35.0	332.0	326.0	15.0	10.0
GC3508201	350.0	35.0	362.0	356.0	15.0	10.0
GC3608201	360.0	35.0	372.0	366.0	15.0	10.0
GC3808201	380.0	35.0	392.0	386.0	15.0	10.0
GC4008201	400.0	35.0	412.0	406.0	15.0	10.0
GC4158201	415.0	35.0	427.0	421.0	15.0	10.0
GC4208201	420.0	35.0	432.0	426.0	15.0	10.0
GC4258201	425.0	35.0	437.0	431.0	15.0	10.0
GC4508201	450.0	35.0	462.0	456.0	15.0	10.0
GC4808201	480.0	35.0	492.0	486.0	15.0	10.0
GC5008201	500.0	35.0	512.0	506.0	15.0	10.0
GC5608201	560.0	35.0	572.0	566.0	15.0	10.0
GC6008201	600.0	35.0	612.0	606.0	15.0	10.0
GC6308201	630.0	35.0	642.0	636.0	15.0	10.0

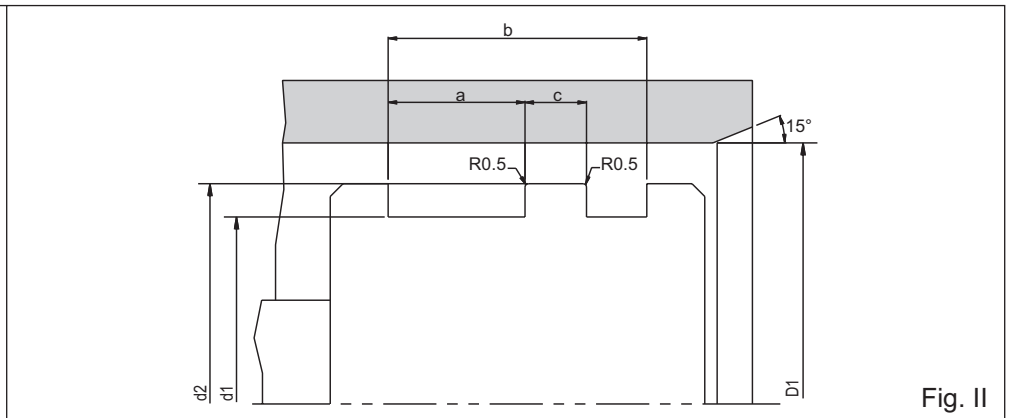
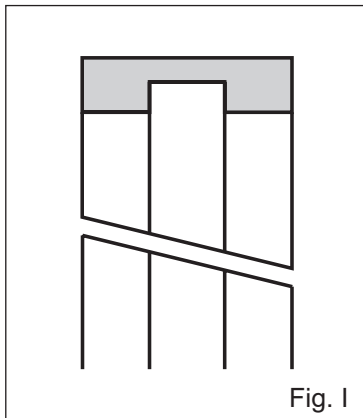
Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION : WEAR RINGS

STYLE : GE

TYPE : Heavy Duty Bearing Rings



MATERIAL :

Phenolic Resin Fabric.

MAX. OPERATING CONDITIONS:

Temp. range: -30°C to +120°C.

Composite Strength Yield: 90 N/mm² (80°C).

Speed: 2 m/s. (+20°C) 0.5 m/s. (+80°C).

MAX. SURFACE ROUGHNESS :

Static : 1.0µmRa.

COMPATIBILITY :

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION :

Earth moving equipments.

Construction machines.

Heavy duty hydraulic cylinders.

DETAILS:

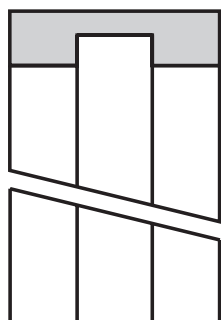
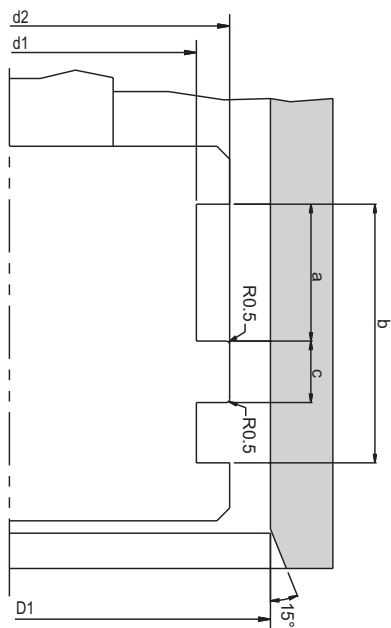
Spareage GE style piston guide ring is a heavy duty bearing ring mostly used in heavy load conditions. It can be use as a single or multiple rings arranged adjacent to each other. The number of bearing rings depend on the expected side load.

SECTION : WEAR RINGS

STYLE : GE

TYPE : Heavy Duty Bearing Rings

Style GE Metric Ordering Information (Dimensions in mm)



Tolerance Table

D1	d1	b	d2	c	a
H9	f8	D10	f8	d10	D10

Part No.	D1	b	d1	d2	c	a
GE0328201	40.0	12.0	32.0	36.0	3.50	4.70
GE0378201	45.0	12.0	37.0	41.0	3.00	4.70
GE0428201	50.0	12.0	42.0	46.0	3.00	6.20
GE0478201	55.0	12.0	47.0	51.0	3.00	6.20
GE0488201	56.0	12.0	48.0	52.0	3.00	6.20
GE0498201	57.0	12.0	49.0	53.0	3.00	6.20
GE0508201	58.0	12.0	50.0	54.0	3.00	6.20
GE0528201	60.0	12.0	52.0	56.0	3.00	6.20
GE0558201	63.0	12.0	55.0	59.0	3.00	6.20
GE0578201	65.0	12.0	57.0	61.0	3.00	6.20
GE0628201	70.0	12.0	62.0	66.0	3.00	6.20
GE0678201	75.0	12.0	67.0	71.0	3.00	6.20
GE0728201	80.0	10.6	72.0	76.0	3.00	3.80
GE0728202	80.0	14.0	72.0	76.0	3.00	7.20
GE0778201	85.0	14.0	77.0	81.0	3.00	7.20
GE0828201	90.0	14.0	82.0	86.0	3.00	7.20
GE0878201	95.0	14.0	87.0	91.0	3.00	7.20
GE0928202	100.0	10.6	92.0	96.0	3.00	3.80
GE0928201	100.0	14.0	92.0	96.0	3.00	7.20
GE0978201	105.0	14.0	97.0	101.0	3.00	7.20
GE1028201	110.0	14.0	102.0	106.0	3.00	7.20
GE1078201	115.0	14.0	107.0	111.0	3.00	7.20
GE1128201	120.0	10.6	112.0	116.0	3.00	3.80
GE1128202	120.0	14.0	112.0	116.0	3.00	7.20
GE1158201	125.0	17.5	115.0	121.0	4.00	9.20
GE1208201	130.0	12.6	120.0	126.0	4.00	4.30
GE1208202	130.0	17.5	120.0	126.0	4.00	9.20
GE1248201	134.6	17.5	124.6	129.6	4.00	9.20
GE1248202	134.6	24.0	124.6	129.6	7.00	8.50
GE1258201	135.0	17.5	125.0	131.0	4.00	9.20
GE1308201	140.0	17.5	130.0	136.0	4.00	9.20
GE1358201	145.0	17.5	135.0	141.0	4.00	9.20
GE1408201	150.0	17.5	140.0	146.0	4.00	9.20
GE1458201	155.0	17.5	145.0	151.0	4.00	9.20
GE1508201	160.0	17.5	150.0	156.0	4.00	9.20
GE1558201	165.0	20.0	155.0	161.0	6.00	9.20
GE1608201	170.0	20.0	160.0	166.0	6.00	9.20
GE1708201	180.0	20.0	170.0	176.0	6.00	9.20
GE1708202	180.0	24.0	170.0	175.0	7.00	8.50

Other sizes available on request.

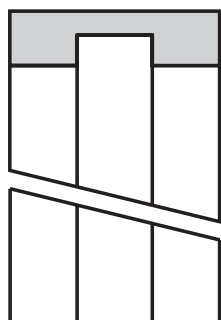
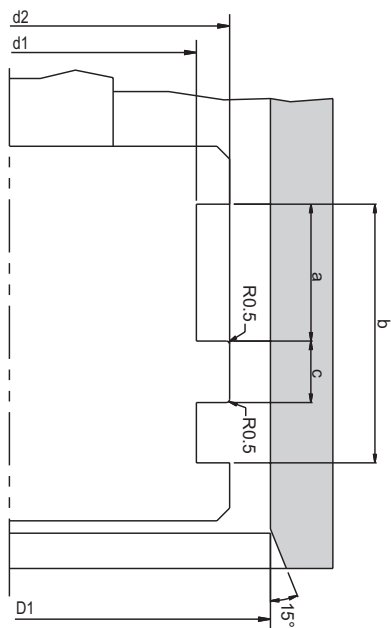
Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION : WEAR RINGS

STYLE : GE

TYPE : Heavy Duty Bearing Rings

Style GE Metric Ordering Information (Dimensions in mm)



Tolerance Table

D1	d1	b	d2	c	a
H9	f8	D10	f8	d10	D10

Part No.	D1	b	d1	d2	c	a
GE1808201	190.0	20.0	180.0	186.0	4.50	11.70
GE1908201	200.0	20.0	190.0	196.0	4.50	11.70
GE2008201	210.0	25.0	200.0	206.0	8.00	11.70
GE2108201	220.0	25.0	210.0	216.0	8.00	11.70
GE2158201	225.0	24.0	215.0	220.0	7.00	8.50
GE2158202	225.0	25.0	215.0	221.0	8.00	11.70
GE2208201	230.0	25.0	220.0	226.0	8.00	11.70
GE2258201	235.0	33.0	225.0	231.0	15.0	11.70
GE2308201	240.0	33.0	230.0	236.0	15.0	11.70
GE2408201	250.0	33.0	240.0	246.0	15.0	11.70
GE2558201	265.0	33.0	255.0	261.0	15.0	11.70
GE2658201	275.0	33.0	265.0	271.0	15.0	11.70
GE2708201	280.0	33.0	270.0	276.0	15.0	11.70
GE2808201	290.0	33.0	280.0	286.0	15.0	11.70
GE2908201	300.0	33.0	290.0	296.0	15.0	11.70
GE2988201	310.0	35.0	298.0	304.0	8.50	13.25
GE3088201	320.0	35.0	308.0	314.0	8.50	13.25
GE3288201	340.0	35.0	328.0	334.0	8.50	13.25
GE3388201	350.0	35.0	338.0	344.0	8.50	13.25
GE3488201	360.0	35.0	348.0	354.0	8.50	13.25
GE3688201	380.0	35.0	368.0	374.0	8.50	13.25
GE3888201	400.0	35.0	388.0	394.0	8.50	13.25
GE4088201	420.0	35.0	408.0	414.0	8.50	13.25
GE4138201	425.0	35.0	413.0	419.0	8.50	13.25
GE4388201	450.0	35.0	438.0	444.0	8.50	13.25
GE4688201	480.0	35.0	468.0	474.0	8.50	13.25
GE4888201	500.0	35.0	488.0	494.0	8.50	13.25
GE5488201	560.0	35.0	548.0	554.0	8.50	13.25
GE5888201	600.0	35.0	588.0	594.0	8.50	13.25
GE6188201	630.0	35.0	618.0	624.0	8.50	13.25
GE6388201	650.0	35.0	638.0	644.0	8.50	13.25
GE6888201	700.0	35.0	688.0	694.0	8.50	13.25
GE7388201	750.0	35.0	738.0	744.0	8.50	13.25
GE7688201	780.0	35.0	768.0	774.0	8.50	13.25
GE7888201	800.0	35.0	788.0	794.0	8.50	13.25
GE8388201	850.0	35.0	838.0	844.0	8.50	13.25
GE8888201	900.0	35.0	888.0	894.0	8.50	13.25
GE9388201	950.0	35.0	938.0	944.0	8.50	13.25
GE9888201	1000.0	35.0	988.0	994.0	8.50	13.25

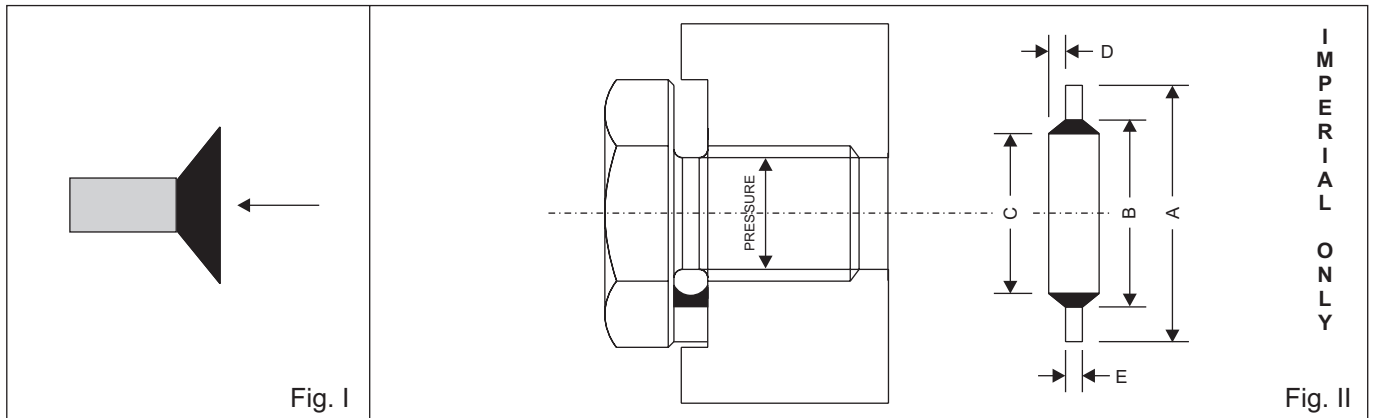
Other sizes available on request.

Standard sizes for housings according to ISO 5597 are printed in bold.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC



MATERIAL:

NT5/b with metal ring.

Spareage NT5/b is a Acrylonitrile Butadiene Compound (NBR) of shore 'A' hardness 85°.

(The standard material is NT5/b but Fluro Rubber +200°c with stainless steel is also available on request).

MAX. OPERATING CONDITIONS:

Temp.: -30°C to +100°C (upto +200°C on request).

Pressure: 1000 BAR.

COMPATIBILITY:

Mineral oils, bio oils, water soluble & water glycol fluids.

APPLICATION:

General purpose seal.

High pressure resistance applications.

DETAILS:

The Spareage style BA seal is a bonded seal combination of NBR seal ring and a metal back up ring. The NBR seal ring is bonded perfectly to the inner portion of the metal back up ring. When a bolt is tightened with BA seal, the NBR seal ring having a Trapezoidal cross section gets compressed to an extent where the bolt cannot be further tightened due to the metal back up ring. Under such state, the NBR seal ring not only has a preload pressure on the mating surface higher than the pressure being sealed, but also forms the profile of a U'ring to withstand higher pressures.

The BA seal can also be provided in high temperature resistant material on request.

FEATURES:

High pressure resistance.

Metal back up.

Most suitable profile.

Standard dimensions.

Note : BA Imperial, BA Cetops (ISO 1179-1973), BA German, BA French & BA Metric are also available.

Refer pg. no. 165, 166, 167, 168, 169 & 170.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC

Style BA Imperial Ordering Information (Dimensions in mm)

Spareage Part No.	ALT. REF	SIZE		A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D	E +0.15 -0.15	MIN. BURST PRESSURE (BAR)
		BSP	BOLT						
BA 0031001	IM-001	-	6BA	6.35	4.09	3.05	0.20/0.45	1.22	2150
BA 0041001	IM-002	-	4BA	7.26	5.26	4.12	0.20/0.45	1.22	1570
BA 0051001	IM-003	-	2BA	8.38	6.35	5.21	0.20/0.45	1.22	1375
BA 0061001	IM-004	-	1/4	13.21	8	6.86	0.20/0.45	1.22	2450
BA 0601002	IM-005	-	1/4	13.34	9.53	6.99	0.20/0.45	1.22	1700
BA 0081001	IM-006	-	5/16	13.34	9.53	8.31	0.20/0.45	1.22	1700
BA 0081002	IM-007	-	5/16	14.22	10.04	8.64	0.20/0.45	1.22	1750
BA 0101001 (Stock Size)	IM-008	1/8	3/8	15.88	11.84	10.37	0.25/0.51	2.03	1500
BA 0111001	IM-009	-	0.4	18.36	12.45	11.26	0.25/0.51	2.03	1950
BA 0111002	IM-010	-	7/16	19.05	13.08	11.69	0.25/0.51	2.03	1900
BA 0131001 (Stock Size)	IM-011	1/4	1/2	20.57	15.21	13.74	0.25/0.51	2.03	1550
BA 0141001	IM-012	-	9/16	22.23	16.39	14.86	0.25/0.51	2.03	1575
BA 0151001	IM-013	-	0.6	22.23	17.3	15.83	0.25/0.51	2.03	1310
BA 0161001	IM-014	-	5/8	25.4	18.75	16.51	0.25/0.51	2.03	1550
BA 0171001 (Stock Size)	IM-015	3/8	-	23.8	18.75	17.28	0.25/0.51	2.03	1260
BA 0181001	IM-016	-	11/16	25.4	19.69	18.16	0.25/0.51	2.49	1320
BA 0191001	IM-017	-	3/4	26.92	21.21	19.69	0.25/0.51	2.49	1260
BA 0211001 (Stock Size)	IM-018	1/2	13/16	28.58	23.01	21.54	0.25/0.51	2.49	1150
BA 0231001 (Stock Size)	IM-019	5/8	7/8	31.75	24.97	23.49	0.25/0.51	2.49	1250
BA 0241001	IM-020	-	15/16	33.27	26.04	24.26	0.25/0.51	2.49	1275
BA 0271001 (Stock Size)	IM-021	3/4	1.0	34.93	28.53	27.05	0.25/0.51	2.49	1060
BA 0271002	IM-022	-	1.1/16	38.61	30.61	27.82	0.25/0.51	2.49	1250
BA 0291001	IM-023	-	1.1/8	36.58	30.86	29.33	0.25/0.51	2.49	900
BA 0301001 (Stock Size)	IM-024	7/8	1.3/16	38.1	32.29	30.81	0.25/0.51	3.38	900
BA 0321001	IM-025	-	1.1/4	41.4	35.69	32.64	0.25/0.51	3.38	800
BA 0331002 (Stock Size)	IM-026	1.0	1.5/16	42.8	36.88	33.89	0.25/0.51	3.38	810
BA 0351001	IM-027	-	1.3/8	44.45	38.99	35.94	0.25/0.51	3.38	700
BA 0381001	IM-028	-	1.1/2	47.75	42.04	38.96	0.25/0.51	3.38	700
BA 0421001 (Stock Size)	IM-029	1.1/4	1.5/8	52.38	45.93	42.93	0.25/0.51	3.38	690
BA 0451001	IM-030	-	1.3/4	57.15	45.39	45.34	0.25/0.51	3.38	875
BA 0481001 (Stock Size)	IM-031	1.1/2	1.7/8	58.6	51.39	48.44	0.25/0.51	3.38	690
BA 0511001	IM-032	-	2.0	63.5	54.74	51.69	0.25/0.51	3.38	780
BA 0541001 (Stock Size)	IM-033	1.3/4	2.1/8	69.85	58.3	54.89	0.25/0.51	3.38	950
BA 0601001 (Stock Size)	IM-034	2.0	--	73.03	63.63	60.58	0.25/0.51	3.38	700
BA 0641001	IM-035	-	2.1/2	77.72	67.44	64.39	0.25/0.51	3.38	750
BA 0661001 (Stock Size)	IM-036	2.1/4	--	79.5	69.98	66.68	0.25/0.51	3.38	670
BA 0761001 (Stock Size)	IM-037	2.1/2	--	90.17	79.38	76.08	0.25/0.51	3.38	680
BA 0891001 (Stock Size)	IM-038	3.0	--	101.47	92.84	89.09	0.25/0.51	3.38	550

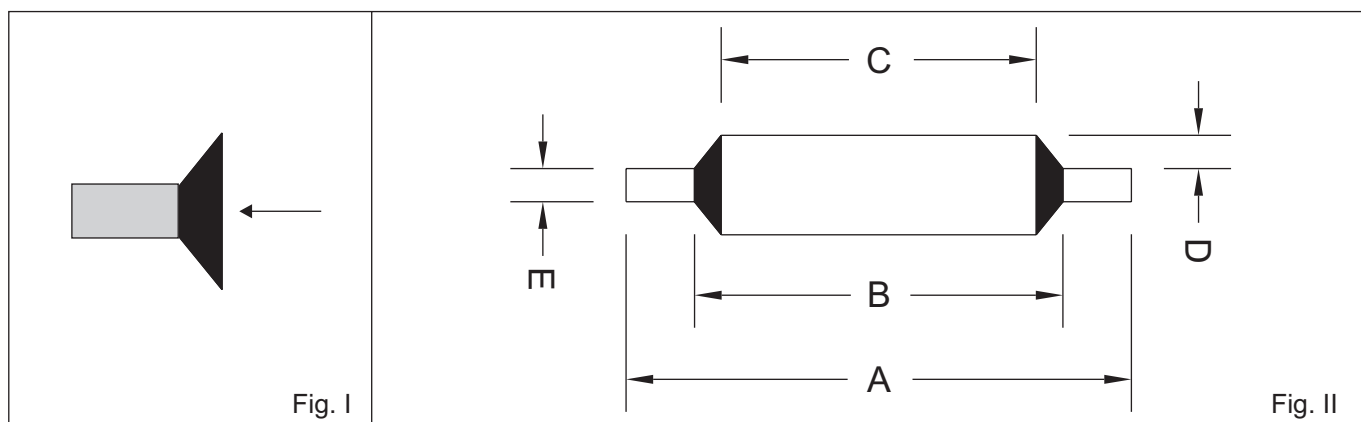
When ordering self centralising bonded seals add **SC** to Part No.
Eg. SC BA 0031001

Other sizes available on request.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC



Style BA Cetops (ISO 1179 - 1973) Ordering Information (Dimensions in mm)

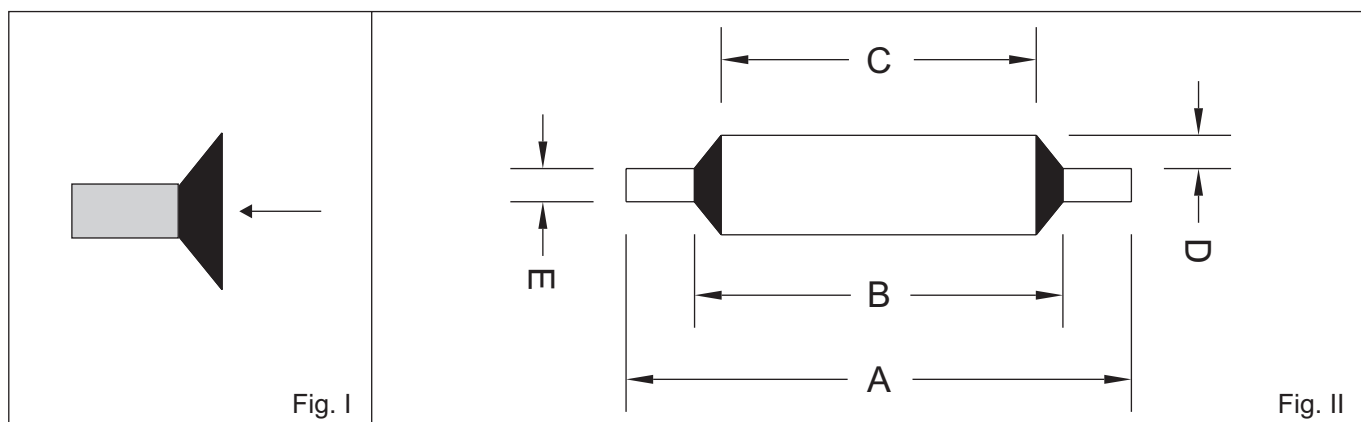
Spareage Part No.	A +0.00 -0.20	B +0.20 -0.00	C +0.20 -0.00	D +0.25 -0.00	E +0.15 -0.15	MIN. BURST PRESSURE (BAR)
BA 0081003	12.70	9.90	8.30	0.25	1.25	1100
BA 0101002	14.70	12.00	10.40	0.25	1.25	930
BA 0101003	16.20	12.00	10.40	0.25	1.25	930
BA 0131002	18.70	15.75	13.85	0.25	1.25	790
BA 0131003	20.20	15.75	13.85	0.25	1.25	790
BA 0171002	22.70	19.25	17.35	0.25	1.25	775
BA 0171003	24.20	19.25	17.35	0.25	1.25	775
BA 0211002	26.70	23.55	21.65	0.25	1.25	580
BA 0211003	29.20	23.55	21.65	0.25	1.25	580
BA 0271003	32.50	29.20	27.30	0.25	1.25	500
BA 0271004	35.00	29.20	27.30	0.25	1.25	500
BA 0341001	39.50	36.10	34.20	0.25	2.00	410
BA 0341002	43.00	36.10	34.20	0.25	2.00	410
BA 0421002	49.50	44.70	42.80	0.25	2.00	500
BA 0421003	53.00	44.70	42.80	0.25	2.00	500
BA 0481002	55.70	50.60	48.70	0.25	2.00	430
BA 0481003	59.00	50.60	48.70	0.25	2.00	430
BA 0601002	68.50	62.40	60.50	0.25	2.00	445
BA 0601003	73.00	62.40	60.50	0.25	2.00	445

Other sizes available on request.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC



Style BA German Metric Ordering Information (Dimensions in mm)

Spareage Part No.	A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.25 -0.00	E +0.15 -0.15	MIN. BURST PRESSURE (BAR)
BA 0041002	7.20	5.20	4.10	0.3	1.0	1600
BA 0041003	7.00	5.40	4.50	0.3	1.0	1250
BA 0051002	9.00	6.80	5.70	0.3	1.0	1400
BA 0051003	10.00	7.40	5.70	0.3	1.0	1500
BA 0061003	9.20	7.20	6.20	0.3	1.0	1220
BA 0061004	10.00	8.00	6.70	0.3	1.0	1130
BA 0061005	11.00	8.20	6.70	0.3	1.0	1510
BA 0081004	13.00	10.00	8.70	0.3	1.0	1330
BA 0081005	14.00	10.40	8.70	0.3	1.0	1550
BA 0091001	13.30	10.50	9.30	0.3	1.0	1200
BA 0101004	15.88	12.00	10.35	0.4	2.0	1450
BA 0101005	16.00	12.40	10.70	0.4	1.5	1350
BA 0101006	18.00	12.40	10.70	0.4	1.5	1880
BA 0111003	16.30	12.70	11.40	0.4	1.5	1250
BA 0111004	19.10	13.50	11.80	0.4	1.5	1770
BA 0121001	18.00	14.30	12.70	0.4	1.5	1250
BA 0121002	20.00	14.40	12.70	0.4	1.5	1680
BA 0131004	22.00	15.40	13.70	0.4	1.5	1810

Other sizes available on request.

SECTION : BONDED SEALS
STYLE : BA
TYPE : STATIC
Style BA German Metric Ordering Information (Dimensions in mm)

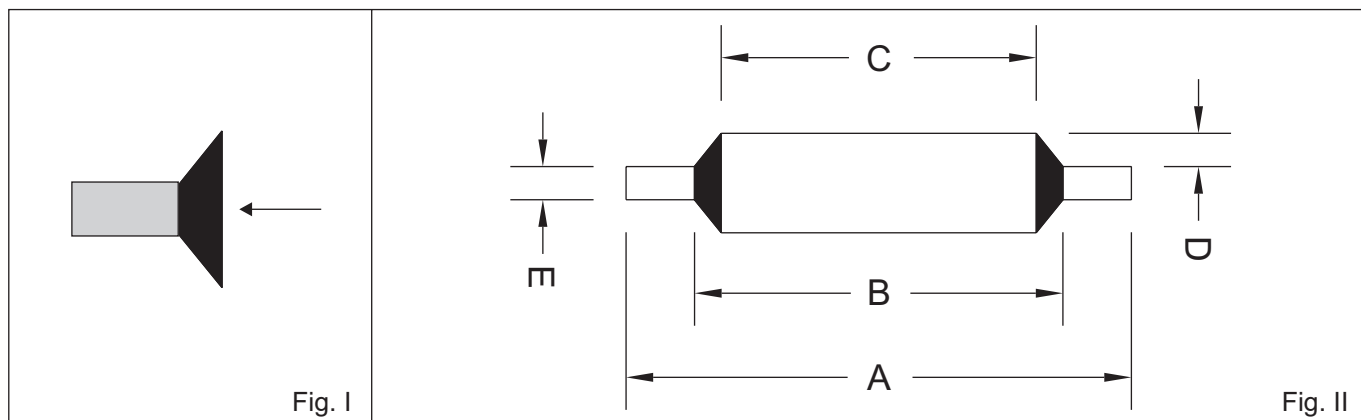
Spareage Part No.	A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.25 -0.00	E +0.15 -0.15	MIN. BURST PRESSURE (BAR)
BA 0141002	18.70	15.70	14.0	0.4	1.50	900
BA 0141003	22.00	16.40	14.70	0.4	1.50	1510
BA 0161002	24.00	18.40	16.70	0.4	1.50	1400
BA 0171004	24.00	19.20	17.40	0.4	1.50	1150
BA 0181002	24.70	20.10	18.00	0.4	1.50	1070
BA 0171003	26.00	20.40	18.70	0.4	1.50	1275
BA 0201001	28.00	22.50	20.70	0.4	1.50	1150
BA 0211004	28.07	23.30	21.50	0.4	2.50	1080
BA 0221001	30.00	24.40	22.70	0.4	2.00	1100
BA 0241002	32.00	26.40	24.70	0.4	2.00	1050
BA 0261001	35.00	28.40	26.70	0.4	2.00	1050
BA 0271005	36.00	29.00	27.20	0.4	2.00	1130
BA 0311001	39.00	33.00	31.00	0.4	2.00	860
BA 0331003	42.00	35.80	33.70	0.4	2.00	900
BA 0341003	46.00	36.40	34.30	0.4	2.00	880
BA 0361001	46.00	38.80	36.70	0.4	2.00	880
BA 0401001	51.00	41.40	40.00	0.4	2.50	1020
BA 0421004	53.00	44.40	42.70	0.4	3.00	940
BA 0481004	59.00	50.80	48.70	0.4	3.00	800
BA 0891002	101.35	92.10	89.09	0.4	3.25	510

Other sizes available on request.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC



Style BA French Metric Ordering Information (Dimensions in mm)

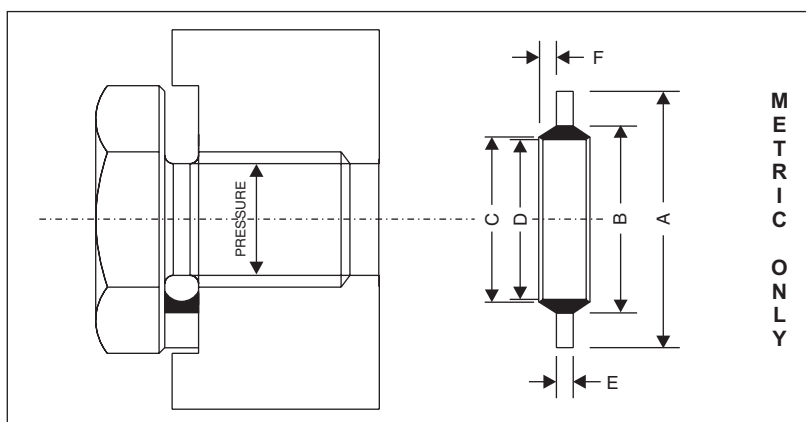
Spareage Part No.	A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.25 -0.00	E +0.10 -0.10	MIN. BURST PRESSURE (BAR)
BA 0031002	7.50	5.00	3.60	0.30	1.00	1950
BA 0041004	9.00	6.00	4.60	0.30	1.00	2000
BA 0051004	10.00	7.00	5.60	0.30	1.00	1780
BA 0061006	11.00	8.00	6.60	0.30	1.00	1680
BA 0071001	11.40	8.40	7.00	0.30	1.00	1540
BA 0081006	13.00	10.00	8.60	0.30	1.00	1330
BA 0101007	17.00	12.10	10.70	0.3	1.50	1730
BA 0111005	18.10	13.20	11.80	0.30	1.50	1600
BA 0121003	19.00	14.10	12.70	0.30	1.50	1530
BA 0131005	20.10	15.20	13.80	0.40	1.50	1440
BA 0141004	21.00	16.10	14.70	0.30	1.50	1370
BA 0161003	23.00	18.10	16.70	0.30	1.50	1240
BA 0171005	23.70	18.80	17.40	0.40	1.50	1200
BA 0181004	27.00	20.40	18.70	0.30	2.00	1450
BA 0201002	29.00	22.40	20.70	0.30	2.00	1340
BA 0211005	30.00	23.40	21.70	0.40	2.00	1290
BA 0221002	31.00	24.40	22.70	0.40	2.00	1240
BA 0231001	32.00	25.40	23.70	0.40	2.00	960
BA 0241003	33.00	26.40	24.70	0.40	2.00	1160
BA 0271006	35.30	28.70	27.00	0.40	2.00	870
BA 0271007	36.00	29.40	27.70	0.40	2.00	1060
BA 0281001	36.00	30.30	28.60	0.40	2.00	730
BA 0301002	39.00	32.40	30.70	0.40	2.00	970
BA 0331003	42.00	35.40	33.70	0.40	2.00	900
BA 0371001	48.00	35.40	37.00	0.40	2.50	1010
BA 0401001	51.00	39.60	40.00	0.40	2.50	950
BA 0431001	54.00	42.60	43.00	0.40	2.50	890
BA 0461001	57.00	48.60	46.00	0.40	2.50	860
BA 0491001	60.00	51.60	49.00	0.40	2.50	790

Other sizes available on request.

SECTION : BONDED SEALS

STYLE : BA

TYPE : STATIC



Style BA Metric Ordering Information (Dimensions in mm)

Spareage Part No.	ALT. REF	SIZE	A +0.20 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.10 -0.10	E +0.20 -0.20	F +0.10 -0.10	MIN. BURST PRESSURE (BAR)
BA 0061007	MT-001	M6	10.0	8.0	7.4	6.0	1.0	0.4	1130
BA 0081007	MT-002	M8	14.0	11.0	10.0	8.0	1.0	0.4	1200
BA 0101008	MT-003	M10	17.0	13.0	12.0	10.0	1.5	0.5	1250
BA 0121004	MT-004	M12	19.0	16.0	15.0	12.0	1.5	0.5	1250
BA 0141005	MT-005	M14	22.0	18.0	17.0	14.0	1.5	0.5	1100
BA 0161004	MT-006	M16	24.0	20.0	19.0	16.0	1.5	0.5	1050
BA 0181005	MT-007	M18	27.0	22.0	21.0	18.0	2.0	0.5	1100
BA 0201003	MT-008	M20	30.0	25.0	24.0	20.0	2.0	0.5	1050
BA 0221003	MT-009	M22	32.0	27.0	26.0	22.0	2.0	0.5	1000
BA 0241004	MT-010	M24	36.0	29.0	28.0	24.0	2.0	0.5	1130
BA 0261002	MT-011	M26	35.0	30.5	30.0	26.0	2.0	0.5	850

Other sizes available on request.

ROD SEALS INSTALLATION TOOLS

SEAL TWISTOR can reduce the chance of seal damage by installation. Most failures of quality seals were caused by bad installations or complicate groove designs. Spareage introduce series of tools to complete the job reliably. SEAL TWISTOR turns seal to an omega shape without acute angle (not suitable for fragile materials). It makes the size of seal smaller than the gland hole diameter. Seal can cross all over the sharp chamfers safely then rebounds in the groove.



SPECIFICATION	S		M		L		XL	
φ GLAND HOLE	22 - 30 mm	0.7" - 1.187"	30 - 50 mm	1.187" - 2"	50 - 70 mm	2" - 2.75"	70 - 165 mm	2.75" - 6.5"
Cross Section Max.	5 mm	0.187"	6 mm	0.234"	10 mm	0.375"	17.5 mm	0.187"

4 steps to complete the Job:-

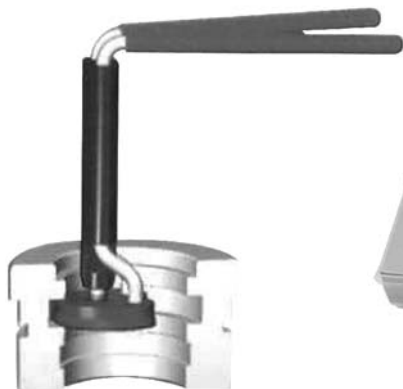
1. Fix the handle in the stand hole then put two arms inside the seal.



2. Twist the seal with guiding hand to prevent it popping out.



3. Hold the handles then reach the seal into the gland hole carefully.



4. Turns handles back then pull TWISTOR out to rebound the seal in the groove.



Whole set with stand
packed in a box.

PISTON SEALS INSTALLATION TOOLS

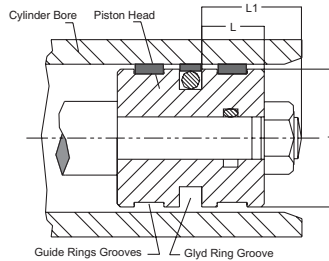


Fig. 1

Dimensional Requirement's:-

- 1) Piston Head Dia = d
- 2) Piston Head Length = L
- 3) Piston Head Total Length = L1
(in case of Nut fitted)

Following is the steps to install

Spareage PTA, PTC, PTE, PTH (Teflon Seal Rings)

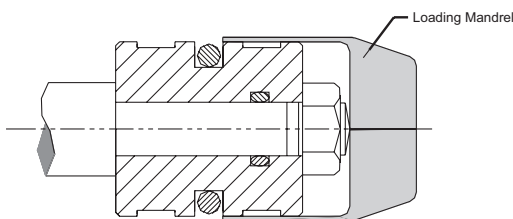


Fig. 2

Step 1

- * Stretch O-Ring and install in the groove.
- * Place loading mandrel onto piston head.

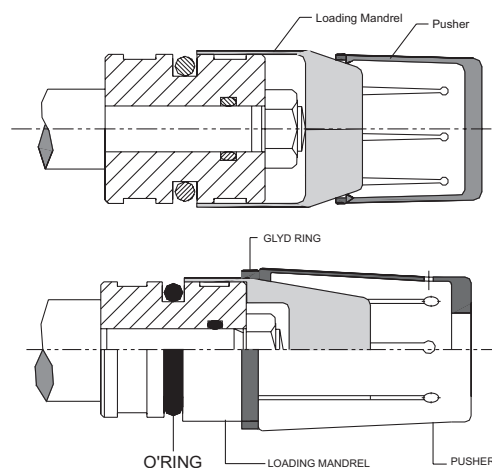


Fig. 3

Step 2

- * Place Teflon ring on the loading mandrel.
- * Place Pusher and push the Teflon ring up to the groove. Teflon ring will evenly expand and slide on the loading mandrel and fit into the groove without damage.

Step 3:

To re-size the expanded glyd ring, use piston constrictor as shown in figure 1,2 & 3 below.
Loading Mandrel, Pusher & piston Seal Constrictor are supply by Spareage.



Fig. 4



Fig. 5



Fig. 6

Installation instructions:-

Spareage Teflon composite seals combinations can be easily installed without damaging and spending more time. With proper size installation kit Spareage PTA, PTC, PTE, PCC, PTH styles seal can install.

Please contact Spareage for any further details require. To order the Installation Kit please provide the piston head dimensions given in Fig.1

INSTALLATION AND ASSEMBLY INSTRUCTIONS

Sealing performance of a seal is determined to a great extent by the method of assembling a cylinder. Make sure that the following guidelines are adhered to,

1. Ensure that the cylinder and piston rod are chamfered. Sharp edges should be deburred and filleted or champhered.
2. Make sure to flush clean the internal face of cylinder and the interior of pipes. Use compressed air wherever possible.
3. Before assembling the cylinder, apply hydraulic oil (the same oil used in the machine) to the seal, gland, rod, surface and the internal face of the cylinder.
4. When the lip of the seal passes through a port, push the seal lip lightly with an edge free metal/plastic rod guided from the port on the top of seal to prevent any possible damage of the seal by the mating edge between the port and the cylinder bore.
5. Do not use tools with sharp edges.
6. If grease is used for lubrication, it must not contain any solid additives (e.g. zinc sulphide or molybdenum disulphide). The grease should be compatible with the seal material.
7. We recommend that customers adhere to the tolerance and surface finishes stated in this catalog. Only by working to these values, the fitting of seals will be made easy and assembly damage avoided.

STORAGE AND CLEANING

The following guidelines apply to rubber products such as vulcanized materials made of natural rubber or synthetic rubber. The properties of a correctly handled product remains virtually unchanged over a long period of time (several years).

1. Keep the seals protected from effects of oxygen, ozone, heat, humidity and solvents.
2. The storage room should be cool, dry, free of dust and well ventilated.
3. Seals should be stored within a temperature range of -10°C to +25°C. The service life may be shortened considerably if these limits are exceeded. Sudden changes in temperature can also be damaging.
4. When heating the storage room, a minimum distance of 1m should be maintained between the radiator and stored material. The radiators and piping surfaces should preferably be covered.
5. The preferable humidity is approximately 65%. The lighting should be dimmed. For this reason, windows should be covered with a red or orange colour (never blue) protective coating.
6. Seals should be protected from Ultraviolet light sources.
7. Solvents, fuels, lubricants or cleaning agents etc. must be stored in a separate room.
8. Do not store seals in a deformed state, or with lateral loads, or bending, as this could cause permanent deformation and or damage.
9. Contact with rubber, brass and iron also causes damage.
10. Never open a seal package unless required since dust may enter the packing or it may be damaged. Once a packing is opened, always repack carefully to avoid entry of foreign material.
11. Never place seals near electric motors, etc. where ozone is generated.
12. Never hang seals on nails or wire or thread strings, to avoid deformation of the seal and damage to the seal lip.
13. Discolouring or generation of white powder on seal faces (blooming phenomenon) may occur but neither will affect the seal's function.
14. Where the cleaning of rubber/fabric, rubber products is required, a clean cloth and lukewarm water is recommended.
15. Do not dry products over a source of heat, or use sharp instruments, abrasive paper, gasoline, benzene, turpentine or similar products.

Guidelines for storing of rubber products are standardized in DIN 7716 and ISO 2230.

SPAREAGE SEALING RING MATERIALS

ELASTOMER MATERIALS

- **Acrylonitrile Butadiene Rubber (NBR)**

Hardness	Spareage Code
NBR 70 ⁰ /75 ⁰ Shore 'A'	NT4/b
NBR 80 ⁰ /85 ⁰ Shore 'A'	NT5/b
NBR 90 ⁰ /95 ⁰ Shore 'A'	NT6/b

Operating Temperature :- -30⁰ C to +100⁰C.

Commonly known as **NITRILE** or **BUNA-N**.

Nitrile rubber is the sealing material most frequently used in Hydraulic & Pneumatic systems because of its excellent resistance to mineral oil based fluids, greases, water & hydrocarbon fuels. It has good physical characteristics such as abrasion resistance and good compression set.

NBR is not suitable to Aromatic hydrocarbons, chlorinated hydrocarbons, automotive brakes fluids, and some fire resistant hydraulic fluids.

- **Carboxylated Nitrile Rubber (XNBR)**

Hardness	Spareage Code
XNBR 70 ⁰ /75 ⁰ Shore 'A'	NT23/b
XNBR 80 ⁰ /85 ⁰ Shore 'A'	NT24/b
XNBR 90 ⁰ /95 ⁰ Shore 'A'	NT25/b

Operating Temperature :- -30⁰ C to +100⁰C.

XNBR properties are similar to those of NBR polymers but they are characterised by improved abrasion behaviour in applications subjected to dynamic stress.

- **Hydrogenated Acrylonitrile Butadiene Rubber (HNBR)**

Hardness	Spareage Code
HNBR 70 ⁰ /75 ⁰ Shore 'A'	NT42/a
HNBR 80 ⁰ /85 ⁰ Shore 'A'	NT42/b
HNBR 90 ⁰ /95 ⁰ Shore 'A'	NT34

Operating Temperature :- -30⁰ C to +140⁰C.

HNBR has good heat resistance, oil resistance & resistance to number of aggressive chemicals. The material exhibits high mechanical strength and improved abrasion resistance. It also has superior resistance to weathering, ozone and hot air and very good resistance to technical oils, even in the presence of hydrogen sulphide and amines.

SPAREAGE SEALING RING MATERIALS

• Fluoro Rubber (FPM)

Hardness	Spareage Code
FPM 70°/75° Shore 'A'	VT2/b
FPM 80°/85° Shore 'A'	VT3/b
FPM 90°/95° Shore 'A'	VT4/b

Operating Temperature :- -40° C to +220°C.

FPM Rubber is commonly known by DU PONT trade name **VITON**. The main characteristics of FPM are that they are resistant to high temperatures & their chemical stability. They also display minimal weight loss in high vacuum & also, its permeability to gases is low.

VITON is compatible to fire resistant Hydraulic fluids, hot oils, greases, hydrocarbon, chlorinated hydrocarbons & most organic acids, even at high concentrations and with / against a number of organic compounds. It has excellent resistance to hot water and to steam.

FPM, however is not resistant to methanol, ketones, esters and ethers.

• Silicon Rubber (VMQ) - Vinyl-Methyl-Polysiloxane

Hardness	Spareage Code
VMQ 70°/75° Shore 'A'	SL4/b
VMQ 80°/85° Shore 'A'	SL5/b
VMQ 90°/95° Shore 'A'	SL6/b

Operating Temperature :- -70° C to +200°C.

SILICON Rubber is characterised by high thermal resistance, good cold flexibility, good dielectric properties, very good resistance to oxygen and ozone attack. The main advantage is that it retains flexibility at very low temperatures and can withstand continuous heating without hardening, making it suitable for low and high temperature applications.

SILICON compounds have poor strength and tear resistance. Their resistance to oils and fuels is poor. Concentrated acids and alkalis, water and steam at temperatures over 100°C will destroy the material.

• Chlorobutadiene Rubber (CR)

Hardness	Spareage Code
CR 70°/75° Shore 'A'	NP4/b
CR 80°/85° Shore 'A'	NP5/b
CR 90°/95° Shore 'A'	NP6/b

Operating Temperature :- -20° C to +100°C.

CR is commonly known as **NEOPRENE** Rubber.

CR based compounds are characterised by excellent resistance to chemicals, ageing, weathering effects, and ozone attack. Its resistance to swelling in mineral oils, greases and water is moderate.

CR compound are not resistant to aromatics compounds such as benzene, toluene, chlorinated hydrocarbons, esters, ethers and ketones.

SPAREAGE SEALING RING MATERIALS

• Ethylene Propylene Diene Rubber (EPDM)

Hardness	Spareage Code
EPDM 70°/75° Shore 'A'	EP4/b
EPDM 80°/85° Shore 'A'	EP5/b
EPDM 90°/95° Shore 'A'	EP6/b

Operating Temperature :- -40° C to +120° C.

EPDM elastomer has very good resistance to ozone, ageing and weathering. Hence it is best suited for extruded profile sections and sealing strips. It has good resistance to swelling in hot water, steam, washing liquids, oxidising media, acids, bases, polar organic media, ketones, fire retardant hydraulic fluids & hydraulic brakes fluids.

EPDM is not suitable for use in mineral based oils or hydrocarbons. But in non-mineral automotive brake fluids and phosphate esters, the swelling is minimal.

• Polyurethane (PU)

Hardness	Spareage Code
PU 92° Shore 'A'	PU X
PU 90° Shore 'A'	PU 1

Operating Temperature :- -30° C to +100° C.

Polyurethane material has extremely good mechanical properties such as high tensile strength, abrasion resistance, tear strength, extrusion strength and above all, good flexibility.

PU has good resistance to swelling in mineral oils and greases, water, oil mixtures, and aliphatic hydrocarbons.

PU is not resistant to polar solvents, chlorinated hydrocarbons, aromatics, brake fluids, acids and alkalis.

• Butyl Rubber (IIR)

Hardness	Spareage Code
IIR 70°/75° Shore 'A'	BU4/b
IIR 80°/85° Shore 'A'	BU5/b
IIR 90°/95° Shore 'A'	BU6/b

Operating Temperature :- -40° C to +120° C.

IIR elastomer's permeability to gases and water vapour is low and it has good electrical insulation properties. It has good resistance to brake fluids based on glycol, organic / inorganic acids / bases, hot water and steam up to 120° C. It has very good resistance to weathering and ageing.

Butyl Rubber is not suitable for use with mineral based oils and aromatic solvents.

SPAREAGE SEALING RING MATERIALS

• Natural Rubber (NR)

Hardness	Spareage Code
NR 70 ⁰ /75 ⁰ Shore 'A'	NR5/b
NR 80 ⁰ /85 ⁰ Shore 'A'	NR6/b
NR 90 ⁰ /95 ⁰ Shore 'A'	NR7/b

Operating Temperature :- -30⁰ C to +80⁰ C.

NATURAL Rubber exhibits high mechanical strength and elasticity with very good low temperature characteristics. Because of its high mechanical strength, NR is frequently combined with fabric reinforcement for seals in applications where water is the hydraulic fluid. It has good resistance to acid and bases at low concentrations as well as alcohols.

NR is not resistant to mineral oils and greases, fire resistant hydraulic fluids, aromatic, aliphatic, and chlorinated hydrocarbons.

• Styrene Butadiene Rubber (SBR)

Hardness	Spareage Code
SBR 70 ⁰ /75 ⁰ Shore 'A'	SB4/b
SBR 80 ⁰ /85 ⁰ Shore 'A'	SB5/b
SBR 90 ⁰ /95 ⁰ Shore 'A'	SB6/b

Operating Temperature :- -50⁰ C to +100⁰ C.

SBR has good resistance to inorganic and organic acids, as well as alcohols and water, and brake fluids based on glycol.

SBR is not resistant to mineral oils, lubricating greases, petroleum, and aliphatic, aromatic and chlorinated hydrocarbons.

• Polyacrylic Rubber (ACM)

Hardness	Spareage Code
ACM 70 ⁰ /75 ⁰ Shore 'A'	PC4/b
ACM 80 ⁰ /85 ⁰ Shore 'A'	PC5/b
ACM 90 ⁰ /95 ⁰ Shore 'A'	PC6/b

Operating Temperature :- -10⁰ C to +125⁰ C.

The properties of POLYACRYLIC Rubber are midway between nitrile and fluorocarbon rubber. They have excellent resistance to mineral oils, hypoid oils and greases upto 125⁰ C. They are resistant to ageing & flex cracking.

ACM is characterised by poor mechanical strength and its resistance to water is poor.

SPAREAGE SEALING RING MATERIALS

• Fabric Reinforced Rubber (R/C)

Hardness	Spareage Code
NT R/C 80 ⁰ /85 ⁰ Shore 'A'	NT 36 (R/C)
VT R/C 80 ⁰ /85 ⁰ Shore 'A'	VT 3/b (R/C)

Seals which are subjected to high pressure are impregnated by cotton fabric for improved extrusion resistance. The fabric structure forms micro lubricating pockets, resulting in lower friction values; thus helping to reduce wear. The fabric is coated with unvulcanised rubber solutions of NBR & FPM depending on the application of the seal.

• Polytetrafluorethylene (PTFE)

Operating Temperature :- -200⁰ C to +260⁰ C.

PTFE is commonly known by Du Pont trade name TEFLON.

PTFE is characterised by its outstanding resistance to chemicals and low co-efficient of friction combined with a very wide working temperature range. Only liquid alkaline metals and some fluoride compounds can attack PTFE at high pressures and temperatures.

Depending on the temperature and the load, PTFE has a tendency to creep or cold flow. For this reason, Spareage does not use pure PTFE for sealing components in hydraulic systems, with the exception of back ups for O'rings. For the majority of sealing tasks, only filled PTFE materials are used, reinforced with materials such as Bronze, Glass, Graphite & Carbons.

• Broze Filled Teflon (BFT) (40% & 60% Bronze filled PTFE)

Operating Temperature :- -200⁰ C to +260⁰ C.

It is high compressive strength, excellent wear resistance, very low cold flow, and good thermal conductivity.

• Glass Filled Teflon (GFT) (15% & 25% Glass filled PTFE)

Operating Temperature :- -200⁰ C to +260⁰ C.

High compressive strength, better wear resistance & excellent chemical resistance.

• Carbon Filled Teflon (CFT) (15% & 25% Carbon filled PTFE)

Operating Temperature :- -200⁰ C to +260⁰ C.

High compressive strength, better wear resistance and good thermal conductivity.

• Graphite Filled Teflon (GRT) (15% & 25% Graphite filled PTFE)

Operating Temperature :- -200⁰ C to +260⁰ C.

High compressive strength, good chemical resistance and improved frictional properties.

• Polyacetal (POM)

Operating Temperature :- -40⁰ C to +140⁰ C.

Commonly known by Du Pont trade name **DELTRIN**.

SPAREAGE SEALING RING MATERIALS

POLYACETAL is an engineering plastic having excellent properties that bridge the gap between metals and ordinary plastics. It has high mechanical strength, rigidity, stiffness and has high resistance to repeated impacts even at elevated temperatures.

It has excellent resistance to moisture, gasoline and many neutral chemicals. However, polyacetal is not resistant to strong acids and their service life is reduced by lengthy use in steam.

- **Glass Filled Acetal** (20% Glass Filled)

Operating Temperature :- -40°C to +160°C.

This special grade of **ACETAL** has reinforcement of glass filler. They have improved stiffness and load bearing properties. It also had improved heat stability.

- **Polyster Elastomer (TPE)**

Operating Temperature :- -50°C to +110°C.

This is Thermoplastic elastomer which combines the properties of high performance elastomer and engineering plastics. It has exceptional toughness and resilience, higher resistance to impact, abrasion and extrusion. Polyester elastomers have excellent resistance to swell in oils, and fuel and have good retention of properties at elevated temperatures. It is used for applications such as wipers and extrusion devices.

Hytrel is the trade name of Du Pont for this material.

- **Glass Filled Polyamide (PA) Nylon** (30% Glass Filled)

Operating Temperature :- -20°C to +220°C.

Polyamides used by Spareage have glass filler reinforcement of upto 30%. Glass filled **PA** has excellent abrasion resistance, high mechanical strength, stiffness & toughness. They have good damping properties for dry running. PA is highly suitable for wear rings in hydraulic applications.

Glass filled PA are resistant to aliphatic and aromatic hydrocarbons, mineral oils, greases, ester and ketones. They are not resistant to acids, phenols and some solvents.

Polyamides usually have dimensional instability due to absorption of moisture from the atmosphere. It is overcome by using Glass Filled material.

Dupont's trade name for Nylon (PA) is **Zytel**.

- **Polyethelene (UHMWPE)**

Operating Temperature :- -270°C to +80°C.

Ultra High Molecular Polyethelene has molecular weight ranging from 3.6 to 5.6 million which makes it have excellent properties such as very low co-efficient of friction, good impact strength and wear resistance. It is hence used in load bearing properties. The material is self lubricating and has excellent chemical and corrosion resistance.

- **Phenolic Resin Bonded Fabric**

Operating Temperature :- -20°C to +120°C.

This material has excellent load bearing capacity, good sliding properties and excellent resistance to wear. Phenolic resin impregnated Cotton Fabric has compressive strength that is compared to metal used for guides. The material has very good thermal stability. It can be used in all fluids commonly used in hydraulic equipment, such as mineral oil based oils, fire resistant hydraulic fluids (HFA, HFB, HFC, HFD) and other organic compounds.

SPAREAGE SEALING RING MATERIALS

- **Polyster Resin Bonded Fabric**

Operating Temperature :- -40°C to +120°C.

Unsaturated Polyster resin impregnated cotton fabric has good wear resistance, good compressive strength and impact strength. The material is resistant to hydraulic fluid HFA, mineral oils ASTM no. 1 & no. 3 and phosphate ester.

- **Polybutylene Terephthalate (PBT)**

Operating Temperature :- -30°C to +130°C.

PBT reinforced with glass fibres has excellent characteristics such as good load bearing properties, high stiffness and hardness, low wear and has excellent electricals properties. It is resistant to all the lubricants containing mineral oils, and to all hydraulic fluids, acids and alcohols.

It is resistant to strong alkalis and acids.

- **Polycarbonate (PC)**

Operating Temperature :- -100°C to +135°C.

PC has excellent impact strength. It has good dimensional stability compared to that of Nylon (PA) as it has low absorption of water compared to PA. They retain their properties at very low temperature.

PC is resistant to many mineral, animal and vegetable oils, aliphatic hydrocarbons, diluted acids and alcohols. They are not resistant to methyl alcohols.

SPAREAGE SEALING RING MATERIALS

ELASTOMERIC MATERIALS

- **Polyphenylene Sulphide (PPS)**

Operating Temperature :- upto +270°C.

PPS resin with 40% glass filler has excellent mechanical and chemical properties. They have very high mechanical strength, good compression set and very good wear resistance.

Polyphenylene Sulphide can withstand very high loads and high temperature and its fatigue resistance is excellent for repeated stress. It is suitable for bearing applications which demands such high properties.

Fortron is a trade name of Polyplastics Co. Ltd. for this material.

- **Polyetherether Ketone (PEEK)**

(PEEK with 30% Glass Filler)

Operating Temperature :- upto +315°C.

PEEK has excellent resistance to various chemicals and hydraulic fluids. Its mechanical properties are moderate but has excellent heat stability. It can perform under continuous use temperature of 260°C.

PEEK is very expensive compared to other engineering plastics.

SEALING RING MATERIAL AND COMPATIBILITY

The table below shows the compatibility of commonly used sealing material with commonly employed working (hydraulic) fluids.

CHEMICALS	POM	PC	PA	PTFE	PU
Acids	U	R	U	R	U
Hydrocarbons	R	S	R	R	R
Water	R	R	S	R	R
Alkalies	S	U	S	R	U
Ammonias	S	U	S	S	S
Mineral/Vegetable Oils	S	R	R	R	S
Alphatics	S	R	R	R	S
Alcohols	R	R	S	R	S
Ketones	R	U	R	R	U
Esters	S	U	R	R	S
HFC Fluids	S	U	S	R	U
Phenols	S	S	U	S	S
Trichlorethylene	S	U	U	S	S
Greases	S	S	R	S	S
Ozone	S	S	S	S	R
Steam	S	S	S	R	U
Petroleum Products	S	S	S	R	R
Ethers	R	S	S	S	S
Aromatic Carbons	S	U	S	R	S

LEGENDS:

R - Resistant to

S - Suitable

U - Unsuitable

MATERIAL SUITABILITY:

PU - Unsuitable for hot water

POM - Unsuitable for low molecular chlorinated acid

PC - Unsuitable for methyl alcohol

PC - Unsuitable for water up to 60° C without greases additives

POM - POLYACETAL

PC - POLYCARBONATE

PA - POLYAMIDE

PTFE - POLYTETRAFLUORETHYLENE

PU - POLYURETHANE

SEALING RING MATERIAL AND COMPATIBILITY

ORGANIC COMPOUNDS	NBR	CR	MVQ	FPM	EPDM
Acetic Acid	ES	SS	ES	ES	RS
Oleic Acid	SS	SS	SS	RS	SS
Acetic Anhydride	ES	SS	ES	ES	SS
Acetylene Chloride	ES	ES	ES	ES	SS
Ethanol	RS	RS	RS	RS	RS
Acetaldehyde	ES	ES	ES	ES	RS
Ethanolamine	SS	SS	SS	ES	SS
Aniline	ES	SS	RS	SS	SS
Trichlorethylene	ES	ES	ES	SS	ES
Chlorobenzene	ES	ES	ES	SS	ES
Tricresyl Phosphate	ES	ES	RS	RS	RS
Dibutylphthalate	ES	ES	RS	ES	SS
Ethylene	RS	RS	RS	RS	RS
Hydrocarbon Octane	RS	SS	ES	RS	ES
Hydrocarbon Benzene	ES	ES	ES	SS	ES
Ketones Acetone	ES	SS	SS	ES	RS
Nitro Benzene	ES	ES	ES	ES	ES
Phenol	ES	SS	RS	RS	SS

INORGANIC COMPOUNDS

Chromic Acid	SA	SA	SS	RS	SA
Hydrochloric Acid	RS	RS	RS	RS	SA
Nitric Acid	SA	SA	SA	SS	SA
Phosphoric Acid	SS	RS	SS	RS	SS
Sulphuric Acid	SA	RS	SA	RS	ES
Caustic Soda	RS	RS	RS	SS	RS
Ammonia	RS	RS	RS	SA	RS
Carbon Disulphide	ES	ES	ES	RS	ES
Hydrogen Peroxide	ES	SS	SS	RS	SA
Steam upto 3.5 Bar	SS	SS	SS	SS	RS
Water	RS	RS	RS	SS	RS

REFRIGERANTS

Ammonia	RS	RS	RS	SA	RS
Ethylene Glycol	RS	RS	RS	SA	RS
Freon 11(Arcton 11)	ES	ES	ES	SS	SS
Freon 12(Arcton 12)	RS	RS	ES	SS	SS
Freon 22(Arcton 22)	ES	SS	ES	ES	SS
Sulphur Dioxide	ES	SS	RS	RS	RS

LEGENDS :

RS - Resistant to Swelling
SS - Slight Swelling
ES - Excessive Swelling
SA - Surface Attack

NBR - ACRYLONITRILE BUTADIENE RUBBER
EPDM - ETHYLENE PROPYLENE DIENE RUBBER
CR - CHLOROBUTADIENE RUBBER
MVQ - SILICON RUBBER
FPM - FLUORO RUBBER

SEALING RING MATERIAL AND COMPATIBILITY

LUBRICANTS & GREASES	NBR	CR	MVQ	FPM	EPDM
Brake Fluid Castor Based	ES	SS	RS	ES	RS
Cellosolve	ES	SS	ES	ES	EE
Grease Mineral	RS	SS	SS	RS	ES
Ester Based DTD 825	SS	ES	SS	RS	SS
HYDRAULIC FLUIDS					
Aqueous Eel 6	RS	RS	RS	RS	SS
Mineral Dtd 585	RS	SS	ES	RS	ES
Ester Based (skydrol 500)	ES	ES	ES	RS	ES
LUBRICANTS OILS					
Mineral Ded 2472	RS	RS	RS	RS	ES
Hypoid	RS	SS	RS	RS	ES
Ester Ded 2487	SS	ES	SS	RS	ES
Paraffin	SS	SS	ES	RS	ES
Silicone Oils	RS	RS	ES	RS	RS
Transformer Oil	RS	SS	SS	RS	ES
Vegetable Oil	RS	RS	RS	RS	RS
GASES					
Chlorine (wet)	SA	SA	ES	SS	SS
Calor Gas	SS	SA	SS	RS	SS
Carbon Dioxide	RS	RS	RS	RS	SS
Coal Gases	SS	SS	SS	RS	SS
Hydrogen	RS	RS	RS	RS	RS
Natural Gases	RS	RS	RS	RS	RS
Nitrogen	RS	RS	RS	RS	RS
Oxygen	RS	RS	RS	RS	RS
FUELS					
Diesel Oil	SS	ES	SS	RS	ES
Gas Oil	SS	ES	ES	RS	ES
Fuel Oil	SS	ES	ES	RS	SS
Petrol	SS	ES	ES	RS	ES
Solvent Naphtha	ES	ES	ES	RS	ES

LEGENDS :

RS - Resistant to Swelling
SS - Slight Swelling
ES - Excessive Swelling
SA - Surface Attack

NBR - ACRYLONITRILE BUTADIENE RUBBER
EPDM - ETHYLENE PROPYLENE DIENE RUBBER
CR - CHLOROBUTADINE RUBBER
MVQ - SILICON RUBBER
FPM - FLUORO RUBBER

SEAL ENGINEERING REQUEST

INTRODUCTION

COMPANY :
 ADDRESS :
 CITY : STATE : COUNTRY :
 CONTACT PERSON : DESIGNATION : PIN CODE :
 PHONE NO. FAX NO. E-MAIL :

NAME OF THE EQUIPMENT : - PRODUCT TYPE ;
 CORRESPONDING SPAREAGE STYLE : (Ref. Seal Profile Chart)

APPLICATION : ☐ **HYDRAULIC** ☐ **PNEUMATIC** TYPE OF MOTION : ☐ **SINGLE ACTING** ☐ **DOUBLE ACTING**

PRESSURE : MINIMUM OPERATING MAXIMUM TEMPERATURE : MINIMUM OPERATING MAXIMUM
 BAR BAR BAR°C°C°C

HOUSING TYPE : ☐ **SPLIT** ☐ **SOLID** PISTON TYPE : ☐ **SPLIT** ☐ **SOLID**

EQUIPMENT MOUNTING STYLE : ☐ **HORIZONTAL** ☐ **VERTICAL** ☐ **TELESCOPIC**

EQUIPMENT CONDITION IN SEALING AREA : ☐ **SMOOTH** ☐ **SCORED** ☐ **PITTED**

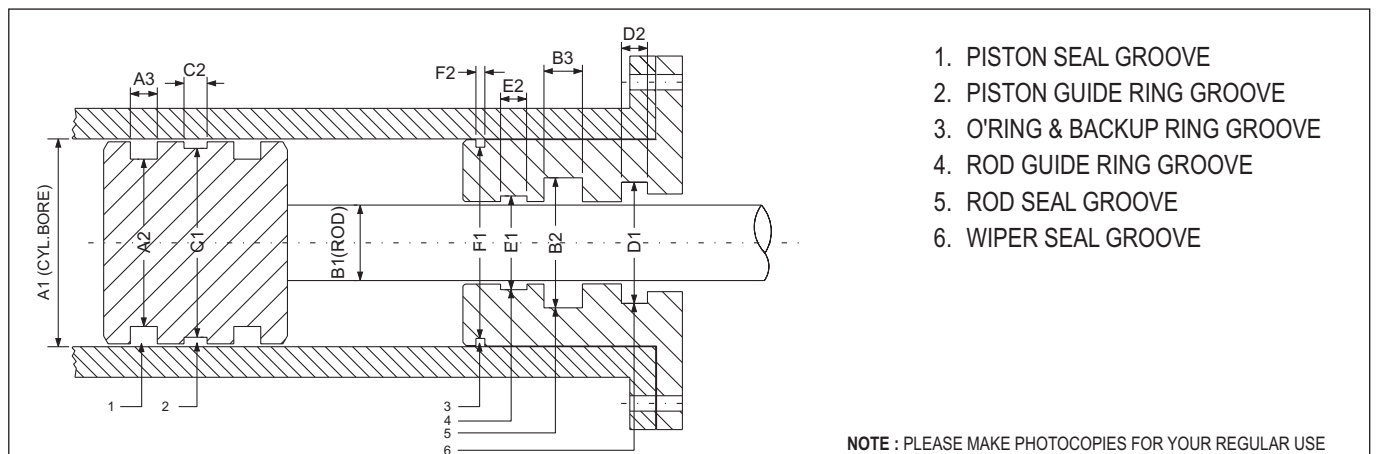
LENGTH OF STROKE : SEALING MEDIA :

ENCLOSED : ☐ EXISTING SAMPLE ☐ PRODUCT DRAWING

NOMINAL DIMENSIONS DETAILS :-

PISTON SEALS :- A1 (CYL. BORE) A2 (PISTON GROOVE DIA) A3 (GROOVE WIDTH)
 ROD SEALS :- B1 (ROD DIA) B2 (HOUSING DIA) B3 (GROOVE WIDTH)
 WIPER SEALS :- B1 (ROD DIA) D1 (HOUSING DIA) D2 (GROOVE WIDTH)
 GUIDE RINGS :- **PISTON** :- A1 C1 C2
 ROD :- B1 E1 E2
 O'RING & A1 (CYL. BORE) F1 (GLAND GROOVE DIA) F2 (GROOVE WIDTH)

BACKUP RINGS :-



NOTE : PLEASE MAKE PHOTOCOPIES FOR YOUR REGULAR USE