

Metric & Imperial



With Metric & Imperial Groove Design Tables

Back Up Washers
Service Kits
O'ring Cord
X'Rings & X'Ring Cord
SAE O'rings & Flange Seals

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The Origin Of The O'ring

The origins of the o'ring can be traced back to mid 19th century, when cast iron was chosen as a seal for steam engine cylinders. Results showed that an elastomeric material was required to aid sealing. As time passed, and engineers learned how to use rubber, the o'ring was truly invented. Today it has become the worlds most popular seal. Its simple shape, low space requirements, and easy fitting, combine with the large range of materials from which it can be made, to suit a wide variety of sealing applications.

As the worlds most simple sealing device, we also find the o'ring to be the most abused. Simple, straight forward information about sizes and housing details, covering both the metric and imperial ranges, can be extremely difficult to find. Therefore, we have attempted to put it all together in a concise, easy to follow format.

Helpful Tips About O'rings

- When stating o'ring size, it is an international convention to specify the o'ring by its inside diameter (ID) x cross-section (CS).
- All metric o'ring cross-sections are actual sizes.
- All imperial o'ring cross-sections are nominal sizes.
Example : a 1/8 nominal o'ring has an actual cross-section of 0.139", not 0.125".
- The overall performance of an o'ring is directly related to the extrusion gap, groove dimensions, and surface finishes of the housing, as well as the appropriate selection of elastomer and compound.
- Due to the vast range of metric o'ring sizes throughout the world, not all are readily available within Australia. Please confirm availability of your selected size in an appropriate elastomer and compound at the design stage.
- Imperial o'rings are available in a wider range of elastomers and durometers (hardness) than are metric o'rings. This should be kept in mind at the design stage.
- The two primary considerations when selecting an elastomer, are that it should be both compatible with the system fluid being used, and capable of operating within the required temperature range.



The Importance Of Cross-Section

One of the greatest problems people experience when identifying o'rings, is getting an accurate measurement of the cross-section (CS). This task can be made a lot easier by ascertaining the origin of the machine to which it belongs. As each country works to a specific set of standard cross-sections, this information can be used to eliminate many potential selections. The following table shows common o'ring cross-sections, and indicates those countries which use them.

Standard Metric & Imperial Cross-Sections In mm									
CS		Tol +/-	Country Standard						
Act	Nom		U.K	U.S.A.	Japan	France	Germany	Sweden	Italy
1.00	-	0.05					✓		
1.50	-	0.08					✓		
1.60	-	0.08	✓					✓	
1.78	1/16	0.08	✓	✓					✓
1.90	-	0.08			✓	✓			
2.00	-	0.08					✓		
2.40	-	0.08	✓		✓			✓	
2.50	-	0.08					✓		
2.62	3/32	0.08	✓	✓					✓
2.70	-	0.08				✓			
3.00	-	0.10	✓				✓	✓	
3.10	-	0.10			✓		✓		
3.50	-	0.10			✓		✓		
3.53	1/8	0.10	✓	✓					✓
3.60	-	0.10				✓			
4.00	-	0.12					✓		
5.00	-	0.12					✓		
5.33	3/16	0.13	✓	✓		✓			✓
5.70	-	0.13	✓		✓			✓	
6.00	-	0.14					✓		
6.99	1/4	0.15	✓	✓		✓			✓
8.40	-	0.15	✓		✓			✓	

Standard Elastomers For O'rings			
Elastomer	Compound	Temp	General Service Applications
Nitrile (Buna N)	N7 70 Durometer N9 90 Durometer	-40°C to 110°C	Nitrile is the most widely used elastomer in the seal industry. It has an excellent balance of desirable properties, with good resistance to mineral based hydraulic fluids, water, alcohol, and many other media. N9 is recommended for high pressure static applications.
Viton (Fluorocarbon)	V7 75 Durometer V9 90 Durometer	-35°C to 205°C	Viton has a resistance to a broader range of chemicals than any other elastomer. It has excellent mechanical properties, with good resistance to compression set and high temperatures. V9 is recommended for high pressure static applications.
Neoprene (Chloroprene)	C7 70 Durometer	-55°C to 140°C	Neoprene is unusual, in that it has moderate resistance to both mineral based hydraulic fluids and weather (ozone, sunlight, oxygen). It is also resistant to many refrigerants (freons, ammonia), and mild acids.
Ethylene-Propylene (E.P.D.M.)	E7 70 Durometer	-55°C to 150°C	E.P.D.M. is resistant to water, steam, acids, alkalis, brake fluid, phosphate esters, and ketones, with excellent weathering properties. It has poor resistance to mineral based fluids.
Silicone	S7 70 Durometer	-85°C to 230°C	Silicone has a very low physical strength and should be limited to static applications only. It is compatible with a wide range of fluids, as well as hot air.

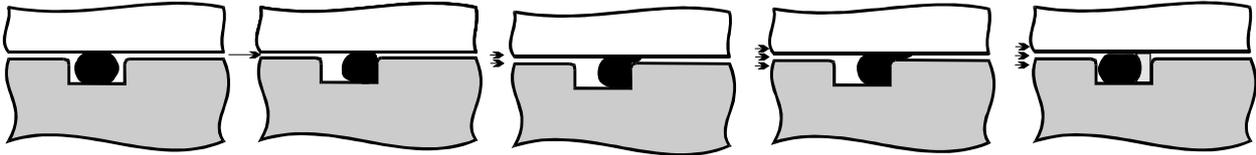


Back-Up-Washers & The Effect Of Pressure

Back-up-washers (BUW's) are not in themselves a pressure seal. Specifically, they are a device to reduce o'ring extrusion, thereby enabling an o'ring to withstand much higher pressures with a given diametral clearance.

The use of BUW's allows extrusion gaps to be increased, permitting larger diametral clearances between the piston & bore or rod & gland at a given pressure, thus reducing machining costs.

The figures below show the effect of increasing pressure on an o'ring, and that of introducing a BUW when pressure becomes too great for an o'ring by itself. The 3rd figure shows an o'ring at the extreme of its operating abilities. With the increase in pressure for figure 4, the o'ring is forced into the extrusion gap and destroyed. This problem can only be solved by reducing the diametral clearance (increasing machining costs), or the introduction of BUW's as in figure 5.



B.U.W's - Availability To Suit Standard Imperial O'rings

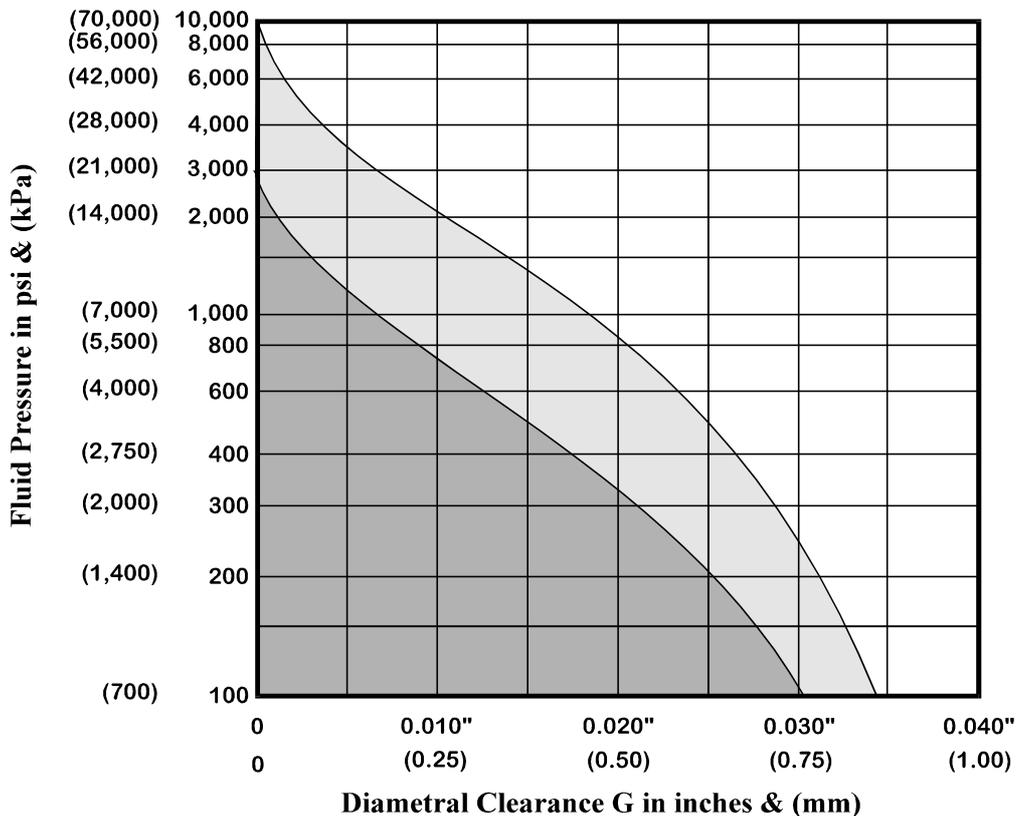
Transeals stocks a comprehensive range of BUW's to suit standard imperial o'rings (refer pages 8-13 for o'ring sizes) manufactured from 90 durometer nitrile (N9). These can be stretched during installation, enabling them to be fitted without being scarf cut. P.T.F.E BUW's are also stocked in a wide selection of these sizes and can be manufactured in-house for the entire range. Being made from a harder material than the N9 BUW's, they are suitable for more extreme applications. However, they do not stretch and must be either fitted into a 2 part housing, or scarf cut prior to fitting.

B.U.W's - Availability To Suit Standard Metric O'rings

Unlike imperial o'ring standards, not all metric o'ring standards contain specifications for BUW's. Therefore, it is not possible to get BUW's to suit all metric o'rings. Transeals stocks metric BUW's manufactured from P.T.F.E and HYTREL in a selected range of common sizes to suit G & P series o'rings (refer to page 14 for JIS B 2401:1967 o'ring sizes). Non-standard sizes can be manufactured in-house from P.T.F.E.

Extrusion Curves For 70 Duro O'rings & 90 Duro BUW's

Use these curves to determine maximum diametral clearance G. This value should always be kept to a minimum.



No Extrusion With O'rings Only
 No Extrusion With O'rings & BUW's
 Extrusion



ACN 008 902 163

O'ring Groove Design Tables

For Reciprocating & Static Hydraulic Applications

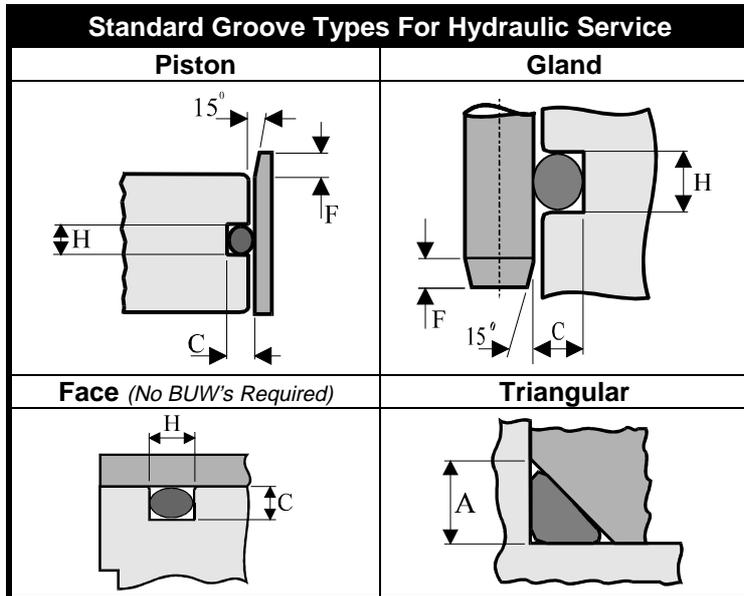
Pressure rating based on 70 durometer o'rings & 90 durometer BUW's

O'Ring Only
→ 1500 psi ←

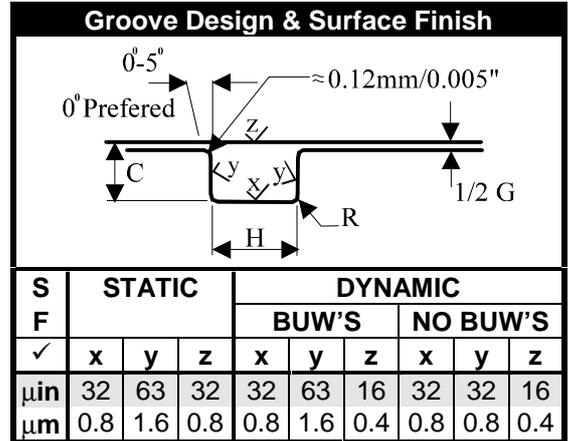
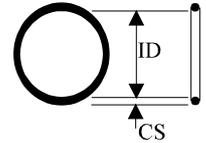
O'Ring & 1 BUW
→ 3000 psi

O'Ring & 2 BUW's
→ 3000 psi ←

For higher pressures, G must be reduced. See extrusion curves on page 3 for values.



When stating size, it is convention to specify an O'ring by its ID x CS.



Standard Imperial O'rings In Inches

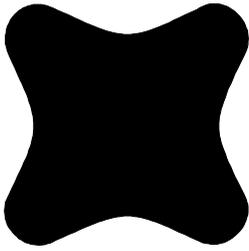
CS Cross Section		C Groove Depth				+0.008 H -0.000 Groove Width			A	R Groove Radius	G Diametral Clearance	F Lead-In	CS Cross Section
Act	Nom	Dynamic		Static		No of BUW's			+0.05 -0.00	Max	Max	Min	Act
		Max	Min	Max	Min	0	1	2					
0.070	1/16	0.060	0.058	0.054	0.052	0.092	0.161	0.240	0.095	0.015	0.005	0.039	0.070
0.103	3/32	0.092	0.088	0.082	0.080	0.133	0.181	0.256	0.138	0.015	0.005	0.059	0.103
0.139	1/8	0.126	0.121	0.114	0.106	0.179	0.216	0.291	0.189	0.025	0.006	0.079	0.139
0.210	3/16	0.191	0.185	0.174	0.162	0.273	0.300	0.401	0.281	0.035	0.006	0.118	0.210
0.275	1/4	0.248	0.240	0.227	0.214	0.358	0.395	0.531	0.370	0.035	0.007	0.157	0.275

Standard Metric And Imperial O'rings In mm

CS Cross Section		C Groove Depth				+0.20 H -0.00 Groove Width			A	R Groove Radius	G Diametral Clearance	F Lead-In	CS Cross Section
Act	Nom	Dynamic		Static		No of BUW's			+0.12 -0.00	Max	Max	Min	Act
		Max	Min	Max	Min	0	1	2					
1.0	-	0.85	0.80	0.75	0.70	1.30	-	-	1.40	0.25	0.10	1.00	1.0
1.5	-	1.30	1.25	1.20	1.15	1.95	-	-	2.00	0.25	0.10	1.00	1.5
1.6	-	1.38	1.33	1.28	1.23	2.08	-	-	2.20	0.25	0.10	1.00	1.6
1.78	1/16	1.53	1.47	1.38	1.33	2.34	4.10	6.10	2.40	0.38	0.13	1.00	1.78
1.9	-	1.64	1.59	1.53	1.48	2.57	4.10	6.00	2.65	0.38	0.13	1.50	1.9
2.0	-	1.74	1.69	1.60	1.55	2.60	-	-	2.70	0.38	0.13	1.50	2.0
2.4	-	2.13	2.07	1.92	1.87	3.12	4.60	6.00	3.20	0.38	0.13	1.50	2.4
2.5	-	2.23	2.18	2.00	1.95	3.25	-	-	3.40	0.38	0.13	1.50	2.5
2.62	3/32	2.34	2.25	2.08	2.03	3.38	4.60	6.50	3.50	0.38	0.13	1.50	2.62
3.0	-	2.71	2.64	2.50	2.30	3.90	5.40	6.80	4.00	0.63	0.13	2.00	3.0
3.1	-	2.81	2.69	2.52	2.32	4.00	5.50	6.90	4.10	0.63	0.13	2.00	3.1
3.5	-	3.21	3.09	2.90	2.70	4.55	6.10	7.50	4.80	0.63	0.13	2.00	3.5
3.53	1/8	3.21	3.09	2.90	2.70	4.55	5.50	7.40	4.80	0.63	0.15	2.00	3.53
4.0	-	3.66	3.54	3.30	3.10	5.20	-	-	5.40	0.63	0.15	3.00	4.0
5.0	-	4.60	4.40	4.15	3.85	6.50	-	-	6.70	0.63	0.15	3.00	5.0
5.33	3/16	4.86	4.70	4.42	4.12	6.95	7.60	10.20	7.15	0.89	0.15	3.00	5.33
5.7	-	5.28	5.08	4.75	4.45	7.47	9.30	11.10	7.70	0.89	0.15	4.00	5.7
6.0	-	5.50	5.30	4.95	4.65	7.80	-	-	8.00	0.89	0.15	4.00	6.0
6.99	1/4	6.31	6.11	5.78	5.45	9.10	10.05	13.50	9.40	0.89	0.17	4.00	6.99
8.4	-	7.75	7.55	6.95	6.65	11.05	13.20	15.40	11.40	0.89	0.17	4.00	8.4



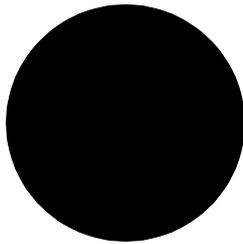
Standard Imperial X'Rings



X'Rings are an elastomeric seal designed to replace o'rings in certain applications. They are basically square in cross-section, making spiral twist impossible, with concave sides to reduce the contact area. The frictional resistance for X'Rings is less than that of the corresponding o'ring for pressures up to 600 psi.

X'Ring dimensions correspond with those for standard imperial o'rings, and as such can be fitted to existing o'ring grooves. Transeals stocks an extensive range of 80 durometer nitrile (N8) X'Rings in standard imperial sizes. Other elastomers and compounds are available only in selected sizes and limited quantities. Contact our technical staff for availability.

O'ring Cord - Imperial & Metric



Extruded 70 durometer nitrile o'ring cord is available in an extensive range of sizes. Other elastomers, including viton, neoprene, E.P.D.M & silicone, are available in a smaller range of sizes and lower quantities. 70 durometer nitrile X'Ring cord is also available in nominal imperial sizes.

Where moulded o'rings are not available in a specific size, we can offer spliced o'rings joined with cyanoacrylate, or vulcanised o'rings. However, joined o'rings are only suitable for static applications.

Standard Sizes For 70 Durometer Nitrile O'ring Cord

Imperial Cross Sections In Inches				Metric Cross Sections In mm		
Actual	Nominal	Actual	Nominal	Actual	Actual	Actual
0.062		0.210	3/16 #	0.562	2.0	5.7
0.070	1/16 #	0.250		0.625	2.4	6.0
0.103	3/32 #	0.275	1/4 #	0.750	2.5	7.0
0.125		0.312		0.812	3.0	8.0
0.139	1/8 #	0.375	#	0.875	3.5	8.4
0.156		0.437		1.000	4.0	9.0
0.187		0.500		1.250	4.5	10.0
# Also available in X'Ring cord.					5.0	22.0

Silicone Grease & The Importance Of Lubrication

Lubrication is extremely important for o'rings working in all static and dynamic applications. It should be kept in mind that the greatest benefit will be obtained, if the lubricant is used at the time of installation. Using a silicone based grease during assembly will help to protect the o'ring from damage through abrasion, pinching, and cutting. As an additional benefit, the surface film formed by such a lubricant helps to protect elastomers from atmospheric degradation, extending the service life of an o'ring.

Transeals stocks a high performance, silicone based, translucent grease specifically developed for such applications. Non-toxic, and with a working temperature range from -50°C to 200°C, it is an excellent fitting grease for a wide variety of applications. It is packed for convenience in screw topped 250g tubs, or bulk packed in 1kg and 5kg tins.

Storage Conditions & Age Control

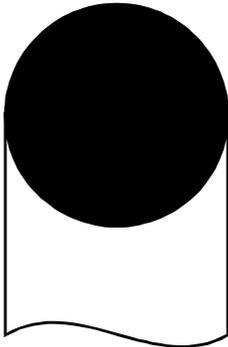
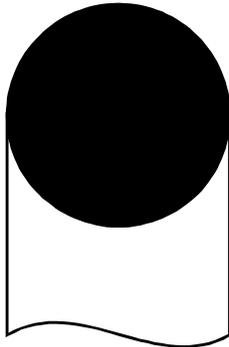
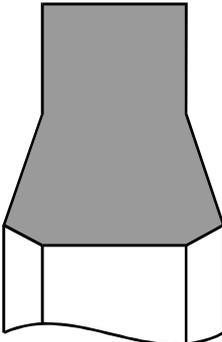
Storage life varies for all elastomers. However, in normal warehousing conditions, life of even the relatively age-sensitive elastomers is considerable. As a general rule, exclusion of contamination, light (particularly sunlight), oxygen and ozone (air), will ensure the maximum possible shelf life. This can be easily achieved by storing elastomeric seals in polyethylene bags, inside larger cardboard boxes. O'rings should always be stored in a relaxed condition and hence must only be coiled in odd numbers when size does not permit them to be stored uncoiled.

Field experience has demonstrated that storage conditions are much more important in determining the useful life of elastomeric seals than is time. Controlling time of storage can serve to de-emphasise the need for adequate control of storage conditions, and this philosophy may result in the use of deteriorated seals, or in the wasteful destruction of perfectly good seals.



Standard SAE O'rings & Flange Seals

In many cases, standard o'rings are not suitable for flange sealing due to marginal conditions. Anything from high temperatures, extreme pressures, or unsuitable surface finish on the flanges, can diminish their operational life. For this reason, Transeals stocks four different types of o'rings and flange seals to suit standard SAE flanges. Choosing the appropriate one will ensure maximum seal life, reducing down time, and therefore overall operating costs.

Standard Types				
Type	O'rings		Flange Seals	
Style	Nitrile N9	Viton V9	11 Series	OV Series
Material	Nitrile	Viton	Polyurethane	Polyurethane
Compound	N9	V9	Unithane®	Ultrathan®
Working Temperature Range	-40°C to 110°C	-35°C to 205°C	-40°C to 100°C	-35°C to 80°C
Profile				

Service Applications	
Nitrile N9	Standard duty o'ring for general service applications.
Viton V9	Standard duty o'ring for high temperature service applications.
11 Series Flange Seal	Heavy duty flange seal constructed from two bonded lamina of polyurethane varying in compound and durometer. The outer lamina provides excellent extrusion resistance for the inner lamina, which exhibits extremely low compression set and has excellent sealing characteristics. This unique combination of bonded lamina provides improved sealing performance and longer service life than can normally be obtained from standard duty o'rings.
OV Series Flange Seal	Heavy duty flange seal moulded from 93 shore A polyurethane, especially compounded for low compression set values. Designed for extreme service applications, the OV series flange seals have good abrasion resistance, making them the ideal choice for situations where the surface finish of the flange is marginal.

Standard SAE O'ring & Flange Seal Sizes						
Nominal SAE Flange Size In Inches	Caterpillar O'ring Part Number	Ryco O'ring Part Number	Transeals Part Number			
			O'rings		Flange Seals	
			Nitrile N9	Viton V9	11 Series	OV series
3/8	4J5140	RO-23	210N9	210V9	11-050	OV050
1/2	4J5140	RO-23	210N9	210V9	11-050	OV050
3/4	4J5267	RO-24	214N9	214V9	11-075	OV075
1	4J0520	RO-25	219N9	219V9	11-100	OV100
1.1/4	4J0522	RO-26	222N9	222V9	11-125	OV125
1.1/2	4J0524	RO-27	225N9	225V9	11-150	OV150
2	4J0527	RO-28	228N9	228V9	11-200	OV200
2.1/2	-	-	232N9	232V9	11-250	-
3	-	-	237N9	237V9	11-300	-
3.1/2	-	-	241N9	241V9	11-350	-
4	-	-	245N9	245V9	11-400	-
5	-	-	253N9	253V9	11-500	-



Standard Service Kits

Designed for the reduction of down time & emergency maintenance, service kits provide an economical alternative for work shops or mobile service units. Kits containing O'rings, X'rings, BUW's, Bonded-Washers, & O'ring Cord for splicing are available in both metric & imperial sizes, as listed below.

OK1N7	206 nitrile N70 o'rings in 27 sizes ranging from 1/8" ID to 1.1/2" ID with nominal cross sections of 1/16" (0.070"), 3/32" (0.103"), & 1/8 (0.139)". Our most popular & versatile service kit.
OK2N7	276 nitrile N70 o'rings in 25 sizes ranging from 1/8" ID to 1.1/2" ID with a nominal cross section of 1/16" (0.070").
OK3N7	218 nitrile N70 o'rings in 25 sizes ranging from 1/8" ID to 1.1/2" ID with a nominal cross section of 3/32 (0.103").
OK4N7	216 nitrile N70 o'rings in 29 sizes ranging from 2.8 mm ID to 37.7 mm ID with cross sections of 1.9 mm, 2.4 mm, 3.1 mm, & 3.5 mm. Japanese metric.
OK5N7	228 nitrile N70 o'rings in 29 sizes ranging from 3.0 mm ID to 37.0 mm ID with cross sections of 2.0 mm, & 3.0 mm. European metric.
OK1N9	Same as OK1N7 except o'rings are 90 durometer. Suitable for high pressure static applications.
OK2N9	Same as OK2N7 except o'rings are 90 durometer. Suitable for high pressure static applications.
OK3N9	Same as OK3N7 except o'rings are 90 durometer. Suitable for high pressure static applications.
OK6N9	160 nitrile N90 o'rings in 16 sizes ranging from 0.351" ID to 2.234" ID with varying cross sections. High pressure static o'rings to suit SAE straight thread boss and flange gaskets.
OK1E7	Same as OK1N7 except o'rings are E.P.D.M E70. Suitable for brake fluids, steam, & alkalis. Good resistance to weathering. Not resistant to mineral based hydraulic fluids.
OK1S7	Same as OK1N7 except o'rings are silicone S70. Suitable for high temperature static applications only. Compatible with hot air.
OK1V7	Same as OK1N7 except o'rings are viton V75. Suitable for high temperatures, and compatible with a wide range of fluids.
8K1N9	290 nitrile N90 back up washers to suit OK1N7 or OK1N9 o'ring kits.
8K2N9	280 nitrile N90 back up washers to suit OK2N7 or OK2N9 o'ring kits.
8K3N9	236 nitrile N90 back up washers to suit OK3N7 or OK3N9 o'ring kits.
COMKIT	142 nitrile N70 o'rings and 116 nitrile N90 back up washers in 27 sizes as per the OK1N7 o'ring kit and the 8K1N9 back up washer kit.
QK1N8	206 nitrile N80 X'rings in 27 sizes as per the OK1N7 o'ring kit.
BWKIT	90 bonded washers in 15 sizes ranging from 1/8" BSP to 1.1/4" BSP and from 1/4" to 1.5/8" bolt sizes.
KITBOXBIG	A heavy duty plastic case that can be supplied containing any four of the above service kits.
STKIT	120 stato seals in 9 sizes and 120 thread seals in 9 sizes.
MOKN7	506 nitrile N70 o'rings in 37 sizes ranging from 1/8" ID to 2.5/8" ID with nominal cross sections of 1/16" (0.070"), 3/32" (0.103"), 1/8" (0.139"), & 3/16 (0.210).
MOKN9	Same as MOKN7 except the o'rings are 90 durometer. Suitable for high pressure static applications.
SK1	Imperial o'ring splicing kit with 3 m lengths of nitrile N70 o'ring cord in cross sections of 1/16" (0.070"), 3/32" (0.103"), 1/8 (0.139"), 3/16" (0.210"), and 1/4 (0.275").
SK2	Metric o'ring splicing kit with 3 m lengths of nitrile N70 o'ring cord in cross sections of 1.6 mm, 2.0 mm, 2.4 mm, 3.0 mm, 4.0 mm, 5.7 mm, and 8.4 mm.
SK3	Combined imperial and metric o'ring splicing kit with 3 m lengths of nitrile N70 o'ring cord in the same sizes as both the SK1 and SK2 o'ring splicing kits.
	All splicing kits contain a cutter, cutting block, & a 6 pack of aron alpha.



Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
001	1/32	3/32	1/32	0.029	0.004	0.040	0.003	0.74	0.10	1.02	0.08	001
002	3/64	9/64	3/64	0.042	0.004	0.050	0.003	1.07	0.10	1.27	0.08	002
003	1/16	3/16	1/16	0.056	0.004	0.060	0.003	1.42	0.10	1.52	0.08	003
004	5/64	13/64	1/16	0.070	0.005	0.070	0.003	1.78	0.13	1.78	0.08	004
005	3/32	7/32	1/16	0.101	0.005	0.070	0.003	2.57	0.13	1.78	0.08	005
006	1/8	1/4	1/16	0.114	0.005	0.070	0.003	2.90	0.13	1.78	0.08	006
007	5/32	9/32	1/16	0.145	0.005	0.070	0.003	3.68	0.13	1.78	0.08	007
008	3/16	5/16	1/16	0.176	0.005	0.070	0.003	4.47	0.13	1.78	0.08	008
009	7/32	11/32	1/16	0.208	0.005	0.070	0.003	5.28	0.13	1.78	0.08	009
010	1/4	3/8	1/16	0.239	0.005	0.070	0.003	6.07	0.13	1.78	0.08	010
011	5/16	7/16	1/16	0.301	0.005	0.070	0.003	7.65	0.13	1.78	0.08	011
012	3/8	1/2	1/16	0.364	0.005	0.070	0.003	9.25	0.13	1.78	0.08	012
013	7/16	9/16	1/16	0.426	0.005	0.070	0.003	10.82	0.13	1.78	0.08	013
014	1/2	5/8	1/16	0.489	0.005	0.070	0.003	12.42	0.13	1.78	0.08	014
015	9/16	11/16	1/16	0.551	0.007	0.070	0.003	14.00	0.18	1.78	0.08	015
016	5/8	3/4	1/16	0.614	0.009	0.070	0.003	15.60	0.23	1.78	0.08	016
017	11/16	13/16	1/16	0.676	0.009	0.070	0.003	17.17	0.23	1.78	0.08	017
018	3/4	7/8	1/16	0.739	0.009	0.070	0.003	18.77	0.23	1.78	0.08	018
019	13/16	15/16	1/16	0.801	0.009	0.070	0.003	20.35	0.23	1.78	0.08	019
020	7/8	1	1/16	0.864	0.009	0.070	0.003	21.95	0.23	1.78	0.08	020
021	15/16	1.1/16	1/16	0.926	0.009	0.070	0.003	23.52	0.23	1.78	0.08	021
022	1	1.1/8	1/16	0.989	0.010	0.070	0.003	25.12	0.25	1.78	0.08	022
023	1.1/16	1.3/16	1/16	1.051	0.010	0.070	0.003	26.70	0.25	1.78	0.08	023
024	1.1/8	1.1/4	1/16	1.114	0.010	0.070	0.003	28.30	0.25	1.78	0.08	024
025	1.3/16	1.5/16	1/16	1.176	0.011	0.070	0.003	29.87	0.28	1.78	0.08	025
026	1.1/4	1.3/8	1/16	1.239	0.011	0.070	0.003	31.47	0.28	1.78	0.08	026
027	1.5/16	1.7/16	1/16	1.301	0.011	0.070	0.003	33.05	0.28	1.78	0.08	027
028	1.3/8	1.1/2	1/16	1.364	0.013	0.070	0.003	34.65	0.33	1.78	0.08	028
028.5	1.7/16	1.9/16	1/16	1.426	0.013	0.070	0.003	36.24	0.33	1.78	0.08	028.5
029	1.1/2	1.5/8	1/16	1.489	0.013	0.070	0.003	37.82	0.33	1.78	0.08	029
030	1.5/8	1.3/4	1/16	1.614	0.013	0.070	0.003	41.00	0.33	1.78	0.08	030
031	1.3/4	1.7/8	1/16	1.739	0.015	0.070	0.003	44.17	0.38	1.78	0.08	031
032	1.7/8	2	1/16	1.864	0.015	0.070	0.003	47.35	0.38	1.78	0.08	032
033	2	2.1/8	1/16	1.989	0.018	0.070	0.003	50.52	0.46	1.78	0.08	033
034	2.1/8	2.1/4	1/16	2.114	0.018	0.070	0.003	53.70	0.46	1.78	0.08	034
035	2.1/4	2.3/8	1/16	2.239	0.018	0.070	0.003	56.87	0.46	1.78	0.08	035
036	2.3/8	2.1/2	1/16	2.364	0.018	0.070	0.003	60.05	0.46	1.78	0.08	036
037	2.1/2	2.5/8	1/16	2.489	0.018	0.070	0.003	63.22	0.46	1.78	0.08	037
038	2.5/8	2.3/4	1/16	2.614	0.020	0.070	0.003	66.40	0.51	1.78	0.08	038
039	2.3/4	2.7/8	1/16	2.739	0.020	0.070	0.003	69.57	0.51	1.78	0.08	039
040	2.7/8	3	1/16	2.864	0.020	0.070	0.003	72.75	0.51	1.78	0.08	040
041	3	3.1/8	1/16	2.989	0.024	0.070	0.003	75.92	0.61	1.78	0.08	041
042	3.1/4	3.3/8	1/16	3.239	0.024	0.070	0.003	82.27	0.61	1.78	0.08	042
043	3.1/2	3.5/8	1/16	3.489	0.024	0.070	0.003	88.62	0.61	1.78	0.08	043
044	3.3/4	3.7/8	1/16	3.739	0.027	0.070	0.003	94.97	0.69	1.78	0.08	044
045	4	4.1/8	1/16	3.989	0.027	0.070	0.003	101.32	0.69	1.78	0.08	045
046	4.1/4	4.3/8	1/16	4.239	0.030	0.070	0.003	107.67	0.76	1.78	0.08	046
047	4.1/2	4.5/8	1/16	4.489	0.030	0.070	0.003	114.02	0.76	1.78	0.08	047
048	4.3/4	4.7/8	1/16	4.739	0.030	0.070	0.003	120.37	0.76	1.78	0.08	048
049	5	5.1/8	1/16	4.989	0.037	0.070	0.003	126.72	0.94	1.78	0.08	049
050	5.1/4	5.3/8	1/16	5.239	0.037	0.070	0.003	133.07	0.94	1.78	0.08	050
102	1/16	1/4	3/32	0.049	0.005	0.103	0.003	1.24	0.13	2.62	0.08	102
103	3/32	9/32	3/32	0.081	0.005	0.103	0.003	2.06	0.13	2.62	0.08	103
104	1/8	5/16	3/32	0.112	0.005	0.103	0.003	2.84	0.13	2.62	0.08	104
105	5/32	11/32	3/32	0.143	0.005	0.103	0.003	3.63	0.13	2.62	0.08	105
106	3/16	3/8	3/32	0.174	0.005	0.103	0.003	4.42	0.13	2.62	0.08	106
107	7/32	13/32	3/32	0.206	0.005	0.103	0.003	5.23	0.13	2.62	0.08	107
108	1/4	7/16	3/32	0.237	0.005	0.103	0.003	6.02	0.13	2.62	0.08	108
109	5/16	1/2	3/32	0.299	0.005	0.103	0.003	7.59	0.13	2.62	0.08	109
110	3/8	9/16	3/32	0.362	0.005	0.103	0.003	9.19	0.13	2.62	0.08	110
111	7/16	5/8	3/32	0.424	0.005	0.103	0.003	10.77	0.13	2.62	0.08	111
112	1/2	11/16	3/32	0.487	0.005	0.103	0.003	12.37	0.13	2.62	0.08	112
113	9/16	3/4	3/32	0.549	0.007	0.103	0.003	13.94	0.18	2.62	0.08	113
114	5/8	13/16	3/32	0.612	0.009	0.103	0.003	15.54	0.23	2.62	0.08	114



BS 1806 : 1989

Standard Imperial O'ring Sizes

AS 568A

Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
115	11/16	7/8	3/32	0.674	0.009	0.103	0.003	17.12	0.23	2.62	0.08	115
116	3/4	15/16	3/32	0.737	0.009	0.103	0.003	18.72	0.23	2.62	0.08	116
117	13/16	1	3/32	0.799	0.010	0.103	0.003	20.30	0.25	2.62	0.08	117
118	7/8	1.1/16	3/32	0.862	0.010	0.103	0.003	21.89	0.25	2.62	0.08	118
119	15/16	1.1/8	3/32	0.924	0.010	0.103	0.003	23.47	0.25	2.62	0.08	119
120	1	1.3/16	3/32	0.987	0.010	0.103	0.003	25.07	0.25	2.62	0.08	120
121	1.1/16	1.1/4	3/32	1.049	0.010	0.103	0.003	26.64	0.25	2.62	0.08	121
122	1.1/8	1.5/16	3/32	1.112	0.010	0.103	0.003	28.24	0.25	2.62	0.08	122
123	1.3/16	1.3/8	3/32	1.174	0.012	0.103	0.003	29.82	0.30	2.62	0.08	123
124	1.1/4	1.7/16	3/32	1.237	0.012	0.103	0.003	31.42	0.30	2.62	0.08	124
125	1.5/16	1.1/2	3/32	1.299	0.012	0.103	0.003	32.99	0.30	2.62	0.08	125
126	1.3/8	1.9/16	3/32	1.362	0.012	0.103	0.003	34.59	0.30	2.62	0.08	126
127	1.7/16	1.5/8	3/32	1.424	0.012	0.103	0.003	36.17	0.30	2.62	0.08	127
128	1.1/2	1.11/16	3/32	1.487	0.012	0.103	0.003	37.77	0.30	2.62	0.08	128
129	1.9/16	1.3/4	3/32	1.549	0.015	0.103	0.003	39.34	0.38	2.62	0.08	129
130	1.5/8	1.13/16	3/32	1.612	0.015	0.103	0.003	40.94	0.38	2.62	0.08	130
131	1.11/16	1.7/8	3/32	1.674	0.015	0.103	0.003	42.52	0.38	2.62	0.08	131
132	1.3/4	1.15/16	3/32	1.737	0.015	0.103	0.003	44.12	0.38	2.62	0.08	132
133	1.13/16	2	3/32	1.799	0.015	0.103	0.003	45.69	0.38	2.62	0.08	133
134	1.7/8	2.1/16	3/32	1.862	0.015	0.103	0.003	47.29	0.38	2.62	0.08	134
135	1.15/16	2.1/8	3/32	1.925	0.017	0.103	0.003	48.90	0.43	2.62	0.08	135
136	2	2.3/16	3/32	1.987	0.017	0.103	0.003	50.47	0.43	2.62	0.08	136
137	2.1/16	2.1/4	3/32	2.050	0.017	0.103	0.003	52.07	0.43	2.62	0.08	137
138	2.1/8	2.5/16	3/32	2.112	0.017	0.103	0.003	53.64	0.43	2.62	0.08	138
139	2.3/16	2.3/8	3/32	2.175	0.017	0.103	0.003	55.25	0.43	2.62	0.08	139
140	2.1/4	2.7/16	3/32	2.237	0.017	0.103	0.003	56.82	0.43	2.62	0.08	140
141	2.5/16	2.1/2	3/32	2.300	0.020	0.103	0.003	58.42	0.51	2.62	0.08	141
142	2.3/8	2.9/16	3/32	2.362	0.020	0.103	0.003	59.99	0.51	2.62	0.08	142
143	2.7/16	2.5/8	3/32	2.425	0.020	0.103	0.003	61.60	0.51	2.62	0.08	143
144	2.1/2	2.11/16	3/32	2.487	0.020	0.103	0.003	63.17	0.51	2.62	0.08	144
145	2.9/16	2.3/4	3/32	2.550	0.020	0.103	0.003	64.77	0.51	2.62	0.08	145
146	2.5/8	2.13/16	3/32	2.612	0.020	0.103	0.003	66.34	0.51	2.62	0.08	146
147	2.11/16	2.7/8	3/32	2.675	0.022	0.103	0.003	67.95	0.56	2.62	0.08	147
148	2.3/4	2.15/16	3/32	2.737	0.022	0.103	0.003	69.52	0.56	2.62	0.08	148
149	2.13/16	3	3/32	2.800	0.022	0.103	0.003	71.12	0.56	2.62	0.08	149
150	2.7/8	3.1/16	3/32	2.862	0.022	0.103	0.003	72.69	0.56	2.62	0.08	150
151	3	3.3/16	3/32	2.987	0.024	0.103	0.003	75.87	0.61	2.62	0.08	151
152	3.1/4	3.7/16	3/32	3.237	0.024	0.103	0.003	82.22	0.61	2.62	0.08	152
153	3.1/2	3.11/16	3/32	3.487	0.024	0.103	0.003	88.57	0.61	2.62	0.08	153
154	3.3/4	3.15/16	3/32	3.737	0.028	0.103	0.003	94.92	0.71	2.62	0.08	154
155	4	4.3/16	3/32	3.987	0.028	0.103	0.003	101.27	0.71	2.62	0.08	155
156	4.1/4	4.7/16	3/32	4.237	0.030	0.103	0.003	107.62	0.76	2.62	0.08	156
157	4.1/2	4.11/16	3/32	4.487	0.030	0.103	0.003	113.97	0.76	2.62	0.08	157
158	4.3/4	4.15/16	3/32	4.737	0.030	0.103	0.003	120.32	0.76	2.62	0.08	158
159	5	5.3/16	3/32	4.987	0.035	0.103	0.003	126.67	0.89	2.62	0.08	159
160	5.1/4	5.7/16	3/32	5.237	0.035	0.103	0.003	133.02	0.89	2.62	0.08	160
161	5.1/2	5.11/16	3/32	5.487	0.035	0.103	0.003	139.37	0.89	2.62	0.08	161
162	5.3/4	5.15/16	3/32	5.737	0.035	0.103	0.003	145.72	0.89	2.62	0.08	162
163	6	6.3/16	3/32	5.987	0.035	0.103	0.003	152.07	0.89	2.62	0.08	163
164	6.1/4	6.7/16	3/32	6.237	0.040	0.103	0.003	158.42	1.02	2.62	0.08	164
165	6.1/2	6.11/16	3/32	6.487	0.040	0.103	0.003	164.77	1.02	2.62	0.08	165
166	6.3/4	6.15/16	3/32	6.737	0.040	0.103	0.003	171.12	1.02	2.62	0.08	166
167	7	7.3/16	3/32	6.987	0.040	0.103	0.003	177.47	1.02	2.62	0.08	167
168	7.1/4	7.7/16	3/32	7.237	0.045	0.103	0.003	183.82	1.14	2.62	0.08	168
169	7.1/2	7.11/16	3/32	7.487	0.045	0.103	0.003	190.17	1.14	2.62	0.08	169
170	7.3/4	7.15/16	3/32	7.737	0.045	0.103	0.003	196.52	1.14	2.62	0.08	170
171	8	8.3/16	3/32	7.987	0.045	0.103	0.003	202.87	1.14	2.62	0.08	171
172	8.1/4	8.7/16	3/32	8.237	0.050	0.103	0.003	209.22	1.27	2.62	0.08	172
173	8.1/2	8.11/16	3/32	8.487	0.050	0.103	0.003	215.57	1.27	2.62	0.08	173
174	8.3/4	8.15/16	3/32	8.737	0.050	0.103	0.003	221.92	1.27	2.62	0.08	174
175	9	9.3/16	3/32	8.987	0.050	0.103	0.003	228.27	1.27	2.62	0.08	175
176	9.1/4	9.7/16	3/32	9.237	0.055	0.103	0.003	234.62	1.40	2.62	0.08	176
177	9.1/2	9.11/16	3/32	9.487	0.055	0.103	0.003	240.97	1.40	2.62	0.08	177
178	9.3/4	9.15/16	3/32	9.737	0.055	0.103	0.003	247.32	1.40	2.62	0.08	178



Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
201	3/16	7/16	1/8	0.171	0.005	0.139	0.004	4.34	0.13	3.53	0.10	201
202	1/4	1/2	1/8	0.234	0.005	0.139	0.004	5.94	0.13	3.53	0.10	202
203	5/16	9/16	1/8	0.296	0.005	0.139	0.004	7.52	0.13	3.53	0.10	203
204	3/8	5/8	1/8	0.359	0.005	0.139	0.004	9.12	0.13	3.53	0.10	204
205	7/16	11/16	1/8	0.421	0.005	0.139	0.004	10.69	0.13	3.53	0.10	205
206	1/2	3/4	1/8	0.484	0.005	0.139	0.004	12.29	0.13	3.53	0.10	206
207	9/16	13/16	1/8	0.546	0.007	0.139	0.004	13.87	0.18	3.53	0.10	207
208	5/8	7/8	1/8	0.609	0.009	0.139	0.004	15.47	0.23	3.53	0.10	208
209	11/16	15/16	1/8	0.671	0.010	0.139	0.004	17.04	0.23	3.53	0.10	209
210	3/4	1	1/8	0.734	0.010	0.139	0.004	18.64	0.25	3.53	0.10	210
211	13/16	1.1/16	1/8	0.796	0.010	0.139	0.004	20.22	0.25	3.53	0.10	211
212	7/8	1.1/8	1/8	0.859	0.010	0.139	0.004	21.82	0.25	3.53	0.10	212
213	15/16	1.3/16	1/8	0.921	0.010	0.139	0.004	23.39	0.25	3.53	0.10	213
214	1	1.1/4	1/8	0.984	0.010	0.139	0.004	24.99	0.25	3.53	0.10	214
215	1.1/16	1.5/16	1/8	1.046	0.010	0.139	0.004	26.57	0.25	3.53	0.10	215
216	1.1/8	1.3/8	1/8	1.109	0.012	0.139	0.004	28.17	0.30	3.53	0.10	216
217	1.3/16	1.7/16	1/8	1.171	0.012	0.139	0.004	29.74	0.30	3.53	0.10	217
218	1.1/4	1.1/2	1/8	1.234	0.012	0.139	0.004	31.34	0.30	3.53	0.10	218
219	1.5/16	1.9/16	1/8	1.296	0.012	0.139	0.004	32.92	0.30	3.53	0.10	219
220	1.3/8	1.5/8	1/8	1.359	0.012	0.139	0.004	34.52	0.30	3.53	0.10	220
221	1.7/16	1.11/16	1/8	1.421	0.012	0.139	0.004	36.09	0.30	3.53	0.10	221
222	1.1/2	1.3/4	1/8	1.484	0.015	0.139	0.004	37.69	0.38	3.53	0.10	222
223	1.5/8	1.7/8	1/8	1.609	0.015	0.139	0.004	40.87	0.38	3.53	0.10	223
224	1.3/4	2	1/8	1.734	0.015	0.139	0.004	44.04	0.38	3.53	0.10	224
225	1.7/8	2.1/8	1/8	1.859	0.018	0.139	0.004	47.22	0.46	3.53	0.10	225
226	2	2.1/4	1/8	1.984	0.018	0.139	0.004	50.39	0.46	3.53	0.10	226
227	2.1/8	2.3/8	1/8	2.109	0.018	0.139	0.004	53.57	0.46	3.53	0.10	227
228	2.1/4	2.1/2	1/8	2.234	0.020	0.139	0.004	56.74	0.51	3.53	0.10	228
229	2.3/8	2.5/8	1/8	2.359	0.020	0.139	0.004	59.92	0.51	3.53	0.10	229
230	2.1/2	2.3/4	1/8	2.484	0.020	0.139	0.004	63.09	0.51	3.53	0.10	230
231	2.5/8	2.7/8	1/8	2.609	0.020	0.139	0.004	66.27	0.51	3.53	0.10	231
232	2.3/4	3	1/8	2.734	0.024	0.139	0.004	69.44	0.61	3.53	0.10	232
233	2.7/8	3.1/8	1/8	2.859	0.024	0.139	0.004	72.62	0.61	3.53	0.10	233
234	3	3.1/4	1/8	2.984	0.024	0.139	0.004	75.79	0.61	3.53	0.10	234
235	3.1/8	3.3/8	1/8	3.109	0.024	0.139	0.004	78.97	0.61	3.53	0.10	235
236	3.1/4	3.1/2	1/8	3.234	0.024	0.139	0.004	82.14	0.61	3.53	0.10	236
237	3.3/8	3.5/8	1/8	3.359	0.024	0.139	0.004	85.32	0.61	3.53	0.10	237
238	3.1/2	3.3/4	1/8	3.484	0.024	0.139	0.004	88.49	0.61	3.53	0.10	238
239	3.5/8	3.7/8	1/8	3.609	0.028	0.139	0.004	91.67	0.71	3.53	0.10	239
240	3.3/4	4	1/8	3.734	0.028	0.139	0.004	94.84	0.71	3.53	0.10	240
241	3.7/8	4.1/8	1/8	3.859	0.028	0.139	0.004	98.02	0.71	3.53	0.10	241
242	4	4.1/4	1/8	3.984	0.028	0.139	0.004	101.19	0.71	3.53	0.10	242
243	4.1/8	4.3/8	1/8	4.109	0.028	0.139	0.004	104.37	0.71	3.53	0.10	243
244	4.1/4	4.1/2	1/8	4.234	0.030	0.139	0.004	107.54	0.76	3.53	0.10	244
245	4.3/8	4.5/8	1/8	4.359	0.030	0.139	0.004	110.72	0.76	3.53	0.10	245
246	4.1/2	4.3/4	1/8	4.484	0.030	0.139	0.004	113.89	0.76	3.53	0.10	246
247	4.5/8	4.7/8	1/8	4.609	0.030	0.139	0.004	117.07	0.76	3.53	0.10	247
248	4.3/4	5	1/8	4.734	0.030	0.139	0.004	120.24	0.76	3.53	0.10	248
249	4.7/8	5.1/8	1/8	4.859	0.035	0.139	0.004	123.42	0.89	3.53	0.10	249
250	5	5.1/4	1/8	4.984	0.035	0.139	0.004	126.59	0.89	3.53	0.10	250
251	5.1/8	5.3/8	1/8	5.109	0.035	0.139	0.004	129.77	0.89	3.53	0.10	251
252	5.1/4	5.1/2	1/8	5.234	0.035	0.139	0.004	132.94	0.89	3.53	0.10	252
253	5.3/8	5.5/8	1/8	5.359	0.035	0.139	0.004	136.12	0.89	3.53	0.10	253
254	5.1/2	5.3/4	1/8	5.484	0.035	0.139	0.004	139.29	0.89	3.53	0.10	254
255	5.5/8	5.7/8	1/8	5.609	0.035	0.139	0.004	142.47	0.89	3.53	0.10	255
256	5.3/4	6	1/8	5.734	0.035	0.139	0.004	145.64	0.89	3.53	0.10	256
257	5.7/8	6.1/8	1/8	5.859	0.035	0.139	0.004	148.82	0.89	3.53	0.10	257
258	6	6.1/4	1/8	5.984	0.035	0.139	0.004	151.99	0.89	3.53	0.10	258
259	6.1/4	6.1/2	1/8	6.234	0.040	0.139	0.004	158.34	1.02	3.53	0.10	259
260	6.1/2	6.3/4	1/8	6.484	0.040	0.139	0.004	164.69	1.02	3.53	0.10	260
261	6.3/4	7	1/8	6.734	0.040	0.139	0.004	171.04	1.02	3.53	0.10	261
262	7	7.1/4	1/8	6.984	0.040	0.139	0.004	177.39	1.02	3.53	0.10	262
263	7.1/4	7.1/2	1/8	7.234	0.045	0.139	0.004	183.74	1.14	3.53	0.10	263
264	7.1/2	7.3/4	1/8	7.484	0.045	0.139	0.004	190.09	1.14	3.53	0.10	264
265	7.3/4	8	1/8	7.734	0.045	0.139	0.004	196.44	1.14	3.53	0.10	265



Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
266	8	8.1/4	1/8	7.984	0.045	0.139	0.004	202.79	1.14	3.53	0.10	266
267	8.1/4	8.1/2	1/8	8.234	0.050	0.139	0.004	209.14	1.27	3.53	0.10	267
268	8.1/2	8.3/4	1/8	8.484	0.050	0.139	0.004	215.49	1.27	3.53	0.10	268
269	8.3/4	9	1/8	8.734	0.050	0.139	0.004	221.84	1.27	3.53	0.10	269
270	9	9.1/4	1/8	8.984	0.050	0.139	0.004	228.19	1.27	3.53	0.10	270
271	9.1/4	9.1/2	1/8	9.234	0.055	0.139	0.004	234.54	1.40	3.53	0.10	271
272	9.1/2	9.3/4	1/8	9.484	0.055	0.139	0.004	240.89	1.40	3.53	0.10	272
273	9.3/4	10	1/8	9.734	0.055	0.139	0.004	247.24	1.40	3.53	0.10	273
274	10	10.1/4	1/8	9.984	0.055	0.139	0.004	253.59	1.40	3.53	0.10	274
275	10.1/2	10.3/4	1/8	10.484	0.055	0.139	0.004	266.29	1.40	3.53	0.10	275
276	11	11.1/4	1/8	10.984	0.065	0.139	0.004	278.99	1.65	3.53	0.10	276
277	11.1/2	11.3/4	1/8	11.484	0.065	0.139	0.004	291.69	1.65	3.53	0.10	277
278	12	12.1/4	1/8	11.984	0.065	0.139	0.004	304.39	1.65	3.53	0.10	278
278.5	12.1/2	12.3/4	1/8	12.484	0.065	0.139	0.004	317.09	1.65	3.53	0.10	278.5
279	13	13.1/4	1/8	12.984	0.065	0.139	0.004	329.79	1.65	3.53	0.10	279
280	14	14.1/4	1/8	13.984	0.065	0.139	0.004	355.19	1.65	3.53	0.10	280
281	15	15.1/4	1/8	14.984	0.065	0.139	0.004	380.59	1.65	3.53	0.10	281
282	16	16.1/4	1/8	15.955	0.075	0.139	0.004	405.26	1.91	3.53	0.10	282
283	17	17.1/4	1/8	16.955	0.080	0.139	0.004	430.66	2.03	3.53	0.10	283
284	18	18.1/4	1/8	17.955	0.085	0.139	0.004	456.06	2.16	3.53	0.10	284
309	7/16	13/16	3/16	0.412	0.005	0.210	0.005	10.46	0.13	5.33	0.13	309
310	1/2	7/8	3/16	0.475	0.005	0.210	0.005	12.07	0.13	5.33	0.13	310
311	9/16	15/16	3/16	0.537	0.007	0.210	0.005	13.64	0.18	5.33	0.13	311
312	5/8	1	3/16	0.600	0.009	0.210	0.005	15.24	0.23	5.33	0.13	312
313	11/16	1.1/16	3/16	0.662	0.009	0.210	0.005	16.81	0.23	5.33	0.13	313
314	3/4	1.1/8	3/16	0.725	0.010	0.210	0.005	18.42	0.25	5.33	0.13	314
315	13/16	1.3/16	3/16	0.787	0.010	0.210	0.005	19.99	0.25	5.33	0.13	315
316	7/8	1.1/4	3/16	0.850	0.010	0.210	0.005	21.59	0.25	5.33	0.13	316
317	15/16	1.5/16	3/16	0.912	0.010	0.210	0.005	23.16	0.25	5.33	0.13	317
318	1	1.3/8	3/16	0.975	0.010	0.210	0.005	24.77	0.25	5.33	0.13	318
319	1.1/16	1.7/16	3/16	1.037	0.010	0.210	0.005	26.34	0.25	5.33	0.13	319
320	1.1/8	1.1/2	3/16	1.100	0.012	0.210	0.005	27.94	0.30	5.33	0.13	320
321	1.3/16	1.9/16	3/16	1.162	0.012	0.210	0.005	29.51	0.30	5.33	0.13	321
322	1.1/4	1.5/8	3/16	1.225	0.012	0.210	0.005	31.12	0.30	5.33	0.13	322
323	1.5/16	1.11/16	3/16	1.287	0.012	0.210	0.005	32.69	0.30	5.33	0.13	323
324	1.3/8	1.3/4	3/16	1.350	0.012	0.210	0.005	34.29	0.30	5.33	0.13	324
325	1.1/2	1.7/8	3/16	1.475	0.015	0.210	0.005	37.47	0.38	5.33	0.13	325
326	1.5/8	2	3/16	1.600	0.015	0.210	0.005	40.64	0.38	5.33	0.13	326
327	1.3/4	2.1/8	3/16	1.725	0.015	0.210	0.005	43.82	0.38	5.33	0.13	327
328	1.7/8	2.1/4	3/16	1.850	0.015	0.210	0.005	46.99	0.38	5.33	0.13	328
329	2	2.3/8	3/16	1.975	0.018	0.210	0.005	50.17	0.46	5.33	0.13	329
330	2.1/8	2.1/2	3/16	2.100	0.018	0.210	0.005	53.34	0.46	5.33	0.13	330
331	2.1/4	2.5/8	3/16	2.225	0.018	0.210	0.005	56.52	0.46	5.33	0.13	331
332	2.3/8	2.3/4	3/16	2.350	0.018	0.210	0.005	59.69	0.46	5.33	0.13	332
333	2.1/2	2.7/8	3/16	2.475	0.020	0.210	0.005	62.87	0.51	5.33	0.13	333
334	2.5/8	3	3/16	2.600	0.020	0.210	0.005	66.04	0.51	5.33	0.13	334
335	2.3/4	3.1/8	3/16	2.725	0.020	0.210	0.005	69.22	0.51	5.33	0.13	335
336	2.7/8	3.1/4	3/16	2.850	0.020	0.210	0.005	72.39	0.51	5.33	0.13	336
337	3	3.3/8	3/16	2.975	0.024	0.210	0.005	75.57	0.61	5.33	0.13	337
338	3.1/8	3.1/2	3/16	3.100	0.024	0.210	0.005	78.74	0.61	5.33	0.13	338
339	3.1/4	3.5/8	3/16	3.225	0.024	0.210	0.005	81.92	0.61	5.33	0.13	339
340	3.3/8	3.3/4	3/16	3.350	0.024	0.210	0.005	85.09	0.61	5.33	0.13	340
341	3.1/2	3.7/8	3/16	3.475	0.024	0.210	0.005	88.27	0.61	5.33	0.13	341
342	3.5/8	4	3/16	3.600	0.028	0.210	0.005	91.44	0.71	5.33	0.13	342
343	3.3/4	4.1/8	3/16	3.725	0.028	0.210	0.005	94.62	0.71	5.33	0.13	343
344	3.7/8	4.1/4	3/16	3.850	0.028	0.210	0.005	97.79	0.71	5.33	0.13	344
345	4	4.3/8	3/16	3.975	0.028	0.210	0.005	100.97	0.71	5.33	0.13	345
346	4.1/8	4.1/2	3/16	4.100	0.028	0.210	0.005	104.14	0.71	5.33	0.13	346
347	4.1/4	4.5/8	3/16	4.225	0.030	0.210	0.005	107.32	0.76	5.33	0.13	347
348	4.3/8	4.3/4	3/16	4.350	0.030	0.210	0.005	110.49	0.76	5.33	0.13	348
349	4.1/2	4.7/8	3/16	4.475	0.030	0.210	0.005	113.67	0.76	5.33	0.13	349
350	4.5/8	5	3/16	4.600	0.030	0.210	0.005	116.84	0.76	5.33	0.13	350
351	4.3/4	5.1/8	3/16	4.725	0.030	0.210	0.005	120.02	0.76	5.33	0.13	351
352	4.7/8	5.1/4	3/16	4.850	0.030	0.210	0.005	123.19	0.76	5.33	0.13	352



Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
353	5	5.3/8	3/16	4.975	0.037	0.210	0.005	126.37	0.94	5.33	0.13	353
354	5.1/8	5.1/2	3/16	5.100	0.037	0.210	0.005	129.54	0.94	5.33	0.13	354
355	5.1/4	5.5/8	3/16	5.225	0.037	0.210	0.005	132.72	0.94	5.33	0.13	355
356	5.3/8	5.3/4	3/16	5.350	0.037	0.210	0.005	135.89	0.94	5.33	0.13	356
357	5.1/2	5.7/8	3/16	5.475	0.037	0.210	0.005	139.07	0.94	5.33	0.13	357
358	5.5/8	6	3/16	5.600	0.037	0.210	0.005	142.24	0.94	5.33	0.13	358
359	5.3/4	6.1/8	3/16	5.725	0.037	0.210	0.005	145.42	0.94	5.33	0.13	359
360	5.7/8	6.1/4	3/16	5.850	0.037	0.210	0.005	148.59	0.94	5.33	0.13	360
361	6	6.3/8	3/16	5.975	0.037	0.210	0.005	151.77	0.94	5.33	0.13	361
362	6.1/4	6.5/8	3/16	6.225	0.040	0.210	0.005	158.12	1.02	5.33	0.13	362
363	6.1/2	6.7/8	3/16	6.475	0.040	0.210	0.005	164.47	1.02	5.33	0.13	363
364	6.3/4	7.1/8	3/16	6.725	0.040	0.210	0.005	170.82	1.02	5.33	0.13	364
365	7	7.3/8	3/16	6.975	0.040	0.210	0.005	177.17	1.02	5.33	0.13	365
366	7.1/4	7.5/8	3/16	7.225	0.045	0.210	0.005	183.52	1.14	5.33	0.13	366
367	7.1/2	7.7/8	3/16	7.475	0.045	0.210	0.005	189.87	1.14	5.33	0.13	367
368	7.3/4	8.1/8	3/16	7.725	0.045	0.210	0.005	196.22	1.14	5.33	0.13	368
369	8	8.3/8	3/16	7.975	0.045	0.210	0.005	202.57	1.14	5.33	0.13	369
370	8.1/4	8.5/8	3/16	8.225	0.050	0.210	0.005	208.92	1.27	5.33	0.13	370
371	8.1/2	8.7/8	3/16	8.475	0.050	0.210	0.005	215.27	1.27	5.33	0.13	371
372	8.3/4	9.1/8	3/16	8.725	0.050	0.210	0.005	221.62	1.27	5.33	0.13	372
373	9	9.3/8	3/16	8.975	0.050	0.210	0.005	227.97	1.27	5.33	0.13	373
374	9.1/4	9.5/8	3/16	9.225	0.055	0.210	0.005	234.32	1.40	5.33	0.13	374
375	9.1/2	9.7/8	3/16	9.475	0.055	0.210	0.005	240.67	1.40	5.33	0.13	375
376	9.3/4	10.1/8	3/16	9.725	0.055	0.210	0.005	247.02	1.40	5.33	0.13	376
377	10	10.3/8	3/16	9.975	0.055	0.210	0.005	253.37	1.40	5.33	0.13	377
378	10.1/2	10.7/8	3/16	10.475	0.060	0.210	0.005	266.07	1.52	5.33	0.13	378
379	11	11.3/8	3/16	10.975	0.060	0.210	0.005	278.77	1.52	5.33	0.13	379
380	11.1/2	11.7/8	3/16	11.475	0.065	0.210	0.005	291.47	1.65	5.33	0.13	380
381	12	12.3/8	3/16	11.975	0.065	0.210	0.005	304.17	1.65	5.33	0.13	381
381.5	12.1/2	12.7/8	3/16	12.475	0.065	0.210	0.005	316.86	1.65	5.33	0.13	381.5
382	13	13.3/8	3/16	12.975	0.065	0.210	0.005	329.57	1.65	5.33	0.13	382
383	14	14.3/8	3/16	13.975	0.070	0.210	0.005	354.97	1.78	5.33	0.13	383
384	15	15.3/8	3/16	14.975	0.070	0.210	0.005	380.37	1.78	5.33	0.13	384
385	16	16.3/8	3/16	15.955	0.075	0.210	0.005	405.26	1.91	5.33	0.13	385
386	17	17.3/8	3/16	16.955	0.080	0.210	0.005	430.66	2.03	5.33	0.13	386
387	18	18.3/8	3/16	17.955	0.085	0.210	0.005	456.06	2.16	5.33	0.13	387
388	19	19.3/8	3/16	18.955	0.090	0.210	0.005	481.41	2.29	5.33	0.13	388
389	20	20.3/8	3/16	19.955	0.095	0.210	0.005	506.81	2.41	5.33	0.13	389
390	21	21.3/8	3/16	20.955	0.095	0.210	0.005	532.21	2.41	5.33	0.13	390
391	22	22.3/8	3/16	21.955	0.100	0.210	0.005	557.61	2.54	5.33	0.13	391
392	23	23.3/8	3/16	22.940	0.105	0.210	0.005	582.68	2.67	5.33	0.13	392
393	24	24.3/8	3/16	23.940	0.110	0.210	0.005	608.08	2.79	5.33	0.13	393
394	25	25.3/8	3/16	24.940	0.115	0.210	0.005	633.48	2.92	5.33	0.13	394
395	26	26.3/8	3/16	25.940	0.120	0.210	0.005	658.88	3.05	5.33	0.13	395
425	4.1/2	5	1/4	4.475	0.033	0.275	0.006	113.67	0.84	6.99	0.15	425
426	4.5/8	5.1/8	1/4	4.600	0.033	0.275	0.006	116.84	0.84	6.99	0.15	426
427	4.3/4	5.1/4	1/4	4.725	0.033	0.275	0.006	120.02	0.84	6.99	0.15	427
428	4.7/8	5.3/8	1/4	4.850	0.033	0.275	0.006	123.19	0.84	6.99	0.15	428
429	5	5.1/2	1/4	4.975	0.037	0.275	0.006	126.37	0.94	6.99	0.15	429
430	5.1/8	5.5/8	1/4	5.100	0.037	0.275	0.006	129.54	0.94	6.99	0.15	430
431	5.1/4	5.3/4	1/4	5.225	0.037	0.275	0.006	132.72	0.94	6.99	0.15	431
432	5.3/8	5.7/8	1/4	5.350	0.037	0.275	0.006	135.89	0.94	6.99	0.15	432
433	5.1/2	6	1/4	5.475	0.037	0.275	0.006	139.07	0.94	6.99	0.15	433
434	5.5/8	6.1/8	1/4	5.600	0.037	0.275	0.006	142.24	0.94	6.99	0.15	434
435	5.3/4	6.1/4	1/4	5.725	0.037	0.275	0.006	145.42	0.94	6.99	0.15	435
436	5.7/8	6.3/8	1/4	5.850	0.037	0.275	0.006	148.59	0.94	6.99	0.15	436
437	6	6.1/2	1/4	5.975	0.037	0.275	0.006	151.77	0.94	6.99	0.15	437
438	6.1/4	6.3/4	1/4	6.225	0.040	0.275	0.006	158.12	1.02	6.99	0.15	438
439	6.1/2	7	1/4	6.475	0.040	0.275	0.006	164.47	1.02	6.99	0.15	439
440	6.3/4	7.1/4	1/4	6.725	0.040	0.275	0.006	170.82	1.02	6.99	0.15	440
441	7	7.1/2	1/4	6.975	0.040	0.275	0.006	177.17	1.02	6.99	0.15	441
442	7.1/4	7.3/4	1/4	7.225	0.045	0.275	0.006	183.52	1.14	6.99	0.15	442
443	7.1/2	8	1/4	7.475	0.045	0.275	0.006	189.87	1.14	6.99	0.15	443
444	7.3/4	8.1/4	1/4	7.725	0.045	0.275	0.006	196.22	1.14	6.99	0.15	444



BS 1806 : 1989

Standard Imperial O'ring Sizes

AS 568A

Dash No	Nominal Size			Actual Size In Inches				Actual Size In mm				Dash No
	ID	OD	CS	ID	+/-	CS	+/-	ID	+/-	CS	+/-	
445	8	8.1/2	1/4	7.975	0.045	0.275	0.006	202.57	1.14	6.99	0.15	445
445A	8.1/4	8.3/4	1/4	8.225	0.045	0.275	0.006	208.91	1.14	6.99	0.15	445A
446	8.1/2	9	1/4	8.475	0.055	0.275	0.006	215.27	1.40	6.99	0.15	446
446A	8.3/4	9.1/4	1/4	8.725	0.055	0.275	0.006	221.61	1.40	6.99	0.15	446A
447	9	9.1/2	1/4	8.975	0.055	0.275	0.006	227.97	1.40	6.99	0.15	447
447A	9.1/4	9.3/4	1/4	9.225	0.055	0.275	0.006	234.31	1.40	6.99	0.15	447A
448	9.1/2	10	1/4	9.475	0.055	0.275	0.006	240.67	1.40	6.99	0.15	448
448A	9.3/4	10.1/4	1/4	9.725	0.055	0.275	0.006	247.01	1.40	6.99	0.15	448A
449	10	10.1/2	1/4	9.975	0.055	0.275	0.006	253.37	1.40	6.99	0.15	449
449A	10.1/4	10.3/4	1/4	10.225	0.055	0.275	0.006	259.71	1.40	6.99	0.15	449A
450	10.1/2	11	1/4	10.475	0.060	0.275	0.006	266.07	1.52	6.99	0.15	450
450A	10.3/4	11.1/4	1/4	10.725	0.060	0.275	0.006	272.41	1.52	6.99	0.15	450A
451	11	11.1/2	1/4	10.975	0.060	0.275	0.006	278.77	1.52	6.99	0.15	451
451A	11.1/4	11.3/4	1/4	11.225	0.060	0.275	0.006	285.11	1.52	6.99	0.15	451A
452	11.1/2	12	1/4	11.475	0.060	0.275	0.006	291.47	1.52	6.99	0.15	452
452A	11.3/4	12.1/4	1/4	11.725	0.060	0.275	0.006	297.81	1.52	6.99	0.15	452A
453	12	12.1/2	1/4	11.975	0.060	0.275	0.006	304.17	1.52	6.99	0.15	453
454	12.1/2	13	1/4	12.475	0.060	0.275	0.006	316.87	1.52	6.99	0.15	454
455	13	13.1/2	1/4	12.975	0.060	0.275	0.006	329.57	1.52	6.99	0.15	455
456	13.1/2	14	1/4	13.475	0.070	0.275	0.006	342.27	1.78	6.99	0.15	456
457	14	14.1/2	1/4	13.975	0.070	0.275	0.006	354.97	1.78	6.99	0.15	457
458	14.1/2	15	1/4	14.475	0.070	0.275	0.006	367.67	1.78	6.99	0.15	458
459	15	15.1/2	1/4	14.975	0.070	0.275	0.006	380.37	1.78	6.99	0.15	459
460	15.1/2	16	1/4	15.475	0.070	0.275	0.006	393.07	1.78	6.99	0.15	460
461	16	16.1/2	1/4	15.955	0.075	0.275	0.006	405.26	1.91	6.99	0.15	461
462	16.1/2	17	1/4	16.455	0.075	0.275	0.006	417.96	1.91	6.99	0.15	462
463	17	17.1/2	1/4	16.955	0.080	0.275	0.006	430.66	2.03	6.99	0.15	463
464	17.1/2	18	1/4	17.455	0.085	0.275	0.006	443.36	2.16	6.99	0.15	464
465	18	18.1/2	1/4	17.955	0.085	0.275	0.006	456.06	2.16	6.99	0.15	465
466	18.1/2	19	1/4	18.455	0.085	0.275	0.006	468.76	2.16	6.99	0.15	466
467	19	19.1/2	1/4	18.955	0.090	0.275	0.006	481.46	2.29	6.99	0.15	467
468	19.1/2	20	1/4	19.455	0.090	0.275	0.006	494.16	2.29	6.99	0.15	468
469	20	20.1/2	1/4	19.955	0.095	0.275	0.006	506.86	2.41	6.99	0.15	469
470	21	21.1/2	1/4	20.955	0.095	0.275	0.006	532.26	2.41	6.99	0.15	470
471	22	22.1/2	1/4	21.955	0.100	0.275	0.006	557.66	2.54	6.99	0.15	471
472	23	23.1/2	1/4	22.940	0.105	0.275	0.006	582.68	2.67	6.99	0.15	472
473	24	24.1/2	1/4	23.940	0.110	0.275	0.006	608.08	2.79	6.99	0.15	473
474	25	25.1/2	1/4	24.940	0.115	0.275	0.006	633.48	2.92	6.99	0.15	474
475	26	26.1/2	1/4	25.940	0.120	0.275	0.006	658.88	3.05	6.99	0.15	475

Standard O'ring Sizes For Straight Thread Tube Fittings

Dash No	Nominal Size Of Tube Fitting	Actual Size In Inches				Actual Size In mm				Dash No
		ID	+/-	CS	+/-	ID	+/-	CS	+/-	
901	3/32	0.185	0.005	0.056	0.003	4.70	0.13	1.42	0.08	901
902	1/8	0.239	0.005	0.064	0.003	6.07	0.13	1.63	0.08	902
903	3/16	0.301	0.005	0.064	0.003	7.65	0.13	1.63	0.08	903
904	1/4	0.351	0.005	0.072	0.003	8.92	0.13	1.83	0.08	904
905	5/16	0.414	0.005	0.072	0.003	10.52	0.13	1.83	0.08	905
906	3/8	0.468	0.005	0.078	0.003	11.89	0.13	1.98	0.08	906
907	7/16	0.530	0.007	0.082	0.003	13.46	0.18	2.08	0.08	907
908	1/2	0.644	0.009	0.087	0.003	16.36	0.23	2.21	0.08	908
909	9/16	0.706	0.009	0.097	0.003	17.93	0.23	2.46	0.08	909
910	5/8	0.755	0.009	0.097	0.003	19.18	0.23	2.46	0.08	910
911	11/16	0.863	0.009	0.116	0.004	21.92	0.23	2.95	0.10	911
912	3/4	0.924	0.009	0.116	0.004	23.47	0.23	2.95	0.10	912
913	13/16	0.986	0.010	0.116	0.004	25.04	0.25	2.95	0.10	913
914	7/8	1.047	0.010	0.116	0.004	26.59	0.25	2.95	0.10	914
916	1	1.171	0.010	0.116	0.004	29.74	0.25	2.95	0.10	916
918	1.1/8	1.355	0.012	0.116	0.004	34.42	0.30	2.95	0.10	918
920	1.1/4	1.475	0.014	0.118	0.004	37.47	0.36	3.00	0.10	920
924	1.1/2	1.720	0.014	0.118	0.004	43.69	0.36	3.00	0.10	924
928	1.3/4	2.090	0.018	0.118	0.004	53.09	0.46	3.00	0.10	928
932	2	2.337	0.018	0.118	0.004	59.36	0.46	3.00	0.10	932



JIS B 2401 : 1967 Japanese Standard Metric O'ring Sizes

Dash No	Actual Size In mm				Dash No	Actual Size In mm				Dash No	Actual Size In mm			
	ID	+/-	CS	+/-		ID	+/-	CS	+/-		ID	+/-	CS	+/-
P3	2.80	0.12	1.90	0.07	P71	70.60	0.40	5.70	0.15	G25	24.40	0.15	3.10	0.10
P4	3.80	0.12	1.90	0.07	P75	74.60	0.40	5.70	0.15	G30	29.40	0.15	3.10	0.10
P5	4.80	0.12	1.90	0.07	P80	79.60	0.40	5.70	0.15	G35	34.40	0.15	3.10	0.10
P6	5.80	0.12	1.90	0.07	P85	84.60	0.40	5.70	0.15	G40	39.40	0.15	3.10	0.10
P7	6.80	0.12	1.90	0.07	P90	89.60	0.40	5.70	0.15	G45	44.40	0.25	3.10	0.10
P8	7.80	0.12	1.90	0.07	P95	94.60	0.40	5.70	0.15	G50	49.40	0.25	3.10	0.10
P9	8.80	0.12	1.90	0.07	P100	99.60	0.40	5.70	0.15	G55	54.40	0.25	3.10	0.10
P10	9.80	0.12	1.90	0.07	P102	101.6	0.40	5.70	0.15	G60	59.40	0.25	3.10	0.10
P10A	9.80	0.12	2.40	0.07	P105	104.6	0.40	5.70	0.15	G65	64.40	0.25	3.10	0.10
P11	10.80	0.12	2.40	0.07	P110	109.6	0.40	5.70	0.15	G70	69.40	0.25	3.10	0.10
P11.2	11.00	0.12	2.40	0.07	P112	111.6	0.40	5.70	0.15	G75	74.40	0.40	3.10	0.10
P12	11.80	0.12	2.40	0.07	P115	114.6	0.40	5.70	0.15	G80	79.40	0.40	3.10	0.10
P12.5	12.30	0.12	2.40	0.07	P120	119.6	0.40	5.70	0.15	G85	84.40	0.40	3.10	0.10
P14	13.80	0.12	2.40	0.07	P125	124.6	0.40	5.70	0.15	G90	89.40	0.40	3.10	0.10
P15	14.80	0.12	2.40	0.07	P130	129.6	0.60	5.70	0.15	G95	94.40	0.40	3.10	0.10
P16	15.80	0.12	2.40	0.07	P132	131.6	0.60	5.70	0.15	G100	99.40	0.40	3.10	0.10
P18	17.80	0.12	2.40	0.07	P135	134.6	0.60	5.70	0.15	G105	104.4	0.40	3.10	0.10
P20	19.80	0.15	2.40	0.07	P140	139.6	0.60	5.70	0.15	G110	109.4	0.40	3.10	0.10
P21	20.80	0.15	2.40	0.07	P145	144.6	0.60	5.70	0.15	G115	114.4	0.40	3.10	0.10
P22	21.80	0.15	2.40	0.07	P150	149.6	0.60	5.70	0.15	G120	119.4	0.40	3.10	0.10
P22A	21.70	0.15	3.50	0.10	P150A	149.5	0.60	8.40	0.15	G125	124.4	0.60	3.10	0.10
P22.4	22.10	0.15	3.50	0.10	P155	154.5	0.60	8.40	0.15	G130	129.4	0.60	3.10	0.10
P24	23.70	0.15	3.50	0.10	P160	159.5	0.60	8.40	0.15	G135	134.4	0.60	3.10	0.10
P25	24.70	0.15	3.50	0.10	P165	164.5	0.60	8.40	0.15	G140	139.4	0.60	3.10	0.10
P25.5	25.20	0.15	3.50	0.10	P170	169.5	0.60	8.40	0.15	G145	144.4	0.60	3.10	0.10
P26	25.70	0.15	3.50	0.10	P175	174.5	0.60	8.40	0.15	G150	149.3	0.60	5.70	0.15
P28	27.70	0.15	3.50	0.10	P180	179.5	0.60	8.40	0.15	G155	154.3	0.60	5.70	0.15
P29	28.70	0.15	3.50	0.10	P185	184.5	0.80	8.40	0.15	G160	159.3	0.60	5.70	0.15
P29.5	29.20	0.15	3.50	0.10	P190	189.5	0.80	8.40	0.15	G165	164.3	0.60	5.70	0.15
P30	29.70	0.15	3.50	0.10	P195	194.5	0.80	8.40	0.15	G170	169.3	0.60	5.70	0.15
P31	30.70	0.15	3.50	0.10	P200	199.5	0.80	8.40	0.15	G175	174.3	0.60	5.70	0.15
P31.5	31.20	0.15	3.50	0.10	P205	204.5	0.80	8.40	0.15	G180	179.3	0.60	5.70	0.15
P32	31.70	0.15	3.50	0.10	P209	208.5	0.80	8.40	0.15	G185	184.3	0.80	5.70	0.15
P34	33.70	0.15	3.50	0.10	P210	209.5	0.80	8.40	0.15	G190	189.3	0.80	5.70	0.15
P35	34.70	0.15	3.50	0.10	P215	214.5	0.80	8.40	0.15	G195	194.3	0.80	5.70	0.15
P35.5	35.20	0.15	3.50	0.10	P220	219.5	0.80	8.40	0.15	G200	199.3	0.80	5.70	0.15
P36	35.70	0.15	3.50	0.10	P225	224.5	0.80	8.40	0.15	G210	209.3	0.80	5.70	0.15
P38	37.70	0.15	3.50	0.10	P230	229.5	0.80	8.40	0.15	G220	219.3	0.80	5.70	0.15
P39	38.70	0.15	3.50	0.10	P235	234.5	0.80	8.40	0.15	G230	229.3	0.80	5.70	0.15
P40	39.70	0.15	3.50	0.10	P240	239.5	0.80	8.40	0.15	G240	239.3	0.80	5.70	0.15
P41	40.70	0.15	3.50	0.10	P245	244.5	0.80	8.40	0.15	G250	249.3	0.80	5.70	0.15
P42	41.70	0.25	3.50	0.10	P250	249.5	0.80	8.40	0.15	G260	259.3	0.80	5.70	0.15
P44	43.70	0.25	3.50	0.10	P255	254.5	0.80	8.40	0.15	G270	269.3	0.80	5.70	0.15
P45	44.70	0.25	3.50	0.10	P260	259.5	0.80	8.40	0.15	G280	279.3	0.80	5.70	0.15
P46	45.70	0.25	3.50	0.10	P265	264.5	0.80	8.40	0.15	G290	289.3	0.80	5.70	0.15
P48	47.70	0.25	3.50	0.10	P270	269.5	0.80	8.40	0.15	G300	299.3	0.80	5.70	0.15
P49	48.70	0.25	3.50	0.10	P275	274.5	0.80	8.40	0.15					
P50	49.70	0.25	3.50	0.10	P280	279.5	0.80	8.40	0.15					
P48A	47.60	0.25	5.70	0.15	P285	284.5	0.80	8.40	0.15					
P50A	49.60	0.25	5.70	0.15	P290	289.5	0.80	8.40	0.15					
P52	51.60	0.25	5.70	0.15	P295	294.5	0.80	8.40	0.15					
P53	52.60	0.25	5.70	0.15	P300	299.5	0.80	8.40	0.15					
P55	54.60	0.25	5.70	0.15	P315	314.5	1.00	8.40	0.15					
P56	55.60	0.25	5.70	0.15	P320	319.5	1.00	8.40	0.15					
P58	57.60	0.25	5.70	0.15	P335	334.5	1.00	8.40	0.15					
P60	59.60	0.25	5.70	0.15	P340	339.5	1.00	8.40	0.15					
P62	61.60	0.25	5.70	0.15	P355	354.5	1.00	8.40	0.15					
P63	62.60	0.25	5.70	0.15	P360	359.5	1.00	8.40	0.15					
P65	64.60	0.25	5.70	0.15	P375	374.5	1.00	8.40	0.15					
P67	66.60	0.25	5.70	0.15	P385	384.5	1.00	8.40	0.15					
P70	69.60	0.25	5.70	0.15	P400	399.5	1.00	8.40	0.15					

Transeals stocks over 500 sizes of metric o'rings in addition to JIS B 2401 : 1967. Cross sections for these sizes are listed on page 2 of this catalogue. These sizes can be ordered by specifying the o'rings ID x CS

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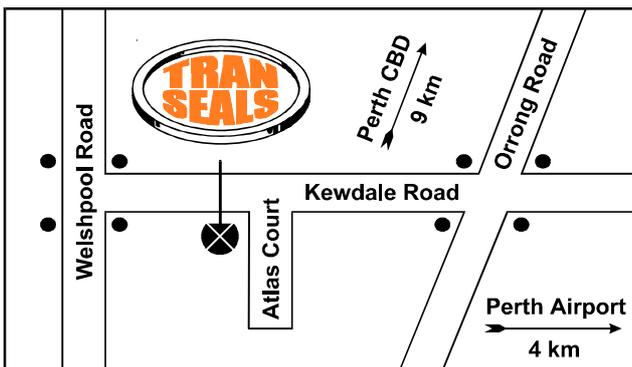


Quick Reference Guide For Nominal Inch Sizes

ID	CROSS SECTION				ID	CROSS SECTION					ID	CROSS SECTION			
	1/16	3/32	1/8	3/16		1/16	3/32	1/8	3/16	1/4		3/32	1/8	3/16	1/4
1/32	001#				2.1/4	035	140	228	331		7.1/2	169	264	367	443
3/64	002#				2.5/16		141				7.3/4	170	265	368	444
1/16	003#	102			2.3/8	036	142	229	332		8	171	266	369	445
5/64	004				2.7/16		143				8.1/4	172	267	370	445A
3/32	005	103			2.1/2	037	144	230	333		8.1/2	173	268	371	446
1/8	006	104			2.9/16		145				8.3/4	174	269	372	446A
5/32	007	105			2.5/8	038	146	231	334		9	175	270	373	447
3/16	008	106	201		2.11/16		147				9.1/4	176	271	374	447A
7/32	009	107			2.3/4	039	148	232	335		9.1/2	177	272	375	448
1/4	010	108	202		2.13/16		149				9.3/4	178	273	376	448A
5/16	011	109	203		2.7/8	040	150	233	336		10		274	377	449
3/8	012	110	204		3	041	151	234	337		10.1/4				449A
7/16	013	111	205	309	3.1/8	041.5		235	338		10.1/2		275	378	450
1/2	014	112	206	310	3.1/4	042	152	236	339		10.3/4				450A
9/16	015	113	207	311	3.3/8			237	340		11		276	379	451
5/8	016	114	208	312	3.1/2	043	153	238	341		11.1/4				451A
11/16	017	115	209	313	3.5/8			239	342		11.1/2		277	380	452
3/4	018	116	210	314	3.3/4	044	154	240	343		11.3/4				452A
13/16	019	117	211	315	3.7/8			241	344		12		278	381	453
7/8	020	118	212	316	4	045	155	242	345		12.1/2		278.5	381.5	454
15/16	021	119	213	317	4.1/8			243	346		13		279	382	455
1	022	120	214	318	4.1/4	046	156	244	347		13.1/2				456
1.1/16	023	121	215	319	4.3/8			245	348		14		280	383	457
1.1/8	024	122	216	320	4.1/2	047	157	246	349	425	14.1/2				458
1.3/16	025	123	217	321	4.5/8			247	350	426	15		281	384	459
1.1/4	026	124	218	322	4.3/4	048	158	248	351	427	15.1/2				460
1.5/16	027	125	219	323	4.7/8			249	352	428	16		282	385	461
1.3/8	028	126	220	324	5	049	159	250	353	429	16.1/2				462
1.7/16	028.5	127	221		5.1/8			251	354	430	17		283	386	463
1.1/2	029	128	222	325	5.1/4	050	160	252	355	431	17.1/2				464
1.9/16		129			5.3/8			253	356	432	18		284	387	465
1.5/8	030	130	223	326	5.1/2		161	254	357	433	18.1/2				466
1.11/16		131	223.5		5.5/8			255	358	434	19			388	467
1.3/4	031	132	224	327	5.3/4		162	256	359	435	19.1/2				468
1.13/16		133			5.7/8			257	360	436	20			389	469
1.7/8	032	134	225	328	6		163	258	361	437	21			390	470
1.15/16		135			6.1/4		164	259	362	438	22			391	471
2	033	136	226	329	6.1/2		165	260	363	439	23			392	472
2.1/16		137			6.3/4		166	261	364	440	24			393	473
2.1/8	034	138	227	330	7		167	262	365	441	25			394	474
2.3/16		139			7.1/4		168	263	366	442	26			395	475

This chart is intended to simplify the referencing of imperial o'rings via their standard dash numbers. O'ring dash number appears to the right of the inside diameter (ID), and below the nominal cross section (CS).

Non standard O'ring cross section, dimensions as follows. 001 .040" 002 .050" 003 .060"



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