

O-ring Symbol

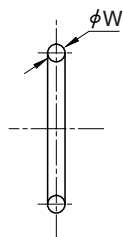
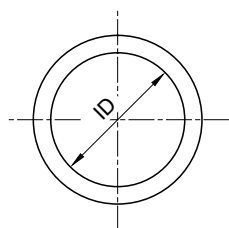
SO - N A - P 90

- Size
- Classification by use
P: For Moving (Packing)
G: For Fixing (Gasket)
- Durometer
A: A70
B: A90
- Material
N: Nitrile Rubber (NBR)
F: Fluororubber (FPM)
- O-Ring

SO-NA/NB-P* SO-FA/FB-P*		mm (Inches)
Size Number	Dimensions	
	ID	W
P 3	2.8 (.110)	1.9 (.075)
P 4	3.8 (.150)	
P 5	4.8 (.189)	
P 6	5.8 (.228)	
P 7	6.8 (.268)	
P 8	7.8 (.307)	
P 9	8.8 (.346)	
P 10	9.8 (.386)	2.4 (.094)
P 10A	9.8 (.386)	
P 11	10.8 (.425)	
P 11.2	11.0 (.433)	
P 12	11.8 (.465)	
P 12.5	12.3 (.484)	
P 14	13.8 (.543)	
P 15	14.8 (.583)	
P 16	15.8 (.622)	
P 18	17.8 (.701)	
P 20	19.8 (.780)	
P 21	20.8 (.819)	3.5 (.138)
P 22	21.8 (.858)	
P 22A	21.7 (.854)	
P 22.4	22.1 (.870)	
P 24	23.7 (.933)	
P 25	24.7 (.972)	
P 25.5	25.2 (.992)	
P 26	25.7 (1.012)	
P 28	27.7 (1.091)	
P 29	28.7 (1.130)	
P 29.5	29.2 (1.150)	5.7 (.224)
P 30	29.7 (1.169)	
P 31	30.7 (1.209)	
P 31.5	31.2 (1.228)	
P 32	31.7 (1.248)	
P 34	33.7 (1.327)	
P 35	34.7 (1.366)	
P 35.5	35.2 (1.386)	
P 36	35.7 (1.406)	
P 38	37.7 (1.484)	
P 39	38.7 (1.524)	8.4 (.331)
P 40	39.7 (1.563)	
P 41	40.7 (1.602)	
P 42	41.7 (1.642)	
P 44	43.7 (1.720)	
P 45	44.7 (1.760)	
P 46	45.7 (1.799)	
P 48	47.7 (1.878)	
P 49	48.7 (1.917)	
P 50	49.7 (1.957)	
P 48A	47.6 (1.874)	5.7 (.224)
P 50A	49.6 (1.953)	
P 52	51.6 (2.031)	
P 53	52.6 (2.071)	
P 55	54.6 (2.150)	
P 56	55.6 (2.189)	
P 58	57.6 (2.268)	
P 60	59.6 (2.346)	
P 62	61.6 (2.425)	
P 63	62.6 (2.465)	
P 65	64.6 (2.543)	
P 67	66.6 (2.622)	5.7 (.224)
P 70	69.6 (2.740)	
P 71	70.6 (2.780)	
P 75	74.6 (2.937)	
P 80	79.6 (3.134)	
P 85	84.6 (3.331)	

SO-NA/NB-P* SO-FA/FB-P*		mm (Inches)
Size Number	Dimensions	
	ID	W
P 90	89.6 (3.528)	5.7 (.224)
P 95	94.6 (3.724)	
P100	99.6 (3.921)	
P102	101.6 (4.000)	
P105	104.6 (4.118)	
P110	109.6 (4.315)	
P112	111.6 (4.394)	
P115	114.6 (4.512)	
P120	119.6 (4.709)	
P125	124.6 (4.906)	
P130	129.6 (5.102)	
P132	131.6 (5.181)	8.4 (.331)
P135	134.6 (5.299)	
P140	139.6 (5.496)	
P145	144.6 (5.693)	
P150	149.6 (5.890)	
P150A	149.5 (5.886)	
P155	154.5 (6.083)	
P160	159.5 (6.280)	
P165	164.5 (6.476)	
P170	169.5 (6.673)	
P175	174.5 (6.870)	5.7 (.224)
P180	179.5 (7.067)	
P185	184.5 (7.264)	
P190	189.5 (7.461)	
P195	194.5 (7.657)	
P200	199.5 (7.854)	
P205	204.5 (8.051)	
P209	208.5 (8.209)	
P210	209.5 (8.248)	
P215	214.5 (8.445)	
P220	219.5 (8.642)	8.4 (.331)
P225	224.5 (8.839)	
P230	229.5 (9.035)	
P235	234.5 (9.232)	
P240	239.5 (9.429)	
P245	244.5 (9.626)	
P250	249.5 (9.823)	
P255	254.5 (10.020)	
P260	259.5 (10.217)	
P265	264.5 (10.413)	
P270	269.5 (10.610)	
P275	274.5 (10.807)	5.7 (.224)
P280	279.5 (11.004)	
P285	284.5 (11.201)	
P290	289.5 (11.398)	
P295	294.5 (11.594)	
P300	299.5 (11.791)	
P315	314.5 (12.382)	
P320	319.5 (12.579)	
P335	334.5 (13.169)	
P340	339.5 (13.366)	
P355	354.5 (13.957)	5.7 (.224)
P360	359.5 (14.154)	
P375	374.5 (14.744)	
P385	384.5 (15.138)	
P400	399.5 (15.728)	

SO-NA/NB-G* SO-FA/FB-G*		mm (Inches)
Size Number	Dimensions	
	ID	W
G 25	24.4 (.961)	3.1 (.122)
G 30	29.4 (1.157)	
G 35	34.4 (1.354)	
G 40	39.4 (1.551)	
G 45	44.4 (1.748)	
G 50	49.4 (1.945)	
G 55	54.4 (2.142)	
G 60	59.4 (2.339)	
G 65	64.4 (2.535)	
G 70	69.4 (2.732)	
G 75	74.4 (2.929)	
G 80	79.4 (3.126)	5.7 (.224)
G 85	84.4 (3.323)	
G 90	89.4 (3.520)	
G 95	94.4 (3.717)	
G100	99.4 (3.913)	
G105	104.4 (4.110)	
G110	109.4 (4.307)	
G115	114.4 (4.504)	
G120	119.4 (4.701)	
G125	124.4 (4.898)	5.7 (.224)
G130	129.4 (5.094)	
G135	134.4 (5.291)	
G140	139.4 (5.488)	
G145	144.4 (5.685)	
G150	149.3 (5.878)	
G155	154.3 (6.075)	
G160	159.3 (6.272)	
G165	164.3 (6.469)	
G170	169.3 (6.665)	
G175	174.3 (6.862)	5.7 (.224)
G180	179.3 (7.059)	
G185	184.3 (7.256)	
G190	189.3 (7.453)	
G195	194.3 (7.650)	
G200	199.3 (7.846)	
G210	209.3 (8.240)	
G220	219.3 (8.634)	
G230	229.3 (9.028)	
G240	239.3 (9.421)	
G250	249.3 (9.815)	5.7 (.224)
G260	259.3 (10.209)	
G270	269.3 (10.602)	
G280	279.3 (10.996)	
G290	289.3 (11.390)	
G300	299.3 (11.783)	



O-ring Symbol

SO - N A - A 012

Size

A: Conformed to "AS568A"

Durometer

A: A70

B: A90

Material

N: Nitrile Rubber (NBR)

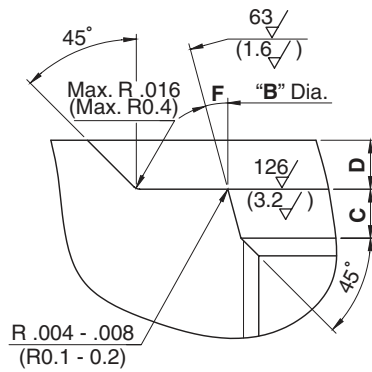
F: Fluororubber (FPM)

O-Ring

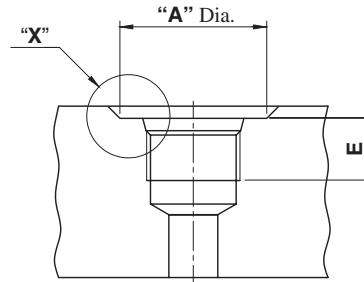
SO-NA/NB-A* SO-FA/FB-A*		W
Size Number	Dimensions mm (Inches)	
ID		
A006	2.90 (.114)	1.78 (.070)
A007	3.68 (.145)	
A008	4.47 (.176)	
A009	5.28 (.208)	
A010	6.07 (.239)	
A011	7.65 (.301)	
A012	9.25 (.364)	
A013	10.82 (.426)	
A014	12.42 (.489)	
A015	14.00 (.551)	
A016	15.60 (.614)	1.78 (.070)
A017	17.17 (.676)	
A018	18.77 (.739)	
A019	20.35 (.801)	
A020	21.95 (.864)	
A021	23.52 (.926)	
A022	25.12 (.989)	
A023	26.70 (1.051)	
A024	28.30 (1.114)	
A025	29.87 (1.176)	
A026	31.47 (1.239)	1.78 (.070)
A027	33.05 (1.301)	
A028	34.65 (1.364)	
A029	37.82 (1.489)	
A030	41.00 (1.614)	
A031	44.17 (1.739)	
A032	47.35 (1.864)	
A033	50.52 (1.989)	
A034	53.70 (2.114)	
A035	56.87 (2.239)	
A036	60.05 (2.364)	1.78 (.070)
A037	63.22 (2.489)	
A038	66.40 (2.614)	
A039	69.57 (2.739)	
A040	72.75 (2.864)	
A041	75.92 (2.989)	
A042	82.27 (3.239)	
A043	88.62 (3.489)	
A044	94.97 (3.739)	
A045	101.32 (3.989)	
A046	107.67 (4.239)	1.78 (.070)
A047	114.02 (4.489)	
A048	120.37 (4.739)	
A049	126.72 (4.989)	
A050	133.07 (5.239)	
A110	9.19 (.362)	2.62 (.103)
A111	10.77 (.424)	
A112	12.37 (.487)	
A113	13.94 (.549)	
A114	15.54 (.612)	
A115	17.12 (.674)	
A116	18.72 (.737)	
A117	20.29 (.799)	
A118	21.89 (.862)	
A119	23.47 (.924)	
A120	25.07 (.987)	2.62 (.103)
A121	26.64 (1.049)	
A122	28.24 (1.112)	
A123	29.82 (1.174)	
A124	31.42 (1.237)	
A125	32.99 (1.299)	
A126	34.59 (1.362)	
A127	36.17 (1.424)	
A128	37.77 (1.487)	
A129	39.34 (1.549)	
A130	40.94 (1.612)	2.62 (.103)
A131	42.52 (1.674)	
A132	44.12 (1.737)	
A133	45.69 (1.799)	
A134	47.29 (1.862)	

SO-NA/NB-A* SO-FA/FB-A*		W
Size Number	Dimensions mm (Inches)	
ID		
A135	48.90 (1.925)	2.62 (.103)
A136	50.47 (1.987)	
A137	52.07 (2.050)	
A138	53.64 (2.112)	
A139	55.24 (2.175)	
A140	56.82 (2.237)	
A141	58.42 (2.300)	
A142	59.99 (2.362)	
A143	61.60 (2.425)	
A144	63.17 (2.487)	
A145	64.77 (2.550)	2.62 (.103)
A146	66.34 (2.612)	
A147	67.94 (2.675)	
A148	69.52 (2.737)	
A149	71.12 (2.800)	
A150	72.69 (2.862)	
A151	75.87 (2.987)	
A152	82.22 (3.237)	
A153	88.57 (3.487)	
A154	94.92 (3.737)	
A155	101.27 (3.987)	2.62 (.103)
A156	107.62 (4.237)	
A157	113.97 (4.487)	
A158	120.32 (4.737)	
A159	126.67 (4.987)	
A160	133.02 (5.237)	
A161	139.37 (5.487)	
A162	145.72 (5.737)	
A163	152.07 (5.987)	
A164	158.42 (6.237)	
A165	164.77 (6.487)	3.53 (.139)
A166	171.12 (6.737)	
A167	177.47 (6.987)	
A168	183.82 (7.237)	
A169	190.17 (7.487)	
A170	196.52 (7.737)	
A171	202.87 (7.987)	
A172	209.22 (8.237)	
A173	215.57 (8.487)	
A174	221.92 (8.737)	
A175	228.27 (8.987)	3.53 (.139)
A176	234.62 (9.237)	
A177	240.97 (9.487)	
A178	247.32 (9.737)	
A210	18.64 (.734)	3.53 (.139)
A211	20.22 (.796)	
A212	21.82 (.859)	
A213	23.39 (.921)	
A214	24.99 (.984)	
A215	26.57 (1.046)	
A216	28.17 (1.109)	
A217	29.74 (1.171)	
A218	31.34 (1.234)	
A219	32.92 (1.296)	
A220	34.52 (1.359)	3.53 (.139)
A221	36.09 (1.421)	
A222	37.69 (1.484)	
A223	40.87 (1.609)	
A224	44.04 (1.734)	
A225	47.22 (1.859)	
A226	50.39 (1.984)	
A227	53.57 (2.109)	
A228	56.74 (2.234)	
A229	59.92 (2.359)	

SO-NA/NB-A* SO-FA/FB-A*		W
Size Number	Dimensions mm (Inches)	
ID		
A230	63.09 (2.484)	3.53 (.139)
A231	66.27 (2.609)	
A232	69.44 (2.734)	
A233	72.62 (2.859)	
A234	75.79 (2.984)	
A235	78.97 (3.109)	
A236	82.14 (3.234)	
A237	85.32 (3.359)	
A238	88.49 (3.484)	
A239	91.67 (3.609)	
A240	94.84 (3.734)	3.53 (.139)
A241	98.02 (3.859)	
A242	101.19 (3.984)	
A243	104.37 (4.109)	
A244	107.54 (4.234)	
A245	110.72 (4.359)	
A246	113.89 (4.484)	
A247	117.07 (4.609)	
A248	120.24 (4.734)	
A249	123.42 (4.859)	
A250	126.59 (4.984)	3.53 (.139)
A251	129.77 (5.109)	
A252	132.94 (5.234)	
A253	136.12 (5.359)	
A254	139.29 (5.484)	
A255	142.47 (5.609)	
A256	145.64 (5.734)	
A257	148.82 (5.859)	
A258	151.99 (5.984)	
A259	155.17 (6.109)	
A260	164.69 (6.484)	3.53 (.139)
A261	171.04 (6.734)	
A262	177.39 (6.984)	
A263	183.74 (7.234)	
A264	190.09 (7.484)	
A265	196.44 (7.734)	
A266	202.79 (7.984)	
A267	209.14 (8.234)	
A268	215.49 (8.484)	
A269	221.84 (8.734)	
A270	228.19 (8.984)	3.53 (.139)
A271	234.54 (9.234)	
A272	240.89 (9.484)	
A273	247.24 (9.734)	
A274	253.59 (9.984)	
A901	4.70 (.185)	1.42 (.056)
A902	6.07 (.239)	1.63 (.064)
A903	7.64 (.301)	1.63 (.064)
A904	8.92 (.351)	1.83 (.072)
A905	10.52 (.414)	1.83 (.072)
A906	11.89 (.468)	1.98 (.078)
A907	13.46 (.530)	2.08 (.082)
A908	16.36 (.644)	2.21 (.087)
A909	17.93 (.706)	2.46 (.097)
A910	19.18 (.755)	2.46 (.097)
A911	21.92 (.863)	2.95 (.116)
A912	23.47 (.924)	
A913	25.04 (.986)	
A914	26.59 (1.047)	
A916	29.74 (1.171)	
A918	34.42 (1.355)	
A920	37.46 (1.475)	
A924	43.69 (1.720)	
A928	53.09 (2.090)	
A932	59.36 (2.337)	



Detail "X"



DIMENSIONS IN
INCHES (MILLIMETRES)

Nominal Tube OD		Thread Size	Dimensions Inch (mm)						O-Ring Size (Hs 90)
			A* (Min.)	B ±.002 (±0.05)	C +.015 0 (+0.4 0)	D (Max.)	E (Min.)	F ±1°	
-2	1/8	5/16-24 UNF-2B	.669 (17)	.360 (9.15)	.075 (1.9)	.063 (1.6)	.394 (10)	12	AS568-902
-3	3/16	3/8-24 UNF-2B	.748 (19)	.423 (10.75)	.075 (1.9)	.063 (1.6)	.394 (10)	12	AS568-903
-4	1/4	7/16-20 UNF-2B	.827 (21)	.490 (12.45)	.094 (2.4)	.063 (1.6)	.453 (11.5)	12	AS568-904
-5	5/16	1/2-20 UNF-2B	.906 (23)	.553 (14.05)	.094 (2.4)	.063 (1.6)	.453 (11.5)	12	AS568-905
-6	3/8	9/16-18 UNF-2B	.984 (25)	.618 (15.7)	.098 (2.5)	.063 (1.6)	.453 (11.5)	12	AS568-906
-8	1/2	3/4-16 UNF-2B	1.181 (30)	.813 (20.65)	.098 (2.5)	.095 (2.4)	.500 (12.7)	15	AS568-908
-10	5/8	7/8-14 UNF-2B	1.339 (34)	.945 (24)	.098 (2.5)	.095 (2.4)	.563 (14.3)	15	AS568-910
-12	3/4	1-1/16-12 UN-2B	1.614 (41)	1.150 (29.2)	.130 (3.3)	.095 (2.4)	.657 (16.7)	15	AS568-912
-14	7/8	1-3/16-12 UN-2B	1.772 (45)	1.276 (32.4)	.130 (3.3)	.095 (2.4)	.748 (19)	15	AS568-914
-16	1	1-5/16-12 UN-2B	1.929 (49)	1.400 (35.55)	.130 (3.3)	.126 (3.2)	.748 (19)	15	AS568-916
-20	1-1/4	1-5/8-12 UN-2B	2.283 (58)	1.715 (43.55)	.130 (3.3)	.126 (3.2)	.748 (19)	15	AS568-920
-24	1-1/2	1-7/8-12 UN-2B	2.559 (65)	1.965 (49.9)	.130 (3.3)	.126 (3.2)	.748 (19)	15	AS568-924
-32	2	2-1/2-12 UN-2B	3.465 (88)	2.589 (65.75)	.130 (3.3)	.126 (3.2)	.748 (19)	15	AS568-932

★ If face of boss is on a machined surface, dimensions "A" and "D" need not apply as long as corner radius R .0004 - .0008 inches (R 0.1 - 0.2 mm) is maintained.