

XIAMEN SEALS SELECTION GUIDE BOOK



Your Static Seals & X-Rings Specialist



Xiamen Seals Technology Co.,Ltd



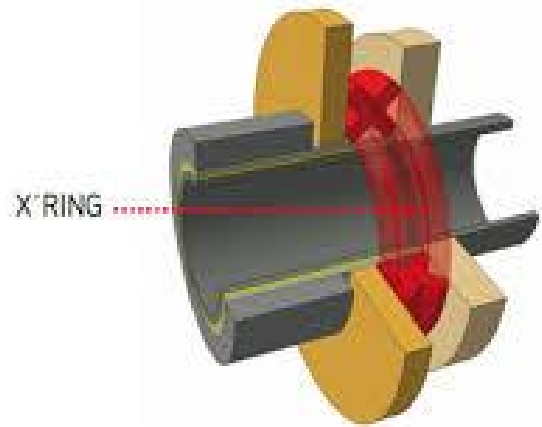
Blog

You Are In X Ring

In some applications, either type of seal will work. In others, one type will work much better. The trick is to understand the various factors that influence which type of ring seal will be the most efficient and most durable in the specific application. What distinguishes an X ring vs. O ring is actually not the shape of the overall seal. That circular shape is why it is called a ring. The X or O is for how it looks if cut into a cross section. While an O ring has a smooth, convex surface, an X ring has four grooves. That amounts to two sealing surfaces per side for the X ring vs. just one for the O ring.



Another reason to choose an X ring for a dynamic application is that their structure prevents spiral twisting. The four ends of the X shape provide a stability that an O ring cannot offer. An O ring is perfectly adequate for some low-speed pivoting, rotating or spiralling movement, but an X ring can better accommodate faster motion. An O ring might do the job for a short period, but an X ring will be more durable in applications with rapidly moving parts.



X-ring

Flash lines are on the inside
Grooves retain lubricant
Multi-lobe design has more sealing surfaces
Wide footprint



Less wear & tear means longer shelf life

X-rings have some key advantages. The inside placement of the flash (parting) lines doesn't affect the sealing lips. The larger sealing surface means it fills the corner of the application groove better, making it more resistant to rolling and preventing spiral failure — leading to greater stability in dynamic applications. The multiple seal points mean less compressive force is required to provide an effective seal. And, because the grooves retain lubricant, it reduces friction and extends seal life.



X-Ring SIZE	measurements in millimeters NBR 70				measurements in millimeters FKM 70			
	ID	±	W	±	ID	±	W	±
-002	1.07	0.100	1.27	0.08	1.07	0.110	1.27	0.09
-003	1.42	0.100	1.52	0.08	1.42	0.110	1.52	0.09
-004	1.78	0.130	1.78	0.08	1.78	0.14	1.78	0.09
-005	2.57	0.130	1.78	0.08	2.57	0.14	1.78	0.09
-006	2.90	0.130	1.78	0.08	2.90	0.14	1.78	0.09
-007	3.68	0.130	1.78	0.08	3.68	0.15	1.78	0.09
-008	4.47	0.130	1.78	0.08	4.47	0.15	1.78	0.09
-009	5.28	0.130	1.78	0.08	5.28	0.16	1.78	0.09
-010	6.07	0.130	1.78	0.08	6.07	0.16	1.78	0.09
-011	7.65	0.130	1.78	0.08	7.65	0.17	1.78	0.09
-012	9.25	0.130	1.78	0.08	9.25	0.18	1.78	0.09
-013	10.82	0.130	1.78	0.08	10.82	0.18	1.78	0.09
-014	12.42	0.130	1.78	0.08	12.42	0.19	1.78	0.09
-015	14.00	0.180	1.78	0.08	14.00	0.25	1.78	0.09
-016	15.60	0.230	1.78	0.08	15.60	0.31	1.78	0.09
-017	17.17	0.230	1.78	0.08	17.17	0.32	1.78	0.09
-018	18.77	0.230	1.78	0.08	18.77	0.32	1.78	0.09
-019	20.35	0.230	1.78	0.08	20.35	0.33	1.78	0.09
-020	21.95	0.230	1.78	0.08	21.95	0.34	1.78	0.09
-021	23.52	0.230	1.78	0.08	23.52	0.35	1.78	0.09
-022	25.12	0.250	1.78	0.08	25.12	0.38	1.78	0.09

-023	26.70	0.250	1.78	0.08	26.70	0.38	1.78	0.09
-024	28.30	0.250	1.78	0.08	28.30	0.39	1.78	0.09
-025	29.87	0.280	1.78	0.08	29.87	0.43	1.78	0.09
-026	31.47	0.280	1.78	0.08	31.47	0.44	1.78	0.09
-027	33.05	0.280	1.78	0.08	33.05	0.45	1.78	0.09
-028	34.65	0.330	1.78	0.08	34.65	0.50	1.78	0.09
-029	37.82	0.330	1.78	0.08	37.82	0.52	1.78	0.09



X- Ring SIZE	measurements in millimeters NBR 70				measurements in millimeters FKM 70			
	ID	±	W	±	ID	±	W	±
-030	41.00	0.330	1.78	0.08	41.00	0.54	1.78	0.09
-031	44.17	0.380	1.78	0.08	44.17	0.60	1.78	0.09
-032	47.35	0.380	1.78	0.08	47.35	0.62	1.78	0.09
-033	50.52	0.460	1.78	0.08	50.52	0.71	1.78	0.09
-034	53.70	0.460	1.78	0.08	53.70	0.73	1.78	0.09
-035	56.87	0.460	1.78	0.08	56.87	0.74	1.78	0.09
-036	60.05	0.460	1.78	0.08	60.05	0.76	1.78	0.09
-037	63.22	0.460	1.78	0.08	63.22	0.78	1.78	0.09
-038	66.40	0.510	1.78	0.08	66.40	0.84	1.78	0.09
-039	69.57	0.510	1.78	0.08	69.57	0.86	1.78	0.09
-040	72.75	0.510	1.78	0.08	72.75	0.87	1.78	0.09
-041	75.92	0.610	1.78	0.08	75.92	0.99	1.78	0.09
-042	82.27	0.610	1.78	0.08	82.27	1.02	1.78	0.09
-043	88.62	0.610	1.78	0.08	88.62	1.05	1.78	0.09
-044	94.97	0.690	1.78	0.08	94.97	1.16	1.78	0.09
-045	101.32	0.690	1.78	0.08	101.32	1.20	1.78	0.09
-046	107.67	0.760	1.78	0.08	107.67	1.300	1.78	0.09
-047	114.02	0.760	1.78	0.08	114.02	1.330	1.78	0.09
-048	120.37	0.760	1.78	0.08	120.37	1.36	1.78	0.09
-049	126.72	0.940	1.78	0.08	126.72	1.57	1.78	0.09
-050	133.07	0.940	1.78	0.08	133.07	1.61	1.78	0.09
-102	1.24	0.130	2.62	0.08	1.24	0.14	2.62	0.09
-103	2.06	0.130	2.62	0.08	2.06	0.14	2.62	0.09
-104	2.84	0.130	2.62	0.08	2.84	0.14	2.62	0.09

-105	3.63	0.130	2.62	0.08	3.63	0.15	2.62	0.09
-106	4.42	0.130	2.62	0.08	4.42	0.15	2.62	0.09
-107	5.23	0.130	2.62	0.08	5.23	0.16	2.62	0.09
-108	6.02	0.130	2.62	0.08	6.02	0.16	2.62	0.09



X- Ring SIZE	measurements in millimeters NBR 70				measurements in millimeters FKM 70			
	ID	±	W	±	ID	±	W	±
-109	7.59	0.130	2.62	0.08	7.59	0.17	2.62	0.09
-110	9.19	0.130	2.62	0.08	9.19	0.18	2.62	0.09
-111	10.77	0.130	2.62	0.08	10.77	0.18	2.62	0.09
-112	12.37	0.130	2.62	0.08	12.37	0.19	2.62	0.09
-113	13.94	0.180	2.62	0.08	13.94	0.25	2.62	0.09
-114	15.54	0.230	2.62	0.08	15.54	0.31	2.62	0.09
-115	17.12	0.230	2.62	0.08	17.12	0.32	2.62	0.09
-116	18.72	0.230	2.62	0.08	18.72	0.32	2.62	0.09
-117	20.30	0.250	2.62	0.08	20.30	0.35	2.62	0.09
-118	21.89	0.250	2.62	0.08	21.89	0.36	2.62	0.09
-119	23.47	0.250	2.62	0.08	23.47	0.37	2.62	0.09
-120	25.07	0.250	2.62	0.08	25.07	0.38	2.62	0.09
-121	26.64	0.250	2.62	0.08	26.64	0.38	2.62	0.09
-122	28.24	0.250	2.62	0.08	28.24	0.39	2.62	0.09
-123	29.82	0.300	2.62	0.08	29.82	0.45	2.62	0.09
-124	31.42	0.300	2.62	0.08	31.42	0.46	2.62	0.09
-125	32.99	0.300	2.62	0.08	32.99	0.46	2.62	0.09
-126	34.59	0.300	2.62	0.08	34.59	0.47	2.62	0.09
-127	36.17	0.300	2.62	0.08	36.17	0.48	2.62	0.09
-128	37.77	0.300	2.62	0.08	37.77	0.49	2.62	0.09
-129	39.34	0.380	2.62	0.08	39.34	0.58	2.62	0.09
-130	40.94	0.380	2.62	0.08	40.94	0.58	2.62	0.09
-131	42.52	0.380	2.62	0.08	42.52	0.59	2.62	0.09
-132	44.12	0.380	2.62	0.08	44.12	0.60	2.62	0.09
-133	45.69	0.380	2.62	0.08	45.69	0.61	2.62	0.09
-134	47.29	0.380	2.62	0.08	47.29	0.62	2.62	0.09
-135	48.90	0.430	2.62	0.08	48.90	0.67	2.62	0.09

-136	50.47	0.430	2.62	0.08	50.47	0.68	2.62	0.09
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X- Ring SIZE	measurements in millimeters NBR 70				measurements in millimeters FKM 70			
	ID	±	W	±	ID	±	W	±
-137	52.07	0.430	2.62	0.08	52.07	0.69	2.62	0.09
-138	53.64	0.430	2.62	0.08	53.64	0.70	2.62	0.09
-139	55.25	0.430	2.62	0.08	55.25	0.71	2.62	0.09
-140	56.82	0.430	2.62	0.08	56.82	0.71	2.62	0.09
-141	58.42	0.510	2.62	0.08	58.42	0.800	2.62	0.09
-142	59.99	0.510	2.62	0.08	59.99	0.810	2.62	0.09
-143	61.60	0.510	2.62	0.08	61.60	0.82	2.62	0.09
-144	63.17	0.510	2.62	0.08	63.17	0.83	2.62	0.09
-145	64.77	0.510	2.62	0.08	64.77	0.83	2.62	0.09
-146	66.34	0.510	2.62	0.08	66.34	0.84	2.62	0.09
-147	67.95	0.560	2.62	0.08	67.95	0.90	2.62	0.09
-148	69.52	0.560	2.62	0.08	69.52	0.91	2.62	0.09
-149	71.12	0.560	2.62	0.08	71.12	0.92	2.62	0.09
-150	72.69	0.560	2.62	0.08	72.69	0.92	2.62	0.09
-151	75.87	0.610	2.62	0.08	75.87	0.99	2.62	0.09
-152	82.22	0.610	2.62	0.08	82.22	1.02	2.62	0.09
-153	88.57	0.610	2.62	0.08	88.57	1.05	2.62	0.09
-154	94.92	0.710	2.62	0.08	94.92	1.18	2.62	0.09
-155	101.27	0.710	2.62	0.08	101.27	1.22	2.62	0.09
-156	107.62	0.760	2.62	0.08	107.62	1.30	2.62	0.09
-157	113.97	0.760	2.62	0.08	113.97	1.33	2.62	0.09
-158	120.32	0.760	2.62	0.08	120.32	1.36	2.62	0.09
-159	126.67	0.890	2.62	0.08	126.67	1.52	2.62	0.09
-160	133.02	0.890	2.62	0.08	133.02	1.56	2.62	0.09
-161	139.37	0.890	2.62	0.08	139.37	1.59	2.62	0.09
-162	145.72	0.890	2.62	0.08	145.72	1.62	2.62	0.09
-163	152.07	0.890	2.62	0.08	152.07	1.65	2.62	0.09
-164	158.42	1.020	2.62	0.08	158.42	1.81	2.62	0.09



X- Ring SIZE	measurements in millimeters NBR 70				measurements in millimeters FKM 70			
	ID	±	W	±	ID	±	W	±
-165	164.77	1.020	2.62	0.08	164.77	1.84	2.62	0.09
-166	171.12	1.020	2.62	0.08	171.12	1.88	2.62	0.09
-167	177.47	1.020	2.62	0.08	177.47	1.91	2.62	0.09
-168	183.82	1.140	2.62	0.08	183.82	2.06	2.62	0.09
-169	190.17	1.140	2.62	0.08	190.17	2.09	2.62	0.09
-170	196.52	1.140	2.62	0.08	196.52	2.12	2.62	0.09
-171	202.87	1.140	2.62	0.08	202.87	2.15	2.62	0.09
-172	209.22	1.270	2.62	0.08	209.22	2.32	2.62	0.09
-173	215.57	1.270	2.62	0.08	215.57	2.35	2.62	0.09
-174	221.92	1.270	2.62	0.08	221.92	2.38	2.62	0.09
-175	228.27	1.270	2.62	0.08	228.27	2.41	2.62	0.09
-176	234.62	1.400	2.62	0.08	234.62	2.57	2.62	0.09
-177	240.97	1.400	2.62	0.08	240.97	2.60	2.62	0.09
-178	247.32	1.400	2.62	0.08	247.32	2.64	2.62	0.09
-201	4.34	0.130	3.53	0.10	4.34	0.15	3.53	0.12
-202	5.94	0.130	3.53	0.10	5.94	0.16	3.53	0.12
-203	7.52	0.130	3.53	0.10	7.52	0.17	3.53	0.12
-204	9.12	0.130	3.53	0.10	9.12	0.18	3.53	0.12
-205	10.69	0.130	3.53	0.10	10.69	0.18	3.53	0.12
-206	12.29	0.130	3.53	0.10	12.29	0.19	3.53	0.12
-207	13.87	0.180	3.53	0.10	13.87	0.250	3.53	0.12
-208	15.47	0.230	3.53	0.10	15.47	0.310	3.53	0.12
-209	17.04	0.230	3.53	0.10	17.04	0.32	3.53	0.12
-210	18.64	0.250	3.53	0.10	18.64	0.34	3.53	0.12
-211	20.22	0.250	3.53	0.10	20.22	0.35	3.53	0.12
-212	21.82	0.250	3.53	0.10	21.82	0.36	3.53	0.12
-213	23.39	0.250	3.53	0.10	23.39	0.37	3.53	0.12
-214	24.99	0.250	3.53	0.10	24.99	0.37	3.53	0.12



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Vertical line with a black segment in the middle.

Vertical line.
