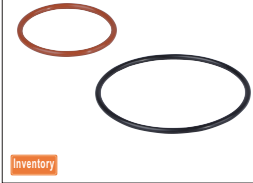


O-Rings ◀ P Series

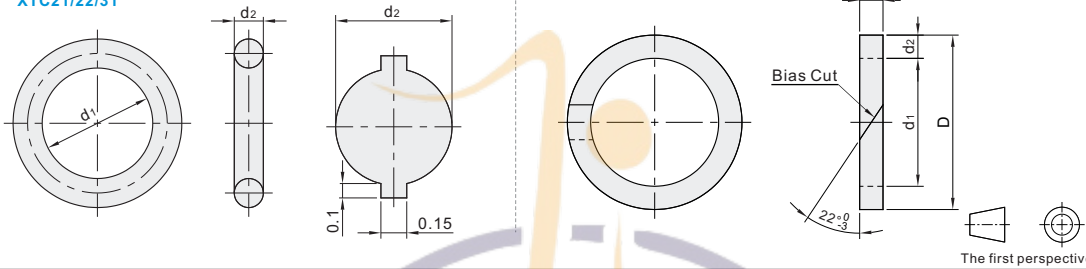
Code	Material	Hardness (JIS HS)	Color	Operating Temp. Range	Applications
XTC01	Nitrile Rubber	HS65 ⁺¹⁰ ₀	Black	-20~100°C	Mineral Oil Resistant
XTC02		HS85 ⁺¹⁰ ₀		-15~100°C	
XTC11		HS45 ⁺¹⁰ ₀	Milky White	-40~200°C	
XTC12	Silicon Rubber	HS65 ⁺¹⁰ ₀	Reddish Brown	-40~200°C	Heat Resistant
XTC21		HS65 ⁺¹⁰ ₀		-10~200°C	
XTC22	Fluoro Rubber	HS85 ⁺¹⁰ ₀	Black	-10~200°C	Heat Resistant
XTC31		HS65 ⁺¹⁰ ₀		-40~120°C	
XTC41	Ethylene Propylene Rubber	HS65 ⁺¹⁰ ₀	Black	-10~200°C	For High Voltage Use
XTC41	Fluororesin	—	White	-10~200°C	For High Voltage Use



XTC01/02/11/12
XTC21/22/31

Enlarged Cross Section

XTC41



The first perspective

☑ P Series, O-Rings (JIS B 2401)

Part Number Code	JIS Nominal Number	d ₂	Inner Diameter			Matching Dimension	
			d ₁	XTC01 XTC02	XTC11 XTC12 XTC31	XTC21 XTC22	d ₁
3	P3	2.8				3	6
4	P4	3.8				4	7
5	P5	4.8				5	8
6	P6	5.8				6	9
7	P7	6.8	1.9±0.07			7	10
8	P8	7.8				8	11
9	P9	8.8				9	12
10	P10	9.8				10	13
10A	P10A	9.8				10	14
11	P11	10.8				11	15
11.2	P11.2	11.0				11.2	15.2
12	P12	11.8				12	16
12.5	P12.5	12.3				12.5	16.5
14	P14	13.8	2.4±0.08			14	18
15	P15	14.8				15	19
16	P16	15.8				16	20
18	P18	17.8				18	22
20	P20	19.8				20	24
21	P21	20.8				21	25
XTC01	22	21.8				22	26
XTC02	22A	21.7				22	28
XTC11	22.4	22.1				22.4	28.4
XTC12	24	23.7				24	30
XTC21	25.5	25.2				25.5	31.5
XTC22	26	25.7				26	32
XTC31	28	27.7				28	34
	29	28.7				29	35
	29.5	29.5				29.5	35.5
	30	29.7				30	36
	31	30.7				31	37
	31.5	31.2				31.5	37.5
	32	31.7				32	38
	34	33.7	3.5±0.09			34	40
	35	34.7				35	41
	35.5	35.2				35.5	41.5
	36	35.7				36	42
	38	37.7				38	44
	39	38.7				39	45
	40	39.7				40	46
	41	40.7				41	47
	42	41.7				42	48
	44	43.7				44	50
	45	44.7				45	51
	46	45.7				46	52
	48	47.7				48	54
	50	49.7				50	56

☑ P Series, O-Rings (JIS B 2401)

Part Number Code	JIS Nominal Number	d ₂	Inner Diameter			Matching Dimension	
			d ₁	XTC01 XTC02 XTC31	XTC21 XTC22	d ₁	D
50A	P50A	49.7	±0.44	±0.66	±0.53	50	60
52	P52	51.6	±0.46	±0.69	±0.55	52	62
53	P53	52.6	±0.47	±0.71	±0.56	53	63
XTC01	55	54.6	±0.48	±0.72	±0.57	55	65
XTC02	56	55.6	±0.49	±0.74	±0.59	56	66
XTC11	58	57.6	±0.51	±0.77	±0.61	58	68
XTC12	60	59.6	±0.52	±0.78	±0.62	60	70
XTC12	62	61.6	±0.54	±0.81	±0.65	62	72
XTC21	63	62.6	±0.55	±0.83	±0.66	63	73
XTC22	65	64.6	±0.56	±0.84	±0.67	65	75
XTC22	67	66.6	±0.58	±0.87	±0.69	67	77
XTC31	70	69.6	±0.60	±0.90	±0.72	70	80
	71	70.6	±0.61	±0.92	±0.73	71	81
	75	74.6	±0.64	±0.96	±0.77	75	85
	80	79.6	±0.68	±1.02	±0.81	80	90

☑ P Series, O-Rings, Bias Cut (JIS B 2407)

Part Number Code	No.	Nominal No. of Applicable O-Rings	d ₂	d ₁	D	c
15	P15			15	19	
16	P16			16	20	
18	P18		2.0	18	22	
20	P20			20	24	
21	P21			21	25	
22	P22			22	26	
22A	P22A			22	28	
24	P24			24	30	
25	P25			25	31	
XTC41	26	P26		26	32	1.25 ±0.1
	28	P28		28	34	
	30	P30		30	36	
	32	P32		32	38	
	34	P34		34	40	
	38	P38		38	44	
	40	P40		40	46	
	42	P42		42	48	
	48	P48		48	54	
	50	P50		50	56	

☑ P Series, O-Rings (JIS B 2401)

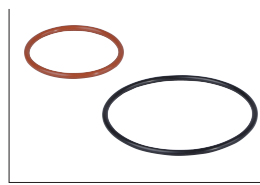
Part Number Code	No.	JIS Nominal Number
XTC01	30	P30
XTC02	32	P32

XTC01-32

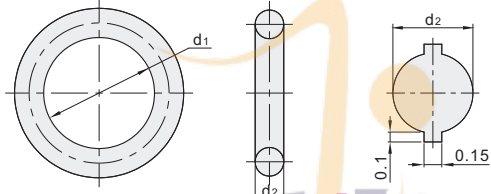


Discount price
Per 1~199 200~
Price 100% Additional
quotation





Code	Type	Material	Hardness(JIS HS)	Color	Operating Temp.Range	Applications
XTF01	S Series	Nitrile Rubber	HS65 ⁺¹⁰ ₀	Black	-20~100°C	Mineral Oil Resistant
XTF02			HS85 ⁺¹⁰ ₀		-15~100°C	
XTF11		Silicon Rubber	HS45 ⁺¹⁰ ₀	Milky White	-40~200°C	Heat Resistant
XTF12			HS65 ⁺¹⁰ ₀	Reddish Brown		
XTF21	G Series	Fluoro Rubber	HS85 ⁺¹⁰ ₀	Black	-10~200°C	Mineral Oil Resistant
XTF22			HS65 ⁺¹⁰ ₀			
XTH01		V Series	Nitrile Rubber	HS65 ⁺¹⁰ ₀	Black	-20~100°C
XTH02	HS85 ⁺¹⁰ ₀			-15~100°C		
XTH11	Silicon Rubber		HS45 ⁺¹⁰ ₀	Milky White	-40~200°C	Heat Resistant
XTH12			HS65 ⁺¹⁰ ₀	Reddish Brown		
XTH21	Fluoro Rubber	HS65 ⁺¹⁰ ₀	Black	-10~200°C	Mineral Oil Resistant	
XTJ01	AS Series	Nitrile Rubber	HS65 ⁺¹⁰ ₀	Black	-20~100°C	Mineral Oil Resistant
XTJ02		Fluoro Rubber	HS65 ⁺¹⁰ ₀	Black	-40~200°C	Heat Resistant
XTJ11	AS Series	Nitrile Rubber	HS65 ⁺¹⁰ ₀	Black	-30~100°C	Mineral Oil Resistant
XTJ12		Fluoro Rubber	HS65 ⁺¹⁰ ₀	Black	-40~200°C	Heat Resistant



Execution Standard: JIS B 2401

Enlarged Cross Section

The first perspective

S Series

Code	No.	Nominal Number	d ₂	Inner Diameter				Matching Dimension	
				d ₁	XTF01 XTF02	XTF11 XTF12	XTF21 XTF22	d ₁	D
	3	3		2.5				3	5
	4	4		3.5				4	6
	5	5		4.5				5	7
	6	6		5.5				6	8
	7	7		6.5				7	9
	8	8		7.5				8	10
	9	9		8.5				9	11
	10	10		9.5				10	12
	11.2	11.2	1.5±0.09	10.7				11.2	13.2
	12	12		11.5				12	14
	12.5	12.5		12.0				12.5	14.5
	14	14		13.5				14	16
	15	15		14.5				15	17
	16	16		15.5				16	18
	18	18		17.5				18	20
	20	20		19.5				20	22
	22	22		21.5	±0.14	±0.44	±0.29	22	24
	22.4	22.4		21.9				22.4	25.4
	24	24		23.5				24	27
	25	25		24.5				25	28
	26	26		25.5				26	29
	28	28		27.5				28	31
	29	29		28.5				29	32
	30	30		29.5				30	33
	31.5	31.5		31.0				31.5	34.5
	32	32		31.5				32	35
	34	34		33.5				34	37
	35	35		34.5				35	37
	35.5	35.5	2.0±0.09	35.0				35.5	38.5
	36	36		35.5				36	39
	38	38		37.5				38	41
	39	39		38.5				39	42
	40	40		39.5				40	43
	42	42		41.5				42	45
	44	44		43.5				44	47
	45	45		44.5				45	48
	46	46		45.5	±0.24	±0.74	±0.49	46	49
	48	48		47.5				48	51
	50	50		49.5				50	53

V Series(JIS B 2401)

Code	No.	JIS Nominal Number	d ₂	Inner Diameter	
				d ₁	XTJ01 XTJ02
	15	V15		14.5	±0.19 ±0.23
	24	V24		23.5	±0.23 ±0.28
	34	V34		33.5	±0.32 ±0.39
	40	V40		39.5	±0.36 ±0.44
	55	V55		54.5	±0.48 ±0.58
	70	V70	4.0±0.09	69.0	±0.60 ±0.73
	85	V85		84.0	±0.71 ±0.86
	100	V100		99.0	±0.82 ±0.99
	120	V120		119.0	±0.96 ±1.16
	150	V150		148.5	±1.17 ±1.41
	175	V175		173.0	±1.35 ±1.62

AS Series(AS568)

Code	No.	d ₂	d ₁	
	001	1.02±0.06	0.74	
	002	1.27±0.06	1.07	±0.09
	003	1.52±0.06	1.42	
	004		1.78	
	005		2.57	
	006		2.90	
	007		3.68	
	008		4.47	
	009		5.28	
	010		6.07	
	011		7.65	±0.11
	012		9.25	
	013		10.82	
	014		12.42	
	015		14.00	
	016		15.60	
	017	1.78±0.06	17.17	
	018		18.77	
	019		20.35	
	020		21.95	
	021		23.52	
	022		25.12	
	023		26.70	
	024		28.30	±0.14
	025		29.87	
	026		31.47	
	027		33.05	
	028		34.65	
	029		37.82	
	030		41.00	±0.24

G Series (AS568)

Code	No.	Nominal Number	d ₂	Inner Diameter			Matching Dimension		
				d ₁	XTH01 XTH02	XTH11 XTH12	XTH21	d ₁	D
	25	G25		24.4	±0.24	±0.37	±0.29	25	30
	30	G30		29.4	±0.28	±0.43	±0.34	30	35
	35	G35		34.4	±0.32	±0.49	±0.39	35	40
	40	G40		39.4	±0.36	±0.55	±0.44	40	45
	45	G45		44.4	±0.40	±0.61	±0.49	45	50
	50	G50		49.4	±0.44	±0.67	±0.53	50	55
	55	G55	3.1±0.09	54.4	±0.48	±0.73	±0.58	55	60
	60	G60		59.4	±0.52	±0.79	±0.63	60	65
	65	G65		64.4	±0.56	±0.85	±0.68	65	70
	70	G70		69.4	±0.60	±0.91	±0.73	70	75
	75	G75		74.4	±0.64	±0.97	±0.77	75	80
	80	G80		79.4	±0.68	±1.03	±0.82	80	85
	105	G105		104.4	±0.86		±0.86	105	110
	120	G120		119.4	±0.97		±0.97	120	125
	145	G145		144.4	±1.15		±1.15	145	150
	170	G170	5.7±0.09	169.3	±1.32		±1.32	170	180



G Series (AS568)

Part Number	Code	No.	Nominal Number
XTH01	25	G25	
XTH02	30	G30	
XTH01—25			



Discount price
Per 1~49 50~
Price 100% Additional quotation

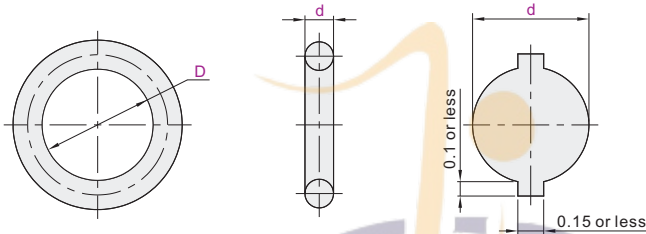


Code	Type	Material	Hardness (JIS HS)	Color	Operating Temp. Range	Applications
XTM01	Large Diameter	Nitrile Rubber	HS70 \pm 5	Black	-20~100°C	Mineral Oil Resistant
XTM02			HS90 \pm 5			
XTM11		Fluoro Rubber	HS70 \pm 5		-10~200°C	Heat Resistant, Chemical Resistant
XTM12			HS90 \pm 5			
XTM31			Ethylene Propylene Rubber			



Features

- Wire diameter and inner diameter are configurable type.
- Able to keep high level of air tightness because of vulcanization molding.
- No breaks from joint parts.



① Enlarged Cross Section



The first perspective

Inner Dia. D Tolerance

Part Number		Wire Dia. d	Inner Dia. D
Code	Wire Dia. d	d Tolerance	1 mm Increment
XTM01 XTM02 XTM11 XTM12 XTM31	3.1	±0.13	300~2000
	3.53		
	4		
	5.33		
	5.7		
	6	±0.15	
	7		
	8		
	8.4		
	9		
XTM01 XTM02 XTM11	10	±0.2	
	11		
	12	±0.25	
	13		
	15		
	16	±0.3	
	18		
	20		

Inner Dia. D	Inner Dia. D Tolerance
300~400	±2.82
401~500	±3.3
501~600	±4
601~700	±4.7
701~800	±5.3
801~900	±6
901~1000	±6.7
1001~1100	
1101~1200	
1201~1300	±7.5
1301~1400	
1401~1500	
1501~1600	±8.8
1601~1700	±9.4
1701~1800	
1801~1900	±10
1901~2000	



Please order as shown

Part Number	Wire Dia. d	Inner Dia. D
XTM01	3.1	300~2000
XTM11	3.53	

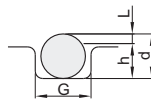
XTM01—d3.1—D350



Discount price	
Per	1~4 5~
Price	100% Additional quotation

Design Standards of O-Rings & Groove Dimension

① In case of internal or external pressure seal on flat surfaces, set crush rate at 8 to 30% as a guide.



Setting Crush Ratio (Operating Rang 8-30%)

$$E = (L/d) \times 100$$

$$E(\%): \text{Crush Rate} \quad L: \text{Crush Width}(=d-h)$$

$$d: \text{O-Ring Wire Dia.} \quad h: \text{Groove Depth}$$

② Design Standard of Internal and External Circumstances(Reference)

Inner Diameter Expansion Rate (%) 0-5%

Outer Diameter Expansion Rate (%) 0-3%