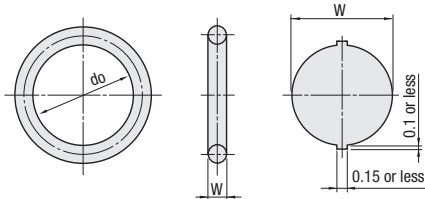


O-Ring – S Series

Type	Material	Hardness (JIS Hs)	Color	Operating Temp. Range	Applications	Features
NSA	Nitrile Rubber	70±5	Black	-30~100°C	Mineral Oil Resistant	Most representative material with superior oil / abrasion resistance and heat stability.
NSB	Nitrile Rubber	90±5	Black	-25~100°C		
NSSW	Silicon Rubber	50±5	Milky White	-50~200°C	Heat Resistant	Having excellent high and low temperature resistances, this material has the widest range of operating temperatures among synthetic rubbers. It is suitable for food-related applications.
NSSK	Silicon Rubber	70±5	Scarlet Red	-50~200°C	Heat Resistant	
NSF	Fluoro Rubber	70±5	Black	-15~200°C	Heat Resistant	Best in oil / chemical resistance and heat stability as synthetic rubber. Suitable for a wide range of applications.
NSFH	Fluoro Rubber	90±5	Black	-15~200°C		



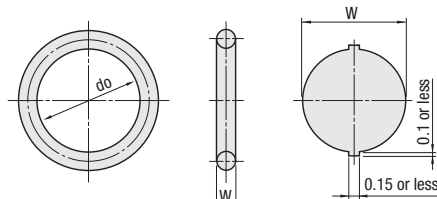
Type	No.	G Dimension (Tolerance $^{+0.25}_0$)			H Dimension H±0.05	R Dimension Max. Value
		No Back-Up Ring	Back-Up Ring on One Side	Back-Up Rings on Both Sides		
NSA / NSB / NSSW NSSK / NSF / NSFH	3~22	2.5	—	—	1.0	0.2
	22.4~50	2.7	—	—	1.5	0.4

S Series

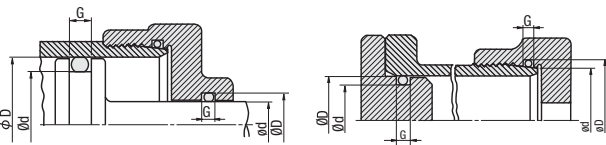
Part Number		Nominal Number	W	Inner Diameter			Matching Material			
Type	No.			do	NSA / NSB Tolerance	NSSW / NSSK Tolerance	NSF / NSFH Tolerance	d	Tolerance	D
NSA Nitrile Rubber, Black	3	3	1.5±0.1	2.5	±0.15	±0.45	±0.30	3	0 -0.05	5
	4	4		3.5				4		6
	5	5		4.5				5		7
	6	6		5.5				6		8
	7	7		6.5				7		9
	8	8		7.5				8		10
	9	9		8.5				9		11
	10	10		9.5				10		12
	11.2	11.2		10.7				11.2		13.2
	12	12		11.5				12		14
NSB Nitrile Rubber, Black	12.5	12.5	2.0±0.1	12.0	±0.25	±0.75	±0.50	12.5	0 -0.05	14.5
	14	14		13.5				14		16
	15	15		14.5				15		17
	16	16		15.5				16		18
NSSW Silicon Rubber, Milky White	18	18		17.5				18		20
	20	20		19.5				20		22
	22	22		21.5				22		24
	22.4	22.4		21.9				22.4		25.4
NSSK Silicon Rubber, Scarlet Red	24	24		23.5				24		27
	25	25		24.5				25		28
	26	26		25.5				26		29
	28	28		27.5				28		31
NSF Fluoro Rubber, Black	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
NSFH Fluoro Rubber, Black	34	34		33.5				34		37
	35	35		34.5				35		38
	35.5	35.5		35.0				35.5		38.5
	36	36		35.5				36		39
	38	38		37.5	±0.25	±0.75	±0.50	38	0 -0.05	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				46		49
	48	48		47.5				48		51
	50	50		49.5				50		53

O-Ring – G Series

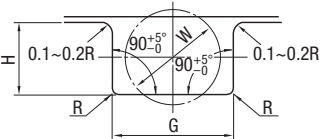
Type	Material	Hardness (JIS Hs)	Color	Operating Temp. Range	JIS Symbol	Applications	Features
NGA	Nitrile Rubber	70±5	Black	-30~100°C	Class 1 A	Mineral Oil Resistant	Most representative material with superior oil / abrasion resistance and heat stability.
NGB	Nitrile Rubber	90±5	Black	-25~100°C	Class 1 B	Heat Resistant	It has almost equivalent characteristics with the class 1A besides higher hardness and better pressure resistance.
NGSW	Silicon Rubber	50±5	Milky White	-50~200°C	—		Having excellent high and low temperature resistances, this material has the widest range of operating temperatures among synthetic rubbers. It is suitable for food-related applications.
NGSK	Silicon Rubber	70±5	Scarlet Red	-50~200°C	Class 4 D	Heat Resistant	
NGF	Fluoro Rubber	70±5	Black	-15~200°C	Class 4 D	Heat Resistant	Best in oil / chemical resistance and heat stability as synthetic rubber. Suitable for a wide range of applications.



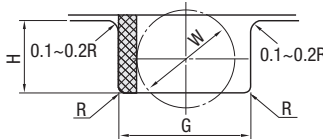
Type	No.	G Dimension (Tolerance $^{+0.25}_0$)			H Dimension H±0.05	R Dimension Max. Value
		No Back-Up Ring	Back-Up Ring on One Side	Back-Up Rings on Both Sides		
NGA / NGB / NGSW NGSK / NGF	25~145	4.1	5.6	7.3	2.4	0.7
	170	7.5	9	11.5	4.6	0.9



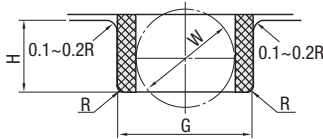
No Back-Up Ring



Back-Up Ring on One Side



Back-Up Rings on Both Sides



JIS B 2401 G Series (For Mounting)

Part Number		JIS Nominal Number	W	Inner Diameter			Matching Material			
Type	No.			do	NGA / NGB Tolerance	NGSW / NGSK Tolerance	NGF Tolerance	d	Tolerance	D
NGA Nitrile Rubber, Black	25	G25	3.1±0.1	24.4	±0.25	±0.38	±0.30	25	0 -0.10	30
	30	G30		29.4	±0.29	±0.44	±0.35	30		35
	35	G35		34.4	±0.33	±0.50	±0.40	35		40
	40	G40		39.4	±0.37	±0.56	±0.45	40		45
NGB Nitrile Rubber, Black	45	G45		44.4	±0.41	±0.62	±0.50	45		50
	50	G50		49.4	±0.45	±0.68	±0.54	50		55
	55	G55		54.4	±0.49	±0.74	±0.59	55		60
	60	G60		59.4	±0.53	±0.80	±0.64	60		65
NGSW Silicon Rubber, Milky White	65	G65		64.4	±0.57	±0.86	±0.69	65		70
	70	G70		69.4	±0.61	±0.92	±0.74	70		75
NGSK Silicon Rubber, Scarlet Red	75	G75		74.4	±0.65	±0.98	±0.78	75		80
	80	G80		79.4	±0.69	±1.04	±0.83	80		85
NGF Fluoro Rubber, Black	105	G105		104.4	±0.87	—	±0.87	105		110
	120	G120		119.4	±0.98		±0.98	120		125
	145	G145		144.4	±1.16		±1.16	145		150
	170	G170		169.3	±1.33		±1.33	170		180

NGS25 and NGS50 not available