
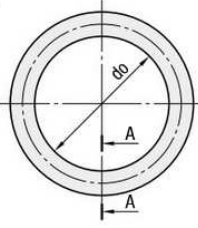


# O-RING

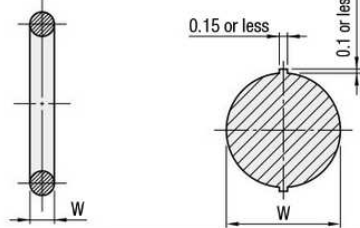


**RoHS 10**

**ORS** (Space saving)  
**ORP** (Movable type)  
**ORG** (Fixed type)



Enlarged view of AA cross section



Part Number	Usable Temperature Range	Material
ORS	-30°C- 80°C	Nitrile rubber (NBR-70-1)
ORP/ORG	-15°C-200°C	Fluoric rubber (FKM-70)

\* Usable temperature range is for reference only.



Order

Part Number  
**ORS 30**



Delivery

**Quotation**

O-ring groove machining dimension (Reference value)					W (Thickness)	do (Inner diameter)		Part Number	
*d	*D	*D <sub>1</sub>				Type	No.		
3	5	5.3		1.5±0.1	2.5	±0.15	ORS (Space saving)		3
4	6	6.3			3.5				4
5	7	7.3			4.5				5
6	8	8.3			5.5				6
7	9	9.3			6.5				7
8	10	10.3			7.5				8
9	11	11.3			8.5				9
10	12	12.3			9.5				10
12	14	14.3			11.5				12
14	16	16.3			13.5				14
15	17	17.3			14.5				15
16	18	18.3			15.5				16
18	20	20.3			17.5				18
20	22	22.3			19.5				20
22	24	24.3			21.5				22
24	27	27.5	+0.05 0	2.0±0.1	23.5	±0.25			24
25	28	28.5	0		24.5				25
26	29	29.5			25.5				26
28	31	31.5			27.5				28
30	33	33.5			29.5				30
32	35	35.5			31.5				32
34	37	37.5			33.5				34
35	38	38.5			34.5				35
36	39	39.5			35.5				36
38	41	41.5			37.5				38
39	42	42.5			38.5				39
40	43	43.5			39.5				40
42	45	45.5			41.5				42
44	47	47.5			43.5				44
46	49	49.5			45.5				46
48	51	51		47.5	48				

\* For d, D, D<sub>1</sub> dimensions, Right page

ORS is space-saving standard instead of JIS standard.

O-ring groove machining dimension (Reference value)				W (Thickness)	do (Inner diameter)		O-ring JIS No.	Part Number	
*d	*D, D <sub>1</sub> (common)				Type	No.			
3	6		1.9±0.07	2.8	±0.24	P 3	ORP (Movable type)		3
4	7			3.8		P 4			4
5	8			4.8		P 5			5
6	9	+0.05 0		5.8		P 6			6
7	10			6.8		P 7			7
8	11			7.8		P 8			8
9	12		8.8	P 9	9				
10	13		9.8	P10	10				
11	15		10.8	P11	11				
12	16		11.8	P12	12				
14	18	+0.06 0	2.4±0.07	13.8	P14	14			
15	19		14.8	P15	15				
16	20		15.8	P16	16				
18	22		17.8	P18	18				

\* For d, D, D<sub>1</sub>, Right page

ORP is the equivalent of P series of JIS standard.

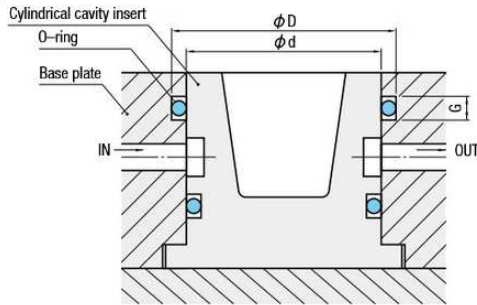
O-ring groove machining dimension (Reference value)				W (Thickness)	do (Inner diameter)		O-ring JIS No.	Part Number		
* d	* D, D <sub>1</sub> (common)		Type					No.		
20	0 -0.06	24	+0.06 0	2.4 ± 0.07	19.8	± 0.3	P 20	ORP (Movable type)	20	
21		25							20.8	21
22		26							21.8	22
24	0 -0.08	30	+0.08 0	3.5 ± 0.1	23.7	± 0.3	P 24		24	
25		31							24.7	25
26		32							25.7	26
28		34							27.7	28
30		36							29.7	30
31		37							30.7	31
32		38							31.7	32
34		40							33.7	34
35		41							34.7	35
36		42						35.7	36	
38		44						37.7	38	
39		45						38.7	39	
40	46	39.7	40							
42	48	41.7	42							
44	50	43.7	44							
46	52	45.7	46							
48	54	47.7	48							
25	0 -0.10	30	+0.10 0	3.1 ± 0.1	24.4	± 0.3	G 25	ORG (Static type)	25	
30		35							29.4	30
35		40							34.4	35
40		45							39.4	40
45		50							44.4	45
50		55							49.4	50
55		60				54.4	55			
60		65				59.4	60			
65		70				64.4	65			
70		75				69.4	70			
75		80				74.4	75			
80		85				79.4	80			
85		90				84.4	85			
90		95				89.4	90			
95		100				94.4	95			
100		105				99.4	100			
105		110				104.4	105			
110		115				109.4	110			
115	120	114.4	115							
120	125	119.4	120							

\* For d, D, D<sub>1</sub> dimensions, refer to the following. (P) ORP is the equivalent of P series of JIS standard. (G) ORG is the equivalent of G series of JIS standard.

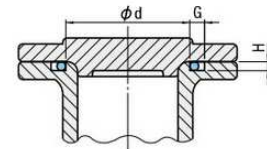


• For Cylinder Face Fixing

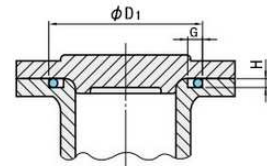
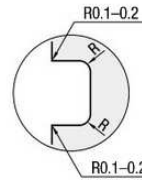
Example



• For Flat Surface Fixing



Against external pressure



Against internal pressure

Groove machining example

- (H) H size is required for flat surface fixing.
- (P) Use the ORP O-rings for movable applications.
- (G) Calculate the groove depth  $\frac{\phi D(D_1) - \phi d}{2}$  for cylinder face fixing from
- (P) Notation of O-ring for movable applications/for flat surface fixing is according to the specifications of JIS B2401.
- (P) There is difference between sizes of O-ring for movable applications/for flat surface fixing.
- (P) O-ring for movable applications can be used for flat surface fixing as well.

■ O-ring Groove Dimensions

Part Number	G <sup>+0.25</sup> <sub>0</sub>	H	H Tolerance	R max.	D/d Eccentricity max.
ORS 3- 22	2.5	1.0	0	-	-
ORS 24- 48	2.7	1.5	-0.1	-	-
ORP 3- 10	2.5	1.4	± 0.05	0.4	0.05
ORP 11- 22	3.2	1.8		0.4	0.05
ORP 24- 48	4.7	2.7		0.7	0.08
ORG 25-120	4.1	2.4		0.8	0.08