



旋转密封件

Rotary Shaft Seal Catalogue

Company Profile

Established in Xiamen in 2001, Xiamen TuoYan Seals Technology Co., Ltd. specializes in the research and development of sealing solutions and sealing components for fluid power systems. The company integrates research and development, production, and sales, and has complete production and testing equipment, including CNC machining centers, CNC lathes, large hydraulic presses, computer-controlled sintering furnaces, flat vulcanizing machines, precision injection molding machines, fully automatic fiber impregnation machines, and laminating machines.

Our company is certified with ISO 9001:2015, and we continually invest in product development and innovation to provide customers with high-quality products and exceptional sealing solutions. We have received high praise from customers both domestically and internationally. We have established three subsidiary companies, each specializing in producing premium sealing components in different sealing domains.

Xiamen TYS Seals Technology Co.,Ltd.

Focuses on the production and development of rubber, polyurethane, and polytetrafluoroethylene (PTFE) seals.

Add. : No.9-5-1, Xingmei Road, Jimei District, Xiamen,Fujian China.361022

Tel : 0592-6192018 Fax:0592-6192019

Email:tys@tysseals.com

TYS Seals Technology(WuPing) Co.,Ltd.

Specializes in the production and development of composite material products, including phenolic fabric wear rings, bushings, and bearing cages.

Add. : No.117, Huan Cheng South Road, Wuping County,Longyan City,Fujian China.

Tel : 0597-4802088

Xiamen JingHengYan Sealing Technology Co.,Ltd.

Focuses on the production and development of metal end-face seals, specifically floating seal products.

Add. : No.37-4-1,Xinyuan Road, Jimei District,Xiamen,Fujian China.



Tel : 0592-6192029

TYS Seals Technology (Guangzhou) Co.,Ltd.

Sales Center

Add. : 11-1237 Zhuji international machinery center , No.36 Zhuji road Tianhe district
Guangzhou

Tel : 020-32380255 Fax:020-3238-0377

Code	Section	Function	Limited Condition			
			Pressure	Speed	Temp.	
			(MPa)	(m/s)	(°C)	
RVA		Var i Seals	45	15	-70°C +260°C	35 36
GRS		Rotary Rod Seals	30	1	-30°C +200°C	37 38
ROI		Rotary Rod Seals	28	0.3	-30°C +100°C	39

Sealing Component Storage Guidelines and Recommended Shelf Life

Storage Recommendations :

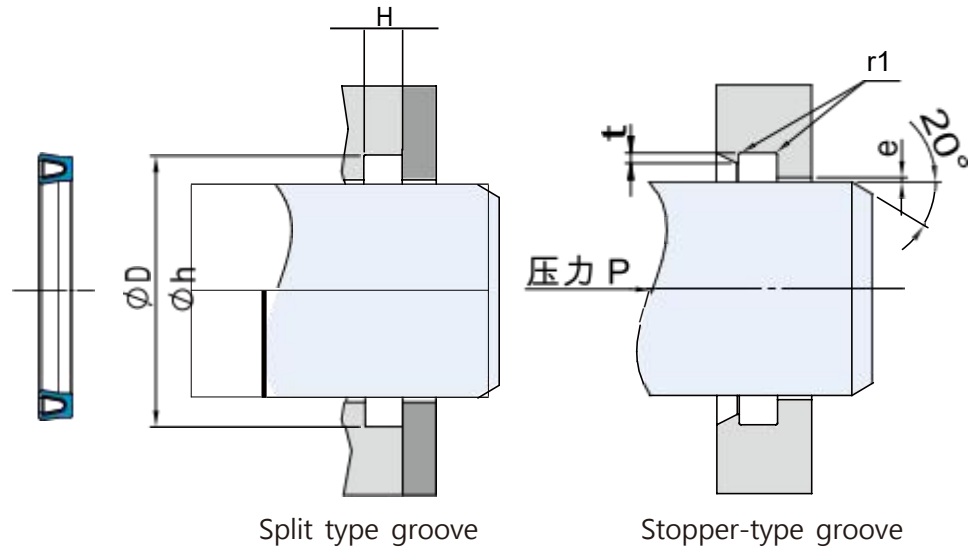
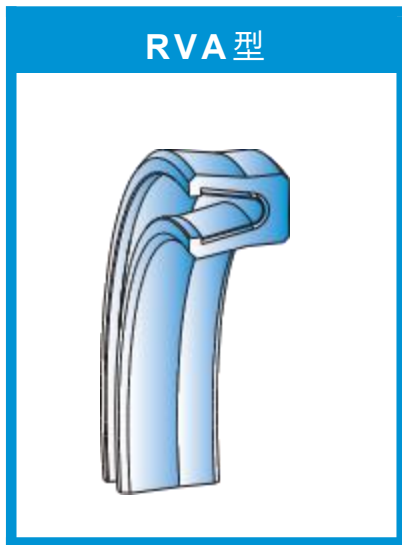
Stock Control	Follow the First- In-First-Out (FIFO) principle
Optimal Temp.	Seals should be kept away from heat sources like direct sunlight and heat-emitting objects. The maximum storage temperature is +32°C. Low temperatures won't cause permanent damage to the seals but can make them brittle, leading to potential breakage if mishandled. Generally, the storage temperature for seals should not go below +10°C, and they should be brought to room temperature before installation.
Avoid strong light	Surfaces should be shielded from direct sunlight and artificial light sources to prevent exposure to ultraviolet radiation.
Moisture control	Special care should be taken during storage, and the ambient humidity should not exceed 65%. Some specific polyurethane seals that are sensitive to moisture should be stored in sealed containers
Keep away from oxygen and ozone	Ozone and oxygen are harmful to seals. Seals should be stored in sealed containers. Any equipment that generates sparks should be kept away from the storage containers.
Keep away from	For seals to have a longer storage life, they should be kept away from contaminants. The warehouse should be kept clean.
Avoid distortion	Large seals should be stored flat instead of hanging, as prolonged hanging can cause distortion. Seals should not be placed on hooks, nails, or metal plates.

Recommended Shelf Life :

化合物名称	Compounds	Shelf Life
Aflas®	FEPDM	7 Years
乙丙橡胶	EP,EPR, EPDM	7 Years
氟橡胶	FKM	7 Years
丁腈橡胶	NBR,HNBR, XNBR	7 Years
聚氨酯	AU or EU	10 Years
聚酯弹性体	TPCE	10 Years
聚四氟乙烯	PTFE	Unlimited



Vari Seals -RVA



Characteristics of RVA Vari Seal:

- Suitable for both reciprocating and rotary motion.
- Can adapt to a wide range of fluids and chemicals.
- Low friction coefficient.
- Does not crawl even during precise control.
- Strong corrosion resistance and good dimensional stability.
- Can withstand rapid temperature changes.
- Does not contaminate food and pharmaceutical liquids.
- Can be sterilized.
- Unlimited storage life.

Application Range:

Vari Seal is used for sealing in reciprocating motion. This type of seal is suitable for harsh operating conditions and can meet the requirements of certain special Medium. It is recommended for applications that require no crawling, chemical resistance, and compatibility with most Medium, such as valves, pumps, separators, brakes, dosing devices, etc.

Technical Specification:

- Pressure: ≤ 45 MPa
- Speed: ≤ 15 m/s (reciprocating motion)
- Temperature: 70°C to $+260^{\circ}\text{C}$
- Medium: All liquids, chemicals, and gases
- Note: When used at high temperatures, pressure and speed should be reduced.

Materials:

- Outer Ring: PTFE or filled polytetrafluoroethylene (FPTFE)
- Spring: Stainless steel (available in V-shape, O-shape, and H-shape structures)

Installation Dimension:

Rod Dia.	Groove Dia.	Groove Width	Radius	Stopper Height	Radius Gap e max			
					2Mpa	10Mpa	20Mpa	40Mpa
d h9	D H9	H+0.2	r1	t				
3-9.9	d+2.9	2.4	0.4	0.4	0.20	0.10	0.08	0.05
10-19.9	d+4.5	3.6	0.4	0.6	0.25	0.15	0.10	0.07
20-39.9	d+6.2	4.8	0.6	0.7	0.35	0.20	0.15	0.08
40-119.9	d+9.4	7.1	0.8	0.8	0.50	0.25	0.20	0.10
120-630	d+12.2	9.5	0.8	0.9	0.60	0.30	0.25	0.12



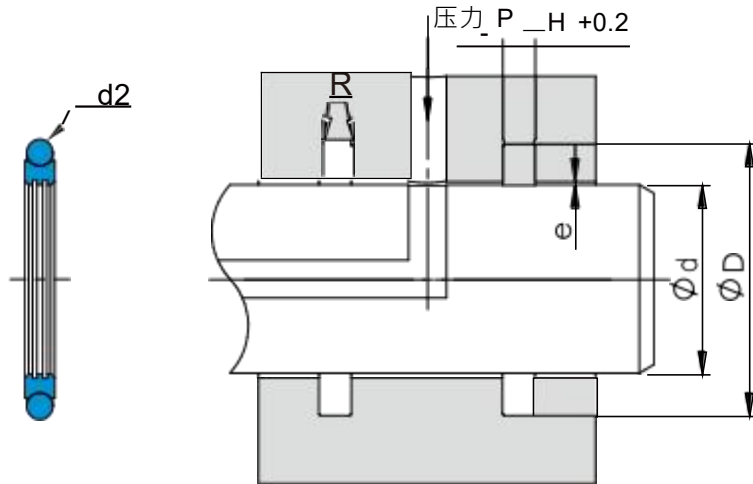
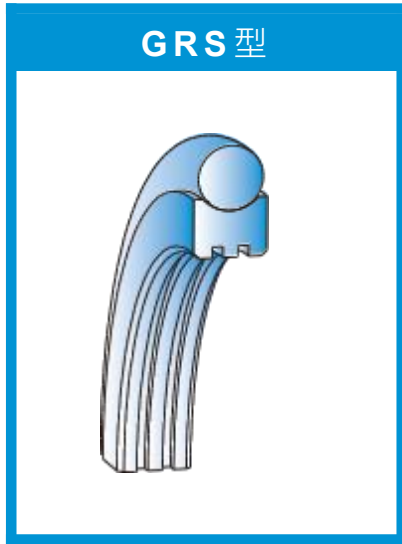
Specification :

Name	Rod Dia.	Groove Dia.	Width
	d h9	D H9	H+0.2
RVA	3	5.9	2.4
RVA	4	6.9	2.4
RVA	5	7.9	2.4
RVA	6	8.9	2.4
RVA	8	10.9	2.4
RVA	10	14.5	3.6
RVA	12	16.5	3.6
RVA	14	18.5	3.6
RVA	15	19.5	3.6
RVA	16	20.5	3.6
RVA	18	22.5	3.6
RVA	20	26.2	4.8
RVA	22	28.2	4.8
RVA	25	31.2	4.8
RVA	28	34.2	4.8
RVA	30	36.2	4.8
RVA	32	38.2	4.8
RVA	35	41.2	4.8
RVA	36	42.2	4.8
RVA	40	49.4	7.1
RVA	42	51.4	7.1
RVA	45	54.4	7.1
RVA	50	59.4	7.1

Name	Rod Dia.	Groove Dia.	Width
	d h9	D H9	H+0.2
RVA	60	69.4	7.1
RVA	70	79.4	7.1
RVA	80	89.4	7.1
RVA	85	94.4	7.1
RVA	90	99.4	7.1
RVA	95	104.4	7.1
RVA	100	109.4	7.1
RVA	110	119.4	7.1
RVA	120	132.2	9.5
RVA	130	142.2	9.5
RVA	140	152.2	9.5
RVA	150	162.2	9.5
RVA	160	172.2	9.5
RVA	170	182.2	9.5
RVA	180	192.2	9.5
RVA	190	202.2	9.5
RVA	200	212.2	9.5
RVA	210	222.2	9.5
RVA	220	232.2	9.5
RVA	230	242.2	9.5
RVA	240	252.2	9.5
RVA	250	262.2	9.5
RVA	280	292.2	9.5



GRS旋转轴用密封/Rotary Rod Seals



Design Description:

The GRS piston seal consists of a filled polytetrafluoroethylene (F-PTFE) sealing ring and an O-ring. It offers the following advantages:

- Very low friction resistance
- Simple and compact groove design with lubrication cavity
- No crawling or sticking during startup
- Excellent wear resistance and dimensional stability

Technical Specification:

- Pressure: 30 MPa
- Speed: 1 m/s
- Temperature: -30°C to +200°C (dependent on O-ring material)
- Medium: Mineral hydraulic oil, fire-resistant hydraulic oil, environmentally friendly hydraulic oil, water, air, and other Medium (dependent on O-ring material)

Materials:

Sealing Ring: Filled polytetrafluoroethylene (F-PTFE)
O-ring: Nitrile rubber (NBR) or Fluoroelastomer (FKM)

Rod Dia. d h9	Groove Dia. D H9	Groove Width H	Max. Radial Gap e_{max}	Raidus R	O Ring Section d2	Grooves of Sealing face		
Standard Range	Usable Range		32Mpa	50Mpa				
6-18.9	6-130	d+4.9	2.2	0.15	0.10	0.40	1.78	0
19-37.9	10-245	d+7.5	3.2	0.20	0.15	0.60	2.62	1
38-199.9	19-455	d+11.0	4.2	0.25	0.20	1.00	3.53	1
200-255.9	38-655	d+15.5	6.3	0.30	0.25	1.30	5.33	2
256-649.9	120-655	d+21.0	8.1	0.30	0.25	1.80	7.00	2
650-999.9	650-999.9	d+28.0	9.5	0.45	0.30	2.50	8.40	2

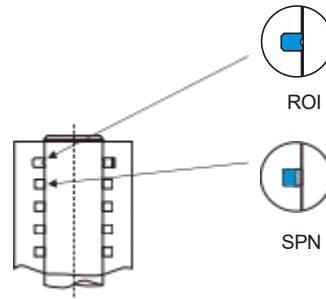
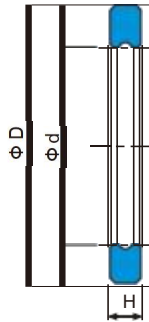


Specifaction :

Name	Rod Dia.	Groove Dia.	Width
	d h9	D H9	L+0.2
GRS	6	10.9	2.2
GRS	8	12.9	2.2
GRS	10	14.9	2.2
GRS	12	16.9	2.2
GRS	14	18.9	2.2
GRS	15	19.9	2.2
GRS	16	20.9	2.2
GRS	18	22.9	2.2
GRS	20	27.5	3.2
GRS	22	29.5	3.2
GRS	25	32.5	3.2
GRS	26	33.5	3.2
GRS	28	35.5	3.2
GRS	30	37.5	3.2
GRS	32	39.5	3.2
GRS	35	42.5	3.2
GRS	40	51	4.2
GRS	45	56	4.2
GRS	50	61	4.2
GRS	55	66	4.2
GRS	60	71	4.2
GRS	63	74	4.2
GRS	65	76	4.2
GRS	70	81	4.2
GRS	75	86	4.2
GRS	78	89	4.2
GRS	80	91	4.2

Name	Rod Dia.	Groove Dia.	Width
	d h9	D H9	L+0.2
GRS	85	96	4.2
GRS	90	101	4.2
GRS	95	106	4.2
GRS	100	111	4.2
GRS	105	116	4.2
GRS	110	121	4.2
GRS	115	126	4.2
GRS	120	131	4.2
GRS	125	136	4.2
GRS	130	141	4.2
GRS	135	146	4.2
GRS	140	151	4.2
GRS	145	156	4.2
GRS	150	161	4.2
GRS	155	166	4.2
GRS	160	171	4.2
GRS	170	181	4.2
GRS	180	191	4.2
GRS	190	201	4.2
GRS	200	215.5	6.3
GRS	210	225.5	6.3
GRS	220	235.5	6.3
GRS	240	255.5	6.3
GRS	250	265.5	6.3
GRS	260	281	8.1
GRS	270	291	8.1
GRS	280	301	8.1

ROI 旋转密封/Rotary seals



Features:

- Designed for rotary motion applications
- Provides reliable sealing performance in high-speed rotations
- Prevents leakage of fluids or gases
- Can withstand a wide range of operating temperatures and pressures
- Excellent resistance to wear and abrasion
- Low friction coefficient
- Long service life
- Can be used in various industries, including automotive, manufacturing, and industrial machinery

Technical Specification:

- Max speed : 0.3 m/ s
- Max pressure : 28Mpa
- Temperature range : -30~100°C
- MAT: PU

Name	Specification		
	D	d	H
ROI	70.5	60.5	5
ROI	80.5	70.5	5
ROI	85.5	75.5	5
ROI	90.5	80.5	5
ROI	100.5	90.5	5
ROI	105.5	95.5	5
ROI	110.5	100.5	5
ROI	120.5	110.5	5
ROI	125.5	115.5	4.5
ROI	125.5	115.5	5
ROI	130.5	120.5	5
ROI	140.5	130.5	4.5
ROI	140.5	130.5	5

If your required sizes are not listed in the table, please kindly contact us.



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