- 本手册仅用于说明产品的相关信息，公司随时可能因技术升级或采用更新的生产工艺而改进本手册有关内容，或对本手册的印刷错误及不准确信息进行必要的更改，恕不另行通知。
- 未经许可，禁止全部或部分复制。
- 本公司拥有最终解释权，更多详细资料敬请垂询！

- This catalogue to describe product related information only, Voneseals may update the cataloge due to the technical upgrade or process change. Or may update the type error and inaccurate information without inform.
- The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted.
- More information, please contact Voneseals.

公司总部：
Headquater:

+86-021-6818 4680

上海市浦东新区运通路196弄6号楼
No.196,Yuntong Road,Building#6, Pudong,Shanghai,P.R.C

WWW.VONESEALS.COM

制造工厂：
Manufacture Unit:

+86-0573-8482 1888

浙江省嘉兴市嘉善县惠民街道钱塘江路58号
58 Qiantangjiang RD, Jiashan, Zhejiang,China

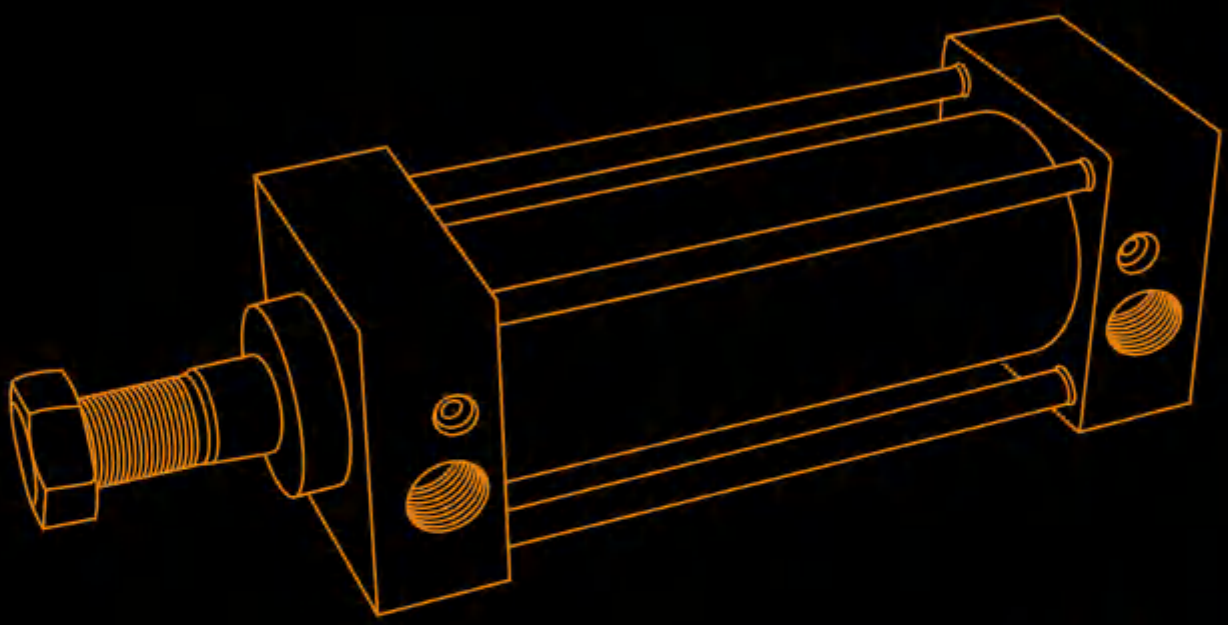
WWW.VONESEALS.COM

唯万官网　　嘉诺官网　　加士特官网

唯万密封 VONESEALS

珍惜资源，善待环境
Take good care of the resources,Be kind to the environment

唯万密封
VONESEALS



2026版
www.voneseals.com

气动密封解决方案

PNEUMATIC SEALING SOLUTION

上海唯万密封科技股份有限公司
VONESEALS TECHNOLOGY (SHANGHAI)INC.

前言
FOREWORD

上海唯万密封科技股份有限公司是专业从事密封系统解决方案的公司。公司的使命是：立足客户需求，坚持材料、产品及应用技术的研究，提供最专业的密封解决方案。

尽管我们的目标是使本手册覆盖尽量宽的密封件范围，但此手册仅仅涵盖了常用的标准密封件产品。

在实际应用过程中，尤其是在某些特殊工况及环境下，本手册中所涵盖的密封件可能不能完全满足您的实际要求。在此情况下，请与我们的技术人员或指定经销商联系。基于多年提供密封系统解决方案的经验，基于国内外多位资深专家的支持与帮助，基于我公司专业的实验和验证手段，我们一定可以为您提供一套量身定做的密封解决方案。

本手册所提供的资料是根据本公司多年在密封件生产和应用方面取得的经验编辑而成。但密封件的性能并不完全取决于密封件本身，在具体使用过程中，其使用性能还与诸如压力、温度、速度、介质、光洁度等其它许多因素相关。因此我们建议您与我司技术人员联系，在其指导下选型并进行相关的可靠性试验。

唯万密封公司版权所有，
未经许可不能摘录，翻印。
保留修改权利

Voneseals Technology (Shanghai) Inc. is a company providing total sealing solutions.

The company's mission is:Based on customer needs,work continuously on new materials,products and application technology developments and offer professional sealing solutions.

Though the aim of this catalogue is to cover as wide seals range as we can, it is still only a selection of the standard parts.

The seals listed in this catalogue may can not solve all the problems you meet.In special cases and applications, please contact Voneseals and/or our authorized official distributors. Based on decades of experience, we can offer customized sealing solutions for you.

The information in this catalogue are based on know-how developed over experience in applications and manufacturing of seals. Due to the great diversity of operational parameters affecting fluidic devices and their impact on seals such as pressure, temperature, speed, media, etc.Therefore, we recommend that you contact our technical team, under their guidance selection and related reliability tests.

Voneseals Technology (Shanghai) Inc. All right reserved.
The catalogue may not to be excerpted and reproduced without authorization.
Modification rights reserve.

唯万密封
VONESEALS

立足客户需求，坚持材料、产品及应用技术的研究，提供最专业的密封解决方案。
Based on customer needs,work continuously on new materials,products and application technology developments and offer professional sealing solutions.

VISION OF 愿景 VONESEALS

以材料科技助力
人类美好生活

Better materials for a better future.

MISSION OF 使命 VONESEALS

立足客户需求，坚持材料、产品及应用技术的研究，提供最专业的密封解决方案。

Based on customer needs,work continuously on new materials,products and application technology developments,and offer professional sealing solutions.



若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.

目录
CONTENTS

材料与产品开发
Materials and Products Development 01

密封形式及特点
Seals Type&Feature 04

缓冲密封
BUFFER SEAL

 PRP 05

活塞杆封
ROD SEAL

 PRL 07
 PRM 09
 PRU 11
 PRD 13

活塞封
PISTON SEAL

 PPS 15
 PPA 17

系列化定制产品
SERIALIZED CUSTOMIZED PRODUCTS

 PPD 19
 PPE 19
 PPM 20
 SP 20

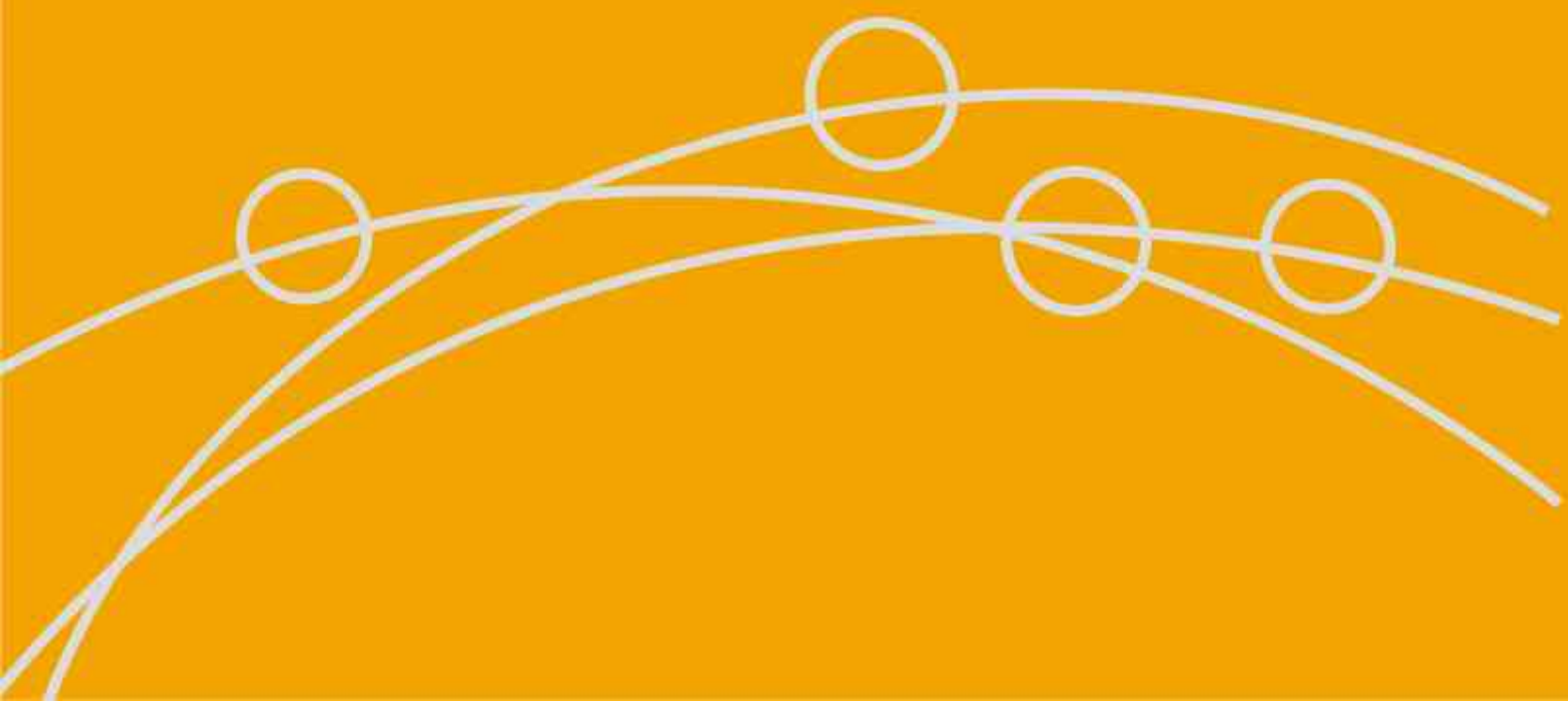
密封件安装与存储
Seals Installation & Storage 21

01

材料与产品开发
MATERIALS AND PRODUCT DEVELOPMENT

立足于基础材料的研发，结合多年的密封设计、生产和工程应用方面的经验，通过专业的实验室检测和台架测试的验证，唯万已经为包括液压和气动等众多领域的合作伙伴提供优化的密封系统解决方案。

Bused on material development and a combination with decades of expeience on seals design,production and application that are,verified with professional laboratory and bench testing,VONE has pro vided partners including hydraulic and pneumatic systems wi th the optimum sealing solutions.



唯万密封
VONESEALS

立足客户需求，坚持材料、产品及应用技术的研究，提供最专业的密封解决方案。
Based on customer needs,work continuously on new materials,products and application technology developments and offer professional sealing solutions.

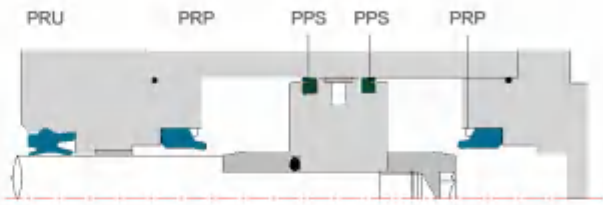
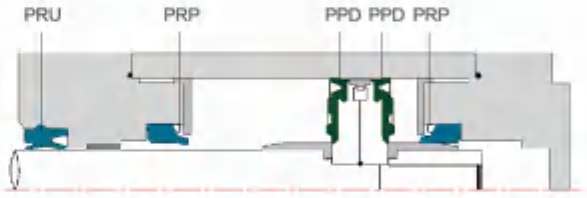
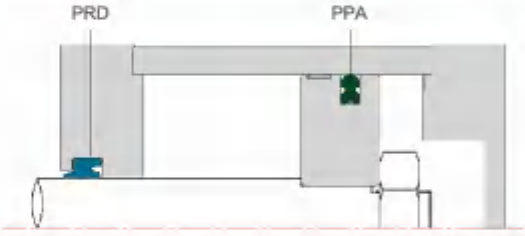
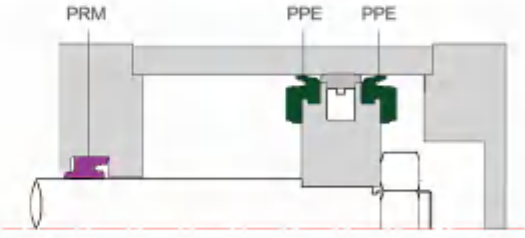
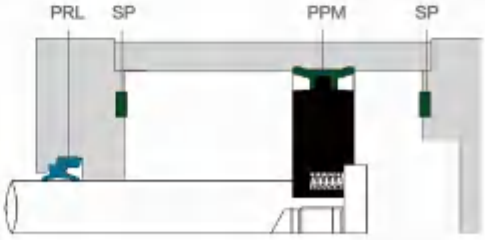
材料类型 MATERIAL TYPE	材料代号 MATERIAL CODE	标准颜色 STANDARD COLORS	硬度 HARDNESS SHA OR SHD	拉伸强度 TENSILE STRENGTH (MPA)	断裂伸长 ELONGATION (%)	100%定伸强度 MODULUS (MPA)	压缩永久形变率(%) COMPRESSION SET (%) 实验条件 A 70℃,24H B 100℃,70H C 175℃,24H	温度范围 TEMPERATURE RANGE (℃)	应用举例 APPLICATION EXAMPLE
聚氨酯(AU)	P2001		93±5(ShA)	≥48	≥400	≥10	≤25(A)	-30~100℃	液压，气动通用材料 Hydraulic, pneumatic general material
聚氨酯(AU)	P2002		95±5(ShA)	≥45	≥300	≥15	≤27(A)	-20~110℃	耐水解，耐酸碱材料 Hydrolytic, acid and alkali resistant materials
聚氨酯(AU)	P2005		95±5(ShA)	≥48	≥400	≥12	≤25(A)	-30~100℃	液压标准材料 Hydraulic Standard Material
聚氨酯(AU/EU)	P2006		93±5(ShA)	≥45	≥400	≥8	≤25(A)	-46~90℃	耐低温材料 Low temperature resistant material
聚氨酯(AU)	P2009		54±3(ShD)	≥40	≥380	≥17	≤27(A)	-20~100℃	履带用密封材料 Material for track pin seal
聚氨酯(AU)	P2010		82±5(ShA)	≥35	≥420	≥6	≤23(A)	-40~90℃	低硬度气动密封材料 Low hardness pneumatic material
聚氨酯(AU)	P2011		90±5(ShA)	≥40	≥420	≥10	≤25(A)	-35~100℃	气动密封标准材料 Pneumatic standard material
聚氨酯(AU)	P2019		52±3(ShD)	≥40	≥380	≥15	≤27(A)	-20~100℃	履带用密封材料 Material for track pin seal
聚氨酯(AU)	P2023	本色 Natural color	52±3(ShD)	≥45	≥300	≥12	≤35(A)	-20~100℃	高硬度、挤压出材料 High hardness, low cut nuskin material
聚氨酯(EU)	P2024		93±5(ShA)	≥40	≥400	≥10	≤28(A)	-30~90℃	耐水解、耐水解材料 Water resist material
聚氨酯(AU)	P2100		93±5(ShA)	≥50	≥450	≥10	≤40(B)	-35~100℃	高回弹材料 Water resist materia
聚氨酯(AU)	P2112		93±5(ShA)	≥50	≥400	≥11	≤48(B)	-20~120℃	耐高温、耐水解材料 Hydrolic, acid and alkali resistant materials
聚氨酯(AU)	P2114		87±5(ShA)	≥50	≥420	≥8	≤40(B)	-20~120℃	耐高温、高回弹材料 High temperature resistant, high rebound material
丁腈橡胶(NBR)	N101		70±5(ShA)	≥12	≥250	≥8	≤28(B)	-35~100℃	O型圈材料、组合密封弹性体材料
	N103		80±5(ShA)	≥12	≥200	≥8	≤28(B)	-35~100℃	O型圈材料 O-ring material
	N106		90±5(ShA)	≥14	≥120	≥12	≤28(B)	-35~100℃	O型圈材料 O-ring material
氢化丁腈橡胶 (HNBR)	H101		70±5(ShA)	≥17	≥250	≥5	≤30(C)	-35~150℃	O型圈材料 O-ring material
	H103		80±5(ShA)	≥20	≥250	≥5	≤30(C)	-35~150℃	O型圈材料 O-ring material
	H106		90±5(ShA)	≥23	≥200	≥10	≤30(C)	-35~150℃	O型圈材料 O-ring material
氟橡胶(FKM)	F102		75±5(ShA)	≥10	≥150	≥8	25(C)	-20~220℃	耐热密封件材料 Heat-resistant material
硅橡胶(VMQ)	V101		70±5(ShA)	≥5	≥150	≥3	25(C)	-90~220℃	耐高低温密封件材料 High and low temperature sealing material
材料类型 MATERIAL TYPE	材料代号 MATERIAL CODE	标准颜色 STANDARD COLORS	硬度 HARDNESS SHA OR SHD	拉伸强度 TENSILE STRENGTH (MPA)	断裂应变(%) ELONGATION	弯曲模量(Mpa) FLEXURAL MODULUS	冲击强度（缺口，KJ/m2） CHARPY IMPACT STRENGTH (NOTCHED, KJ/M2)	温度范围 TEMPERATURE RANGE (℃)	应用举例 APPLICATION EXAMPLE
聚酰胺树脂 (PA6-GF)	S024	本色 Natural color	80±5(ShD)	≥50	267	1633	15.3	-40~100℃	吸水率低，尺寸稳定性好 low water absorb, size stable
	S028	本色 Natural color	120±5 (Rockwell)	≥130	3	6500	12	-40~120℃	强度高，抗挤出 high modulus, extrusion resistance
聚甲醛(POM)	S101	本色 Natural color	80±5(ShD)	≥60	15	2800	5	-40~100℃	强度高，承载力大 High modulus, High load resistance
聚四氟乙烯 (PTFE/PTFE+Cu)	S102	本色 Natural color	60±5(ShD)	≥26	300	/	压缩强度 ≥35Mpa (Compressive strength)	-200~260℃	耐高低温、摩擦性 Low & high temperature resistance, commercial use surface
	S106	本色 Natural color	65±5(ShD)	≥20	280	/	抗压强度: (Corrosion strength) ≥10Mpa（2.5%变形） ≥20Mpa（12%变形）	-200~260℃	耐高低温、自润滑好 Low & high temperature resistance, self-lubrication
酚醛树脂(PF)	S108	本色 Natural color	140(球压硬度) (Brinell hardness)	≥90	/	3930	压缩强度 ≥340 (Compressive strength)	-40~120℃	强度高，承载力大 High modulus, High load resistance

若有特殊要求（压力、温度、速度、介质等），请与本公司联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please connect our company to recommend suitable materials and structures.

适用密封件类型 SEAL TYPE	矿物油 MINERAL OIL	聚α烯烃合成油 POLYOLEFIN SYNTHETIC OIL	润滑脂 GREASE	硅油 SILICONE OIL	刹车油 BRAKE OIL	涡轮机油 TURBINE OIL	水溶性液压油 HFA	油包水液压油 HFB	水乙二醇液压油 HFC	磷酸酯液压油 HFD	水 WATER	热水和蒸汽 HOT WATER AND STEAM
O型圈,PRU,HRD,HRS等	●	●	□	●	×	●	□	●	×	×	□	×
HRU,HPU等	●	●	○	●	×	●	●	●	□	×	●	□
HWS,HWB,HWT,HWY,GWJ, HRD,HRS,HRB,HPS等	●	●	□	●	×	●	□	●	×	×	□	×
HWX,HWB,HRD,HRS, HRB,HPS 等	○	○	□	●	×	●	○	○	×	×	○	×
HWB,HWC,HPB,GRM等	●	●	□	●	×	●	□	●	×	×	□	×
PPS,PPD,PPE等	●	●	□	●	×	●	□	●	×	×	□	×
PRM,PRD等	●	●	□	●	×	●	□	●	×	×	□	×
HWB,HWC,GRM等	●	●	□	●	×	●	□	●	×	×	□	×
GRM等	●	●	□	●	×	●	□	●	×	×	●	×
HPS,PR等	○	○	○	●	×	●	○	○	×	×	○	×
HRS,HRD,HRN等	●	●	□	●	×	●	□	●	×	×	□	×
HWGA,HRX,HRXA等	●	●	○	●	×	●	●	●	□	×	●	□
HRSD,PRXB等	●	●	○	●	×	●	●	●	□	×	●	□
O型圈,GSJ,GPP,HRE等	●	●	●	●	×	●	□	●	●	×	×	×
O型圈 O-ring	●	●	●	●	×	●	□	●	●	×	×	×
O型圈 O-ring	●	●	●	●	×	●	□	●	●	×	×	×
O型圈 O-ring	●	●	●	●	×	●	●	●	●	×	□	×
O型圈 O-ring	●	●	●	●	×	●	●	●	●	×	□	×
O型圈 O-ring	●	●	●	●	×	●	●	●	●	×	□	×
O型圈 O-ring	●	●	●	●	×	□	●	×	×	●	□	×
O型圈 O-ring	●	×	×	×	□	□	×	×	□	●	□	×
适用密封件类型 SEAL TYPE	矿物油 MINERAL OIL	聚α烯烃合成油 POLYOLEFIN SYNTHETIC OIL	润滑脂 GREASE	硅油 SILICONE OIL	刹车油 BRAKE OIL	涡轮机油 TURBINE OIL	水溶性液压油 HFA	油包水液压油 HFB	水乙二醇液压油 HFC	磷酸酯液压油 HFD	水 WATER	热水和蒸汽 HOT WATER AND STEAM
挡圈 Backup ring	●	●	●	●	●	●	●	●	●	●	×	×
挡圈 Backup ring	●	●	●	●	●	●	●	●	●	●	×	×
挡圈，导向环 Backup ring,Guide ring	●	●	●	●	●	●	●	●	●	●	○	×
挡圈、V组，O型圈 Backup ring,V-ring,O-ring	●	●	●	●	●	●	●	●	●	●	●	●
挡圈，防污环 Backup ring,Containment ring	●	●	●	●	●	●	●	●	●	●	●	●
导向环 Guide ring	●	●	●	●	×	●	×	×	×	●	×	×

注：● 合适 ○ 比较合适 □ 一般 × 不合适
Notes: ● Excellent ○ Good □ Common × Not recommend

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.

缸型 CYLINDER TYPE	密封特点 FEATURE	示例图片 DIAGRAM
标准气缸 Standard Cylinder	单向 Y 型 活塞密封 Unidirectional Y-shaped Piston Seal	
	单向整体 活塞密封 (金属骨架) Unidirectional Integral Piston Seal (Metal Skeleton)	
短行程气缸 Short Stroke Cylinder	双向鼓型 活塞密封 Bidirectional Drum Type Piston Seal	
	单向分体式 活塞密封 (自带缓冲) Unidirectional Split Piston Seal (Equipped With Buffering Function)	
椭圆夹紧气缸 Elliptical Clamping Cylinder	椭圆活塞密封 (防偏转) Elliptical Piston Seal (Anti deflection)	

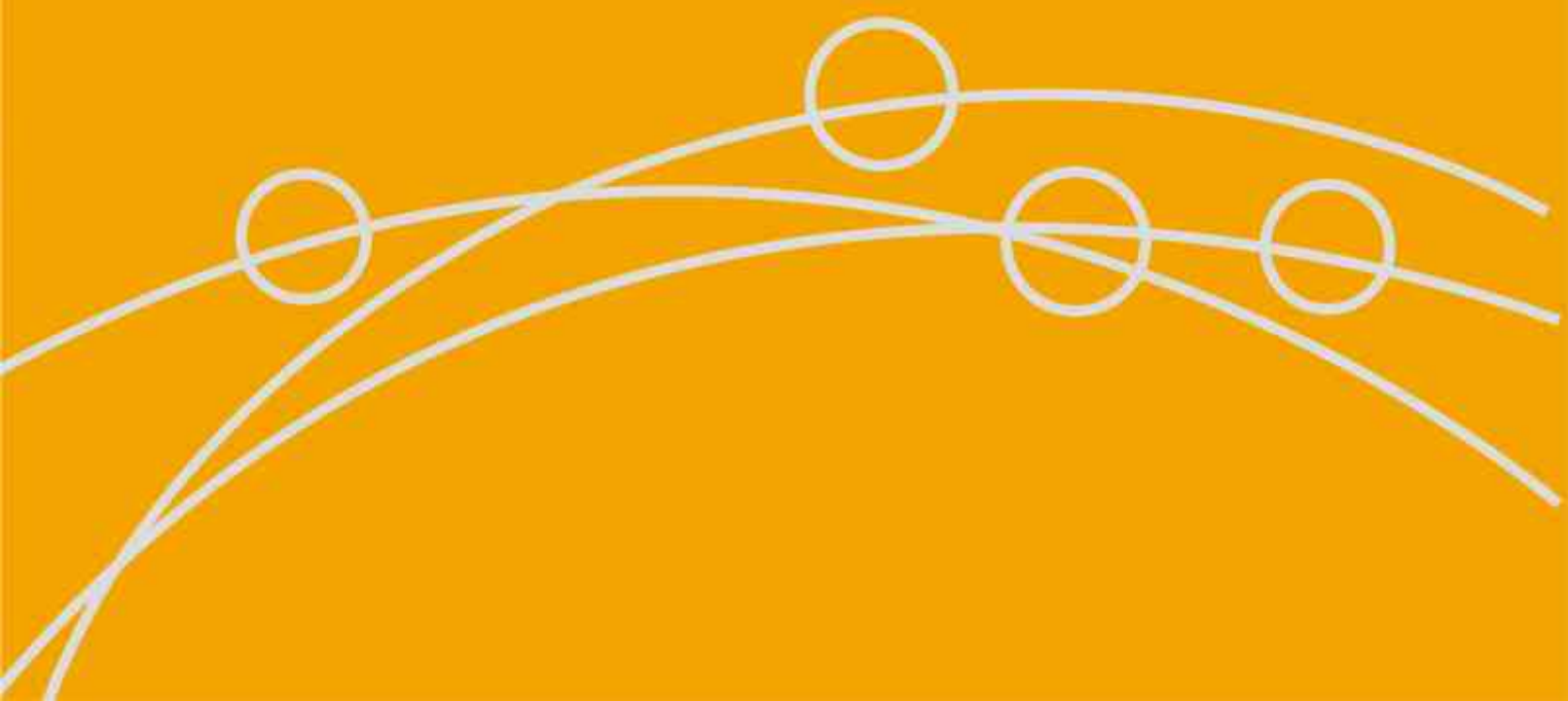
若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.

02

密封形式及特点
SEALS TYPE & FEATURE

立足于基础材料的研发，结合多年的密封设计、生产和工程应用方面的经验，通过专业的实验室检测和台架测试的验证，唯万已经为包括液压和气动等众多领域的合作伙伴提供优化的密封系统解决方案。

Based on material development and a combination with decades of expeience on seals design,production and application that are,verified with professional laboratory and bench testing,VONE has pro vided partners including hydraulic and pneumatic systems wi th the optimum sealing solutions.



缓冲密封 PRP
BUFFER SEAL PRP



PRP型缓冲密封是专门为气缸设计的缓冲密封件。

The profile of PRP pneumatic cushioning seal is specially designed for cushioning in pneumatic cylinders.

技术参数

工作压力：≤1.6MPa
工作温度：-30℃~80℃
工作速度：≤1.0m/s
工作介质：润滑后的空气以及干燥空气（须初始润滑）
标准材料：聚氨酯P2001

TECHNICAL PARAMETER

Working pressure:	≤1.6MPa
Working temperature:	-30℃ ~80℃
Surface speed:	≤1.0m/s
Working medium:	Lubricated as well as dry air (after initial lubrication during assembly)
Standard material:	Polyurethane P2001

密封件主要特点

※在整个密封系统中起单向阀的作用，从而不再需要在系统中加入其他的单向阀
※自动选择最佳的缓冲行程
※在略有偏心的情况下可自动对中，具有极佳的缓冲效果
※具有两道互相独立的密封系统，增加了系统的可靠性
※易于安装

ADVANTAGES

※Since the seal functions as a check valve,no separate valve is necessary
※Optimum use of design-related cushion stroke
※High cushioning consistency due to automatic centering, even in the case of misalignment of the cushioning spear to the cylinder head
※Increased reliability due to two independent sealing systems (flexible sealing lips and axial sealing areas).
※Easy manual snap assembly

安装要求

※可以人工装入沟槽内。注意装配过程中防止密封唇部被锐边划伤。初始润滑是保持长期使用寿命的前提。

INSTALLATION

※Self-retaining profile of PRP is manually snapped into housing while the piston rod is disassembled.Please pay attention to prevent sharp edges from damaging the sealing lips during assembly. Initial lubrication is the prerequisite for very long operation life.

订货号标注方法：

PRP d×D×L P2001

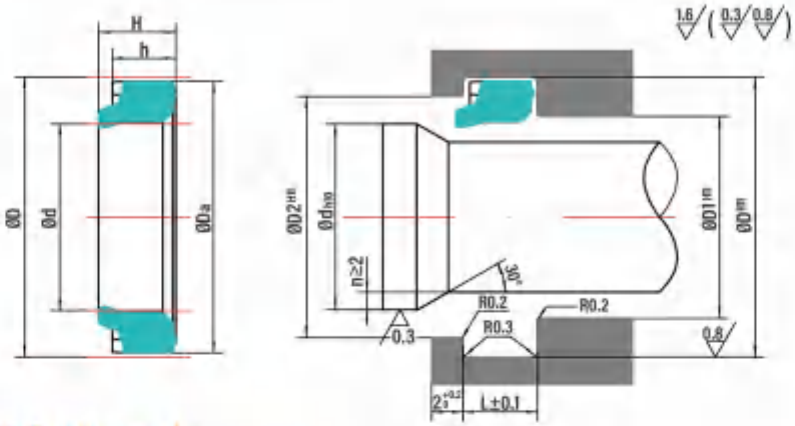
- P2001 — 材料(有其他材料可供选择)
- L — 沟槽宽度
- D — 槽径
- d — 杆径
- PRP — 订货号

ORDER EXAMPLE:

PRP d×D×L P2001

- P2001 — Materials (More materials available)
- L — Groove width
- D — Groove diameter
- d — Rod diameter
- PRP — Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PRP型标准规格表（单位：mm）
PRP Standard specification sheet (Unit: mm)

PRP型标准规格表（单位：mm）
PRP Standard specification sheet (Unit: mm)

订货号 PART NUMBER		d	D	H	h	D1	D2	L	
PRP 8X11.6X3.3	P2001	8	11.6	3.5	2.8	8.5	10	3.3	*
PRP 9.5X15X4.5	P2001	9.5	15	4.6	3.7	10	12	4.5	*
PRP 12X18X4.8	P2001	12	18	5	4.1	13	15.5	4.8	*
PRP 14X22X7	P2001	14	22	7.8	6.3	15	19	7	
PRP 16X22X5.2	P2001	16	22	5.5	4.4	17	19.5	5.2	*
PRP 16X24X7	P2001	16	24	7.8	6.3	17	21	7	*
PRP 18X26X7	P2001	18	26	7.8	6.3	19	23	7	*
PRP 20X28X7	P2001	20	28	7.8	6.3	21	24	7	*
PRP 22X30X7	P2001	22	30	7.8	6.3	23	26	7	
PRP 25X33X7	P2001	25	33	7.8	6.3	26	29	7	*
PRP 28X36X7	P2001	28	36	7.8	6.3	29	32	7	*
PRP 30X40X7	P2001	30	40	7.8	6.2	31.5	35	7	*
PRP 32X42X7	P2001	32	42	7.8	6.2	33.5	37	7	*
PRP 36X46X7	P2001	36	46	7.8	6.2	37.5	41	7	*
PRP 40X50X7	P2001	40	50	7.8	6.2	41.5	45	7	*
PRP 50X60X7	P2001	50	60	7.8	6.2	51.5	55	7	

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞杆密封 PRL
ROD SEAL PRL



PRL活塞杆密封/防尘圈是专为小气缸及阀设计。
The pneumatic rod seal/wiper profile PRL is a combined element with sealing and wiping function for rods in small pneumatic cylinders.

TECHNICAL PARAMETER

Working pressure: ≤1.6MPa
Working temperature: -30℃ ~80℃
Surface speed: ≤1.0m/s
Working medium: Air after lubrication and dry without oil air.
Standard material: Polyurethane P2001

技术参数

工作压力：≤1.6MPa
工作温度：-30℃~80℃
工作速度：≤1.0m/s
工作介质：润滑后的空气以及干燥空气和无油空气
标准材料：聚氨酯P2001

ADVANTAGES

※Both functions, sealing and wiping, are performed by a single seal
※Low assembly costs, easier storage
※Clean line finish and full function at minimal space requirement
※No additional axial adjustment required
※Smooth running thanks to optimal balance of sealing lips
※No danger of corrosion as the part is made of polymeric material

密封件主要特点

※密封和防尘的双重功能由一个密封件完成
※降低加工成本，易于存储
※最大限度的节省了空间
※不需要另外的轴向调整
※密封唇的特殊设计保证运行平滑稳定
※由于材料为聚合物弹性体，从而不会生锈、腐蚀

INSTALLATION

※The self-retaining rod seal/wiper profile PRL is manually snapped into the installation housing while the piston rod is disassembled. Please pay attention to prevent sharp edges from damaging the wiping and sealing lips during assembly. Initial lubrication is the prerequisite for very long operational life.

安装要求

※可以人工装入沟槽内。注意装配过程中防止防尘和密封唇部被锐边损伤。初始润滑是保持长期使用寿命的前提。

订货号标注方法：

PRL d×D×L P2001

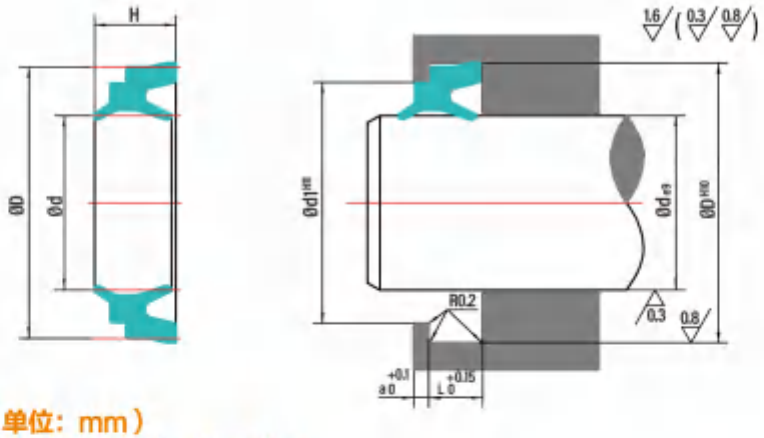
- P2001 — 材料(有其他材料可供选择)
- L — 沟槽宽度
- D — 槽径
- d — 杆径
- PRL — 订货号

ORDER EXAMPLE:

PRL d×D×L P2001

- P2001 — Materials (More materials available)
- L — Groove width
- D — Groove diameter
- d — Rod diameter
- PRL — Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PRL型标准规格表（单位：mm）
PRL Standard specification sheet (Unit: mm)

PRL 型标准规格表（单位：mm）
PRL Standard specification sheet (Unit: mm)

订货号 PART NUMBER	d	D	H	d1	L	a	
PRL 4X8.2X3 P2010	4	8.2	4.2	6.7	3	0.8	*
PRL 6X11.2X3.6 P2011	6	11.2	5.2	9.1	3.6	1	*
PRL 8X14.2X3.6 P2001	8	14.2	5.2	12.1	3.6	1	*
PRL 10X16.2X4.2 P2001	10	16.2	6.2	14.1	4.2	1.2	*
PRL 10X18X5.9 P2001	10	18	7.9	14.2	5.9	1.2	
PRL 16X23X4.8 P2001	16	23	4.8	18.8	3.4	1	*
PRL 20X29X6.8 P2001	20	29	6.8	24.8	5.2	1	*

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞杆密封 PRM
ROD SEAL PRM



PRM活塞杆密封/防尘圈是一种气动密封件。
集防尘和密封两种功能于一身，尺寸小,摩擦力更低。
The design of the profile of PRM is a rod seal/wiper combination pneumatic sealing element.sealed two kinds of dust function and a suit also are considerably smaller and friction values are even lower.

TECHNICAL PARAMETER

Working pressure: ≤1.6MPa
Working temperature: -35℃ ~80℃
Surface speed: ≤1.0m/s
Working medium: Lubricated as well as dry and oil-free air (after initial lubrication during assembly)
Standard material: Polyurethane P2011

技术参数

工作压力：≤1.6MPa
工作温度：-35℃~80℃
工作速度：≤1.0m/s
工作介质：润滑后的空气以及干燥空气和无油空气（经初始装配润滑后）
标准材料：聚氨酯P2011

ADVANTAGES

※Minimum space requirement
※Simple housing, cost-efficient in manufacturing
※No additional requirements for axial securing
※Smooth running due to optimum adjustment of the functional lips
※Zero danger of corrosion since part consists of polymeric material

密封件主要特点

※最小空间要求
※简单的结构，有效地制作成本
※没有附加的轴向定位要求
※由于功能性唇部最优化调整使其平稳运行
※由于组件由单一聚合材料组成，无腐蚀

INSTALLATION

※The self-retaining rod seal/wiper profile PRM is manually snapped into the installation housing while the piston rod is disassembled. Please pay attention to prevent sharp edges from damaging the wiping and sealing lips during assembly. Initial lubrication is the prerequisite for very long operational life.

安装要求

※可以人工装入沟槽内。注意装配过程中防止防尘和密封唇部被锐边损伤。初始润滑是保持长期使用寿命的前提。

订货号标注方法：

PRM d×D×L P2011

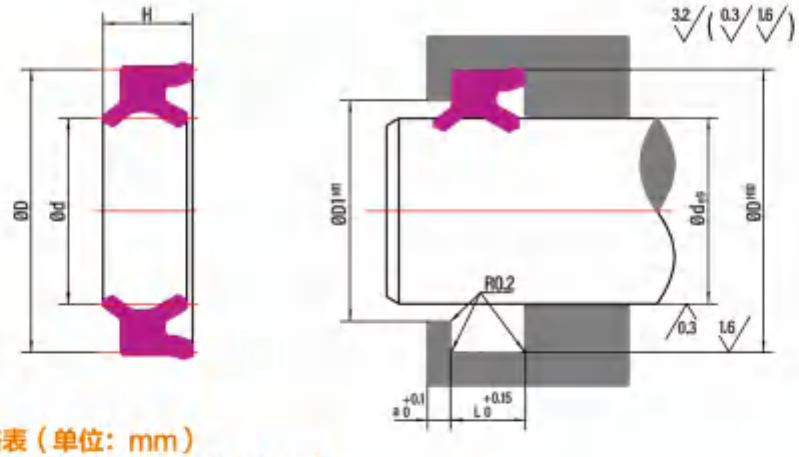
- P2011 — 材料(有其他材料可供选择)
- L — 沟槽宽度
- D — 槽径
- d — 杆径
- PRM — 订货号

ORDER EXAMPLE:

PRM d×D×L P2011

- P2011 — Materials (More materials available)
- L — Groove width
- D — Groove diameter
- d — Rod diameter
- PRM — Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



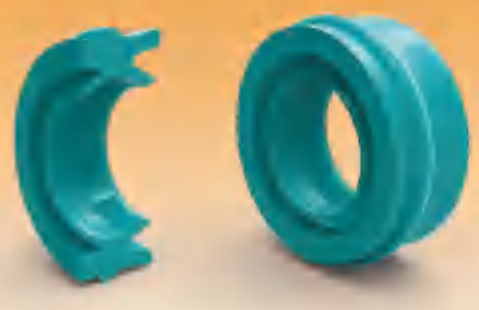
PRM型标准规格表（单位：mm）
PRM Standard specification sheet (Unit: mm)

PRM型标准规格表（单位：mm）
PRM Standard specification sheet (Unit: mm)

订货号 PART NUMBER		d	D	H	D1	L	a	
PRM 3X5.6X2.7	P2011	3	5.6	2.9	4.6	2.7	0.6	*
PRM 4X7X2.7	P2011	4	7	2.8	5.6	2.7	0.8	*
PRM 5X8X2.7	P2011	5	8	2.8	7.1	2.7	0.8	*
PRM 6X9X2.7	P2011	6	9	2.8	8.1	2.7	1	*
PRM 8X11.5X3	P2011	8	11.5	3.2	10.1	3	1	*
PRM 10X14X3.4	P2011	10	14	3.7	12.1	3.4	1	*
PRM 12X16.5X3.7	P2011	12	16.5	4	14.1	3.7	1.2	*
PRM 14X18.5X3.7	P2011	14	18.5	4	16.1	3.7	1.2	*
PRM 16X20.5X3.7	P2011	16	20.5	4	18.1	3.7	1.2	*
PRM 18X22.5X3.7	P2011	18	22.5	4	20.1	3.7	1.2	*
PRM 20X25X4.15	P2011	20	25	4.6	23.1	4.15	1.2	*
PRM 25X30X4.15	P2011	25	30	4.6	26.9	4.15	1.2	*
PRM 32X37.5X4.55	P2011	32	37.5	5	34.1	4.55	1.2	*
PRM 40X46X4.9	P2011	40	46	5.5	42.2	4.9	1.4	*

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞杆密封 PRU
ROD SEAL PRU



PRU活塞杆密封/防尘圈是一种气动密封件。
集防尘、密封、固定三种功能于一身。
The self-retaining PRU rod seal/ wiper ring for pneumatic cylinder piston rods performs three functions simultaneously: Sealing, Wiping, Fixing.

TECHNICAL PARAMETER

Working pressure: ≤1.6MPa
Working temperature: -30℃ ~80℃
Surface speed: ≤1.0m/s
Standard material: Polyurethane P2001

技术参数

工作压力：≤1.6MPa
工作温度：-30℃~80℃
工作速度：≤1.0m/s
标准材料：聚氨酯P2001

ADVANTAGES

※No risk of corrosion
※No dirt traps
※Low friction values and long service life
※The special sealing and wiper lip geometry combined with our material allows the PRU seal/wiper element to be operated in oil-free air after initial lubrication during assembly

密封件主要特点

※不会腐蚀
※不会产生灰尘角落
※低摩擦和长工作寿命
※经初始润滑后，即使使用在干燥和无油空气中也具有很长的使用寿命

INSTALLATION

※The profile PRU rod seal wiper is pushed into the open housing with a circlip recess and retained by the easy-to-snap in retainer ridge. During assembly,should neither the wiper nor the sealing lip be damaged by being pushed over any sharp edges.

安装要求

※随着凹形的环形槽，PRU 型活塞杆密封防尘圈被推进沟槽里，在装配中，避免唇部被锐边拉伤。

订货号标注方法：

PRU d×D×L P2001

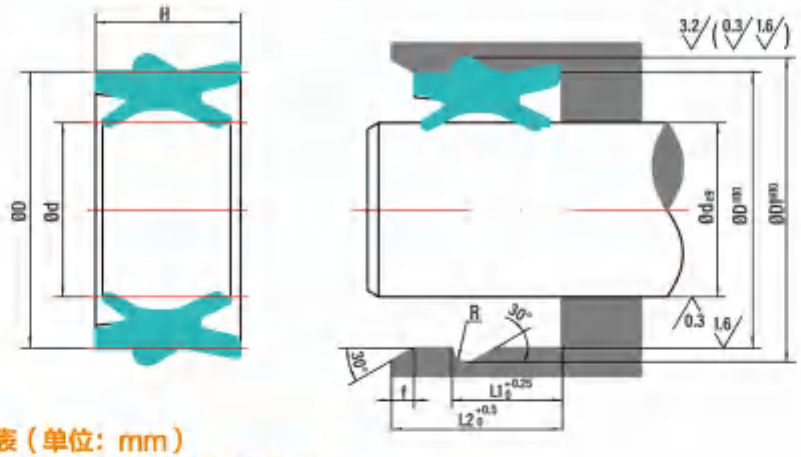
- P2001 — 材料(有其他材料可供选择)
- L — 沟槽宽度
- D — 槽径
- d — 杆径
- PRU — 订货号

ORDER EXAMPLE:

PRU d×D×L P2001

- P2001 — Materials (More materials available)
- L — Groove width
- D — Groove diameter
- d — Rod diameter
- PRU — Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PRU型标准规格表（单位：mm）
PRU Standard specification sheet (Unit: mm)

PRU型标准规格表（单位：mm）
PRU Standard specification sheet (Unit: mm)

订货号 PART NUMBER		d	D	H	D1	L1	L2	R	f	
PRU 12X19X12	P2001	12	19	10	21	7.7	12	1	1.5	*
PRU 12X22X13	P2001	12	22	10.7	24	8.8	12	1.1	1.5	*
PRU 14X24X13	P2001	14	24	10.7	26	8.8	13	1.1	1.5	
PRU 16X26X13	P2001	16	26	10.7	28	8.8	13	1.1	1.5	*
PRU 18X26X13	P2001	18	26	10.7	28	8.8	13	1.1	1.5	
PRU 18X28X13	P2001	18	28	10.7	30	8.8	13	1.1	1.5	
PRU 20X30X13	P2001	20	30	10.7	32	8.8	13	1.1	1.5	*
PRU 22X32X14	P2001	22	32	11.2	34.5	9.4	14	1.4	2	*
PRU 25X35X14	P2001	25	35	11.2	37.5	9.4	14	1.4	2	*
PRU 30X40X14	P2001	30	40	11.2	42.5	9.4	14	1.4	2	
PRU 32X42X14	P2001	32	42	11.2	44.5	9.4	14	1.4	2	*
PRU 40X50X14	P2001	40	50	11.2	52.5	9.4	14	1.4	2	*
PRU 45X55X15	P2001	45	55	12.2	58.2	10.4	15	1.8	2	
PRU 50X60X15	P2001	50	60	12.2	63.2	10.4	15	1.8	2	*
PRU 63X75X16	P2001	63	75	13	78.2	11.4	16	1.8	2	*

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞杆密封 PRD
ROD SEAL PRD



PRD 活塞杆密封/防尘圈是一种气动密封件。
集防尘和密封两种功能于一身，尺寸小，摩擦力更低。
The design of the profile PRD is a rod seal/wiper combination for mid-to-bigger diameter.

TECHNICAL PARAMETER

Working pressure:	≤ 1.6MPa
Working temperature:	-30℃ ~80℃
Surface speed:	≤ 1.0m/s
Working medium:	Lubricated as well as dry and oil-free air (after initial lubrication during assembly)
Standard material:	Polyurethane P2001
Optional material:	Polyurethane P2011

技术参数

工作压力：≤1.6MPa
工作温度：-30℃~80℃
工作速度：≤1.0m/s
工作介质:含油润滑的空气、干燥空气、无油空气
（装配初始润滑后）
标准材料：聚氨酯P2001
可选材料：聚氨酯P2011

ADVANTAGES

※Minimum space requirement
※Simple housing, cost-efficient in manufacturing
※No additional requirements for axial securing
※Smooth running due to optimum adjustment of the functional lips
※Zero danger of corrosion since part consists solely of polymeric material

密封件主要特点

※最小空间要求
※简单的结构，有效地制作成本
※没有附加的轴向定位要求
※由于功能性唇部最优化调整使其平稳运行
※由于组件由单一聚合材料组成，无腐蚀

INSTALLATION

※The self-retaining rod seal/wiper profile of PRD is manually snapped into the installation housing while the piston rod is disassembled. Care is to be taken to prevent sharp edges from damaging the wiping and sealing lips during assembly. Initial lubrication is the prerequisite for very long operation life.

安装要求

※可以人工或自动装入沟槽内。注意装配过程中防止防尘和密封唇部被锐边损伤。初始润滑是保持长期使用寿命的前提。

订货号标注方法：

PRD d×D×L P2001

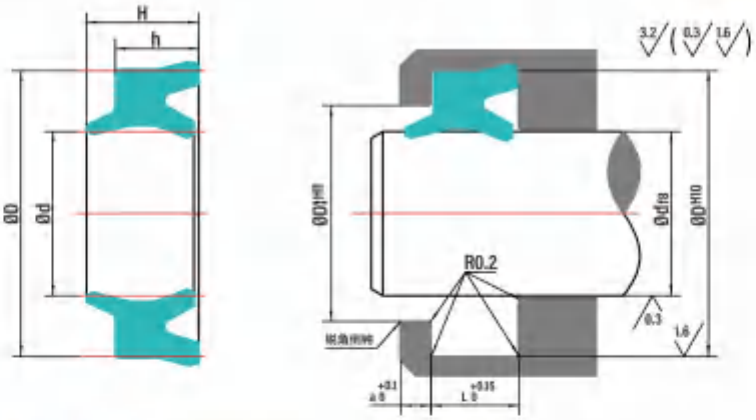
- P2001 — 材料（有其他材料可供选择）
- L — 沟槽宽度
- D — 槽径
- d — 杆径
- PRD — 订货号

ORDER EXAMPLE:

PRD d×D×L P2001

- P2001 — Materials (More materials available)
- L — Groove width
- D — Groove diameter
- d — Rod diameter
- PRD — Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PRD型标准规格表（单位：mm）
PRD Standard specification sheet (Unit: mm)

PRD型标准规格表（单位：mm） PRD Standard specification sheet (Unit: mm)									
订货号 PART NUMBER		d	D	H	h	D1	L	a	
PRD 6X10X3.5	P2001	6	10	4.4	3	7.6	3.5	2	*
PRD 8X12X4	P2001	8	12	4.75	3.4	9.6	4	2	*
PRD 10X14X4	P2001	10	14	4.75	4	11.6	4	2	*
PRD 12X16X4	P2001	12	16	4.75	3.4	13.6	4	2	*
PRD 14X18X4	P2001	14	18	4.75	4	15.6	4	2	
PRD 16X24X6	P2001	16	24	7.4	5.5	19.4	6	2	*
PRD 20X28X6	P2001	20	28	7.4	5.5	23.4	6	2	*
PRD 25X33X6	P2001	25	33	7.4	5.5	28.4	6	2	*
PRD 32X42X7	P2001	32	42	8.5	6.5	36	7	2	*
PRD 35X45X7	P2001	35	45	8.5	6.5	39	7	2	
PRD 36X46X7	P2001	36	46	8.5	6.5	40	7	2	
PRD 40X50X7	P2001	40	50	8.5	6.5	44	7	2	*
PRD 45X55X7	P2001	45	55	8.5	6.5	49	7	2	

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞密封 PPS
PISTON SEAL PPS



PPS 活塞密封件是一种适用于气缸活塞和阀的唇形密封件。
The profile PPS cylinder seal is a single-acting lip seal for pistons in pneumatic cylinders and valves.

TECHNICAL PARAMETER

Working pressure: ≤1.6MPa
Working temperature: -40℃~80℃
Surface speed: ≤1.0m/s
Working medium: Lubricated as well as dry and oil-free air (after initial lubrication during assembly)
Standard material: Polyurethane P2010

技术参数

工作压力：≤1.6MPa
工作温度：-40℃~80℃
工作速度：≤1.0m/s
工作介质：含油润滑的空气、干燥空气、无油空气（装配初始润滑后）
标准材料：聚氨酯 P2010

ADVANTAGES

※Good sealing performance in smallest installation grooves
※Smooth running
※Low static and dynamic friction
※For use in dry and oil-free air
※Easy assembly in the seal grooves
※Also suitable for cylinders with cushioning

密封件主要特点

※安装沟槽小，密封性能好
※运行非常平稳
※结构小，因而动静摩擦都很低
※适用于干燥空气和无油空气中
※易于安装入沟槽当中
※还适用于具有缓冲作用的气缸

INSTALLATION

※To avoid damaging the seals sharp edges should be removed from the piston and the cylinder tube.

安装要求

※为避免损坏密封件，应将活塞和缸筒上的锐边去除。

订货号标注方法：

PPS D×d ×L P2010

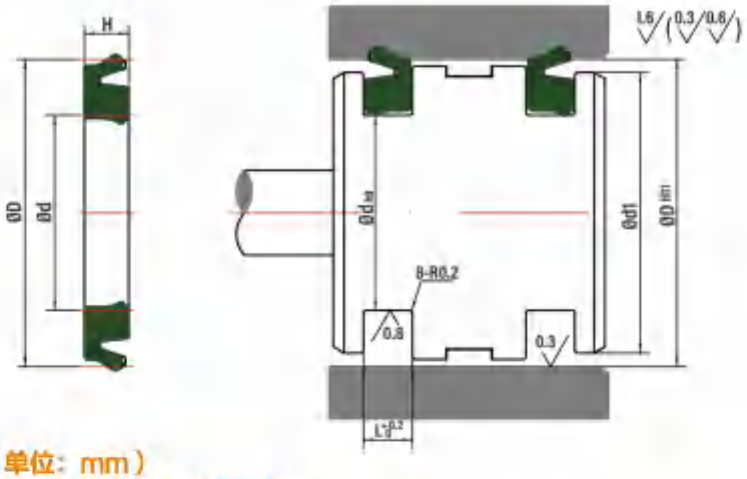
- 材料(有其他材料可供选择)
- 沟槽宽度
- 杆径
- 槽径
- 订货号

ORDER EXAMPLE:

PPS D×d ×L P2010

- Materials (More materials available)
- Groove width
- Rod diameter
- Groove diameter
- Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PPS型标准规格表（单位：mm）
PPS Standard specification sheet (Unit: mm)

PPS 型标准规格表（单位：mm）
PPS Standard specification sheet (Unit: mm)

订货号 PART NUMBER		D	d	H	L	d1	
PPS 4X1.5X2	P2010	4	1.5	1.5	2	3.6	
PPS 6X3X2.5	P2010	6	3	2	2.5	5.6	
PPS 8X4.8X2.7	P2010	8	4.8	2.3	2.7	7.6	
PPS 10X3X4	P2010	10	3	3.5	4	9.6	
PPS 10X6X3	P2010	10	6	2.55	3	9.6	*
PPS 12X7X3	P2010	12	7	2.55	3	11.6	*
PPS 13X8X3	P2010	13	8	2.55	3	12.6	
PPS 15X9X3	P2010	15	9	2.55	3	14.6	*
PPS 16X10X3	P2010	16	10	2.55	3	15.6	*
PPS 18X12X3	P2010	18	12	2.55	3	17.6	*
PPS 20X14X3	P2010	20	14	2.55	3	19.6	*
PPS 22X16X3	P2010	22	16	2.55	3	21.4	
PPS 24X18X3.5	P2010	24	18	3.25	3.5	23.4	
PPS 25X19X3.5	P2010	25	19	3.25	3.5	24.4	*
PPS 30X22X3.5	P2010	30	22	3.25	3.5	29.4	
PPS 32X24X3.5	P2010	32	24	3.25	3.5	31.4	*
PPS 35X27X3.5	P2010	35	27	3.25	3.5	34.4	*

PPS 型标准规格表（单位：mm）
PPS Standard specification sheet (Unit: mm)

订货号 PART NUMBER	D	d	H	L	d1	
PPS 37X29X3.5	37	29	3.25	3.5	36.4	
PPS 38X30X3.5	38	30	3.25	3.5	37.4	
PPS 40X32X3.5	40	32	3.15	3.5	39.4	*
PPS 42X34X3.5	42	34	3.25	3.5	41.4	
PPS 45X37X3.5	45	37	3.25	3.5	44.4	
PPS 50X42X3.5	50	42	3.15	3.5	49.4	*
PPS 52X42X4.5	52	42	4.25	4.5	51.4	
PPS 57X50.5X3.5	57	50.5	3.25	3.5	56.4	
PPS 58X48X4.5	58	48	4.25	4.5	57.4	
PPS 63X53X4.5	63	53	4.25	4.5	62.4	*
PPS 80X70X4.5	80	70	4.25	4.5	79.4	*
PPS 90X80X4.5	90	80	4.25	4.5	89.4	
PPS 100X90X4.5	100	90	4.25	4.5	99.4	*
PPS 125X105X8.5	125	105	8.25	8.5	123.8	
PPS 150X130X8.5	150	130	8.25	8.5	148.8	
PPS 160X140X8.5	160	140	8.25	8.5	158.8	
PPS 200X180X8.5	200	180	8.25	8.5	198.8	

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

活塞密封 PPA
PISTON SEAL PPA



PPA活塞密封件是一种适用于气缸活塞和阀的鼓型双作用密封件。
PPA piston seal is a drum type double acting seal suitable for cylinder pistons and valves.

TECHNICAL PARAMETER

Working pressure: ≤1.2MPa
Working temperature: -40℃ ~80℃
Surface speed: ≤1.0m/s
Working medium: Lubricated as well as dry and oil-free air (after initial lubrication during assembly)
Standard material: Polyurethane P2010

技术参数

工作压力：≤1.2MPa
工作温度：-40℃~80℃
工作速度：≤1.0m/s
工作介质：含油润滑的空气、干燥空气、无油空气（装配初始润滑后）
标准材料：聚氨酯 P2010

ADVANTAGES

※Good sealing performance in smallest installation grooves
※Low static and dynamic friction
※For use in dry and oil-free air
※Smooth transition sealing lip design for smooth and wear-resistant operation

密封件主要特点

※安装沟槽小，密封性能好
※结构小，因而动静摩擦都很低
※适用于干燥空气和无油空气中
※平缓过渡的密封唇口设计，运行平稳且耐磨

INSTALLATION

※To avoid damaging the seals sharp edges should be removed from the piston and the cylinder tube.

安装要求

※为避免损坏密封件，应将活塞和缸筒上的锐边去除。

订货号标注方法：

PPA D×d ×L P2010

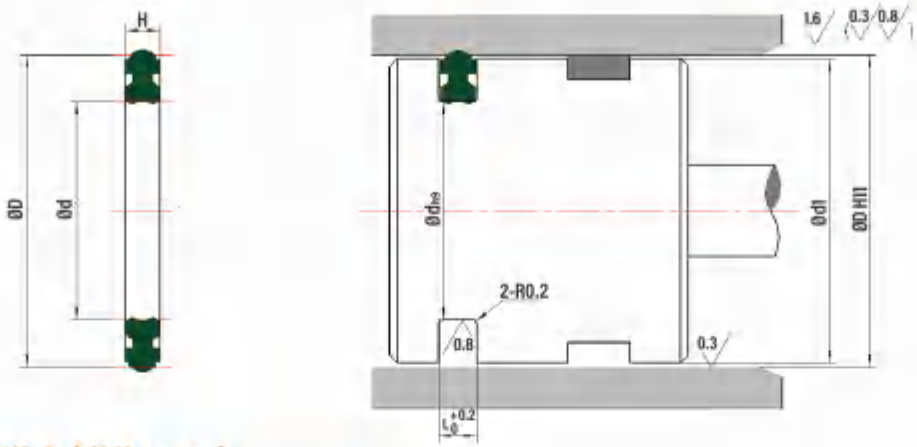
- 材料(有其他材料可供选择)
- 沟槽宽度
- 杆径
- 槽径
- 订货号

ORDER EXAMPLE:

PPA D×d ×L P2010

- Materials (More materials available)
- Groove width
- Rod diameter
- Groove diameter
- Profile

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.



PPA型标准规格表（单位：mm）
PPA Standard specification sheet (Unit: mm)

PPA型标准规格表（单位：mm）
PPA Standard specification sheet (Unit: mm)

订货号 PART NUMBER		D	d	H	L	d1	
PPA 10X5.4X1.8	P2010	10	5.4	1.6	1.8	9.7	*
PPA 12X7.4X1.8	P2010	12	7.4	1.6	1.8	11.7	*
PPA 15X10.4X1.8	P2010	15	10.4	1.6	1.8	14.7	*
PPA 16X11.4X1.8	P2010	16	11.4	1.6	1.8	15.7	*
PPA 20X14X2.4	P2010	20	14	2.2	2.4	19.5	*
PPA 25X17X3.2	P2010	25	17	3	3.2	24.5	*
PPA 30X22X3.2	P2010	30	22	3	3.2	29.5	
PPA 32X24X3.2	P2010	32	24	3	3.2	31.5	*
PPA 40X32X3.2	P2010	40	32	3	3.2	39.5	*
PPA 50X40X4	P2010	50	40	3.6	4	49.5	*
PPA 63X53X4	P2010	63	53	3.6	4	62.4	*
PPA 80X65X6	P2010	80	65	5.6	6	79.4	
PPA 100X85X6	P2010	100	85	5.6	6	99.4	
PPA 125X110X6	P2010	125	110	5.6	6	124.3	
PPA 140X125X6	P2010	140	125	5.6	6	139.3	
PPA 150X135X6	P2010	150	135	5.6	6	149.3	
PPA 160X140X8	P2010	160	140	7.6	8	159.3	
PPA 175X155X8	P2010	175	155	7.6	8	174.3	
PPA 180X160X8	P2010	180	160	7.6	8	179.3	
PPA 200X180X8	P2010	200	180	7.6	8	199	
PPA 250X230X8	P2010	250	230	7.6	8	249	
PPA 300X280X8	P2010	300	280	7.6	8	299	

*标注此规格已有模具，如有其它产品需求，请与我司技术部联系
*Represents that this specification tooling exist. If you have any question, please contact us

系列化定制产品 PPD
SERIALIZED CUSTOMIZED PRODUCTS PPD



PPD 型是一种单U型密封与金属骨架粘接成一体的单作用整体式气动活塞，两片单体活塞密封以背靠背的安装方式实现双向密封，用锁紧螺母固定在活塞杆上以免松动，金属骨架之间留有磁环与支撑环的安装位置，产品结构简单且稳定，内孔通过O型圈与活塞杆过盈实现密封。它有两个功能：密封和缓冲，并且相较于常规活塞更薄。

The PPD is a single acting integral pneumatic piston with a single U-shaped seal bonded to a metal skeleton. Two single piston seals are installed back-to-back to achieve bidirectional sealing, Fix it on the piston rod with a locking nut to prevent loosening. The installation position of the magnetic ring and support ring is left between the metal skeleton, and the product structure is simple and stable. The inner hole is sealed through the interference between the O-ring and the piston rod. It has two functions: sealing and buffering, and is thinner compared to conventional pistons.

温度范围 Temp.-Range(℃)	压力 Pressure(bar)	材料 Material
-40℃~80℃	16	P2010+AlCu

系列化定制产品 PPE
SERIALIZED CUSTOMIZED PRODUCTS PPE



PPE型是一种单作用分体式气动活塞密封，特殊设计的密封唇结构提高了密封可靠性，同时降低了摩擦力。两片单体活塞密封以背靠背的安装方式实现双向密封，特殊的沟槽设计使产品可以既迅速又稳定的压装入沟槽内。活塞头留有磁环与支撑环的安装位置，产品结构简单且稳定。它有两个功能：密封和缓冲。

The PPE is a single acting split type pneumatic piston seal, with a specially designed sealing lip structure that improves sealing reliability while reducing friction. The two piece single piston seal is installed back-to-back to achieve bidirectional sealing, and the special groove design allows the product to be quickly and stably pressed into the groove. The piston head has an installation position for the magnetic ring and support ring, and the product structure is simple and stable. It has two functions: sealing and buffering.

温度范围 Temp.-Range(℃)	压力 Pressure(bar)	材料 Material
-40℃~80℃	16	P2010

若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.

系列化定制产品 PPM
SERIALIZED CUSTOMIZED PRODUCTS PPM



PPM型是一种应用于汽车生产线治具的骨架与密封圈一体式的椭圆型气缸活塞，替换了现有的金属骨架与NBR密封圈的结构，填补了非金属材料与高性能聚氨酯密封结合的椭圆型防转市场的空白。相较于传统金属骨架，配方中添加了改型材料，骨架强度满足支撑需求，且成本更低，尺寸稳定性更好。

PPM is an elliptical cylinder piston that integrates the framework and sealing ring of automotive production line fixtures. It replaces the existing metal framework and NBR sealing ring structure, filling the gap in the elliptical anti rotation market where non-metallic materials are combined with high-performance polyurethane seals. Compared to traditional metal skeletons, modified materials have been added to the formula, which meets the strength requirements of the skeleton and has lower cost and better dimensional stability.

温度范围 Temp.-Range(℃)	压力 Pressure(bar)	材料 Material
-40℃~80℃	16	P2010+PA

系列化定制产品 SP
SERIALIZED CUSTOMIZED PRODUCTS SP



SP型是一种使用低硬度聚氨酯材料生产的缓冲垫片，它既有橡胶的高弹性，又有塑料的高强度。其特点是硬度相对高而富有弹性，良好的耐介质性能和机械性能，突出的耐磨性能。具有压缩性高、承载能力大和不错的缓冲吸震等优点。

SP type is a buffer gasket produced using low hardness polyurethane material, which has both the high elasticity of rubber and the high strength of plastic. Its characteristics are relatively high hardness and elasticity, good resistance to media and mechanical properties, and outstanding wear resistance. It has the advantages of high compressibility, large load-bearing capacity, and good cushioning and shock absorption.

温度范围 Temp.-Range(℃)	压力 Pressure(bar)	材料 Material
-40℃~80℃	16	P2010

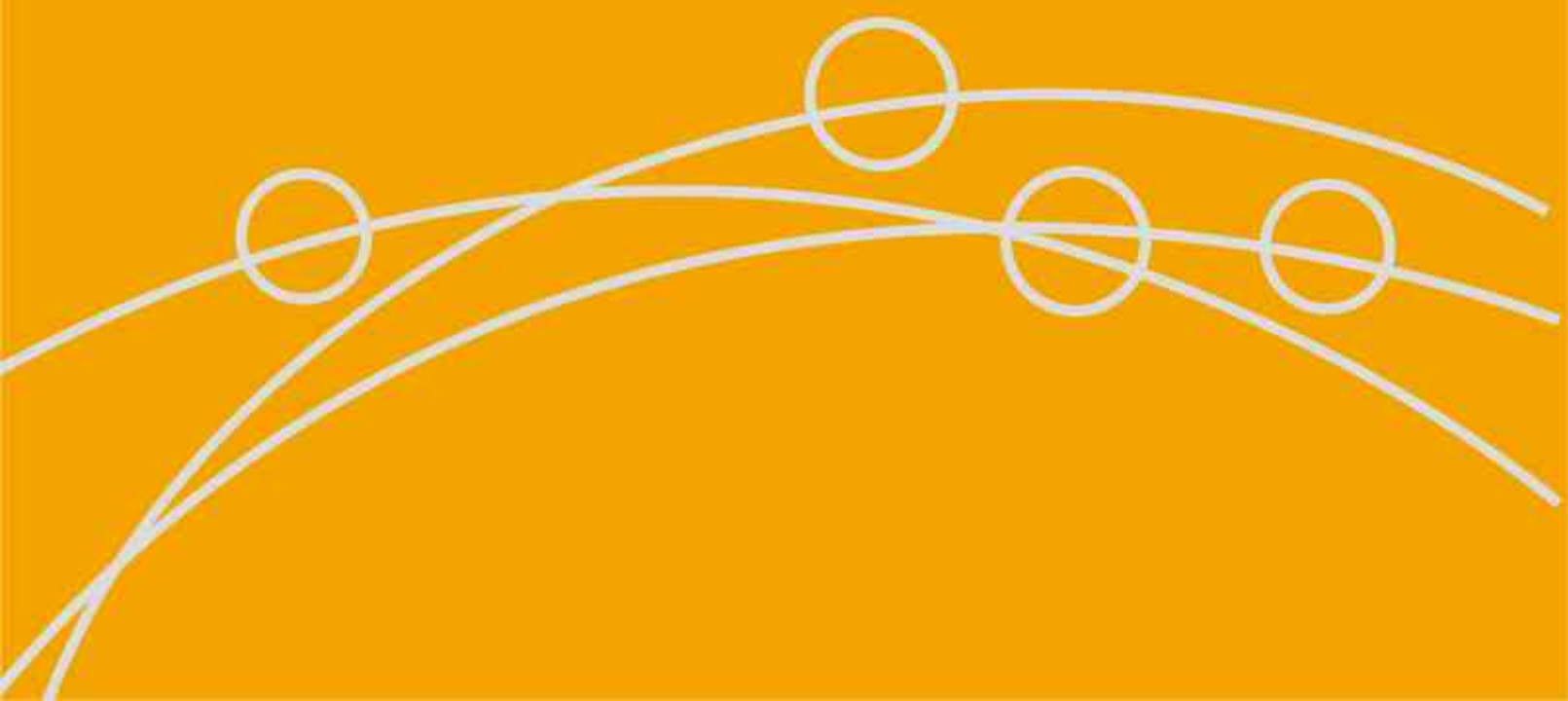
若有特殊要求（压力、温度、速度、介质等），请与本公司咨询联系，以便向您推荐合适的材料和结构。
For special requirements (pressure, temperature, speed, medium, etc.), please contact our company to recommend suitable materials and structures.

03

密封件安装与存储
SEALS INSTALLATION & STORAGE

立足于基础材料的研发，结合多年的密封设计、生产和工程应用方面的经验，通过专业的实验室检测和台架测试的验证，维万已经为包括液压和气动等众多领域的合作伙伴提供优化的密封系统解决方案。

Based on material development and a combination with decades of expeience on seals design,production and application that are,verified with professional laboratory and bench testing,VONE has pro vided partners including hydraulic and pneumatic systems wi th the optimum sealing solutions.



密封件安装
SEAL INSTALLATION

密封件装配注意事项

仔细合理的装配有助于避免密封件失效，建议如下：

※确保所有金属件清洁无污物
※检查密封沟槽无锐边、毛刺
※当密封件安装必须通过螺纹，孔槽等结构时，需用到保护套筒
※确保密封结构、数量、规格符合要求
※单作用密封件安装时确保安装方向正确
※检查倒角是否合适
※安装前密封件和金属件用油脂润滑
※特定的密封结构可能需要专用的装配工具

Advice for Seal Assembly

Careful fitting and assembling of the seals will assist in preventing seal failure. The following check list is advisable:

※Ensure all metal parts are clean and no contamination.
※Check that the seal housing is free of sharp edges and burrs.
※Where seals are to pass over threads, undercuts. etc. some form of protective sleeve should be used.
※Ensure that the seal is the correct type, part number, and size as that specified.
※When fitting single-acting seals particularly make certain that the pressure side of the seal is installed correctly.
※Check that lead in chamfers available.
※Oil the seal and surrounding metal components fitting.
※Certain seal types may require appropriate fitting tools to assist in damage free assembly.

安装方法

密封件可以很轻松的安装到活塞及内部沟槽中。材料可以通过拉伸、变形、压缩等安装，经过一定时间或者通过外力又会恢复原状，这样的变化可逆并且不会对材料性能有任何影响。

密封件安装有多种方法，下面介绍的是几种简单的工具安装方法。建议用塑料工具以降低失效风险。

Installation Method

Composite Seals can be assembled easily onto one piece pistons and into internal grooves.The material will stretch, deform and compress to allow assembly and will return to its original dimension after a period of time.If this period is unacceptable the ring can be reverted to its original size immediately by exerting a force opposite to that used to assemble in the first instance.This reversal of strain can be carried out many times with no deterioration of the material properties.

Assembly can be carried out in many ways and we show some suggestions for tools to facilitate the simplest assembly. It is recommended that the tools should be made from plastic material (POM,PA,P.V.C., etc.) to reduce the risk of any damage to the seal.







密封件存储
SEAL STORAGE

温度

除夏天因为气候影响，一般储存温度要求低于38℃，远离火源、辐射，避免阳光直接照射。
注意：如果温度低于15℃时，密封件可能变硬，如果不小心处理可能导致其变形。因此安装前应该将其置于20℃以上环境中一段时间后再行使用。

Temperature

The storage temperature shall be below 38 ℃ except when higher temperatures are caused by temporary climate changes, and articles shall be stored away from direct sources of heat such as boilers,radiators,and direct sunlight.NOTE:If the storage temperature is bel ow 15 ℃,care should be exercised during the handling of stored articles as they may have stiffened and become susceptible to distortion if not handled carefully.The temperature of articles stored below 15 ℃ shall be raised to approximately 20 ℃ throughout Their mass before being installed into a component.

湿度

仓库相对湿度应随温度变化而调整，无论如何，如果密封件不是包装于密封袋中，对于橡胶件，储存环境的相对湿度应该低于75%，而对于聚氨酯则应低于65%。

Humidity

The relative humidity shall be such that given the variations of temperature in storage,condensation does not occur.In any event,if the elastomers are not store d in sealed moisture proof bags,the relative humidity of the atmosphere in storage shall be less than 75%,or if polyurethanes are being stored,shall be less than 65%.

光照

橡胶密封件应避免光照，特别是避免日照和强烈光源下的紫外光照射。只要避免紫外光照射，通常的包装都会对密封件有良好的保护作用。
注意：推荐橡胶密封件仓库的窗口用红色或橙色的涂料或屏幕遮盖。

Light

Elastomeric seals shall be protected from light sources,in particular direct sunlight or intense artificial light having an ultraviolet content.The individual storage bags offer the best protection as long as they are UV resistant.NOTE: It is advisable that windows of storage rooms where elastomers are stored in bulk be covered with a red or orange coating or screen.

辐射

应该对可能由于电离辐射造成密封件损害的情况采取预防措施。

Radiation

Precautions shall be taken to protect stored articles from all sources of ionizing radiation likely to cause damage to stored articles.

臭氧

由于臭氧对橡胶密封件损伤严重，因此储存室应该避免放置可能产生臭氧的设备如汞灯、高电压设备等。排出可能由于光化学反应产生臭氧的可燃气体和有机蒸汽。

Ozone

As ozone is particularly deleterious to some elastomeric seals,storage rooms shall not contain any equipment that is capable of generating ozone such as mercury vapor lamps,high voltage electrical equipment giving rise to electric sparks or silent electrical discharges.Combustion gases and organic vapor shall be excluded from storage rooms as they may give rise to ozone via photochemical processes.

变形

橡胶密封件应避免长时间挤压和拉伸以免变形，用无应力的包装。如有疑问，可咨询生产商。

Deformation

Elastomeric seals shall be stored free from superimposed tensions and compressive stresses or other causes of deformation.Where articles are packaged in a strain-free condition,they shall be stored in their original packaging.

密封件存储
SEAL STORAGE

接触液体或半固态材料

除了设计集成包装外，橡胶密封件在储存时不得与任何液态或者半液态的物质（如汽油、润滑脂、酸、消毒液、清洁剂等）相接触。已经涂覆工作介质的，保持其储存于这种工作介质中。

Contact with Liquid and Semi-Solid Materials

Elastomeric seals shall not be allowed to come into contact with liquid or semi-solid materials (for example,gasoline,greases,acids,disinfectants,cleaning fluids) or their vapors at any time during storage unless these materials are by design an integral part of the component or the manufacturer's packaging.When elastomeric seals are received coated with their operational media,they shall be stored in this condition.

接触金属

通常的金属及合金（特别是铜、锰、铁等）已知可能对密封件造成损害，因此橡胶密封件储存时不得与之接触（结合在一起的除外）而应该单独包装储存。

Contact with Metals

Certain metals and their alloys(in particular,copper, manganese, and iron)are known to have deleterious effects on elastomers.Elastomeric seals shall not be stored in contact with such metals(except when bonded to them)but shall be protected by individual packaging

橡胶和金属结合件

金属橡胶结合件不得与其它橡胶密封件相接触，结合件应单独包装。不得使用对橡胶件有影响的金属防腐剂、不使用与不符合密封件产品规格的粘合剂。

Elastomeric Seals with Metal Parts Bonded

The metal part of bonded elastomeric seals shall not come in contact with the elastomeric element of another seal.The bonded seal shall be individually packaged.Any preservative used on the metal shall be such that it will not affect the elastomeric element or the bond to such an extent that the seal will not comply with the product specification.

不同弹性体之间的接触

避免不同弹性体之间的接触，不得置于同一包装中。

Contact between Different Elastom ers

Contact between different polymeric elastomers and elastomers of different seals shall be avoided.They shall not be packaged together in the same envelope.

接触隔离剂

隔离剂通常用于橡胶件避免其粘连，使用时用最小的添加量即可。

Contact with Dusting Powder

Dusting powders shall only be used for the packaging of elastomeric items in order to prevent blocking.In such instances,the minimum quantity of powder to prevent adhesion shall be used.