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液压破碎锤 密封解决方案

SEALING SOLUTION FOR
HYDRAULIC BREAKER

上海唯万密封科技有限公司
Voneseals Technology(Shanghai)Co.,Ltd.

液压破碎锤密封方案

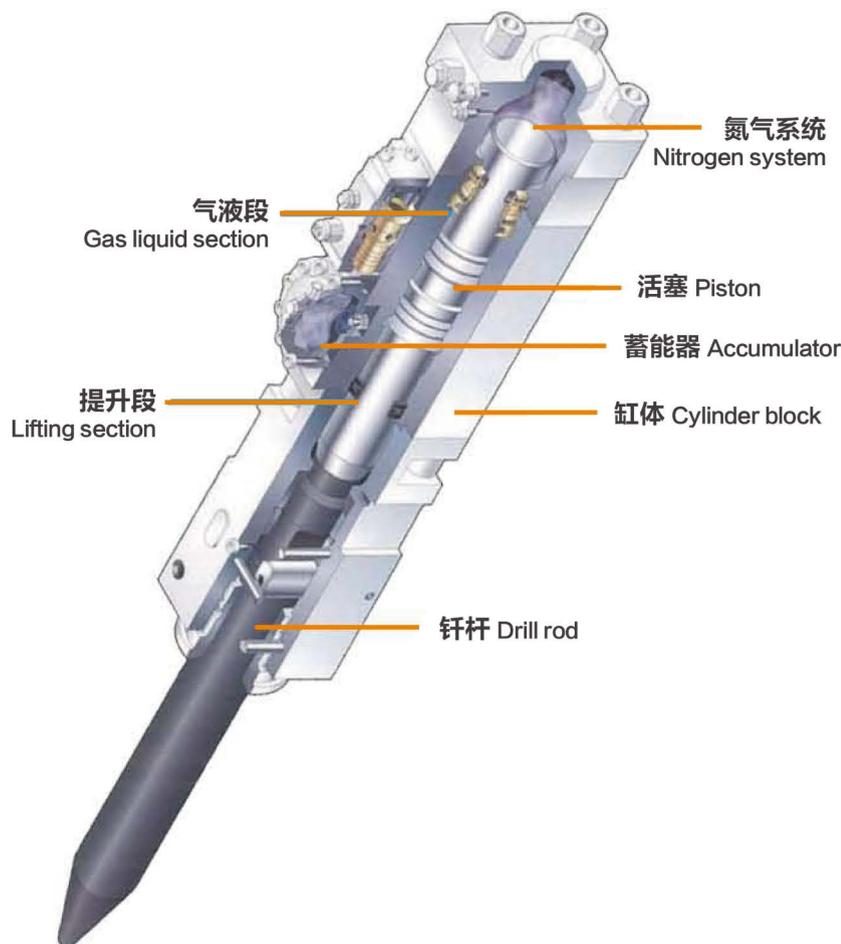
SEALING SOLUTION FOR HYDRAULIC BREAKER

破碎锤结构和工作原理

Breaker Structure & Operation Principal

液压破碎锤是通过活塞与高速换向阀相互控制对方的油路的通断，来实现活塞在高压氮气和高压油的联合作用下在缸体中作高速往复冲程运动，从而打击钎杆实现震动、破碎的功能。广泛应用于矿山开采、道路、建筑、冶金、船舶等行业用于破拆、除锈等。

The hydraulic breaker is used to control the opening and closing of the oil passage of the other through the piston and the high-speed reversing valve, so that the piston can perform high-speed reciprocating stroke movement in the cylinder under the combined action of high-pressure nitrogen and high-pressure oil, thereby striking the drill rod to realize vibration, broken function. Widely used in mining, roads, construction, metallurgy, shipbuilding and other industries for demolition, derusting and so on.



工作条件 Working conditions

提升段和气液段两端起着封油和支撑作用，使运动段形成均匀配合间隙，充分润滑。

Both the lifting section and the gas-liquid section serve as sealing oil and support, so that the moving section forms a uniform matching gap and is fully lubricated.

压力 Pressure

- ※ 上部油压：3~25MPa
- ※ 下部油压：0~40MPa
- ※ 气压：2~4MPa
- ※ 工作行程：最大200mm
- ※ 工作频率：最大1200次/分
- ※ Upper oil pressure: 3~25MPa
- ※ Lower oil pressure: 0~40MPa
- ※ Air pressure: 2~4MPa
- ※ Working stroke: up to 200mm
- ※ Working frequency: up to 1200 times / min

工作速度 Working speed

- ※ 上升过程：最大10米/秒
- ※ 下降过程：最大12米/秒
- ※ 要求密封寿命：不低于600h
- ※ Ascending process: up to 10 m / s
- ※ Falling process: up to 12 m / s
- ※ Requires sealed life: no less than 600h

材料介绍

Material Introduction

Material Code 材料编号			P2001	P2005	P2100
Description 描述			TPU热塑性聚氨酯		PPDI热塑性聚氨酯
颜色	/	/	绿色	灰色	橙色/黄色
硬度/Hardness	ShA	DIN 53 505	92±3	95±3	92±3
密度/Density	g/cm3	DIN 53 479	1.20±0.02	1.20±0.02	1.17±0.02
100%定伸模量 Modulus 100%	N/mm2	DIN 53 504	Min 10	Min 12	Min 10
300%定伸模量 Modulus 300%	N/mm2	DIN 53 504	Min 22	Min 25	Min 20
拉伸强度 Tensile strength	N/mm2	DIN 53 504	Min 48	Min 48	Min 48
断裂伸长 Elongation	%	DIN 53 504	Min 400	Min 400	Min 450
永久压变 Compression set	%	24h @70°C	Max 25	Max 25	/
永久压变 Compression set	%	24h @100°C / 70h @100°C	/	/	Max 30 / Max 40
回弹性/Rebound	%	DIN 53 512	Min 40	Min 35	Min 55
磨耗量/Abrasion	mm3	DIN 53 516	Max 45	Max 45	Max 30
撕裂强度 Tear strength	N/mm	ISO 34-1	/	/	Min 125
温度范围 Temperature range	°C	ASTM 1329	-35~110	-32~110	-30~120

耐高温、高弹性聚氨酯材料

HIGH TEMPERATURE RESISTANT, HIGH ELASTICITY POLYURETHANE MATERIAL

未来液压气动元器件正在向着高温、高压、高速、低摩擦、免维护方向发展，这就相应的对密封件的材料提出了更高的要求。破碎锤工作条件苛刻，高频率、高速度、高温环境下，对密封材料和结构的选择极其重要。唯万公司的新一代P2100系列材料正是针对这类的需求而进行的研发。

The future demand for the hydraulic and pneumatic Components is to have higher temperature ,higher pressure ,higher speed,lower friction and maintenance-free ,which leads to the next generation of the sealing material. VONESEALS new P2100 material series is developed for the future more critical application.

材料特点

MATERIAL CHARACTERISTICS

- ※ 优异的耐高温性能（工作温度可达120°C）
- ※ 优异的回弹性能（比同硬度常规材料提升近50%）
- ※ 优异的热动态性能
- ※ 优异的耐磨性能
- ※ 低压缩永久变形率（特别100°C以上高温压变优势明显）
- ※ 良好的耐介质及老化
- ※ Excellent high temperature resistance(working temperature up to 120°C)
- ※ Excellent resilience performance(50% higher than traditional materials)
- ※ Excellent thermal dynamic performance
- ※ Excellent wear resistance
- ※ Low compression set (Especially good if temperature is higher than 100°C)
- ※ Good resistance to media and aging

应用特点

APPLICATION CHARACTERISTICS

- ※ 高速或高频率运动场合
- ※ 110°C~120°C长期工作场合
- ※ 直接频繁的冲击载荷
- ※ 适用于普通 聚氨酯材料不能满足的高温、高速、内生热的极端恶劣工况
- ※ High speed or high frequency working conditions
- ※ High Temperature 110°C~120°C working conditions)
- ※ Direct and frequent impact loads
- ※ It is suitable for extreme conditions of high temperature,high speed and endogenous heat that ordinary polyurethane materials cannot meet.

液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

密封方案

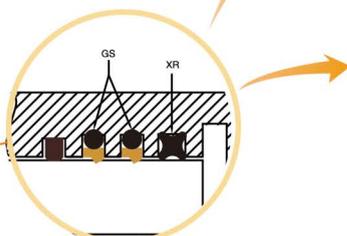
SEALING SOLUTION

密封方案特点

SEALING SCHEME FEATURES

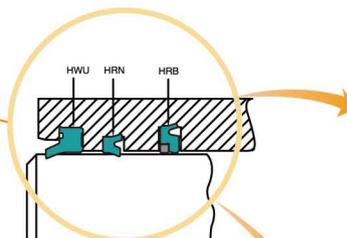
密封性能好，低摩擦
耐磨性好、永久压缩形变低、抗挤出性能优良
适应不同压力工况，抗高压冲击
材料性能优良，适应不同的应用环境
密封使用寿命长

Good sealing performance, low friction
Good wear resistance, low permanent compression set and excellent extrusion resistance
Adapt to different pressure conditions and resist high pressure shock
Excellent material properties, adapt to different application environments
Long sealing life



斯特封GS,启动和运动摩擦低,无爬行,耐高压,适应高频往复运动
材料: 滑环PTFE+青铜粉
O型圈 丁腈橡胶

Sterling GS, low step seal and movement friction, No crawling, high pressure resistance, adapt to high frequency reciprocating motion
Material: slip ring PTFE + bronze powder
O-ring nitrile rubber



气密封XR, 多唇口星形密封圈, 能双向密封分割破碎锤氮气段和液压段, 耐磨性好, 耐高温性能优良
材料: 氟橡胶或氢化丁腈橡胶

Air-sealed XR, multi-lip star seal ring, can seal the nitrogen and hydraulic sections of the breaker with two-way sealing, good wear resistance and excellent high temperature resistance.
Material: FKM or HNBR



防尘圈HWU, 有效防止粉尘、砂粒、水、碎屑等进入液压系统。改进的结构可以减小小接触面、降低摩擦, 增强防尘、除尘效果
材料: 聚氨酯 P2005 或 P2100

The dust ring HWU effectively prevents dust, sand, water, debris and the so on entering the hydraulic system. Improved structure reduces contact surface, reduces friction, and enhances dust and dust removal
Material: Polyurethane P2005 or P2100



缓冲圈HRB, 减缓密封系统压力冲击, 结构改进有利于增润滑、降低摩擦, 使系统能适应苛刻的工作条件材料: 聚氨酯 P2005 或 P2100

The buffer ring HRB slows the pressure shock of the sealing system, and the structural improvement helps to increase lubrication and reduce friction, so that the system can adapt to harsh working conditions.
Material: Polyurethane P2005 or P2100



主密封HRN, 密封性良好, 增加回油槽改进润滑性, 减小摩擦
材料: 聚氨酯 P2001 或 P2100

Main seal HRN, good sealing, increase oil return groove to improve lubricity and reduce friction
Material: Polyurethane P2001 or P2100

防尘圈HWU



技术参数

工作温度: $-35^{\circ}\text{C}\sim 110^{\circ}\text{C}$
 工作速度: $\leq 2.0\text{m/s}$
 工作介质: 液压油 (矿物油基)
 材 料: 聚氨酯P2005

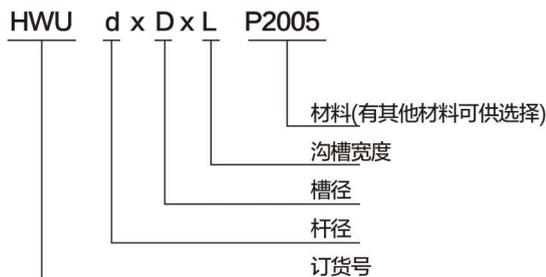
HWU密封件主要特点

防尘效果好;
 耐磨性能好;
 易于安装;

安装要求

应避免防尘圈唇口与活塞杆孔眼或其他连接元件相接触, 并且防尘圈唇口最好装在壳体外边, 这样挡出的污物易于清除。

订货号标注方法:



防尘圈HWU,有效防止粉尘、砂粒、水、碎屑等进入液压系统。改进的结构可以减少接触面、降低摩擦, 增强除尘效果, 延长了密封件的使用寿命。

Anti-dust ring HWU can effectively prevent dust,sand,water and debris from entering the hydraulic system.The improved structure can reduce contact surface,reduce friction,enhance the effect of dust removal,and extend the service life of seal.

Technical Parameter:

Working temperature: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$
 Working speed: $\leq 2.0\text{m/s}$
 Working medium: hydraulic oil (mineral oil-based)
 Materials: Polyurethane P2005

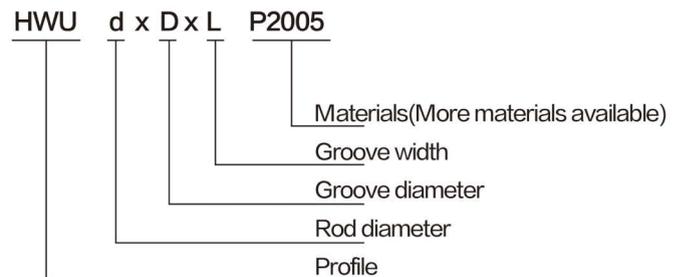
Advantages:

Very good wear resistance
 Good wear resistance
 Easy installation

Installation:

Any contact of the wiper lip with piston rod eyes or other connecting parts should be avoided. However,we recommend the wiper lip to be outside the housing,so that the wiper-off dirt falls off.

Ordering example:

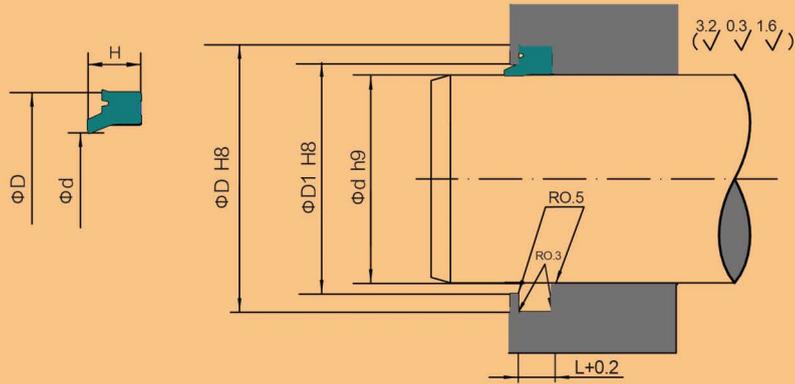


液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

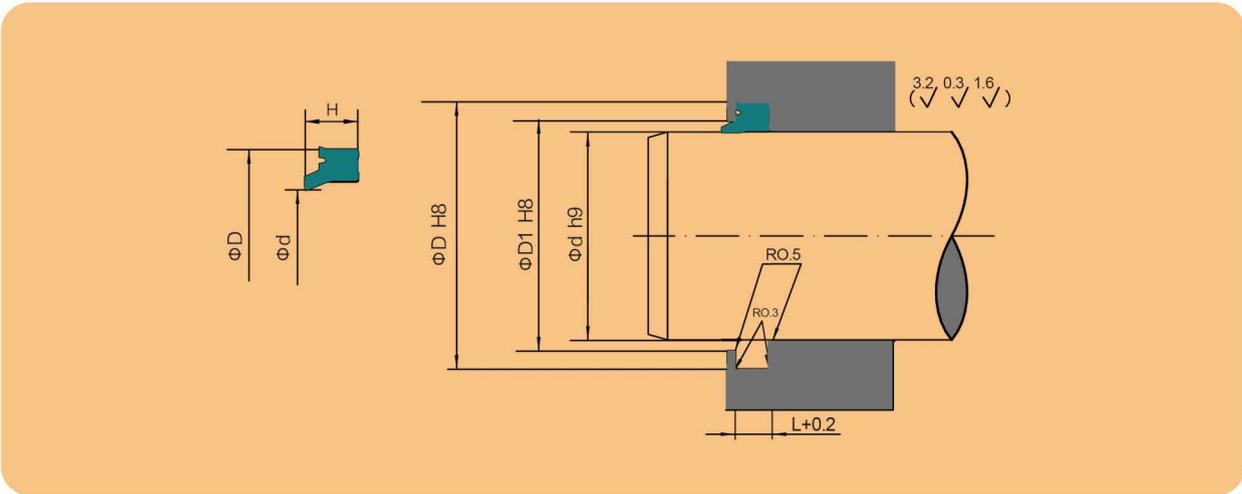
密封形式及特点

Seals Type & Feature



HWU型标准规格表 (单位: mm)

订货号	d	D	H	D1	L
HWU 40x48x6 P2005	40	48	6.5	44	6
HWU 45x53x6 P2005	45	53	6.5	49	6
HWU 50x58x6 P2005	50	58	6.5	54	6
HWU 53x61x6 P2005	53	61	6.5	57	6
HWU 55x63x6 P2005	55	63	6.5	59	6
HWU 60x68x6 P2005	60	68	6.5	64	6
HWU 65x73x6 P2005	65	73	6.5	69	6
HWU 70x80x7 P2005	70	80	8	75	7
HWU 75x85x7 P2005	75	85	8	80	7
HWU 80x90x7 P2005	80	90	8	85	7
HWU 85x95x7 P2005	85	95	8	90	7
HWU 90x100x7 P2005	90	100	8	95	7
HWU 100x110x7 P2005	100	110	8	105	7
HWU 105x115x7 P2005	105	115	8	110	7
HWU 110x120x7 P2005	110	120	8	115	7
HWU 120x130x7 P2005	120	130	8	125	7
HWU 125x138x8 P2005	125	138	9.5	132	8
HWU 130x143x8 P2005	130	143	9.5	137	8
HWU 135x148x8 P2005	135	148	9.5	141.5	8



HWU型标准规格表 (单位: mm)					
订货号	d	D	H	D1	L
HWU 136x149x8.8 P2005	136	149	9.4	142.4	8.8
HWU 140x153x8 P2005	140	153	9.5	147	8
HWU 140x155x7.5 P2005	140	155	10.3	147.5	7.5
HWU 145x158x8 P2005	145	158	9.5	152	8
HWU 150x163x8 P2005	150	163	9.5	157	8
HWU 155x168x8 P2005	155	168	9.5	162	8
HWU 155x170x7.5 P2005	155	170	10.3	162.5	7.5
HWU 160x173x8 P2005	160	173	9.5	167	8
HWU 170x183x8 P2005	170	183	9.5	177	8
HWU 170x185x7.5 P2005	170	185	10.3	177.5	7.5
HWU 175x188x8 P2005	175	188	9.5	182	8
HWU 180x193x8 P2005	180	193	9.5	187	8
HWU 185x198x8 P2005	185	198	9.5	192	8
HWU 190x203x8 P2005	190	203	9.5	197	8
HWU 195x208x8 P2005	195	208	9.5	202	8
HWU 200x213x8 P2005	200	213	9.5	207	8
HWU 210x223x8 P2005	210	223	9.5	217	8
HWU 220x233x8 P2005	220	233	9.5	227	8

液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

主密封 HRN



HRN型密封件密封性良好，增加的回油槽改进润滑性，减小摩擦，防止背压，延长了密封件的使用寿命，通常作为破碎锤的主密封件。

HRN type seals have good tightness, increased oil return groove improves lubricity, reduces friction, prevents back pressure, and extends the service life of seals, usually as the main seal of breaker.

技术参数

工作温度: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$

工作介质: 液压油 (矿物油基)

材料: 聚氨酯P2001或P2100

Technical Parameter:

Working temperature: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$

Working medium: hydraulic oil (mineral oil-based)

Standard materials: Polyurethane P2001 or P2100

HRN密封件主要特点

防止背压;

耐磨性能好;

抗挤出;

回油槽，足够润滑。

Advantages:

Preventing back pressure;

Good wear resistance;

High extrusion resistance;

Return oil groove, sufficient lubrication

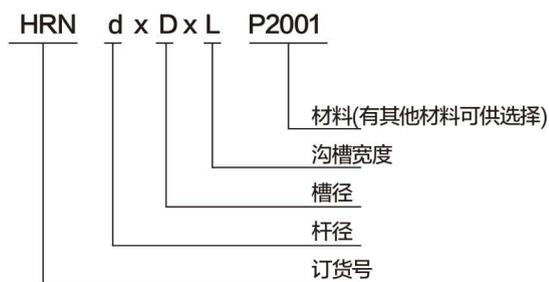
安装要求

此类密封件应有一个轴向间隙，为避免密封唇口的损坏，安装时不要将密封件在锐边上拉动。在入口有限的地方，需要特殊的安装工具。

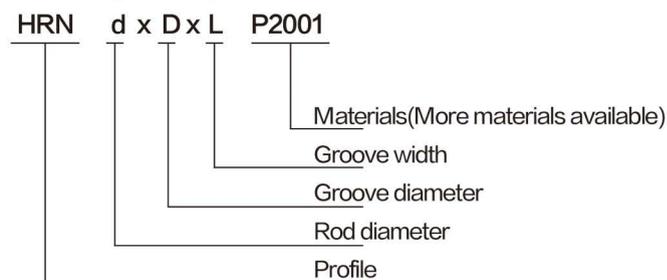
Installation:

The seals should have an axial clearance. To avoid damage at the sealing lips, the seals not be pulled over sharp edges during installation. Normally these seals may be snapped into closed grooves. Where access is restricted special assembly tools may be required.

订货号标注方法:

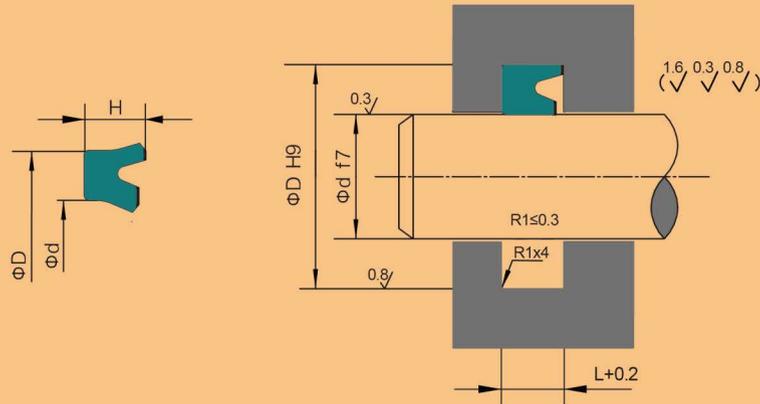


Ordering example:



密封形式及特点

Seals Type & Feature



HRN型标准规格表 (单位: mm)

订货号	d	D	H	L
HRN 40X50X7	40	50	6	7
HRN 42X52X7	42	52	6	7
HRN 45X55X7	45	55	6	7
HRN 50X60X7	50	60	6	7
HRN 53X63X7	53	63	6	7
HRN 60X70X7	60	70	6	7
HRN 70X80X7	70	80	6	7
HRN 75X85X7	75	85	6	7
HRN 80X90X7	80	90	6	7
HRN 85X100X10	85	100	9	10
HRN 100X115X10	100	115	9	10
HRN 125X140X10	125	140	9	10
HRN 133X143X7	133	143	6	7
HRN 135X150X10	135	150	9	10
HRN 135.8X150.9X10.6	135.8	150.9	9.6	10.6
HRN 136X146X7	136	146	6	7

HRN型标准规格表 (单位: mm)

订货号	d	D	H	L
HRN 140X150X7	140	150	6	7
HRN 140X155X10	140	155	9	10
HRN 150X165X10	150	165	9	10
HRN 155X165X7	155	165	6	7
HRN 155X170X10	155	170	9	10
HRN 160X175X10	160	175	9	10
HRN 170X180X7	170	180	6	7
HRN 175X190X10	170	190	9	10
HRN 180X200X13	180	200	12	13
HRN 185X205X13	185	205	12	13
HRS 190X210X13	190	210	12	13
HRS 190X215X17	190	215	16	17
HRS 195X215X13	195	215	12	13
HRS 200X220X13	200	220	12	13
HRS 200X225X17	200	225	16	17
HRS 210X230X13	210	230	12	13
HRS 220X240X13	220	240	12	13

* HRN为带回油槽结构, HRS为不带回油槽结构

* HRN is with oil return tank structure, HRS is without oil return tank structure

液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

缓冲圈 HRB



技术参数

工作压力: $\leq 50\text{MPa}$
工作温度: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$
工作速度: $\leq 0.5\text{m/s}$
工作介质: 液压油 (矿物油基)
材料: 聚氨酯
挡圈: 尼龙

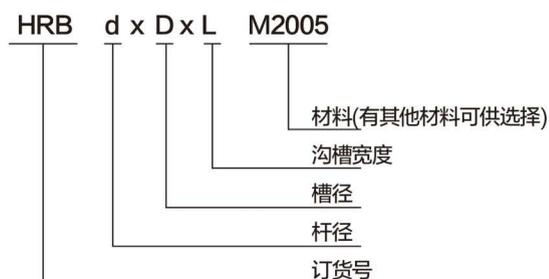
HRB密封件主要特点

极好的耐磨性;
耐冲击;
抗挤出;
能适应最苛刻的工作条件;
易于安装。

安装要求

此类密封件应有一个轴向间隙, 为避免密封唇口的损坏, 安装时不要将密封件在锐边上拉动。在入口有限的地方, 需要特殊的安装工具。

订货号标注方法:



HRB活塞杆密封是一种带挡圈的紧凑型密封。这种密封主要运用在建筑机械油缸密封系统中, 用作缓冲密封。由于它所具有的特殊结构, 这种密封能将处于主密封和缓和密封之间形成的压力传递回系统。

The Profile HRB is a compact seal with an integrated anti-extrusion ring. A typical application of this seal profile is its use as a buffer seal in sealing systems, often found in construction machinery cylinders. Due to its special form the seal is in a position to transfer pressure, which develops between the main and buffer seals, back into the system.

Technical Parameter:

Working pressure: $\leq 50\text{MPa}$
Working temperature: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$
Surface speed: $\leq 0.5\text{m/s}$
Working medium: hydraulic oil (mineral oil-based)
Materials: Polyurethane & PA

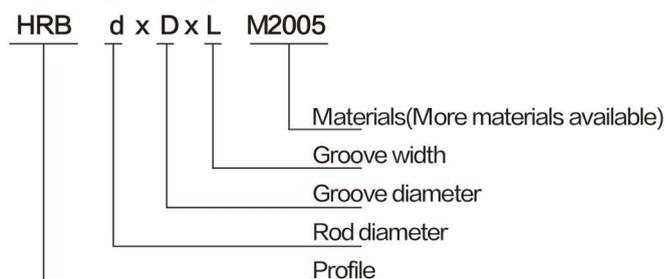
Advantages:

Good wear resistance
Impact resistance
High resistance against extrusion
Suitable for the most severe working conditions
Easy installation

Installation:

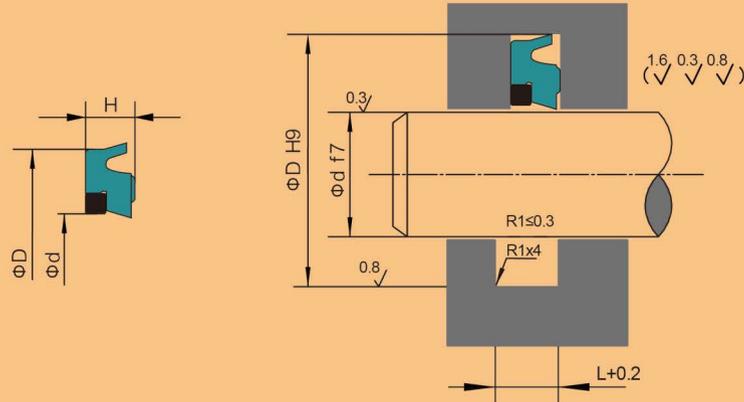
The seals should have an axial clearance. To avoid damage at the sealing lips, the seals not be pulled over sharp edges during installation. Normally these seals may be snapped into closed grooves. Where access is restricted special assembly tools may be required.

Ordering example:



密封形式及特点

Seals Type & Feature



HRB型标准规格表 (单位: mm)

订货号	d	D	H	L
HRB 40X55.5X6.3 M2005	40	55.5	6	6.3
HRB 45X60.5X6.3 M2005	45	60.5	6	6.3
HRB 50X65.5X6.3 M2005	50	65.5	6	6.3
HRB 60X75.5X6.3 M2005	60	75.5	6	6.3
HRB 70X85.5X6.3 M2005	70	85.5	6	6.3
HRB 75X90.5X6.3 M2005	75	90.5	6	6.3
HRB 80X95.5X6.3 M2005	80	95.5	6	6.3
HRB 85X100.5X6.3 M2005	85	100.5	6	6.3
HRB 100X115.5X6.3 M2005	100	115.5	6	6.3
HRB 120X135.5X6.3 M2005	120	135.5	6	6.3
HRB 125X140.5X6.3 M2005	125	140.5	6	6.3
HRB 130X145.5X6.3 M2005	130	145.5	6	6.3
HRB 135X150.5X6.3 M2005	135	150.5	6	6.3
HRB 140X155.5X6.3 M2005	140	155.5	6	6.3
HRB 150X165.5X6.3 M2005	150	165.5	6	6.3
HRB 155X170.5X6.3 M2005	155	170.5	6	6.3
HRB 160X175.5X6.3 M2005	160	175.5	6	6.3
HRB 170X185.5X6.3 M2005	170	185.5	6	6.3
HRB 175X190.5X6.3 M2005	175	190.5	6	6.3
HRB 180X195.5X6.3 M2005	180	195.5	6	6.3
HRB 185X200.5X6.3 M2005	185	200.5	6	6.3
HRB 190X205.5X6.3 M2005	190	205.5	6	6.3
HRB 200X221X8 M2005	200	221	7.7	8
HRB 210X231X8 M2005	210	231	7.7	8

液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

斯特封 GSJ



技术参数

工作温度: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$

工作速度: $\leq 4\text{m/s}$

工作介质: 液压油 (矿物油基)

材 料: 滑环: 改性的PTFE+40%青铜粉
O型圈: 丁腈橡胶 邵氏A 70

GSJ密封件主要特点

极小的启动摩擦力, 无爬行现象;

耐磨性能好;

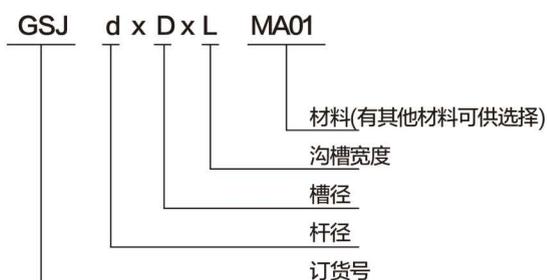
抗挤压;

滑环具有高的耐化学腐蚀特性, 并且选择不同的O型圈材料, 几乎适合所有的工作介质。

安装要求

30mm以下的杆径应使用开式沟槽。

订货号标注方法:



GSJ活塞杆密封是有PTFE密封环和O型圈组成的组合密封件, 特别适用于控制油缸、伺服系统以及快速响应油缸, 与双唇防尘圈使用可达到最佳的密封特性。PTFE滑环和可选择材料的O型圈能适应各种严苛的工况。

The Profile is single-acting rod sealing consists of slipper PTFE ring and a elastomer as a preloadin element, particularly suitable for sealing rods control servo assisted equipment and quick actin cylinder, optimal sealing performance will be obtained if the rod sealing set is used in tandem with a double wiper. the material PTFE and the O-ring make the product suitable for a wild range of application.

Technical Parameter:

Working temperature: $-35^{\circ}\text{C} \sim 110^{\circ}\text{C}$

Surface speed: $\leq 4\text{m/s}$

Working medium: hydraulic oil (mineral oil-based)

Standard materials: modified PTFE + 40% bronze powder
O-ring: NBR Shore A 70

Advantages:

Minimal break-away and dynamic friction and no stick-slip tendency;

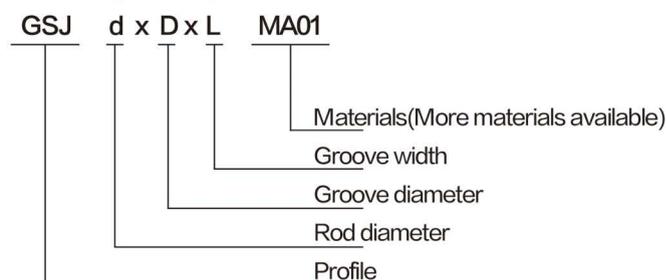
Good wear resistance;

Slip-ring is highly resistant to chemical corrosion and is suitable for almost all working media by selecting different o-ring materials

Installation:

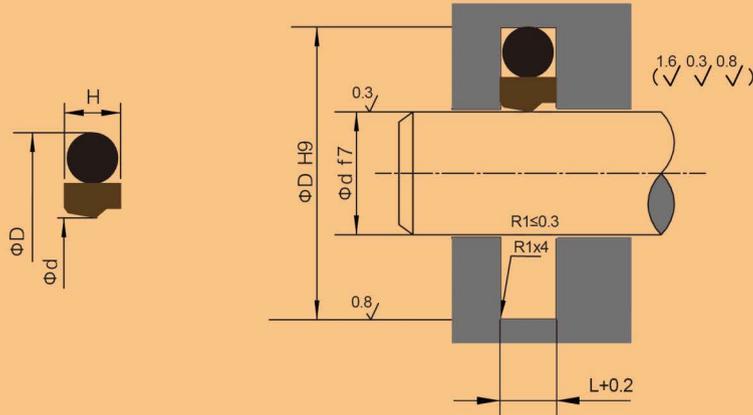
For diameters $< 30\text{mm}$ open grooves are required.

Ordering example:



密封形式及特点

Seals Type & Feature



GSJ型标准规格表 (单位: mm)

订货号	d	D	L	O型圈	
				内径	线径
GSJ 37X47.7X4.2 MA01	37	47.7	4.2	40.87	3.53
GSJ 42X57.5X6.3 MA01	42	57.5	6.3	46.99	5.33
GSJ 50X65.5X6.3 MA01	50	65.5	6.3	56.52	5.33
GSJ 57X72.5X6.3 MA01	57	72.5	6.3	62.87	5.33
GSJ 68X83.5X6.3 MA01	68	83.5	6.3	72.39	5.33
GSJ 70X85.5X6.3 MA01	70	85.5	6.3	75.57	5.33
GSJ 73X88.5X6.3 MA01	73	88.5	6.3	78.74	5.33
GSJ 78X93.5X6.3 MA01	78	93.5	6.3	82.5	5.3
GSJ 83.5X99X6.3 MA01	83.5	99	6.3	88.26	5.33
GSJ 98X113.5X6.3 MA01	98	113.5	6.3	104.14	5.33
GSJ 123.5X139X6.3 MA01	123.5	139	6.3	129.54	5.33
GSJ 128X143.5X6.3 MA01	128	143.5	6.3	132.72	5.33
GSJ 133X148.5X6.3 MA01	133	148.5	6.3	139.07	5.33
GSJ 135X150.5X6.3 MA01	135	150.5	6.3	139.07	5.33
GSJ 138X153.5X6.3 MA01	138	153.5	6.3	142.24	5.33
GSJ 140X155.5X6.3 MA01	140	155.5	6.3	145.42	5.33
GSJ 145X160.5X6.3 MA01	145	160.5	6.3	151.77	5.33
GSJ 147X162.5X6.3 MA01	147	162.5	6.3	151.77	5.33
GSJ 150X165.5X6.3 MA01	150	165.5	6.3	155	5.3
GSJ 157X172.5X6.3 MA01	157	172.5	6.3	161.3	5.33
GSJ 160X175.5X6.3 MA01	160	175.5	6.3	164.47	5.33
GSJ 165X180.5X6.3 MA01	165	180.5	6.3	170.82	5.33
GSJ 167X182.5X6.3 MA01	167	182.5	6.3	170.82	5.33

GSJ型标准规格表 (单位: mm)

订货号	d	D	L	O型圈	
				内径	线径
GSJ 170X185.5X6.3 MA01	170	185.5	6.3	177.17	5.33
GSJ 172X187.5X6.3 MA01	172	187.5	6.3	177.17	5.33
GSJ 175X190.5X6.3 MA01	175	190.5	6.3	177.17	5.33
GSJ 177X192.5X6.3 MA01	177	192.5	6.3	180	5.3
GSJ 180X195.5X6.3 MA01	180	195.5	6.3	183.52	5.33
GSJ 182X197.4X6.3 MA01	182	197.5	6.3	185	5.3
GSJ 185X200.5X6.3 MA01	185	200.5	6.3	189.87	5.33
GSJ 186X201.5X6.3 MA01	186	201.5	6.3	189.87	5.33
GSJ 190X205.5X6.3 MA01	190	205.5	6.3	196.22	5.33
GSJ 190X210.5X8.1 MA01	190	210.5	8.1	196.22	6.99
GSJ 195X210.5X6.3 MA01	195	210.5	6.3	202.57	5.33
GSJ 195X215.5X8.1 MA01	195	215.5	8.1	202.57	6.99
GSJ 197X212.5X6.3 MA01	197	212.5	6.3	202.57	5.33
GSJ 197X217.5X8.1 MA01	197	217.5	8.1	202.57	6.99
GSJ 200X220.5X8.1 MA01	200	220.5	8.1	202.57	6.99
GSJ 205X225.5X8.1 MA01	205	225.5	8.1	211.02	6.99
GSJ 207X227.5X8.1 MA01	207	227.5	8.1	211.02	6.99
GSJ 215X235.5X8.1 MA01	215	235.5	8.1	218	7
GSJ 220X240.5X8.1 MA01	220	240.5	8.1	227.97	6.99
GSJ 225X245.5X8.1 MA01	225	245.5	8.1	227.97	6.99
GSJ 230X250.5X8.1 MA01	230	250.5	8.1	240.67	6.99
GSJ 240X260.5X8.1 MA01	240	260.5	8.1	243	7
GSJ 250X270.5X8.1 MA01	250	270.5	8.1	253.37	6.99

液压破碎锤密封方案

SEALING SOLUTION FOR HYDRAULIC BREAKER

气密封 XR



技术参数

工作温度: $-35^{\circ}\text{C} \sim 150^{\circ}\text{C}$
工作速度: $\leq 1\text{m/s}$
工作压力: $\leq 30\text{MPa}$
工作介质: 液压油或氮气
材 料: 氢化丁腈或氟橡胶

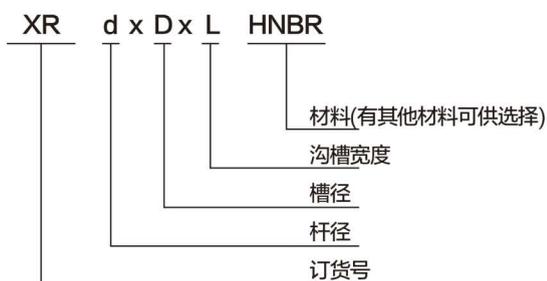
XR气封主要特点

耐高温性能优良, 耐磨性好;
双唇口密封效果极佳;
能双向密封分割液压段和氮气段;
易安装;

安装要求

此类密封件应有一个轴向间隙, 为避免密封唇口的损坏, 安装时不要将密封件在锐边上拉动。在入口有限的地方, 需要特殊的安装工具

订货号标注方法:



XR气密封是很常见的一种典型的唇形双作用星型密封件, 无论是封油或是封气都能获得良好的效果。

The XR hermetic star ring is a very common type of lip-shaped double-acting star seal, which can achieve good results in both oil sealing and gas sealing.

Technical Parameter:

Working temperature: $-35^{\circ}\text{C} \sim 150^{\circ}\text{C}$
Working speed: $\leq 1\text{m/s}$
Working pressure: $\leq 30\text{MPa}$
Working medium: hydraulic oil or nitrogen
Material: HNBR or FKM

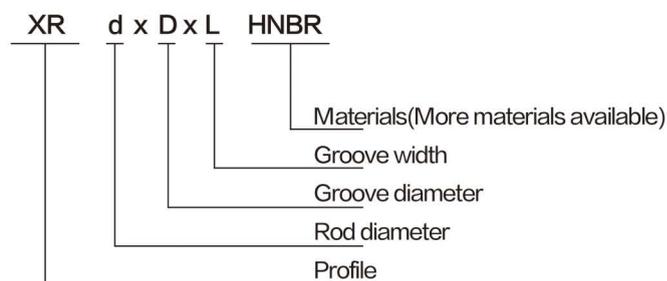
Advantages:

High temperature resistance;
Double lip sealing effect is excellent;
It can seal the hydraulic section and nitrogen section in both directions;
Easy to install;

Installation:

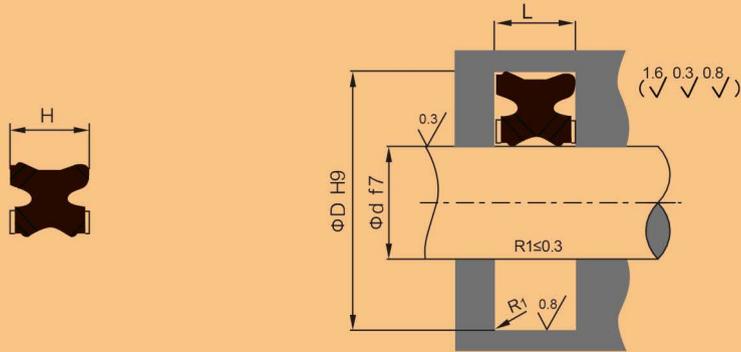
The seals should have an axial clearance. To avoid damage at the sealing lips, the seals not be pulled over sharp edges during installation. Normally these seals may be snapped into closed grooves. Special installationn tools are required where entry is limited

Ordering example:



密封形式及特点

Seals Type & Feature



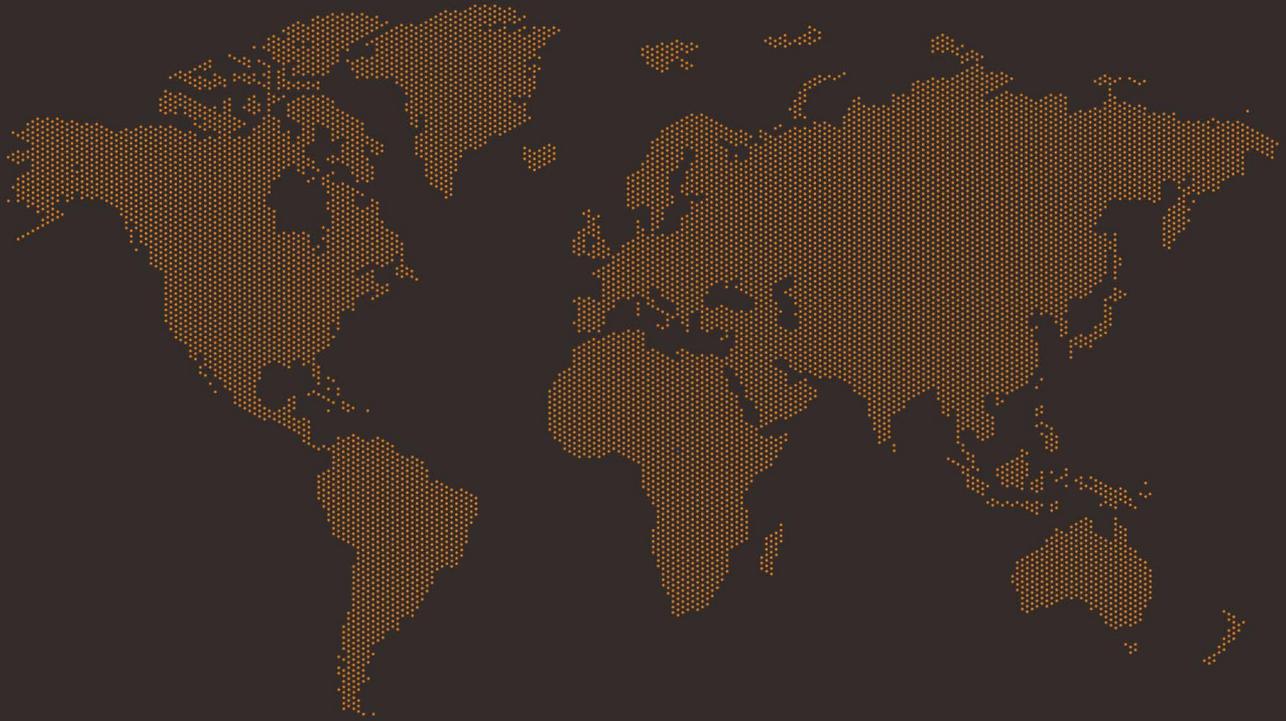
XR型标准规格表 (单位: mm)

订货号	d	D	H	L
XR 37X48x5.5	37	48	7	7.6
XR 42X53X7	42	53	7	7.6
XR 50X61X5.5	50	61	5.5	6
XR 57X68X7	57	68	7	7.6
XR 68X78X5.5	68	78	5.5	6
XR 73X83.8X7.1	78	83.8	7.1	7.7
XR 83.5X94.3X7.1	83.5	94.3	7.1	7.7
XR 98X108X7.2	98	108	7.2	7.8
XR 123.5X136X9.7	123.5	136	9.7	10.5
XR 128.4X142X9.7	128.4	142	9.7	10.5
XR 133X146X9.7	133	146	9.7	10.5
XR 135X148X9.7	135	148	9.7	10.5
XR 138X151X9.7	138	151	9.7	10.5
XR 140X153X9.7	140	153	9.7	10.5
XR 145X158X9.7	145	158	9.7	10.5
XR 147X160X9.7	147	160	9.7	10.5
XR 150X163X9.7	150	163	9.7	10.5
XR 157X170X9.7	157	170	9.7	10.5
XR 165x178x9.7	165	178	9.7	10.5

XR型标准规格表 (单位: mm)

订货号	d	D	H	L
XR 167x180x9.7	167	180	9.7	10.5
XR 170X183X9.7	170	183	9.7	10.5
XR 172X185X9.7	172	185	9.7	10.5
XR 175X188X9.7	175	188	9.7	10.5
XR 177X190X9.7	177	190	9.7	10.5
XR 180X193X9.7	180	193	9.7	10.5
XR 182X195X9.7	182	195	9.7	10.5
XR 185X198X9.7	185	198	9.7	10.5
XR 186X199X9.7	186	199	9.7	10.5
XR 187X200X9.7	187	200	9.7	10.5
XR 190X203X9.7	190	203	9.7	10.5
XR 192X205X9.7	192	205	9.7	10.5
XR 195X208X9.7	195	208	9.7	10.5
XR 197X210X9.7	197	210	9.7	10.5
XR 200X213X9.7	200	213	9.7	10.5
XR 205X218X9.7	205	218	9.7	10.5
XR 207X220X9.7	207	220	9.7	10.5
XR 215X228X9.7	215	228	9.7	10.5

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