

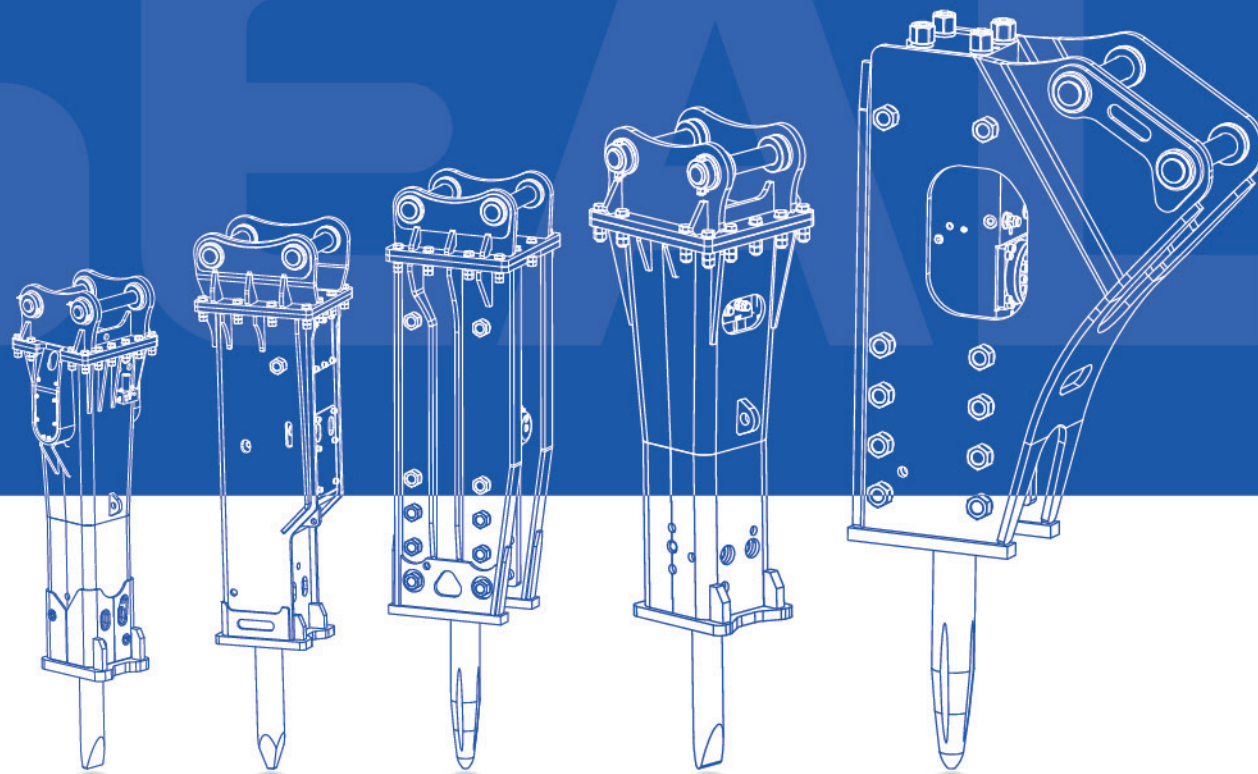
跻身全球密封行业优质品牌行列

sealing-device market Among the reputable brands serving the international

CFSEAL

破碎锤密封解决方案

Sealing solution for impact breaker



浙江华希密封科技有限公司

Zhejiang Huax Sealing Technology Co., Ltd.

Endeavor For The Best

精益求精 | 锐意成希

Founded in Newcastle | Reaching Five Continents

纽卡启业 | 驰达五洲

CF SEAL成立于1871年，总部位于英国纽卡斯尔市，一直从事密封件的制造，已成为全球密封行业的悠久品牌之一，产品出口至北美、南美、亚洲和欧洲等40余个国家。

CF SEAL was founded in 1871 and its headquarters is located in Newcastle, UK. It has been engaged in the manufacturing of seals and has become one of the long-standing brands in the global sealing industry. Its products are exported to more than 40 countries including North America, South America, Asia and Europe.



Robert Crossley Purdy



关于我们 | About Us

CFSEAL

Originated in Britain | Expert-Driven Material Intelligence

源起英伦 | 精研材智

始创于1871年，总部设立于英国，并于2004年正式进驻中国市场。经过近20年的积累与沉淀，于2023年在华投资2000万成立聚氨酯TPU生产基地，从事高分子材料的研究和制造。历经几十年的发展，凭借跨行业丰富的技术积累与实操经验，持续深耕密封材料技术创新。

Founded in 1871 and headquartered in the United Kingdom, the brand officially entered the Chinese market in 2004. Following nearly two decades of market cultivation and experience accumulation, the brand invested RMB 20-million to build a thermoplastic polyurethane (TPU) manufacturing base within China in 2023, specialising in the research, development and production of polymer materials. With decades-long abundant cross-industry technical expertise and hands-on practical experience, we keep committed to in-depth technological innovation for sealing materials.



Mission of Huaxseals
华希使命
Based on customer needs, work continuously on new materials, products and application technology developments, and offer professional sealing solutions.
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。



Uphold Original Aspiration | Serve Clients With Sincerity 秉守初心 | 以诚驭客

CFSeal有一套核心原则, 自成立以来一直坚持, 因为这些原则是CFSeal全球成功的基础, 我们相信客户服务和满意度是我们业务的最重要方面, 我们通过为客户提供完整的购买体验来实现这一目标。

CFSeal has a set core principles, that have been adhered to since it, sinception & these principles are the basis of CFSeal worldwidesuccess, we believe that customer service & satisfaction is the mostimportant aspect of our business, we achieve this by offering ourcustomers a complete purchasing experience.

关于我们 | About Us



Endeavor for the Best
精益求精 锐意成希

CFSEAL



Digital-intelligent Control | Smart Exquisite Craft

数智管控 | 智创精工

依托工业物联网平台，综合运用ERP、MES等系统，将各环节进行全方位的智能化监管，形成数据关联联动机制，充分发挥智能生产的优势，在密封件行业率先实现自动化生产，并快速响应客户，有效提高生产效率，满足市场需求，实现绿色智能制造和公司可持续发展。

Supported by the industrial-IoT platform, we deploy ERP, MES and other management systems for full-scale intelligent monitoring over all production links. A correlated-data linkage framework is built to maximize smart-manufacturing strengths. As an industry pioneer in automated sealing-part production, we deliver swift customer responses and boosted operational efficiency to meet market demands. Our green intelligent manufacturing strategy underpins the enterprise's long-term sustainable development.

CFSEAL



Build Solid Foundation | Steer Corporate Operation

筑立根基 | 稳驭营运

公司采用汽车行业TS16949作为企业质量管理体系，以6S作为企业运营基础构架。经验丰富的精英团队用卓越的产品、一流的服务为客户提供完善的技术支持和行业应用解决方案。

The company adopts the TS16949 standard of the automotive industry as its enterprise quality management system, and uses 6S as the basic framework for its operations. The experienced and elite team provides customers with comprehensive technical support and industry application solutions through outstanding products and first-class services.



Abide By Standards | Consolidate Foundation With Certifications

严循标准 | 认证固本



汽车行业质量管理
体系认证



职业健康安全管
理体系认证



环境管理
体系认证



质量管理
体系认证



武器装备质量管
理体系认证

Conquer Harsh Conditions | Develop Tailored Materials

攻坚工况 | 研材适配

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。西爱孚密封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. The series of materials of CF SEAL are precisely developed in response to such demands.



材料牌号	Units	Test Method	97P97	94P95	94P94	92P50
硬度 / Hardness	Shore A	ASTM D 2240	97	95	94	93
拉伸强度 / Tensile Strength	MPa	ASTM D412	50	47	47	44
断裂伸长 / Elongation at Break	%	ASTM D 412	635	550	550	520
100%定伸强度 / 100% Modulus	MPa	ASTM D 412	12.6	14.8	14.8	11
300%定伸强度 / 300% Modulus	MPa	ASTM D 412	19.2	22	22	18
撕裂强度 / Tear Strength	kN/m	ASTM D 624	125	130	130	124
回弹 / Rebound. Bayshore	%	ASTM D 2632	55	40	40	45
DIN磨轮 / DIN Abrasion	mm3	DIN 53516	22	31	31	30
维卡 / Vica1 Softening Point	℃	ASTM D 1525	166	186	186	176
压缩变形 / Compression Set B (100℃, 22hrs)	%	ASTM D 395	38	29	29	33

CFSEAL

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Add: Yongli Bafu Intelligent Manufacturing Industrial Zone, Hangzhou City, Zhejiang Province, China

Material: 94P95			
Properties	Test Method	Units	Typical Value
Hardness	ASTM D 2240	Shore A	95
Tensile Strength	ASTM D 412	MPa	47
Elongation at Break	ASTM D 412	%	300
100% Modulus	ASTM D 412	MPa	14.8
300% Modulus	ASTM D 412	MPa	22
Tear Strength	ASTM D 2632	KN/m	130
Rebound, Bayshore	ASTM D 2632	%	40
DIN Abrasion	DIN 53516	mm³	31
Vicat Softening Point (130°C/min, 10N)	ASTM D 1525	°C	186
Compression Set B (100°C, 22hrs)	ASTM D 395	%	29

DCI

IAF

Designers and Manufacturers of Sealing Systems and Polymer Mouldings

材料测试报告
94P95

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Material Specification Sheet			
PTFE BS564A Grade A-VA1/2			
Mechanical Properties		Thermal Properties	
Specific Gravity	2.13g/cm³	Maximum Working Temperature	<260°C
Tensile Strength	24.00MPa	Maximum Working Temperature	<180°C
Elongation @Break	220%	Operating Temperature	-150°C ~ 200°C
Hardness	68 Shore D	Melting Temperature	>300°C
Coefficient of Friction	0.10		
Moisture Absorption	0%		
Characteristics			
PTFE is the most chemically resistant thermoplastic polymer available.			
It is inert to almost all chemicals and solvents such as Acids, Alcohols, Alkalis.			
Excess Solvents and Hydrocarbons			
A few substances are harmful to PTFE: Phosphoric, Chlorine trifluoride and molten Alkali metal oxides at high pressure.			
The only thing silder than PTFE is gold.			

DCI

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材料测试报告
PTFE

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Add: Yongli Bafu Intelligent Manufacturing Industrial Zone, Hangzhou City, Zhejiang Province, China

Material: 97P97			
Properties	Test Method	Units	Typical Value
Hardness	ASTM D 2240	Shore A	97
Tensile Strength	ASTM D 412	MPa	50
Elongation at Break	ASTM D 412	%	435
100% Modulus	ASTM D 412	MPa	12.6
300% Modulus	ASTM D 412	MPa	19.2
Tear Strength	ASTM D 2632	KN/m	125
Rebound, Bayshore	ASTM D 2632	%	55
DIN Abrasion	DIN 53516	mm³	22
Vicat Softening Point (130°C/min, 10N)	ASTM D 1525	°C	166
Compression Set B (100°C, 22hrs)	ASTM D 395	%	38

DCI

IAF

Designers and Manufacturers of Sealing Systems and Polymer Mouldings

材料测试报告
97P97

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Add: Yongli Bafu Intelligent Manufacturing Industrial Zone, Hangzhou City, Zhejiang Province, China

Material: 92P50			
Properties	Test Method	Units	Typical Value
Hardness	ASTM D 2240	Shore A	93
Tensile Strength	ASTM D 412	MPa	44
Elongation at Break	ASTM D 412	%	320
100% Modulus	ASTM D 412	MPa	11
300% Modulus	ASTM D 412	MPa	18
Tear Strength	ASTM D 2632	KN/m	124
Rebound, Bayshore	ASTM D 2632	%	45
DIN Abrasion	DIN 53516	mm³	30
Vicat Softening Point (130°C/min, 10N)	ASTM D 1525	°C	176
Compression Set B (100°C, 22hrs)	ASTM D 395	%	33

DCI

IAF

Designers and Manufacturers of Sealing Systems and Polymer Mouldings

材料测试报告
92P50

CFSEAL

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Add: Yongli Bafu Intelligent Manufacturing Industrial Zone, Hangzhou City, Zhejiang Province, China

Material: TPE			
Properties	Test Method	Units	Typical Value
Hardness	ASTM D 2240	Shore A	90
Tensile Strength	ASTM D 412	MPa	44
Elongation at Break	ASTM D 412	%	320
100% Modulus	ASTM D 412	MPa	11
300% Modulus	ASTM D 412	MPa	18
Tear Strength	ASTM D 2632	KN/m	124
Rebound, Bayshore	ASTM D 2632	%	45
DIN Abrasion	DIN 53516	mm³	30
Vicat Softening Point (130°C/min, 10N)	ASTM D 1525	°C	176
Compression Set B (100°C, 22hrs)	ASTM D 395	%	33

DCI

IAF

Designers and Manufacturers of Sealing Systems and Polymer Mouldings

材料测试报告
TPE

CNAS High and Low Temperature Test
CNAS高低温试验



报告编号: GT2102054029

试验报告

样品名称: 油缸
样品型号: A35M30-630000-000C
委托单位名称: 浙江华泰密封技术有限公司
委托单位地址: 浙江省杭州市萧山区杭州湾水利路
报告日期: 2024年4月30日

浙江华泰密封技术有限公司

CNAS 认证

试验报告

试验项目: 低温试验

试验结果: 油缸在低温环境下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在-42℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在-42℃条件下, 密封性能良好, 无泄漏现象。

-42℃ 测试

试验报告

试验项目: 70℃ 试验

试验结果: 油缸在70℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在70℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在70℃条件下, 密封性能良好, 无泄漏现象。

70℃ 测试

试验报告

试验项目: 135℃ 试验

试验结果: 油缸在135℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在135℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在135℃条件下, 密封性能良好, 无泄漏现象。

135℃ 测试

试验报告

试验项目: 150℃ 试验

试验结果: 油缸在150℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在150℃条件下, 密封性能良好, 无泄漏现象。试验过程中, 油缸在150℃条件下, 密封性能良好, 无泄漏现象。

150℃ 测试

Gas-liquid Driven · Versatile Demolition

气液驱冲 | 破拆万域

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。

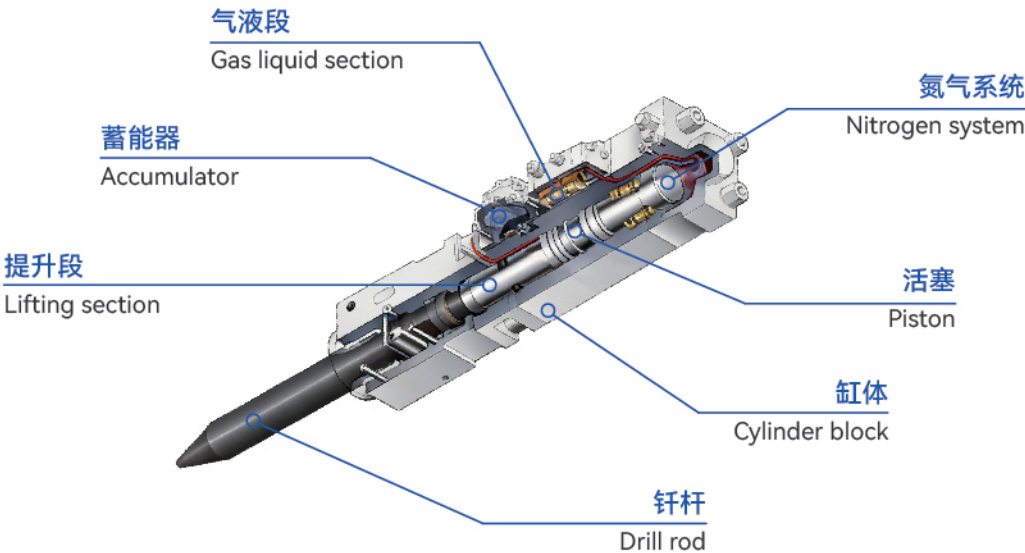
The hydraulic breaker is used to contro! the opening and closing of the oil passage of the other through the piston and the high-speedreversing valve, so that the piston can perform high-speed reciprocating stroke movement in the cylinder under the combined actionof high-pressure nitrogen and high-pressure oil, thereby stniking the drill rod to realize vibration. broken function.

Widely used in miningroads, 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-liquidsection serve as sealing oil and support,so that the moving section forms a uniformmatching gap and is fully lubricated.



压力 | PRESSURE

参数项	数值	参数项	数值
上部油压 / Upper oil pressure	3~25MPa	下部油压 / Lower oil pressure	0~40MPa
工作行程 / Working stroke	最大200mm	气压 / Air pressure	2~4MPa
工作频率 / Working frequency	最大1200次/分		

工作速度 | WORKING SPEED

参数项	数值	参数项	数值
上升过程 / Ascending process	最大10米/秒	下降过程 / Falling process	最大12米/秒
要求密封寿命 / Requires sealed life	不低于600h		

主要特点 | ADVANTAGES



密封性能好，低摩擦
Good sealing performance, low friction



适应不同压力工况，抗高压冲击
Adapt to different pressure conditions and resist high pressure shock



密封使用寿命长
Long sealing life



耐磨性好、永久压缩形变低、抗挤出性能优良
Good wear resistance, low permanent compression set and excellent extrusion resistance



材料性能优良适应不同的应用环境
Excellent material properties, adapt to different application environments



斯特封CS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



气密封CAS，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：复合材料 PFKM



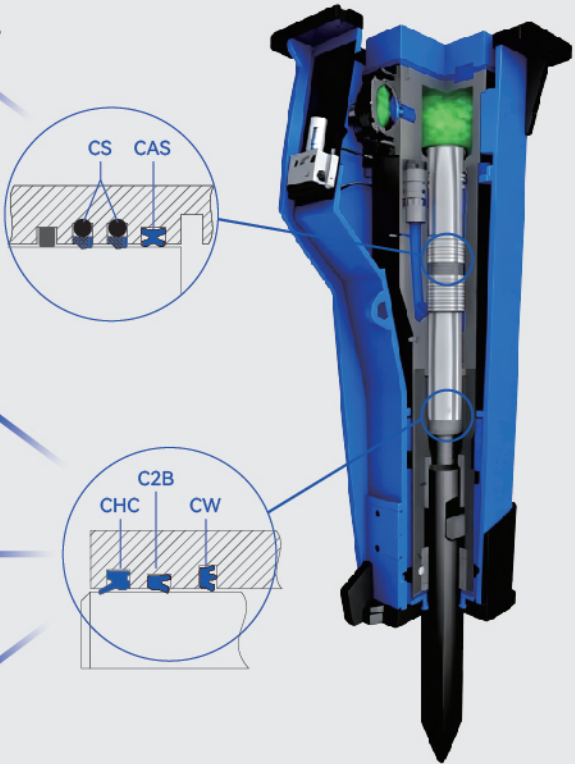
防尘圈CHF，有效防止粉尘、砂粒、水、碎屑等进入液压系统，改进的结构可以减小接触面、降低摩擦，增强防尘、除尘效果。
材料：聚氨酯 94P94



主密封C2B，密封性良好，增加回油槽改进润滑性，减小摩擦。
材料：聚氨酯 94P94



缓冲圈CW，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 94P94





防尘密封 | WIPER SEAL

CHF型是一种外部带有静态密封唇和内部带。有凸缘的聚氨酯防尘圈。静态密封唇可以防止污染物和水雾的进入，刮尘唇能有效的刮除外界的污物，同时在活塞杆上任何保留剩余的油膜。

The CHF-type is a polyurethane dust seal featuring an outer static sealing lip and an inner flange. The static sealing lip prevents ingress of contaminants and water mist. The wiper lip efficiently scrapes off external dirt while retaining a residual oil film on the piston rod.

主要特点 | ADVANTAGES



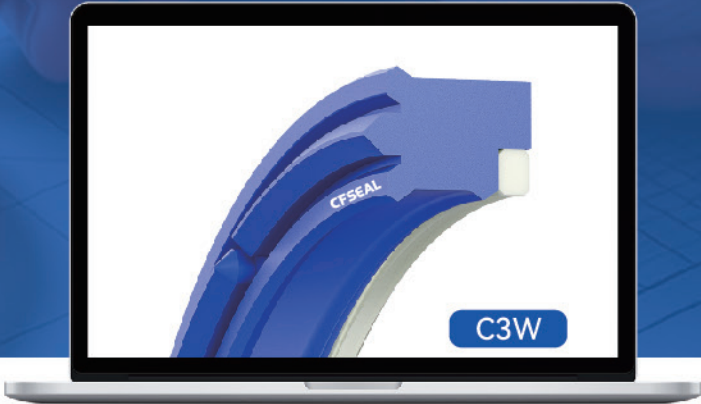
气密封 | GAS SEAL

CAS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 CAS hermetic star seal is a typical widely-used lip-type double-acting star-shaped sealing element, which delivers favorable sealing performance for both oil-sealing and gas-sealing applications.

主要特点 | ADVANTAGES





主油封 | ROD SEAL

C2B型油封采用特殊改性聚氨酯材料，具备优异的耐高温、耐水碱腐蚀性能，密封性能可靠。产品增设回油槽结构，有效改善润滑条件、降低摩擦阻力，释放背压，避免压力蓄积，显著延长油封使用寿命，常作为破碎锤主油封使用。

The C2B type seal has excellent sealing performance. The added oil return groove improves lubricity, reduces friction, prevents back pressure, and extends the service life of the seal. It is usually used as the main seal for breakers.

主要特点 | ADVANTAGES



优异的耐磨性能



对冲冲击载荷和压力峰值不敏感



优异的抗挤出能力



适用于恶劣的工况



易于安装

压紧型密封圈C3W，带有档圈，附加支撑缘和密封缘，带有轴向固定设计，和腔体外缘采用过盈配合。

The compression type sealing ring C3W, with a retaining ring, additional support flange and sealing flange, features an axial fixation design and adopts an interference fit with the outer edge of the cavity.

主要特点 | ADVANTAGES



极好的静态和动态密封性能



能承受高压，允许较大的间隙设计



压缩紧密，沟槽底面允许较高的表面粗糙度



附加的密封缘能有效阻止外界污染



较小变形，推荐与单作用防尘圈组合使用



缓冲环 | BUFFER RING

C2Y型超高压缓冲密封，专为破碎锤冲击工况设计。破碎锤承受瞬时冲击载荷时，该密封可有效卸除峰值压力，缓冲冲击能量，保护主油封免受突发高压的破坏，提升整套密封系统使用寿命。

Model C2Y ultra-high-pressure buffer seal is engineered for hammer impact conditions. Under transient impact loads, it effectively relieves peak pressure and absorbs impact energy, protecting primary oil seals from sudden high-pressure damage and extending the service life of the whole sealing system.

CW活塞杆密封是一种带挡圈的紧凑型密封。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。

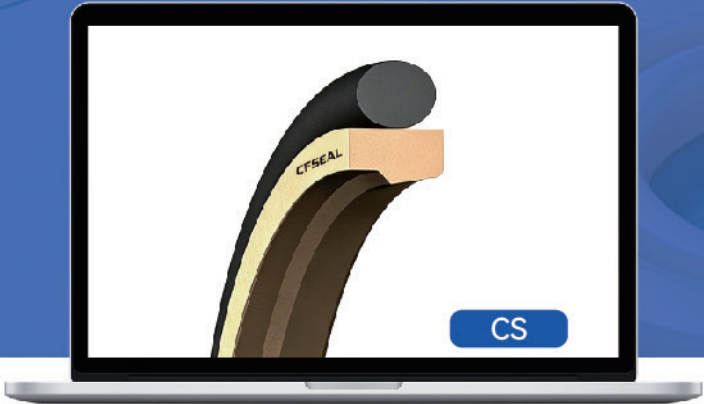
CW piston rod seal is a compact seal with a retaining ring. It is mainly used in the cylinder sealing system of construction machinery as a buffer seal. Due to its special structure, this seal can transfer the pressure formed between the main seal and the cushioning seal back to the system.

主要特点 | ADVANTAGES



主要特点 | ADVANTAGES





斯特封 | ROD SEAL

CS破碎锤专用斯特封为组合式密封结构，由PTFE密封滑环与弹性O形圈装配组成。PTFE滑环采用特殊改性配方，具备优异的耐高压、耐高温与高耐磨特性，可满足设备高速往复的严苛工况使用需求。

CS Special Breaker Step Seal adopts a combined sealing structure, assembled from PTFE sliding seal ring and elastic O-ring. Specially modified PTFE ring delivers outstanding high-pressure resistance, heat resistance and wear resistance for harsh high-speed reciprocating operating conditions of breakers.

主要特点 | ADVANTAGES

-  具有非常高的耐压力和抗压稳定性
-  具有良好的异热性
-  具有非常好的挤出性能
-  耐磨性高
-  低摩擦，不会造成液压爬行

活塞环油封 | ROD SEAL

C2T采用高强度聚氨酯基材，具备优异耐高温、抗高频往复、耐高压性能，装配便捷，适配破碎锤活塞环严苛工况。

The C2T seal adopts high-strength polyurethane base material. It delivers excellent high-temperature resistance, high-frequency reciprocating performance and high-pressure resistance. Easy-to-install, it is suitable for the harsh working conditions of breaker piston rings.

主要特点 | ADVANTAGES

-  耐冲击
-  耐高温
-  抗挤出
-  极好的耐磨性
-  能适应苛刻的工作条件
-  易于安装



静密封 | STATIC SEAL

聚氨酯材料制作的双作用对称压紧型密封圈，外圈为密封面。可有效阻隔介质泄漏与外界污染，工业设备核心密封部件。

Double-acting symmetric compression-type seal made of polyurethane material, with its outer ring serving as the sealing surface. It effectively blocks medium leakage and external contamination, and acts as a core sealing component for industrial equipment.

异形结构静态密封圈，两侧面有2道刀形密封刃口。凭借定制化异形结构，可精准匹配不规则密封面，密封可靠且适配性强。

The static sealing ring with an irregular structure has two knife-shaped sealing edges on both sides. With customized irregular structures, it can precisely match irregular sealing surfaces, ensuring reliable sealing and strong adaptability.

主要特点 | ADVANTAGES

-  可与O型圈沟槽和O型圈带档圈沟槽互换
-  高可靠性 安装简单
-  包储容易、可密封气体
-  大的间隙 (膨胀大的油缸)
-  缸头终点定位缓冲装置的静密封

主要特点 | ADVANTAGES

-  密封唇位于沟槽内，应力分布较理想
-  极高压力时，能够稳固保持在腔体中形态
-  所用材料是抗延伸聚氨酯
-  适用于恶劣的工况
-  易于安装

皮碗 | DIAPHRAGM

CUP皮碗是破碎锤核心部件，采用高性能复合基材，可适应破碎锤高频冲击、瞬时高压、内生热显著的严苛作业工况。

The CUP plastic bowl is a key component of the impact hammer. It is made of high-performance composite material and is capable of withstanding the harsh working conditions of the impact hammer, which include frequent impacts, instantaneous high pressure, and significant internal heat generation.

主要特点 | ADVANTAGES



密封性能

通过弹性变形紧密贴合运动部件(蓄能器)，防止液体或气体泄漏。



耐久性

产品可承受高压(60MPa)和极端温度(-50 to +150°C)，适应恶劣工况。



材料

PFKM，兼顾耐磨、耐油及回弹性。



Cover Vast Industrial Fields | Fit Myriad Machinery

广覆工域 | 适配万机

产品广泛应用于工程机械，特种车辆，海工设备，工业设备等领域。

The product is widely applied in fields such as construction machinery, special vehicles, offshore engineering equipment, and industrial equipment.



液压挖掘机



小型反铲



轮式装载机



推土机



越野起重机



自卸卡车



叉车



电瓶式叉车



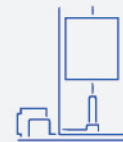
废物回收车



联合收割机



拖拉机



液压升降机



注塑机



多层停车场



冲压机



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Precision for All Sectors | Smart-driven Longevity

精工全域 | 智启长青

我们致力于打造高品质密封产品，适配航空、车载装备、工程机械、矿山、基建、农机、制药、冶金等各大工业领域对于产品性能与耐久度的使用标准。我们推进密封件生产线自动化升级，快速响应客户需求、优化产能效率适配市场；深耕绿色智能制造，保障企业长期可持续经营。

We strive for premium-grade seals compliant with durability requirements across aviation, construction, mining, metallurgy and other industries.

Our automated production lines enable fast customer response and optimized output, while eco-friendly smart manufacturing underpins our lasting operation.

CFSEAL

Thanks

 WATCHING

愿与您携手深耕，共筑密封智造新局

Let us cooperate deeply and shape intelligent sealing-manufacturing future.



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