

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

挖掘机油缸密封解决方案

Hydraulic-Cylinder Sealing Solutions for Excavators

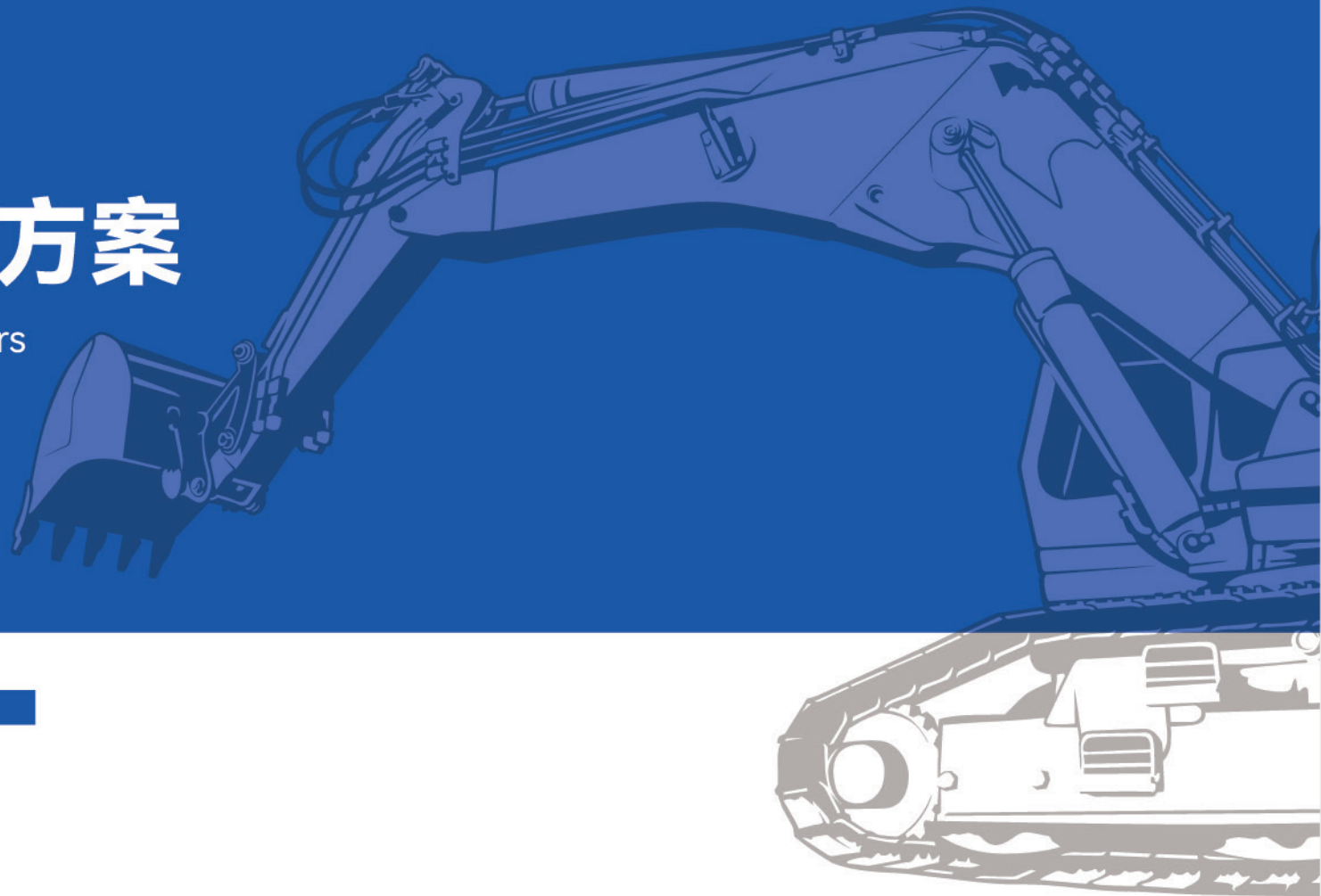
CFSEAL

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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Mailbox: wind@cfseal.com.cn

Add: Yongli Bahe 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 624	kJ/m	130
Rebound, Bayshore	ASTM D 2632	%	40
DIN Abrasion	DIN 53516	mm³	31
Vicat Softening Point (120°C/hr, 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 BS6564 Grade A-VA1/2

Mechanical Properties	Thermal Properties		
Specific Gravity	2.13g/cm³	Maximum Working Temperature	<260°C
Tensile Strength	20/20MPa	Maximum Working Temperature	<180°C
Elongation @Break	220%	Operating Temperature	<150°C ~ <250°C
Hardness	65 Shore D	Melting Temperature	<330°C
Coefficient of Friction	0.10		
Moisture Absorption	0%		

Characteristics

PTFE is the most chemically resistant thermoplastic polymer available.

It is known to resist all chemicals and solvents such as Acids, Alkalies, Oils, Solvents, Ketones, and Hydrocarbons.

A few substances are harmful to PTFE: Fluorine, Chlorine, Bromine, and molten Alkali metal solutions at high pressure.

The only thing older than PTFE is salt.

DCI

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材料测试报告
PTFE

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Add: Yongli Bahe 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 624	kJ/m	125
Rebound, Bayshore	ASTM D 2632	%	55
DIN Abrasion	DIN 53516	mm³	22
Vicat Softening Point (120°C/hr, 10N)	ASTM D 1525	°C	186
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 Bahe 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	%	520
100% Modulus	ASTM D 412	MPa	11
300% Modulus	ASTM D 412	MPa	18
Tear Strength	ASTM D 624	kJ/m	124
Rebound, Bayshore	ASTM D 2632	%	45
DIN Abrasion	DIN 53516	mm³	30
Vicat Softening Point (120°C/hr, 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

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

Material: TPE

Properties	Test Method	Units	Typical Value
Hardness (Shore A/Durometer)		Shore A	80/110
伸长率		%	80/110

Properties	Test Method	Units	Typical Value
拉伸强度	拉伸强度	MPa	10/10
伸长率	伸长率	%	10/10
撕裂强度	撕裂强度	kJ/m	10/10
回弹性	回弹性	%	10/10

Properties	Test Method	Units	Typical Value
硬度	硬度	Shore A	80/110
伸长率	伸长率	%	10/10
撕裂强度	撕裂强度	kJ/m	10/10
回弹性	回弹性	%	10/10

DCI

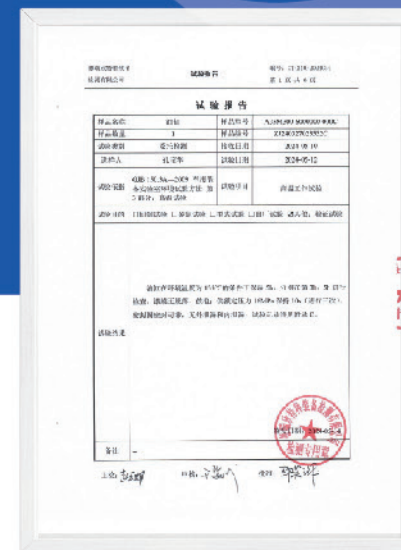
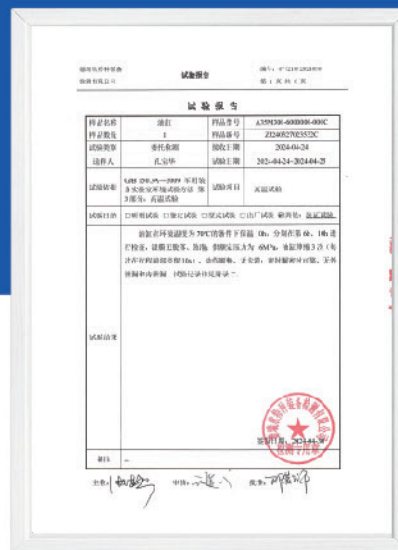
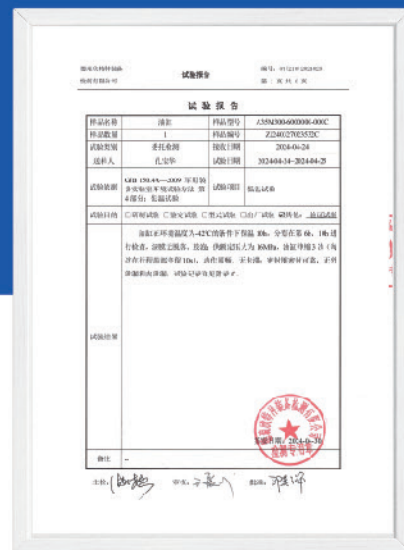
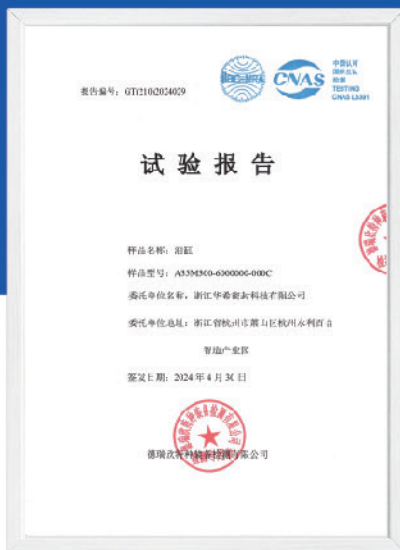
IAF

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



CNAS 认证

-42°C 测试

70°C 测试

135°C 测试

150°C 测试



Impact-Load Resist | Secure Cylinder Sealing

抗冲耐载 | 密固油缸

纵观各类工程机械，挖掘机油缸具备工作压力高、动作速度快、内泄控制标准高的特性，同时长期承受瞬时高压冲击。复杂严苛的作业条件，造成密封件失效概率高，整机维修更换频次居高不下。

挖掘机主要包含动臂油缸、斗杆油缸、铲斗油缸，三类油缸的密封系统整体结构相近。

Among all construction-machinery equipment, excavator hydraulic cylinders feature high working pressure, fast movement speed and stringent internal-leakage requirements, while enduring recurring instantaneous high-pressure shocks. Harsh and complicated operating conditions raise the failure risk of sealing components and lead to frequent machine-wide maintenance and part-replacement work.

An excavator is fitted with boom, stick and bucket cylinders. The sealing systems of the three cylinder types share a comparable overall structure

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



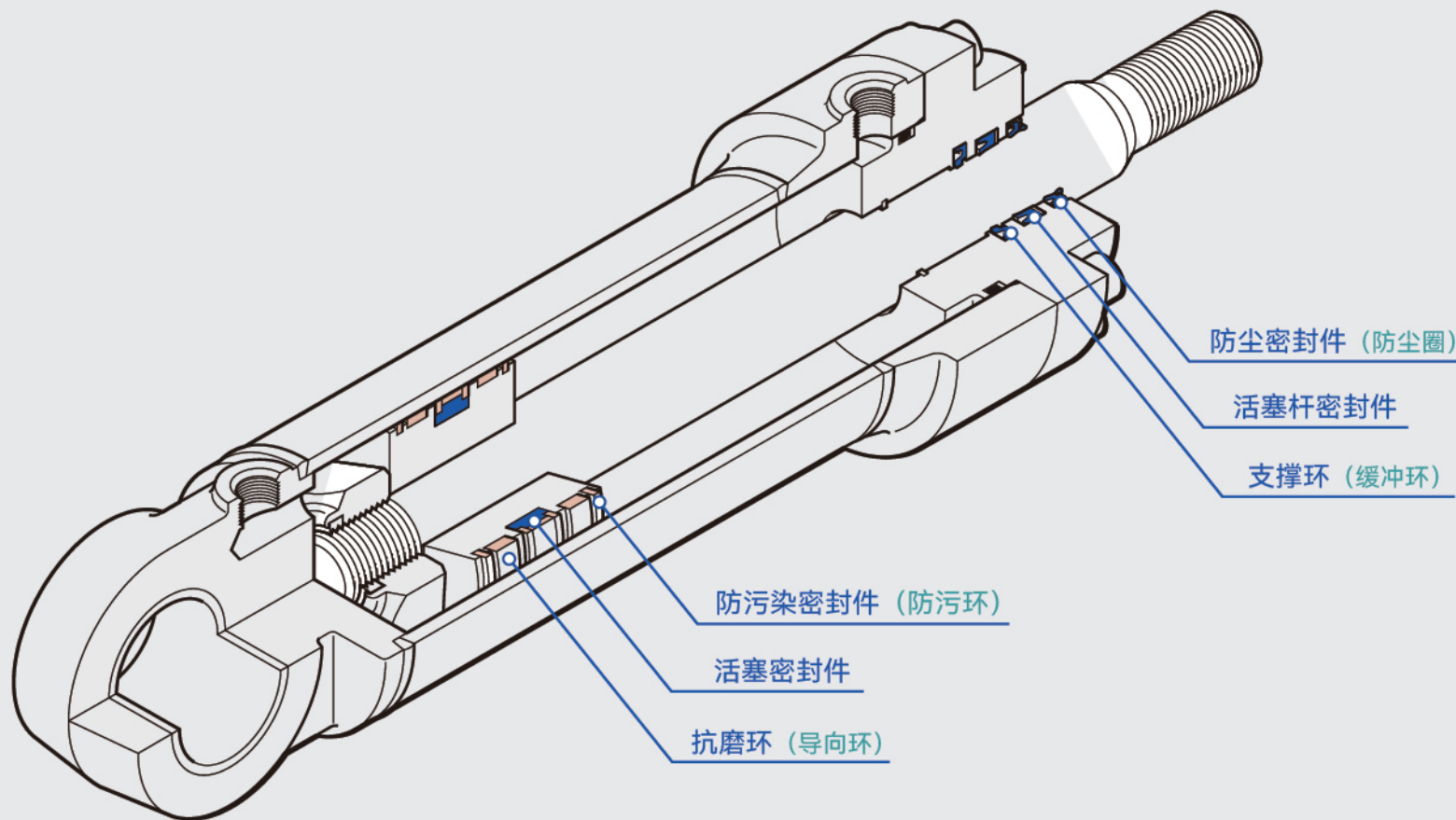
密封使用寿命长
Long sealing life



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





防尘密封 | WIPER SEAL

CE1型是由聚氨酯刮尘唇外金属骨架一体化的防尘圈，安装在开放式沟槽中。

The CE1 type is an integrated dust-proof ring made of polyurethane dust-removing lip and metal frame. It is installed in an open groove.

主要特点 | ADVANTAGES



密封性能好



耐磨性能好



防尘效果极好



易于安装

活塞杆密封 | ROD SEAL

C3H采用聚氨酯基材制造，具备优异的回弹性、耐磨性与抗疲劳特性，材料内生热低，动态工况表现突出。可胜任普通聚氨酯难以应对的高频往复作业，适用工作温度区间-50℃~150℃，适配严苛高低温工况。

C3H is made of polyurethane. It delivers excellent resilience, wear resistance and anti-fatigue property with low internal heat generation and outstanding dynamic performance. Suitable for high-frequency and wide temperature(-50℃~150℃) working conditions where ordinary polyurethane fails.

主要特点 | ADVANTAGES



可采用多种材料，包括
TPU、PTF、PA、NBR



不同的设计，适应不同
的工况



抗挤出挡圈有助于
避免间隙挤出



精确定义表面
粗糙度



活塞杆密封 | ROD SEAL

CUH型是超高压聚氨酯氟胶密封，密封唇端面设有排油口的唇型密封件，防止背压泄漏，防止爬行。

The CUH type is a super-high pressure polyurethane fluorine sealant. It is a lip-shaped sealing component with an oil outlet at the end face of the sealing lip, which prevents back pressure leakage and crawling.

主要特点 | ADVANTAGES

-  可采用多种材料，包括 TPU、PTF、PA、NBR
-  不同的设计，适应不同的工况
-  抗挤出挡圈有助于避免间隙挤出
-  精确定义表面粗糙度

活塞密封 | PISTON SEAL

CGA型是一种设计紧凑的双作用活塞密封。有一个聚四氟乙烯密封环，一个丁青弹性体及两个挡圈组合而成。在高压工况下的重载双向活塞密封场合非常出色，主要应用于重载或者工程机械的油缸活塞密封，具有良好的泄露控制。

Model CGA is a compact double-acting piston seal assembled with one PTFE seal ring, one NBR elastomer and two backup rings. It performs excellently in high-pressure heavy-duty bidirectional piston sealing. Widely applied to construction-machinery & heavy-load cylinder pistons for superior leakage control.

主要特点 | ADVANTAGES

-  可采用多种材料，包括 TPU、PTF、PA、NBR
-  不同的设计，适应不同的工况
-  抗挤出挡圈有助于避免间隙挤出
-  精确定义表面粗糙度



活塞密封 | PISTON SEAL

CZK型是由PTFE材料制成一定厚度的，具有纳污功能的环状密封件。PTFE材料硬度低，密度不高，耐磨性好，具有杂质浸没功能，可将杂质吸附在纳污环表面，防止杂质浸入缸体内，确保缸体内的密封件不受损坏。

The CZK-type ring-shaped seal is made of thickness-specified PTFE with dirt-trapping capacity. Boasting low hardness, moderate density and excellent wear-resistance, the PTFE ring adsorbs contaminants onto its surface. It stops impurities from entering the cylinder and protects inner seals against damage.

主要特点 | ADVANTAGES

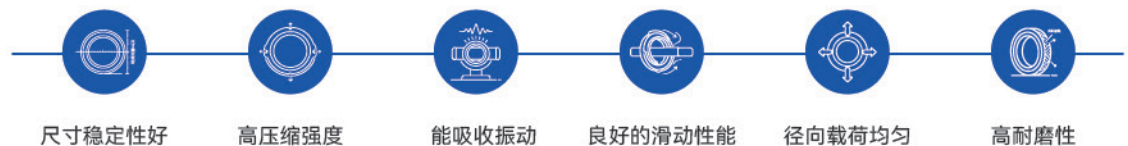


耐磨环 | GAS SEAL

CGS耐磨环的作用，是在液压油缸运动中，引导活塞和活塞杆的方向，提供横向支撑，并且防止金属与金属之间的摩擦。

The function of the CGS wear-resistant ring is to guide the direction of the piston and the piston rod during the movement of the hydraulic cylinder, provide lateral support, and prevent friction between metals.

主要特点 | ADVANTAGES



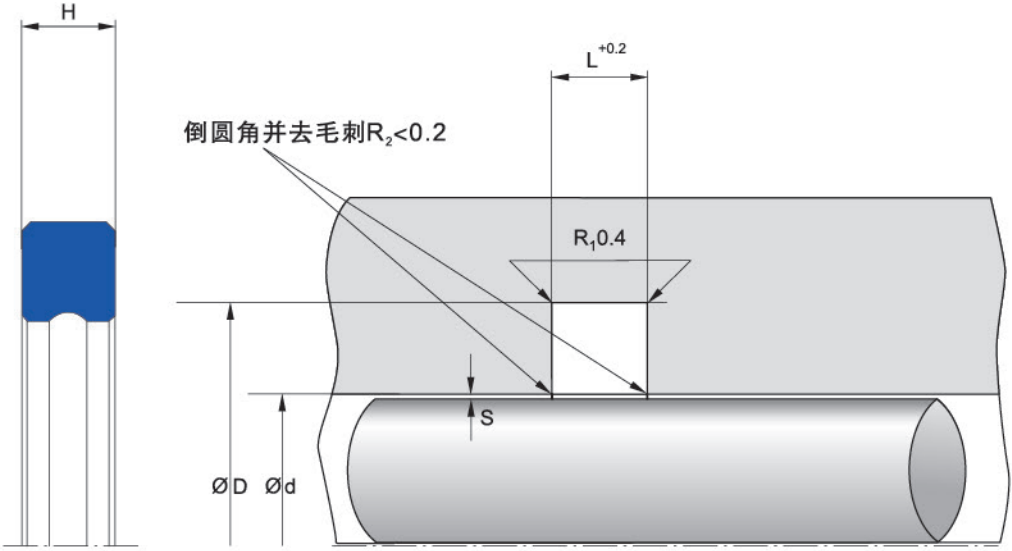


斯特封 | ROD SEAL

C14密封件：优异耐酸碱、高耐磨、耐高温，密封性能卓越。

C14 seals: Excellent acid-alkali resistance, high wear resistance, high temperature resistance and superior sealing performance.

主要特点 | ADVANTAGES



安装图例

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



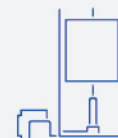
废物回收车



联合收割机



拖拉机



液压升降机



注塑机



多层停车场



冲压机



升降机



机械手



液压破碎机



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.



联系我们 Contact Us

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