Company profile by ANRV

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About us

Company profile

Anhui ANRV Intelligent Engineering Machinery Co., Ltd. was founded in 2017. The company has been honored with the titles of National High-Tech Enterprise and Anhui Province Innovation-Oriented SME Certification. It has also obtained CE certification and ISO quality and environmental management system certification. With over 30 proprietary intellectual property rights, the company is located in the Yushan Development Zone, Ma'anshan, Anhui Province, with a staff of over 40 people and standardized workshops covering an area of 6,000 square meters.

ANRV is a pioneering research and development manufacturing enterprise in the field of engineering machinery and equipment. It specializes in hydraulic design, pipeline system optimization, and maintenance services. The core management team of Anrv consists of professionals with over 15 years of experience in the research, production, sales, and management of equipment.

Adhering to the philosophy of "Realistically, Pragmatically, Ingeniously and Innovatively" Anrv is committed to market-oriented development and maximizing the interests of the industry, partners, and customers. It aims to promote the healthy and orderly development of China's engineering machinery aftermarket and provide mid-to-high-end engineering machinery accessories and authoritative technical consultation globally, thereby ushering in a new era of multifunctional engineering machinery equipment.

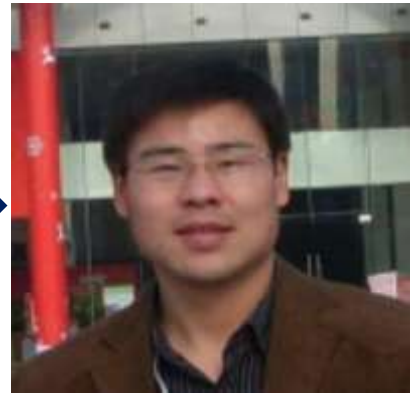
Additionally, Anrv offers hydraulic system design and maintenance services to major domestic enterprises. With its meticulous and efficient service, high-quality products, and competitive prices, Anrv has earned a good reputation in both domestic and international markets. Its products are marketed nationwide as well as in Northern Europe, France, Portugal, the United States, Canada, Indonesia, Thailand, and other regions.

Professional Team

Robin

CEO

One of the first batch of people engaged in hydraulic industry in China.One of the leaders of the hammer attachment project,from Having been in the furniture industry for 25 years,he has a keen sense of market insight and innovation capabilities.



Xiao Wangqun

CDO

With a Ph.D. degree from East China University of Science and Technology, specializing in hydraulic hammer design for over ten years, he possesses excellent capabilities in attachment research and development. He leads the Anrui hydraulic hammer project.

Qiu Dongfeng

CTO

Has a graduate degree and has been specialized in hydraulic hammer design for more than ten years.He has worked for many hydraulic hammer manufactures and has good attachment research and development capabilities.

Yu Jing

Minister of Enterprise Management

With a bachelor's degree, he previously worked at JingTian Hydraulic for over a decade, accumulating extensive experience in enterprise management. Diligent and meticulous, he approaches his work with dedication and attention to detail.

Li Wenhao

Sales Engineer

With a bachelor's degree and as one of the shareholders, he has been engaged in the sales of hydraulic hammers and robots for 15 years. He is adept at sales in large enterprises, demonstrating considerable expertise in the field.

02 The key elements of corporate competition

National high-tech enterprises

ISO and CE certification

Over 30 patents granted, including invention and utility model patents

Import and export qualification

02 The key elements of corporate competition

匠心

求是，务实，匠心，创新

Positive, Pragmatic, Creative, Innovative

Mission vision

Become the global construction machinery industry leader, continuous innovation, products lead the future.

Enterprise Spirit

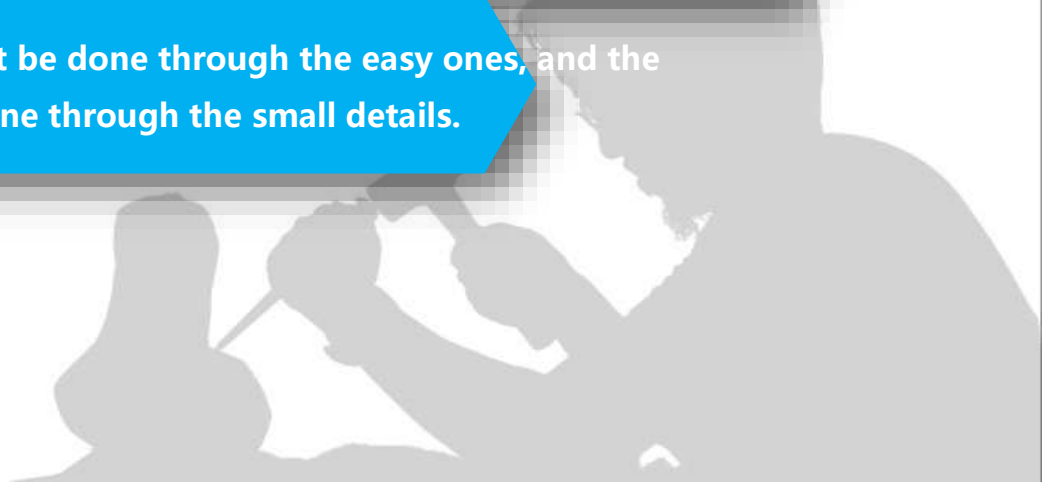
Realistically, Pragmatically, Ingeniously and Innovatively

Value

Maximizing industry interests, maximizing partner interests, and maximizing customer interests.

Enterprise Training

The difficult things in the world must be done through the easy ones, and the great things in the world must be done through the small details.

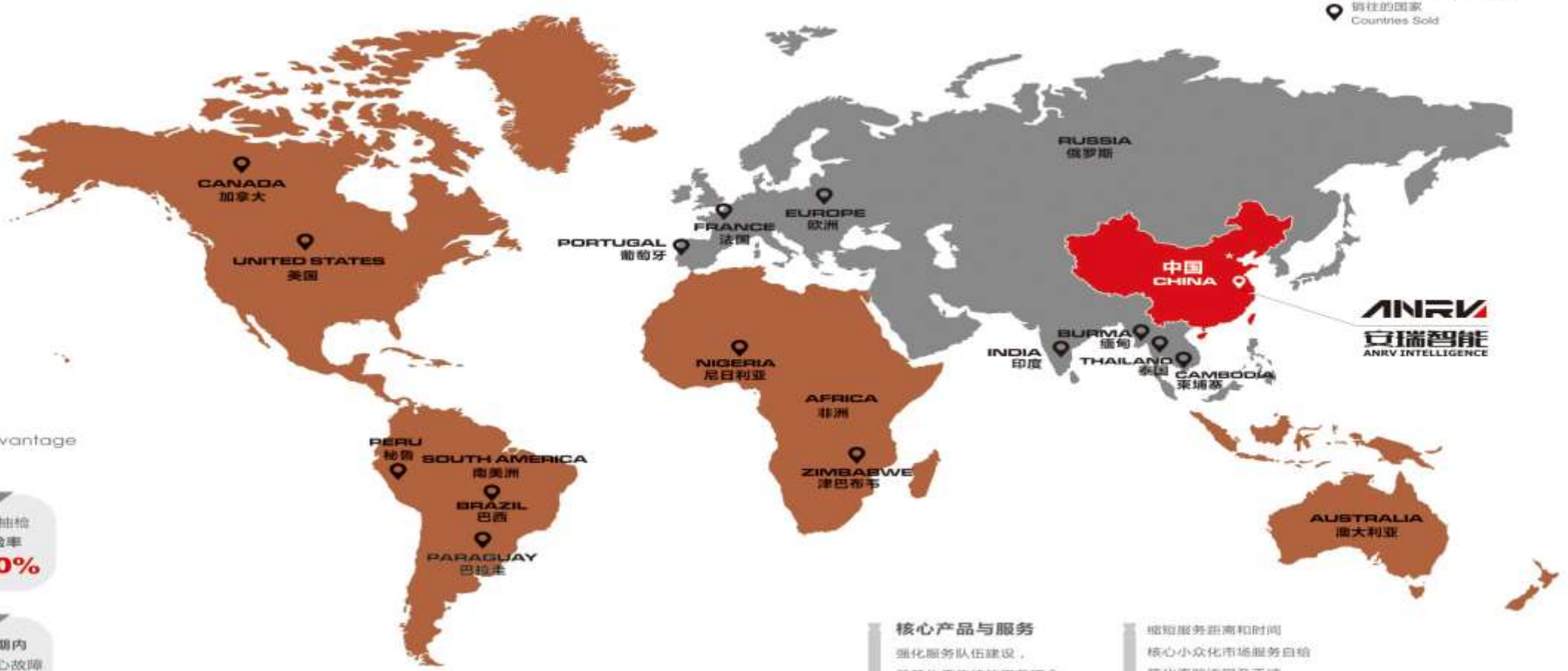


02 The key elements of corporate competition

ANRV HYDRAULIC BREAKER | 求是 务实 匠心 创新

销售网络 SALES NETWORK

安瑞凭借着细致快速的服务，优质的产品和有竞争力的价格已经在国内外市场上赢得了良好的口碑。公司产品行销全国以及北欧，法国，葡萄牙，美国，加拿大和印尼，泰国等地区。



质量优势 Quality advantage

- AR175以下 故障率 **1/300**
- 杜绝抽检 全检率 **100%**
- 宁缺毋滥 供应商零配件 优质率 **100%**
- 三包期内 出现核心故障 **只换不修**

核心产品与服务

强化服务队伍建设，
差异化于传统的服务理念
标准化服务程式

缩短服务距离和时间
核心小众化市场服务自给
简化索赔流程及手续
提升用户体验，强化口口相传，试用、以租代售混合运行。

Hydraulic Inflating Hammer

Bolt Remover

Core products and services

01 02 03 04

Portable Impactor

Drill Head

Various specifications and models of hydraulic hammer

03 Core products and services

03 Core products and services

Develop and lead a category

Hydraulic Inflating Hammer

Core Technology

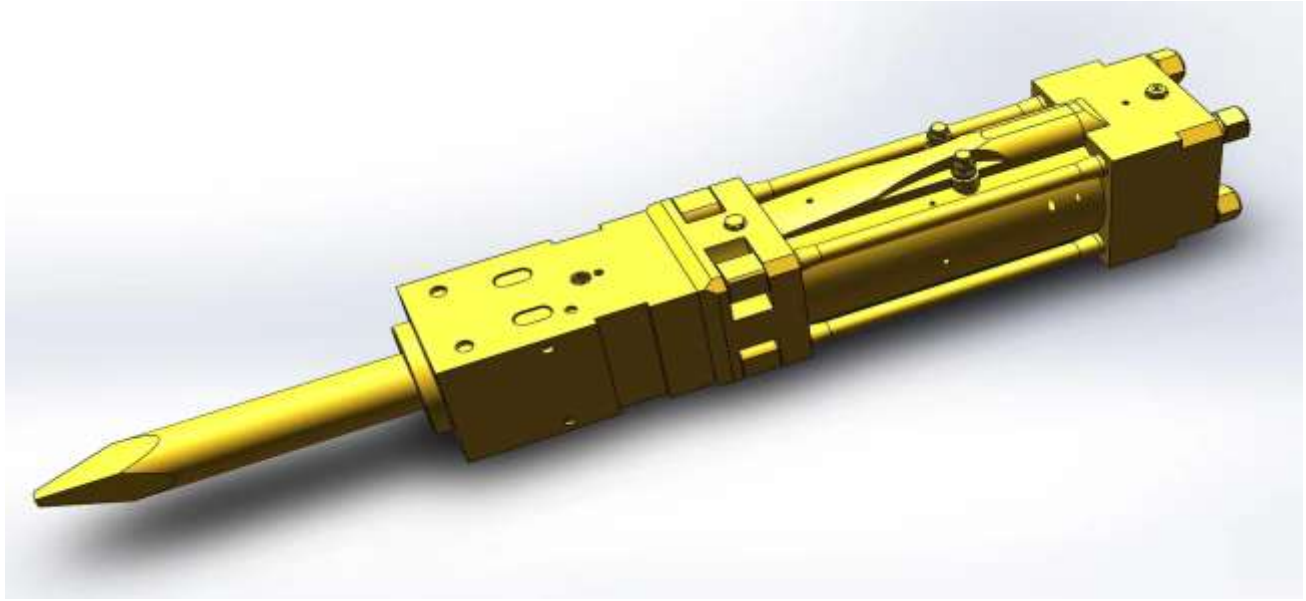
Fill the domestic gap

The pioneer in establishing national standards for hydraulic inflating hammers, with independent intellectual property rights.

The Anrv hydraulic inflating hammer combines the advantages of both pure hydraulic and nitrogen hydraulic hammers.

The unique design and external structure enhance the reliability and attractiveness of the product's performance. The first domestic use of precision sintering technology reduces manufacturing costs significantly.

It is the first globally to incorporate Tesla valves, enhancing product durability. Large-scale hammers are equipped with remote timing and GPS positioning via an accompanying mobile app, with remote non-destructive testing capabilities currently under development.



Product development background

In China, hydraulic hammer technology was introduced in the 1970s and was designated as a key technology project during the "Sixth Five-Year Plan" period. Since the early 1980s, many Chinese institutions have been involved in the research and development of hydraulic hammers, including the Beijing Metallurgical Equipment Research Institute, Beijing University of Science and Technology, and Central South University, among others. This led to the emergence of some well-known enterprises in the industry at that time, such as Giant Company, Changzhi Hydraulic, and Hunan Shanhe. Hydraulic breakers are a type of hydraulic attachment that relies mainly on the host machine for operation. They convert the hydraulic energy provided by the host machine into kinetic energy for impact, thereby achieving the function of breaking and demolition.

In the past two decades, hydraulic breakers in China have experienced rapid development, especially with the continuous research and development efforts of domestic companies like Giant, coupled with industry training. This has fueled the vigorous development of hydraulic hammers domestically. Currently, hydraulic hammer technology in China is continuously being updated, but it has been largely following the footsteps of foreign counterparts without bold innovation and invention. There is still a certain gap compared to advanced foreign technologies. While China may have surpassed foreign countries in terms of quantity, it has not yet surpassed them in terms of quality and technology.

In foreign countries, as early as 1967, Krupp introduced the first hydraulic breaker. Hydraulic breakers have undergone over 60 years of development abroad, evolving from the initial complex structure and single functionality to today's diversified and serialized products. Moreover, innovation in various fields has reached its peak, leading to the emergence of many differentiated hydraulic breaker accessories. Overall, foreign hydraulic breakers have the following advantages:

(1) High impact energy: The Korean Soosan series adopts a nitrogen hydraulic hammer.

(2) High energy efficiency: Krupp's variable frequency mode from Germany.

(3) Incorporation of empty hitting technology: Krupp from Germany can work without a pressing rod, and there is no damage to the hydraulic breaker components.

(4) Introduction of "intelligent crushing impactor technology": Stanley hydraulic breakers from the United States adjust output energy based on resistance to impacts, continuously controlling impact energy.

(5) Low noise: Korean Rammer and German Krupp's integral hydraulic breakers mostly use fully enclosed shells to minimize noise pollution.

(6) Durability of wearing parts and low failure rate.

Scenario and requirement change analysis

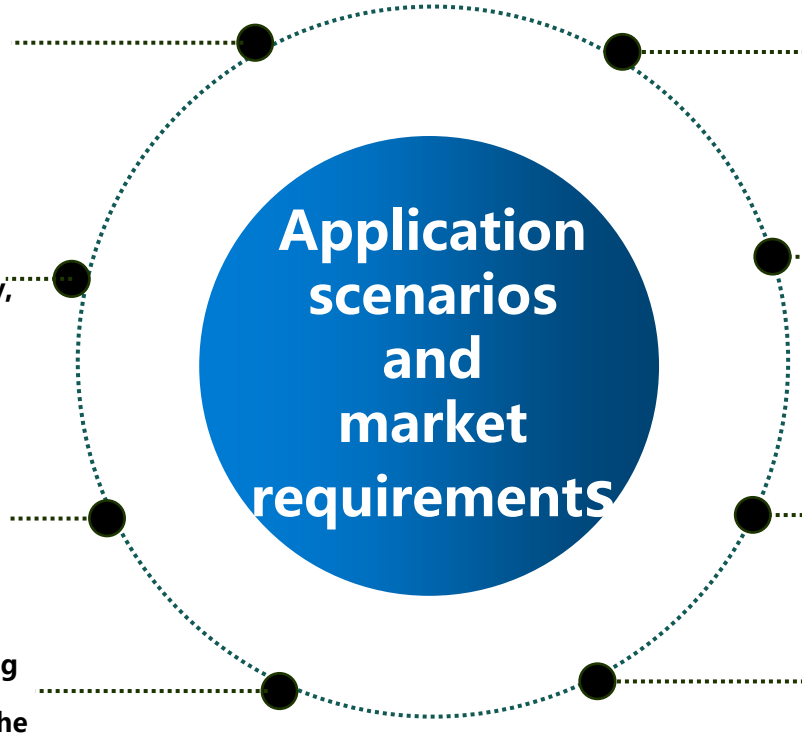
In high-frequency usage scenarios, domestic brands dominate the application product market
In low-frequency usage scenarios, imported high-end brands are more prevalent.

The mindset of large enterprises such as central enterprises and state-owned enterprises is reflected in their preference for well-established brands with high reliability and strong financial backing. They typically prioritize quality and reliability over cost-effectiveness, although there has been a shift in recent years towards considering products with higher value for money.

The application scenarios where pure hydraulic hammers excel over nitrogen hydraulic hammers include metallurgy, cement, chemical industry, sand and gravel aggregate, as well as soil sampling in tunnels.

Pure hydraulic hammers come with a high price tag, elevated usage costs, and may suffer from delayed service and extended ordering cycles.

The high-noise products domestically are having a significant impact on the environment, with the current level of government intervention being insufficient.



Domestic manufacturing companies have low recognition, and there is a shortage of advanced research and development personnel.

The industry is facing severe overcapacity, with profits for some large-scale products nearly non-existent.

In the existing market, disruptive differentiation across various industries will undoubtedly bring new opportunities for intelligent, highly durable, and user-friendly products.

Survival of the fittest; only the products best suited to users can endure.

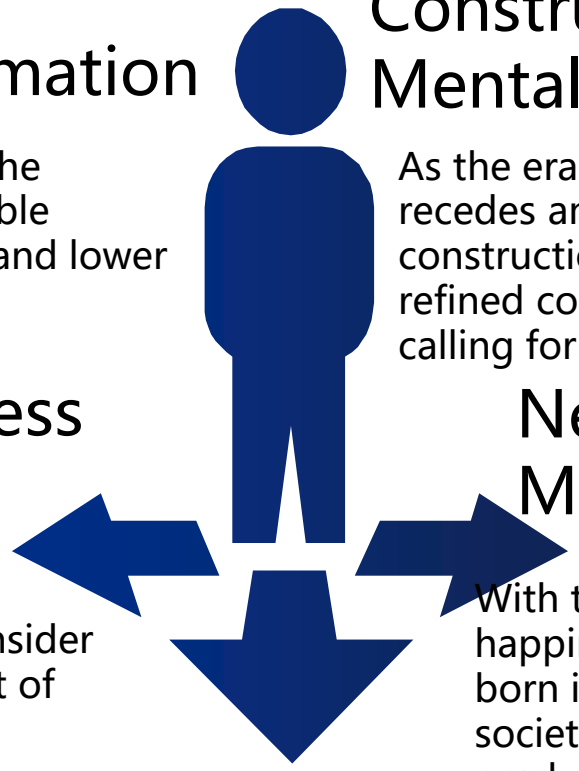
Analysis of user mental change

Labor cost Mental transformation

Labor costs are increasing, leading to the adoption of highly intelligent and reliable products to achieve greater efficiency and lower costs by replacing manual labor.

Environmental awareness Scene transformation

In line with the national strategy of dual carbon economy, users will gradually consider environmentally friendly products as part of their mental considerations.



Construction scenario Mental transformation

As the era of large-scale construction gradually recedes and the era of excessive profits in construction comes to an end, the dimension of refined construction is increasing, and the market is calling for new products with growing breadth.

New users Mental transformation

With the overall improvement of social welfare, the national happiness index is on the rise. Over the next decade, those born in the 1990s and 2000s will become the mainstay of society. The mental strength of this new generation will gradually overturn traditional construction scenes. There will be a growing demand for more intelligent, highly reliable, durable, and environmentally friendly application products.(especially products like the Hydraulic Inflating Hammer and the Universal Quick Couplers.)

Analysis of the advantages and disadvantages of pure hydraulic and nitrogen hydraulic hammers.

nitrogen hydraulic → pure hydraulic → hydraulic flating

The built-in directional valve ensures quick response and high frequency operation;
It demonstrates superior efficiency in soft working conditions, offering 1.5 times the output volume compared to nitrogen hydraulic hammers of the same model;
Its unique empty hitting structure the need for a driving rod, allowing for instant striking functionality;
This feature provides significant advantages in industries such as construction demolition, tunnel excavation, and refractory brick removal from furnaces;
Additionally, the hammer's integrated design minimizes noise while maintaining a compact and lightweight profile;
On the other hand, foreign hydraulic hammers have drawbacks, including insufficient impact force against hard materials;
Inconvenient maintenance, long lead times for spare parts procurement;
High prices, typically three to five times that of domestic models of the same type.

Superiority of nitrogen hydraulic hammers:
1. High impact force.
2. Low price, relatively economical.
3. Large market retention.
Shortcoming of domestic hydraulic hammers:
1. Slow frequency, cannot perform empty hitting.
2. Heavy, bulky, and less stable compared to foreign models.
3. It mostly used in mining industry and cannot suitable for certain specific conditions.

The product combines the advantages of pure hydraulic hammers (such as Atlas) with no need for compression and high frequency, as well as the high impact force of nitrogen hydraulic hammers (such as Furukawa). It is suitable for various applications, especially in secondary crushing in mines, the efficiency can be increased by 50%. In tunneling and demolition fields, because there is no need for compaction and the feature of working at the touch of a button reduces the driver’ s need to accurately find the point,which can greatly improve the operation effciency.

Product intellectual property

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一种钎杆非压紧状态即可工作的液压锤

(57) 摘要

本发明公开了一种钎杆非压紧状态即可工作的液压锤。缓冲腔(14)和系统高压油之间设置空打阀(18)，当活塞(5)进入缓冲腔(14)，则空打阀(18)开启，高压油进入缓冲腔(14)，将活塞(5)推出，使得液压锤工作；当活塞(5)离开缓冲腔(14)，则空打阀(18)关闭，切断油路，解决了液压锤启动和工作的过程中必须压紧钎杆(10)，使用钎杆(10)将活塞(5)顶出缓冲腔(14)的技术问题。有效的提高了液压锤对物料的二次破碎效率及表面附着物清除破碎的可操作性。

证书号第15715449号

实用新型专利证书

实用新型名称：一种钎杆非压紧状态即可工作的液压锤

发明人：罗斌；邱东峰

专利号：ZL 2021 2 2139160.2

专利申请日：2021年09月06日

专利权人：安徽安瑞智能工程机械有限公司

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授权公告日：2022年02月01日　　授权公告号：CN 215715667 U

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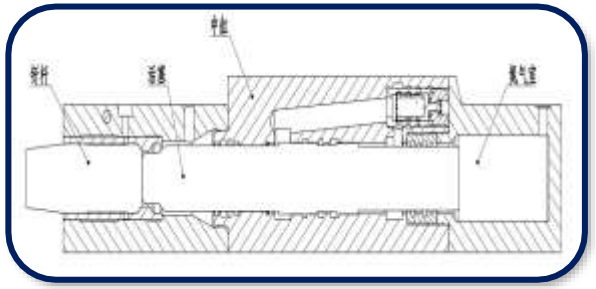
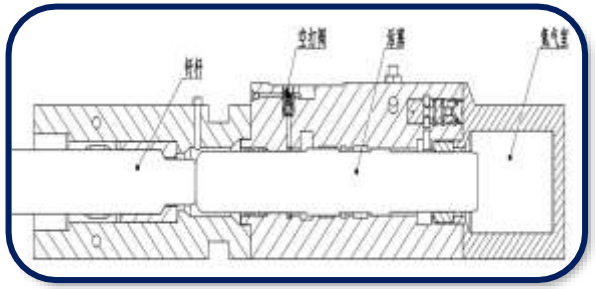
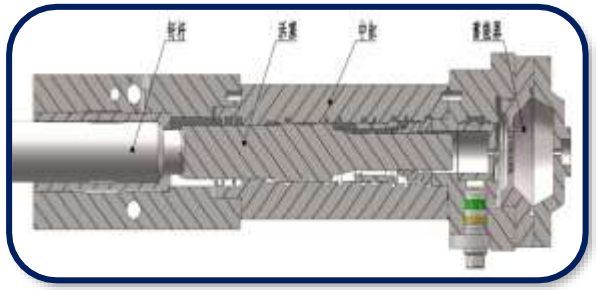


Nitrogen Hydraulic Hammer



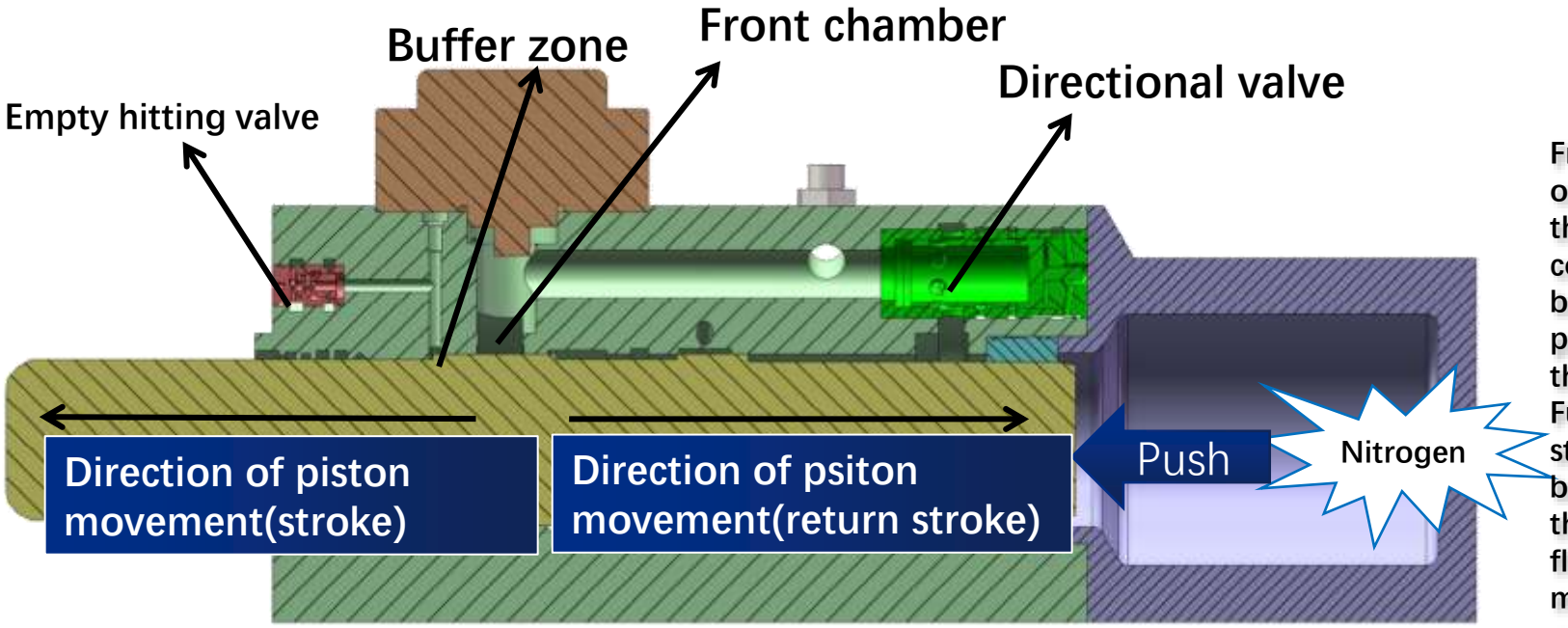
Hydraulic Infalting Hammer



Pure Hydraulic Hammer

Product principle and characteristics

(1) The reason why conventional hydraulic hammers cannot perform an empty hitting valve is that the nitrogen gas in the chamber pushes the piston into the buffer zone. As a result, the high-pressure oil in the front chamber cannot enter the buffer zone, causing the piston's front end to lack thrust. Consequently, the piston cannot undergo a return stroke, rendering conventional hydraulic hammers unable to perform an empty hitting.



(2) **Solution: Introduce the high-pressure oil from the front chamber into the buffer zone, but it cannot be directly introduced. This is because during the piston stroke, its inertia will compress the hydraulic oil in the buffer zone, generating a pressure P1. P1 is connected to the pressure P of the entire hydraulic system, and collision occurs between them, causing hydraulic system disorder. Therefore, by designing a valve similar to a one-way valve, known as the empty hitting valve, this problem can be effectively solved (allowing oil flow in one direction only). This enables the empty hitting function of the hydraulic hammer to be resolved.**

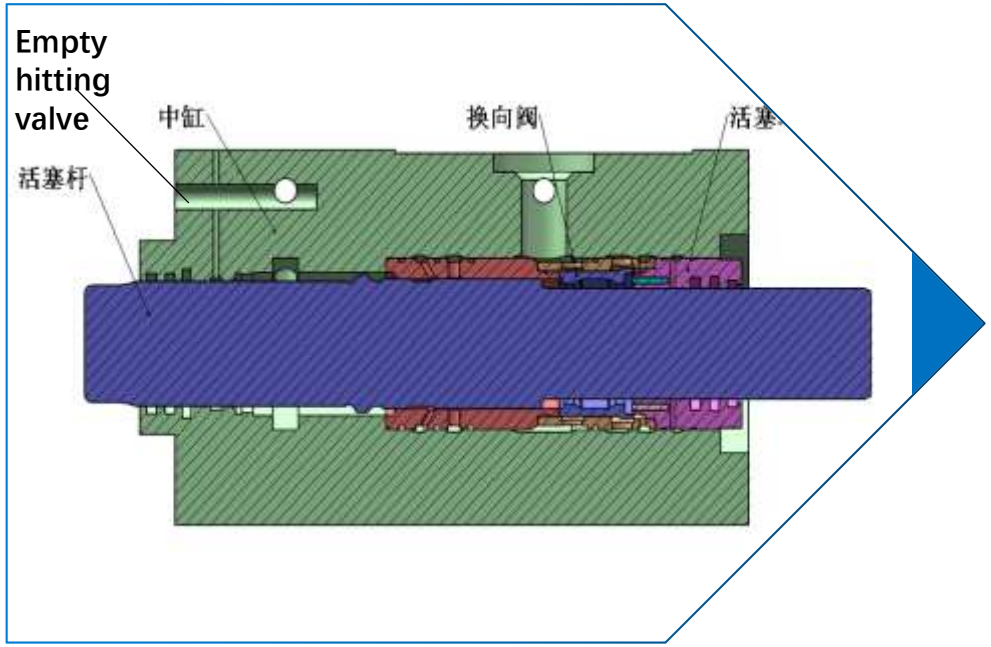
(3) Increased Impact Force and Frequency: By increasing the volume of the nitrogen chamber, increasing the nitrogen storage capacity, and compression ratio, the instantaneous burst thrust of nitrogen during the piston stroke is increased to enhance the piston's hitting force. Furthermore, by designing the piston stroke and the difference in area between the front and rear faces of the piston, as well as utilizing high-flow directional valves, the piston's movement and directional change speed are increased within a specified range of main machine flow, thereby achieving the characteristics of increased frequency and enhanced hitting force.

Top Type:
The working range is large, and the precision strike can be achieved within 180 degrees in front of the host

Box Type: Special type for high temperature environment of steel mill, the housing is completely enclosed, and it is equipped with shock-absorbing pads to effectively reduce noise pollution

Side Type: Special demolition type, add a cover plate of wear-resistant material in front of the shell to reduce scratches brought by steel bars; A zigzag plate is designed below to smash the reinforced concrete in order to retrieve the steel

03 Core products and services



01 High Frequence:Unique cylinder design,built-in directional valve for quick response.

02 New Invention：Empty hitting is no need to give pressure on objects,easy work for driver who do not need to find a spot.

03 High Efficiency：The work efficiency increased 15-50% than normal hydraulic hammer.

04 Modern Technology：Circular sharp design cryogenic treatment,optimized hydraulic system.

05 New Material：Customized material to extended service life.Nice and durable.

06 Lower Investment：Efficiency comparable to 155 and 165 crushing hammer，low excavator costs.

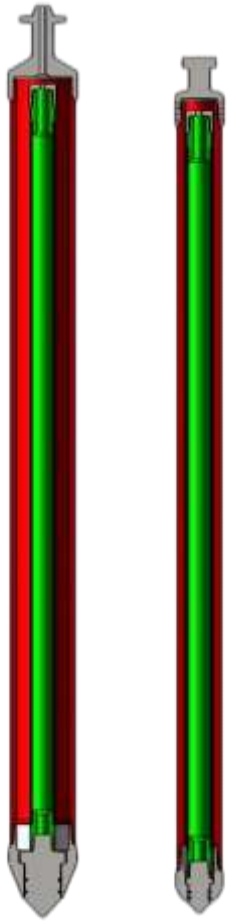
07 Wide Range Of Applications：Suitable for special working conditions in the construction demolition industry,tunnel excavation,furnace and kiln refractory brick removal,metallurgical industry,etc.

08 Low Failure Rate：30% reduction in

Site Video

Environmental protection products

Multi-function Rotary(Drill head)



Sampling rod

Big and small auger rod

Handle hold hydraulic hammer

1.Working Oil Pressure:110—150Bar;
2.Working Flow:40—70（L/min）;
3.Impact Energy:280（J）;
4.Rod Diameter:φ63mm;
5.Weight：136kg;
6.Connection dimensions of the inlet and outlet ports：G3/4'';
7.Hitting Frequency：500—1400（times/min）;
8.Theoretical Travel：33mm。

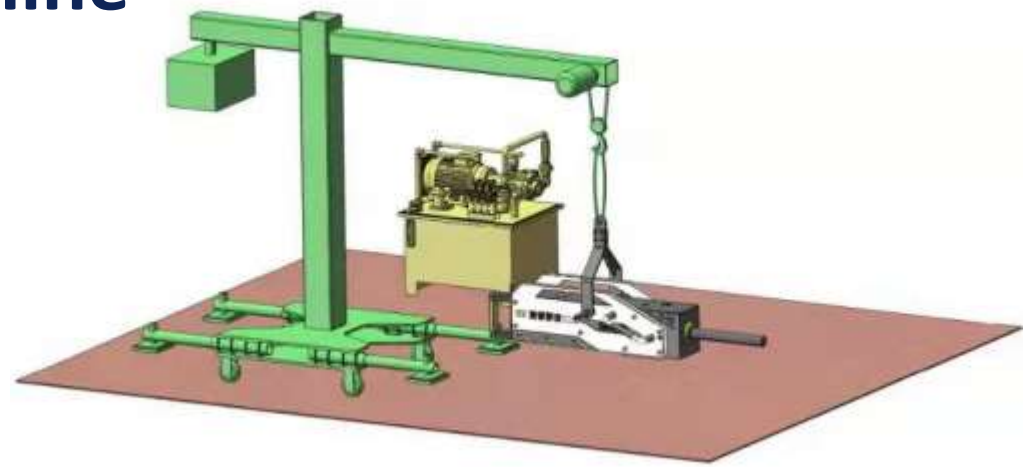
1. Working Oil Pressure:90—120Bar;
2. Working Flow:25—50（L/min）;
3. Impact Energy:300（J）;
4. Rod Diameter:Φ53mm;
5. Weight: 138kg;
6. Connection dimensions of the inlet and outlet ports: G3/4'';
7. Hitting Frequency: 500—1100（times/min）;
8. Theoretical Travel: 35mm。

Intelligent portable soil sampler

1、Pressure：90-120Bar；Flow：15-35L/min；
3、Nitrogen Pressure：6-12Bar；
5、Rod Diameter：φ40；
7、Impact Energy：130J。

2、Movement Weight：32.8Kg；
4、Frequency：800-1400Bpm；
6、Hammer head oil inlet and outlet threads：G3/8''；

Anrv intelligent shaft dismantling machine



With the continuous improvement and upsizing of mining equipment, the degree of automation of the removal of internal lining bolts of large shafts and mills has also been continuously improved. At present, when domestic enterprises replace linings, most of the linings of various shafts and bolts are removed. The manual impact type results in low work efficiency, high labor intensity, potential safety hazards, long lining replacement time and backward technology.

Our company's smart shaft remover is a product developed to improve this traditional method of removing shafts and bolts and shorten maintenance time. It is driven by hydraulic power and emits more than ten times the force of a normal person's sledge hammer. The striking power is high, and it can deliver 1-500 strikes per minute without the need to pause and rest. It gives workers a delicate, flexible and extremely powerful striking tool, which greatly improves the utilization rate of the equipment and brings higher benefits to the using units.

Product performance parameters

Model	85	100
Impact Energy（J）	1000~1280	1300~1580
Impact Frequency (次/min)	Adjustable 1-500	Adjustable 1-500
Impact Rod Diameter（mm）	≤ φ85	≤ φ100
Weight（kg）	≤ 450	≤ 650
Disassembly Diameter（mm）	φ45 ~ φ180	φ45 ~ φ180

Hydraulic system parameters

Working pressure	≤20 Mpa
Working Flow	≤ 100 L/min
Oil Supply Mode	Customer host oil source, factory equipped with oil source

Application Area

◆ 1 Oilfield derrick Pin removal

The traditional method of disassembling and assembling the derrick pins in drilling oil fields requires a large number of people, is heavy workload, time-consuming, labor-intensive, and has low efficiency. It faces various occupational hazards, such as falling from heights, hazards from mechanical equipment, etc., during which personal injury accidents are prone to occur. Therefore, adopting The intelligent shaft disassembly machine can complete the disassembly task efficiently, quickly and safely.

◆ 2 Artificial diamond Removing the pin shaft of the six-sided press

It has the characteristics of large impact, no recoil, simple operation, safety and reliability.

Only two people can complete the removal of the pin with a diameter of 180mmx700mm and 190mmx700mm from the matching gap in the 0.08-0.1mm hole.

◆ 3 Concrete collapse test,excavator and other large engineering machinery pin removal

It can reduce the difficulty of disassembly, improve work efficiency, and not damage the main components; it can replace the traditional methods of jack pressure and manual impact.

◆ 4 Removal of all mill liner bolts.

Intelligent shaft removal machines are widely used in the removal and replacement of lining bolts of various ball mills. The bolt disassembly cart developed on this basis has the advantages of convenient walking, accurate positioning, high work efficiency and low cost compared to the current traditional machine and station separated disassembly devices.

Anrv intelligent shaft dismantling machine

Six advantages

01 New Design

03 New Material

02 Modern Technology

Can realize stepless frequency modulation and make it more convenient to use

05 Low Failure Rate

Light weight and few faults

The hydraulic inflating hammer using independent intellectual property rights

04 Low-energy

can be truly **recoilless**, In the past,the equipment required multiple people to control the situation,but now one person can easily solve it;it is light in weight and has fewer faults.

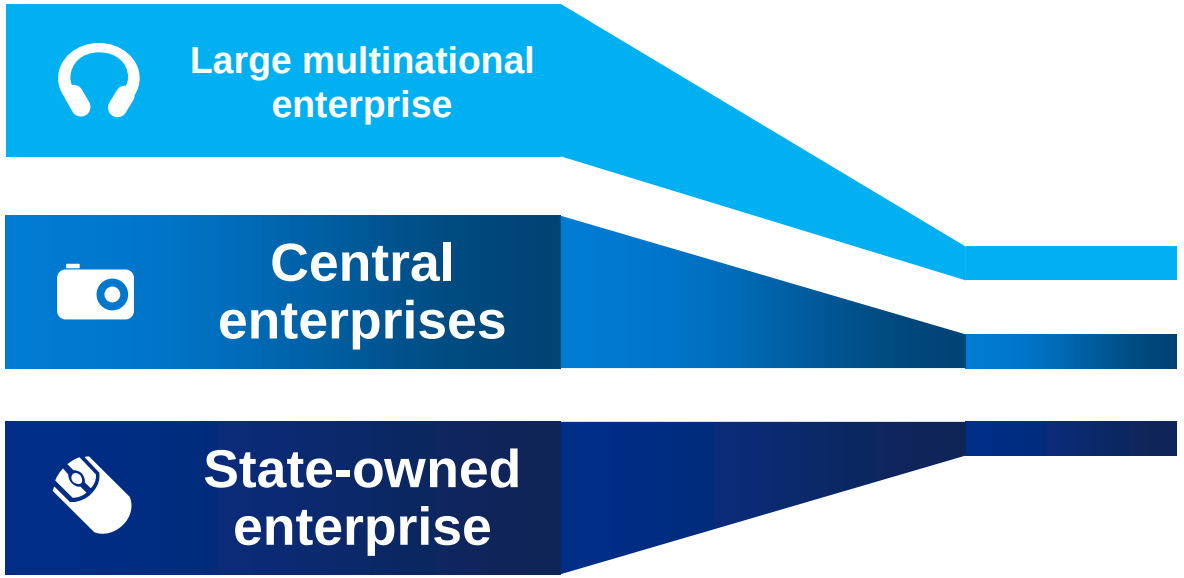
06 Low Investment

CORE COOPERATIVE ENTERPRISE

Qualified supplier of Hitachi Construction Machinery

Qualified supplier of Aluminum Corporation of China Limited

Baowu Meishan iron、YuChai



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