



工作效率 WORKING EFFICIENCY

高效：通过自主研发的蓄能系统，与挖掘机技术完美融合，使挖掘机在相同的功率下，斗容可加大80%，动作增快，实现工作效率提高100%的目标，施工期大幅缩短。

Efficient: Through the independently developed energy storage system and perfect integration with excavator technology, the bucket capacity of the excavator can be increased by 80% at the same power, the action can be accelerated, and the goal of improving work efficiency by 100% can be achieved, greatly shortening the construction period.

环保 ENVIRONMENTAL PROTECTION

环保：气弹簧中的高压气体循环使用，使得挖掘机发动机的作业功率减小，排放量降低一半以上，有效降低机械使用成本。绿色能源让油耗降低50%以上，有效控制了污染物的排放，减轻大气污染，为我们的后人创造美好的明天。

Environmental protection: The high-pressure gas in the Nitrogen cylinder is recycled, reducing the operating power of the excavator engine and reducing emissions by more than half, effectively reducing the cost of mechanical use. Green energy has reduced fuel consumption by more than 50%, effectively controlled pollutant emissions, reduced air pollution, and created a better tomorrow for our future generations.

I 氮气弹簧 Nitrogen cylinder

气弹簧是双壹机械于2014年研发出的专利产品（专利号201520795941.9），它是一种新型的蓄能节油装置，运动独特的“气体储存系统”，使其进行能量循环使用，并作为辅助能量与机械主动力源共同向挖掘机的作业装置负荷提供能量，解决了挖掘机动臂的自重问题，以达到无需启动发动机即可支撑挖掘机大臂举升的目的。安装后用户可节约油耗50%以上，提高大臂举升力，加大斗容80%，工作速度增快，有效降低施工成本。

Nitrogen cylinder is a patented product developed by Shuangyi Machinery in 2014 (patent number 201520795941.9). It is a new type of energy storage and fuel saving device, with a unique "gas storage system" that enables energy circulation and provides energy to the working device load of the excavator as auxiliary energy and the main power source of the machinery. It solves the problem of the self weight of the excavator boom and achieves the goal of supporting the lifting of the excavator boom without starting the engine. After installation, users can save more than 50% of fuel consumption, increase the lifting force of the boom, increase the bucket capacity by 80%, increase working speed, and effectively reduce construction costs.

PART 01

PART 02

PART 03

PART 04



Fuel consumption

燃油消耗

节能：经过严格的工况测试，标准的挖掘机安装气弹簧后，用户可节省燃油50%以上，有效降低了使用成本，这对终端用户而言，具有重要的意义。

Energy saving: After rigorous working condition testing, standard excavators equipped with Nitrogen cylinder can save users more than 50% of fuel, effectively reducing usage costs. This is of great significance to end users.



斗容 A SURNAME

先进：挖掘机借助气弹簧的助力，可以增加工作装置的长度及重量，或者将工作装置的重量化为土石方的重量。以一台240型的加长臂挖掘机为例，常规的臂长为21米，斗容0.6立方；很多工程满足不了要求，可挖掘机再加长就带不动了，大臂举不起来。通过借助气弹簧的助力，大臂提升力度增大了，臂的长度可加长至32米，斗容加大至1.4立方；不仅工作范围广了，工作效率提高了，租赁价格自然上涨了。

Nitrogen cylinder, excavators can increase the length and weight of the working device, or convert the weight of the working device into the weight of earth and stone. Taking a 240 type extended arm excavator as an example, the conventional arm length is 21 meters and the bucket capacity is 0.6 cubic meters; Many projects cannot meet the requirements, but if the excavator is further extended, it cannot be moved and the boom cannot be lifted. By utilizing the assistance of Nitrogen cylinder, the lifting force of the boom has increased, the length of the arm can be extended to 32 meters, and the bucket capacity has been increased to 1.4 cubic meters; Not only has the scope of work expanded, but work efficiency has also improved, resulting in a natural increase in rental prices.