



HYDRAULIC-ELECTRIC  
INTEGRATED SYSTEM &  
CYLINDER FOR HIGH-LEVEL  
AGRICULTURAL  
MACHINERY

**FAST**<sup>®</sup>  
法斯特

[www.fasthydraulic.com](http://www.fasthydraulic.com)



YANTAI FUTURE AUTOMATIC  
EQUIPMENTS CO., LTD



>>QUALITY CREATES FUTURE

Try to be one of the best brands in the hydraulic & electric integrated system



## ABOUT US

Yantai Future Automatic Equipments Co., Ltd. was founded in 1973 and located in Yantai, China. It is a high-tech enterprise with hydraulic-electric integrated control technology and high-level pneumatic control technology. The company covers an area of nearly 60,000 square meters and has more than 470 employees. More than 70 of them are engineers, including 12 senior engineers. We also hire many technical experts from home and abroad as consultant. So far, Yantai Future has owned 772 sets of various production and laboratory testing equipment and 13 professional cylinder production lines. We have also obtained 89 national patents, including 9 invention patents.

The company's main products are hydraulic cylinders, hydraulic integrated systems, hydraulic intelligent equipment, EPC project, high-level pneumatic cylinders and pneumatic systems. The products are certified by ISO9001, IATF16949, and DNV. Now it has an annual production capacity of 400,000 cylinders and 3,000 sets of integrated hydraulic-electric systems.

Our products are widely used for industries such as special vehicles, solid waste disposal, rubber machinery, high-level agricultural machinery, construction machinery, metallurgy, military, ocean engineering, electronics, chemical industry, machine tools, etc. Yantai FAST is an excellent supplier of hydraulic cylinder in the field of engineering machinery. Our products are widely used in engineering machinery such as aerial work platforms, truck mounted cranes, loaders, forklifts, road rollers, scrapers, mini excavators, etc. With compact structure and high-quality seals, the cylinders are reliable, stable with longer service life which can meet the customer's requirement.

Based in Jiaodong, our products have been used all over the world. Besides Chinese Mainland, Hongkong, Taiwan, our hydraulic cylinders and hydraulic systems are also exported to Japan, Germany, US, Italy, Canada, Denmark, Sweden, Iran, Russia, Southeast Asia, etc.

Adhering the core value of "Quality Creates Future", Yantai Future is steadily moving towards the vision of "Becoming an expert brand company in the field of hydraulic engineering technology"!

YESTERDAY



TODAY



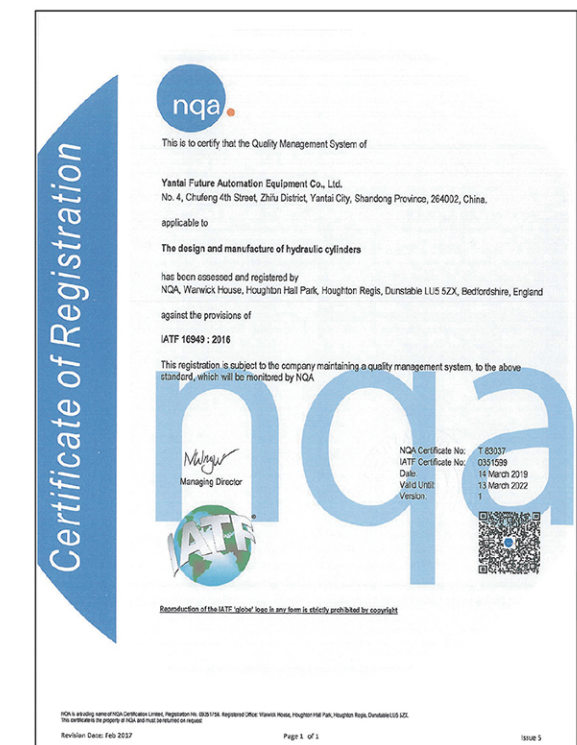
## MILESTONES

- 1973, Yantai Pneumatic Works
- 1975, XZB semi-automatic pneumatic casting production line
- 1982, QBI packing machine
- 1983, Light aluminium pneumatic cylinder
- 1984, Bao Steel supplier
- 1985, lifetime project for pneumatic cylinder
- 1986, QGAI- QGAI pneumatic cylinder
- 1986, Provincial enterprise
- 1987, National enterprise
- 1988, KQG magnetic pneumatic cylinder
- 1990, QGK pneumatic rotary actuator
- 1992, 915 series pneumatic cylinder
- 1993, Hydraulic cylinder manufacturer
- 1995, F25 series group valves
- 1997, K series group valve
- 2000, ZG vibrate cylinder
- 2000, ISO9001 by DNV
- 2001, Yantai Future Automatic Equipments Co., Ltd.
- 2003, Provincial calibration enterprise
- 2005, Import & Export certificate
- 2006, Hydraulic cylinder for garbage trucks
- 2008, Automatic reciprocate pneumatic cylinder
- 2008, Blade swing hydraulic cylinder
- 2009, Invention patent for automatic reciprocate pneumatic cylinder
- 2010, Provincial high-tech enterprise
- 2010, Invention patent for electric pull-push tool
- 2011, YYFH hydraulic cylinder for garbage trucks
- 2011, Famous brand of Shandong Province
- 2012, Famous-brand hydraulic cylinder product
- 2013, City level Engineering research center
- 2013, National hydraulic & pneumatic prize
- 2014, Provincial Engineering research center
- 2014, ISO/TS16949 certificate
- 2015, Invention patent of pneumatic striking cylinder
- 2015, Invention patent of hydraulic lifting machine
- 2015, Invention patent of sequence control multistage ram cylinder
- 2015, FSL hydraulic control system for waste incineration
- 2016, Hydraulic system and cylinder for HPU982 offshore drilling platform certified by DNV.
- 2016, Hydraulic cylinder supplied for US famous car lift manufacturer finished 20000 cycles life test.
- 2017, A famous Australia agricultural manufacturer visited our factory and start the cooperation.
- 2017, Certified by new version of ISO9001:2015.
- 2018, Start to use PLM system.
- 2018, We produce totally 200,000 pcs hydraulic cylinders for the first time. All the cylinders are made on the production line and the production capacity can reach 400,000 pcs hydraulic cylinders.

## ISO 9001 SINCE 2000



## IATF16949 SINCE 2014



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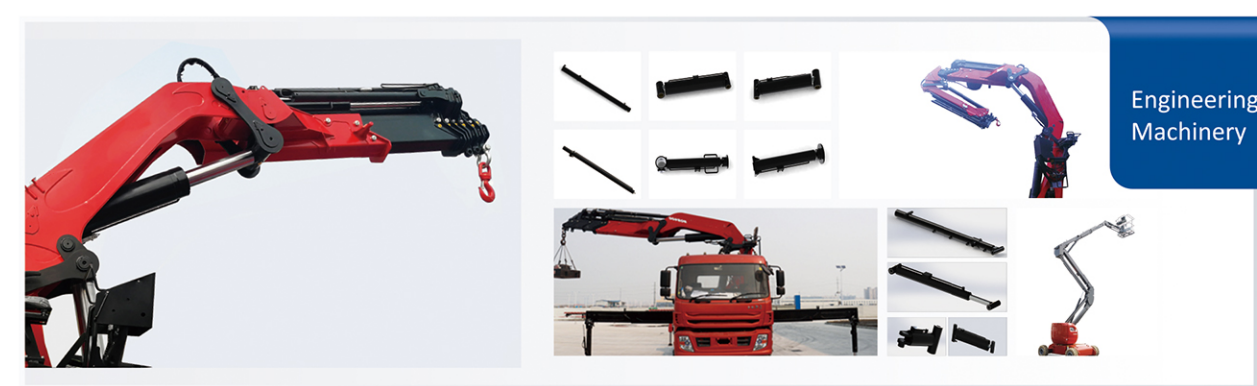
## Service Industry

Eco-environmental Truck



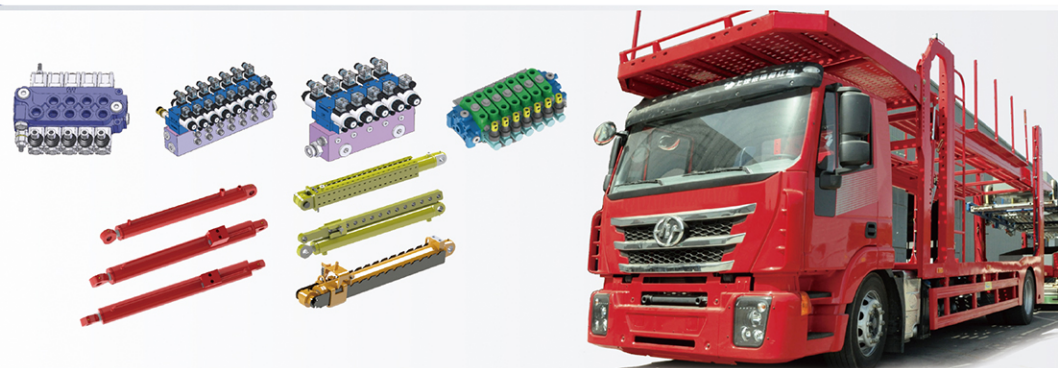
Car Lift

Refuse Incinerator



Engineering Machinery

Car Transporter



High-Level Agricultural Machinery

Rubber Machinery



Offshore Industry

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\*This catalogue only introduces our cylinders and service for agricultural machinery.

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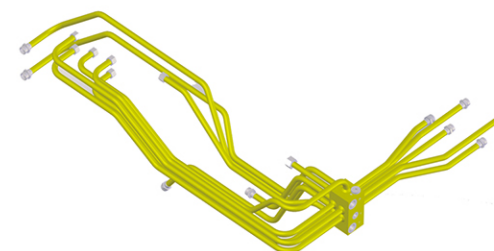
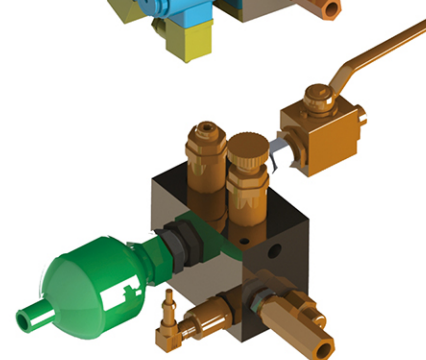
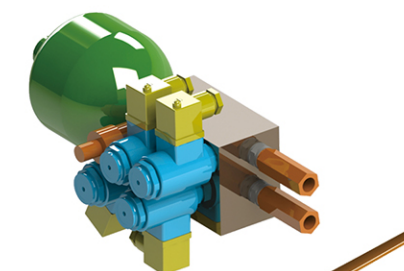
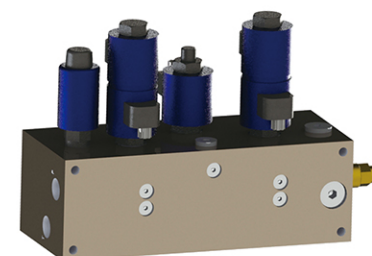
## Hydraulic -Electric Integrated System for Round Baler

We have developed the hydraulic integration system for round baler, which can bale the size to  $\phi 1.2 \times 1.4$  meter, weight up to 500 kg.

The whole system includes hydraulic system, pipe, hydraulic cylinder, etc, which provide the customer with complete solution of hydraulic system.

All the control valves are imported from USA with high performance, which satisfies the demands of small working space and high stability. For the pipe, we use numerical control pipe bender to assure the size. For the valve block, we do nickel plating to avoid corrosion.

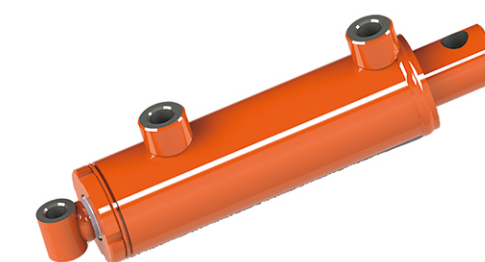
### >Hydraulic System



#### Hydraulic System

Main parameters:  
 Max working pressure:20 MPA  
 Max volume:22L/min  
 Voltage of solenoid valve 12V  
 Filtering accuracy:10  $\mu$ m

### >Hydraulic Cylinder



**Baler net cylinder**  
 FYK-40/20X70-205



**Baler cutter cylinder**  
 FYK-40/20X70-214



**Bottom cylinder**  
 FYK-30/25X140-310



**Ram cylinder**  
 FYK-40/20x297-520



**Supporting cylinder**  
 FYK-50/30X500-700



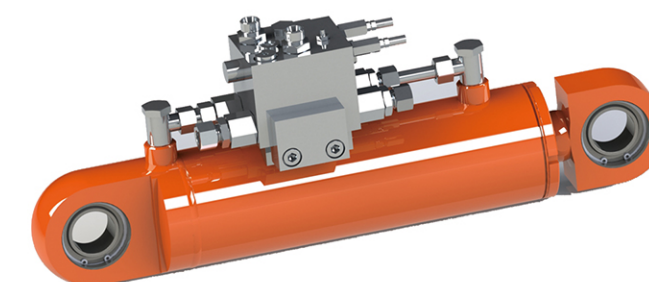
## Hydraulic Cylinder for Plough

FAST Hydraulic Cylinder for turning plough mainly includes turning hydraulic cylinder and hydraulic cylinder adjusting working width. For the turning hydraulic cylinder, the control valve is imported. For the hydraulic cylinder to adjust working width, there are 2 Pilot Check Valves to the right position. All seals are imported. With beautiful appearance, stable quality and long service time, the cylinder PPM is lower than 5000.

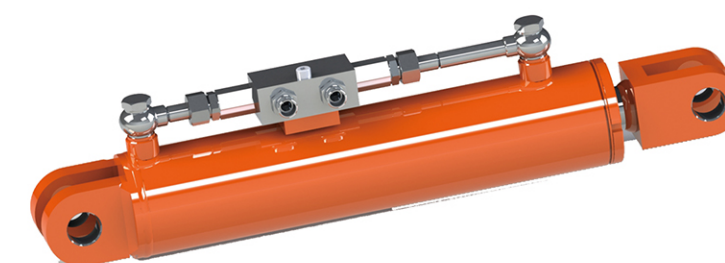
## >Hydraulic Cylinder



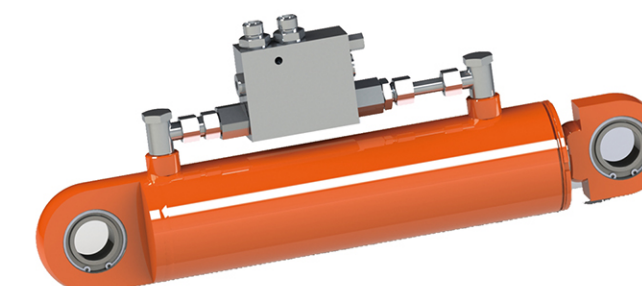
**Side cylinder**  
FFZL-100/50X120-885



**Turning cylinder**  
FFZL-90/45X234-482



**Inside cylinder**  
FFZL-80/40X320-573



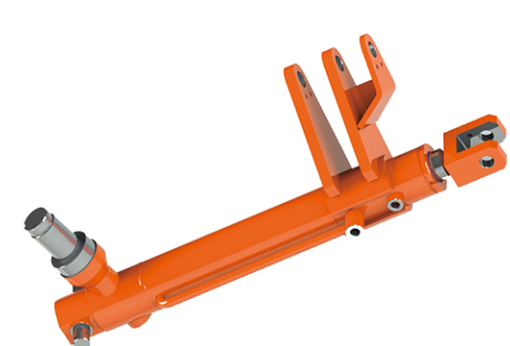
**Plough turning cylinder**  
FFZL-80/45X240-462



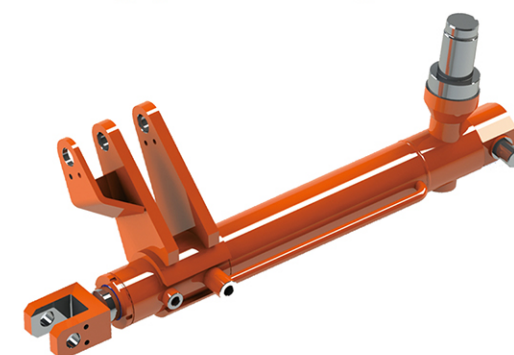
### Hydraulic Cylinder for Sugarcane Harvester

According to different function, the cylinder used for sugarcane harvester is designed accordingly with different seals and parts. With suitable structure and technology, it can meet the requirements for different working conditions. All seals are imported. With beautiful appearance, stable quality, long service time, the cylinder PPM is lower than 5000.

### >Hydraulic Cylinder



Lifting cylinder for the right front wheel



Lifting cylinder for the left front wheel



Lifting cylinder for elevator



Lifting cylinder for hopper



Lifting Cylinder for fan



Steering cylinder



Cutting cylinder



Cylinder with level indicator



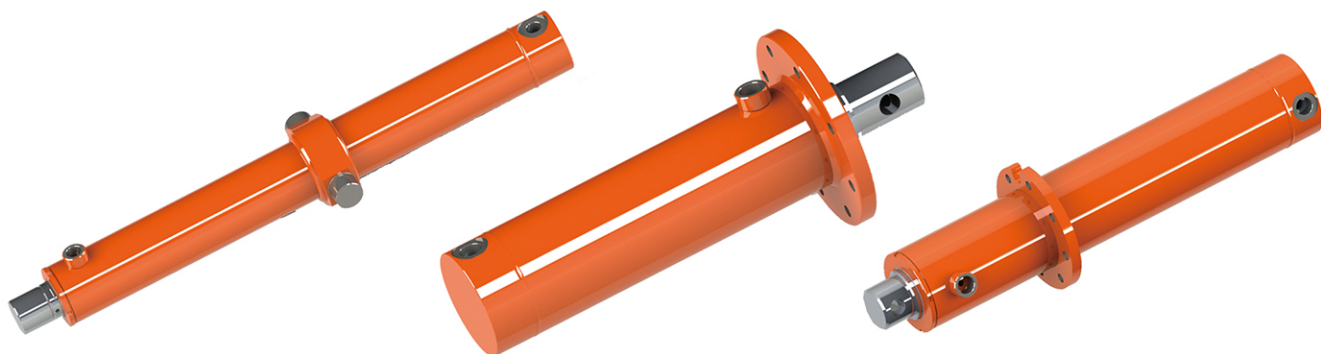
Cylinder for ridging





## Hydraulic Cylinder for Press- Baler

FAST cylinders mainly have 3 models for baler, pushing cylinder, main cylinder and pressure cylinder. With right structure and technology, it can meet the requirements for different working conditions. All seals are imported. With beautiful appearance, stable quality and long service time, the cylinder PPM is lower than 5000.



**Main cylinder**  
FYK-110/80X900-1235

**Pressure cylinder**  
FYK-160/120X400-860

**Push cylinder**  
FYK-160/120X820-1140



## Hydraulic Cylinder for Sowing Machinery

Two cylinders in series connection to achieve lifting and back. With one-way valve on the cylinder, which can effectively realize exhaust and guarantee the synchronization accuracy of the two hydraulic cylinders. With right structure and technology, it can meet the requirements for different working conditions. All seals are imported. With beautiful appearance, stable quality and long service time, the cylinder PPM is lower than 5000.



**Φ63.5 synchronous cylinder**  
FBZ-63.5/40X200-456

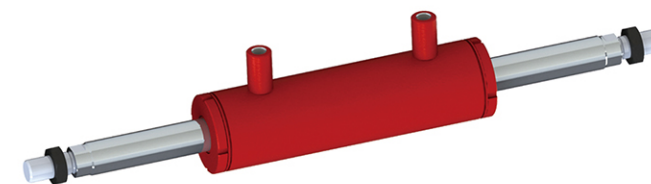
**Φ75 synchronous cylinder**  
FBZ-75/40X200-456



## Hydraulic Cylinder for Large & Medium Size Tractor

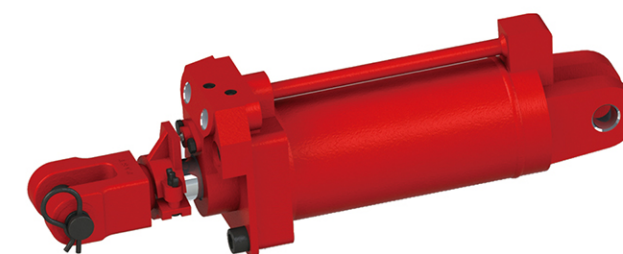
FAST hydraulic cylinders for medium and large tractors mainly include steering cylinder and lifting cylinder. Steering cylinder is a double-rod cylinder. The special design for lifting cylinder can reach different strokes. Fast has years of experience of cylinder for agricultural machinery. With rich design experience, mature technology and stable quality, our PPM is lower than 5000.

### >Hydraulic Cylinder



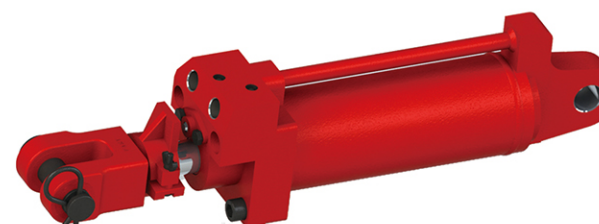
#### Steering cylinder

FN-TL-ZX-01 double-rod cylinder with simple mounting type. All the seals are imported. Working temperature is -20°C to 80°C



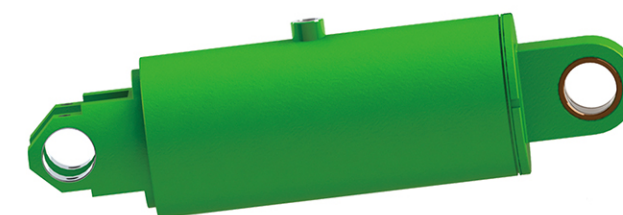
#### Lifting cylinder

SF-700 cylinder is designed with clevis-connecting means and adjustable stroke. All seals are imported. Working temperature is -20°C to 80°C



#### Lifting cylinder

SF-800 cylinder is designed with clevis-connecting means, with adjustable stroke and high performance. All seals are imported. Working temperature is -20°C to 80°C



#### Lifting cylinder

2304.54.010-00 cylinder is single-acting ram cylinder. The end cap is thread connected with high performance. All seals are imported. Working temperature is -20°C to 80°C



#### Lifting cylinder in the right

N1454.54.011-A cylinder is clevis-connecting means, which is simple and stable. All seals are imported. Working temperature is -20°C to 80°C



#### Lifting cylinder in the left

N1454.54.010-A cylinder is clevis-connecting means, which is simple and stable. All seals are imported. Working temperature is -20°C to 80°C

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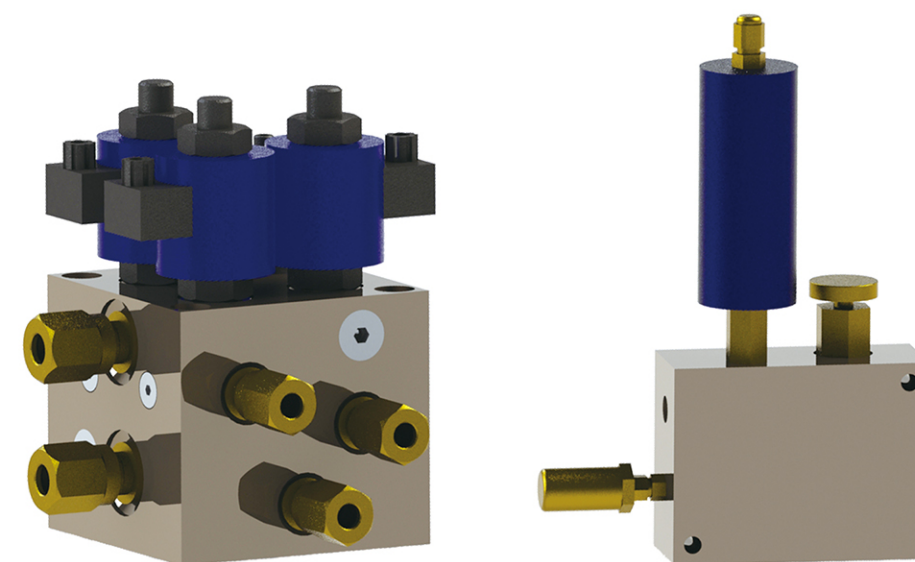
## Hydraulic - Electric Integrated System for Square Baler

FAST has produced hydraulic cylinders used on balers for many years. Now we have developed our own standard products. In consideration of the working condition, the seal structure and installation parts were designed reasonably. All seals are imported. The structure, parts, seals, materials and processing technology have been fully standardized. With beautiful appearance, stable quality and long lifetime, the cylinder PPM is lower than 5000.

### >Hydraulic System

**Main Parameters:**

- Max working pressure: 21MPa
- Max flow: 20L/min
- Control voltage of solenoid valve: DC24V
- Filter precision: 10 μm



### >Hydraulic Cylinder



Hydraulic Cylinder	Model	Introduction
Pickup Cylinder	9FG-7.0-2.2-006-30	Single ear connectors on both ends, practical and beautiful, compact and durable internal structure, superior imported seals, working temperature -40oC – 80oC
Pressurization Cylinder	9FG-7.0-2.2-007-13	Tie rod cylinder, clevis connectors with pins, compact and durable internal structure, stable performance, superior imported seals, working temperature -40oC – 80oC



## Hydraulic-Electric Integrated System for Stacker

We provide a full set of hydraulic-electric system solutions. The Stacker Hydraulic-electric Integrated System includes a hydraulic system, pipes, hydraulic cylinders, motors and a electricity control system. All of the control valves are imported high-performance cartridge valves. The pipes are produced by numerically-controlled bending machines, which can ensure the precision of pipes. To avoid the corrosion, the valve blocks are nickel plated. With an integrated board electric control module, the loosing of the electrical elements can be prevented effectively. With these methods, the trouble spots will be reduced and the whole system will be more reliable.

FAST standard hydraulic cylinders for stackers mainly includes one No. 1 hydraulic cylinder, two No.2 hydraulic cylinders, two No.3 hydraulic cylinders, two No.4 hydraulic cylinders, one No.5 hydraulic cylinders, two No.6 hydraulic cylinders, two No.7 hydraulic cylinders, and two No.8 hydraulic cylinders. FAST has produced hydraulic cylinders used on balers professionally for many years. Now we have developed our own 9FG Standard products. The structure, parts, seals, materials and processing technology have been fully standardized. Good looking, stable quality, long lifetime, PPM < 1000.

### >Hydraulic System

#### Main Parameters:

Max working pressure: 20MPa

Max flow: 26L/min

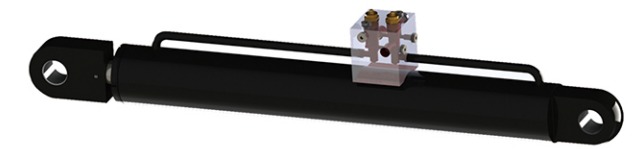
Control voltage of solenoid valve: DC12V



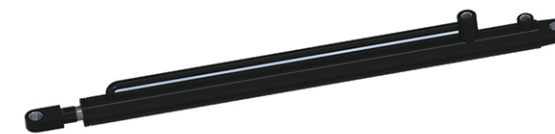
### >Hydraulic Cylinder



**No.1 Hydraulic Cylinder** JCYG-01 Simple mounting structure and good performance. Imported superior seals. Working temperature -20oC-80oC.



**No.4 Hydraulic Cylinder** JCYG-04 With a counterbalance valve. Simple mounting structure. Imported superior seals. Working temperature -20oC-80oC.



**No.2 Hydraulic Cylinder** JCYG-02 Thread connectors that are easy to be mounted. Imported high-performance seals. Reasonable and compact internal structure. Working temperature -20oC-80oC.



**No.5 Hydraulic Cylinder** JCYG-05 With a balance valve. Its smart shape can save the mounting space. Good performance. Imported superior seals. Working temperature -20oC-80oC.



**No.3 Hydraulic Cylinder** JCYG-03 With a two position three way solenoid valve. External thread connector on the rod. Reasonable structure and good performance. Imported superior seals. Working temperature -20oC-80oC.



**No.6 Hydraulic Cylinder** JCYG-06 Thread connectors that are easy to be mounted. Reasonable and compact internal structure. Good performance. Imported superior seals. Working temperature -20oC-80oC.

**No.7&8 Hydraulic Cylinder** JCYG-07&08 Thread connectors that are easy to be mounted. Reasonable and compact internal structure. Good performance. Imported superior seals. Working temperature -20oC-80oC.





## Hydraulic Cylinder for Plant Protection Machine

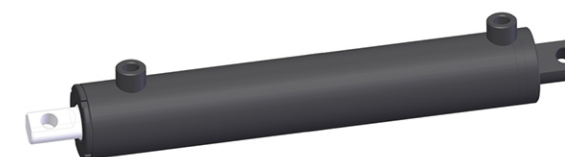
One set of hydraulic cylinders for plant protection machine have 12 models, including 2 steering cylinders with MTS sensors.

There are several main features of the working of plant protection machines:

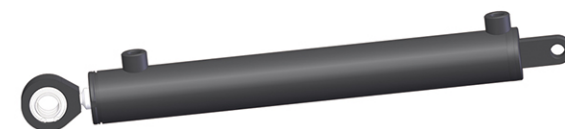
- 1) Large range of working temperature. The lowest working temperature is -40°C.
- 2) Short operation time, long resting period.
- 3) Small working load, the hydraulic cylinders are mainly used to complete the specified actions.

These features cause that the hydraulic cylinders for plant protection machines need to have the characteristics including low temperature resistant, low friction and low pressure. That requires a good sealing performance. FAST has provided hydraulic cylinders for plant protection machines professionally for many years. With experienced design, mature technology and reliable quality, the cylinder PPM is lower than 5000.

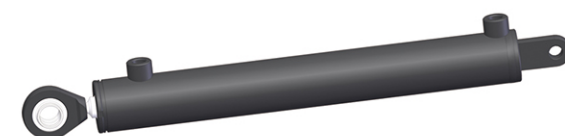
## >Hydraulic Cylinder



**Ladder lifting hydraulic cylinder**  
FAST Standard code: ZBJ-PTSJ/YJSJφ40/20-314  
Specification: 40/20X314-480 Qty: 2



**Pesticide frame expansion hydraulic cylinder**  
FAST Standard code: ZBJ-YJZK-2φ40/20-310  
Specification: 40/20X310-480 Qty: 2



**Cover lifting hydraulic cylinder**  
FAST Standard code: ZBJ-JZSJφ50/25-150  
Specification: 50/25X150-300 Qty: 1



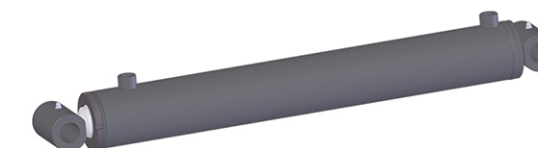
**Slasher frame folding hydraulic cylinder**  
FAST Standard code: ZBJ-GTZDφ50/35-225  
Specification: 50/35X225-585 Qty: 2



**Slasher frame lifting hydraulic cylinder**  
FAST Standard code: ZBJ-GTSJφ60/35-280  
Specification: 60/35X280-520 Qty: 6



**Pesticide frame expansion hydraulic cylinder**  
FAST Standard code: ZBJ-YJZK-1φ50/35-567  
Specification: 50/35X567-760 Qty: 2



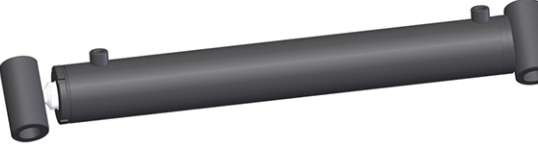
**Steering hydraulic cylinder with sensor**  
FAST Standard code: ZBJ-ZX-Mφ63/32-215  
Specification: 63/32X215-170 Qty: 2



**Steering hydraulic cylinder**  
FAST Standard code: ZBJ-ZXφ63/32-215  
Specification: 63/32X215-170 Qty: 2



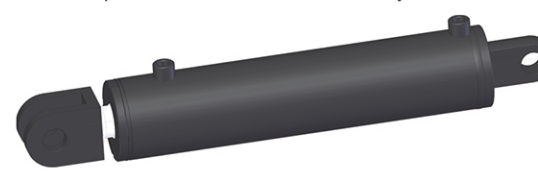
**Tire stretching hydraulic cylinder**  
FAST Standard code: ZBJ-LTSZφ63/35-455  
Specification: 63/35X455-658.5 Qty: 4



**Pesticide frame rotary hydraulic cylinder**  
FAST Standard code: ZBJ-YJSJφ63/40-460  
Specification: 63/35-525-110 Qty: 2



**Pesticide frame lifting hydraulic cylinder**  
FAST Standard code: ZBJ-YJSJφ63/40-460  
Specification: 63/40X460-645 Qty: 2



**Pesticide frame lifting hydraulic cylinder**  
FAST Standard code: ZBJ-YJQLφ75/35-286  
Specification: 75/35X286-534 Qty: 2

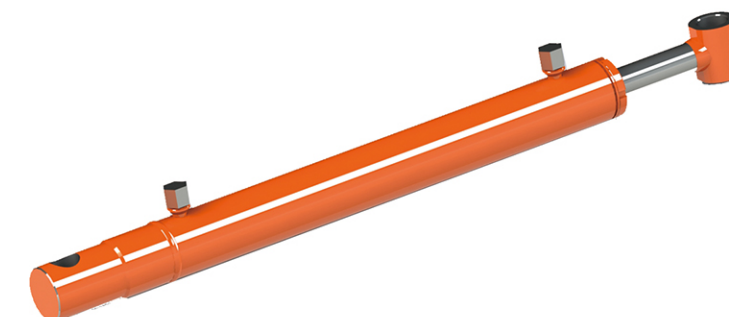
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## Hydraulic Cylinders for Agricultural Attachment

FAST hydraulic cylinders for agricultural attachment are mainly exporting to Europe and North America. Seals structure is based on different working conditions of various machines. Reasonable structure design and machining technology makes our cylinders are capable to work in sever conditions. All seals are imported. With beautiful appearance, stable quality and long service time, the cylinder PPM is lower than 5000.

### >Hydraulic Cylinder



980013594



60022091A



037.200-14

## Technology R&D

In 1973, FAST produced the first domestic pneumatic cylinder in China. After more than forty years of development, FAST insists on technological innovation as the core power, takes professional services as the core competitiveness. FAST has established a solid cooperative relationship with industry leading enterprises and universities. With the expert team at the forefront of industry technology, FAST has created a unique technical advantage. FAST provides high-end customized system solutions in hydraulic and pneumatic engineering technology field. Keeping fulfilling customers, helping industry development. FAST now has more than 70 technicians, including 12 senior engineers and several Chinese and foreign external experts.

### Scientific and Technological Innovation Platform

FAST owns four scientific and technological innovation platforms: High-tech Enterprise, Provincial Enterprise Technology Center, Hydraulic and Pneumatic Technology Engineering Laboratory of Yantai City, Pneumatic Engineering Research Center of Yantai City.

### Enterprise Information Construction

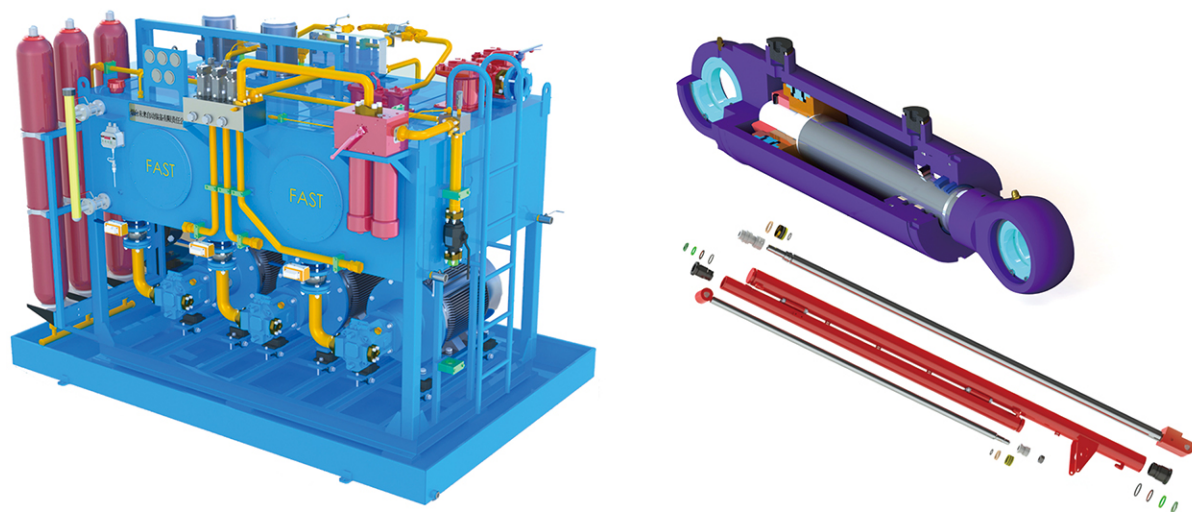
Managing and optimizing the design of products lifecycle with SOLIDWORKS, PLM. Carrying on comprehensive balance and optimized management of enterprise resources (for example, people, property, materials, information, time, space) with ERP.

### Intellectual Property

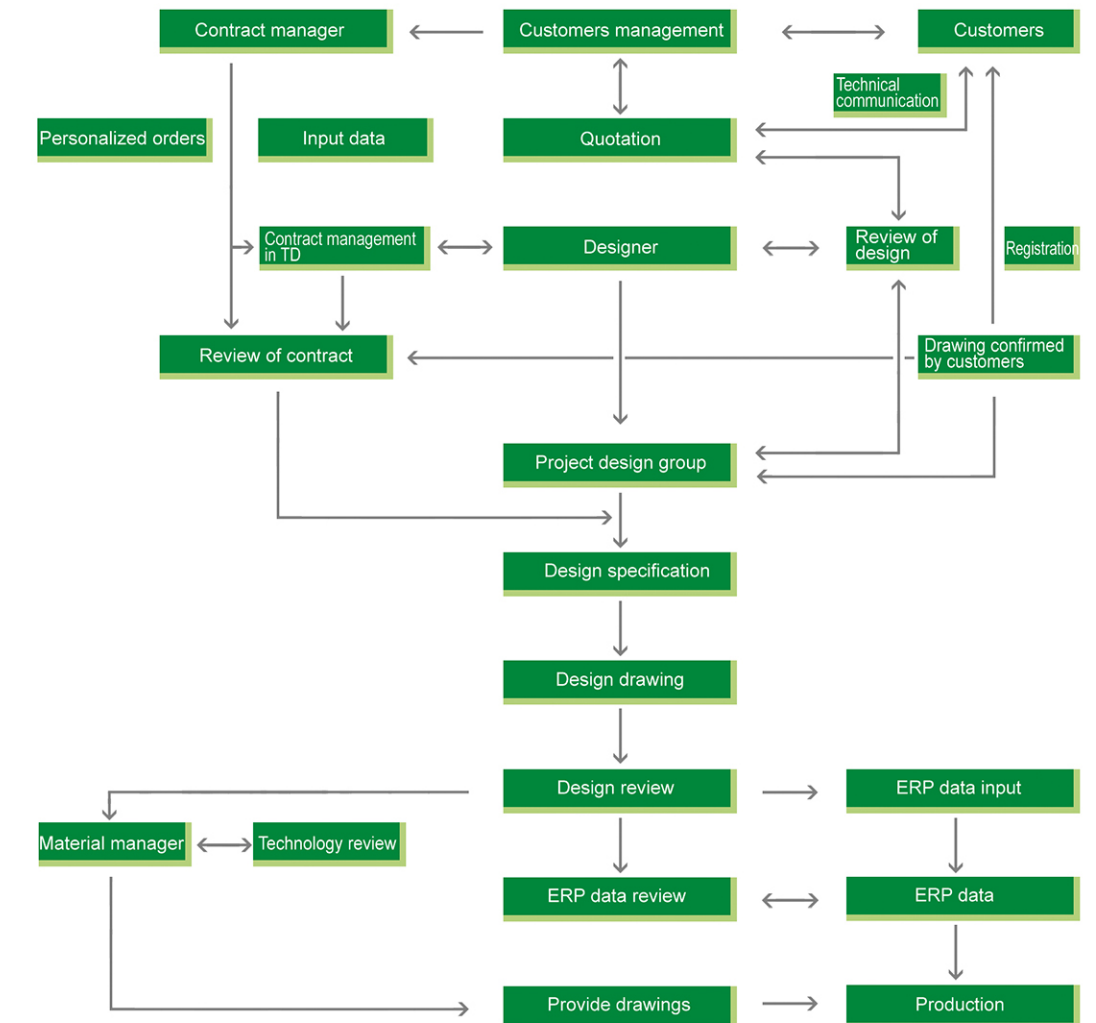
FAST has passed IPR Certification by IPMS GB/T29490-2013 Standard and is a National IPR Demonstration Enterprise. Now FAST has owned 92 national patents, including 9 invention patents, 4 copyrights of computer software.

### Contribution to the Industry

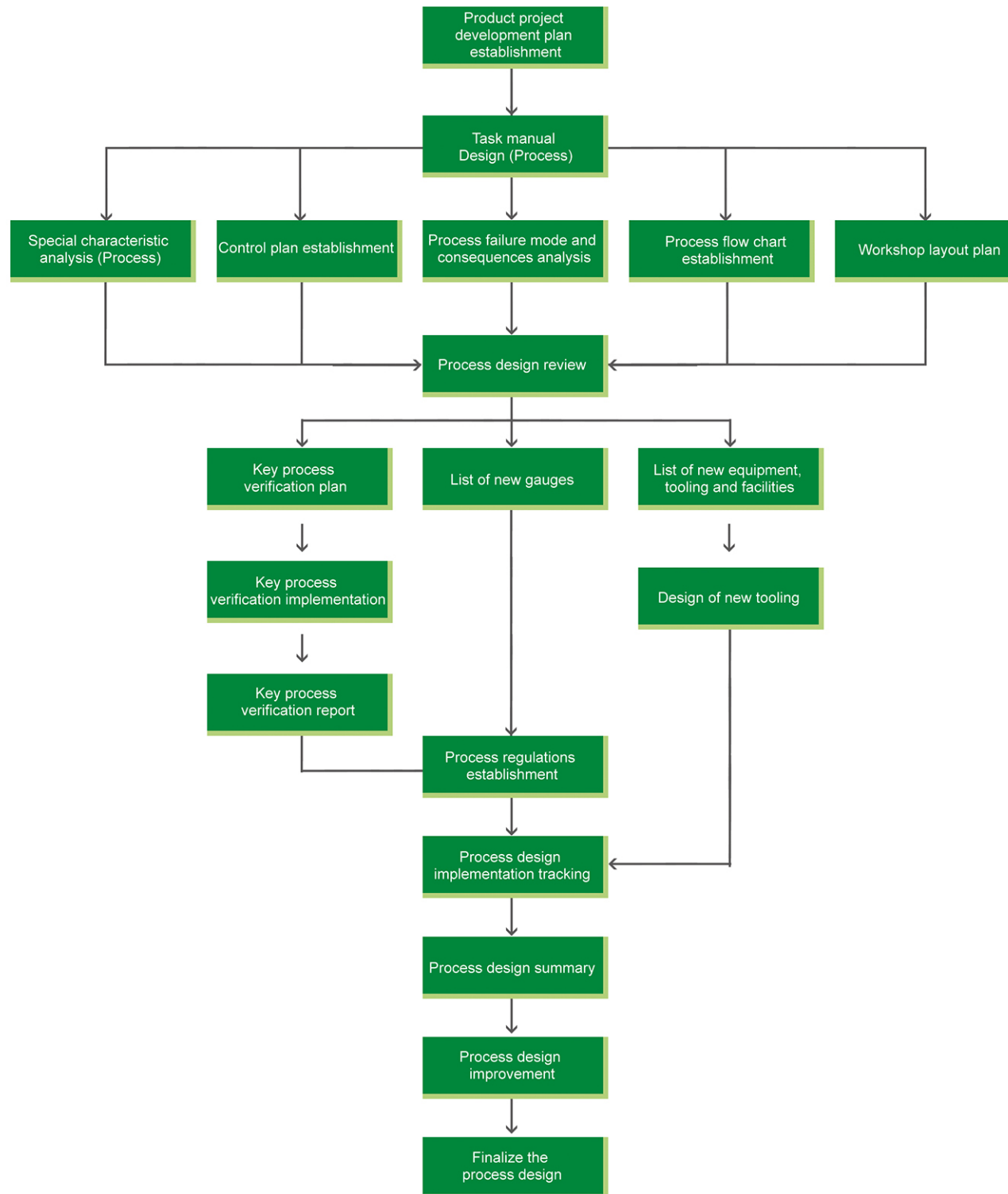
National (Industry) standard setting outstanding contribution unit. National (Industry) standard setting unit of National Hydraulic and Pneumatic Standardization Technical Committee.



## Design Control



### Engineering Process Design



### Full Inspection Control

Raw material performance monitoring



Hydraulic oil and cleanliness control



Production process control



Painting appearance control

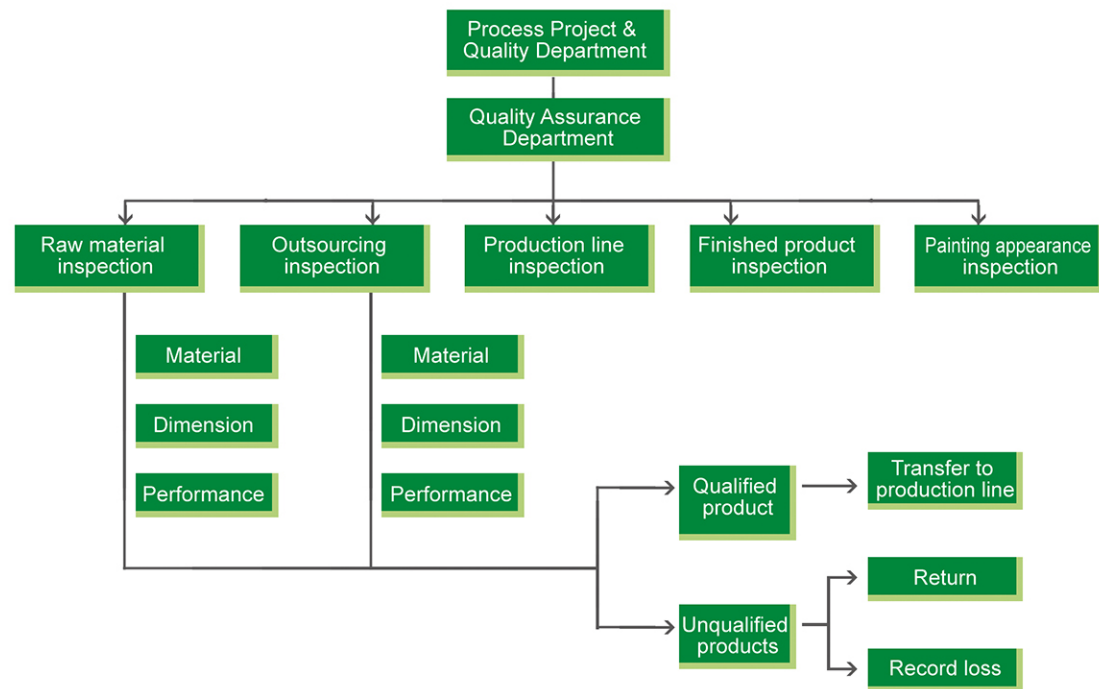


Finished product inspection

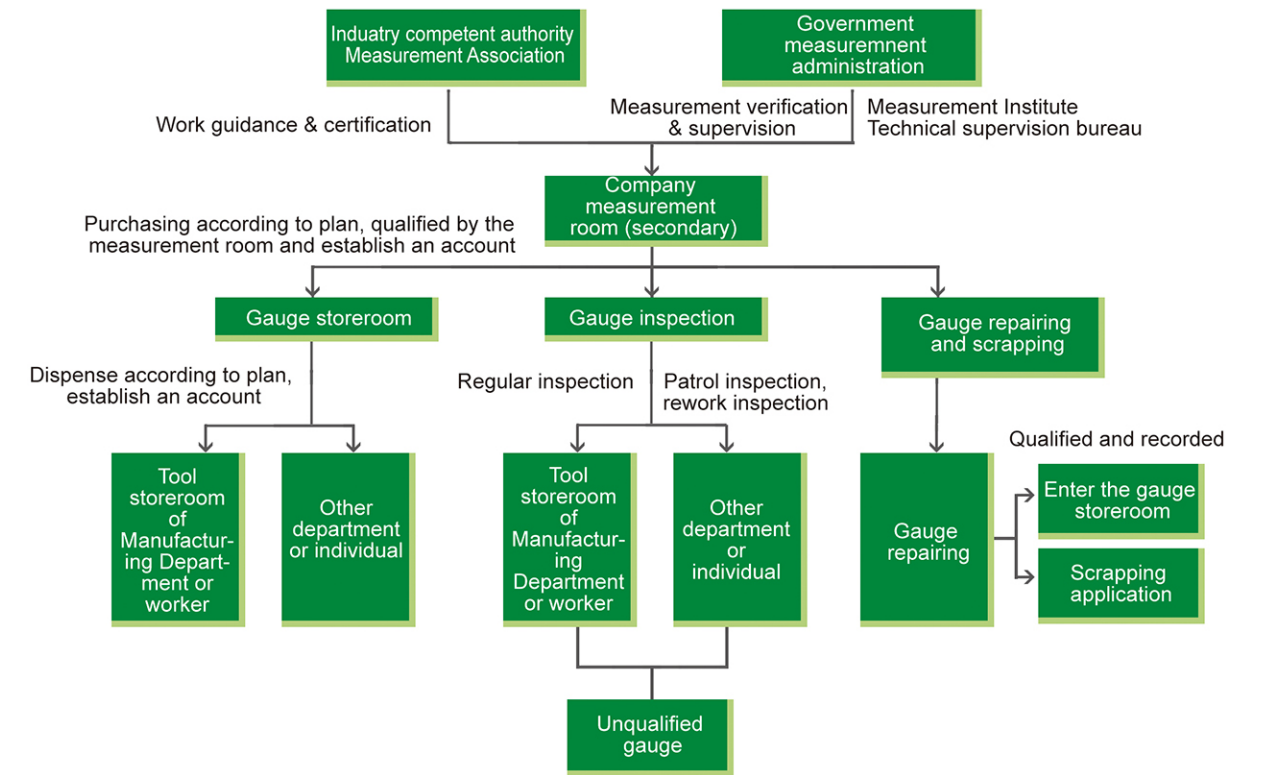




Quality Inspection Control System (part)



Measurement Management System



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# Hydraulic Cylinder and Hydraulic System Production Line





## Company Headquarter Panorama

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*Prospective >>*

*Try to be one of the best brands in the  
hydraulic & electric integrated system*

## Contact

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[www.yantaifast.com](http://www.yantaifast.com)

[www.yantaifuture.cn](http://www.yantaifuture.cn)