XK-QD1 PLC control pneumatic teaching experiment device

Products overview:

project	content
product structure:	desktop structure ,working table used the "T" type aluminum materials, provides great convenience for the installation and location of pneumatic components.
main parameters:	size 1800 mm x 630 mm x 1500 mm; The power supply: single phase AC220V, power < 500W weight:150kg
main components:	training platform, aluminum working mesa, the power module, PLC module, relay modules, pneumatic components (including air filtration, reduced pressure, oil mist is a joint, pressure reducing valve, the manual directional control valves, electromagnetic reversing valves, air control directional valves, travel valves, one-way valves, throttle valve, one-way throttle valve, quick exhaust valve, "OR gate" type shuttle valve , the single-acting cylinder, double-acting cylinder, rotating cylinder, etc), gas source, and tool accessories, computer (optional) components.
main functions:	PLC commonly used programming instructions learning and training, pneumatic basic loop training. Have a safety protection function.
annex:	experimental jump line, commonly used tools, software disc, the product specification.

Training Projects:

1. Single-acting cylinder reversing loop
2. Double-acting cylinder reversing loop
3. Single-acting cylinder speed control loop
4. Double-acting cylinder on-way speed regulation loop
5. Double-acting cylinder both way speed regulation loop
6. Speed changing-over loop
7. Buffering loop
8. Twice pressure control loop
9. High-and-low pressure exchanging loop
10. Counting loop
11. Delay loop
12. Overload protection loop
13. Interlocking loop
14. Single cylinder single reciprocating control loop
15. Single cylinder continuous reciprocating action loop
16. Linear-motion cylinder and angle-motion sequential action loop
17. Multiple cylinder sequential action loop
18. Double-cylinder synchronization action loop
19. Four-cylinder linkage loop
20. Unloading loop
21. Joint gate type shuttle valve application loop
22. Rapid escape valve application loop

XK-QD2 PLC control pneumatic teaching experiment device

Products overview:

project	content
product structure:	desktop structure ,working mesa used the "T" type aluminum materials, provides great convenience for the installation and location of pneumatic components.
main parameters:	size 1500 mm x 750 mm x 1800 mm; The power supply: the three-phase AC380V, power < 500 VA.weight:160kg
main components:	the training platform, aluminum working mesa, the power module, PLC module, relay modules, pneumatic components (including air filtration, reduced pressure, oil mist is a joint, pressure reducing valve, the manual directional control valves, electromagnetic reversing valves, air control directional valves, travel valves, one-way valvesthrottle valve, one-way throttle valve, quick exhaust valve, the single-acting cylinder, double-acting cylinder), gas source, and tool accessories components.
main functions:	PLC commonly used programming instructions learning and training, pneumatic basic loop training. Have a safety protection function.
annex:	experimental jump line, commonly used tools, software disc, the product specification.

Training Projects:

1) Basic pneumatic circuit experiment
1 Single-acting cylinder reversing loop
2 Double-acting cylinder reversing loop
3 Single-acting cylinder speed control loop
4 Double-acting cylinder on-way speed regulation loop
5 Double-acting cylinder both way speed regulation loop
6 Speed changing-over loop
7 Buffering loop 8 Twice pressure control loop
9 Counting loop 10 Delay loop
11 Overload protection loop 12 Interlocking loop
13 Single cylinder single reciprocating control loop
14 Single cylinder continuous reciprocating action loop
15 Double-cylinder sequential action loop
16 Double-cylinder synchronization action loop
17 Unloading loop
18 Joint gate type shuttle valve application loop
19 Rapid escape valve application loop

Mechanical and electrical integration

XK-MBP1 Pneumatic Experiment Bench

Products overview	This experiment bench can use two kinds of control way: panel relay control and external expand PLC control, it equips with common pneumatic components, is suitable for professional training teaching of mechanical and mechatronics, etc.
main parameters	1.Size： 1600mmx600mmx1530mm; weght:150kg 2.The power supply: single phase AC220V, power < 1500VA
main functions:	1.Pneumatic control system constitute demonstration experiment 2.Pneumatic component control and principle experiment 3.Various kinds of pneumatic loop control experiment

XK-YY1 hydraulic transmission teaching experiment device

Products overview:

project	content
product structure:	desktop structure ,working mesa used the "T" type aluminum materials, provides great convenience for the installation and location of hydraulic element.
main parameters:	size 1800 mm x 630 mm x 1500 mm; The power supply: single phase AC220V, power < 500 VA.weight:160kg
main components:	the training platform, aluminum working mesa, the power module, PLC module, relay modules, hydraulic components (including double role oil cylinder (with stroke collision block), spring return oil cylinder, hydraulic controlled one-way valve, pressure reducing valves, auxiliary fuel tank, and pressure relay, pressure oil cylinder, throttle valve (e-style), one-way valve, order valve), hydraulic special using pump station, tools accessories components.
main functions:	PLC commonly used programming instructions learning and training, hydraulic loop machine learning basic training. Have a safety protection
annex:	experimental jump line, commonly used tools, software disc, the product specification.

Training Projects:

1. Program control (PLC) electric control experiment, mechanics, electronics and hydraumatic, integrated-control experiment.
PLC elementary instructions, high-level instructions and extend instructions learning and exercise.
PLC programming-software learning and exercise.
Communication, on-line debugging, monitoring and failure detection between PLC and computer.
2 .Fundamental hydraumatic experiment circuit examples
1） Direction changing circuit using a reversing valve
2） Shutting circuit using a “O” type centre bypass valve
3） Shutting circuit using a pilot operated check valve
4） Pressure setting circuit
5） Secondary pressure circuit
6） Decompression circuit using a reducing valve
7） Decompression circuit using a pressure cylinder
8） Unloading circuit using a reversing valve
9） Meter-in speed-regulation circuit
10） Meter-out speed-regulation circuit.
11） Speed-regulation circuit of speed-regulation gear pump
12） Composite speed-regulation circuit of speed-regulation gear pump and flow speed control valve.
13） Speed changing-over circuit by short circuit of a flow valve
14） Secondary feeding circuit
15） Sequent circuit using a sequence valve
16） Sequent circuit using a pressure switch
17） Sequent circuit using a position switch
18） Sequent circuit using an overtravel-limit reversing valve.

XK-YY2 hydraulic transmission teaching experiment device

Products overview:

project	content
product structure:	desktop structure working mesa used the "T" type aluminum materials, provides great convenience for the installation and location of hydraulic element .
main parameters:	size 1500 mm x 750 mm x 1800 mm; The power supply: the three-phase AC380V, power < 500 VA.weight:180kg
main components:	the training platform, aluminum working mesa, the power modules, PLC module, relay module, hydraulic components (including double role oil cylinder (with stroke collision block), spring return oil cylinder, hydraulic controlled one-way valve, pressure reducing valves, auxiliary oil tank, and pressure relay, pressure oil cylinder, throttle valve (direct-acting style), one-way valve, order valve, hydraulic special using pump station, tools accessories components.
main functions:	PLC commonly used programming instructions learning and training, hydraulic loop machine learning basic training. Have a safety protection function.
annex:	experimental jump line, commonly used tools, software disc, the product specification.

Training Projects:

1. of the hydraulic circuit of pilot projects:
1） the electromagnetic valve commutation loop
2） O-function, M-function valve latch circuit
3） pilot-operated check valve atresia
4） the pressure it is set loop
5） two pressure control loop
6） valve decompression circuit
7） H-type electromagnetic valve unloaded loop
8） into the oil throttle speed control loop
9） circuit throttle speed control loop
10） the throttle valve in parallel with throttle speed control loop
11） the order of action of the sequence valve circuit
12） the order of action of the pressure relay loop
13） circuit limit switch the order of action
14） the order of the trip valve action loop
2. of the programmable logic controller (PLC) electrical control experiments
1） PLC's programming instructions, ladder programming learning
2） PLC programming software to learn and use
3） PLC control solenoid valve commutation circuit

Mechanical and electrical integration

XK-MBH1 Hydraulic BenchProduct Instruction

Products overview:

Products overview	The bench adopts control plate the PLC control of relay control and the outer expansion two ways, configured with a common hydraulic components for Practical Teaching in the mechanical, electrical and mechanical integration.
main parameters	1. Size：1600mmx600mmx1530mm,weght:180kg 2. The power supply: the three-phase AC380V, power < 2000 VA. 3. Motor: Y80 power: 1.5KW s peed: 1400r/Min voltage: 380V 4. Pump: CB-FC10 rated displacement: 2ml/rev rated pressure: 0.8MPa
main functions:	1. A hydraulic drive system composed of a demonstration experiment. 2. Each element, components structure of the hydraulic drive, and working principle to observe, dismounting experiments. 3. A variety of hydraulic circuit control experiment.

XK-JD3A mechanical and electrical integration training sets

Products overview:

project	content
product overview:	device made of industrial aluminum , contains PLC technology, inverter technology, pneumatic technology, belt transmission technology, sensor detection technology, communication technology, etc. Can not only do mechanical and electrical equipment installation, PLC application technology, electrical control technology, automatic control technology, mechanical and electrical integration technology, professional knowledge module single training project teaching, but also do mechanical and electrical equipment, pneumatic systems, automatic control system comprehensive skills training..
main parameters:	size 1200 mm x 720 mm x 750 mm; The power supply: the three-phase AC380V, power < 500 VA.weight:130kg
main components:	work station, material feeding unit, carrying manipulator unit, belt transfer units, material inspection identification unit, sorting unit, multi-function alarm lamp, gas source processor, power supply module, PLC module, inverter module, touch screen module.(PLC can choose Siemens, mitsubishi, schneider, omron, AB and other brands of products)
main functions:	PLC programming training, inverter basic training, touch screen technology training, pneumatic technology training, sensor detection technology training, the mechanical structure disassembling and adjust training, system maintenance and fault detection training, mechanical assembly training. Have a safety protection function.
annex:	experimental jump line, commonly used tools, software disc, the product specification.

Training Projects:

1 PLC program training
2 Fundamental frequency converter training
3 Touch screen technology training
4 Pneumatic technology training
5 Sensor-detection technology training
6 Process of mechanical construction disassembly /assembly and adjusting training
7 System maintenance and Fault Detection practice training

XK-AT211 small logistics production line training device

Products overview:

project	content
product overview:	this equipment is a standard modular small manufacturing system, has the material feeding, testing and simulation processing, transmit, material sort and storage function; Can choose different PLC controller based on PC or the controller, study the application of industrial sensor and control technology, can according to the idea of the students set up different modular production systems, dismounting outfit is convenient.
main parameters:	□ size :800 mm x 700 mm x 750 mm □ power supplies: single phase AC220V, power < 1000 VA.
main components:	consist of modular small manufacturing system (by material feeding unit, testing unit, simulation processing unit, transfer units, material sort and storage unit constitution), the power modules, PLC module, etc.
main functions:	sensor training, pneumatic technology training, PLC technology training, electrical control system training, mechanical system installation debugging training, motor drive technology training, system maintenance and fault detection technology training. Have a safety protection function.
annex:	put wiring, commonly used tools, software disc, the product specification.

Training Projects:

1 PLC Application technology
2 Pneumatic technology
3 Electronics technology
4 Sensor technology
5 Automatic control technology
6 Industrial transmission technology
7 Industrial communication technology
8 MCGS applications and OPC technology
9 System integration design, optimization, fault diagnosis technology

Mechanical and electrical integration

XKJ211 type material tag machine model

Product Overview	XKJ211 type material tag machine model is a standard modular small-scale manufacturing systems, feeding, testing, transmission, marking, storage and other functions; to be completed by the PLC programming control technology, single-chip control technology, and stepper motor drive technology, pneumatictechnology, sensor technology, mechanical installation and commissioning of technology and other aspects of practical learning and training. Material tag machine model comes with the operating panel and control interface module, you can switch between single-chip control and PLC control, change control according to the learning needs, and is ideal for students learning and training. Supports three types of control (PLC control, MCU control, computer control), can be the GRAFCET personalized process control model, and simulation run on a computer screen. Model outside of organic glass with door limit switch installed on the door, only when the door is closed the state, the model was allowed to run, the model automatically stops when the door on the side of the organic glass left Inlet.
Key performance index	1, Supply Voltage: AC220V, 50Hz 2, Current: ≤ 1A 3, Size: Dimensions 800 × 600 × 700mm (LWH) 4, Weight: 50KG 5, Working environment: 0 ~ +50 ℃, 40 ~ 90% RH
Main function	1,PLC feeding, transfer, marking, storage control training 2, single-chip feeding, transfer, marking, storage, control training 3, the stepper motor speed control to run training 4 stepper motor position control run training 5, the direction of the pneumatic drive control, speed control, sequential control training 6, optoelectronics, color, capacitive sensors use the debugger training
Accessories	1、K4mm experimental connection 30 （different colors） 2、Certificate 1 3、Product manual and experiment guide book (in English) 1 4、Supporting software (computer simulation software, PLC programming, microcontroller program) 1 5、Crosswise screwdriver 1 6、Hexagonal wrench 1

XK-DCSF1 dc servo motor closed-loop control training device

product structure:	using aluminum alloy box structure.
main parameters:	□ the overall size: 420 mm x 300 mm x 120 mm; □ The power supply: singel-phase AC220V ,50 HZ,< 50 W.
main composition:	dc servo motor, rotational speed meter, feedback device, control circuit module.
main functions:	understand and application of dc servo motor, understand and application of dc servo drive , dc servo manual control experiment, dc servo typical speed closed-loop control application experiment, complete the analog circuit realize dc servo motor speed closed-loop adjusting loop (P, I, D) related training.
annex:	experimental jump line, related tools, the product specification.

● Training Projects:

1. dc servo motor know applications
2. the dc servo drive know applications
3. dc servo manual control experiment
4. dc servo typical speed closed-loop control application experiment

XK-DCSF2 dc servo motor closed-loop control training device

product structure:	using aluminum alloy box structure.
main parameters:	□ size 420 mm x 300 mm x 120 mm; □ The power supply: singel-phase AC220V,50 HZ, <50 W.
main composition:	dc servo motor, Angle meter, dc servo drive, feedback device, control circuit module.
main functions:	understand and application of dc servo motor, understand and application of dc servo drive , dc servo manual control experiment, dc servo typical position closed-loop control application experiment, complete the analog circuits realize dc servo motor position closed-loop adjusting loop (P, I, D) related training.
annex:	experimental jump line, related tools, the product specification.

● Training Projects:

1. dc servo motor know applications
2. the dc servo drive know applications
3. dc servo manual control experiment
4. dc servo typical speed closed-loop control application experiment

XK-MMT1A digital dc servo motor closed-loop control training device (position loop)

Products overview:

project	content
product structure:	using aluminum alloy box structure.
main parameters:	size 420 mm x 300 mm x 120 mm;weight:15kg The power supply: singel-phase AC220V,50 HZ, <100 W.
main components:	dc servo motor, dc servo drive, encoder, linear motion device, control circuit module, PC monitoring software.
main functions:	understand and application of dc servo motor, understand and application of dc servo drive, dc servo manual control experiment, dc servo typical position closed-loop control application experiment, dc servo system PC control experiment, dc servo motor position loop adjustment loop (P, I) application training.
annex:	experimental jump line, related tools, the product specification.

Training Projects:

1. and single-chip microcomputer intelligent control and display
2. right movement step function
3. 3 fixed position
4. software running environment: WINDOWSXP
5. PC monitor position closed-loop control function
6. parameter PC functions

XK-MMT1B digital dc servo motor closed-loop control training device (speed loop)

Products overview:

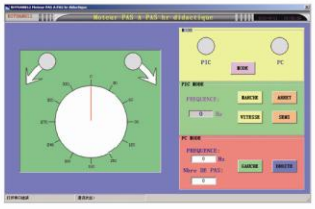
project	content
product structure:	using aluminum alloy box structure.
main parameters:	size 420 mm x 300 mm x 120 mm;weight:15kg The power supply: singel-phase AC220V,50 HZ, <100 W.
main components:	dc servo motor, dc servo drive, the encoder, the rotary motion device, control circuit module, PC monitoring software.
main functions:	understand and application of dc servo motor, understand and application of dc servo drive, dc servo manual control experiment, dc servo typical speed closed-loop control application experiment, dc servo system PC control experiment, dc servo motor velocity loop adjustment loop (P, I) application training.
annex:	experimental jump line, related tools, the product specification.

Training Projects:

1. speed resolution: 1 week
2. photoelectric speed detection
3. while the transmission
4. rotational speed digital display
5. and single-chip microcomputer intelligent control and display
6. and reversing step function
7. 3 speed demo
8. software running environment: WINDOWSXP
9. PC monitor speed closed-loop control function
10. parameter PC functions

XK821 Stepper motor experiential Chamber

Product Overview	Stepper motor test box by DC12V four-phase stepper motor, PIC microcontroller control unit PLC control interface unit, the control button, indicator, and other components. Suitable for students at PLC, microcontroller programming control training, and stepper motor control training. Communication with the PC through the USB port.
Key performance index	1、Supply voltage: AC220V, 50Hz 2, Current: ≤ 1A 3, size: 370mm * 220mm * 120mm (L * W * H) 4, Weight: 5KG 5, the stepper motor 5.1 Model: 25BY48 5.2 Rated voltage: DC12V 5.3 Number of phases: 4 5.4 each step of the corner: 3.75 5.5 pulses per revolution: 96 5.6-phase current: 0.3A 6, single-chip models: PIC16F628A
Main function	1, learning the work of the four-phase stepper motor and control methods. 2, learn how to use microcontroller to control the four-phase stepper motor. 3, learn how to use the PLC to control the four-phase stepper motor. 4, learning to use the PC + single-chip control of the four-phase stepper motor.
Accessories	1、Single-phase power line 1 2、K4mm experimental connection 5 3、USB communication line 1 4、Fuse 2 5、Certificate 1 6、Product manual and experiment guide book (in English) 1 7、Software CD-ROM 1



Mechanical and electrical integration

XKJ213 three-elevator teaching model

Product Overview	The small metal tensile testing machine is specially designed for teaching test of mechanical properties of metallic materials. Precision high-pressure hand pumps, miniature hydraulic cylinder through the reaction frame test force applied. The high-precision pressure gauge shows the test force, the dial gauge measuring specimen deformation models of small, agile, precise and reliable mechanical teaching effective and practical test equipment.
Key performance index	1) The maximum test force: 20kN; 2) Test the force measurement: precision pressure gauge, unit, kN, accuracy: ± 2% FS; 3) M10 threaded port cylindrical specimens, the available part of the diameter of 5mm or 6mm or 8mm, the minimum length of 60mm 4) The deformation measurement accuracy: 0.01 mm 5) Overall dimensions are approximately: 360 × 360 × 810mm; 6) The total weight about: 32kg.
Main function	1, the fuel tank under the home, double column, anti-power rack to set the host structure. 2, the manual hydraulic pump as a power source. 3, 20 kN small plunger hydraulic cylinder structure, no leakage, low friction. 4, Precision pressure gauge indicates that the test force. 5, the dial gauge measurement of specimen deformation. 6, the threaded specimen holding device, smart and reliable. 7, the whole beautiful appearance, easy to operate.
Accessories	1, the host framework: a set of 2, hand pump: a 3, hydraulic cylinders: a 4, precision pressure gauge: a 5, the dial gauge: a 6, toolbox: a. 7, the tensile specimens: brass, bronze, aluminum, 10. 8, ejector: 1. 9 tools: 22 wrenches 1. 10 spare parts:O-ring: 12.5 * 1.8 a 43.7 * 1.8 2 50 * 1.8 1 : Two seals, a 11, hydraulic oil: 1 bottle. 12, the dust cover: a. 13, product brochures (including 2D and 3D drawings) 14 export wood packaging: 1

XKN312 torsion testing machine

Product Overview	The torsion testing machine is to reverse the teaching experiment designed and manufactured specifically for the metal material. Increase or decrease in hanging weights loaded on the specimen, using precision dial gauge shows the twist angle of the sample deformation, and the other with the angle indicating dial to display the torsional angle. It is easy to operate, can the relationship between the more intuitive reflection of torque and deformation.
Key performance index	1,device by the framework, moving beam (sample installation of beam), component parts of the dial gauge, dial gauge bracket, angle indicating device, load weight, weight tray. 2, three linear axes and two fixed steel plate bearing framework, constitute the main part of the testing machine. Move the beam into two structures, are free to convenient adjustment of the locking screw locking. Move the beam features oriented wear sets, the specimen wear in which The outside has a sample to increase its jaws for clamping a fixed sample. Precision dial gauge for the test specimens to torsional deformation, the bracket can be easily adjusted. 5, the angle indicating device is easy to adjust for the torsional angle. 6, the weights used for torque load, step by step configuration. 7, the whole beautiful shape, easy to operate.
Main function	1, the maximum sample length: 700mm; 2, Reversing the weight: 100g, 200g, 500g, two (can be combined weight of six kinds); weight tray: 200g, accuracy of 0.1% (step adjustable); weight bracket; 3, sample specifications: Φ8 × 700; 4, the effective test space: 600mm; 5 Overall dimensions are approximately: 810 * 240 * 610mm 6, total weight about: 20KG
Accessories	1, reversing the framework: a set of 2, the specimen installation beam: two sets of 3, the dial gauge: 1 4, the dial gauge bracket: 1 set 5, the angle indicating device: a set of 6, the loading unit: 1 set (including weight, weight tray, etc.) 7, the weight and toolbox: a set; 8,mm long 700mm standard sample: brass, 1; bronze, 1; pure aluminum, a; 9, Dust Cover: 1; 10 export wood packaging: 1 11, product brochures (with 2D and 3D drawings)

XKW313 bending test

Product Overview	The bending test machine is dedicated to metal flexural teaching test. Using the increase or decrease in the hanging weight, the load on the specimen, using precision dial gauge shows the specimen deformation. It is easy to operate, can the relationship between the more intuitive reflect the bending moment and bending.
Key performance index	1) The maximum sample length: 700mm; 2) to reverse weight: 100g, 200g, 500g, two; weight tray: 200g, accuracy of 0.1% (step adjustable); weight bracket; 3) sample size: 30 × 700; 4) Effective Testing space: 600mm; 5) Overall dimensions of approximately: 810 * 240 * 600mm 6) Weight approximately: 20KG
Main function	1, the device by the framework, the mobile beam (sample installation beam), dial indicator, dial indicator bracket load weight, the weight tray and other component parts. 2, three linear axes and two fixed steel plate bearing framework, constitute the main part of the testing machine. 3,Move the beam into two structures, are free to convenient adjustment of the locking screw locking. 4,Move the beam upper part of the curved support plate of heat treatment used to support the specimen. Precision dial gauge for bending test specimens and the bracket can be easily adjusted. 5, the weights used for load moment, step by step configuration. 6, the whole beautiful shape, easy to operate.
Accessories	1, frame: a set of Move the beam: 2 sets 3, the dial gauge: 1 4, the dial gauge bracket: 1 set 5, the loading unit: 1 set (including weight, weight tray, etc.) 6, the weight and toolbox: a set; 7,30 mm * 4mm long 700mm sample: brass, 1; steel, 1; Al, 1; 8,30 mm * 5mm long 700mm sample: brass, 1; steel, 1; Al, 1; 9,30 mm * 6mm long 700mm sample: brass, 1; steel, 1; Al, 1; 10, the dust cover: 1; 11, product brochures (including 2D, 3D drawings) 12 export wood packaging: 1;

Mechanical and electrical integration

Reducer model 1

Key performance index	1.1 The main technical parameters: m = 2 z1 = z2 = 47 z3 = 26 z4 = 60 α = 20 ° β = 12 the ° α1 = 58 α2 = 86 i = for 6 h = 98 mm 1.2 Dimensions: Length 350 mm × width 270 mm × height 220 mm 1.3 Weight: 8kg

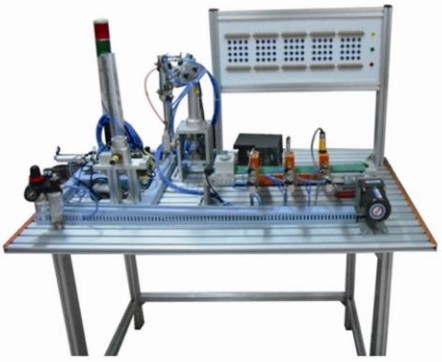
Reducer model 2

Key performance index	2.1 The main technical parameters: m = 2 z1 = z2 = 40 z3 = 20 z4 = 60 α = 80 β = 12 ° i = for 6 h = 105 mm 2.2 Dimensions: Length 360 mm × 205 mm × height 200 mm wide 2.3 Weight: 7.8kg

Reducer model 3

Key performance index	3.1 The main technical parameters: m = 3 z1 = z2 = 40 q = 12 α = 135 beta = 4 ° 45'49 the "i = 6 3.2 Dimensions: 300 mm × 220 mm × 245 mm 3.3 Weight: 6.2kg

XK-JD3B mechanical and electrical integration training sets



Compared with XK - JD3A, not include the control system。