

YZ1515x series

PRODUCT MANUAL

SUPPORT CUSTOMIZATION

Thank you for choosing pump head supporting related products. Please read this manual carefully before installation and use. Please follow the warnings and precautions marked in the product manual.

V1.0

Important information

Please read this product instruction manual carefully before using the product!

The contents of this product instruction manual are for reference only.

Chuangrui Pump Industry reserves the right to change the product (design or specification) without prior notice.

Safety warning

- Before any cleaning or maintenance work, be sure to cut off the power supply.



- * This instruction manual is applicable to pump head supporting related products. All pump head supporting related products derived from this series can also be implemented with reference.

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Product maintenance and after sales

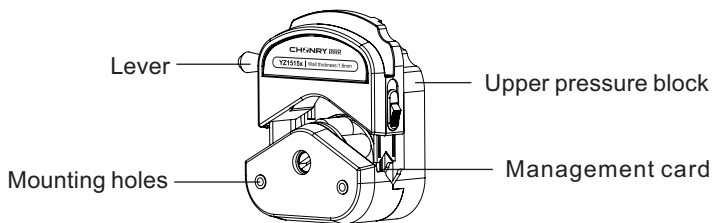
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Product description

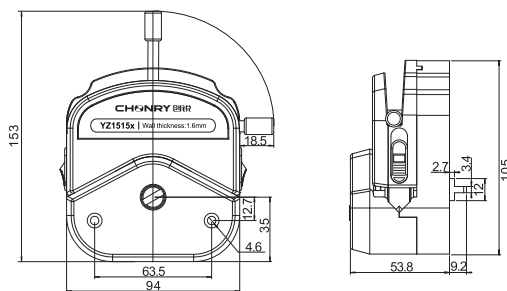
Product description

YZ1515x series is equipped with the YZ1515x pump head, which is simple to operate and easy to load and unload the hose. The hose can be easily installed through the lever. The roller is made of stainless steel, which is wear-resistant, corrosion-resistant and has a long life. It can be equipped with DC motor, AC motor and stepper motor to meet different working needs.

• YZ1515x Pump head structure

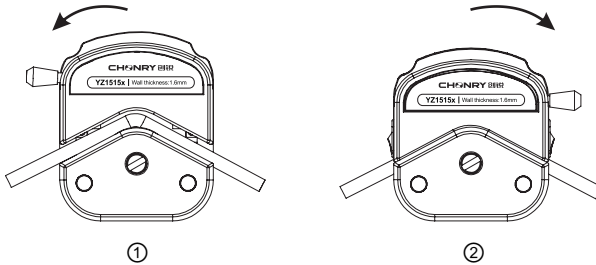


• YZ1515x Pump head size



YZ1515x size: 94x63x105 mm

• YZ1515x Pump tube installation



1. According to the picture ①, pull the lever in the direction of the arrow and open the upper pressure block.
2. Lift the pipe clamps on both sides and put the hose in the groove
3. Pull the lever in the direction of the arrow as shown in picture ②, close the upper pressure block, and the installation is completed.

UCP301 adapt stepper motor parameters



Belt driver



Without driver

• Product parameters

Pump head	YZ1515x
Channels	1
Rollers	3
Applicable hose	13#、14#、19#、16#、25#、17#、18#
Max flow	2280mL/min
Max speed	600rpm
Matching motor	57 long stepper motor/57 short stepper motor
Number of phases	2
Step angle(°)	1.8
Rated phase voltage (V)	1.62
Rated phase current(A)	3.0
Phase resistance (Ω)	0.54
Phase inductance(mH)	1.8
Holding torque (kg·cm)	15
Insulation level	B

• Hose selection and flow reference

Pump head	Tube	ID*wall thickness(mm)	Max flow(mL/min)	Max speed(rpm)
YZ1515x	13#	0.8*1.6	42	600
	14#	1.6*1.6	162	600
	19#	2.4*1.6	306	600
	16#	3.1*1.6	492	600
	25#	4.8*1.6	1020	600
	17#	6.4*1.6	1740	600
	18#	7.9*1.6	2280	600

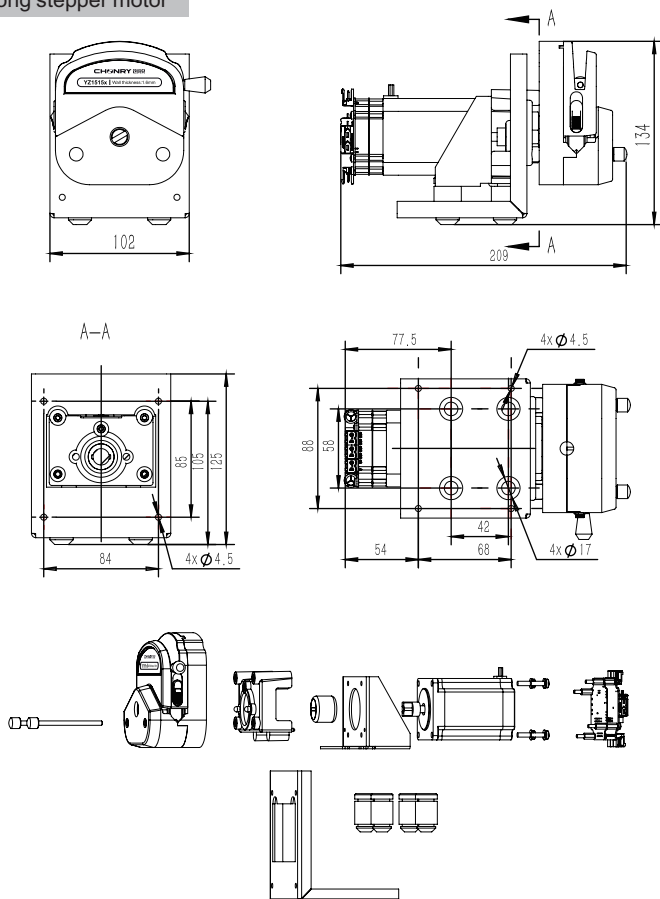
Test conditions:

1. Flow data testing environment for room temperature 20-25 °C, relative humidity is not greater than 80%, altitude is not greater than 1500 metres above sea level
2. The test is measured using a straight-through pipe with a suction range of 0.5 m, a head of no more than 0.5 m, and a total pipe length of no more than 1.5 m (inlet end + outlet end + test end)

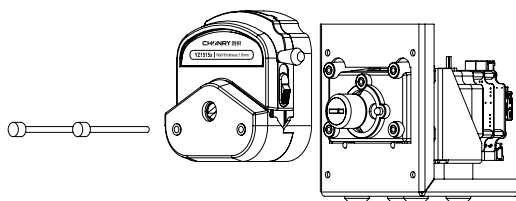
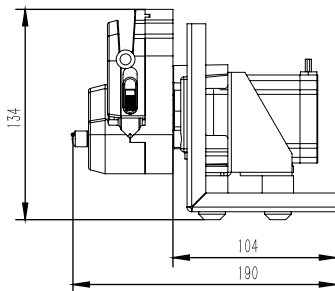
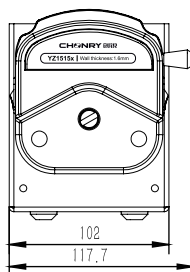
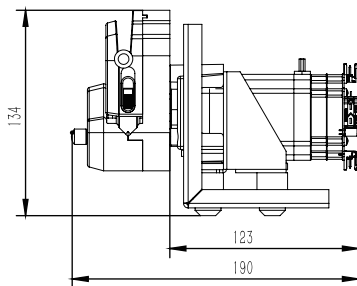
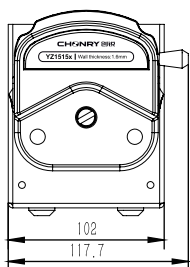
The above data test environment for normal temperature and pressure, the test fluid is water, the data is for reference only, please refer to the actual standard.

• Dimensions/structure diagram

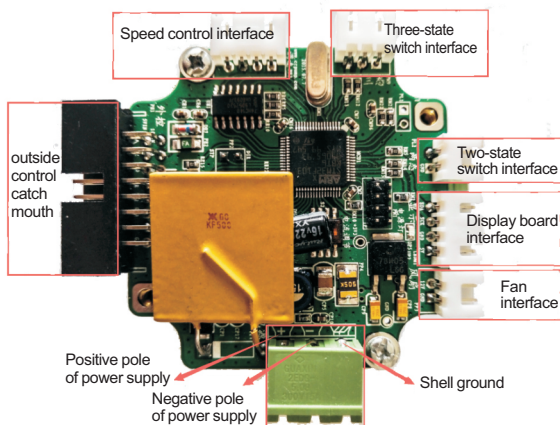
57 long stepper motor



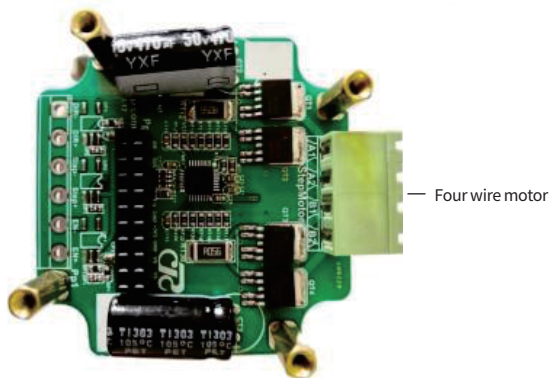
57 short stepper motor



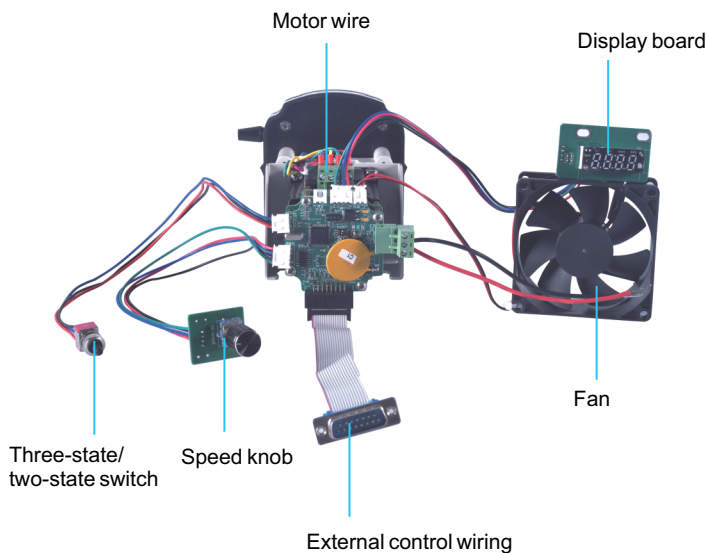
Driver interface description (1)



Control panel (Figure 1)



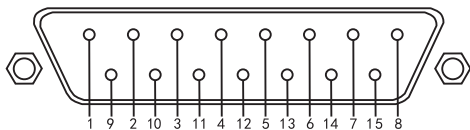
Driver board (Figure 2)



Wiring diagram

As the picture shows:

Insert the display board, two-state switch, three-state switch, speed control knob, motor cable, power cable, fan, and external control cable into the corresponding interface of the motherboard in sequence. Pay attention to the wiring sequence.

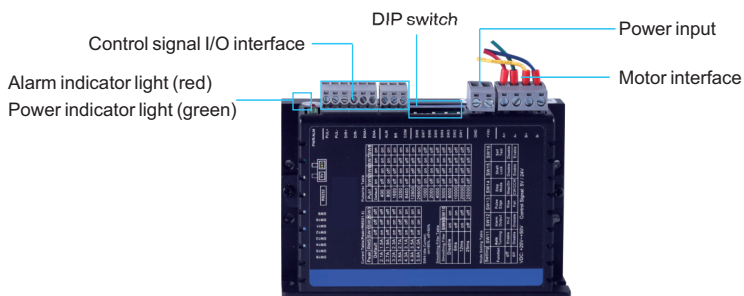


Schematic diagram of external control port

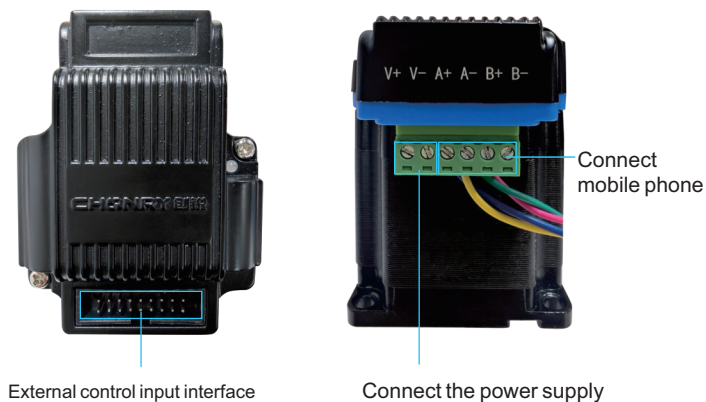
External control port pin parameter table

PIN	External control input interface definition	Enter leader color	External control output interface definition	Output lead color
1	E-c Ground	Black	E-C output enable output A	Yellow
2	485 interface A	Brown	E-C output enable output B	Yellow
3	E-c Ground	Black	Start/stop output B	Red
4	Start/stop 2	Grey	Direction output B	Green
5	Direction	Green	E-c Ground	Black
6	E-c Ground	Black	4-20mA Output negative pole	White
7	0-10kHz input	Blue	E-c Ground	Black
8	0-5V input	Blue	E-c Ground	Black
9	485 interface B	White	Start-stop output A	Red
10	E-c Ground	Black	Direction output A	Green
11	Start/stop 1	Red	12V Voltage output	Brown
12	E-c Enable	Yellow	0-10kHz output	Blue
13	E-c Ground	Black	4-20mA Output positive	Blue
14	4-20mA input	Blue	0-10V Output	Blue
15	0-10V input	Blue	0-5V Output	Blue

Driver interface description (2)



Driver interface description (3)



ACM101 adapt AC motor parameters



AC motor

(With potentiometer)



AC motor

(Without potentiometer)



Synchronous motor

(With potentiometer)



Synchronous motor

(Without potentiometer)

• Product parameters

Pump head	YZ1515x	
Channels	1	
Rollers	3	
Tube	13#, 14#, 19#, 16#, 25#, 17#, 18#	
Max flow	1710mL/min	
Max speed	450rpm	
Matching motor	60AC motor	Synchronous motor
Motor Power	15W	16W
Motor voltage	AC220V	220V
Motor current	0.18A	0.075A

• Hose selection and flow reference

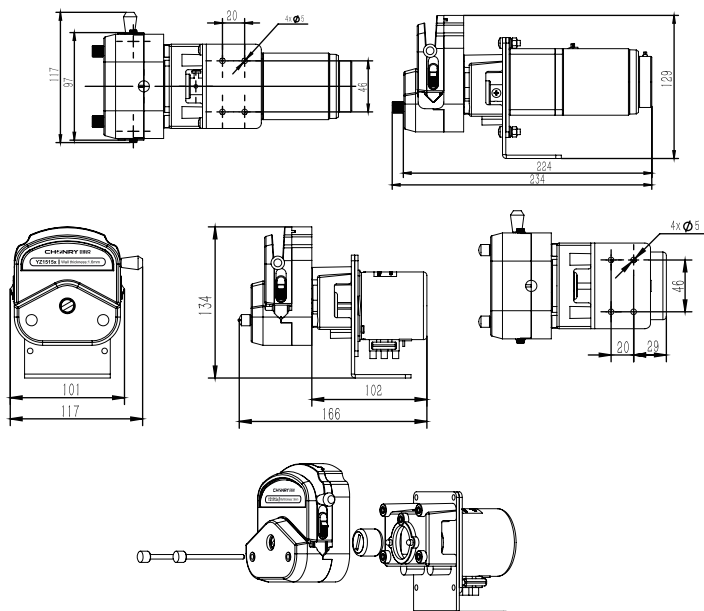
Pump head	Tube	ID*wall thickness(mm)	Max flow(mL/min)	Max speed(rpm)
YZ1515x	13#	0.8*1.6	31	450
	14#	1.6*1.6	121	450
	19#	2.4*1.6	229	450
	16#	3.1*1.6	369	450
	25#	4.8*1.6	765	450
	17#	6.4*1.6	1305	450
	18#	7.9*1.6	1710	450

Test conditions:

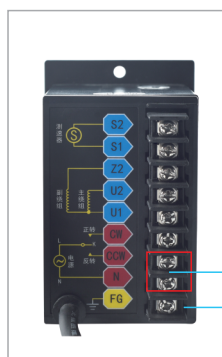
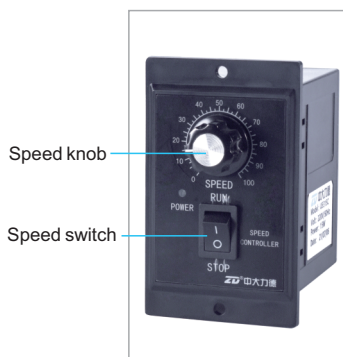
1. Flow data testing environment for room temperature 20-25 °C, relative humidity is not greater than 80%, altitude is not greater than 1500 metres above sea level
2. The test is measured using a straight-through pipe with a suction range of 0.5 m, a head of no more than 0.5 m, and a total pipe length of no more than 1.5 m (inlet end + outlet end + test end)

The above data test environment for normal temperature and pressure, the test fluid is water, the data is for reference only, please refer to the actual standard.

• Dimensions/structure diagram



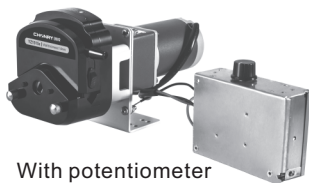
• Potentiometer description



By connecting different ports, Change the running direction of the motor:
 COM-CW——Motor forward rotation
 COM-CCW——Motor reverse rotation

Connect AC220V power supply
 Ground point

OEM201 adapt DC motor parameters



With potentiometer



Without potentiometer

• Product parameters

Pump head	YZ1515x	
Channels	1	
Rollers	3	
Tube	13#、14#、19#、16#、25#、17#、18#	
Max flow	2280mL/min	
Max speed	600rpm	
Matching motor	60 DC motor	
Motor Power	15W	
Motor voltage	DC24V	DC12V
Motor current	0.625A	1.25A

• Hose selection and flow reference

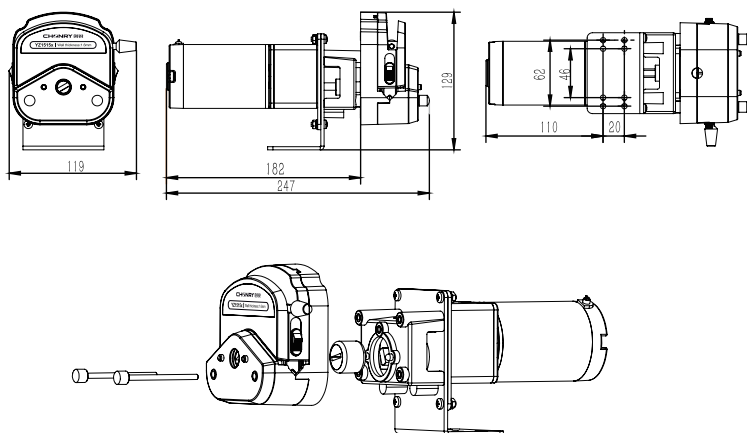
Pump head	Tube	ID*wall thickness(mm)	Max flow(mL/min)	Max speed(rpm)
YZ1515X	13#	0.8*1.6	42	600
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	19#	2.4*1.6	306	600
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	17#	6.4*1.6	1740	600
	18#	7.9*1.6	2280	600

Test conditions:

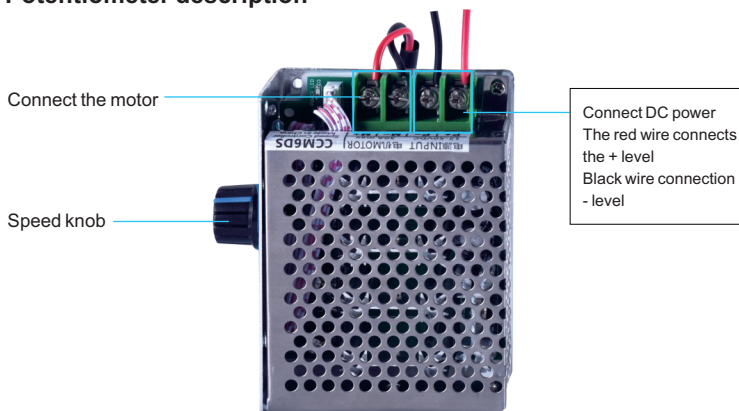
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• Dimensions/structure diagram



• Potentiometer description



Product maintenance and after sales

Product maintenance and after sales

Warranty information

•Warranty commitment

- ① The product has a one-year warranty period. If there is a failure during the warranty period, you can enjoy free maintenance and replacement of parts; if it is damaged by humans, it will not be included in the warranty scope.
- ② If the warranty period is exceeded, only cost will be charged for repairs.

Note: Any employee or distributor has no right to change or violate the above warranty terms. Chuangrui is only responsible for repairing, replacing or refunding the product in accordance with the actual use of the product and the reasonable compliance requirements of the customer.

•Relevant details

- ① Chuangrui will not be responsible for any direct or indirect losses caused by external reasons such as operating errors or human negligence that are not the product's own quality problems.
- ② Chuangrui will not be responsible for the transportation damage caused by the returned products and accessories during the return journey.
- ③ In any case, the compensation cost received by the customer shall not exceed the actual payment price.

• Non-warranty scope

The following conditions are not included in the free maintenance of the warranty:

- ① The product has exceeded the warranty period.
- ② Product failure caused by abuse, misuse or accidental damage by Chuangrui's judgment.
- ③ Product problems caused by ultraviolet rays or direct light.
- ④ It is not the damage caused by after-sales personnel in the repair or disassembly process.
- ⑤ Damage caused by chemical erosion or long-term improper maintenance.
- ⑥ Product failure caused by force majeure factors such as natural disasters.
- ⑦ The operator fails to follow the corresponding operation suggestions and requirements, improper loading and unloading, improper maintenance, and improper operation.
- ⑧ Failures or damages that are not caused by the quality of the product itself.

Note: Chuang Rui reserves the right to modify the above terms at any time.

Repair information

- ① If there is a product that needs to be returned/repared, please contact the sales, distributor or Chuangrui official according to the delivery related process to quickly solve the after-sales problems such as return, replacement, and repair;
- ② If there is no special agreement or written instructions, please return and exchange the goods within the specified time;
- ③ When applying for after-sales service, please provide a clear reason for the return, specific information about the contacted substances, and responsible for the cleaning of the product (especially products that have been exposed to toxic chemical substances or harmful substances to the human body)
- ④ When returning the product to the factory, please pay attention to the packaging specifications to prevent damage to the pump during transportation; Chuang Rui will not be responsible for product damage caused by improper packaging and will not be included in the warranty.

Technical support & After-sales

For official technical support and after-sales questions, please consult:

Address: NO.369 of HuiYang Street , Baoding 071000 , Hebei , China

Telephone: +86 15633705132

Website : www.crpump.com

*Disclaimer

- The content of this operation manual is for reference only.
- Chuang Rui reserves the right to change the product (Design or specification) without prior notice.
 - We formulate the information in this document from a correct perspective, but Chuangrui will not be responsible for any errors.
- If you need the latest version of the operation manual, please contact Chuang Rui official.
 - Chuangrui will not be responsible for any loss caused by non-product quality problems or human errors.







Warning:

This product is not suitable for equipment with its own problems.
Do not place this product in hazardous work areas, flammable and explosive environments.








Appendix 1:1 comparison table of tube size




1:1 comparison table of tube size

Micro flow tube

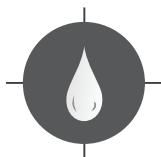
Tube	0.5x0.8	1x1	2x1	3x1	2.4x0.8	3.2x0.8
Tube section (1:1)						
Wall thickness (mm)	0.8	1	1	1	0.8	0.8
Inside diameter (mm)	0.5	1	2	3	2.4	3.2
Pressure (Mpa)	Continuous	0.1				
	Interval	0.1				

Basic flow tube

Tube	13#	14#	19#	16#	25#	17#	18#
Tube section (1:1)							
Wall thickness (mm)	1.6						
Inside diameter (mm)	0.8	1.6	2.4	3.1	4.8	6.4	7.9
Pressure (Mpa)	Continuous	0.17			0.14	0.1	0.07
	Interval	0.27			0.24	0.14	0.1

Tube	15#	24#	35#	36#
Tube section (1:1)				
Wall thickness (mm)	2.4			
Inside diameter (mm)	4.8	6.4	7.9	9.6
Pressure (Mpa)	Continuous	0.17		0.14
	Interval	0.27		0.24

BAODING CHUANG RUI PRECISION PUMP CO. , LTD.



Address: NO.369 of HuiYang Street, Baoding 071000, Hebei, China

Mobile: +86 15633705132 **E-mail:** support@crpump.com

Website: <https://www.crpump.com>

