



User manual
Hydraulic Comparator
HS711A

Claim

- The operating instructions are parts of the products and must be kept in the immediate vicinity of the instrument and readily accessible to skilled personnel at any time.
- Skilled personnel must have carefully read and understood the operating instructions prior to beginning any work.
- The manufacturer's liability is void in the case of any damage caused by using the product contrary to its intended use, non-compliance with these operating instructions, assignment of insufficiently qualified skilled personnel or unauthorized modifications to the instrument.
- HUAXIN reserve the rights to change the contents or form of these operating instructions at any time without prior notice having been given.

Safety information

Symbol



warns you against actions that can cause injury to people or damage to the instrument.



points out useful tips, recommendations and information for efficient and trouble-free operation.

Warning

In order to protect your products, your own and others safety, please read this manual carefully before your operation, otherwise it may cause trouble.

Huaxin is not liable for any safety problems or damages caused by misuse or incorrect operation.

① Operate by professional



The system must only be operated by trained and authorised personnel who know the manual and can work according to them.

② Use the product only as specified




Any operation not included in the following instructions or outside the specifications must not be attempted.


③Please use non-damage goods

 Don't use the product if it is damaged.


④No Disassembling

 Disassembling may cause physical injury or equipment damage. Only qualified technicians are allowed to fix the equipment. Please call our service staff for repair instruction and guidance if there would be anything wrong.

⑤Don't calibrate oil gauge

 The item belongs to non-oil equipment, if you use the item to calibrate oil gauge, there will be oil left behind in the system, and it will not provide pressure anymore. Meanwhile that may pollute oil gauge.

⑥Store the item with pressure

 If this equipment will be in idle for a long time, please close the relieve valve and provide pressure about 2bar. In order to avoid the air enter into the item inside. That will affect the system stability when you use it next time.

Labeling

Huaxin Instrument(Beijing) Co., Ltd.		→	Manufacturer
Model	HS711A	→	Model
Product	Hydraulic Comparator	→	Product Name
Range	(0~600bar)	→	Pressure Range
No.	17016038	→	Series Number
Date	2017.01	→	Date of Manufacture

Claim

Safety

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1.Summary

HS711A Hydraulic comparator adopts special process with high quality aluminum alloy and pinning inside design, which make it high sealing quality, easy to clear. With the advantage of fast connection ,easy generate pressure , quick pressurizing, long time keep pressure, higher accuracy, it have been widely used in Lab and Field on the pressure gauge calibration.

Functions

HS711A generate pressure for calibrating pressure gauges, such as pressure (different pressure) transducers, precision pressure gauges, general pressure gauges and other pressure gauges. It can be widely used in power, chemical, petrol, metallurgy, metering, military industry, etc.

Features

- Compact structure, light weight
- Pressure range up to 600bar
- Easy operation, saving time and energy
- Fast connection, quick pressurizing
- Easy increasing pressure, convenient maintenance
- Simple and smart appearance

2.Technical Specification

Model:HS711A Hydraulic Comparator

Generated pressure range:(0~600)bar ; (0~700)bar

Working medium: Distilled water

Adjust resolution:0.001bar(0.1kPa)

Material: Stainless Steel/Aluminum for body; Stainless steel for outputs; Buna-N for seals

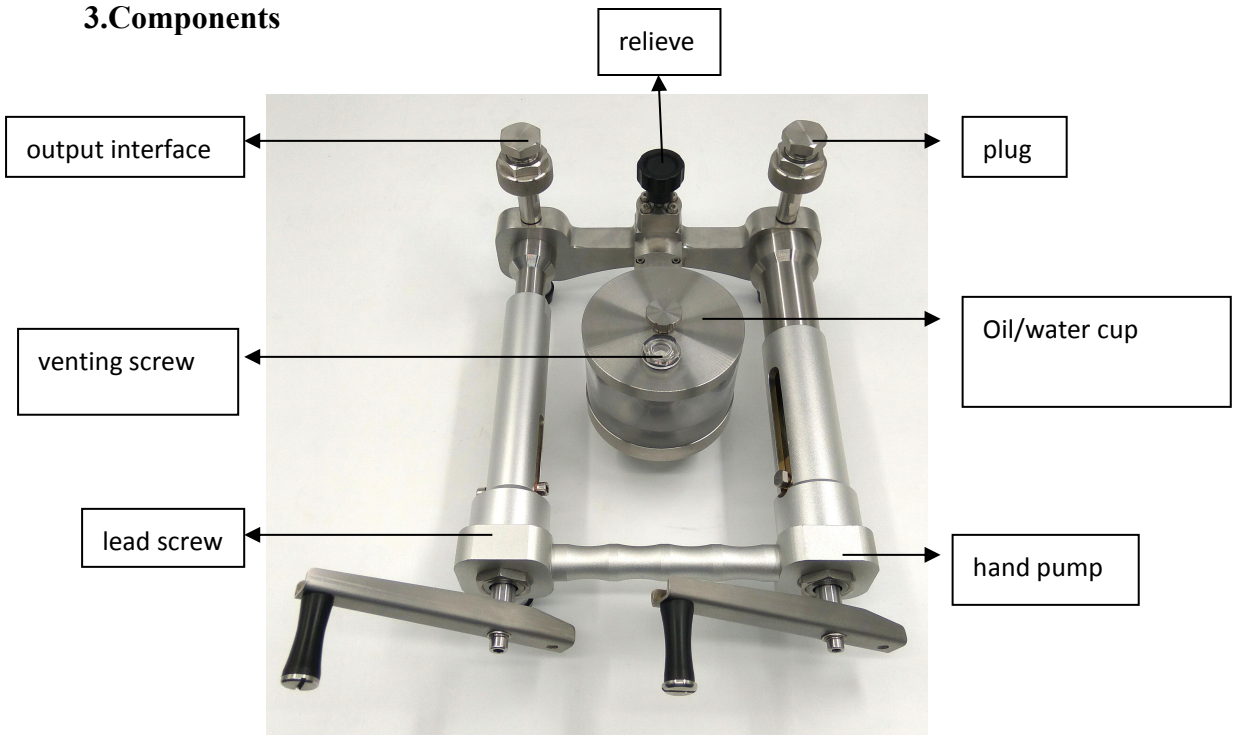
Output interface connection:M20×1.5Female

Package: Carrying black bag. Specialized cartons and foam wrap(optional)

Dimensions:320L×240W×140H(mm)

Weight:5.0kgs

3.Components



Output

There are two output interface. one for standard gauge, the other for gauge under test.

Venting screw

Release the venting screw during operation ;otherwise be tightened.

Relieve

Clockwise rotate the relieve knot before generating pressure, slowly anti clockwise rotate to release the inner pressure when finished calibration.

Lead screw

Clockwise rotate the lead screw to increase the pressure, anti clockwise rotate to decrease the pressure (pressure range :0~600bar).

Hand pump

Clockwise rotate the hand pump to pre-generate the pressure (pre-generate pressure range: 0~50bar) before use lead screw to increase the pressure.

Water can

Store distilled water

Plug

Please fasten plug after calibration test, only release it during testing process.

4.Operation

Pressure gauge 250bar(25Mpa) as example.

(The calibration points:0bar 50bar 100bar 150bar 200bar 250bar)

A. Lay the HS711A on the test bench. anti-clockwise the relieve valve, unscrew venting screw . Remove the plug of the outputs, connect the standard gauge and gauge under test on the two output interface

B. Please fill the work medium (distilled water) before calibration. The water position should be at least 2/3 of the whole water can.

C. Anti-clockwise rotate the hand pump and lead screw till cannot rotated.

D. Record 0bar record, then close the "relieve" valve, clockwise rotate the lead screw to generate the pressure till the standard gauge shows to about 20~30bar.

E. Then clockwise the hand pump to increase the pressure to calibration the normal pressure gauge on the calibration points, then anti-clockwise rotate hand pump to decrease pressure on the calibration points for calibration.

F. After finished calibration, anti-clockwise the relieve valve to release the pressure till all the inside pressure have been released. then remove the standard gauge and gauge under test. tighten the plug and venting screw. The whole calibration cycle have finished.



Remarks:

Please tighten the plugs after all the tests have been finished.

NOTES:

1. There must be no pressure in the system when removing pressure gauge.
2. Replace the O-rings regularly.
3. The working medium of item is water, please don't mix any other liquid.

5.Troubleshooting

There are some main faults of HS711A mentioned below after long term usage, the operator can analyze and eliminate problems by these methods.

Disassemble and repair the HS711A with pressure is prohibited.

Faults	Cause	Solution
Water leakage	The O-ring seal is loose or damaged	Replace the O-ring
	There is large damage on the sealing faces of gauge under test	Check the sealing faces
Lead screw couldn't generate pressure	No enough medium in water cup	Add medium
	The internal O-ring is damaged	Replace the O-ring
	The gauge under test has huge capacity	Replace the gauge under test
The pressure is instability, the standard gauge depressurized quickly	Check the instrument to make sure there is no leakage of water. Otherwise the O-ring is damaged or there is connection loosening	Replace O-ring, or reassembling
	Pressurize without gauge under test. if the instrument doesn't leak pressure, this indicates gauge under test has problem. Otherwise there is problem with device or standard gauge. Check the standard gauge and device separately	Replace standard gauge or gauge under test

5.Maintenance

7.1. Keeping about 2bar pressure inside, and tighten the venting screw and relieve valve, if the HS711A will be out of work for long time,

7.2 Tighten and fasten all the valve and plug to prevent water leakage during the transportation. , it is necessary to packed with special carton and foam wrap.

7.3.Replace working medium regularly.

7.4.The working medium is distilled water or any water that can be used for calibrating gauges.

6.Support

The product specifications and other information contained in this manual are subject to change without notice. If you have any questions, please call our services hotline:400 611 3558 or Tel:+86-10-62392087