

Accurate calibration, Perfect service!



SPMK 213K

Hydraulic Ultrahigh Pressure Comparator User's Manual
[Version No.:V1.0]

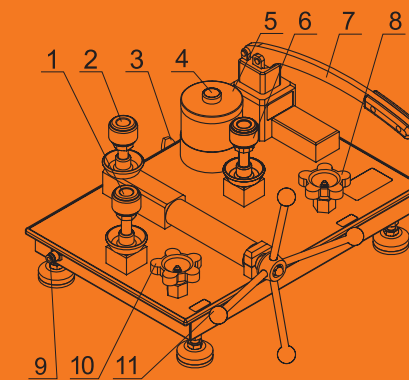
Beijing Spake Technology Co., Ltd.

Technical Parameters

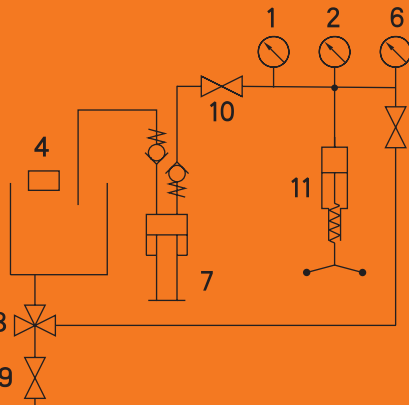
- > Measuring range: (0 ~ 250) MPa
- > Minimum controllable adjustment: 1kPa
- > Medium: Mineral oil
- > Dimensions: (450X380X250) mm
- > Weight: 17kg
- > Interface size: M20 × 1.5 F*3pcs (BSP/NPT Optional)
- > Oil tank volume: 0.38L

Structure and Principle

Structure



Principle



1&2&6 - Output ports
3 - Drain inside/outside switch
4 - Oil filling port
5 - Oil cup
7 - Pre-pressure handle
8 - Isolation valve
9 - Drain outlet
10 - Release valve
11 - Handwheel

Accessories

- > O rings.
- > Plugs*3pcs.

O rings



Plugs*3pcs



Precautions

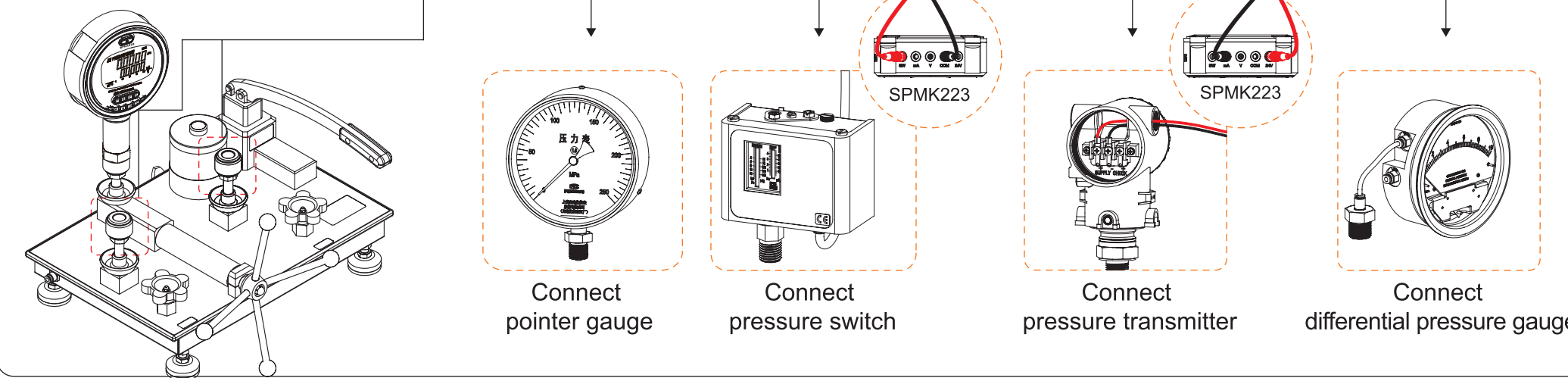
- > Instruments with impurities must be cleaned before calibration.
- > When connect with the instrument containing strong corrosive medium to this equipment, it must be washed with carbon tetrachloride solution.
- > If the thread end surface of the interface of the instrument under test is damaged, the output port may leak. Please use the transition joint and sealing aluminum pad produced by our company.
- > When not in use, please close each output port, tighten the oil port, and store in a clean and dry place.
- > It is strictly forbidden to mix-work this equipment with other equipment, and it is strictly forbidden to use it overrange.
- > Our company is not responsible for personal safety problem and machine damage caused by wrong operations as required

FAQ and Solutions

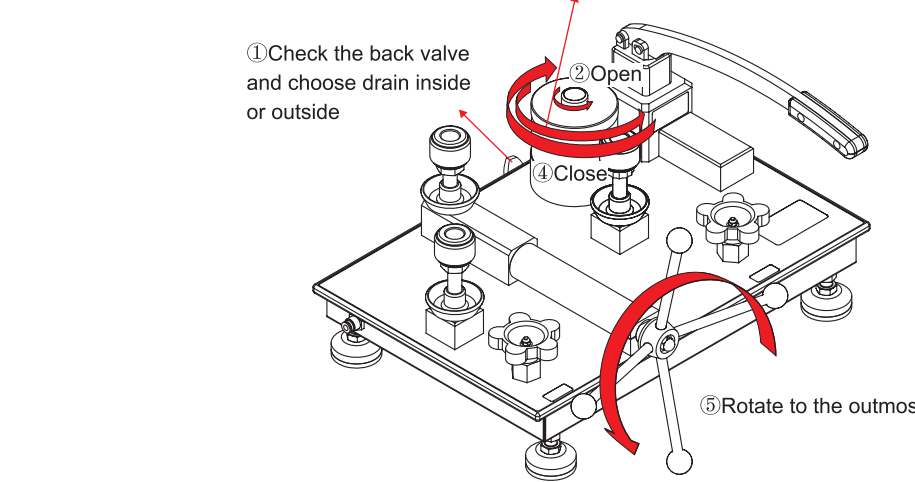
Problems	Causes	Solutions
Difficult in producing pressure	Lack of oil in oil cup	Fill oil into the oil cup
	Isolation valve is closed	Anti-clockwise open isolation valve
	Release valve is open	Clockwise close isolation valve
	Under tested gauge(reference gauge) is not tightened	Under tested gauge(standard gauge) should be tightened, output port not in used should be tightened by plugs
	System is with air	Block the output port, close release valve, making pressure and open isolation valve,repeat for a few times
	Medium pollution, one way valve is not sealed	Cleaning, maintenance, use our liquid filter
Leakage of pressure comparator	Under tested gauge thread face is not smooth	Use adaptor of our company or use Aluminum/copper sealed pad. Use tools to tighten if necessary
	The seal ring in the output port is worn or aged	Replace O rings
	Isolation valve is not closed	Close isolation valve
	Under tested gauge is leaking	Change other gauges and check if there is still leaking
	The comparator is leaking	Connect pressure sensor or high accuracy pressure gauge with output port, block other un-used ports by plugs, make pressure to the highest pressure of its pressure range to check the sealability

Basic Operation

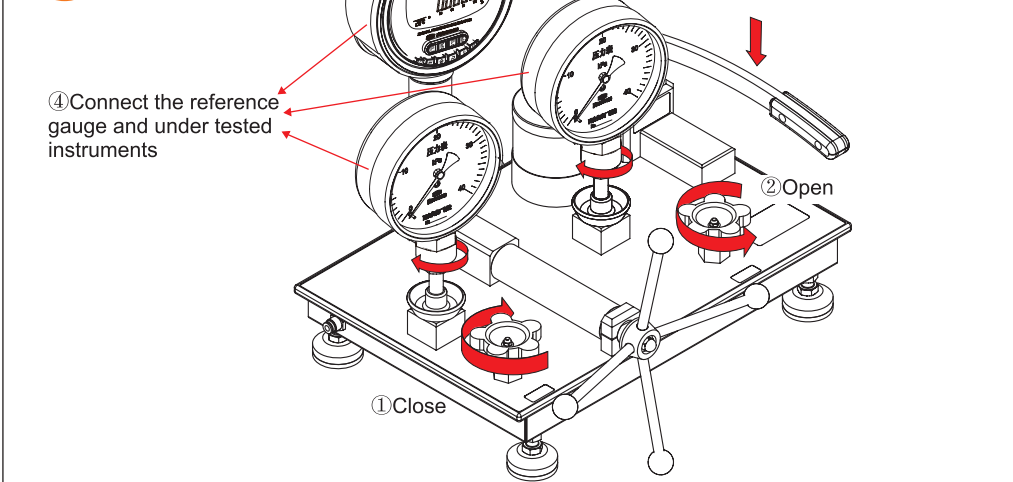
A Connection



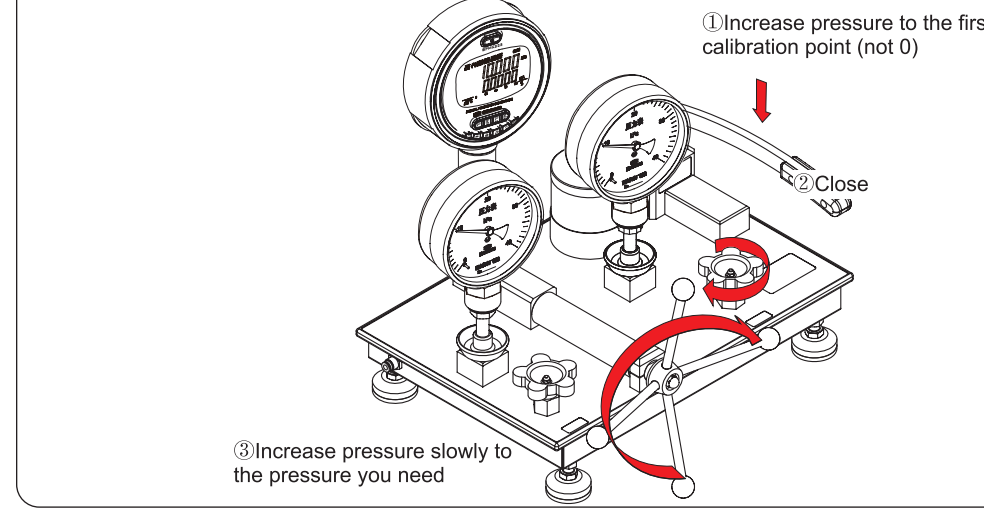
B Prepare



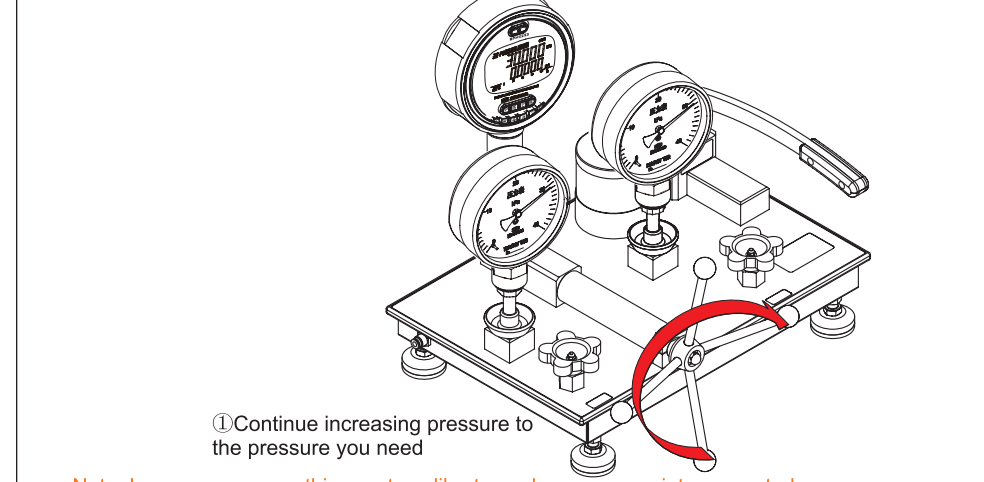
C Connection



D Pressure increase process

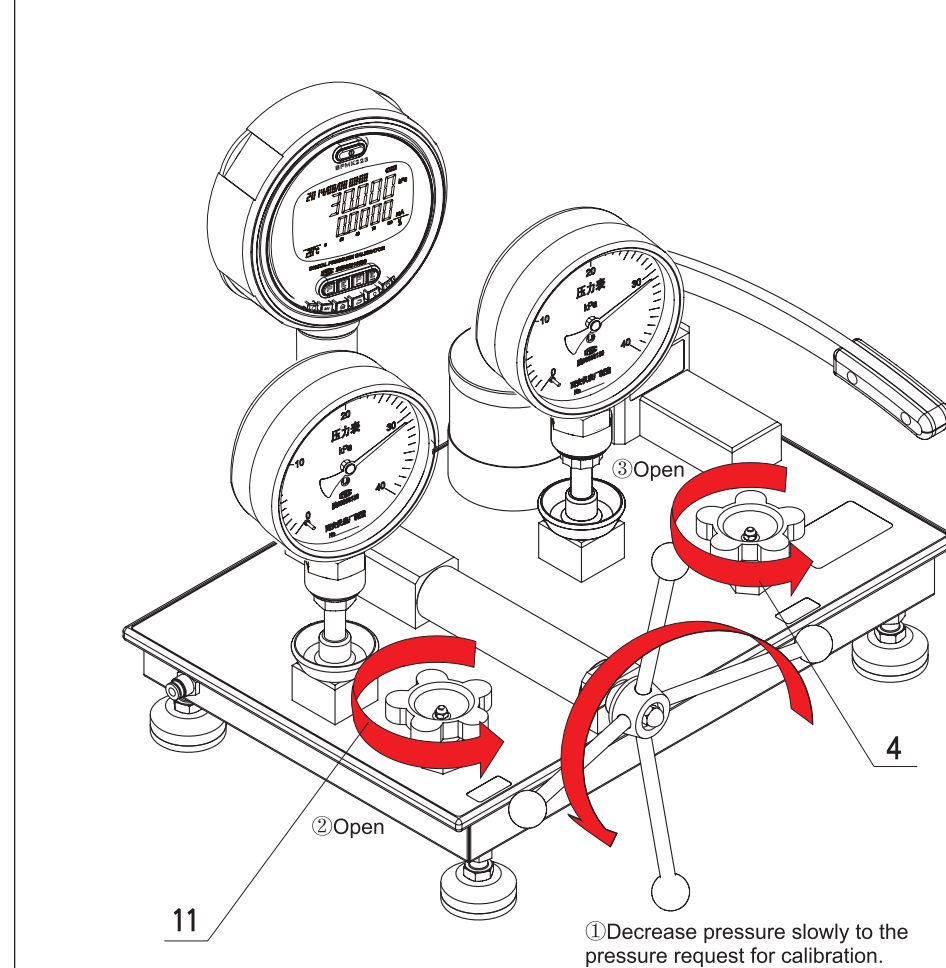


E Pressure increase process



Note: Increase pressure this way to calibrate each pressure points requested.

F Pressure decrease



Note:Pressure decrease near 0, Anticlockwise open release valve (11) and isolation valve (4) for 0 pressure calibration.

Declaration: 1. Beijing Spake Technology Co.,Ltd has tried to ensure the accuracy of this manual. Due to the difference of the object under calibration, the content may not be comprehensive. Please refer to the relevant calibration regulation.
2. Above pictures are just for reference.

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