ATO

XY-6/60 Pressure Gauge Calibrator

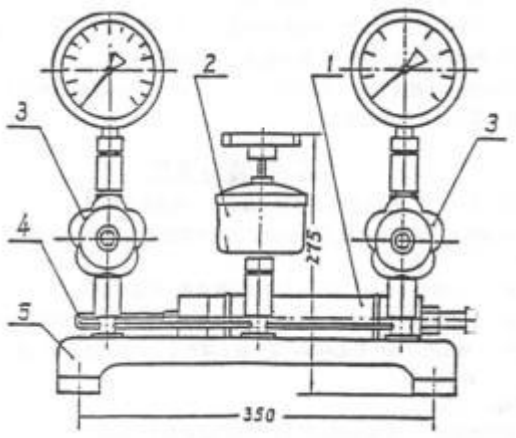
User Manual

I. Purpose

The pressure gauge calibrator is intended for the calibration of general-purpose pressure gauges, with a test pressure capacity of up to 60 MPa and a test vacuum capacity of -0.08 MPa.

II. Basic Structure and Working Principle

The XY-6/60 pressure gauge calibrator consists of a hand pump (1), an oil cup (2), and two one-way valves (3). These components are connected by connecting pipes (4) and fixed on the base (5). Each valve (3) is fitted with M20×1.5 locking nuts at both ends, for connecting the precision pressure gauge and the gauge under test. When the oil cup valve is closed, rotating the handwheel moves the piston, generating pressure (or vacuum) that is transmitted to both gauges. The gauge under test is then calibrated by comparing its readings with those of the precision pressure gauge.



(1) Hand pump **(2)** Oil cup **(3)**Check valve (one-way valve) **(4)** Connecting pipe **(5)**Base

III. Technical Data

Model	XY-60	XY-6
Test Pressure	(0～60)MPa	(0～6)MPa
Test Vacuum		(－0.08～0)MPa
Working Fluid	Mixture of kerosene and transformer oil	Medical castor oil
Weight	15.6kg	15.6kg

IV. Acceptance and Storage

1. Upon receiving the calibrator, the user shall first inspect the shipping crate for integrity. If any damage is found, the cause must be identified immediately.

2. After unpacking, remove the cushioning materials, inspect the calibrator for any visible damage, check that the user manual and factory certificate of conformity are complete, and verify the product and accessories against the packing list. If any items are missing, notify our website immediately.

3. The calibrator shall be stored indoors, where the ambient temperature is (+5 ~ +35)° C, the relative humidity is no more than 80%, and the surrounding air contains no harmful substances that could corrode the calibrator.

V. Installation and Operation

1. The pressure gauge calibrator shall be placed on an easily accessible workbench and kept level.

2. The operating ambient temperature of the calibrator is (20±10)° C, the relative humidity shall not exceed 80%, and the surrounding air must be free of corrosive gases.

3. The calibrator must not be subjected to vibration. A rubber mat shall be placed on the workbench, and the calibrator shall be securely fastened with screws.

4. Before use, clean all parts of the calibrator with gasoline first, then fill the oil cup with working fluid. Rotate the handwheel of the hand pump to check if the oil circuit is unobstructed. If no issues are found, install the precision pressure gauge and the gauge to be tested.

5. Operating Steps:

1) When calibrating pressure gauges:

a. Open the oil cup valve and turn the pressurizing handle counterclockwise to fill the cylinder of the hand pump with working fluid.

b. Close the oil cup valve and turn the pressurizing handle clockwise to compress the working fluid, applying oil pressure to the gauge under test and the precision pressure gauge. Calibration can then be performed by comparing the readings of both pressure gauges.

2) When calibrating vacuum gauges with the XY-6:

a. Remove the working fluid from the calibrator.

b. Close valve (3), open the oil cup valve, and screw the hand pump rod fully into the cylinder.

c. Close the oil cup valve, open valve (3), and unscrew the hand pump rod to create a vacuum. If the required vacuum level is not achieved with one stroke, repeat the screwing in and out process until the desired vacuum is reached.

VI. Maintenance and Repair

1. Clean all parts of the instrument regularly and reassemble them as they were after cleaning.

2. The oil must not contain impurities or contaminants. It must be replaced with new oil after a certain period of use.

3. When not in use, the calibrator must be covered with a cloth cover to prevent dust from entering.

VII. Ordering Information

When placing an order, the following information must be specified: Model number, product name, and test pressure range.