

TECHTONGDA YJY-600

TECHTONGDA YJY-600 Pressure Calibrator Instruction Manual

Model: YJY-600

1. INTRODUCTION

The TECHTONGDA YJY-600 Pressure Calibrator is a robust and reliable instrument designed for generating stable pressure to test and calibrate various pressure measuring devices. It functions as a pressure source for the inspection of general pressure gauges and other pressure measuring equipment, capable of reaching pressures up to 60MPa. This calibrator is an essential tool for laboratories, factories, and educational institutions requiring precise pressure verification.

Note: This equipment does not include a precision pressure gauge. A suitable precision pressure gauge must be acquired separately for accurate calibration and measurement.



Figure 1.1: Front view of the TECHTONGDA YJY-600 Pressure Calibrator.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the TECHTONGDA YJY-600 Pressure Calibrator. Failure to follow these instructions may result in injury or damage to the equipment.

- Always operate the calibrator on a stable, level surface to prevent tipping.
- Wear appropriate personal protective equipment (PPE), including safety glasses, when operating the device.
- Do not exceed the maximum rated pressure of 60MPa. Over-pressurization can lead to equipment failure and potential hazards.
- Use only the specified pressure transfer medium (machine oil or castor oil). Using incorrect fluids can damage the internal components.
- Ensure all connections are securely tightened before applying pressure to prevent leaks.
- Never attempt to disassemble or repair the unit while it is under pressure.

- Keep the work area clean and free of obstructions.

3. PACKAGE CONTENTS

Upon unpacking, verify that all items listed below are present and undamaged. If any items are missing or damaged, contact your supplier immediately.

- 1 x TECHTONGDA YJY-600 Pressure Calibrator Unit
- Assorted sealing washers and O-rings
- Conical adapter
- Operating keys (if applicable for case/locks)
- Carrying/Storage Case



Figure 3.1: YJY-600 Pressure Calibrator with various accessories including seals and adapters.



Figure 3.2: The YJY-600 Pressure Calibrator stored within its protective carrying case.

4. PRODUCT FEATURES

The YJY-600 Pressure Calibrator offers several key features designed for efficient and reliable pressure calibration:

- **Manual Hydraulic Source:** Provides a stable and controllable pressure generation mechanism.
- **High Reliability:** Constructed with durable materials for long-term performance.
- **Convenient Operation:** Designed for ease of use and straightforward maintenance.
- **Wide Pressure Range:** Capable of generating pressures from 0 to 60MPa.
- **Stable Pressure Fluctuation:** Ensures consistent pressure output for accurate calibration.
- **Corrosion Resistance:** Features a surface paint treatment for enhanced durability and protection against corrosion.

5. SPECIFICATIONS

Parameter	Value
Model	YJY-600
Maximum Test Pressure	0-60MPa
Pressure Transfer Medium	Machine oil or Castor oil
Hand Lift Pump Pressurized Pressure	<1MPa
Coupling Nut	M20*1.5
Net Weight	37.4 LBS (approx. 17 kg)

6. SETUP

Proper setup is crucial for accurate and safe operation of the calibrator.

- 1. Unpacking and Inspection:** Carefully remove the calibrator from its packaging. Inspect the unit for any visible damage that may have occurred during transit.
- 2. Placement:** Position the calibrator on a sturdy, level workbench or surface capable of supporting its weight. Ensure there is adequate space around the unit for operation and maintenance.
- 3. Connecting Gauges:**
 - Connect the precision reference pressure gauge to one of the M20*1.5 coupling nuts on the calibrator.
 - Connect the pressure gauge or device under test (DUT) to the other M20*1.5 coupling nut.
 - Ensure all connections are hand-tightened, then use an appropriate wrench to secure them firmly, but do not overtighten.
- 4. Filling Pressure Transfer Medium:**
 - Locate the fill port for the pressure transfer medium.
 - Slowly pour the recommended machine oil or castor oil into the reservoir until it reaches the indicated fill level. Avoid overfilling.
 - Ensure no air bubbles are trapped in the system. Operate the hand pump a few times with the relief valve open to purge air, then close the relief valve.



Figure 6.1: Angled view highlighting the hand pump and gauge connection points.



Figure 6.2: Detail of a M20*1.5 coupling nut for connecting pressure gauges.

7. OPERATION

Follow these steps to operate the YJY-600 Pressure Calibrator for testing and calibration.

1. Initial Pressure Generation:

- Ensure the pressure relief valve is closed.
- Use the hand lift pump to generate an initial pressure in the system. Pump slowly and steadily until the desired approximate pressure is reached on the reference gauge. The hand pump is designed for pressures up to 1MPa.

2. Fine Pressure Adjustment:

- For precise pressure adjustment, use the large handwheel (fine-tuning mechanism). Turning the handwheel clockwise will increase pressure, and counter-clockwise will decrease it.
- Carefully adjust the pressure until the reference gauge indicates the exact desired calibration point.

3. Reading and Recording:

- Once the pressure is stable at the calibration point, read the value on both the precision reference gauge and the device under test (DUT).
- Record the readings for analysis and calibration adjustments.

4. Releasing Pressure:

- After completing the test or calibration, slowly open the pressure relief valve to gradually release the pressure from the system.
- Ensure the pressure returns to zero before disconnecting any gauges or components.



Figure 7.1: Detail of the fine-tuning handwheel and control valves for pressure regulation.

8. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your pressure calibrator.

- **Cleaning:** Keep the exterior of the calibrator clean and free of dust and debris. Use a soft, dry cloth. Avoid abrasive cleaners or solvents.
- **Fluid Level Check:** Periodically check the level of the pressure transfer medium. Refill as necessary, ensuring no air is introduced into the system.
- **Fluid Replacement:** Replace the pressure transfer medium annually or if it appears discolored or contaminated. Refer to the fluid manufacturer's guidelines for disposal.
- **Seal Inspection:** Regularly inspect all seals and O-rings for signs of wear, cracking, or damage. Replace worn seals promptly to prevent leaks and maintain pressure integrity.
- **Storage:** When not in use, store the calibrator in its protective case in a clean, dry environment, away from extreme temperatures and direct sunlight.

9. TROUBLESHOOTING

This section addresses common issues you might encounter with the YJY-600 Pressure Calibrator.

Problem	Possible Cause	Solution
No pressure generation	Pressure relief valve open; Insufficient fluid; Air in system; Loose connections	Close relief valve; Check fluid level and refill; Purge air from system; Tighten all connections
Pressure instability/fluctuation	Air in system; Worn seals; Contaminated fluid	Purge air; Inspect and replace seals; Replace pressure transfer medium
Fluid leakage	Loose connections; Damaged seals/O-rings	Tighten connections; Inspect and replace damaged seals/O-rings
Difficulty in fine adjustment	Stiff mechanism; Contaminated fluid	Lubricate moving parts (if accessible and recommended); Replace fluid

10. WARRANTY AND SUPPORT

For technical assistance, warranty information, or to inquire about replacement parts, please contact TECHTONGDA customer support. Keep your purchase receipt and product model number (YJY-600) readily available when contacting support.

For the most up-to-date contact information, please refer to the official TECHTONGDA website or your product documentation.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question