Time Electronics
Calibration, Test and Measurement

User Manual

7090
Pneumatic Calibration Pump

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This also applies to any schematics, drawings and diagrams contained herein.

This manual provides operating and safety instructions for the Time Electronics product. To ensure correct operation and safety, please follow the instructions in this manual.

Time Electronics reserves the right to change the contents, specifications and other information contained in this manual without notice.

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1 Introduction



The 7090 is a pressure and vacuum calibration hand pump that combines performance with rugged design. It is designed for arduous use in the field or as a pressure and vacuum source in test facilities. It is ideal for checking the calibration of gauges, pressure switches, transmitters, and recorders.

The large comfortable handles with grips moulded into the design make it easy to control the instrument whilst pumping up to pressure. Features include protective caging for the vent valve guarding against accidental damage, and dual o-rings on all pistons to ensure zero leakage.

The 7090 is supplied as a kit with 1 meter of 6/4 mm hose, a selection of 5 fittings, carry case, and user manual. Optional digital pressure gauges are available, including the TEG-CV40b/0.2 that covers vacuum to 40 bar, with 0.2 % of full scale accuracy.

2 Specifications

Output Range:	-0.95 to 40 bar (-13.78 to +600 psi).
Media:	Air and compatible gases only.
Gauge Port:	¼” BSP with ¼” NPT adaptor fitted.
Process (UUT) Port:	1/8” BSP with 1/8” NPT adaptor and plug fitted.
Materials:	Stainless steel fittings, anodized aluminium housing, plastic/rubber handles, nitrile o-rings.
Weight:	0.91kg.
Options:	Digital pressure gauges, pressure fittings, manifolds, MK-7090 maintenance/rebuild kit.

3 Kit Contents

- 7090 hand pump
- 1 meter of 6/4mm hose
- Selection of 5 fittings
- Carry case
- Manual



Digital gauge optional

4 Operational Guidelines

1. Ensure all units under test are disconnected from process pressures before connecting the pump.

2. Do not exceed the maximum pressure rating; this is 41 bar (600 psi).

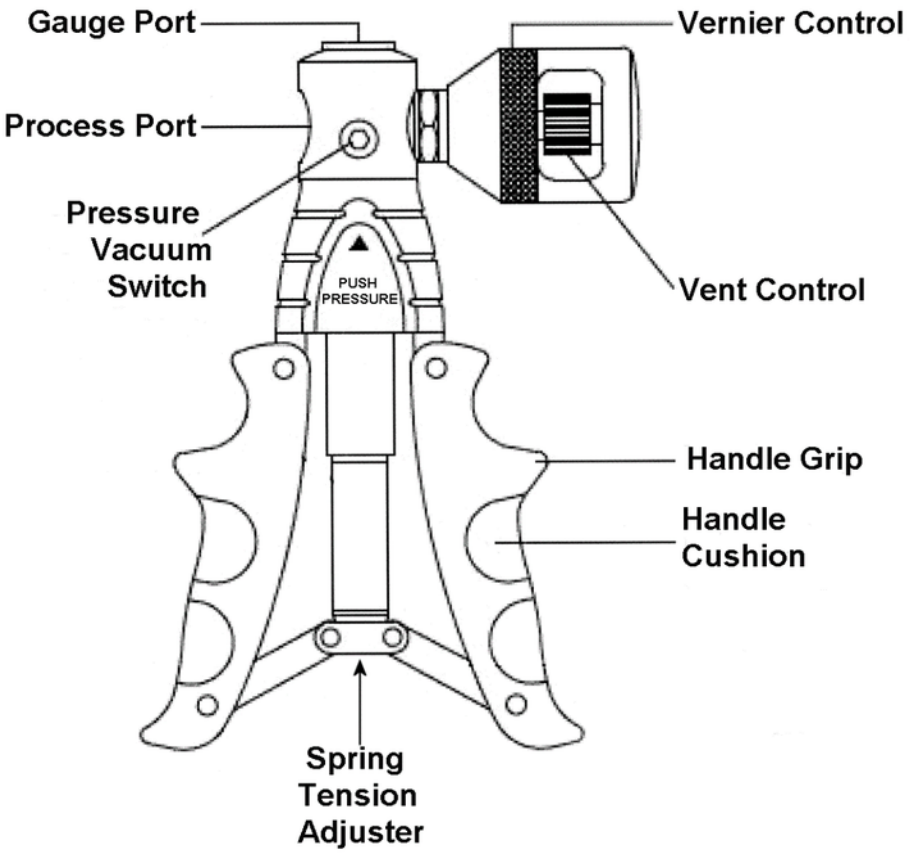
3. The 7090 is supplied with ¼” and 1/8” BSP ports. For use with NPT fittings the supplied adaptors must be fitted.

4. Use only bonded washers to seal the male adaptors/fittings. Screw down hand tight, and then fully tighten with a spanner. Do not over-tighten, this could strip thread. PTFE tape or thread sealant may be used with female adaptors.

5. The 7090 uses a Schrader valve to vent. This means that the vent valve is fully open or closed several turns from the end of travel. Over tightening does not increase the effectiveness of the seal.

6. Do not use with liquids.

5 Operation



1. Connect the calibrator via a suitable adaptor and hose to the gauge port.
2. Connect the UUT to the process port via a suitable adaptor and hose.
3. Select the desired pressure/vacuum function using the slide switch (for example, if pressure generation is required, using a suitable tool, push the slide pin in on the side of the pump housing marked PRESSURE.
4. Close the vent knob by rotating it away from the pump housing (see note 5 in operational notes).
5. For high pressure operation, back out the vernier control until the ring on the vernier shaft is visible. Pump to pressurize. Screw in the vernier control towards the pump body, the control will become stiff to turn, this is normal, the pressure will rise and easily achieve maximum pressure (do not exceed 40bar or 600 psi).
6. To achieve maximum pressure, the bottom of the pump handles should be about 19mm (3/4”) apart at the closest point when squeezed together. This is adjusted by the spring tension adjuster.
7. To release pressure slowly, turn the vent control towards the pump body. To increase or decrease the pressure slightly, use the vernier control.

6 Repair and Maintenance

The 7090 can be returned to Time Electronics for repair work, or a range of spare parts are available for supply upon request. These include pump handles, vernier assemblies and component kits.

6.1 MK-7090: Maintenance Kit for Hydraulic Pump 7090

A selection of replacement components for 7090, for overhaul and rebuild.



The maintenance/rebuild kit for 7090 pneumatic pump includes:

- Bonded Washers
- O-Rings
- Schrader Valve
- X-Ring
- Pressure Valve Spring
- Vacuum Valve Spring
- Ring Retain Clip
- Plug Shorty
- Non-petroleum lubricant

7 Warranty and Servicing

Warranty

Time Electronics products carry a one-year manufacturer's warranty as standard.

Time Electronics products are designed and manufactured to the highest standards and specifications to assure the quality and performance required by all sectors of industry. Time Electronics products are fully guaranteed against faulty materials and workmanship.

Should this product be found to be defective, please contact us using the below details. Inform us of the product type, serial number, and details of any fault and/or the service required. Please retain the supplier invoice as proof of purchase.

This warranty does not apply to defects resulting from action of the user such as misuse, operation outside of specification, improper maintenance or repair, or unauthorized modification. Time Electronics' total liability is limited to repair or replacement of the product. Note that if Time Electronics determine that the fault on a returned product has been caused by the user, we will contact the customer before proceeding with any repair.

Product Registration

You can register your product at: www.timeelectronics.com/contact/product-registration
Registering your product will enable us to maintain a record of purchase for your warranty. You can also use the web form to provide feedback about our products and services.

Calibration and Repair Services

Time Electronics offers repair and calibration services for all the products we make and sell. Routine maintenance by the manufacturer ensures optimal performance and condition of the product. Periodic traceable or accredited calibration is available.

Contacting Time Electronics

Online:
Please visit www.timeelectronics.com and select Technical Support from the Contact links. From this page you will be able to send information to the Time Electronics service team who will help and support you.

By phone:
+44 (0) 1732 355993

By email:
mail@timeelectronics.co.uk

Returning Instruments

Prior to returning your product please contact Time Electronics. We will issue a return merchandise authorization (RMA) number that is to accompany the goods returning. Further instructions will also be issued prior to shipment. When returning instruments, please ensure that they have been adequately packed, preferably in the original packing supplied. **Time Electronics Ltd will not accept responsibility for units returned damaged.** Please ensure that all units have details of the service required and all relevant paperwork.

Send the instrument, shipping charges paid to:

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Disposal of your old equipment



1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or return to Time Electronics.