Time Electronics
Calibration, Test and Measurement

User Manual

7095
Hydraulic 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 7095 is a hydraulic calibration hand pump that combines performance with durable design. It is designed for arduous use in the field or as a pressure source in test facilities. It is ideal for checking the calibration of gauges, pressure switches, transmitters, recorders, and much more.

The 7095 is designed for ease of use with a fully adjustable stroke control providing quick priming, easy pumping and a fast pressure generation up to 700 bar (10,000 psi).
Fine control of the desired pressure is achieved with use of the vernier control. The pump has changeable built-in filters to the output and gauge ports. The shatterproof reservoir and stainless steel construction ensure reliable leak free operation. Further features include protective housing for the vent knob, contoured cushioned handles, and oversized check valves for smooth, controlled operation.

The 7095 is supplied as a kit with a minimess 1/4" BSP high pressure hose, 1/4" BSP blanking plug, selection of spare washers, filters and o-rings, carry case, and user manual. Optional digital pressure gauges are available, including the TEG-G700b/0.2 that measures pressure to 700 bar with 0.2 % of full scale accuracy.

2 Specifications

Output Range:	0 to 700 bar (0 to 10,000 psi)
Media:	Distilled water or mineral based hydraulic oil.
Gauge Port:	3/8” BSP (blanking plug fitted)
Process (UUT) Port:	1/4” BSP with minimess test point fitted
Reservoir Capacity:	130 mL
Materials:	Stainless steel fittings, anodized aluminium housing, plastic/rubber handles, nitrile o-rings.
Weight:	1.36 kg.
Options:	Digital pressure gauges, pressure fittings, manifolds, MK-7095 maintenance/rebuild kit.

3 Kit Contents

- 7095 hand pump.
- Minimess to 1/4” BSP high pressure hose.
- 1/4” BSP blanking plug.
- Selection of spare bonded washers, filters, washers and o-rings.
- Carry case.
- User Manual.



Digital gauge optional

4 Operational Guidelines

1. Do not exceed 700 bar (10,000 psi), the 7095's maximum pressure.

2. Do not try to achieve 700bar by pump action alone.

3. The filler cap incorporates a small breather valve, it is normal for a very small amount of media fluid to trickle out, especially if the pump is held horizontally.

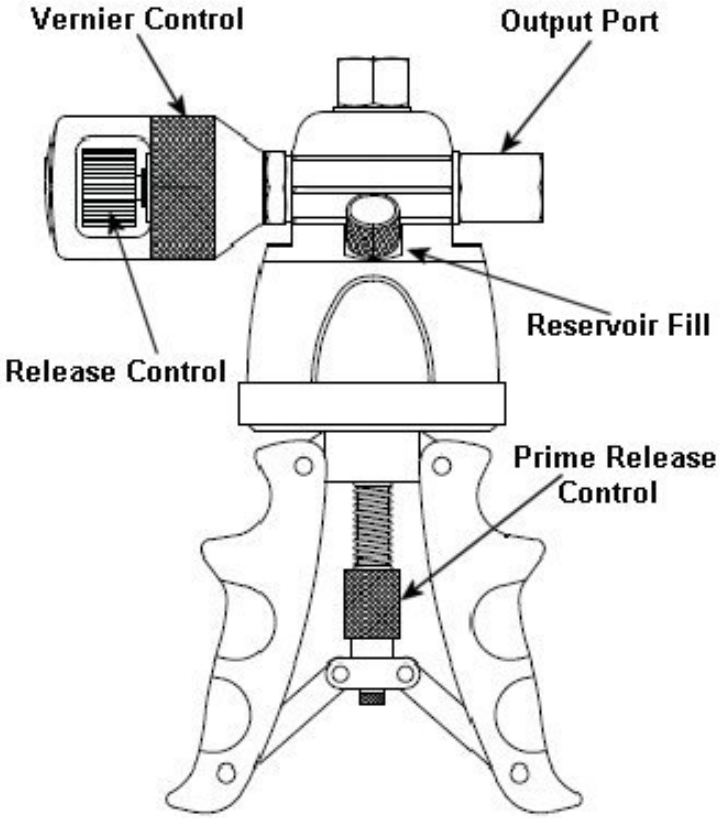
4. The 7095 comes with a 3/8" BSP gauge port fitted with a blanking plug and a 1/4" BSP output port fitted with a capped Minimess 1620 test point.

5. Use only bonded washers (Dowty) to seal adaptors.

6. Use only with distilled water or mineral based hydraulic oil.

7. Two bonded washers are fitted to seal the output port.

5 Operation





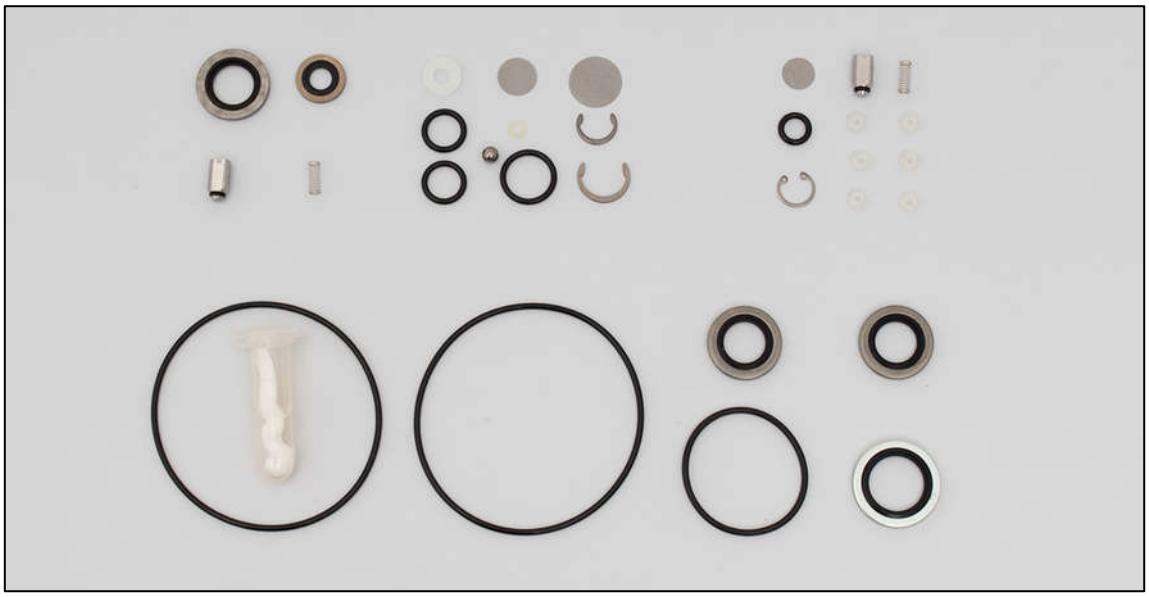
1. Remove the reservoir fill cap, and fill with an approved fluid to the required level (130 millilitres maximum). Refit the cap.
2. Connect the Minimess hose to the Minimess adaptor on the output port and connect to the instrument under test.
3. Connect the calibrator with a suitable adaptor to the 7095 via the top gauge port.
4. Set the vernier control to about half its travel and fully screw in the release control valve, no need to over tighten.
5. To prime the system, twist the knurled knob marked “Release” .Squeeze the handles together and release. Twist the knob once again. Repeat until the system is fully primed and a low pressure is indicated on either the UUT or on the calibrator. This feature can be engaged at any pressure.
6. ***Be sure not to exceed the 700bar (10,000psi) maximum operating pressure indicated on the pump.*** There is no pressure relief valve. Squeeze pump handles raising the pressure to about 50% of final required pressure. Screw in the vernier control to increase pressure to final set point, or screw out the vernier to decrease pressure to desired set point.
7. If the fluid level in the reservoir falls considerably during use, a partial vacuum may be created which could affect pump performance. To avoid this simply allow air to enter the reservoir by partly unscrewing the filler cap. If the system demands more fluid, remove cap and add more, do not over fill, the total amount in the system should not exceed the capacity of the reservoir.
8. For fast controlled decompression, unscrew the release control valve.

6 Repair and Maintenance

The 7095 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-7095: Maintenance Kit for Hydraulic Pump 7095

A selection of replacement components for 7095, for overhaul and rebuild.



The maintenance/rebuild kit for 7095 hydraulic pump includes:

- Bonded Washers
- Dowel Pin
- Main Spring
- Nylon Washers
- Check Valve Springs
- O-Rings
- Filters
- Washer Sealing
- High Pressure Seals
- Thrust Washer
- Spring Selector
- Stainless Steel Ball
- 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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Tonbridge, Kent, TN9 1RA.
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Tel: +44(0)1732 355993
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Email: mail@timeelectronics.co.uk
Web Site: www.timeelectronics.com

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.