

## **User Manual**

# 7191 Pneumatic Pressure Pump

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#### **Time Electronics Ltd**

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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.

## Contents

1	Introduction		4
	1.1	Description	4
	2 Controls		6
	2.1	Pressure Routine	6
3	Оре	Operation	
4	Operating Precautions & Troubleshooting		8
		Operating Precautions	
		Warranty and Servicing	

## 1 Introduction



## 1.1 Description

The 7191 is a hand operated pressure pump designed to generate either vacuum to -0.95 bar (-14 psi) or pressures to 4 bar (60 psi). A high-quality screw press is designed for fine pressure adjustment, with adjusting resolution up to 0.0001 mbar (0.01 Pa). To reach the pressure stability as high as possible during the pressure calibration, an isothermal bellows chamber is designed for reducing the possible heat effects such as environmental temperature change.

The 7191 is designed without a non-returning valve meaning minimal maintenance is required. Two finger-tight connectors installed on the pump allow the user using fingers to connect and disconnect the reference gauge and devices under test quickly and easily without the need for PTFE tape or wrenches.

The 7191 is ideal for applications requiring accurate low pressure testing and calibration. It can be used in calibrating low pressure gauges, transmitters, or other pressure measuring instruments. To accompany the pump a wide range of digital pressure gauges are available. The TEG-CV4b covers the full range of the pump (-1 to 4 bar) with accuracies of either 0.2 %, 0.1 %, 0.05 %, or 0.02 % of full scale.

## 1.2 Specifications

Media.....Air

Generated Pressure Range ............ 0.95 bar vacuum to 4 bar pressure

(14 psi vacuum to 60 psi pressure)

Pressure Resolution......0.0001 mbar / 0.01 Pa

Material ......Ram/adapters: SST

Body: SST/aluminum

Seals: Buna-N

Connection......Finger-tight connectors on both output ports

Reference Gauge Connection.......... 1/4" BSP (1/4" NPT or other optional)

Height ......145 mm

Weight ......2.8 kg (6.2 lbs)

Optional Extras ...... Digital pressure gauges

7191-CC Carry Case (with pump & 2 gauge storage)

Pressure adaptor kits (7198 and 7198-NPT)





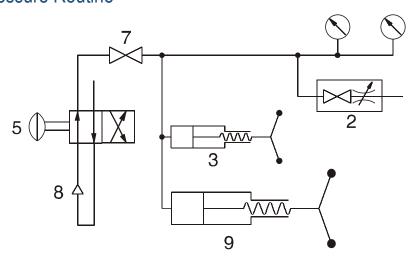


## 2 Controls

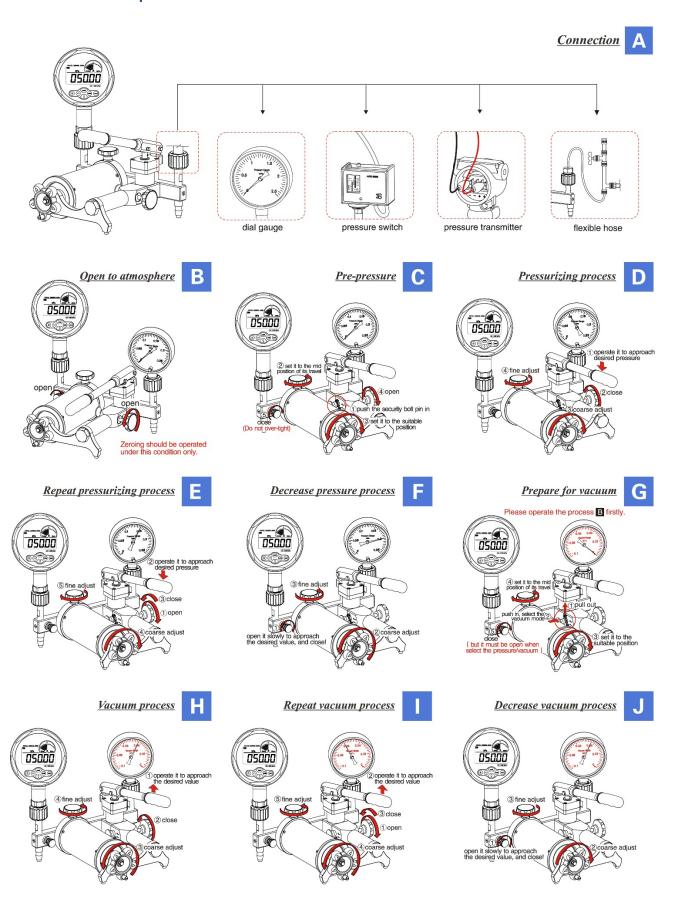


- 1. 1/4" BSP port (1/4" NPT, M20 x 1.5 if specified)
- 2. Release valve (clockwise = close / anti-clockwise = open)
- 3. Fine adjust handle (turn clockwise to increase pressure)
- 4. 1/4" BSP port (1/4" NPT, M20 x 1.5 if specified)
- 5. Pressure/vacuum selector (pull out for pressure, push in for vacuum)
- 6. Security bolt pin
- 7. Isolation valve
- 8. Pressure lever
- 9. Coarse adjustment handle (turn clockwise to increase pressure)

## 2.1 Pressure Routine



## 3 Operation



#### **Operating Precautions & Troubleshooting** 4

#### **Operating Precautions** 4.1

- Do not exceed the safety pressure limit
- Compressed air may cause problems in explosive or hazardous environments
- Close the valves and tighten plugs when 7191 is being transported
- Do not shift the selector to vacuum mode whilst under pressure
- Do not over tighten connectors
- Store the pump in a dry and clean environment

#### 4.2 Troubleshooting

Causes	Solution
Hard to pump pressure lever	Check isolating valve is open Check airline for blockages
Pressure lever pumps but pressure is not increasing	Check release valve is closed  Check pressure/vacuum selector is pulled out (for pressure).  Check for leaks on device under test  Check for leaks on output connection
The isolating valve is open	Close isolating valve
Sealing ring in broken or loose	Replace or tighten sealing ring
Output pressure is unstable when using fine adjust	Check the isolating valve is closed
Slow leak, output pressure dropping.	Check reference gauge and device under test is tightly screwed on and connection seal washer.  Check release valve is closed  Check pressure/vacuum selector is engaged correctly.
	Hard to pump pressure lever  Pressure lever pumps but pressure is not increasing  The isolating valve is open  Sealing ring in broken or loose  Output pressure is unstable when using fine adjust  Slow leak, output pressure

## 5 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.

## 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.
- 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.