

PART NUMBER	
SERIAL NUMBER	



QUBE Inflator Quick Start Manual

Please read these instructions carefully before attempting to assemble, install, operate or maintain the product. Protect yourself and others by observing all safety information. Failure to do so could result in personal injury and/or damage to property. Retain these instructions for future reference.

Safety Guidelines



Please read and follow the accompanying Safety Instructions before continuing.

Please ensure all operators are familiar with the Safety Instructions.

General Specifications

Min recommended air supply:	0.7 bar above the max target pressure
Max air supply:	16 bar
12Volt units	12 bar
Max operating pressure:	10 bar or 5.5 bar (see product rating label)
Min operating pressure:	0.3 bar
Display resolution:	0.1 bar
Max outlet hose length:	20m
Max permissible error (MPE):	0.08 bar
Voltage:	230V 50/60Hz - 12V dc
Power:	18VA max.
IP rating:	IP31 For indoor use only
Operating temperature range:	-10 °C to +55 °C



Installation

Please ensure all safety information is visible to the operator.

Wall mounted products should be secured to the wall using 4 screws onto the wall brackets. The mass of the product is 1.8 kg (excluding hoses).

Electrical supply (for models not fitted with a standard electrical plug)

For safe operation the equipment should be connected to an approved disconnect device such as a mains isolator or switched spur that is correctly rated according to local national standards and regulations. The unit must be earthed and protected with a HBC type F fuse or circuit breaker rated at 3 A and approved and rated according to local national standards and regulations. The disconnect device must be marked as the disconnecting device for the equipment, it must be located close to the equipment and be accessible at all times.

Air supply

Ensure the air supply is filtered and dry. This will minimise the accumulation of dirt and water in the inflator line filters.

For efficient tyre inflation, ensure that the air supply is at least 10 psi / 0.7 bar above the intended maximum target pressure.

It is recommended that when tightening any hose connections to the unit, the user selects two spanners. Hold the filter housing with one spanner, to ensure it does not spin, then tighten the hose connection with the other spanner.

Contact details

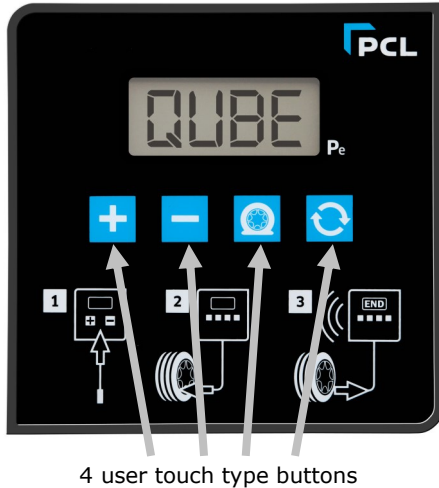
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 Holbrook Rise
 Holbrook Industrial Estate
 Sheffield, UK
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Control Panel



Key Legend

- Increase or decrease to set pressure
- Start flat tyre inflation
- Switch pressure unit

Note that the key legend above is for the standard PCL decal, symbols used may vary by individual part number but the functionality of the keys remains the same

Buzzer



Air/N₂ supply port (G 1/4)

Air outlet (tyre) port (G 1/4)

Deflate exhaust port

All units have a filter housing inlet and outlet port, G1/4 or NPT for US Market.

Start-up

Do not connect the outlet hose to the tyre during start-up or E5 and/or E16 will show

1. Turn on power supply.
2. Display will show all LCD digits check.
3. Display will show the current Firmware version number.
4. Display will show Program model variant.
5. Display will show the application e.g. 'Std'.
6. After 10 seconds the display will show 'PCL'.
7. The unit will then display the default set pressure.
8. However, if the Tyre Shop (tir) or N2 (N2P) Operation are required, then follow the **Application Mode Selection**.
9. The QUBE will reboot into the desired application and will

remain in this mode until an alternative mode is selected with **Application Mode Selection**.

Standard Operation

Inflation and deflation

1. Set desired pressure, by touching either or .
2. Connect the hose to the tyre.
3. Automatic inflation will commence to the set pressure, periodically stopping to display the pressure of the tyre.
4. If the pressure in the tyre is below 2 psi / 0.15 bar the process will not commence until is touched.
5. To halt inflation while inflating, press any of the four blue buttons. Press to restart inflation
6. When the set pressure is reached, the buzzer will sound and the display will show 'END' with the final pressure measurement and the red light will illuminate.
7. Remove the hose from tyre.
8. For selection of alternative pressure units touch

For adjustments to the inflators parameters please refer to your Distributor or PCL.

Refer to the vehicle manufacturers recommended pressure when setting the required pressure.

Application Mode Selection





1. Turn on power supply
2. Display will show all LCD digits check
3. Display will show the current Firmware version number e.g. '3.2.5'
4. Display will show Program model variant e.g. '300'
5. Display will show the current application, 'Std', 'tir' or 'N2P' as stored.
6. After 10 seconds the display will show 'PCL'
7. Touch to enter Application Mode
8. Display will show 'L 0', confirm to enter by touching
9. Display will show 'APP' confirm to enter by touching
10. Display will show 'Std' if this is the required Application Use or to change to 'tir' or 'N2P' touch to save mode.
11. Touch twice to exit and allow unit to reboot with new setting.

Tyre Shop (tir) Operation

Inflation and deflation

1. Set desired pressure, by touching either or
2. Connect the hose to the tyre
3. Automatic inflation will commence to the set pressure, periodically stopping to display the pressure of the tyre.
4. If the pressure in the tyre is below 2 psi / 0.15 bar, the process will not commence until is touched.
5. When the Set pressure is reached, the buzzer will sound and the display will show 'END' with the final pressure.
6. Remove the hose from tyre.

To enable setting of OPS

1. Touch  and display will toggle 'OPS' and blank value
2. Increment the OPS value between 0-29 psi / 0-2 bar by touching  and , to accept the value, touch 
3. Display will revert to the Set pressure previously selected.

Using OPS

The OPS value is added to the final target pressure setting to give the Over Pressure.

Example

A final set pressure of 32 psi / 2.2 bar is required with an OPS value of 15 psi / 1 bar. The tyre will now inflate (from flat condition only) to 47 psi / 3.2 bar. **Once the OPS value has been achieved, the unit will deflate back to the desired set pressure.**

Note that The OPS value will not be applied when the tyre has a pressure of more than 2 psi / 0.15 bar.




To prevent the accidental use of OPS, the OPS setting is **not retained** after the machine is powered down.



When using the OPS function, the sum pressure must not exceed the tyre manufactures maximum inflation pressure.

N₂ (N2P) Operation

Inflation and deflation (tyre top off)

1. Set desired pressure, by touching either  or 
2. Connect the hose to the tyre.
3. **The process will not commence until  is touched.**
4. When the Set pressure is reached, the buzzer will sound and the display will show 'END' with the final pressure.
5. Remove the hose from tyre.

N₂ Conversion of Existing tyres

For normal use a purity level of between 93% and 96% N₂ is sufficient for most road tyres.

If your N₂ generation source is greater than 97% then it is sufficient to leave the default setting of 2 purges. For N₂ generation sources less than 97%, then to achieve the required N₂ purity, consider adding additional purge cycles.




The final N₂ purity can be periodically checked using a N₂ meter (PCL Part Number N2A001).

For adjustments to Inflators parameters please refer to your Distributor or PCL.

User Inspection Mode

It is possible to set the inflator to act as a pressure gauge. The display resolution is changed and can be used to reference the inflator against a calibrated pressure source. The inflator automatic cycle is inhibited.

To access

1. Ensure the outlet hose is disconnected from the tyre.
2. Touch  and  together.
3. The unit will beep but the display will not change.
4. Touch  5 times.
(if this is not done within 10 seconds, the inflator reverts back to the normal mode)
5. Display will show the pressures to the minimum resolution: psi = 0.1 / bar = 0.01.
6. Connect the hose to the tyre and the display will show the pressure in the tyre.
7. When complete, touch any button to return to the normal mode.

Preset Operation

For models that include preset buttons P1 to P4.



The presets can be used to store and recall commonly used pressure settings.

- Press and hold the preset button to store the current set pressure to the selected preset.
- Press briefly the preset button to recall the preset pressure.

Service/Maintenance

Periodically

- Check the hose
- Check the tyre connector
- Remove the air input supply and tyre hose from the head and check the filters are clean

Contact your distributor or PCL for replacement spare parts.

Trouble Shooting Guide/Error Messages

Problem	Possible Cause	Solution
No display	No power connected	Switch power on
No inflation process	Tyre is below 2 psi Faulty connector	Press flat tyre button Replace faulty connector
Buzzer does not sound	Buzzer volume has been turned off Buzzer is damaged	Turn buzzer on Replace buzzer
Inflation process starts but does not complete	Low or no supply pressure Leaks exist	Check supply pressure Confirm leaks do not exist
Supply pressure leaks out input	Input and tyre hoses are incorrectly fitted (reversed)	Ensure input connection is to offset port, tyre connection is central between input and exhaust
Inflating or deflating is very slow	Check that mesh filters under input and output port fittings are blocked	Clean and or replace mesh filters
Connector will not seal to the tyre stems	Connector worn	Replace connector
Connector leak while not connected to tyres	Connector worn	Replace connector
E1	Unstable or insufficient supply pressure	Check the supply pressure
E4	Small volume, caused inflator to check pressure > 2bar / 29psi over target pressure	Check hose is not kinked or blocked, ensure a OPEN END connector is installed
E5	Inflator started under pressure i.e. is connected to tyre or a CLOSED END connector is being used	Remove hose from tyre and allow inflator to reset Change connector to OPEN END type
E6	Pressure sensor drift out	New sensor required - Refer to authorised repairer
E8	Pressure sensor disconnected from PCB or faulty	New sensor required - Refer to authorised repairer
E9	Pressure sensor failure - high	New sensor required - Refer to authorised repairer
E10	Under voltage	Check power supply
E11	Over voltage	Check power supply - Refer to authorised repairer
E12	Checksum corrupted	New PCB required - Refer to authorised repairer
E13	Lost or corrupted calibration settings	New PCB required - Refer to authorised repairer
E16	Unit started under pressure	Unit started when connected to a tyre or new sensor required - Refer to authorised repairer
E17	Calibration settings corrupt	Recalibrate unit - Refer to authorised repairer
E18	Runtime error	New PCB required - Refer to authorised repairer
E19	Touch screen error	New PCB required - Refer to authorised repairer
E20 - E23	Startup sequence error(s)	New PCB required - Refer to authorised repairer

PCL LIMITED WARRANTY

PCL warrants the components of each unit to which this Limited Warranty applies against defects in materials and workmanship for a period of twelve (12) months from date of sale (as evidenced by bill of sale or equivalent) or for a period of eighteen (18) months from date of shipment from PCL manufacturing facility (identifiable by the serial number and noted on original bill of lading from the manufacturing facility), whichever period is shorter. During this warranty period and subject to the conditions set forth in this statement, PCL will, at its option, repair or replace component parts that were defective at the time of shipment from PCL manufacturing facility, subject, however, to the following specific EXCLUSIONS: hoses and connections.

Repair or replacement will not extend the warranty period.

Customer must give PCL timely notice of any warranty claim by contacting an authorized PCL service centre. Claims must be accompanied by (1) evidence, by a bill of sale or equivalent, which clearly establishes date of purchase of the unit and (2) the serial number, found on the unit. Customers must properly pack parts in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk for loss or damage in shipment. Return shipment to customer will be freight collect unless otherwise agreed. For service at a customers location, customer will be charged the then prevailing service rates .

The Limited Warranty applies to PCL manufactured units only. Items listed in the applicable operators manual under routine maintenance are not covered by this or any other warranty. Failure to complete maintenance as stated in any applicable maintenance schedule will void the Limited Warranty. The Limited Warranty is expressly conditioned upon proper and normal use and service of the unit and upon strict compliance by customer with all of PCL instructions and recommendations for installation, operation and maintenance. The Limited Warranty does not apply to the unit or parts that are damaged or become defective due to improper handling, maintenance, storage, use, or operation, and does not cover ordinary wear and tear, corrosion, or erosion.

THE LIMITED WARRANTY SET FORTH IN THIS STATEMENT CONSTITUTES PCL'S SOLE WARRANTY FOR THE UNIT AND THE REMEDIES SET FORTH HEREIN CONSTITUTE CUSTOMERS SOLE REMEDIES FOR BREACH OF WARRANTY. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN FACT OR BY LAW, INCLUDING WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Determination of the suitability of the unit for the use contemplated by the customer is the sole responsibility of the customer. PCL shall not, under any circumstances, be liable in contract, tort or otherwise (including negligence and strict liability) for indirect, special, incidental, or consequential damages, and PCL's total liability shall not exceed the net purchase price for the unit. PCL shall be excused for delay or inability to perform obligations due to events beyond its reasonable control.



CUT HERE

Warranty Registration

Please complete and mail this form to activate warranty
Or visit us at www.pclairtechnology.com

Mail to:

**Warranty Department
PCL
Holbrook Rise
Holbrook Industrial Estate
Sheffield
S20 3GE
United Kingdom**

Name _____ Title _____

Company Name _____

Type of Business _____

Address _____

City _____ County _____ Post Code _____

Telephone _____

Part Number _____ Serial No _____

Purchased From _____

Purchase Date _____

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Calibration Certificate

This unit has been calibrated on test equipment that is traceable to national standards and meets the accuracy requirements for maximum permissible error in BS EN 12645:2014.

READING	SET PRESSURE			ACTUAL PRESSURE
	BAR	psi	KPA	
1	BAR	psi	KPA	
2	BAR	psi	KPA	

PART NUMBER	
SERIAL NUMBER	
TESTED BY	
DATE	