PROFESSIONAL AIR QUBE DIGITAL TYRE INFLATOR WITH OPS + NITROGEN PURGE

MODEL NO: **SA390**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.

Refer to instructions

1. SAFETY

- × **DO NOT** operate unit if damaged during shipping, handling or use.
- ✓ Read and understand all safety warnings and instructions before operating this product. Failure to read and follow all safety warnings may result in serious personnel injury or death. Property damage and/or product damage may also occur if all warnings are not followed.
- × **DO NOT** expose the product to flammable gases, vapours or fumes
- × **DO NOT** store flammable gases in or near this product
- ✓ Never use flammable or toxic solvents to clean the product or any of the unit's parts
- ✓ Never remove or alter any safety warning labels, tags, etc. located or provided with product.
- ✓ Follow all directions for maintenance.
- ✓ The use of other than genuine replacement parts may result in reduced equipment performance. Repairs must be performed by authorised repair personnel, otherwise the warranty will be void.
- ▲ **DANGER**! This product can be dangerous if used improperly. Children should not be allowed to use this equipment, as incorrect setting can allow tyre to be over inflated and a subsequent tyre burst/explosion can occur!
- ✓ Each person who is involved with installation, start-up, maintenance and the operation of the unit must read and understand the complete operating manual.
- ✓ The Sealey tyre inflators are exclusively approved for the dispensing of air/N2. Each use which doesn't follow this purpose as well as modifications to the product will be deemed to be improper use. The manufacturer is not liable for damages caused by improper use, the risk lies solely with the user.
- ✓ Proper use of the product also implies the observance of the manufacturers instructions with regard to installation, start-up, operation and maintenance.
- ✓ All works concerning installation, start-up, adjustment and maintenance must be made by qualified staff. For the operation of this tyre pressure inflator the local safety and accident prevention rules must be observed in all cases.
- ✓ High Pressure air is stored within the system.
- ✓ When using N2P mode , locate this system in a well ventilated area. Position the system away from any heat source.
- × **DO NOT** exceed the maximum air input pressure.
- × **DO NOT** operate this product if tired or under the influence of medication, drugs or alcohol.
- ❑ **WARNING!** To avoid the risk of personal injury, especially to the eyes, face or skin **DO NOT** direct the air/N2 stream at any person.

2. INTRODUCTION

Robust, high reliability and modern design which is space-saving and lightweight. Touch screen technology with human touch recognition software. Electronic pressure pre-set with additional four button memory function. Three modes, inflate, deflate and over pressure setting (OPS) – which allows operator to set the machine to automatically seat the bead on new tyres whilst getting on with alternative work. The inclusion of the nitrogen (N2) purge facility allows the unit to increase the effectiveness of this increasingly popular tyre service. Red flashing light, flashing screen and audio signal for end of cycle. Auto-start Inflation. Ceramic sensor gives guaranteed accuracy to ± 0.5% of full scale reading even with hoses up to 50m in length. 21mm Backlit transflective LCD gives a clear easy to read display. Supplied with a wall bracket, 5m hose with new patented design clip-on connector and BS approved 13A plug. 2 year warranty.

3. SPECIFICATION

Model No:	**SA390**
Accuracy:	± 0.5% of full scale reading
Inlet Size:	1/4" BSP
Maximum Air Supply:	12bar(174psi, 12.2kg/cm², 1200kPa)
Pressure Units:	bar, psi, kg/cm², kPa
Range:	0-12bar(0-174psi, 0-12.2kg/cm², 0-1200kPa)

4. INSTALLATION

❑ **WARNING!** The inflator is designed for indoor use only.

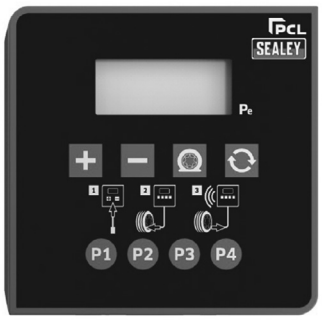
4.1. The compressor producing the air should have the necessary water and dirt filtration, to minimise accumulation of debris at the inflator line filter strainer.

4.2. INSTALLATION:

4.2.1. Qube is design to be mounted to a wall/support at 90°.

4.2.2. Affix the 2 metal brackets to the rear of Qube, place the assembly to the wall. Mark the holes, mount the Qube using adequate screwed support.

✓ Ensure the Mains plug can be easily accessed at all times.



8 user touch type buttons

Key Legend

+ − Increase or decrease to set pressure in all modes

Allow flat tyre in Standard (std) and Tyre Shop (tir) modes
Tyre top off in N2 (N2P) mode

Switch pressure unit in Standard (std) mode
Toggle OPS in Tire Shop (tir) mode
Starts tyre purging in N2 (N2P) mode

P1 P2 P3 P4 Setting and recall of favourite preset values

fig.1

5. CALIBRATION & ACCURACY

5.1. The accuracy of our digital units when released from our factory is that:-

5.1.1. The maximum permissible error (MPE) = 0.08 bar.

5.1.2. Each unit, before release, is checked and calibrated on test equipment that has accuracy traceable National standards.

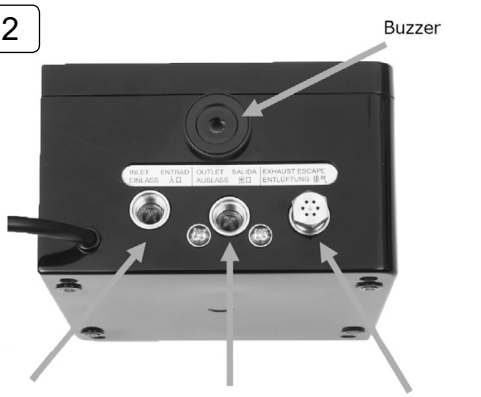
6. OPERATION

6.1. CONTROL PANEL

NOTE: All QUBE models have a filter housing of G1/4.

6.1.1. It is recommended that when tightening any hose connections to the QUBE, 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.

fig.2



6.2. MODE OVERVIEW

6.2.1. The unit has a choice of 3 different inflator applications installed.

6.2.2. Your QUBE can be configured into the 3 different applications.

6.2.3. Application Modes:-

STANDARD (std)
The QUBE will inflate and deflate tyres (Default mode by Sealey).

TYRE SHOP (tir)
The QUBE will inflate and deflate tyres and will allow Over Pressure Setting (**OPS**).

N2 (N2P)
The QUBE will inflate and deflate tyres and allow tyre purging for Nitrogen rich tyre filling.

During the start up procedure initiation the current application is always shown.

6.3. START-UP

6.3.1. On plugging in the unit for the first time, the QUBE will automatically start in Standard (**Std**) Operation.

6.3.2. However, if the Tyre Shop (**tir**) or N2 (**N2P**) Operation are required, then follow the Application Mode Selection.

6.3.3. The QUBE will reboot into the desired application and will remain in this mode until an alternative mode is selected with Application Mode Selection.

6.4. STANDARD (STD) OPERATION: INFLATION AND DEFLATION

6.4.1. Set desired pressure, by touching either + or −

6.4.2. Connect the hose to the tyre.

6.4.3. Automatic inflation will commence to the set pressure, periodically stopping to display the pressure of the tyre.

6.4.4. If the pressure in the tyre is below 3 psi, 0.2 bar the process will not commence until ⊙ is touched.

6.4.5. When the Set pressure is reached, the buzzer will sound and the display will show **'END'** with the final pressure. Red LED light will flash.

6.4.6. Remove the hose from tyre.

6.4.7. For selection of alternative pressure unit touch ⟳

6.4.8. For adjustments to Inflators parameters please refer to your Distributor or Sealey.

❑ **WARNING!** This unit is not suitable for the filling of bicycle tyres with a standard (Presta, Woods) bicycle valves and adapters. Over fill of the tyre is possible!

6.5. ADJUSTMENT OF THE FAVOURITE SETTING FOR ALL OPERATIONAL MODES

6.5.1. Select the desired favourite pressure set value using + and −

6.5.2. Hold P1 button until beep is heard (3 seconds) P1 is now saved to your favourite setting.

6.5.3. Press to select your favourite, this may be altered by resetting.

6.5.4. Repeat P2 for P3, and P4

NOTE: These values are retained after power down.

6.6. APPLICATION MODE SELECTION

6.6.1. Turn on power supply.

6.6.2. Display will show all LCD digits check.

6.6.3. Display will show the current Firmware version number e.g. '.3.2.5'.

6.6.4. Display will show Program model variant '415'.

6.6.5. Display will show the current application, **'Std'** , **'tir'** or **'N2P'** as stored.

6.6.6. After 10 seconds the display will show **'PCL'**.

6.6.7. Touch ⊙ to enter Application Mode.

6.6.8. Display will show **'L 0'**, confirm to enter by touching ⊙

6.6.9. Display will show **'APP'** confirm to enter by touching ⊙

6.6.10. Display will show **'Std'** if this is the required Application then exit 'application mode' by touching twice. To change to **'tir'** or **'N2P'** touch (+) And use to (-) change back to **'Std'**.
6.6.11. Confirm the application **'Std'**, **'tir'** or **'N2P'** by touching.
6.6.12. Display shows **'APP'** exit the application by touching twice.
6.6.13. The QUBE will reboot into the desired application and will remain in this mode until an alternative application is required.

6.7. TYRE SHOP (TIR) OPERATION: INFLATION AND DEFLATION

6.7.1. Set desired pressure, by touching either or
6.7.2. Connect the hose to the tyre.
6.7.3. Automatic inflation will commence to the set pressure, periodically stopping to display the pressure of the tyre.
6.7.4. If the pressure in the tyre is below 3 psi, 0.3 bar or 30 kpa, the process will not commence until is touched.
6.7.5. When the Set pressure is reached, the buzzer will sound and the display will show '**END**' with the final pressure. Red LED light will flash.
6.7.6. Remove the hose from tyre.

6.8. TO ENABLE SETTING OF OPS

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

NOTE: The OPS value will not be applied when the tyre has a pressure of more than 3 psi, 0.2 bar.
To prevent the accidental use of OPS, the OPS setting is not retained after the machine is powered down.
Use of 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 the value of 47 psi, 3.2 bar.
Once the OPS value has been achieved, the unit will deflate back to the desired set pressure.
For adjustments to Inflators parameters please refer to your Distributor or Sealey.

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

6.9. N2 (N2P) OPERATION; INFLATION AND DEFLATION (TYRE TOP OFF)

6.9.1. Set desired pressure, by touching either or
6.9.2. Connect the hose to the tyre.
6.9.3. The process will not commence until is touched.
6.9.4. When the Set pressure is reached, the buzzer will sound and the display will show **'END'** with the final pressure. Red LED will flash.
6.9.5. Remove the hose from tyre.

6.10. TYRE PURGING (N2 CONVERSION)

6.10.1. Set desired pressure, by touching either or
6.10.2. Connect the hose to the tyre.
6.10.3. The process will not commence until is touched.
6.10.4. If the pressure in the tyre is below 3 psi, 0.3 bar or 30 kpa, the process will start but perform only one purge (since the tyre is already flat).
6.10.5. During the purging process the display will show the last pressure check point and the number of purging cycles completed when deflating.
6.10.6. When the set pressure is reached, the buzzer will sound and the display will show **'END'** with the final pressure. Red LED will flash.
6.10.7. Remove the hose from tyre.

NOTE:

- In N2 (**N2P**) Operation the QUBE will not commence inflation until is touched for tyre top off or for N2 Conversion.
- For N2 conversion of existing tyres the number of purge cycles is defaulted to 2.
- For flat tyre purging the number of cycles is reduced by 1, as the tyre is already empty.
- The lower purge pressure limit is defaulted to the greater of 10% of the set pressure or 3 psi, 0.2 bar, 20 kpa.

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

6.11. 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.
For adjustments to Inflators parameters please refer to your Distributor or Sealey.
The Final N2% concentration can be periodically checked using a N2% concentration meter.

6.12. 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.

6.13. TO ACCESS:-

6.13.1. Touch and together.
6.13.2. The QUBE will beep but the display will not change.
6.13.3. Touch 5 times (if this is not undertaken within 10 seconds, the Inflator reverts back to normal Inflator mode).
6.13.4. Display will show the pressures to the minimum resolution: psi = 0.1 / Bar = 0.01 / kpa = 1 / kg/cm = 0.01.
6.13.5. Connect the hose to the tyre and the display will show the pressure in the tyre.
6.13.6. When complete, touch any button to return to the last set mode.

7. MAINTENANCE

7.1. There is no requirement to service the following items:

7.1.1. Pressure Transducer.

7.1.2. Electric Control Board.

If these are faulty they can only be replaced by a competent person. Please refer to an Authorised Stockist.

7.2. PERIODICALLY

- Check the hose.
- Check the tyre connector.
- Remove air input supply and tyre hose from the head. Unscrew captive sintered filters from filter housings and clean or replace.

8. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
No display	No power connected	Switch power on
No inflation process	Tyre is below 3 psi N2P mode requires confirm start Faulty connector	Press flat tyre button Press flat tyre button Replace faulty connector
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 of input	Input and tyre hoses are reversed	Reverse hose connections
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 on the tyre valves	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
LO	Under voltage	Check power supply
HI	Over voltage	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
E17	Calibration data corrupted	Re-calibrate Refer to authorised repairer
E19	Capacitive touch interface error	Refer to authorised repairer
E18, E20, E21, E22, E23, E28	Software error	Refer to authorised repairer

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 24 months from purchase date, proof of which is required for any claim.

Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk. IP32 7AR

01284 757500 **01284 703534** **sales@sealey.co.uk** **www.sealey.co.uk**