

AutoChanger

Installation & User Guide

Issue 2 - 16/06/2008



Please read carefully
before installing the Unit

07 0 003357



INDEX

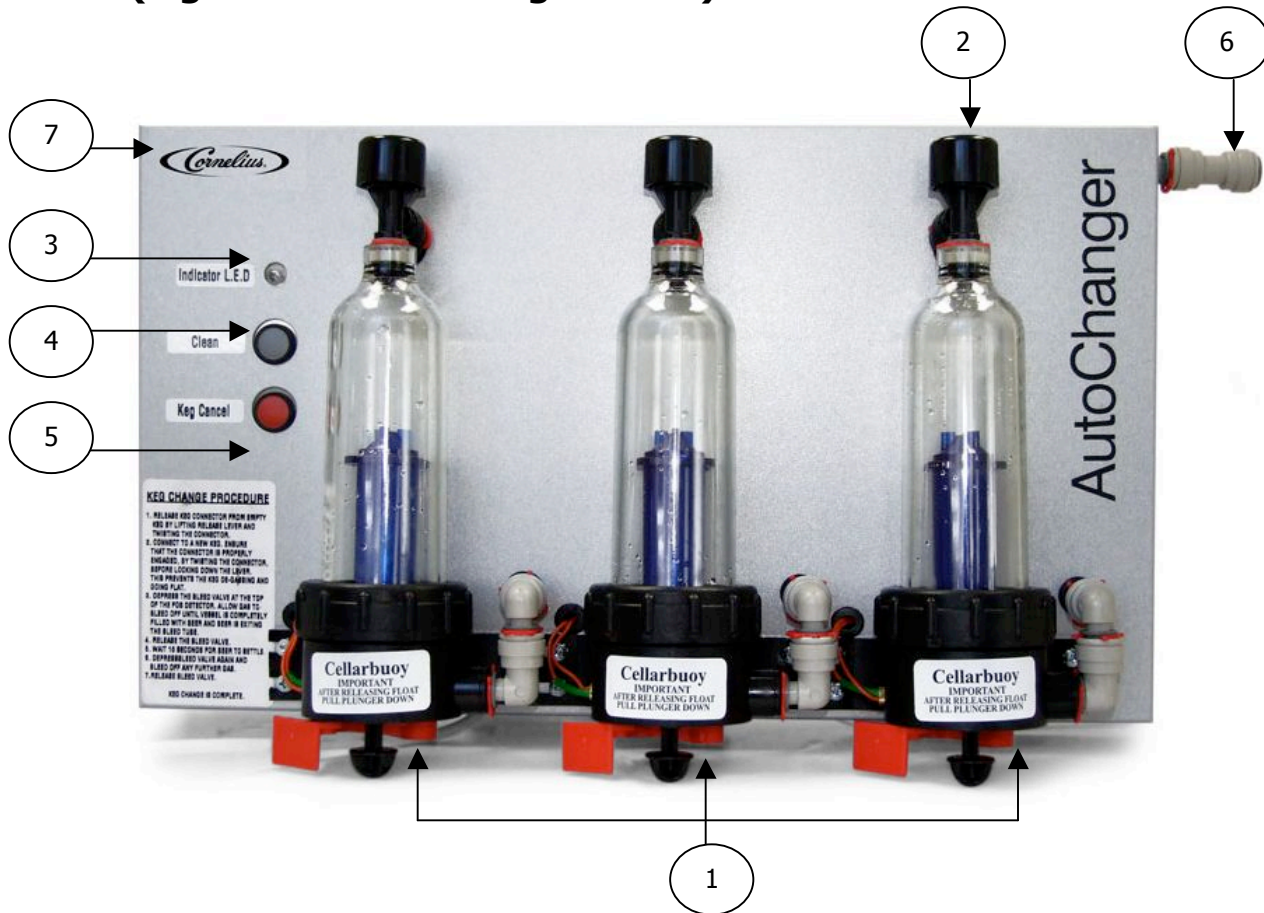
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1. Introduction - Autochanger



Autochanger is a fully retrofittable semi-automatic keg changing device that increases keg change efficiency during busy trading periods. It allows continuous dispense of product and saves valuable time on fully manual keg change during peak trading periods. This system helps maximise dispense efficiency reducing frustration at the bar. It can accommodate & allow a maximum of 3 kegs, of the same product type, to be manually primed as per standard keg changing practice and can be used alongside electric or gas pump dispense systems. Once keg 1 runs empty, keg 2 is seamlessly engaged and automatically activated by the AutoChanger system, and so on. This system is fully retrofittable into trade and complies with industry standard keg priming & cleaning practices and is CE compliant.

2. AutoChanger – Components Guide (Figure 1 – AutoChanger Front)



Standard Parts

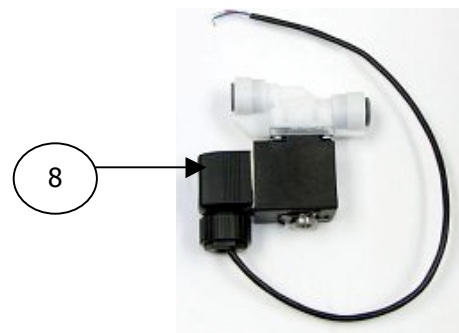
1. 3/8 JG Product Line connection to bottom of Cellarbuoy
2. Bleed Valve
3. Indicator LED
4. Clean Button
5. Keg Cancel Button
6. 3/8 JG Product Outlet (Right hand outlet)
7. AutoChanger Casing

Additional Option

- ##. Stand-Off Mounting Bracket

Additional Spare

8. Gas Solenoid Kit



3. INSTALLATION

- a) **Installation Guidelines**
- b) **Installation Retrofit**
- c) **Installation New**

a) Installation Guidelines

IMPORTANT NOTE: If limited space to mount AutoChanger in the required product footprint, a STAND-OFF mounting bracket is available and can be purchased separately.

- I. AutoChanger is fully retrofittable into trade.
- II. New or retrofittable installations must only be carried out by a suitably trained person and comply with national and local codes for connection to water / electrical supplies.
- III. It is recommended that the mains electrical supply is protected by a water-proof RCCB.
- IV. The AutoChanger is designed for indoor use only in ambient temperatures between $>0^{\circ}\text{C}$ & 32°C .
- V. Autochanger should not be exposed to water spillage, spray, steam or high humidity in excess of 45-65 %.
- VI. Autochanger should be sited directly onto a dry, vertical wall, or on a suitable board using locating slots provided. Where possible, the siting should allow for easy access for using & extracting the system to send back to supplier for maintenance. In absence of clear siting a stand-off kit can be purchased as an additional option. (Where gas pump application is required siting near to gas pump is recommended).
- VII. The AutoChanger should be located within a maximum of 2 metres of an earthed, switched 13 Amp, 230 Volt socket which should be easily accessible for isolation of the equipment. The socket should be installed in accordance with current I.E.E. regulations.
- VIII. Siting should be within easy access of standard line cleaning practices.
- IX. Warning, this product has been earthed and no attempt must be made to remove casing and tamper with this connection.
- X. AutoChanger complies with European Directive: EMC Directive 89/336//EEC as amended by 92/31/EEC.



b) Installation - Retrofit

Note: If fitting AutoChanger to a gas pump application then site AutoChanger as near to the gas pump as possible (recommended distance no greater than 2 metres).

1. Take Autochanger out of the box and carefully read Installation & User guide manual (Manual to be kept in safe place for future reference).
2. Autochanger can be screwed directly to a dry, vertical, flat cellar wall, or on a suitable board using the 4 "keyhole slots" provided in the rear of the unit, following the points detailed in this installation guide. (If there is no clear access to the cellar wall, a "stand off kit" can be supplied as an optional extra.) **Please note that for applications involving gas pumps, a gas pump solenoid kit is included as standard.**

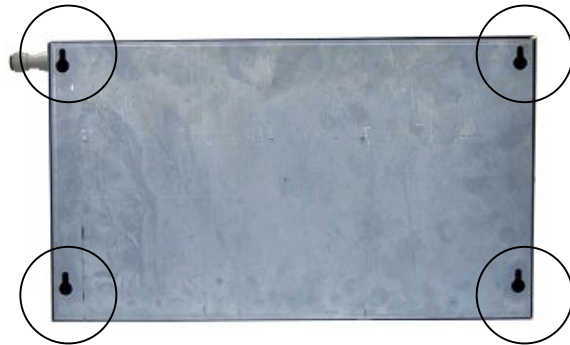
(Figure 2 – AutoChanger Keyhole Slots)

4 x Keyhole Slots

Dimensions (Distance hole to hole)

Horizontal: 415mm

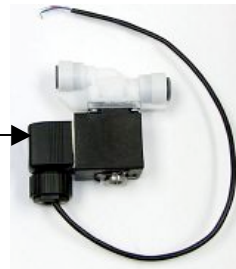
Vertical: 205mm



3. If either a gas pump application required or re-plumbing product outlet direction, then extract 6 screws to remove rear panel. **Note: Be careful not to lose 2 x star washers for earthing purposes.**
4. For gas pump application take gas Solenoid & unscrew solenoid head to remove 2 core 0.5mm² cable from valve plug head. Re-connect a suitable length of 2 core 0.5mm² cable to valve plug head (pins 1 & 2) to suite application i.e. Length of cable from terminal block via suitable location of gas pump solenoid valve. **This additional solenoid not required with electric pump.**

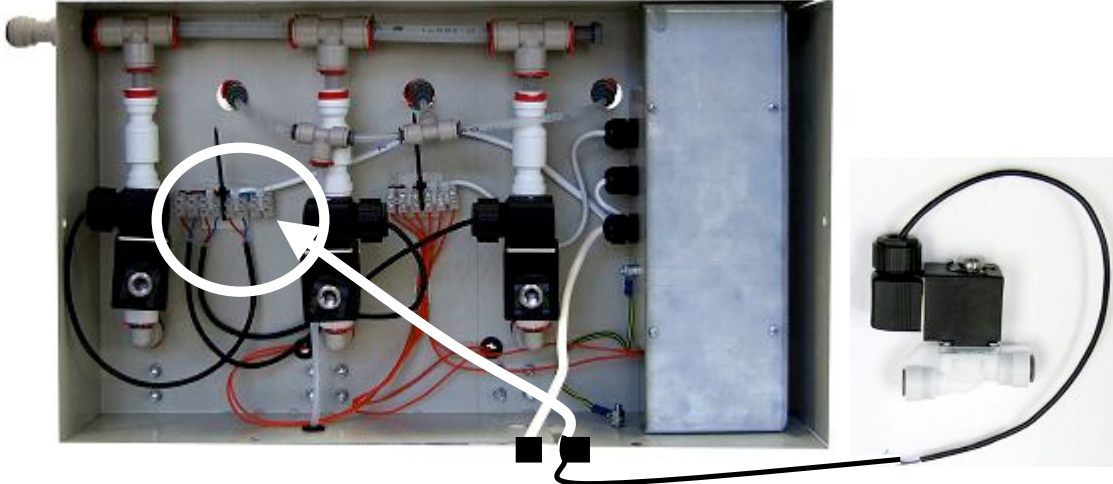
(Figure 3 – Gas Solenoid)

Solenoid Head →



5. Connect gas solenoid wire into the bottom of the AutoChanger through fitted cable gland & wire into terminal block.

Figure 4 – Gas Solenoid Wiring Connection

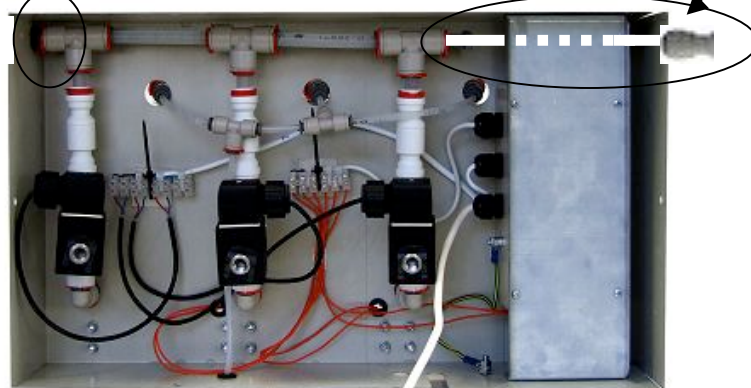


Feed 2 Core Gas Solenoid connection wire through the fitted cable gland in hole at the bottom of the AutoChanger and connect into the Terminal Block.

6. AutoChanger is supplied with a right hand product outlet. To change to left hand outlet remove 3/8 JG straight connection fitting + short length of 3.8 MDP tube (Discard tube). Remove 3/8 JG blanking plug from left hand 'T' and relocate directly into right hand 'T'. Insert a suitable length of 3/8 MDP product tub from the left hand 'T' to the left hand outlet point and connect the 3/8 JG straight connector.

(Figure 5 – AutoChanger Back - Product Outlet Plumbing)

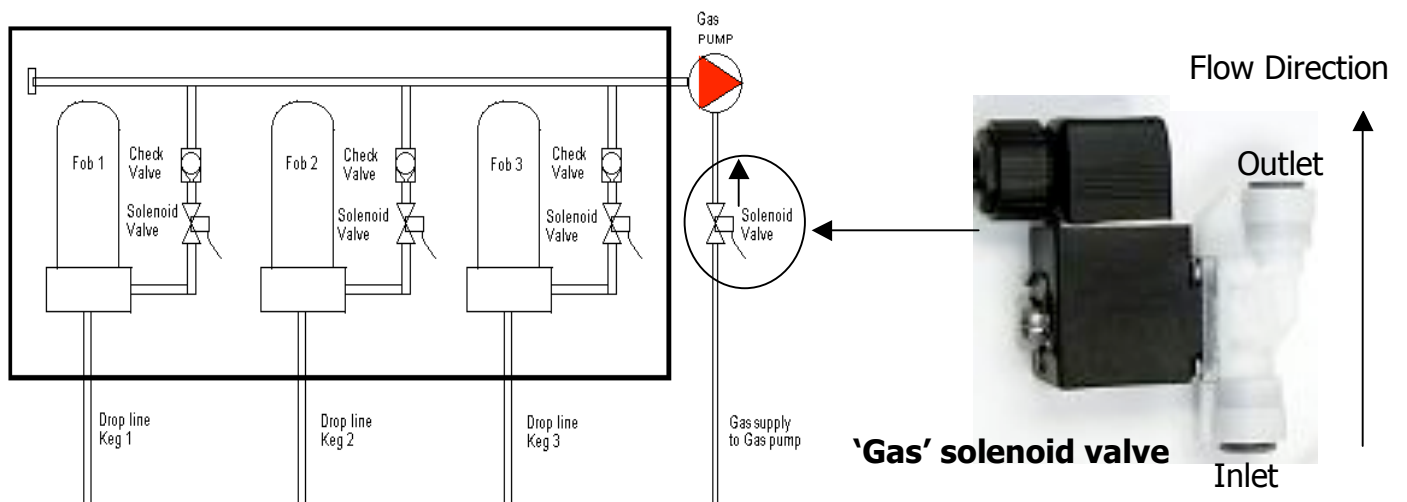
Blanking Plug here



For left hand outlet switch blanking plug on left side with 3/8 JG on right side. Connect 3/8 MDP product tube and connect to 3/8 JG Connection.

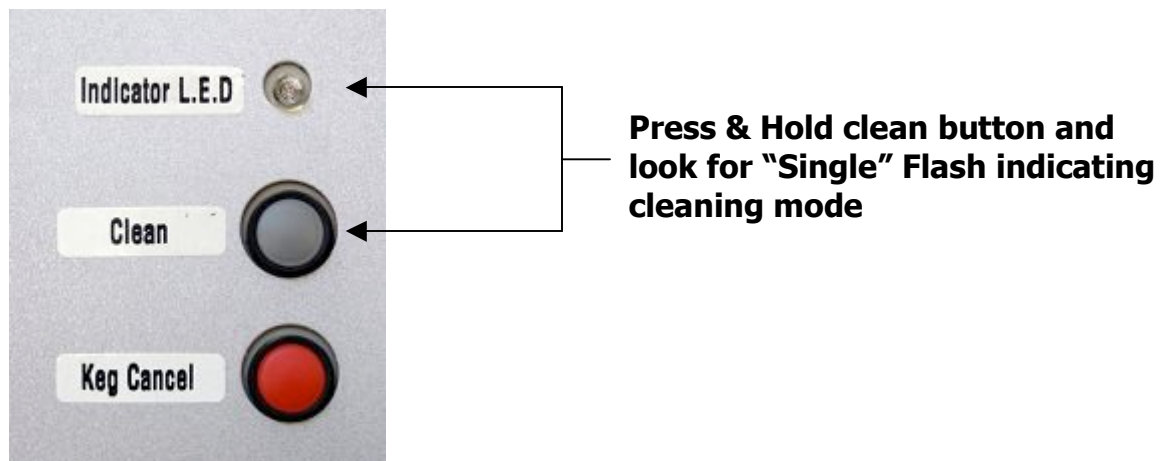
7. Site the Autochanger utilising keyhole fixing slots on wall or mounting board, as close as possible to the beer monitor of the selected product.
8. Disconnect the appropriate keg coupler from the existing keg, currently in use.
9. De-Pressurise the existing system.
10. Remove the drop-line from the existing beer monitor.
11. Install a length of 3/8 tube with suitable routing from the beer monitor to the Autochanger outlet. (This can be left or right handed. See Item 6).
12. Connect three drop lines, fitted with appropriate keg couplers, to the three Cellarbuoys on the Autochanger.
13. **Isolate the gas supply to the gas pump and de-pressurise.**
14. Install gas pump solenoid valve into the gas supply line of the gas pump, if required for gas pump application. **Note: Ensure direction of flow is correct with suitable routing i.e. Ensure no stress on connections.**

Figure 6 - Autochanger as connected to a gas pump



15. Restore gas supply.
16. Connect **ALL THREE** keg couplers to the cleaning system, and ensure AutoChanger 3/16 MDP tube drain line routed accordingly to suitable location.
17. Using clean water, manually vent all air from the three Cellarbuoys and existing Beer Monitor (if appropriate).
18. Plug the Autochanger into an RCD protected (Recommended) waterproof 13amp 230Vac.supply. The indicator LED will illuminate red "Steady".
19. Press & hold button marked "Clean" until the Indicator LED flashes "Single flash" to indicate that the system is in cleaning mode and is OK.

Figure 7 – Autochanger Control Buttons – Clean



20. Flush existing product through to tap.

21. If any float on the Autochanger drops during cleaning, the Indicator LED will "Double flash" and the cleaning process will be halted.

Figure 8 – Autochanger Control Buttons – Clean Cycle Halt



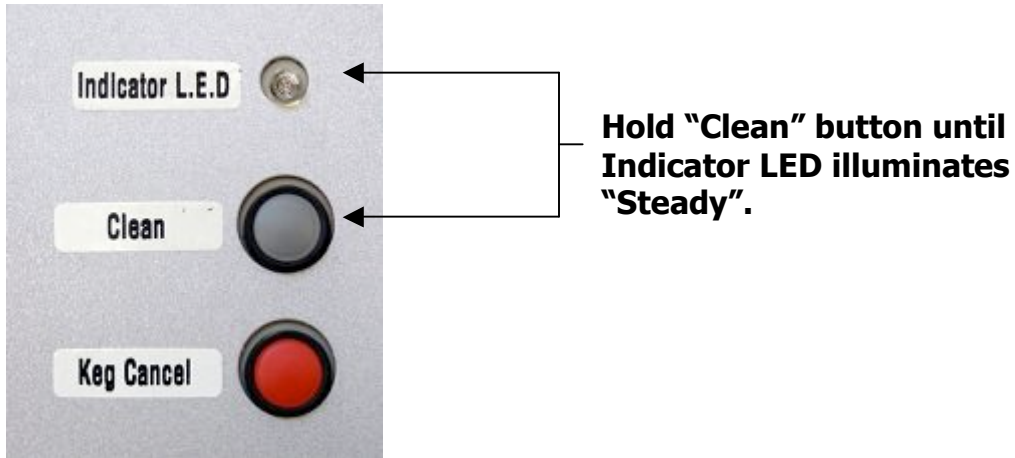
Look for 'Double' flash indicating float drop & cleaning process halted.

'Single' flash indicating cleaning mode.

22. In this instance, once the Cellarbuoys have been checked and vented cleaning will continue. The Indicator LED will "Single Flash" to indicate that the system is in cleaning mode and is OK.
23. Complete usual cleaning process. (If required)
24. When the cleaning is complete and system has been fully flushed with clean water, remove ALL THREE keg couplers from the cleaning system and connect to **THREE** new or part used kegs (**OF THE SAME PRODUCT TYPE**).
25. **DO NOT press any buttons at this stage.**
26. Go to bar and dispense until all water has been pulled through and product can be seen. (If dispense stops during this process, See items 21 & 22.)
27. When satisfied all water has been pulled through and product is available, return to cellar.

28. Press & hold "Clean" button until Indicator LED illuminates "Steady".

Figure 9 – Autochanger Control Buttons – Clean End Cycle



29. Ensure all three Cellarbuoys are completely vented.

30. System is now ready for use.

31. Keg 1 will be used first then Keg 2 etc.

c) Installation - New

Install Autochanger as above, but the additional external beer monitor is optional.

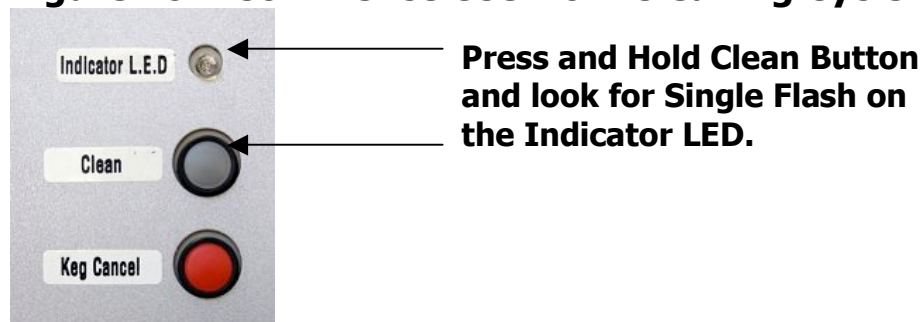
Autochanger User Guide

- d) Normal Dispense
- e) Cleaning
- f) Keg Cancel
- g) Maintenance
- h) Full Product Specification

d) Normal Dispense

1. The Autochanger will have been installed by a suitably trained person and should be handed over to you with product connected (If available) or clean water, if product not available.
2. The installer should now show you how to use the autochanger.
3. **Product connected.** To ensure continuous auto keg change over, at least one empty keg must be replaced with a new or part used keg (**OF THE SAME PRODUCT TYPE**) and manually vented before all three kegs are used.
4. **Product not connected.** Press and hold the button marked "Clean" until the Indicator LED flashes "Single flash" to indicate that the system is in cleaning mode. Follow steps 8 to 14 in the **Cleaning** section to connect product now refer to section 5 below.

Figure 10 – Commence Use from Cleaning Cycle



5. Any empty keg can be replaced with a new or part used keg, (OF THE SAME PRODUCT TYPE) at any time, once manually vented it will become active when required.
6. If all three kegs are allowed to empty, then system will shut off the gas supply to the gas pump (IF FITTED). This is to prevent possible gas build up in the cellar or gas wastage.
7. To resume dispense, connect one or more new or used kegs (OF THE SAME PRODUCT TYPE) and manually vent them.

Figure 11 – Resume Dispense



Vent each Cellarbuoy here on connection of New or Used Keg until the float is raised and excess gas/fob released to drain

8. The software will automatically detect the new kegs, restore the gas supply to the gas pump and dispense as required.

e) Cleaning

1. **To ensure the efficient working of this system it is essential that line cleaning must be carried out on a regular basis.**
2. Remove **ALL THREE** keg couplers form the kegs and connect **ALL THREE** to the cleaning system and manually vent all three Cellarbuoys.
3. Press & hold the button marked "Clean" until the Indicator LED flashes "Single Flash" to indicate that the system is in cleaning mode and is OK. (See Figure 10 in Normal Dispense Section).
4. **It will ALSO be necessary to vent any air from the existing beer monitor.** (If fitted).
5. If any float on the Autochanger drops during cleaning, the Indicator LED will "Double flash" and the cleaning process will be halted.

Figure 12 – Clean Cycle Halted



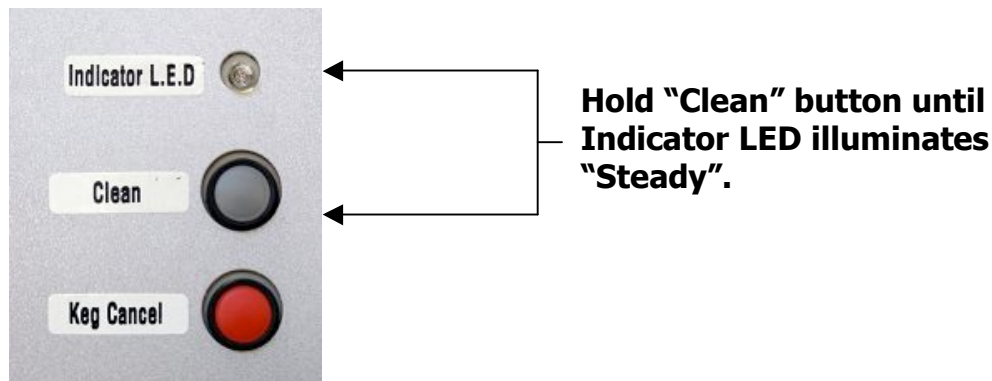
Double Flash on the Indicator LED highlights cleaning process halted.

'Single' flash indicating cleaning mode.

6. Once the Cellarbuoys have been checked and vented, cleaning will continue and the Indicator LED will again "Single Flash" to indicate that the system is in cleaning mode and is **OK**.

7. Complete usual cleaning process.
8. System has been fully flushed with clean water, remove the keg couplers from the cleaning system and connect to **THREE** new or part used kegs. (OF THE SAME PRODUCT TYPE).
9. **DO NOT press any buttons at this stage.**
10. Go to the bar and dispense until all water has been pulled through and product can be seen. **(If dispense stops, See items 5 & 6 of this section.)**
11. When satisfied all water has been pulled through and product is available, return to cellar.
12. **Press & Hold** "Clean" button until Indicator LED illuminates "Steady".

Figure 13 – Clean End Cycle



13. Ensure all three Cellarbuoys are completely vented. (See Figure 11 of **Normal Dispense** section).
14. System is now ready for use.
15. The software will detect which kegs are connected and dispense each one in turn, as in **Normal Dispense**.

f) Keg Cancel

1. **Should not be required under normal working conditions.** However if in the unlikely event one of the kegs did not change over it would prevent the next keg from being used and would stop the dispense cycle.

Figure 14 – Keg Cancel



In **unlikely** event of faulty keg press "Keg Cancel" button to bypass line until an engineer can attend and repair the fault. Please note that the system will disregard the faulty line until an engineer has repaired & re-set the system.

2. In the event of identifying a faulty keg **Press & hold** the button marked "Keg Cancel" and the system will ignore the faulty keg and allow the remaining kegs to dispense, thus removing any down time.
3. The Autochanger can now be used as a two keg change over unit, until an engineer can attend and repair the fault.

g) Maintenance

1. There are NO user serviceable parts on the main unit, however an additional external gas solenoid valve can be purchased separately as a spare for gas pump applications. (Note: In the unlikely event of an AutoChanger fault an engineer is to be called to fix any problems accordingly). (See **Warranty & Technical Enquires** Section of this manual)
2. **However, to ensure the unit works efficiently, it must again be stressed that regular line cleaning is essential.** (See **Cleaning** Section of this manual).
3. Periodic testing of electrical equipment should be carried out by a competent person.

h) Full Product Specification

07 1 002841
AutoChanger

AutoChanger 3 Keg

Standard Product

- AutoChanger 3 keg (same product type)
- For use with any keg draught product
- Compatible with gas or electric pumps (gas solenoid valve included)
- Galvanised steel case
- Right or left hand product out plumbing option (supplied right hand)

Options

- Stand-off mounting bracket 07 0 003381 (available on request)

Additional Spares

- Gas solenoid valve 07 0 003348 (for use with gas pump applications)

Hardware

- Autochanger casing including back cover
- 3 x Cellarbuoys with Reed Switch
- 3 x Solenoid Valves to control keg selection
- 1 x Solenoid Valve (to control gas flow)

Technical

Maximum Operating Pressure	100 psi
Operating Conditions	>0-32°C 45-65% RH
Cellarbuoy Drain	3/16 MDP tube

Weight

Packed 6.8 Kg / Unpacked 6.2 Kg

Dimensions

Case	(H) 262mm x (W) 430mm x (D) 91mm
Footprint	(H) 285mm x (W) 500mm x (D) 175mm
Keyslot Fixing (hole to hole)	Horizontal 415mm x Vertical 205mm

Control

- Mains Power 230Vac / 50 HZ / run current 0.08Amps
- Electronics Enclosure rated to IP 66
- PCB with Microprocessor
- PCB power supply 24 Vac (built in)
- PCB output 24Vdc
- Control Buttons (Clean / Keg Cancel / System Mode) / Indicator LED rated to IP 67

Plumbing

Product Inlet	3 x 3/8 JG
Product Outlet	1 x 3/8 JG

Solenoid Valves

Quantity	4
Electrical	24Vdc 9 Watt solenoid valves

Control Buttons

LED	Indicator LED
Grey	Clean
Red	Keg Cancel

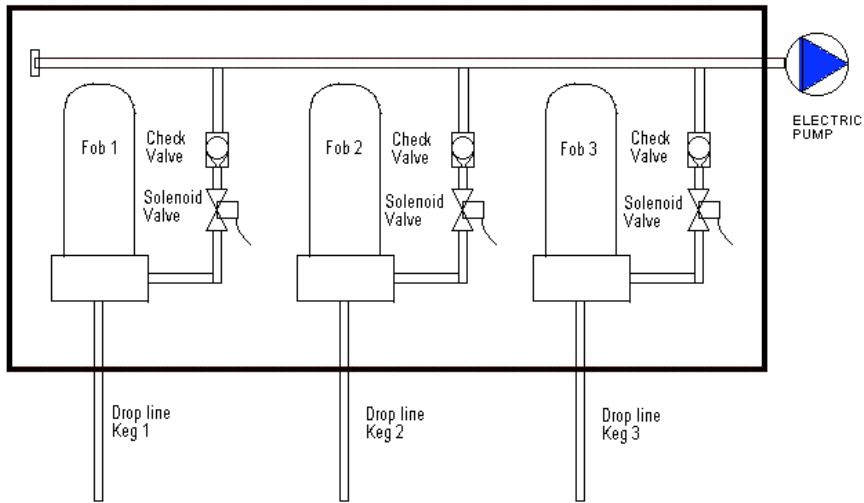
Gas Installations

[Note: This solenoid to be used in applications that utilise a gas pump only and is included as standard & is available as a spare]

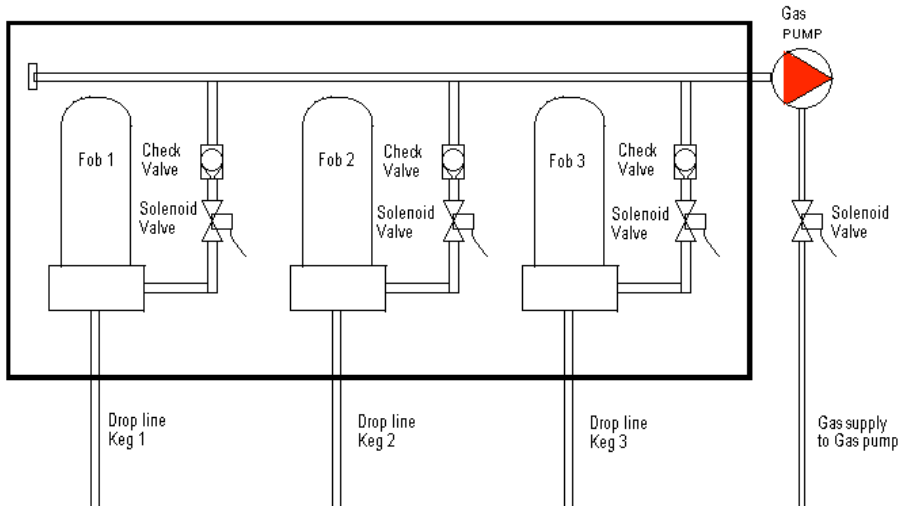
Auxiliary	Gas pump supply control valve
Plumbing	3/8 inlet / 3/8 outlet
Electrical	24V dc (50Hz)
	2 Core 0.5mm ² cable

Note: Technical installation engineer to supply own suitable length of 2 Core cable to connect to gas solenoid valve accordingly on application

3 Keg Autochanger as connected to an electric



3 Keg Autochanger as connected to a gas pump



SPARES LIST

AutoChanger

Please Note:

There are no serviceable parts in AutoChanger main unit with exception of external gas solenoid.

PART No.	DESCRIPTION
07 0 003348	GAS SOLENOID VALVE

Warranty & Technical Enquires

For warranty & technical enquires contact:

**IMI CORNELIUS (UK) LTD.
CUSTOMER SERVICES
RAWSON SPRING WAY
RIVERDALE INDUSTRIAL ESTATE
SHEFFIELD
S6 1PG**

**TELEPHONE: 0114 285 2345
BUSINESS FAX: 0114 232 0067**

Compliance to standards & legislation

AutoChanger & associated Cellarbuoys comply with current UK legislation. Materials coming into contact with the product are of "Food Grade" quality and are compatible with common beer line cleaning fluids. This product complies with the current requirements of the EMC directive.

AutoChanger complies with European Directive: EMC Directive 89/336//EEC as amended by 92/31/EEC.

