

COTSWOLD
Dairy Equipment Co Ltd

CLUSTER-FLUSH

Milking Cluster Disinfection System
SWINGOVER PARLOUR



Installation Manual

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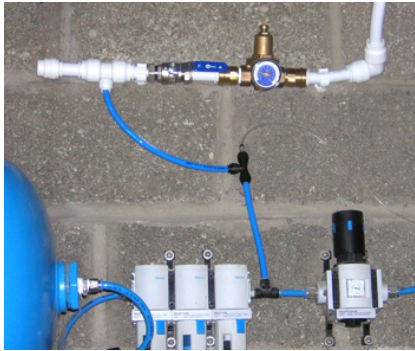
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MADE IN ENGLAND



AIR SUPPLY



CHEMICAL ENTRAINMENT
(option)



FLEXIBLE
PIPE
RUN



WATER INLET SYSTEM



HEADER TANK
(Note: Level With Cylinders)



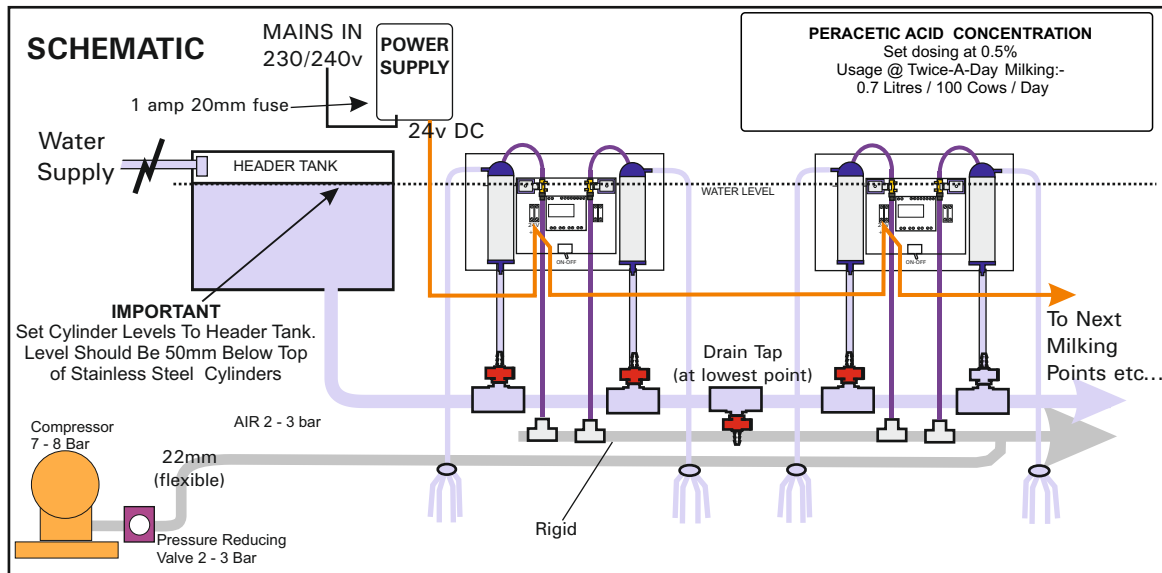
CONNECTION TO MILK LINE (Y Piece)

COTSWOLD CLUSTER FLUSH

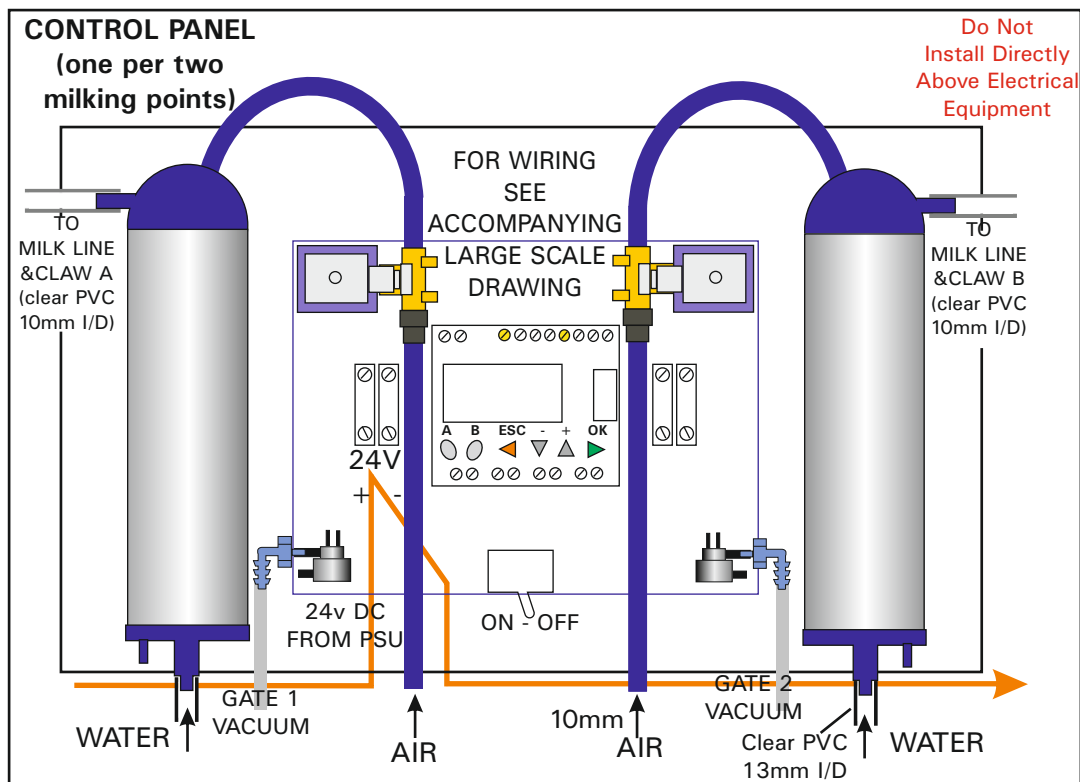
Milking Cluster Disinfection System

FOR SWING OVER PARLOURS:

One controller per 2 milking clusters



(ALWAYS SWITCH OFF EITHER THE POWER SUPPLY OR THE CONTROLLER(S) WHEN NOT IN USE)



PERACETIC ACID CONCENTRATION

Set dosing at 0.5%
Usage @ Twice-A-Day Milking:-
0.7 Litres / 100 Cows / Day

IMPORTANT

BEFORE installation of your new Cotswold Cluster Flush system:
ensure that all EXISTING milk shut-off valves are working satisfactorily, (sealing fully and without leaks)

INSTALLATION NOTES

ORDER OF INSTALLATION

For ease of installation we recommend the following installation sequence:-

- 1/ Header Tank(s)
- 2/ Water / Plumbing
- 3/ Set Up Water Cylinders
- 4/ Install Airlines
- 5/ Controllers and Electrical

WATER / CHEMICAL

Site the Header Tank at the same level as the cylinders. Ensure that the water level in the cylinders is set 50mm (2 inches) below the top of the stainless tube, (see drawing opposite).

Run 2 inch (50mm) water tube from header tank along the centre of the parlour, connecting to every cylinder using tees, taps and 10x16mm i/d tube. Terminate this tube with a reversed (upside-down) tee/tap so that it can be used as a drain point if required.

Chemical Dosing

We can supply Dosatron high accuracy dosing units if required. When dealing with chemicals, do take all recommended precautions. Before commissioning the system, ensure all unions are tight and the clusters hang correctly

AIR 2 - 3 bar, (pressure reducer may be required)

Use 22mm Flexible Tubing between the compressor (clean air filters should be fitted) and the first 22x22x10mm tee located adjacent to the first controller. Continue to following controllers using *rigid* tubing. Terminate the air line in a blanking cap.

Anti Syphon Valves

fit one valve either side of the Tee connection of air line, at the mid-point of each half (see schematics)

Pressure Reducer

We can supply a suitable pressure reducing valve if required.

ELECTRICAL

Locate Power Supply Unit (PSU) in a safe dry location, run 24v supply to first controller, and then daisy-chain the supply from controller to controller.

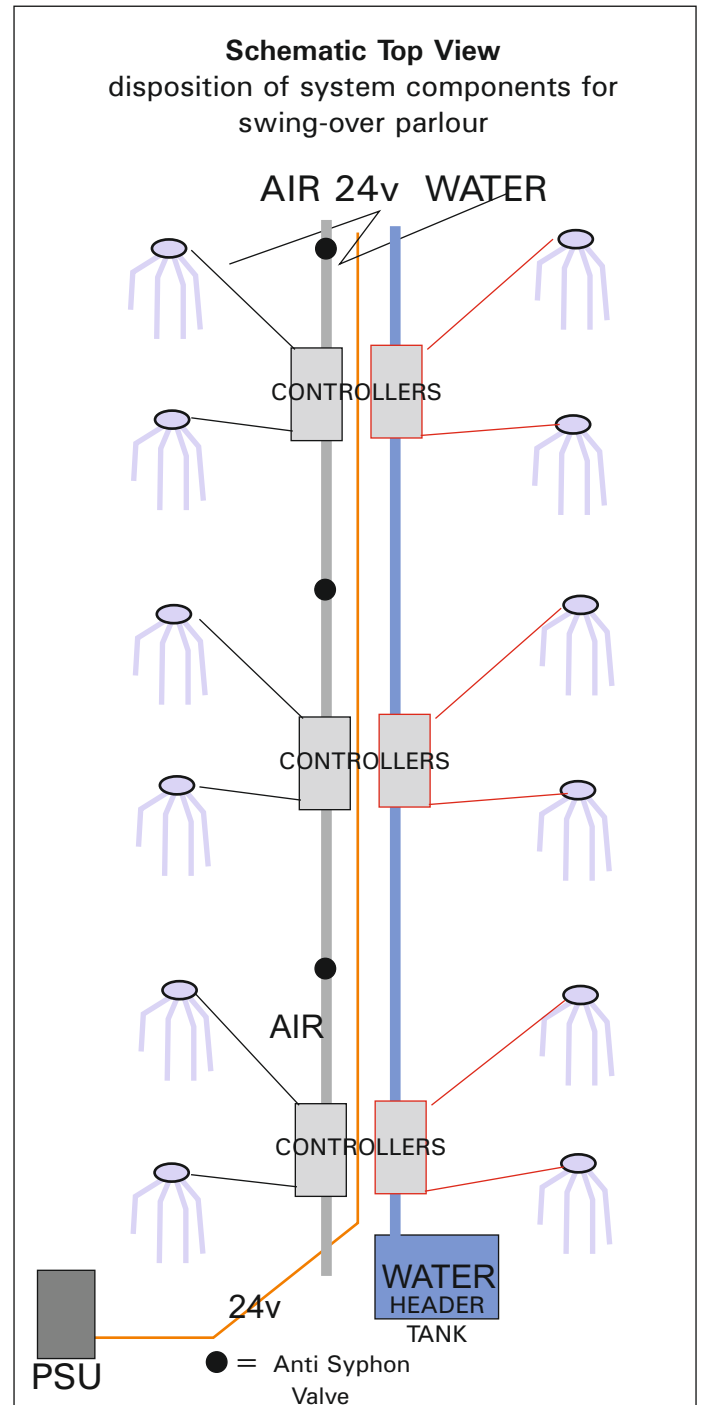
Each controller controls two milking points simultaneously.

Arrange a convenient switch to turn off the system when not in use.

Always switch off system when washing the parlour

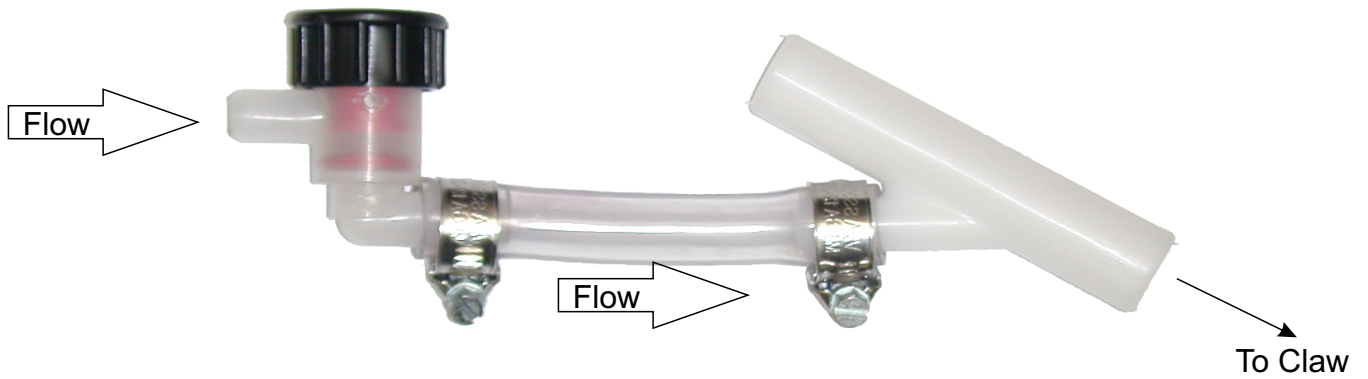
CONNECTION TO MILK LINE

Cut into the milk line and fit the "Y" piece moulding using 13mm pvc tubing connecting to upper horizontal outlet of stainless steel cylinder.



SHUT-OFF VALVE (for CLUSTER FLUSH)

Controls maximum of two (2) cluster points on either side of valve (see schematic on previous page).



Unit MUST be installed vertically (as above)

CONTROLLER - SWINGOVER AND ROTARY PARLOUR

COTSWOLD DAIRY EQUIPMENT

CONTROL PANEL WIRING (controls sides A and B)

TRIGGER INPUTS

24v DC IB

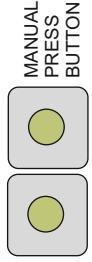
(LEFT A) (RIGHT B)

MCL-VERSION ROTARY (XD10 in top right corner of controller)

MCL-VERSION ROTARY (XD10 in top right corner of controller)

SYSTEM TRIGGERS VIA GATE SWITCHES OR MANUAL PUSH BUTTONS

IB ID



GATE SWITCH OR MANUAL PUSH BUTTON



(ALWAYS SWITCH OFF EITHER THE POWER SUPPLY OR THE CONTROLLER(S) WHEN NOT IN USE)

24v Input from PSU or previous controller

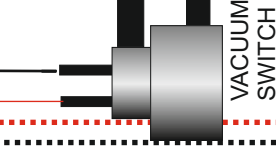
ON - OFF

Fuse 20mm 1 Amp

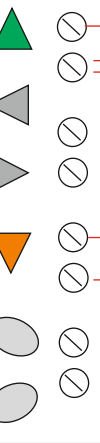
Switch

GATE or ACR VACUUM CONNECTION

GATE VACUUM CONNECTION



24v SIGNALS OUTPUT TO GATES



24V

VACUUM SWITCH

VACUUM SWITCH

EXHAUST VENT

EXHAUST VENT

ACCESSING TIMING PARAMETERS

MCL CONTROLLER (XD10)

To open main screen, press the “ - ” (minus) button twice.

To access any sub-menu

Press OK

Then A

then either “+” or “-” to move between sub-menus

2. Sub Menu 1 = Milk Sweep Setup

2a. When finished, press esc

3 Timer Setup - Maintenance (Change Timings)

(a) Initial Delay

Milk Sweep

Flush Delay

First Flush

Fill Time

Second Flush

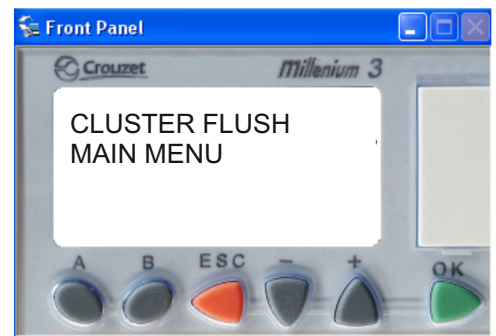
3. Maintenance Help

Shows “A” Solenoid Function

4. Help - Version (call dealer)

5. Software Version

No. eg: R5-4-M5

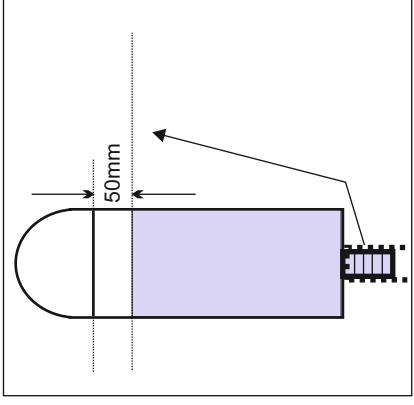


**COTSWOLD CLUSTER FLUSH
SWINGOVER & ROTARY PARLOUR**
Crouzet Controller
Euro/MCL

COTSWOLD DAIRY EQUIPMENT

PERACETIC ACID CONCENTRATION
Set dosing at 0.5%
Usage @ Twice-A-Day Milking:-
0.7 Litres / 100 Cows / Day

IMPORTANT
Set Cylinder Levels To Header Tank.
Level Should Be 50mm Below Top
of Stainless Steel Cylinder



SCHEMATIC
Not To Scale

**(ALWAYS
SWITCH OFF
WHEN NOT IN USE)**

1 amp 20mm fuse

**POWER
SUPPLY**
Out
24vDC

POWER
SWITCH

DOSATRON (Option)
Chemical Induction Unit

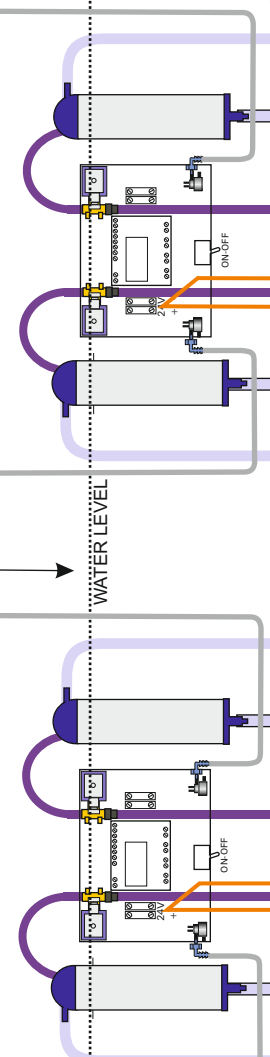
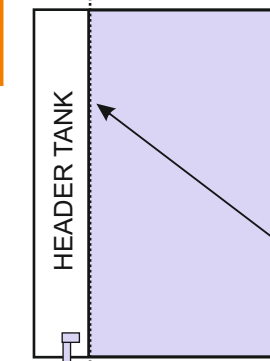
STOP VALVE

CHEMICAL
STORE
(UP TO 7 METRES
HORIZONTALLY)

TEE OFF
ACR
VACUUM
SUPPLY

TEE OFF
ACR
VACUUM
SUPPLY

TEE OFF
ACR
VACUUM
SUPPLY



WATER LEVEL

IMPORTANT
Set Cylinder Levels To Header Tank.
Level Should Be 50mm Below Top
of Stainless Steel Cylinders

**COTSWOLD CLUSTER FLUSH
SWINGOVER & ROTARY PARLOUR**
Crouzet Controller
Euro/MCL

22mm
(flexible)

AIR
2 - 3 bar

Pressure Reducing
Valve 2 - 3 Bar
and food grade air filters



Rigid

Drain Tap
(at lowest point)



Cluster Flush Servicing

page 1

Service interval: 1 Year

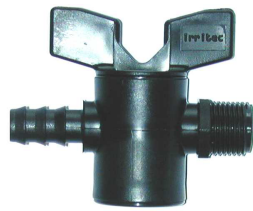
At 1 year, the following service parts should be fitted

Dosatron Service Kit

Food Grade Air Filter (Compressor)



Dosatron Service Kit DOS/KIT

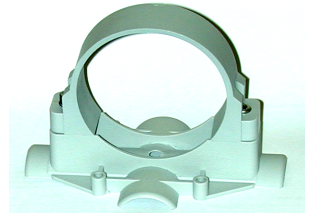


Inline Tap /
Lever Valve
152-153



Bracket -
Swingover Control
Box
CF100

Bracket -
Pressure Vessel
CF38A



Food Grade Air Filters - Service Kit CF21

Other parts you may find useful to have with you when servicing a cluster Flush system.

10 mm i/d x 16mm o/d hose (30m).....	151-102
10mm i/d x 20mm o/d hose (30m)	151-127
13mm i/d Hose (30m).....	151-118
Herbi Clips 16mm.....	154-153B
Herbi Clips 20mm	154-154C
10 MM Jubilee clips.....	154-159A
Brackets for pressure vessels.....	CF 38A
Brackets for swing over control box.....	CF 100
Taps.....	152-153

see overleaf for 3 Year Major Service...

Service interval: **3 Years**

At 3 years, the following service parts should be fitted (in addition to Annual Servicing)

Service Part: Cylinder Service Kit: Part No CF 99 (See picture below)

CF 99 - Replaces all the internal parts of the pressure vessel.

Order one Service Part per Milking Point:

example: 10 x 20 order 10, or 20 x 20 order 20

Replacing the complete vessel assembly is:

Assured: Complete assembly factory-tested before dispatch.

Quick: Internal parts exchanged in-place without moving vessels.

Simple: No small parts to take apart. No leaky re-assembly.

Warranty: We will give 3 years warranty on serviced assembly.

**** See video of service procedure on our Website****

Additional Non-Return Valve: You will also need to replace the external non-return valve, which is included in the service kit.

You may want to change flexible tubes during the service

30 Metres 10mm tube - 151-102B

30 Metres 13mm tube – 151-118

30 metres 20mm tube - 151-127

Thoroughly rinse out header tanks and pipe work with alkaline cleaner.

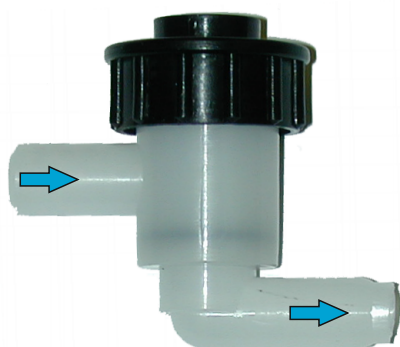
Check water levels: (See picture)

- o Water level must be level with or just below top label on the vessels.
- o **important** - water levels above this level risk contamination of milk.

Best way to set water levels:

- o Set the water in the header tanks level with the overflow
- o Set the top label of the vessels level with the overflow
- o This way if the water level rises it only overflows the header tank

Prevent dust and dirt getting into the header tank.



Non-Return Valve
CF91



NRV Kit comes
with 2 x Tube Clamps



Pressure Vessel
Service Kit
CF99