

COTSWOLD
Dairy Equipment Co Ltd

CLUSTER-FLUSH

Milking Cluster Disinfection System
DOUBLE-UP HIGH LEVEL PARLOUR



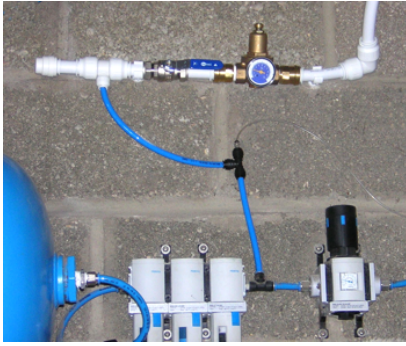
Installation Manual

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MADE IN ENGLAND



AIR SUPPLY



CHEMICAL ENTRAINMENT
(option)



FLEXIBLE
PIPE
RUN



WATER INLET SYSTEM



HEADER TANK
(Note: Level With Cylinders)

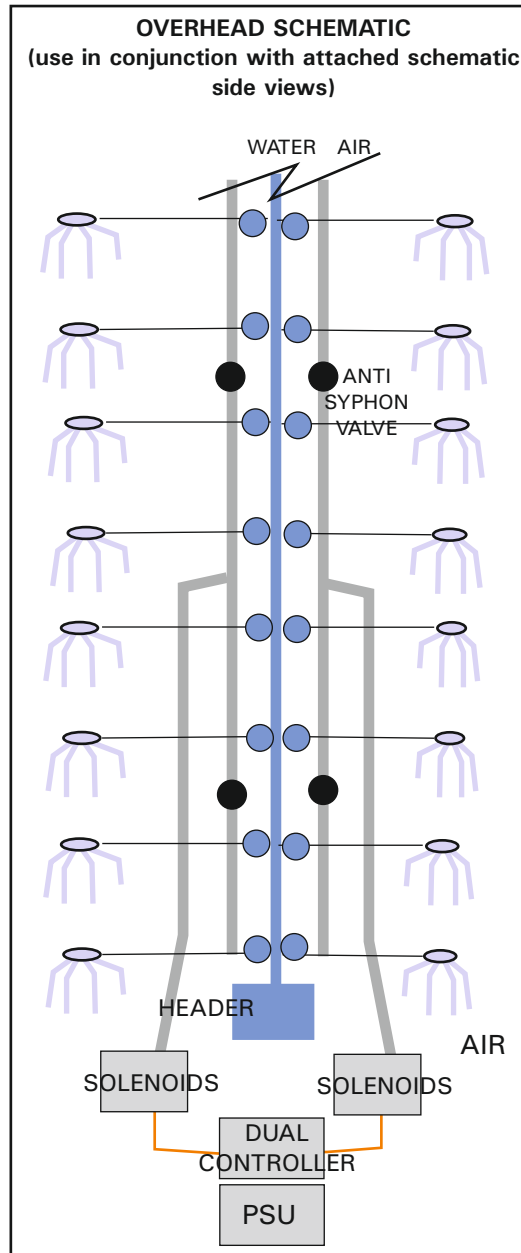


CONNECTION TO MILK LINE
(Y Piece)

COTSWOLD CLUSTER-FLUSH

Milking Cluster Disinfection System

FOR HIGH-LEVEL DOUBLE-UP PARLOURS:



DOUBLE-UP TWIN PARLOURS

For a schematic to be used with larger TWIN systems (over 8 x 8), refer to the single page schematic loose-page insert included with this manual cover.

PERACETIC ACID CONCENTRATION

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

INSTALLATION NOTES

(DOUBLE-UP PARLOUR HIGH LEVEL)

ORDER OF INSTALLATION

!For ease of installation, we recommend the following installation sequence:

- ! 1/ HEADER TANKS
- 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 schematic drawings attached).

Run 2 inch (50mm) water tube from each header tank along the centre of the parlour, connecting to each cylinder using tees, taps and 10x16mm i/d tube. At the lowest point fit 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)

Connect the airline to the centre of the line of milking points, and Tee out to either side. Use 22mm Flexible Tubing between the compressor (clean air filters should be fitted) and the centre 22x22x10mm tee.

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

Pressure Reducer

We can supply suitable pressure reducing valves if required.

ELECTRICAL

Locate Power Supply Unit (PSU) in a safe dry location, run 24v supply to the dual-solenoid control box. If your system is Manually Triggered (by green Thumb-Switches in a grey boxes) locate convenient positions for these and install them.

Also **Arrange a convenient switch to turn off the system when it is not in use.**

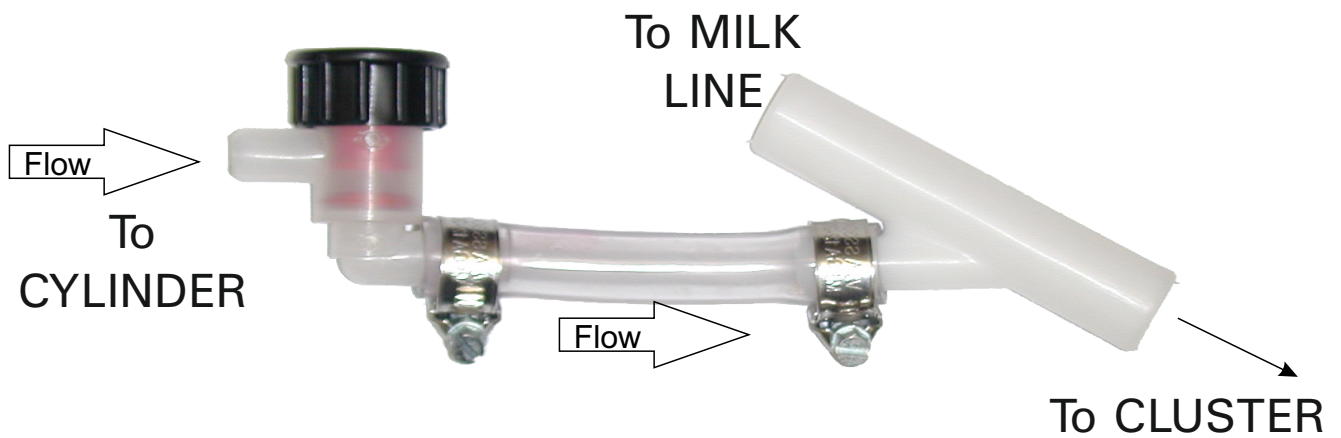
Always switch off system when washing parlour.

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).



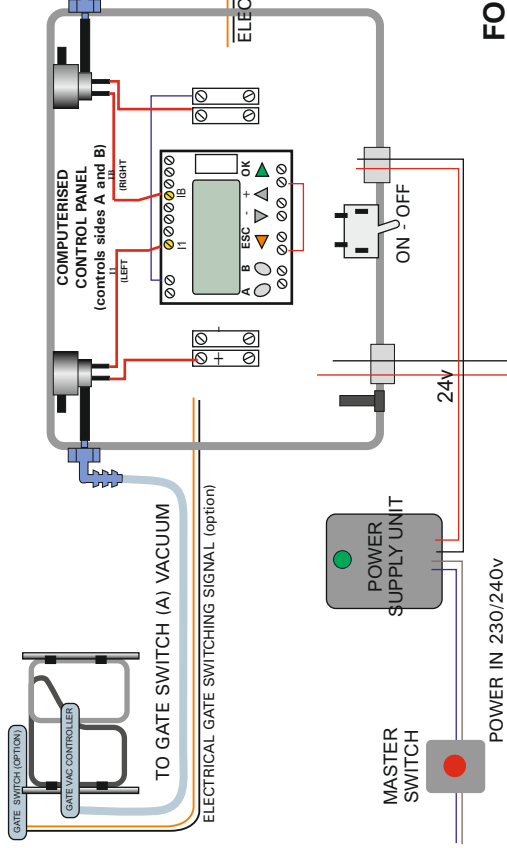
Unit MUST be installed vertically (as above)

SCHEMATIC

Double-Up Parlour Cluster Flush Typical Layout for Cotswold Cluster Flush for Double-Up Parlour, Hi/Lo

EURO / MCL
DOUBLE UP

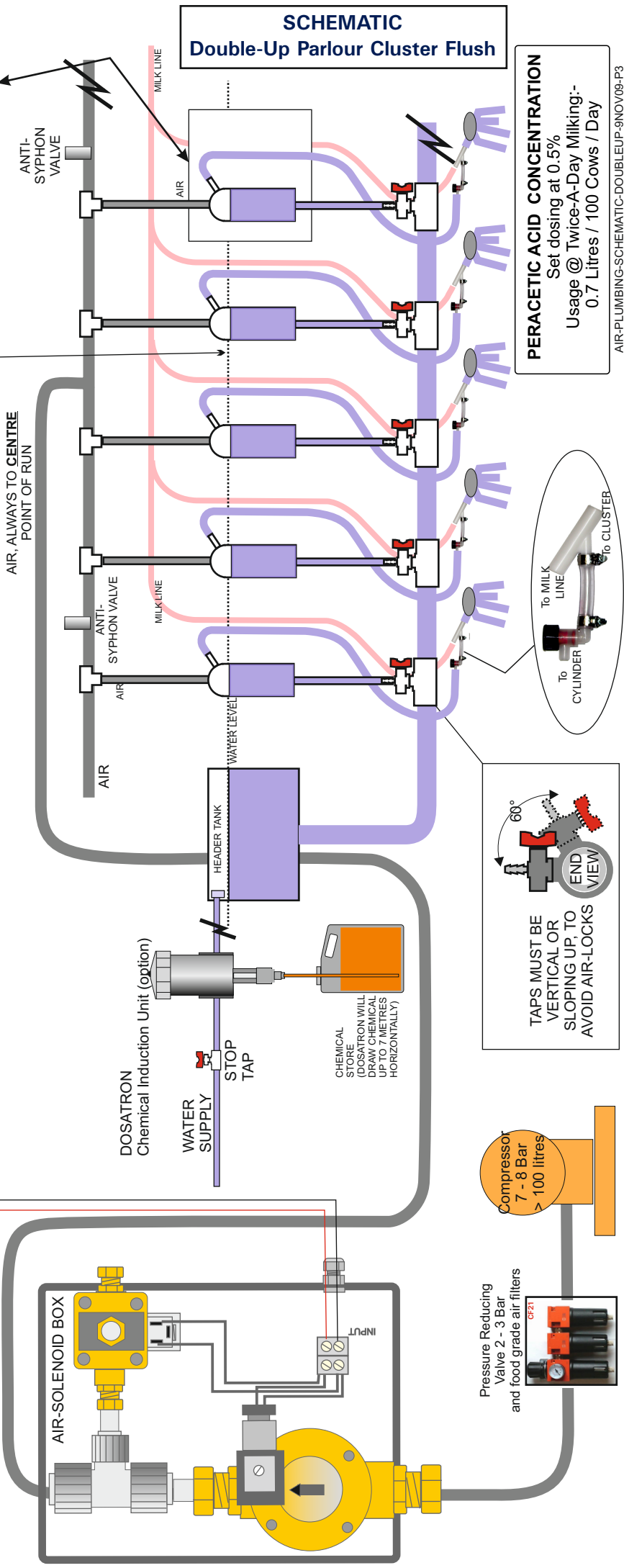
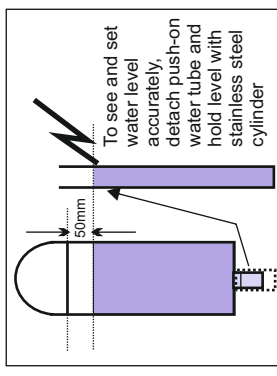
EURO / MCL
DOUBLE UP



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

FOR ELECTRICAL WIRING SEE ELECTRICAL SCHEMATIC

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



SCHEMATIC Double-Up Parlour Cluster Flush

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

TAPS MUST BE VERTICAL OR SLOPING UP, TO AVOID AIR-LOCKS

Compressor
7 - 8 Bar
> 100 litres

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

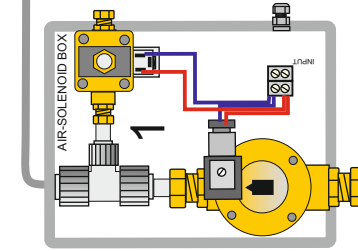
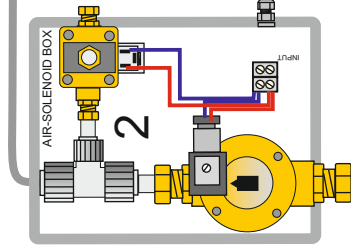
SCHEMATIC

**Double-Up Parlour Cluster Flush
(30/30 or bigger)**

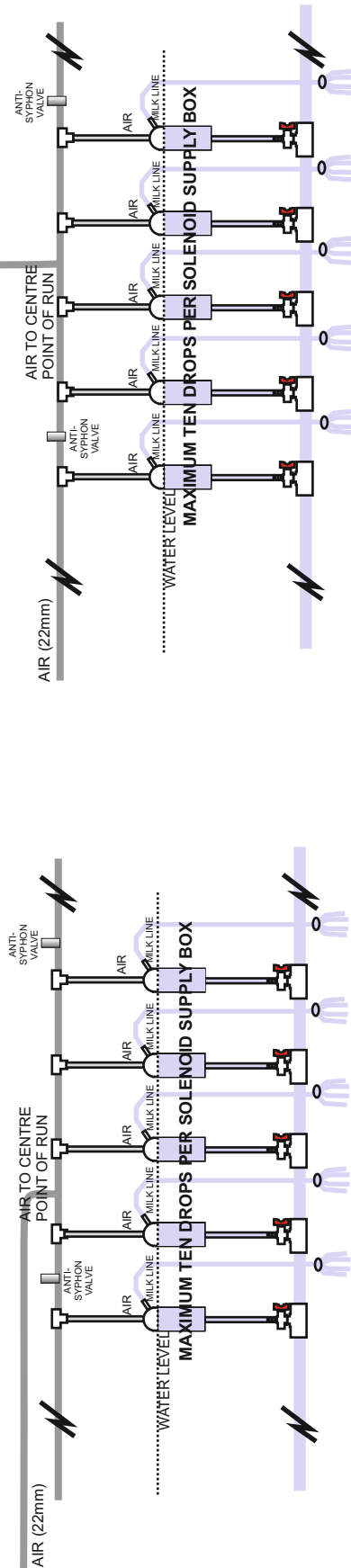
Typical Layout for Cotswold Cluster Flush for Double-Up Parlour, Hi/Lo, showing how to split the air supply (this is one side only)

SCHEMATIC
**Double-Up Parlour Cluster Flush
(30/30 or bigger)**
Typical Layout for Cotswold Cluster Flush for Double-Up Parlour, Hi/Lo, showing how to split the air supply (this is one side only)

LEFT SIDE



AIR (22mm)



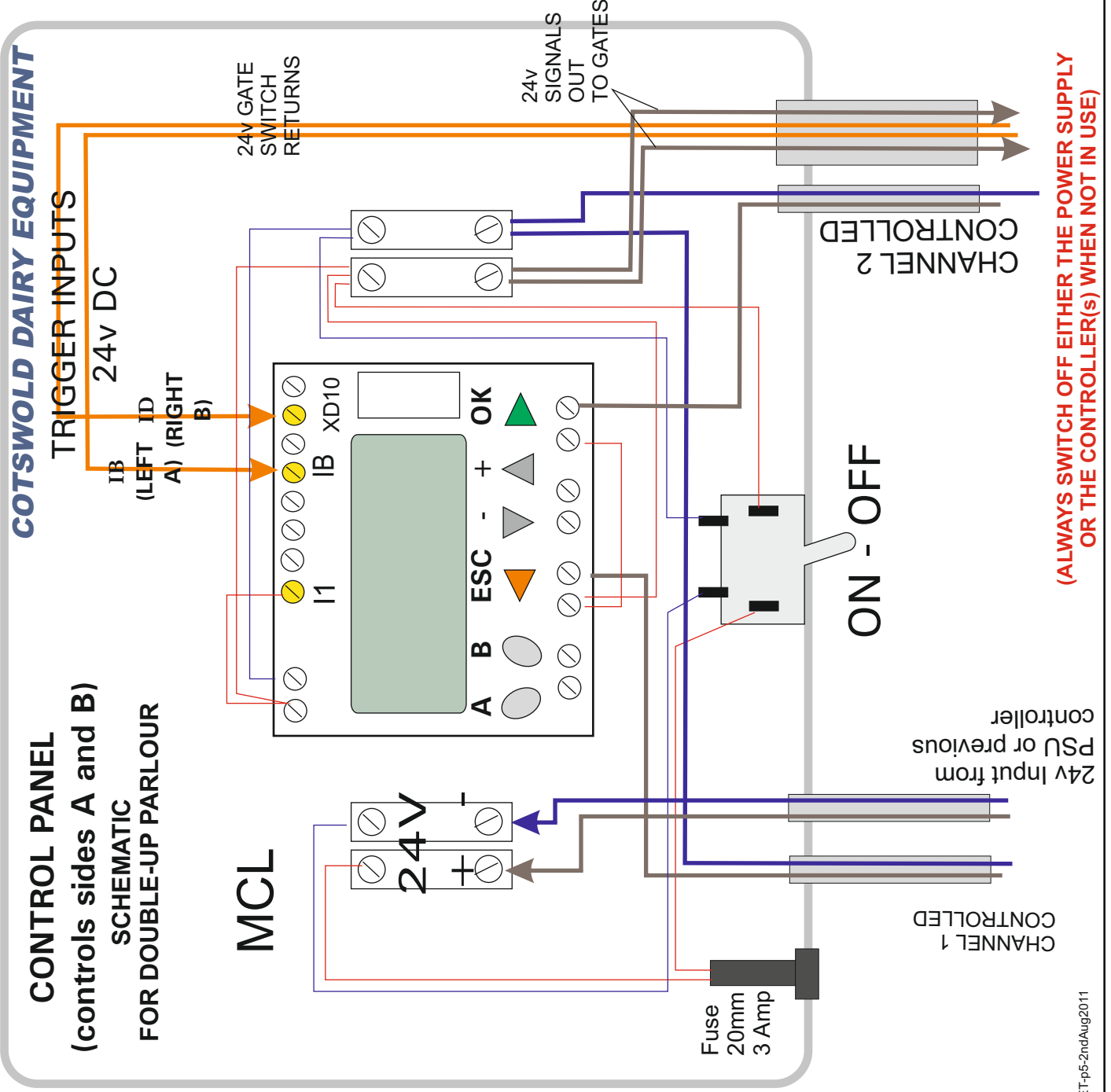
Standard

MCL
DOUBLE UP

Standard

CONTROL PANEL
(controls sides A and B)
SCHEMATIC
FOR DOUBLE-UP PARLOUR

MCL
DOUBLE UP



Option

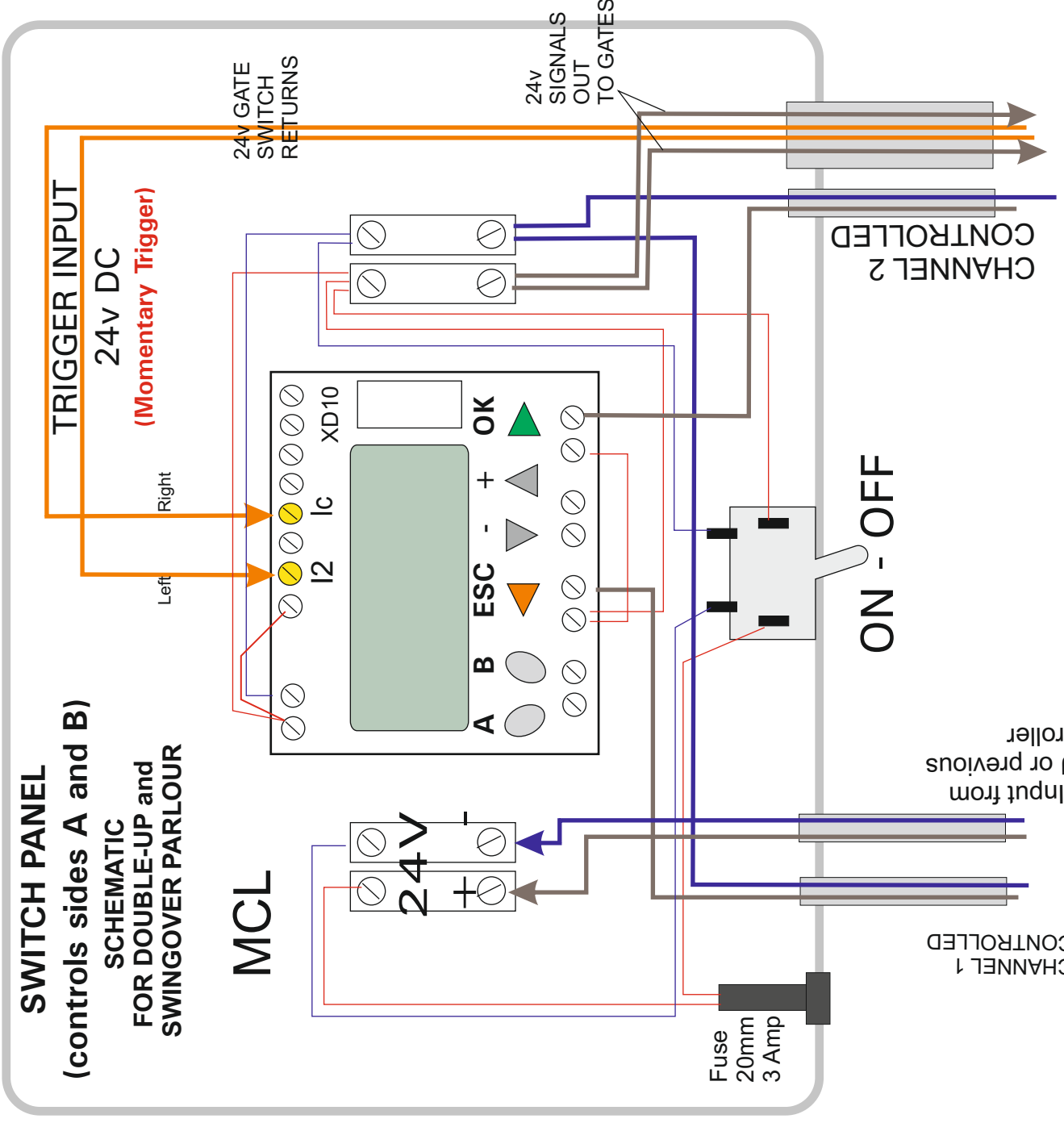
COTSWOLD DAIRY EQUIPMENT

MCL
DOUBLE UP &
SWINGOVER

Option

SWITCH PANEL
(controls sides A and B)
SCHEMATIC
FOR DOUBLE-UP and
SWINGOVER PARLOUR

MCL
DOUBLE UP &
SWINGOVER



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

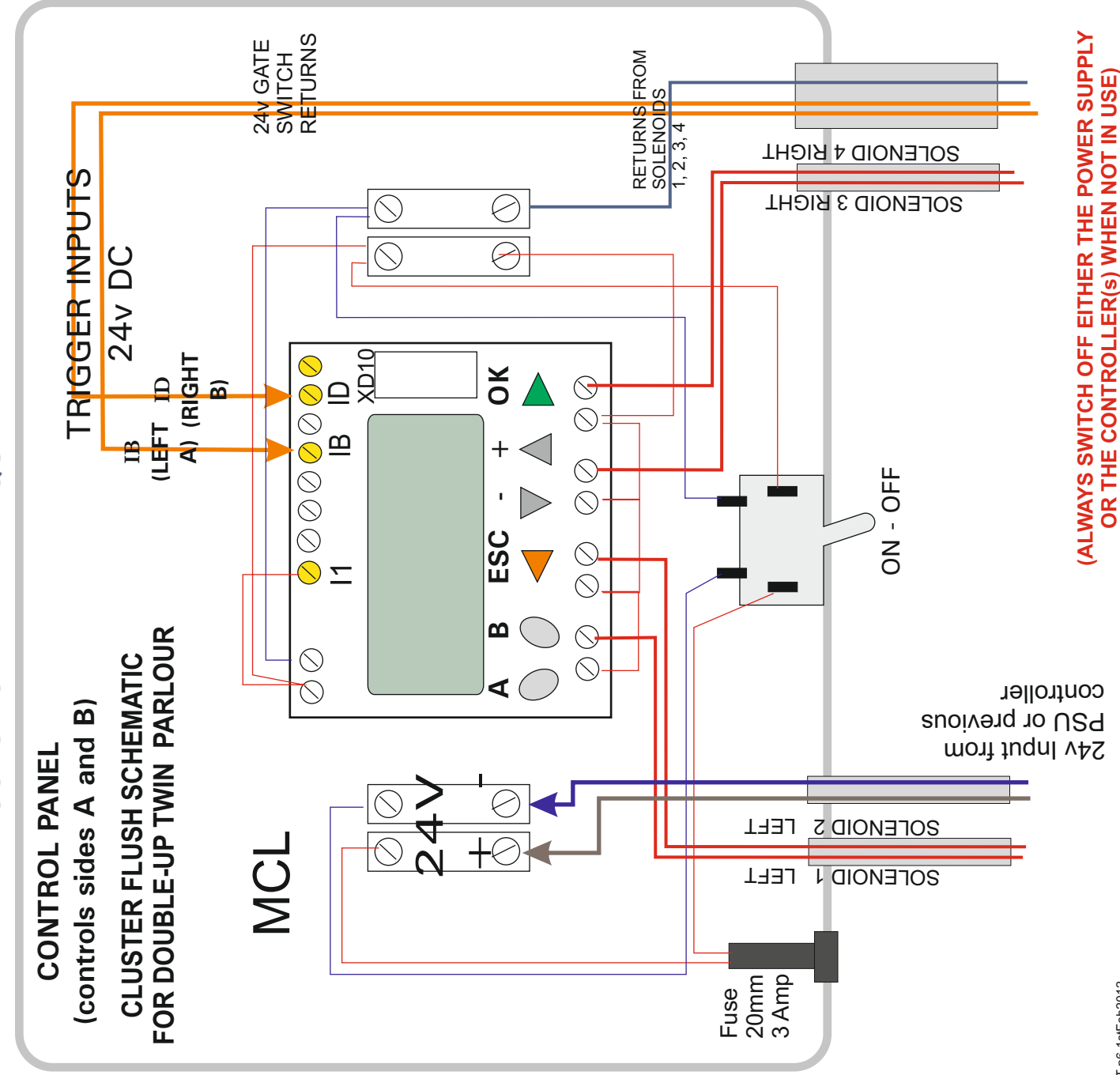
MCL
DOUBLE UP
TWIN

OPTION

CONTROL PANEL
(controls sides A and B)
CLUSTER FLUSH SCHEMATIC
FOR DOUBLE-UP TWIN PARLOUR

MCL
DOUBLE UP
TWIN

COTSWOLD DAIRY EQUIPMENT



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

OPTION

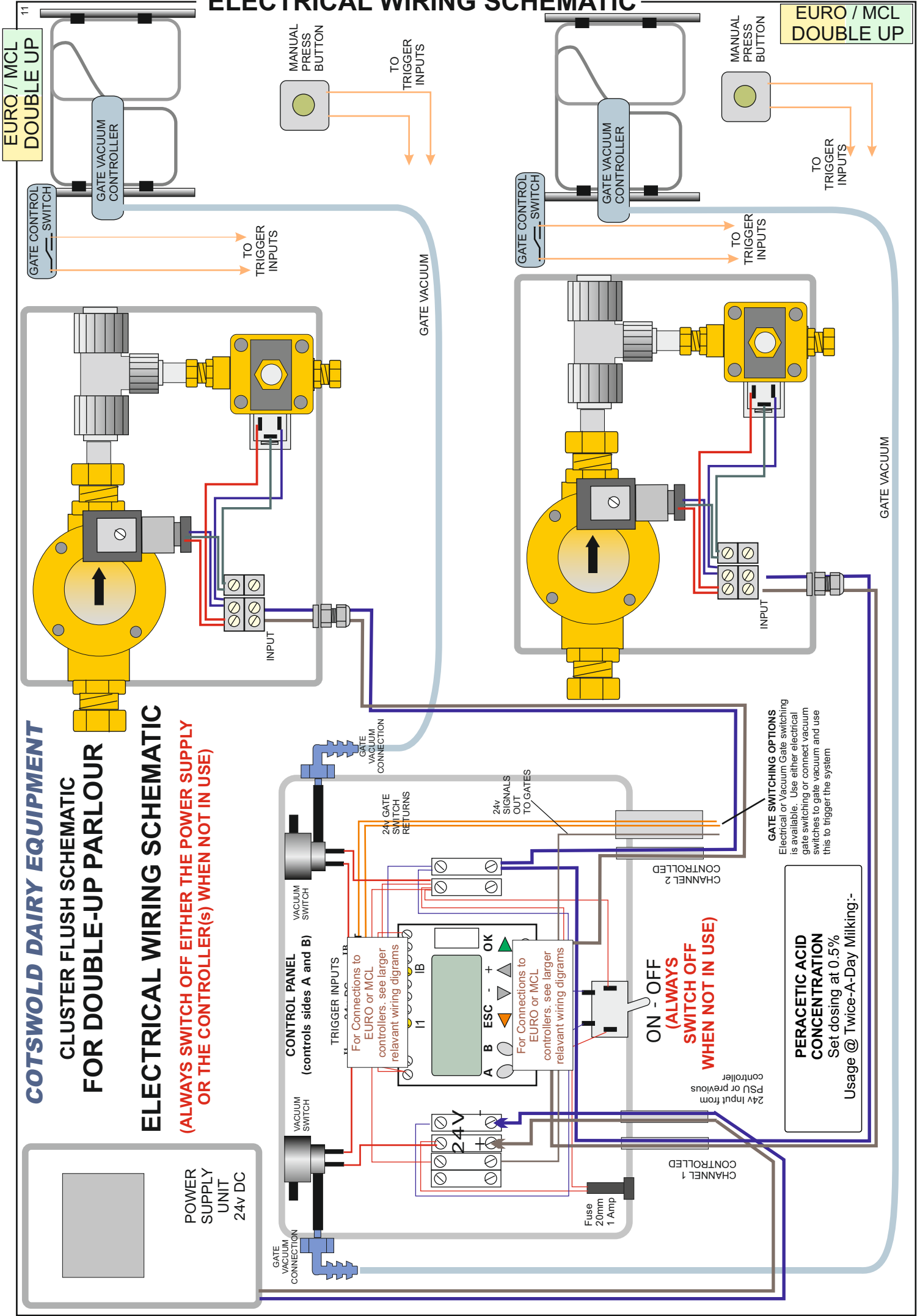
COTSWOLD DAIRY EQUIPMENT

CLUSTER FLUSH SCHEMATIC FOR DOUBLE-UP PARLOUR

ELECTRICAL WIRING SCHEMATIC

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

ELECTRICAL WIRING SCHEMATIC

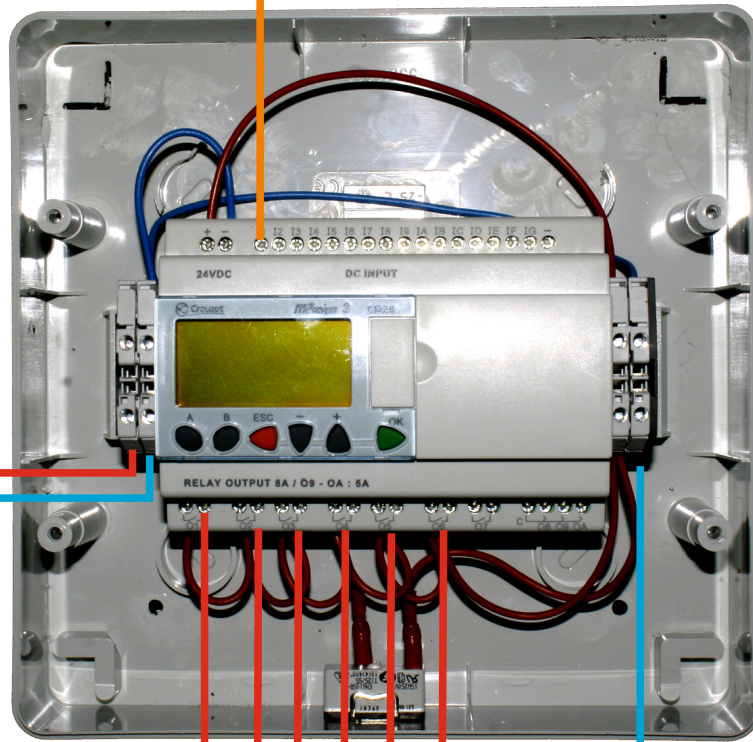


CLUSTER FLUSH MILK SWEEP CONTROLLERS DOUBLE UP

Trigger (from Cluster Flush Controller IB or ID)

24v from Cluster Flush controller

Controller Box

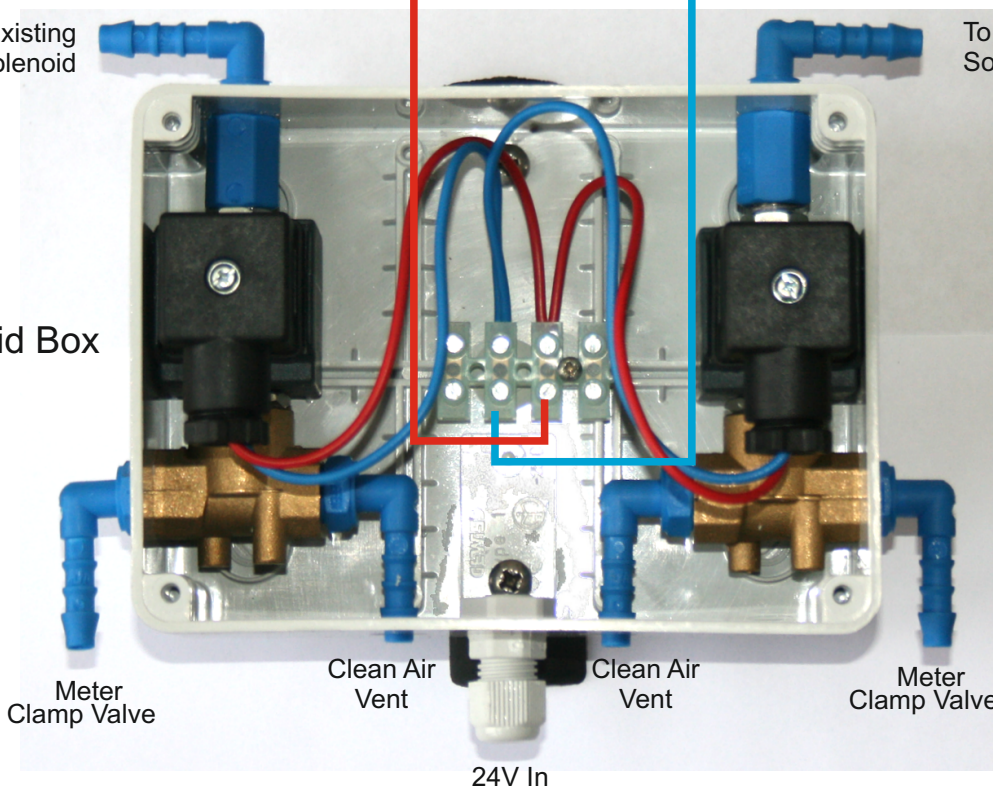


To Other Solenoid Boxes

To Existing Solenoid

To Existing Solenoid

Solenoid Box



Meter Clamp Valve

Clean Air Vent

Clean Air Vent

Meter Clamp Valve

24V In

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

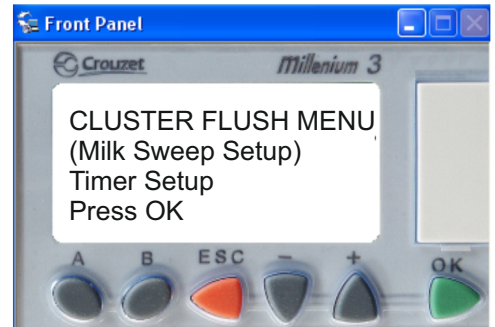
3. Maintenance Help

Shows “A” Solenoid Function

4. Help - Version (call dealer)

5. Software Version

No. eg: R5-4-M5



Cluster Flush Servicing

page 1

Service interval: 1 Year

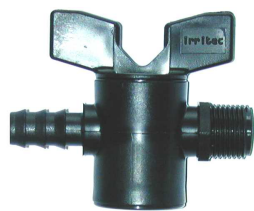
At 1 year, the following service parts should be fitted

Dosatron Service Kit

Food Grade Air Filter (Compressor)



Dosatron Service Kit DOS/KIT

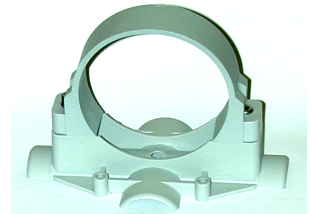


Inline Tap /
Lever Valve
152-153



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.

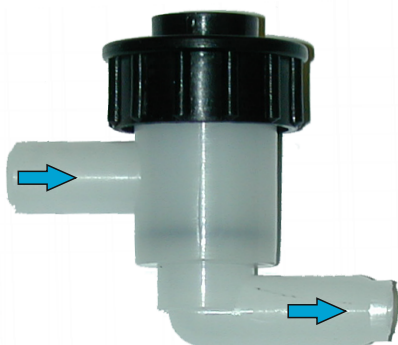
Check water levels: (See picture)

- 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