CARDEV **Oil Filtration** and **Coolant Handling** Specialists

CMS300-1000

Accurate And Repeatable Mixes Every Time

Delivery Rate Of Up To 90 Litres Per Minute

Push Button Control And Selection

No Mixed Coolant Stored

Conforms With Water Authority Regulations

Distribution –Local Or Through Central Pipework System

One Unit Can Service An Entire Workshop

CMS300

CMS1000

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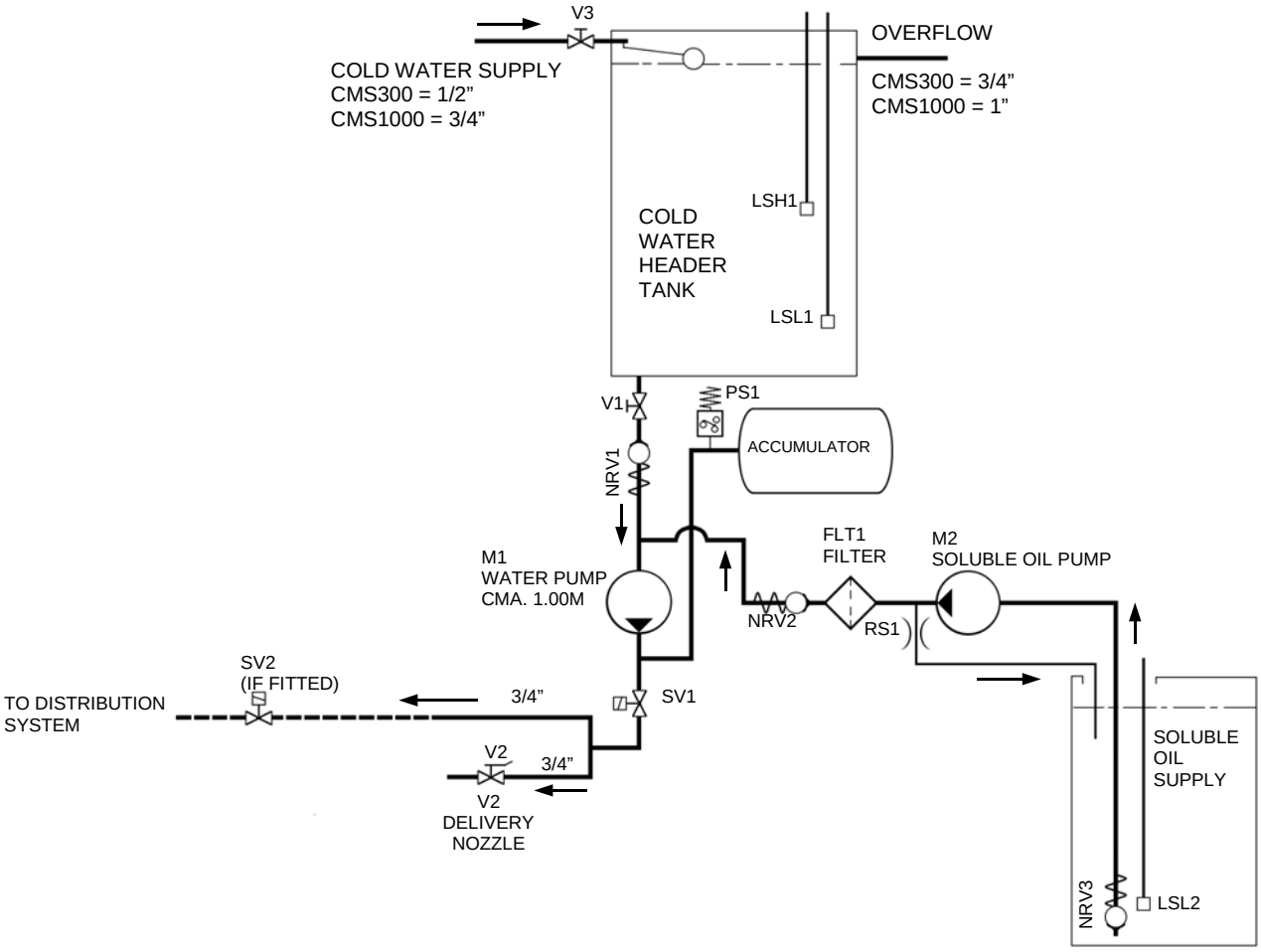
CMS300-1000

CARDEV
Industrial Filtration

PANOLIN®
Biodegradable Lubricants

SCHEMATIC



CMS—SPECIFICATION		
Coolant Pump Motor Rating	Volts	230V
	kWs	0.18
	Amps	2.3
	RPM	1425
	Protection	IP55
Coolant Pump Performance	12 ltr/min at 0 bar - based on water at ambient temperature	
Water Pump Motor rating	Volts	230V
	kWs	0.75
	Amps	6.2
	RPM	2850
	Protection	IP44
Water Pump Performance	90 ltr/min at 0 bar - based on water at ambient temperature	
Operation	By 4 pre-set selector buttons	

CMS300-1000

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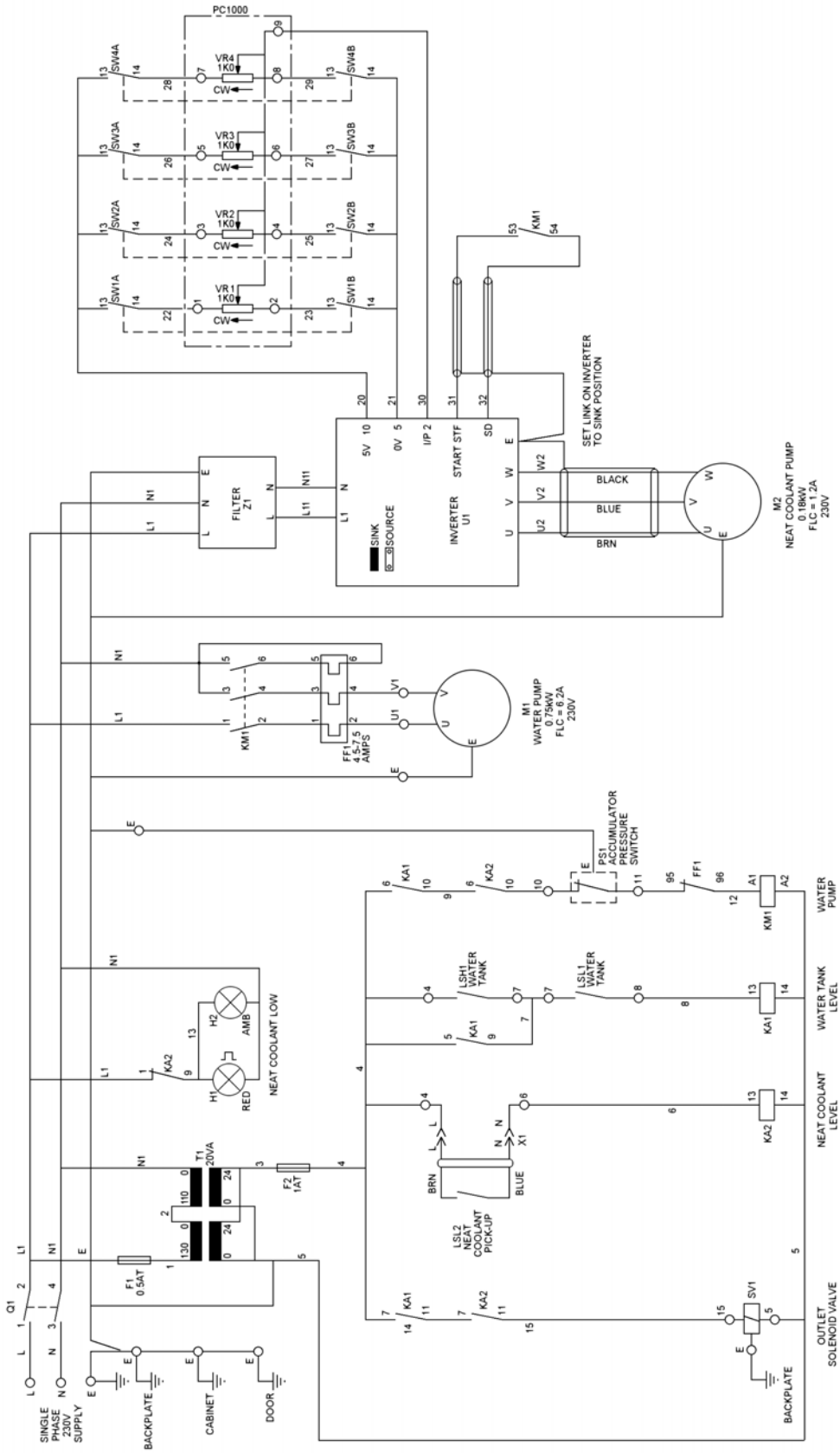
ELECTRICAL SCHEMATIC



CMS300-1000 OPERATING INSTRUCTIONS

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INSTALLATION

1. The CMS is a free standing unit that is bolted to the floor. It should be positioned to allow easy access to the front panel and nozzle.
2. The water feed is connected from the mains supply into the top tank. Ensure tank outlet valve is closed prior to filling.
3. The mains supply cable should be connected to an appropriate single phase mains supply outlet.
4. The soluble oil drum or IBC should be positioned to accept the inlet lance assembly.
5. Before turning on the water supply and electrical supply, check the air pressure in the accumulator. This should be 2 bar.

SET UP OPERATION

1. Prime water pump by opening tank outlet valve and squeezing nozzle for a short period into a bucket.
2. Prime oil dosing pump by turning the main switch from 0 to 1 and pressing the red button. Operate trigger for a few seconds until coolant mixture is present in line.
3. Where possible, the unit will be pre-set to the required levels of coolant. However, this may not always be possible and so the following action should be taken:

A. Press first button (yellow), adjust VR4 (Blue potentiometer with brass screw on printed circuit board) to mid position, operated trigger until consistent flow of coolant is achieved. Test strength of mixture using refractometer.

B. If mixture strength measured by refractometer is greater than that required, turn VR4 anticlockwise and re-test. Perform this operation until a satisfactory result is obtained. Turn VR4 clockwise for stronger mixtures. ***NOTE:*** The highest percentage mix required should be set on the yellow button

C. Carry out a similar operation on each coloured button.
For buttons left to right **VR1—red, VR2—green, VR3—blue,**

Note:

1. If the mixture strengths or coolant specifications change, then the unit can be re-programmed following the above procedure.
2. The refractometer should be re-set to the appropriate coolant manufacturer's calibration guidelines. Cardev offer a complete installation and set-up service for CMS customers.

SAFETY FEATURES

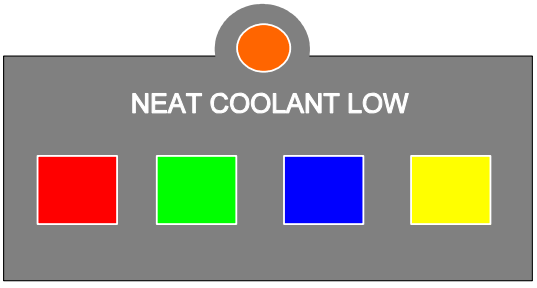
1. The lower float switch in the water tank will switch off the system if no water is available. Once the water has risen in the tank to the upper float switch, the unit will automatically switch back on.
2. If the coolant runs out, an orange light on the front panel and a red strobe light will activate. The system will stop and the operator should change the coolant barrel or IBC.
3. If the unit fails to operate - check the thermal overload, situated in the control panel - the red square button.

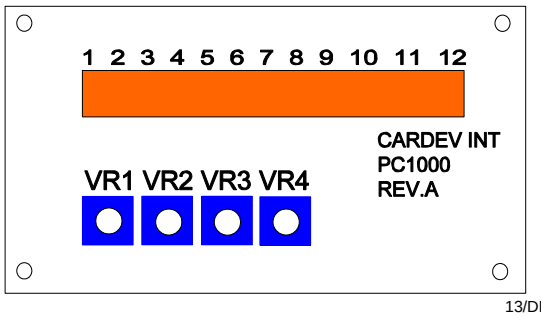
Warning

The inside of the panel is live—switch off isolator before opening panel.

Guarantee

The Cardev CMS system carries a 12 month warranty on all parts. Full details are given on the guarantee attached to the system.





CMS300-1000 OIL PUMP SPARES

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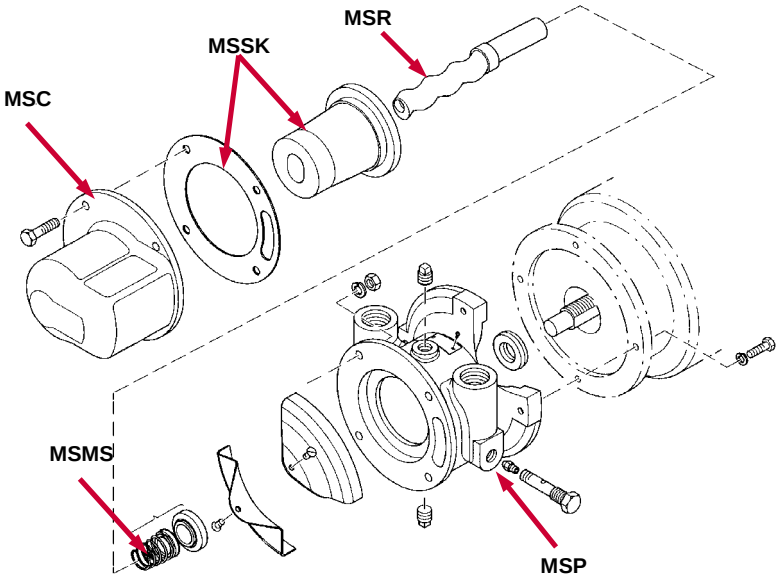
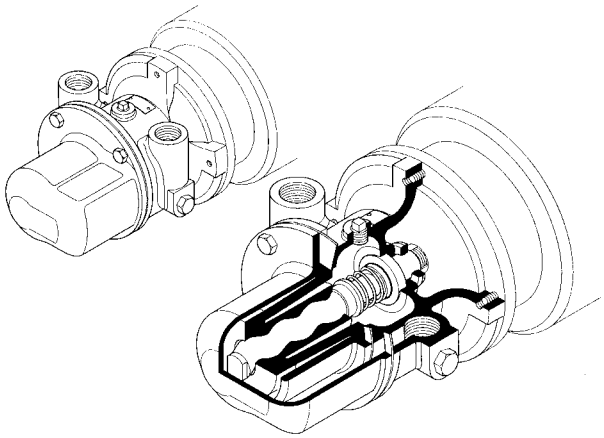




Stator
This is removed by undoing the four nuts and bolts securing the barrel which is then pulled off the body. This exposes the stator which can then be removed from the rotor.

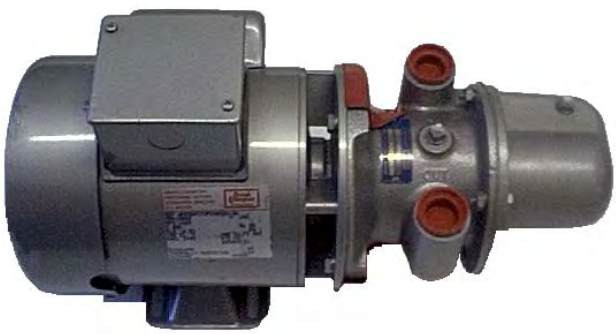
Rotor
This is removed by holding the motor shaft with a spanner on the two flats on the shaft and unscrewing the rotor with the aid of a second spanner on the flats on the end of the rotor. The threads are LEFT HAND and so the rotor should be screwed in a clockwise direction (when looking at the end of the rotor.) Removal of the rotor also releases the mechanical seal and care should be taken not to damage the mating sealing edges.

Seal
If this is disturbed or removed because of damage, when replacing or fitting a new seal, ensure it is correctly assembled before re-fitting into the pump. The rubber seal and stationary seat should be pressed into the body housing and the rotating portion assembled on to the rotor shaft before screwing the rotor back on to the motor shaft which is then locates the mechanical seal with its correct tension.

To Re-Fit
The reverse procedure is used to that of dismantling.

START-UP PROCEDURE

Pumps must be filled with liquid before starting. The initial filling is not for priming purposes, but to provide the necessary lubrication of the stator until the pump primes itself.
When the pump is stopped, sufficient liquid will normally be trapped in the rotor/stator assembly to provide lubrication upon re-starting.
If, however, the pump has been left standing for an appreciable time, moved to a new location, or has been dismantled and re-assembled, it must be refilled with liquid and given a few turns before starting.



<u>PUMP & MOTOR</u>
MS:230V

<u>MOTOR</u>
MSM: 230V

<u>CAPACITOR</u>
MSC: 230V

CMS300-1000 SPARE PARTS LIST - 1

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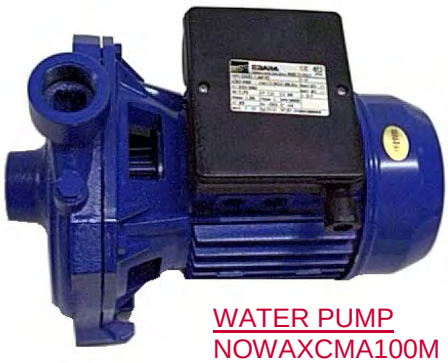
INVERTER
INVERTER

RED STROBE LIGHT
BEA2—230V

FLOAT SWITCH-WATER TANK
CFRS

ELECTRIC SWITCH
PSWCMS/C700

FLOW METER (OPTION)
FLOWK400



WATER PUMP
NOWAXCMA100M

CONTACTOR
CON2B: 230V
CONB24V: 24V

PUSH BUTTON ASSEMBLY
PBA-CMS

PRE-FILTER
PFY38BSP

IMPELLER REPAIR KIT
NOWAXREPKT

SEAL KIT—NOWAX
NOWAXSLKT

OVERLOAD RELAY
TOR75: 230V 4.5-7.5 AMPS

LANCE(COMPLETE)
CMSLANCE

BALL FLOAT VALVE - ARM & BALL
CBAB1/2 - CMS300
CBAB3/4 - CMS1000

PRESSURE SWITCH
PS-CMS

DISPENSING GUN
NOZZLE–CMS

CONTROL RELAY
REL4P24AC

CMS300-1000 SPARE PARTS LIST - 2

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NON-RETURN VALVE - 1”
NRV1

NON-RETURN VALVE - 3/8”
NRV38

TRANSFORMER
CT

FUSE
FUSE 0.5AMP
FUSE 1.0 AMP

PRESSURE GAUGE
PG160F

ACCUMULATOR
ACC-CMS

CAPACITOR
MSC230