CARDEV®

CDU-140

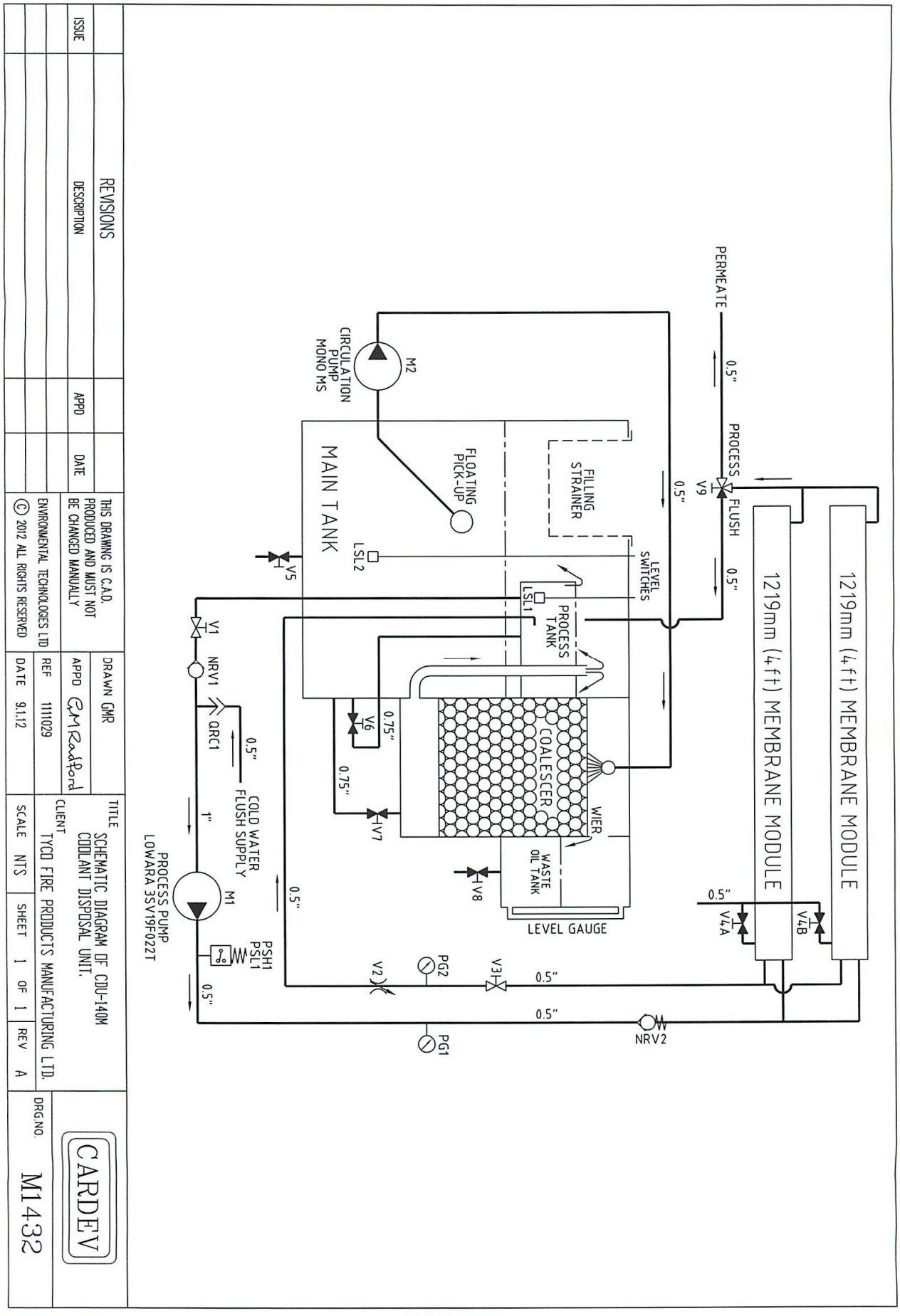
Coolant Disposal Unit

Product Datasheet

- Splits oil/water emulsions
- Separates free oil
- Reduces disposal costs
- Permeate suitable to be put down drain
- Low running costs
- Easy to operate

CDU-140M SCHEMATIC

CARDEV



REVISIONS			
ISSUE	DESCRIPTION	APPD	DATE

DRAWN GMR

APPD GM Radford

REF 1111029

DATE 9.1.12

TITLE SCHEMATIC DIAGRAM OF CDU-140M COOLANT DISPOSAL UNIT.

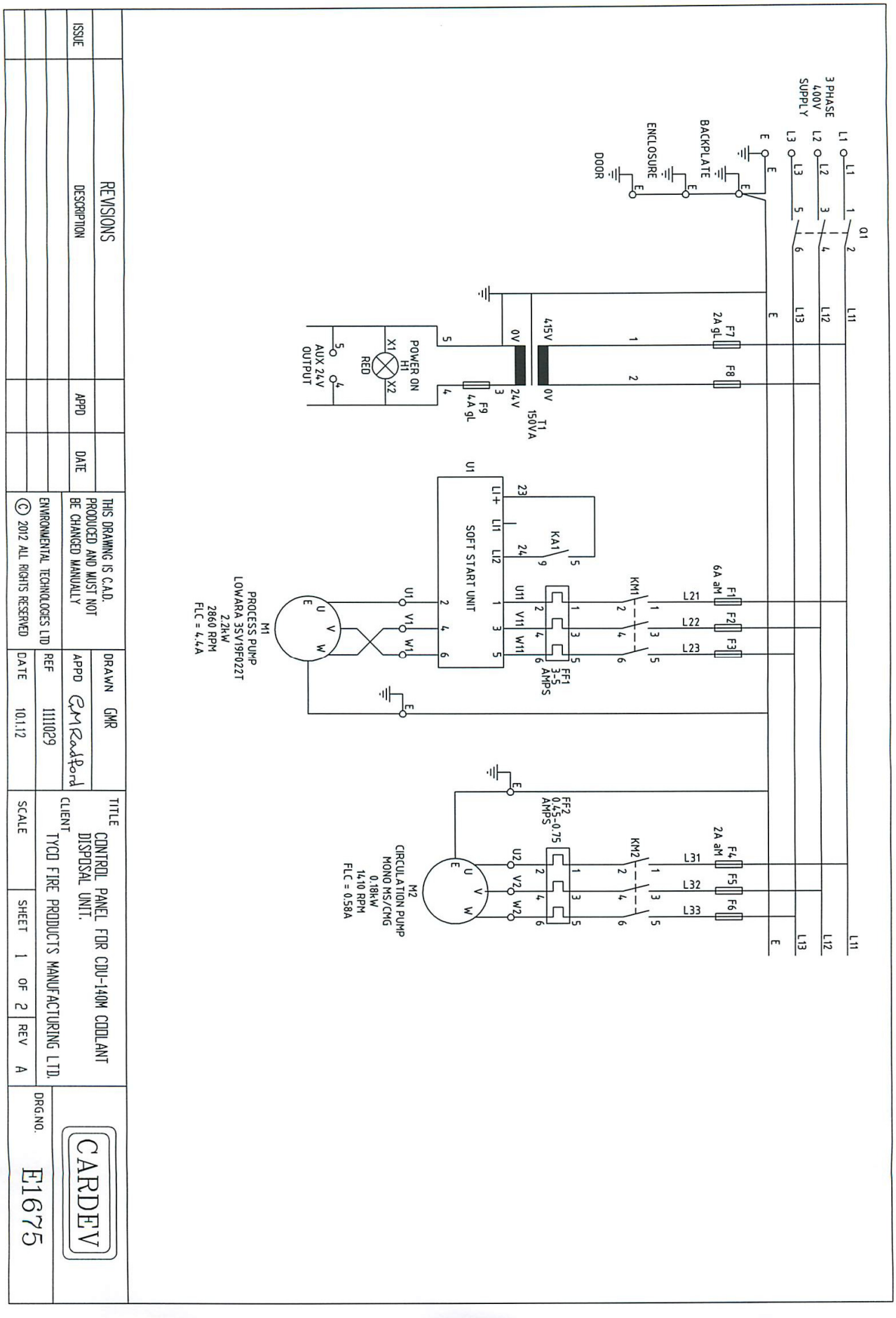
CLIENT TYCO FIRE PRODUCTS MANUFACTURING LTD.

SCALE NTS | SHEET 1 OF 1 | REV A

CARDEV

DRG.NO. M1432

CDU-140M ELECTRICAL SCHEMATIC



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DRAWN GMR

APPD GM Radford

REF 1111029

DATE 10.1.12

TITLE CONTROL PANEL FOR CDU-140M COOLANT DISPOSAL UNIT.

CLIENT TYCO FIRE PRODUCTS MANUFACTURING LTD.

SCALE

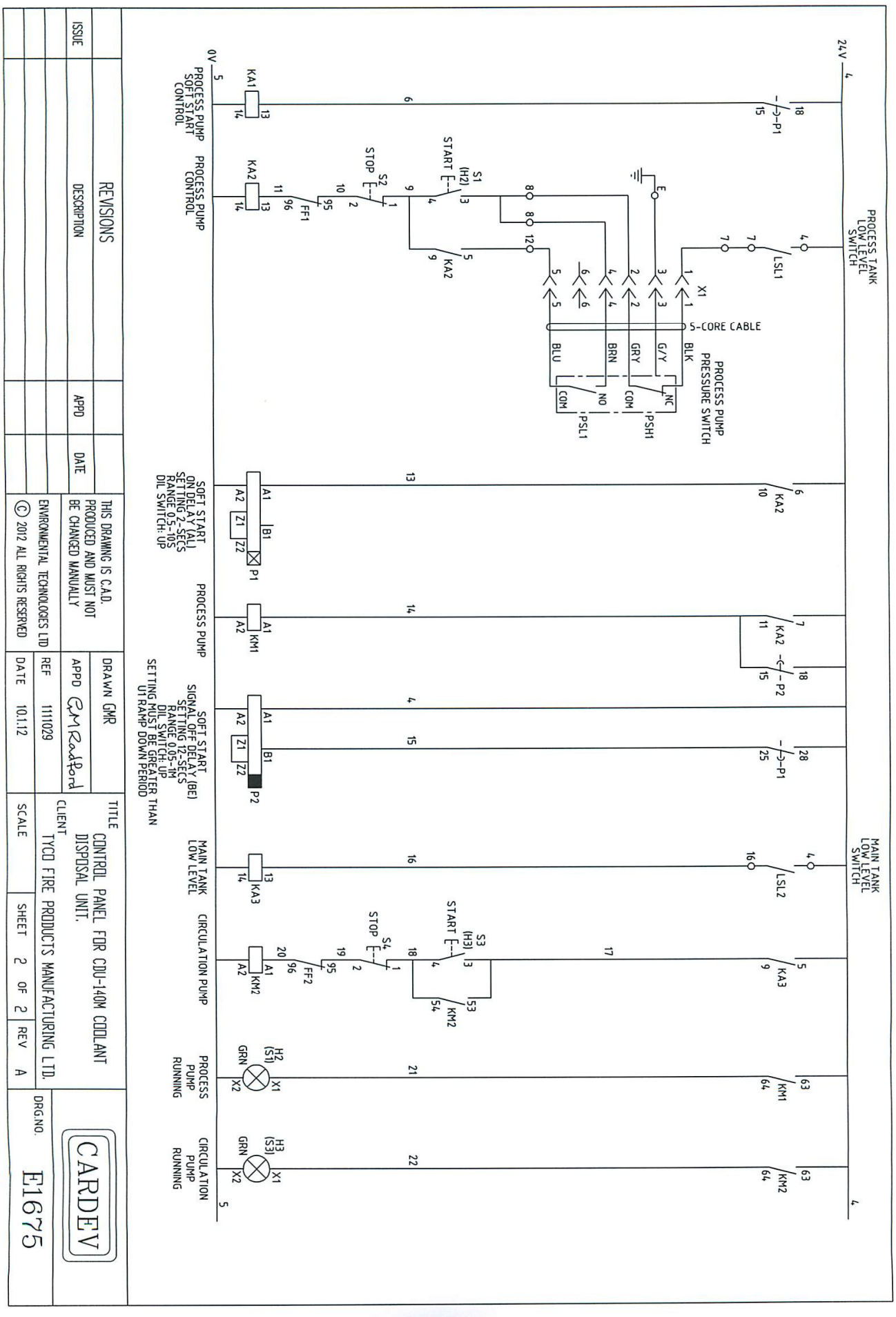
SHEET 1 OF 2

REV A

CARDEV

DRG.NO. E1675

CDU-140M



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REF 1111029
DATE 10.1.12

TITLE
CONTROL PANEL FOR CDU-140M COOLANT DISPOSAL UNIT.

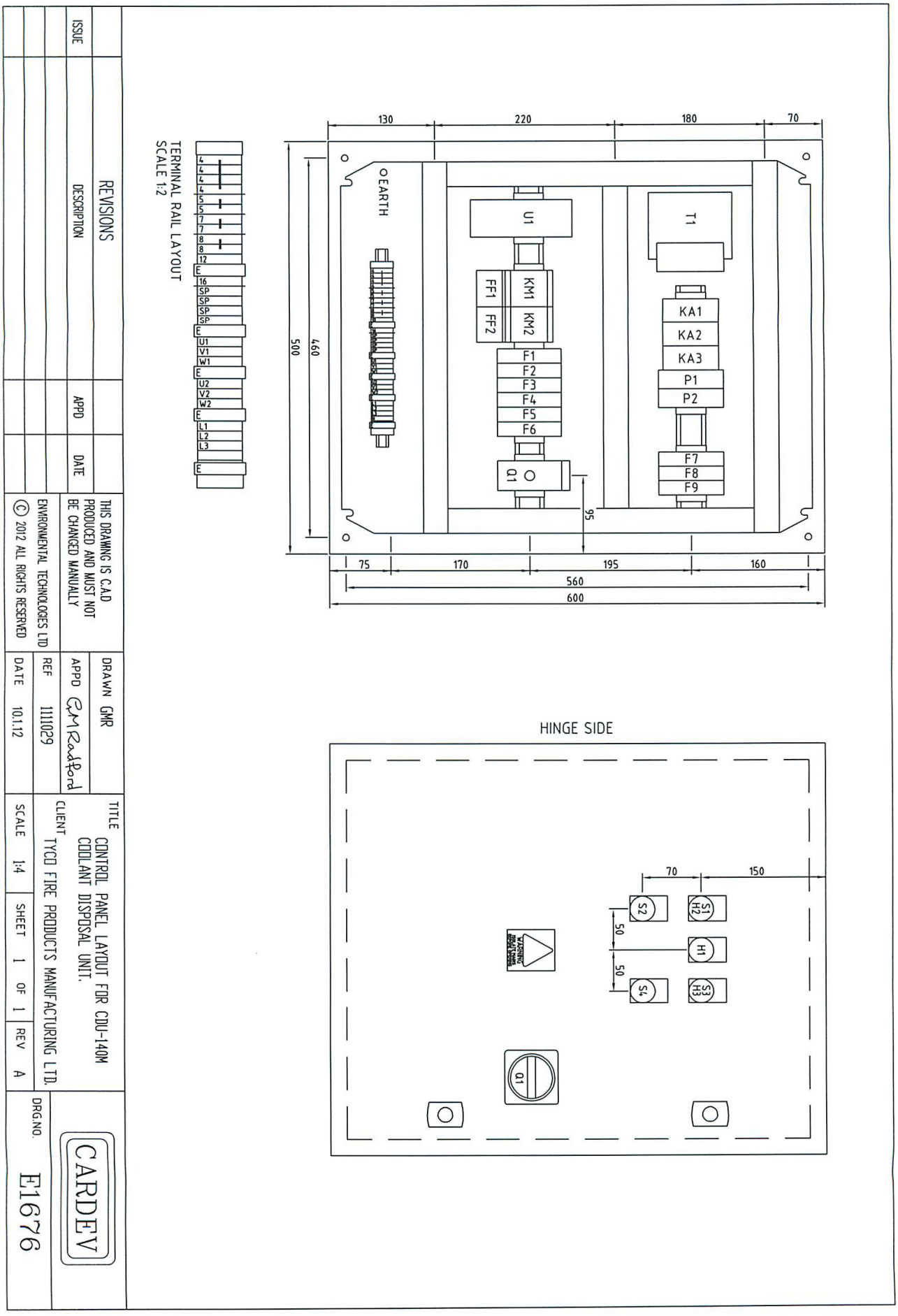
CLIENT
TYCO FIRE PRODUCTS MANUFACTURING LTD.

SCALE
SHEET 2 OF 2
REV A

CARDEV

DRG.NO. E1675

CDU-140M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TITLE CONTROL PANEL LAYOUT FOR CDU-140M COOLANT DISPOSAL UNIT.
CLIENT TYCO FIRE PRODUCTS MANUFACTURING LTD.
SCALE 1:4
SHEET 1 OF 1
REV A
CARDEV
DRG.NO. E1676
TERMINAL RAIL LAYOUT
SCALE 1:2
EARTH
U1
T1
KM1
KM2
FF1
FF2
F1
F2
F3
F4
F5
F6
Q1
KA1
KA2
KA3
P1
P2
F7
F8
F9
130
220
180
70
500
460
95
75
170
195
160
560
600
HINGE SIDE
70
150
50
50
S1
S2
S3
S4
H1
H2
H3
Q1

CDU-140M OPERATING INSTRUCTIONS

Introduction

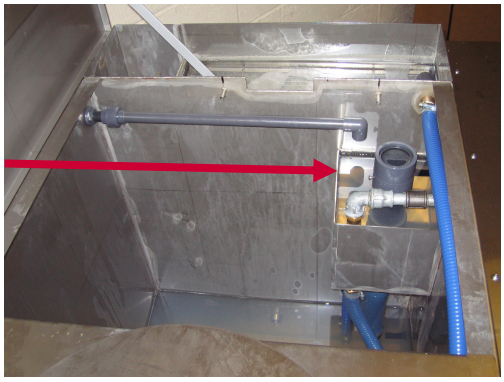
The coolant disposal unit is designed to accept waste coolant and oily waters direct from the machine tool or wash plant.

To transfer the fluid, current site methods may be used, but we recommend the use of an CARDEV S100 – 220 or 500. As this type of machine is fitted with a bag filter, any larger particles are removed prior to the fluid entry into the CDU, so extending the life of the bag filter.

Operation

1. Transfer the used liquid into the CDU via the bag filter (1), fill the process tank (2) until the level reaches the top of the internal flush tank (6).
   Note : It will not cause a problem if the unit is partially filled.

Maximum fluid level



2. Switch on the circulation pump (4) and wait until the fluid is overflowing the flush tank (6).

3 Turn the permeate valve to allow the flow to go to waste the flow should go down from the unit.
Note : This should be open to atmosphere.

4 Open the membrane shut-off valves

5 Press the main pump start, this button has to be held in for a few seconds. The pump is fitted with a soft start and stop to avoid shock pressures on the membranes

6 When the pump is running slowly close the membrane back pressure valve until a 1.5 to 2 bar differential has been reached. If the valve is closed to far the pressure switch will stop the pump.

7 The unit will now process the batch, a visual check on the permeate at the start is advisable.

8 When the level in the main tank falls to the lower float switch the circulation pump will stop. This will cause the level in the small flush tank to fall, when it reaches the float switch the main
pump will stop. Note this switch has a short delay to avoid bounce

9 FLUSHING
After each batch it is advisable to flush the membranes, this will maintain there performance.
Open the flush tank drain tap (10)
Now using the vacuum unit or a pump remove all of the concentrate left in the main tank.

Connect a water host to the top cam lock connector and open the membrane shut off valves
DO NOT START ANY PUMPS

Turn on the water tap ,this will expel the concentrate from the pump and membranes. When the fluid returning is lighter coloured closed the water tap and the drain valve.
Add 500 ml of Surfac degreaser and top up the tank using the water tap.

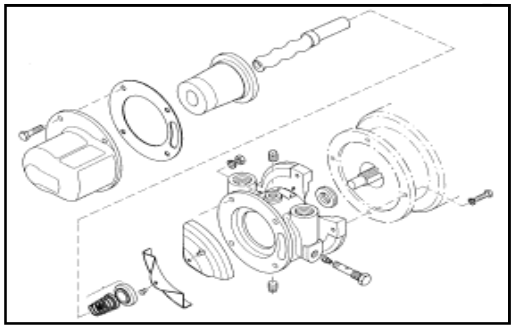
Now start the MAIN pump, if the level in the tank falls turn on the water tap to refill it.

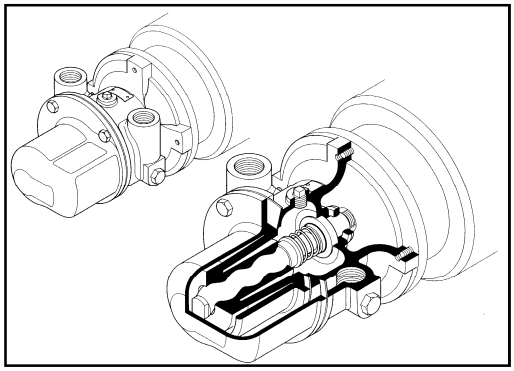
Turn the permeate tap to allow the flow back to the flush tank

Run the flush for a minimum of 1 hour

At any time during the flush the main tank can be refilled ready to process the next batch

CDU-140M PUMP & MOTOR





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.

VISUAL	PART CODE	DESCRIPTION
	PMP-MS-CMG-110/1/50 PMP-MS-CMG-230/1/50 **PMP-MS-CMG-400/3/50**	PUMP & MOTOR (MS CMG TYPE)
	MOT-MS-CMG-110/1/50 MOT-MS-CMG-230/1/50 **MOT-MS-CMG-400/3/50**	MOTOR ONLY (MS CMG TYPE)
	KIT-STT-MSSK	STATOR KIT (MS)
	MSR	MS ROTOR
	MSC	MS COVER
	MSP	MS PUMP BODY
	MSPC	MS ROTOR HOUSING (RED)
	CAP-MOT-MS-110 CAP-MOT-MS-230	MS CAPACITOR
	KIT-SEA-MSMS	MS MECHANICAL SEAL KIT

CDU-140M

VISUAL	PART CODE	DESCRIPTION
	PMP-3SV19F022T-400/3/50	PUMP TYPE 3SV19F0227 400V 50HZ
	PG-14-1/8TA-53-B	PRESSURE GAUGE 0-14BAR
	VLV-CH-SW-1	1” BRASS SWING CHECK VALVE
	VLV-CH-1/2	1/2” BRASS BARREL CHECK VALVE
	PSW-1/2-2PCO-28	PRESSURE SWITCH
	FSW-HRM16NO0.6A	FLOAT SWITCH
	TOR-3-5A TOR-0.45-0.75A	THERMAL OVERLOAD RELAY 3-5A THERMAL OVERLOAD RELAY 0.45-0.75A
	MED-25-PLY	MEDIA / FLEXIRINGS
	BSK-F1122	FILTER BASKET
	S100-FLT-BAG-2010270	200 MICRON NYLON MESH FILTER BAG
	FLT-HSG-MEM-B1RO-4 FLT-MEM-AFC30-4	4FT MEMBRANE HOUSING 4FT SET OF MEMBRANES (18 TUBES)
	TFR415.24.150VA	TRANSFORMER 415V 24V 150VA

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