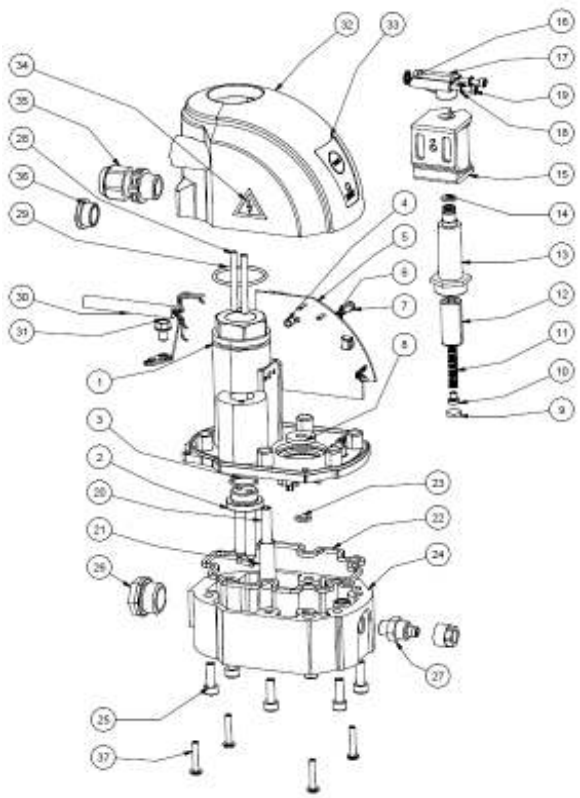


	Part
1	Housing
2	Sensor husing
3	O-ring 15x1,5
4	Spacer 5x5
5	PCB
6	Washer M3 DIN6798A
7	Screw M3x10
8	Damper
9	Plunger sealing
10	Spring base
11	Spring
12	Plunger
13	Valve housing
14	O-ring 5,8x1,5
15	Coil
16	O-ring 5,8x1,5
17	Valve connector
18	Screw M3 DIN912
19	Screw M3x30
20	Extension hose
21	Internal strainer
22	Sealing
23	O-ring 7x2
24	Bottom
25	Screw M5x16
26	Screw plug ½"
27	Hose connector 6mm
28	Sensor
29	O-ring 30x2
30	Cable
31	Screw M5x8
32	Cover
33	Front panel label
34	High voltage label
35	Cable gland M16
36	Cap M16
37	Screw PT KA35x16 WN1411

www.oil-water.com

Condensate Systems Ltd
Unit 2
Delta Way Business Park
Longford Rd
Bridgtown
Cannock
Staffordshire
WS11 0LJ

Tel: +44 (0)1543 378402
Fax: +44 (0)1543 578202
Email: sales@oil-water.com
www.oil-water.com

Service Kit type	Part number
ECD 15B / 40B	3400330
ECD 90B	3400331
ECD 150B	3400332

Type		ECD 15B	ECD 40B	ECD 90B	ECD 150B
Voltage	115 VAC	115 V +/-10%			
	230 VAC	230 V +/-10%			
Power	115 VAC	24 VA			
	230 VAC	24 VA			
Frequency		50 – 60 Hz			
Operating pressure		0 – 16 bar / 0 – 232 psi			
Peak Capacity (7 bar)		15 l/h	40 l/h	90 l/h	150 l/h
Operating temp (°C)		1.5 – 65°C			
Inlet connection		R 1/2"			
Outlet connection		R 1/8"			
Power cable		3 x 0.75mm²			
Protection class		IP54			
Mass		0.9 kg	0.9 kg	1.05 kg	1.15 kg
Dim D x W x H [mm]		120x82x125	120x82x125	120x82x135	120x82x150
Performance [m³/min]		For UK, N. Europe, N. America, Canada, Central Asia			
Compressor / receiver		4.9	9.8	29.4	112
Dryer		9.8	19.6	58.8	224
Filter		49	98	294	1120

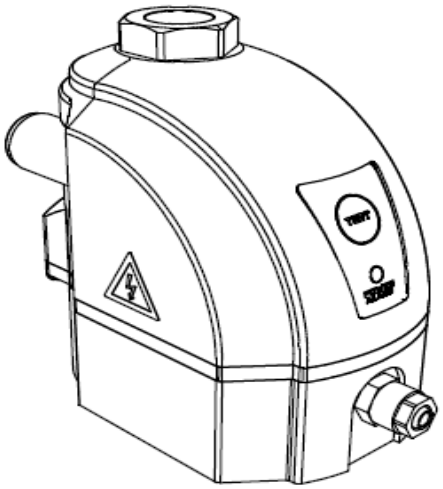
www.oil-water.com

Installation and operating manual

ECD15B / ECD40B / ECD90B / ECD150B

condensate drains

CE



Please read the following instructions carefully before installing the electronic drain unit into service. Trouble-free and safe operation of the unit can only be guaranteed if the recommendations and conditions stated in this manual are respected.

Safety instructions

- Depressurize the system before carrying out any work on the piping.
- Only trained and experienced staff should maintain or install this product
- Disconnect power supply before installation or maintenance work.
- Electrical work must always be carried out by qualified electrician.
- Operate within stated pressure & temperature ranges (see page 1).
- Not suitable for use in potentially explosive atmospheres.
- Use original spare parts only.
- Use the device for the appropriate purpose only.

Appropriate use

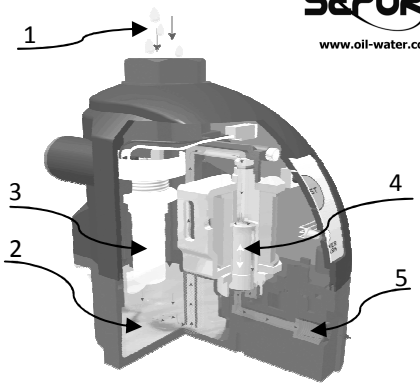
ECD series electronic drain is intended for the purpose of draining condensate from compressed air systems (compressors, receivers/pressure vessels, dryers and filters). Any other form of use shall be considered inappropriate; no liability will be accepted for any loss or damage caused as a result of such use.

Maintenance

Please ensure that the internal strainer and reservoir are cleaned at least once each year. At the same time, because of the abrasive nature of condensate, it is advisable to change the wearing seals, which are available as a service kit—see back page

Operating principle

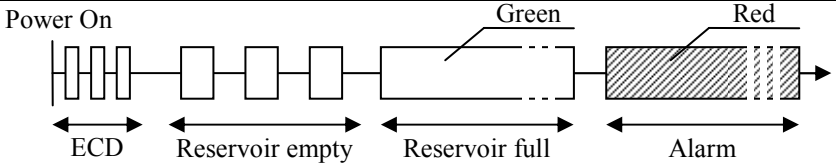
Condensate flows through inlet (1) and accumulates in reservoir (2). The sensor (3) monitors condensate level. When reservoir (2) is full, sensor (3) signals to the PCB. Solenoid valve (4) is then opened to discharge condensate through outlet (5). When reservoir (2) is empty, valve (4) closes without loss of compressed air.
An LED signal indicates status of the device (**see *Functions***).
If the microcontroller registers faulty operation, the device enters alarm mode. A remote alarm may be controlled by the voltage-free contact. (**see *Functions***)

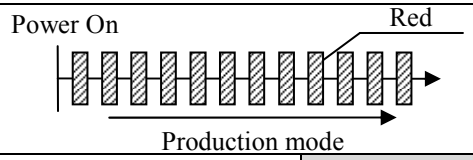


Functions

Power on
LED flashes at power-on to indicate ECD type.
One flash: ECD 15B Two flashes: ECD 40B
Three flashes: ECD 90B Four flashes: ECD 150B

Operating
LED indicates a condensate sensor output.
Green FLASHES: Sensor detects no condensate
Green ON: Condensate is detected
Red ON: Alarm mode





Short flashes of red light indicate a production test mode has been entered. In this case, you should contact the supplier.

Pressing the TEST button opens the valve. If a brief single press of the test button results in repeated valve operation clearing 'backed-up' condensate, it is almost certain that the installation is incorrect. An air-lock is the most likely cause. Check pipework falls constantly to the drain.

Remote alarm

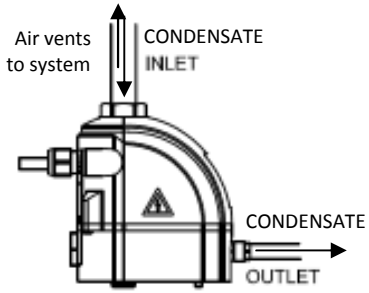
The ECD is provided with an alarm output that is voltage-free, and is triggered by the on-board alarm. The output is high impedance when the red LED is 'on' and when electricity is disconnected.
Operating parameters are: Max current—20mA, Max applied voltage—24V

Operating modes

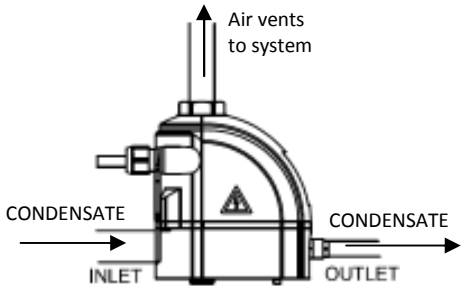
- **Normal.** Condensate detected. Valve opens for 1sec. Minimum 5secs between repeat operations.
- **Overload.** If excess water is detected for 90 secs, valve opens 2s and closes 1s for 5 minutes. Valve resets to 'Normal' automatically if excess water clears, or goes into 'Alarm' mode.
- **Alarm**. If unable to drain as above, then valve opens 5s every 30s. Valve auto resets if problem clears.
- **Blocked valve detection**. Excessive debris could cause the valve plunger to stick in 'open' position. ECD tests plunger position 0.5s after closing. If plunger position is incorrect, valve will oscillate/ vibrate for 1 second. This procedure repeats until debris is cleared, then the valve auto resets. If the debris is not clear after 10 cycles then the drain enters 'Alarm' mode.

Installation

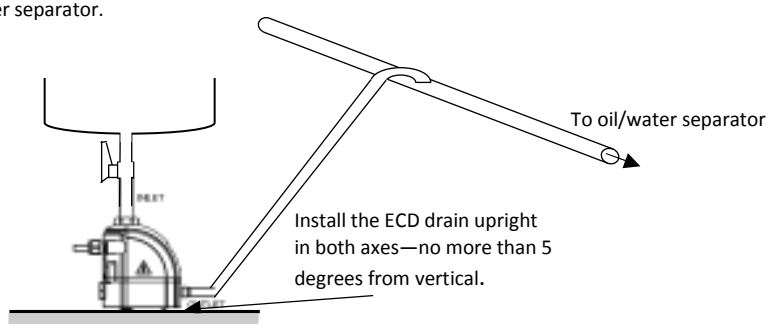
In a standard installation, the upper connection is used. Condensate flows into the drain while displaced air returns to the drained vessel in the same pipe.



In a venting line installation, condensate flows into the drain through the lower (rear) connection, while the upper connection is used to allow air displacement back to the system



General installation. Never use gate valves as isolators, always use ball valves. Be sure to use steel tube for inlet connections to avoid sagging and air-locks. Minimum inside dia. of inlet pipe should be 13mm. Use flexible tube to connect the outlet to a collecting header as shown. Install with at least 2% fall towards the oil/water separator.



- Never connect more than one condensate source to any drain
- Ensure that the inlet pipe-work has a steady fall towards the drain, or air-locking will occur, and the drain will operate only with manual intervention.
- Before installation on old or rusty vessels, carefully open the drainage point to clear as much debris as possible.
- After installation open the isolating ball valve so as to build pressure gradually in the condensate drain