Service Manual

dFlow

Electronic Bottle-Top Dispenser

Dragon Laboratory Instruments Limited

DOMINIQUE DUTSCHER SAS

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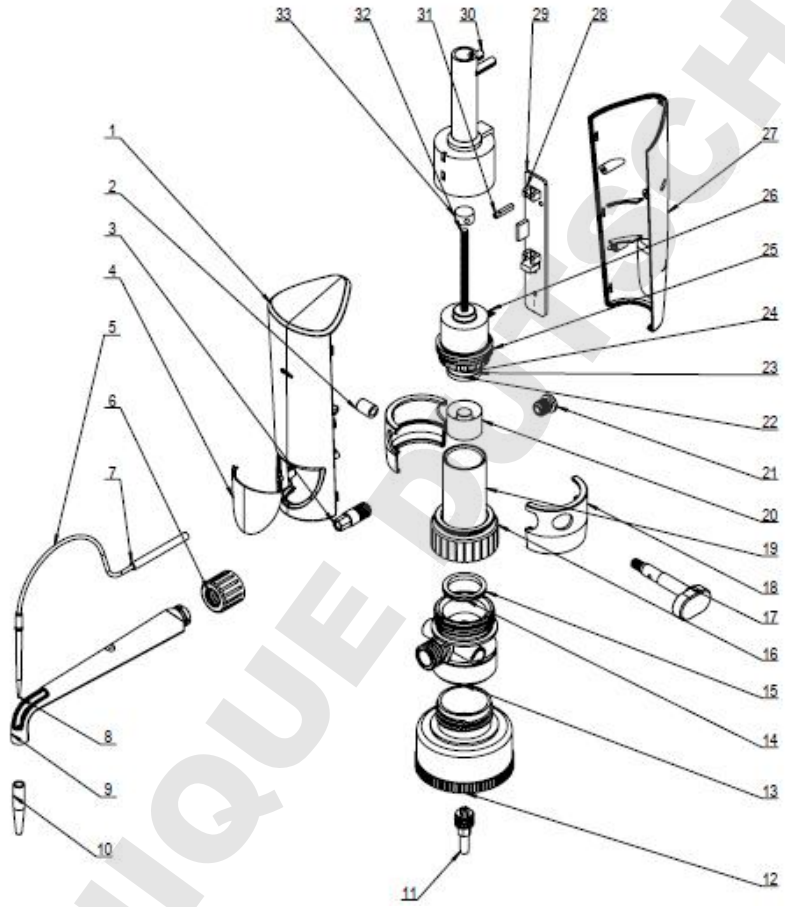
Chapter1: Working Principle

1.1 Instructions

Electronic Bottle-Top Dispenser dFlow (hereinafter referred to as "dFlow") is a kind of digital control overhead dispenser, used for liquid separation and accurate analysis.

1.2 Structure



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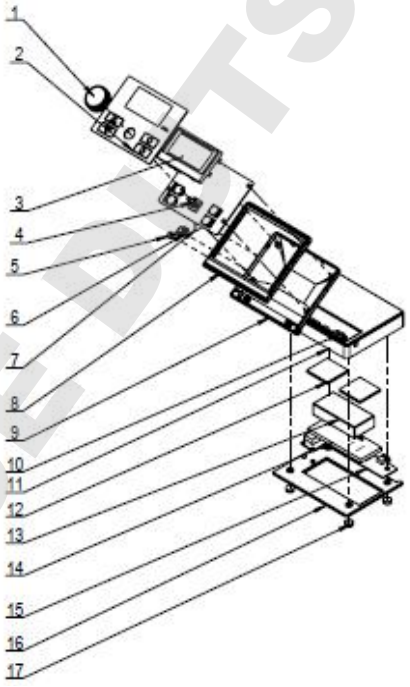
SN.	1	2	3	4	5	6	7	8	9	10	11
Name	front shell	Return valve trim cap	Liquid discharging valve	Display Window	Burette	Burette lock nut	Titration value outlet pipe	Tip head (fine)	Burette protective sleeve	Liquid outlet pipe joint -2mm	Liquid inlet Head
SN.	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**
Name	Adapter 28-45mm	Check valve seat	Glass cylinder sealing ring	Glass cylinder sealing ring seat	lock button	Return valve	Check valve seat-shell	Glass cylinder	piston-1	Air cover	Sealing ring
SN.	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**
Name	Piston Sealing ring	Piston ring compression -2	Motor lock nut	Linear stepping motor	After shell	Photoelectric switch	Photoelectric switch circuit board	Motor fixing part	Photoelectric block	Motor shaft	Screw stop

Figure 1 The dFlow Host structure diagram



SN.	1	2	3	4	5	6	7	8	9
Name	KNOB CAP	Control panel -5	lattice LCD screen	Encoder	Damping shaft Plug	Plug socket	Plug	Display front shell	Display After shell
SN.	10	11	12	13	14	15	16	17	
Name	Six angle damping knob	Controller Shell	Cotton. Double faced adhesive tape	lithium battery	Sponge	Main control board	Controller base board	Anchor	

Figure 2 Controller structure diagram

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1.3 Removal and Installation of Instrument

When the instrument appears to run the fault, the first to carry out the fault analysis, such as the failure of the instrument hardware damage, it is necessary to carry out the replacement of the relevant equipment maintenance, the following are introduced dFlow host, the controller of the replacement of the relevant content.

a、 The dFlow Host disassembly

Step 1 First of all, as shown in Figure 3, will be rotated to the direction② of the return valve, emptying the liquid in the cylinder body.

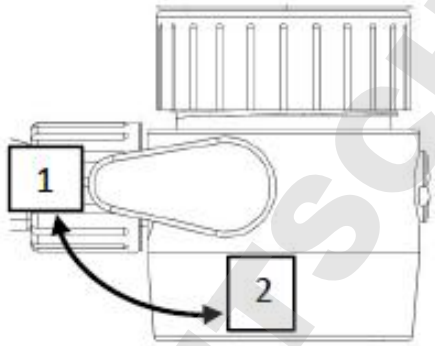

Figure3 Diagram of return valve

Step 2 Disconnect the power supply, and then disconnect the dFlow host and the controller data connection.

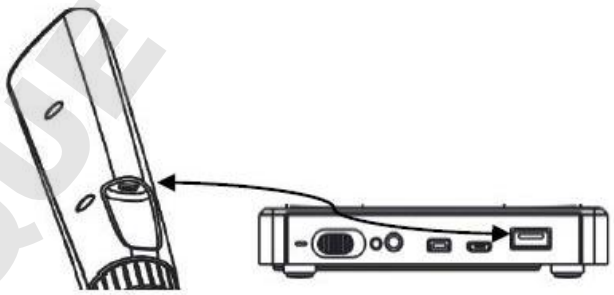

Figure 4 diagram of connection between the dFlow host and controller

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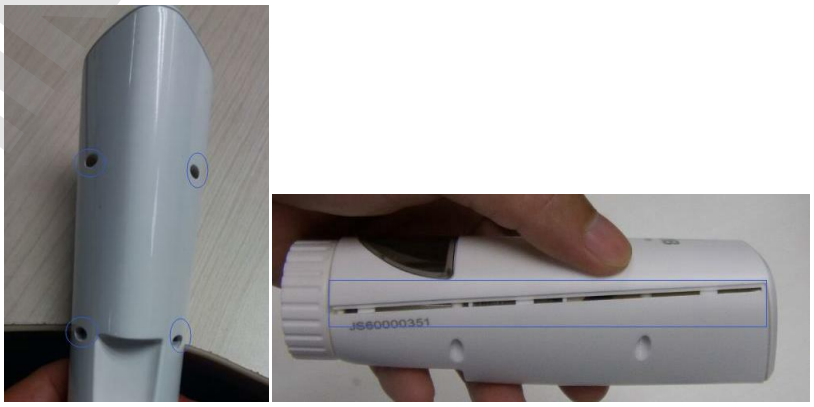
Step 3 Remove the bottle from the dFlow host (counterclockwise) (Figure 5)

Figure 5 diagram of the dFlow host and bottle-top the separation

Step4 Remove the burette (Figure 6)

Figure 6 Diagram of the dismantling of the buret

Step5 Dismantling the dFlow host (Figure 7), first remove the four screws of M3, open the shell before and after between the buckle can be opened.



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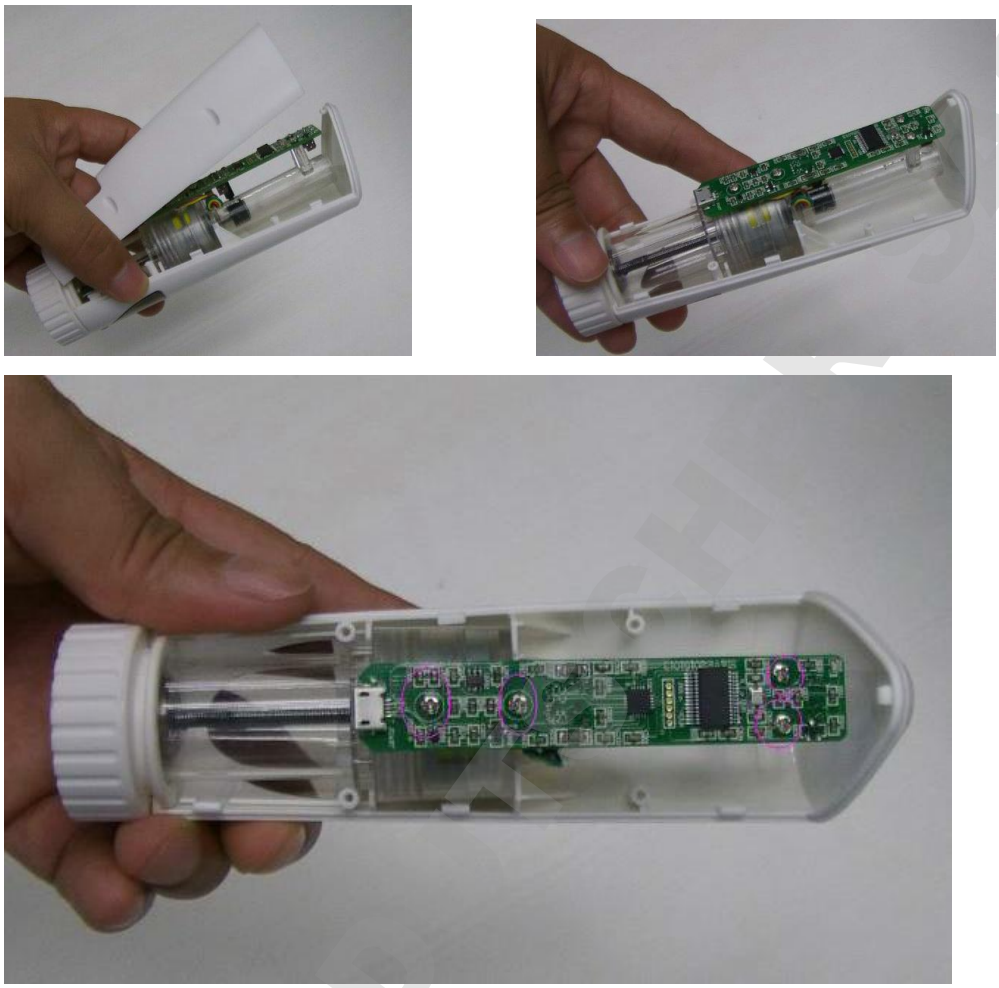

Figure 7 diagram of the dFlow host dismantling

b、 Controller disassembly

Remove the controller four anchors, and then use cross screwdriver remove four M3 screws, open the shell, disconnect the battery connecting cables, simple replacement components. (Figure 8)

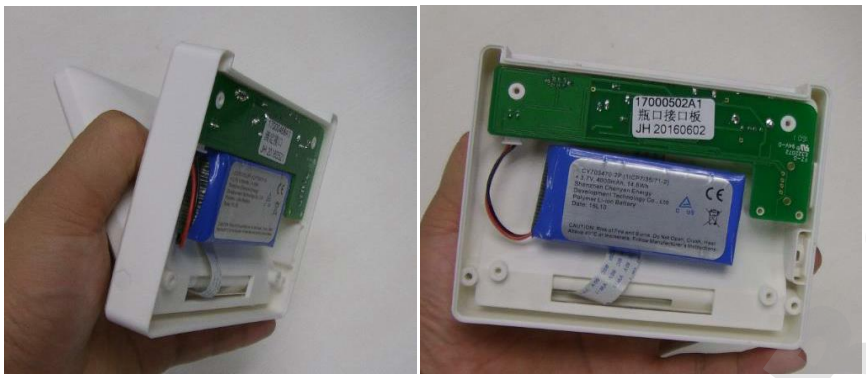

Figure 8 Diagram of controller disassembly

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Chaper2: Trouble shooting (Table 1)

Fault description	Possible causes	Resolvent
Liquid spill piston	Piston wear	Contact manufacturer
Piston movement difficulty	Piston / piston chamber components are contaminated or damaged due to crystallization precipitation	1.Clean the cylinder according to the instructions; 2.Contact manufacturer
Can not enter the liquid	Inlet valve plugged	1.Replace Inlet Valve 2.Contact manufacturer
Liquid liquid outflow from the buret	The liquid inlet valve pollution or damage burets	1.Replace Inlet Valve 2.Contact manufacturer
The bubble / liquid discharge volume in the instrument is smaller than that of the volume display.	Into the liquid pipe is loose or damaged	Replace the liquid inlet pipe
	The liquid inlet pipe is not inserted into the liquid level.	Check liquid inlet pipe
	Do not install the return valve or return valve installation is not correct	Contact manufacturer
	Instrument is not completely into the liquid	Check operation
	Fluid inlet valve	Check inlet valve
	Inlet valve plugged or damaged	Replace inlet valve
Without display	The battery is low.	Connecting charger
	There is no connection between the host and the controller	Check connection
System Error 01	Controller and host communication exception	1.Check the host communication line connection after the restart 2.Contact manufacturer
System Error 02	Motor up reset timeout, the instrument is connected to normal	
System Error 03	Motor down reset timeout, the instrument is connected to normal	
System Error 04	Motor running out of time, the instrument is connected to normal	

Table 1

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Chapter3: Parts List（Table 2）

SN.	Part Name	Cat.No.	Remark
1	Magnetic stirring core	18900008	
2	Magnetic stirring assembly	17000435	
3	Bracket assembly	17000511	
4	Support rod -D	17000409	
5	Extended Support rod -D	17000433	
6	Bracket assembly -D	17000511	
7	Titration host assembly	17000443	
8	Controller assembly	17000455	
9	Long distance buret assembly	17000477	
10	USB Cable	17000480	

Table 2

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