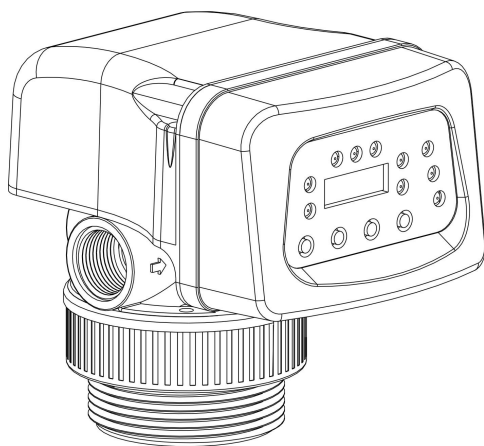




# User Manual

## GL-2 Economical filter valve

(GL2-2\GL4-2\GL10-2)

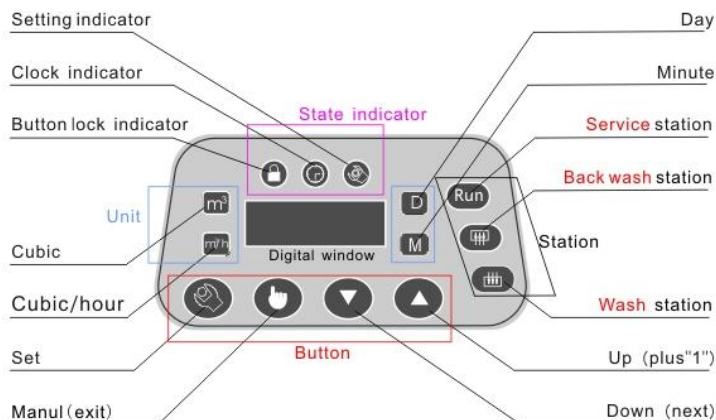


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## I .The Controller




Pic1: Filter valve Controller interface

### (1) Panel indicator and button

#### 1、 Station Indicator


: Back wash; : wash; : Service

#### 2、 Control signal light

Light "

**lighting**, The LED digital display is the clock.

**flashing**, It means there is a long time power off (more than 10 days). That need to set the current clock

Light "

**lighting**, means the buttons are locked. Any button is pressed will not work.

Goes out, **Unlock** state, if there is no operation on button in 2 minutes, the


buttons will be automatic locked ).



lighting, indicate under *inquiry* state. The parameters menus can be inquired by “▲” “▼” up and down.




flashing, indicate under *setting* state. The parameters can be changed by “▲” “▼” plus and minus


3、 button.


Button “”

If the button “” were pressed under *unlock state*, “” indicator lighting,


enter into *inquire state*, to inquire parameter menus(follow table) up and down by “▼” “▲” button.

Press “” under *inquire state*, “” flashing, enter to *setting state*, the parameter can be modified.by “▲” “▼” to plus & minus to modify the value of the blinking digit, press again to switch another blinking digit,finally press “” to confirm the modification and return to the *inquire* state.

Button “”


Press “” under *unlock state*, the current valve station will be shift into next(Manual shift).

Press “” under *inquire state*, return back to *unlock state*.

Press“  ”under *setting state*,return back to *inquire state* and the parameter modified will be not saved.

Button “▲”&“▼”























*Unlock* : hold down at the same time button“▲”“▼” for around 2

seconds, “” light will go out and enter into *unlock state*.



Inquire parameters menus up and down under *inquire state*.

Plus1 and minus1for digit of each parameter under *setting state*.

## (2) Parameters menus

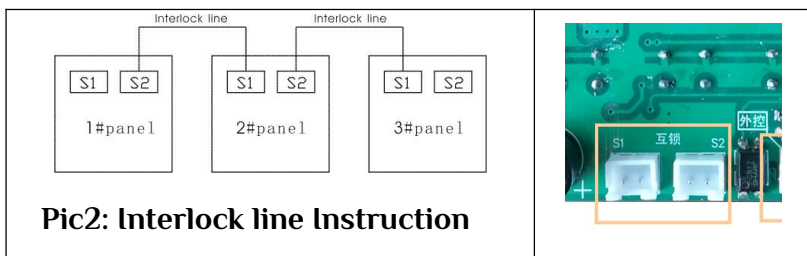
Function	Digital window	Indicator light of LED and instruction
Start up display		S: Time model, L: Meter model
		5 means the fifth generation products, 03 means that the current program version
clock		“ : ” Flashing, the factory set for random
<i>Unlock</i> state, press “  ” to <i>inquire</i> state, display in turn		
Time model		 、means <b>Run</b> station. <b>D</b> is unit. Left of “.” is day. Right of “.” is hour, If the unit is <b>M</b> Left of “.” is hour. Right of “.” is minute,
		 、2 means <b>Backwash</b> , 36 is Station parameter, unit display is <b>M</b> (minute)
		 、3 means <b>Wash</b> , 02 is Station parameter, unit display is <b>M</b> (minute)
Meter model		 、 <b>RUN</b> station. unit display is <b>M<sup>s</sup></b>
		 、 <b>Backwash</b> station, unit display is <b>M<sup>s</sup></b>
		 、 <b>Wash</b> station. unit display is <b>M<sup>s</sup></b>
Output control mode		Relay output mode include: 00, 01, 02, 03, 04, 05, 06. See section <b>Relay output mode</b> for details.
Delay backwash		Delay backwash “--:--” lighting; If set left as “99”(default), means cancel the function.
Backwash times		<b>L</b> is setting code. <b>01</b> is setting value. that is 01 means from  to  once per cycle
Time unit D/M for time model.		00: “-- : --” the unit ahead of “:” is hour, the unit behind of “:” is minutes
		01: “-- : --” the unit ahead of “:” is day, the unit behind of “-- : --” is hour,

## Note






1. Under **inquire** state or setting state, if there is no button operation in 30 seconds.,The state will automatically exit.
- 2.During normal operation, the data window will display: station parameters (decreasing state), clock, water inflow flow rate, and corresponding signal indication, station indication, unit indication every 10 seconds
3. Display  ,means the valve is shifting to next station.the motor is rotating.
4. Display clock flashing, such as  , that means power off time is too long, remind the user to check current time.
5. " E1" display means the system out of order.

## (3) 、Output control

### 1、Interlock line connection as below



### Explanation:

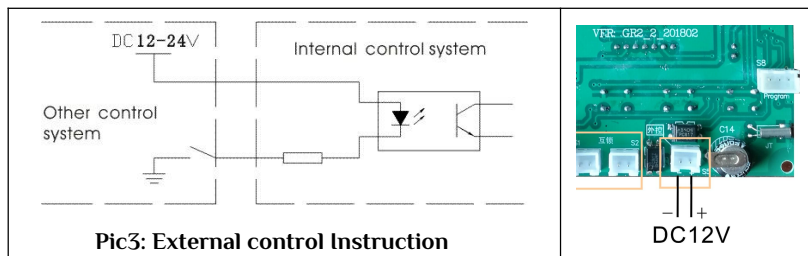
- A. Any valve at 、 position, the valve can send lock signal.
- B. Any valve from  to 、 position, the program will read locking signal from interlock line. If there are locking signals (that

means there are other valves in (Run) 、 (Stop) , the valve will continue service in (Run) ,Until other valves finish in (Run) 、 (Stop) (locking signal disappear), this valve shift to (Run) 、 (Stop) .

C. S1 and S2 is same signal on PCB board. There is no sequence relationship.

## 2. External control interface

The valve can be controlled by external system to control into (Run) (backwash), (Stop) (wash)



## 3、 Delay backwash explain :

When the digital of (Run) station decrease to “0”, the valve will continue at working station of “ (Run) ” and not shift to (Stop) until the actual time come to the time of “0-23” clock set in advance. Set “99” can cancel this function.

## 4. Relay output interface (b-0X)

A. the capacity for contacts of Relay 5 A / 250 V.






B. Relay output port:

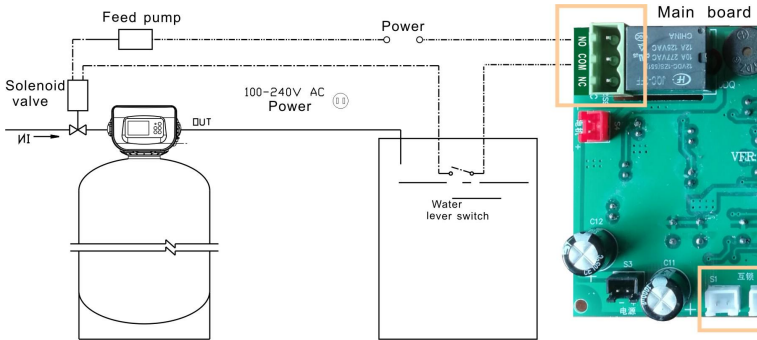
NO= Normal open, NC=Normal Close ,COM =Common port

C. In connection AC220V power output relays, input to meet leakage circuit breakers.

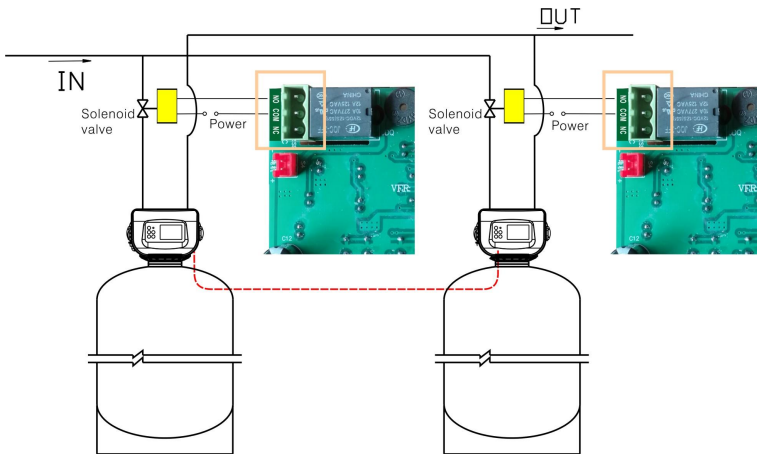
Different mode, the relay output NO and COM,Connected to "C", 6 disconnect for "x"

Mode			RUN	
b=00	C	C	C	×
b=01	C	C	×	×
b=02	×	×	C	×
b=03	C	C	×	×
b=04	C	C	×	×
b=05	×	×	CX	×
b=06	C	×	×	×

Mode	Applications
b=00	Inflow water solenoid valve mode: Pressure relief when valve shifting.water Lever switch,feed pump combine control PIC4
b=01	booster pump mode: control backwash pump start-up,In  and  station, Relay “COM” and “NO” are connected,backwash booster pump start-up.
b=02	Outflow pump start-up mode: such as for subsequent RO system high pressure pump start-up,only in  station,high pressure pump start-up.
b=03	Tow valve one RUN & one standby inflow water solenoid valve mode: This mode is using for soften valve.
b=04	Tow valve RUN simultaneously Backwash respectively: Interlock line connection, if one valve into  ,  , close another valve inlet solenoid valve, to achieve backwash pressurization .Pic 5.
b=05	CX(Mode2 additional conditions) : When the inlet flow meter check the water flow signal in RNU station.the Relay is Connected.
b=06	Backwash booster and compressed air mode



Pic4: Mode(b=00): Solenoid valve liquid level switch and feed pump. water pressure relief when the valve is shifting station and solenoid valve cut off



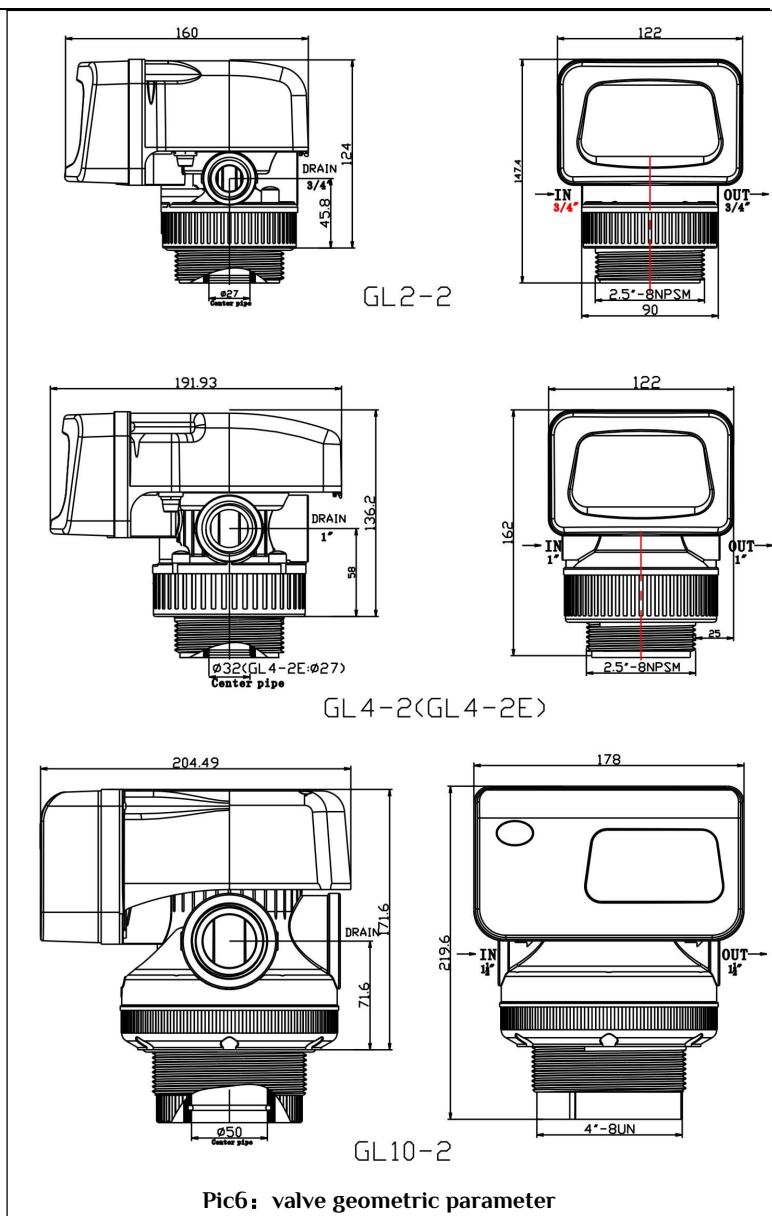
Pic5: Mode(b=04): RUN simultaneously backwash Respectively

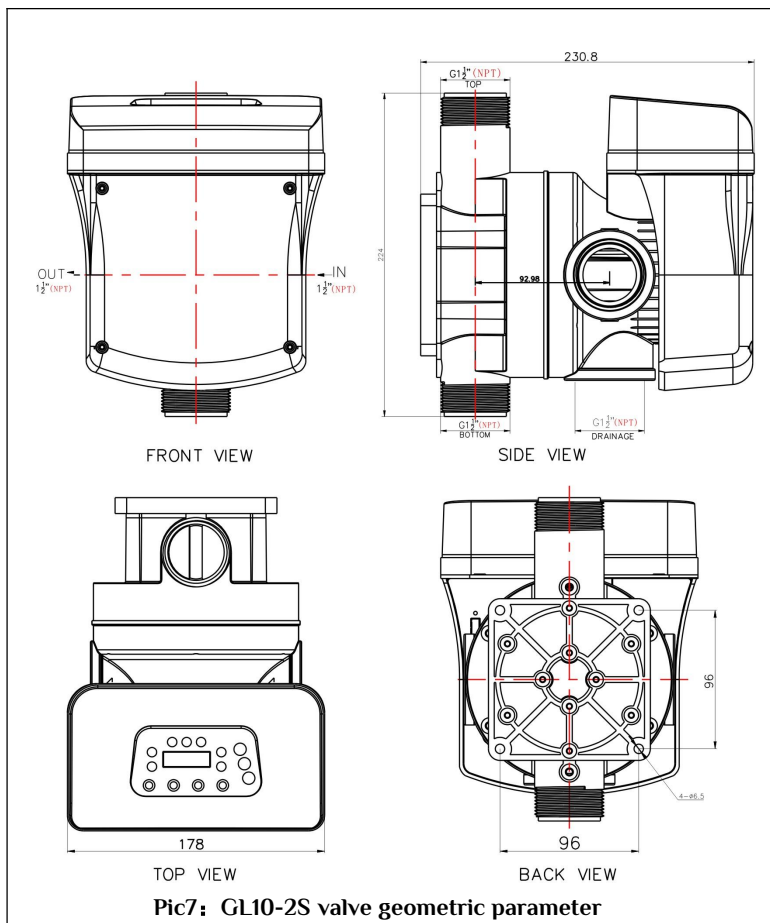
## II、Installation

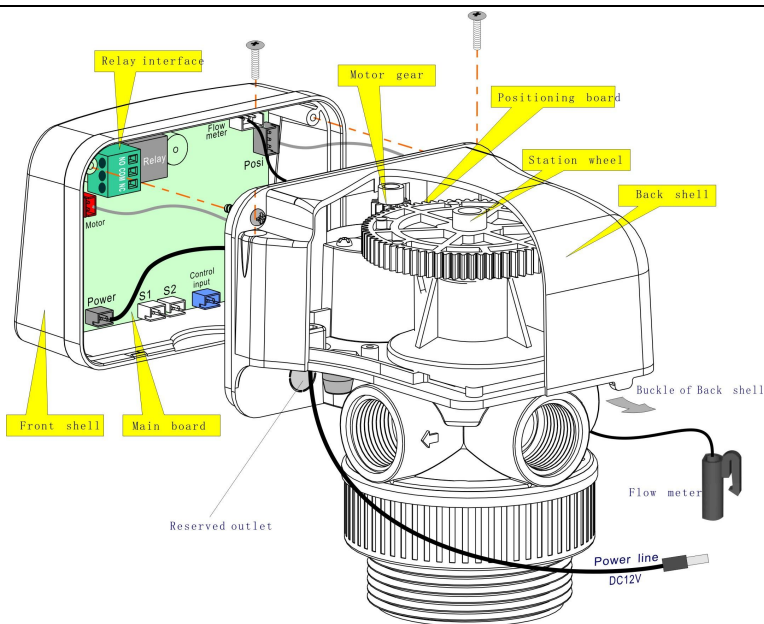
1, The water must be installed filters, lest cause valve core fault and water distributor congestion.



- 
- 2, Pipe valve specifications is not less than control valve in and out of the size.
  - 3, Water static pressure is not higher than 0.6 MPa.
  - 4, the equipment is installed in the room, the humidity should not be too high, there should be no corrosive chemical gas around, to avoid strong electromagnetic interference to affect the power supply of the control valve.
  5. Floor drain or trench drainage shall be set around the equipment to avoid accidental water leakage causing the floor and other indoor items to be flooded.
  6. Water temperature is  $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$

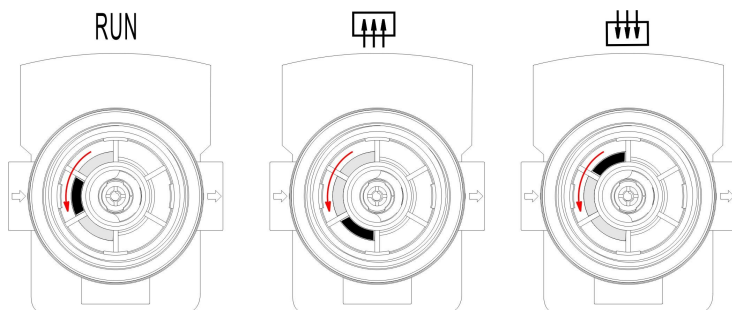






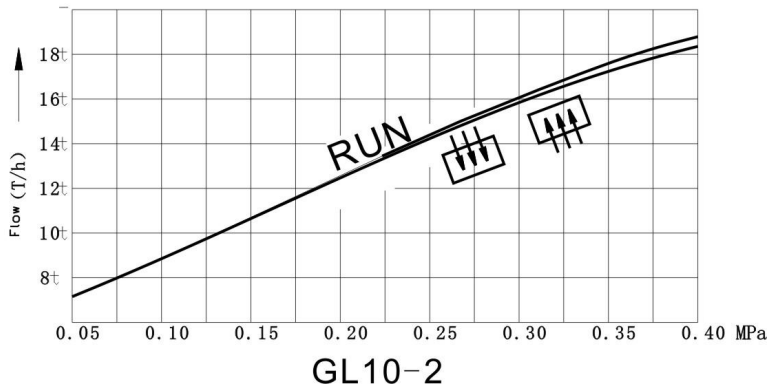
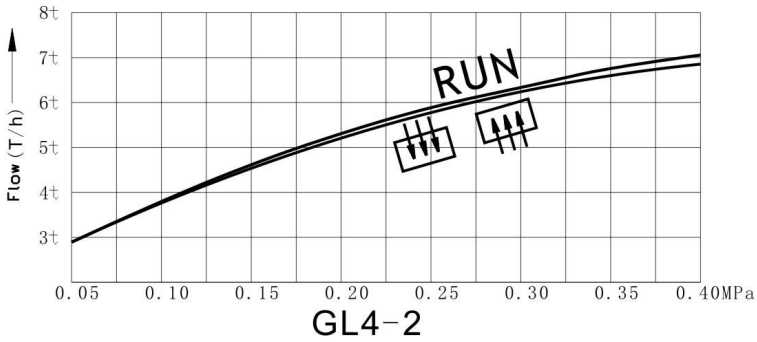
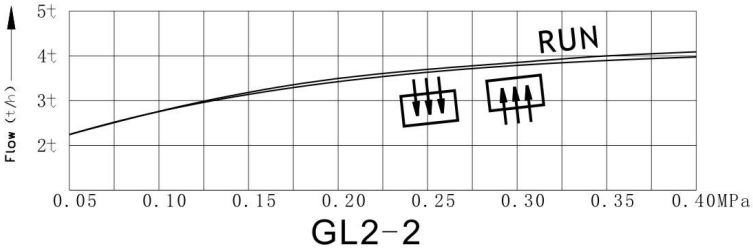
**Pic8: Removal and connection of front shell of the controller**

### III、Station identification from valve bottom



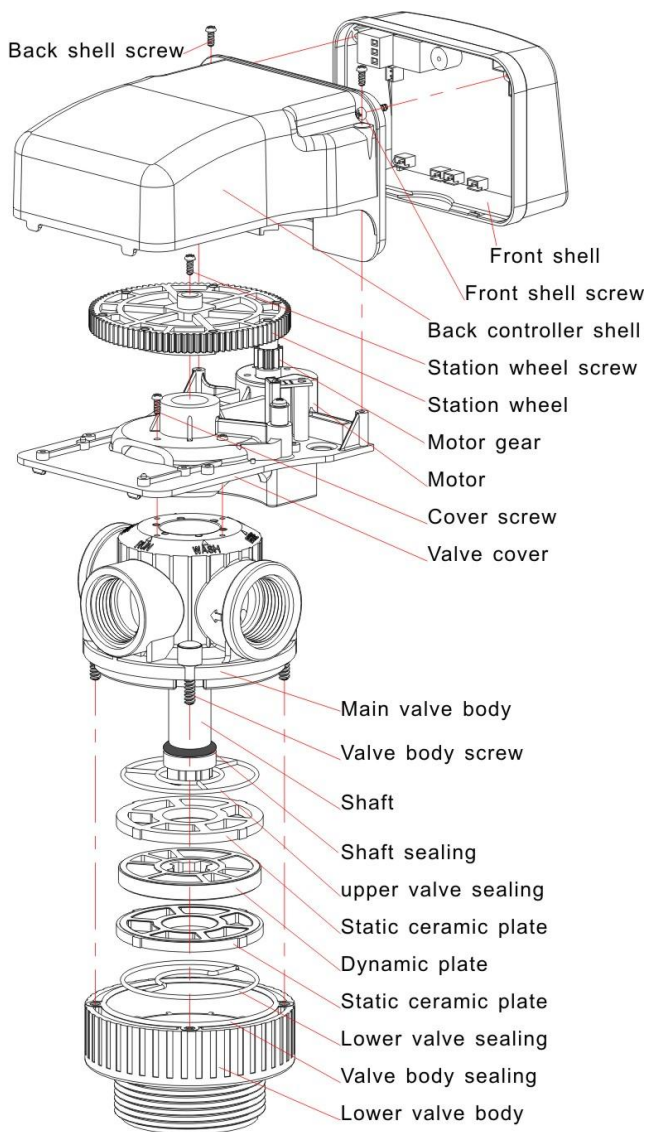
**Pic9: GL-2 identification from valve bottom**

#### IV. Curve of Flow and Pressure for the Valve



Pic10: Curve of Flow and Pressure for the Valve

## V. GL-2 valve explode drawing (GL4-2 example)



**Pic11: GL-2 valve explode drawing (GL4-2 example)**



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