AutoDose Automatic Dispensing System Instruction Manual

Models 1170GB/1180GB/1190GB

Contents

1. - Description

The AutoDose is a battery or mains powered peristaltic pumping dispenser that runs automatically at preset times as programmed with an electronic timer / control. Product operates reliably and consistently, even in demanding environments.

This guide contains instructions for installing, programming, and troubleshooting the AutoDose Dispensing System. Throughout the guide, the following icons are used to indicate the model(s) to which each step pertains.

1.1 - Models:

- 1170GB
  - Mounting: Chemical container Mount (3.5 – 5 gal chemical container)
  - Power: 8 Alkaline D-cell batteries

- 1180GB
  - Mounting: Wall Mount
  - Power: 8 Alkaline D-cell batteries

- 1190GB
  - Mounting: Wall Mount
  - Power: Mains Powered using wall mounted transformer (or 8 Alkaline D-cell batteries)

2. - Site Survey and installation requirements

Before an installation takes place it is advisable to complete a site survey to ensure the AutoDose can be installed in a position that meets all of the requirements listed below.

a) Unit must not be installed near areas that suffer excess temperature changes, direct sunlight, frost or precipitation of any kind

b) Ensure the unit can be mounted in an accessible position above the height of the required discharge location.

c) Unit must only use Alkaline batteries

d) Unit must be mounted on a suitable wall, that is flat and perpendicular to the floor

e) Area unit works in must be well lit for maintenance

f) Tube life will vary depending on the type of treatment product used.

- Advise scheduled maintenance and tube replacement at least once per year.

3. - Package Contents

- AutoDose Unit
- Accessory Kit Containing;
  - Ceramic weight and strainer for inlet tubing
  - Polyethylene tubing (3m / 10 ft)
  - Cable ties
  - Mounting Bracket (1180GB /1190GB)
  - Injection Fitting
- UK/EU/US Mains Transformer (1190GB)

4. - Installation

Before proceeding, ensure rocker switch on side is set to ‘O’

STEP 1 : Install the Batteries (1170GB/1180GB)

a. Loosen the battery door screw.

b. Open the battery compartment.

c. Place eight, fresh alkaline D-cell batteries into the holder as shown in the battery compartment

Battery life is typically 40 running hours. A “low battery” indicator will alert you to a low voltage condition indicating battery change. Program settings will be maintained if dispenser is disconnected from power source.

STEP 2 : Determine Appropriate Dispenser Location & Mount the Dispenser (1170GB/1180GB/1190GB)

For Model 1170GB, choose a location away from walkways. Accidental contact with the dispenser may knock it over if the chemical container is almost empty. For 1180GB/1190GB see steps below;

a. Choose a location near the pipe, drain or grease trap into which it will be dosing. In kitchens, the unit may be mounted beneath the dish machine work tables or on the wall.

b. Use the mounting bracket to mark the appropriate locations for the mounting hardware.

c. Hole centres are 76mm (3’’) apart

d. Drill the holes accordingly and insert the anchors (if necessary) and screws provided.

e. Affix the mounting bracket to the wall.

f. Mount the dispenser onto the mounting bracket.

g. Secure the dispenser with the remaining screw provided.

STEP 3 : Install the Power Cord (1190GB). If you are installing an 1170GB or 1180GB proceed to STEP 4

For 1190GB either Alkaline batteries or the 12v DC Mains Transformer supplied may be used.

a. Locate the jack on the side of the unit.
b. Install the adapter plug into the jack.
c. Plug the adapter into the wall receptacle.

⚠ CAUTION

Wires left hanging loose may be a tripping hazard, or may accidentally cause the adapter to become unplugged.

STEP 4 : Install the Inlet and Discharge Tubing (1170GB/1180GB/1190GB)

a. Using the tubing supplied, cut a section long enough to reach from the pump inlet (left side port) to the bottom of the chemical container to be used. Slide the ceramic weight onto the end and insert the strainer into the end of the tube.

b. Route the tube properly and insert into the inlet compression fitting.

c. Hand tighten the nut to secure.

d. Connect remaining tubing to the exit side port and tighten.

e. Route and secure the tubing with cable ties provided so that the product is dispensed directly into the intended drain to be treated.

f. If connecting to an existing facility drain piping, drill and tap the drain pipe or trap cover for the 1/8” NPT injection fitting supplied. Ensure hole is drilled above liquid level

NOTE: Be sure the tubing will be out of the way of walkways and will not impede motion required in the area. Creating a low place in the run of tubing near the fitting will minimize drainage from the tubing.

STEP 5 : Prepare/Prime the Dispenser for Use

a. Open the chemical container.

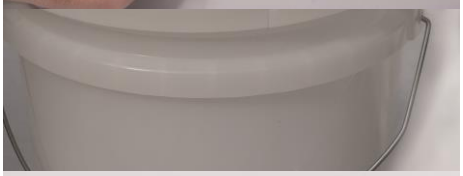
b. Drop the strainer end of the inlet tube into the container.

c. Place the dispenser on the container (for Model 1170GB).

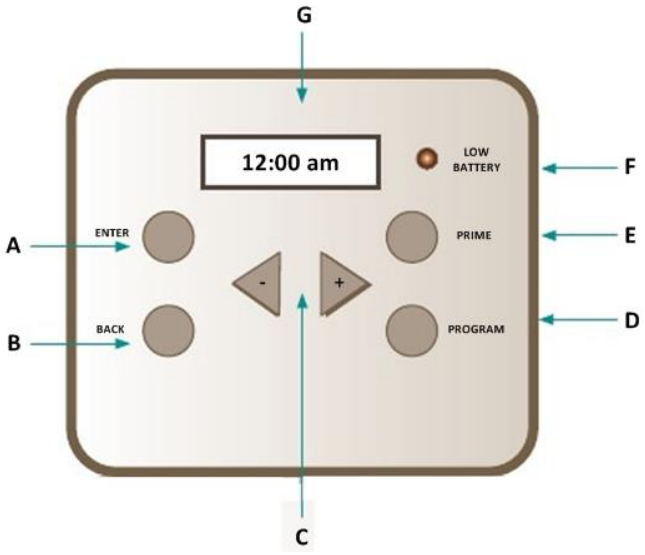
d. Before proceeding, ensure rocker switch on side is set to ‘I’

e. Prime the pump: Press ENTER to wake the display and push and hold the Prime button until product is evident at exit to drain.

f. Review the program and adjust if necessary.



5. - User Interface Definition



A. Use ENTER to view or change the data for that option. ENTER is also used to save data.
B. Use BACK to view previous menu.
C. Use FORWARD/BACKWARD to increase or decrease options in each menu setting.
D. The user can view and program the settings on the device.
E. Use the PRIME button to prime the pump.
F. The LOW BATTERY indicator will illuminate when battery life is low.
G. LCD Display

NOTE: To conserve power, the display will not be visible during normal operation.

5.1 – 5.7 – Programming Unit

a) Press ENTER.
b) Press PROGRAM.
c) Press ENTER to step through settings.

STEP	ACTION	BUTTON(S)	SCREEN SHOWS	SCREEN ACTIONS *OPTIONS*
STEP 1	PRESS ENTER TO WAKE UNIT	ENTER		
STEP 2			12.34PM	**SHOWS CURRENT TIME**
STEP 3	HOLD PROGRAM FOR 2 SECONDS	PROGRAM		
STEP 4			PROGRAM?	
STEP 5	PRESS ENTER TO PROGRAM UNIT	ENTER		
STEP 6	SCREEN WILL SHOW PIN SCREEN		0000	
STEP 7	INSERT DEFAULT PIN '**1000**'			
STEP 8			**0**000	**FIRST NUMBER FLASHING**
STEP 9	CHOOSE PIN NUMBER 1	+ / -		*1/2/3/4/5/6/7/8/9//0*
STEP 10			**1**000	**FIRST NUMBER FLASHING**
STEP 11	SET PIN NUMBER 1	ENTER		

STEP 12			✱000	**PIN NUMBER WILL TURN TO STAR WHEN SET**
STEP 13	PRESS ENTER 3 MORE TIMES	ENTER X3		
STEP 14			✱✱✱✱	
STEP 15	CONFIRM PIN	ENTER		
STEP 16			VALID	
STEP 17	PRESS ENTER TO SET CLOCK TIME	ENTER		
STEP 18			**2**.34PM	**HOURS FLASHING**
STEP 19	CHOOSE CURRENT HOUR	+ / -		*0-12AM 0-12PM*
STEP 20			**3**.34PM	**HOURS FLASHING**
STEP 21	PRESS ENTER TO SET	ENTER		
STEP 22			3.**34**PM	**MINUTES FLASHING**
STEP 23	CHOOSE CURRENT MINUTE	+ / -		*0-59*
STEP 24			3.**35**PM	**MINUTES FLASHING**
STEP 25	PRESS ENTER TO SET	ENTER		
STEP 26			**THU**	**DAY FLASHING**
STEP 27	CHOOSE CURRENT DAY	+ / -		*MON/TUE/WED/THU/FRI/SAT/SUN*
STEP 28			**FRI**	**DAY FLASHING**
STEP 29	PRESS ENTER TO SET	ENTER		
STEP 30			UNITS / DISPENSE	**ALTERNATES WORDS ON SCREEN**
STEP 31	PRESS ENTER TO SET UNITS DISPLAYED	ENTER		
STEP 32			OUNCES	**UNITS FLASHING**
STEP 33	CHOOSE UNITS	+ / -		*OUNCES/ML*
STEP 34			mL	**UNITS FLASHING**
STEP 35	PRESS ENTER TO SET DISPENSE AMOUNT	ENTER		
STEP 36			DISPENSE / AMOUNT	**ALTERNATES WORDS ON SCREEN**
STEP 37	PRESS ENTER TO SET	ENTER		
STEP 38			30mL	**NUMBER FLASHING**
STEP 39	CHOOSE DISPENSE AMOUNT	+ / -		*30-900ml, 30ml increments*
STEP 40			DISPENSE / DAYS	**ALTERNATES WORDS ON SCREEN**
STEP 41	PRESS ENTER TO SET DISPENSE DAYS	ENTER		
STEP 42			DAILY	**DISPENSE DAYS FLASHING**

STEP 43	CHOOSE DISPENSE DAYS	+ / -		*DAILY / WEEKDAYS / WEEKENDS / SPECIAL*
STEP 44			WEEKDAYS	**DISPENSE DAYS FLASHING**
STEP 45	PRESS ENTER TO SET	ENTER		
STEP 46	**IF DAILY / WEEKDAYS / WEEKENDS PROCEED TO STEP 39, IF SPECIAL SEE NEXT STEP**			
STEP 47			SUN Y?	
STEP 48	CHOOSE IF YOU WANT SUNDAY	+ / -	SUN Y? / SUN N?	**SELECT Y? IF YOU WANT UNIT TO DISPENSE ON THIS DAY**
STEP 49	PRESS ENTER TO SET	ENTER		
STEP 50	**REPEAT FOR DAYS OF WEEK YOU WANT UNIT TO DISPENSE ON, WHEN YOU HAVE MADE YOUR CHOICE FOR SAT, CONTINUE BELOW**			
STEP 51			DONE	
STEP 52	PRESS ENTER TO SET	ENTER		
STEP 53			DISPENSE / TIMES	**ALTERNATES WORDS ON SCREEN**
STEP 54	PRESS ENTER TO SET DISPENSE TIMES	ENTER		
STEP 55			EVENT 1	
STEP 56	PRESS ENTER TO SET EVENT 1	ENTER		
STEP 57			**2**.34PM	**HOURS FLASHING**
STEP 58	CHOOSE DISPENSE HOUR	+ / -		*0-12AM 0-12PM*
STEP 59			**3**.34PM	**HOURS FLASHING**
STEP 60	PRESS ENTER TO SET	ENTER		
STEP 61			3.**34**PM	**MINUTES FLASHING**
STEP 62	CHOOSE DISPENSE MINUTE	+ / -		*0-59*
STEP 63			3.**35**PM	**MINUTES FLASHING**
STEP 64	PRESS ENTER TO SET	ENTER		
STEP 65			STORED	
STEP 66	PRESS ENTER TO SET NEXT EVENT	ENTER		
STEP 67			EVENT 2	
STEP 68	**TO PROGRAM EVENT 2 REPEAT FROM STEP 44**			
STEP 69	**WHEN YOU HAVE ENTERED 24 EVENTS, OR WHEN YOU PRESS 'PROGRAM' AFTER YOU HAVE SET AS MANY EVENTS AS YOU WANT, IT WILL SHOW THE FOLLOWING SCREEN**			
STEP 70			DONE Y?	
STEP 71	CONFIRM DONE	ENTER		
STEP 72			USER PIN	
STEP 73	CHOOSE TO SET NEW PIN OR NOT	ENTER		
STEP 74			NewPin N	

STEP 75	CHOOSE TO SET NEW PIN OR NOT	+ / -		**NewPin N / NewPin Y**
STEP 76	**IF YOU SELECT 'NewPin N?' AND PRESS 'ENTER' IT WILL RETURN TO THE READY SCREEN, IF YOU HAVE SELECTED 'NewPin Y?' AND PRESS 'ENTER', PROCEED BLOW**			
STEP 77			EnterPin	
STEP 78	SET PIN	ENTER		
STEP 79			**0**000	**FIRST NUMBER FLASHING**
STEP 80	CHOOSE PIN NUMBER 1	+ / -		*1/2/3/4/5/6/7/8/9//0*
STEP 81			**1**000	**FIRST NUMBER FLASHING**
STEP 82	SET PIN NUMBER 1	ENTER		
STEP 83			✱000	**PIN NUMBER WILL TURN TO STAR WHEN SET**
STEP 84	**REPEAT STEP UNTIL YOU HAVE CHOSEN ALL NUMBERS FOR THE PIN**			
STEP 85			✱✱✱✱	
STEP 86	CONFIRM PIN	ENTER		
STEP 87	**UNIT WILL RETURN TO READY SCREEN**			
STEP 88	**UNIT WILL PROMPT FOR PIN NEXT TIME YOU ENTER THE PROGRAM MENU**			

- *NOTE: Controller will "go to sleep" after 30 seconds and display will be blank until awakened by pressing ENTER.*
- *NOTE: Keep User PIN in safe place.*

6. - Maintenance:

Before any maintenance, isolate the unit using the on/off switch on the side of the unit, then either unplug the mains adaptor from the unit and wall, or remove all batteries

6.1 - Changing the Pump Tubing

NOTE: You may want to work over a mat to protect floors or other areas from the possibility of spilled treatments.

6.2 - Remove the Old Tubing

a. Loosen and remove tubing from compression fittings.
b. Loosen screw on pump cover and remove.
c. Lay aside the supply and discharge tubing.
d. Remove the old squeeze tube assembly from pump housing and discard it.

NOTE: If drain treatment leaks on pump housing, it can be washed in soapy water. If the rotor assembly has been wetted, wipe it with a dry cloth. It is not necessary to wipe the grease from the pump housing if the grease is clean.

6.3 - Inspect the Pump

a. While the pump is disassembled, inspect all parts for foreign matter.
b. Clean the parts as necessary.
c. Check the rollers to ensure they turn freely.
d. Inspect the rotor.

⚠ CAUTION - If the rotor needs service, replace the entire rotor.

6.4 - Install the New Tubing

a. Replace the rotor and put a small amount of tube lubricant on each end of the rotor assembly shaft (bearings).
b. Position the pump inlet port as shown.
c. Bend the new tube in half and insert without twisting the tube and place the outlet port fitting in as shown.
d. Replace the rotor over the motor (blade) shaft and use a screwdriver to twist the rotor as it is inserted.
e. Replace cover and tighten screw.
f. Reattach the inlet and exit port tubing.
g. Prime the product to ensure the fittings are tight and unit is ready for operation.

NOTE: A small amount of tube lubricant in will aid this process.

⚠ CAUTION - Be sure the tube is not twisted during installation. Twisting the tube will greatly reduce tube life.

7. - Specifications

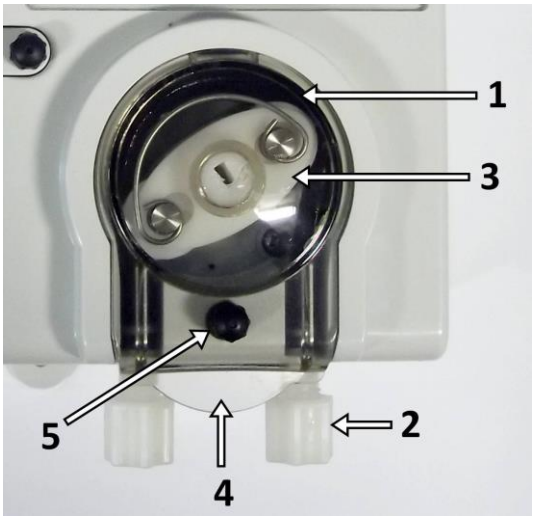
PUMP	
Flow Rate	100ml / min
Tube Material	EPDM (Other options available by contacting Hydro Systems Europe)
Inlet Vacuum	508mm Hg (20 in. Hg)
Outlet Pressure	138kPa (20 PSI)
SYSTEM CABINET	
Cabinet Material	PP and ABS
Size (1170GB)	200mm H X Ø356mm (does not include container 1170GB model system sits on)
Size (1180GB/1190GB)	205mm W x 120mm D x 200mm H
Program Duration	Daily / Weekend / Week Days/Special
Maximum number of events	24
Dispense amount per event	15 – 900 ml (dispensed in 15 ml increments)

NOTE: The batteries should be scheduled for periodic replacement. Using a total of 40 running (pumping) hours, create a schedule for servicing the unit and changing the batteries. Maintaining the power source as such will help to provide the proper dosing by providing a more consistent pumping rate.

8. - Troubleshooting

Issue	If the motor is turning	If the motor won't turn
Unit is not pumping fluid: Wake and push PRIME button.	Check level of drain treatment supply.	Ensure programmer is functioning: Try to run pump manually (see "Prime" Function, page 4 Step 4).
	Check for air leaks in the supply tubing connection to pump tube.	Check program: ensure times for dispense are correct.
	Check for clogs in inlet and outlet tubes.	Check battery orientation.
	Ensure pump tube is not twisted.	Check battery condition; install new batteries. Is "Low Battery" light illuminated?
	Check pump tube (as it wears out, the amount of fluid pumped decreases); change if necessary.	Replace tube binding rotor.
	Are springs broken on rotor?	
Unit is pumping improperly:	Check the programmed dispense amount and adjust as necessary.	
	Ensure programmer is turning on and off at set times. Check for improper tube installation. Replace tubing with proper size.	

9. - Replacement Parts



Item	Part Number	Part Description
1	15-06959-04	Pump Tube Assembly (EPDM)
2	41-05567-00	Compression Nuts
3	03-06281-02	Rotor Assembly
4	90090430	Pump Cover
5	27-08008-00	Thumb Screw
Not Shown	509100	Injection Fitting
	609600	Strainer
	509900	Weight
	10097016	UK/EU/Aus AC Adapter
	10012301	Tubing 6M/20' Roll
	13-06647-00	Mounting Bracket Kit
Also available	10095411	Viton Pump Tube Assembly
	10095410	Santoprene Pump Tube Assembly
	03-07708-04	Silicone Pump Tube Assembly

10. - Safety

- Please use this equipment carefully and observe all warnings and cautions.
- Wear PPE when dispensing chemicals or other materials or when working in the vicinity of all chemicals, filling or emptying equipment.

- Always observe safety and handling instructions of the chemical manufacturers.
- Always direct discharge away from you or other persons or into approved containers.
- Always dispense cleaners and chemicals in accordance with manufacturer's instructions.
- Always exercise caution when maintaining your equipment.
- Always re-assemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.
- Keep equipment clean to maintain proper operation.
- You must follow all precautions as advised on the product safety data sheet
- Before any maintenance, isolate the unit using the on/off switch on the side of the unit, then either unplug the mains adaptor from the unit and wall, or remove all batteries

11. - WEEE - Waste Electrical and Electronic Equipment

WEEE Regulations apply to companies who Manufacture & Distribute electrical or electronic equipment

WEEE Classification – 10. Automatic dispensers.

The WEEE Regulations apply to importers, producers, retailers and users of EEE, and to businesses that treat or recover WEEE.
The AutoDose unit is a product placed onto market POST 13.08.05 , therefore called 'future WEEE'.
As a producer Hydro Systems Europe have the option to take responsibility for the EEE placed on the market. If Hydro Systems Europe chooses to receive WEEE they must make sure that it is disposed of in an environmentally sound way, including the treatment, reuse, recovery and recycling of the components where appropriate.

Responsibility as a producer of EEE

Hydro Systems Europe as a producer of EEE are registered with a producer compliance scheme who register them with the relevant environmental regulator. Through the regulator they become part of an approved producer compliance scheme (PCS).The PCS supply a unique and permanent producer registration number.

If disposal is outsourced it (the product) must be taken to an appropriately licensed site (approved authorised treatment facility - AATF) where it can be treated safely.

The environmental impacts of the substances in EEE and waste electrical and electronic equipment (WEEE)

The main environmental concerns in the EEE sector stem from soil and water contamination, resource depletion, energy use and waste.
At the production stage, obtaining raw material for EEE production consumes a large amount of energy, especially the process of extracting resources, which can also lead to degradation of the surrounding environment. For instance, when raw material is shipped to a plant, it goes through a complex, high energy-consuming process as it is converted into a finished product. Moreover, as demand for fuel and raw materials increases with the increase in exports, the environmental impact of these factors is also likely to increase.

The reasons for separating WEEE from other waste

Failing to separate waste properly can be very expensive as the majority of discarded products are shredded into small pieces of material and re-sold as raw material – much of which ends up in the Far East and goes back into manufacturing. If the hazardous components were not separated first the entire batch could be contaminated. This significantly increases the risk of environmental damage and could lead to legal action under hazardous waste regulations.

The meaning of the crossed out wheeled bin symbol

The crossed out wheeled bin symbol is not intended to indicate to you that WEEE is banned from being disposed of as general waste.
Moreover, the intention behind the symbol is that, when coupled with information supplied by distributors as to the availability of recycling facilities, you will be reminded that these facilities exist.

How they can safely dispose of WEEE for proper treatment

When the product is at its end of life, either contact the Local Authority in charge of electrical disposal, or contact Hydro Systems Europe who will either take the item back from yourself or supply you with relevant information for a local WEEE treatment facility.
If asked, Hydro Systems Europe must provide yourself business with:

• Contact information for the EEE producer within Hydro Systems Europe. The producer's compliance scheme is responsible for the end-of-life handling of EEE.
• Records that will help producers to supply their producer compliance scheme with accurate information, for example numbers of sales of EEE to non-household users.

As a distributor Hydro Systems Europe have no legal obligation to take back WEEE from business users

12. - BERR - The Batteries and Accumulators Regulations 2008

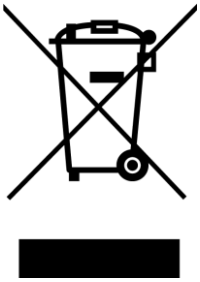


Fig.1

Contents

Detail

1. Battery Definition
   - The battery(s) contained in the accessory kit are classed as 'Portable Batteries'
2. Material Prohibitions
   - The battery(s) contained in the accessory kit are Alkaline; this does not fall under the material prohibition regulations contained within the BERR guidelines.
3. Labelling to aid recycling
   - The battery(s) contained in the accessory kit are pre-labelled with the BERR 'Crossed out Wheelie Bin' Logo (See Fig. 1), indicating that disposal of the batteries must be in line with EU regulations, through returning the battery to either
   - Local authority battery collection scheme
   - Retailer of electrical batteries exceeding sales weigh of 48kg of battery
4. Removal of Batteries at end of life
   - The appliance is designed in such a way that a waste battery can be readily removed from it, by a trained service engineer.
   - The instruction manual defines instructions showing how the battery can be removed safely, this must only be done by a trained service engineer
5. Capacity Labelling / Materials Declarations / Materials Analysis / Due Diligence
   - The capacity of the battery(s) is indicated in a visible, legible and indelible form
   - The advised battery(s) are Alkaline

12.1 - Replacing the Batteries

a) Turn off the unit via the isolation switch
b) Remove unit from wall / chemical container
c) Remove the battery cover to gain access to the battery housing
d) Remove the batteries to be replaced
e) Replace the batteries with 8 x Alkaline D Cell Batteries
f) Slide the battery back into position.
g) Replace the battery cover.
h) Re-set the time on clock (local time) and any programs that may have been lost

13. - EC Declaration of Conformity

This unit complies with the following directives;

- Electromagnetic Compatibility (EMC) Directive (2004/108/EC)
- Machinery Directive - (2006/42/EC)

And has been designed and manufactured to the following specifications

EN ISO 12100, EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3

CE

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