



**SPECIFICATIONS**

E Dose NEO is an electronic metering pump with a digital display using a solenoid, controlled by an internal circuit to drive a reciprocating diaphragm

- Electrical : 230 Volts AC (±20%) 50HZ.
- Suction Tubing : 4/6 mm.
- Discharge Tubing : 4/6 mm.
- Dosing rate : 1.5/3/6/10 at 4 Kg/cm<sup>2</sup>.
- Max Strokes / Minute : 400

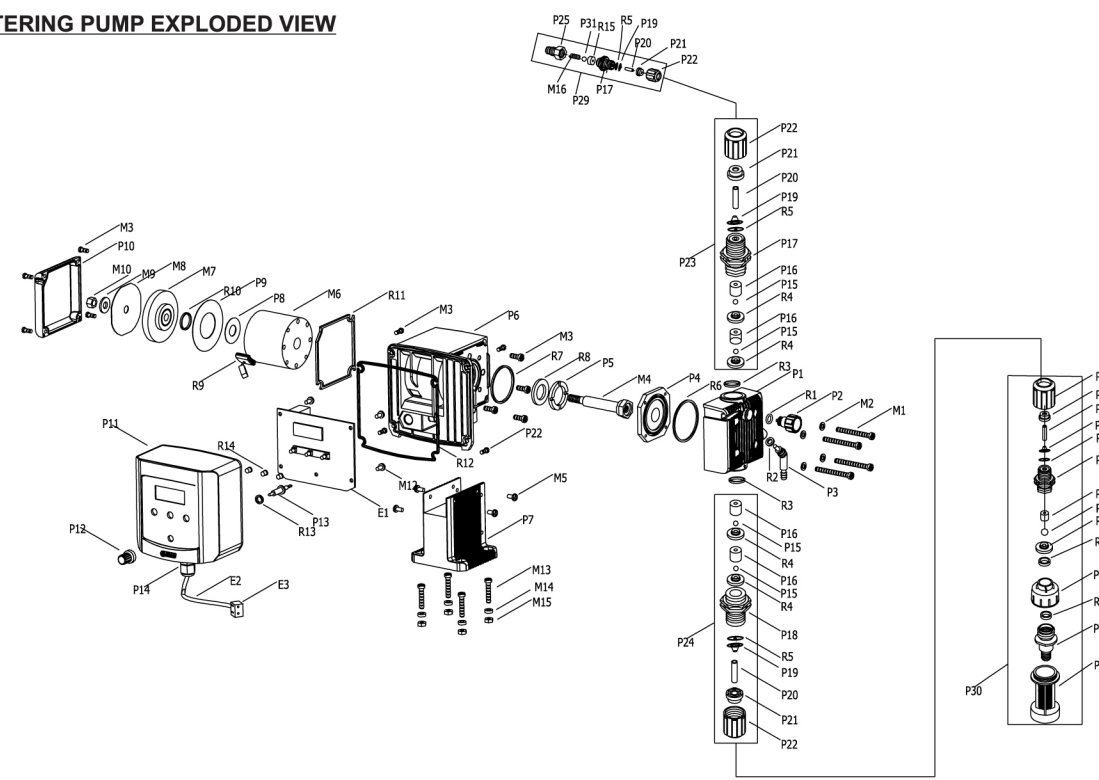
**ALSO AVAILABLE**

Options of Level Switch Interlock, Relay output, 4-20mA input, pulse input.

**SCOPE OF SUPPLY**

- Metering pump.
- 3 meter suction & discharge tubing.
- Suction filter cum foot valve.
- Injection / Back pressure assembly.
- O & M manual.

**E-DOSE NEO METERING PUMP EXPLODED VIEW**

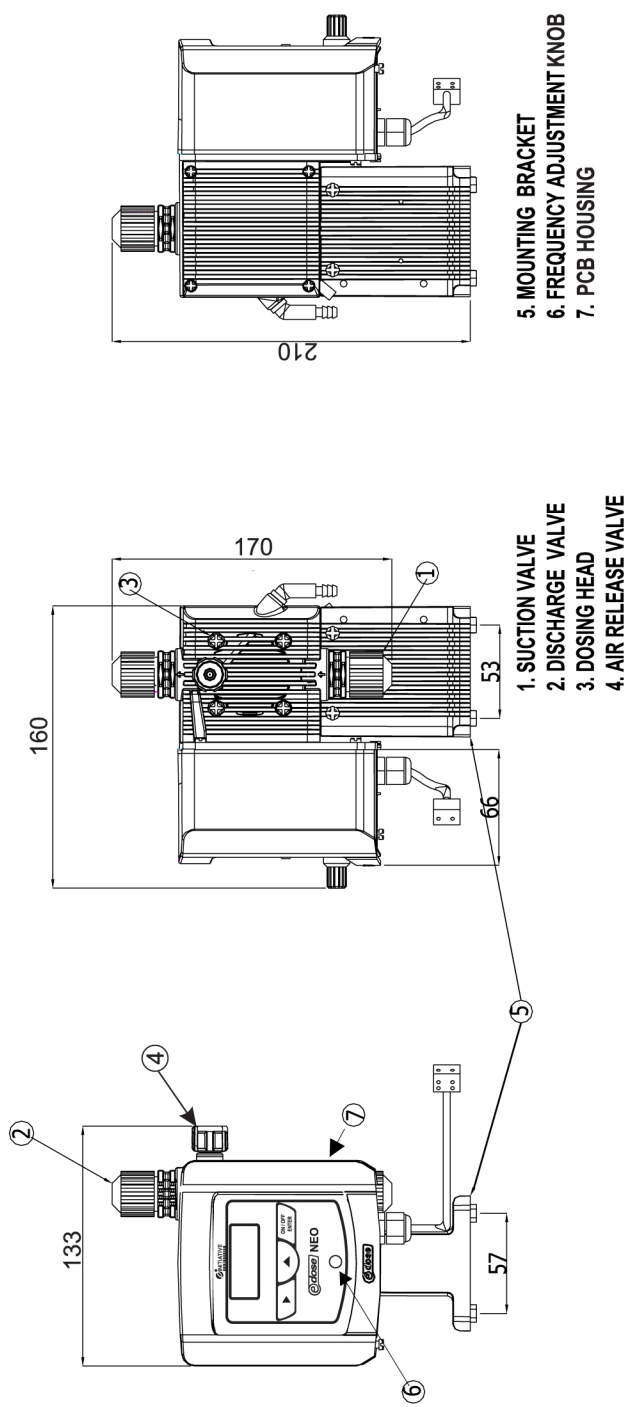


**PART LIST**

S.NO.	PART NO.	DESCRIPTION
1	P1	DOSING HEAD.
2	P2	AIR RELEASE VALVE.
3	P3	DIAPHRAGM.
4	P4	DIAPHRAGM SPACER.
5	P5	SOLENOID HOUSING.
6	P6	SOLENOID HOUSING COVER.
7	P7	PCB HOUSING.
8	P8	PCB HOUSING COVER.
9	P9	PCB HOUSING WASHER.
10	P10	PCB HOUSING WASHER.
11	P11	PCB HOUSING WASHER.
12	P12	PCB HOUSING WASHER.
13	P13	PCB HOUSING WASHER.
14	P14	PCB HOUSING WASHER.
15	P15	PCB HOUSING WASHER.
16	P16	PCB HOUSING WASHER.
17	P17	PCB HOUSING WASHER.
18	P18	PCB HOUSING WASHER.
19	P19	PCB HOUSING WASHER.
20	P20	PCB HOUSING WASHER.
21	P21	PCB HOUSING WASHER.
22	P22	PCB HOUSING WASHER.
23	P23	PCB HOUSING WASHER.
24	P24	PCB HOUSING WASHER.
25	P25	PCB HOUSING WASHER.
26	P26	PCB HOUSING WASHER.
27	P27	PCB HOUSING WASHER.
28	P28	PCB HOUSING WASHER.
29	P29	PCB HOUSING WASHER.
30	P30	PCB HOUSING WASHER.
31	P31	PCB HOUSING WASHER.
32	R1	PCB HOUSING WASHER.
33	R2	PCB HOUSING WASHER.

(ALL DETAILS SHOWN IN THE MANUAL ARE SUBJECT TO CHANGE WITH/WITHOUT NOTICE)

S. NO.	PART NO.	DESCRIPTION
34	R3	DOSING HEAD "O"RING.
35	R4	BALL SEAL.
36	R5	NRV BODY "O" RING.
37	R6	DIAPHRAGM "O" RING (Ø 42X2.2)
38	R7	SOLENOID HOUSING ORING (Ø 40 X 2).
39	R8	PLUNGER WASHER.
40	R9	SOLENOID HOUSING GROMMET SQ.
41	R10	SOLENOID SPACER "O" RING (Ø15.6X1.78).
42	R11	SOLENOID HOUSING COVER WASHER.
43	R12	PCB HOUSING WASHER.
44	R13	PCB HOUSING WASHER.
45	R14	PCB HOUSING WASHER.
46	R15	PCB HOUSING WASHER.
47	R16	PCB HOUSING WASHER.
48	R17	PCB HOUSING WASHER.
49	E1	POWER CORD.
50	E2	2-WAY CONNECTOR.
51	E3	DOSING HEAD FITTING BOLT (M4 X 40 S.S.316).
52	M1	DOSING HEAD FITTING WASHER (M4 S.S. 316).
53	M2	SOLENOID FITTING BOLT (M3X8, S.S.).
54	M3	PLUNGER (BRASS).
55	M4	MOUNTING BRACKET BOLT (M3X8).
56	M5	SOLENOID ASS'LY.
57	M6	SOLENOID SPACER.
58	M7	SS SPRING.
59	M8	SPRINGS FITTING WASHER.
60	M9	SPRING FITTING NUT (M8).
61	M10	PCB FITTING BOLT (M3X6).
62	M11	M6X20 BOLT.
63	M12	M6 WASHER.
64	M13	M6 NUT.
65	M14	M6 NUT.
66	M15	INJECTION VALVE SS SPRING.



# FILTRA CONSULTANTS AND ENGINEERS LTD.

Gala No. 2 & 3, Ground Floor, Neminath Industrial Estate No. 2, Navghar, Vasai (East), Dist.: Palghar - 401 219  
 Tel.: +91 8691009127/26 Email: [filtraw@gmail.com](mailto:filtraw@gmail.com) Website: [www.ewatertreatmentindia.com](http://www.ewatertreatmentindia.com)



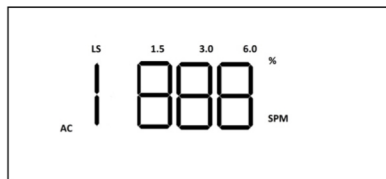
**MATERIAL OF CONSTRUCTION**

- Pump Head : Glass filled PP
- Diaphragm : Teflon
- Connectors : Glass filled PP
- Suction tubing : HDPE
- Discharge tubing : HDPE

**INSTALLATION**

- Install the pump in a dry environment and mount it on a tank/surface using the mounting brackets and nut-bolts provided.
- Place the pump above the liquid to be dosed within a maximum limit of 1.5 meter suction lift.
- The discharge point (marked with arrow) should always be facing upward.
- The suction nipple will be on the lower side with the suction tubing being immersed completely in solution.
- Cut the suction tubing to the desired length and attach suction filter to it.
- Ensure that suction filter is placed vertical and always immersed completely in solution.
- Use the remaining tubing on the discharge side and connect the back pressure/injection valve to the injection pipe into which dosing is to be done.
- Connect nozzle on pump to the injection valves.
- Plug the pump into a 230 Volts AC electrical outlet.

**OPERATING INSTRUCTIONS**



The numbers displayed for 1.5; 03; 06; 10 indicates th capacity of pump in LPH at 4Kg/cm<sup>2</sup>.

When "SPM" is displayed, numbers on display indicate actual strokes per minute.

When "LS" is displayed- it means that the pump has a level switch interlock.

When "AC" is displayed- it indicates the input voltage.

When "%" is displayed, the numbers displayed indicate the percentage setting.

1. The ON/OFF key is used to switch the pump OFF and ON.
2. When pump is in operation, by pressing the **▶** key, you can scroll to display either the percentage dosing, number of strokes per minute or the input A.C. voltage

**STARTING THE PUMP**

**SWITCH ON THE MAINS POWER SUPPLY TO THE PUMP.**

Press the ON/OFF key to start the pump. Turn the frequency knob fully clockwise so that the display shows 100 (This is the maximum frequency setting of the pump). Make sure all the air is primed out of the system by opening the bleed valve until liquid flows out in a continuous stream. Close bleed valve. Pump is now in operation. Adjust the knob to the desired percentage frequency to achieve required dosing flow.

[Note- By pressing the **▶** button once, the strokes per minute (spm) value is displayed. Pressing a second time displays the input voltage. Press **▶** once again to show the percentage dosing].

**LOCKING THE FREQUENCY KNOB**

Normally the frequency knob can be rotated to increase or decrease the frequency of the dosing. In case you desire to lock the setting to prevent unnecessary tampering, use the following procedure.

Press the ON/OFF button to stop the pump.

Then press the **▶** and **▲** buttons simultaneously (display shows PPS and then cursor blinks)

Then using the **▲** key to scroll left to right and the **▶** key to increase the value- set the pass-word to 191 and then press the ON/OFF button. The display shows 191 first and then OFF.

Using the **▶** key change display to ON. Press Enter. Then press ON/OFF to start the pump.

The frequency knob is now locked. If you rotate the knob the frequency does not change and the display shows lock.

To unlock/change frequency, follow the same procedure as above and select the lock-OFF option.

PUMP ON- To switch ON Pump- Press "ON/OFF Enter" Key. (Display shows "100%")

PUMP OFF- To switch OFF Pump- Press "ON/OFF Enter" key. (Display shows "OFF" until Power supply switched OFF.)

**ADVANCED FUNCTIONS SETTING :**

If you have already specified the type of advanced function required, viz. batch or interval dosing, the pump will come with the relevant option already chosen. In this case use the following method for setting [Please note- In case you haven't specified the advanced function required, this option can be selected by using the instruction in "CHOOSING ADVANCED FUNCTIONS" in case not specified to dealer earlier in the next paragraph]

**PROGRAMMING FOR BATCH DOSING**

This feature can be used to dose a fixed quantity of liquid by setting the number of stroke for which the pump should operate. The number of strokes can be set to a maximum of 999 multiplied by 999 (multiplying factor).

- a. Display shows **bart** and the **bou**
- b. Press ENTER. Display shows **off**
- c. Press **▶** and **▲** together. Display shows **PPS** and then **000** left most Zero blinks.
- d. By pressing key **▶** you can choose the next level. Display shows **blinking** of the level chosen.
- e. By pressing **▲** numbers will change from 0 to 9.
- f. Press **▲** to change number and press **▶** to choose level.

- g. Obtain "678" on the screen and then press "ON/OFF ENTER" key.
- h. Display will show Auto / Manual.
- i. Select Auto.
- j. Display shows "bart" which is batch mode and then **000** with left **0** blinking.)
- k. For selecting up to 999 we can select by pressing the **▶** and **▲**, for to greater than 999 then we have to choose multiplication factor.
- l. For factor press ENTER, display shows **FAc**
- m. Selecting 001 will give us the first selection "999" multiplied by "001"; selecting appropriate number like 002 will give "999X002"; the required number of strokes can thus be achieved by choosing the strokes and the multiplication factor, maximum number of strokes of "999X999" can be achieved.
- n. Press Enter display shows **bart** and then **bou**
- o. Press ENTER again, display shows **off**; this means the batch is set.
- p. Once we start the pump again, the **▲** key has to be pressed to start the pump.
- q. For pump OFF; "ON/OFF ENTER" key has to be pressed to switch OFF the pump.
- r. Even when supply is switched OFF, the program is retained for next operation.

**PROGRAMMING FOR INTERVAL DOSING**

This function can be used to operate the pump in fixed intervals i.e. the pump can be programmed to remain ON for a certain period of time and OFF for a certain time after which the cycle will repeat.

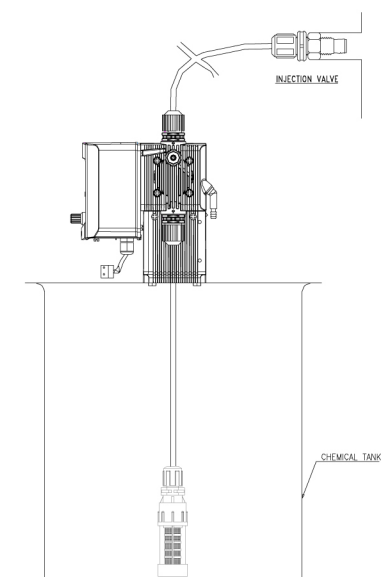
- a. Display shows **int** and then **off**
- b. Press **▶** and **▲** together. Display shows **PPS** and then **000** left most Zero blinks.
- c. Enter 678 and press ENTER.
- d. Display will show Auto/Manual.
- e. Select Auto press enter.
- f. Display shows **int** and then **000** left most Zero blinks, this means ON time is 1 min and we can set maximum of 999 minutes by using **▶** and **▲** keys press enter.
- g. Display shows **off** and then **000** left most Zero blinks, this means OFF time is 1 min and we can set maximum of 999 minutes by using **▶** and **▲** key
- h. Press Enter.
- i. Press ON/OFF Enter again to start the pump.
- j. The pump will be ON for selected minutes and then OFF for selected minutes.
- k. Display will show **int** and the selected times alternately during pump functioning.
- l. Display will show **off** and then selected time alternately during pump OFF.
- m. By pressing the ON/OFF ENTER, we can stop the pump.

**CHOOSING ADVANCED FUNCTIONS IN CASE NOT SPECIFIED TO DEALER EARLIER**

1. Press **▶** and **▲** together. Display shows **PPS** and then **000** left most Zero blinks.
2. By pressing key **▶** you can choose the next level. display shows **blinking** of **0** the level chosen.
3. By pressing **▲** numbers will changes from 9 to 9.
4. Press **▲** to changes number and press **▶** to choose level.
5. Obtain "567" on the screen and then press "ON/OFF ENTER" key.
6. Firstly display shown **int**. Showing Manual mode. Press Enter to select this mode.
7. Press **▲**
8. Secondly display shows **bart** Showing Batch mode.
9. Press **▶** Enter to select this mode.
10. Thirdly display show **int**. Showing Interval mode. Press Enter to select this mode.

**PRECAUTIONS**

- A) **Electrical**
  - Ensure voltage is within range specified for the pump ie. 180- 280 Volts.
  - Electrical connection should be made between "Live-Neutral" & Not Live-Ground".
  - Avoid giving supply to dose from the same line as heavy electrical equipment.
- B) **General**
  - Install pump in any shaded place AWAY from direct sunlight.
  - Pump is resistant to dust and water but cannot be used in a sub-merged condition.
  - Clamp the mounting bracket adequately so that vibrations do not loosen the mounting.
  - Before performing any maintenance on the pump, release internal pressure by operating bleed valve and disconnect power supply.



# FILTRA CONSULTANTS AND ENGINEERS LTD.

Gala No. 2 & 3, Ground Floor, Neminath Industrial Estate No. 2, Navghar, Vasai (East), Dist.: Palghar - 401 219  
 Tel.: +91 8691009127/26 Email: [filtraw@gmail.com](mailto:filtraw@gmail.com) Website: [www.ewatertreatmentindia.com](http://www.ewatertreatmentindia.com)

