

## Operating and Installation Instructions for Dosing Pump



### Automatic.Arom Start, 230V AC

Dosing pump Automatic.Arom Start A, 230V AC  
Dosing pump Automatic.Arom Start P, 230V AC

Item No.: D01-2001  
Item No.: D01-2002

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# 1. Scope of delivery (box contents)



1 x Dosing pump Automatic.Arom Start



1 x Injection nozzle G1/2" K-P (Injection valve)



1 x Suction hose with fine filter



1 x Syringe with syringe hose



1 x Pressure hose



1 x Self-venting cover for canister or bottle

## 2. Assembly and Installation

### 2.1 On-site Requirements

- Technical room for the installation of the dosing pump
- Technical room dry and ventilated
- Temperature technical room max. 25°C
- Power supply 230 V AC for fixed wiring
- Distance of the dosing pump to the injection point less than 30 m
- Difference of height between the dosing pump and the injection point max. 4 m
- Place storage tank (canister) under the dosing pump
- Height difference between the dosing pump and the storage tank max. 1 m
- Dosing pump not below or above a heat source (e.g. steam generator, heating)
- Distance of the dosing pump to a heat source at least 1 m
- If a distance of max. 1 m cannot be maintained, a radiating plate or heat protection plate must be installed between the heat source and the dosing pump
- Injection point for the fragrance, T-piece with G1/2" thread

## 2.2 Mounting the Rack and Dosing Pump



Figure 1: Rack K10B

### Wall mounting of the rack

1. Fix the rack to the wall using the supplied drywall screws (Figure 1).
2. Place the aroma dosing pump on the rack, see figure 2.



*Attention:*

Please observe the chapter "On-site Requirements".



*Note*

It is recommended to screw the aroma dosing pump to the rack, to prevent it from falling down.



Figure 2: Rack K10B with dosing pump

### Mount the dosing pump onto the rack

1. Push one of the four fastening screws from below through the rack base into the hole in the base of the dosing pump.
2. Use a screwdriver to screw the fastening screw into the base of the dosing pump.
3. Repeat steps 1 to 2 until you have fixed the dosing pump with all four fastening screws.
4. The dosing pump is now fixed to the rack and cannot fall down.

## 2.3 Installing the Suction Hose

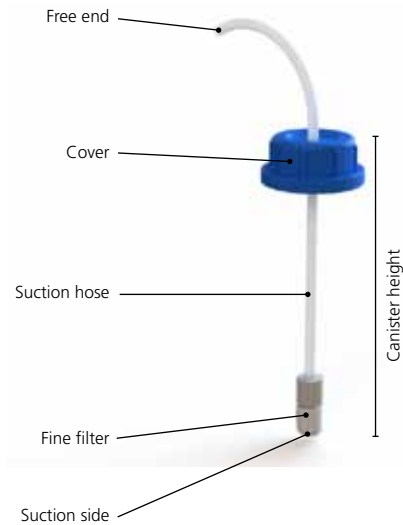


Figure 3: Suction hose with fine filter and canister cover

### Installation suction hose in the canister

1. Take the cover and the suction hose with the fine filter out of the tube package.
2. Push the suction hose with the free end from below through the hole in the cover (Figure 3).
3. The distance between the fine filter and the cover corresponds to the canister height (figure 3).
4. Unscrew the cover from the canister (e.g. fragrance canister).
5. Push the suction hose with the fine filter through the opening of the canister.
6. The fine filter at the end of the suction hose must be located, suction side down, in one of the 4 corners of the canister. Suction side of the fine filter must not point upwards in the canister.
7. Close the canister using the cover.
8. Place the canister on the lower level of the rack (Figure 4).



Figure 4 Dosing pump with suction hose and canister on the rack

## Installation of the suction hose on the dosing pump

1. Before you can connect the suction hose to the dosing pump, you must remove the transport hose from the dosing head.
2. Unscrew the cap nut on the suction side of the dosing head ( Figure 5).
3. Pull off the transport hose.
4. Now pull the cap nut off the transport hose.
5. Insert the free end of the suction hose (Figure 3) through the hole in the cap nut.
6. Push the free end of the hose onto the cone of the suction valve on the dosing head (Figure 4 and 5).
7. Screw the cap nut onto the suction valve. The cap nut must **ONLY** be tightened by hand!



*Attention:*

**ONLY** tighten the cap nut by hand!

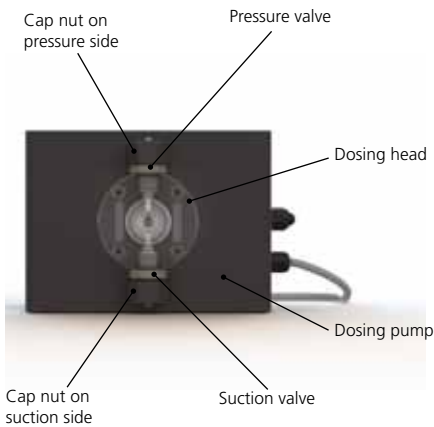


Figure 5: Front view of dosing pump

## 2.4 Installation of the Pressure Hose

### Installation pressure hose



*Important:*

Follow the installation instructions for steam and water pipe.

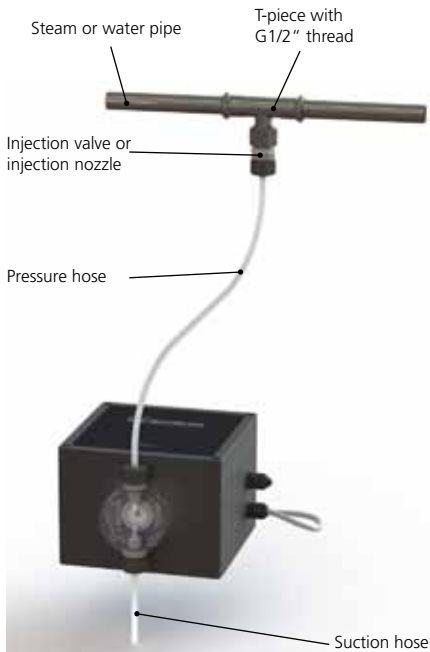


Figure 6: Pressure hose connection

1. A T-piece must be installed in the steam line of the steam generator or water line of the adventure shower (see Figure 6).
2. Screw the injection nozzle or the injection valve into the T-piece (Figure 6). Seal with Teflon tape if necessary.
3. In case you have not already done so, you must remove the transport hose on the dosing head before you can connect the pressure hose to the dosing pump.
4. Unscrew the pressure-side cap nut (Figure 4) on the dosing head.
5. Pull the cup nut off the transport hose.
6. Push the pressure hose through the hole in the cap nut.
7. Plug the pressure hose onto the pressure valve of the dosing head.
8. Screw the cap nut onto the pressure valve and tighten the cap nut by hand **ONLY!**
9. Unscrew the cap nut from the injection valve or injection nozzle.
10. Push the free end of the pressure hose through the cap nut.
11. Attach the pressure hose to the injection valve or injection nozzle (Figure 6).
12. Screw on the cap nut and tighten it **ONLY** by hand!



## 2.5 Electrical dosing pump connection

The terminal connectors for the motor as well as for the mains connection are located on the circuit board (Figure 7). The circuit board is in the housing of the dosing pump. Everything is prepared to connect the dosing pump directly to 230 V AC.

On the main board you will also find the Main Interface connection for communication with the InOut PCB and the Main LCD connection for the LCDs in the dosing pump cover.

Power supply cable of the dosing pump should only be connected by a qualified person.

The terminal connectors pin assignment is as follows (see Figure 7):

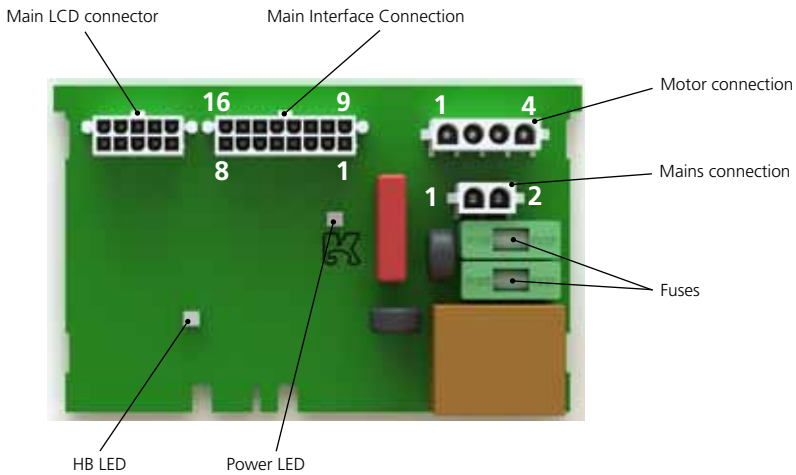


Figure 7: Main board 10.2

### Description of the LEDs

#### HB LED

If the HB LED flashes evenly, the program is running correctly.

Fatal Error Codes can be displayed via the HB LED.

#### Power LED

The Power LED lights up as soon as the controller has electrical voltage.

### Fuses

Backup value:	0,1 A
Fuse characteristic:	slow
Fuse size:	5 x 20 mm

## Motor Connection

Terminal #.	Terminal function	Terminal description	Wire color
1	L	L – Motor 230V AC	Red
2	N	Neutral – Motor 230V AC	Blue
3	N	Neutral– Motor 230V AC	Blue
4	C	C – Motor 230V AC	White

## Mains Connection

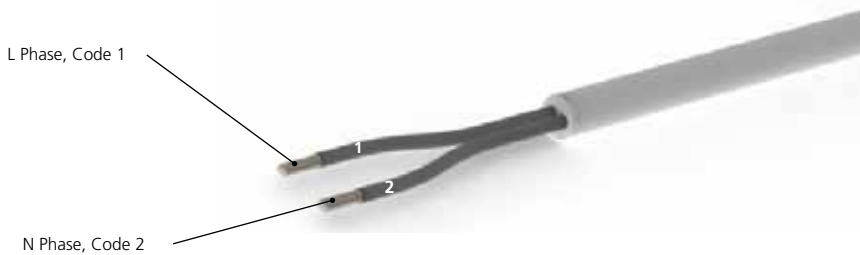


Figure 8: Power cable 2 x 0.5 mm<sup>2</sup>

Terminal #	Terminal function	Terminal description	Wire color	Wire Code
1	L	Phase 230V AC	Black	1
2	N	Neutral conductor 230V AC	Black	2



### Attention:

This dosing pump is only designed for 230V AC mains voltage!

If the mains cable is damaged, it should only be replaced by a qualified person to avoid the risk of an electrical shock.

## 2.6 Connection of 230V AC dosing pump request cable

The request cable start is connected to the terminal request-start 230V AC at the circuit board InOut-PCB (Figure 9). InOut-PCB is located to the left of the Main PCB in the dosing pump housing. The InOut interface is intended for communication with the Main PCB. .

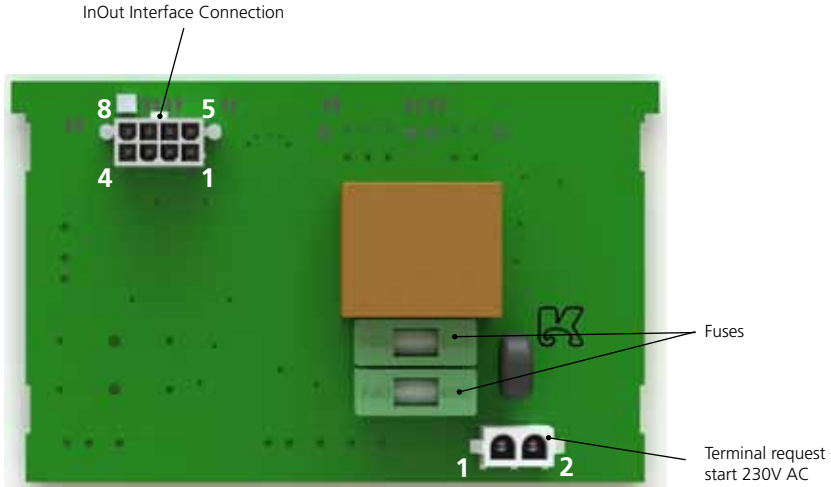


Figure 9: Circuit board InOut HV Start 230V 10.2

### Request Cable Start 230V AC



Figure 10 Request-start request cable black 2 x 0.5 mm<sup>2</sup>

Terminal #.	Terminal function	Terminal description	Wire color
1	L	Phase 230V AC, relay contact (normally open)	Brown
2	N	Neutral 230V AC, relay contact (normally open)	Black

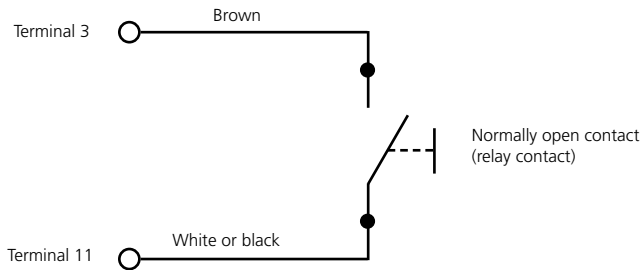


Figure 11: Request start - relay contact (normally open contact)



**Attention:**

The request start of the dosing pump is only designed for 230V AC voltage!  
 If the request cable is damaged, it should only be replaced by a qualified person to avoid the risk of electric shock.

## 3. Start-up

### 3.1 Filling the Dosing Pump

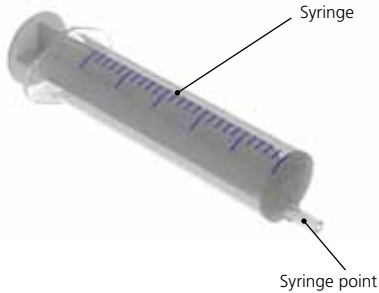


Figure 12: Syringe

1. Check whether the canister on the rack contains liquid (e.g. fragrance solution).
2. Take the syringe out of the tube package and open the packaging of the syringe.
3. Place the short syringe hose on the syringe point (see Figure 12).
4. Unscrew the cap nut on the pressure side from the dosing head and also remove the pressure hose from the pressure valve (see Figure 5).
5. Insert the free end of the syringe hose onto the pressure valve (see Figure 13).
6. Slowly and steadily pull the syringe open. This will suck the liquid out of the canister.
7. Pull the syringe slowly and steadily until it contains liquid.
8. When you have fully opened the syringe without liquid in the syringe, disconnect the syringe hose from the pressure valve.
9. Empty the syringe by squeezing it. Repeat steps 5 to 7 until there is liquid in the syringe.

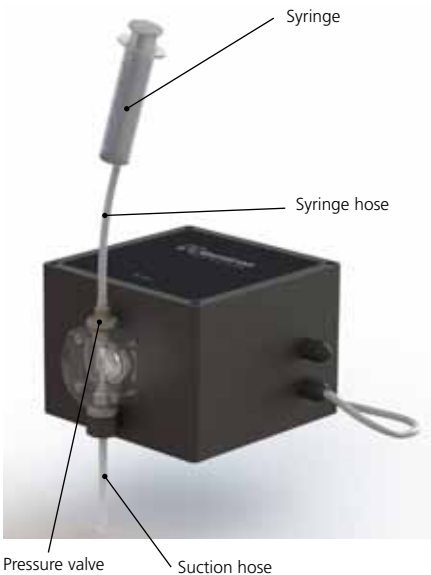




Figure 13: Filling the dosing pump



*Important:*

The housing cover of the dosing pump must be closed!

## 3.2 Filling the pressure hose

1. Make sure that the canister on the rack contains liquid (e.g. fragrance solution).
2. Switch the mains voltage ON for the dosing pump.
3. Press and hold down the filling button combination  on the display of the dosing pump. Filling button combination , see red frame, Figure 14.
4. As soon as you keep the button combination pressed, the dosing pump starts to fill the pressure hose.
5. Keep the button combination pressed until the pressure hose to the injection valve or injection nozzle is filled with fragrance. Then you can release the buttons.
6. The dosing pump is now ready for operation.

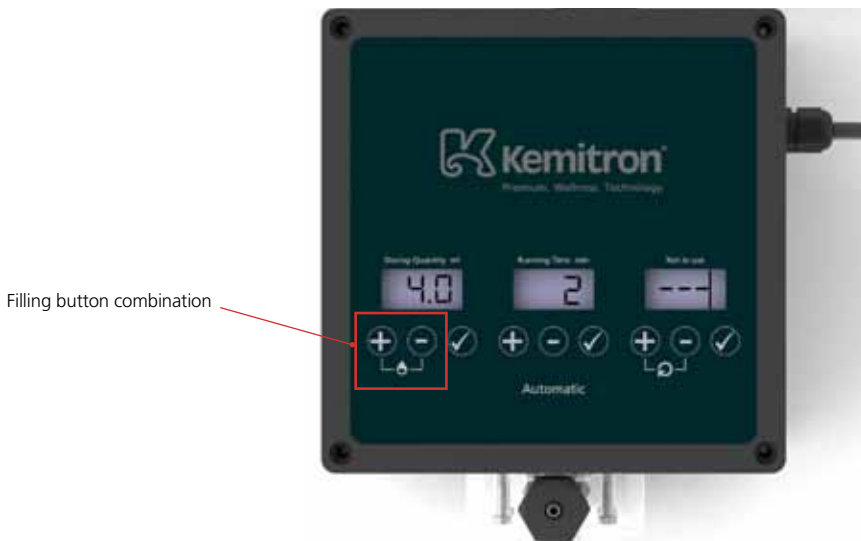


Figure 14: Filling button combination display dosing pump

### 3.3 Program Sequence of the Dosing Pump Automatic.Arom Start

1. The Automatic.Arom Start dosing pump program starts as soon as the contact from the external control unit closes and supplies the 230V AC voltage for the request start at the input.
2. The dosing pump delivers the programmed dosing quantity, see Figure 15, chapter Programming the dosing pump.
3. Once the programmed dosing quantity has been reached, the pause time, which has also been programmed, begins, see Figure 15, chapter Programming the dosing pump.
4. After the pause time has elapsed, the program starts dosing again..
5. The program cycle Dosing quantity and Pause time is repeated until the 230V AC external voltage at the input of the dosing pump drops.



#### *Attention*

If the request signal (230V AC voltage from external control unit) at the input of the dosing pump has dropped, then the program cycle (dosing quantity and pause time) is executed at the end.

## 4. Programming the Dosing Pump

### 4.1 Display and function keys



Figure 15: Dosing pump programming



PLUS button



MINUS button



OK button

Figure 16: Function buttons

#### Dosing Quantity

Display and function buttons for dosing quantity, Figure 15 and 16

#### Running Time

Display and function buttons for pause time, Figure 15 and 16

#### Not in use

Display and function buttons are without function, Figure 15 and 16



## 4.2 Programming the Dosing Quantity

The dosing quantity is programmable from 0.5 to 8.0 ml, in 0.5 ml steps. The blue illuminated „Dosing Quantity“ display shows the dosing quantity in ml, see Figure 15. Dosing quantity is set and programmed with the three function buttons PLUS, MINUS and OK, below the blue illuminated „Dosing Quantity“ display, Figure 15 and 16.

PLUS function button increases the dosing quantity by 0.5 ml. And the MINUS function button reduces the dosing quantity by the value of 0.5 ml. With the OK function button, the value is stored and programmed in the blue illuminated display.

As long as the value shown in the display flashes, the value has not yet been saved. By pressing the OK function button, the set value is saved and programmed. The value in the display no longer flashes to confirm the programming.

1. Set the desired dosing quantity using the PLUS and MINUS function buttons below the „Dosing Quantity“ display.
2. The set value flashes in the „Dosing Quantity“ display.
3. Save and program the value by pressing the function button OK.
4. The value in the display stops flashing.
5. You have reprogrammed the dosing quantity.

## 4.3 Programming the Pause Time (Running Time)

The pause time is programmable from 1 to 20 minutes, in 1 min steps. The blue illuminated display „Running Time“ shows the pause time in min, see figure 15. Pause time is set and programmed via the three function buttons PLUS, MINUS and OK, below the blue illuminated display „Running Time“, see figure 15 and 16.

PLUS function button increases the pause time by the value of 1 min. and the MINUS function button reduces the pause time by the value of 1 min. The OK function button is used to save and program the value in the blue lighted display.

As long as the displayed value is flashing in the display, the value has not been saved. By pressing the OK function button, the set value is saved and programmed. The value in the display stops flashing to confirm the programming.

1. Set the desired pause time with the PLUS and MINUS function buttons, below the „Running Time“ display.
2. The set value flashes in the „Running Time“ display.
3. Save and program the value by pressing the function button OK.
4. The value in the display no longer flashes.
5. You have reprogrammed the pause time.

## 5. Maintenance of the Dosing Pump

### 5.1 Maintaining the Dosing Head

The suction and discharge valve should be cleaned from crystalline deposits and lint 1 to 2 times a year. In the case of unsuitable fragrance solutions (e.g. fragrance emulsions), the suction and pressure valves should be cleaned every month. The valve plates (Figure 17) must be replaced. If unsuitable fragrance solutions are used, there is a risk that the dosing head will be damaged, see chapter „General conditions“.

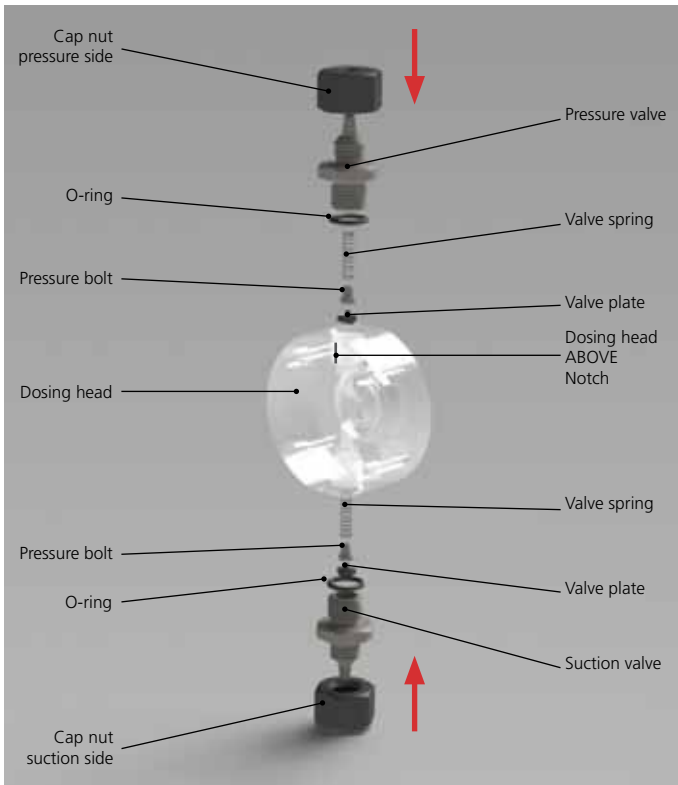


Figure 17: Dosing head

DP-Automatic.Arom Start A + P 230V 202101101



**Attention:**  
ONLY tighten cap nuts by hand!



**Attention:**  
Note the position of the dosing head, see notch on dosing head.

## 5.2 Maintenance Suction Valve

1. Pull the mains plug.
2. Unscrew the cap nut on the suction side and draw off the suction hose
3. Unscrew the suction valve. Carefully remove the valve spring with the pressure bolt and the valve plate.
4. Rinse suction valve, the valve spring, pressure bolt and the valve plate with clear water. Remove crystalline deposits and lint with a damp cloth.
5. Wipe the spring guide in the dosing head and the valve seat in the suction valve with a damp cloth. Remove crystalline deposits and lint here as well.
6. If the dosing head has been removed for maintenance, observe the installation direction of the dosing head during assembly. The notch on the dosing head indicates which side is UP (pressure side) of the dosing head.
7. Position the valve plate in the valve seat of the suction valve and place the valve spring with the pressure bolt in the center of the valve plate.
8. Carefully screw the suction valve with the valve spring back into the dosing head and tighten it **ONLY** by hand.
9. Install the suction hose, see chapter "Installation of the suction hose".



*Important:*

The dosing head must be mounted the right way round!

Notch must point UPWARDS.

The valve plate has to lie flat in the suction valve!

Valve spring has to be inserted into the spring guide of the dosing head without becoming tilt (see Figure 17)!

Observe the installation sequence!



*Attention:*

**ONLY** tighten cap nut by hand!



*Attention:*

Note the position of the dosing head, see notch on the dosing head. Notch must point UPWARDS (pressure side) on the dosing head !

*Note:*

The dosing pump has a longer service life and significantly less maintenance requirements when using Kemitron fragrance solutions.

## 5.3 Maintenance Pressure Valve

1. Pull the mains plug.
2. Unscrew the cap nut on the pressure side and draw off the pressure hose
3. Unscrew the pressure valve. Carefully remove the valve spring with the pressure bolt and the valve plate.
4. Rinse pressure valve, the valve spring, pressure bolt and the valve plate with clear water. Remove crystalline deposits and lint with a damp cloth.
5. Wipe the valve seat in the dosing head and the spring guide in the pressure valve with a damp cloth and also remove the crystalline deposits and lint.
6. If the dosing head has been removed for maintenance, observe the installation direction of the dosing head during assembly. The notch on the dosing head indicates which side is UP (pressure side) of the dosing head.
7. Position the valve plate in the valve seat of the dosing head and place the valve spring with the pressure bolt in the center of the valve plate.
8. Carefully screw the pressure valve back into the dosing head and tighten it **ONLY** by hand.
9. Install the pressure hose, see chapter "Installation of the pressure hose".



*Important:*

The dosing head must be installed in the right way round!

Notch has to point UPWARDS.

The valve plate must lie flat in the dosing head!

Valve spring has to be inserted into the spring guide of the pressure valve without tilting (see Figure 17)!

Observe the assembly sequence!



*Attention:*

ONLY tighten cap nut by hand!



*Attention:*

Note the position of the dosing head, see notch on the dosing head. Notch must point UPWARDS (pressure side) on the dosing head !

*Note:*

The dosing pump has a longer service life and significantly lower maintenance requirements when using Kemitron fragrance solutions!

## 6. Spare Parts



Figure 18: Dosing head APV

### Dosing head APV

Scope of delivery:

- 1 x Dosing head A
- 1 x Suction valve P
- 1 x Pressure valve P
- 2 x Valve plate
- 2 x Valve spring with pressure bolt
- 2 x Cap nut

Item No.: E01-1006



Figure 19: Suction and pressure valve PV

### Suction and pressure valve PV

Scope of delivery:

- 1 x Suction valve P
- 1 x Pressure valve P
- 2 x Valve plate
- 2 x Valve spring with pressure bolt
- 2 x Cap nut

Item No.: E01-1004



Figure 20: Valve spring set

### Valve spring set

Scope of delivery:

- 2 x Valve plate
- 2 x Valve spring with pressure bolt

Item No.: E01-1015

## 7. Troubleshooting

### 7.1 Dosing pump delivers too much or too little

1. Verify how many minutes the mains voltage is present.
2. If the dosing pump delivers too much, reduce the length of the mains voltage signal ON.
3. If she delivers too little, increase the length of the ON signal.

### 7.2 Dosing pump no longer suck in

1. Verify that mains voltage is present.
2. Monitor that the canister contains liquid. If necessary, replace the empty canister with a filled one.
3. Check if the fine filter is located at the end of the suction hose at the bottom of the canister, in one of the 4 corners. If this is not the case, correct it (see chapter "Installation of the suction hose").
4. Monitor if there are air bubbles in the suction hose or in the dosing head. To eliminate the air bubbles, proceed as described in the section "Filling the dosing pump".
5. Check the suction and pressure valves for dirt, clean the valves if necessary (see chapter "Maintenance of the dosing pump").
6. Check both springs to ensure that they are seated straight in the dosing head guides. If one of the springs is tilt, dismantle this valve according to the instructions in the chapter "Maintenance suction valve" or "Maintenance pressure valve".
7. Check that the fine filter in the canister is not dirty, rinse it out under clear running water.
8. For other causes, the dosing pump has to be sent to the Kemitron factory for verification.

## 7.3 Dosing pump does not deliver fragrance

1. Verify that mains voltage is present.
2. Check that the canister contains liquid. If not, replace the empty canister with a filled one.
3. Check if the fine filter is located at the end of the suction hose at the bottom of the canister, in one of the 4 corners. If it is not, correct it (see chapter "Installation of the suction hose").
4. Check if the fine filter in the canister is dirty. Rinse it under running, clear water.
5. Determine if there are air bubbles in the pressure hose or in the dosing head. To eliminate them, proceed as described in chapter "Filling the pressure hose".
6. Check the suction and pressure valves for dirt, clean the valves if necessary (see chapter "Maintenance of the dosing pump").
7. Check both springs to ensure that they are seated straight in the dosing head guides. If one of the springs is tilt, dismantle this valve according to the instructions in the chapter "Maintenance suction valve" or "Maintenance pressure valve".
8. Check whether the pressure hose is bent or clamped.
9. Test if the injection valve or the injection nozzle lets liquid through. Send compressed air through the inoculation valve or inoculation nozzle. Place the air pistol where the pressure hose was connected. Take care to send **ONLY** a small amount of air through the injection valve or injection nozzle!
10. If your checks have revealed nothing, the dosing pump has to be sent to the Kemitron factory for checking and, if necessary, repair.



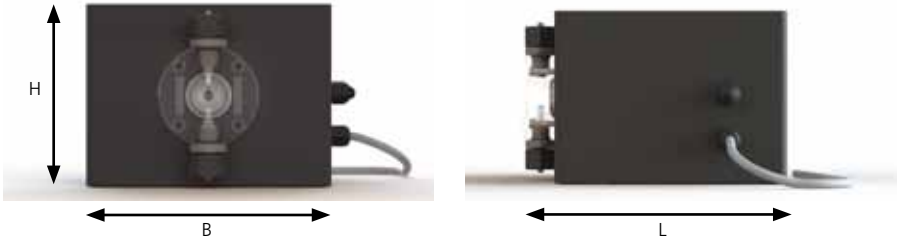
### *Attention:*

If you send too much compressed air through the injection valve, the valve mechanism may tilt. In this case, the injection valve no longer functions properly.



## 8. Technical Information

### 8.1 Technical data Automatic.Arom Start



Dimensions LxWxH	165 x 190 x 120 mm
Weight	1,7 kg
Pump housing	IP65, insulated
Pump housing fire class	UL94 5VA
Cable gland	IP 68, strain relieved, 10bar according to EN 60529
Electrical connection	230V ~ 50 / 60 Hz
Connected load	1-9 W
Mains cable L, N grey	2 x 0.5 mm <sup>2</sup> with cable end sleeves
Request cable L, N, black	2 x 0.5 mm <sup>2</sup> with cable end sleeves
Request input	Relay contact (normally open contact). Contact supply 230V AC
Dosing volume	15,65 ml / min, programmable
Dosing quantity	0,5 - 8 ml programmable
Pause time	1 - 20 min programmable
Direction of delivery	vertical
Delivery pressure	max. 4 bar absolute, 5 bar
Delivery height	max. 20 m
Suction height	max. 1 m
Dosing head A	transparent (for all applications, except sauna)
Dosing head P	opaque (for use in sauna)
Approval	CE – 230V AC Version

*Comment:*

We recommend the use of Kemitron fragrance solutions, see also chapter „Maintenance of the Dosing Pump“.



*Important:*

Dosing head material: depending on the application

## 8.2 System and Function of the Dosing Pump

Electronically controlled dosing system with automatic repetition for dosing liquids such as fragrance solutions, etc.

Bellows dosing system in closed, splash-proof plastic housing.

Drive via eccentric gear motor, self-priming, low-noise, almost maintenance-free, resistant to chemicals. Suitable for fragrance solutions and essential oils.

## 9. General Terms and Conditions

The manufacturer warrants the dosing system delivered to you to be free of defects and therefore to function for a period of two years. The requirement for this is that the operating and installation instructions are followed exactly, whereby reference is made in particular to the use of only the fragrance solutions manufactured by Kemitron GmbH. No warranty can be given for the use of fragrance solutions from other manufacturers.



## Our other product groups



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Fragrances for steam baths, sauna, whirlpools, hot tubs and experience showers



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Disinfectant and cleaner for whirlpool and spa tubs for pipe and residual water disinfection.

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