



VARIABLE FLOW PERISTALTIC PUMP

Model D-25Vplus

Code 1.9732.13 / 1.9731.14



INSTRUCTION MANUAL

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Marked 

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1- GENERAL INTRODUCTION

Peristaltic pumps pump all types of liquids without coming into contact with mechanical elements, as with other pumps. They are easy to use and require minimal maintenance.

The pumped substance is propelled into a flexible tube by the vacuum generated by rotors that successively compress and release the tube's surface. The liquid passes directly from its container to another without contamination and without recoil when the pump stops, as the tube is compressed by the roller.

Some aggressive substances prevent the use of conventional pumps and make peristaltic pumps very useful for transferring or dispensing such substances.

Flow rates are obtained from 0.2 ml/minute to 1000 ml/minute.

A wide variety of tubes and hoses are available in various sizes and are made from materials resistant to various conflict substances.

The following instructions are intended to ensure proper reception and use of the device, as well as user safety. To this end, we recommend reading this manual carefully before unpacking the device and using it.

For proper maintenance of the device, it is necessary to avoid installing it in areas with corrosive atmospheres or exposed to liquid splashes.

Avoid using the appliance when there is a possibility of generating explosive and flammable gas mixtures.

2- PACKING LIST

Description Code	Quantity
Peristaltic Pump D-25V plus	1.9732.13/ 1.9732.14
*Connections set	1
Power cable	1
Instruction Manual	1

*Platinum Cure Silicone Peristaltic Tubing Set, Food/Clinical Grade. 1.6mm Wall Thickness

0.5 m Silicone inner Ø 1.6 mm. Code 1.8760.16, (1 m) and 2 stainless steel tube. Code 8.0056.06, (25 units)

0.5 m Silicone inner Ø 3.2 mm. Code 1.8760.32, (1 m) and 2 stainless steel tube. Code 8.0056.08, (25 units)

0.5 m Silicone inner Ø 4.8 mm. Code 1.8760.48, (1 m) and 2 stainless steel tube. Code 8.0056.10, (25 units)

0.5 m Silicone inner Ø 6.4 mm. Code 1.8760.64, (1 m) and 2 stainless steel tube. Code 8.0056.12, (25 units)

1 0-10V / 4-20mA connector. Code 1.0005.23.

1 Foot switch connector. Code 1.0005.37

3- RECEPTION

To ensure proper reception and use of the device, and user safety, we recommend reading this manual carefully before unpacking the device and subsequent use, especially the following points:

3.1-THE MANUAL

This manual must be kept at all times within reach of the user of the equipment.

3.2-UNPACKING

Unpack the appliance, checking that the contents match the packing list.

Report any eventuality immediately.

3.3-EXPLOSIVE MIXTURES

Avoid using the device when there is a possibility of generating explosive gas mixtures and flammable. The ATEX Directive is not covered.

3.4-RESPONSIBILITY

According to European regulation 89/655/EEC, the lack of adequate maintenance and the alteration of component, exempts the manufacturer from any liability for any damage that may occur.






3.5-REPAIRS

The devices to be sent to DINKO technical services *must* be **clean and disinfected**.

Otherwise, they will be rejected and returned at the owner's expense.

3.6-SIGNS AND SYMBOLS

Always heed the hazard warning signs and symbols that appear in this manual or on labels attached to the pump body, such as those shown below.

SIGN/SYMBOL	INTERPRETATION-MEANING
	Avoid contact of fingers with moving parts
	Danger-Risk-Caution
<p>Before opening DISCONNECT the network cable Before removing cover PULL-OUT plug</p> 	Before accessing the inside of the Pump, disconnect the power cable from the mains.
	Possible overheating - Do not touch
230V AC 50/60Hz	Alternating current supply voltage
110V AC 60Hz	Alternating current supply voltage
12V DC or 24V DC	DC supply voltage
	<p>Disposal of waste electrical and electronic equipment by users within the European Union.</p> <p>It is not disposable as household waste.</p> <p>Deliver to the agency for recycling electronic equipment.</p> <p>Contact your local office, the store where you purchased the equipment, or your local waste disposal service.</p> <p>Recycling helps conserve natural resources.</p> <p>Make sure it is recycled while protecting human health and the environment.</p>

4- DESCRIPTION

The D-25Vplus peristaltic pumps in this manual are equipped with an easy-to-load CF-4r head that allows access to the tube for removal when it needs to be replaced due to wear or for sterilization.

Simply pull up on the top of the head to load the tubes.

They admit various tube sizes which, combined with speed regulation, give a wide variety of flows, as can be seen in the flow table..

With the FULL key, No. 3 in the front panel description, the maximum engine speed is obtained, in loading and purging operations.

Keys 1 and 2 allow you to select the direction of rotation of the motor for flow reversal.

On the back there is a connection for the mains cable with integrated fuse holder, a connection for a pedal and an input for an analogue signal of 0-10 V and 4-20 mA.

Consult the dosage table and install the appropriate tube.

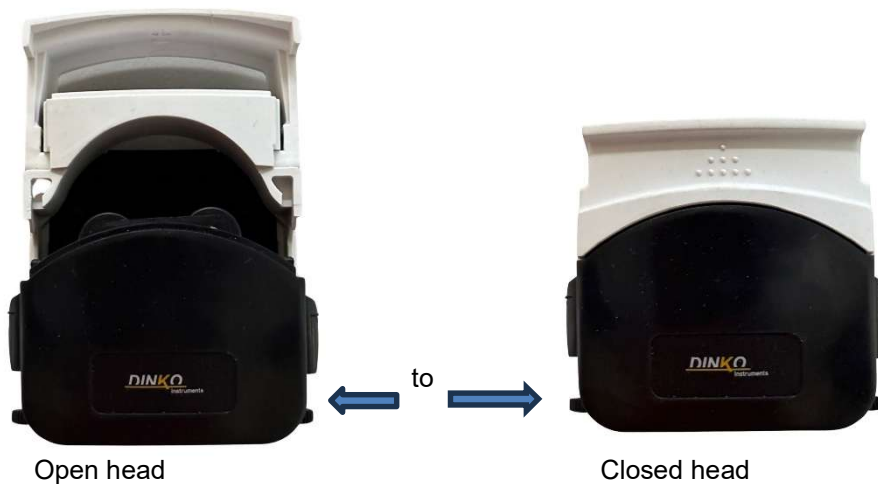
4.1 CF HEADS .

Head opening and adjustment.

For proper operation of the head and to prevent unnecessary noise, it is very important to properly adjust the two internal tube diameter settings on both sides of the head.

Next, we will detail how they have to be adjusted:

Here we show the front view of the head:



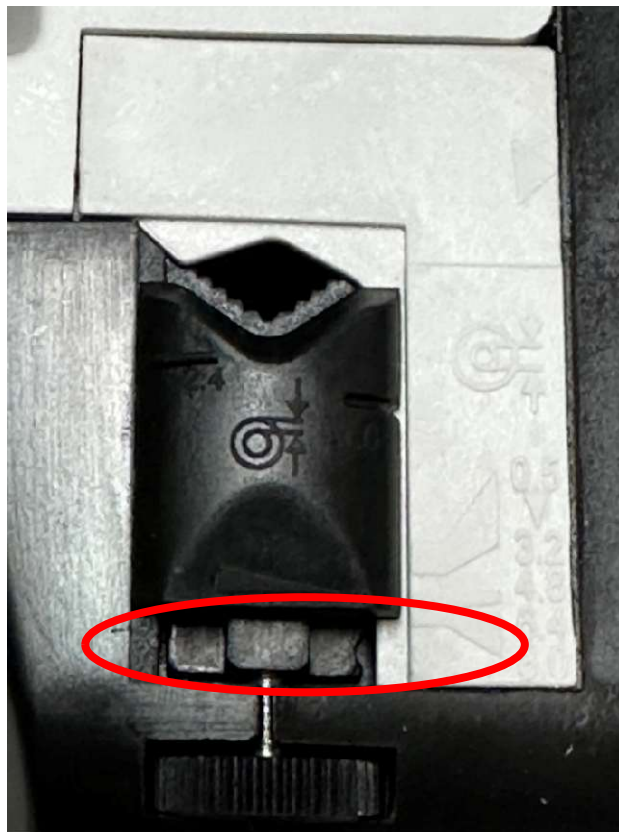
In the figure we have marked the adjustment wheels with the letter A.

Let's take an example for a tube with an internal diameter of 4.8 mm and a wall of 1.6 mm.

With the head closed, turn the wheel until the mark on the bottom of the moving part is at the height of the 4.8 mm mark, as shown in the following images:

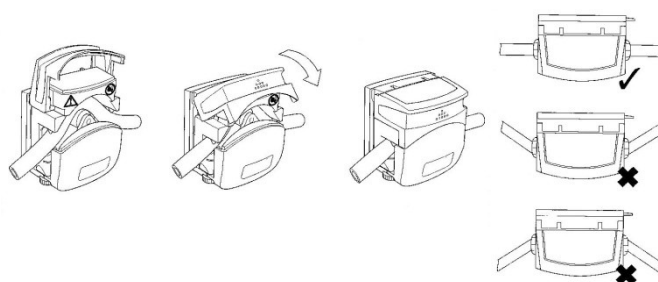
Side view:





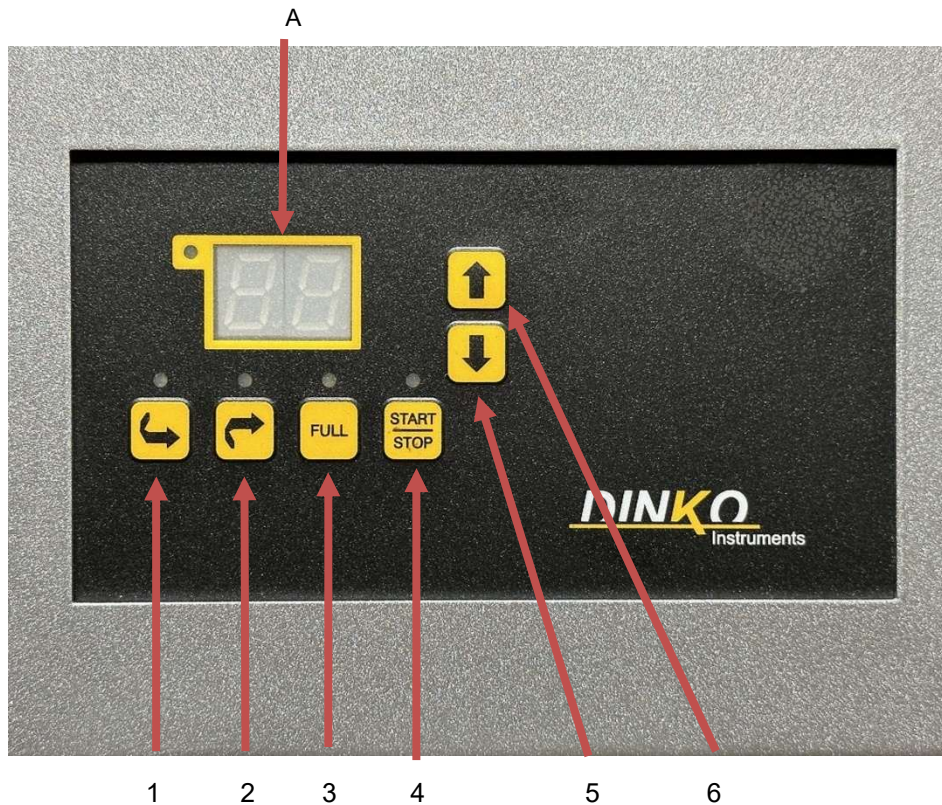
In red we can see the correct position of how the mark on the moving part should look with the head closed. Check, by applying a little pressure, that the moving part is in the lowest possible position. This operation must be performed on both wheels, both on the right side and the left side. Once checked, we can now place the tube inside the head.

Loading of tubes.



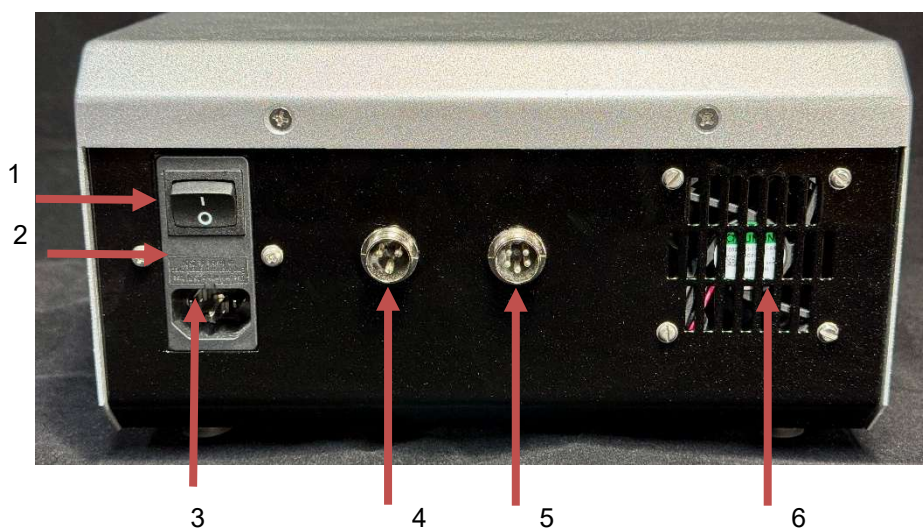
X - Incorrect position
V - Proper position

4.2- DESCRIPTION OF THE FRONT PANEL (photo a).



- A- Digital reader
- 1- Counterclockwise rotation key
- 2- Clockwise rotation key
- 3- Full key
- 4- Start/Stop key
- 5- Decrease key
- 6- Increase key

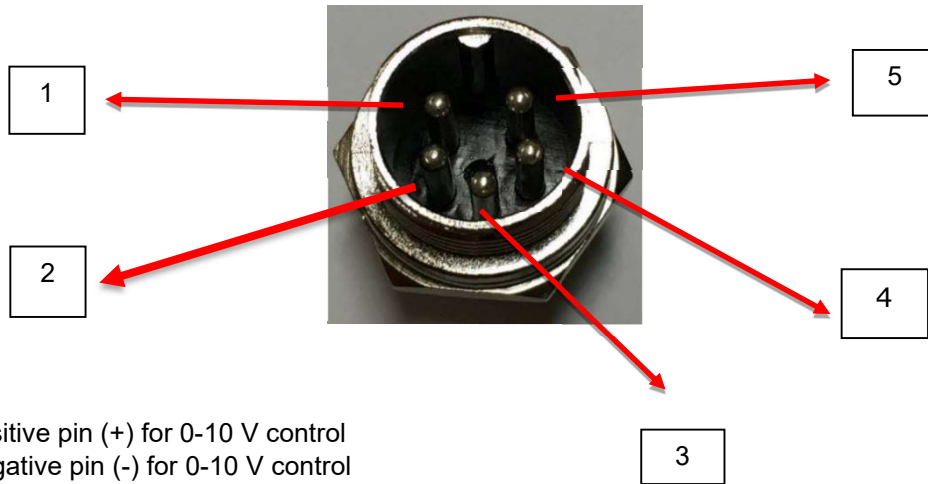
4.3- DESCRIPTION OF THE REAR PANEL (photo b).



- 1- Main ON/OFF switch
- 2- Fuse box
- 3- Take food
- 4- Voltage-free pedal input
- 5- 0-10V and 4-20mA signal input
- 6- Fan

5 PIN CONNECTOR (0-10V / 4-20 mA) n°5 (photo b).

0-10V and 4-20 mA CONNECTION



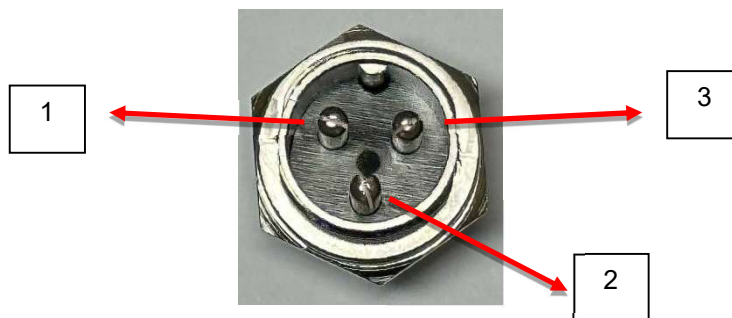
- 1-
- 2- Positive pin (+) for 0-10 V control
- 3- Negative pin (-) for 0-10 V control
- 4- Do not connect
- 5- Positive pin (+) for 4-20 mA control
- 6- Negative pin (-) for 4-20 mA control



WARNING : Do not use both inputs (0-10 V and 4-20 mA) simultaneously.
It may cause malfunction or breakdown .

3-PIN CONNECTOR (Voltage-free open contact) No. 4 (photo b).

ON/OFF CONNECTION (PEDAL)



- 1- Pin for connecting voltage-free output (NA). Pump off.
- 2- Not connected, DO NOT USE.
- 3- Pin for connecting voltage-free output (NA). Pump off.

If we physically connect pins 1 and 3, the pump will start working.

The connectors cannot be in their respective inputs for manual pump operation. Connect them only when using the foot pedal or 0-10V / 4-20mA regulator.

5- START-UP

Ensure that the mains voltage is between 110 and 230 V.
Connect the power cable to the rear socket and to the mains.
Consult the flow guide table and install the appropriate pipe.
See tips in the Tube Change and Head Description sections.
Select the desired function.

MODES OF OPERATION.

Available modes:

- A- Pumping Mode.
- B- Ramp Mode.
Programming.
Access to the use of the Ramp.
- C- Cyclic Dosing Mode.
Programming.
Access to the use of Cyclic Dosing
- D- Pedal dosing mode.
Programming.
Access to the use of Dosing with pedal.

· **Pumping Mode.**

This mode is used to work with the pump continuously, to transfer liquids.
If the pedal is connected, while it is pressed, the head will work, if it is released, the head will stop.

- 1- Activate rear switch no. 1 (photo b) O/1.
- 2- Press the front switch no. 7 (photo a), it will light up in blue and the display will turn on.
- 3- Select the engine speed in % by pressing the decrease or increase keys nº5 or nº6 (photo a).
- 4- If it is necessary to change the direction of rotation, press keys no. 1 or no. 2 (photo a).
- 5- Press Start/Stop key 4 (picture a) to start pumping. To stop, use the same key 4 (picture a).
If the pedal is connected, you can start pumping by pressing key 4 (picture a) or by holding the pedal down. When operating the pedal, the pump will stop when you release the pedal.
- 6- The unit can be programmed so that if there is a power outage, it will continue operating at the programmed speed when the power is restored. To program this function and the speed at which it should resume operation, press key 4 (photo a) for 5 seconds. Its pilot light will flash, and using keys 5 or 6 (photo a), we will enter the speed at which we want it to operate. If there is a power outage and it is restored, it will be memorized by simply pressing key 4 (photo a) Start / Stop.

To facilitate loading, purging, or cleaning, press key 3 (photo a) Full. The speed will gradually increase to maximum, and the display will show a speed increase to 99. Pressing the Full key again will return to the programmed speed, and the display will decrease to that speed.

· Ramp Mode.

This working mode consists of achieving an increase or decrease in the speed of the spindle, from an initial value to a final value during a set time.

If the first value is less than the final value, there will be an increase, otherwise, if the initial programmed speed is greater than the final value, there will be a decrease.

The time we can program for the ramp is from 1 minute to 99 minutes.

Programming:

- 1- Activate rear switch no. 1 (photo a) O/1.
- 2- Press and hold keys 2 and 3 (photo a) while pressing switch 1 (photo b). It will remain illuminated in blue, and the yellow LED on key 2 (photo a) will flash. The value on the screen indicates the programmed ramp time in minutes. Range: 1 to 99 minutes
- 3- If you wish to modify it, press keys 5 or 6 (photo a) to set the new time.
- 4- Press key nº4 (photo a) Start / Stop to memorize the chosen value.
- 5- The initial speed of the ramp will then appear on the screen.
- 6- If you wish to modify it, press keys 5 or 6 (photo a) to set the new value of the initial speed in %
- 7- Press key 4 (photo a) to store the chosen value.
- 8- The final speed of the ramp will then appear on the screen.
- 9- If you wish to modify it, press keys 5 or 6 (photo a) to set the new value of the final speed in %
- 10- Press key 4 (photo a) to store the chosen value.
- 11- To memorize all the ramp parameters, press switch no. 1 (photo b), the blue light and the equipment display will turn off.

Access to the use of the Ramp:

To access ramp mode and operate the programmed ramp, hold down key 2 (photo a) while pressing switch 1 (photo b). The LED on key 3 (photo a) will light up, and the display will show the initial ramp speed in %, and the ramp will begin. The display will show how the speed increases until it reaches the final programmed speed within the programmed time.

All keys will remain inactive during the process.

At the end of the ramp, the spindle will stop. If you want to run another ramp, press any key.

To exit the ramp function, press switch 1 (photo b). The pump will remain in standby, waiting to operate in the mode you choose.

· **Cyclic dosing mode.**

This operating mode is used to operate the pump by running for a period of time and stopping for a period of time, thus cyclically until the equipment is stopped.

It is normally used to fill a fixed volume of several containers, with a stop time to allow the end of the peristaltic tube to be moved from one container to another.

The time we can program, both on and off, is from 1 second to 99 seconds.

Before starting programming, a series of tests must be performed to check that the volume to be dosed is the desired one and to see how long the pump should operate and at what speed to achieve said volume.

Programming:

- 1- Activate rear switch no. 1 (photo b) O/1.
- 2- Press and hold keys 1 and 3 (photo a) while pressing switch 1 (photo b). The LED on key 1 (photo a) will flash. The value on the display indicates the running time in seconds.
Range: 1 to 99 seconds.
- 3- If you wish to modify it, press keys 5 or 6 (photo a) to set the new running time in seconds.
- 4- Press key nº4 (photo a) Start / Stop to memorize the chosen value.
- 5- The stop time will then appear on the screen.
- 6- If you wish to modify it, press keys 5 or 6 (photo a) to set the new value of the stop time in seconds.
- 7- Press key 4 (photo a) to store the chosen value.
- 8- The engine speed in % will then appear on the screen.
- 9- If you wish to modify it, press keys 5 or 6 (photo a) to set the new speed value in %
- 10- Press key 4 (photo a) to store the chosen value.
- 11- To memorize all the parameters of the cyclic dosage, press switch no. 1 (photo b), the equipment display will turn off.

Access to Cyclic Dosing:

To access cyclic dosing mode and operate with programmed cyclic dosing, hold down key 1 (photo a) while pressing switch 1 (photo b). The LED on key 2 (photo a) will light up, and the display will show the programmed dosing time, and the cycle will begin. The display will show the time decreasing until it reaches zero. The stop time will then appear, decreasing to zero, and continue cyclically until the unit is stopped.

All keys will remain inactive during the process.

To exit the cyclic dosing mode, press switch 1 (photo b). The display will turn off, and the pump will go into standby mode, waiting to operate in the selected mode.

· Pedal dosing mode.

This operating mode is used to operate the pump for a period of time when the pedal is pressed and automatically stops when the time reaches zero.

It is normally used to fill a fixed volume of several containers, with pedal control when the head is started.

The time we can program is from 1 second to 99 seconds.

Before starting programming, you must perform a series of tests to check the volume you wish to dose, and to know how long the pump should operate and at what speed to achieve that volume.

Programming:

- 1- Activate rear switch no. 1 (photo b) O/1.
- 2- Press and hold keys 1 and 3 (photo a) while pressing switch 1 (photo b). The LED on key 1 (photo a) will flash. The value on the display indicates the running seconds. Range: 1 to 99 seconds.
- 3- To modify, press keys n°5 or n°6 (photo a) to set the new running time.
- 4- Press key n°4 (photo a) Start / Stop to memorize the chosen value.
- 5- The stop time will then appear on the screen.
- 6- If you wish to work with the pedal, press keys 5 or 6 (photo a) to set the stop time value to 0 seconds.
- 7- Press key 4 (photo a) to store the chosen value.
- 8- The engine speed in % will then appear on the screen.
- 9- To modify, press keys 5 or 6 (photo a) to set the new speed value.
- 10- Press key 4 (photo a) to store the chosen value.
- 11- To memorize all the parameters of the cyclic dosage, press switch no. 1 (photo b), the blue light and the equipment display will turn off.

Access to dosage with pedal.

Connect the pedal to the rear three-pin connector no. 4 (photo b).

To access the pedal dosing mode and operate with the programmed dosage, press and hold key 1 (photo a) while pressing switch 1 (photo b). The display will show the programmed dosing time.

When we press the pedal, the time will begin to count down to zero, and the programmed dosage will begin.

When it reaches zero, the head will stop until we press the pedal again.

You have to press the pedal, not hold it down.

All keys will remain inactive during the process.

To exit the pedal dosing mode, press switch 1 (photo b). The display will turn off. The pump will remain in standby, waiting to operate in the selected mode.

NOTE:

While using the 0-10V and 4-20mA analog input, the ramp and cyclic dosing modes are not accessible.

The pedal connection is active during use of the pedal pump and cycle function.

When using the 0-10V / 4-20mA regulation, regulation keys 5 and 6 are inactive.

ANTI-DRIP SYSTEM

Programming the anti-drip system

- 1- Turn off the pump using switch no. 1 (photo b)
- 2- Hold down the Full (3) and Start (4) keys while starting the pump by pressing switch no. 1 (photo b)
- 3- The pilot lights on keys 1 and 2 will flash.
- 4- A value appears on the screen (A) indicating the degree of anti-drip setback on a scale of 0 to 40 (hundredths of a second).
- 5- With keys 5 and 6 the desired value is selected and once obtained it is validated by pressing the Star/Stop key (4)

The anti-drip system is applicable in manual, cycle, and pedal modes. It is not applicable to ramps.

6- CHANGING TUBE

Press the OFF switch. Remove the tube according to the instructions in the “Description” and “Heads” sections.

When installing the new tube, it must be centered over the rollers to prevent the rotor from pinching it.

The CF-4r head has a spring retainer on the sides where the peristaltic tube enters and exits, which holds the tube in position.

In general, new tubes may stretch during the first 30 minutes of operation. If this occurs, they should be retensioned to prevent unexpected breakage. To detect stretching or insufficient tube attachment to the head, it is helpful to properly mark the tube with a marker.

Because the friction of the tubes with the rollers increases with the diameter of the tubes, the minimum adjustable speed increases the larger the tube diameter.

It's not advisable to use the lowest speed observed, even if the engine is running, as it can stall at any moment, causing the regulation circuit to overheat, which could damage it if left in this position for too long. It's preferable to slightly increase the minimum speed observed.

The pump feed and discharge pipes can have any wall thickness, but the pipe installed in the head must have a wall thickness of 1.6 mm.

The silicone tubing supplied with each pump is medical/food grade according to FDA and USP standards, autoclavable at 120°C, with peristaltic usage range up to 80°C and medium life.

Other materials available are:

The most mechanically resistant tubes are PHARMA, TYGON L ®, TYGON A-60-C ®, TYGON A-60-G ® and of medium duration SILICONE and VITON, but the durability also depends largely on the chemical nature of the pumped liquid, the pressure, existing temperature and naturally the engine revolutions.

Proper selection of the inner diameter of the tube avoids the need for higher revolutions of the peristaltic pump motor with a small diameter tube and the reduction of the tube's life.

THE AVAILABLE MATERIALS ARE:

PHARMA	Autoclavable multiple times. Sterilizable by ETO and Gamma . Medical-food grade, Class VI USP, 21CFR 177.2600 and FDA. Non-hemolytic. Excellent resistance to chemicals. ISO 10993. Low permeability and good abrasion resistance. Long duration. Use temperature, -51°C to 132°C . Beige color.
SILICONE	Autoclavable. The most versatile tube. Platinum Cure quality silicone. Average duration. Medical/food grade. Excellent biocompatibility. Maximum temperature: 140°C. Translucent.
TYGON A-60-C ®	Autoclavable multiple times. Food grade. Long duration. Resistant to acids, alkalis, oxidizing agents. Use temperature: -59°C to 135°C. Beige color.
TYGON A-60-G ®	Autoclavable Compatible with Ozone, UV light and disinfectants . High resistance to fatigue and abrasion. Resistant to acids, alkalis and alcohols. Use temperature -59°C to 135°C. Black color.
VITON ®	Autoclavable Suitable for acids and non-acetone solvents. Maximum temperature 300°C. Black color.

7. ORDERING INFORMATION

Code ▼	Motor rpm	Pump head	Article
1.9732.13	110	CF-4r	Complete peristaltic pump
1.9732.14	350	CF-4r	Complete peristaltic pump
1.9740.02			Foot switch (pedal)

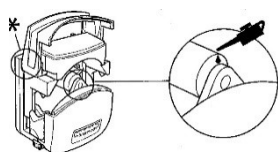
Tubes and other elements for peristaltics pumps see pages 15 to 17

8. MAINTENANCE-SPARE PARTS

Before proceeding with any examination or repair of the appliance, it is necessary to disconnect the power supply.

Every initiative must be carried out by qualified personnel to avoid major problems.

Entrust your device to a technical service authorized by *DINKO Instruments*.



The engine and its block do not require lubrication so they do not have maintenance.

The rotor bearings are self-lubricating, but it is advisable to lightly lubricate them with silicone grease (ref. 8.0030.03 or similar) from time to time, along with the rollers, especially on the CF heads if they have been washed. * Also lubricate the lever to prevent wear. See figure.

The head tube must be replaced periodically and systematically to avoid the inconvenience of it breaking while the pump is in operation.

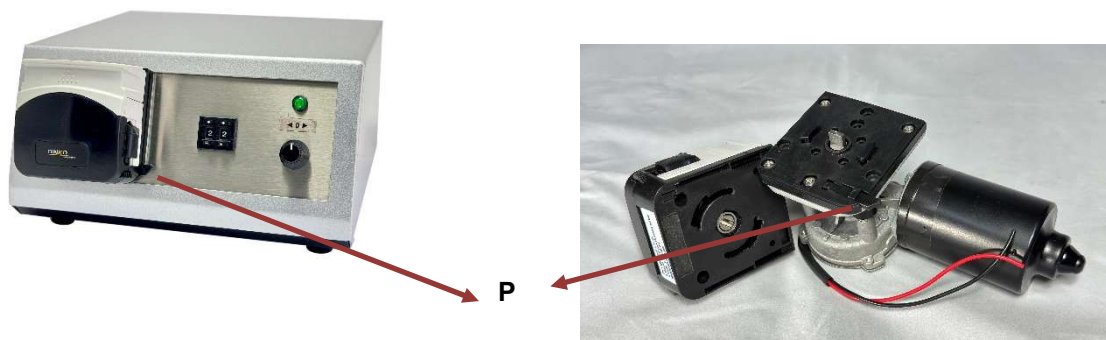
Spare parts

Code - Description

1.0078.01	CF-4r Pump head
1.0060.30	Main control circuit.
1.8093.21	Power supply 100-24.
1.9740.02	Foot switch.
1.0080.01	Motor 350 rpm.
1.0080.13	Motor 110 rpm

8.1 Disassembling the CF.4r head

To replace the CF-4r head or to wash it, it is possible to detach it from its attachment to the pump cabinet.



P- Release lever

To remove the head, press the image release lever while turning the head to the left and then pull it towards the operator.

1.6 mm wall thickness calibrated tube codes, 1 meter

Tube / Inside Ø ► Tube ▼	0.5 mm	0.8 mm	1.6 mm	2,4 mm	3.2 mm	4.0 mm	4.8 mm	6.4 mm
Identifier nr. ►		13#	14#	19#	16#		25#	17#
Pharma		1.8801.08	1.8801.16		1.8801.32		1.8801.48	1.8801.64
Tygon A-60-C ®			1.8740.16	14#	1.8740.32			
Tygon A-60-G ®			1.8750.16				1.8750.48	1.8750.64
Silicone	1.8760.05	1.8760.08	1.8760.16	1.8760.24	1.8760.32	1.8760.40	1.8760.48	1.8760.64
Tygon L ®			1.8770.16		1.8770.32		1.8770.48	1.8770.64
Viton ®		1.8790.08	1.8790.16		1.8790.32		1.8790.48	1.8790.64

Figure 2 shows the connectors used for connections corresponding to tubes with an internal diameter of 0.5 and 0.8 mm.



Stainless steel capillary tube connector for 0.5 mm tube. Code 1.0077.23*

Stainless steel capillary tube connector for 0.8 mm tube. Code 1.0077.26*

Figure 2

*Bag of 10 units

Important: The head tubes should be lightly coated with silicone grease to extend their life and facilitate starting at low rpm.

Silicone Grease, 50g for lubricating peristaltic tubes. Code 8.0030.03

9. ACCESSORIES

9.1 Scales for flow and dosage calibration

To measure the dosed quantity in the calibration process of peristaltic pumps, it is very effective to use a precision scale with digital reading.

If the liquid pumped has a density of "1," there will be no difference between grams and milliliters. Otherwise, calculate the density by weighing a quantity of the liquid with a measuring cylinder, for example, 25 ml, and then tare it on the scale.

Divide the weight indicated on the digital readout of the scale in grams by the milliliters contained in the test tube to obtain the density according to the ratio,

$$D = M / V.$$

There is always the option to calibrate the pump directly based on weight. instead of volume.

Reproducibility 0.1 g. Capacity 600 g. Code 8.9812.02
Reproducibility 0.01 g. Capacity 500 g. Code 1.9812.04

Characteristics:

- ◆ Single digital readout plate, with high visibility backlit LCD screen.
- ◆ Easy to use and highly robust with ABS housing and membrane keyboard airtight, moisture-proof.
- ◆ Stainless steel plate, 157x128 mm (8.9812.02); Stainless steel plate 133x182 cm (Code 1.9812.04).
- ◆ External self-calibration.
- ◆ Units of measurement: grams, pounds, and ounces
- ◆ Continuous tare up to 600 g (Code 8.9812.02), 500 g (Code 1.9812.04)
- ◆ Power supply 230V 50/60Hz
- ◆ Non-slip rubber feet
- ◆ Working temperature: +5°C to +40°C. Maximum operating humidity: 80% RH



8.9812.02



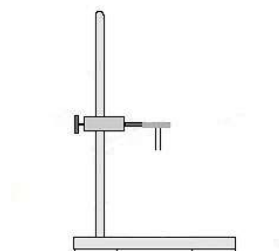
1.9812.04

9.2 Graduated cylinder, 25 ml. Code 1.9808.20

9.3 Silicone Grease, 50 g. Lubrication of peristaltic tubes. Code 8.0030.03

9.4 Foot support. Code 1.8003.08

Useful as a dosing tube/tip holder. Base: 150 x 70 cm. Pole, height 70 cm. Sliding dosing tip holder.



CONNECTORS FOR PERISTALTIC TUBES

9.5 Straight connectors for splicing / equal ends, polypropylene



Straight connector for 1.6 mm inner diameter tubes. Code 1.0080.15
Straight connector for 3.2 mm inner diameter tubes. Code 1.0080.18
Straight connector for 4.8 mm inner diameter tubes. Code 1.0080.05
Straight connector for 6.4/8 mm inner diameter tubes. Code 1.0080.14
Straight connector for 9/12 mm inner diameter tubes. Code 1.0080.20

9.6: Y-shaped connectors, polypropylene



Y-shaped connector, 6 mm Ø. Code 1.0120.26
Y-shaped connector, 8 mm Ø. Code 1.0120.48
Y-shaped connector, 10 mm Ø. Code 1.0120.32
Y-shaped connector, 12 mm Ø. Code 1.0120.33

9.7 Stainless steel tube connectors - Splicing and dosing

Straight splice 40mm length



Stainless steel tube for 0.5 and 0.8 mm Ø tubes, 25 units. Code 8.0056.14
Stainless steel tube for 1.6 mm Ø tubes, 25 units. Code 8.0056.06
Stainless steel tube for 3.2 mm Ø tubes, 25 units. Code 8.0056.08
Stainless steel tube for 4.8mm Ø tubes, 25 units. Code 8.0056.10
Stainless steel tube for 6.4 mm Ø tubes, 25 units. Code 8.0056.12

Dosage 130mm length with a bevel

Dosing tube for tubes 0.5 and 0.8 mm Ø, 10 units. Code 8.0056.15
Dosing tube for 1.6mm Ø tubes, 10 units. Code 8.0056.07
Dosing tube for 3.2mm Ø tubes, 10 units. Code 8.0056.09
Dosing tube for 4.8mm Ø tubes, 10 units. Code 8.0056.11
Dosing tube for 6.4mm Ø tubes, 10 units. Code 8.0056.13

Length 38mm

Micro-tube 0.8mm outer diameter, 10 pcs. Code 1.0077.23
Micro-tube 0.9mm outer diameter, 10 pcs. Code 1.0077.26

Clamping flange P. Code 1.0120.01

Clamping flange G. Code 1.0120.12

9.8: 304 stainless steel anti-floaters for suction pipes



For peristaltic tubes with 1.6 and 3.2mm inner diameter. Code 1.0303.10
For peristaltic tubes with an inner diameter of 4.8mm. Code 1.0303.11
For peristaltic tubes with an inner diameter of 6.4mm. Code 1.0303.12
For peristaltic tubes with an inner diameter of 8.0mm. Code 1.0303.13
For peristaltic tubes with an inner diameter of 9.6mm. Code 1.0303.14
For peristaltic tubes with an inner diameter of 12.7mm. Code 1.0303.15

9.9: Stainless steel dosing tubes with non-return valve



For 3.2 and 4.8 mm inner diameter tubes. Stainless steel tip, 4 mm outer diameter, 1 mm wall thickness. Code 1.0302.10
For 4.8 and 6.4 mm inner diameter tubes. Stainless steel tip 6 mm outer diameter, 1 mm wall thickness. Code 1.0302.11
For 6.4 and 8 mm inner diameter tubes 8 mm stainless steel tip, 1 mm wall thickness. Code 1.0302.12
For 8 and 9.6 mm inner diameter tubes 10 mm stainless steel tip, 1 mm outer diameter wall. Code 1.0302.13



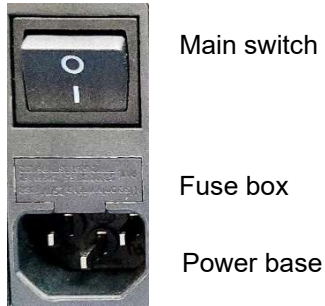
9.10: Peristaltic pump pulse damper - Code 1.0078.80

9.11: Adapter hose and connector for pulse damper

For 24# tube. Code 1.0078.81
For 35# pipe. Code 1.0078.82
For 36# pipe. Code 1.0078.83

10. CHANGING FUSES

The fuse box is part of the power supply base located on the rear of the pump. See figure.



Pry the fuse box between the center of the fuse box and the top of the power supply base with a screwdriver to remove it. The box remains in place but cannot be completely removed. There are two fuses.

Press the box inwards to restore its original position.
Remember that you have already used the spare fuse.

11. FLOW TABLES

Indicative adjustment intervals for each inside tube diameter in mm.

Code	rpm	Head	0.5m	0.8m	1.6m	2.4	3.2m	4.8m	6.4mm	Tube Ø
1.9732.14	350	CF-4r	0.5-5	2.0-20	9.0-90	15-150	30-300	60-600	100-1000	Caudal
1.9732.13	110	CF-4R	0.2-2	0.7-7	3.0-30	5,9-50	10-100	20-200	30-300	ml/min

Approximate values without outlet backpressure with water under normal temperature conditions.

Various factors influence the variations in expected flow rates, such as size tolerances of the tubes, the viscosity of the pumped product and any variation in the travel of the pumped product.

12. WARRANTY

12.1 DURATION:

The warranty is established for a period of 1 year from the date of commissioning of the appliance, provided that the warranty card is returned to us within 8 days of said commissioning. Without this condition the warranty will not be valid.

12.2 SCOPE OF THE WARRANTY:

The warranty covers manufacturing and material defects for an average work week of 40 hours. The warranty is reduced proportionally with increased work hours.

Repairs will be carried out at our factory. Otherwise, the warranty will only include the replacement of the defective components.

DINKO will not be responsible for transportation costs, nor will it assume liability for the consequences caused by the immobilization of the device.

Parts replaced free of charge remain our property, and we reserve the right to request their return, postage-free to our address.

Repairs or replacement of parts during the warranty period do not extend the initial warranty.

Our liability is limited to the attached warranty and not to possible accidents to persons or other things.

Any alteration of the device by the user voids the warranty.

13- "CE" DECLARATION OF CONFORMITY

DINTER SA

***DINKO INSTRUMENTS* c/ Encarnació, 123-125 / 08024- Barcelona**

Declares that the articles mentioned in the attached list, to which this declaration refers, comply with the essential safety requirements of the applicable European Directive:

- Low Voltage Directive D2014/35/EU of 26 February 2014
- Essential requirements of Annex I of the Machinery Directive 2006/42/EEC of 17 May 2006
- Electromagnetic compatibility EC relating to the Electromagnetic Compatibility Directive 2014/30/EU in compliance with EMC recommendations.
- Safety of electrical measuring, control and laboratory equipment. EMC-related requirements .
61326
- Safety rules for electrical measuring, control and laboratory devices. Part I. Prescriptions
general EN 61010-1

However, the user must observe the assembly and connection instructions indicated in the catalogues of technical instructions.

Name: Joan A. Bravo
Post: Technical Director

Josep X. Sensada
Quality Manager

Signature



Model: D-25Vplus Peristaltic Pumps.

OTHER *DINKO* APPLIANCES

- Colorimeters
- Conductimeters
- Dosing Pumps
- Extractor for meat analysis
- Grinders-Homogenizers
- Heating Plates
- Kits for water analysis
- Magnetic Stirrers
- Metal block heaters
- Microscopes
- Nephelometers
- Orbital Shakers
- Oximeters
- Peristaltic Pumps
- pH meters
- Photometers
- Respirometers
- Rod Stirrers
- Rotary Stirrers
- Sand Baths
- Spectrophotometers
- Temperature Controllers
- Timers
- Trichinoscope TriquiVisor
- Turbidimeters
- Turndiscs
- Vacuum Pumps



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