DINKO

Instruments

MANUAL

VARIABLE FLOW
PERISTALTIC PUMPS

Modelo D-25Vplus

July 2015

CE marked

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GENERAL INTRODUCTION

The following instructions are intended to ensure correct reception and use of the device, and the safety of the user. To this end, we recommend reading this manual in detail before proceeding to unpack the device and subsequent use.

-This manual must be permanently kept within the equipment user's reach.

-Carefully unpack the appliance, checking that the contents match the packing list.

Immediately notify any eventuality.

-For the correct conservation of the appliance it is necessary to avoid its installation in areas with corrosive atmospheres or exposed to liquid splashes.

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

-According to the European regulations of use 89/655/CEE, the lack of adequate maintenance and the alteration or change of any component, exempts the manufacturer from any responsibility for the damages that could occur.

-The devices that are sent to the technical services of DINKO Instruments must be perfectly clean and sanitized. Otherwise they will be rejected and returned with postage paid by the owner.

PACKING LIST

Description	Code	Amount
Peristaltic pump D-25V plus	1.9731.XX/ 1.9735.XX ó 1.9747.XX ó 1.9748.XX	1
Connection set		1
power cord		1
Manual		1

DESCRIPTION

The D-25Vplus peristaltic pumps are provided with a head that allows access to the tube for its extraction when it must be replaced due to wear or for sterilization.

With the pump code 9735 and 1.9748.15, the cover is removed by extracting the fixing screws.

Pumps code 1.9731.XX and 1.9747.XX mount easy-load CF type heads. Just pull up the part top of the head.

The code 1.9747.08 pump mounts a 5-channel MMB head.

The Pump of code 1.9748.00 It is provided with coils with the tube incorporated. It will suffice to remove the fixing spring and replace the cartridge or coil.

The pump code 1.9748.20 mounts the 5000 self-adjusting head. The head cover is released by pressing the latch which allows a very easy change of the tube.

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

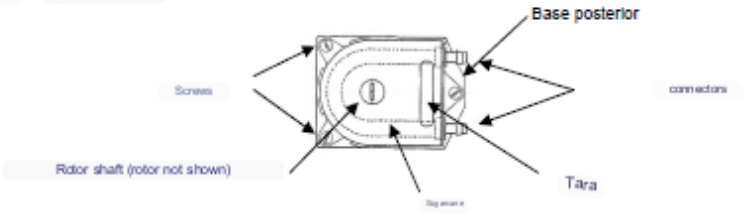
With the FULL key, nº 3 in the description of the front panel, the maximum speed of the motor is obtained, the operations in load and purge.

Keys 1 and 2 allow choosing the direction of rotation of the motor for flow inversion.

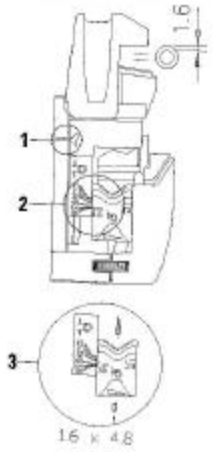
On the back is the connection for the network cable with integrated fuse holder, connection for pedal and input for 0-10V analog signal.

Consult the dosage table and install the appropriate tube.

HEADS: HEAD 50

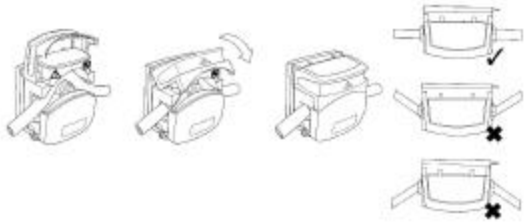


CF head. Opening of the head and adjustment.



1- Fix the tube clamp. (Not necessary in the CF-4r head) 2- Indicates the thickness of the tube wall
3- Set according to the size of the inside diameter of the tube. It is not necessary in the CF-4r head)

tube loading



X-Incorrect position
V-Proper position

Head 1500

Cover fixing screws

head 2000

Spare spool
with built-in tube

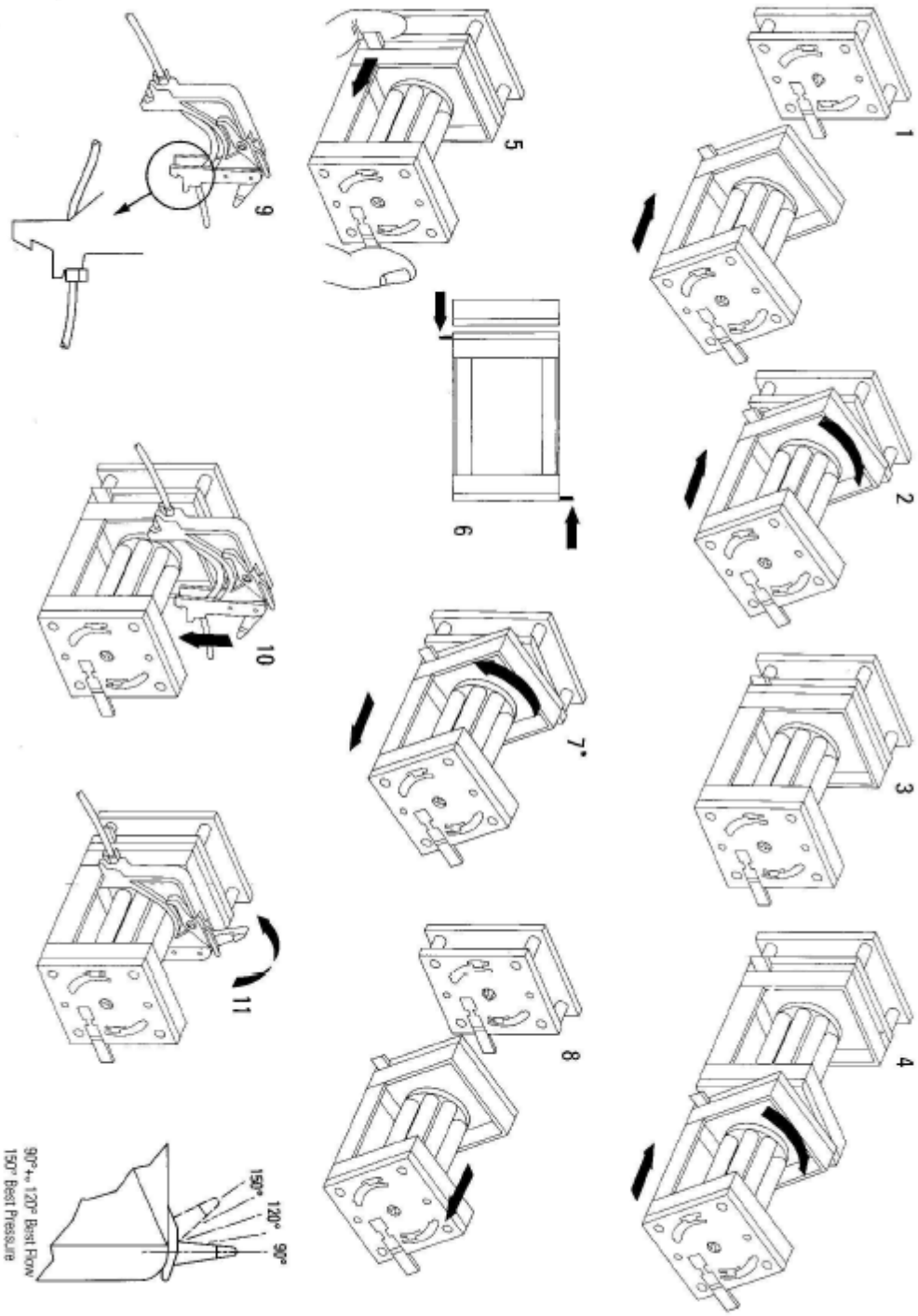
fixing spring

head with coil

MMB-8r head

Micro tube tensioning levers

head extractor lever



IMPORTANT: Figure 11. Avoid excessive pressure of the lever on the tubes as it can totally brake the rotor, especially at low revs, which could burn out the engine.

Head 5000 -Description and adjustment.

1	Bolt	5	Flexible rotor	9	Roller
2	Track Protection	6	cover Hose guide roller	10	Tube Clamp Slider
3	Cover	7	Rotor	11	tube clamp
4	Button cover	8	support roller	12	protective board
	clutch				
13	drain				

Rotor removal.

◊ Open the protection cover and remove the hoses from the head.

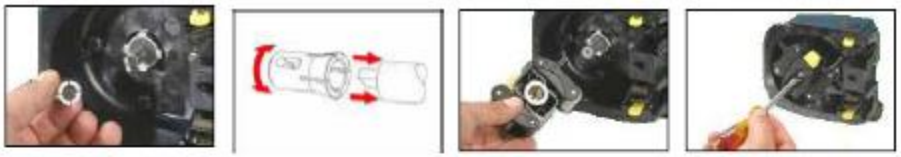
◊ Open the flexible black cover located in the center of the rotor.

• With a Phillips screwdriver, remove the central positioning screw.

◊ Pull the rotor hub until it is separated from its axis.

◊ Between the hub and the shaft there is a split collet. If the caliper is held by the shaft, pull it until it separates, loosening it, if necessary, by tapping it lightly. Do not try to pry it out with a screwdriver. If the caliper is stuck inside the hub, remove it; if necessary, loosen it by slightly reinserting the center positioning screw and lightly tapping the head of the screw.

Rotor replacement.



◊ Reassemble the split caliper on the drive shaft, turning it until it is fully inserted. Mount the rotor body on the drive shaft as a unit. ◊ Open the flexible black cover in the center of the rotor. Using a Phillips screwdriver, tighten the positioning screw to a torque of 3 Nm to prevent the caliper from slipping during operation. If the assembly is correct, the hose guide rollers should line up with the outer surface of the track. Close the flexible lid of the rotor.

© Close the protective cover and make sure that the rotor is separated from it, observing the first rotations of the rotor

Placement of tubes (hoses)

The 5000 heads are factory set to accept 1.6mm wall tubing. Pumping performance may be adversely affected if proper tubing is not used.

◊ Mark a length of hose to be inserted inside the head of 225 mm. Attention if more than 225 mm are placed, the life of the tube can be shortened.

◊ Open the lower clamp (with spring) and position the hose with the first 225mm mark aligned with the inside of the spring part of the clamp. Release the clamp.

◊ Disengage the rotor clutch by fully depressing the yellow button on the side of the rotor hub and turning the rotor hub a few degrees, always keeping the button depressed. Now the rotor can make a complete revolution independently of the reducer and the motor.

If the clutch re-engages before the hose is fully assembled press the button again and rotate the rotor a few degrees.

◊ Place the hose around the head race, turning the rotor accordingly. Make sure that the hose is not twisted or caught between the guide rollers and the race. Check that the second mark of the 225 mm is next to the inner edge of the upper clamp.

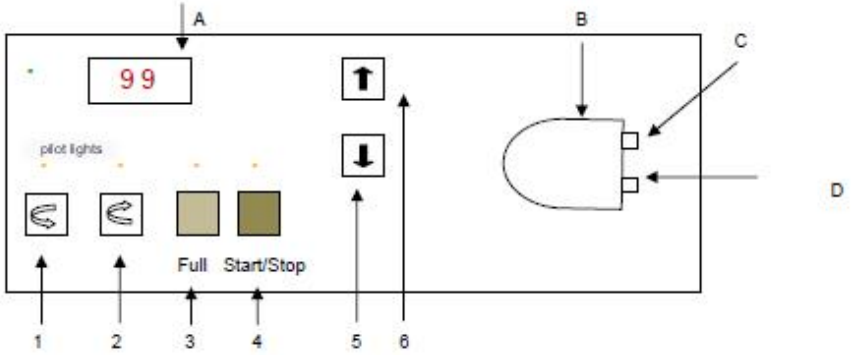
◊ Open the upper spring-loaded hose clamp and place the hose in the clamp, ensuring that the hose is free of twist and that it rests centered between the hose guide rollers. release the clamp

◊ Spring-loaded hose clamps should hold the hose tight enough that it will not move in or out of the pump head, but should not be overtightened or throttle the flow of fluid. The clamps have a yellow slider that can be set to two positions while the clamps are open. The outer position allows the clamps to hold the hose tight, while the inner position leaves it looser. Adjust the sliders to prevent the hose from moving by giving the rotor a few test turns.

◊ Close the protective cover, pushing it fully until the bolt engages.

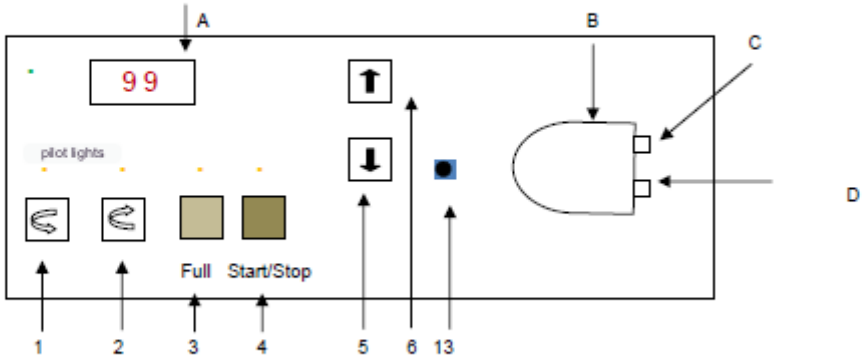
◊ Remember that it is advisable, after 30 minutes of operation, to tighten the hose again, since it can lengthen as it is fitted. Tighten it so that the 225 mm of hose is between the inner faces of the spring-loaded parts of the hose clamp.

FRONT PANEL DESCRIPTION



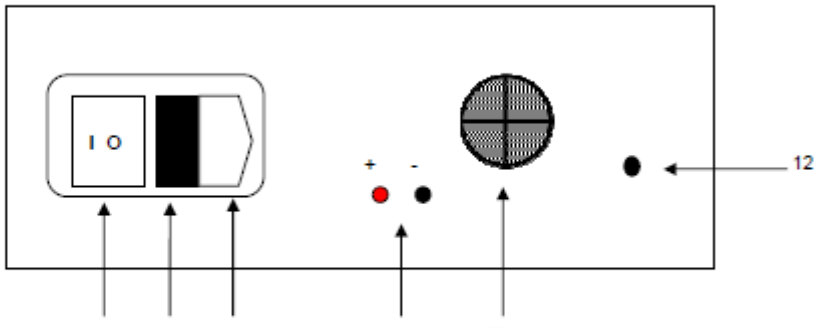
A- Digital reader
1- Direction of rotation key
2- Direction of rotation key
3- Tecla Full
4- Tecla Start / Stop-Memo start
5 and 6- Decrease and increase keys
B- Peristaltic head
Cy D- Connectors for fluid charge and discharge tubes

FRONT PANEL DESCRIPTION PUMPS WITH CF-3r, 2000, 1500, 5000 AND MMB HEADS



A- Digital reader
1- Direction of rotation key
2- Direction of rotation key
3- Tecla Full
4- Tecla Start / Stop/Memo Start
5 and 6- Decrease and increase keys
13- Programming switch
B- Peristaltic head
Cy D- Connectors for fluid charge and discharge tubes

BACK PANEL DESCRIPTION



7- Interruptor general ON/OFF
8- Fuse holder box
9- Power socket
10- Analog signal input 0-10V (+ red, - black)
11- Fan
12- Input for pedal

START UP

Make sure that the mains voltage is 230V. Connect the power cable to the rear plug and to the network.
Consult the flow chart and install the appropriate tube. See tips in the Tube Change section and Description of heads.
Select the desired function.

FUNCTIONS

Available functions:

A- Pumping

B- Ramp

B-1. ramp programming

B-2. ramp access

C - Cyclic

C-1. cycle programming

C-2. cycle access

Pumping-Procedure function:

1- Connect to the network

2- Activate the rear general switch (7) ON/OFF. The green indicator lights up.

3- Select the motor speed in % by pressing the decrease or increase keys 5 or 6

4- If it is necessary to change the direction of rotation, press keys

no. 1 02 5- Press key no. 4 Start/Stop/Memo Start to start or stop pumping

6- If you want the pump to resume its operation under the established conditions after a power outage unexpected power supply or voluntary shutdown, press key no. 4 for 5 seconds. Your pilot will shine flashing as long as it is not deactivated by simply pressing the 4 Start/Stop/Memo Start button.

To facilitate loading, purging or cleaning tasks, press key no. 3 Full. The speed will increase to the maximum. when pressing again the Full key will recover the programmed speed.

Ramp-Procedure Programming Function B-1

1- Connect to the network.

2- Hold down keys no. 2 and 3 while operating the rear ON/OFF switch no. 7, or the switch front n° 13 in the pumps that mount it. The green light will light up and the yellow light of key n° 2 will light intermittently. The displayed value indicates the total ramp time in minutes. Range: 1 to 99 minutes

3- Press keys 5 or 6 to set the time value. Press

4- key n°4 Start/Stop to memorize the chosen value.

5- The initial speed of the ramp will appear on the screen. Press keys 5 or 6 to set the initial value of speed in %

6- Press key no. 4 to memorize the chosen value

7- The final speed of the ramp appears on the screen. Press keys 5 or 6 to set the final value of the ramp.

8- Press key no. 4 to memorize the chosen value.

The ramp can be increasing or decreasing.

9- Activate the rear ON/OFF switch no. 7 or the front switch no. 13 on the pumps that have it. they ride. The ramp parameters are loaded.

Ramp-Procedure Access Function B-2

To access the loaded ramp, hold down key no. 2 while operating the rear ON/OFF switch no. 7 or the front switch no. 13 in the pumps that mount it.

The indicator will indicate the engine speed %. The ramp starts.

All keys will remain inactive during the process.

At the end of the ramp, press any key to repeat the ramp.

To exit the ramp function, activate the rear ON/OFF switch no. 7 or the front switch no. 13 on pumps that they ride it.

Cycle-Procedure Programming Function

1- Connect to the network

2- Keep keys n° 1 and 3 pressed while activating the rear ON/OFF switch n° 7 or the front switch n° 13 on the pumps fitted with it. The green light will light up and the yellow light of key n° 1 will light intermittently. The displayed value indicates the operating time in seconds. Range: 1 to 99 seconds

3- Press keys 5 or 6 to set the value of the operating time in seconds.

4- Press the No. 4 Start/Stop key to memorize the chosen value.

5- The rest time will appear on the screen. Press the 5 or 6 keys to set the value between 1 and 99 seconds

6- Press key no. 4 to memorize the chosen value

7- The motor speed in % appears on the screen. Press keys 5 or 6 to set the chosen value. 8- Press key no. 4 to memorize the chosen value.

9- Activate the rear main ON/OFF switch no. 7 or the front switch no. 13 on the pumps that mount He it. cycle is loaded.

Function Access to the Cycle- Procedure

To access the loaded cycle, keep key 1 pressed while operating the rear ON/OFF switch no. 7 or the front switch no. 13 on the pumps that mount it.

The display will alternately indicate the remaining time of each cycle. To stop the process, activate the main rear ON/OFF switch no. 7 or the front switch no. 13 on the pumps that have it.

Use:

While using the rear 0-10V analog input, the ramp and cycle functions are not accessible. The foot pedal connection is only active when using the pump function.

CHANGE OF TUBES

Press the OFF switch. Extract the tube according to the indications described in the "Description" and "Heads" section.
When removing the tube from the heads, do it together with its fixing terminals.

When the new tube is installed, it should be centered over the rollers to prevent the rotor from pinching it. Take advantage of the rotation of the rotor to insert the new tube. This avoids forcing the axis when trying to place the tube with the rotor stopped. Put the lid back on.

In general, new tubes can stretch during the first 30 minutes of operation. If this happens, it will be advisable to tighten them again.

Since the friction of the tubes with the rollers increases with the diameter of the tubes, the minimum speed adjustable increases the larger the tube. From the 4.8 mm tube, the minimum speed required is the following: 4.8/5% tube. Tube 6.4mm/10%. Tube 8mm/15%. It is not convenient to use a lower speed even if the engine starts since at any moment it can stop and cause an overheating of the regulation circuit that could be damaged if it remains in this situation for a long time.

When two CF heads are used at the same time on the 9747 pump, the tubing diameter will be limited to 4.8mm.

A set of tubing is supplied with each pump.

The pump feed and discharge tubes can have any wall thickness, but not the tube to be It is installed in the head, whose wall must be 1.6 mm., with the exception of the pump code 1.9748.15 with head 1500 that uses a 2.4 mm thick wall tube.

The supplied silicone tubes are medical / food grade according to FDA and USP standards, autoclavable at 120°C, with a peristaltic range of use up to 80°C and medium duration.

Other materials available are:

NEOPRENE: resistant to solvents and gasoline
NORPRENE F: great resistance to acids and caustics. Food grade
NORPRENE G: great resistance to acids and caustics. Industrial use
FARMED: long lasting, pharmaceutical medical grade. Suitable for high pressures
FLUORAN: suitable for acids and non-acetone solvents. Average duration.
TYGON L : long duration. Raincoat. Total chemical resistance to inorganics. Not toxic. autoclavable.
TYGON F-4040: Suitable for gasoline, hot oil, kerosene and glycols.
VITON: suitable for acids, non-acetic solvents. Withstands 300°C

ORDERING INFORMATION

Peristaltic pump, variable flow. CF-4r head. 110-230V/50-60Hz. 10rpm. Code: 1.9731.25
Peristaltic pump, variable flow. CF-4r head. 110-230V / 50-60Hz. 80 rpm. Code: 1.9731.26
Peristaltic pump, variable flow. Head 50-3r. 110-230V / 50-60Hz. 240rpm. Code: 1.9735.00
Peristaltic pump, variable flow. Head 50-3r. 110-230V / 50-60Hz. 80 rpm. Code: 1.9735.15
Peristaltic pump, variable flow. Head 50-3r. 110-230V/50-60Hz. 30 rpm. Code: 1.9735.12
Peristaltic pump, variable flow. CF-3r head. 110-230V / 50-60Hz. 270 rpm. Code: 1.9747.00
Peristaltic pump, variable flow. CF-3r head. 110-230V/50-60Hz. 110 rpm. Code: 1.9747.11
Peristaltic pump, variable flow. MMB-8r head. 110-230V / 50-60Hz. Code: 1.9747.08
Peristaltic pump, variable flow. L2000-3r head. 110-230V / 50-60Hz. Code: 1.9748.00
Peristaltic pump, variable flow. L1500-2r head. 110-230V / 50-60Hz. Code: 1.9748.15
Peristaltic pump, variable flow. L5000-2r head. 110-230V / 50-60Hz. Code: 1.9748.20

MAINTENANCE-SPARE PARTS

Before proceeding with any examination or repair of the appliance, it is necessary to disconnect the mains socket. Any initiative must be carried out by qualified personnel to avoid greater evils.

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

The engine and its block do not require greasing, so they are maintenance-free.
Rotor bearings are self-lubricating.

As for the rollers, it is convenient to lightly lubricate them with silicone grease from time to time.

The head tube must be replaced periodically in a systematic way to avoid the inconvenience of its breaking during full operation of the pump.

Head base 50. Code 1.0077.04
Head 5000. Code: 1.0078.10
CF-3r head. Code 1.0078.01
Auxiliary CFC-3r head. Code 1.0078.02
Header MMB-8r. Code 1.0078.15
Auxiliary MMB-8r head. Code 1.0078.16
Header CF-4r. Code 1.0078.22
Cartridge p.cab, 2000, tube 8mm.Ø. Cód.1.8767.00
1.0079.02 Foot switch. Code 1.9740.00
Power supply 75-24. Code 1.8093.17
Power supply 50-24. Code 1.8093.16

Motor 50, 24V 240rpm. Code 1.0077.01
Motor 50, 12V 240rpm. Code 1.0077.28
Motor 50, 24V 80rpm. Code 1.0077.10
Motor for, head. MMB-8r and CF3, 110 rpm. Code 1.0080.13
Engine for CF-3r, 1500, 2000, and 5000, 270 rpm. Code: 1.0080.01
Motor and head 1500. Code: 1.0080.10
Engine for CF-4r 10 rpm. Code 1.0079.03
Engine for CF-4r 80 rpm. Code
Motor 50, 24V 30rpm. Code 1.0077.24
Rotor 50-3r. Code 1.0077.02
Head cover 50. Code 1.0077.03
Timer - cyclic disconnector. Code: 1.8119.00

External tubes

Silicone tube, 3 x 5mm., 1 meter. Code: 1.8737.00

Silicone tube, 5 x 10mm., 1 meter. Code: 1.8738.00

Silicone tube, 8x14mm., 1 meter. Code: 1.8739.00

Codes for calibrated tube of 1.6 mm dia thickness pared, 1 metro.

Tube/diam.Intero 0.5 mm		0.8 mm	1.6 mm	3.2 mm	4.0 mm	4.8 mm	6.4 mm	8.0 mm
Butilo			1.8700.16	1.8700.32		1.8700.48	1.8700.64	1.8700.80
Farmed	1.8710.05	1.8710.08	1.8710.16	1.8710.32		1.8710.48	1.8710.64	1.8710.80
Fluoran				1.8720.32		1.8720.48	1.8720.64	1.8720.80
neoprene		1.8730.08	1.8730.16	1.8730.32		1.8730.48	1.8730.64	1.8730.80
Norpreno F			1.8740.16	1.8740.32		1.8740.48	1.8740.64	1.8740.80
Norpreno G			1.8750.16	1.8750.32		1.8750.48	1.8750.64	1.8750.80
Silicona	1.8760.05	1.8760.08	1.8760.16	1.8760.32	1.8760.40	1.8760.48	1.8760.64	1.8760.80
Tygon L			1.8770.16	1.8770.32		1.8770.48	1.8770.64	1.8770.80
Tygon 4040				1.8780.32		1.8780.48		
Viton			1.8790.16	1.8790.32		1.8790.48	1.8790.64	1.8790.80

CF-4r head. Codes for connections in the head. 3.2mm 5 units

Tube Diameter	0.5 mm	0.8 mm	1.6 mm	package	4.0 mm
Butilo			1.8704.16	1.8704.32	
Farmed	1.8714.05	1.8714.08	1.8714.16	1.8714.32	
Fluoran				1.8724.32	
neoprene		1.8734.08	1.8734.16	1.8734.32	
Norpreno F			1.8744.16	1.8744.32	
Norpreno G			1.8754.16	1.8754.32	
Silicona	1.8764.05	1.8764.08	1.8764.16	1.8764.32	1.8764.40
Tygon L			1.8774.16	1.8774.32	
Tygon 4040				1.8784.32	
Viton			1.8794.16	1.8794.32	

*Note: 0.5 and 0.8 tubing packages contain 3 CF head connections.

Head 50. Codes for connections in the head. Package with 5 units

Tube Bottom Diameter	0.5 mm	0.8 mm	1.6 mm	3.2 mm	4.0 mm	4.8 mm	6.4 mm
			1.8705.16	1.8705.32		1.8705.48	1.8705.64
Farmed	1.8715.05	1.8715.08	1.8715.16	1.8715.32		1.8715.48	
Fluoran				1.8725.32		1.8725.48	1.8725.64
neoprene		1.8735.08	1.8735.16	1.8735.32		1.8735.48	1.8735.64
Norpreno F			1.8745.16	1.8745.32		1.8745.48	1.8745.64
Norpreno G			1.8755.16	1.8755.32		1.8755.48	1.8755.64
Silicona	1.8765.05	1.8765.08	1.8765.16	1.8765.32	1.8765.40	1.8765.48	1.8765.64
Tygon L			1.8775.16	1.8775.32		1.8775.48	1.8775.64
Tygon 4040				1.8785.32		1.8785.48	
Viton			1.8795.16	1.8795.32		1.8795.48	1.8795.64

*Note: Packages with 0.5 and 0.8 tubing contain 3 connections for 50 head.

Important: Head tubes should be lightly coated with silicone grease for longer life and easier starting at low revs.

Tubes for MMB-8r head (specify tube ID)

PAC tubes Farmed, 6 Units Code 1.8710.83

PAC Silicone tubes, 6 Units Code 1.8760.83

PAC PVC pipes, 12 Pcs. Code 1.8770.83

Tubes for head 1500 wall 2.4 mm

Farmed pipe, inner diameter 8.0mm, wall 2.4mm.

Figure no. 1 shows from left to right the head cover 50 with tube installed, a connection / tube representing all tubes from 1.6 to 6.4 mm in diameter and a connection / tube corresponding to tubes of 0 .5 and 0.8 mm equipped with stainless steel charge/discharge capillaries.

Figure No. 1

Fuse change

The fuse holder box is part of the power base located at the rear of the pump. See figure.

Base
Fusible
Interruptor

Pry with a screwdriver between the central part of the fuse-holder box and the upper part of the power supply base to remove the fuse-holder box. The box remains attached without being fully extracted. There are two fuses. The one closest to the power base is the fuse to be replaced by the spare fuse located on the outside. Press the box in to restore its original position. Remember that you no longer have a replacement fuse.

Information of interest

Disposal of waste electrical and electronic equipment by users within the European Union.

This symbol on the product or on the packaging Indicates that it may not be disposed of as normal household waste. You must dispose of your residual equipment by handing it over to the collection agency for the recycling of electrical and electronic equipment. For more information about recycling this equipment, contact your local office, the store where you purchased the equipment, or your household waste disposal service. Recycling materials helps conserve natural resources and ensure that it is recycled in a way that protects human health and the environment.

FLOW TABLES

Flow chart - Regulation intervals

Code	rpm	Fits	0,5 mm	0,8 mm	1,6 mm	3,2 mm	4,0 mm	4,8 mm	6,4 mm	8,0 mm	9,6 mm	Ø
1.8731.25	10	CF-4r	0,01-0,25	0,03-0,62	0,2-2	0,5-6	0,7-9	No				
1.8731.28	80		0,15-1,8	0,4-4,5	1-15	4-40	7-57					
1.8736.00	240		0,6-5,2	1,5-16	5,6-65	25-225	35-283	70-400	130-700	No		
1.8736.15	80		0,15-2,2	0,4-5,6	1,3-24	3,8-73	5,9-114	8,9-145	16-258			
1.8736.12	30		0,05-0,8	0,13-2,0	0,6-7,5	1,5-23	2,1-35	3,2-45	5,7-81			
1.8747.00	270	CF3r	0,5-7,0	1,3-18	7,5-79	20-257	32-404	75-600	130-900	200-1300	No	
1.8747.11	110		0,14-2,2	0,3-4,6	1,5-31	4,4-114	6,9-179	16-241	28-428	44-668		
1.8748.20	270	5000	0,12-1,8	3-28	14-112	43-449	68-705	100-999	165-1725	240-2760	348-4025	
1.8748.00	270	2000	8.0 mm diameter tube only							200-2200	No	
1.8748.15	270	1500	Choosing between 8.0mm or 9.6mm diameter tube							400-2000	600-3000	
1.8747.08	110	MMB	See flow rates in "MMB-6 Head"									

The 6.4 tube on the 50 heads is for Intermittent use.

MMB-8r head flow table

Tube Inner Diameter mm	0,13	0,19	0,25	0,38	0,50	0,63	0,76	0,88	1,02	1,14	1,29
Flow ml/rpm	0,001	0,003	0,004	0,008	0,013	0,024	0,035	0,048	0,06	0,08	0,95
Maximum continuous flow l/min	0,01	0,30	0,47	0,83	1,40	2,60	3,90	5,30	6,60	8,80	10,0
Maximum continuous speed rpm	100	100	110	110	110	110	110	110	110	110	110
Maximum pressure bar*					2				2		
Maximum vacuum mm Hg					400				400		

MMB-8r head flow table

Tube Inner Diameter mm	1,42	1,47	1,62	1,86	1,86	2,06	2,38	2,54	2,79
Flow l/rpm	0,11	0,12	0,13	0,15	0,18	0,22	0,26	0,30	0,33
Maximum continuous flow l/min	12,0	13,0	14,0	17,0	20,0	24,0	29,0	33,0	36,0
Maximum speed continued	110	110	110	110	110	110	110	110	110
Maximum pressure bar*			2F1,5S			1,3		1,5F1S	1
Maximum vacuum mm Hg			300			300		200	200

- *With vertical position of the reel fixing lever and head fully loaded
- F- with Farmed tube
- S- with Silicone tube
- With the lever displaced from its vertical position, it is possible to work against higher pressures, but a Torque of two to three times greater and the duration of the tubes will be shortened

WARRANTY

DURATION:

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

The guarantee is given against manufacturing and material defects for an average work week of 40 hours. The guarantee is reduced proportionally to the increase in working hours.

Repairs will be made in our factory. Otherwise, the guarantee will only include the replacement of the elements defective.

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

The parts replaced free of charge remain our property, reserving the right to request their return, Free shipping to our home. Repairs or replacement of parts during the warranty period does not extend the initial warranty.

Our responsibility is limited to the attached guarantee and not to possible accidents to persons or other things.

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

"CE" DECLARATION OF CONFORMITY

DINTER S.A. DINKO Instruments c/ Encarnació, 123-125 / 08024-Barcelona

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

- Low Voltage Directive Directive D2006/95/CEE of December 12, 2006

- Essential requirements of Annex I of the Machinery Directive 2006/42/CEE of May 17, 2008

-Electromagnetic compatibility EC relative to the Electromagnetic Compatibility Directive 2004/108/CEE of the 15th of December 2004

-Safety for electrical measurement, control and laboratory devices. EMC requirements. EN 61326

-Safety rules for electrical measurement, control and laboratory devices. Part I. General requirements EN 61010-1

However, the user must observe the instructions for assembly and connections indicated in the catalogs of Technical instructions.

Name, charge:	Joan A. Bravo Technical Director	Josep X. Sensada Quality Manager
Business		

Model: Peristaltic Pumps D-25Vplus. Codes 1.9731.XX/1.9735.XX/1.9747.XX/1.9748.XX