

Installation and maintenance guide



GP CONTROLLER GEAR VOLUMETRIC PUMPS



DAV TECH SRL

Via Ravizza, 30 - 36075 Montecchio Maggiore (VI) - ITALY

Tel. 0039 0444 574510 - Fax 0039 0444 574324

davtech@davtech.it - www.davtech.it

INDEX

Foreword	pag. 3
References to ECC standards	
Contents of Manual	
Topic and purpose of the manual	pag. 4
Manual use and retention	
Warnings and guarantees	pag. 5
Manufacturer's address	
Conditions of use	pag. 6
Controller features	
Installation	
Connections	pag. 7
Diagram and function of connectors	pag. 8
HMI	pag. 11
Turning on the machine	pag. 16
First start and useful tips	pag. 17
"Fast command" mode	
Controls functioning mode	
MODBUS PLC registers	pag. 18
Troubleshooting	pag. 18
Components legend	pag. 19

The contents of this manual are strictly technical and owned by DAVTECH S.R.L. , it is therefore forbidden to reproduce, disclose or modify partially or completely its content without written permission. The owner company protects its rights strictly by law.

FOREWORD

This manual provides you all the information you need for the use and maintenance of the system.

The good operation and durability of the equipment will depend on the good maintenance and attention in its use.

This manual is designed for maintenance operators and technicians, and contains the characteristics, technical data, operating instructions and preventive and corrective maintenance plan.

Operators and maintenance technicians must read what is stated in this manual before operating on the system.

This document and the documentation attached must be kept throughout the life of the equipment and stored in a place accessible to the personnel proposed for use and maintenance of the same.

REFERENCES TO ECC STANDARDS

The machine to which this manual is referred complies with the following:

- Machinery Directive 2006/42/EC of the European Parliament and council of 17 May 2006
- 2014/30/EU: of the European Parliament and of the Council of 26 February 2014 concerning the harmonisation of member states' laws on electromagnetic compatibility (recast).

CONTENTS OF MANUAL

The following manual contains all the information related to the use and maintenance of the controller.

Then there is the list of subjects dealt with.

> Summary of the indications provided for marking, excluding the serial number, possibly supplemented with indications to facilitate maintenance operations, such as references to importers or any service centers;

> Expected terms of use, intended as normal use and reasonably intended use;

> Instructions to run without any risk:

- commissioning
- use
- transport
- installation
- assembly and disassembly
- adjustment
- maintenance and repair

This document will be accompanied by drawings and diagrams necessary for commissioning, maintenance, control and inspection and, if necessary, repair.e all'occorrenza la riparazione.

TOPIC AND PURPOSE OF THE MANUAL

This manual is dedicated to the user for the maintenance of the equipment, in order to provide main technical datas characteristic of the system, a technical description of the various functional groups that make it up, as well as the main procedures of use and the information necessary to carry out the preventive and corrective maintenance of the plant.

The manual is aimed at personnel who has a good knowledge of processing techniques, mechanical and electrical design; it involves both the management staff and the technical assistance technicians.

This manual contains information about the machine to allow the personnel using it to operate safely and ensure perfect efficiency throughout their life. For the proper use of the system, it is assumed that the working environment is adapted to current regulations in the areas of safety and hygiene.

Installation and maintenance guide

MANUAL USE AND RETENTION

This user and maintenance manual is related only to the “**GP CONTROLLER**” machine made by **DAV Tech S.r.l.** and is prepared in accordance with the Machinery Directive 2006/42/EC of the European Parliament and Council of 17 May 2006.

The function of the machine is only to **control and manage the dispensing of two-component products through the PDP series of dispensing.**

The machine must be installed in an appropriate working environment and the surrounding space must always be cleared of obstacles, clean and well lit.

What is contained in this manual does not include any risks that may arise after coupling with other machines.

It is forbidden to modify or tamper this manual by personnel not delegated by the Manufacturer.

The User Manual and Maintenance can never replace an adequate operator experience.

In case of transfer of the plant, the user is invited to report to the manufacturer the address of the new owner to facilitate the transmission of any additions of the Manual to the new user.

The Manual is related to the configuration of the plant under the conditions in which it was made and reflects the state of the technique at the time of marketing of the machine.

This Manual and its annexes must be carefully kept in an easily accessible place known to all users (operators and maintenance personnel) and must always be available for consultation.

WARNINGS AND GUARANTEES

All the construction elements, the connecting and control devices have been designed and manufactured with an adequate degree of safety, such as to withstand abnormal stresses or in any case higher than those of normal use.

An accurate choice was made of the materials and components to be used in the construction of the equipment, subjecting to regular testing before delivery.

The good performance, over the time, of the system also depends on proper use and adequate preventive maintenance.

It prohibits the use of the system for a different use than what is indicated in the manual and the manufacturer cannot be held responsible for failures, inconveniences or injuries due to non-compliance with this prohibition.

The warranty conditions agreed with suppliers for the different parts of the machine and with the customer. All is specified in the respective contract documents.

The manufacturer of the machine provides assistance in the manner specified by the manual.

Looking to the complexity of the machine, the specialist assistance of the manufacturer must be expressly used for any intervention not provided for and authorized by the manual.

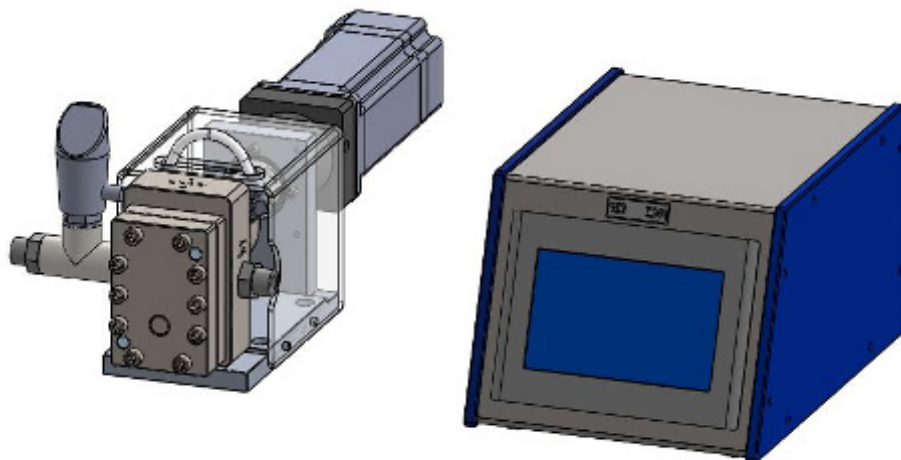
Original spare parts should preferably always be used. Incorrect assembly and/or use of non-original spare parts exempt the manufacturer from any liability.

MANUFACTURER'S ADDRESS

For any needs, informations or doubts regarding use, maintenance, installation or request of spare parts, please contact the technical office of DAV tech S.r.l.

Any request for assistance from the customer or technical aspects of the document must be addressed to:

DAV Tech S.r.l.
Via G. Ravizza, 30
36075 - Montecchio Maggiore (VI)
ITALY
Tel. +39 0444 574510



CONDITIONS OF USE

Power supply voltage	100-230V +- 10% (monophase)
Average consumption	600 W
Frequency	50-60 Hz
Room temperature	From 10 to 45 °C
Humidity	From 5 to 90% non-condensing
Ionizing radiation	NOT allowed
Storage temperature	From -20 to 55 °C

CONTROLLER FEATURES

- Two-mode dispensing management: predetermined quantity and same-speed dispensing (jog);
- Automatic purge;
- Output pressure monitoring;
- Levels management;
- Digital input communication with an external device, also with recipe selection;
- MODBUS communication via TCP/IP.

INSTALLATION

The machine must be positioned also considering compliance with current regulations regarding the requirements of the working environments, lighting, ventilation, etc. (Annex IV 81/2008).

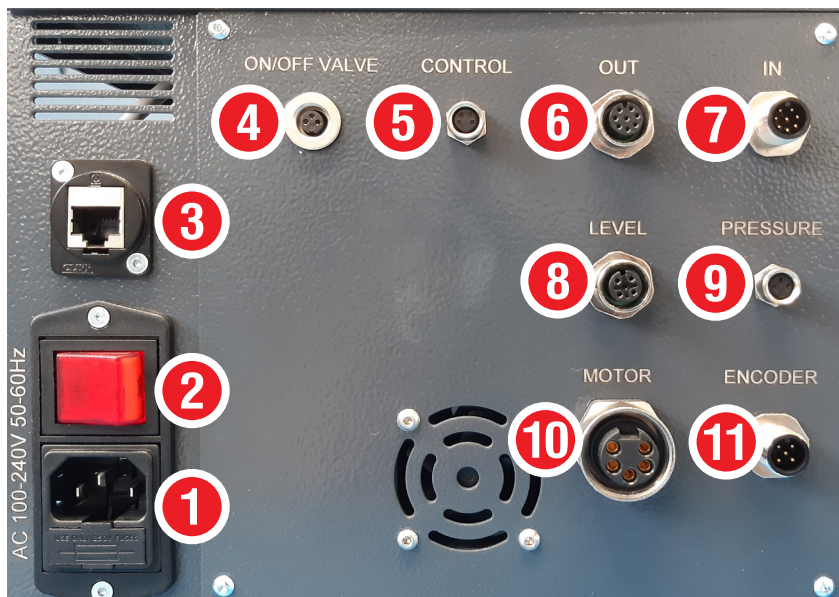
The electrical connection to the line must be made by means of the supplied cable.

Installation and maintenance guide

CONNECTIONS

In the back of the controller there are various connectors that allow you to communicate with external systems and control the GP dispensing device.

This paragraph explains the function of each connector.



- 1** Power outlet: connect to the power supply.
- 2** Power switch: power on the controller.
- 3** Ethernet port: allows you to communicate with the controller via TCP/IP Modbus protocol, and can also be used to perform remote technical assistance.
- 4** On/off valve: allows you to control in 24VDC the opening/closing of an electro-valve (max. 10W).
- 5** Control: permette di ricevere il segnale di dosatura e di inviare il segnale di fine dosatura.
- 6** Out: allows you to communicate with external devices via digital signals.
- 7** In: allows you to receive digital inputs to perform various operations.
- 8** Level: allows you to receive the signal from the product level sensor.
- 9** Pressure: allows you to receive the signal from the pressure sensor installed output to the GP
- 10** Motor: Allows you to manage stepper pump motor
- 11** Encoder: Allows you to manage the encoder of stepper pump motor

⚠ WARNING! The power sources that are on the connectors must be used only for probes connected to the controller input. If you need to connect the controller with an external device that already has a power source, you must connect **ONLY** the negative one (GND); the positive **MUST NOT** be connected, because if you do so the power sources will be in parallel.

DIAGRAM AND FUNCTION OF CONNECTORS

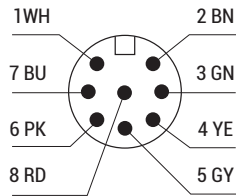
This paragraph describes connection patterns for using cables.

INPUT CONNECTOR (IN)

CONNECTOR 7		
M12 8 POLES M. INPUT		
PIN	COLOR	DESCRIPTION
1	WHITE	BIT 0 RECIPES
2	BROWN	BIT 1 RECIPES
3	GREEN	BIT 2 RECIPES
4	YELLOW	BIT 3 RECIPES
5	GREY	BIT 4 RECIPES
6	PINK	START DISPENSING
7	BLUE	PARK
8	RED	+ 24 VDC

Through this connector it is possible to call the recipes (if selected the mode “recipes from digital I/O”), perform a dispensing command or inform the controller that the dispensing device is in the parking position (park).
Exchange signals for automatic line, free terminal for connection.

CONNECTOR INPUT
CONNECTOR LEGEND
M12 8 POLES



Installation and maintenance guide

OUTPUT CONNECTOR (OUT)

CONNECTOR 6		
M12 8 POLES F. OUTPUT		
PIN	COLOR	DESCRIPTION
1	WHITE	ALLARM
2	BROWN	READY
3	GREEN	END DISPENSING
4	YELLOW	COMMAND EV
5	GREY	END PRODUCT
6	PINK	FREE
7	BLUE	ALLARM DRIVE
8	RED	0 VDC

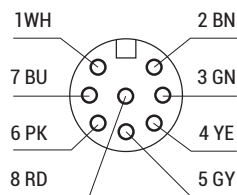
Through this connector the controller communicates with digital signals various dispensing states.

The description of the signals it transmits is given in the table above.

For "EV Command" max. 10W usage.

Exchange signals for automatic line, free terminal for connection.

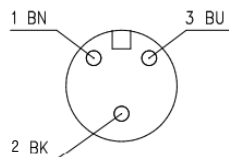
OUTPUT CONNECTOR CONNECTOR LEGEND M12 8 POLES



ON/OFF VALVE CONNECTOR (ON/OFF VALVE)

CONNECTOR 4		
M9 3 POLES F. COMMAND EV		
PIN	COLOR	DESCRIPTION
1	BROWN	NOT CONNECTED
2	BLACK	COMM. EV
3	BLUE	0 VDC

ON/OFF VALVE CONNECTOR CONNECTOR LEGEND M8 3 POLES



Through this connector it is possible to control the opening/closing of an external electro-valve.

The same signal is given by the "OUT" connector, the "ON/OFF VALVE" connector can be used as an alternative.

When used, the electro-valve should not absorb more than 10W. Free terminal for connection.

CONTROL CONNECTOR

CONNECTOR 5		
M8 4 POLES F. START + END DISPENSING		
PIN	COLOR	DESCRIPTION
1	BROWN	+ 24 VDC
2	WHITE	END DISPENSING
3	BLUE	0 VDC
4	BLACK	START DISPENSING

Through this connector it is possible to control the dispensing and receive an end-dispensing signal. Same signals/data are received from the "IN" and "OUT" connectors, the "control" connector can be used as an alternative. Free terminal for connection.

LEVEL CONNECTOR (LEVEL)

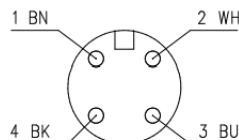
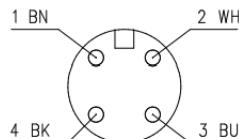
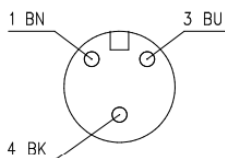
CONNECTOR 8		
M12 4 POLES F. LEVEL		
PIN	COLORE	DESCRIPTION
1	BROWN	+ 24 VDC
2	WHITE	NOT CONNECTED
3	BLUE	0 VDC
4	BLACK	PRODUCT LEVEL

Through this connector the controller receives the product exhaustion signal. You can set it NO or NC through the controller parameters. Male female pre-wired cable.

PRESSURE CONNECTOR (PRESSURE)

CONNECTOR 9		
M8 3 POLES F. PUMP PRESSURE SWITCH		
PIN	COLOR	DESCRIPTION
1	BROWN	+ 24 VDC
2		
3	BLUE	0 VDC
4	BLACK	PRESSURE SWITCH SIGNAL

Through this connector the controller receives the analog signal indicating the output pressure of product from GP pump. Male female pre-wired cable.

**CONNECTOR
START - END DISPENSING
CONNECTOR LEGEND
M8 4 POLES**

**LEVEL
CONNECTOR
CONNECTOR LEGEND
M12 4 POLES**

**PRESSURE
CONNECTOR
CONNECTOR LEGEND
M8 3 POLES**


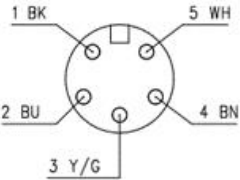
Installation and maintenance guide

MOTOR CONNECTOR (MOTOR)

CONNECTOR 10		
7/8 5 POLES F. POWER DRIVE		
PIN	COLOR	DESCRIPTION
1	BLACK	PHASE A+
2	BLUE	PHASE A-
3	YELLOW / GREEN	GND
4	BROWN	PHASE B+
5	WHITE	PHASE B-

Through this connector the controller commands the rotation of the stepper motor.
Male female pre-wired cable.

**MOTOR
CONNECTOR
CONNECTOR LEGEND
7/8 5 POLES**

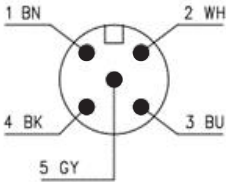


ENCODER CONNECTOR (ENCODER)

CONNECTOR 11		
M12 5 POLES M. ENCODER DRIVE		
PIN	COLORE	DESCRIZIONE
1	BROWN	+24 DC
2	WHITE	ENC. A
3	BLUE	0 VDC
4	BLACK	ENC. B
5	GREY	ENC. Z

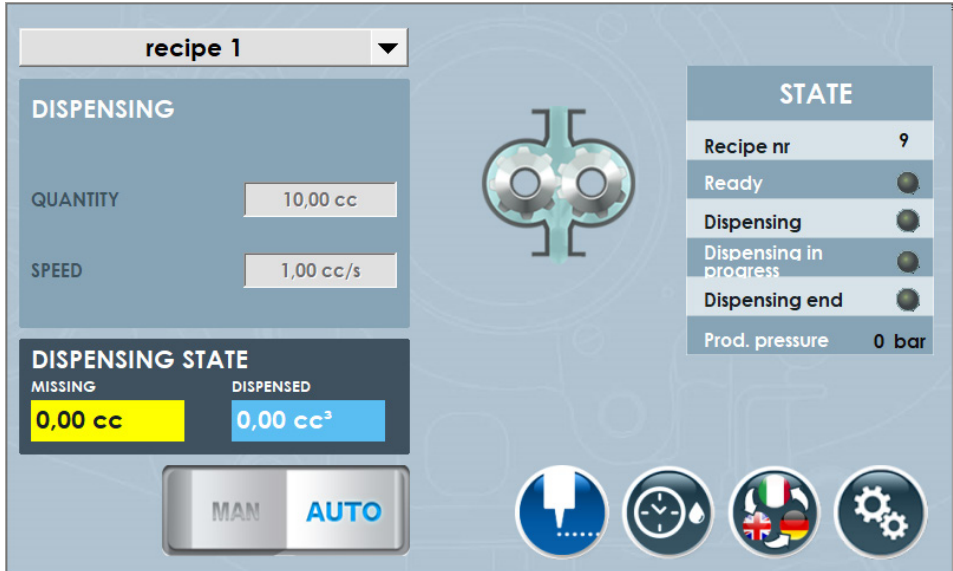
Through this connector the controller receives the position information of the stepper motor
Male female pre-wired cable.

**ENCODER
CONNECTOR
CONNECTOR LEGEND
M12 5 POLES**



HMI

The system is equipped with an HMI display, through the display you can see the states and parameters set in the controller, and eventually modify them.



RECIPE SELECTION

- **RECIPE SELECTION:** in “auto” mode it is not possible to change the parameters of the recipe “on the fly” but you can select one of the recipes set through the drop-down menu.

DISPENSING

- **QUANTITY:** Indicates the quantity that is automatically delivered after pressing the “dispensing” button on the screen, **if the quantity is zero, the system goes in jog mode, so the quantity matches to the dispensing signal active time.**
- **SPEED:** indicates the speed (flow rate) at which the product is dispensed.

MAN/AUTO SELECTOR

- It allows you to switch from recipe selection mode via drop-down menu (auto) to direct data entry mode (man). When the selector is on “man” you can enter directly dispensing data that you want to use.

SYSTEM STATE

- **RECIPE NR:** indicates the number of the recipe currently selected/recalled.
- **READY:** indicates that the system is ready and therefore ready to work.
- **DISPENSING:** indicates the reception of the dispensing signal.
- **DISPENSING IN PROGRESS:** indicates an ongoing dispensing.
- **DISPENSING END:** indicates the end of a dispensing cycle.

Installation and maintenance guide

- **PRESSURE:** indicates the output pressure detected by the sensors of the PDP pump (if installed).

BUTTONS

- **DISPENSING:** performs a dispensing cycle according to the parameters set in the current recipe.
- **PURGE ACTIVATION (DROP CLOCK):** when pressed (orange) indicates the ability to automatically purge in the set modes.
This button is displayed only if automatic purging is enabled.
- **LANGUAGE SELECTION:** language changing
- **GEARS:** access to the main menu

LOGIN CREDENTIALS

In order to access to various menu, enter the following credentials:

USER: dav

PASSWORD: dav

To access more advanced levels of settings contact Dav Tech.



- **PARAMETERS:** access to the parameter menu.
- **RECIPES:** access to the recipe setup menu.
- **INTERFACING:** access to inputs and outputs status.

Parameters

Sistema
Pompe

Weight mode	OFF
Product level NC	OFF
Interfacing via MODBUS TCP	ON
Recipe selection	MANUAL
Delay pump valve	0 ms
Max product pressure	0 bar
Stop dispensing	NONE
Auto purge mode	PARK
Purge quantity	1000 mm ³
Purge interval	10 s

- **WEIGHT MODE:** The controller has the possibility to work in “weight mode”, this means that after entering the “specific resin (A)/hardening (B) gravity” all calculations and units will be expressed in mg instead of mm3 (the parameter appears only if “weight mode” is on ON).

- **PRODUCT LEVEL NC:** Depending on the type of sensor connected, you can use a NO (off selector) or NC (selector on ON) contact. When a level sensor is used, upon receipt of the signal the controller blocks the execution of new dispensing cycles until the signal remains.

- **INTERFACING VIA MODBUS TCP:** If ON enables TCP/IP MODBUS communication.

- **PRODUCT SPECIFIC GRAVITY:** indicates the specific gravity of the product (only if “weight mode” is on “ON”).

- **RECIPE SELECTION:** indicates how the recipe is chosen;
 - > Manual - (via drop-down menu).
 - > Digital I/O - (via connector “IN”).
 - > TCP/IP MODBUS - (via TCP/IP MODBUS after enabling the selector “interfacing via TCP/IP MODBUS”).

- **MAX PRODUCT PRESSURE:** indicates the maximum output pressure threshold beyond which the controller enters an alarm state. Max pressure can be fixed at a value lower than 150bar but NOT higher.

- **DELAY PUMP VALVE:** indicates the time between the opening of a possible electro-valve and the beginning of the dispensing cycle. If no electro-valve is used leave it at zero.


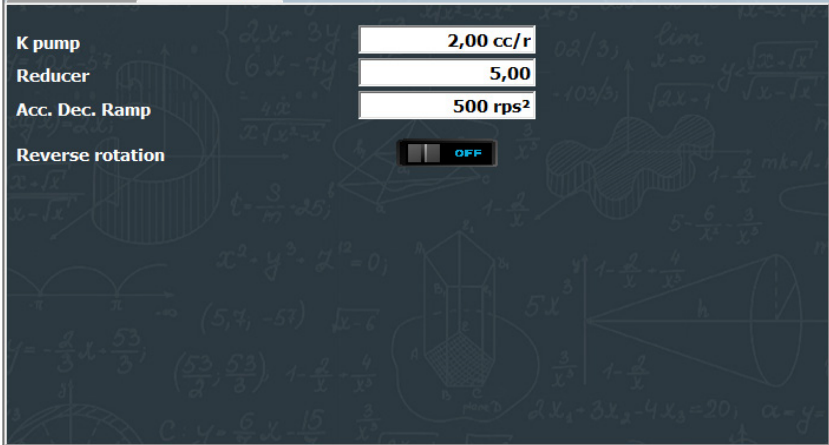
Installation and maintenance guide

- **DISPENSING STOP:** Indicates the criteria by which to end the current dosing cycle;
 - > **None** - (it will not be possible to stop the dispensing cycle in progress).
 - > **Interruption** - (when the dispensing signal is released, the cycle will be interrupted; at the next signal the dosing cycle will start over).
 - > **Pause HI** - (the current dispensing cycle will be stop when the controller receives a dispensing signal again; when the dispensing signal is sent again, the cycle will be resumed from the interruption and the remaining quantity will be dosed.)
 - > **Pause LO** - (the current dispensing cycle will be paused when the controller receives no longer the dispensing signal; when the dispensing signal is sent back, the cycle will be resumed and will end if the signal remains "high" for the duration of the cycle).
- **AUTO PURGE MODE:** indicates under what circumstances it is necessary to carry out an automatic purge; the general switch to activate automatic purging (when on "ON" and "Parking") is present on the main page.
 - > **Always OFF** - (automatic purging will not be performed).
 - > **Always ON** - (automatic purging will always be performed according to the settings indicated below).
 - > **Park** - (automatic purging will only be carried out if the parking signal is received).
- **PURGE QUANTITY:** indicates the amount of product to be purged.
- **PURGE INTERVAL:** indicates with what interval to purge the above quantity.

Parameters

Sistema**Pompe**

K pump	2,00 cc/r
Reducer	5,00
Acc. Dec. Ramp	500 rps ²
Reverse rotation	<input type="checkbox"/> OFF



- **K PUMP:** indicates the volume of product dispensed at each complete rotation of the pump.
- **REDUCER:** indicates the reduction ratio given by the planetary gearbox installed between the stepper motor and the gear pump.
- **ACC. DEC. RAMP:** indicates the acceleration and deceleration ramp.
- **REVERSE ROTATION:** allows to reverse fluid inlet / outlet in the gear pump.

The screenshot displays a control interface for a GP Controller Gear Volumetric Pump. At the top, a grey bar contains the text "recipe 1" and a downward-pointing arrow. Below this, three input fields are arranged vertically on the left, each with a corresponding value in a grey box on the right. The first field is labeled "RECIPE NR" and contains the value "9". The second field is labeled "DISPENSING QUANTITY" and contains "10,00 cc". The third field is labeled "DISPENSING SPEED" and contains "1,00 cc/s". At the bottom of the interface, there are four circular icons with labels below them: a blue circle with a white left-pointing arrow labeled "BACK"; a blue circle with a white document icon and a plus sign labeled "NEW RECIPE"; a green circle with a white floppy disk icon labeled "SAVE RECIPIES"; and a red circle with a white 'X' icon labeled "DELETE RECIPE".

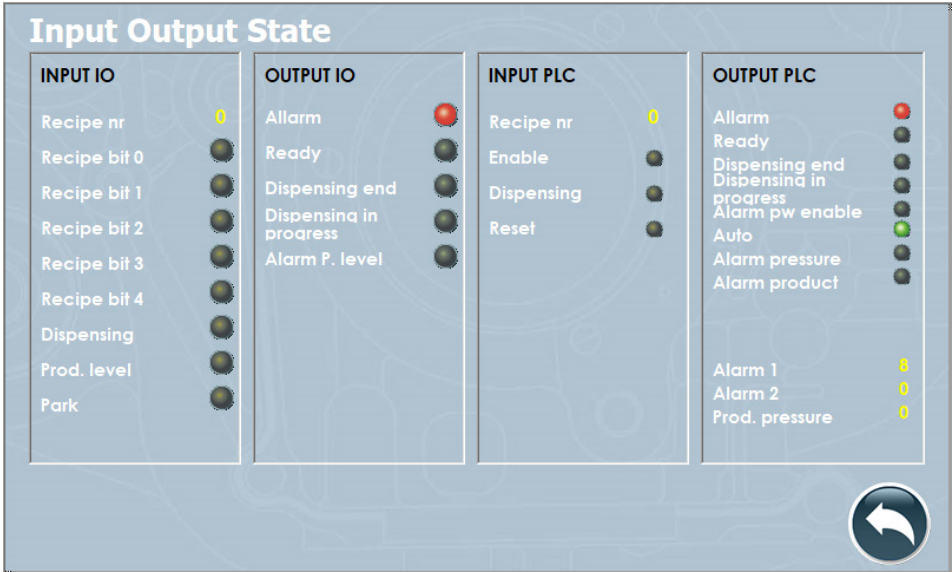
Label	Value
RECIPE NR	9
DISPENSING QUANTITY	10,00 cc
DISPENSING SPEED	1,00 cc/s

BACK NEW RECIPE SAVE RECIPIES DELETE RECIPE

- **RECIPE DESCRIPTION:** allows you to change the description of the current recipe or choose another recipe.
- **RECIPE NR:** allows you to give a number to specific recipe for recall via external signals.
- **DISPENSING QUANTITY:** quantity to be dispensed when the current recipe is selected, if left at zero the quantity corresponds **to the time in which the dispensing signal is maintained**.
- **DISPENSING SPEED:** the flow rate with which the system will deliver the set quantity.

BUTTONS

- **NEW RECIPE:** create a new recipe with zero parameters
- **FLOPPY DISK:** save the recipe
- **CROSS** delete the selected recipe.



On this page you can view in real time all the states of the controller inputs and outputs.

- **INPUT/OUTPUT IO** when working in digital I/O
- **INPUT/OUTPUT PLC** when working in TCP/IP MODBUS.

TURNING ON THE MACHINE

Before proceeding to the first power on, make sure that the controller is properly connected to the mains and properly connected to the GP pump.

IGNITION PROCEDURE:

The controller must be accessed via the switch on the back.
After waiting for the HMI to turn on, reset any alarms.

SHUTDOWN PROCEDURE:

To turn OFF the controller simply press the switch on the back.

FIRST START AND USEFUL TIPS

The controller has been designed to work stand-alone or to work via external signals.

The controller communicates the various states and operations via digital I / O signals or via Modbus TCP / IP protocol depending on the selected settings.

VERIFY CONNECTIONS

When starting the system for the first time, check all connections made.

To operate in stand-alone mode, it is sufficient to connect only the motor and encoder cables of the GP dispenser.

PUMP BAITING

At the first start of the GP dispenser, it is recommended to prime the system with the product and start the dosage with a flow rate not exceeding half pump displacement.

This is to avoid running the pump “dry” at high speeds.

As soon as the product starts to come out then it is possible to use higher speeds always taking into consideration any limits given by products with high abrasion, with this type of products it is recommended to remain at low flow rates.

START DISPENSING

After carrying out the preliminary operations it is possible to start dispensing.

Set the parameters in the recipe and press the button to send the dosage signal.

If the dosage is not successful, the controller will notify you with an alarm pop-up.

“FAST COMMAND” MODE

In case of use with very tight cycle times in which even a few tenths of a second of latency can affect, the controller can be used in “fast command” mode, to use the controller under these conditions it is enough to set the “stop” mode in the parameter “stop dispensing”.

As described in the previous paragraph, in “interruption” mode it is necessary to maintain the dispensing control for the duration of the dose cycle, i.e. until you receive the “end of dispensing” signal”.

CONTROLS FUNCTIONING MODE

The dispenser can be controlled via HMI, digital input or MODBUS TCP/IP. These can work combined between each other. Also, depending on the active mode (predetermined quantity or same-speed dispensing (jog)), the controller works differently:

- Same-speed dispensing (jog): the controller controls the dispensing until there's the control signal; if this signal ends, the dispensing ends. In this mode, the end dispensing signal is not active;
- predetermined quantity: the controller works differently based on the “End dispensing” parameter, that is:
- “None” mode: To begin the dispensing is sufficient to give an impulse to the system (i.e. press the button). It's not possible to interrupt the dispensing cycle and the end dispensing signal is not active;
- “Interruption” mode: To begin the dispensing the command must be continuous (i.e. keep pressing the button) until setpoint value is reached. When the setpoint is reached, the end dispensing signal is activated and is possible to turn off the dispensing command;
- “Pause HI” mode: To begin the dispensing is sufficient to give an impulse to the system (i.e. press the button) and with a second impulse is possible to block the dispensing. To continue the dispensing, another impulse is needed and so on;
- “Pause LO” mode: To begin the dispensing the command must be continuous (i.e. keep pressing the button). If the command is interrupted, the dispensing is blocked, until the command is resumed again.

Installation and maintenance guide

MODBUS PLC REGISTERS

HOLDING REGISTER 0

OUTPUT STATUS

B0 -> Alarm

B1 -> Ready

B2 -> Dispensing end

B3 -> Dispensing in progress

B4 -> Power enable alarm

B5 -> Mod auto

B6 -> Pressure alarm

B7 -> Level alarm

HOLDING REGISTER 1

Alarms 1

B0 -> Timeout modbus drive 1

B2 -> Timeout modbus IO module

B3 -> Timeout modbus PLC

B4 -> Fault drive 1

B6 -> Power alarm drive 1

B8 -> Level alarm

HOLDING REGISTER 2

Alarms 2

Empty

HOLDING REGISTER 3

Pressure 1

HOLDING REGISTER 5

Last dispensed quantity LSB

HOLDING REGISTER 6

Last dispensed quantity MSB

HOLDING REGISTER 10

Commands

B0 -> enable

B1 -> dispensing

B2 -> Alarms reset

HOLDING REGISTER 11

Recipe

For more documentations about MODBUS TCP/IP management contact DAV Tech support at: davtech@davtech.it

TROUBLESHOOTING

ERROR MESSAGES	CAUSE	PROBLEM RESOLUTION
Drive Power Enablement Alarm	Drive does not receive power	Make sure that all conditions are in place for operation, turn the controller OFF and ON again.
The controller does not turn on	Lack of power supply	Replace fuses, check the power line
Drive Connection Alarm	Drive is not connected correctly	Make sure all conditions are ok for operation, turn the controller OFF and ON again
Drive Alarm	The drive is on alarm	Make sure there are all the conditions for operation, turn the controller OFF and ON again.
Level Alarm	The minimum quantity of product has been reached.	Change tank/top up tank.
Pressure Alarm	Output pressure from the pump has exceeded the maximum threshold.	Check that there are no obstructions in the circuit, reduce the dispensing rate.
Drive Power Timeout Alarm	The drive is not responding	Make sure there are all the conditions for operation, turn the controller OFF and ON again.
PLC modbus timeout alarm	TCP/IP modbus communication error	Check wiring and verify that the TCP/IP MODBUS selector in the settings is on.

GP COMPONENTS LEGEND

CONTROLLER ACCESSORIES GP

	USE	CABLE TYPE	QUANTITY
A	POWER SUPPLY	Power Supply Cable	1
B	CONTROL	M8-4 poles Male	1
C	OUT	M12-8 poles Male	1
D	IN	M12-8 poles Female	1
E	LEVEL/ENCODER	M12-5 poles M/F	2
F	PRESSURE (GP - custom cable)	M8-3 poles M /M12-5 poles F	1
I	MOTOR (GP)	7/8-5 poles Male - Female	1
H	ON/OFF VALVE	M9-3 poles Male	1



DAV TECH SRL Via Ravizza, 30 - 36075 Montecchio Maggiore (VI) - ITALY - Tel. 0039 0444 574510 - Fax 0039 0444 574324
davtech@davtech.it - www.davtech.it

Ci riserviamo di modificare in qualsiasi momento, senza preavviso, le caratteristiche tecniche, le dimensioni ed i pesi indicati nel presente manuale. Le illustrazioni non sono impegnative.