



User manual digital dispenser DC 1200 Series



Made in Germany

Dear Customer

Thank you for purchasing our product.

For easy operating we developed this user manual.

Before putting into operation please read this manual carefully and pay attention to the security instructions.

Ihre VIEWEG GmbH

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2 Designated use

The digital dispense controller series DC 1200 can be built up with different options, with technical differences. Therefore, in the following manual is only spoken about the DC 1200.

The digital dispenser DC 1200 is used for precise control of pneumatic dispensing with for example 3 – 55 cc cartridges.

The air output pressure for the cartridge is adjustable with the integrated pressure regulator. An integrated digital pressure sensor at the inlet air gives an additional point for the process safety.

3 For your safety

WARNING:

If the DC 1200 is used for other functions as in this manual described, it could come to personal or material damage. Use the DC 1200 controller only to the functions, which are explained in this user manual. VIEWEG GmbH is not responsible for personal or material damages, which happen because of incorrect using and no designated use.



No designated uses are:

- Modifications at the DC 1200, which are not recommended in this user manual.
- Using of defective or not compatible spare parts.
- Using of not allowed accessories.



SAFETY PRECAUTIONS:

- The DC 1200 works with 100 – 240 V AC voltage. By touching the 100 – 240V AC voltage, there exists danger of life!! Because of this, the DC 1200 must be disconnected from the AC input cable, before opening the housing. It is only allowed for authorized electrical experts to open the housing.
- Use the DC 1200 only with the max. described and allowed power / settings.
- Always wear useful protection clothing.

- More details for using the dispensing material, please see the safety data sheets of the dispensing material.
- No smoking or fire by using flammable material.
- The DC 1200 is only allowed for using inhouse.

4 Scope of delivery

The following parts are included in the scope of delivery:



User Manual



DC 1200 Dispenser



Power cord 230V AC
(Art.-Nr. C-0043)



Air hose
(Art.-Nr. C-0042)



Barrel stand
(Art.-Nr. C-0041)



Foot switch
(Art.-Nr. C-0040)

please find additional accessoires on next page
(without images)

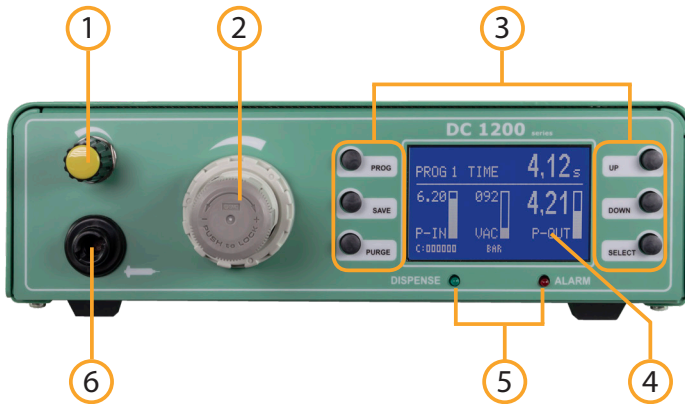
Additional accessoires without image:

Quantity	Description	Part-No.
1	Barrel adapter 30 cc	990180
3	Barrel 30 cc	801004
3	Piston PE 30 cc	801009
1	Needle dispensing set	990062A-G

5 Technical data

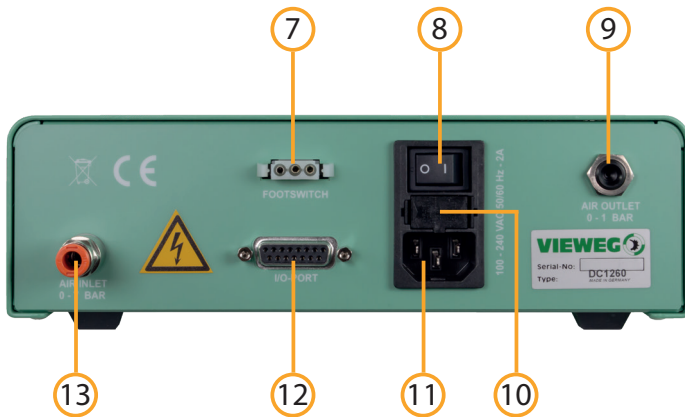
Dimensions	235 x 75 x 220 mm
Weight	ca. 1,50 kg
Power supply	85 – 264 V AC 50/60 Hz
Operating voltage	24 V
Timer	0,01 - 999 sec.
Air inlet	0 - 7 bar
Air outlet	0 - 2 / 4 / 6 bar (precise air regulator)
Vacuum suck-back	<ul style="list-style-type: none"> • indication of all pressures • excellent overview of all necessary data • 3-digits units
Graphic display	128 x 64 pixels
Memory	8 program memory spaces

6 About this dispenser



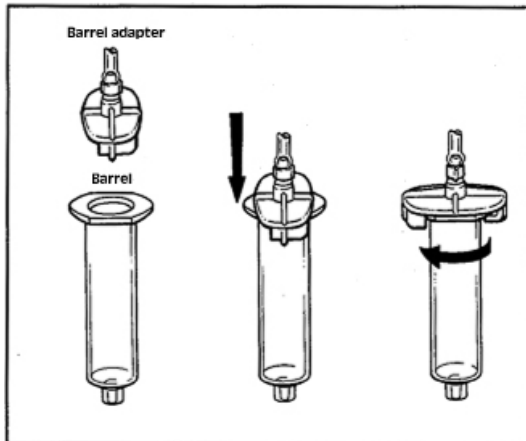
- 1 vacuum suck-back
- 2 pressure regulator
- 3 operating buttons
- 4 display
- 5 status LEDs
- 6 air outlet

- 7 plug for foot switch
- 8 power switch
- 9 air outlet for vacuum suck-back
- 10 fuse 2A T
- 11 power inlet
- 12 I/O-Port
- 13 compressed air inlet



7 Startup

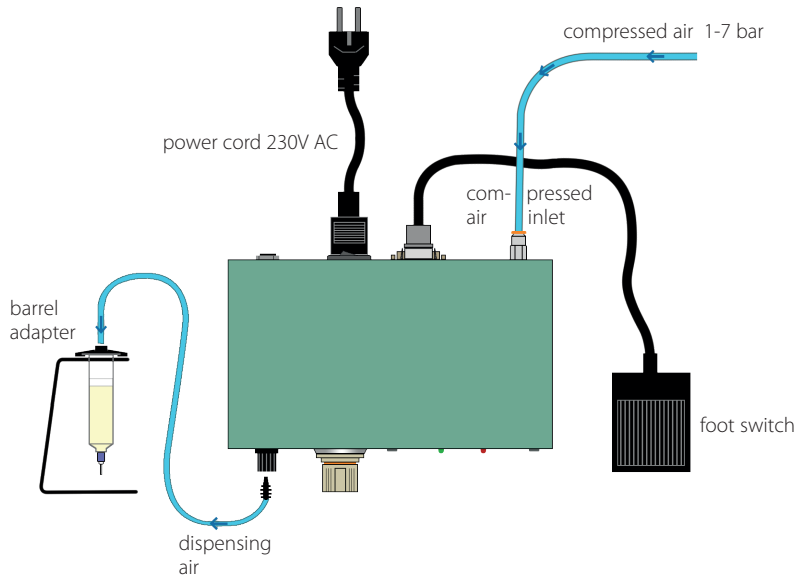
- Connect the power inlet cable to the Power inlet connector on the backside.
- Connect the Air Inlet tube from the compressor to the Air Inlet at the backside of the DC 1200.
- Connect the Footswitch or the dispense cable of the dispense robot to the Footswitch connector on the backside of the DC 1200.
- Switch the DC 1200 on. The display shows the initialisation and the installed software version. After 5 seconds, the display switches automatically to the standard screen and is ready for operation.
- Check the pressure input (e.g. P-IN: 5.6 bar) in the display to be sure, that the air input pressure is connected
- Connect the cartridge to the cartridge adapter like follows:



- Connect the air hose of the cartridge adapter to the air pressure output of the DC 1200 and adjust the pressure for the cartridge on the front side with the pressure controller.
- Adjust the Vacuum to reduce material dripping.

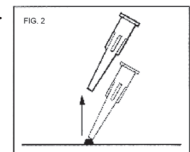
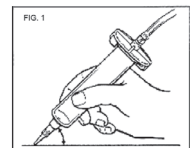
7.1 Connection diagram

Once the unit is connected, it should look like this:

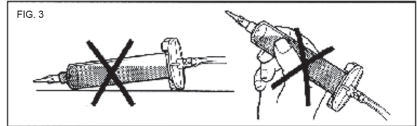


7.2 Usefull tips

- Hold the barrel at approximately 60° as shown.
- After making deposit remove tip as shown.
- Do not permit the liquid to flow back into the DC 1200 as shown. The controller can be damaged.
- To increase the size of dots, you can increase the time, pressure, size of tip.
- To decrease the size of dots, you can decrease the time, pressure, size of tip.
- To increase pressure, turn the pressure regulator clockwise. To decrease pressure, first turn the pressure regulator counter clockwise past the value desired and the clockwise to the value desired.



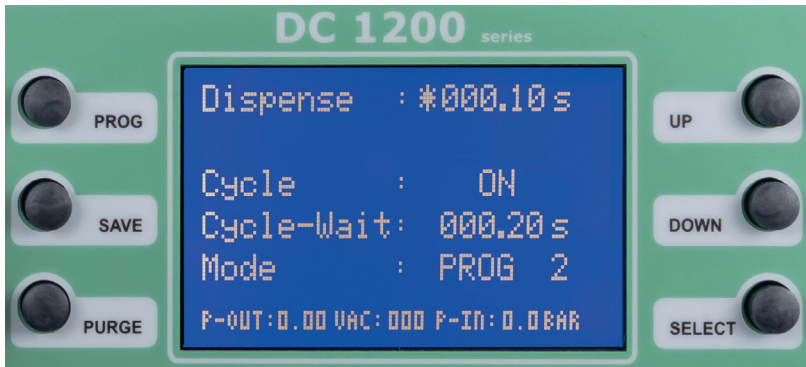
- By pressing the regulator of the pressure regulator, you can fix the setting.
- Always use a piston in the barrel to avoid that material goes back to the controller.
- For thin liquids like water, you can prevent dripping by slowing turning the vacuum control knob counter clockwise.
WARNING – Too much vacuum will cause bubbles and suck liquid back into the controller thus creating permanent damage to the unit.



8 Operating controls

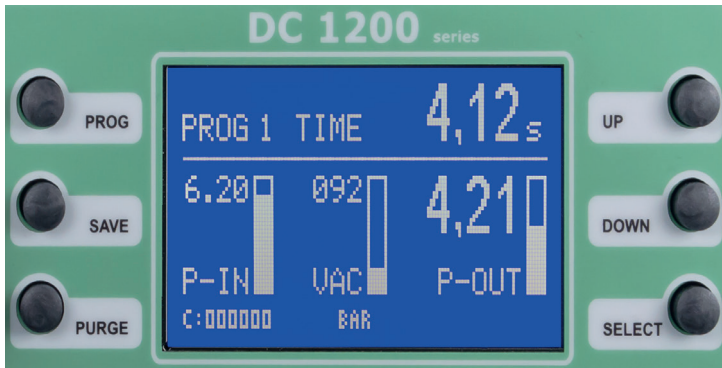
8.1 Start screen

After turning on the device the start screen appears.



After 5 seconds the display returns to the main screen if no action is performed .

8.2 Main screen



The main screen shows clearly all relevant dispensing parameter.

Press the PROG button to go back to the start screen where you can adjust the timer or to save a dispensing program.

8.3 Status LEDs

The Status-LEDs are located below the graphic display.

DISPENSE The DISPENSE LED lights up when the magnetic valve is opened and compressed air is present.

ALARM The ALARM LED lights up, when one of this happens:

- Air pressure Alarm is active
- External Alarm signal transmitted by I/O-Port

8.4 Operating keys



PROG - switches to the next program

By pressing the PROG-Button you will get to the start screen where you can choose the dispensing program.



SAVE - saves the actual parameters

Press the SAVE key for 2 sec. and select the wanted program with the UP and DOWN keys and press SAVE again to store the parameters. If no different program is selected, the parameters get automatically saved in the actual program.



PURGE - starts the dispensing procedure



UP - increases the selected value.

Pressing on the UP key once increases the last digit by one.
By holding the button pressed you can scroll to the wanted value.



DOWN - decreases the selected value

Pressing on the Down key once decreases the last digit by one.
By holding the button pressed you can scroll to the wanted value.



SELECT

The SELECT key moves the asterisk to the next display line.

9 Operation

- **Selecting the operating mode:**

Pressing the PROG key switches to the next program and to manual mode

Manual: In this mode, the dispense time does not get saved and the DC 1200 dispenses as long as the dispense signal is activated by one of the following:

footswitch / purge key / I/O-start.

After dispensing, the dispense time starts again at 0.00 sec.

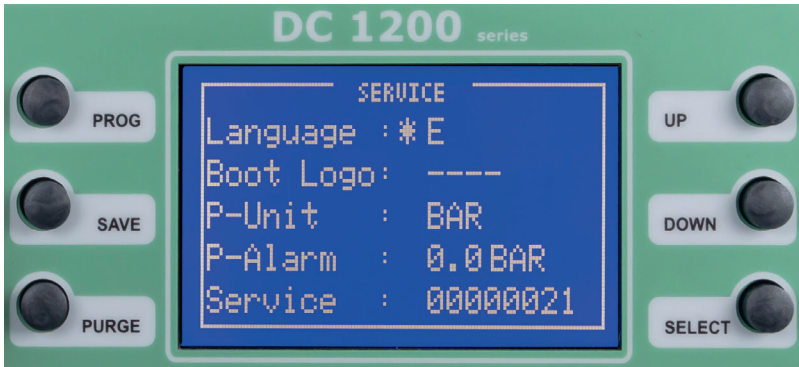
PROG 1-7: If one of the seven programs is selected, the DC 1200 dispenses as long as the value of the dispense time is set for. This dispense cycle is activated by one of the following: footswitch / purge key / I/O-start.

This mode should be selected, if the rotary valve should always dispense for the same time.

- **Set the dispense time:**
The dispense time can be selected with the UP and DOWN keys, and set from 0.01 - 999.99 sec.
- **Activating the Teach-In function:**
The Teach-In function is only available in the manual operation mode. When this function is activated each dispensing activity adds more dispensing time to the actual interval (and not set back to 0.00 sec.). Thus you can approach to a dispensing time interval and material amount when you establish a new dispensing procedure. These value can be saved to one of the preinstalled programs. To reset the timer to 0.00 sec. press SAVE and DOWN key at the same time.
- **Activating the Cycle mode:**
When the device is in cycle mode a single signal starts a continous loop of dispensing processes. The dispenser runs a predefined cycle of exhausting compressed air and waiting time. (see next topic - IDLE time). This looping process can be stopped by sending an other start signal via PURGE key, footswitch or external signal from I/O-port.
- **Adjusting the Cycle mode IDLE time (Zyk-Wartez):**
When the device is in cycle mode, the IDLE time can be set by using the UP and DOWN keys. It can be adjusted from 0.05 to 999.99 sec. The main screen shows a countdown of the IDLE time schematic with a shrinking bar right aside the counter.
- **Cycle counter:**
The cycle counter counts the dispensing procedures after switching ON the DC 1200. The memory of the cycle counter is volatile and gets reset to 000000 after switching OFF the unit.
- **Keylock:**
By pressing SAVE + PROG at the same time, a key lock for the dispenser can be activated. An activated key lock is shown in the display (lower right hand corner) as a lock.
By pressing SAVE + PROG again, the keylock is deactivated.

10 Service menu

10.1 Service screen



For entering the service menu hold the buttons UP and DOWN pressed at the same time while switching on the device.

10.2 Settings

By pressing the SELECT button you can step to the next menu option. The asterisk marks your actual position.

- **Language:**
The system language can be switched between german to english by pressing UP or DOWN button
- **Boot Logo:**
The boot logo can be changed when you type a 4-digit code. This should only be done by the manufacturer.
- **P-Unit:**
Pressing UP or DOWN key switches between PSI and BAR as unit for the digital displayed pressure.

- **P-Alarm:**
By pressing the UP or DOWN key, the value for the low pressure alarm-limit can be selected. If the input pressure is lower than the selected limit, the DC 1200 switches to ALARM mode and no new dispensing is possible.
- **Service:**
The service counter shows the total number of dispensings the device has performed. It is **NOT** resettable.

**NOTE: Press the save key to store new settings. The unit will reboot itself.
If you do not want to store new settings, turn off the power and turn on again.**

11 Electrical connections

11.1 Foot switch

pins: connection between Pin 1 + 3 starts dispensing

11.2 I/O-Port

type: 15-pol. Sub-D female 2-doublrow
pins: see following chart
Supply voltage: The dispenser has an internal 24 V power supply available at Pin 2 + 3 with max. 100 mA.
**Don't apply any supply voltage here!
This can damage the device.**

Pin No.	Input / Output	Description	Comment
1	--	Reserved	Reserved
2	--	GND	GND
3	--	24V DC	24V DC
4	Output	BUSY	Dispensing procedure active
5	--	GND	GND
6	Input	START	Starts dispensing
7	Input	PRG 1	Program select Bit #1
8	Input	PRG 3	Program select Bit #3
9	--	Reserved	Reserved
10	--	Reserved	Reserved
11	Output	READY	Ready signal
12	Output	ERROR	Error signal
13	Input	REMOTE	Remote active
14	Input	ERROR-IN	External Error input
15	Input	PRG 2	Program select Bit#2

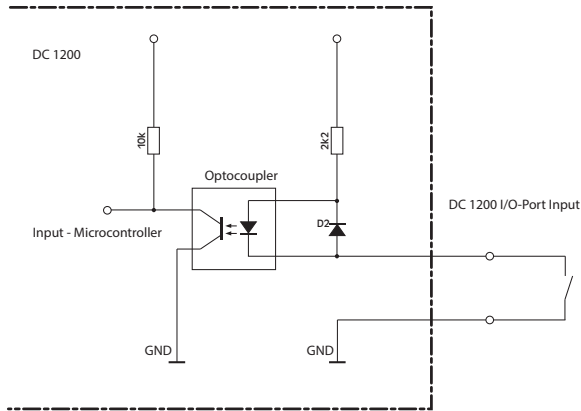
External Program select: (assumed by REMOTE input signal)

Program Nr.	PRG-Selectbit #1	PRG-Selectbit #2	PRG-Selectbit #3
Manual	0	0	0
Program 1	1	0	0
Program 2	0	1	0
Program 3	1	1	0
Program 4	0	0	1
Program 5	1	0	1
Program 6	0	1	1
Program 7	1	1	1

11.3 Wiring Diagrams

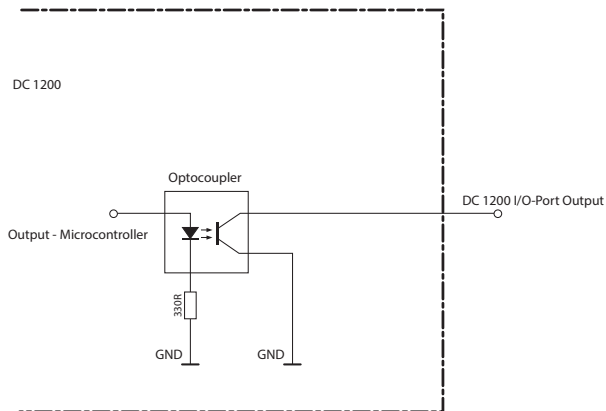
Digital Inputs:

A digital input is active, if the opto coupler is ON. If the opto coupler is connected to GND, the input is activated:



Digital Outputs:

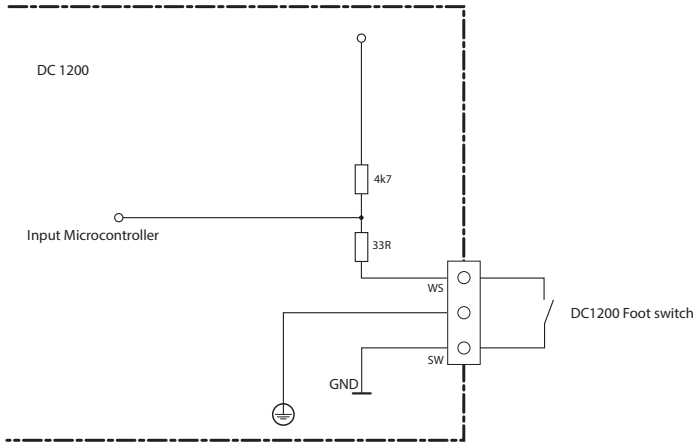
If the digital output is active, the opto coupler is electroconductive.



Foot switch:

The foot switch signal gets activated if the input pin is connected to GND.

Don't apply any supply voltage here. This can damage the device!



12 Maintenance and cleaning

Repairs should only be done by the manufacturer.

Clean the DC 1200 controller only with a clean, smooth and dry cloth.

Do not use disolvent material to clean the DC 1200 controller.

The lamination at the front- or back plate or the housing can be destroyed.

13 Disposal



Dispose the product after the economic life-time according to the legal requirements.

14 Declaration of conformity**CE DECLARATION OF CONFORMITY**

- EG-Low Voltage directive 2014/35/EU
- EG-EMC directive 2014/30/EU

We, as manufacturer declare under our sole responsibility that the following product to which this declaration relates is in conformity with the following EG / EC directives:

Product: **Dispenser**
Type: **DC 1200 Series**

Manufacturer: **VIEWEG Dosier- und Mischtechnik**
Gewerbepark 13
85402 Kranzberg
Germany
Tel.: +49 8166-6784 -0
Fax: +49 8166-6784 -20

The following european standards are used:

- DIN EN ISO 61000-6-3
- DIN EN ISO 61000-6-2



Till Vieweg, managing director

Kranzberg, 08.04.2016



VIEWEG GmbH
Dosier- und Mischtechnik
Gewerbepark 13
85402 Kranzberg
Tel. +49 8166 6784 - 0
Fax +49 8166 6784 - 20
info@dosieren.de
www.dosieren.de