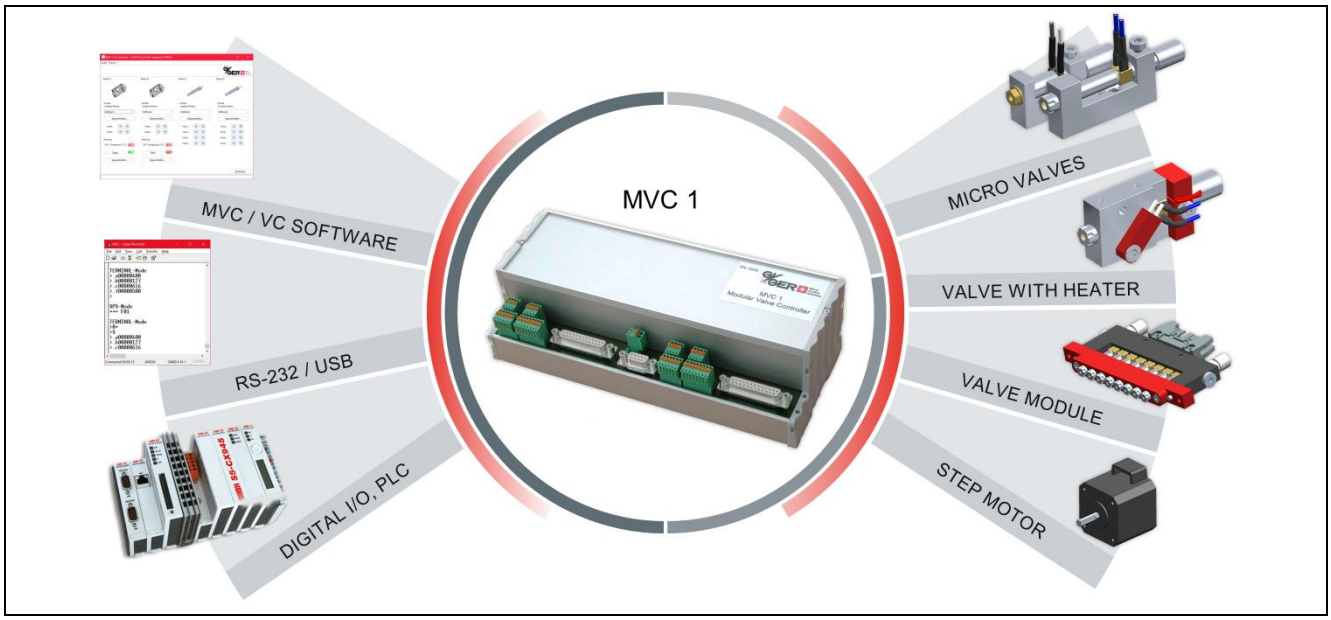
MODULAR VALVE CONTROLLER MVC 1



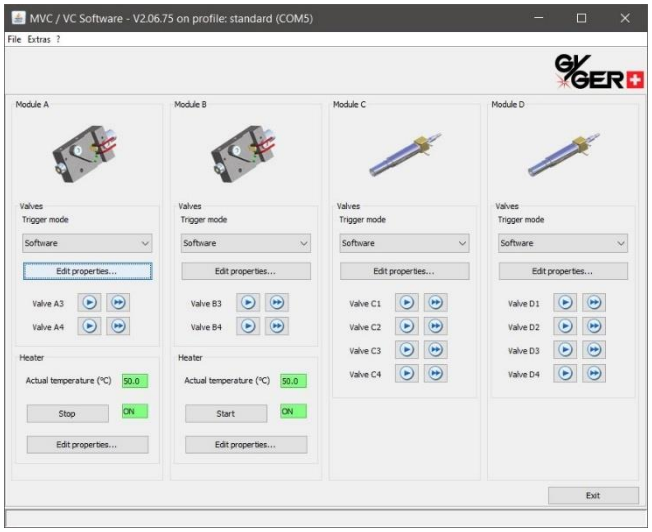
Complete Integrated Solution
The valve controller MVC 1 provides a feature-rich complete solution for dispensing applications depending on customer's need. Optimal dispensing accuracy is given by µs precise control with the "peak and hold" principle.

The microvalves and heaters will be configured by a serial interface (RS232 or USB) via Java-Software or directly with the rich command set.
This allows customers to integrate the MVC 1 as an intelligent driver module in existing systems or to use it as a capable stand-alone solution.

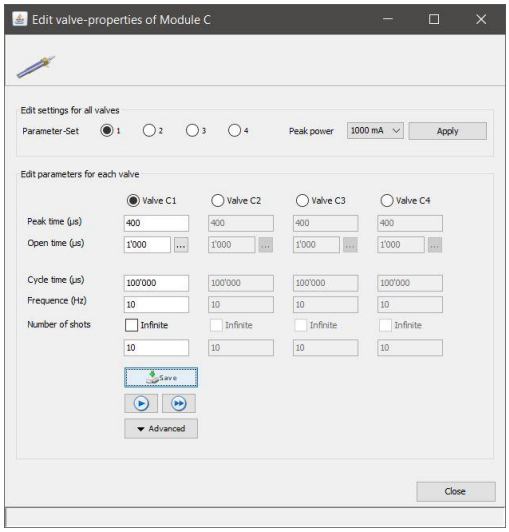
Software
The MVC / VC Software (Java based) allows a convenient operation via a graphic interface.
All installed power modules and their functions are visualized in the software and the associated parameters (e.g. valve opening time, heating temperature) can be set and precisely matched to the dispensing application.
The functions can be controlled directly from the software (e.g. triggering dispensings).
In addition, different modes can be set, which allows the operation over external Hardware-I/O-signals. On demand a complete configuration can be saved and loaded from the hard disk.

SCREENSHOTS

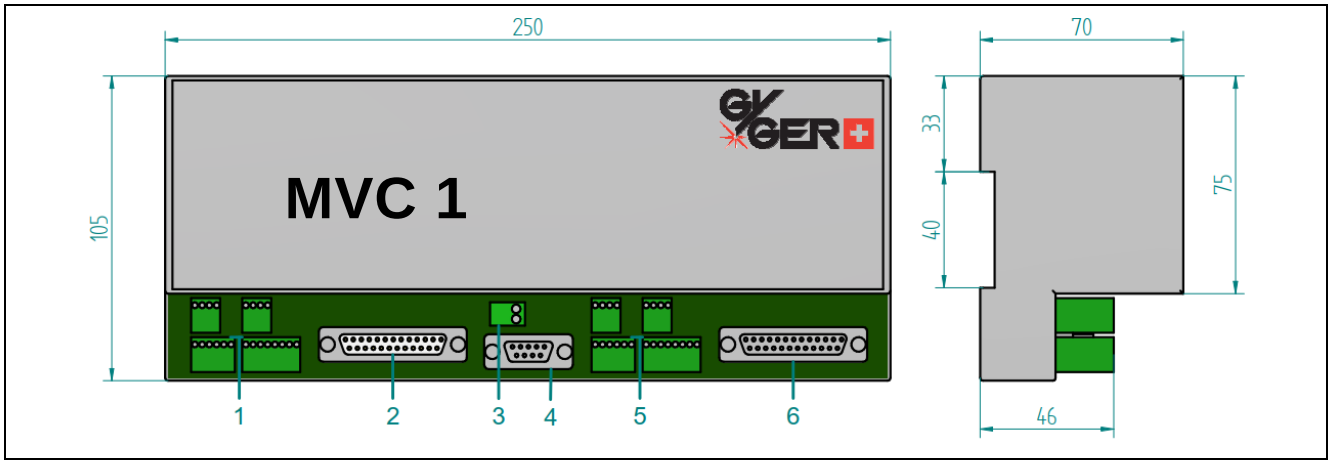
MVC / VC Software main screen



Edit valve-properties



SYSTEM OVERVIEW



General Specifications		
3	Needed Power Supply	24V DC, max. 3 A
	Weight	0.7 – 0.9 kg (Depending on the numbers of installed driver modules)
	Dimensions	250 x 105 x 70 mm (L x B x H)
	Operating Temperature	0°C to 50°C
	Mounting	Housing prepared for mounting on a 35 mm DIN rail
4	Interface	Serial point to point connection (UART) via RS232 or USB
	Operating	❯ Graphic Windows-Interface with Gyger MVC / VC-Software (Javabased) ❯ Alternative direct communication via commands over the interface
	Approvals	CE

Specifications of the Power Output (for Valves, Heaters and Step Motors)		
2/6	Max. Numbers of Driver Modules	4
	Possible Functions per driver Module	❯ 4 Micro valves SMLD or Zitera ZJ6 ❯ 2 Valves + 1 heater (heating power max. 20w). Heater regulation with PID control cycle and NTC temperature sensor ❯ 1 Step motor only operable with commands (Bipolar, load current max. 0.85a/phase, max. torque ca. 0.5nm)
	Power Output	24 V DC, respective clocked for peak+hold drive
	Current Capacity	1.3 A short time, 0.85 A constancy

Specifications for signal inputs / output		
1/5	Digital-Input	5 - 24 V DC, Rin > 10 kOhm
	Digital-Output	24 V DC, max. 0.5 A

MVC 1 Configuration Levels
depending on customers application the MVC 1 is available in the following configuration levels:

- ❯ 2 micro valves and 1 heater
- ❯ 4 micro valves
- ❯ 4 micro valves and 2 heaters
- ❯ 6 micro valves and 1 heater
- ❯ 6 micro valves and 3 heaters
- ❯ 8 micro valves
- ❯ 8 micro valves and 2 heaters
- ❯ 8 micro valves and 4 heaters
- ❯ 10 micro valves and 1 heater
- ❯ 10 micro valves and 3 heaters
- ❯ 12 micro valves
- ❯ 12 micro valves and 2 heaters
- ❯ 14 micro valves and 1 heater
- ❯ 16 micro valves

Get started: downloads.fgyger.ch/mvc-1

MVC 1 COMPONENTS

Modular valve controller MVC 1

Including MVC / VC Software
Including RS232 / USB connection cable

Power supply and connecting cables for the valves must be ordered separately if required!

Article type	Micro valves	Valve heaters	Part-#
AH	2	1	19216
AV	4	-	19215
AH BH	4	2	19212
AV BV	8	-	19210
AV BV CV	12	-	19203
AH BH CH DH	8	4	19200
AV BV CV DV	16	-	19195

Other configurations available on request!

Connection cable

Connection cable to connect the valve coils to the valve controller.

All cables are equiped with a 25 pin D-Sub connector to connect to the MVC controller. At the other end is the appropriate connection Plug for the valve coils or heaters.

Design: Round cable unshielded with ferrite sleeve, cable sheat made of PVC.
Strand cross section: 0.14 mm^2.

Example image

Article type	Connection plug	Length	Part-#
MVC 4V	4 x 2 pin (for 4 Micro valves)	1.8 m	19187
MVC 8V	8 x 2 pin (for 8 Micro valves)	1.8 m	19186
MVC 1H2V	1 x 4 pin (for 1 Valve heater) 2 x 2 pin (for 2 Micro valves)	1.8 m	19188
MVC 2H4V	2 x 4 pin (for 2 Valve heater) 4 x 2 pin (for 4 Micro valves)	1.8 m	19184
MVC 1H6V	1 x 4 pin (for 1 Valve heater) 6 x 2 pin (for 6 Micro valves)	1.8 m	19185
MVC 8VM	1 x 16 pin (for dispensing module 19761 with 8 Micro valves)	3.0 m	19180

Suitable for the Gyger valve coils and heating elements with Molex connector

Extension cord

For extending the connection cables if the cable length is not sufficient.

Design: Round cable unshielded with ferrite sleeve, cable sheath made of PVC, equipped on both sides with 25-pin D-Sub connector (male - female).
Strand cross section 0.14 mm2.

Cable type	Length	Part-#
D-Sub 25 pol male - female	3 m	20370
D-Sub 25 pol male - female	5 m	19182

MVC 1 COMPONENTS

Desktop power supply MVC 1 — Part-# 19191

Desktop power supply for the power supply of the MVC 1 controller.

Input: 100-240 VAC, 50/60 Hz (connector socket C7)
Output 24 VDC / 2.5 A (Phoenix 2-pin)

Without power cord

Power cord

Power cord for desktop power supply. It is available region-specific, the individual versions are listed below.

Type	Part-#
Euro; Connector socket C7	**18768**
USA; Connector socket C7	**17878**
UK (Typ G, BS 1363); Connector socket C7	**21305**

Power adapter MVC 1 / VC Mini — Part-# 18788

Snap-on power supply for DIN rail

Dimensions W x H x D: 45 x 75 x 100 mm

Input: 85-264 VAC, 50/60 Hz
Output: 24VDC, 2.5 A.

Without wiring, only power supply

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