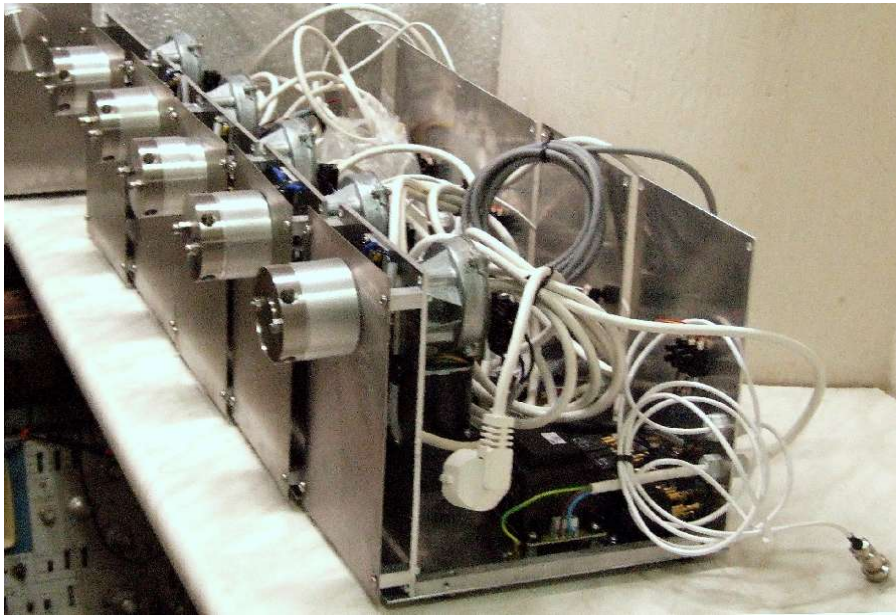


## MOTORIZED VALVES FOR PLC



***Instruction manual***

Labio a.s. 2005

## 1. Description

Labio made motorised valves are used for mobile phase handling in preparative liquid chromatography. General view on the valve unit is on Fig. 1. Valve is sitting in a stainless steel box, valve head is on front side of the box. There is a motor with gearbox inside the box and control electrical circuits (see Fig. 2). Valves have no direct switching possibility and can be switched either from computer (via interface) or using a simple control modul (see Fig 3) with manual switches.

Different configuration of inputs and outputs can be used in the system. Standard six port valves as well as 1→4 and other types are offered. All valves are designed with front stainless steel part with side holes (equipped with M10 internal threads and ferrules for 1/4" O.D. tubes) and PTFE rotor. Rotor is pressed to stator by a plate spring and moved by a DC motor with gearbox.



Fig. 1 Valve

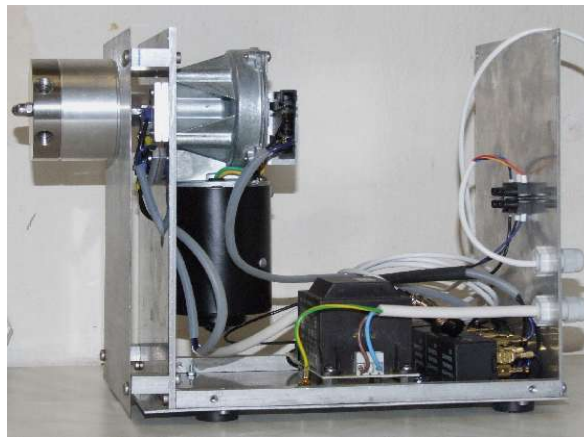
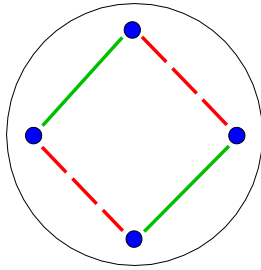


Fig. 2 View on internal valve part

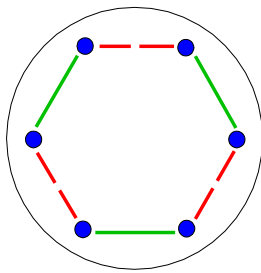


Fig. 3 Control modul for valves

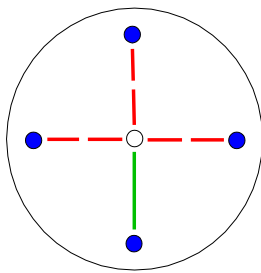
## 2. Different valves



**4 port switching valve CI 03ML or  
1 port to 2 ports switching valve**



**Six port loop valve CI 02ML**



**1 port to 4 ports switching valve CI 4+1M+**

## 3. Control modul

Control moduls are used for all valve types. There are two position switches for six port and four port (+ 1→2 valve) and four position switches for 1→4 valves. On back side of control modul (Fig 4) are connectors for valves control and 2 sockets for connecting of valves to 230V voltage (splitting cables have to be used in case more valves are worked together).



Fig. 4 Back panel of control modul

## 4. Technical parameters

Voltage:	230 V / 50 Hz (control modul)
	12 V DC (motors)
Input:	20 VA/valve
Weight:	4 kg/valve
Max. pressure:	1 bar

## **5. Manufacturing, distribution and service**

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