



**Note:** Read the corresponding technical documentation for handling and safety reasons.

Science Together



# Column selection valve for AZURA® VU 4.1

## 1. Product information

The column selection valve allows the operation of up to 5 different columns. Additionally, there is a bypass function and the option to reverse the flow for eluting or cleaning purposes.

This document describes the port connections of the valve and the installation procedure for the valve drive AZURA® VU 4.1.

### Legend

- ① Column selection valve
- ② Adapter with RFID tag
- ③ Coupling
- ④ Screws



**Fig. 1** Column selection valve and accessories

## 2. Installation of valve head to valve drive AZURA® VU 4.1

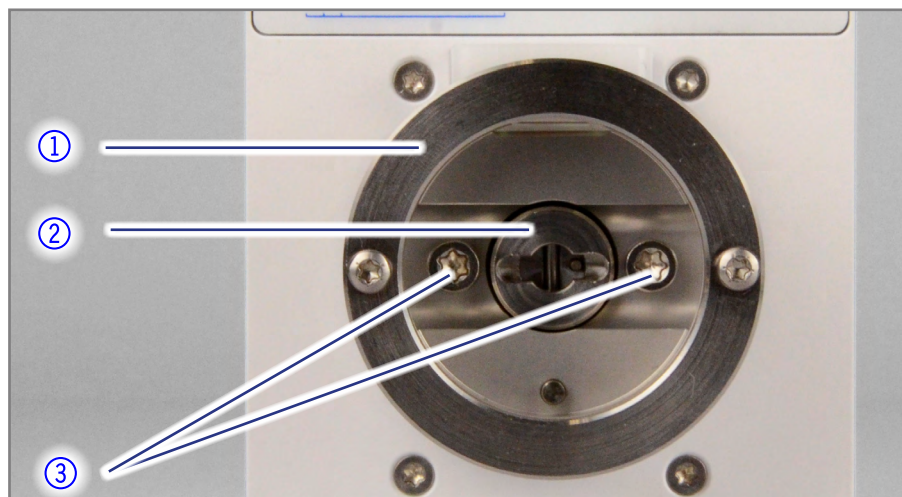
**Prerequisite** The valve drive is turned off.

**Tool** Torx screwdriver TX20

- Process**
1. Loosen the two screws ③ (TX20) next to the coupling ② and remove the valve head adapter ① (Fig. 2)

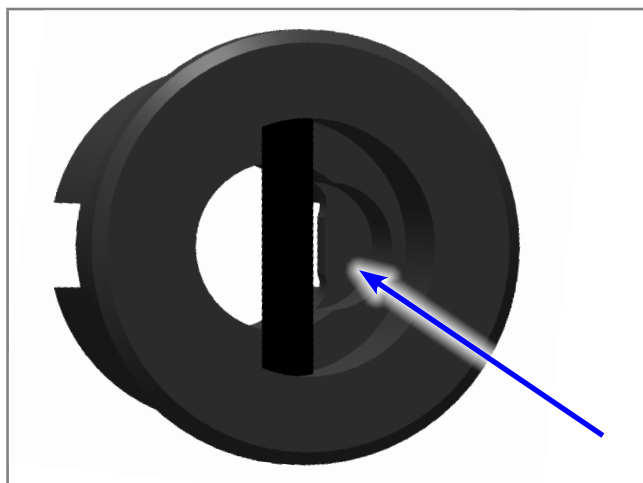
### Legend

- ① Adapter
- ② Coupling
- ③ Screws

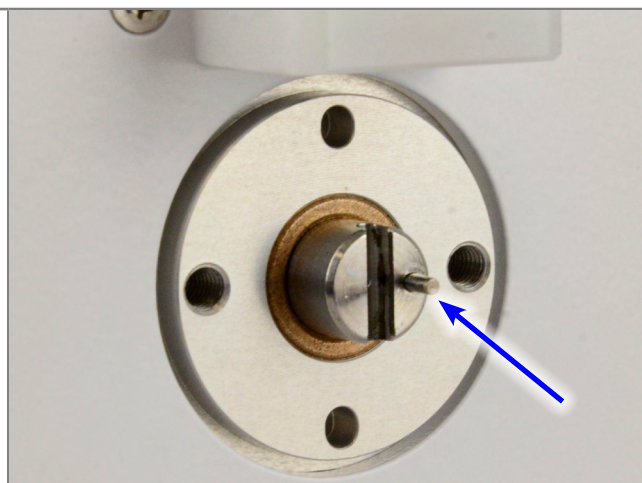


**Fig. 2** Adapter for standard KNAUER valves mounted on AZURA® VU 4.1

2. Pull off the coupling and replace it by the supplied one. Make sure that the cutout on the back side of the coupling (Fig. 3) is in the same orientation with the pin of the drive axle (Fig. 4).



**Fig. 3** Cutout on the coupling

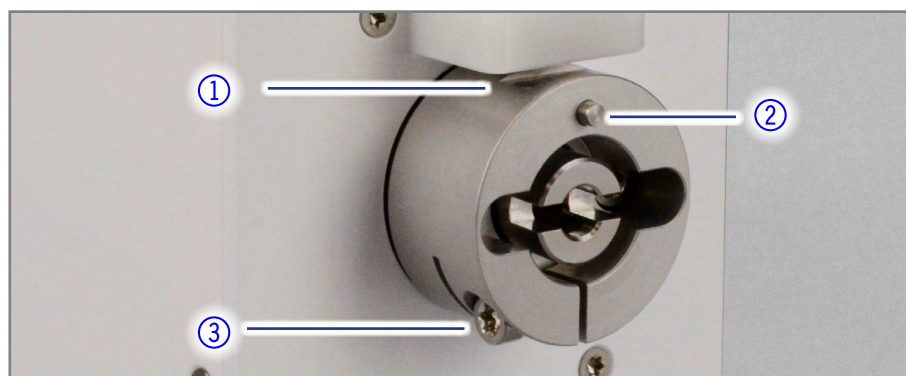


**Fig. 4** Drive axle with axle pin

3. Screw the supplied valve head adapter with the provided screws (TX20) onto the valve drive. Make sure that the adapter is correctly oriented (Fig. 5: RFID tag ① and adapter pin ② up, turnbuckle screw ③ down and facing left).

#### Legend

- ① RFID tag
- ② Adapter pin
- ③ Turnbuckle screw

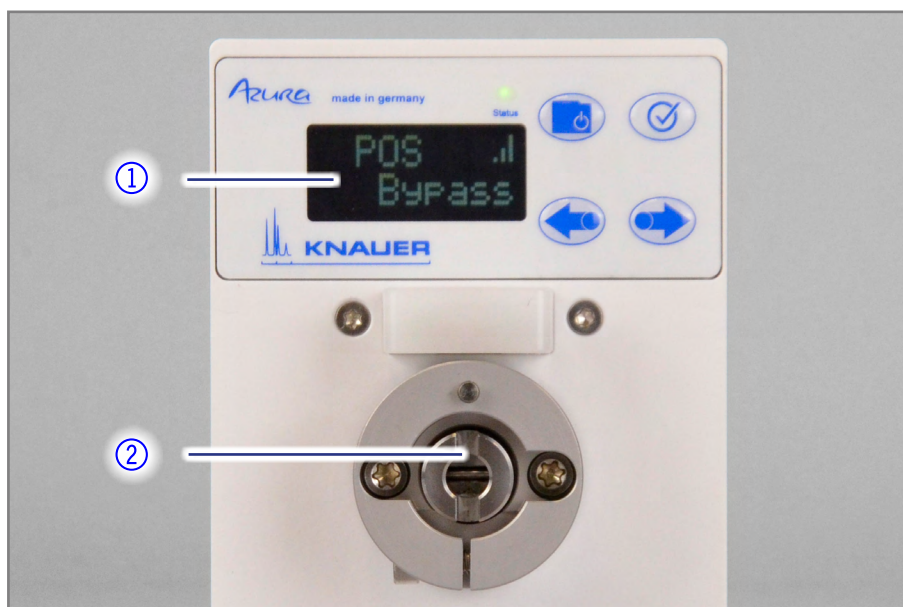


**Fig. 5** Valve drive with mounted VICI valve adapter

4. Switch on the valve drive and wait until the RFID tag is recognized correctly. After a short initialization "Bypass" is shown on the display ① and the coupling ② turns so that the slit of the coupling is in vertical position (Fig. 6).

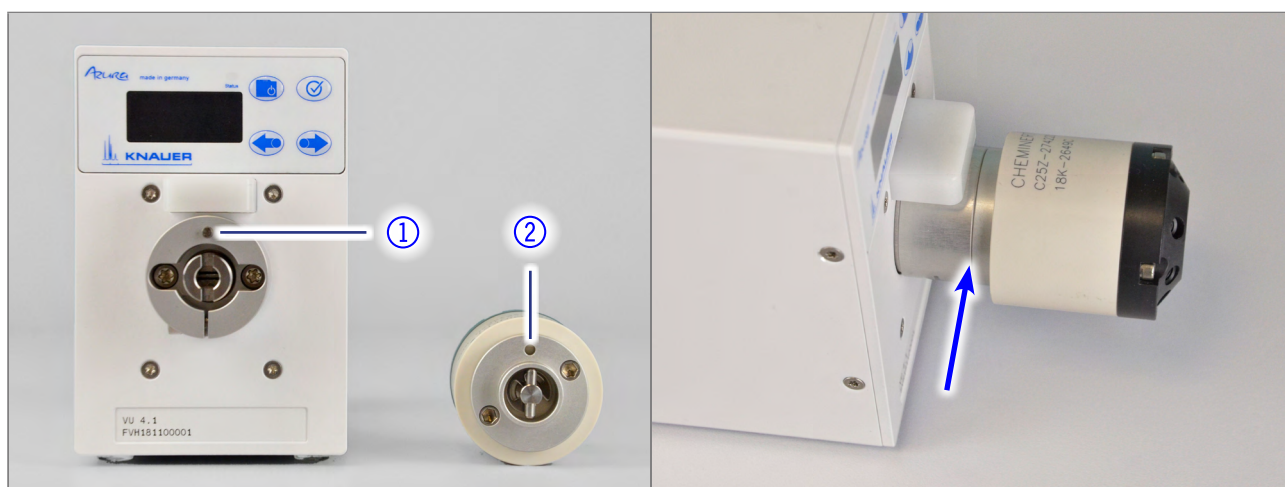
## Legend

- ① Display showing Bypass position
- ② Coupling with slit in vertical position



**Fig.6** Valve drive with mounted VICI valve adapter after correct initialization

5. Turn off the valve drive again and insert the valve head. Make sure that the pin of the adapter ① is inserted entirely in the pinhole of the valve (②, Fig.7) and that there is no gap between adapter and valve (Fig. 8).



**Fig.7** Valve drive and valve head

**Fig.8** Correctly mounted valve with no gap between adapter and valve

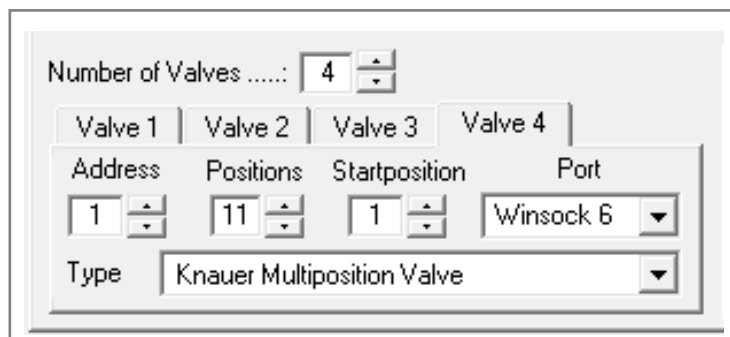
## Legend

- ① Pin on valve adapter
- ② Pin hole on valve

6. Screw tight the valve head with the turnbuckle screw (TX20).

### 3. Control with PurityChrom®

The column selection valve can be configured as any other KNAUER valve (see PurityChrom® instructions, document no. V2650). As the valve is built with an internal symmetry, the port connections for position 1-11 and position 12-22 are identical (see table below). Therefore, in PurityChrom® only 11 positions must be configured as shown exemplified in Figure 9.



**Fig.9** Sample configuration of column selection valve in PurityChrom®

### 4. Port connections of column selection valve

Position	Display VU 4.1	Port IN is connected with	Port OUT is connected with
1	BYPASS	OUT	IN
2	Col.1	1A	1B
3	Col.2	2A	2B
4	Col.3	3A	3B
5	Col.4	4A	4B
6	Col.5	5A	5B
7	r-Col.1	1B	1A
8	r-Col.2	2B	2A
9	r-Col.3	3B	3A
10	r-Col.4	4B	4A
11	r-Col.5	5B	5A
12	BYPASS	OUT	IN
13	Col.1	1A	1B
14	Col.2	2A	2B
15	Col.3	3A	3B
16	Col.4	4A	4B
17	Col.5	5A	5B
18	r-Col.1	1B	1A
19	r-Col.2	2B	2A
20	r-Col.3	3B	3A
21	r-Col.4	4B	4A
22	r-Col.5	5B	5A



## 5. Detailed view of column selection valve ports

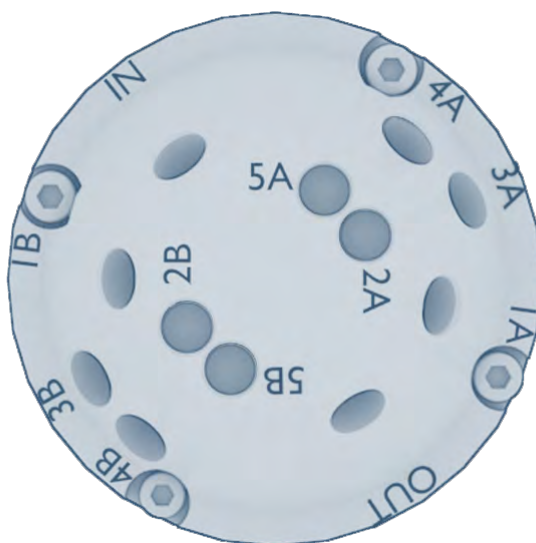


Fig. 10 Negative picture of valve head

## 6. Repeat orders

Name	Order number
Column selection valve	AVZ52CE
VICI/VALCO	
Replacement stator	M6033-1
Replacement rotor seal	M6034-1

## 7. Technical data

Parameter	Value
Valve type	Column selection valve
Stator	PAEK
Rotor seal	cross-linked PTFE
Max. pressure stability	50 bar
Capillary connector	1/16"
Diameter Ø	45 mm
Weight	0.1 kg
Max. flow rate	50 ml/min
Ambient conditions	4-40 °C, air humidity below 90 %