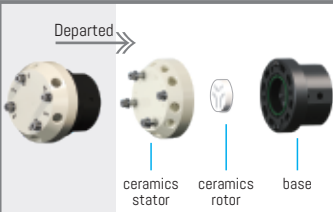


Injector Valve

★ **TC20QC-B valve head assembly:**
available for replacement

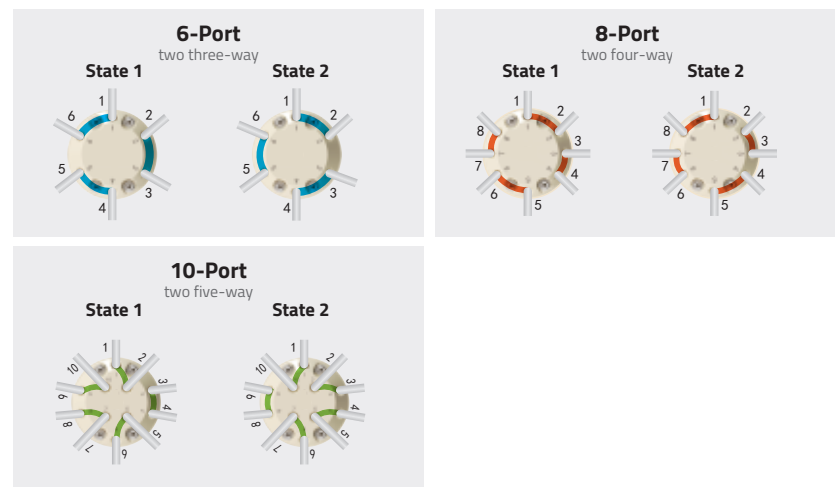
SKU	Model No.	Material
TC20QC-B valve head assembly		
1015120007	TC20C-B-T06-K1.2-28-C-C	Ceramic
1015120008	TC20C-B-T08-K1.2-28-C-C	Ceramic



The injector valve dynamically switches between two flow paths without manually disconnecting the channel. In chromatographic analysis, these valves can be used for column switching, backwashing, sample enrichment, and other techniques. In diagnostic or sequencing applications, quantitative valves can convert flow paths and perform backwashing or other fluid tasks within the instrument.

Runze valve operates between two positions and may have 6, 8, or 10 ports (two three-way, two four-way, or two five-way) on the stator surface. The flow path connects the ports around the stator.

★ Injector valve head status



Application Note

Runze Injector valves, through combination and combination, can be suitable for various situations. The following are common application examples for you. If you have other connection and usage needs, please contact us, and our engineers will assist you in valve selection and flow path layout.

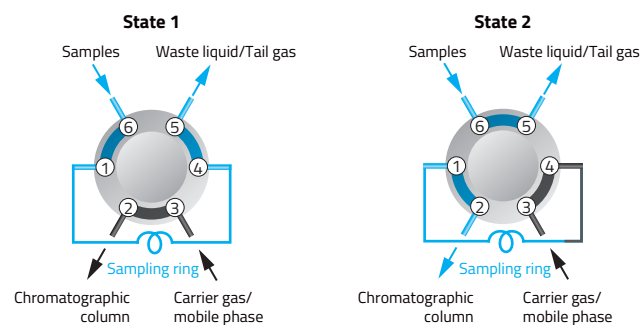
6-way - External sampling ring injection

Inject

State 1: The sample flows through the sampling ring, and the mobile phase flows directly through the chromatographic column.

State 2: The sample in the groove of the sampling ring and valve rotor is blown into the chromatographic column.

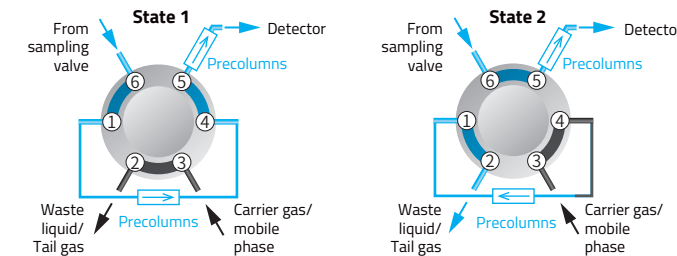
Attention: The flow direction of the mobile phase in the sampling loop should be opposite to the flow direction of the sampling loop when flowing through the sample (i.e. backflow).



6-way - External sampling ring injection/switching valve

Pre column backflushing

This pipeline scheme allows for the backflushing of slower elution components that do not require analysis to the discharge outlet. Short analytical columns are usually used as pre columns. Once all the components to be tested enter the analysis column (at port 5), the valve will switch, blow back the pre column, and shorten the analysis time.

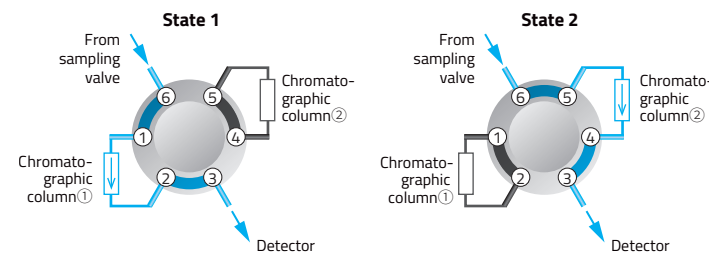


6-way - Sampling

Switching of chromatographic columns

When it is necessary to frequently switch between two different chromatography columns at similar column box temperatures, the 6-way valve can quickly select the chromatography column to be used. Unused chromatography columns are protected by an inert mobile phase, which can quickly reach equilibrium when needed.

Note: If it is necessary to maintain the flow rate of a non selected chromatographic column, an 8 or 10 way valve is required.



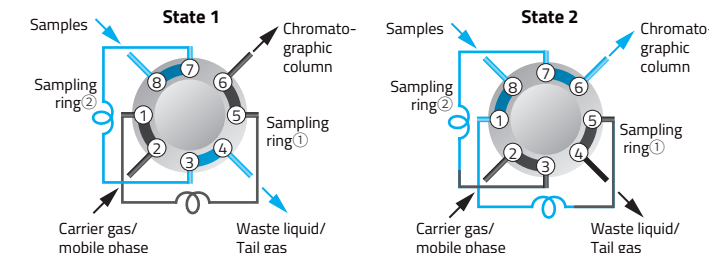
8-way - Dual sampling loop injection

Quick loading of samples

This flow configuration can achieve uninterrupted loading and injection of samples.

State 1: Sampling loop 2 loads the sample, and the sample in sampling loop 1 is blown into the chromatographic column.

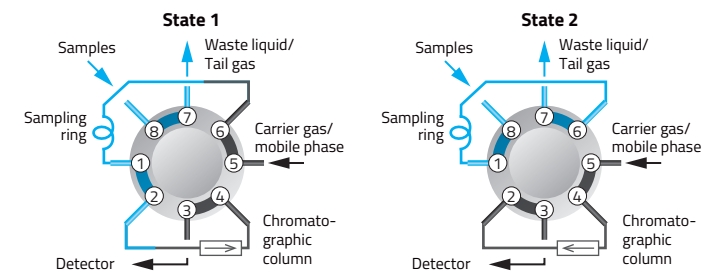
State 2: The sample inside the sampling ring ② is blown into the chromatographic column, and the sampling ring ① is loaded with the sample.



8-way - Single sampling ring injection

Sampling and Blowback

A valve simultaneously achieves the functions of injection and backflushing, simplifying operation and reducing costs. When the component of interest is detected, the remaining components will be blown out without the need to continue the program heating.



10-way - Dual sampling loop injection

Two samples to one chromatographic column

The 10 way valve can achieve alternating injection of samples of different volumes (determined by the sampling ring) by connecting two sampling rings.

State 1: Sample ② is loaded into the sampling ring ②, and sample ① inside the sampling ring ① flows into the chromatographic column.

State 2: The sample inside the sampling ring ② flows into the chromatographic column, and the sampling ring ① loads the sample.

