

## Fraction Collection

### Overview

## Fraction Collection using Valves

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Knauer rotary valves offer a low-cost flexible solution for fraction collection in preparative chromatography. Valves with six, twelve or sixteen ports are available in either stainless steel or peek versions. Positioning is controlled via a standard electric valve drive module which can be controlled either manually or using remote control.

#### Fraction Collection Software

Use of the Knauer Fraction Collection software option fully automates the application and allows also solvent or peak recycling if required.

#### Inert Collection Possibilities

Using these valves it is possible to design systems where the process occurs with complete isolation of the sample or product. Fractions are collected directly into standard laboratory bottles which can be fitted with quick-connect adapters to allow rapid and safe exchange of bottles as required.



## Standard Fraction Collectors

### Smartline Fraction Collector 3050

The ultra fast drive enables position changes in very short times, ensuring the collection of very narrow peaks, for instance in UHPLC.

The Smartline Fraction Collector 3050 is available in two versions: an analytical version for flow rates up to 5 ml/min with cover and optional sample cooling or a semi-präparative version for flow rates up to 50 ml/min. The fraction collector can collect up to 384 fractions in well plates or up to 192 fractions in standard autosampler vials.

Due to the identical rack design the racks can be transferred directly to autosamplers such as the Smartline Autosampler 3950. Special racks for different test tubes, beakers or flasks up to 250 ml also can be used.

The fraction collector can be controlled with ChromGate® software, with or without the FRC option, or ClarityChrom® Prep via LAN or RS232.

Sensitive samples can be protected against warming using the cooling option. A solvent and peak recycling option with two additional valves is available for saving solvents and costs.





## Fraction Collector Foxy® R1

The Foxy® R1 is the improved successor of the well-known Foxy® Jr. and can be used for a variety of applications. The Foxy® R1 accommodates the same rack types as its predecessor, but provides faster operation, more control options (RS-232 and Ethernet) and features an integrated diverter valve as a standard. When connected to a detector, the Foxy® R1 offers slope detection, level sensing, and a combination of these methods. The applicable rack types range from 96-well microplates, to test tube racks, to funnel racks for virtually unlimited collection volumes. The Foxy® R1 is biocompatible and can be used in cold room environments. Foxy® R1 can be fully controlled using either the ChromGate® software together with the Fraction Collector Control Option or with our GeminiX Software.

## Specifications

### Smartline 6 / 12 / 16 Port Distributor Valves

Display	LED
Switching time	<150 ms
External control	RS-232 connector, shorting contacts for position 1 and next position or binary code
Dimensions (mm)	85 x 100 x 150 (W x H x D)
Weight	0.8 kg

### Smartline Fraction Collector 3050

	Analytical Version	Semi-preparative Version
Sample Vials	4 x 96 deep well plates, 4 racks with 48 vials 1.5 ml, 4 racks with 12 vials 5 or 10 ml	4 racks with 48 test tubes 12 mm OD, 4 racks with 24 test tubes 16 mm OD, 4 racks with 24 test tubes 18 mm OD, 4 racks with 12 test tubes 25 mm OD, 4 racks for 2 beakers or bottles max. 250 ml
Flowrate	0.1 – 5 ml/min.	1 – 50 ml/min
Maximum pressure	3 bar	3 bar
Switching time	100 ms	100 ms
Delay volume (approx.)	40 µl	300 µl
Optional valves	Solvent and peak recycling valves	Solvent and peak recycling valves

### Foxy® R1

Sample Vials	12 mm diameter tubes (144/rack), 13 mm diameter tubes (144/rack), 16 mm diameter tubes (100/rack), 18 mm diameter tubes (72/rack), 25 mm diameter tubes (36/rack), 1.5 ml microcentrifuge tubes (60/rack), 50 ml centrifuge tubes (36/rack), 28 mm diameter scintillation vials (36/rack), 96-well microplates (up to 2 plates total), MiniVials (72/rack), 480 ml bottles, Funnel racks for fractions larger than 480 ml
Collection control	Time, drop number and volume control, if a suitable detector is connected peak detection according to time, signal level, and signal slope is possible.
Flowrate	max. 25 ml/min.
Switching time	200 to 450 ms
Temperature range	0°C - 40°C
External control	RS-232 with ChromGate or ClarityChrom software, Ethernet

All specifications may be subject to change for technical reasons.

## Ordering Information

A55030	Smartline Electrical Valve Drive 7-Port/1-Channel switching valve, stainless steel, 1/16" connections with external power supply included
A55040	Smartline Electrical Valve Drive 7-Port/1-Channel switching valve, stainless steel, 1/8" connections with external power supply included
A55110	Smartline Electrical Valve Drive 13-Port/1-Channel switching valve, stainless steel, 1/8" connections with external power supply included
A55211	Smartline Electrical Valve Drive 17-Port/1-Channel switching valve, stainless steel, 1/16", maximum 100 bar, and external power supply included
A5371	Smartline Fraction Collector 3050, analytical version
A5372	Smartline Fraction Collector 3050, semi-preparative version
A59100	Fraction Collector Foxy® R1 with integrated diverter valve, including rack for 13 mm vials, other racks are also available.