

## VC 10 S-TYPE Heat-and-Turn for Heat-not-Burn

### For automated and continuous puffing of Heated Tobacco Products

Heated Tobacco Products require a button-activated pre-heating of the tobacco sticks prior to the smoking experience. During a smoking machine operation the pre-heating activation is either performed by the operator or – for improved handling and reproducibility – by automated button actuators.

#### Heat-and-Turn option for rotary Smoking Machine VC 10 S-TYPE

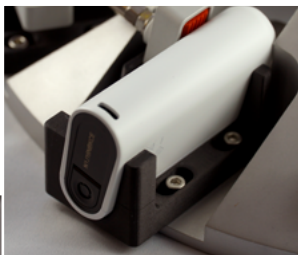
The heat-and-turn feature enables the VITROCELL® Vapestarter button actuator function for all 10 ports of the VC 10 S-TYPE Robot.

Now continuous smoking and selective guidance of the aerosol to max. 6 exhaust lines are possible.

#### Features:

- Automated device activation
- Suitable for all commercial HTP devices
- Continuous puffing for up to 1 hour according to ISO and custom regimes
- Puffing to 1, 2, 3 or 4 exhaust lines (6 with triple piston drive)
- Time-saving, automated process
- Compatible with all VITROCELL® Exposure Systems

[For more details see our video](#)



*The system is available for all commercial HTP devices.*



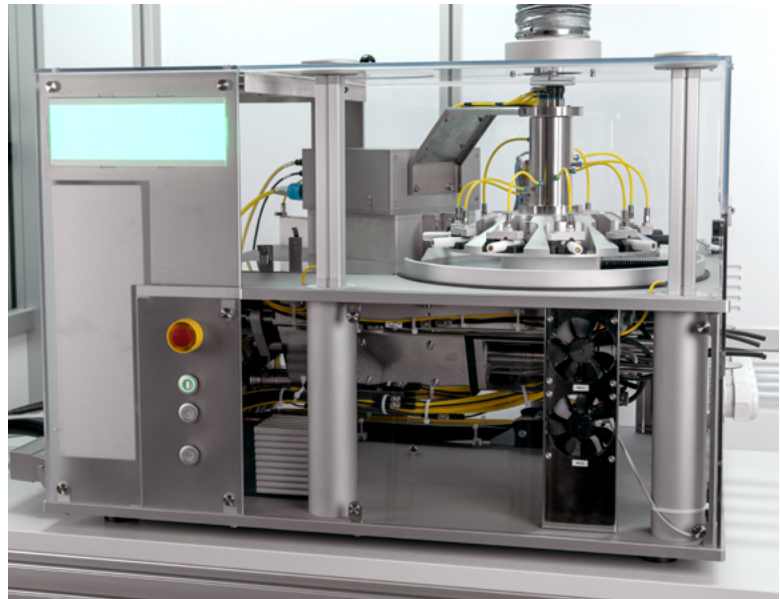
*Up to 10 devices can be installed on the support rim with individual button actuators.*

### About the VC 10 S-TYPE

This Smoking Robot is used for a controlled aerosol generation of combustion cigarettes, next generation products such as Heated Tobacco Products (HTP) and electronic nicotine delivery systems (ENDS). A product change incl. cleaning takes only 10 minutes if the relevant change parts are in place.

Device holders can be adapted to the actual shape and dimensions of the test articles.

Special attention was given to guarantee very flexible programming of the smoking parameters for best results in analytical or in vitro set ups. Requirements of all relevant ISO standards are met.



### Easy cleaning

A fast and uncomplicated cleaning is possible after termination of the experiment series or in case of a product change. The pump cylinder can be easily dismantled, cleaned and mounted again within a few minutes. All valves are not in direct contact with the aerosol to speed up cleaning and to increase the reliability of the system.

### Future-oriented controls

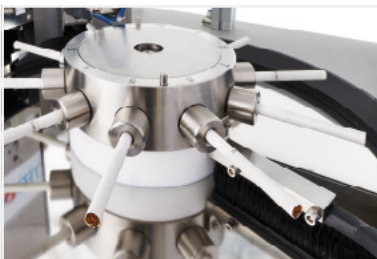
The open design allows for easy installation of additional testing equipment, such as particle or gas analysers.

All processes are controlled by a Beckhoff TwinCat based software in conjunction with Microsoft Windows 10 and the VITROCELL® Human Machine Interface (HMI).

High precision linear motors ensure safe and precise operation of the piston pump. The puff profile is programmed to a bell-shaped or square specification. A large variety of smoking puff recipes including human puff profiles can be added by the operator.

Data for each cigarette is logged into an Excel-sheet showing the start/end of the experiment, average puff duration and number of puffs.

### High versatility



*Combustion cigarettes*



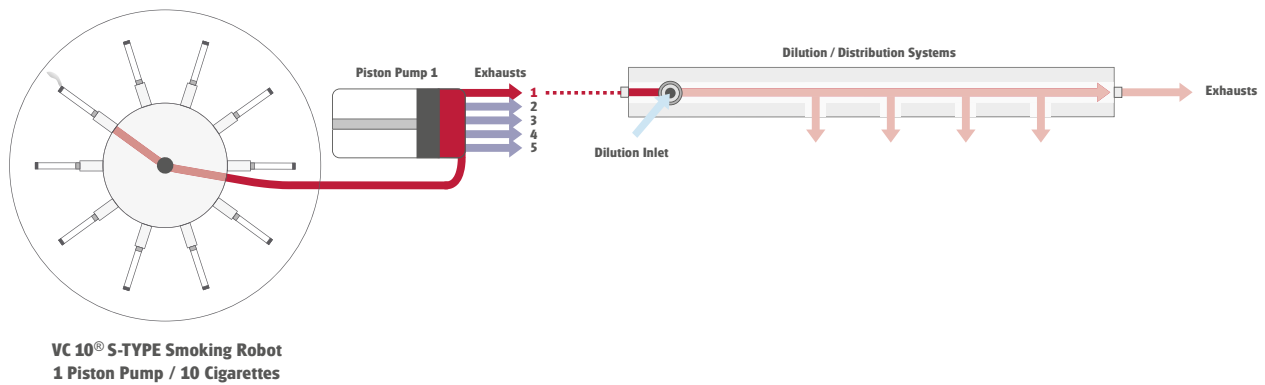
*Draw-actuated ENDS products*



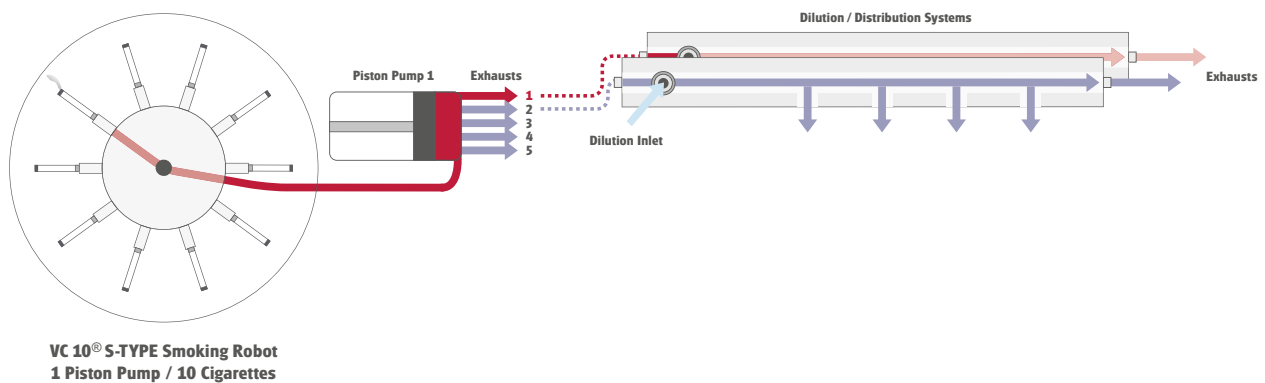
*Button-actuated tank products*

## Exhaust routing options

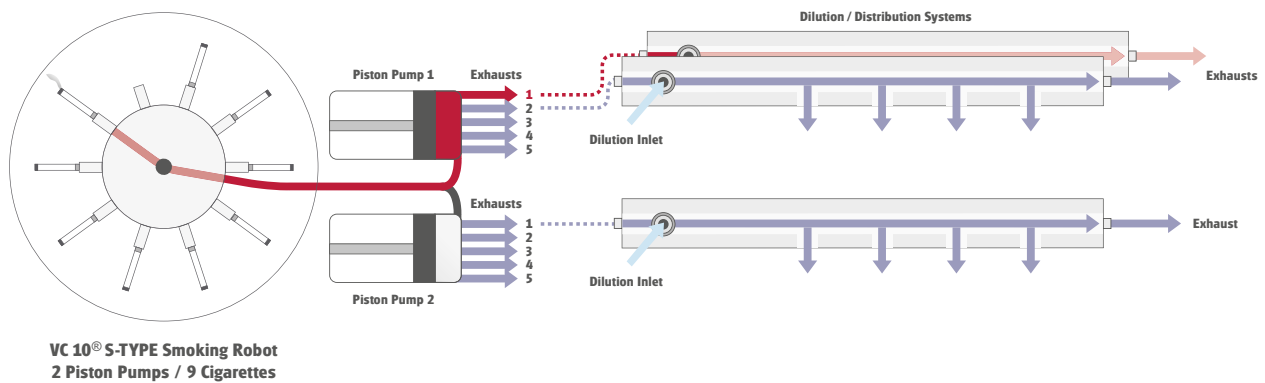
### Option A: All devices to one exit



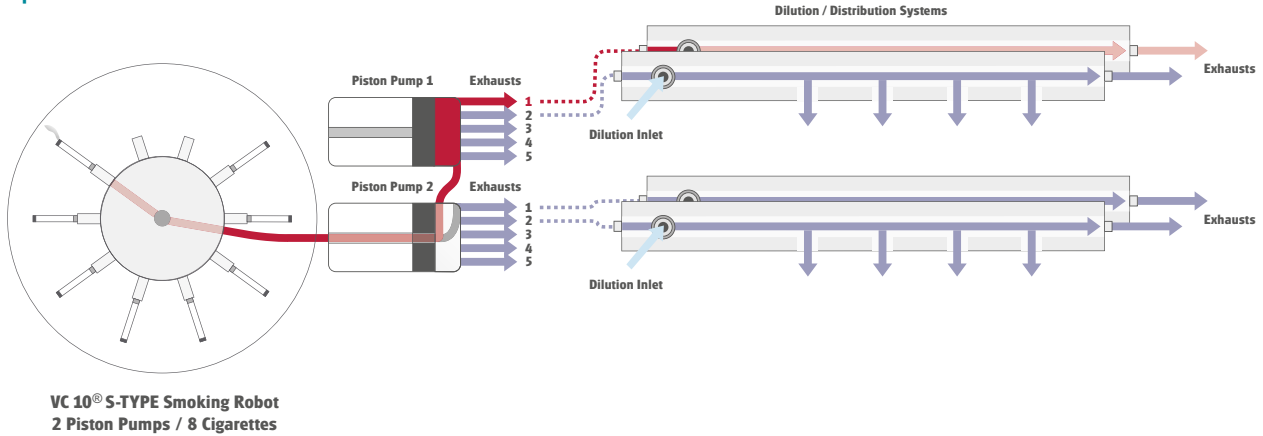
### Option B: 5 x 2 devices to 2 exits



### Option C: 3 x 3 devices to 3 exits



Option D: 2 x 4 devices to 4 exits



Option E: 6 devices to 6 exits

