



KRONES Mecafill VKP
Level-Controlled Filling System

Simple, Robust, and Versatile



The Mecafill VKP filling system is based on the mechanical counter-pressure principle with electropneumatic control system. The filling process is started by pressing the bottles onto the centring bell and pressurising them with gas from the ring bowl. The product starts flowing into the bottle as soon as the pressures in ring bowl and bottle are equal. The filling process is completed once the product has been filled up to the vent tube in the bottle, thereby preventing gas from escaping back into the ring bowl.

All technical details at a glance

- For changing-over the filling system to another bottle type and/or product, the vent tubes are exchanged. Variants provided with lifting cylinder are equipped with an automatic ring bowl height adjustment system.
- The filling process steps, and thereby the control of the valve functions, are individually adjustable and can be selected on the central operator panel from where they are transmitted to the electronics cabinet.
- Depending on the container characteristics and product features, rinsing or evacuation steps may be added before the filling process and/or a correction step after filling.

- Each filling unit is provided with a snifting valve to allow for gentle reduction of the pressure in the bottle headspace to ambient pressure at the end of the filling process.
- The complete system can be cleaned in a circuit (CIP) by applying CIP cups.
- The filler design corresponds to utmost hygienic requirements.

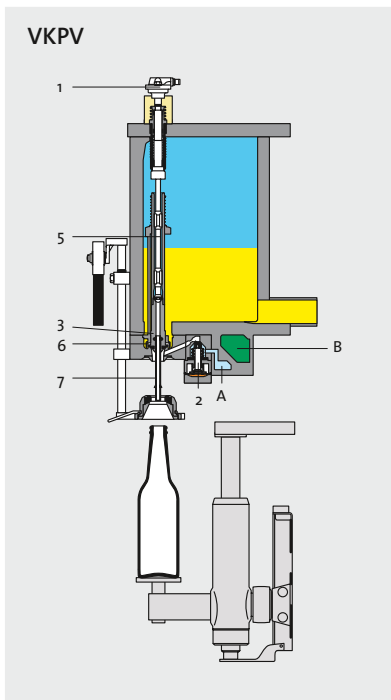
Field of application

- Filling of non-carbonated and carbonated beverages
- Filling system for cold and hot filling of products
- Processing of glass or PET bottles

Overview of the Variants



- 1 Control cylinder
- 2 Snifting valve
- 3 Valve stem
- 4 Correction valve
- 5 Gas needle
- 6 Gas lock
- 7 Vent tube
- A Snifting channel
- B Vacuum channel
- C Correction channel



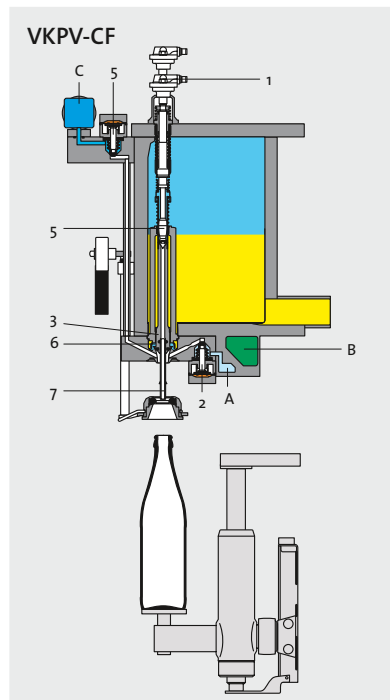
For glass bottles

VKP

The basic design is suitable for processing a wide variety of bottle and product types.

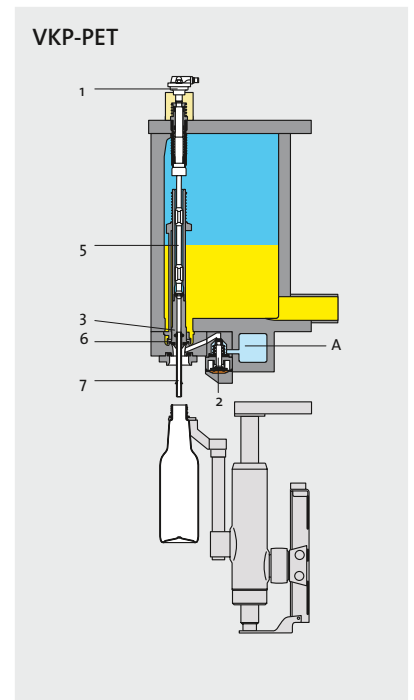
VKPV

Several pre-evacuation steps and the bottle treatment with gas from the ring bowl ensure minimum oxygen pick-up during filling.



VKPV-CF

- Individually adjustable evacuation steps provide a low-oxygen condition in the bottle for filling.
- A fill level correction after filling is enabled by injecting pure CO₂ via a correction channel into the bottle neck, which will force back the overfilled product into the ring bowl.
- Therefore, this filling system ensures optimum fill level accuracy and minimum product loss.



For PET bottles

VKP-PET

- The neck handling system allows for processing PET bottles with minimum change-over times.
- Pre-flushing with CO₂ will displace air from the bottle and create a low-oxygen atmosphere for processing products which are sensitive to oxygen.
- For processing very light, pressure-sensitive PET bottles, this filler is available in a pressureless variant.

Machine sizes and number of filling valves

Type	Pitch circle diameter	Machine pitch							
		87	94	103	113	126	141	188	283
		No. of filling valves							
121	1440		48	44	40		32	24	16
122	1800		60	55	50	45	40		
123	2160	78	72	66	60	54	48		
124	2520	91	84	77	70	63	56		
126	2880	104	96	88	80	72	64		
129	3600	130	120	110	100	90	80		
131	4320	156	144	132	120	108	96		
132	5040	182	168	154	140	126	112		
136	5760		192	176	160	144	128		

Design features:

- Front table in robust steel design with stainless steel panels
- Gentle media feed from bottom without hoses and with pipe connections
- Distributor and all parts contacting product or gas are made of stainless steel AISI or even higher grade
- Product return system, e.g. for hot filling are available as additional equipment

Hygienic design options

- Design with gable-type table top
- Flushing package and/or foam cleaning equipment
- Clean room housing with HEPA filters
- Bloc arrangement with blow moulder or rinser and capper, as well as labelling machine
- Quick-change type Rapterc handling parts in hygienic design