Advanced Can Filling and Sealing

CF213 & CF214 Carbo-Fill®

Comprehensive Sealing Capabilities in R&D Technology

The CF213 and CF214 Carbo-Fill® units represent the pinnacle of carbonation and filling technology innovation, uniquely integrating a can seamer for enhanced efficiency. These systems allow researchers to produce test samples effortlessly with high reproducibility and and support various packaging options, including cans, glass bottles, and PET bottles.

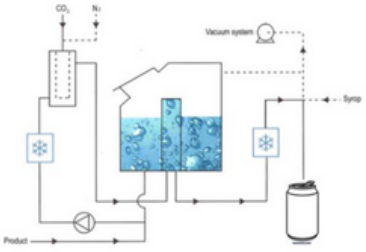
The units feature a 42L tank capacity and optionally operate with continuous filling capabilities, efficiently processing products at approximately 1 liter per minute. The CF213 is equipped with one filling head, ideal for moderate throughput, and capable of filling at a rate of 1 packaging per minute. The CF214 with two filling heads, increases production capacity to 40 seconds per packaging. Closing devices for glass and PET bottles can optionally be integrated in the filling head.

Additionally, both models are designed with a CIP program that allows for efficient cleaning through connection to an external CIP unit. This setup uses strategically placed valves to ensure thorough cleaning and meeting hygiene and safety standards crucial for R&D processes without having to remove any parts.

Features & Benefits

- Can seaming integration for significantly enhancing productivity and operational efficiency
- Dual mode operation: operates in both batch and continuous modes, ensuring uniform product quality and adherence to food safety standards
- High-capacity 46L pressurized tank to ensure optimal saturation and constant CO_2 levels. Capable of processing from 5L to 42L of product
- Compact integrated cooling system to minimize foot print

Working Principle



OMVE's CF213 and CF214 models use a seamless carbonation process with a specially designed OMVE CO_2 injector. The process starts by cooling the product to the optimal temperature, followed by CO_2 injection for efficient, uniform saturation while maintaining key temperature and pressure parameters.
A Programmable Logic Controller (PLC) ensures consistent saturation at about 1 liter per minute, preparing the product for filling. During filling, the packaging is precisely aligned, pre-flushed with CO_2 for stabilization, pressurized, filled, and then depressurized, after which cans are automatically seamed (automatic closing for PET and glass are optional) . Both models can store up to 50 operational programs, allowing quick adjustments for various beverages and production needs, enhancing efficiency and product quality.

Applications

- Energy drinks
- Spirits
- Malt-based beverages
- Club soda
- Seltzer water
- Flavored carbonated beverages
- Functional beverages
- Dairy & plant-based beverages
- Non-alcoholic cocktails
- Alcoholic cocktails
- Tea & coffee-based carbonates

Optional Capabilities

- Integrated cappers for PET and glass bottles
- External can seamer
- Built-in vacuum pump allowing for deaeration of the product vessel and/or evacuation of glass bottles prior to filling
- Additional pre-cooler to enable running multiple tests within a shorter timeframe, increasing efficiency.
- Nitrogen connection for filling non-carbonated drinks, adding versatility to beverage production
- Hot filling capability from external HTST/UHT systems, specifically for non-carbonated products
- Syrup dosing pump to facilitate post-mix production

Specifications

Process Parameters	CF213	CF214
Max. operational pressure	3,5bar [50,8psi]	3,5bar [50,8psi]
Cooling temperature (internal)	4-6°C [39-42,5°F] accuracy 0,1°C [0,18°F]	
Flow rate	60L/hr	90L/hr
CO_2 content	Min. 4g/L - max. 11g/L	
Cleaning temperature	Max. 80°C [176°F] (for the CIP, 55°C [131°F] most efficient temp.)	
Weights & Dimensions		
Standard saturation vessel	42L	
Weight	670kg [1477lbs]	1050kg [2315lbs]
L x W x H	1900 x 1125 x 2200mm [74,8 x 44,3 x 86,6"]	2320 x 1125 x 2200mm [91,3 x 44,3 x 86,6"]
Required utilities		
Electrical supply	220-240 VAC/ 1ph+N+E/ 50Hz/ 16A	200-240 VAC/ 3ph+E/ 60Hz/ 16A
Water supply	2-3bar [29-43psi]	
Compressed air	6-7bar [87-101,5psi]	
CO_2 supply/ Nitrogen supply	4-5bar [58-72,5psi]	
Drains	Required	

CF214 (with two filling heads) & CIP250

OMVE Netherlands B.V.
De Meern, The Netherlands
Tel +31 30 241 00 70
sales@omve.com

OMVE Americas Inc.
Milton, Canada
Tel +1 416 986 8442
omve.com

Lab & Pilot Equipment omve

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