INNOVUS ENGINEERING

CATEGORY BROCHURE

BEVERAGE CANNING

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BEVERAGE CANNING

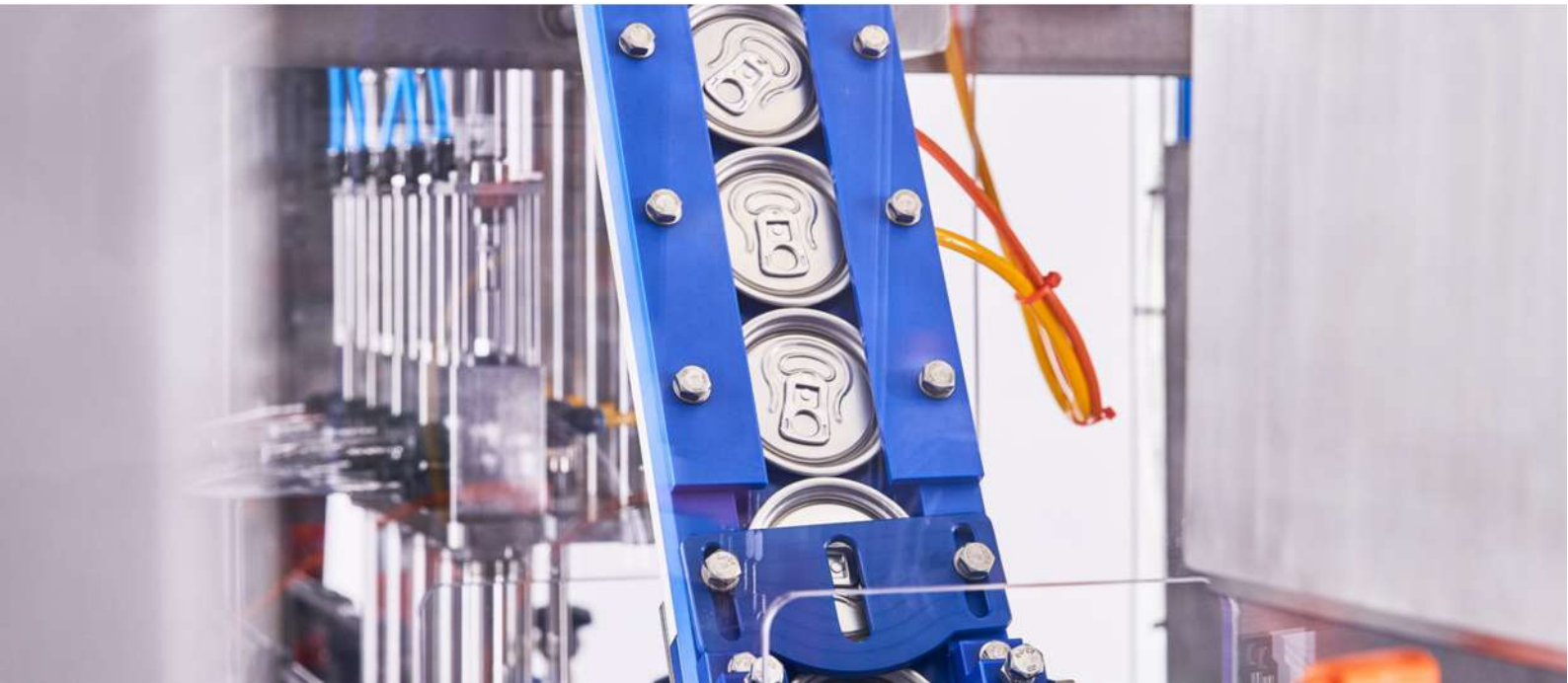
Innovus Engineering specialise in the design and manufacture of beverage canning machines, ranging from table-top seamers for the taproom, through to fully automatic canning lines rated for 4000 cans per hour.

Every machine is manufactured using food grade 304 and 440C stainless steel and food grade plastic, with the most resistant grade 316 stainless steel used in contact areas. This delivers an extremely high level of robustness and hygiene and allows the safe use of heated caustic and other cleaning agents.

Industry leading seam integrity and extremely low dissolved oxygen pickup levels of less than 20 parts per billion ensure shelf life is maximised and your product is enjoyed as intended.

Our experience in handling all types of carbonated and non-carbonated beverages means we can offer advice on ideal product preparation before packaging in order to minimise avoidable wastage. Liquid nitrogen dosing can be integrated for filling non-carbonated beverages such as still water, wine, juices and cocktails.

To further automate your production line we offer ancillary equipment such as rotary infeed and collection tables, depalletisers and lowerators.



FULLY AUTOMATIC

Our fully automatic machines all include sophisticated brite tank pressure monitoring resulting in highly accurate and repeatable fill levels to +/- 2ml. Time adjustable CO2 purging and post-fill injection is available at each fill head. Siemens touch screen controls and automatic CIP programming included on all models. Smooth can transfer throughout delivers exceptionally low dissolved O2 pickup of less than 20 parts per billion. Dual inlet hoses to each fill head minimises opportunity for CO2 breakout.

CF15

- Two fill heads
- 1000 cans per hour
- Compact footprint 1200 x 980mm
- Castors for maximum portability
- Can sizes 150-500ml
- Quick & easy height adjustment of seaming heads & lid dispenser
- Optional liquid nitrogen dosing

CF25

- Five fill heads
- 1500 cans per hour
- Footprint 2860 x 1200mm
- Optional castors for maneuverability
  - Can sizes 150-500ml
  - Quick & easy height adjustment of seaming heads & lid dispenser
  - Optional liquid nitrogen dosing

FULLY AUTOMATIC

The CF35 & CF70 both feature servo-driven seaming assemblies, giving the operator full control over seam settings from the touchscreen user interface. This delivers maximum positional accuracy and speed, along with a reduction in moving parts & associated maintenance requirements.

CF35

- Seven fill heads
- 2000 cans per hour
- Can sizes 150-500ml
- Full seam setting control via touchscreen HMI
- Remote access module for enhanced technical support
- Optional liquid Nitrogen dosing

CF70

- Dual lane, fourteen fill heads
- 4000 cans per hour
- Can sizes 150-500ml
- Full seam setting control via touchscreen HMI
- Remote access module for enhanced technical support
- Optional liquid Nitrogen dosing

DISSOLVED OXYGEN

We understand the detrimental effect oxygen can have on beer & other beverages. That's why we have invested significant research & development time to minimising the introduction of oxygen during the filling process.

All of our machines have CO2 purging tubes that enter the same can as the fill valve. Using the advanced Siemens control system, the machine is able to detect if there has been a delay between purging & the fill valve lowering fully into the can. In such a case, the machine will automatically purge the can again before filling, to ensure that the fill valve is opening into CO2 rather than oxygen.

The machines are also able to add a second dose of CO2 after the can has been filled. For example, if a product is lightly carbonated, increasing the fill rate with additional brite tank top pressure is not enough to generate sufficient foam to fill the head space of the can & expel any oxygen. Instead, the operator can accurately set the CO2 burst to 1ms intervals, also adjusting the position within the can that the CO2 is introduced as the fill valves are retracting.

After filling, the can travels towards the lid dispenser where there is a CO2 knife positioned under the waiting lid. As the can picks up the lid, a layer of CO2 is inserted between can and lid, further minimising oxygen pick up. The can then travels under the tamp bar which holds the lid down, forming a temporary seal to atmosphere before the can is promptly seamed.

SEMI AUTOMATIC

CF10

- Two head filler with integrated CO2 purging
- 500 cans per hour
- Pneumatically actuated seamer
- In-built brite tank pressure monitoring
- Fully adjustable for different can heights
- Can diameter changes within 5 minutes
- Can sizes 150-568ml
- Small footprint 1300 x 850mm
- Castors for maximum portability

10BEVM

- Single can motor driven, manually actuated seamer
- Designed for bars, taprooms, laboratories and product trials
- Same high quality seaming mechanism as our larger machines
- Easy changeover for different can heights and diameters
- Tool kit included with micrometer and seam tear down tool
- Footprint 665 x 266mm

PRESSURE MONITORING

The Innovus range of beverage canning machinery utilises intelligent pressure sensors to regulate the supply of CO2 to the brite tank head space.

A hygienic tri-clamp pressure sensor is mounted to the filler inlet manifold to measure the pressure of the liquid being transferred from tank to canning line. Real time readings are fed to the touch screen for the operator to view. The canning line splits the CO2 supply, to feed both the can purging on the line, and the brite tank top pressure.

The operator sets the required pressure on the touch screen. As soon as the reading drops below the set pressure, a solenoid valve inside the control panel opens to send CO2 to the brite tank feeding the line, and then closes once the set pressure is reached again. By topping up the tank top pressure as the liquid level drops, the flow rate of the liquid is kept consistent and the machine is able to consistently deliver fill levels of +/- 2ml.

ANCILLARY EQUIPMENT

DEPALLETISER

Innovus depalletisers are constructed from all stainless steel and are available at full-height and half-height sizes. Fully integrated with the canning line, the depalletiser maximises the efficiency of your packaging operation. The design features a belt drive linear actuator for smooth and accurate pushing of the cans and photocell sensors to monitor can build-up. A high torque motor raises and lowers the pallet with precision movement using a heavy duty chain. The Siemens touch screen controls allows the operator to easily manage the automatic setting of pallet layer increments and the automated removal of pallet layer pads is also provided.

LOWERATOR

The lowerator is a belt driven can transfer system to take cans from the depalletiser conveyor down to the canning line. The major advantage of the lowerator is that there is tool free adjustment between can sizes, without the need for any change parts. There is also the optional integration of a can rinser, using either sterile water or an ionising air jet. The lowerator has photoelectric sensors included to monitor downstream can build up, automatically turning the belt drive on and off as more cans are required.

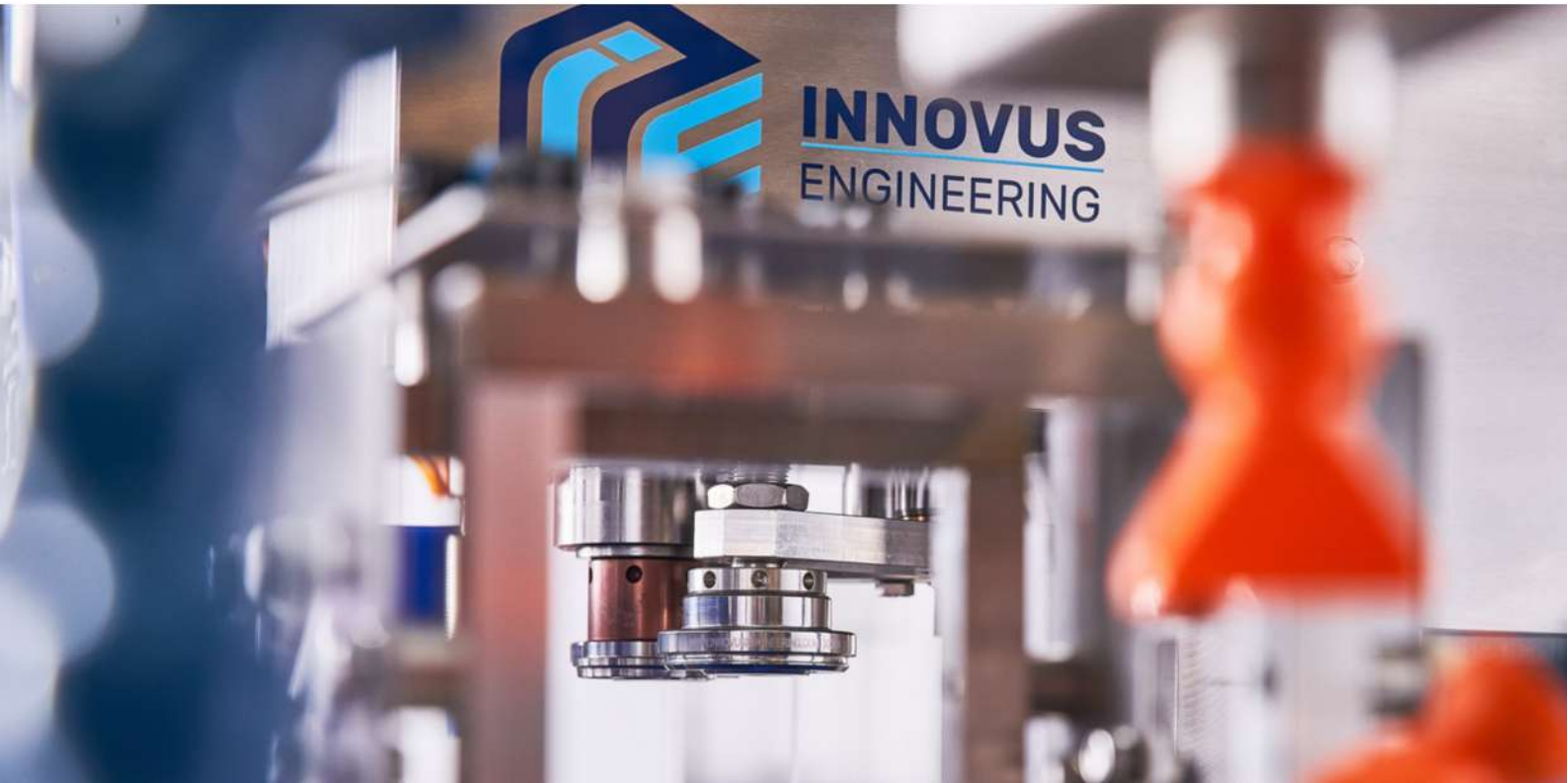
ANCILLARY EQUIPMENT

ROTARY TABLES

To maximise the automation and efficiency of the canning line, rotary infeed and collection tables can be integrated with our fully automatic machines. With capacity for up to 160 cans, adding rotary tables drastically reduces operator demand on the line. Optional castors are included to maximise portability when not in use.

SEAM ANALYSIS

An important element of production is ensuring safe standards are maintained throughout the lifetime of any machinery. We recommend seam measurements are regularly conducted on sealed cans, and the Innovus seam saw makes seam tear down and analysis incredibly straightforward. Cans are safely and precisely cut in seconds, and the integrated camera and measurement software makes highly accurate record keeping achievable in a fraction of the time versus manual methods.



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