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Offered By

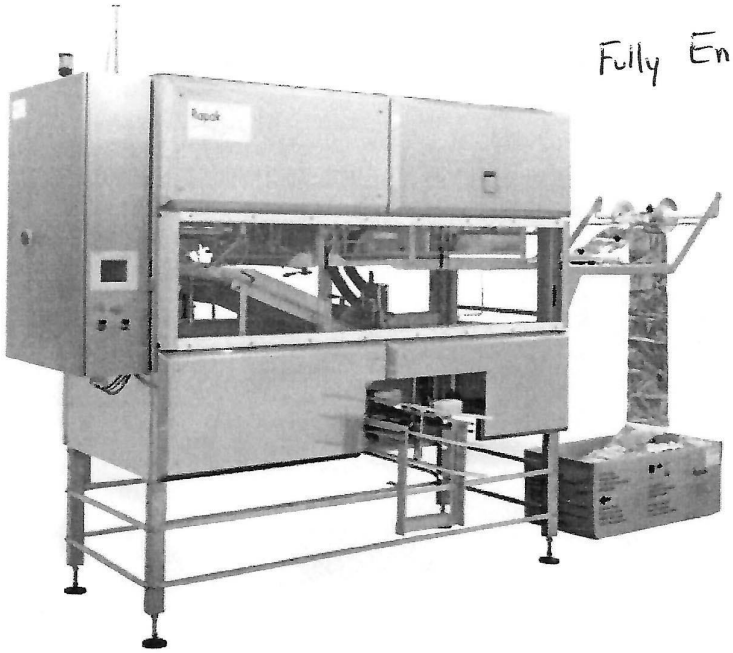
SOLUTIONS 4 MANUFACTURING

Filler: Asset R3402
Line: Asset PK-7500

Rapak Filler Specification

autokap™

1270E Single head Fully Automatic Edible Oil Filler



The **Autokap 1270E Edible Oil Filler** is a single head, strip feed, bag filler designed to fill and automatically load bags into boxes at High production speeds.

A general arrangement drawing of the filler is attached. A utility connection drawing will be provided once the final line configuration is confirmed.

~~The filler is supplied with~~ *tooled* ~~to run 10, 15 and 20 litre bags with one cap style.~~ Change tooling is available as optional extras for most commercially available caps, taps and connectors.

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An Automatic *bag into box Loader and box indexer system* is provided to load bags into end load boxes. The loader could have three chute sizes that can be easily changed out to run the 10, 15 and 20 litre boxes. The loader is mounted integrally inside the filler frame. The boxes are indexed across the filler. Rapak supply a pin and pad index system with all photo eyes and controls to automatically feed boxes to the loader as an option. The customer supplies the powered conveyor to move the boxes to and from the loader.

Utilities

Electrical:	240 volts, 1 phase, 40 amps
Air:	0.5 cubic meter per minute @ 6 bar, clean and dry
Water:	0.5 cubic meters per minute intermittent @ 4 bar minimum

Production Speed

	10 litre:	11 to 12 boxes per minute
17.3L	15 litre:	10 to 11 bags per minute
	20 litre:	8 to 9 bags per minute

10 bags/min - 11 bags/min

Production is dependent on product supply conditions. Rapak must be consulted on final pump and piping sizes. Piping must be 65mm minimum to the filler. Fill rates are based on product being supplied at 6 litres per second and 2 bar pressure at the fill head. (Productivity based on tests with water)

Construction

All fabricated components are made from stainless steel and engineering plastics. Product contact surfaces conform to USA 3A Dairy Standards. The machine complies with UK Health and Safety at work Act 1974.Noise level will be under 80 decibels.
The filler also complies with UK, EC and F&DA food regulations.

The *filler frame* allows for connection to the floor by screw feet that are adjustable +/- 50 mm.

A stainless steel roller type *extended bag feed table* is included to allow bags to feed from bins within 2 meters behind the filler.

Safety guards are standard and meet all CE safety requirements. The Guards consist of Clear Lexan panels on a slide track and fixed stainless steel panels that cover all sides of the filler. The sliding panels are interlocked to the filler controls.

Electrics and Controls

The Electrical enclosure is Stainless Steel, IP65 and is constructed in a UL listed panel shop. Wiring is to CE standards. It is mounted on the front of the filler. It houses the an Allen Bradley SLC 5/04 controller that is standard on the filler.

The *Operator Interface* is mounted on either the front left-hand or right-hand side of the main enclosure panel. AB PV 600 is the operator interface device. All functions and devices on the filler are actuated from the PV. A fault alarm displays the reason why the filler stops during operation and instructs the operator during all operations.

A *Remote E-Stop and cycle stop enclosure* is mounted on the right rear of the machine for added safety and operator convenience.

The Elevator, Bag In-feed and fill valve are powered by *Servo Motors*. The Servos provide precise repeatable bag positioning and capping, Easy size and tooling changes and increased speed and reliability.

Position sensors are 24 VDC with screw connections for easy disconnection and replacement. The servo system monitors torque loads to stop the filler under a no-cap or a no-bag condition.

A single *beacon light* is provided to alert the operator of alarm conditions on the filler. The reason for the alarm condition is displayed on the Panel View screen.

Pneumatics

Air valves and air cylinders are metric and are manufactured by Festo. They are air piloted valves and are fast operating and highly reliable. The valves are mounted on a manifold for easy service. Speed controls and regulators are mounted under the valves as required. Valves are easy to change-out. The manifold is IP65 rated and is mounted inside an *Air Valve Enclosure* with a hinged cover. The Enclosure is mounted on the upper left side of the filler.

The *Filter Regulator* is Festo brand and has a Lock-out/Tag-out manual switch to CE specification and is mounted on the front of the machine near the Valve Enclosure to provide air for the air valves. A soft start module in the line to the Air manifold provides controlled air power up.

Bag Feed and Separator

The *Bag pusher* is servo powered. This provides fast repeatable indexing of the bag to the fill chamber. The Servo is programmed to provide both the primary feed to the bag separator and the secondary feed to the elevator gripper under the fill chamber.

The *Bag Separator* is in a set position. Adjustment is done automatically for the bag sizes by selecting the bag size on the TP.

Fill Chamber Assembly

The elevator grippers are mounted on the *elevator assembly* and are powered by a servomotor mounted above the Chamber top plate. The Servo provides precise positioning of the cap and spout during uncaps and recaps. The Servo torque feed back capability allows monitoring of capping loads to identify no cap and no bag situations.

An *air cylinder-operated pad* is used to control air in the bag and prevent over splash during uncap and recapping.

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Fill Valve

The 25mm bore *fill nozzle* with the high flow fill valve piston reduces o-ring change-outs and increases productivity. The fill valve is servo operated for precise repeatable fills. A vacuum shroud on the nozzle tip sucks off any drips and dribbles from the fill valve tip after each fill for clean drip-less fills.

Metering System

A Turbine *volumetric flow meter* is standard and provides exceptional accuracy and low maintenance. Repeatability is +/- 0.3 %. Or +/-30 grams on a 10-litre bag. Accuracy is affected by changes in the product supply conditions. Rapak must approve tank pump and piping configurations. FM .02 % Accuracy by volume

Product Supply

The filler *product inlet* is a 40mm Tri-Clover connection. A pump supplied by others is required to deliver product to the filler. The pump should be a high volume / low pressure type, such as a centrifugal pump, and deliver product at a minimum of 6 litres per second, with a maximum of 2 bar pressure at the fill head.
A *shock tube* to reduce hydraulic shock in the product lines is provided as standard.

Vacuum System

A Venturi style *vacuum pump* and air operated valve provide post vacuuming of the bag.

CIP System

A CIP *adapter* is provided as standard. It fits in the elevator grippers and is raised to the outlet of the fill valve during the CIP sequence. The adapter has a 25mm diameter, high temperature, flexible hose that connects to a 40mm Tri-Clover fitting on the machine frame that provides the CIP return. This allows the fill valve and all product lines to be flushed with water or to be connected to an automatic CIP system. Rapak will customize the CIP program to suit plant requirements.

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Bag into Box Loader

The loader is a metal chute design. The load chute is raised and lowered to the box. The load chute goes into the box by 50mm to ensure the bag does not get caught on the box flaps.

Operator Platforms

An operator platform is only required if the box conveyor height is more than 400mm high. If platforms are required they will be quoted as a special.

Maintenance Manual

One hard copy of the *operation, maintenance and replacement parts* documentation is provided with the filler. The machines will be CE marked and a certificate of conformity will be filed.

Kits

A basic *parts kit* is available as an option.

Factory Testing

The filler is run on water in as close to production conditions as possible prior to shipping. The Customer is responsible to provide all operating supplies, at their cost, 30 days before the scheduled ship date. Rapak will advise quantities required for tests. We welcome customer participation in the testing.

After testing, the filler is mounted to a heavy-duty enclosed skid and shipped in an enclosed container.

Labels & Instruction plates

Labels will be provided in local language. A complete list of labels and their location will be provided to the customer so they can provide local language translations. The Touch panel will be programmed in local language and in English.

Installation & Startup

The Customer is responsible for placing the equipment and completing all utility and product connections. Rapak will provide installation instructions. A Rapak Service Technician is required to be on site to supervise the startup and train operators and Maintenance personnel. 5 days startup is required per filler. Standard service rates apply. All travel and expenses will be charged at cost.