

# Equipment Information



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# 1 Description and key features

## 1.1 Description

The Cryovac® VPP 2045D is a Vertical Form-Fill Seal machine, especially designed for the packing of pumpable foods and liquids. It offers great speed with flexibility when packing hot or cold products, with or without particulate up to 30 mm in diameter.

The 2045D is designed to operate with Cryovac's full range of oxygen barrier films. The film is automatically formed into a tube which is continuously filled. With our unique squeeze roller technology we accurately control the weight providing a pack with no headspace, the tube is then heat sealed and separated into a finished pouch.

The machine can operate with four different film widths (230 mm, 350 mm, 420 mm or 510 mm), achieved by interchangeable tooling and depending on pack size and product viscosity, the 2045D is capable of packaging up to 28 products/min. Optionally it can be modified for 5 liter packs, running at speeds of up to 15 products/min.

Microprocessor controlled for speed and accuracy, the 2045D's processor has a 100 channel memory for storing different packaging and/or products and a touch screen interface for operator control and trouble shooting.

Construction is simple and robust. All critical parts are treated against the corrosive environment often found in food production and packaging rooms. Designed with ergonomics, safety and hygiene in mind it is easy to use and clean, simple to maintain and meets all relevant European legislation for safety and hygiene.

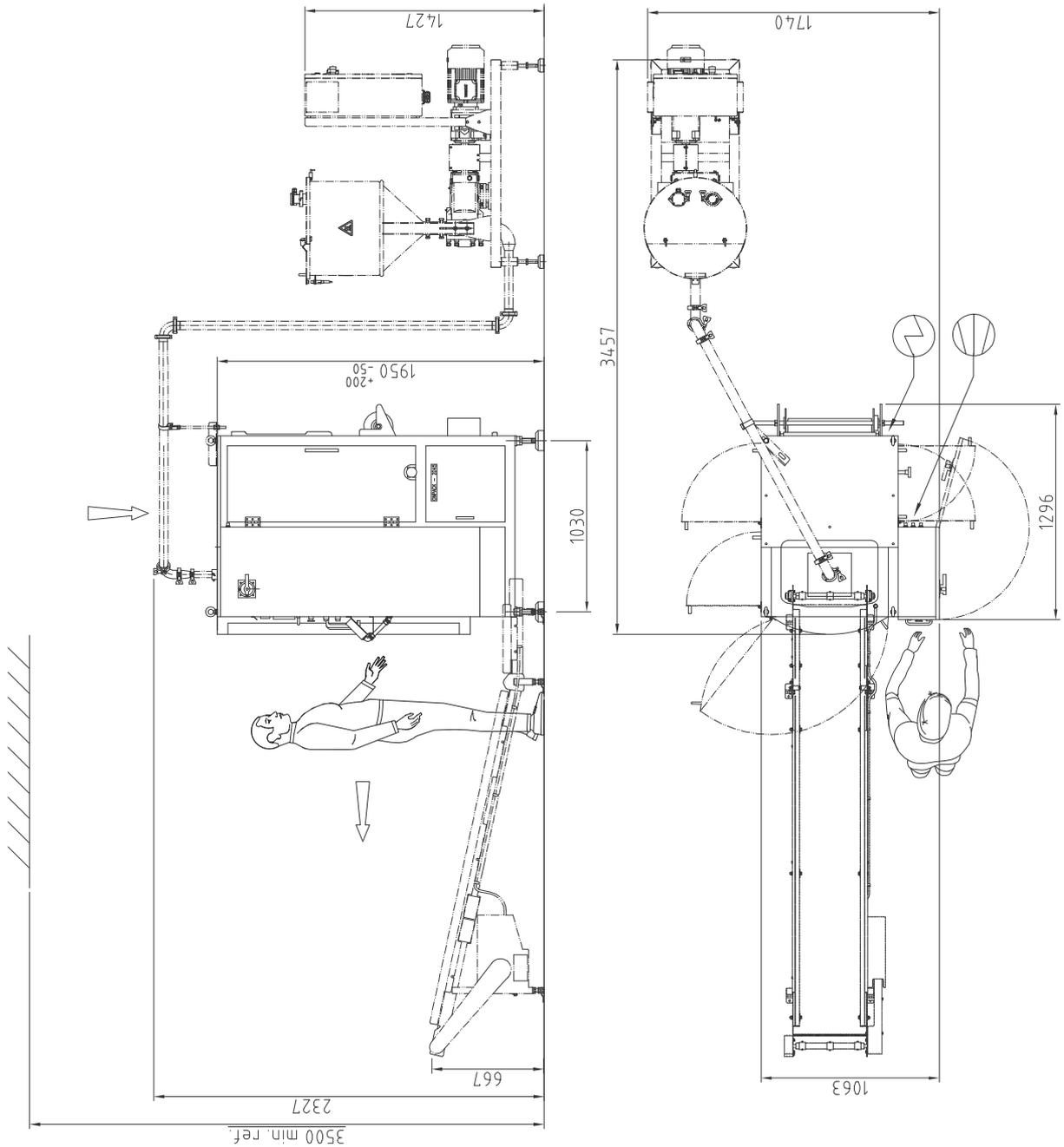
## 1.2 Key features

- Unique minimum head space with our squeeze roller technology
- Wide range of pack sizes, from 0.3 to 5 liters
- Versatile: quick and easy film roll and product changeover
- Up to 28 products/min (depending on product and pack size)
- 100 channel touch screen memory
- Cold and hot fill - up to 96°C
- Possibility to insert a fitment for dispensing
- Hygienic design makes cleaning easy and effective
- Good access for maintenance
- Robust high quality build standard using food approved materials throughout
- Utilizes well proven and reliable mechanical systems

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Layout

Important: The ceiling height must be at least 3500 mm.  
 For machines with Fitment System the ceiling height must be at least 3808 mm.



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Fig. 2-1, Layout

### 3 Nominal technical data

#### 3.1 Machine dimensions

Length, width & height See machine layout

#### 3.2 Weight

2045D	650 kg approx.
Pump-VPP	350 kg approx.
Package discharge conveyor	110 kg approx.

#### 3.3 Utilities

##### 3.3.1 Compressed air



Air type

ISO8573-1:2001 Class 5.4.4  
 ISO8573-1:2001 Class 3.4.2  
 (when using oils containing esters)  
 ISO8573-1:2001 Class 3.3.2  
 (when equipment is used below 5°C)

Pressure	6 bar
Supply pipe diameter	20 mm
Consumption	42.5 Nm <sup>3</sup> /h (708 l/min.)
Connection fitting	G 1/2" external thread

##### 3.3.2 Electrical - 2045D



Voltage	400 V +/-10%
No. of phases	3 phases, neutral + earth
Frequency	50 Hz
Installed power	4 kW
Current protection	Min. 20 A, max. 32 A, Type C according to IEC 60898-1
Average consumption	1.5 kWh, excluding pump

### 3.3.3 Electrical - Pump-VPP (to be ordered separately)

	Voltage	400 V +/-10%
	No. of phases	3 phases + earth
	Frequency	50 Hz
	Installed power	2.2 kW / 4 kW
	Current protection min./max	Min. 16 A, max. 25 A, Type C according to IEC 60898-1
	Average consumption	up to 4 kWh

## 3.4 Working characteristics

### 3.4.1 Product dimensions

Length	200 to 510 mm
Width	102, 162, 197, 242 mm
Height	variable
Volume	0.3 - 5 liters

### 3.4.2 Seal bars

End seal bar	5 ribs
Length	280 mm
Width	12 mm
Center seal bar	Double
Length	380 mm
Width	Twin, 3.5 mm each rib

### 3.4.3 Film details

Width	230, 350, 420, 510 mm (roll diameter)
Core diameter	6 inches
Film type(s)	FS range
Max. film roll diameter	419 mm
Max. film roll weight	55 kg

### 3.4.4 Functional details

Product fill temperature	Up to 96°C
Heating time	15 min
Working speed	up to 28 products/min
Noise level	68 dB (A)
No. of operators	1 operator to monitor only

## 4 Configuration

### 4.1 Standard system

- Basic machine (2045D)
- One set of tooling: 230, 350, 420 or 510 mm (to be ordered separately). Each set of tooling includes one straight fill tube (1" for 230 and 350 mm / 1.5" for 420 / 2" for 510 mm).
- One 5 rib end seal assembly and corresponding spare parts kit (to be ordered separately)
- Printed film registration capability
- Standard straight or easy-open end seal knife
- PLC controlled machine functions with LCD operator touch screen (language to be specified at time of order)
- Universal spare parts kit
- Declaration of CE conformity
- Manual (language to be specified at time of order)

### 4.2 Additional machine options

- Code dater (4 lines x 7 characters/line). Includes letters (A-Z) and numbers (0-9)
- Curved roller bed conveyor to allow to make packages in excess of 380 mm in length
- Fitment ready kit to allow the customer to integrate the Fitment System at a later date. This kit is a must if a Fitment System is to be ordered.
- Additional toolings (230 mm, 350 mm, 420 mm or 510 mm)
- Additional fill tubes
- Additional end seal assembly

### 4.3 Additional machine accessories

- Integrated Pump-VPP (to be ordered separately). Each Pump-VPP is supplied with a positive displacement Waukesha pump with Integral Speed Reducer gearbox, pump standard inverter, conductive level control, speed potentiometer, LCD speed reference display, 100 liters holding hopper, and sanitary piping from pump to machine.  
Further options:
  - available as C.I.P. (-U2) or strippable pump (-U1)
  - up to 4 kW pump motor

**Note: The 'Link to Pump' option must be ordered if a Pump-VPP is required.**

- Fitment System that delivers the fitments to the inside of the film tube and seals them in the desired position (to be ordered separately)
- Package discharge conveyor to remove finished packages from the machine (to be ordered separately)

### 4.4 System configuration

2045D + corresponding toolings + Pump-VPP + Package discharge conveyor + Fitment System FTS08.