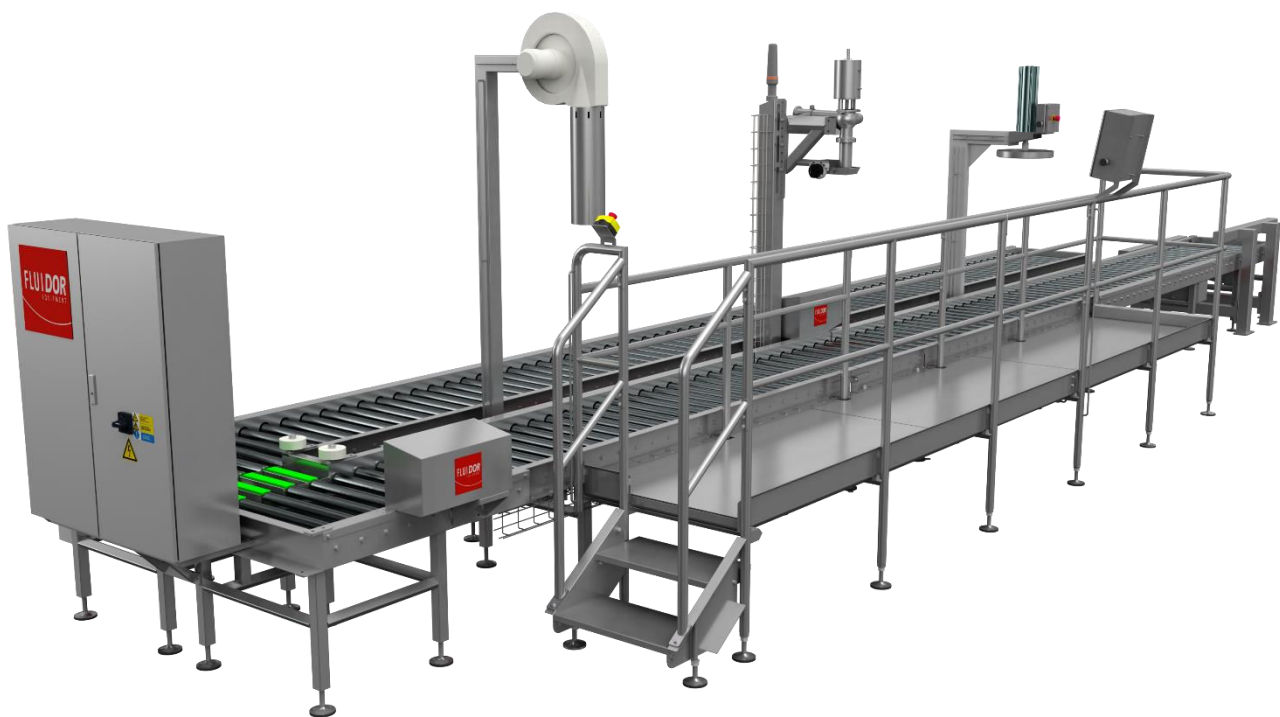


MACHINE SPECIFICATION

FILLING LINE DRUMS



Machine name	Filling line drums	Manufacturer	Fluidor Equipment B.V.
Publication date	26-04-2024	Address	Ramgatseweg 25, 4941VN Raamsdonksveer, The Netherlands
Version	0.1	Telephone	+31(0)162 581 450

DESCRIPTION

The Filling line for drums is designed for efficient dynamic filling of 200 l drums with fruit juices or fruit juice concentrates/blends with a viscosity up to 15.000 cP.

A complete Drum Filling Line consists out of following process steps:

- Station for insertion of plastic bags or liners by means of a Bagblower.
- Drum Filling Station on loadcells with Filling Lance .
- Stop position for closing of bags/liners.
- Drum lid press for closing of drum.
- Pneumatic driven sliding doors to enter/exit a Clean Room.

Empty drums are loaded onto driven roller conveyor, enter the Clean Room and stop at position for manual insertion of plastic liner(s) by means of a Bagblower. The Bagblower is an electric driven airblower executed with airfilter for clean air inside bags/liners.

Drum with liner will be conveyed to the filling position, where the drum is positioned on a roller conveyor section equipped with 4 loadcells to control the weight of the product to be loaded.

The Filling Lance lowers by means of a frequency controlled electric motor into the drum and starts loading at full flow.

The position of the Filling Lance is automatically controlled by the loadcells and frequency drive to prevent foaming of the product, last part of loading is at low flow to achieve an accuracy of 0,5 kg.

Drum with product will be conveyed to next stop position for manual closing of liners, finally the drum will stop at the Drum Closing Station, where an operator positions the drumlid properly by means of a pneumatic press and secures the clamping ring by a pneumatic nutspanner.

Full drums leave the Clean Room through pneumatic driven sliding door.

Several data are obtainable out of control system, therefore it is of absolute importance to discuss in detail what is expected by the customer prior to installation of the equipment.

DESIGN SPECIFICATION

- According actual CE-regulations
- Developed and build according quality system ISO 9001
- Clean design according actual EN1672-2 and HACCP-regulations
- Food contact materials according EC 1935/2004 and FDA
- Good Manufacturing Practice Regulation (EC) 2023/2006
- Components according Fluidor standard components list
- Machine prepared for integration into existing C.I.P.-system
- Machine control by HMI
- Control cabinet IP55 / NEMA 12 (VX25.....,various sizes, AISI 304)
- Module for remote internet access
- Construction + product parts AISI304
- Product contact materials (piping parts) AISI 316
- Operator platform along right hand side of the machine
- The filling line can optionally be supplied with frequency controlled twin screw product pump with seal flush and pressure relief valve set on 12 bar
- Height roller conveyor system 700 mm
- Machine is designed to be used 12 hours a day 5 days a week and 52 weeks a year with proper maintenance and an expected service life of 20 years



REQUIREMENTS

- Layout (dimensional, utility & requirements drawing) available upon request
- Earthquake area extra fixation needed (Anchors option)
- Machine is designed for indoor use in a medium hygiene wet area

TECHNICAL DATA

	EU	USA
· Total weight	: 3500 kg	4760 lbs
· Product / CIP temp	: -20, +90 °C max 60 minutes	-4, 194 °F max 60 minutes
· Ambient temperature	: 5 - 25 °C	41 - 77 °F
· Relative humidity	: 30 - 70%	
· Noise level	: < 85 dB(A)	
· IP value (control cabinets + drives)	: IP55	
· Pump particle size max	: 32/48 mm	1.26 /1.88 inch
· Adjustable machine support legs	: 80 -160 mm	3.15 - 6.3 inch
· Dimensions h	: 3700 mm	145 inch
· w*d	: Depending on customers request	
· Installed power	: 13 kW	18 HP

CAPACITY

- Depending drum infeed & product: up to 60 drums per hour
- Available product pump must have a capacity up to 20 m³ per hour.

PRODUCT INFORMATION

- Product type : Fruit juices and concentrates, liquid
- Product viscosity max : Dynamic viscosity 20.000 cP

CLEANING

- Cleaning depends on the product and company guidelines, the values below are guide values
- CIP cleaning after each production batch or before each production run after 12 hours of downtime
- Manual cleaning +- 20 min

CIP Time (sec)

CIP Step	Caustic	Caustic + Acid	Temperature (°C)	Concentration (%)
Pre Rinse	600	600	45	fresh water
Caustic (Organic soils)	1200	1200	75	0,5 - 2 % (Caustic soda)
Intermediate Rinse		600	20	fresh water
Acid (Inorganic soils)		600	65	0,5 - 1% (Acid)
Final Rinse	600	600	20	fresh water
Total CIP time (min)	40	60		

BIN AND DRUM SPECIFICATION

	EU	USA
· Dimensions drums:	Width: Ø480 to Ø630 mm Height: 810 to 1000 mm	19.0" to 24.8" inches 31.8" to 39.4" inches
· Max weight drum:	300 kg	775 Lbs

MACHINE EXECUTIONS

- One standard execution

POWER SUPPLY / CONTROLES

- 3 Phase 400V 50Hz 35 A+ neutral + earth, Siemens controls
- 3 Phase 480V 60Hz 30 A + earth, Allen-Bradley controls, UL prepared

COMMUNICATION

- PROFINET connections pre- installed at Siemens controls
- Ethernet/IP connections pre- installed at Allen Bradley controls

OPTIONS

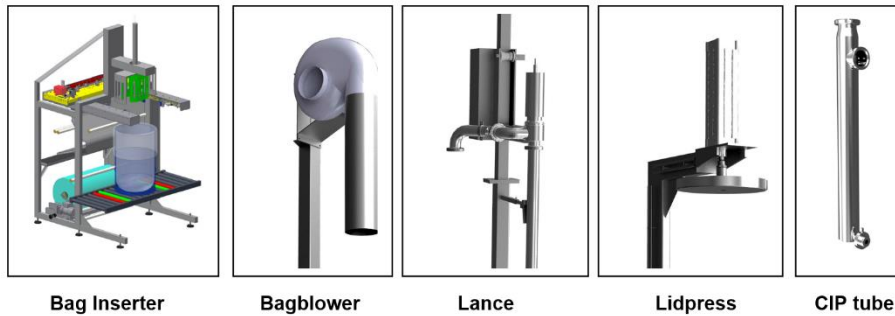
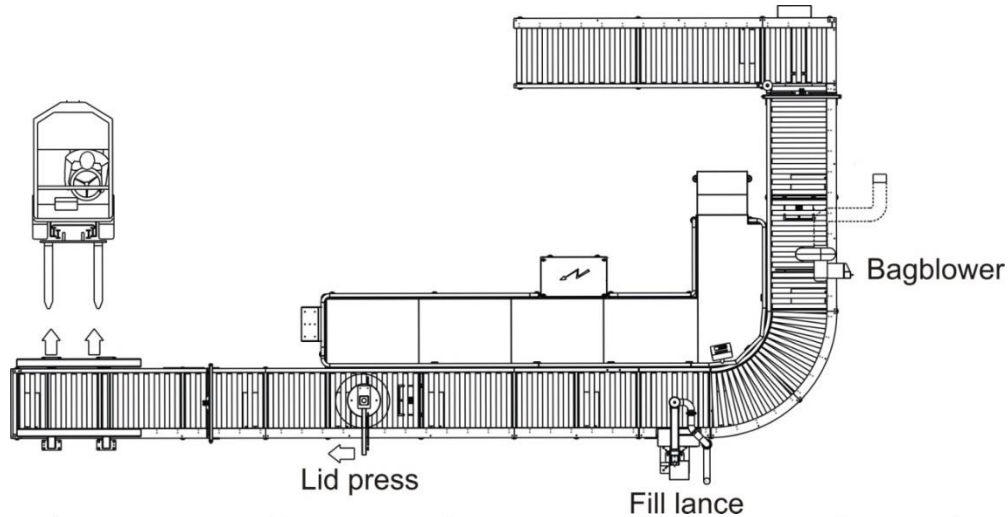
- Mirror filling
- Pneumatic drip tray
- Lance for CIP of filling lance
- Filter unit bag blower
- Forklift protection at loading station
- USA: <= 9 motors. HD Control Cabinet (wall mounted cabinets): IP66 / IPX9 / NEMA 13 / NEMA 4X (HD 1316.600, 810x1050/1221x300, AISI 304)
- EU: >9 motors - Standing enclosure cabinets, IP66 / NEMA 4x (VX25, basic cabinet 800x2000x600, AISI 304)
- USA: >9 motors - Standing enclosure cabinets, IP66 / NEMA 4x (VX25, basic cabinet 800x2000x600, AISI 304)

PROCESS OPTIONS

The Filling line for drums can be combined with the following Fluidor machines
Machine specification available upon request

- Automatic bag inserter
- Automatic drum palletizer
- Conveyor system: Drum weighing section, Drum sliding door, etc.

PROJECT LAYOUT EXAMPLE



Bag Inserter

Bagblower

Lance

Lidpress

CIP tube

ANNEXED DOCUMENTS

- Machine Lay-out
- Machine P&ID
- Fluidor standard components

GENERAL INFORMATION

Website : www.fluidor.com
 Telephone : +31 162 581450

Sales : Mr. Jan Vermeulen
 Telephone: : +31 162 581457
 Mobile : +31 6 25009609
 Email : j.vermeulen@Fluidor.com

Spares : Mr. Wing Ho Kwok
 Telephone : +31 162 581468
 Email : wh.kwok@fluidor.com

Service : Service department
 Telephone : +31 162 581466
 Email : service@fluidor.com