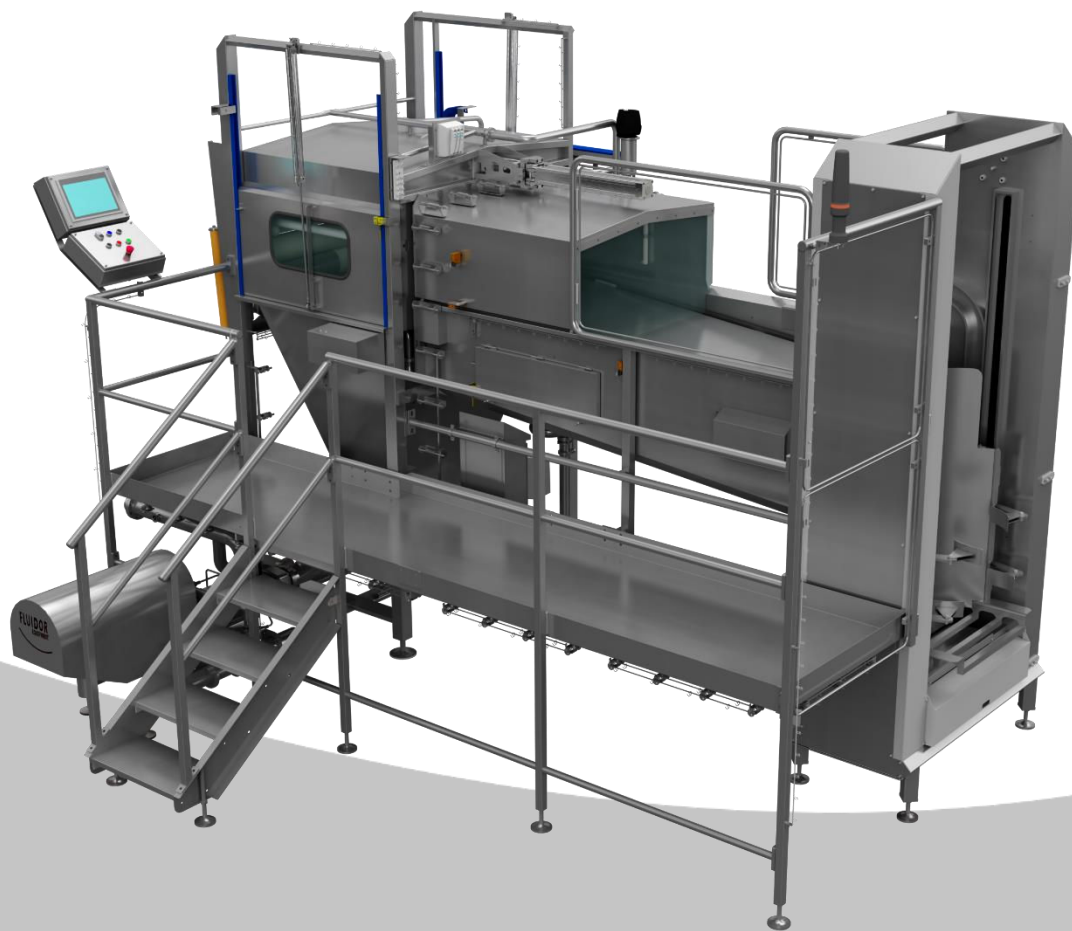


MACHINE SPECIFICATION

DRUM DUMPER DL-Paste



Machine name	DL-Paste	Manufacturer	Fluidor Equipment B.V.
Publication date	20-02-2024	Address	Ramgatseweg 25, 4941VN Raamsdonksveer, The Netherlands
Version	0.1	Telephone	+31(0)162 581 450

DESCRIPTION

The drum emptying system DL-Paste is designed for an efficient handling of 200 litre open top drums containing aseptically packed viscous products like tomato paste (up to 38° brix) with a maximum viscosity of 25.000 cP.

The drums are placed on the roller conveyor section by forklift with drum gripper. The rings and lids will be removed at the drum opening station including rotating rollers, platform and bolt cutter.

The drum will automatically be lifted and emptied. The aseptic bag falls on a stainless steel wire belt for transport through the washing section where the aseptic bag is washed externally by hot or cold water. Washing water can be re-circulated after filtering.

After washing the bag is gripped by the squeezer that pulls the bag over rotating circular knives that cut open the bag, The product falls into the product hopper and is discharged by a screw conveyor and twin screw pump. The bag is squeezed by the squeezer, equipped with a partly stainless steel lower roller and a rubber covered upper roller, so the filler caps do not have to be removed up front. Due to variation in quality (hardness) some specific filler caps can break during squeezing, which cannot be influenced by Fluidor. We advise to use transfer caps to put on these filler caps. The empty bag is collected at the end of the machine in a collecting container. After production the DL-Paste can be integrated into the customers CIP process. The installed complete set of nozzles will clean the inside of the hopper section according to the set cleaning program.

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 (CIP covers included)
- Machine control by HMI
- Control cabinet IP55 / NEMA 12 (VX25...., various sizes, AISI 304)
- Module for remote internet access
- Drum holder with pneumatic actuated clamping device, suitable to handle conical drums.
- Electric driven drum lift for smooth lifting and tilting of the drums.
- Electric driven rotating knives to open aseptic bags.
- AISI 304 electric driven transport belt.
- Construction + upper hopper AISI304
- Hygienic stainless steel hopper with integrated level detection
- Product contact materials (hopper + piping parts) AISI 316
- Operator platform along right hand side of the machine
- Maintenance platform along right hand side of the machine
- Washing section for external washing of aseptic bags
- Electric driven squeezer, consisting of one rubber covered roller and one knurled stainless steel roller
By squeezing the aseptic bag the remainder in the bag is less than 0,1 %
- Frequency controlled twin screw product pump with seal flush and pressure relief valve set on 12 bar
- Pressure transmitter behind the pump
- Height roller conveyor system 700 mm
- The CIP supply is not equipped with a mix-proof valve solution
- Machine is designed to be used 12 hours a day 5 days a week and 52weeks 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 empty	: 3650 kg	8050 lbs
· Total weight Full	: 4550 kg	10030 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	
· Product hopper volume	: 900 L	237 gal
· 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*w*d:	: 3300*3550*4950 mm	129*140*195 inch
· Installed power	: 20 kW	27 HP

CAPACITY

- Depending on drum infeed & product: up to 50 drums per hour
- Pump capacity 8 - 20 m³ product per hour. (35 - 88 gpm)
- Pump capacity 40 m³ CIP liquid per hour (176 gpm)
- Pump pressure max. 12 bar. (174 psi)

PRODUCT INFORMATION

- Product type : Viscous products, paste (up to 38° brix), concentrates, pulps paste
- Product viscosity max : Dynamic viscosity 25.000 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 80 A+ neutral + earth, Siemens controls
- 3 Phase 480V 60Hz 60 A + earth, Allen-Bradley controls, UL prepared

COMMUNICATION

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

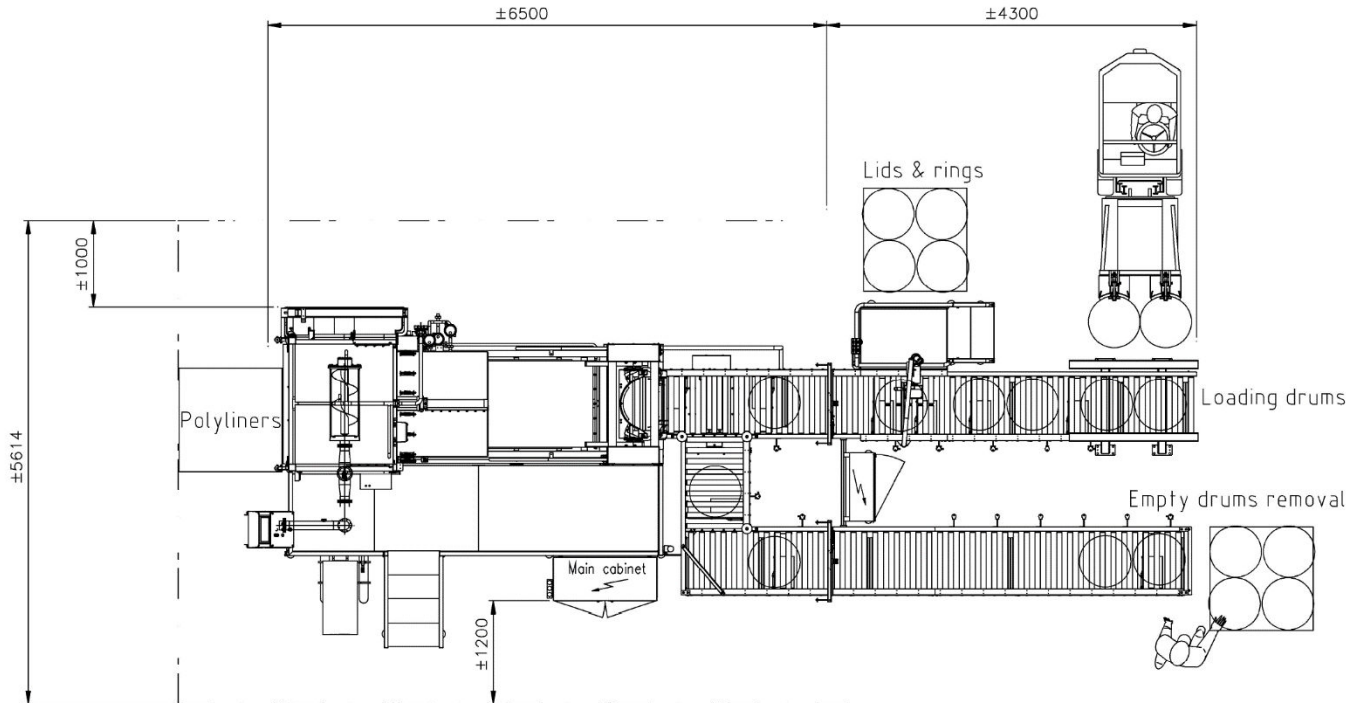
OPTIONS

- Water flow meter
- Magnetic trap in front of the pump
- wall mounted HD Control cabinets: IP66 / IPX9 / NEMA 13 / NEMA 4X (HD... , Various sizes, AISI 304)
- Standing enclosure cabinets, IP66 / NEMA 4x (VX25, basic cabinet 800x2000x600, AISI 304)
- External pump cooling for low product flow rate

PROCESS OPTIONS

The DL-Paste can be combined with the following Fluidor conveyor systems: Drum opening station, Drum weighing system, Drum conveyor load/unload, forklift protection, Drum sliding door, Drum washer full or empty drums, Drum crusher, Auto bag removal system ect.

PROJECT LAYOUT EXAMPLE



ANNEXED DOCUMENTS

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

GENERAL INFORMATION

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