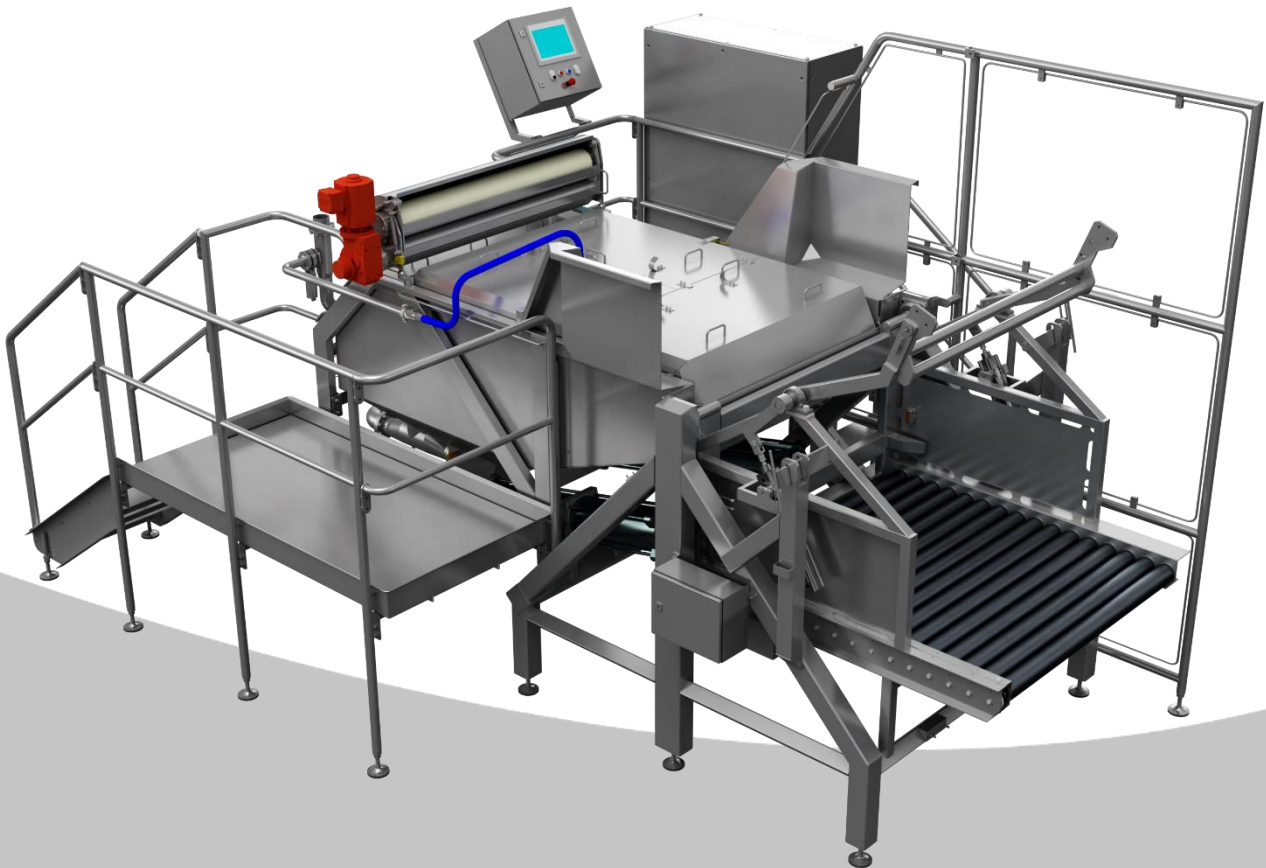


MACHINE SPECIFICATION

TOTE BIN DUMPER FLUIDS TBD-Fluids



Machine name	TBD-Fluids	Manufacturer	Fluidor Equipment B.V.
Publication date	06-05-2024	Address	Ramgatseweg 25, 4941VN Raamsdonksveer, The Netherlands
Version	0.1	Telephone	+31(0)162 581 450

DESCRIPTION

The Tote Bin Dumper-Fluids (TBD-Fluids) is designed for an efficient emptying of tote bins and drums with liquid product in aseptic bags.

The Tote bin or drums are placed on the roller conveyor system by fork lift truck. The covers are removed and the bag is opened by an operator.

Bins and drums are centered for correct infeed in the bin/drum holder for pneumatic lifting / dumping. The bag falls on the grid and the product flows towards the product discharge pump. Operated feeds the bag into the squeezer, reducing the product loss to a bare minimum.

After production CIP covers are placed and TBD-Fluids can be integrated into the CIP-process.

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
- Construction + product parts AISI304
- Hygienic stainless steel hopper with dumping grid and integrated level detection
- Piping parts AISI 316
- Operator platform along left hand side of the machine
- Extra operator platform along right hand side of the machine
- Pneumatic loading an tilting device
- Electric driven bag squeezer with finger protection, hygienic design, consisting out of knurled AISI 316 lower roller and natural rubber upper roller, assembled in 2 AISI316-side plates with lifetime lubricated closed bearings, IP66 electric drive without cooling fan
- Product loss < 0,1%, with foot operated reverse drive for safe operation
- 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 955 mm
- CIP supply can optionally be supplied with a mix-proof valve.
- 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	: 5500 kg	12125 lbs
· Total weight Full	: 7500 kg	16530 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	: 2000 L	530 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:	: 2200*4220*5350 mm	86*166*210 inch
· Installed power	: 18 kW	25 HP

CAPACITY

- Depending on bin / drum infeed & product: 20 tote bins or 40 drums per hour (2 drums per cycle)
- 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 : Fruit juices and concentrates, liquid up to 70°
- 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
· Dimensions bin:	Length: 1465 mm Width: 1200 mm Height:1200 mm	57,7" inches 49,2" inches 49,2" inches
· Max weight bin :	1650 kg	3640 Lbs

MACHINE EXECUTIONS

- One standard execution

POWER SUPPLY / CONTROLES

- 3 Phase 400V 50Hz 40 A+ neutral + earth, Siemens controls
- 3 Phase 480V 60Hz 35 A + earth, Allen-Bradley controls, UL prepared

COMMUNICATION

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

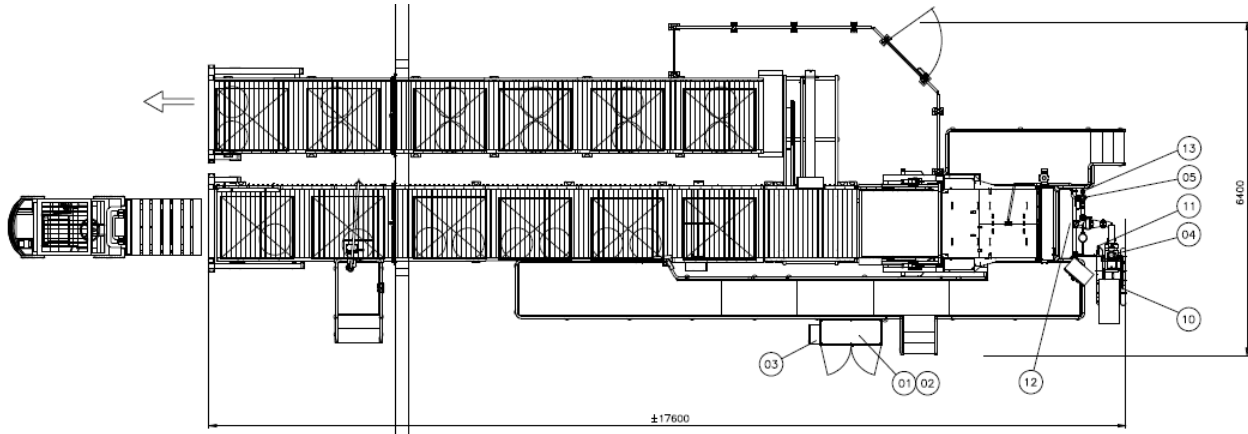
OPTIONS

- Product parts in AISI 316
- Water flow meter
- Magnetic trap in front of the pump
- Standing enclosure cabinets, IP66 / NEMA 4x (VX25, basic cabinet 800x2000x600, AISI 304)
- External pump cooling for low product flow rate from 0 to 20 m³/h (standard range is from 8 to 20 m³/h)

PROCESS OPTIONS

The TBD-Fluids can be combined with the following Fluidor conveyor systems: BIN opening station, BIN weighing system, BIN conveyor load/unload, BIN shuttle, BIN sliding door etc.

PROJECT LAYOUT EXAMPLE



ANNEXED DOCUMENTS

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

GENERAL INFORMATION

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