

# MACHINE SPECIFICATION

## DRUM DUMPER DAPS-Paste



Machine name	DAPS-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 dumper DAPS-paste is designed for an efficient emptying of 200 liter open top drums containing viscous products (up to 38° brix) with viscosity up to 25.000 cP.

Drums are placed on the roller conveyor section, at (optional) Drum Opening Station the lid will be removed and liner(s) will be opened.

The drum is lifted and tipped pneumatically. The bag slides into the collecting hopper and is stopped by a grid. The bag will empty itself partly. The operator brings the bottom part of the bag into the squeezer and the remaining product is squeezed out. The product falls into the hopper and is discharged by a screw conveyor and twin screw pump. After production the CIP-covers with rotating nozzle can be placed for integration of the DAPS-Paste into the customer's 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 parts AISI304
- Product contact materials (hopper + piping parts) AISI 316
- Hygienic stainless steel hopper for viscous products with dumping grid and integrated level detection
- Operator platform along right or left hand side of the machine
- Pneumatic loading an tilting device with additional clamp for conical drums and pneumatic stainless steel AISI 304 lifting cylinders
- 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 700 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	: 2200 kg	4850 lbs
· Total weight Full	: 3050 kg	6725 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	: 850 L	225 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:	: 3600*2250*5700 mm	141*88*225 inch
· Installed power	: 18 kW	25 HP

## CAPACITY

- Depending on drum infeed & product: up to 40 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
- 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
<b>Total CIP time (min)</b>	<b>40</b>	<b>60</b>		

## BIN AND DRUM SPECIFICATION

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

## **MACHINE EXECUTIONS**

- DAPS-Paste right
- DAPS-Paste left

## **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

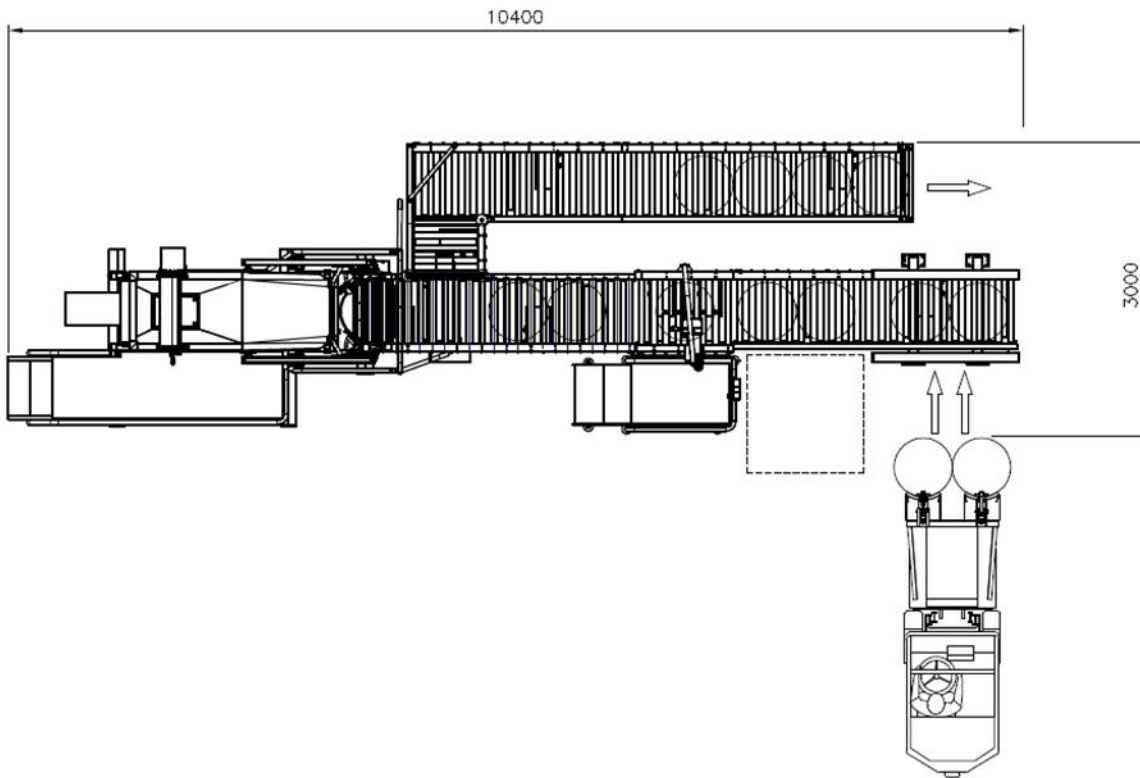
## **OPTIONS**

- 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

## PROCESS OPTIONS

The DAPS 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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