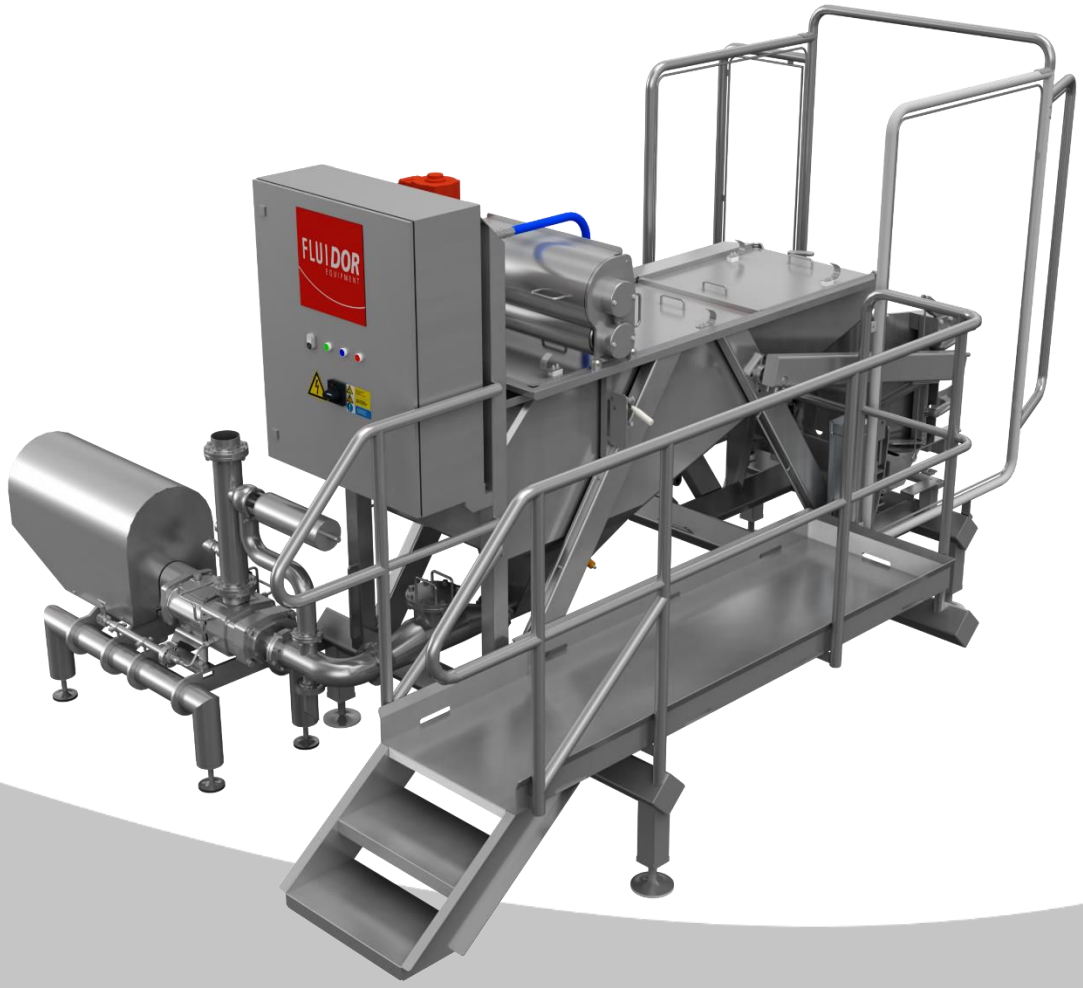
MACHINE SPECIFICATION

DRUM DUMPER, DAPS



Machine name	DAPS	Manufacturer	Fluidor Equipment B.V.
Publication date	20-02-2024	Address	Ramgatseweg 25, 4941VN Raamsdonksveer, The Netherlands
Version	0.2	Telephone	+31(0)162 581 450

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DESCRIPTION

The Drum Dumper (DAPS) is designed for an efficient emptying of 200 liter open top drums containing liquid products like fruit juice concentrates (up to 70° brix) with a maximum viscosity of up to 20.000 cP. Drums are placed on the roller conveyor section, at (optional) Drum Opening Station lid will be removed and liner(s) will be opened. The drums are transported to the Drum Dumper where drum is lifted and tipped pneumatically. The liner with product will fall into the collecting hopper and is stopped by a grid. The liner will empty itself partly. The operator brings the bottom part of the liner into the squeezer and the remaining product is squeezed out, the product flows into the product hopper and is discharged by a twin screw pump. After production CIP covers with rotating nozzle can be placed for integration into 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 with dumping grid and integrated level detection
- Operator platform along right or left hand side of the machine
- Pneumatic loading an tilting device with pneumatic actuated clamping device, aluminum cylinders in a Clean design
- 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	: 2000 kg	4410 lbs
Total weight Full	: 2500 kg	5510 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	: 500 L	132 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:	: 2400*1850*4250 mm	94*73*167 inch
Installed power	: 18 kW	25 HP

CAPACITY

- Depending on drum infeed & product: up to 60 drums per hour
- Pump capacity 4 - 12 m³ product per hour (18 - 52 gpm)
- Pump capacity 30 m³ CIP liquid per hour (132 gpm)
- Pump pressure max. 12 bar (174 psi)

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

- DAPS right
- DAPS 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

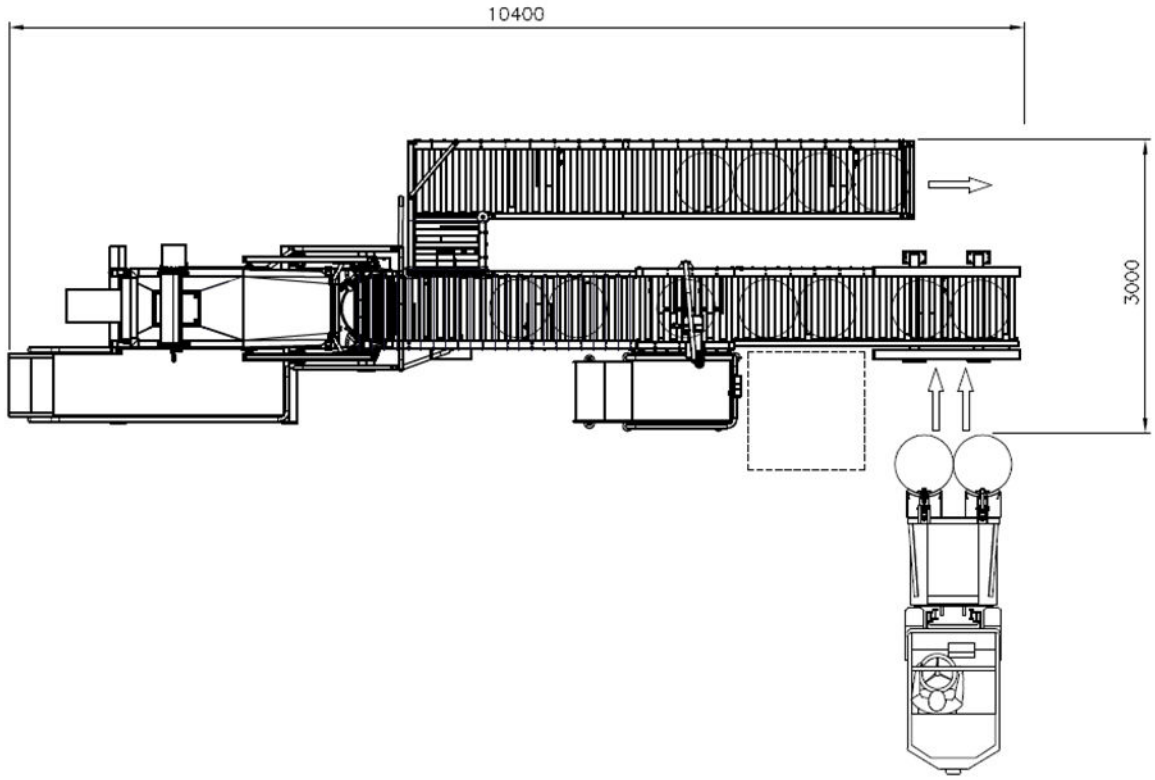
OPTIONS

- 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 m^3/h (standard range is from 8 to 20 m^3/h)

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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