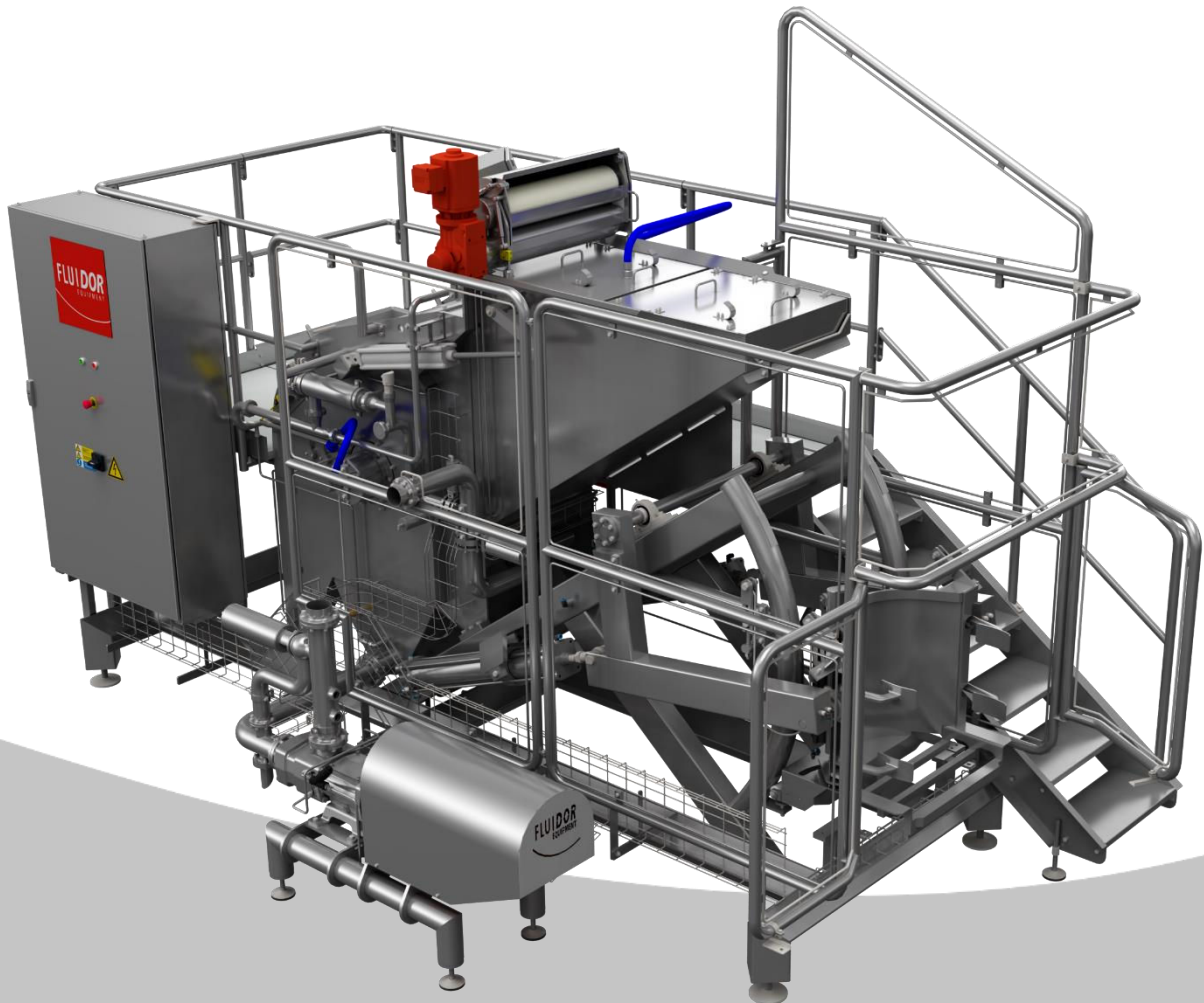


MACHINE SPECIFICATION

DRUMDUMPER-ICE-CRUSHER DPRICS



Machine name	DPRICS	Manufacturer	Fluidor Equipment B.V.
Publication date	06-05-2024	Address	Ramgatseweg 25, 4941VN Raamsdonksveer, The Netherlands
Version	1.5	Telephone	+31(0)162 581 450

DESCRIPTION

The Drum Dumper Ice Crusher (DPRICS) is designed for an efficient emptying of drums with liquid or frozen product in bags. The drums are placed on the roller conveyor system by a forklift with a drum gripper. The covers are removed and the bag is opened by an operator. Drums are centered for correct infeed in the drum holder for pneumatic clamping and lifting. The liquid product falls into the hopper and flows towards the product discharge pump. The hard frozen product is smoothly guided by a pneumatic safety grid to the driven crusher with pins that crushes it into flakes. At the bottom of the hopper the driven screw conveyor pushes the product into the twin screw product pump. The operator feeds the bag into the squeezer, reducing the product loss to a bare minimum.

After production CIP covers are placed and DPRICS 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 pneumatic dumping grid and integrated level detection
- Piping parts AISI 316
- Operator platform along right hand or left hand side of the machine
- Pneumatic loading and tilting device with additional clamp for conical drums and pneumatic stainless steel AISI 304 lifting cylinders
- Electric driven crusher equipped with pins horizontally placed in hopper, suitable for deep frozen liquids, cells and liquids containing ice crystals
- 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	: 4000 kg	8820 lbs
· Total weight Full	: 4700 kg	10360 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	: 700 L	184 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:	: 3500*2900*5350 mm	137*114*210 inch
· Installed power	: 35 kW	47 HP

CAPACITY

- Depending on drum infeed & product: up to 60 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

PRODUCT INFORMATION

- Product type : Fruit juices and concentrates, liquid or frozen
- 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

- DPRICS right
- DPRICS left
- Stairs at front
- Stairs at side
- Stairs at rear
- Control cabinet at side
- Control cabinet at rear

POWER SUPPLY / CONTROLES

- 3 Phase 400V 50Hz 100A+ neutral + earth, Siemens controls
- 3 Phase 480V 60Hz 80A + earth, Allen-Bradley controls, UL prepared

COMMUNICATION

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

OPTIONS

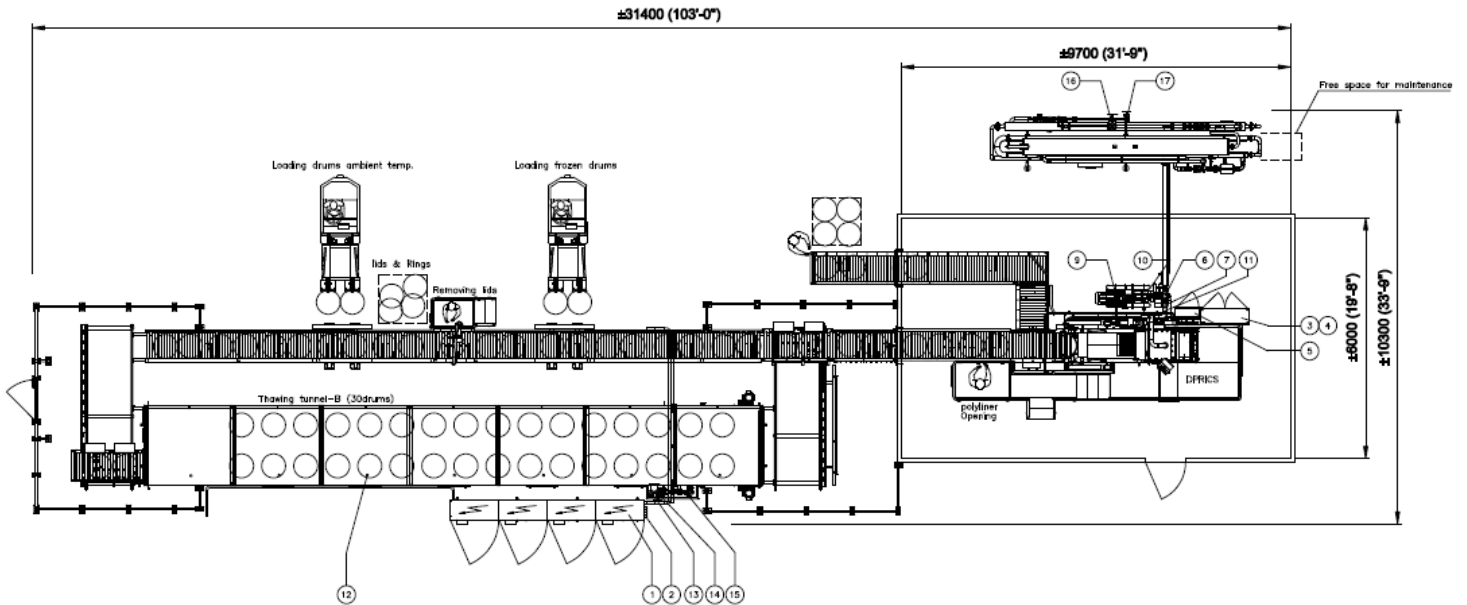
- Product parts in AISI 316
- Water flow meter + connection to CIP line
- Magnetic trap in front of the pump
- Standing enclosure cabinets, IP66 / NEMA 4x (VX25, basic cabinet 800x2000x600, AISI 304)
- External pump cooling for low product flow rate from 0 to 20 m³/h (standard range is from 8 to 20 m³/h)

PROCESS OPTIONS

The DPRICS can be combined with the following Fluidor machines
Machine specification available upon request

- Crushed ice melter (C.I.M.).
- Thawing tunnel
- Conveyor system: Drum opening station, Drum crusher, Drum weighing system, Drum conveyor loading full drums, Drum sliding door, Drum Full or empty drum washing station etc.

PROJECT LAYOUT EXAMPLE



ANNEXED DOCUMENTS

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

GENERAL INFORMATION

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