Tetra Pak® Cheese Vat Yieldmaster 2

Machine for making curd and whey from milk and additives

Highlights

- Gentle uniform cook with hot water dimple surface targeting a maximum cook rate of 1-degree F/ 0.55-degrees C per minute
- Highest yields of any vat through increased fat retention and reduced fines generation
- Efficient agitation in cut or stir at minimal rpm speeds to produce a balanced curd to whey ratio and maximize yield
- Proven performance of sanitation and avoidance of product loss with our patented low-cost sanitary seal, which only requires one seal per shaft
- Reduced water usage to rinse out curd due to the barrel shaped vat, specially designed blade panels with reduced surface area and dual center outlets

Application

Tetra Pak® Cheese Vat Yieldmaster 2 is used for converting milk into curds and whey, in a batch process, for all cheese types.

Working principle

Milk and culture enter the vat via a filling port. Rennet is then introduced into the milk by a series of spray nozzles along the length of the vat's roof. The rennet is quickly and efficiently mixed into the cheese milk via the counter rotating horizontal dual shaft. The mixture is allowed to set, then cut by counter-rotating knife blades. After it has been cut, the curd is cooked as it is stirred by counter-rotating agitators which keeps the curd well dispersed while operating at relatively low speeds. Precise heating takes place via a hot water jacket to ensure process consistency and minimize fat loss. The vat's stirring and cutting parameters are both determined by a programmable controller. Prior to pump-out, whey can be pre-drawn through a fixed port or with an optional top-mounted pre-draw system. Then the remaining contents are pumped out to downstream processes. The length of the vat can be extended to obtain different capacities.

Main components

- Dual horizontal barrel shaped body with flat ends
- Slope to center of vat is ¾" per foot
- Heating jackets on body and flat ends
- Dual shaft counter rotation with leak detect
- Each shaft includes blade panels for cutting and stirring
- Frequency controlled gear motor coupled to dual secondary gear reducers to drive each shaft
- Pre-draw connection at customer specified level
- Two centrally located curd and whey outlets
- Manway with polypropylene cover and locking safety grate
- CIP sprays and manifold complete with leak detect valves to control cleaning of tank, internal seals and bearings
- Coagulite fitting with O-ring and plug
- Rennet nozzle with local header
- Temperature fitting and sensor
- Internal lighting
- Sanitary air vent
- Adjustable legs

Control system

The Tetra Pak® Cheese Vat Yieldmaster 2 is fully automated, requiring little or no operator intervention. Available control systems include either Allen Bradley or Siemens.

Options, Mechanical

- Prewired operator panel and low voltage panel
- Prewired VFD panel
- Vat internal access ladder
- Vat specialty maintenance tools
- Vat man retrieval system
- Coagulation sensor
- Top mounted predraw whey sieve
- Non-standard outlet height
- Non-standard voltage and frequency
- Blades to match existing vats
- Flush mounted outlet plate

Options, Automation

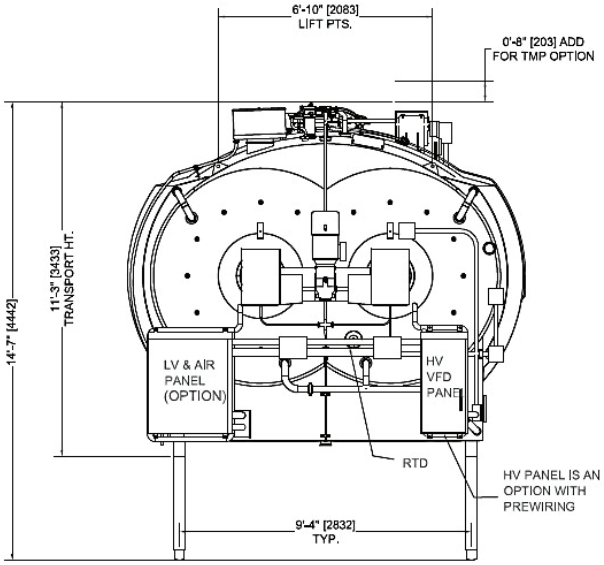
- I/O Communication (hardwired communication)
- Operator panel and machine manuals in non-English language

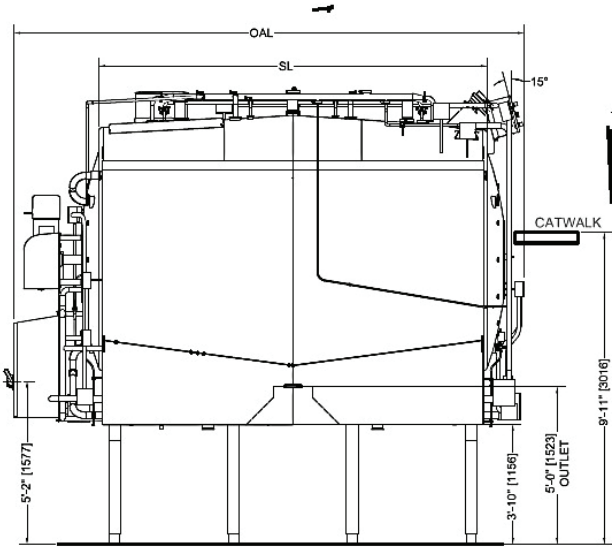
Technical Data

Model	Tetra Pak® Cheese Vat Yieldmaster 2 55k	Tetra Pak® Cheese Vat Yieldmaster 2 70k	Tetra Pak® Cheese Vat Yieldmaster 2 85k
Dry Saturated Steam Consumption (Hot Water Set)*	3,150 PPH at 55 PSIG 1,430 kg/hr at 3.8 bar	4,000 PPH at 55 PSIG 1,810 kg/hr at 3.8 bar	4,860 PPH at 55 PSIG 2,200 kg/hr at 3.8 bar
Compressed Air Consumption	3 CFM at 90 PSIG minimum 85 L/min at 6.2 bar minimum		
Power Requirements	10 HP 7.45 kW		15 HP 11.18 kW
CIP Flow Rate	160 GPM @ 25 PSIG 0.61 m^3/min @ 1.7 bar		

*For 1-degree F/ 0.55-degrees C per minute and maximum fill.

Layout





Dimensions

Model	Maximum Operating Capacity		Dimensions ft [mm]			Empty Weight
			O. A. L.	S. L.	O. A. W.	
55k	55,000 lbs 24,948 kg	24,200 L 6,393 gal	16'-3" [4,953]	12'-4" [3,759]	12'-7" [3,835]	12,800 lbs 5,806 kg
70k	70,000 lbs 31,751 kg	30,800 L 8,136 gal	19'-3" [5,867]	15'-8" [4,775]	12'-10" [3,912]	14,000 lbs 6,350 kg
85k	85,000 lbs 38,555 kg	37,400 L 9,880 gal	21'-10" [6,655]	18'-8" [5,690]	13'-2" [4,013]	16,300 lbs 7,394 kg

*Maximum operating capacity is calculated using density of 8.6 lbs/gallon.

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