Prodek
Serving the Industry

Batch Vacuum Pan custom designs

A batch vacuum pan is a piece of equipment that with verified evidence, can be kept in use for more than 50 years. Our design is focused on high circulation and thermal efficiency and on the development of crystals free of conglomerates and false grain, which will produce a recurring economic return for the next 50 years.

With the good quality natural circulation obtained, the use of a forced circulator would improve the performance of the equipment rather than correct a design problem, however we strongly recommend it for the process of refined sugar using low pressure steam.

The most outstanding characteristics of our batch vacuum pan are:

- Construction: carbon or stainless steel as per customer's preference.
- Ratio of heating surface to mass final volume: ≥ to 2.0 ft2 / ft3 (6.50 m2 / m3).
- Foot or graining volume: ≤ 40%.
- Tube flow area / downtake flow area or circulation factor: ≤ 2.5
- Calandria's height between plates: ≤ 36"
- Mass' final height on top calandria plate: ≤ 6.23'
- Distance from mass' final volume to the entrainment separator: ≥ 6'

By informing of the required capacity of the vacuum pan, the basic design with dimensions and characteristics can be obtained free of charge.

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The mechanical design with construction drawings and details can be obtained at a satisfactory price. If you prefer the equipment built and/or installed, we could also quote its cost in a reasonable timeframe.

The answer to your dimensioning query will be answered in the following format:

General Data	
Vacuum Pan's ID (ft)	0.00
Heating tubes nominal Ø (inch)*	0.00
Distance between outside walls or ligaments (inch)	0.00
Downtake Ø (ft)	0.00
External height between calandria plates (inch)	0.00
Main cone Ø (ft)	0.00
Inverted Cone Ø (ft)	0.00
Main cone angle (°)	0.00
Inverted cone angle (°)	0.00
Flange height (ft)	0.00
Grain total load volume (ft^3)	0.00
Vacuum pan's useful volume (ft^3)	0.00
Number of tubes	0.00
Heating surface (m^2)	0.00

Straight Vacuum Pan Characteristics	Reached	Recommended Range	
S/V ratio	0.00	≥	2.00
% Grain load	0.00	≤	40.00
Tube area/Downtake area	0.00	≤	2.51
Mass height over top plate (ft)	0.00	≤	6.23
Ratio of downtake Ø to calender Ø	0.00	≥	0.40

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