

BATCH COOKER

BROCHURE

A & S THAI WORKS CO., LTD.

Design and manufacture of fishmeal & rendering plant as complete turnkey solution

Contact:

99/199 Moo 1 Theparak Rd., Km.22 Bangsaothong, Samutprakan 10570 Thailand







The batch cooker has been used in the rendering industry since the 1940s. It is a simple steam heated machine that can process in "one batch"

- Mixed meat and bone and intestines (high temp drying)
- Feathers (hydrolyzing and drying)
 => feather meal for animal feed
- Blood (cooking and drying)
 > blood meal for animal feed

- Mixed poultry offal (offal and feathers mixed together) (hydrolyzing and drying)
 => meal for animal feed and tallow/ chicken oil
- Wool and hair from processing of sheep, hog (swine) (hydrolyzing and drying)
 => feed back into the rendering process

PROCESS:

- Hydrolyzing and drying in a batch cooker at internal pressure about 3 bar for 30 minutes to make the feathers digestible - (pressure and time can vary)
- Hydrolyzing and then drying in a disc dryer
- Cooling of meal and hammer milling

For Mixed meat, bone and intestines the batch cooker will act as a HIGH TEMP frying pan where the material is cooked and dried in a high temperature oil bath, up to 135 deg C. Then the hot material is pressed in a high pressure press where the tallow/fat/oil is separated.

The batch cooker design has a heated shell with a steam jacket and a heated mixer rotor. There is an inlet chute and a bottom outlet, both with knife gate valves. The body is designed to withstand internal pressure up to 5 bar (operation 3 bar)

ASTW make three most common sizes;

5,000 liters, popular name 5 x 12 foot batch cooker

10,000 liters, popular name 5.5 x 18.5 foot batch cooker

1,700 liters, popular name 3 x 9 foot batch cooker, 2 options!

- a) normal batch cooker
- b) no jacket, injection of live steam for hydrolysis of wool

TECHNICAL DATA

	BC 1,700 liters	BC 5,000 liters	BC 10,000 liters
Dimension mm:			
A Body diameter	950	1400	1540
B Body length flange to flange	3000	3560	5640
C Total installation length	5500	5937	8169
D Total installation width	1400	2827	2902
E Total installation height	3200	4236	4432
Internal pressure in body	5 bar	5 bar	5 bar
Design pressure	7 bar	7 bar	7 bar
Heating surface	11 m²/live steam*	29 m²	50 m ²
Power	11 kW	37 kW	75 kW
Shipping weight	6 tons	14 tons	24 tons

* direct injection of live steam for hydrolysing of wool, no jacket

Material to be processed in kg: (filling values may vary)

Mixed meat and bone and intestines {cooking and drying only)

- BC1,700 = 900 kg
- BC 5,000 = 2,800 kg
- BC 10,000 = 5,600 kg

Mixed poultry offal (offal and feathers mixed together) (hydrolyzing and drying)

- BC1, 700 = 900 kg
- BC 5,000 = 2,600 kg
- BC 10,000 = 5,200 kg

Feathers (hydrolyzing and drying)

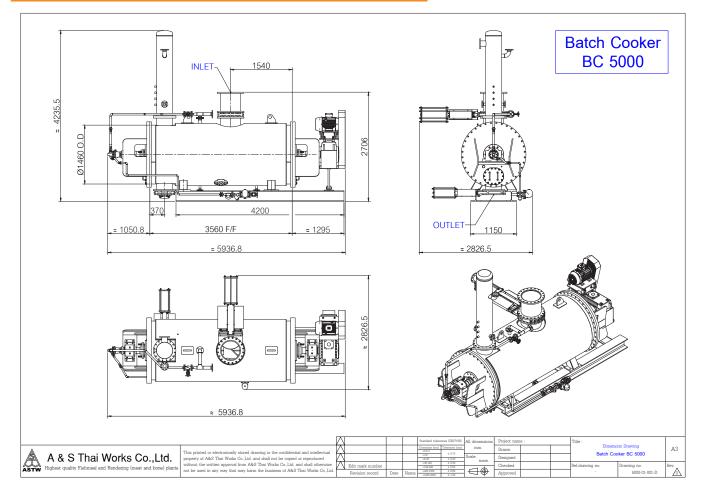
- BC1,700 = 850 kg
- BC 5,000 = 2,400 kg
- BC 10,000 = 4,800 kg

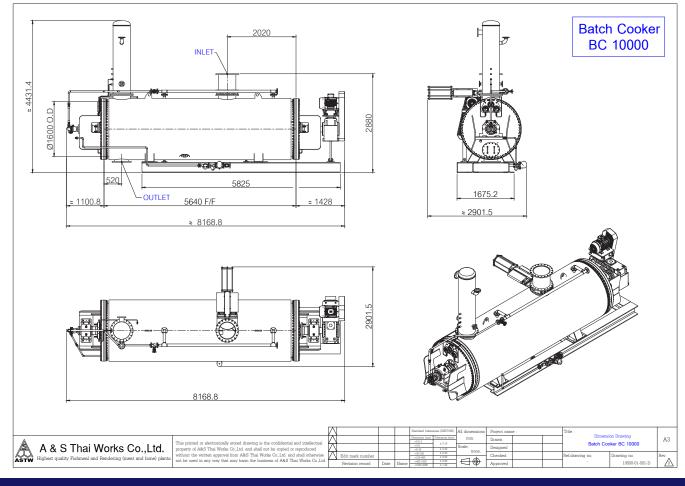
(Note that with a disc dyer the total capacity will increase about 30%) Wool and hair from processing of sheep, hog (swine) (hydrolyzing and drying)

- BC1,700 = 780 kg
- BC 5,000 = 2,300 kg
- BC 10,000 = 4,600 kg

Today batch cookers are used mainly for small, low cost rendering capacities while continuous systems are being used for larger capacities. For feathers, the batch cooker is sometimes used together with a disc dryer which is a better "dryer" and increase capacity about 30%.

LAYOUT FOR BATCH COOKER







A & S Thai Works Co., Ltd.

Highest quality Fishmeal and Rendering (meat and bone) plants