



# BATCH COOKER

## BROCHURE

**A & S THAI WORKS CO., LTD.**

Design and manufacture  
of fishmeal & rendering  
plant as complete turn-  
key solution



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# ASTW BATCH COOKER

Brochure

**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
<b>Dimension mm:</b>			
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 m <sup>2</sup> /live steam*	29 m <sup>2</sup>	50 m <sup>2</sup>
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}	Mixed poultry offal (offal and feathers mixed together) (hydrolyzing and drying)	Feathers (hydrolyzing and drying)	Wool and hair from processing of sheep, hog (swine) (hydrolyzing and drying)
<ul style="list-style-type: none"> <li>• BC 1,700 = 900 kg</li> <li>• BC 5,000 = 2,800 kg</li> <li>• BC 10,000 = 5,600 kg</li> </ul>	<ul style="list-style-type: none"> <li>• BC 1,700 = 900 kg</li> <li>• BC 5,000 = 2,600 kg</li> <li>• BC 10,000 = 5,200 kg</li> </ul>	<ul style="list-style-type: none"> <li>• BC 1,700 = 850 kg</li> <li>• BC 5,000 = 2,400 kg</li> <li>• BC 10,000 = 4,800 kg</li> </ul> <p>(Note that with a disc drier the total capacity will increase about 30%)</p>	<ul style="list-style-type: none"> <li>• BC 1,700 = 780 kg</li> <li>• BC 5,000 = 2,300 kg</li> <li>• BC 10,000 = 4,600 kg</li> </ul>

**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%.**

