

The **SoyCow 30** is a food processing system for producing soymilk and derivatives. This system enables small-to-medium enterprises to produce commercial quantities (about 80 liters per hour) of soymilk and derivative products such as yoghurt or about 15 kg tofu per hour. It produces 30L batches of soymilk, with a combined **grinder & cooker**, an enclosed SS **filter press**, and an 18kW, 380V, 3Phase **electric boiler**. A **tofu box** is also included.

SoyCow 30 System



The SoyCow 30 consists of 3 main components:

- 18kW, 380V, 3phase, fully automatic electric boiler with stainless steel core
- 42L custom pressure cooker with built-in grinder and 1 HP Baldor “wash down” motor
- enclosed stainless steel filter press

Table for Comparison with SoyCow E

Item	SoyCow E	SoyCow 30
Electric Boiler	9kW, 220V, Single Phase	18kW, 380V, 3Phase
Soymilk and derivative foods like soy yogurt & sour soymilk	35 - 40 liters / hour (9 - 10 USG / hour)	70 - 80 liters / hour (18 - 20 USG / hour)
Tofu – (coagulated & pressed soymilk curds)	7 - 8 kg / hour (15 - 18 lbs / hour)	14 - 16 kg / hour (30 - 35 lbs / hour)
2016 price \$US	\$5,500	\$11,900



**Twin SoyCow 30's
Custom Installation**

Picture shows a custom installation of twin SoyCow 30's at a commercial soy yogurt facility in Mozambique. Pressure cookers release the slurry into the filter presses, which then use gravity to feed the milk base into the large mixing tank on the right of the picture. Electric boilers are visible in blue.

Process

Soaked soybeans (4kg dry weight) and 24L of water are poured into the custom commercial pressure cooker. The beans are ground in water to form a slurry which is then cooked under pressure. Steam is injected from the electric boiler directly into the soy slurry for rapid cooking under pressure. After cooking up to 105 to 110 degrees C, the cooked slurry is released into the filter press and then pressed to release about 30L of soymilk. The healthy fiber residue (okara) can be used in other foods for human consumption or directly for animal consumption. Each batch takes about 20 minutes.

COMPONENTS

18kW Steam Boiler: Operating on about 48 amps of 380V 3-phase power, water is heated in an inner stainless-steel core to produce about 20 kgs of pressurized steam per hour. The resulting food-grade steam is injected directly into the SoyCow pressure cooker. It includes an automatic water-feed pump and automatic low water cut-off. The boiler is reliable and safe, with a high-quality safety relief valve and CE approved electronic controls, relays, fuses etc. Produces enough steam for cooking up to 3 batches per hour.

42L Pressure Cooker / Grinder: This custom stainless steel pressure cooker allows direct steam injection (via steam hose into the bottom of the vessel), and is designed to produce 30L of soymilk per batch. It includes a 1 HP Baldor wash-down grinder motor to grind the soybean mixture before cooking. Grinder blades and other key spares can be replaced on site. The cooker operates up to 40 psi pressure and also has a high-quality safety relief valve. It features a hopper top with a butterfly valve that allows quick addition of ingredients, and also a butterfly valve on the product outlet.

Filter Press: This enclosed, highly sanitary stainless steel press can process a full batch of cooked soy slurry. The manually operated press enables easy pressing of each batch in a few minutes. Pressing occurs by turning a threaded rod that pushes a perforated stainless steel plate, in turn squeezing out the soymilk base from the "okara" fiber residue held within a closed filter bag. The liquid simply pours out through a valve on the bottom into a vessel. The press is very simple to operate and clean.

Stainless Steel Tofu Box included. (Mechanical Press optional)