

## Autoclaves for Food Sterilization



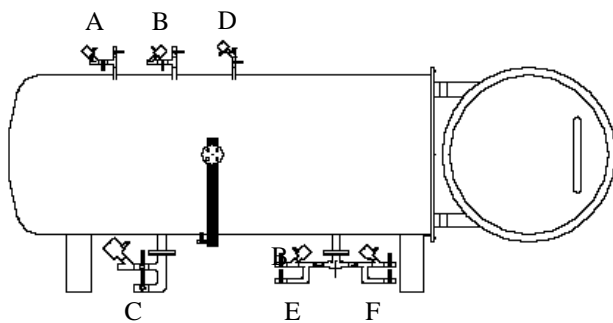
Autoclaves for sterilization are machines that process foodstuffs using steamy heat.

Food processing obtained through sterilization consists of:

- Steam cooking of food raw materials such as sauces, jams or marmalade;
- Packaging of fresh food into jars, bottles, cans or packets with superheated steam.

Through heat sterilization all micro-organisms dangerous to human health are completely destroyed without toxic residues on foodstuff.

### PLANT DESIGN



**PAV – A & B**  
Media: Vacuum  
Pressure: -1 bar  
Temperature: 25° C  
Seal Material: PTFE

**PAV - D**  
Media: Water  
Pressure: Atmospheric  
Temperature: 70° C  
Seal Material: PTFE

**PAV - C**  
Media: Steam  
Pressure: 2 bar  
Temperature: 121° C  
Cycle: 10 – 15 min.  
Seal Material: PTFE

**PAV – E & F**  
Media: Air  
Pressure: Atmospheric  
Temperature: 25° C  
Seal Material: PTFE

### APPLICATION

#### 1<sup>st</sup> Stage - Vacuum

Product placed in a sterilizer is closed inside the autoclave. Before starting sterilization, valves (A)(B) create a -1 bar depression inside the chamber through a vacuum pump. Vacuum is needed to prevent air sacs at not controlled temperatures from creating, which are potentially dangerous to the quality of sterilization.

#### 2<sup>nd</sup> Stage - Sterilization

During the sterilization cycle valve (C) controls steams at 121°C temperature and 2 bar pressure for a processing time of 10-15 minutes.

#### 3<sup>rd</sup> stage – Exhaust

Once the sterilization cycle is over, valve (C) closes, valve (D) opens restoring the atmospheric pressure, valves (E)(F) empty water created through steam condensation at 70°C temperature and atmospheric pressure. The port can then be opened to take out processed products.

## SOLUTION



#### TYPE BTG205SXW00 / SXS code 75883733293

Bi-directional Normally Closed Bronze PAV  
 Ø 63 Actuator – 1/2”gas Connection  
 Medium Direction over / under seat  
 Piloting Pressure min. 5,5 bar over seat  
 Piloting Pressure min. 3,8 bar under seat  
 Piloting Pressure max 10 bar  
 Working Pressure 0-16 bar  
 Seal Material PTFE