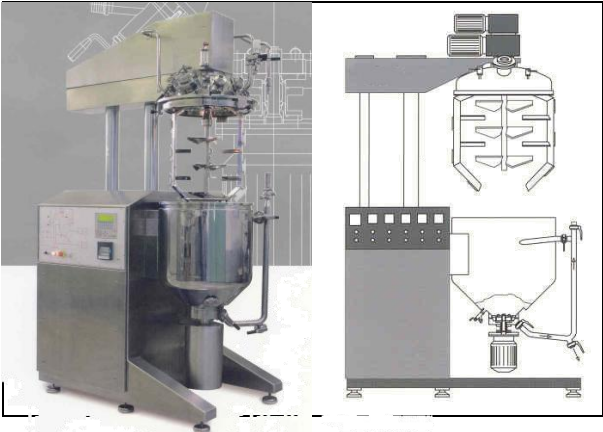


Product application – Industry

Mixer under vacuum



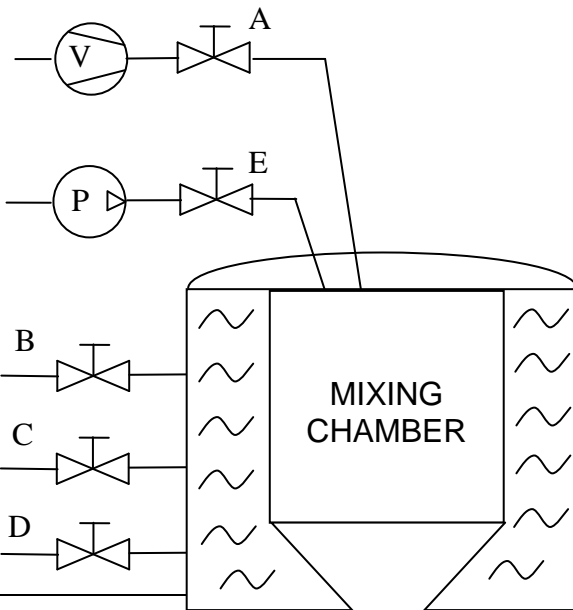
The equipment is used to mix and homogenize liquid substances in manufacturing creams and other compounds in the pharmaceutical, cosmetic and food industries. Stages and mixing times depend on the manufacturers' recipes.

The machine is made up of a control board, a mixing chamber, a shaking unit, a vacuum pump and a hydraulic circuit for warming up and cooling the mixing chamber.

The shaking unit consists of two slow shakers and a fast shaker (mixer) rotating in opposite directions to homogenize and prevent stagnation of highly viscous products or with a high specific gravity.

PLANT DESIGN

<p>PAV - A Medium vacuum / Press. -2 bar Room Temperature Seal: PTFE</p> <p>PAV - B Medium steam/ Press. max 5 bar Temperature max 150° C Seal: PTFE</p>	<p>PAV - C Medium Water / Press. 3 bar Temperature 90-95° C Seal: PTFE</p> <p>PAV - D Medium air / Press. 2 bar Room Temperature Seal: PTFE</p>
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APPLICATION

1st stage – Vacuum

By a vacuum pump (V), valve (A) creates a - 0,5 bar depression in the mixing chamber to prevent air from spoiling or deteriorating the quality of products during mixing operations.

2nd stage – Filling and Mixing

Liquid ingredients (ex. glycerine, water) are poured into the mixing chamber and the shaking unit starts rotating.

3rd stage – Warm up

While mixing it might be necessary to warm up substances that do not melt at room temperature. The outside of the chamber is warmed up both by valve (B), that controls steam up to 150°C from an external generator, and by valve (C), that controls hot water at 90-95°C and 3 bar pressure from an external boiler. The temperature inside the chamber is controlled by a thermic probe connected to the PLC, which operates the opening of the valves according to the requested temperature.

4th stage – Cooling

When products has been homogenized, the chamber is cooled externally by valve (D), that controls cold water and glycol at - 10° and 3 bar pressure, coming from an external chiller.

5th stage – Ejection

By valve (E) connected to an external pump (P), the chamber is brought under pressure at 2 bar so that products can be ejected into commercial containers.

SOLUTION



TYPE BSC207SXY00 / SXS code 75883738294

S/S normally closed bi-directional PAV
Body Actuator Ø63 – Clamp Connection DN 25
Flow direction over / under seat
Pilot pressure min 6,5 / 3,8 bar - max 10 bar
Working pressure 0-10 bar - Seal material PTFE