



ABOUT US

Akar Makina, founded in 1990, manufactures autoclaves and pressure vessels for various industries including Composite Materials, Glass Industry, Tire Retreading - Rubber Vulcanization, Building Materials, Medical Waste Sterilization.

Our autoclaves are manufactured in our state-of-the-art manufacturing facilities in the city of Eskisehir, with close proximity to major cities and ports. From the customer requirement acquisition stage to design, manufacturing, test, delivery and on-site commissioning, Akar is capable of providing turnkey and boutique solutions for every customer need.

The autoclaves are designed using advanced design tools and software meeting the highest safety and quality standards. We approach every project as unique and custom-made, and can handle customer specific requests. The autoclaves are manufactured with limited reliance on outside suppliers and are carried out by an experienced, highly trained and certified work force and technical staff. Akar has the following certifications including those for autoclave and pressure vessel manufacturing:

- Pressured Equipment Directive 2014/68/EU (PED)
- Simple Pressure Vessels Directive 2009/105/EC (SPVD)
- ASME SEC VIII Div. 1
- EAC
- EN 3834-2
- EN 15085-2

Other certificates that may be required by different countries and jurisdictions. To certify our autoclaves, we work with internationally well-known certificate agencies such as Bureau Veritas, TUV, Hartford Steam Boilers.

Thank you for your interest in our company and our products. We look forward to realizing successful projects with you and enhance your value chain with high quality products.

Please do not hesitate to contact us, if you have any questions. You can also visit us at www.akarmak.com.tr and www.autoclave.com.tr to get more information about our company and our products.

AUTOCLAVES

Safety is critical when it comes to autoclaves, and manufacturing is based on accepted standards

Material used is special material used for pressure vessels

Manufacturing based on 2014/68/EU Pressure Equipment Directives (PED) or ASME or EAC standards

Manufacturing based on 2006/42/EC Machinery Safety Regulation

Certified autoclaves by world well-known certification agencies such as Bureau Veritas, TUV, Onecis Insurance Company



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FOOD PROCESSING
PHARMACEUTICAL
TEXTILE

STERILIZATION
AUTOCLAVES

www.akarmak.com.tr





PHARMACEUTICAL AUTOCLAVES

Autoclaves are produced by Akarmak according to different diameters, lengths and loading capacities. Akarmak can offer different solutions from laboratory type autoclaves to large scale autoclaves.

Hot water system is able to perform counterpressure sterilization of large volume parenteral solutions / infusions through hot water spray system.

Steam&Air system is suitable for treating loads in containers that may be deformed due to the difference in pressure between the chamber and the container itself.

- Our autoclaves have both direct steam injection and hot water spray on the products.
- All of our autoclaves are cooled by spraying cold water using a heat exchanger.
- Suitable for all kinds of packaging such as bags, plastic and glass.

FOOD PROCESSING AUTOCLAVES

We provide our standard size autoclaves (2-7 baskets) and custom-made autoclaves for food processing.

These autoclaves are mainly used for sterilization purposes for the food industries. It can also be used for purposes such as cooking and pasteurizing.

Suitable for all kind of food products and container types. Our autoclaves have both direct steam injection and hot water spray on the products.

Akarmak produces the following types of autoclaves for its customers for food processing.

- Static type
- Rotary type
- Pendular type



- We design and manufacture basket & tray loading systems specifically for processes.

TEXTILE AUTOCLAVES

Autoclaves are produced by Akarmak according to different diameters, lengths and loading capacities.

These autoclaves are mainly used in the textile industry for the relief, strengthening, preparation and repair of natural and synthetic fibers.

Textile autoclaves have vacuum and direct steam heating system.

Autoclave for steaming and recovery of moisture for all types of fibers.

We design and manufacture special loading system according to the processes.



- Heating and cooling control
- One or two doors with interlocking system
- Basket Trolley System
- Economical and high quality operating cycle
- Designed to operate 24 hours per day with simple maintenances
- Desing and manufacturing based on international standards including CE, ASME, EAC.

STERILILIZATION PASTEURISATION

THERMAL PORCESSING

VACUUM STEAM STERILIZATION

STAINLESS STEEL CONSTRUCTION



Cooling Using A Heat Exchanger

Cooling is carried out using a cold water shower system using water distribution nozzles. Sterile water at the bottom of the autoclave is used and level control is done. This process does not require any additional chlorine and also allows the possibility to use potable or non-drinking water with no risk of crosscontamination.



PLC software able to control time, heating, cooling, depressurizing functions automatically by the PLC system including the recipe and graphical displays

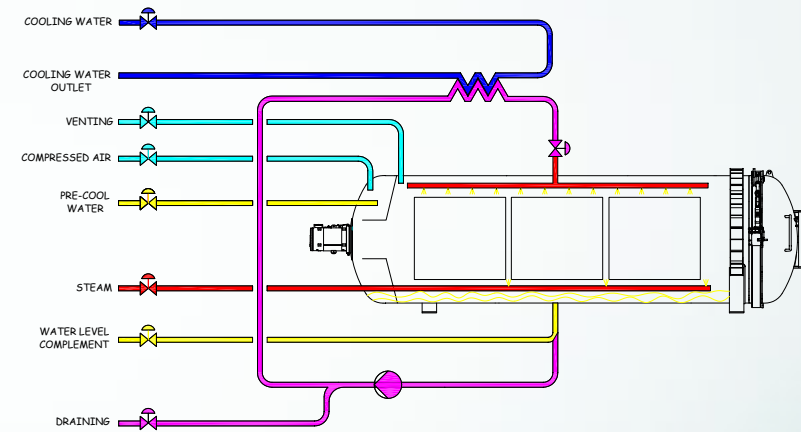
STEAM & AIR

Heating by direct steam injection.

Cooling using a heat exchanger. The cooling by cold water spraying on containers.

Fan-motor system is optional for assisted forced circulation.

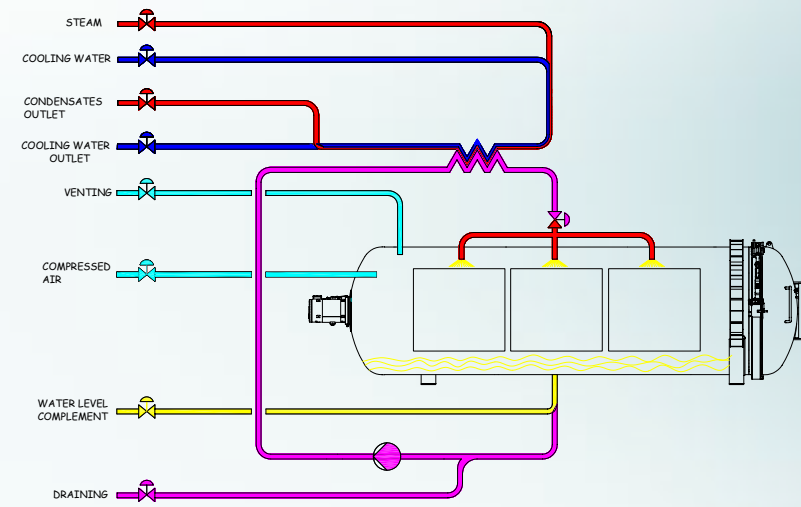
Pre-Cooling water supply is optional for fast cool.



HOT WATER SPRAY

Heating using a heat exchanger. The heating by hot water spraying on containers.

Cooling using a heat exchanger. The cooling by cold water spraying on containers.



DUAL PROCESS

Heating by direct steam injection or hot water spraying on containers.

Cooling using a heat exchanger. The cooling by cold water spraying on containers.

Fan-motor system is optional for assisted forced circulation.

Pre-Cooling water supply is optional for fast cool.

