



AUTOCLAVES

www.akarmak.com

Excellence in Autoclave Manufacturing

Superb After-Sales Service

Made in Europe



akarmak

turnkey autoclave
systems with high
degree of safety

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ABOUT US

Akarmak, founded in 1990, manufactures autoclaves and pressure vessels for various industries including the 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, Akarmak 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.

Akarmak has the following certifications including those for autoclave and pressure vessel manufacturing:

- 2014/68/EU Pressure Equipment Directive
- 2009/105/EC Simple Pressure Vessels Directive
- ASME SEC VIII Div. 1
- EAC
- EN 3834-2
- EN 15085-2
- AD2000

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 BureauVeritas, TUV, OneCIS Insurance Company.

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 to get more information about our company and our products.

QUICK FACTS

- State of the art machinery manufacturing facility
- Advanced engineering capabilities and highly-skilled workforce
- Professional management team with experience and knowledge
- Worldwide strong after sales service
- ISO 9001 – 2015 certified and providing CE Certification
- Well executed future growth plans
- Export and growth oriented international company with customers in more than 60 countries
- Conveniently located in the hub city of Eskisehir (close to ports and major cities)

FACTORY

LOCATION

Eskisehir, Turkey Conveniently located close to ports and major cities.

FACTORY

27.000 m² factory space in Eskişehir Industrial Zone

QUALITY

ISO 9001-2015 certified with advanced engineering capabilities

Pressured Equipment Directive (PED) 2014/68/EU (CE)

ASME SEC VII D.1.

EAC

EN 3834-2

AD2000



AUTOCLAVES

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

AKARMAK'S AUTOCLAVE SYSTEMS SAFETY IS GUARANTEED BY THE FOLLOWING

Material used is special material used for pressure vessels.

Safety switches used at the door system showing the door as open/closed and locked

Advanced PLC control system controlling maximum and minimum pressure values through PLC

Mechanical over pressure valve system

Manufacturing based on 2014/68/EU or ASME or EAC standards

Manufacturing based on 2006/42/EC Machinery Safety Regulation

Manufacturing based on CE, ASME, EAC standards

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



COMPOSITE AUTOCLAVES

FOR PRODUCTION & LAB APPLICATIONS



TECHNICAL FEATURES

Full Compliance with Boeing, Airbus, NADCAP and AMS2750 Class-1 autoclave standards up to 400°C and 70 bar processing capabilities

State-of-the-art manufacturing with experience in US & EU standards and internationally reputable EU origin hardware & software preferences

Up to Ø6500 mm with customizable sizes and configuration according to customer requirements

Heating, Cooling, Pressurization & Exhaust operations and dwell time can be controlled automatically with support by PID controls, proportional valves and trystor systems for precision

Optimum air circulation and homogenous heat distribution ensured with ANSYS modelling and advanced process control

Advanced reporting and monitoring features to analyze process, keep track of past operations, calibration and maintenance

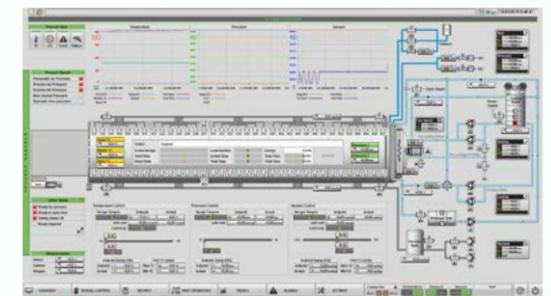
Turn key project management solutions including: Cooling, Vacuum, Pressurization (Air and Nitrogen), Loading Systems

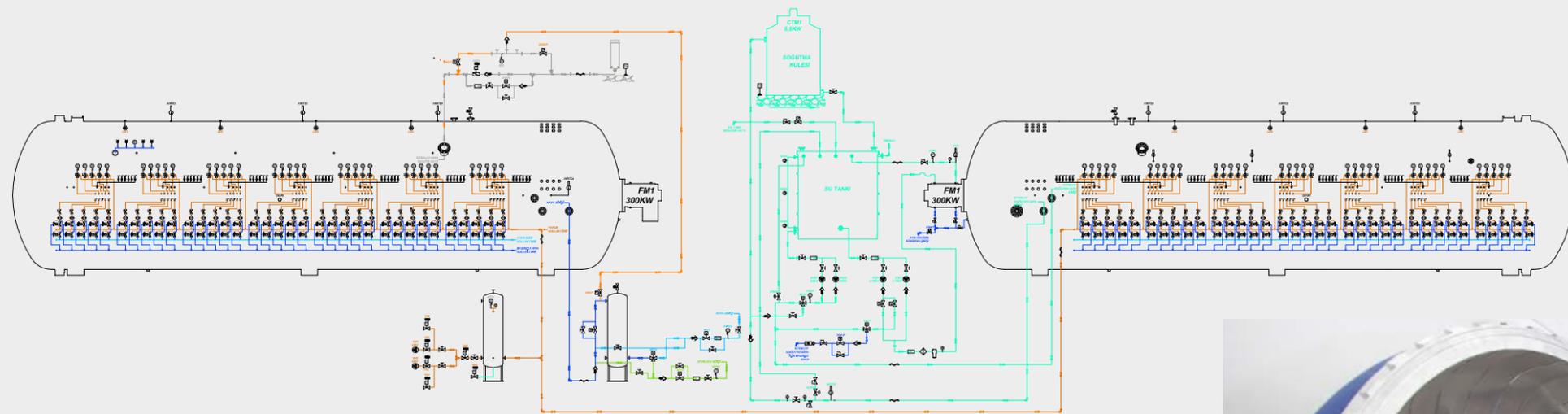
30+ years of Akarmak experience in autoclave manufacturing and hundreds of installations world-wide

Internationally recognized certifications provided by reputable certification agencies

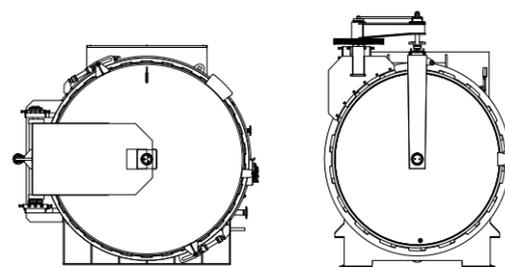
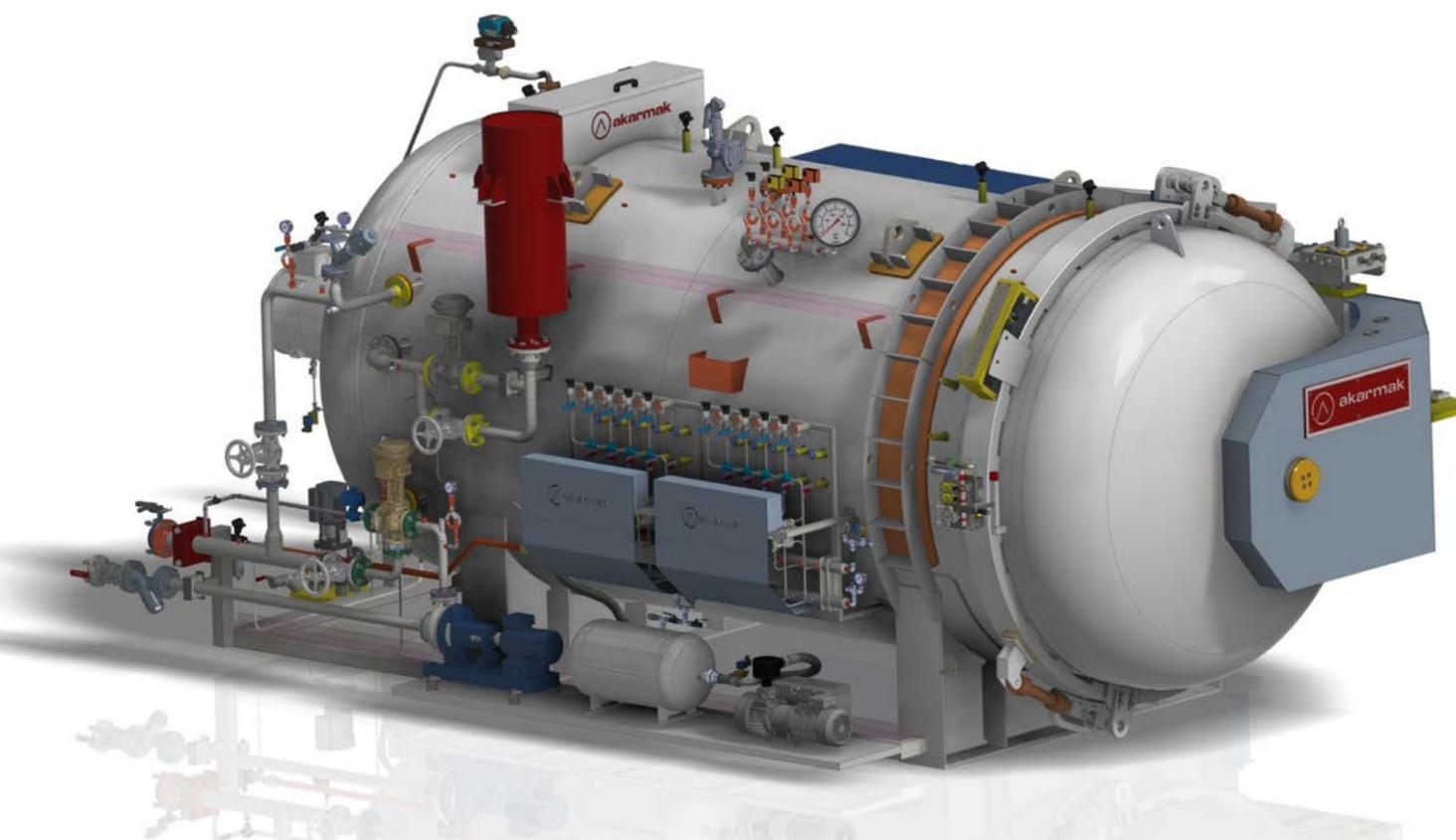
Safety PLC, Interlocks and Alarm functions offering highest safety measures for all sub-systems

Exceptional after-sales services for support and troubleshooting with quick response and remote access features

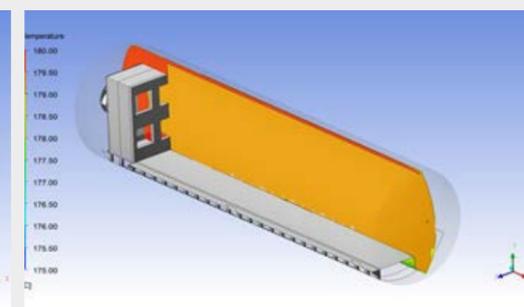
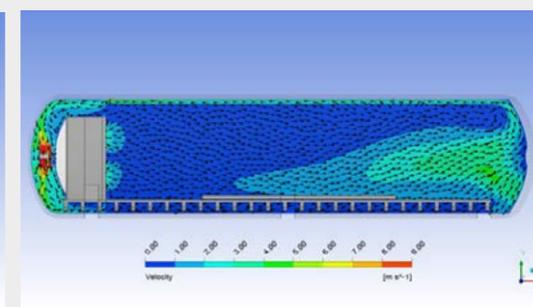
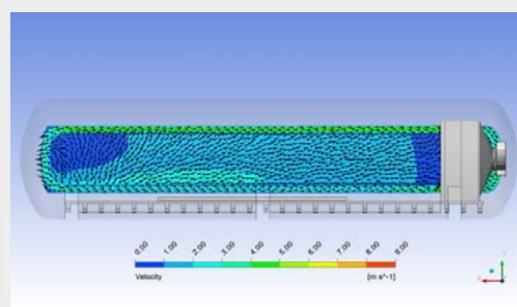
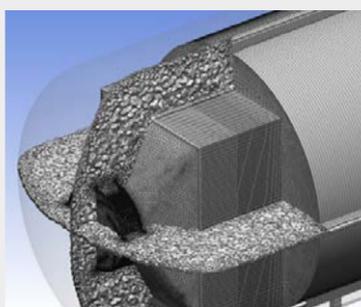
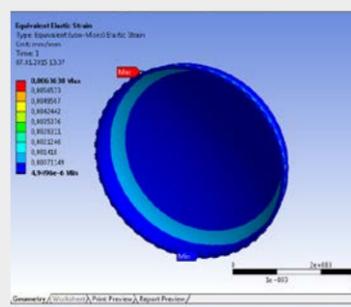
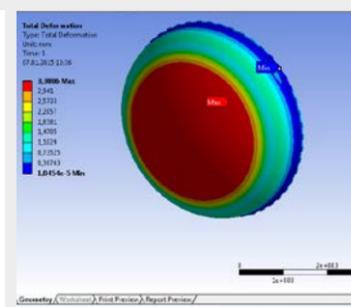




Highest safety standards



Safe Bayonet Door
Closure Systems



GLASS LAMINATION AUTOCLAVES

FLAT LAMINATED GLASS

AUTO GLASS

BULLET RESISTANT GLASS

Compact design and easy for installation and maintenance

User friendly control system including remote access

Energy conservative heating and insulation system

Multiple point safety control devices and built with highest safety standards

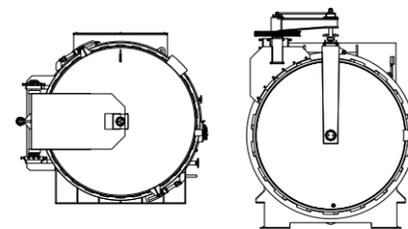
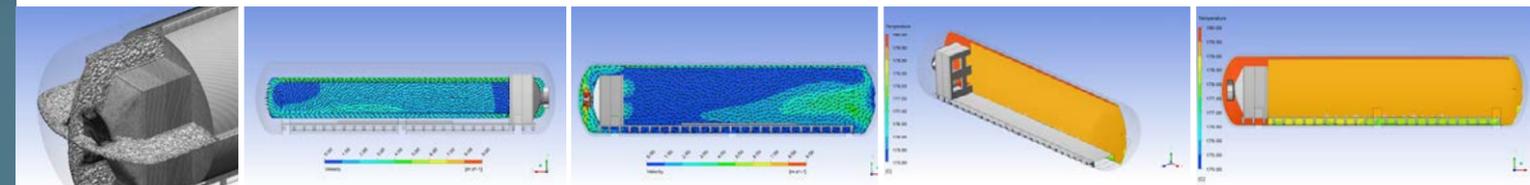
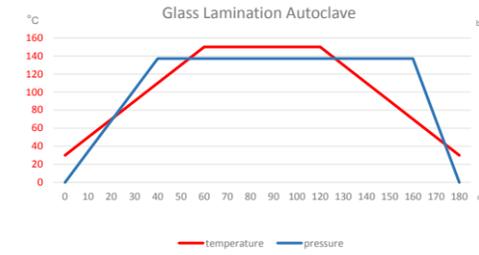
Optional features: Vacuum system, autoclave trolleys, cooling units, compressor sets

Manufactured at state-of-the-art manufacturing facilities

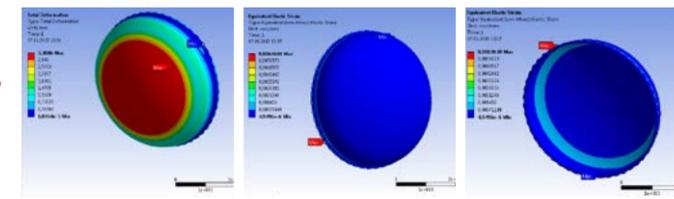
Advanced safety features with available certification of 2014/68/EU, ASME, EAC



Highest safety standards



Safe Bayonet Door Closure Systems



GLASS LAMINATION AUTOCLAVES

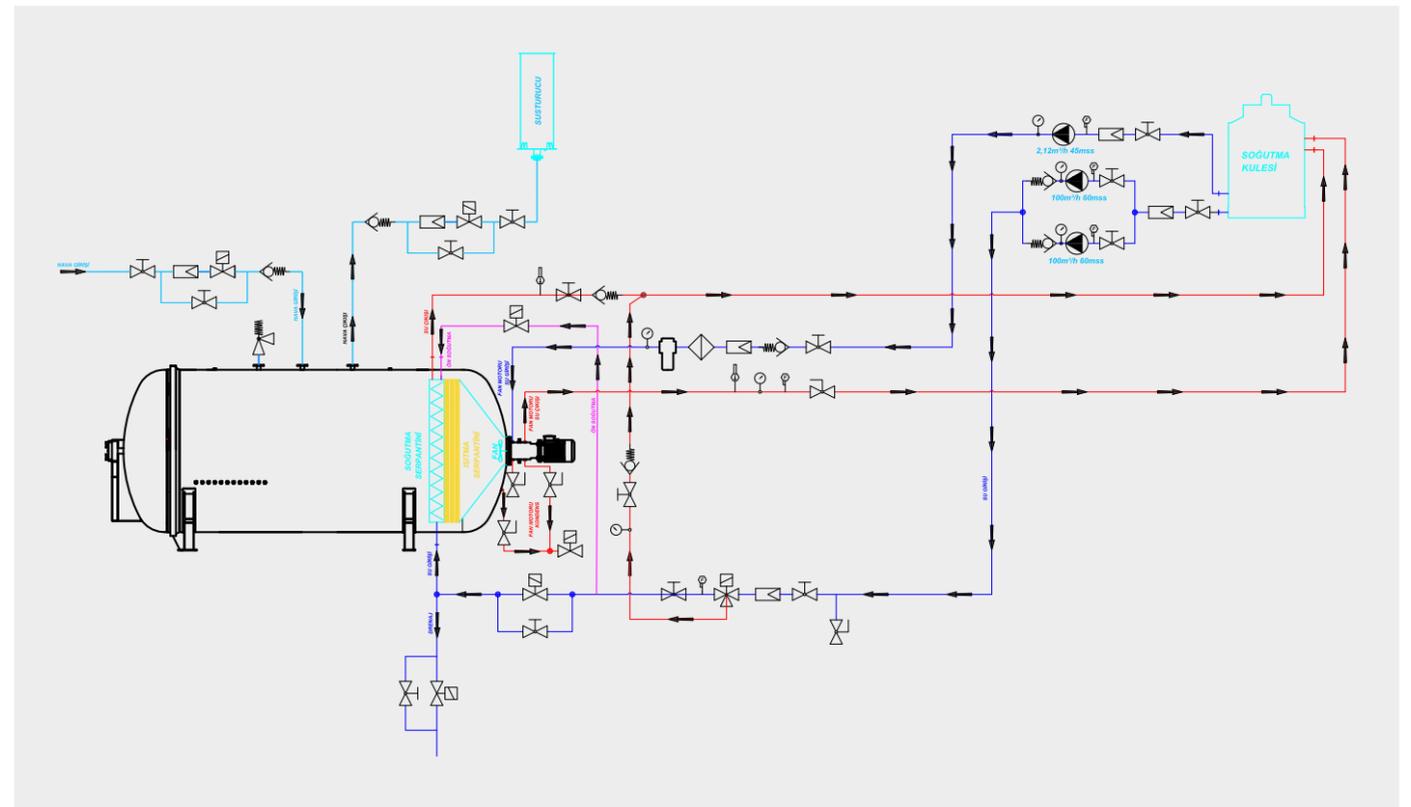


For the production of Flat Laminated Glass, Auto Glass, Bullet Resistant Glass. **HIGHEST SAFETY STANDARDS**

Design and manufacturing based on international standards including CE, ASME, EAC

Special motor fan system to create optimum temperature and air distribution

Standard heating system: Electrical or thermal



Lamination Autoclaves for Flat Laminated Glass, Auto Glass, and Bullet Resistant laminated glass production

Custom-made solutions available with different working diameters and lengths

Durable bayonet door system and alternative door opening systems depending on customers project requirements

Excellent heating, pressurizing, depressurizing and cooling controls phases guaranteeing perfect end product



**ADVANCED
ENGINEERING**
AND
INNOVATIVE
PRODUCTION



TIRE RETREADING AUTOCLAVES



OTR TIRE

AUTOCLAVES

TECHNICAL FEATURES

Certified P series material suitable for pressure vessels

Bayonet door closure systems

Hydraulic door opening and locking mechanism

Precured or Orbitread system automation control

Advanced PLC software able to control time, temperature, pressure, DPC functions (precured) automatically

Manufactured at state-of-the-art manufacturing facilities

Advanced safety features with available certification of 2014/68/EU, ASME, EAC



HIGHEST SAFETY STANDARDS



DESCRIPTIONS	Inner Diameter	Length	Capacity	Heating System	Working Pressure	Max. Working Temperature	Tire Curing
AKR 881E	2300 mm/90"	3900 mm/153"	29,50 R 25 x 4 Tires	Electrical / Indirect Steam	7 Bar/100 psi	120 °C	J Hook
AKR 881	2300 mm/90"	4900 mm/193"	29,50 R 25 x 6 Tires	Electrical / Indirect Steam	7 Bar/100 psi	170 °C	Console
AKR 384	3100 mm/122"	4000 mm/158"	27,00 R 49 x 4 Tires	Direct / Indirect Steam	7 Bar/100 psi	170 °C	Console
AKR 434	3500 mm/138"	5000 mm/197"	36,00 R 51 x 4 Tires	Direct / Indirect Steam	7 Bar/100 psi	170 °C	Console
AKR 389	3900 mm/153"	5500 mm/216"	40,00 R 57 x 4 Tires	Direct / Indirect Steam	7 Bar/100 psi	170 °C	Console
AKR 337	4600 mm/181"	3500 mm/138"	59/80 R63 x 2 Tires	Direct / Indirect Steam	7 Bar/100 psi	170 °C	Console



15" TO
63"

TRUCK TIRE

AUTOCLAVES



TECHNICAL FEATURES

- Fully computerized PLC controlled
- Electrical heating system with efficient use
- Preheating feature
- Vacuum test function
- Working pressure: 6 bar (90 psi)
- Advanced safety features with available certification of 2014/68/EU, ASME, EAC

HIGHEST SAFETY
STANDARTS



DESCRIPTIONS

	Capacity	Inner Diameter (mm)	Length (mm)	Heating System	Working Temperature
AKR 291	12 Tires	1600 mm / 63"	4500 mm / 177"	Electric	120 °C / 248 °F
AKR 293	16 Tires	1600 mm / 63"	6000 mm / 236"	Electric	120 °C / 248 °F
AKR 294	20 Tires	1600 mm / 63"	7500 mm / 295"	Electric	120 °C / 248 °F
AKR 297	24 Tires	1600 mm / 63"	9000 mm / 354"	Electric	120 °C / 248 °F



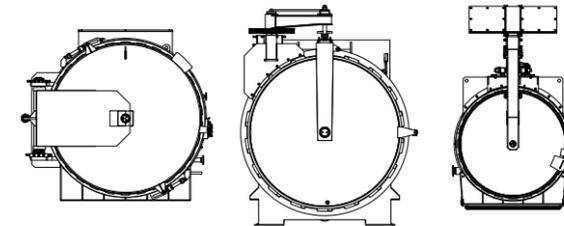
BUILDING MATERIALS AUTOCLAVES

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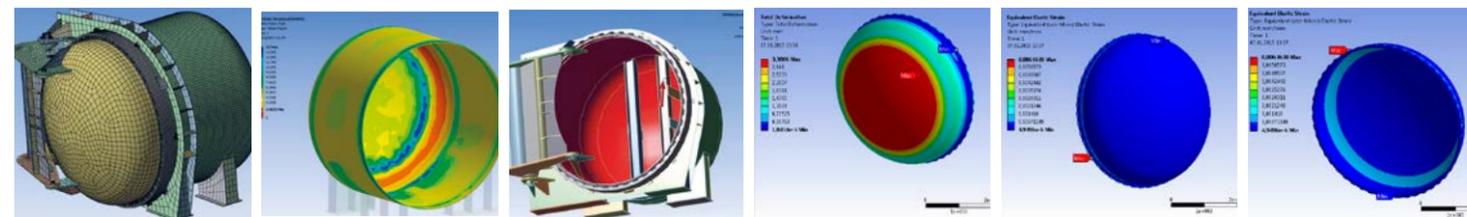
For the production of **HIGHEST SAFETY**
AAC, Sand Lime Bricks,
Fiber Cement **STANDARDS**



Design and manufacturing based on international standards including CE, ASME, EAC



Safe Bayonet Door
Closure Systems





MEDICAL WASTE STERILIZATION SYSTEMS AUTOCLAVES

POST & PRE SHREDDING SYSTEMS

ISO 9001 CE EAC ISO 13485 EN ISO 3834-2 CERTIFIED AD2000

MEDICAL WASTE STERILIZATION SYSTEM
WITH POST & PRE SHREDDED AUTOCLAVE METHODS

- High quality materials
- Standard capacities and custom-made solutions for specific customer needs
- Full automatic and advanced automation control system with pressured direct steam sterilization
- Fully automated operation from loading, sterilization to unloading
- Advanced reporting and monitoring features
- High degree of sterilization meeting international regulations
- Turnkey solutions including shredders, autoclave trolleys, steam generators, air compressor systems
- Special gasket system for perfect vacuum and pressure conditions
- Multiple safety control devices and built with highest safety standards
- Design and manufacturing with international standards including CE, ASME, EAC

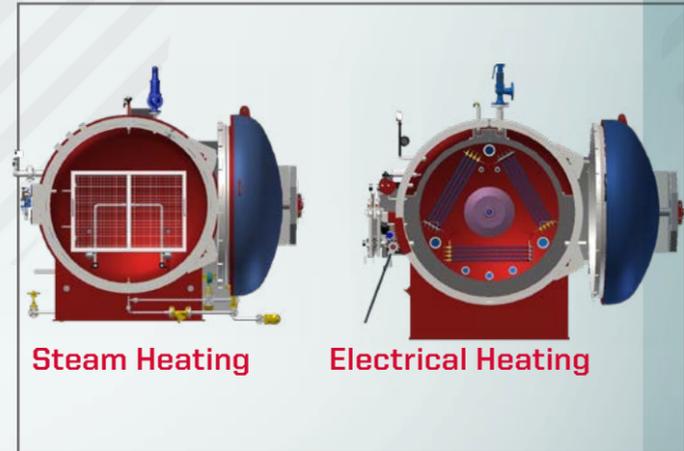


RUBBER VULCANIZATION AUTOCLAVES



TECHNICAL FEATURES

- Custom-made design and manufacturing meeting specific customer needs
- Project/application specific working pressure and temperature
- Various heating systems including direct/indirect steam, electrical, thermal oil
- Homogenous heat distribution
- Advanced automation control system and product specific recipes
- Turnkey solutions including autoclave trolleys, steam generators, air compressor systems
- Advanced safety features with available certification of 2014/68/EU, ASME, EAC



PRESSURE VESSELS

TECHNICAL FEATURES

- Special pressure vessel manufacturing for project based applications such as filters, vacuum chambers, air receivers, impregnators and many more
- Custom-made sizes in diameters up to 5000 mm and working pressure up to 80 bars
- Multiple point safety control devices and built with highest safety standards
- Design and manufacturing based on international standards including CE, ASME, EAC



BAYONET CLOSURE SYSTEMS



BAYONET CLOSURE SYSTEMS (Quick Closing Doors)

Our Quick Closing Doors provide quick access and hassle-free operations for autoclaves and all kinds of other pressure vessels

Design and manufacturing of Quick Closing Doors based on EN13445, ASME Section VIII and AD2000 standards.

Designed and manufactured by Akarmak with 30+ years of experience

Up to 6500 mm diameter

Up to 70 bar operating pressure

Suitable for vacuum process

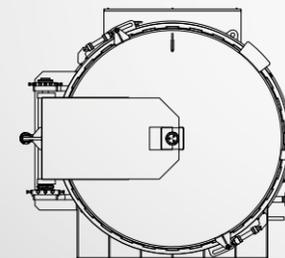
Carbon steel or stainless steel material

Hinge, Davit Arm and Counter Weight door options

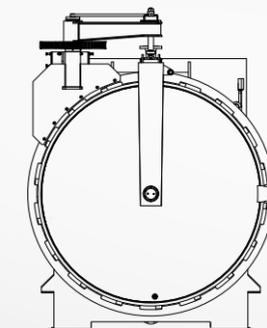
Automatic and manual control

Durable and low maintenance

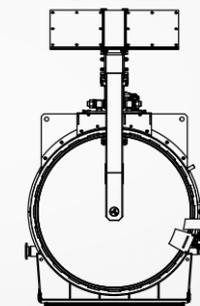
BAYONET DOOR OPTIONS



CLASSICAL HINGE



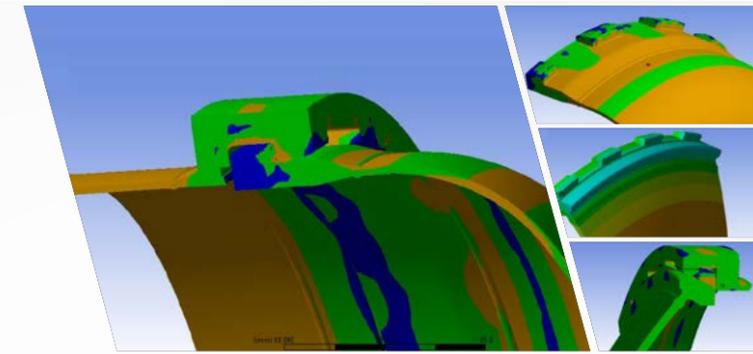
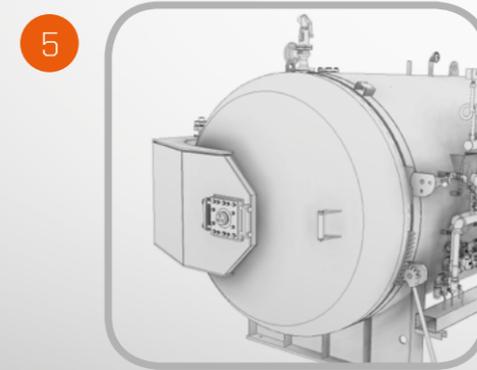
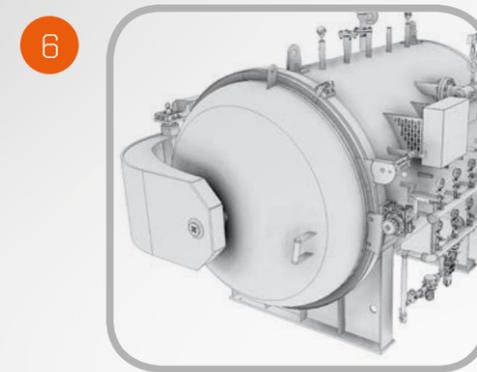
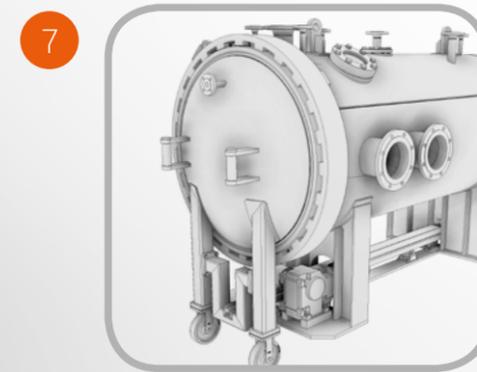
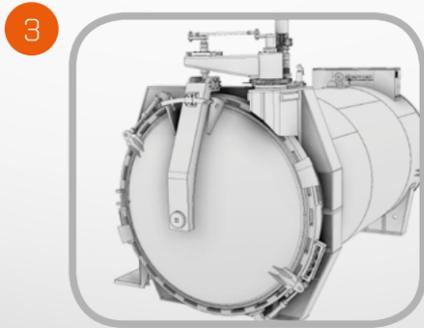
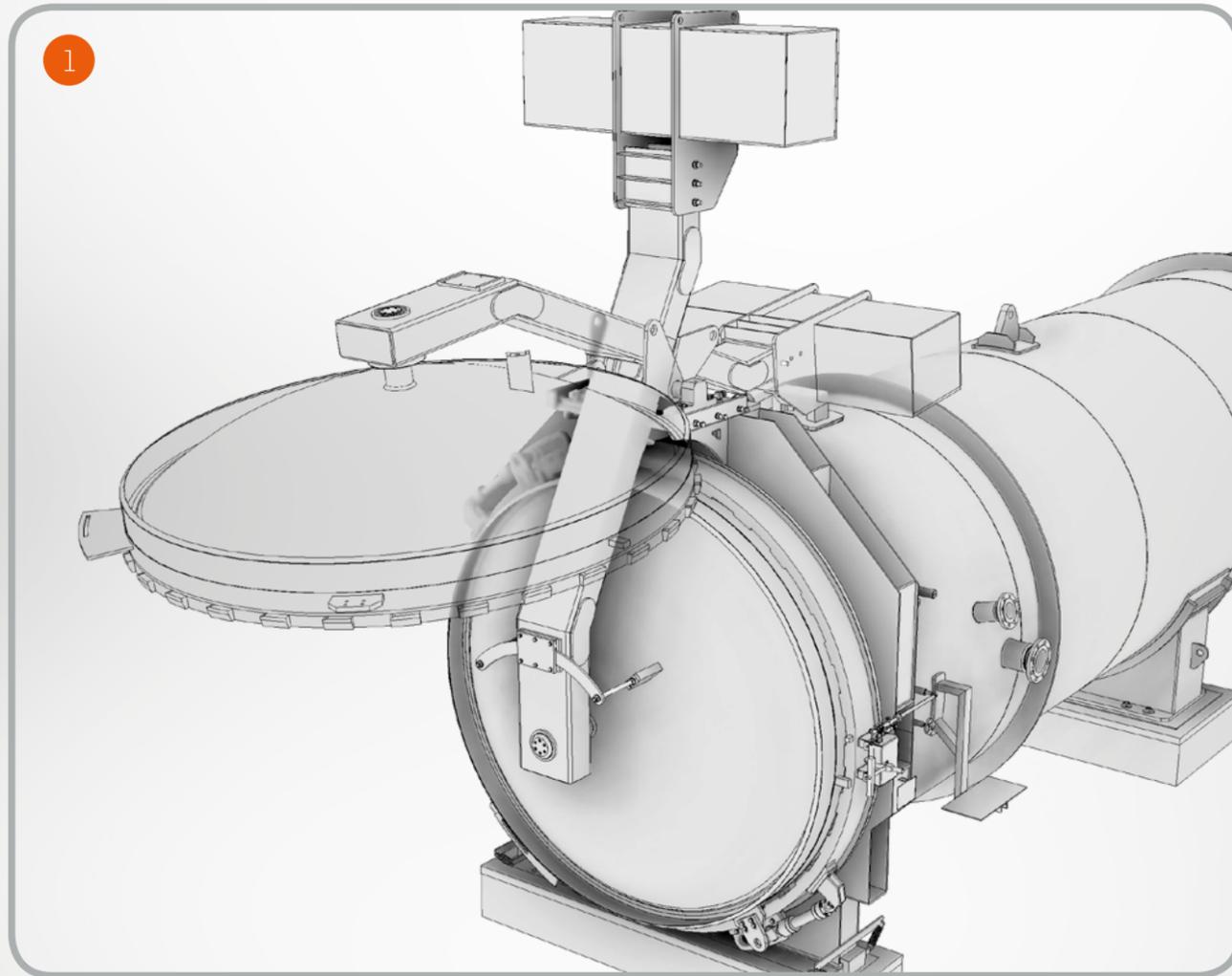
DAVIT ARM



COUNTER WEIGHT

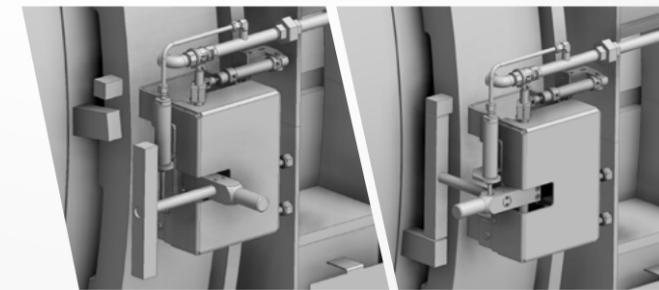
CONTROL TYPES

Manual / Hydraulic / Pneumatic / Electrical

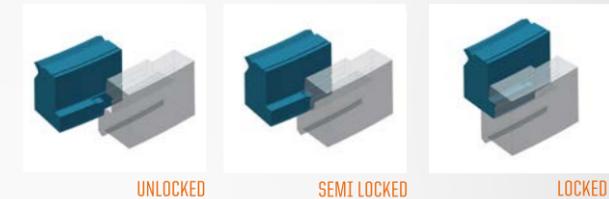


Top-notch design methods and principles with worldwide viability

Safe Quick Closing Doors geometry generated with finite element method



Interlocking mechanism prevents unintentional door opening



Special form on the door locking mechanism allows any possible pressure relief without opening the door.



3-ring system provides anti friction on the gasket, thus a longer useful gasket life.



CERTIFICATIONS

Safe turnkey
autoclave systems for our
customers around the globe



www.akarmak.com



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