

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 onsite 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 TUV, Intertek, Bureau Veritas Inspection & Insurance Company.

- Safety is critical when it comes to autoclaves and manufacturing based on accepted international and local standards.
- Certified raw materials used according to pressure vessel manufacturing standards.
- Manufacturing based on 2006/42/EC Machinery Safety Regulation.
- Akarmak product portfolio includes high capacity centralized plant sterilization machinery as well as smaller size hospital-based sterilization equipment in both pre and post autoclave shredding technologies.



www.akarmak.com



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MEDICAL WASTE STERILIZATION SYSTEMS

www.akarmak.com

Excellence in Autoclave Manufacturing

Excellent After-Sales Service

Made in Europe



PRE-SHREDDING MEDICAL WASTE STERILIZATION SYSTEMS
FOR CLINICS & HOSPITALS

STERILIZATION LEVEL: 8LOG10 (99,999999%)

AKARMAK MEDICAL WASTE STERILIZATION SYSTEM DATA SHEET							
Code	Design Values				Consumption/Cycle		
	Cycle Time (min)	Sterilization Capacities (kg/h)	Power Supply [kW]	Feeding Unit Volume (lt)	Autoclave Unit Volume (lt)	Electric (kWh)	Steam (kg)
AKR250L	30-35	40-60	12	250	450	2-3	15
AKR500L	30-35	100-140	20	500	600	3-5	25
AKR1000L	30-35	200-220	22	1000	600	5-7	35
AKR2500L	50-60	300-350	55	2500	1800	20-25	80

- Pre-shredded steam sterilization
- Shredder and autoclave are coupled to each other
- Sterilization temperature: 135-140 °C (Programmable)
- Sterilization pressure: 3-4 bar (Programmable)
- Robert Koch Institute & STAATT Level IV approved
- Up to 80% volume reduction
- Auto reverse system for shredder in case of waste jamming
- Stainless-steel AISI316L pressure vessel and shredder hopper



1

Waste loading
Full automatic loading option.

2

Shredding
Efficient and durable shredder with reverse rotation to avoid waste jamming.

3

Sterilization
Fully automated sterilization process of vacuum, steam sterilization, pressurization and depressurization.

4

Waste discharging
The automatic sterilized waste discharge through Archimedes Screw.



AKARMAK MEDICAL WASTE STERILIZATION MACHINES

- Technical Support & Maintenance by Certified Experts
 - Up to 80% Volume Reduction
- Well-Engineered and Designed Durable Shredder
 - Bayonet Door: Safe and User Friendly
 - Reference in 70+ Countries
- 30+ Years of Experience and Know-How
 - Siemens Touch Panel
- Turnkey Solutions with Steam Generator & Compressor
 - Environmentally Friendly Operation
 - Odor Control

AKR 250L



TOUCH-FREE PLANT



POST-SHREDDING MEDICAL WASTE STERILIZATION SYSTEMS
FOR WASTE COLLECTING & TREATMENT PLANTS

STERILIZATION LEVEL: 6LOG10 (99,9999%)

Code	Cycle Time (min)	Design Values			Consumption/Cycle	
		Sterilization Capacities (kg/h)	Power Supply [kW]	Autoclave Unit Volume (lt)	Electric (kWh)	Steam (kg)
AKR500A	45-50	500-700	60	15000	12-15	200
AKR1000A	45-50	1000-1200	60	23000	15-20	300
AKR1500A	50-55	1500-1800	60	29000	22-30	400

- Post-shredded steam sterilization
- Shredder and autoclave are separated from each other
- Sterilization temperature: 135-140 °C (Programmable)
- Sterilization pressure: 3-4 bar (Programmable)
- Robert Koch Institute & STAATT Level IV approved
- Up to 80% volume reduction
- Auto reverse system for shredder in case of waste jamming
- P295GH material for pressure vessel and shredder hopper
- Full automatic waste feeding system into shredder's hopper
- Stainless-steel AISI316L autoclave container material
- Full automatic, hydraulic autoclave door opening/closing



1

Waste Loading and Sterilization
Manual loading with stainless steel containers into the autoclave. Automatic weighing in front of the autoclave. Automatic sterilization process.

2

Loading to Shredder
Full automatic loading into the shredder.

3

Shredding
Efficient and durable shredder with reverse rotation to avoid waste jamming.

4

Waste Discharging
Sterilized and shredded waste is discharged automatically to truck or container.

DESCRIPTIONS	AKR500A	AKR1000A	AKR1500A
Sterilization Capacities (kg/h)	500-700	1000-1200	1500-1800
Approximate Total Weight of Autoclave	19500	21500	23000
Autoclave Unit Volume (lt)	15000	23000	29000
Total Design Power (Excluding Steam Generator and Compressor) (kW)	60kW		
Dimensions (Inner Dimensions x Length)	Ø2000x4000	Ø2000x6500	Ø2000x8500
Autoclave Container (mm)	1200x1200x1450		
Shredder's Electric Motor Power	15 kWx18.5 kW		
Autoclave Container Quantity Per Cycle	3	5	7
Feeding Hopper Capacity For Shredding Unit (lt)	2000		
Dimensions for Shredding Unit (Width x Length x Height) (mm)	6500x6200x6500		
Optimum Building Area Requirement (mm)	15000x15000x8000	18000x15000x8000	20000x15000x8000