SQUARE AUTOCLAVE RANGE

125 – 980 litre models | Integral steam generator or direct steam

Astell's SQUARE autoclaves are built-to-order steam sterilizers with a square chamber for processing liquids, glassware, instruments and laboratory discard. The chamber shape makes efficient use of loading space for bottles, trays and other regularly shaped items, with options for vacuum air removal, drying and faster liquid cooling.



Features include:

- Chamber capacities from 125 to 980 litres
- Automatic or manual vertically sliding door (manual door up to 720 litres)
- Choice of steam source: integral steam generator or direct steam
- 316 stainless steel electropolished chamber
- Fully programmable 5.7" colour touchscreen controller: 5 pre-programmed cycles (up to 50 available), five password levels and USB data download
- Optimised for low water and power consumption
- Taller chambers or lower loading heights: see the SQUARE MAX range; double-door and pass-through models: see the Double Door SQUARE range

RANGE CLASSIFICATION



Maximum Capacity, Maximum Adaptability

Cuboid rather than cylindrical chambers give the biggest possible sterilization volume for their external size. The range can be fitted with a huge array of options for increased processing speeds, enhanced containment and pass-through abilities.

SPECIFICATIONS

Every SQUARE autoclave is built to order. Choose a door type, with or without vacuum, a chamber size to suit your load and a steam source.

MODEL SERIES	DOOR	VACUUM	CHAMBER CAPACITY
ANS125 – ANS980	Automatic, vertically sliding	No	125 – 980 litres
AVS125 – AVS980	Automatic, vertically sliding	Yes	125 – 980 litres
MNS125 – MNS720	Manual, vertically sliding	No	125 – 720 litres
MVS125 – MVS720	Manual, vertically sliding	Yes	125 – 720 litres

Reading the model code: A = automatic / M = manual door; V = vacuum / N = no vacuum; S = single door; number = chamber capacity in litres; G = integral steam generator / D = direct steam. Example: AVS250D.

Chamber sizes: standard cross-sections of 500 x 500, 600 x 600 and 700 x 700 mm (W x H), with depths from 500 to 2,000 mm, up to a maximum of 980 litres. Manual doors are available up to the 600 x 600 mm cross-section (maximum 720 litres). Non-standard sizes are available as custom units.

HIGH POWER OPTIONS

Selecting these options may alter the power supply requirements.

Steam source: integral steam generator or direct steam. Choose an integral steam generator (G models: 24, 48 or 72 kW, Astell Ref: 24KWSG, 48KWSG or 72KWSG), which improves cycle times and includes automatic water filling (a mains water supply is required), or an external direct steam supply (D models), such as a stand-alone steam generator.

Advanced vacuum option. Vacuum air removal is essential for porous loads (e.g. wrapped instruments and fabrics) and other cycles where air could be trapped within the load. AVC001 is Astell's advanced pulsar vacuum which, used with a heated jacket and a suitable steam supply, enables the dry output of all loads. Astell Ref: AVC001

External jacket option. Adds an additional layer to the outside of the chamber. It can be heated to enhance drying at the end of the cycle, or flooded with water during cooling for faster cooling times. Astell Ref: AAQ302 (AAQ302C for cooling)

ADDITIONAL OPTIONS

Integral data printer	AAR130	Drain cooling	AAN420
Load Sensed Process Timing	AAR014	Category III (BSL-3) compliance	AVQ006
FDA 21 CFR part 11 controller software	CFR021	Morrison discard container (300 x 300 x 300 mm)	AAQ300
Remote maintenance/diagnosis	RDM101	Additional shelf	AAQ801
Ethernet interface	AAR122	Water softener	AAW002
IQ/OQ documentation	IQ/OQ	Blowdown vessel	AAB001
Internal convection (fan) cooling	AAP102	Loading systems	AAQ600/2
Advanced water cooling	–	Autofill (automatic chamber filling)	–
Cooling jacket	AAQ302C	Autodrain (automatic chamber drain)	–
Heated jacket	AAQ302	Castor wheels	–
Air ballast (requires compressed air)	AVC004	Nelldorn glassware dryer	–
Integral air compressor (req. for vacuum units)	AAQ503	Stainless steel fascia panelwork	–
Simple vacuum	–	Stainless steel pipework (primary)	AAS001
Pulsar freesteaming (non-vacuum models)	–	Stainless steel pipework (full)	SPL422
Assisted air cooling (non-vacuum models)	–		

STANDARD SAFETY FEATURES

- Over temperature protection, a cooling lock, a safety valve test program and emergency stop button
- The door mechanism is safety linked, so a cycle cannot start until the door is properly closed, and the door cannot be opened until the pressure and temperature within the chamber are at a safe level
- The door seal is steam and vacuum resistant, and seals effectively without trapping 'foreign' material
- Doors are thermally insulated to prevent the surface temperature presenting a hazard to operators
- Water conservation re-circulation system minimising water usage

INSTALLATION REQUIREMENTS

Power requirements

415 V, 3 phase, with neutral and earth. Requirements vary with the model, steam source and options selected. Please contact us for exact power requirements.

Water and drainage requirements

A cold water supply of 2–6 bar minimum, 4 litres/min is required. Max temperature 25 °C, max flow rate 20 litres/min. Requirements vary for RO/de-ionised/hard water. Drainage: free venting, non-manifolded drain (54 mm diameter) capable of withstanding temperatures up to 100 °C.

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