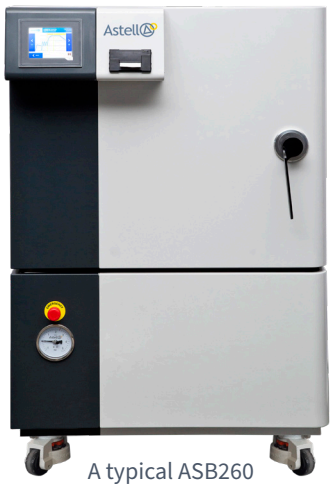
Astell are proud to manufacture highly customisable autoclaves that are built-to-order. This enables us to meet any challenges that your facility or sterilisation requirements present. This technical data sheet provides you with a range of measurements and specifications from previous ASB260 models. Our Sales and Technical teams will provide you with the precise specification of your autoclave after consultation.

1. ASB260 GENERAL OVERVIEW

Sterilisation Temperature Range	From **100** to **138** (°C)
Sterilisation Pressure Range	From **20** to **240** (kPa) From **0.2** to **2.4** (bar)
Volume	**120** (L)
Number of Doors	**1**
Standard Steam Source	**In-chamber water heating element**
Power of Standard Steam Source	**TBC** (kW)
Fitted Vacuum System	**Optional**

These are the base options. Steam and vacuum system upgrades are available for most Astell Autoclaves. Ask your sales person for more info.



A typical ASB260

2. THE AUTOCLAVE CHAMBER

The autoclave chamber is the active site of sterilisation in the autoclave. Objects requiring sterilisation must be placed in the autoclave chamber.

	Dimensions
Width	**454** (mm)
Height	**454** (mm)
Depth	**740** (mm)
Loading Height	**790** (mm)
Chamber Volume	**120** (L)
Chamber Finish	**Electropolished**

CHAMBER SIZE AND ENERGY EFFICIENCY CONSIDERATIONS

Steam sterilises surfaces most efficiently by direct contact. Ensuring objects in the chamber do not touch maximises this effect. Plan your autoclave loads with objects closely spaced, but not touching.

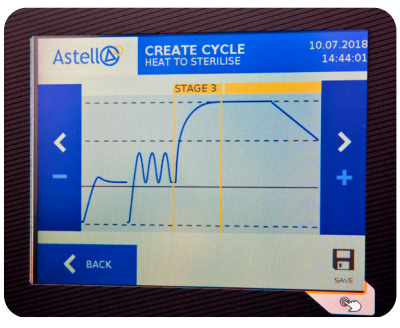
An autoclave is most energy efficient when loaded to capacity. Select an autoclave chamber that will be loaded to capacity when run. A twin-chambered Duaclave can help accommodate more varied load frequencies.

Optimal efficiency can be achieved through load validation; an optional service to produce replicable chamber configurations and sterilisation cycles designed to user-specified loads and individual autoclaves.

3. THE TOUCH-SCREEN CONTROL COMPUTER

The simple to use Astell C70 Touch-Screen Controller is fitted as standard to all Astell autoclaves. This powerful device provides flexibility and customisation to the autoclave user, allowing them to easily create and store up to 50 different sterilisation programs.
As standard, the C70 Controller includes:

Sterilisation Program Storage Capacity	**50** Programs
Cycle Data Storage Capacity	**5000** Cycles
Screen Size	**5.7”**
USB Ports for Remote Data Archiving	**1**
Password Protection	**Yes**
Live Data Feedback	**Yes**
Multilingual	**Yes**



Creating a new sterilisation cycle program on the C70 Touch-Screen Control Computer.

4. FEATURES

The following features are part of this autoclave as standard.

Recirculating coolant conservation system with temperature-controlled tundish
316 stainless steel electropolished chamber
A choice of 120, 153, 247, 290 and 344 litres models
Cooling Lock
External pressure gauge
Optimised for low water and power consumption
Fully programmable 5.7” colour touchscreen controller
USB interface for downloading controller data

5. OPTIONS

This autoclave can be equipped with a range of options to enhance and modify its functionality.

Vacuum	**Compressed air**
AVC001S - Advanced Vacuum	AAQ503 - Integral Air Compressor
AVC002S - Simple Vacuum	AAQ503EXT - Small External Air Compressor
Heating & steam	AAQ525 - Large External Air Compressor
16KWSG - 16kW Integral Steam Generator	**Enhanced automation**
AJP100 - Chamber Vessel Heating Jacket	AAP018 - Autodrain
CWS300 - Water softener and installation kit	AAP019 - Autofill
AAB001 - Blow Down Vessel	Biosafety
DSS - Steam separator	AVQ006S - CAT III (CL3 / BSL3) Compliance
Cooling	Load handling
AJP100C - Chamber Vessel Cooling Jacket	AAN316 - Additional Shelf
AAP102S - In Chamber Fan	AAN300 - Morrison Discard Container
AAP100 - Chamber Vessel Cooling Water Coils	Compliance, validation & documentation
AAP006 - Chamber Vessel Cooling Fan System	AAR130 - Integral Data-Printer
Drainage & discharge	AAR122 - Ethernet Interface
AAN420 - Drain Cooling	CFR021 - FDA 21 CFR Part 11 Compliant Controller Software
Liquid loads	UKAS001 - UKAS Calibration
AVC004 - Air ballast	UKASVAL - Load Validation
AAR014 - Load Sensed Process Timing	IQ/OQ001 - IQ/OQ Documents Package
	IQ/OQ003 - Completion of IQ/OQ Documentation

YOU WILL NEED

The autoclave has a number of requirements that must be catered for prior to installation. These are: an adequate route between the delivery and installation sites, physical space for the installation, the correct connection points for the appropriate quality of water and electricity, and a suitable drainage connection. Some autoclaves also require compressed air and a steam supply. Read this section carefully and ensure all the requirements can be met prior to ordering your autoclave.

6. SPACE FOR THE AUTOCLAVE

	Dimensions
Width	**686** (mm)
Height	**1265** (mm)
Depth	**1150** (mm)
Footprint / Area	**0.79** (m²)
Clearance Space	**500** (mm)
Dry Weight	**125.5** (kg)

It is recommended that a gap of 500mm is left around the autoclave for maintenance and utilities access.

A route capable of bearing the size and weight of the autoclave must be available between the delivery and installation site. If such a route is unavailable, discuss the construction of an autoclave that can be bisected with Astell.

Remember to leave space for any options you select that are physically external to the autoclave, such as an external air compressor, water softener, or blowdown vessel.

	Water Softener	External Air Compressor	Blowdown Vessel
Width	**250** (mm)	**400** (mm)	**345** (mm)
Height	**500** (mm)	**460** (mm)	**1050** (mm)
Depth	**440** (mm)	**670** (mm)	**335** (mm)

7. A CLEAN WATER SUPPLY

Water Type	Mains Water
Maximum Water Hardness	**50** (ppm)
Water pH	pH **7**
Maximum Water Temperature	**25** (°C)

Is your water quality outside the specification given above? Astell can supply an external water softener to reduce the hardness and pH of your mains water to acceptable levels. Please see the table to the right for an overview of the water softener's installation requirements.

	Water Softener
Unit Width	**250** (mm)
Unit Height	**500** (mm)
Unit Depth	**440** (mm)
Installation Location	**Adjacent to drain** AND **adjacent to autoclave**
Water Input Via	**Washing machine inlet hose** with Ø **3/4**" compression fittings
Minimum Water Input Pressure	**1.5** (bar)
Maximum Water Input Pressure	**6** (bar)
Water Output Via	**Washing machine inlet hose** with Ø **3/4**" compression fittings
Drain Connection	**Via 2 hoses** (Ø **1/2**" & Ø **3/8**") inserted into a floor drain or standpipe drain
Additional Requirements	**Water input via a 3-valve bypass system** with Ø **3/4**" compression fittings

Water Enters The Autoclave Via	**a water jug, filled from a tap**
Minimum Water Flow Rate	**0** (L / min)
Maximum Water Flow Rate	**Infinity** (L / min)

Water flow rates and pressures that are above the maximum can be reduced to acceptable levels by fitting a valve to your water supply. If required, ask a plumber to do this before installing your autoclave.

YOU WILL NEED

8. ADEQUATE DRAINAGE

Drainpipe Material	**Copper**
Drainpipe Diameter	Ø **35** (mm)
Maximum Drain Height	**690** (mm) above floor
Drainpipe Connections	**Between Autoclave and Main Building Drain Only**
Required Features of Drainage System	**Venting**

If your drainpipe is not made of copper, ask Astell if they can build an autoclave designed for the drains you have.

Most buildings have a vent stack to stop gas pressure build-ups. If your main drain does not have a vent stack, you may need another means for pressurised steam to escape from your drain. For example, drainage components such as an air gap, tundish, or vent pipe can work. Ask Astell or your plumber for more information.

A water softener has drainage requirements that are additional to those of the autoclave. If you are fitting a water softener, review the water softener drain requirements in section 5.

9. ELECTRICITY

	Electrical Requirement
Maximum Voltage	**230** (V)
Maximum Wattage	**18** (kW)
Maximum Frequency	**60** (hz)
Standard Amperage	**30** (A)

	Single	Three
AC Phases		**Available**

A single phase autoclave can usually be plugged into a standard mains socket whereas a three phase autoclave will need to be fitted to an electrical isolator box or commando plug and socket. Plugs and sockets not supplied. Contact Astell or your electrician for more information.

10. COMPRESSED AIR

Some of our autoclaves require a compressed air supply to power features such as door seals and movement pneumatics, air ballast, and advanced vacuum systems. As standard, Astell autoclaves are supplied without an air compressor, allowing you to use an on-site air compressor. Astell can supply air compressors compatible with the autoclave requirements; ask your sales representative for more information.

	Air Supply for Air Ballast	Air Supply for simple or advanced vacuum
Connecting Airline Hose Size	Ø **TBC** (mm)	Ø **TBC** (mm)
Peak Air Flow Rate	**100** (L / min)	**TBC** (L / min)
Peak Air Pressure	**TBC** (bar)	**TBC** (bar)

If you are providing your own air supply, you must also provide connections with pneumatic regulators set for the air flow rates, pressures, and connecting hose sizes for each requirement outlined here.

SERVICES

11. DELIVERY

Astell equipment is sold ex works. For your convenience, Astell will arrange a specialist equipment haulier at cost on your behalf. Alternatively, you may elect to arrange haulage from our headquarters; please instruct our sales team if this is the case.

12. CALIBRATION

All Astell autoclaves are fully tested and calibrated before despatch in line with our Quality Management System procedures ISO9001-2015. If you require traceable calibration, Astell can provide UKAS certified calibration when building and testing your autoclave - ask your sales representative for more information. All calibrations will be set to 121°C unless you specify otherwise during your order

Astell can provide UKAS Certified Calibration and Load Validation as optional extras - Ask your sales rep for more info.

13. VALIDATION PROTOCOLS

Astell Services can support validation protocols in a variety of settings. The packages we provide can include Installation Qualification (IQ), Operational Qualification (OQ), Performance. Qualification (PQ), and Design Qualification (DQ). Talk to your sales representative about the validation protocols you require.

FOR CUSTOMERS IN THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, THE FOLLOWING SERVICES ARE ALSO AVAILABLE:

14. MULTIPOINT LOAD VALIDATION

Astell recommends that the optional Installation Service is purchased with your order. Our highly experienced installation team will take care of final positioning and connections to utilities, as per the requirements outlined in the “You Will Need” section of this document and in later documentation provided by Astell must be in place prior to the installation team arriving. If the installation site does not meet the requirements outlined in this document, you may incur additional costs and delays to your installation. Ask your sales representative about Astell Installation Services.

15. LOAD VALIDATION

When you add load validation to your purchase, an Astell Service Engineer will work with your on-site team to create archetypal autoclave loads, and test them in your autoclave to make sure they sterilise throughout in the most efficient manner. You will receive a report detailing the validation results, and showing the autoclave users how to replicate the autoclave load setup as to reproduce the validated sterilisation cycle. Astell Scientific is an UKAS accredited laboratory, and the validation provided is traceable to national standards. Discuss load validation with your sales representative.

16. PLANNED PREVENTATIVE MAINTENANCE

Astell Maintenance ensures that your autoclave is regularly inspected, serviced, and maintained with official parts by a qualified Astell Service Engineer. Speak to your sales representative about building a maintenance contract tailored to your autoclave use.

STANDARDS

17. APPLICABLE STANDARDS

Astell autoclaves are manufactured in accordance with the following standards:

- PED 2014/68/EU
- ISO 17025:2017 (UKAS)
- ISO9001:2015
- 21CFR11 (when optional functionality is fitted)
- BS2646
- EN285

(Manufacturing to other standards is available on request)