Laboratoires Humeau

Imaginons l'avenir ensemble

+33 (0)2 40 93 53 53

Astell

Front Loading Autoclave Range

120, 153, 247, 290, 344 litre models

*Fitted with **heaters in chamber** as standard*

Low water and power consumption

Astell's front loading **'Swiftlock'** autoclave range is available in five sizes and is factory fitted with a large number of features as standard, making it suitable for sterilizing liquids (media), discard, glassware and other instruments. These features include:

- A 5.7" colour touchscreen with integrated USB data port
- A delayed start and a media holdwarm feature for greater control over when you want to sterilize
- Safety: over-temperature protection, an external pressure gauge, a cooling lock, a safety valve test program and an emergency stop button
- A validation port, drain valve and an electropolished stainless steel chamber
- Safe and easy loading, plus Astell's unique 'Swiftlock' door closure system
- Timed/Pulsed Freesteaming
- Full range of options and accessories *(see opposite page for details)*

Specifications

Model no.	Steam source	Volume (litres)	Power supply	Chamber diam. x depth (mm)	Usable chamber depth (mm)	Overall dimensions W x H x D (mm)
ASB260	Heaters in Chamber	120	Single or 3 Phase, 7/10kW	454 x 740	633	685 x 1320 x 1100
ASB270		153		454 x 945	862	685 x 1320 x 1310
ASB280		247	3 Phase, 13kW	600 x 876	734	900 x 1405 x 1370
ASB290		290	3 Phase, 16kW	600 x 1024	886	900 x 1405 x 1370
ASB300		344		600 x 1217	1086	900 x 1405 x 1570
ASB260	Integral Steam Generator (option)	120	3 Phase, 18kW	454 x 740	633	685 x 1320 x 1500
ASB270		153		454 x 945	862	685 x 1320 x 1500
ASB280		247	3 Phase, 28kW	600 x 876	734	900 x 1405 x 1750
ASB290		290		600 x 1024	886	900 x 1405 x 1750
ASB300		344		600 x 1217	1086	900 x 1405 x 1750

(Power consumption/dimensions may vary with the addition of certain options)

Bottle capacity

Below is a table identifying the number of Duran bottles it is possible to fit in to the chamber of each model using the standard base shelf. The number in brackets indicates quantity of extra bottles with the addition of a centre shelf (optional extra).

Model no.	500ml	1000ml	2000ml
ASB260	24	18	8
ASB270	33	23	11
ASB280	41 (+9)	28 (+4)	15
ASB290	50 (+11)	32 (+4)	18
ASB300	63 (+14)	42 (+6)	23

Advanced options *(Selection of these options alters the power supply requirements listed in the Specifications table)*

Integral Steam Generator Option

The standard heaters in chamber are replaced with a 16kW/24kW integral steam generator. This option helps to improve cycle times by increasing the efficiency of steam production and also includes automatic water filling as standard, removing the requirement of manually filling the machine with water between sterilization cycles (a mains water supply is therefore required for this option). Astell Ref: 16KWSG or 24KWSG

Advanced and Simple Vacuum Options

A vacuum option is essential for porous type loads (e.g. wrapped instruments and fabrics) or other cycles where air pockets could easily become trapped within the load. Available in 2 derivatives, the AVC001 option is Astell's advanced pulsar vacuum, which when used in conjunction with the integral steam generator and a heated jacket enables the dry output of all loads. Alternatively, the AVC002 vacuum utilises the standard heaters in the base of the chamber with simple pre-vacuum air removal and post vacuum cooling to effectively sterilize porous type loads and 'difficult' discard loads, but without any drying capability. Astell Ref: AVC001 or AVC002

External Jacket Option

Requiring a steam generator or direct steam option (and normally in conjunction with the AVC001 vacuum option), the external jacket option effectively adds an additional layer to the outside of the autoclave chamber. This can then be independently heated by the steam generator to enhance the drying process at the end of the cycle, or it can be flooded with water during cooling to aid faster cooling times. Astell Ref: AJP100 or AJP152

Additional options

Load Sensed Process Timing	Ref: AAR014
Pulsar Freesteaming	Ref: AAN009
Integral data printer	Ref: AAR130
FDA 21 CFR part 11 controller software	Ref: CFR021
Remote maintenance/diagnosis	Ref: RDM101
Ethernet interface	Ref: AAR122
IQ/OQ documentation	Ref: IQ/OQ
Assisted air cooling/non jacketed	Ref: AAP006
Advanced water cooling	Ref: AAP100
Autodrain (heaters in chamber models only)	Ref: AAP018
Autofill (heaters in chamber models only)	Ref: AAP019
Air ballast (requires compressed air)	Ref: AVC004

Internal convection cooling	Ref: AAP102
Drain Cooling (heaters in chamber model only)	Ref: AAN420
Category III (BSL-3) compliance	Ref: AVQ006
Morrison discard container (W:280 x H:290 x D:330mm)	Ref: AAN300
Container tray (W:279 x H:127 x D:279mm)	Ref: AAN080
Additional shelf kit (for ASB260/ASB270)	Ref: AAN316
Additional shelf kit (for ASB280/ASB290/ASB300)	Ref: AAN318
Water softener (compact)	Ref: AAW002
Integral air compressor (req. for Vacuum units)	Ref: AAQ503/525
Blow down vessel (steam gen. only)	Ref: AAB001
Direct Steam model	Ref: Various

See pages 20-25 for further information explaining options and accessories

Options capacity

Part name	Part ref.	Dimensions W x H x D (mm)	ASB260	ASB270	ASB280	ASB290	ASB300
Morrison discard container	AAN300	280 x 290 x 330	1	3	2	3	3
Container tray	AAN080	279 x 127 x 279	2	3	2	3	3
Container tray (capacity with middle shelf – optional extra)			4	6	6	9	9
Container tray (capacity with middle & upper shelf – extras)			–	–	6	12	12

Installation requirements

Power requirements:

The power requirements for the standard machines are listed in the Specifications table, however these can vary depending on the options selected. Options that affect the power requirement are **Integral Steam Generator** and **Advanced and Simple Vacuum**. For details on the exact power requirements on these options please contact us. *N.B. A Neutral line and protective Earth are required for all electrically heated units.*

Water and drainage requirements:

A cold water supply of 2-6 Bar minimum, 4 litres/min is required for the 'Autofill', vacuum and water cooling options. Max temperature 25°C, Max flow rate 20 litres/min. Requirements vary for RO/de-ionised/hard water. Drainage: Free venting, non-manifolded drain (35mm diameter) capable of withstanding temperatures up to 100°C.

NEW

Sliding Front Autoclave Range

120, 153, 247, 290, 344 litre models

*Fitted with **heaters in chamber** as standard*

Astell's sliding front circular chamber autoclave range combines the easy access of a sliding door cabinet design with the value inherent in circular section machines. Available in five sizes, each unit is factory fitted with a large number of features as standard, making it suitable for sterilizing liquids (media), discard, glassware and other instruments. These features include:

- A 5.7" colour touchscreen with integrated USB data port
- Choice of manual or automatic door opening*
- Safety: over-temperature protection, an external pressure gauge, a cooling lock, a safety valve test program and an emergency stop button
- A validation port, drain valve and an electropolished stainless steel chamber

**requires air supply*

Specifications

Model no.	Steam source	Volume (litres)	Power supply	Chamber diam. x depth (mm)	Usable chamber depth (mm)	Overall dimensions W x H x D (mm)
MNS120C	Heaters in Chamber	120	Single or 3 Phase, 7/10kW	454 x 740	633	700 x 1630 x 1165
MNS153C		153		454 x 945	862	700 x 1630 x 1370
MNS247C		247	3 Phase, 13kW	600 x 876	734	915 x 1780 x 1455
MNS290C		290	3 Phase, 16kW	600 x 1024	886	915 x 1780 x 1455
MNS344C		344		600 x 1217	1086	915 x 1780 x 1650
MNS120C	Integral Steam Generator (option)	120	3 Phase, 18kW	454 x 740	633	700 x 1630 x 1510
MNS153C		153		454 x 945	862	700 x 1630 x 1510
MNS247C		247	3 Phase, 28kW	600 x 876	734	915 x 1780 x 1595
MNS290C		290		600 x 1024	886	915 x 1780 x 1595
MNS344C		344		600 x 1217	1086	915 x 1780 x 1790

(Power consumption/dimensions may vary with the addition of certain options)

Bottle capacity

Below is a table identifying the number of Duran bottles it is possible to fit in to the chamber of each model using the standard base shelf. The number in brackets indicates quantity of extra bottles with the addition of a centre shelf (optional extra).

Model no.	500ml	1000ml	2000ml
MNS120C	24	18	8
MNS153C	33	23	11
MNS247C	41 (+9)	28 (+4)	15
MNS290C	50 (+11)	32 (+4)	18
MNS344C	63 (+14)	42 (+6)	23

Advanced options *(Selection of these options alters the power supply requirements listed in the Specifications table)*

Integral Steam Generator Option

The standard heaters in chamber are replaced with a 16kW/24kW integral steam generator. This option helps to improve cycle times by increasing the efficiency of steam production and also includes automatic water filling as standard, removing the requirement of manually filling the machine with water between sterilization cycles (a mains water supply is therefore required for this option). Astell Ref: 16KWSG or 24KWSG

Advanced and Simple Vacuum Options

A vacuum option is essential for porous type loads (e.g. wrapped instruments and fabrics) or other cycles where air pockets could easily become trapped within the load. Available in 2 derivatives, the AVC001 option is Astell's advanced pulsar vacuum, which when used in conjunction with the integral steam generator and a heated jacket enables the dry output of all loads. Alternatively, the AVC002 vacuum utilises the standard heaters in the base of the chamber with simple pre-vacuum air removal and post vacuum cooling to effectively sterilize porous type loads, but without any drying capability. (Please note vacuum units require AAQ503 air compressor option). Astell Ref: AVC001 or AVC002

External Jacket Option

Requiring a steam generator or direct steam option (and normally in conjunction with the AVC001 vacuum option), the external jacket option effectively adds an additional layer to the outside of the autoclave chamber. This can then be independently heated by the steam generator to enhance the drying process at the end of the cycle, or it can be flooded with water during cooling to aid faster cooling times. Astell Ref: AJP100 or AJP152

Additional options

Load Sensed Process Timing	Ref: AAR014	Internal convection cooling	Ref: AAP102
Pulsar Freesteaming	Ref: AAN009	Drain Cooling (heaters in chamber model only)	Ref: AAN420
Integral data printer	Ref: AAR130	Category III (BSL-3) compliance	Ref: AVQ006
FDA 21 CFR part 11 controller software	Ref: CFR021	Morrison discard container (W:280 x H:290 x D:330mm)	Ref: AAN300
Remote maintenance/diagnosis	Ref: RDM101	Container tray (W:279 x H:127 x D:279mm)	Ref: AAN080
Ethernet interface	Ref: AAR122	Additional shelf kit (for MNS120C/MNS153C)	Ref: AAN316
IQ/OQ documentation	Ref: IQ/OQ	Additional shelf kit (for MNS247C/MNS290C/MNS344C)	Ref: AAN318
Assisted air cooling/non jacketed	Ref: AAP006	Water softener (compact)	Ref: AAW002
Advanced water cooling	Ref: AAP100	Integral air compressor (req. for Vacuum units)	Ref: AAQ503/525
Autodrain (heaters in chamber models only)	Ref: AAP018	Blow down vessel (Steam Generator only)	Ref: AAB001
Autofill (heaters in chamber models only)	Ref: AAP019	Automatic door (requires compressed air)	Ref: APD001
Air ballast (requires compressed air)	Ref: AVC004	Direct steam model	Ref: Various

See pages 20-25 for further information explaining options and accessories

Options capacity

Part name	Part ref.	Dimensions W x H x D (mm)	MNS120C	MNS153C	MNS247C	MNS290C	MNS344C
Morrison discard container	AAN300	280 x 290 x 330	1	3	2	3	3
Container tray	AAN080	279 x 127 x 279	2	3	2	3	3
Container tray (capacity with middle shelf – optional extra)			4	6	6	9	9
Container tray (capacity with middle & upper shelf – extras)			–	–	6	12	12

Installation requirements

Power requirements:

The power requirements for the standard machines are listed in the Specifications table, however these can vary depending on the options selected. Options that affect the power requirement are **Integral Steam Generator** and **Advanced and Simple Vacuum**. For details on the exact power requirements on these options please contact us. *N.B. A Neutral line and protective Earth are required for all electrically heated units.*

Water and drainage requirements:

A cold water supply of 2-6 Bar minimum, 4 litres/min is required for the 'Autofill', vacuum and water cooling options. Max temperature 25°C, Max flow rate 20 litres/min. Requirements vary for RO/de-ionised/hard water. Drainage: Free vented, non-manifolded drain (35mm diameter) capable of withstanding temperatures up to 100°C.

Duaclave Autoclave Range

66, 86, 126, 240, 306 litre models

*Fitted with **heaters in chamber***

The 'Duaclave' is the ideal autoclave where laboratory space is at a premium. The Duaclave features two identical chambers, stacked one directly above the other, giving double the capacity for the same footprint.

Combining two units within one frame, the two chambers operate completely independently – for example, allowing you to run a glassware cycle in one chamber whilst preparing your media with the other.

Duaclave models are only available with 'heaters in chamber'.

Features include:

- Media holdwarm and delayed start facility
- 5.7" colour touchscreens
- Electropolished stainless steel chambers
- External pressure gauges
- Versatile range of options and accessories *(see opposite page for details)*
- Over pressure/temperature protection
- Validation port

Specifications

Model no.	From range	Steam source	Volume (litres)	Power supply	Chamber diam. x depth (mm)	Usable chamber depth (mm)	Overall dimensions W x H x D (mm)
AMB420DV	Benchtop	Heaters in Chamber	33 (x2)	2 x Single Phase, 230V, 13A	346 x 355 (x2)	294	520 x 1200 x 780
AMB430DV			43 (x2)		346 x 465 (x2)	403	520 x 1200 x 780
AMB440DV			63 (x2)		346 x 668 (x2)	600	520 x 1200 x 980
ASB260DV	Swiftlock		120 (x2)	2 x Single/3Ph, 7/10kW	454 x 740 (x2)	633	685 x 1855 x 1310
ASB270DV			153 (x2)		454 x 945 (x2)	862	685 x 1855 x 1310

(Power consumption/dimensions may vary with the addition of certain options)

Bottle capacity

Below is a table identifying the total number of Duran bottles it is possible to fit in to each Duaclave chamber using the standard base shelf.

Model no.	500ml	1000ml	2000ml
AMB420DV	10	8	2
AMB430DV	14	11	3
AMB440DV	21	15	4
ASB260DV	24	18	8
ASB270DV	33	23	11

Additional options – AMB420DV – AMB430DV – AMB440DV

Load Sensed Process Timing	Ref: AAR014
Pulsar Freesteaming	Ref: AAN009
Integral data printer	Ref: AAR130
FDA 21 CFR part 11 controller software	Ref: CFR021
Remote maintenance/diagnosis	Ref: RDM101
Ethernet interface	Ref: AAR122
IQ/OQ documentation	Ref: IQ/OQ
Assisted air cooling	Ref: AAP006
Morrison discard container (W:180 x H:200 x D:260mm)	Ref: AAN346

Category III (BSL-3) compliance	Ref: AVQ009
Five position shelf rack (AMB420) Two shelves supplied	Ref: AAN025
Five position shelf rack (AMB430) Three shelves supplied	Ref: AAN530
Five position shelf rack (AMB440) Three shelves supplied	Ref: AAN040
Spare shelf (AMB420)	Ref: AAN022
Spare shelf (AMB430)	Ref: AAN532
Spare shelf (AMB440)	Ref: AAN043

Additional options – ASB260DV – ASB270DV

Load Sensed Process Timing	Ref: AAR014
Pulsar Freesteaming	Ref: AAN009
Integral data printer	Ref: AAR130
FDA 21 CFR part 11 controller software	Ref: CFR021
Remote maintenance/diagnosis	Ref: RDM101
Ethernet interface	Ref: AAR122
IQ/OQ documentation	Ref: IQ/OQ
Assisted air cooling	Ref: AAP006
Advanced water cooling	Ref: AAP100
Autodrain	Ref: AAP018

Autofill	Ref: AAP019
Drain Cooling	Ref: AAN420
Category III (BSL-3) compliance	Ref: AVQ006
Morrison discard container (W:280 x H:290 x D:330mm)	Ref: AAN300
Container tray (W:279 x H:127 x D:279mm)	Ref: AAN080
Additional shelf kit (for ASB260/ASB270)	Ref: AAN316
Water softener (compact)	Ref: AAW002
Direct Steam model	Ref: Various

See pages 20-25 for further information explaining options and accessories

Installation requirements

Power requirements:

The power requirements for the standard machines are listed in the Specifications table, however these can vary depending on the options selected. For details on the exact power requirements on these options please contact us. *N.B. A Neutral line and protective Earth are required for all electrically heated units.*

AMB model drainage requirements:

A condensate bottle or a similar heat resistant receptacle per chamber. Alternatively connection to a free venting, non-manifolded drain (35mm diameter) capable of withstanding temperatures up to 100°C.

ASB model water and drainage requirements:

A cold water supply of 2-6 Bar minimum, 4 litres/min is required for the 'Autofill' option.
Max temperature 25°C, Max flow rate 20 litres/min. Requirements vary for RO/de-ionised/hard water.

Drainage: Free venting, non-manifolded drain (35mm diameter) capable of withstanding temperatures up to 100°C.

SQUARE ECO Autoclave Range

125, 216, 250, 360 litre models

*Fitted with **heaters in chamber***

The SQUARE ECO range has been designed to bridge the gap between circular chamber autoclaves and the more complex square chamber autoclaves that Astell offer. The SQUARE ECO range still contains all the features you would expect from an Astell autoclave, including colour touchscreen, multiple programs for sterilizing and our delayed start/media holdwarm features, but this cost effective range has been designed with simplicity and economy in mind.

The ECO range is manufactured using high quality materials and includes all the safety features you would expect to find on any of our smaller units, with a manual door.

SQUARE ECO models are supplied with 'heaters in chamber'.

Features include:

- Media holdwarm and delayed start facility
- 5.7" colour touchscreen controller
- External pressure gauge
- Range of options and accessories *(see opposite page for details)*
- Assisted air cooling
- Autofill/Autodrain
- Over pressure/temperature protection
- Validation port

Specifications

Model no.	Steam source	Volume (litres)	Power supply	Chamber dimensions W x H x D (mm)	Overall dimensions W x H x D (mm)
MNS125E	Heaters in Chamber	125	415V, 3 Phase, Neutral & Earth, 16kW	500 x 500 x 500	780 x 1750 x 1000
MNS216E		216		600 x 600 x 600	880 x 1850 x 1100
MNS250E		250		500 x 500 x 1000	880 x 1850 x 1750

Only suitable for fluid loads

Model no.	Steam source	Volume (litres)	Power supply	Chamber dimensions W x H x D (mm)	Overall dimensions W x H x D (mm)
MNS360E	Heaters in Chamber	360	415V, 3 Phase, Neutral & Earth, 16kW	600 x 600 x 1000	880 x 1850 x 1700

(Power consumption/dimensions may vary with the addition of certain options)

Bottle capacity

Below is a table identifying the total number of Duran bottles it is possible to fit in to each SQUARE ECO autoclave using the standard base shelf. The number in brackets indicates quantity of extra bottles with the addition of a centre shelf (optional extra).

Model no.	500ml	1000ml	2000ml
MNS125E	25 (30)	20	9
MNS216E	42 (42)	30	16
MNS250E	60 (60)	40	21
MNS360E	66 (66)	50 (50)	21

Advanced options *(Selection of this option alters the power supply requirements listed in the Specifications table)*

Simple Vacuum Option

The AVC002 vacuum utilises the standard heaters in the base of the chamber with simple pre-vacuum air removal and post vacuum cooling to effectively sterilize porous type loads and 'difficult' discard loads, but without any drying capability.

Astell Ref: AVC002

Additional options

Load Sensed Process Timing	Ref: AAR014
Pulsar Freesteaming	Ref: AAN009
Integral data printer	Ref: AAR130
FDA 21 CFR part 11 controller software	Ref: CFR021
Remote maintenance/diagnosis	Ref: RDM101
Ethernet interface	Ref: AAR122
IQ/OQ documentation	Ref: IQ/OQ

Category III (BSL-3) compliance	Ref: AVQ006
Drain Cooling	Ref: AAN420
Discard container (W:300 x H:300 x D:300mm)	Ref: AAQ300
Loading system 1 x external trolley + 1 x internal truck	Ref: AAQ600
Water softener	Ref: AAW002
Stainless steel fascia panelwork	Ref: SSFPW

See pages 20-25 for further information explaining options and accessories

Standard safety features

All SQUARE ECO range autoclaves are fitted with the following built-in safety features as standard:

- Over temperature protection, a cooling lock, a safety valve test program and emergency stop button
- The door mechanism is safety linked meaning a cycle cannot start until the door is properly closed; or opened until the pressure and temperature within the chamber is at a safe level
- The door seal is steam and vacuum resistant, and will seal effectively without trapping or entrapment of 'foreign' material
- Doors are thermally insulated to prevent the surface temperature presenting a potential hazard to operators

Installation requirements

Power requirements:

The power requirements for the standard machines are listed in the Specifications table, however these can vary depending on the options selected. For details on the exact power requirements on these options please contact us. *N.B. A Neutral line and protective Earth are required for all electrically heated units.*

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 (54mm diameter) capable of withstanding temperatures up to 100°C.

Low water and power consumption

Touchscreen controller

Manual door

Pressure gauge

SQUARE Autoclave Range

125 – 735 litre models

*Fitted with **steam generator** as standard*

Astell's SQUARE range offers the choice of seven different chamber sizes ranging from 125 to 735 litres and various heating, loading and door options. The SQUARE range is suitable for sterilizing glassware, fluids, waste and porous type loads (subject to configuration).

Features include:

- 5.7" colour touchscreen controller
- 7 standard chamber sizes available
- Choice of three heating methods: Direct steam, heaters in chamber or with steam generator (subject to chamber size and load type)
- Single or double doors (pass through)
- Automatic or manual door operation
- Full range of options and accessories *(see opposite page for details)*
- Custom built units available to meet your exact requirements

Specifications

Models listed below are a representative selection. Please contact us for the full range of available sizes and options.

Model no.	Volume (litres)	Doors	Door mech.	Steam generator	Chamber dimensions W x H x D (mm)	Overall dimensions W x H x D (mm)
AVS125	125	1	Auto or Manual	24kW	500 x 500 x 500	780 x 2000 x 1300
AVS216	216	1	Auto or Manual	24kW	600 x 600 x 600	880 x 2000 x 1400
AVS250	250	1 or 2	Auto or Manual	24kW	500 x 500 x 1000	880 x 2000 x 1750
AVS360	360	1 or 2	Auto or Manual	24kW	600 x 600 x 1000	880 x 2000 x 1750
AVS490	490	1 or 2	Auto	48kW	700 x 700 x 1000	1250/1500 x 2000 x 1700
AVS612	612	1 or 2	Auto	48kW	700 x 700 x 1250	1250/1500 x 2000 x 2000
AVS735	735	1 or 2	Auto	48kW/72kW	700 x 700 x 1500	1250/1500 x 2000 x 2300

(Overall dimensions are based on single door models. May vary with the configuration and addition of certain options)

Standard safety features

All SQUARE range autoclaves are fitted with the following built-in safety features as standard:

- Over temperature protection, a cooling lock, a safety valve test program and emergency stop button
- The door mechanism is safety linked meaning a cycle cannot start until the door is properly closed; or opened until the pressure and temperature within the chamber is at a safe level
- The door seal is steam and vacuum resistant, and will seal effectively without trapping or entrapment of 'foreign' material
- Doors are thermally insulated to prevent the surface temperature presenting a potential hazard to operators

AVS735 fitted with optional stainless steel panels

Advanced options *(Selection of these options alters the power supply requirements listed in the Specifications table)*

Integral Steam Generator Option

The heaters in chamber are replaced with a 24kW/48kW integral steam generator. This option helps to improve cycle times by increasing the efficiency of steam production and also includes automatic water filling as standard, removing the requirement of manually filling the machine with water between sterilization cycles (a mains water supply is therefore required for this option). Astell Ref: 24KWSG or 48KWSG

Advanced Vacuum Option

A vacuum option is essential for porous type loads (e.g. wrapped instruments and fabrics) or other cycles where air pockets could easily become trapped within the load. The AVC001 option is Astell's advanced pulsar vacuum, which when used in conjunction with the integral steam generator and a heated jacket enables the dry output of all loads. Astell Ref: AVC001

External Jacket Option

Requiring a steam generator or direct steam option (and normally in conjunction with the AVC001 vacuum option), the external jacket option effectively adds an additional layer to the outside of the autoclave chamber. This can then be independently heated by the steam generator to enhance the drying process at the end of the cycle, or it can be flooded with water during cooling to aid faster cooling times. Astell Ref: AAQ302 (AAQ302C for cooling)

Additional options

Integral data printer	Ref: AAR130
Load Sensed Process Timing	Ref: AAR014
FDA 21 CFR part 11 controller software	Ref: CFR021
Remote maintenance/diagnosis	Ref: RDM101
Ethernet interface	Ref: AAR122
IQ/OQ documentation	Ref: IQ/OQ
Internal convection cooling	Ref: AAP102
Air ballast (requires compressed air)	Ref: AVC004
Integral air compressor (Req. for Vacuum units)	Ref: AAQ503
SPF seal (for double door machines only)	Ref: AVQ007

Drain Cooling (heaters in chamber models only)	Ref: AAN420
Category III (BSL-3) compliance	Ref: AVQ006
Morrison discard container (W:300 x H:300 x D:300mm)	Ref: AAQ300
Additional shelf	Ref: AAQ801
Water softeners	Ref: AAW002
Blow down vessel	Ref: AAB001
Loading systems	Ref: AAQ600/2
Stainless steel pipework (primary)	Ref: AAS001
Stainless steel pipework (full)	Ref: SPL422

See pages 20-25 for further information explaining options and accessories

Installation requirements

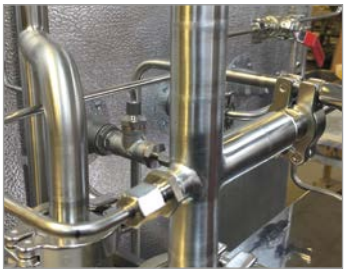
Power requirements:

The power requirements for the standard machines listed in the Specifications table are 415V, 3 Phase, with Neutral and Earth. Requirements can vary depending on the configuration and options selected. For additional details of exact power requirements please contact us.

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 (54mm diameter) capable of withstanding temperatures up to 100°C.

Touchscreen controller



Stainless steel pipework (optional)

Pressure gauge

SQUARE MAX Autoclave Range

600 – 1400 litre models

*Fitted with **steam generator**/direct steam*

Astell's SQUARE MAX range offers the choice of five different chamber sizes ranging from 600 to 1400 litres and various heating, loading and door options. The SQUARE MAX range is highly customisable and by choosing from the many options available it is possible to sterilize almost anything (subject to configuration).

Features include:

- 5.7" colour touchscreen controller
- 5 standard chamber sizes available
- Choice of two heating methods: Direct steam or steam generator
- Single or double doors (pass through)
- Automatic sideways opening door operation
- Full range of options and accessories *(see page 18 for details)*
- Custom built units available to meet your exact requirements

Specifications

Models listed below are a representative selection. Please contact us for the full range of available sizes and options.

Model no.	Volume (litres)	Doors	Steam generator	Direct steam	Chamber dimensions W x H x D (mm)	Overall dimensions W x H x D (mm)
SVS600	600	1 or 2	48kW	4kW	600 x 1000 x 1000	2000 x 2000 x 1500
SVS875	875	1 or 2	72kW	4kW	700 x 1000 x 1250	2000 x 2000 x 1750
SVS1050	1050	1 or 2	72kW	4kW	700 x 1000 x 1500	2000 x 2000 x 2000
SVS1200	1200	1 or 2	72kW	4kW	600 x 1000 x 2000	2000 x 2000 x 2500
SVS1400	1400	1 or 2	72kW	4kW	700 x 1000 x 2000	2000 x 2000 x 2500

(Overall dimensions are based on single door models. May vary with the configuration and addition of certain options)

Standard safety features

All SQUARE MAX range autoclaves are fitted with the following built-in safety features as standard:

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

SQUARE MAX fitted with optional stainless steel panels

Z.A. Gesvrine - 4, rue Képler - B.P 4125
44 241 La Chapelle-sur-Erdre cedex - FRANCE
Tél. : +33 (0)2 40 93 53 53 - Fax : +33 (0)2 40 93 41 00

www.humeau.com