# Autoclave Range















# Why specify a Rodwell Autoclave?

### Make the smart choice

Autoclaves are often overlooked in the central role they play in the operation of the modern laboratory. The vast majority of laboratories simply cannot function without one. Therefore, it is the smart buyer who gives such careful consideration to the single piece of equipment so essential to the efficient every day to day running of a laboratory.

Everybody is under constant pressure to reduce costs and save money. However, how smart is the buyer who saves money on the initial purchase, only to incur additional costs in extra maintenance; breakdowns which will ultimately result in the early replacement of an instrument?

Rodwell Autoclaves tend to cost more than most of the competition but vast savings are quickly realised due to reduced operating, service and maintenance costs, not to mention the knock-on costs to the laboratory when an autoclave breaks down. A reliable autoclave not only means an efficient laboratory, but a happier workforce too, which in turn saves money!

### You get what you pay for?

This is certainly the case for cheaper equipment for the reasons mentioned above, but with Rodwell Autoclaves you do not get what you pay for; you get more!

- The highest quality materials
- High pressure pipe work and compression fittings for easy maintenance
- Proven materials, systems and technology
- Control system with more standard features
- Solid construction ensuring many years reliable service
- Upgradeable technology
- Sensible, practical design as opposed to aesthetics
- Safety locks + lock detection systems
- Diagnostic control system that informs the operator of the nature of any faults for quick and simple fault finding.

### Support for your autoclave - a team obsession

The Rodwell Autoclave Company is a division of the Rodwell Engineering Group, a family owned company whose team of engineers have achieved success over the past 50 years simply by doing their best to ensure total customer satisfaction.



### A Global Business

The Rodwell Autoclave Company has been exporting for the past 30 years and has established distributors in many nations all over the world. Our distributors share our commitment for proficient after-sales service, using fully trained engineers with access to the latest technology and total support from the manufacturers they represent.

# Making full use of modern available technology

Email and the internet has allowed us to develop up-to-date software (optional) which allows the scientist to email complete cycles to our technical department for full on-screen diagnosis and set-up recommendations.

### Expertise

Rodwell Engineering Group is a family business founded in 1945. Over the years it has expanded to a multi-faceted engineering company though natural growth, acquisition and shrewd investment. Some of Rodwell's acquisitions have a history spanning back nearly 100 years!

The company also has extensive property and business interests which ensure financial stability even throughout the most turbulent times.

This broad nature of Rodwell Engineering Group's activities plus sound financial foundations ensure that your Rodwell Autoclave is manufactured to the highest engineering standards and can be supported throughout its lifetime.

### **Company Structure**

The Rodwell Autoclave	Autoclave
Company	manufacturers
The Rodwell Compressor	Compressed Air
Company	Engineers
Rodwell Powell	Aerospace Engineers & Inspection

**Precision Engineering since 1945** 

# Compact Autoclaves (Round Chambers)

### **Phoenix Benchtop**

#### **Design Features**

- 40 or 60 litres
- MP25 Control (see page 8)
- Space-saving design
- Single phase 'plug in & play'
- Integral drip tray under each door
- Bench or trolley mounted
- Phoenix 40 has capacity for up to 13 x 1L media bottles
- Can be completely stand alone

#### **Optional Accessories**

- Fan accelerated cooling
- Loading baskets
- Waste discard system
- Condense collector
- (eliminates need for a plumbed drain service)
- Range of data recording options
- Scale prevention systems
- Automatic fill
- Vacuum air removal systems



Capacities and Dimensions				
Model	Phoenix 40	Phoenix 60		
Chamber Capacity:	40 litres	60 litres		
Vessel Dimensions (mm):	350Ø x 460 deep	350Ø x 600d deep		
Overall Dimensions (mm):	550w x 790h x 710d	550w x 790h x 860d		

### Monarch

#### **Design Features**

- 50 or 75 litres
- Counterbalanced lid for easy opening
- MP25 control (see page 8)
- Angled control panel
- Space-saving design
- Exceptionally low loading height (50)
- Fits most fermentation vessels and bioreactors (75)

#### **Optional Accessories**

- Fan accelerated cooling
- Additional loading baskets
- Condense collector (eliminates need for a plumbed drain service)
- Waste discard system
- Range of data recording options
- Automatic fill
- Vacuum air removal systems

#### Monarch 50 Features

- Designed to fit underneath a standard bench
- Single phase 3kw 'plug in and play'

#### Monarch 75 Features

- Fits up to 3 loading baskets
- Powerful 4kw heater

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Capacities and Dimensions				
Model	Monarch 50	Monarch 75		
Chamber Capacity:	50 litres	75 litres		
Vessel Dimensions (mm):	350Ø x 520 deep	350Ø x 780 deep		
Overall Dimensions (mm):	470w x 840h x 690d	470w x 1100h x 690d		

# Medium Capacity Autoclaves

### Ensign

#### **Design Features**

- 100 & 125 litres
- MP25 control (see page 8)
- Space-saving design
- Counterbalanced lid for easy opening
- Available in electrically heated version or from a piped steam source

#### Formats

- 1) 6 kW in-chamber heating (100)
- 2) 9 kW in-chamber heating (100 & 125)
- 3) Heated from an external steam supply
- 4) Remote steam heated with generator

#### **Optional Accessories**

- Fan accelerated cooling
- Hydraulic loading trolley
- Air ballasting option
- Loading baskets
- Waste discard system
- Drain line condenser for plastic drains
- Range of data recording options
- Scale prevention systems
- Automatic fill
- Vacuum air removal systems

### Ambassador

#### **Design Features**

- 100 or 158 litre variants
- MP25 control (see page 8)
- Cost effective hinge / bolt door
- Space-saving design
- Integral drip tray under door
- Fixed seal

#### Formats

- 1) 6 kW in-chamber heating (100)
- 2) 9 kW in-chamber heating (100 & 158)
- 3) Heated by an integrated 9kW steam generator
- 3) Heated from an external steam supply
- 4) Double door "pass through" version available (158L)

#### **Optional Accessories**

- Fan accelerated cooling
- Loading trolley
- Air ballasting option
- Loading baskets
- Waste discard system
- Drain line condenser for plastic drains
- Range of data recording options
- Scale prevention systems
- Automatic fill
- Vacuum air removal systems
- Integrated steam generator



Capacities and Dimensions				
Model	Ensign 100	Ensign 125		
Chamber Capacity:	100 litres	125 litres		
Vessel Dimensions (mm):	460Ø x 570 deep	460Ø x 723 deep		
Overall Dimensions (mm):	560w x 1090h x 800d	560w x 1240h x 800d* 560w x 1240h x 1100d**		
*Without loading step **With loading step				



Capacities and Dimensions				
Model	Ambassador 100	Ambassador 158		
Chamber Capacity:	100 litres	158 litres		
Vessel Dimensions (mm):	460Ø x 610 deep	460Ø x 960 deep		
Overall Dimensions (mm):	650w x 1240h x 1160d	650w x 1240h x 1310d		

# Large Capacity Autoclaves (Round Chambers)

### Gemini

### Totally Unique: Two independent autoclaves in one robust frame!

#### **Design Features**

- 2 x 158 litre vessels
- 316 litre total capacity
- MP25 control (see page 8)
- Independent control of each chamber
- Space-saving design
- Can be used as a clean and dirty autoclave in one frame
- Integral drip tray under each door
- Available in electrically heated version or from a piped steam source
- Integrated steam generator available

#### **Optional Accessories**

- Fan accelerated cooling
- Hydraulic loading trolley
- Air ballasting option
- Loading baskets
- Waste discard system
- Drain line condenser for plastic drains
- Range of data recording options
- Scale prevention systems
- Automatic fill
- Vacuum air removal systems

### Sovereign

#### **Design Features**

- 200 & 250 litre variants
- Economy round chamber
- MP25 control (see page 8)
- Cost effective hinge / bolt door
- Space-saving design
- Integral drip tray under door
- Available in electrically heated version or from a piped steam source
- Fixed seal
- Integrated steam generator available

#### Formats

- 1) Heated from within the chamber
- 2) Integral steam generator separate from the chamber
- 3) Heated from an external steam supply
- 4) Remote steam heated with generator back-up

#### **Optional Accessories**

- Fan accelerated cooling
- Loading trolley
- Air ballasting option
- Loading baskets
- Waste discard system
- Drain line condenser for plastic drains
- Range of data recording optionsScale prevention systems
- Automatic fill

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• Vacuum air removal systems

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Capacities and Dimensions			
Model	Gemini 316		
Chamber Capacity:	158 litres x 2		
Vessel Dimensions (mm):	460Ø x 960 deep (x2)		
Overall Dimensions (mm):	650w x 1970h x 1310d		



Capacities and Dimensions			
Model	Sovereign 200	Sovereign 250	
Chamber Capacity:	200 litres	250 litres	
Vessel Dimensions (mm):	545Ø x 860 deep	545Ø x 1057 deep	
Overall Dimensions (mm):	830w x 1800h x 1450d	830w x 1800h x 1450d	

### Large Capacity Autoclaves (Square Chambers)

### Crystal

#### **Design Features**

- 300 litres
- Square section chamber
- MP25 control (see page 8)
- Cost effective hinge / bolt door
- Space-saving design
- Integral drip tray under door
- Available in electrically heated version or from a piped steam source
- Fixed seal
- Integrated steam generator
- Fan accelerated cooling

#### Formats

 1) Integral steam generator separate from the chamber
2) Heated from an external steam supply
3) Remote steam heated with generator back-up
4) Double door "pass-through" version available

### Sapphire

#### Design Features

- 330, 440, 550, 660 & 770 litre variants
- Square section chamber
- MP25 control (see page 8)
- Reliable 'Hoist and Clamp'
- door
- Fixed seal
- Integral drip tray under door
- Accelerated water
- cooling jacket
- Compact
- Integrated steam generator
- Super fast cycle times!

#### Formats

 Integral steam generator separate from the chamber
Heated from an external steam supply
Remote steam heated with generator back-up
Double door "pass-through" version available
(550, 660 & 770)

**Optional Accessories** 

• Air ballasting option

• Drain line condenser for

• Range of data recording

• Scale prevention systems

• Vacuum air removal systems

• Loading trolley

Loading basketsWaste discard system

plastic drains

options

Automatic fill

- Optional Accessories15 min. 'flash cycle' option
- Loading trolley
- Air ballasting option
- Loading baskets
- Waste discard containers
- Drain line condenser for
- plastic drains
- Range of data recording options
- Scale prevention systems
- Steam jacket drying
- Vacuum air removal systems



Capacities and Dimensions			
Model	Crystal 300		
Chamber Capacity:	300 litres		
Vessel Dimensions (mm):	510w x 510h x 1030d		
Overall Dimensions (mm):	830w x 1800h x 1450d		



Capacities and Dimensions					
Model	Sapphire 330	Sapphire 440	Sapphire 550	Sapphire 660	Sapphire 770
Chamber Capacity:	330 litres	440 litres	550 litres	660 litres	770 litres
Vessel Dimensions (mm):	670w x 670h x 745d	670w x 670h x 936d	670w x 670h x 1099d	670w x 670h x 1274d	670w x 670h x 1455d
Overall Dimensions (mm):	980w x 1930h x 1530d	980w x 1930h x 1530d	980w x 1930h x 1530d	980w x 1930h x 1750d	980w x 1930h x 1900d

# MP25 Controller & Smartcard

The common control system fitted to every autoclave in the Rodwell range. The MP25 has evolved to be one of the finest laboratory instrument control systems on the market today. What sets this system apart from any other control system is that it is totally interchangeable. The same MP25 control system with any Rodwell Autoclave: from a bench top to a large square chambered vacuum machine.

### Total versatility in 25 programs!

### **Standard Features**

#### 25 programs

Can be programmed and stored by the laboratory supervisor

#### Smart Card Access System

- Allows programs to be stored and locked off by a supervisor
- Operator cards give access to pre-programmed cycles only
- Available with or without operator smartcard access for operator access

#### Load Activated Sterilise Timer

(On/Off) prevents the sterilise timer from starting until the chamber and load have reached set point temperature.

#### Free Steam Timer (adjustable by time)

Holds the chamber at approximately 100°C (without pressurising) for a pre-determined time during the heating period and allows effective steam penetration into the load.

#### Delayed Start (24 hour clock)

Timer option allows the autoclave to be pre-programmed at a pre-determined time so the autoclave completes a cycle just before the lab arrives for work the following morning for preprepared warm media.

#### Adjustable Stay Warm (on/off)

Keeps the chamber warm at the end of the cycle for pourable media. This is adjustable to allow the operator to select the optimum temperature.

#### Instrument Cycles (programs 21 to 24 only)

Exhausts the chamber at the end of the cycle for dryer glassware and instruments upon completion.

#### Self Diagnostic

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Notifies the operator of any faults. The nature of many faults are clearly displayed on the LCD.

#### Sterilise Fault Warning

Notifies the operator if there has been a power supply problem or the temperature has not been maintained during the cycle.





#### **MP25 Options**

#### Post Cycle Drying

Programs 17 to 20 can be set to control a post-cycle drying heater (cannot be used with in-chamber heating systems unless auto drain or separate steam generator is specified).

#### Cycle Recorders

Cycle recorders are available to record: Load temperature - (single channel) Load & Chamber temperature (2 channel) Load & Chamber temperatures + Pressure (3 channel).

#### **Data Printers**

Provides a hard copy print out of parameters and readings during the cycle (2 or 3 channel available).

#### **Chart Recorders**

A complete range of circular and strip type chart recorders are available to provide a graphical representation of chamber conditions during each cycle. The MP25 will switch on the chart recorder only when a cycle is operating in order to save chart paper. A complete range of anything up to 12 channels are available plus a range of independent graphical recorders (1, 2 or 3 channel available).

#### SmartLog™ Cycle Data Recording Software

The ultimate system for autoclave logging. Enables a personal computer to analyse each autoclave cycle in great detail. The software provides a multi-channel readout including a full graphic profile, and the ability to provide remote diagnostic support.

#### **USB Memory Logging**

For quick and efficient downloading of log data the MP25 is equipped with a USB port for direct data transfer straight to a Rodwell USB Key. The data can then be transferred to a PC for analysis on our SmartLog<sup>™</sup> Software.

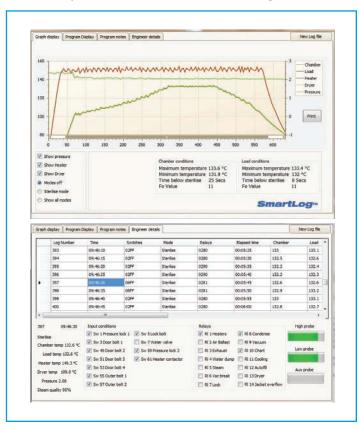
Download product data sheets online: www.rodwell-autoclave.com Telephone: +44 (0) 1268 286646

# USB SmartLog<sup>™</sup> System

The MP25 SmartLog system from The Rodwell Autoclave Company is revolutionising the way that autoclave cycle data is collected and analysed. In the past data collection would have been carried out by use of a data printer, which meant regular paper re-fills, replacement ink ribbons and reams of paper reports accumulating on the laboratory manager's desk. Now with our SmartLog & SmartLog+ systems instead of large bulky chart recorders, or paper printers, every cycle is automatically stored to memory, which can then be downloaded and analysed in our SmartLog software.

### **Complete Package**

The SmartLog system, comprises a specially adapted USB memory stick and our SmartLog software package. When connected to our MP25 controller, each time a cycle is carried out, all the cycle information is stored directly to the memory stick. The data files can then be downloaded to the PC for analysis at a later date. The software offers quick and easily analysis identifying any problems which may have occurred during the run. Need something tangible to show auditors? SmartLog can generate a comprehensive customisable report which only has to be printed as and when required for audit purposes. As well as basic time and temperature sampling as with traditional data printers, a complete cycle temperature profile is also displayed giving a graphic representation of the entire cycle. The graph offers various visual options enabling the user to view only what they wish to see. This includes custom probe views, different cycle stages, drying and pressure displays, graphical zoom for more detailed analysis as well as FO values for food testing laboratories.



#### **Traceability**

As per the requirements of CFR21 Part 11, the software data cannot be tampered with so the system is fully suitable for traceability purposes. The data can also be exported to spreadsheets if required.

### SmartLog+

In addition to the benefits of *SmartLog*, *SmartLog*+ enables you to network your autoclave to a PC network. This means that the data on the USB stick can be accessed from multiple PCs and viewed without the need to



remove the USB stick from the MP25 controller. In addition to being able to remotely see the cycle data, users can also monitor the cycle information in real time. *SmartLog+* also enables the *SmartLog* data files to be saved in duplicate in two separate locations; one on the USB stick and a back-up copy to a folder on the network which provides added security.

### **Diagnostic Support**

When choosing an autoclave, the back up service is the most serious consideration. With the *SmartLog* diagnostic features, this package could rapidly become the laboratory manager's best friend. The Engineer's details tab, enables a quick and comprehensive overview of the autoclaves' technical functions, saving the engineer lots of troubleshooting time, and reducing overall downtime. In addition the *SmartLog* software enables users to email cycle files directly to Rodwell technical support, where we can analyse any file on our diagnostic computer giving any user or service agent the benefit of Rodwell technical back up without even being there! This service is completely unique to Rodwell and is all part of our quality after sales care.

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# Microjet Microwave Autoclave

#### **Design Features**

- Innovative
- Compact
- Easy to Operate
- Patented Technology
- Temperature Sterilisation
- Liquid Media Sterilisation
- Data Stored on Micro SD Card

# A Revolution in the Sterilisation of Liquid Media

In the MICROJET autoclave, the thermal energy required for sterilisation is supplied directly to the medium. Microwaves are used as the energy source, so that heating of the medium is immediate and uniform. In comparison with the traditional steam autoclave, sterilisation takes 5 times less time, while the exposure to high temperatures is very short (60-90 seconds). This minimises the decomposition of microbiological medium.

- Heating Time 1.5—4.5 mins
  - Sterilisation Time 60-80 sec Total Process Time 7-18 mins
- Working Range from
- 100ml to 500ml

# 12 min Total time of sterilisation



Traditional Microwave sterilisation

#### Plug 'n' Play

Operation of the MICROJET autoclave is intuitive, & does not require additional training. All you need is a standard 13amp electrical socket. Just plug it in and start using it. As simple as that.



Specifications		
Model	Microjet	
Autoclave Weight	15kg	
Power Supply	230v /50Hz	
Maximum Power Consumption	8A	
Operating Pressure	3.6 bar	
Max. Pressure	5 Bar	
Overall Dimensions	280Ø x 427h (mm)	
Chamber Dimensions	350 Ø x 460d	
Chamber Capacity	2L	
EM Wave frequency	2450 MHz	
Protection	IP 20	
Data Logging	Micro SD card	
500ml Media Bottles	1	

Process Parameters	
Model	Microjet
Sterilisation Temperature	135°C
Set Point Duration	80 Seconds
Heating Time	1.5 - 4.5 Mins
Cooling Time	4 - 8 Mins
Total Cycle Time	7- 12.5 Mins
Temperature after Process	95°C



#### Touchscreen

All functions are operated from the touch screen; the touch screen displays also progress of the sterilisation process.

#### Standard Vessels

Liquid media such as microbiological media, buffer solutions, carbohydrate solutions or water can

be sterilised in standard laboratory vessels of 100 to 500ml capacity and temperature resistant up to 135°C (glass or plastic – PMP, PP, PTFE, FEP).

#### **Express Process**

Ease of use and very short sterilisation times make the preparation of sterile liquid media as simple as making a cup of tea.

#### **Quality Guarantee**

MICROJET autoclaves have a standard 24-month warranty.

#### Data Logging

Each sterilisation operation is automatically stored on a memory card. As the data is stored in a format compatible with GLP it can be copied to any PC and read using the inclusive Data Viewer software.





## Portable Autoclaves Specifications for ST1528E ST2228E ST3028E ST1528V ST2228V ST3028V

#### **Design Features**

- 15, 22 or 30 litres
- Manual or Vario digital Controller
- Robust space saving design
- Single phase 'plug & play'
- Compact and fully portable
- No plumbing needed
- Minimal Maintenance
- Grade 316 stainless steel chamber
- Suitable for Culture Media

#### Vario Controller

- Variable Temperature 100°C 137°C
- Variable Time: 199 minutes
- Preset Cycles:
  - 30mins @ 115°C
  - 15mins @ 121°C - 30 mins @ 121°C
  - 60 mins @ 115°C

Capacities and dimensions			
Model	ST1528E	ST2228E	ST3028E
Autoclave Weight	19kg	21kg	23kg
Export Case Size	470w x 680h x 470h	470w x 880h x 470h	470w x 880h x 470h
Overall Dimensions	370w x 485h x 390d	370w x 600h x 390d	370w x 730h x 390d
Chamber Dimensions	280 Ø x 245d	280 Ø x 360d	280 Ø x 490d
Water Capacity	2L	2L	2L
1L Media Bottles	4	4	8
Basket Dimensions	240 Ø x 220d	240 Ø x 220d	240 Ø x 440d
Digital Controller	No	No	No

Capacities and dimensions				
Model	ST1528V	ST2228V	ST3028V	
Autoclave Weight	19kg	21kg	23kg	
Export Case Size	470w x 680h x 470h	470w x 880h x 470h	470w x 880h x 470h	
Overall Dimensions	370w x 485h x 390d	370w x 600h x 390d	370w x 730h x 390d	
Chamber Dimensions	280 Ø x 245d	280 Ø x 360d	280 Ø x 490d	
Water Capacity	2L	2L	2L	
1L Media Bottles	4	4	8	
Basket Dimensions	240 Ø x 220d	240 Ø x 220d	240 Ø x 440d	
Digital Controller	Yes (Vario)	Yes (Vario)	Yes (Vario)	



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# **Options and Features Explained**

### Accelerated Load Cooling Systems

**Fan Assisted Cooling** (Available on all models except Sapphire)

Powerful fans, strategically located, direct a blast of cool air around the chamber which significantly improves cooling times by up to 50%.

#### Water Cooling (Sapphire Only)

The most efficient way of cooling. Cold water passes through a complete water jacket surrounding the autoclave chamber, which rapidly cools the chamber and the load. This system is far more effective than 'cooling coils' fitted to some other autoclaves.

#### Air Ballasting

Uses compressed air to improve cooling times even further and prevent 'boil-over' and breakages in bottled liquid loads. A silent air compressor and carbon filter pack (for an oil free supply) can be provided if there is no compressed air supply in the laboratory.

### Heating Systems Diagram

#### **Heating Systems**

In-chamber electric steam heating generates steam from within a water compartment in the bottom of the chamber below the shelf.

#### Electrically Heated by separate steam generator (boiler) (Available on Ambassador, Gemini, Sovereign, Crystal & Sapphire)

Steam is generated by means of a steam generator mounted below the autoclave chamber. This includes a high pressure inlet pump which automatically tops up the steam generator during the cycle.

#### **Pre-Heated steam generator**

This works on a similar principle as above, except the steam generator remains constantly heated providing instant heating of the chamber when a cycle is started.

#### Direct Steam Heated

Heating by means of a steam inlet valve from an external steam supply. A saturated supply regulated to a pressure of between 35lb and 70lb at 2.62 bar is required (depending on model requirements).

#### **Auto-fill Systems**

A water supply is required for automatic fill options. The supply must be fed from a regular mains water supply. A break tank is included within the machine to comply with water regulations.

#### Manual Fill (available on all models except Sapphire)

Basic in-chamber heated autoclaves are manual fill for simplicity. No water supply is required for manual fill machines unless a drain line condenser is specified. The MP25 notifies the operator if the chamber is low on water. The autoclave cannot be started unless the chamber has sufficient water. The chamber is simply topped up with a jug of water.

#### Auto-fill for in-chamber heating

In-chamber heated autoclaves can be manufactured with a 'topup system'. If the MP25 senses the chamber is low, it sends a signal to a motorised valve which opens to allow the chamber to be topped up from the water supply.

#### Auto-drain and Re-fill for in-chamber heating

The chamber dumps all the water from the chamber at the end of the cycle and fills with fresh water when a new cycle is started.

#### Auto-fill for steam generator models

Note that automatic fill is standard on autoclaves supplied with a separate steam generator.

#### Water Treatment Systems

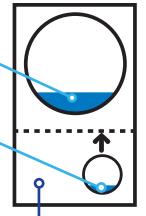
An industrial grade electronic scale prevention system alters the physical characteristics of minerals within the inlet water supply so they pass through the autoclave without sticking to the chamber or boiler.

#### **Inlet Water Filter**

Industrial grade filter traps most scale and chalk and other large debris from the mains water supply.

#### Vacuum Air Removal Systems

Typically the key to good sterilisation results is to remove all the air from within the chamber; particularly on waste and porous loads. By adding a vacuum option this ensures that no air pockets remain in the chamber and that the correct temperatures are achieved. Vacuum systems are also an essential element to drying options.



The steam generator

stands separate from

the autoclave for top

loading models.

More powerful

generators are

required for

pre-heated steam

electrically heated liquid vacuum autoclaves.

# Drain Systems

### **Condense Collector**

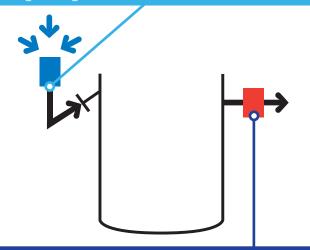
(Available for manual fill autoclaves only\*) Eliminates the need for a drain service by collecting the condense in a stainless steel container. \*Basic manual fill autoclaves are Phoenix, Monarch, Ensign, Ambassador and Gemini. Not suitable for direct steam autoclaves.

#### Drain Line Condenser

This option is required if the autoclave is to be connected to a plastic drain service either directly or indirectly. It works by injecting cold water in to the drain if it reaches temperatures over 50°C. There is also a second type of drain line condenser which works like a mini heat exchange and does not require a water supply.

#### Vacuum Break & Filter

As the chamber cools a natural vacuum is drawn; therefore a vacuum break can be offered complete with a filter to filter the incoming air being drawn back into the chamber.



#### **Drain Line Filters (HEPA Filters)**

Hepa filters are fitted to the autoclave vent to prevent the release of dangerous pathogens into the drain. Rodwell also offers a Hepa filter monitoring system.

#### **Condensate Retention**

Some CAT3 effluents are considered too dangerous to discharge immediately, so this waste is retained and sterilised a second time prior to discharge.

#### **Chamber Furniture**

A complete range of shelves, containers & discard systems are available to enhance the performance of your autoclave. The Rodwell Autoclave Company' chamber furniture is specifically tailored to maximise space within the chamber. Bespoke furniture can be manufactured on request.

#### Shelves

Our shelves are manufactured using rigid punched stainless steel capable of taking the heaviest of loads. All front loading units come equipped with one shelf with extra shelves available as optional.

#### Baskets

Our baskets are manufactured using strengthened grade 316 stainless steel wire mesh for optimum durability. All top loading autoclaves are equipped with one basket as standard with extra baskets available as optional.

#### **Discard Containers & Systems**

Laboratory waste must be autoclaved to render it safe prior to disposal. Research has shown that a high efficiency vacuum air removal system is necessary when sterilising waste in solid sided containers with a height of greater than 200mm.

However, The Rodwell Autoclave Company offer a unique patented range of discard containers which allows total efficient sterilisation of laboratory waste without the need for a vacuum system.

Advantages of the Rodwell Waste Discard Container system are:

- Simplifies the autoclave by eliminating the need for a vacuum system.
- Efficient sterilisation of waste by naturally removing air pockets
- Trivet system catches spillages and helps keep the chamber clean for reduced housekeeping.

The Rodwell Waste Discard Container system is available on all models except the Crystal & Sapphire range. For these units standard solid sided containers and vacuum air removal systems are recommended for sterilising waste.



### We're here to help...

If you'd like help or advice choosing the right autoclave please get in touch. Our knowledgeable sales people will do their best to guide you toward the choice that is right for your application and budget.

### +44 (0) 1268 286646 autoclavesales@rodwellgroup.co.uk

# The Best After-Sales Care for your Autoclave

Every Rodwell Autoclave is manufactured to the highest standards and will provide many years of reliable service if looked after and maintained by an approved, accredited Rodwell engineer. Our service engineers have extensive knowledge and the very latest up-to-date technical information for our equipment, as well as the latest working practices and procedures.



To get the very best from your autoclave, it is essential that it is maintained by the people who know your autoclave best -Rodwell trained and accredited engineers or approved Rodwell service agents. They understand your autoclave, care about it and are committed to achieving your complete satisfaction. Not only that, it is in Rodwell Engineering Group's best interest to keep your autoclave running reliably for as long as possible in order to maintain the reputation for reliability and durability that we currently enjoy.

#### Expertise

Rodwell and their approved service agents have highly trained technicians with the specialist skills and knowledge required to maintain your autoclave in accordance with The Rodwell Autoclave Company's recommendations and leave your equipment in a SAFE STATE OF REPAIR. Our trained engineers have access to the latest technical information so they know precisely what's needed to maintain your autoclave in a safe and reliable condition.

#### **Specialist Equipment**

Every Rodwell Engineer has access to a vast array of specialised spare parts and tools essential to keep your autoclave in a reliable, safe state of repair. Consider this: an autoclave is a pressure vessel with a door that has a force equivalent to 3 to 11 tonnes exerted on it when up to pressure. Do you want to be responsible for any accidents or litigation as a result of your authorisation for maintenance by a company not trained or accredited by the manufacturer of the equipment?

#### **Genuine Parts**

Your autoclave is made up of hundreds of different parts, set up to various tolerances and finely set to give maximum performance and paramount safety. Whenever a worn part is replaced, you should make sure that genuine The Rodwell Autoclave Company parts are used. They are designed, tested and manufactured to the original tolerances and specification. Only Rodwell know exactly what is required of each part because it is only The Rodwell Autoclave Company who designed each part to come together perfectly to make the overall machine - your Rodwell Autoclave.

#### Calibration

The Rodwell Autoclave Company offer a calibration service using the very latest cycle recording equipment. This work can be carried out to the most demanding standards. The equipment and working practices equate or improve on any of those standards dictated by any accreditation authority and The Rodwell Autoclave Company have the knowledge and expertise to



fine-tune your autoclave if deemed necessary.

Please feel free to contact our technical service team with any questions regarding the maintenance of your autoclave, or queries about spare parts.

### +44 (0) 1268 286646 autoclaveservice@rodwellgroup.co.uk

# Sterilisation Monitoring Products

For use in monitoring steam sterilisation processes.



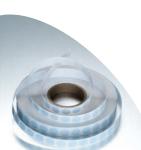
### **Dick Tests**

A Bowie & Dick test is a test for steam penetration in dynamic air removal steam sterilisers. A daily steam penetration test should be run in every autoclave. The colour of the indicator test sheet changes from blue to pink which will confirm that the steam penetration has been effective up to the centre of the sterilisation pack.

B&D test Steam: 134ºC, 3,5min. Conforms to EN-867-4, ISO 11140-1, class 2 Catalogue No. AC980 (Case of 20)

### **Chemical Indicators**

Chemical Process Indicators are self-adhesive labels suitable for application on various types of autoclave load. The label colour indicates at a glance whether or not the product has gone through the sterilisation process, making it easy for sterilisation facilities to ensure that products have been exposed to the sterilisation process. Labels turn from blue to pink after exposure to 121°C for 3-10 mins, or 134°C for 0.5-2 mins. Catalogue No. AC986





Fast and no fuss. Rodwell offers regular biological indicators as well as self contained biological indicators. Simply place the SCBI into the autoclave, remove after cycle end, crush the cap (or squeeze the side for Mini SCBIs) and incubate for 24 hours. A negative result ensures the micro-organism within has been destroyed and guarantees sterility of the process. Catalogue No. AC982 (Regular), AC984 (Mini) Catalogue No. AC983 (Glass Ampoules)

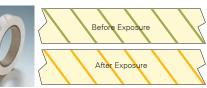
### Autoclave TST Strips:

STEAM	ISO 11140-1 Class 4		
	Reference: Acceptable if indicating square is equal to or darker in color than reference arrow	▶	

The TST (Time, Steam and Temperature) Steriliser Control is the most sophisticated Chemical device produced, being an integrated control system that registers a Pass only when it has been subjected to the required heat and time ratio in saturated heat steam. when exposed to steam for 15 minutes at 121°C. Can be placed throughout the load for thorough checking. Catalogue No. AC981

### Autoclave Tape

White adhesive tape, for use in standard autoclaves. Transitions from green to Orange



after 15 mins at 121°C. Provides clean removal from autoclaved object. Can be written on. Tape Size: 18mm x 55m, Catalogue No. AC985

For Further information please contact The Rodwell Autoclave Company



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