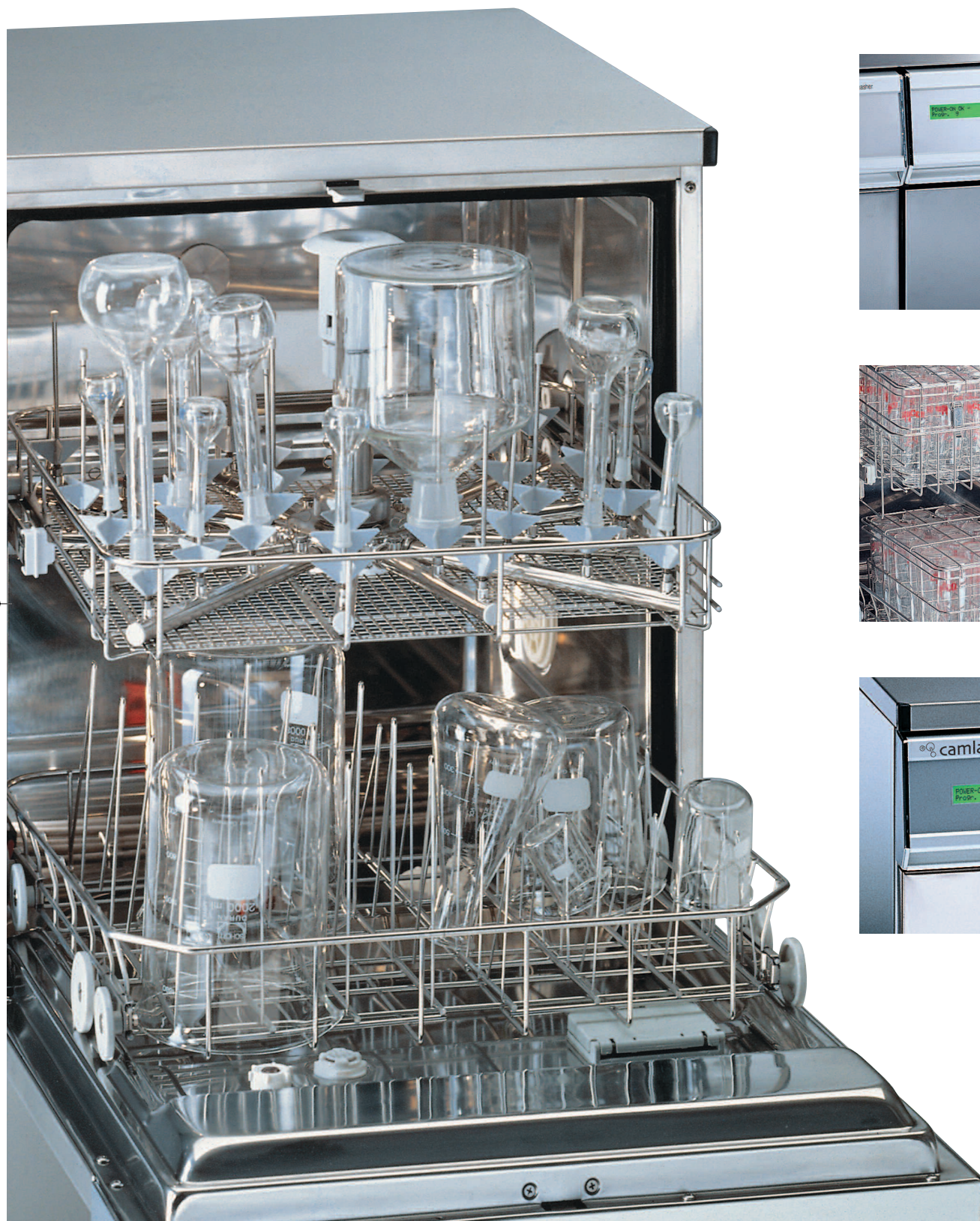


# Camlab CUB RANGE

## UNDERBENCH LABORATORY WASHING MACHINES



Choice, Service and Trust

# camlab



# The CUB Laboratory Washing Machine

## ELECTRONIC PROGRAMME

The Camlab CUB range of washing machines incorporate the latest in microprocessor technology. The machines can be programmed to carry out washing, rinsing and drying cycles to meet a wide range of specific or demanding requirements for the decontamination of laboratory glassware.



- 7 programmes installed as standard
- Option for further 23 operator defined programs
- Screen dialogue messages, 2 lines x 20 characters
- Display shows cycle progress, internal temperature, and fault detection messages.

*As an optional extra, machines may be set up with a connection to an ASCII printer with a parallel port.*

## DRYING SYSTEMS

The range offers a choice of two drying methods. The CUB features steam drying whilst the CUB EXTRA system offers the option of forced air drying up to 100°C, with a very fast cycle time.

## NO HIDDEN COSTS

The CUB and CUB EXTRA are supplied as complete working systems, although many accessories are available. Two basket trays and spray arms are included with the machines.

## COMPACT

The compact size of the washing machines makes them ideal for installation under most laboratory benches.

## PROVEN FEATURES

Laboratory and industrial washing machines have been an important part of the Camlab product range for many years. During this time we have taken account of the comments and observations made by our customers, all of which have helped us to provide affordable and durable machines with an emphasis on the very latest technology.

## DEMONSTRATION FACILITIES

Demonstration facilities are available at our Cambridge headquarters specifically for customer trials and evaluation. This enables potential users to view and to operate the CUB range. Alternatively, a representative from our nationwide sales team would be pleased to visit you to discuss your requirements.

## AFTER SALES SERVICE SUPPORT

Our Service Department are always available for SOS or service contact repairs, both during and after the 12 month period. Service, maintenance and guarantee work is carried out nationally by Camlab qualified staff.



## STANDARD FEATURES

- Washing tank/door in AISI 316L acid resistant stainless steel for superior corrosion resistance
- Outer panels in AISI 304 stainless steel for easy cleaning
- Separate centrifugal wash pump (400L/min) provides efficient cleaning
- Individual peristaltic pumps for liquid detergent and acid neutralising rinse for flexible programming and to minimise handling of corrosive cleaning agents
- Separate cold, hot and de-ionised (DI) water connections (1 to 6 bar)
- Economical water consumption: 8-10L per phase
- Built-in water softener to prevent limescale build up and to give a streak-free finish

## SAFETY

- Water level control
- Heating over-temperature thermostat
- Full diagnostic message display
- Electrical and mechanical door safety interlock

## WASHING LEVELS

Number of washing levels with jet racks: 1 or 2

Number of washing levels with spray arm basket: 2

## ADDITIONAL OPTIONS

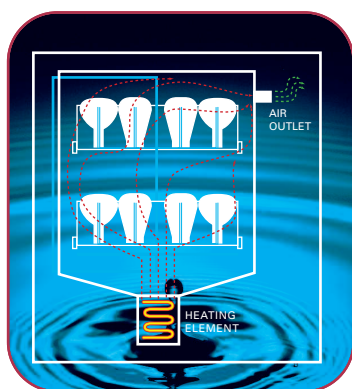
- 2 auxiliary additive pumps
- i) Anti-foam pump
  - ii) Caustic soda pump

Self-priming DI boost pump for non-pressurised DI water supply



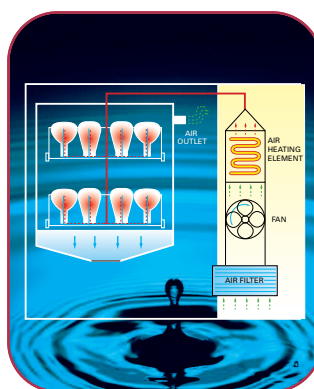
*An optional plinth is available for the CUB and the CUB EXTRA to allow more comfortable loading.*

## CUB STEAM DRYING SYSTEM



The washing chamber is heated by electric heating elements, which causes the water to evaporate. The steam produced creates a slight internal pressure which escapes through a small outlet. Maximum air temperature is less than 95°C.

## CUB EXTRA DRYING SYSTEM

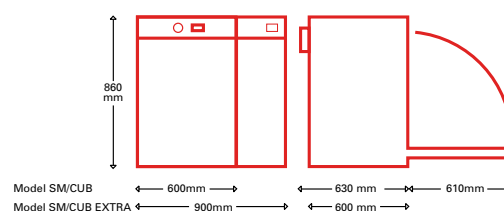


A fan draws in filtered air and directs it into a heating system. Hot filtered air is delivered to the washing tank and channelled into the spigots of the jet rack. The air is directed onto the internal surfaces of the materials and dries them. Drying takes place at up to 110°C, ensuring efficient drying of internal surfaces and an extremely fast cycle.

## JET RACKS AND BASKETS

The Camlab CUB Washing Machine is supplied with two basket trays and two spray arms, for the upper and lower levels. In this mode of the operation the machine is ideally suited for washing wide mouth vessels, beakers and petri dishes. This spray arm action is also recommended for washing large baskets of test tubes on one or both levels. Tubes should be inverted and stacked in baskets, which should be full or packed to ensure that tubes remain in the vertical position during the washing process. For washing of narrow necked vessels, i.e. volumetric flasks, medical flats, small cylinders etc, the jet rack system ensures thorough internal cleaning of glassware.

# Models CUB and CUB EXTRA



\* Note: Non-pressurised DI water supply will require special self-priming pump at additional cost

## CUB

Camlab CUB under bench laboratory washing machine, with steam drying system, complete with two basket trays and spray arm assemblies, liquid dispenser for detergent and acid, fitted with valve or pump to customer's choice for final rinse cycle in either distilled or deionised water.

## CUB EXTRA

Camlab CUB EXTRA under bench laboratory washing machine, with air drying system. Supplied with two basket trays and spray arm assemblies, liquid dispenser for detergent and acid, fitted with valve or pump to customer's choice for final rinse cycle in either distilled or deionised water.

## CUB EXTRA P

Camlab CUB EXTRA laboratory washing machines, with plinth. Specification as CUB EXTRA but inclusive of floor standing stainless steel plinth to increase the working height by 410mm.

### Specifications

Wash Chamber Dimensions: 520x500x535mm (wxdxh)

Plinth Dimensions: 900x560x410mm (wxdxh)

Power requirements: 400V, 3 phase with neutral, 16 amps per phase. 220-240V single phase, 30 amp. (220-240v, 13amp - cycle time will be extended) Please state requirements when ordering

Water Pressure: 1 to 6 bar for hot, cold and deionised water supply (0.2 to 1 bar for low pressure DI. water)\*

Water Temperature: adjustable to 95°C

Weight: Model SM/CUB: 75KG  
Model SM/CUB EXTRA: 100KG

Detergent: Built-in dispensers for liquid detergent

Construction: washing chamber and exterior - all stainless steel

Effective Washing Heights: Basket trays on 2 levels:

bottom level: 280mm

top level: 190mm

jet racks on 2 levels:

bottom level: 240mm

top level: 205mm

jet rack on bottom level: 460mm

Neutralisation/Acid Rinsing: built in pump automatically injects required amount of solution directly into washing machine chamber

Water Softener: built-in regeneration takes place automatically, only needs periodical addition of salt

Distilled Water: fitted with valve or pump as required (please state water supply pressure when ordering)

### Reference

### Description

SM/CUB Camlab CUB under bench laboratory washing machine, with steam drying system, complete with two basket trays and spray arm assemblies, liquid dispenser for detergent and acid, fitted with valve or pump to customer's choice for final rinse cycle in either distilled or deionised water.

SM/CUB EXTRA Camlab CUB EXTRA under bench laboratory washing machine, with drying system. Supplied with two basket trays and spray arm assemblies, liquid dispenser for detergent and acid, fitted with valve or pump to customer's choice for final rinse cycle in either distilled or deionised water.

SM/CUB EXTRA P Camlab CUB EXTRA laboratory washing machine, with plinth. Specification as SM/CUB EXTRA but inclusive of floor standing stainless steel plinth to increase the working height by 410mm.



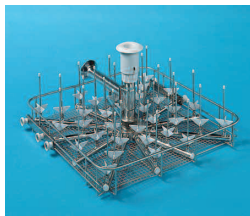
# CUB and CUB EXTRA ACCESSORIES

## THE CUB RANGE

### Jet Rack for Upper Level

40 hollow spigots, each with height adjustment fittings.

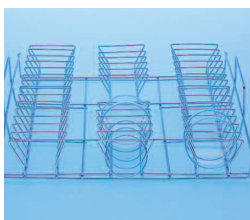
Reference	Description
SM/LM34S	For CUB
SM/LM34S-DS	For CUB EXTRA



### Upper Level Basket CS1 with Spray Arm

For glassware racks and baskets or large, wide mouth vessels.

Reference	Description
SM/CS1	Can use on both models



### Petri Dish Rack

For upper or lower level (place on basket CS1 or CS2). Holds 38 dishes, 70-120mm diameter.

Reference	Description
SM/PD100S	Can use on both models



### Jet Rack for Lower Level

40 hollow spigots, each with height adjustment fittings.

Reference	Description
SM/LM40	For CUB

### Lower Level Basket CS2

For use as shown.

Reference	Description
SM/CS2	Can use on both models



### Beaker/Bottle Rack

Two racks will fit into either CS1 or CS2 basket trays, each holding 28 items, giving a total capacity of 112 items on the 4 racks.

Reference	Description
SM/SB28	Can use on both models



### Combination Jet Rack for Upper and Lower Levels

Two jet racks, each with 40 hollow spigots and height adjustment fitting.

Reference	Description
SM/LM80	For CUB
SM/LM80-DS	For CUB EXTRA



### Two Level Surgical Instrument Rack

With spray arm and 4 baskets.

Reference	Description
SM/CSK	Can use on both models

### Slide Washing Rack

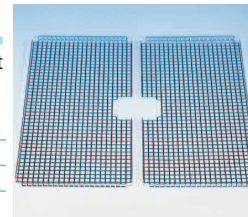
Each rack holds 105 slides. Four racks can fit inside basket tray CS1 or CS2.

Reference	Description
SM/PV105	Can use on both models

### Stainless Steel Mesh Supports

Fits into the base of the basket trays to support small items.

Reference	Description
SM/PF1	Full mesh
SM/PF1/2	Half mesh



### Stainless Steel Baskets

Mesh basket with removable lid for test tubes and other small items of laboratory glassware.

Reference	Description
SM/CP132	For Tubes up to 105mm long
SM/CP192	For Tubes up to 165mm long*
SM/CP222	For Tubes up to 200mm long*
*for use on lower basket tray CS2 only	



### Stainless Steel Mesh Baskets

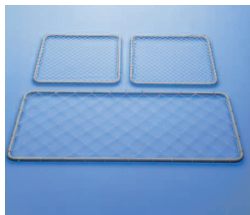
Fits into base of the basket tray to support small items.

Reference	Description
SM/CPF1/2	1/2 bottom basket

### Nylon Lid Nets

Covers lightweight items to prevent them being dislodged during washing.

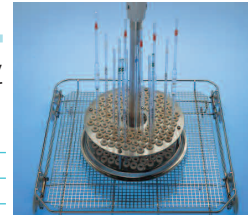
Reference	Description
SM/RC1	For complete basket
SM/RC1/2	For half basket
SM/RC1/4	For quarter basket



### Pipette Washers

Takes up to 100 pipettes from 1mL to 20mL, and heights up to 450mm. Pipette washer must be used with basket tray CS2.

Reference	Description
SM/LPT100	For CUB
SM/LPT100-DS	For CUB EXTRA



### CamClean

A general purpose liquid cleaning agent suitable for use in all Camlab machines or any type of washing machine fitted with a liquid detergent capability. We are happy to supply samples for evaluation and quotations for bulk/contract supply.

Reference	Description
CCC.150	CamClean, 25 litre
CCC.150/10	CamClean, 10 litre



### CamAcid

Our neutralising agent, CamAcid is suitable for use with all machines fitted with dispenser and programmed cycles for intermediate neutralisation following detergent wash.

Reference	Description
CCC.200	CamAcid, 25 litre
CCC.200/10	CamAcid, 10 litre



# MAXI - Three Level Washing Machine

**A large capacity washing machine offering washing on three levels, using a combination of jet racks and support trolleys. Available with or without air drying system. Incorporates the latest microprocessor technology, with 30 available programs for maximum versatility. Programming is via the soft-touch keypad.**

## STANDARD FEATURES

- Pre-heating of demineralised water to reduce the cycle time
- Stainless steel wash chamber and exterior - for long life and easy cleaning
- 7 programs installed as standard
- Option for a further 23 operator defined programs
- Separate hot, cold and purified water supplies
- 4 dosing pumps for programmed dosing of cleaning agents
- Heating to 95°C
- Display shows cycle progress, chamber temperature and fault detection
- Door interlock for safety
- Choice of a wide range of jet racks, trays and baskets

## MODELS AVAILABLE

### CUB MAXI

MAXI 3-level washing machine, with liquid dispenser for detergent and acid. Fitted with valve for final rinse cycle in distilled/deionised water.

### CUB MAXI DS

MAXI 3-level washing machine, with hot air drying system. Complete with liquid dispenser for detergent and acid. Fitted with valve for final rinse cycle in distilled/deionised water.



#### Overall dimensions

(wxdxh):	SM/CUB MAXI	900x800x1830mm
	SM/CUB MAXI DS	900x800x2110mm

Depth with door open: 1770mm

Washer chamber dimensions (wxdxh): 670x650x835mm

Power requirements: 400V, 3 phase with neutral, 24 amps per phase

Water temperature: adjustable to 95°C

Detergent: built-in pump for liquid detergent

Acid rinsing: built-in pump automatically injects required amount of solution directly into the washing chamber

Distilled water: fitted with valve

Water Pressures: 1 to 6 bar for hot and cold

Weight: SM/CUB MAXI 290kg  
SM/CUB MAXI DS 335kg

**For best results we recommend  
CamClean and CamAcid**



# Example of Washing level Configurations

The Maxi has an extensive range of racks, baskets and accessories. These configurations represent a few examples only. For personal advice on your specific laboratory glassware washing requirements please call our Technical Sales Department on 01954 233120.

## ONE WASHING LEVEL



### LOWER LEVEL

SM/C61 **Jet rack support**

SM/L685 **Jet rack** with 76 hollow spigots of various heights (6x90, 14x110, 28x140, 14x180, 14x240mm). Maximum useful height 730mm.

## TWO WASHING LEVELS

(EXAMPLE 1)



### LOWER LEVEL

SM/C61 **Jet rack support**

SM/L690 **Jet rack** with 86 hollow spigots (110mm high). Maximum glassware height 230mm.

### INTERMEDIATE LEVEL

SM/C63 **Jet rack support**

SM/L685 **Jet rack** with 76 hollow spigots of various heights (6x90, 14x110, 28x140, 14x180, 14x240mm). Maximum glassware height 410mm.

(EXAMPLE 2)



### LOWER LEVEL

SM/C61 **Jet rack support**

SM/L685 **Jet rack** with 76 hollow spigots of various heights (6x90, 14x110, 28x140, 14x180, 14x240mm). Maximum glassware height 400mm.

### UPPER LEVEL

SM/C63 **Jet rack support**

SM/L690 **Jet rack** with 86 hollow spigots (110mm). Maximum glassware height 135mm.

## THREE WASHING LEVELS

(EXAMPLE 1)



### LOWER LEVEL

SM/C61 **Jet rack support**

Maximum glassware height 360mm

### INTERMEDIATE LEVEL

SM/C62 **Support** with spray arm and tray.

Maximum glassware height 180mm.

### UPPER LEVEL

SM/C62 **Support** with spray arm and tray.

Maximum glassware height 105mm.

(EXAMPLE 2)



### LOWER LEVEL

SM/C61 **Jet rack support**

SM/L685 **Jet rack** with 76 hollow spigots of various heights (6x90, 14x110, 28x140, 14x180, 14x240mm). Maximum glassware height 230mm.

### INTERMEDIATE LEVEL

SM/C63 **Jet rack support**

SM/L685 **Jet rack** with 76 hollow spigots of various heights (6x90, 14x110, 28x140, 14x180, 14x240mm). Maximum glassware height 170mm.

### UPPER LEVEL

SM/C63 **Jet rack support**

SM/L690 **Jet rack** with 87 hollow spigots (110mm). Maximum glassware height 135mm.



All MAXI machines can be delivered to your laboratory and commissioned on-site. Service, maintenance and guarantee work is carried out by Camlab Engineers. Demonstration facilities are available at our Cambridge office specifically for customers' trials and evaluation.



**camlab**

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