

Sterilising Area

Function

The main function of the sterilising area is to make contaminated equipment used in oral health activities fit for reuse.

The sterilising area receives reusable contaminated equipment from dental surgeries and laboratories. These items are cleaned, dried, packaged, sterilised, stored and distributed. The functions of the sterilising are separated into three distinct areas:

- ▶ Decontamination
- ▶ Packaging and Sterilising
- ▶ Sterile Stock Store

A general workflow principle of contaminated to clean, and clean to sterile is maintained in the sterilising areas.

Design Options

Room Annex

The room annex option is intended to provide limited sterilisation capacity to small, satellite clinics, or facilities which accommodate only visiting services. It should be located adjacent to single room surgeries and is appropriate for facilities with only one or two chairs.

Single Room

A single room sterilising area combines the required functions into a single room. The design maintains the general workflow principle of contaminated to clean and clean to sterile. The single room design is recommended for facilities with up to 4 chairs.

Three Room

In larger facilities, the three main functions of decontamination, packaging and sterilising, and sterile stock store are physically separated into 3 rooms. This configuration is appropriate for facilities with 5 or more chairs, or facilities which provide centralised sterilising services to satellite clinics.

External

Some facilities may consider the option to outsource the sterilising services externally and not have it incorporated into the design. In this case, a Dirty Hold Room with cleaning up area for removing debris from instruments before collection is required. In addition, a Clean Hold area is required for receipt of sterile stock. The Clean Hold can be positioned within the Dirty Hold Room as long as there is a physical barrier separating the two areas. A Central Clean Store located in the dental surgery area will accommodate the sterile stock which is distributed to the surgeries, as needed.

General Standard

- ▶ AS/NZS 4815:2001 Office-based health care facilities not involved in complex patient procedures and processes – Cleaning, disinfecting and sterilising reusable medical and surgical instruments and equipment, and maintenance of the associated environment.

Infection Control

Awareness of the principles of infection control is important in designing sterilising service facilities. It is this service which has the role of removing and eradicating all traces of potentially infectious material from all reusable contaminated clinical instruments and equipment before they can be safely redistributed for use. The provision of a hand washing facility in the Decontamination Area is a standard precaution in controlling infection. Consultation with infection control personnel and sterilisation staff is advisable at the planning stage.

Location

It is desirable to locate the sterilising area in close proximity to the dental surgeries.

Workflow

Decontamination Area

All contaminated items are delivered to the Decontamination Area for sorting and cleaning in rigid, puncture-proof covered containers. Ideally, items are delivered to a drop-off bench within the room, which is accessible from the circulation corridor through an automatic opening hatch in the wall. Items may be cleaned manually or mechanically, depending on the type of instrument and equipment being cleaned. The workflow pattern for this area flows from contaminated to clean. Items are dried before sterilisation. In the 3 Room Design Option, this area is separated from the clean area by a physical barrier, such as a wall with pass-through window and/or pass-through decontamination equipment e.g. double-ended washer/dryer.

Packaging and Sterilising Area

After the decontamination process, items are wrapped, packaged, labelled and loaded in the steriliser within a designated Packaging and Sterilising Area. This area should flow from clean to sterile.

Sterile Stock Storage

After sterilisation, the load is removed from the steriliser and left to cool on the trolley. The sterile items are then stored in a clean, dry, dust-free dedicated storage area. A pass-through storage system, which enables direct access to the sterile stock from the circulation corridor, will effectively minimise traffic in this area.

Construction and Finishes

Walls

Wall surfaces should be smooth, impervious and easy to clean. In areas where there is high volume of trolley movement it is desirable to have impact resistant walls. Walls above sinks are to be protected with splashbacks.

Ceilings

Ceilings should also be flush-set, smooth and easily cleaned.

Floors

Floors are to be finished with low maintenance, non-porous vinyl sheeting, coved at walls. Non-slip vinyl is to be used in wet areas.

Work surfaces

Work benches should be durable and constructed of non-porous material with integral splashbacks at walls for easy cleaning. Stainless steel is desirable in high use areas.

Doors

Adequately sized doors are to be provided to ensure ease of trolley movement. Minimum clear opening width of 900mm is desirable.

Windows

Internal viewing panels are to be in walls separating the various functions of the service. Good visual contact between staff operating within these areas is important for communication, safety and morale.

Curtains are not allowable. Integral venetian blinds may be used if required.

Services and Environment

Services and environment control in sterilising areas should include:

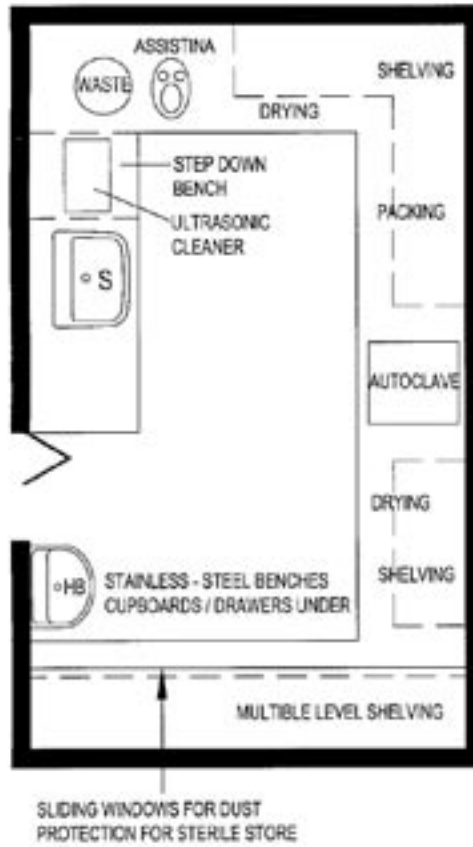
- ▶ General comfort air conditioning to the central sterilising area.
- ▶ General exhaust as required to the central sterilising area.
- ▶ Specific, localised ventilation to the steam sterilising units & washer/ disinfectors, comprising ceiling mounted exhaust grilles directly above the sterilising unit doors and an exhaust fan sized to capture and remove steam and heat released when the steriliser doors are opened. Care is to be taken not to locate smoke detectors above steriliser doors.
- ▶ Bench mounted compressed air outlets adjacent the sinks on each bench.
- ▶ A separate distribution board for sterilising areas with high electrical loads if required
- ▶ Power outlets and hard-wired connections as required based on technical data for all sterilising electrical equipment.
- ▶ Flush-mounted IP56 power outlets, isolators and switches in all wet areas and areas subject to high impact throughout the CSSD. Accessories are to be Clipsal type, IP56 range, with flush surround or other equivalent product.
- ▶ RCD protections (30mA/30 mS) located at the switchboard for all 3 phase and single phase power outlets.

Room Annex Sterilising

Room Data Sheet

Functional Information						
Functions:	Basic sterilising activities.					
Relationship:	Annex of dental surgery.					
Floor Area:	10m ²					
Occupants:	Patients:	N/A	Staff:	1	Visitors: N/A	
Time of Use:	Project specific.					
Construction and Finishes						
Floors:	Non-slip vinyl sheeting.			Skirtings:	Coved vinyl.	
Walls:	13mm plasterboard.					
Ceiling:	Acoustic ceiling.			Height:	2700mm	
Doors:	Folding solid core door.					
Door Hardware:	Project specific.					
Windows:	Project specific.					
Signage:	Project specific.					
Services and Environment						
Lighting:	Fluorescent.					
Power:	GPOs as required.					
Communications:	N/A					
Gases:	Compressed air, town gas.					
Sanitary Fixtures:	Stainless steel sink with retractable hand held spray nozzle for rinsing. Hand basin with wrist operated tapware.					
Environmental Control:	Air conditioned. Exhaust ventilation above bench-mounted autoclaves.					
Acoustics:	N/A					
Furniture and Equipment						
Loose Furniture:	General waste bin.					
Built In Furniture:	Stainless steel bench unit.					
Equipment / Fittings:	Assistina Ultrasonic cleaner Bench mounted autoclave					

Indicative Plan



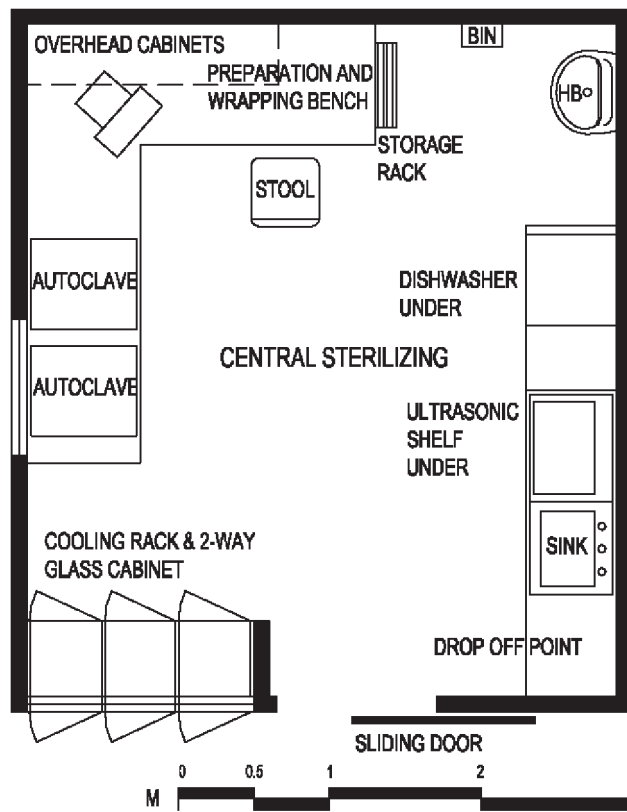
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Single Room Sterilising

Room Data Sheet

Functional Information	
Functions:	Room combining all primary functions of the large 3 room facility.
Relationship:	Close to dental surgeries with direct access to circulation corridor.
Floor Area:	Indicative size – 17m ²
Occupants:	Patients: N/A Staff: 2 Visitors: N/A
Time of Use:	Operating hours (8.00am to 5.00pm)
Construction and Finishes	
Floors:	Non-slip vinyl sheeting. Skirtings: Coved vinyl.
Walls:	13mm plasterboard.
Ceiling:	Acoustic ceiling. Height: 2700mm
Doors:	Solid core with viewing pane.
Door Hardware:	Sliding door track and hardware.
Windows:	Automatic-opening window/hatch to access drop-off bench from circulation corridor.
Signage:	Project specific – Hosplan or Qld Health equivalent.
Services and Environment	
Lighting:	Fluorescent.
Power:	GPO's as shown.
Communications:	Data outlet for computer. Telephone outlet.
Gases:	Compressed air, town gas.
Sanitary Fixtures:	Stainless steel sink with retractable hand held spray nozzle for rinsing. Hand basin with wrist operated tapware.
Environmental Control:	Air conditioned. Exhaust ventilation above bench-mounted autoclaves.
Acoustics:	N/A
Furniture and Equipment	
Loose Furniture:	General waste bin.
Built In Furniture:	Stainless steel bench unit with space for drop-off of decontaminated instruments, set-down for ultrasonic and space for assistinas, drying cabinets and underbench dishwasher. Stainless steel bench unit with space for unloading dishwasher, preparation, wrapping and packaging instruments and bench-mounted autoclaves. Glass-fronted pass-through storage cupboard with wire racks.
Equipment / Fittings:	Ultrasonic Assistinas Drying cabinets Dishwasher Bench-mounted autoclaves Paper towel dispenser Glove dispenser

Indicative Plan



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Three Room Sterilising Area

Room Data Sheet – Decontamination Room

Functional Information	
Functions:	Clean up of instruments and equipment and disposal of contaminated wastes.
Relationship:	Close to dental surgeries with direct access to circulation corridor. Locate next to Packaging and Sterilising Room.
Floor Area:	Indicative size – 10m
Occupants:	Patients: N/A Staff: 1 Visitors: N/A
Time of Use:	Operating hours (8.00am to 5.00pm)
Construction and Finishes	
Floors:	Non-slip vinyl sheeting Skirtings: Coved vinyl
Walls:	13mm moisture-resistant plasterboard with wall protection for trolleys.
Ceiling:	Acoustic ceiling. Height: 2700mm
Doors:	Solid core with viewing pane.
Door Hardware:	Sliding door track and hardware.
Windows:	Internal windows: Automatic-opening window/hatch to access drop-off bench from circulation corridor. Viewing panel and pass-through window into Sterilising Room to transfer clean equipment for packaging before sterilisation.
Signage:	Project specific – Hosplan or Qld Health equivalent.
Services and Environment	
Lighting:	Fluorescent.
Power:	GPO's as shown.
Communications:	N/A
Gases:	Compressed air, town gas.
Sanitary Fixtures:	Stainless steel sink with retractable hand-held spray nozzle for rinsing. Hand basin with automatic operating tapware.
Environmental Control:	Air conditioned.
Acoustics:	
Furniture and Equipment	
Loose Furniture:	General waste bin
Built In Furniture:	Stainless steel bench with space for drop-off of decontaminated instruments and set-down for ultrasonic. Bench for assistinas. Storage cupboard.
Equipment / Fittings:	Pass-through washer/dryer unit Ultrasonic Assistinas Loading trolley for washer Antiseptic soap dispenser Paper towel dispenser Glove dispenser Hat dispenser

Room Data Sheet – Packaging and Sterilising Room

Functional Information	
Functions:	Clean instruments and equipment are packaged before sterilisation.
Relationship:	Direct access to circulation corridor. Locate between Decontamination Room and Sterile Stock Storage Room.
Floor Area:	Indicative size – 18m ²
Occupants:	Patients: N/A Staff: 2-3 Visitors: N/A
Time of Use:	Operating hours (8.00am to 5.00pm)
Construction and Finishes	
Floors:	Vinyl sheeting Skirtings: Coved vinyl
Walls:	13mm plasterboard with wall protection for trolleys.
Ceiling:	Acoustic ceiling. Height: 2700mm
Doors:	Solid core with viewing pane.
Door Hardware:	Stainless steel kickplates to both sides of door.
Windows:	Internal windows: Viewing panels into Decontamination Room and Sterile Stock Storage Room.
Signage:	Project specific – Hosplan or Qld Health equivalent.
Services and Environment	
Lighting:	Fluorescent.
Power:	GPO's as shown.
Communications:	Data outlet for computer. Telephone outlet.
Gases:	Compressed air, town gas.
Sanitary Fixtures:	Hand basin with automatic operating tapware.
Environmental Control:	Air conditioned. Exhaust ventilation above heat producing equipment.
Acoustics:	N/A
Furniture and Equipment	
Loose Furniture:	General waste bin
Built In Furniture:	Stainless steel bench with underbench storage units.
Equipment / Fittings:	Double-sided, pass-through autoclave Loading trolley for autoclave Antiseptic soap dispenser Paper towel dispenser Glove dispenser Hat dispenser Drying cabinet

Room Data Sheet – Sterile Stock Storage Room

Functional Information	
Functions:	Sterilised items are unloaded from autoclave onto trolley for cooling, then stored in a pass-through storage cupboard with wire racks.
Relationship:	Locate beside Packaging and Sterilising Room with direct access from this room only.
Floor Area:	Indicative size – 9m ²
Occupants:	Patients: N/A Staff: 1 Visitors: N/A
Time of Use:	Operating hours (8.00am to 5.00pm)
Construction and Finishes	
Floors:	Vinyl sheeting Skirtings: Coved vinyl
Walls:	13mm plasterboard with wall protection for trolleys.
Ceiling:	Standard ceiling. Height: 2700mm
Doors:	Solid core with viewing pane.
Door Hardware:	Stainless steel kickplates to both sides of door.
Windows:	Internal windows: Viewing panel into Packaging and Sterilising Room.
Signage:	Project specific – Hosplan or Qld Health equivalent.
Services and Environment	
Lighting:	Fluorescent.
Power:	N/A
Communications:	N/A
Gases:	N/A
Sanitary Fixtures:	N/A
Environmental Control:	Air conditioned. Exhaust ventilation above heat producing equipment.
Acoustics:	N/A
Furniture and Equipment	
Loose Furniture:	N/A
Built In Furniture:	Glass-fronted pass-through storage cupboard with wire racks.
Equipment / Fittings:	Unloading trolley for autoclave.

Indicative Plan

