Designing Your Sterilization or Instrument Preparation Center

When asked to design a new sterilization or instrument preparation facility, we start with our best design principles and combine them with your individual decisions on equipment selection and processing protocol, and we should be able to create an ideal instrument preparation area. However, it is much more challenging to take an existing facility with an out-of-date area and transform it to the current state-of-the-art. At Burkhart we are routinely called on to act on both of these scenarios almost on a daily basis in our nineteen market areas of the country.

At “Team Burkhart” we take the efficiency of your instrument processing very, very seriously. We design centers for all the dental specialties as well as for general practice. Ortho and Oral Surgery have their unique challenges, and Burkhart Equipment Specialists are up to the task.

Let’s begin the design process with some basics. In general your instrument preparation center should be as centrally located as possible to all your treatment areas. The first major question now arises as to whether you want your center to be visible to patients or as private as possible. If it is to be visible for patient inspection, then we strongly encourage you to consider one of the manufactured sterilization furniture systems like the A-dec ICC, Pelton & Crane Solaris, Dentech/Conex Stericenter, Midmark/European Design Sterilization Center, Biotec Sterilization Center or Modular & Custom Cabinetry Sterilizing Package. One of these will undoubtedly fit your space and desired look.

These systems are designed to fit as much instrument processing capacity as possible into the least number of linear feet and to eliminate the typical clutter associated with the process. They are naturally laid out in a “dirty to clean” flow pattern and can absorb both the traditional ultrasonic cleaner or the Meile Thermal Disinfector, the ESMA E789 or the Sci-Can Hydrim or Hydrim L automated instrument processors. Most have provisions for incorporating the handpiece maintenance units like the A-dec Assistina or the KaVo QUATTROcare. They can also support multiple autoclaves and water filtration units such as the Oasis 2.5 or 2.5HD. The A-dec LISA Autoclave (optionally) can actually fill and drain itself automatically using the Oasis unit to supply the water! In as little as 8 linear feet, these systems can support the instrument processing needs of up to four treatment rooms. Increase this to 10 linear feet for up to six rooms and 12 linear feet for larger facilities, or you may wish to use two 8 foot systems in two locations to minimize walking and traffic in the hallways.

If you wish to enclose your center and make it as private as possible from patient view, you can still use these systems, and they can be arranged in “L” or “U” shapes quite easily. I particularly like two opposing 8 foot or 9 foot counters.
with an entry from both ends, if
the flow of the office calls for this,
or at just one end if possible with
an entry to a supply storage room
with ordering station at the other
end. This will accommodate up to
twelve treatment rooms if properly
designed and take no more space
than usually devoted to a four chair
facility for this purpose.

We highly advocate you utilize
instrument cassettes like the
Hu-Friedy IMS system for many
reasons. The first is that they save
staff time! Saving about 10-12
minutes per patient adds up to
over three hours per day even in
a one doctor/one hygienist office.
This is because the cassette is
closed up in the treatment room
with all the instruments needed
for the procedure; then it is
transported to sterilization where
it is deposited into the Ultrasonic
Cleaner or Instrument Washing
System directly with no further
handling. We recommend the use of
Health-Sonics Non-Ionic Ultrasonic
Cleaning Solution or Hu-Friedy’s
Enzymax Ultrasonic Detergent and
Presoak to prevent damage to
the instruments in the ultrasonic
cleaner and to keep debris from
drying to the instruments while
waiting for a cycle to begin. When
the ultrasonic cleaner finishes its
cycle, the cassettes are ready to
be wrapped and autoclaved with
no rinsing or drying process. This
is because both solutions coat the
instruments and cassettes with
a surfactant that prevents water
from clinging to them. Just shake
the cassettes over the sink and
wrap them. If you are utilizing one
of the three instrument washers
mentioned above, they
all wash and dry the
cassettes making them
ready for immediate
wrapping for
sterilization. When the
cassettes come out
of the sterilizer, they are ready to
go to clean storage either centrally
or in your modular treatment room
cabinery. The sterile cassette
presents a much more appealing
sight to patients, and you will never
be missing an instrument from your
set-up again. Note that the inside
of the wrap is sterile and so when
opened, it forms a sterile barrier
between the cassette and your
work surface, and it also eliminates
much of the counter wiping after
the procedure. A side benefit is
that your instruments stay sharper
and last longer. Most wear and
tear on instruments occurs in the
traditional processing as opposed
to actual usage. The Hu-Friedy
cassettes trap the instruments
individually and prevent them from
banging together or against the
metal cassette.

If you decide to have your
sterilization cabinetry built by
a contractor/cabinetmaker,
be prepared to design the
details. Start out with the waste
management aspect of most of the
systems. There are foot activated
roll out drawers with sharps and
trash available and foot activated
contaminated tray/cassette storage
areas in most of the manufactured
systems. Next you move on to the
ultrasonic cleaning or instrument
washing section. This must be
sized correctly to accommodate
your choice, and if using a
recessed ultrasonic, it must also
accommodate the remote control
panel. We generally recommend one
large sink of 20” x 20” x 10” deep,
but some practices like the double
bowl sink. The sink must have a pull
out “rinser type” faucet to clean
and refill the ultrasonic cleaner. A
few systems have integrated dryers
for those practices that still choose
to rinse their instruments and then
dry them before wrapping. The
autoclave section is very important,
and most manufactured units have
heavy duty roll out shelves with
moisture traps or drains to put the
autoclaves on. They also make
provisions to prevent the steam
from de-laminating the cabinetry.
Most have the ability to have two
 sterilizers stacked, and there is
a place to store the waste water
bottle if you have a SciCan StatIM
2000, 5000 or 7000 sterilizer. Most
systems also have foot activated
clean storage areas for allowing the
cassettes to cool after autoclaving.
Make sure you provide a place
for the handpiece processing
unit of your choice in your design.
Although the manufactured units
have some upper cabinetry and
lower storage drawers, they are
not designed to accommodate
treatment room supplies within
the instrument processing area.
Supplies are usually stored in the
opposing counter or in additional
linear footage after the autoclave
section. You should decide on your
autoclave first and then note which
way the door opens (most are left
opening). You will probably want to
flow towards the open door, so you
won’t have to work around the hot
door when loading.

Most instrument processing areas
Your practice requires a business model for productivity and long-term growth. SciCan introduces the 2009 Sterilization Stimulus Package designed to help you achieve these business goals. This growth oriented plan is targeted at innovation and efficiency. The SciCan Stimulus Package contains broad parameters, economic savings and the ability for you to reinvest in your business.

**FAQs**

**Q. What will the 2009 SciCan Sterilization Stimulus package do for my practice?**

The Stimulus package provides great savings on state of the art equipment. This package enables you to add value, efficiency, compliance and productivity to your business.

**Q. Why does my practice need a Sterilization Stimulus Package?**

In this economic climate, each dollar you consider spending is critical to your financial performance. The heart of your practice begins with your sterilization area. This package provides real cost savings on products that will enhance patient throughput, employee safety, and productivity.

**Q. How can I take advantage of the 2009 SciCan Sterilization Stimulus Package?**

When you purchase the STATIM Cassette Autoclave® that best fits the needs of your practice, simply trade in your old sterilizer and receive, on average, a savings of $2000. This package is available between February 15 and April 30.

**Q. Why should I purchase a STATIM now?**

STATIM benefits to your practice:
- Speed & efficiency.
- Reduces instrument investment.
- Prolongs instrument life.
- Provides superior drying with Dri-Tec™ technology.

Through May 29, with the purchase of a STATIM, trade in your old sterilizer through your authorized SciCan dealer, even if it’s not working, and you will save an average of $2000 off a new STATIM 2000, STATIM 5000, or STATIM 7000.

Visit scican.com or call 1.800.572.1211 for more details.

This promotion is a stand-alone promotion. It cannot be offered with any other on-going dealer or end user promotion. STATIM and STATIM Cassette Autoclave are registered trademarks of SciCan Ltd. “The world’s favorite handpiece autoclave,” “The Chamber Alternative” and Dri-Tec are trademarks of SciCan Ltd.
now have a computer/phone station for coordinating patient care, lab cases and ordering supplies. This needs to be separated from the “dirty to clean” instrument flow and is typically part of the re-supply side or area of the center. This area should have an open shelf in the cabinet above for quick access to manuals and a file drawer.

**Design Elements to Consider**

If you desire to move to one of the newer Class B sterilizers like the A-dec LISA, you will need to have a dedicated 208VAC outlet vs. dedicated 120VAC outlet. We recommend that the 208V be boosted by a plug-in boost transformer to put it up to 230-235VAC for best performance from this very fast sterilizer. If your building still has 220-230VAC service, then this will be unnecessary.

If you are using an ultrasonic cleaner and cassettes, then you will probably want to recess the unit into the counter. If you don’t, it will be too high for most assistants to see down into for unloading. You can provide a drop down countertop area to accomplish the same thing with a tabletop unit, but it is generally easier to keep the area around a recessed unit clean. If you choose the recessed unit, you should specify a separate drain line with the top of the “P” trap no higher than 16” above the floor for proper drainage. You will also need a 120V duplex outlet located approximately 18” above the floor level in the compartment where this unit is to be located.

If you are going to have a water treatment unit like the Oasis 2.5 o 2.5HD installed, you will need power under the sink where it will be located. It can share the water and drain lines with the sink.

If you are going to have a Miele instrument disinfector, then you may require a Reverse Osmosis unit to treat the water input. Your Burkhart Equipment Specialist can have your water tested in advance to determine if this will be necessary. If it is, then space must be reserved for this unit as it is relatively bulky. You will also need a 208V/220V 30A dedicated circuit for this unit, and a dedicated drain is preferred.

If you are going to utilize the SciCan Hydrims, then you will need a 208V/220V 20A dedicated circuit for either of these units, and a dedicated drain is preferred here also.

We always have a “compressed dental air” line run to sterilization to operate your handpiece maintenance unit regardless of brand.

Also some equipment specialists like to run a vacuum under the sink cabinet in your center so that you can have a vacuum hose to drain your ultrasonic cleaner.

We strongly recommend task lighting under your overhead cabinets.

There are many choices and design considerations when planning a new sterilization or instrument preparation center. Each system and unit has specific requirements, and fitting them all together can be a daunting design challenge. Be sure that any contractors or cabinetmakers you may use are familiar with all the specifications of such an important part of your practice, or call on the Equipment and Design Specialists at Burkhart to work with you to create the best solution for your needs.