
E188 5/7
Your utility room is currently operating out of its normal temperature range.
2:22 PM Thu Jul 15
aeras.dentalez.com
Aeras
Dashboard
Scheduling
Admin
Search equipment...
Search
Dr. Smith
< Back
AEN2011130
Smith Dental
1234 Street Road, Malvern PA, 19355
Performance
Signal Strength
Pump Runtime
1489hrs
Equipment Runtime
1490hrs
Vacuum Level
8inHg
Pump Temperature
122.1F
Oil Life
26%
Online
Get Latest Sensor Data
See More Sensor Details
Debug Mode
Cycle Autowash
Service Provider
123 Demo Service Way
Demo, PA, 12345
No Phone Provided
Smart Service
Trial (expires: 08/25/2021)
Billing History
Active Alerts
Date
Alert
Message
Jun 30th 2021 1:19 pm
Motor 1 temperature high, minor alert
Monitor equipment and prevent excessive temperatures.
Clear
Jun 30th 2021 1:15 pm
Ambient temperature high, minor alert
Monitor equipment and prevent excessive temperatures.
Show Alert History
Aeras
Ramvac
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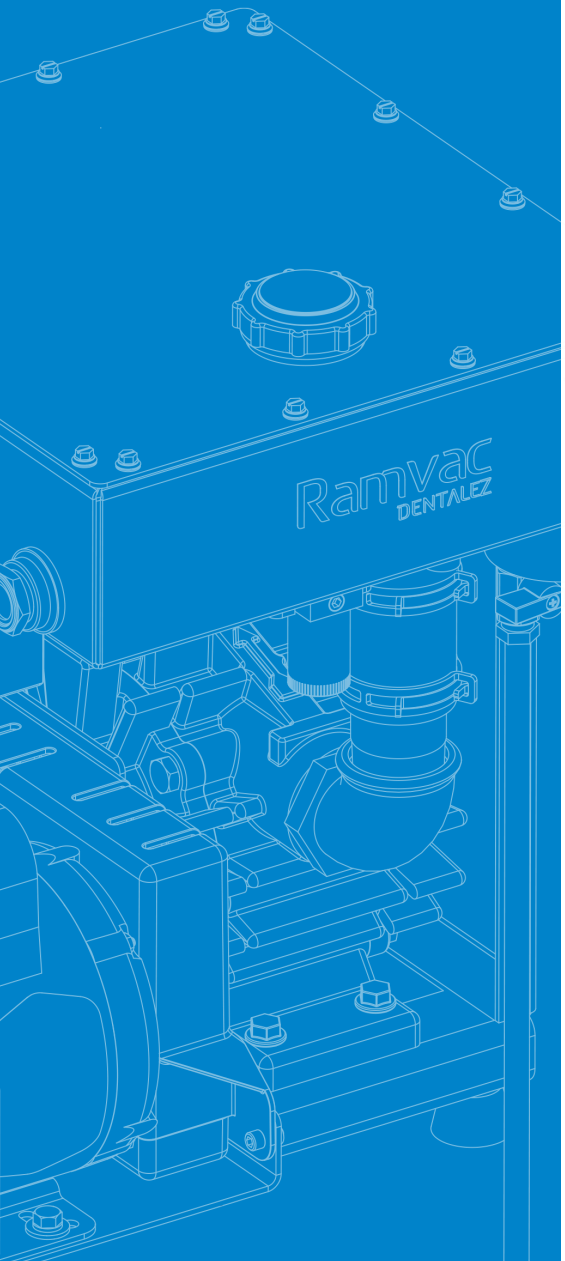
DENTALEZ

BUILT TO PERFORM UNDER PRESSURE



Aeras Vacuum

Every choice made in designing these vacuums is done to help protect your practice's investment — from the materials they're built with to the technology that powers them. Now with Aeras, easy, proactive maintenance makes the promise of performance plus durability just about foolproof.

QUIET EFFICIENCY

Energy-efficient Ramvac motors run at a minimum of **50% less BTUs** than competitive technology, making them efficient and quiet*.

BUILT-IN SAVINGS

100% water-free operation means money saved compared to wet vacuum designs.

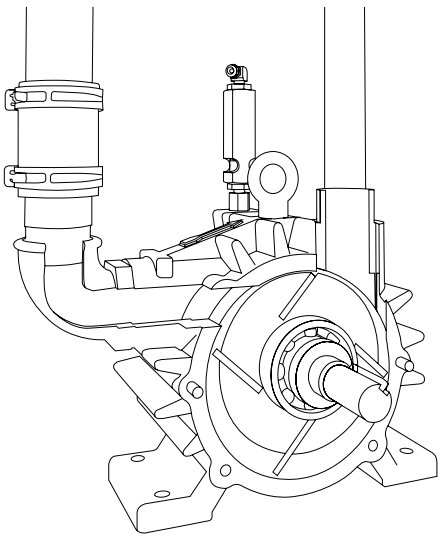
UNRIVALED PERFORMANCE

The advanced design of Ramvac's rotary vane pump shown in figure 1, **maintains the vacuum even as additional HVEs are opened**.

LONG-LASTING

Because our vacuums systems are lubricated, it will **far outlast non-lubricated systems**.

Fig. 1



**Data on File*
Fig 1. Cross Section of Rotary Vane Pump

Vacuum Specifications

E188 7/7

NOMENCLATURE KEY

Series Name	Max Number of Users	Max Input Power	Tank Included
RV = Ramvac Dry Vacuum	4 = up to 4 users	12 = 115v / 230v	T = tank included
	5 = up to 5 users	2 = 230v	
	7 = up to 7 users		
	10 = up to 10 users		

Sizing Guide: 1 HVE = 1 User, 1 SE = 1/5 User, Nitrous Scavenger = 1/4 User

ELECTRICAL REQUIREMENTS

Item No.	Description	Output Power	Input Power	Max Amps
RV4-12T	Aeras® 4 Dry Vacuum System	1 hp (0.745kW)	115v or 230v, 1 ph 60 Hz	9 @ 115v, 4.5 @ 230v
RV5-2T	Aeras 5 Dry Vacuum System	3 hp (2.2kW)	230v, 1 ph 60 Hz	16.0 @ 230v
RV7-2T	Aeras 7 Dry Vacuum System	3 hp (2.2kW)	230v, 1 ph 60 Hz	16.0 @ 230v
RV10-2T	Aeras 10 Dry Vacuum System	3 hp (2.2kW)	230v, 1 ph 60 Hz	16.0 @ 230v

WEIGHT AND DIMENSIONS

Item No.	Description	Weight (lbs) Pump only	Dimensions (Pump only) W x D x H (in)	Stacked Dimensions (Pump and Tank)
RV4-12T	Aeras 4 Dry Vacuum System	200 lbs	25” x 17” x 28”	29” x 19” x 48”
RV5-2T	Aeras 5 Dry Vacuum System	345 lbs	26” x 19” x 31”	32” x 21” x 59”
RV7-2T	Aeras 7 Dry Vacuum System	345 lbs	26” x 19” x 31”	32” x 21” x 59”
RV10-2T	Aeras 10 Dry Vacuum System	395 lbs	26” x 22” x 31”	32” x 22” x 59”

SIZING GUIDE

Item No.	Description	No. of Users	Breaker Size	Drain Valve Centerline to Floor
RV4-12T	Aeras 4 Dry Vacuum System	4	15 amp	8”
RV5-2T	Aeras 5 Dry Vacuum System	5	20 amp	8”
RV7-2T	Aeras 7 Dry Vacuum System	7	20 amp	8”
RV10-2T	Aeras 10 Dry Vacuum System	10	20 amp	8”

MODEL NO.	DESCRIPTION
003583	Air Filter Set for 4 User Vacuum Includes: Main Air Filter & Vacuum Controller Filter
310705	Oil Filter element
003740	Service Filter Set for 4 user Vacuum Includes: Main Air Filter, Vacuum Control Filter & Oil Filter Element
003700	Air Filter set for 5-12 user Vacuum Includes: Main Air Filter & Vacuum Controller Filter
003750	User Service Filter set for 5-12 user Vacuum Includes: Main Air Filter, Vacuum Control Filter & Oil Filter Elements
7809-001	Ramvac Synthetic Oil, 6 x 1qt. bottles

Notes: All Aeras Vacuum systems (pump and tank) except RV4-12T include a platform (575056) for stacking. Height dimensions do not include S-type filters

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Cylindrical Tank

RAMVAC makes inherently strong, cylindrical shape, large capacity separating tanks to serve larger facilities. Not pretty but very strong and more chemical resistant than metal tanks, 50 gallon fiberglass RAMVAC tanks are built for the life of your practice.

Construction

- Non-corrodable fiberglass
- Smooth gel coated interior
- Clean-drain tapered bottom
- Extra large drain valve

Versatile

- Rotate to position inlet
- Rotatable centerline pump connection
- Rotatable centerline drain connection
- Leg length easily changed

Strength

- Tested to 15" Hg

Easy to install

- Rubber couplings included
- Screw-in legs included
- No cement needed

Reliable

- Proven RAMVAC drain valve
- Matchless separation

1 / 1

(866) 383-4636 Opt. 4

MORE PRODUCTS

Complete Dental Vacuum Systems
Dental Dry Vacuum Units
Dental Separation Tanks
Dental Compressors
Accessories
Dental Water Ring Pumps

INFINITANK™

SAVE TIME & MONEY!

The first vacuum separation tank that automatically drains when needed without the added cost of a pump.

- Simple maintenance free design
- Drains without vacuum interruption
- Significantly reduces the size and number of separating tanks
- Completely automated to provide worry free operation
- Intelligent controller records cycle history
- Fits neatly next to walls and into corners

RAMVAC products are manufactured in an ISO 13485:2003 Certified facility.

SOF 7.5.1-04-118

RAMVAC®

INFINITANK™

What does the InfiniTank do and why do you need one? Most dry dental vacuum systems direct liquids and solids generated in the treatment room to a collection tank where they are stored until the vacuum unit is shut off. At that time, they are allowed to flow to a sanitary drain. In a properly designed system, this process happens once a day (usually at the end of each work day). If the separating tank has been oversized, there is wasted space and money. However, if the separating tank has been sized too small, your problems are even greater. You will have the nuisance of cycling your vacuum pump on and off during the day, resulting in irregular service and wasted time. You also run a constant risk of damaging your vacuum pump if the tank accidentally overfills.

The InfiniTank is the first vacuum separation tank that automatically drains without the use of expensive, maintenance prone pumps. The InfiniTank works in harmony with the natural forces of gravity and air pressure to create "infinite" tank volume in an easy to install, compact design. In short, there's no more cycling your vacuum pump during work hours and no more risk of flooding your vacuum pump because your separating tank is too small. Also, the InfiniTank can eliminate the need for mulitple separation tanks and as with other RAMVAC tank designs, you can mount the vacuum unit to the top of the InfiniTank to create an even more compact installation.

InfiniTank Part Number 575080 or 575085 (50Hz)

Installation Options

Standard InfiniTank

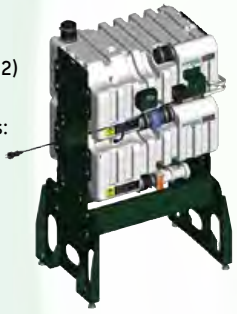
Place Bison in any convenient location. Tank does not have to be close by.

Dimensions:
Width 29" (740 mm)
Depth 19" (540 mm)
Height 36" (920 mm)

InfiniTank with height extender

Height Extender (575212)

Assembled Dimensions:
Width 29"
Depth 19"
Height 48"



InfiniTank with Bison® platform and Bison

Dimensions (w/ Bison):
Width 34"
Depth 21"
Height 70"

InfiniTank with Bison placed "side by side"

Dimensions (w/ Bison):
Width 55"
Depth 22"
Height 36"

InfiniTank with additional 50-gallon tank for high flow - high volume applications

Dimensions (w/ Bison):
Width 55"
Depth 22"
Height 62"

Patent Pending

Item #	Description
575080	InfiniTank
575085	InfiniTank 50 Hz

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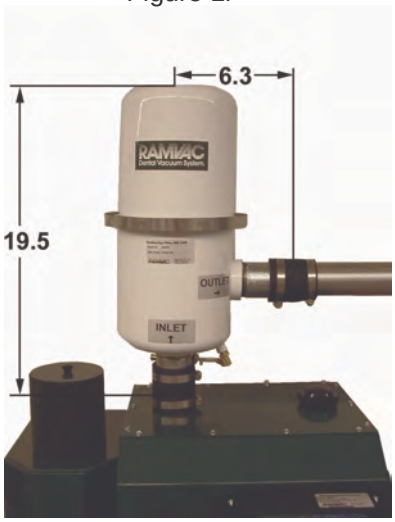
DentalEZ GROUP

S-Type™ Exhaust Filter Assembly – Model No. 003270

Figure 1.



Product Dimensions
Plumb with 2" Pipe

Installation Instructions:

Normal Location: Mount the filter as shown in Figure 1.

Remote Location: Contact RAMVAC for assistance.

*Minimum 26.0" overhead clearance for maintenance (measure from top of Bison Oil Reservoir).

1. Remove existing exhaust pipe from Vacuum Unit.
2. If present, remove metal check valve from vacuum unit exhaust port.
3. Connect filter inlet to the Power Unit as shown in Figure 1.
4. Secure hose clamps to avoid an oil leak.
5. Connect filter outlet to the existing exhaust line as shown in Figure 1. Secure hose clamps to avoid an oil leak.
6. Support the exhaust pipe leaving the filter. Place a non-rigid hanger within 12 inches of the filter outlet.
7. This is not a bacteria filter. Exhaust must be vented outside. Also see your Vacuum Unit Installation Guide.

Back Flow Reducing Check Valve Assembly – Model No. 512403

CAUTION: If a metal check valve is present in the exhaust port of the oil reservoir, remove it before installing this check valve.

Location: Mount in plumbing line between Tank and Power Unit

Note: Position valve for "Up" and "Flow" as marked.

Solmetex

50 Bearfoot Road
Northborough, MA 01532
www.solmetex.com

SolmeteX Hg5®-HV Amalgam Separator
Type 2 – Maximum Flow 2000 ml/min
Maximum Fillable Volume 1900 ml
Installation and Maintenance Instructions

Table of Contents

Thoroughly read and understand instructions prior to installing, operating and servicing the Hg5®-HV Amalgam Separator. These instructions are also available on our website at www.solmetex.com

The waste stream treated by the SolmeteX Hg5®-HV is generated by a dental vacuum system and as such may contain concentrations of solid and soluble mercury and silver. Because of this, any spills should be considered hazardous and should be handled in accordance with standard hazardous materials (HAZMAT) handling procedures.

Full Collection Containers are a HAZMAT and should be handled, stored and disposed of according to regulations applying to hazardous waste containing mercury. Always wear protective gear when handling full SolmeteX Hg5®-HV collection containers (latex gloves, safety glasses or face shield) and dispose of per local regulations and codes.

SolmeteX Warranty

Solmetex Hg5®-HV Air Water Separators are warranted against defects in material and workmanship for a period of two (2) years from the date of purchase, established by proof of purchase or formal warranty registration. During the warranty period SolmeteX will at its option repair or replace products that prove to be defective.

Solmetex Hg5®-HV Collection Containers are warranted against defects in material and workmanship for a period of one (1) year from the date of purchase, established by proof of purchase or formal warranty registration. During the warranty period SolmeteX will at its option repair or replace products that prove to be defective.

Labor, transportation and service charges are not included.

Limitations of Warranty

The warranty shall not apply to defects resulting from improper installation, maintenance, abuse, unauthorized modification, or operation outside of the environmental specifications for the product or damages that occur due to improper repackaging of equipment for return to SolmeteX.

USE OF THIRD PARTY COLLECTION CONTAINERS OR LINE CLEANERS HAVING A pH LESS THAN 6 OR GREATER THAN 10 WILL VOID THESE WARRANTIES.

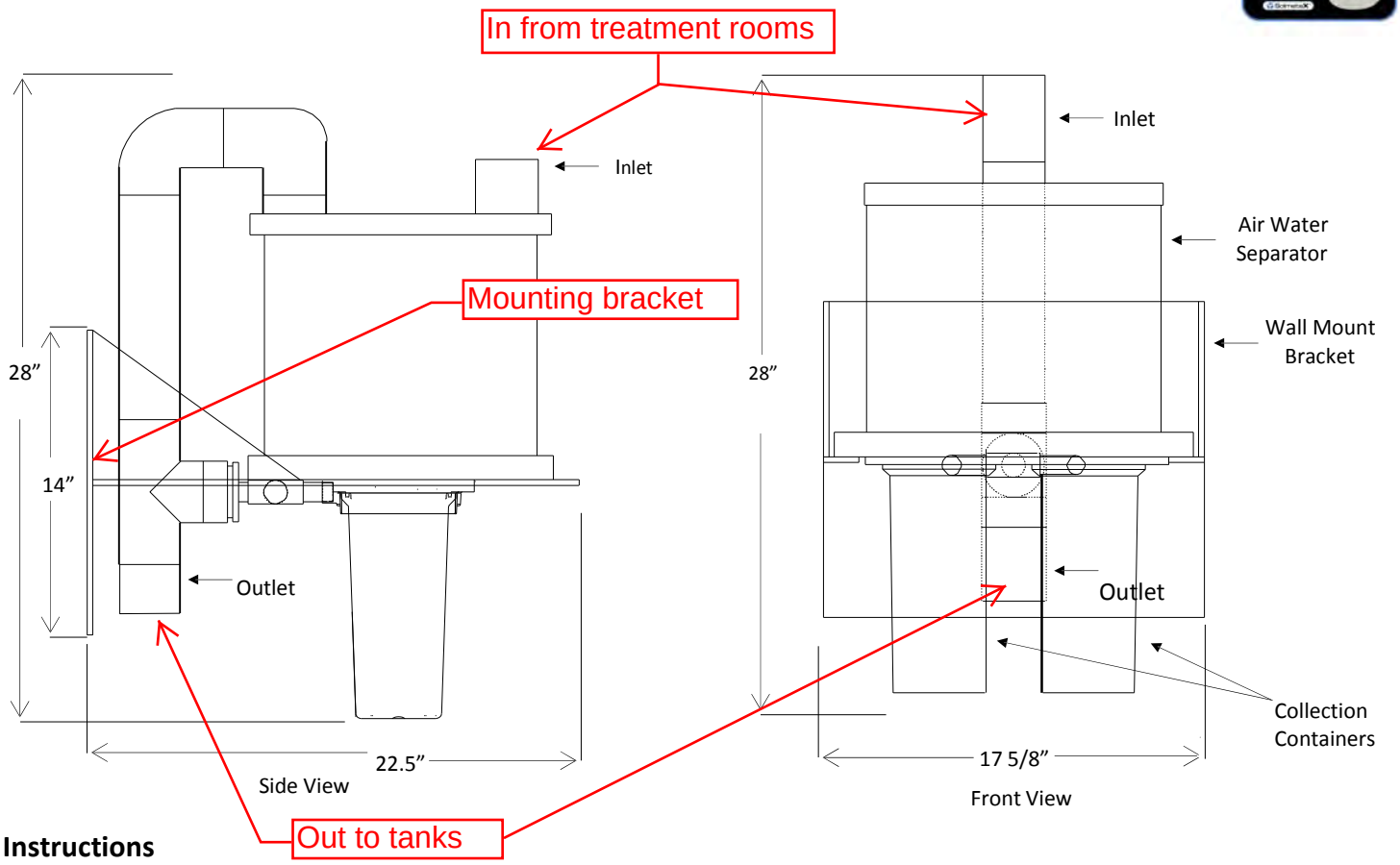
For a complete list of recommended cleaners, visit our web site www.solmetex.com.

No other warranty is expressed or implied. SolmeteX specifically disclaims the implied warranties of merchantability and fitness for particular purpose.

Exclusive Remedies

The remedies provided herein are the buyer's sole and exclusive remedies. SolmeteX shall not be liable for any direct, indirect, special, incidental or consequential damages, whether based on contract, tort or any other legal theory.

Hg5®-HV Installation



Instructions

When choosing the location to mount the Hg5®-HV, remember that you must leave room to:

- Complete the piping.
- Access the front and sides of the unit for collection container replacement.
- Have the unit mounted higher than the pump and drain.

The wall mounted support bracket must be mounted to the wall prior to installation of the Hg5®-HV unit.
The support bracket should be stud mounted in order to support the filled weight of approximately 100 pounds.
The inlet and outlet connections are 3” Schedule 40 PVC Pipe. It is recommended that flexible pipe couplings be used to connect the unit to the existing vacuum lines. Since pipe sizes can vary from site to site, bushings may be required to adapt the unit to the vacuum line piping at your facility.

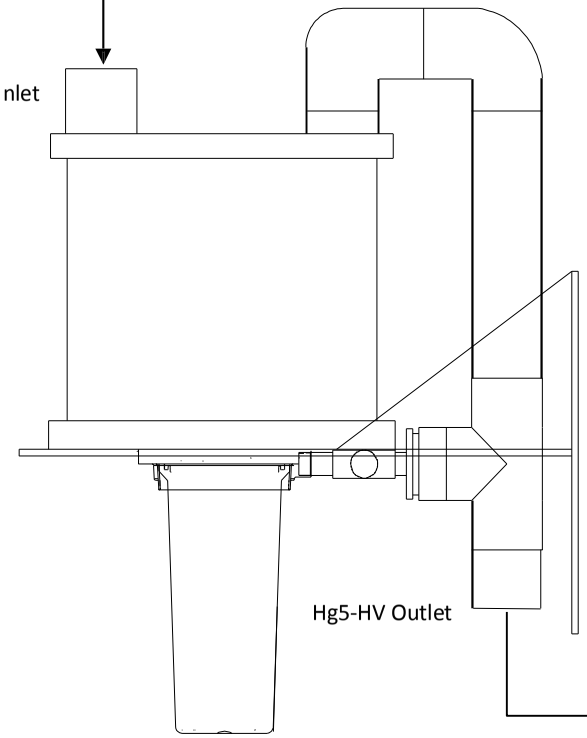
- Remove all components from package(s) make sure you have everything, prior to proceeding.
- The unit is piped into the vacuum line between the treatment rooms and the vacuum source. The line from the treatment rooms is piped to the inlet of the Hg5®-HV and the outlet is piped to the vacuum source. **DO NOT** connect the unit to the outlet of the separating tank (dry vacuum system) or water ring pump (wet vacuum system).
- Determine the location of unit with respect to existing plumbing; pump location, drain and ease of collection container change out.
- Mount the back plate to an existing wall using lag bolts. The structure and bolts should be capable of supporting 100 pounds. Mount directly into the studs using the pre-drilled holes in the backplate. If no studs are available, molly bolts may be used providing they and the wall are capable of supporting the load.
- After mounting the bracket, lower the Hg5®-HV onto the bracket. It will sit between the two side supports. Use the four ¼-20 bolts supplied with the unit to secure the unit to the bracket.
- After the unit is installed, the two collection containers can be installed. (See included installation instructions).
- Write the installation date on each collection container.
- Complete the registration form and return to SolmeteX.

Environmental Specifications

- Overall Dimensions: 17.625” W x 28” H x 22.5” D
- One Hg5-HV will serve up to 20 chairs
- Minimize water lift height.
- Maximum Temperature = 120^{O} F (52^{O} C).
- Maximum Vacuum = 15” Hg (51 kPa)
- For Dental Use ONLY

Hg5®-HV Installation Diagram

Treatment Rooms



Tank Inlet

Air Water Separating Tank

+

Any Dry Vacuum Unit

DO NOT connect Hg5-HV to outlet of tank.

OR

Pump Inlet

Any Water Ring Pump

DO NOT connect Hg5-HV to outlet of the water ring pump.

NOTE: The Hg5-HV should be installed so that the outlet of the Hg5-HV is higher than the tank or pump inlet.

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Solmetex

Hg5®-HV Maintenance

MAINTENANCE

MAINTENANCE

- **Collection Container must be replaced/changed once every twelve (12) months or when the sediment level reaches the full line; whichever occurs first.**
- **Check the sedimentation level of the collection container weekly**
- **Line Rinsing & Vacuum Line Cleaners - Cleaners should have these qualities: Non-Foaming, De-Odorizing, Sanitizing & pH between 6 and 10.**

USE OF LINE CLEANERS OUTSIDE OF THIS pH RANGE WILL VOID THE WARRANTY.

For a complete list of recommended cleaners, visit our web site www.solmetex.com.

WITH DENTAL VACUUM SYSTEMS: **Follow manufacturers instructions.**

Note: Plan to rinse no more than 5 chairs every 10 minutes. Limit the total maximum flow to the Hg5® during rinsing to 1 liter per minute. Rinsing too much or too rapidly can overfill the Hg5® and could affect the unit's efficiency.

SERVICE

The Hg5®-HV is designed to provide years of trouble-free service, with minimal attention. In the unlikely event of system related problems, please consult the troubleshooting and maintenance chart below.

Problem: Little or No vacuum at the hand piece

1. Check sediment level of collection container, if full change the collection container.
2. If the vacuum gauge reads normally but there is little or no vacuum to the hand piece, there is probably a clog or a leak between the hand piece and the Hg5®-HV.
3. If the vacuum gauge reads lower than normal these are the possible causes:

   Did you just replace the collection container?

   Yes:

   Check installation of the new collection container. If the vacuum is low there is a possibility that the o-rings on the collection container did not seal into the receivers. Remove the collection container, check the o-rings and re-install per the collection container installation procedure.

   No:

   If you have a solids collection cup (installed by others) - Check & Clean or replace element/screen if necessary.

   Check operation of the vacuum pump.

   - Listen for vacuum leaks.
   - Check all connections for breaks or cracks.

   Check all flexible hose for kinks, breaks, or loose clamps.

Problem: Water in the Upper Chamber (Air Water Separator)

1. Check sediment level of collection container, if full change collection container.
2. Check the pH of vacuum line cleaner, if below 6 or above 10 change collection container and line cleaner. Visit www.solmetex.com for a recommended list of cleaners.
3. Call your dental dealer.
   - If the problem cannot be solved easily, call or e-mail your dealer for support.

Problems	Solution
Solids reach full line of collection container	Change the collection container Leave the vacuum running during process
Solids above full line of collection container	Change the collection container Inspect the top chamber for solids
Top chamber has some solids	System is backed up • Turn on vacuum • Remove pins • Tilt container towards manifold to allow air into top chamber • Place container back on and insert pins
Top chamber is full with solids	System is in bypass • Reduction in suction • Solids released into waste stream and environment • Top chamber needs to be replaced • Full top chamber needs to be recycled
Bring a flashlight	• Most equipment/utility rooms have poor lighting. Using a flashlight from the backside of the system and shining it forward will help determine the level of sedimentation. Also can be used to inspect the top chamber using the same procedure.

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E194

OWL Touch™

The OWL Touch incorporates a full color, touch screen display to provide easy control and monitoring of your dental utility room equipment. Simple, easy to understand screen layouts make navigation of this powerful device a cinch.

Four different categories of devices can be controlled through a single OWL Touch panel:

Vacuum Units

RAMVAC brand vacuum units with the S2 control can be easily plugged into the OWL Touch and will display maintenance notifications, fault messages and other system data. However, even non-RAMVAC vacuum units can be controlled via an OWL Interface Control attached to the OWL Touch.

Air Compressors

RAMVAC Osprey air compressors featuring the C2 control (Smart control) are easily connected and will provide similar information to the vacuum units. Osprey compressors with a Basic control or non-RAMVAC brand compressors can also be connected via the Interface Control.

Water Valve

Any type of water valve utilizing a solenoid valve can be easily turned off and on utilizing an Interface Control.

Auxiliary Devices

Any type of system that can be turned off or on with a switch can be controlled by an Interface Control (up to 10 amps). Systems such as lighting, stereo, intercom or a mechanical room exhaust fan can be attached to the OWL Touch and turned on and off either manually or with the schedule.

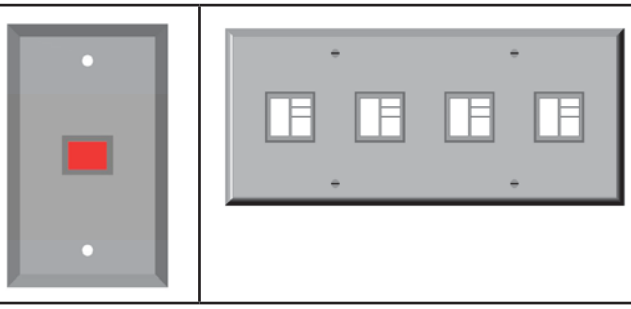
Features

- Home screen provides the ability to choose Manual or Schedule run mode for the equipment and includes a Master Shutdown button.
- Manual mode allows the user to turn on or off each individual type of device, similar to a standard remote switch panel.
- Schedule mode automatically controls all devices by a saved user defined weekly schedule
- Master Shutdown turns off the entire utility room when activated. Simply push this button and your utility room stays off until either the Manual or Schedule mode is selected.
- OWL Touch models are available with either a four, eight or sixteen port OWL Hub device.
- Entire configuration from device, to hub, to OWL is easily connected with category 6 patch cable.

E194

Low Voltage Remote Switching

The RAMVAC can be run continuously throughout the workday. To avoid wasting electricity, turn off the RAMVAC if vacuum will not be needed for an hour or more. Note: The tank will drain only when no vacuum is present – Vacuum must be turned off at least once per day!

Illuminated Remote Panel	RAMVAC® OWL™ Touch	Non-Illuminated remote Switches
		
• Switch light is steady-on when system is running normally. • Switch light flashes for maintenance or one of the heads has been disabled by the disable button on the S2 Control.	• Touch Pad illuminates while equipment is running. • OWL gives complete breakdown of data on selected equipment	• Non-illuminated switches provide no indication for system status.

Recommended Switching

RAMVAC Remote Panel or equivelent with illuminated 24VDC Switch

1. → F.
2. → G.
3. → H.

S2 Control Terminals

RAMVAC OWL Touch

OWL Hub

S2 Control

OWL Connection "COM"

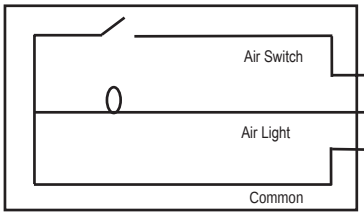
Low Voltage Switch Connection "FGH"

Alternative Switching

Toggle Switch or other non-illuminated switch (option)

F. → H.

S2 Control Terminals



Illuminated Remote Switch

Note: Maximum wire length for low voltage 18 gauge wire : 500 feet

Note: High Voltage switching is an option but not recommended. Contact RAMVAC.

Note: OWL to S2 connection must be made with Cat 6 shielded cable using RJ45 connectors.

E194

Low Voltage Remote Switching

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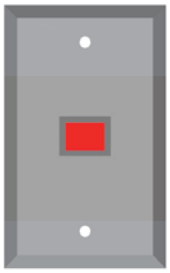
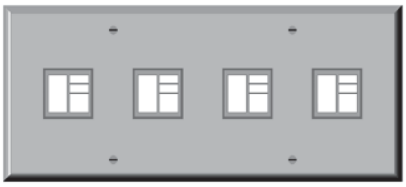
Use to turn system on and off from a remote location

Your Osprey compressor is manufactured to continuously cycle as required throughout the workday. Power off at end of the day.

Illuminated Remote Panel		RAMVAC® OWL™ Touch	Non-Illuminated remote Switches
			
• Switch light is steady-on when system is running normally. • Switch light flashes for maintenance or one of the heads has been disabled by the disable button on the C2 Control.		• Touch Pad illuminates while equipment is running. • OWL gives complete breakdown of data on selected equipment	• Non-illuminated switches provide no indication for system status.

Recommended Switching

RAMVAC Remote Panel or equivelent with illuminated 24VDC Switch

1. → F.
2. → G.
3. → H.

C2 Control Terminals

Purple
Red
Black

Basic Control Wires

RAMVAC OWL Touch

OWL Hub

C2 Control

RAMVAC Panel or Alternative Switch Connection

OWL Connection

Alternative Switching

Toggle Switch or other non-illuminated switch (option)

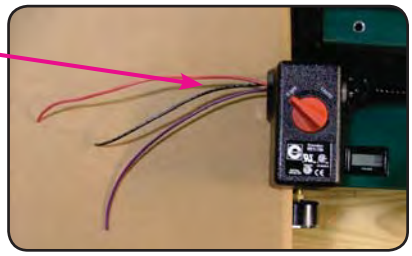
F. →
H. →

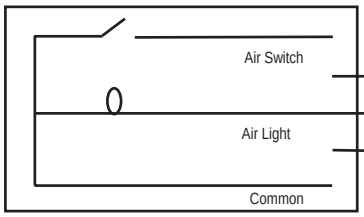
C2 Control Terminals

Purple
Black

Basic

Low Voltage Switch Wires





F - +24 VDC (Purple)

G - +24 VDC (Red)

H - DC Common (Black)

Illuminated Remote Switch

Note: Maximum wire length for low voltage 18 gauge wire : 500 feet

Note: High Voltage switching is an option but not recommended. Contact RAMVAC.

Note: OWL to C2 connection must be made with Cat 6 shielded cable using RJ45 connectors.

OWL *On Wall Logic* Touch™

The OWL Touch™ incorporates a new full color, touch screen display to provide easy control and monitoring of your dental utility room equipment. Simple, easy to understand screen layouts make navigation of this powerful device a cinch.

Demo the OWL Touch experience online at DentalEZ.com/OWL.

RAMVAC® Utility Solutions

Four different categories of devices can be controlled through a single OWL Touch panel:

Vacuum Units

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Air Compressors

RAMVAC Osprey™ air compressors featuring the new C2 control (Smart control) are easily connected and will provide similar information to the vacuum units. Osprey compressors with a Basic control or non-RAMVAC brand compressors can also be connected via the OWL Interface Control.

Water Valve

Any type of water valve utilizing a solenoid valve can be easily turned off and on utilizing an OWL Interface Control.

Auxiliary Devices

Any type of system that can be turned off or on with a switch can be controlled by an OWL Interface Control (up to 10 amps). Systems such as lighting, stereo or intercom can be attached to the OWL Touch and turned on and off either manually or with the schedule.

DentalEZ INTEGRATED SOLUTIONS

RAMVAC products are manufactured in an ISO 13485:2003 Certified facility.

OWL Touch™ *On Wall Logic*

- Home screen provides the ability to choose Manual or Schedule run mode for the equipment, and includes a Master Shutdown button.
- Manual mode allows the user to turn on or off each individual type of device, similar to a standard remote switch panel.
- Schedule mode automatically turns on or off all devices by a saved user defined weekly schedule.
- Master Shutdown turns off the entire utility room when activated. Simply push this button and your utility room stays off until either the Manual or Schedule mode is selected.
- OWL Touch models are available with either a four, eight or sixteen port OWL Hub device.
- Entire configuration from device, to hub, to OWL is easily connected with category 6 patch cable.

OWL configurations:

OWL Touch models are available with 4, 8, or 16 port OWL Hubs.

DentalEZ INTEGRATED SOLUTIONS

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0615 1M 116

DENTAL IMAGING

INTRAORAL X-RAY | EXTRAORAL X-RAY

MIDMARK®

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30-A2040 - Handswitch with 25' cable

30-08110 - Lighted Remote-Exposure Station

ACCESSORIES

30-A2040	**Handswitch with 25' cable**
30-A2044	Lighted Remote Exposure Station (with interconnect cable)
30-A2114	Preva Dual-Operator Panel Kit
30-08110	**Lighted Remote-Exposure Station**
30-A2042	Two-Stud Mounting Plate
30-A2099	4 X 4 Pass-Through Kit
30-A2043	Metal Stud Mount
ASAM-GT	Laptop Tray for Preva Mobile
30-08101	Doorbell-type Exposure Station
45-P0002	**Sensor Holder**

REPLACEMENT ARMS
PREVA DC INTRAORAL SYSTEM WITH 70MM LONG CONE

DPD7-G2P	76" reach, two-stud mount, long cone
DPD6-G2P	66" reach, two-stud mount, long cone
DPD5-G2P	56" reach, two-stud mount, long cone
DPD7-G1P	76" reach, single-stud mount, long cone

REPLACEMENT ARMS

30-A2212	Preva Plus - 34 5/8" (76" total reach) - long
30-A2211	Preva Plus - 24 5/8" (66" total reach) - short
30-A2210	Preva Plus - 14 5/8" (56" total reach) - compact
30-A2071	Preva - 34 5/8" (76" total reach) - long
30-A2073	Preva - 24 5/8" (66" total reach) - short
30-A2074	Preva - 14 5/8" (56" total reach) - compact

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Preva DC

WHERE TECHNOLOGY MEETS SIMPLICITY...PERFECTLY

MIDMARK®

E197 2/10

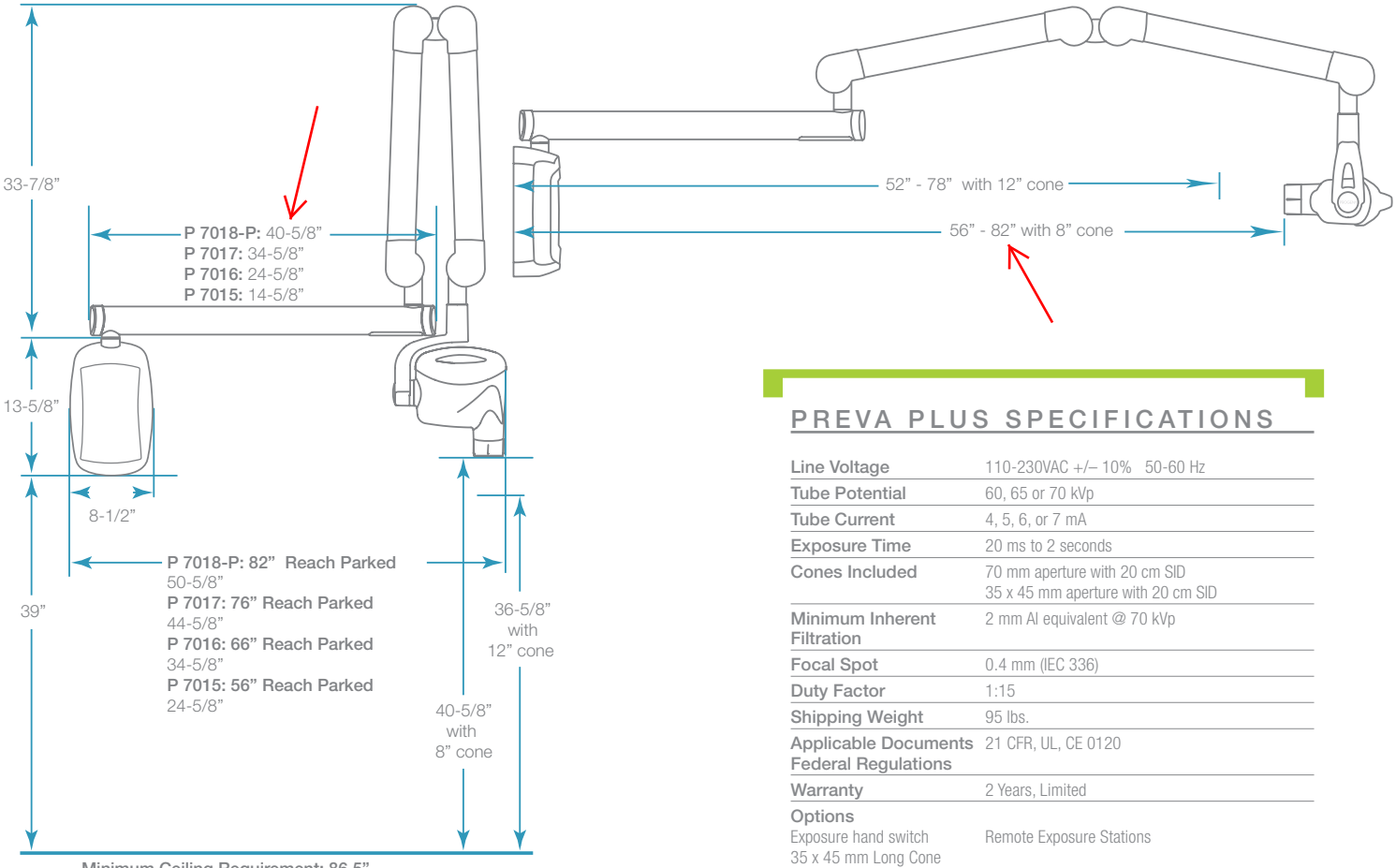
Preva Plus

All the benefits of Preva, PLUS a high resolution digital sensor always handy, always ready.

[Sensor stores safely and securely on arm]

Progeny®—the leader in intraoral x-ray systems in the U.S. and the preferred choice of dentists around the world.

E197 3/10



Minimum Ceiling Requirement: 86.5"

Cabinet Pass Through
66" Arm: 31" W x 47.5" H
76" Arm: 41" W x 47.5" H

Cabinet Pass Through (Alternate)
66" Arm: 26.75" W x 47.5" H
76" Arm: 36.75" W x 47.5" H

Mobile
Base: 26.9" W x 36" L
Height: 76.9"
Arm reach: 44"

PREVA PLUS SPECIFICATIONS

Line Voltage	110-230VAC +/– 10% 50-60 Hz
Tube Potential	60, 65 or 70 kVp
Tube Current	4, 5, 6, or 7 mA
Exposure Time	20 ms to 2 seconds
Cones Included	70 mm aperture with 20 cm SID 35 x 45 mm aperture with 20 cm SID
Minimum Inherent Filtration	2 mm Al equivalent @ 70 kVp
Focal Spot	0.4 mm (IEC 336)
Duty Factor	1:15
Shipping Weight	95 lbs.
Applicable Documents Federal Regulations	21 CFR, UL, CE 0120
Warranty	2 Years, Limited

Options

Exposure hand switch	Remote Exposure Stations
35 x 45 mm Long Cone	
Two stud mounting plate	Metal stud mounting plate

Choice of 56", 66", 76", or 82" (total reach) and Mobile

Sensor

Film Size equivalent	*Size 1*	*Size 2*
Dimensions	37 x 24 x 5.5 mm	43 x 32 x 5.5 mm
Active Area	30 x 20 mm	36 x 26 mm
Sensor Cable	90 cm	90 cm
Computer Interface	High Speed USB 2.0	High Speed USB 2.0

Computer Requirements

Please see www.progenydental.com for operating system and hardware requirements

Contact your Midmark representative for additional system requirement information.

midmark.com

675 Heathrow Drive Lincolnshire, Il 60069
847-415-9800 Toll-free 888-924-3800

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ML-00041 Rev. D

MIDMARK®
Because we care.®

Environmental Factors

Use

The Preva Dental X-ray System is intended for indoor use for normal dental applications at temperatures in the range +10 °C to +35 °C (+50 °F to +95 °F). See the Specifications section on page 117 for complete temperature, pressure, and altitude parameters for using, transporting, and storing the Preva system.

Support Requirements

The system is designed to mount on a single wood 2x4-inch drywall stud or equivalent wall support. It can also be mounted on concrete or other similar wall construction. **Mounting to a plywood or particle board wall is not acceptable**. Verifying the wall support capability and the selection of the proper mounting hardware is the responsibility of the installer.

Note that a two-stud wall plate assembly (30-A2042) is available to mount on two wooden studs. A metal stud mounting kit (30-A2043) is also available.

The wall support and mounting hardware must withstand a 45.4 kg (100 lb.) shear load and a 227 kg (500 lb.) withdrawal force at each of the mounting bolts. The wall fabrication and attachments to the building structure must be capable of withstanding a load moment of 127 kg-m (920 lb-ft).

Electrical Requirements

Mains Power Supply

The Preva Dental X-ray System requires a 3-wire single phase AC power mains that contain line conductor, neutral conductor, and protective earth conductor. It is recommended that the unit be installed with a dedicated electrical line connected to a breaker with a minimum 15 amp rating. The wiring must provide for a permanently grounded power line configuration.

Line Cord Use

The installer must determine the suitability of installing the Preva with a line cord. If a line cord is used, the installer must ensure that the unit is properly grounded and has the required line rating.

Line Voltage

AC 100 V to 250 V, 50 Hz or 60 Hz (see complete specifications on page 117)

Fuse Rating

5 A, 250 V, UL Recognized (see complete specifications on page 117)

Max Line Resistance

For normal function of the Preva Dental X-ray System the resistance of the power line should not exceed 0.4 Ω at nominal line voltage.

Interlock

NOTICE	It is the owner's responsibility to provide any visual interlock indicators required by local ordinances.

Dual Wood Stud Wall

When installing the Preva Dental X-ray System on two 41 cm (16 in.) centered wood studs, the Control Unit is mounted to a wall plate (Two Stud Mounting Kit 30-A2042), which mounts to the wood studs, as shown in *Figure 10*. Fasteners are provided with the wall plate.

In mounting configurations using the dual stud wall plate, there are several holes available for incoming line power. This is to provide for various locations of existing power boxes when installing as a replacement unit. Refer to the reverse side of the mounting template, *Figure 8*, for hole locations.

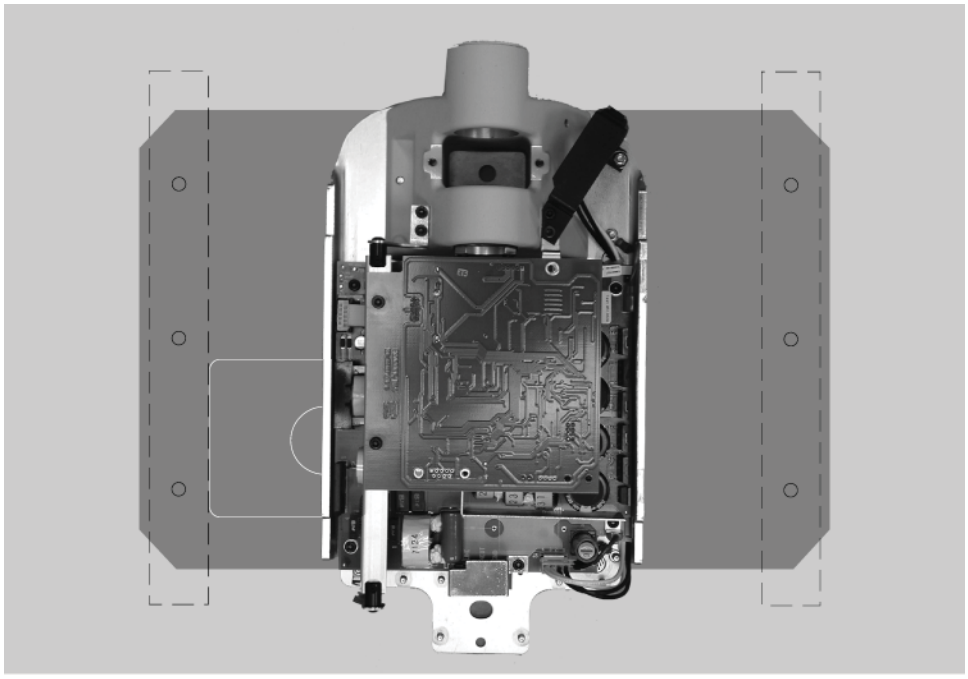

Figure 10 Dual Wood Stud Mount

Installing the Control Unit on a Dual Wood Stud Wall

Mark and Drill Wall Plate Mounting Holes

The mounting template [30-S0003] is a guide for locating where to drill the holes used to mount the wall plate to the wall. Carefully placing the mounting template for two stud mount installations on the wall will help ensure correct installation of the mounting plate and, hence, the Control Unit.

1. Using a stud finder, locate the center of the studs on which the wall plate will be mounted.
2. Place the mounting template for the two stud mount on the wall with the lower mounting holes 102 cm (40 in.) above the floor.
3. Place a level parallel to the vertical lines on the mounting template and adjust the mounting template until it is plumb.
4. Tape the mounting template to the wall.
5. Using an awl or other sharp object, punch through the mounting template to mark the location of the mounting holes.
6. Drill 5/32” pilot holes (for common pine studs) at the marked locations.
7. Remove the mounting template from the wall and save for future use.

Install the Wall Plate (30-A2042)

In the dual wood wall stud installation, the Control Unit is bolted to a wall plate that has been installed on two wood studs. The wall plate, shown in *Figure 16*, is packaged separately from the Preva.

1. Select the 3/8” x 3” long lag screws [30-H0006] and washers [30-H0008].
2. Put the lag screws and washers through the mounting holes on the wall plate and loosely tighten. Be sure that the power wire extends through the opening in the wall plate.
3. Level the wall plate.
4. Tighten the lag screws to 2.0 to 2.5 kg-m (14–18 ft-lb).

⚠CAUTION Do not over-tighten the lag screws. Over-tightening the lag screws will damage the wooden stud and reduce the holding force.

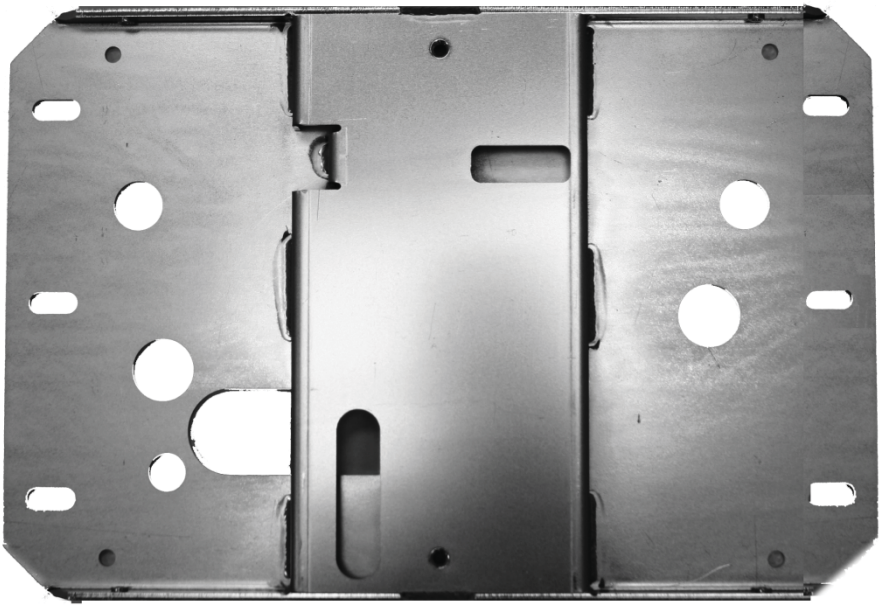

Figure 16
Mounting Plate for Dual Stud Wall Mounts

Remove Control Unit Front Cover

1. Open the shipping carton and locate the Control Unit in the first level of the carton.
2. Remove the Phillips screw from the front cover of the Control Unit.
3. Carefully remove the front cover.
4. Place the front cover and the screw in a safe location for later reassembly.

Mount the Control Unit

1. Select the 5/16”-18 x 7/8” long socket cap screws [H1-15-S23088-01] and washers [H1-NA-S12000-01].
2. Put the one screw and washer through the upper mounting hole of the Control Unit.
3. Place the Control Unit on the wall and loosely tighten the upper screw.
4. Put the other screw and washer through the lower mounting hole of the Control Unit and loosely tighten. Be sure that the power wire extends through the opening at the bottom of the Control Unit.
5. Place a level on the Control Unit bearing parallel to the wall. Level the Control Unit.
6. Tighten the upper and lower screws.
7. After the Preva is installed, slide covers on the wall plate and fasten with the provided (8) screws [H1-64-S17050-01].

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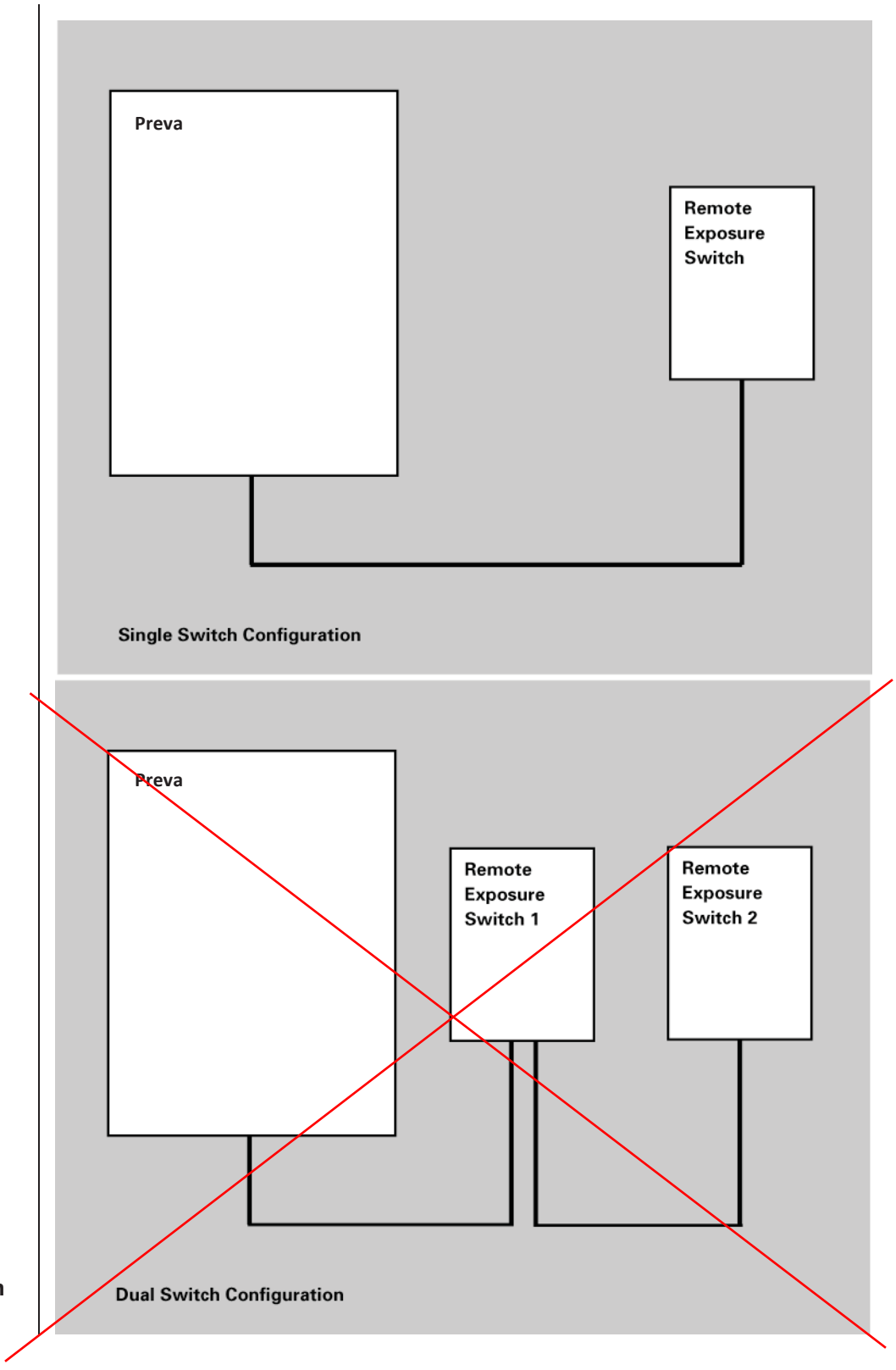

Figure 42
Remote Switch Configurations

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midmark

JB-70 PREVA

Midmark Corporation
1001 Asbury Drive
Buffalo Grove, IL 60089
USA

1-800-MIDMARK
midmark.com

Technical Specifications:

Electrical:

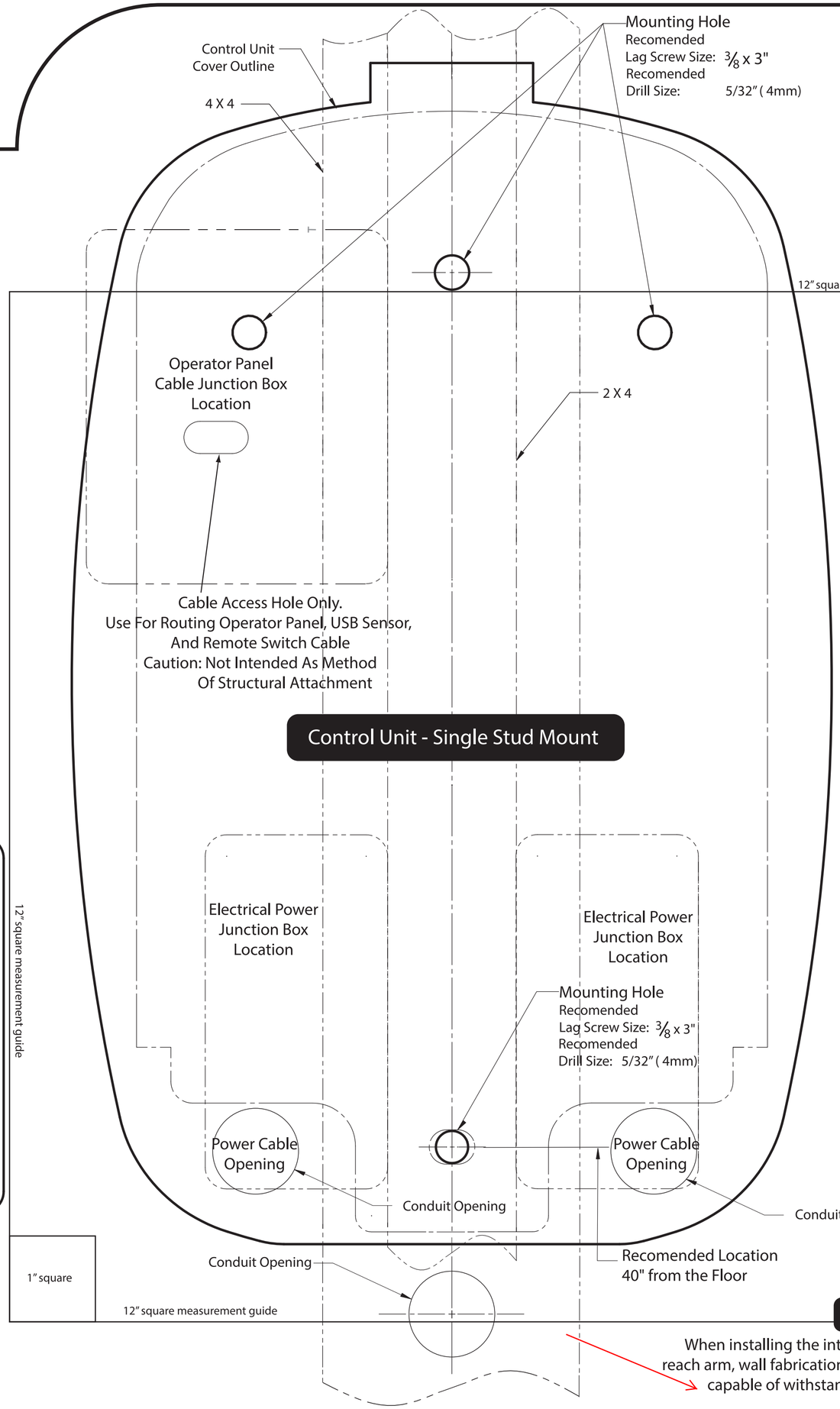
JB-70 Line Voltage:

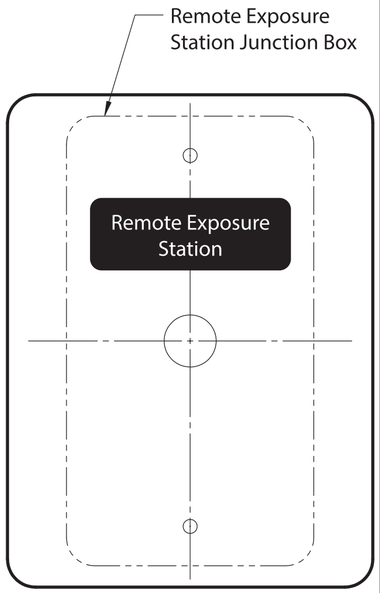
120 VAC 10 % 50/60 Hz Max Line Current 10 A

PREVA Line Voltage:

100-230 VAC 10% 50/60 Hz Max Line Current 10 A)

Not using the single stud mount at this time due to the long reach arm desired. See next Page

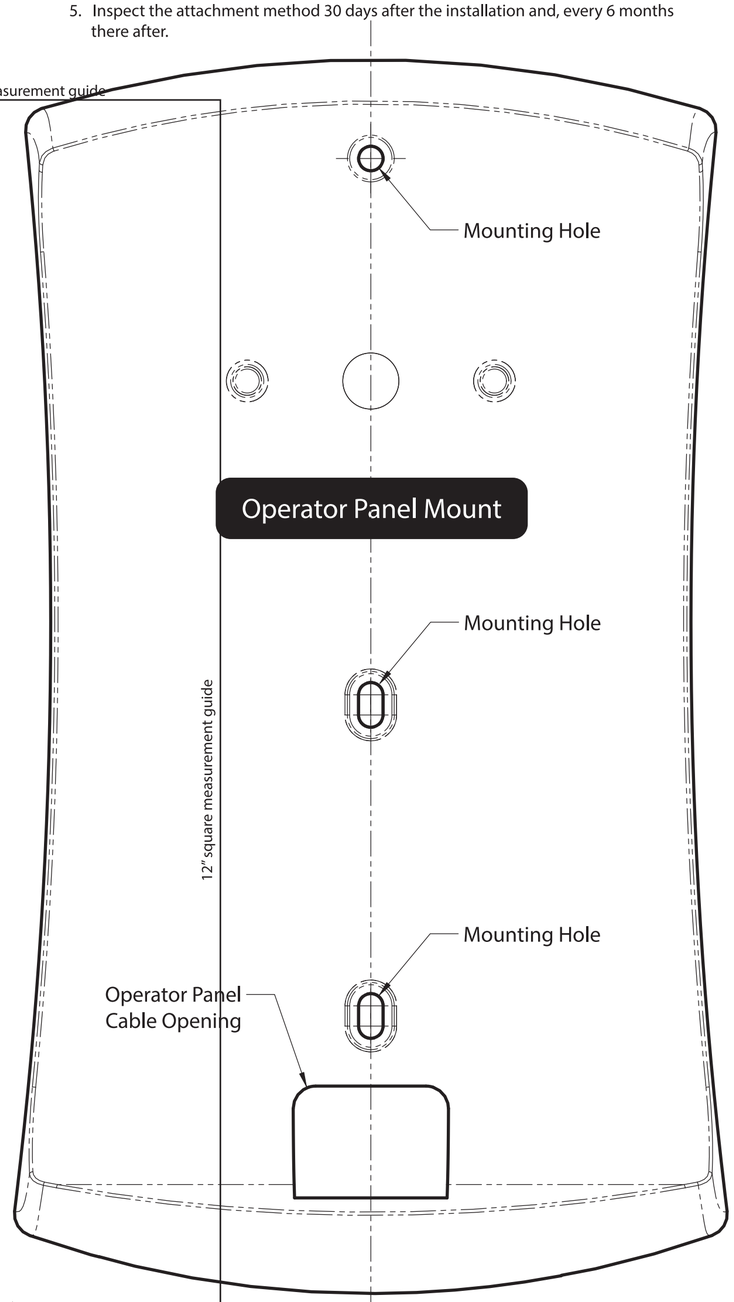




Attachment Cautions

When using lag screws as the method of attachment, it is imperativeto consider the full scope of the task. Several factors must be considered for safe, permanent installations. For detailed issues see installation manual. Some key issues are:

1. The size of the pilot hole reguired for the lag screw will be different based on the grade, age and condition of the lumber.
2. Plywood, particle board or similar construction materials, should not be used for attachment.
3. Never over-tighten the lag screws as this will weaken the mechanical connection.
4. Progeny mechanical designs will exert up to 920 ft lbs (127 Kg m) of loading moment on the supporting structure.
5. Inspect the attachment method 30 days after the installation and, every 6 months there after.



Caution:

When installing the intraoral system, combined with the 82 in (208 cm) reach arm, wall fabrication and attachments to the building structure must be capable of withstanding a load moment of 920 ft lbs (127 Kg m)

30-S0003
Rev. S01

Made in USA

midmark

JB-70

PREVA

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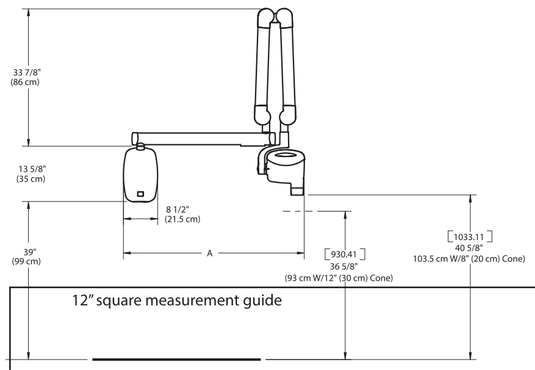
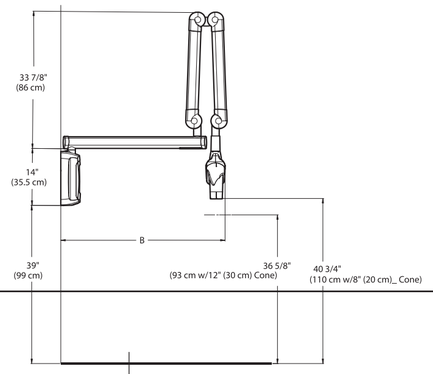
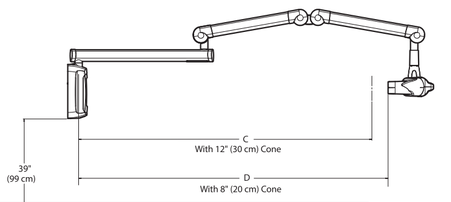






12" square measurement guide

Catalog Number (Beginning with)	A	B	C	D
DCD5 DCV5 I7015 P7015	24 5/8" (63 cm)	20 1/2" (52 cm)	52 1/2" (133 cm)	56 1/2" (144 cm)
DCD6 DCV6 I7016 P7016	34 5/8" (88 cm)	30 1/2" (78 cm)	62 1/2" (159 cm)	66 1/2" (167 cm)
DCD7 DCV7 I7017 P7017	44 5/8" (114 cm)	40 1/2" (103 cm)	72 1/2" (184 cm)	76 1/2" (194 cm)
DCD8 DCV8 P7018	48 5/8" (124 cm)	44 1/2" (113 cm)	76 1/2" (194 cm)	80 1/2" (204 cm)

Long Arm not shown - see page 3

Mounting Hole for
Metal Studs Mount
30-A2043

Mounting Hole
Recomended Lag Screw Size:
3/8 x 3" (6 places)
Recomended
Drill Size: 5/32" (4mm) (6 places)

Control Unit
Mounting Hole

Mounting Hole for
Metal Studs Mount
30-A2043

Operator Panel
Cable Junction Box
Location

Operator Panel
Station Cable Junction
Box Location

Control Unit - Two Stud Mount

Electrical Power Junction Box Location
Junction Box Size: 4"x4"

12" square measurement guide

Power Cable
Opening

Control Unit
Mounting Hole

1" square

12" square measurement guide

Mounting Hole for
Metal Studs Mount
30-A2043

Recomended Location
41" from Floor

Recomended Location
40" from Floor

Mounting Hole for
Metal Studs Mount
30-A2043

Made in USA

Midmark Corporation • 1001 Asbury Drive Buffalo Grove IL 60089 •USA •1-800-MIDMARK •midmark.com

Accessible. Durable. Smart.

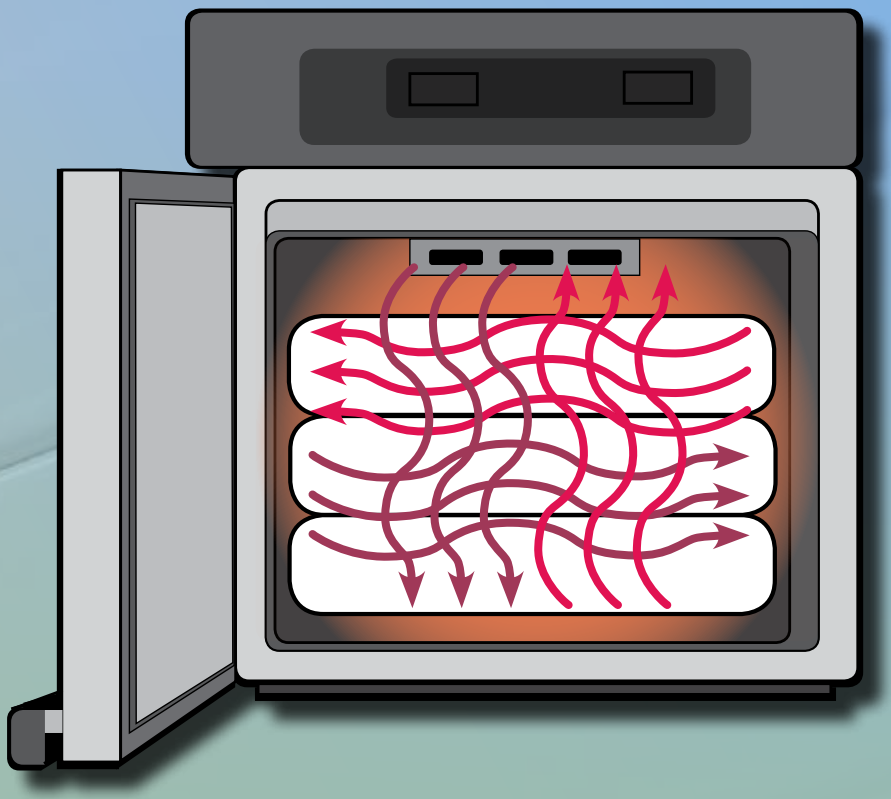
AMSCO® Warming Cabinets

STERIS

WARM, SECURE & ORGANIZED

AMSCO® Warming Cabinets are designed to store and warm sterile intravenous (IV) and surgical irrigation solutions, linens, and blankets to programmed temperature settings for patient applications. Cabinets are available in:

- Standard or premium featured configurations
- Single- or dual-compartment models
- Glass or solid door versions
  - 18" (457 mm) or 24" (610 mm) depths
  - Mobile or fixed-based models, or OR storage console units
  - Freestanding or recessed installations



EVEN, CONVECTION HEATING

AMSCO Warming Cabinets features convective heating, effectively and uniformly distributes heat, maintaining even temperature from the center, out.

- **Energy efficient** – No energy is wasted, and the heat is continuous with no interruptions, unlike radiant heat where short bursts of heat are emitted.
- **Warmed, circulated, ambient air –** With radiant heat, the warm air is transferred from each heated object to the next by contact or proximity. With convective heat, every pocket and fold of the blanket will be of equal temperature.
- **Consistent warmth –** Every item, from the center of the chamber to the exterior, is warmed evenly.

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AT A GLANCE

AMSCO Warming Cabinets with glass doors offer:

- **Increased productivity** due to improved access to supplies
  - At a glance, caregivers can see where items are located for quick access
- **Lower utility cost** because of reduced heat loss
  - Easy visualization means less need to open the door
  - Tempered dual-pane glass helps maintain the interior temperature
- **Improved case turnaround**
  - More efficient inventory management means caregivers have more time for patients

ADAPTABLE TO YOUR WORKFLOW

All of our warming cabinets are engineered to provide:

- Flexible organization and storage
  - Integral adjustable shelves adapt to different sized items or changing inventory levels
- Easy servicing and maintenance
  - Control and heater assemblies are easily accessed from “works-in-a-drawer” trays

Technical Specifications

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Available Models	Single Compartment		Dual Compartment		OR Storage Warming Cabinet		Mid-Size Single Compartment
	Standard	Premium	Standard	Premium	Standard	Premium	Premium
Door Options	Steel or dual-pane tempered glass front	Steel or dual-pane tempered glass front	Steel or dual-pane tempered glass front	Steel or dual-pane tempered glass front	Steel front	Steel front	Dual-pane tempered glass front
Installation	Freestanding or recessed	Freestanding or recessed	Freestanding or recessed	Freestanding or recessed	Freestanding or recessed	Freestanding or recessed	Freestanding or recessed
Outside Dimensions (H x W x D) **18" Depth**	24 ¼ x 30 x 20 ½" (616 x 762 x 521 mm)		74 ¾ x 30 x 20 ½" (1899 x 762 x 521 mm)		60 x 30 x 18" (1524 x 762 x 457 mm)		n/a
Outside Dimensions (H x W x D) **24" Depth**	24 ¼ x 30 x 26 ½" (616 x 762 x 673 mm)		74 ¾ x 30 x 26 ½" (1899 x 762 x 673 mm)		n/a		36 3/8 x 30 x 27 1/8" (924 x 762 x 689 mm)
Inside Dimensions (H x W x D) **18" Depth**	13 ½ x 24 x 16 7/8" (343 x 610 x 429 mm)		Upper Chamber 13 ½ x 24 x 16 7/8" (343 x 610 x 429 mm)		n/a		n/a
			Lower Chamber 36 ½ x 24 x 16 7/8" (927 x 610 x 429 mm)		n/a		n/a
Inside Dimensions (H x W x D) **24" Depth**	13 ½ x 24 x 22 7/8" (343 x 610 x 581mm)		Upper Chamber 13 ½ x 24 x 22 7/8" (343 x 610 x 581 mm)		n/a		22 ¾ x 24 x 22 7/8" (578 x 610 x 581 mm)
			Lower Chamber 36 ½ x 24 x 22 7/8" (927 x 610 x 581 mm)		n/a		n/a
Mobile Base on 24" Model	n/a	n/a	Optional	Optional	n/a	n/a	Optional
Temperature Range	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)	90°F (32°C) to 160°F (71°C)
Door Locking Mechanism	Mechanical	Electronic with mechanical backup	Mechanical	Electronic with mechanical backup	Mechanical	Electronic with mechanical backup	Included
Electronic Data Recording	n/a	Included	n/a	Included	n/a	Included	Included

For more information, contact your STERIS representative or visit www.steris.com.

STERIS
STERIS Corporation
5960 Heisley Road
Mentor, OH 44060-1834 · USA
800-548-4873
www.steris.com

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STERIS®

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AMSCO® WARMING CABINET

APPLICATION

The Amsco Warming Cabinet is designed to raise the temperature of surgical IV and irrigation solutions and/or blankets to an acceptable level for hospital and surgical outpatient center applications.

FEATURES

Single-Compartment Model features a heating chamber available in two depths: 18" (457 mm) or 24" (610 mm) deep.

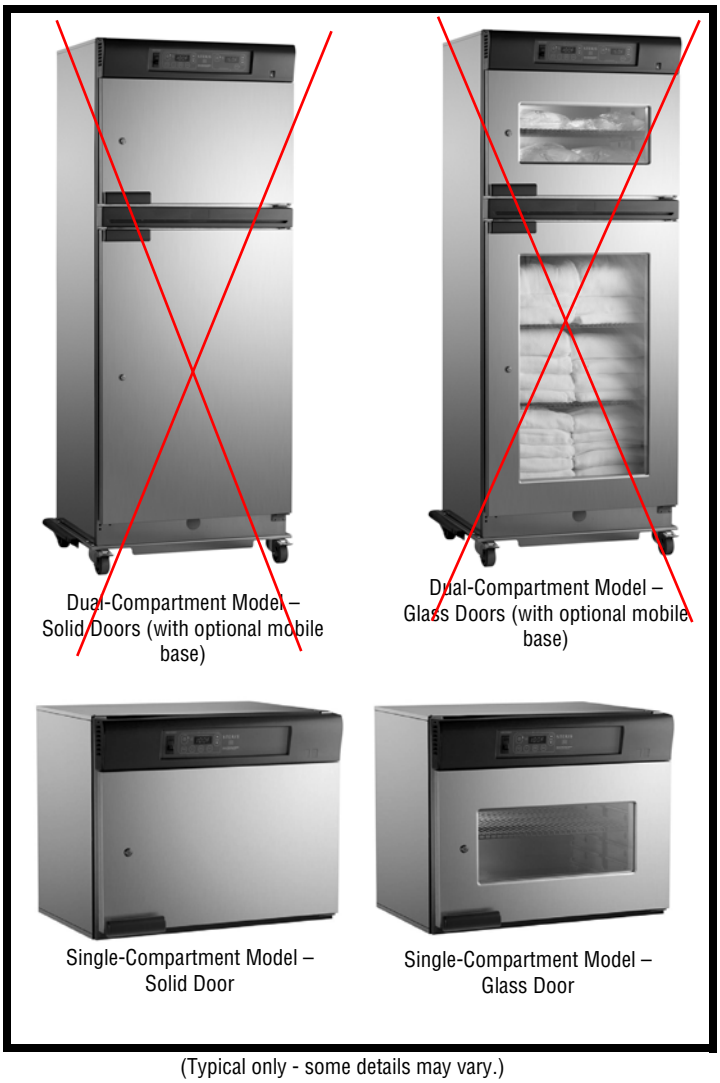
Dual-Compartment Model features an upper and lower heating chamber with independent temperature controls, and a choice of two depths: 18" (457 mm) or 24" (610 mm) deep.

Key Door Locks feature a key that is used to lock/unlock the door. The key is turned counterclockwise to lock door; clockwise to unlock door.

STANDARDS

Warming cabinet meets applicable requirements of the following standards, and carries the appropriate symbols.

- **Underwriters Laboratories (UL) Standard 61010-1, 2nd Ed.,** as certified by ETL Testing Laboratories, Inc.
- **Standard IEC 61010-2-010. 2nd Ed.,** as certified by ETL Testing Laboratories, Inc.
- **Standard CSA C22.2 No. 61010-1-04. 1st Ed.,** Standard for Electro-Medical Equipment as certified by ETL Testing Laboratories, Inc.
- **CENELEC EN 61010-1, Issued 2001/03/01.** Electrical Safety as certified by ETL Testing Laboratories, Inc.
- **IEC 61326-1. 1st Ed.,** EMC testing as certified by ETL Testing Laboratories, Inc.
- **California OSHPD Seismic Pre-Approval**
- **Medical Device Directive (93/42 IEEC)**



Dual-Compartment Model – Solid Doors (with optional mobile base)

Dual-Compartment Model – Glass Doors (with optional mobile base)

Single-Compartment Model – Solid Door

Single-Compartment Model – Glass Door

(Typical only - some details may vary.)

CONSTRUCTION

Freestanding and recessed units ship identically (with outer side, top and back covers). Outer side, top and back covers are removed for recessed installation. When recessed, unit requires a connection to building service (not provided by STERIS). The unit contains a heating chamber, instrumentation and operating controls, and a lower heated chamber when dual-compartment model is specified.

The Selections Checked Below Apply To This Equipment

MODEL
- ☐ Single-Compartment
  - ☐ 18" (457 mm) deep
  - ☐ 24" (610 mm) deep
- ☐ Dual-Compartment
  - ☐ 18" (457 mm) deep
  - ☐ 24" (610 mm) deep

MOUNTING
- ☐ Freestanding
- ☐ For Recessing

DOOR OPTIONS
- ☐ Glass
- ☐ Solid

MOBILE BASE OPTION
- ☐ Mobile Base with Bumpers and Locks

TEMPERATURE RECORDING OPTION
- ☐ USB port

VOLTAGE
- ☐ 120 V
- ☐ 230 V

DOOR LOCK OPTION
- ☐ Electronic Numeric Keypad

NOTE: All cabinets are furnished with right hand hinge. Door swing is reversible during installation.

Item _____

Location(s)_____

_____

Corners and intersections on the face of the cabinet and door are structurally formed for rigidity, cleanability and appearance. Both models are supported on a stainless-steel integral subbase. The cabinet doors are available in solid vinyl coated galvanized steel material with stainless steel inside and include optional tempered double pane glass window(s). Interior cabinet shelves (wire racks) are polyester powder coated steel. Interior air ducts and fan guards are flame retardant Acrylonitrile Butadiene Styrene (ABS) material. If a freestanding model, the cabinet top and side panels are vinyl coated galvanized steel.

Doors are of double-wall construction with 1-1/2" (38 mm) thick insulation between the walls. Right-hand door swing is provided; swing is reversible. Door closes against a heat-resistant, magnet-imbedded, vinyl gasket. Pivot type hinges are stainless steel.

Heating chamber compartment is insulated with 1" (25 mm) thick, fiberglass blanket. An impedance protected fan circulates air within the chamber to provide even heat distribution.

Lower chamber (dual-compartment model) includes two polyester powder coated steel wire rack shelves, adjustable in 3" (76 mm) increments. Door structure mounting, gasket and hinges are the same as the door on the upper chamber.

Chamber(s) is heated by an electric rod heater operating on 120 or 230 Volt, 50/60 Hz power.

ENGINEERING DATA

Unit	Approx. Unit Wt. lb (kg)
Single-Compartment:*	
18" (457 mm) Wall/Counter Mounting	131 (60)
18" (457 mm) Recess Mounting	105 (48)
24" (610 mm) Wall/Counter Mounting	142 (65)
24" (610 mm) Recess Mounting	115 (52)
Dual-Compartment:†	
18" (457 mm) Open-Mounted	324 (147)
18" (457 mm) Recessed Mounting	288 (131)
24" (610 mm) Open-Mounted	375 (170)
24" (610 mm) Recessed Mounting	328 (149)
24" (610 mm) Mobile Base	483 (219)

** For glass door option, add 6 lb (2.7 kg).*

† For all glass door options except 18" (457 mm), add 14 lb (6 kg); for 18" (457 mm) glass door option, add 48 lb (22 kg).

CONTROLS

Cabinet controls are digital and similar for single- and dual-compartment configurations. Both controls have a Main Power on/off switch.

The double cabinet control panel has control and temperature display functions for both cabinets. The upper cabinet control includes an on/standby key and digital temperature display. Also included is a °F/°C temperature display selection key and a SET temperature key with incremental raise/lower temperature set keys. LED lights indicate the on/standby status for cabinet heating, door ajar indication and SET selections have been made. The lower cabinet control includes an on/standby switch and digital temperature display. The lower cabinet also includes a SET temperature switch with incremental raise/lower temperature set keys. Temperature control lockout designates user adjustment.

The single cabinet control panel has control and temperature display functions including an on/standby switch, digital temperature display, °F/°C selection key and a SET temperature key with incremental raise/lower temperature set keys. LED lights indicate the on/standby status for cabinet heating, door ajar position and when SET selections have been made.

Upper compartment and single compartment controls include IV and IRR/Blanket mode setting switches, limiting temperature set ranges to 90-110°F (32.2-43.3°C) and 90-160°F (32.2-71.1°C), respectively. For lower compartment controls, the temperature selection range is 90-160°F (32.2-71.1°C).

Both controls monitor and regulate the heating of the interior compartment(s). The control for upper or single compartment ensures a temperature accuracy of ±3°F (±1.7°C) when warming IV/irrigation solution. The control for lower compartment ensures a temperature accuracy of ±5°F (±2.8°C) when warming irrigation solution.

An overtemperature alarm visually and audibly alerts operator should an overtemperature condition occur (chamber temperature greater than 10°F [5.5°C] above set temperature). In the event of an overtemperature condition, the overtemperature control automatically turns off the heater(s).

An optional USB peripheral connection allows Customer to plug a PC or laptop computer into the warming cabinet to retrieve stored temperature data from control memory. The data is stored or printed from the computer. Data capture software for use on PC is provided with the warming cabinet.

MOUNTING ARRANGEMENT

Dual-compartment models may be installed as freestanding or recessing into a partition wall. If model is recess installed, a synthetic-rubber sealing gasket is provided to ensure close fit of cabinet front to the face of the wall partition. Recessed cabinet requires no supplementary supports behind the wall partition (except in seismic locations).

Single-compartment models may be installed freestanding on shelf or counter surfaces or recessed into a partition wall.

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OPTIONS

Mobile base with bumpers (for dual 24" [610 mm] deep cabinets only). Casters are used to allow warming cabinet mobility. Press foot lever down to lock; push foot lever in to unlock.

USB port for temperature recording.

Electrical numeric keypad door locks are available for keyless entry.

PREVENTIVE MAINTENANCE

A global network of skilled service specialists can provide periodic inspections and adjustments to help ensure cost-effective performance. STERIS representatives can provide information regarding annual maintenance agreements.

NOTES

1. Due to the variety of building constructions employed, fasteners for mounting cabinet to wall are not provided by STERIS. Wall(s) must be adequately reinforced to support operating weight of cabinet.
2. Customer must ensure warming cabinet is installed per applicable seismic requirements.

INTERNAL DIMENSIONS AND CAPACITY

Unit	Upper Chamber Single Chamber Unit (Height x Width x Depth)	Lower Chamber Double Chamber Unit (Height x Width x Depth)
18" Depth	13-1/2 x 24 x 16-7/8" = 3.1 cu. ft. (343 x 610 x 429 mm)	36-1/2 x 24 x 16-7/8" = 8.5 cu. ft. (927 x 610 x 429 mm)
24" Depth	13-1/2 x 24 x 22-7/8 = 4.2 cu. ft. (343 x 603 x 581 mm)	36-1/2 x 24 x 22-7/8" = 11.6 cu. ft. (927 x 603 x 581 mm)

UTILITY REQUIREMENTS – Single Compartment Model

Electricity (E)

120 Volt, 50/60 Hz, 1-Phase, 7.0 Amps, 840 Watts; or
230 Volts, 50/60 Hz, 1-Phase, 3.6 Amps, 869 Watts

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

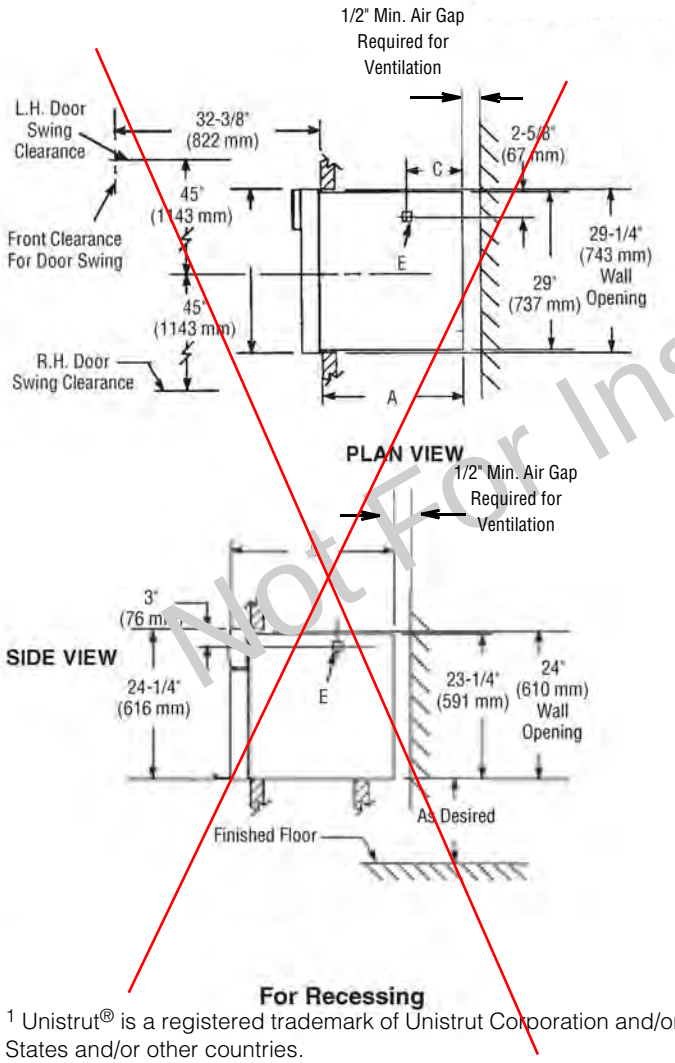
Reference listed equipment drawing for detailed installation specifications. Obtain this drawing from your STERIS Representative.

Equip. Dwg. No.	Equipment Drawing Title
413726-637	Warming Cabinet 18" Freestanding or Recessed Single Compartment
413726-639	Warming Cabinet 24" Freestanding or Recessed Single Compartment

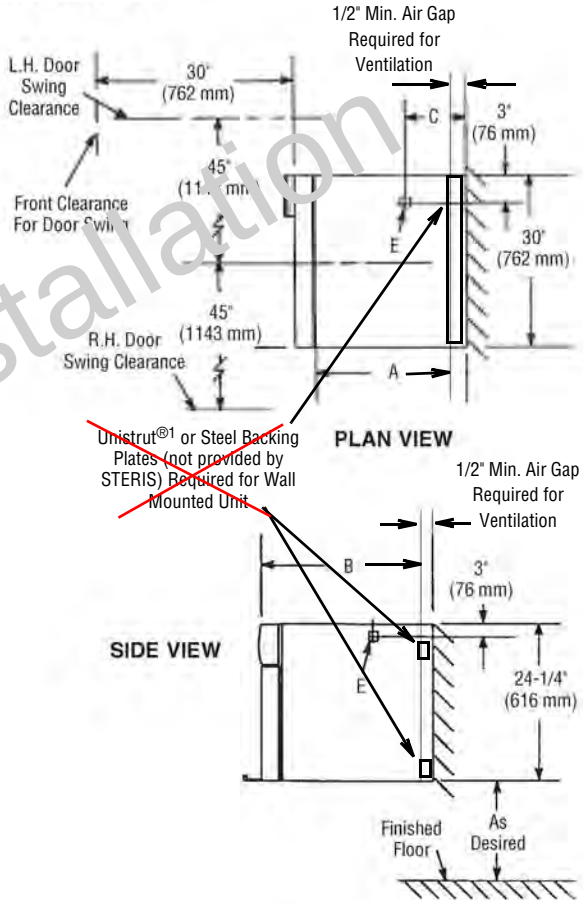
SINGLE-COMPARTMENT MODEL

Model	Dimensions – inches (mm)		
	A	B	C
18" (457 mm)	18 (517)	20-1/2" (521)	7 (178)
24" (610 mm)	24 (610)	26-1/2 (673)	10 (254)

Dimensions are typical – drawing is not to scale.



For Recessing



Wall/Counter Mounting

[1] Unistrut® is a registered trademark of Unistrut Corporation and/or its affiliates in the United States and/or other countries.

Not For Installation

E200 1/4

INTRASPIN®

Brochure

The FDA-cleared and CE marked medical device for the production of L-PRF®

BIOHORIZONS®

Don’t be fooled

Choose a medical device that is FDA-cleared and CE marked for the production of Leukocyte- and Platelet-Rich Fibrin.

- simple & economical[1]
- quality guarantee
- quick, three-step processing protocol
- up to 80% reduction in undesirable vibrations[2]
- high-quality, German engineering and manufacturing

Ordering information

The IntraSpin system components are FDA-cleared and CE marked and are optimized to ensure proper material biocompatibility and clinical performance.

IntraSpin® Centrifuge

The IntraSpin Centrifuge has a specific configuration and proprietary set of parameters. It has been calibrated and tested to ensure consistent separation of the blood into its proper segments for L-PRF.

LPRF110	IntraSpin System, 110 volts
	Includes centrifuge, Tissue Regeneration Kit and blood collection system

Tissue Regeneration Kit

The Tissue Regeneration Kit includes the Xpression® box which is engineered to optimize the final step in the fabrication of Leukocyte-and Platelet-Rich Fibrin. The weighted press is designed to express serum from the fibrin clot in a controlled manner and to form a thin compressed layer of L-PRF of a consistent thickness. A piston and cylinder assembly is used for the creation of L-PRF plugs. The instrumentation is also designed for mixing graft material into the L-PRF matrix.

BDTRKZ	Tissue Regeneration Kit

Includes items below:

CTRZ	Xpression Box
BSTFZ	Surgical Tissue Forceps
BSCSZ	Surgical Curved Scissors
BDBCZ	Dual Biomaterial Carrier Spatula
BDBPZ	Dual Biomaterial Packer
BSSSMTZ	Round Stainless-Steel Bowl
BRSSMTZ	Rectangular Stainless-Steel Bowl

BRACK	Test Tube Rack

Blood Collection System

The blood sample collection system has been developed for proper biocompatibility, collection and maintenance of the blood sample.

455092	Red Cap 9ml Serum Clot Activator, pack of 50
455001	White Cap 9ml No Additive Blood Collection Tube, pack of 50
450160	Greiner Safety Blood Collection Set + Holder, 21G, box of 24
BAT	Medical Tourniquet, latex-free
450241	Holdex Single Use Holder, box of 100

E200 4/4

12 CENTRIFUGE TECHNICAL SPECIFICATIONS

Model Type	IS220Z	IS110Z
Mains voltage (± 10%)	200 - 240 V 1~	100 - 127 V 1~
Mains frequency	50 - 60 Hz-	50 - 60 Hz
Connected load	100 VA	100 VA
Current consumption	0.5 A	1.0 A
Capacity	8 x 10 ml	
Maximum allowed density	1.2 kg/dm^3	
Maximum Speed (RPM)	6,000	
Force (RCF)	3,461	
Kinetic energy	750 Nm	
Set-up site	Indoors only	
Altitude	Up to 2000 m above sea level	
Ambient temperature for operation	5°C to 40°C	
Relative Humidity for operation	Maximum relative humidity 80% for temperatures up to 31°C, linearly decreasing to 50% relative humidity at 40°C.	
Excess-voltage category	II	
Pollution degree	2	
Device protection class	I	
	Not suitable for use in explosion-endangered areas.	
Emitted interference, Interference immunity	EN / IEC 61326-1, Class B	FCC Class B
Noise level (dependent on rotor)	≤ 50 dB(A)	
Centrifuge width	261 mm	
Centrifuge Depth	353 mm	
Centrifuge Height	228 mm	
Centrifuge Weight	approx. 9 kg	

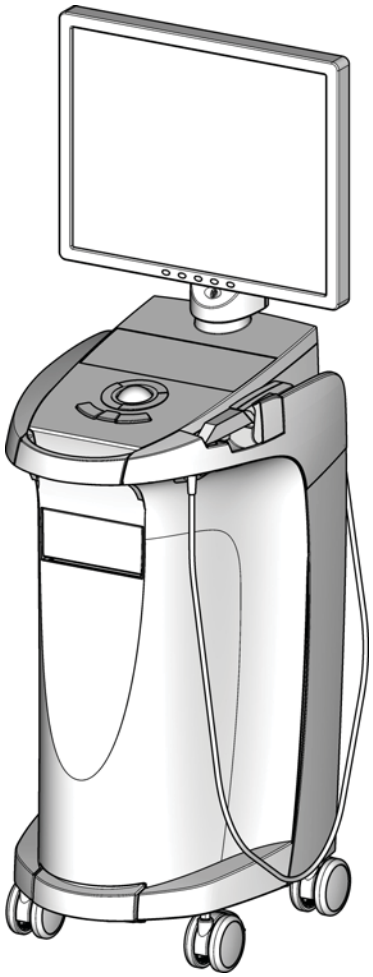
Suggested Acquisition unit at this time. Others are available and Owner may opt for a different model. Power connection will be similar for most any units that are in consideration. If Owner selects a model that requires greater power - a change in the field will need to be provided

sirona
The Dental Company

CEREC AC

Technical data

English



E201 2/4

1 Technical description

CAD system for high-precision intraoral optical impressions

- High-resolution, heated oral measuring camera (3D- camera) with removable prismatic tube (prismatic tube sterilizable with hot air)
- Integrated image processing
- High processing power due to state-of-the-art processor
- Trackball
- Hand and foot controlled enter keys
- Wipe-disinfectable membrane keyboard
- Hard disk
- DVD-R(W)/CD-R(W) drive
- Ethernet port
- USB port
- 1 integrated loudspeaker

High-resolution 3D intraoral measuring camera with control and image processing electronics

• Measuring technique:	active triangulation
• Pixel size:	28 µm x 28 µm
• Low-noise CCD sensor:	680 x 480 pixels (=326,400 pixels)
• Light source:	Blue LED, polarized, 470 nm
• Image acquisition:	Image control inside the camera
• Image acquisition:	16 MB ultrafast SDRAM
• Image processing:	Intensity measurement of 1.4 mil. pixels in 0.070 sec.
• Image data transfer:	Dependent on fast USB 2.0 standard

Monitor

- 19” TFT LCD flat display, true color, resolution SXGA (1280 x 1024 pixels)

E201 3/4

2 Technical data

Type designation	CEREC AC acquisition unit
~~Rated line voltage for Europe~~	~~230 VAC / 50Hz~~
~~Rated current for Europe~~	~~1.5 A~~
Rated line voltage for USA	115VAC / 60Hz
Rated current for USA	2,7 A
~~Rated line voltage for Japan~~	~~100VAC / 50Hz and 60Hz~~
~~Rated current for Japan~~	~~3,0 A~~
Type of protection against electric shock	Class I device
Type of protection against electric shock (Bluecam)	Type BF applied part 
Degree of protection against ingress of water	Ordinary device (without protection against ingress of water)
Operating mode	Continuous operation Battery-backed operation for 6 minutes
Storage battery pack for battery-backed operation	24 VDC / 2.5 Ah Sirona Order Number: 61 87 582 D3492
 Label: CAUTION	Observe accompanying documents

Requires 120V outlet for charging

Transport and storage conditions

Temperature	-25°C to 60°C (-13° F to 140° F)
Relative humidity	10% to 75%
Air pressure	700 hPa to 1060 hPa

E201 4/4

Operating conditions

Ambient temperature	10°C to 35°C (50° F to 95° F)
Relative humidity	30% to 85% No condensation
Air pressure	700 hPa to 1060 hPa

Dimensions and weight

Dimensions (WxHxD) in mm in inches	 350 x 1210 x 470mm 13¾ x 47 ⅝ x 18½“
Weight	
• without monitor and battery pack approx. • Monitor approx. • Battery pack approx.	38 kg (83.8 lbs) 4 kg (8.8 lbs) 2 kg (4.4 lbs)

CWTF15-3, PF (3 Lower Warmers)

E203 1/4

Height: 17.3" (43.9cm) Width: 16.4" (41.7cm) Depth: 21.4" (54.4cm)

- All stainless steel construction
- Hot water faucet (requires active plumbing connection)
- Pourover feature
- SplashGard® funnel deflects hot liquids away from the hand
- PROP 65 Warning Decal included in packaging with equipment
- Servers not included unless otherwise noted

Suggested Model provided by the Owner. Unit may be new or relocated - verify exact model. Provide 120V 20Amp Circuit & water connection

⚠ Server(s) sold separately

Agency:

UL LISTED NSF

Specifications

Product #: 12950.0212

Water Access: Plumbed

Finish: Stainless

Funnel: Black Plastic

Faucet: Upper

Warmers: Three Lower

Additional Features

Low Profile

Pourover Option

Electrical & Capacity

Volts*	Amps	Watts	Cord Attached	Plug Type	8oz cups/hr 236ml cups/hr	Input H²O Temp.	Phase	# Wires plus Ground	Hertz
120	13.9	1670	Yes	NEMA 5-15P	62	60°F (15.5°C)	1	2	60

*When a BUNN is machine rated 120/208-240V, 120/208V or 120/240V, the higher voltage is the supply voltage needed to power the machine. The 120V is there to supply power to some components rated 120V in the machine, but it is not the supply voltage and would not power the machine if the machine is marked with the before mentioned ratings.

Plumbing Requirements

PSI	kPa	Fitting Supplied	Water Flow Required (GPM)
20-90	138-621	1/4" Male Flare Fitting	-

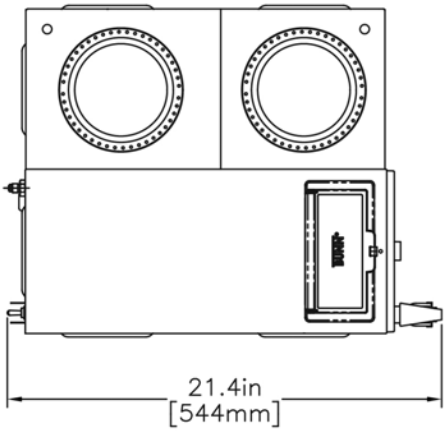
CAD Drawings

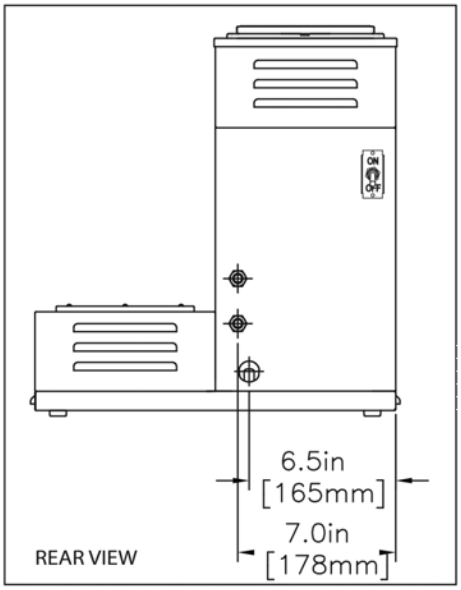
2D	Revit	KLC
●		

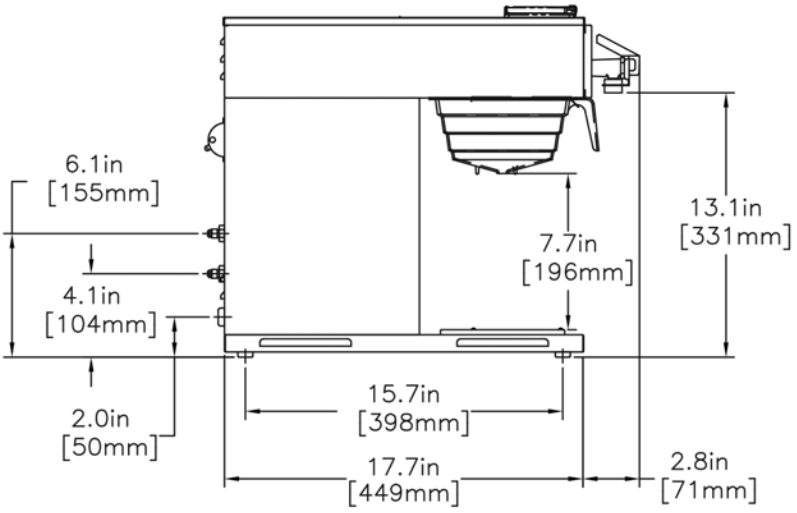
⚠ **WARNING:** This product can expose you to chemicals including Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

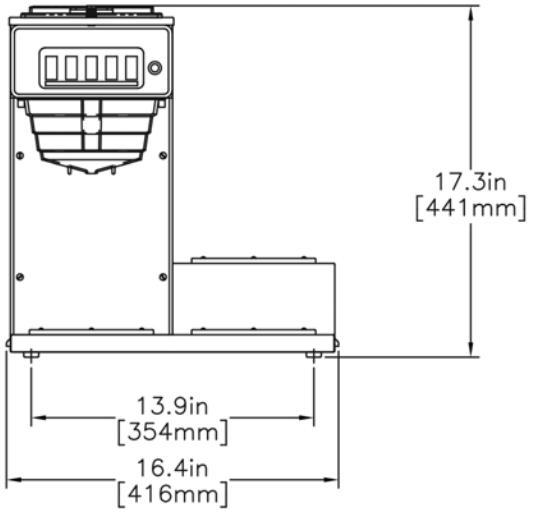
BUNN® reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment. For most current specifications and other info visit bunn.com.

Last Updated: 06/28/2021









	Unit			Shipping				
	Height	**Width**	**Depth**	**Height**	**Width**	**Depth**	**Weight**	**Volume**
English	17.3 in.	16.4 in.	21.4 in.	22.4 in.	19.9 in.	25.8 in.	39.350 lbs	6.643 ft³
Metric	43.9 cm	41.7 cm	54.4 cm	56.8 cm	50.5 cm	65.6 cm	17.849 kgs	0.188 m³

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Last Updated: 06/28/2021

Related Products & Accessories: CWTF15-3, PF (3 Lower Warmers)(12950.0212)

E203 3/4

FILTERS,REGULAR1M 500/2 50/CL

Product #: 20115.0000

FUNNEL W/DECALS, BLACK PLASTIC

Product #: 20583.0003

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Serving & Holding Options: CWTF15-3, PF (3 Lower Warmers)(12950.0212)

EASY POUR®,(BLK) 1/CS

Product #:06100.0101

EASY POUR®,(BLK) 2/CS

Product #:06100.0102

EASY POUR®,(BLK) 3/CS

Product #:06100.0103

EASY POUR®,(BLK) 6/CS

Product #:06100.0106

EASY POUR®,(BLK) 12/CS

Product #:06100.0112

EASY POUR®,(BLK) 24/CS

Product #:06100.0124

EASY POUR®,(ORN) 1/CS

Product #:06101.0101

EASY POUR®,(ORN) 2/CS

Product #:06101.0102

EASY POUR®,(ORN) 3/CS

Product #:06101.0103

EASY POUR®,(ORN) 24/CS

Product #:06101.0124

DECANTER,GLASS-BLK 12C 24/CS

Product #:42400.0024

DECANTER,GLASS-BLK 12CUP 1PK

Product #:42400.0101

DECANTER,GLASS-BLK 12C 3/CS

Product #:42400.0103

DECANTER,GLASS-ORN 12C 24/CS

Product #:42401.0024

DECANTER, GLASS-ORN 12 CUP 1PK

Product #:42401.0101

DECANTER,GLASS-ORN 12C 3/CS

Product #:42401.0103

BUNN® reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment. For most current specifications and other info visit bunn.com.

Last Updated: 06/28/2021

Symphony Plus™ ice and water dispenser

12 CI series countertop with Chewblet® ice machine

Shown with SensorSAFE™

agion® ANTIMICROBIAL PRODUCT PROTECTION

SensorSAFE infrared dispense (optional)

SensorSAFE not recommended for use with clear containers or for applications in direct sunlight

Model configurations			
Ice storage capacity	Dispense	Ice machine cooling	**Item number**
12 lb (5.4 kg)	Lever	air	**12CI425A-L**
	SensorSAFE	air	**12CI425A-S**

Ice-only available, add -I
Example: 12CI425A-LI

Ice production		
Temperatures air/water	**70/50 F (21/10 C)**	**90/70 F (32/21 C)**
Air-cooled	425 lb (193.0 kg)	325 lb (147.6 kg)
Energy consumption per 100 lb (45.4 kg) ice	N/A	6.0 kWh air-cooled
Water consumption	12.0 gal (45.4 L) of potable water per 100 lb (45.4 kg) of ice	

Features

Narrow, 16.12" (40.9 cm) width

12 lb (5.4 kg) ice storage capacity

Integral air-cooled ice machine with up to 425 lb (193.0 kg) daily production of Chewblet ice

- soft, chewable, compressed nugget ice is preferred over cubes[1] and is ideal for patient care
- Quiet Night™ sleep mode turns off ice machine when idle

Designed with sanitation in mind

- automatic self-flushing of ice machine removes impurities
- drain cup provides internal air gap for added protection of food zone components from drain line contaminants
- Agion® silver-based antimicrobial provides protection of key ice and water contact components[2]
- one-hand lever or SensorSAFE infrared ice dispense

Dependable design, easy to service and clean

- cleaning and sanitizing of entire machine takes only 1 hour
- LED control board provides at-a-glance machine status
- panels are easily removed for accessibility to all components
- ice machine parts are common across all Symphony Plus dispensers
- stainless steel evaporator and auger deliver long life

Environmentally responsible

- meets Consortium for Energy Efficiency Tier 2 specifications
- R404a refrigerant has zero ozone depletion potential
- continuous ice making process uses less electricity and water

Durable, attractive dispenser

- stainless steel cabinet with accent trim
- poly drain pan, grille and dispenser lid are corrosion-resistant

Easy installation

- comes fully assembled and installs with three easy connections – electric, water and drain

Warranty

- 3 years parts and labor, 5 years compressor parts

Accessories

Base stand with or without factory installed filter (refer to form# 7010)

4.00" (10.16 cm) leg kit (item# AF10LBLEGS)

Pressurized water sanitizing kits (refer to form# 6830)

SafeCLEAN Plus™ ice machine cleaner
6 x 8 oz (237 ml) bottles (item# 01149954)
Carton of 24 x 8 oz (237 ml) bottles (item# 01149962)

Nu-Calgon® IMS-III sanitizer, 16 oz (0.5 L) bottle (item# 00979674)

Additional filters (refer to form# 9905 and 8320)

Additional Symphony Plus accessories (refer to price list)

Job

Item

801 Church Lane | Easton, PA 18040, USA
1.800.523.9361 | 1.610.252.7301 | follettice.com

FOLLETT®

Specification

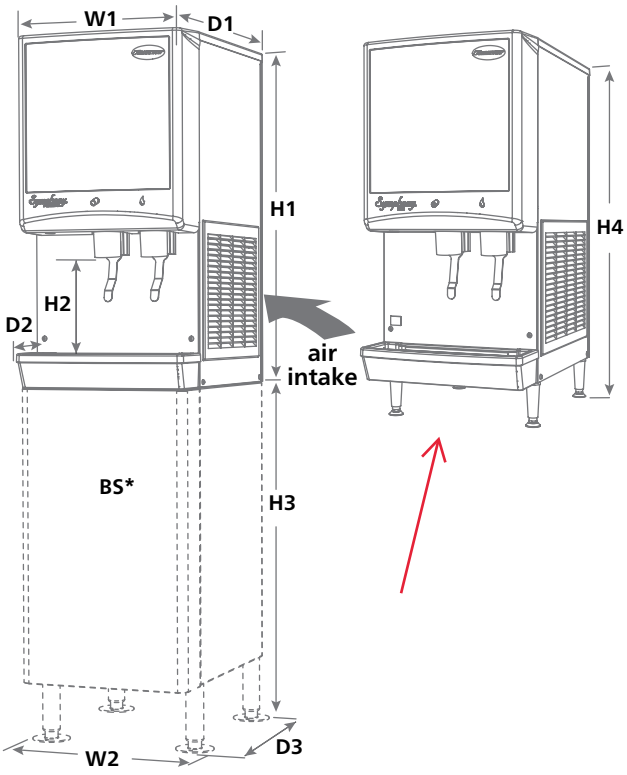
Ice storage capacity	12 lb (5.4 kg)
W1 Width	16.12" (40.9 cm)
W2 Width, base stand accessory	17.50" (44.4 cm)
D1 Depth, entire dispenser	23.50" (59.7 cm)
D2 Depth, drain pan	5.50" (13.97 cm)
D3 Depth, base stand accessory	22.00" (55.9 cm)
H1 Height, dispenser	32.50" (82.6 cm)
H2 Dispense height clearance	9.38" (23.83 cm)
H3 Height, base stand accessory	33.00" (83.8 cm)
H4 Height, leg kit accessory	36.64" (93.1 cm)
Ventilation clearance	6.00" (15.24 cm) top and right side
Service clearance	12.00" (30.5 cm) top
Utility connection location	through back or bottom
C1 115 V/60/1 electrical	11 amps, 0.8 kW 8.5' (2.6 m) cord w/ NEMA 5-15 90º hospital-grade plug
C2 Potable water inlet	3/8" FPT
C3 Drain	3/4" MPT
Air temperature	50 -100 F (10 - 38 C)
Water temperature	45 - 90 F (7 - 32 C)
Water pressure	10 - 70 psi (69 - 483 kpa)
Heat rejection	5000 BTU/hr
Approximate net weight	144 lb (65 kg)
Approximate ship weight	199 lb (90 kg)
Approximate ship weight, base stand accessory	80 lb (36 kg)

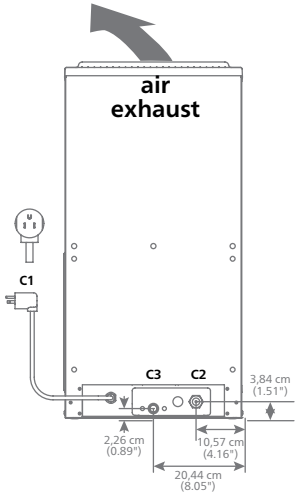
NOTE: For indoor use only

SHORT FORM SPECIFICATION: (Choose one) ___ Ice and water or ___ ice-only dispenser to be Follett® automatic load in countertop configuration, with 12 lb (5.4 kg) of storage and separate ice and water chutes. Environmentally responsible R404a air-cooled ice machine to have 24 hour production capacity of approximately 425 lb (193.0 kg) of Chewblet compressed nugget ice at water temp. of 70 F (21 C); air temp. of 50 F (10 C). Ice machine equipped with automatic self-flushing and Quiet Night sleep mode. Dispenser to have automatic bin level control to start and stop ice machine. Storage area insulated with CARB compliant non-HFC foam. 8.5' (2.6 m) cord and NEMA 5-15 90º hospital grade plug provided. NSF and ETL listed.

Suggested Model provided by the Owner. Unit may be new or relocated - verify exact model. Provide 120V 15Amp Circuit & water connection

Dimensional drawing





BS*– Base stand sold separately; measurements shown are with base stand legs at lowest position.

See dispenser detail sheet, form# 6675, for counter cutouts.

[1] Independent third party studies. Contact Follett for details.
[2] Disclaimer: Antimicrobial protection is limited to the treated components and does not treat water or ice.

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1.800.523.9361 | 1.610.252.7301 | follettice.com

E205 1/1

Southcentral Foundation Dental Clinic

Fireweed Building Renovation

Dental Equipment Cut Sheet

Item To Be Selected

Undercounter Refrigerator to be Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

E206 1/2

5002 Mobile Stand-On Scale

Durable. Long Lasting. Designed for Demanding Healthcare Environments.

- Versatile and ideal for high-traffic areas
- Low-profile platform and heavy-duty stainless steel handrail designed to help reduce fall risk

Configurations

5002-XP-B	Standard weight (lb/kg) (X), printer (P) and power adapter with hospital-grade plug (B)
5002-XX-B	Standard weight (lb/kg) (X), data port (X) and power adapter with hospital-grade plug (B)
5002-XX-X	Standard weight (lb/kg) (X), data port (X) and battery power (X)
5002-KP-B	Kg only (K), printer (P) and power adapter with hospital-grade plug (B)
5002-KX-B	Kg only (K), data port (X) and power adapter with hospital-grade plug (B)
5002-KX-X	Kg only (K), data port (X) and battery power (X)

Owner to select specific model

Welch Allyn®

E206 2/2

Specifications

Weighing Capacity	880 lb / 400 kg
Dimensions*	Width: 22” (55.88 cm) Depth: 28” (71.12 cm) Height: 60” (152.4 cm)
Platform	Low profile Width: 18” (45.72 cm) Depth: 19.5” (49.53 cm) Height: 1.5” (3.81 cm)
Resolution	0.1 lb / 100 gm
Readout	Digital LED display in pounds and kilograms (kilogram-only options available)
Power Source (Cordless)	6 D-size disposable alkaline batteries. Line cord available.
Gross Weight*	61 lbs (27.669 kg)
Warranty	One year
Weighing Mechanism	Electronic load cells
Successive Weighing	Allows weighing a continuous stream of patients without zeroing in between
Automatic Zero	Automatically returns to zero, ready for next patient
Weight Recall	Recalls last weight
Reweigh	Recomputes patient’s weight while patient is on scale
Computer Connectivity	RS-232 output (optional)
Low Battery Indicator	Indicates battery needs replacing
Audible Signal	Indicates weight reading is entered into memory
Optional Accessories	Integrated height gauge; wall-mount height gauge; printer; thermal printer paper; line cord power supply
Wheels	Heavy-duty rubber wheels
Printer	Built in for models 5002-XP-B and 5002-KP-B. Available as accessory for others. Paper tape, uses standard thermal paper.

*Weight and dimensions represent approximate values for box weight and dimensions.

Provide 120V outlet for flexibility

Contact us at scale-tronix@welchallyn.com
or visit www.welchallyn.com to learn more.

Welch Allyn, Inc.
4341 State Street Road
Skaneateles Falls, NY 13153 USA
(p) 800.535.6663 (f) 315.685.3361

WWW.WELCHALLYN.COM

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L&R ULTRASONICS

Quantrex®

Ultrasonic Cleaning Systems

Powerful, durable machines for effective cleaning

The Quantrex® line of Ultrasonic Cleaning Systems sets the standard for precision cleaning; providing versatility, durability and exacting results. Designed for countertop use, the Quantrex series is quiet, self-contained and offers a variety of sizes for every cleaning application, including instruments, parts and apparatus. A full line of accessories is available for all your cleaning requirements. When combined with L&R's premium quality ultrasonic cleaning solutions, Quantrex brand Ultrasonic Cleaning Systems are the superior choice…because clean matters.

- Quick and powerful cleaning
- Designed for countertop use
- Optional heater available
- Standard 60 minute timer
- Shipped complete with cover
- Equipped with a multi-directional stainless steel drain (excluding the Q90)
- ETL-CAN/US, CE approved
- ISO 9001-2008

Quantrex 310

L&R Manufacturing Company
577 Elm Street, P.O. Box 607
Kearny, NJ 07032-0607 USA
Tel: 201.991.5330 Fax: 201.991.5870
www.LRultrasonics.com info@LRultrasonics.com

because clean matters.

L&R ULTRASONICS

Quantrex®

Quantrex Q140 with Optional Basket

Ultrasonic Cleaning Systems for powerful, reliable and repeatable results

The Quantrex® product line is constructed with a stainless steel housing and tank, using only the best and most durable materials and workmanship. Each machine goes through a series of tests to ensure quality, making L&R the choice of professionals. Every Quantrex machine is backed by the most comprehensive warranty in the industry; all defects in materials and workmanship are covered for 2½ years.

Model *	Input Power Average Watts 117 VAC 60 Hz	Overall Dimensions (L x W x H)	Tank Capacity	Tank Internal Dimensions (L x W x H)
Quantrex 90 **	55 110 with Heat	7.0 x 6.4 x 8.8 in 17.8 x 16.2 x 22.2 cm	0.5 gal 1.9 L	5.9 x 5.4 x 4.0 in 14.9 x 13.7 x 10.2 cm
Quantrex 140	95 150 with Heat	10.3 x 6.5 x 8.3 in 26.0 x 16.5 x 21.0 cm	0.85 gal 3.2 L	9.4 x 5.4 x 4.0 in 23.8 x 13.7 x 10.2 cm
Quantrex 210	135 335 with Heat	12.8 x 7.0 x 11.0 in 32.4 x 17.8 x 27.9 cm	1.5 gal 5.7 L	11.8 x 6.0 x 6.0 in 29.8 x 15.2 x 15.2 cm
Quantrex 310 (No Heater)	320	16.5 x 10.0 x 12.1 in 41.9 x 25.4 x 30.8 cm	3.25 gal 12.3 L	15.5 x 9.0 x 6.0 in 39.4 x 22.9 x 15.2 cm
Quantrex 360	240 440 with Heat	12.8 x 10.5 x 14.3 in 32.4 x 26.7 x 36.2 cm	3.6 gal 13.6 L	11.5 x 9.3 x 8.0 in 29.2 x 23.5 x 20.3 cm
Quantrex 650	415 815 with Heat	21.8 x 13.8 x12.7 in 55.2 x 34.9 x 32.2 cm	6.50 gal 24.6 L	19.8 x 11.8 x 6.5 in 50.2 x 29.8 x 16.5 cm

L&R's Triple Warranty covers the entire unit for defects in material and workmanship for 2½ years.
The housing is warrantied for a period of 5 years and the tank-to-transducer bonding is covered for 10 years.

Quantrex Systems
– Shown with Heat

All systems operate at 43kHz.
All systems are available with international voltages.

* All models include timer, drain and cover. Heater available on most systems. Baskets and accessories sold separately.
** Quantrex 90 does not include drain.

because clean matters.

L&R Manufacturing Company
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Kearny, NJ 07032-0607 USA
Tel: 201.991.5330 Fax: 201.991.5870
www.LRultrasonics.com info@LRultrasonics.com

Product code: MAC.100.0517.R

QUATTROcare™ Plus

Maintenance (/en-us/handpieces-small-equipment/maintenance)

Handpiece Maintenance System

The user friendly QUATTROcare™ Plus handpiece maintenance system is designed to clean, lubricate and purge your instruments with the simple push of a button.

Simple operation and loading make the QUATTROcare Plus easy to use. Maintenance with the QUATTROcare Plus system means less wear, less repairs, less staff down time, smoother operation, and increased longevity of your handpieces.

The QUATTROcare Plus can be used for virtually all manufacturer's high-speeds, low-speed contra-angles, straight handpieces, air driven scalers, and air motors

Schedule A Demo (https://www.kavo.com/en-us/%23)

Details

- Up to four (4) handpieces or air motors are cleaned, lubricated and purged in the same cycle
- Flexible programming allows setting of total cycle time from 20–45 seconds per handpiece
- New Chuck Cleaning Adapter and Cycle for Chuck maintenance
- Can be used for virtually all manufacturers' handpieces, air-driven scalers and air motors
- Unique spray formula expands up to 300 times inside each handpiece, creating a highly effective cleaning foam
- QUATTROcare Plus reduces mishandling or insufficient care and maintenance
- Completely controlled cleaning and purging procedure

Technical Specifications

- 120V, 50/60Hz, 20 Amps electrical connection
- Simply connects to 1/4" airline (58 to 87 psi air pressure ideal (max 145 psi) built in automatic pressure regulator controls flow)

Dimensions

- Height: 15", Width: 13-9/16", Depth: 11-1/2"
- Weight: 22 lbs.
- Width with door ajar (right side — to exchange spray can): 16-15/16". Depth with flap open (front): 18-7/8"

Part No. 1008.3805

PROMOTIONS

E210 3/10

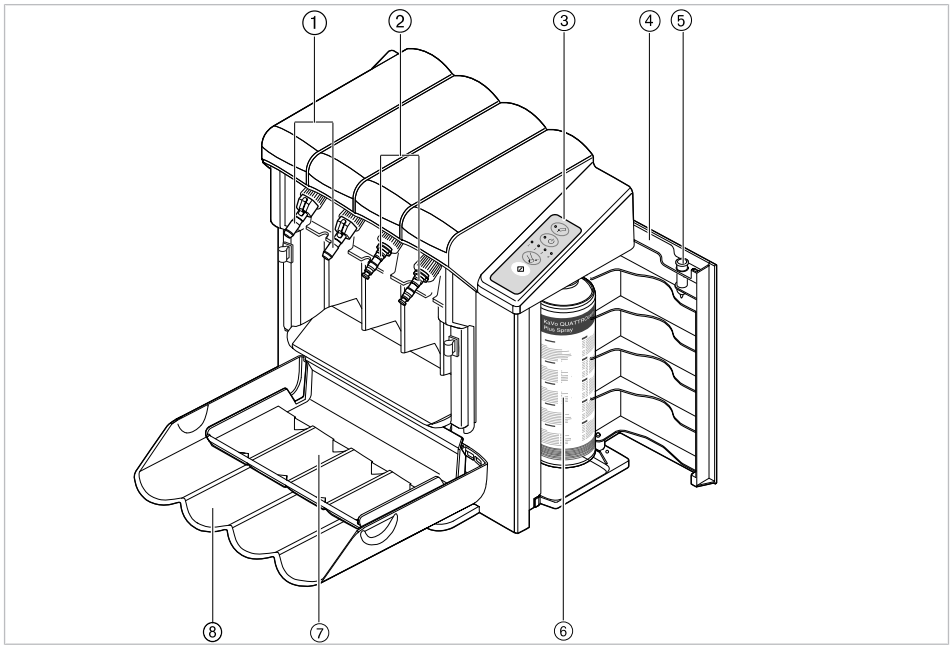
Instructions for use

QUATTROcare PLUS 2124 A - 1.008.3805

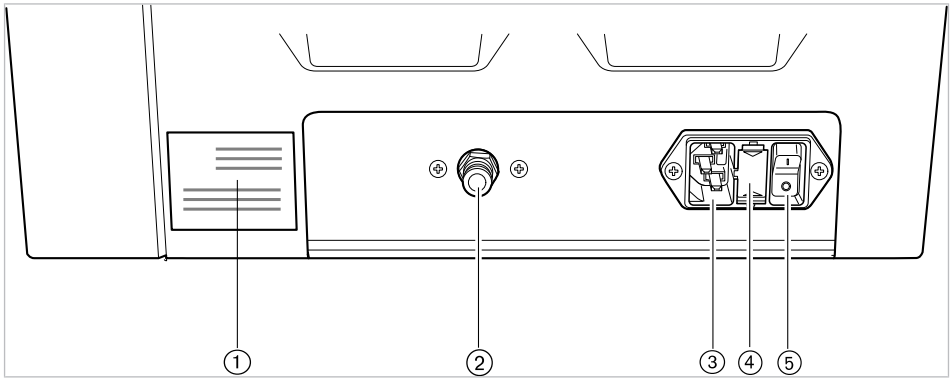
KAVO
Dental Excellence

E210 4/10

3.2 QUATTROcare PLUS 2124 A



① 2x INTRAmatic service couplings, short
② 2x MULTIflex service coupling
③ Control panel and display
④ Door of spray can chamber
⑤ Chuck service adaptor
⑥ QUATTROcare Plus Spray canister
⑦ Collecting pan
⑧ Front door



Back of QUATTROcare PLUS 2124 A

① Rating plate
② Compressed air connection
③ Input of mains voltage
④ Fuse
⑤ Main switch

3.3 Symbols on product and rating plate

The rating plate is attached to the back of the unit.

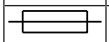
Accompanying documents

	Please note the electronic instructions for use
	Please note the instructions for use
	Please note the instructions for use
	Please note the instructions for use
	HIBC Code

Certification

	CE mark
	CSA mark
	EAC conformity mark (Eurasian Conformity)
	GOST R certification

Product characteristics

Type	QUATTROcare PLUS 2124 A
SN	Year of manufacture - serial number
REF	Catalog number
	Fuse-protected with T1000 mA
	Labeling according to 2002/96/EC

3.4 Technical Specifications

Device dimensions

Width	350 mm (1.15 feet)
Depth	230 mm (0.75 feet)
Height	380 mm (1.25 feet)
Weight	10 kg (22 pounds)

Electrical supply

Supply voltage	100 to 240 VAC
Supply frequency	50 or 60 Hz
Power consumption	41 VA
Overvoltage category	II
Supply voltage fluctuation	±10 %

Compressed air

Compressed air	0.4 to 0.6 MPa
Compressed air consumption	Approximately 50 NL/min
Air requirements	dry, oil free, dirt free, uncontaminated in accordance with EN ISO 7494-2

Operating environment

Temperature	15 to 40°C (59 to 104°F)
Humidity	25 to 90%
Pollution degree	2
Permissible up to	2000 m (6560 feet altitude)

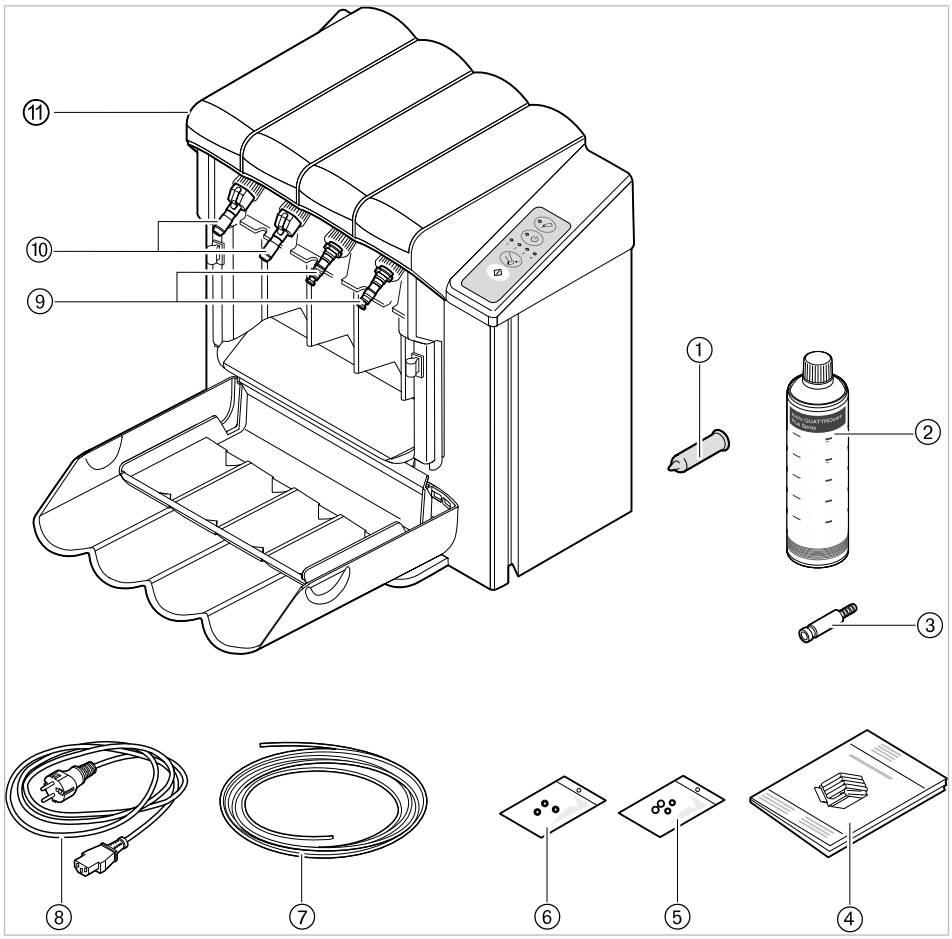
Transportation and storage conditions

Storage temperature	0 to 25°C (32 to 77°F)
Transport temperature	-18 to 40°C (-0 to 104°F)
Rel. humidity	5 to 95% non-condensing
Air pressure	700 to 1060 hPa

3.5 Scope of delivery

Note
The package includes the articles listed below. If any of these articles is missing, please contact the supplier immediately so that the missing article can be delivered.

Note
Configuration of US version:
INTRAmatic service coupling, short, 2x
MULTIflex service coupling 2x



① Chuck service adaptor
② QUATTROcare Plus Spray canister
③ Compressed air coupling
④ Instructions for use
⑤ O-ring MULTIflex (4 pcs)
⑥ O-ring INTRAmatic (3 pcs)
⑦ Compressed air hose
⑧ Power cable
⑨ Service coupling MULTIflex (2 pcs)
⑩ Service coupling INTRAmatic, short, (2 pcs)
⑪ QUATTROcare PLUS 2124 A

4 Startup

4.1 Select location

The QUATTROcare Plus Spray canister contains explosive propellant gases. You therefore need to comply with the following instructions and setup conditions when you set up the unit.

⚠ WARNING

Propellant gases of the QUATTROcare Plus spray can.

Combustible, flammable vapor/air mixtures may be produced during use. Risk of fire from overheating.

- Do not expose the product to direct sunlight.
- Do not place the product right next to a source of heat.
- Keep away from ignition sources, and do not use open fire close by.
- Ensure sufficient ventilation of the premises.

NOTICE

Danger of overheating.

Damage to and malfunction of the product.

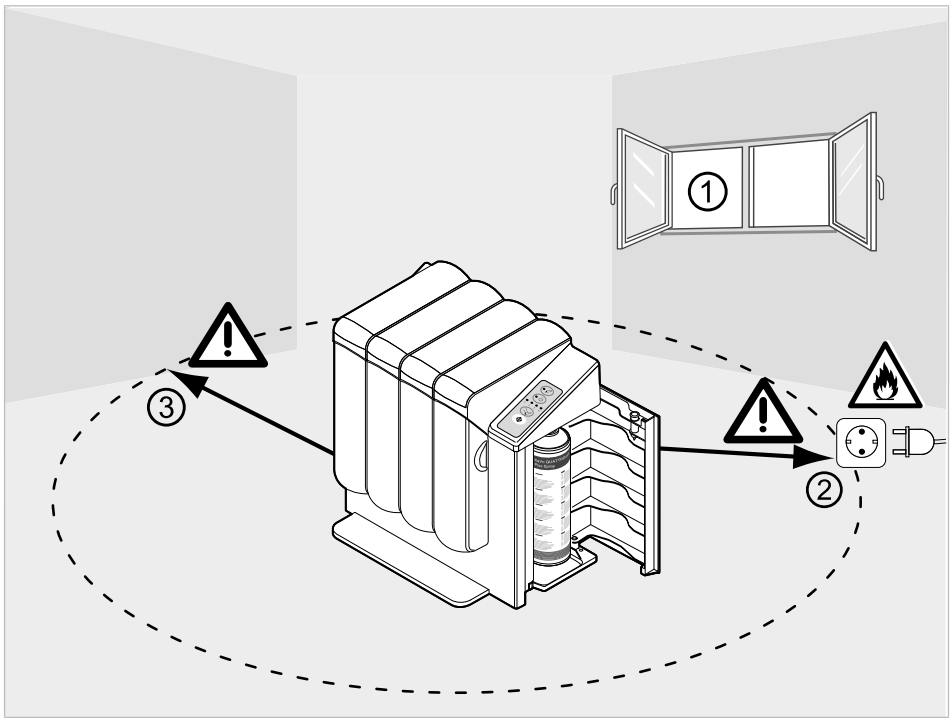
- Do not cover or obstruct the vents and openings on the product.
- Maintain a minimum distance of 20 cm (8 inches) between the product and the surfaces of walls or cabinets.

Note

Tests have demonstrated that the unit meets the requirements of EC Directive 2004/108/EC concerning electromagnetic compatibility. Even though the unit does not emit interfering radiation, other equipment (such as ultrasonic cleaners) can interfere with the unit. Keep the unit away from possible sources of interference.

Note

The unit must be set up on a flat, level surface that is insensitive to oil and water. The unit must not be set up or operated on an angled surface.



Installation requirements:

- It is mandatory to maintain a minimum distance of 20 cm (8 inches) ③ between the unit and wall or cabinet surfaces.
- Well-ventilated rooms ① are a suitable installation location. Do not expose to direct sunlight. Do not set up the unit in cabinets.
- Maintain a minimum distance of 50 cm (20 inches) ② from electrical plugs, light switches, and sources of ignition.
- Only operate the device in a clean environment such as that of a laboratory or dental practice.

4.2 Connecting the QUATTROcare PLUS 2124 A

NOTICE

Contaminated compressed air.

Damage to and malfunction of the product.

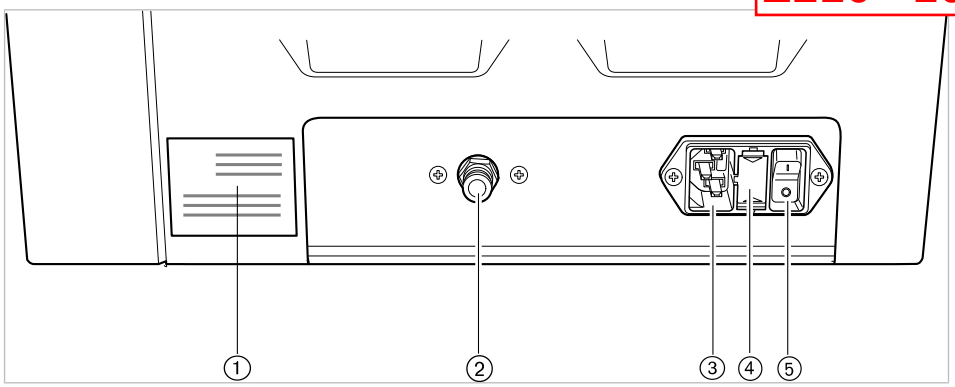
- ▸ Make sure that the compressed air is dry and free of dirt and oil according to EN ISO 7494-2.
- ▸ If needed, use a compressor with a dry air system, possible install an upstream air filter (on the compressor) or blow-out the lines before connecting them.

NOTICE

Use of power cables other than original KaVo parts.

Damage to or malfunction of the product.

- ▸ Use original KaVo power cables only (for material numbers, see chapter on "Consumables and tools").



Back of QUATTROcare PLUS 2124 A

A T1000 mA fuse ④ is installed in the insert.

- Plug the power cable into the electric socket ③.
- Plug the compressed air hose onto the compressed air connector ①.

Note
Compressed air hose must not be kinked.

- Turn the main switch ⑤ on.

4.3 Replacing the QUATTROcare Plus Spray can

⚠ WARNING

Use of servicing products other than original KaVo products.
The use of third-party products can shorten the product life, cause explosion, damage or malfunction.

- Always service KaVo products with original KaVo service products.

Note
KaVo advises explicitly that original KaVo service products must be used exclusively.
Only QUATTROcare Plus spray cans bearing a bar code may be used. The QUATTROcare PLUS unit checks if the original spray can is being used. If a spray can without a barcode or with a false bar code is inserted, the servicing device will indicate this as an error by means of a flashing LED.

See also:
7 Troubleshooting, Page 33

QUATTROcare plus Spray USA and Canada 2141 P, pack of 6 cans (**Mat. no. 1.005.4524**).

4.3.1 Inserting the spray canister

Wear safety goggles when you insert or replace the spray can. Please note the safety data sheet of the spray can.

STERIS®

RELIANCE® RACK RETURN MODULE

APPLICATION

The Reliance Rack Return Module allows washer accessories and manifold racks to be returned from the preparation and pack area to the decontamination room and facilitates movement of decontaminated items between the decontamination room and the preparation and pack area.

DESCRIPTION

The Reliance Rack Return Module is compatible with accesssories processed in Reliance® 444, 450 and 777 as well as Reliance®/Hamo® Synergy® and Vision™ Washers.

When a transfer cart interfaces with the rack return, an empty rack on the transfer cart is moved to the countertop, and then is pushed forward through the doors from the clean side to the soiled side. The rack is then moved from the rack return to the transfer cart.

Size (W x H x L)

- Counter Assembly:
  34-3/4 x 9 x 47"
  (883 x 229 x 1194 mm)
- Window Assembly:
  34-3/4 x 36-9/16 x 10-1/2"
  (883 x 929 x 267 mm)
- Doors:
  15-3/8 x 34 x 3/8"
  (391 x 864 x 10 mm)

Loading Height

Two loading heights are available when used with the Reliance Rack Return Module:

- 31" (787 mm) when used with the Reliance 444 and 450 as well as Reliance®/Hamo® Synergy® and Vision™ Washers.
- 36-5/8" (930 mm) when used with the Reliance 777 Washer

(Typical only - some details may vary.)

STANDARDS

Governing Directive for the affixing of the CE Mark:

- **92/59/EEC**, EC General Products Safety Directive.

FEATURES

Rack Return Module

- is designed to be compatible with any type of building wall: masonry, drywall, and the Modular Wall.
- is designed to fit into a standard rough opening, through 2-8" (51-203 mm) thick walls, without any special modifications.

Internal Reinforcement Frame

- is designed to withstand fully loaded racks up to 135 lb (61 kg) over a 24" (610 mm) square area.

The Selections Checked Below Apply To This Equipment

☐ Reliance Rack Return Module For Washers With Loading Height of 31" (787mm)
☐ Reliance Rack Return Module for Washers With Loading Height of 36-5/8" (930mm)

Item _____
Location(s)_____
_____

Door spring mechanism allows self-closing action, without human interface. Door spring system is designed to counter room pressure differential, to keep doors normally closed at all times. Locking devices can lock doors in a 90° open position.

Barrier Wall Flanges. Standard barrier wall flanges can be provided to aesthetically seal the wall opening between the rack return and the building wall, so no spaces or gaps remain.

Transfer Cart interface. Counter aprons act as a lateral blockage device for the Reliance Rack Return Module used with the Reliance 444 and 450 as well as Reliance®/Hamo® Synergy® and Vision™ Washers. Guidance blocks on both sides of the countertop act as a lateral blockage system for the Reliance Rack Return Module used with the Reliance 777 Washer.

ATS Interface. Both ends of the rack return are fully compatible with Reliance® ATS Automated Transport System non-powered, gravity-fed systems.

SCS Conveyor System. Both ends of the Reliance Rack Return Module (used with washers interfacing with SCS Conveyor System) are fully compatible with the SCS Conveyor System.

CONSTRUCTION

Countertop, legs, window outline, and filler panels are of 304 stainless steel (#4 finish).

Internal reinforcement frame is made of painted carbon steel.

Sliding guides, lateral guidance blocks, and bumpers are of UHMW (ultra high molecular weight) plastic.

Doors are of shock- and scratch-resistant, tinted polycarbonate plastic.

Locking devices are of 304 stainless-steel (#4 finish) rod.

NOTES

1. Gypsum wall must be reinforced with surrounding frame of 2 x 4" (51 x 104 mm) metal studs.

CUSTOMER RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

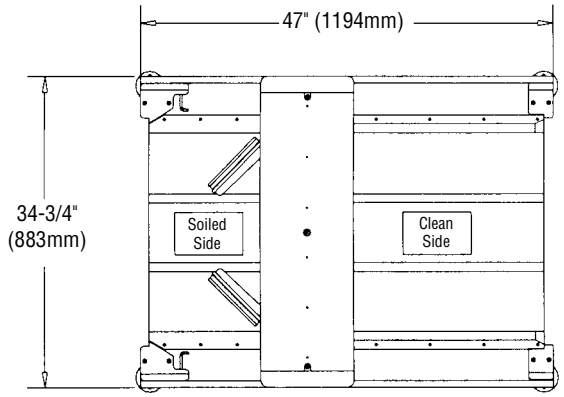
**STERIS Corporation,
Quebec, Canada is an ISO 9001 and
ISO 13485 certified facility.**

**The base language of this document is ENGLISH.
Any translations must be made from the base language document.**

ENGINEERING DATA

Washer Model	Model Loading Height	Maximum Shipping Weight	Maximum Shipping Dimensions (W x H x D)	Wall Opening (W x H x D)	Distance Above Finished Floor
Reliance Rack Return Module	31" (787mm)	235 lb (107 kg)	34-3/4 x 67-5/16 x 47" (883 x 1710 x 1194mm)	36-3/8 x 48-1/2" x depth of wall (924 x 1232mm x depth of wall)	20-1/4" (514mm)
Relaince Rack Return Module	36-5/8" (930)	235 lb (107 kg)	34-3/4 x 73-1/8 x 47" (883 x 1857 x 1194mm)	36-3/8 x 48-1/2" x depth of wall (924 x 1232mm x depth of wall)	25-5/8" (651mm)

Refer to the Following Equipment Drawing for Installation Details	
Equipment Drawing Number	**Equipment Drawing Title**
122-997-430	Reliance Rack Return Module

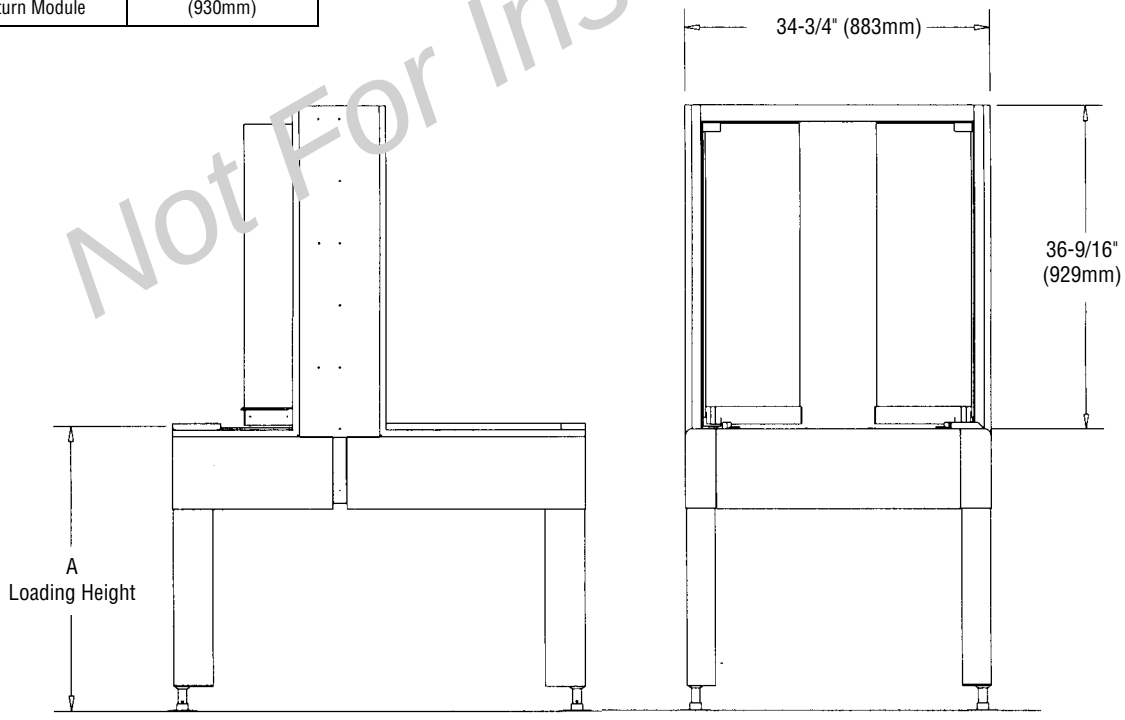


TOP VIEW

Loading Height

Model	A
Reliance Rack Return Module	31" (787mm)
Reliance Rack Return Module	36-5/8" (930mm)

Not For Installation



SIDE VIEW **FRONT VIEW**

For Further Information, contact:

STERIS®

STERIS Corporation
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Mentor, OH 44060-1834 • USA
440-354-2600 • 800-444-9009
www.steris.com

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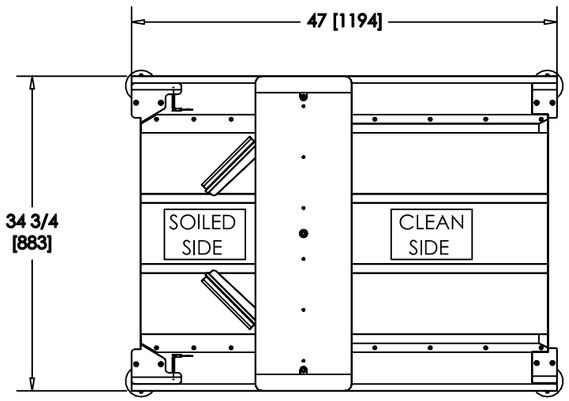
DWG. NO.	SHEET OF
122-997-430EN	1 OF 2

QUANTITY	PART NUMBER	ITEM NO.	MODEL	ENGINEERING CHANGE	REV NO	REVISION DATE
☒	122-997-430EN		Rack Return	TECH. MODIF. #04051	2.0	2004-03-04

E211 5/6

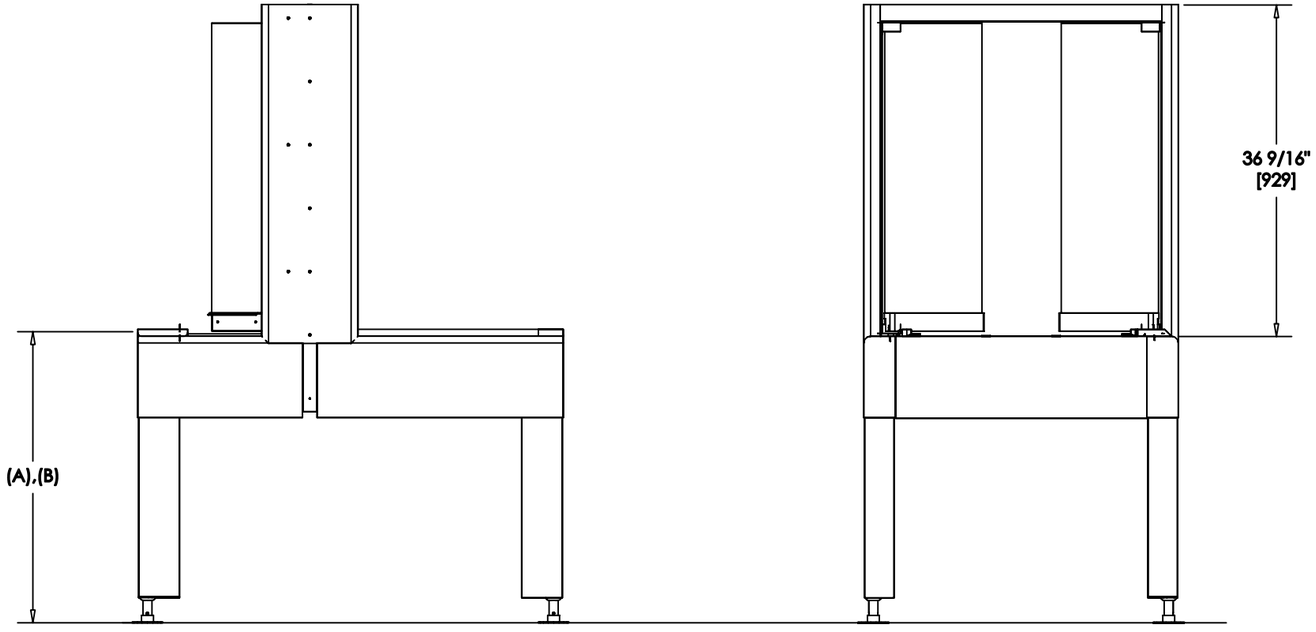


GENERAL NOTES:

1- ACCESSORY AND BARRIER WALL FLANGES ARE SHIPPED IN ONE (1) CRATE.

2- WALL ROUGH OPENING (W x H x D): 36 3/8" x 48 1/2" X DEEPNESS OF WALL [924 x 1232 x D]
AT 20 1/4 [514] ABOVE FINISHED FLOOR (444 VERSION)
AT 25 5/8 [651] ABOVE FINISHED FLOOR (430/777 VERSION)

3- GYPSE WALL MUST BE REINFORCED WITH SURROUNDING FRAME OF 2" x 4" [50 X 102] METAL STUDS.



NOTE:
(A) LOADING HEIGHT, 444 VERSION : 31 [787]
(B) LOADING HEIGHT, 777 VERSION: 36 5/8 [930]

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DWN.	CKD.	ENG.
MAG		
DATE 1996-10-30	DATE	DATE

TITLE: Reliance®
Rack Return Module

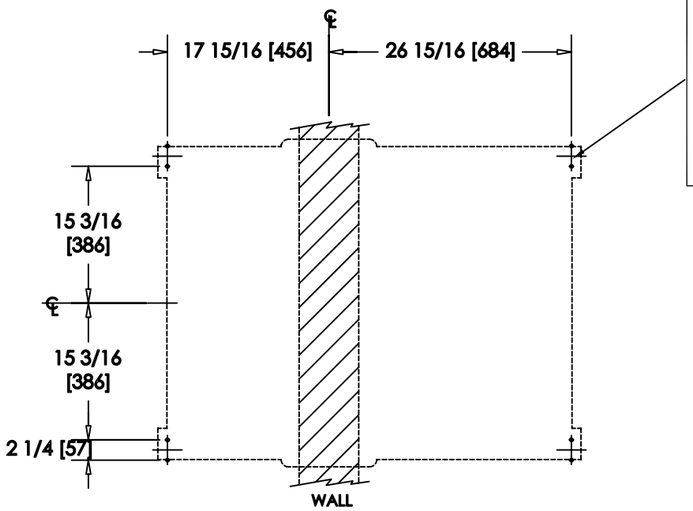
FIRST MADE FOR: Rack Return

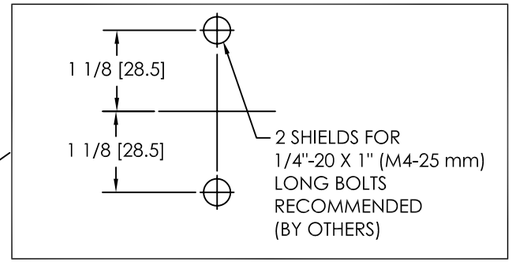
DWG. NO. 122-997-430EN | 1 SHEET OF 2

DWG. NO.	SHEET OF
122-997-430EN	2 OF 2

QUANTITY	PART NUMBER	ITEM NO.	MODEL	ENGINEERING CHANGE	REV NO	REVISION DATE
X	122-997-430EN		Rack Return	TECH. MODIF. #04051	2.0	2004-03-04

E211 6/6

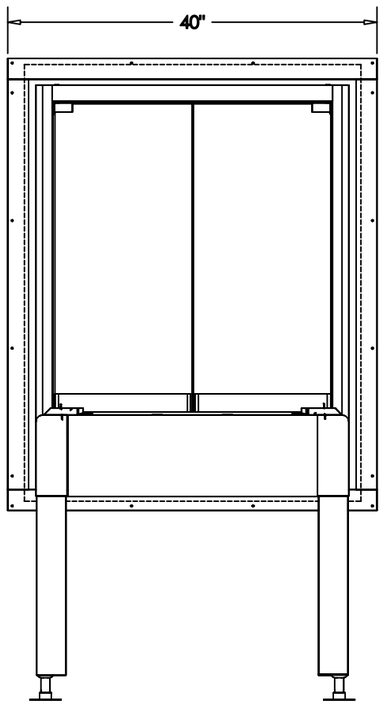


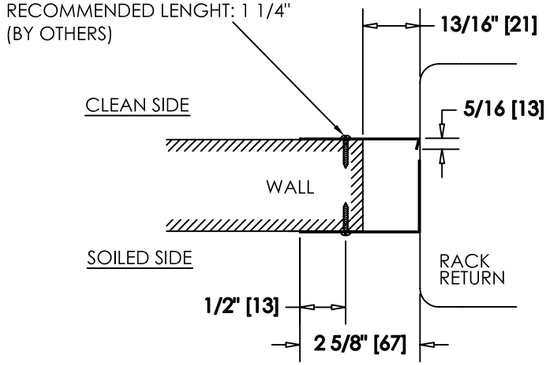


BARRIER WALL FLANGE DETAIL

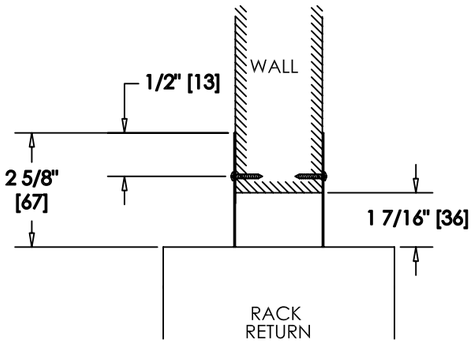
DYNAMIC UTILITY REQUIREMENTS CHART

DESCRIPTION	CONNECTION TYPE	CONNECTION SIZE	PRESSURE RANGE	OPERATING CONSUMPTION – Reliance® Rack Return Module 444	OPERATING CONSUMPTION – Reliance® Rack Return Module 777	NOMINAL TEMP.	AIR QUALITY	WATER QUALITY	COMMENTS
SHIPPING DIMENSION W x H x L AND WEIGHT				34 3/4 X 67 5/16 X 47 [883 X 1710 X 1194]	34 3/4 X 73 1/8 X 47 [883 X 1858 X 1194]				
OPERATING WEIGHT MAX W/LOAD				235 LBS [107 KG]	235 LBS [107 KG]				

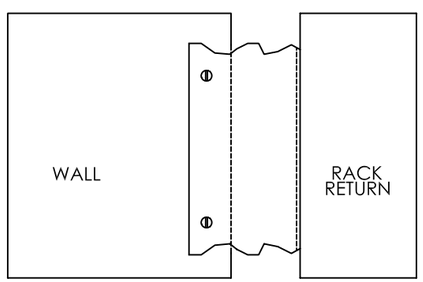




TOP VIEW CROSS-SECTION



LEFT SIDE CROSS-SECTION



FRONT VIEW

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DWN. MAG	CKD.	ENG.
DATE 1996-10-30	DATE	DATE

TITLE: Reliance® Rack Return Module

FIRST MADE FOR: Rack Return

DWG. NO. 122-997-430EN | SHEET 2 OF 2

AUTOCAD DWG.

Technology that'll make a splash in your practice.

- **Eliminates water contaminants**
  Vaporizes tap water to kill and remove 99% of most contaminants.
- **Protects your equipment**
  Aquastat produces the highly pure water necessary for autoclave sterilization in your office.
- **Fast distilling/energy efficient**
  Aquastat processes 3.78 litres (1 gallon) of distilled water in just 4.25 hours with very low power consumption.
- **Safe, clean water from any source**
  Whether your water source is spring fed, municipally piped, soft or hard, the Aquastat assures you of fresh, safe, clean water every time.
- **Portable and easy-to-use**
  No special wiring or plumbing required – just plug it in! And Aquastat is easily portable at just 4.5 kg (10 lb.).
- **Removable boiling chamber**
  For ease of use and cleaning.
- **Special heating base**
  A uniquely designed heating base reduces scale buildup.
- **New design**
  A new contemporary design compliments any office decor.

AQUASTAT

AQUASTAT

The cleanest water in a sea of technology

- Vaporization
- Condensation
- 99% Free of most contaminants

Weight:	4.5 kg (10 lb.)
Dimensions:	40.6 x 24.5 x 38.4 cm (L x W x H) (16 x 9 5/8 x 15 1/8")

A new wave breakthrough provides clean, fresh water

Protect your equipment by using only steam-process distilled water in your practice. SciCan's **AQUASTAT** distiller allows you to forget about buying expensive bottled water or risking damage to your equipment from poor quality distilled water. A patented energy saving design with unique distillation technology kills harmful bacteria and viruses by vaporizing water and then reconstituting it through condensation. The result is water that's 99% free of most contaminants.

AQUASTAT processes soft or hard water from any source including those that are spring fed or municipally piped. Simply plug it in, fill with tap water and switch on.

With its energy efficient technology, **AQUASTAT** processes 3.78 litres (1 gallon) of water in just 4.25 hours. Combine this fast process with a compact, light-weight design that doesn't require any special plumbing or wiring – and you'll have all the fresh water you need.

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Phone (416) 445-1600; Fax (416) 445-2727;
Toll-free 1-800-667-7733

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SciCan Dental | Your Infection Control Specialist™

SD-129/2-E 10M 9/09

Safety Precautions

Observe these safety precautions when using your water distiller.

- Read all instructions before using.
- Do not run distiller without water in the boiling chamber. Permanent damage to the boiling chamber could occur.
- Make sure the water bottle is properly placed, with its cap removed, on the base of the distiller chassis immediately after starting the machine.
- Do not remove the water bottle or the boiling chamber while the distiller is running.
- No part of the distiller should be moved while the distiller is in operation.
- Always allow the boiling chamber to cool before removing it from the distiller.
- Do not let the cord touch hot surfaces or hang over the edge of a counter or table.
- Do not use the distiller if it or its cord is damaged or not working properly. Return the unit to your authorized distributor for examination and/or repair.
- Avoid using extension cords.
- Do not immerse the distiller, boiling chamber, its cord or plug in any liquid. Do not place any component near a hot gas, electric burner or in a heated oven.
- This appliance is not intended for use by young children.
- Do not use the distiller outdoors.
- Use your distiller only for the uses described in these instructions.

WARNING: To prevent personal injury or property damage, read and follow the instructions and warnings in this Use and Care Guide.

Save these instructions

Safety Precautions (Continued)

Your distiller requires no special care other than cleaning. If servicing becomes necessary, please contact an authorized distributor. See the warranty on page 10 for service details. **Do not attempt to repair the distiller yourself**.

The product has a water production rate of 1 US gallon (4 L) per 4 hours and has the water storage capacity of 1 US gallon.

Model/Series #W10000. Production rate: 5.5 U.S. gallons per day

	Volts	Hertz	Watts
North America	120 VAC	60 Hz	750W
Europe	230 VAC	50 Hz	750W
Latin America	230 VAC	50 Hz	750W
Southeast Asia	230 VAC	50 Hz	750W
Japan	100 VAC	50/60Hz	750W

Electric Cord Statement

CAUTION: Your distiller has a short cord as a safety precaution to prevent injury or property damage resulting from pulling, tripping or becoming entangled with the cord. Do not allow children to be near this distiller without close adult supervision. If you must use an extension cord with this distiller, the cord must be arranged so that it will not drape or hang over the edge of a countertop or tabletop where it can be pulled on or tripped over. To prevent electric shock, injury or fire, the electrical rating of the extension cord you use must be the same as or more than the wattage of the distiller (wattage is indicated on the bottom of the distiller). Plug the distiller into a rated voltage AC grounded electric outlet ONLY (rated voltage found on bottom of the product). The cord has a three-prong plug which mates with a standard three-prong grounded wall outlet. Do not cut or remove the third prong from the plug. If an adapter is used, be sure the adapter wire and the wall outlet are grounded. If there is any doubt as to whether the outlet is properly grounded, check with a qualified electrician. Unplug the distiller when not in use.

CAUTION: To prevent personal injury or electric shock, do not immerse the distiller, boiling chamber, its cord or plug in water or any other liquid.

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Dimensions: 10.1″ H, 11.9“ W, 8.4″ D

Weight: 13 lbs, without supply

Display:

- LCD Color TFT with Resistive Touchscreen
- 7” Diagonal
- Resolution: 800×400 dpi (RGB)
- 262K Colors
- Six o’clock Viewing Angle (Sunlight Readable)
- Anti-Glare Hard Coating
- LED Backlight
- Brightness: 250 cd/m2
- Contrast Ratio: 400

Set-Up: Table-top, shelf, wall-mount

Power Supply: 100-240V AC, Internal

Real Time Clock (battery backed)

Memory:

- Marvell PXA320, 806 MHz processor
- 256MByte DDR SDRAM Memory

Sterile Processing

Labeling System for Sterile Processing.

SteriDate is a fully automated Sterile Processing Labeling System that replaces Label Guns and Pre-Printed Labels…eliminating human error handwriting mistakes and ensuring regulatory compliance!

All inclusive labeling system that encompasses all labeling requirements in Sterile Processing. Easy to use interface with NO operator input of data ensures 100% accuracy of critical information.

- **Customizable to the needs of your facility.**
- **Upgradeable to accept new applications and labeling requirements.**
- **Single and Dual printing options** with Thermal Transfer printers.
- **Sterilization Load Control Labeling** that improves legibility and replaces label guns.
- **Print Loaner Trays, Implant, Endoscope Reprocess and Rechargeable Battery Dating Labels** by simply tapping the label you need from the screen and selecting the amount of labels you need.
- **General Communication Labeling.**
- **Automated Dating Feature** automatically calculates your expiration dates/times ensures all labels are dated correctly.
- **Worry-free Safety and Compliance –** eliminate health code violations by improving labeling legibility and accuracy.
- **Over 1,600 programmable labels.**
- **Labels come in a selection of sizes and colors** and are made of an ultra-aggressive material that can be applied before any sterilization method or washer without fading or peeling off.

AMSCO® 7052HP

Single-Chamber Washer/Disinfector

E214 1/6

APPLICATION

The AMSCO 7052HP Single-Chamber Washer/Disinfector with touch screen control is intended for use in the cleaning and intermediate-level disinfection of soiled reusable simple hard-surfaced rigid surgical instruments (such as forceps and clamps), utensils (such as bedpans and urinals, trays, bowl, basin, kidney dishes), rubber and plastic goods, theatre shoes and other similar and related articles found in healthcare facilities.

DESCRIPTION

The AMSCO 7052HP Single-Chamber Washer/Disinfector is a cabinet-type mechanical washer that includes:

- Color touch screen control system and visual progress indicator
- Audible warning system with adjustable volume
- Space saving, power vertical sliding doors
- Eight factory-loaded (Instruments, Orthopedic Instruments, Utensils, Plastic Goods, Rigid M.I.S., Anesthesia / Respiratory Goods, Gentle and Decontamination) and up to 20 Custom cycles. Each cycle is effective, fast, energy efficient and may be customized (within allowed range of parameters) to meet specific operating requirements
- LED status indicator lighting
- Compact space saving footprint
- Conforms to seismic building code requirements
- Patented spray arm system providing entire chamber coverage
- 180 degree reverse installable

Preliminary Equipment Item - Owner to Select Final Model

SPECIFICATIONS

Configurations	Steam-Heated, Electric-Heated
Size (W x H x L)	**Operating dimensions:** 42 x 80-3/4 x 32" (1067 x 2051 x 813 mm) **Chamber dimensions:** 26-1/2 x 26-1/4 x 25-1/2" (673 x 667 x 648 mm)
Loading height:	31" (787 mm) above finished floor
Weight	**Shipping Weight:** Approximately 1400 lb (635 kg) **Operating Weight:** 1543 lb (700 kg)

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Utility Requirements	Refer to proper equipment drawing for installation details and specifications: **Electric-Heated Unit:** 10292222, 10292223, 10292224 or 10292225 **Steam-Heated Unit:** 10292218, 10292219, 10292220 or 10292221
Electricity	▪ 200 to 208 V, 60Hz (Steam) ▪ 200 to 208 V, 50 Hz (Steam) ▪ 380 to 400 V, 60 Hz ▪ 380 to 415 V, 50 Hz ▪ 460 to 480 V, 60 Hz

STANDARDS

The AMSCO 7052HP Single-Chamber Washer/Disinfector complies with the following standards:

As certified by Intertek:

- CAN/CSA-C22.2 No. 61010-1, 3rd Edition (R2017)
- CAN/CSA-C22.2 No. 61010-2-040 2nd Edition Dated 07/01/2016
- UL 61010-1, 3rd Edition (2012-05-11)

Governing Directive for the affixing of the CE mark:

- Medical Devices Directive 93/42/EEC as amended by 2007/47/EC
- Machinery Directive 2006/42/EC

Standards Applied to Demonstrate Conformity to the Directive:

- IEC 61010-1 3rd Edition (2012-05-11), EN 61326-1, 2013, IEC 61326-1 Second Edition (July 2012) and IEC 61010-2- 040:2015
- EN ISO 15883-1:2009+A1:2014, ANSI/AAMI ST15583-1:2009 and CAN/CSA-Z15883-1:09 (R2019) Washer-Disinfectors – General Requirements, Definitions and Tests
- EN ISO 15883-2:2009, ANSI/AAMI ST15583-2:2013 and CAN/CSA-Z15883-2-09 (R2019) Requirements and Tests for Washer-Disinfectors Employing Thermal Disinfection for Surgical Instruments, Anesthesia Equipment, Holloware, Utensils, Glassware, etc.

FEATURES

Vertical sliding power door:

- Door is constructed of double pane tempered glass to allow operator to view chamber interior with door closed.
- Color LED light illuminates top portion of each door to indicate machine status.
- Door is pneumatically activated using touch screens located on the control panel (one each side of unit) and is equipped with a built-in safety system.
- Each door is mounted on a compressed seal that reduces heat loss and increases heating capability.
- If a power failure occurs, door can be opened manually. A door interlock feature is provided to prevent cross-contamination.
- Unit can be configured in single- or double-door operation.

Stainless-steel pump is powered by a dual-speed motor. High pump speed provides equivalent capacity of a 14 hp (10.4 kW) motor, 165 U.S. gal/min at 196 ft (625 L/min at 60 m) head pressure. Low pump speed provides equivalent capacity of a 3.5 HP (2.6 kW) motor, 90 U.S. gal/min at 46 ft (341 L/min at 14 m) head pressure. Pump impeller is mounted directly on motor shaft and does not require additional bearings. Pump motor is equipped with a drip-proof frame, magnetic starter, overload protection and sealed bearings (not requiring periodic lubrication).

Pump, spray system and all recirculating piping are of **stainless-steel construction**.

Wash chamber:

- Constructed of 16-gauge, 316L stainless steel (No. 4 finish), argon-welded and polished. Chamber is of sanitary-type design (horizontal fixed surfaces are sloped, without overlapping sheet metal) for complete drainability and reducing hard-to-clean locations.
- **Single-walled, insulated construction** of chamber exterior reduces heat loss and noise level to the work area.
- **Rotary spray assemblies** are positioned (one at top and one at bottom of chamber, each measuring 24-3/8" [620 mm] long) to reach all load surfaces. Spray assemblies are easily removable without tools to aid in cleaning and maintenance.

Sump:

- Constructed of 316L stainless steel with 7.2 gal (27 L) capacity with **removable stainless-steel filter** preventing debris from entering pump and piping system.
- **Heating coil (steam or electric)** at the bottom of the wash chamber (sump) raises and maintains water temperature up to 185°F (85°C) during the Wash phase and up to 194°F (90°C) during the Thermal Rinse phase.

Chemical peristaltic injection pumps:

- Pre-Programmed cycles and pumps are optimized to use Prolystica® Ultra Concentrate (PUC) HP chemicals. Each ultra concentrated product is 10 times the concentration of a traditional product; so, 10 times less chemical is injected per cycle.

- Washer/Disinfector comes with one enzyme and one detergent injection peristaltic pump which automatically add a selected quantity of chemical from 1/40 to 2 oz/gal (0.2 to 16 mL/L).
- One pump is dedicated to automatically add a selected quantity of lubricant during Thermal Rinse phase.
- Pumps are positioned near chemical containers. A low-level sensor is included to indicate when detergent level is low, or when insufficient chemical is available for next cycle.
- 100' (30 m) extension tubes are included to pump chemicals from canisters installed in a remote location to unit.
- Control monitors volume of chemicals injected and indicates if this parameter meets specified criteria during all specific phases.

Top Utility Connections (except drain connections) facilitate installation. All utilities (including vent, steam, electric, water and compressed air) are connected on washer top. Top water injection gives a secure air gap of 31-1/2" (800 mm). Backflow preventers are not required for hot and pure water.

Front Service Panels provide easy access to piping, valves, electrical components and wiring. Unit can be configured as either a **Vented System** that exhausts chamber vapors to building exhaust system through 3.0" (76 mm) OD vent connection located at top of washer **or** as a **Non-Vented Drying System** where chamber vapors are exhausted through cold water condenser to facility room.

Drying System uses uniquely designed four-sided inflow drying pattern to produce high-flow air curtain. Air curtain provides broad, efficient, drying within wash chamber. Recycled and non-recycled air is manifolded and circulated through piping and accessory providing energy efficient system while ensuring complete chamber air coverage. Fresh air is drawn through a HEPA filter. Drying system includes a 3 hp (2.2 kW) blower, to remove vapor from chamber prior to opening doors, and three electric heaters totaling 11.4 kW to heat and maintain chamber air temperature. When Acu-Drying is selected, drying time self-adjusts to meet drying time of loaded rack and items.

Pure Water Stainless-Steel Supply Valve is supplied on washer/disinfector so **Pure Water Rinse Supply** may be used with factory programmed cycles and optional Acu-Rinse Reservoir.

Drain Discharge Cool Down ensures water drained at end of each phase, from chamber sump to building drain system, does not exceed 140°F (60°C). If water temperature in sump is higher than 140°F (60°C), cold water is automatically added to reduce temperature of water discharged into building drain system.

Sampling Valve is supplied in washer/disinfector recirculation piping for North American Customers that are not able to install sampling valves on facility supply lines near washer/disinfector.

Barrier Wall Kit Flanges for one wall (clean side) installation come standard. An optional kit to enclose second wall (dirty side) is also available (FD351).

Cycle Graph enables monitoring of injection volume, water circulating pressure and water temperature during a cycle. Graphs are visible during cycle and can also be displayed at cycle completion. Data can be exported using ConnectAssure Technology or USB port.

SAFETY FEATURES

Vertical chamber doors are equipped with an **obstruction sensor** to detect any door obstruction. If obstruction is present, door automatically opens.

The washer/disinfector is equipped with a **safety lockout feature** so a cycle cannot start unless the door is fully closed. If the door is opened during a cycle, all utility services to chamber are shut off, and the cycle stops.

Door interlock feature is provided to prevent cross-contamination. Door interlock feature allows only one door to be opened at a time whenever power is on. When the cycle is in process, door interlock prevents either door from being opened. Access to the load is then restricted.

Safety stop pushbutton(s), one on the load and one on the unload side, automatically stop all unit operation when pressed.

Building electrical supply disconnect switch must be used to shut off power to the unit before servicing.

CYCLE DESCRIPTIONS

NOTE: STERIS does not intend, recommend or represent in any way that this AMSCO 7052HP Single-Chamber Washer/Disinfector be used for the terminal disinfection or sterilization of any regulated medical device. AMSCO 7052HP Washer/Disinfector is intended only to perform an initial step in the processing of soiled, reusable medical devices. If medical devices contact blood or compromised tissues, such devices must be terminally processed in accordance with good hospital practices before each use in human patients.

Once treatment cycle is selected, washer/disinfector automatically processes load through standard phases (additional phases are included in certain treatment cycles depending on unit configuration) as described on Cycle Charts and in supplied Operator Manual.

AMSCO 7052HP Single-Chamber Washer/Disinfector enables Customers to use Dual Wash phase combining PUC HP enzyme and PUC HP detergent in the same filling which accelerates cycle time and reduces water consumption.

Custom cycles are available but must be validated by the Customer (not STERIS responsibility).

CONTROL SYSTEM

The AMSCO 7052HP Single-Chamber Washer/Disinfector is equipped with a touch screen Customer interface. This 8.4" (213 mm) color touch screen is mounted at eye level beside chamber door (both sides of unit) and tilted for better visibility, allowing easy monitoring of all wash cycles. Control system monitors and controls all phases of each programmed cycle.

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The control system features:

- Cycle selection is simplified through use of Icons representing devices and cycle confirmation (on-screen) to ensure correct cycle is selected.
- Service mode for preventive maintenance testing and to facilitate troubleshooting.
- Built-in service diagnostic program to permit system calibration and verification of component operations.
- Security lock-out feature that enables cycles and temperatures to be locked and unchangeable without proper access code.
- Cycle data is stored as a protection against power disruption. Data may be downloaded from controller using supplied USB ports.
- Permits operator to monitor current washer/disinfector status (including current chamber temperature, circulating pressure and time remaining in phase).
- Indicates any abnormal conditions with audible and visual alarm system.

INSTALLATION

The washer/disinfector is designed as a fully enclosed cabinet for freestanding or recessed installation. **Clearance between top of the unit and the ceiling must be at least 14" (356 mm)**.

If the system is recessed through one or two barrier walls, stainless-steel barrier flanges are included to provide a finished wall appearance.

Once installed, system is designed to allow for easy access for maintenance purposes.

All configuration modifications are available upon request. Contact STERIS to receive a quotation.

ACCESSORIES AND OPTIONS

Printer (FD094 or FD012), if provided, produces an easy-to-read printed record of whether load was properly processed at preset temperature, as well as a complete list of alarm and abort in-cycle messages. A paper out LED is included.

Acu-Rinse Reservoir (if equipped) pre-heats Pure Water for Rinse and Thermal Rinse phases significantly reducing cycle times. Constructed of 316L stainless steel.

Acu-Wash Reservoir recovers a portion of water used in Thermal Rinse treatment and stores it for use in Wash treatment of next cycle reducing overall cycle water consumption.

RAS Cycle (Robotic Assisted Surgery Cycle) (FD000057 or FD258) is used with RAS 12 Rack (FD256) for effective cleaning, rinsing, intermediate level disinfection and drying of reusable *da Vinci X/Xi* and *S/Si* EndoWrist[1] instruments.

Steam Condensate Return To Drain (FD353) allows for connection of steam condensate return outlet to drain when steam condensate return line is not available in building. Cold water is also injected in drain piping when condensate return water temperature is too high. Condensate return cool down keeps temperature in drain piping below 140°F (60°C).

Seismic Tie-Down Kit (FD354) includes a seismic report for proper installing and securing of washer to building floor. Unit is designed to comply with seismic building code.

Additional Chemical Pump (FD349; up to two pumps) is available, giving flexibility to wash with neutral process, alkaline process, or to vary chemical used, depending on load type.

Drain Acu-CoolDown (FD361) precisely injects correct amount of potable water into facility drain system, minimizing volume of cold water needed.

Offset Installation Air Management Kit (FD352) controls airflow at top of door assemblies.

ConnectAssure Data Export (CAT3030) exports XML cycle records from equipment to Customer tracking system.

ProConnect® Technical Support Services maximizes operational efficiencies with secure, Internet-based, real-time equipment monitoring. Data from Customer equipment is used by STERIS to provide pro-active Customer alert notifications, technical support and predictive maintenance. (ProConnect Technical Support Services is available in U.S. and Canada only.) Refer to Tech Data sheet SD983, PROCONNECT TECHNICAL SUPPORT SERVICES, for details.

PREVENTIVE MAINTENANCE

A global network of skilled service specialists can provide periodic inspections and adjustments to help ensure low-cost peak performance. STERIS representatives can provide information regarding annual maintenance programs.

NOTES

1. Machine segments (unit is bolted onto a wooden skid) are shipped in one cardboard carton (W x H x L): 50 x 91 x 42" (1270 x 2311 x 1067 mm).
2. Customer must ensure the washer/disinfector stands on a noncombustible floor (floor should be level).
3. Customer must provide utility connections with shutoff disconnects within 2' (0.6 m) of equipment perimeter and below ceiling deck or purchase Installation Kit from STERIS.
4. STERIS recommends vacuum breakers (not provided by STERIS) be installed on service lines, and disconnect switches (with lockout in OFF position; not provided by STERIS) be installed in electric supply lines near equipment.
5. For all ventilation ducting from the washer/disinfector, STERIS recommends installation of a dedicated, corrosion-proof, flexible watertight duct (3" [76 mm] OD) to the exterior of the building, sloped toward the washer/disinfector.
6. Minimum ceiling height for door removal is 94" (2388 mm).

1. *da Vinci® and EndoWrist® are registered trademarks of Intuitive Surgical, Inc.*

7. STERIS recommends illumination of the service area along with providing a convenience outlet for maintenance.
8. Noise level of 60.6 dB; Operating weight of 1543 lb (700 kg).
9. Unit is shipped with an Operator Manual. Maintenance Manual is available for purchase.
10. ConnectAssure Data Export requires an Ethernet drop and Ethernet connection within 10 ft of the equipment. The Customer must supply the network cable.

Refer to the Following Equipment Drawings for Installation Details	
Equipment Drawing Number	**Equipment Drawing Title**
Electric-Heated Configurations	
10292222	AMSCO 7052HP Electric heated, W/ Acu-Rinse Res., Unit flush to wall
10292223	AMSCO 7052HP Electric heated, W/ Acu-Rinse Res., Unit offset from wall
10292224	AMSCO 7052HP Electric heated, W/O Acu-Rinse Res., Unit flush to wall
10292225	AMSCO 7052HP Electric heated, W/O Acu-Rinse Res., Unit offset from wall
Steam-Heated Configrations	
10292218	AMSCO 7052HP steam heated, W/ Acu-Rinse Res., Unit flush to wall
10292219	AMSCO 7052HP steam heated, W/ Acu-Rinse Res., Unit offset from wall
10292220	AMSCO 7052HP steam heated, W/O Acu-Rinse Res., Unit flush to wall
10292221	AMSCO 7052HP steam heated, W/O Acu-Rinse Res., Unit offset from wall

Selections Checked Below Apply To This Equipment

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POWER[2]

- ☐ Steam-Heated Unit
- ☐ Electric-Heated Unit

VOLTAGE[2]

- ☐ 200 to 208 V, 60 Hz (Steam)
- ☐ 200 to 208 V, 50 Hz (Steam)
- ☐ 380 to 400 V, 60 Hz
- ☐ 380 to 415 V, 50 Hz
- ☐ 460 to 480 V, 60 Hz

ACCESSORIES[3]

- ☐ Impact Printer (FD094)
- ☐ Thermal Printer (FD012)
- ☐ Seismic Tie-Down Kit (FD354)
- ☐ Condensate Return To Drain (FD353)

Required - verify with floor structure

- ☐ Two-Level Manifold Rack with Equal Space (FD79-100))
- ☐ Three-Level Manifold Rack (FD74-900)
- ☐ Four-Level Single-Chamber Manifold Rack (FD75-000)
- ☐ Four-Level Manifold Rack (FD75-100)
- ☐ Five-Level Manifold Rack (FD75-200)
- ☐ Multi-Function Rack for Large Items (FD75-500)
- ☐ Multi-Function Rack for Small Items (FD75-600)
- ☐ General Purpose Basket (FD77-100)
- ☐ RAS 12 Rack (FD256)
- ☐ Self Docking Transfer Cart (FD199)
- ☐ Transfer Cart Adapter (FD209)
- ☐ Set of Dry Contacts (FD362)
- ☐ Handheld Bar Code Reader (FD363)
- ☐ Conductivity Probe (FD350)
- ☐ Additional Wall Flange (FD351)

- ☐ Installation Kit – Steam (FD088)
- ☐ Installation Kit – Electric (FD037)
- ☐ Additional Chemical Pump (FD349)
- ☐ Offset Installation Air Management Kit (FD352)
- ☐ IQ-OQ-PQ Protocols (FD359)
- ☐ Machine Identifier (11000866)
- ☐ Drain Acu-CoolDown (FD361)
- ☐ ConnectAssure Technology for Data Export (CAT3030)
- ☐ ProConnect® Technical Support Services (Remote Monitoring, Priority Technical Support, Customer Care Center Access, Equipment Performance Reports). Available in U. S. and Canada only. (GP09-167)

OPTIONS

- ☐ Acu-Rinse Reservoir (FD000054)
- ☐ Acu-Wash Reservoir (FD000055)
- ☐ 40-Amp Min Circuit Protection (FD000056)
- ☐ RAS Cycle (FD000057)

Item:	
Locations:	

For Further Information, contact:

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Mentor, OH 44060–1834 ▪ USA
440–354–2600 ▪ 800–548–4873
www.steris.com

The base language of this document is ENGLISH. Any translations must be made from the base language document.

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

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2. *Careful consideration must given to voltage selection prior to ordering. Later changes require substantial field modification.*
3. *Refer to SD867 for Material Handling Accessories. Refer to 10726323 for AMSCO® Top Enclosure Panels Accessories. Refer to SD857 for SCS Conveyor System Accessories. Refer to 10370003 for ATLAS WAV System Accessories.*

STERIS®

AL-2000 CHEMISTRY DELIVERY SYSTEM

APPLICATION

The AL-2000 Chemistry Delivery System provides an automated solution for delivering Prolystica® Ultra Concentrate Chemistries to Washer/ Disinfectors. The precision of the peristaltic pump design maintains accurate delivery of solution from1/40 to 1/10 oz/gal (0.2 to 0.8 mL/L) from distances up to 150 feet (45.7 m). Use this special delivery system on all Reliance and Hamo Washer/ Disinfectors, as well as on washer/disinfectors from other manufacturers.

DESCRIPTION

The AL-2000 is a high precision electronic delivery system designed exclusively for STERIS Prolystica Ultra Concentrated Chemistries. The system interfaces and delivers chemistries on all STERIS equipment and competitive washer/disinfectors.

SIZE (W x H x D)

AL-2002 - 2 Pump Delivery System

6-13/16 x 13-9/16 x 5-11/16" (172 x 336 x 145 mm)

AL-2003 - 3 Pump Delivery System

10-1/4 x 13-9/16 x 5-11/16" (260 x 336 x 145 mm)

STANDARDS

AL-2000 Chemistry Delivery System meets the applicable requirements for the following:

- **CAN/CSA - C22.2 No. 61010-1-04**
- **UL Standard 61010-1 (2nd Edition)**
- **CE Mark**

FEATURES

Unique microprocessor pump controller interfaces to the washer's chemical pump power outputs and low supply sensors through a customized washer interface module mounted inside the washer. Service friendly electrical connectors make washer interfacing simple and easy for the technician.

Precise speed controlled peristaltic metering pumps provide optimal accuracy for delivering ultra concentrated chemistries for any preprogrammed wash cycle. A simple calibration procedure requires calibration to 30 or 120 me per minute flow rates that enable precise washer control over delivery quantities.

(Typical only - some details may vary.)

Low supply audible alarm function at delivery system is also communicated to the washer through the washer interface module.

Bright pump signal LEDs illuminate whenever a pump signal from the washer is present. If the LED is not on, the pump will not operate and vice versa. Low supply sensor LEDs also indicate when the float switch on the low supply sensor senses a chemical container low level situation.

Pumps can dose in the default "relay" mode for STERIS equipment or "signal" mode for all other washers.

Typical AL-2000 Chemistry Delivery System configuration:

- Washer Interface Module (connects to washer pumps and level sensor inputs/outputs)
- Main Control with Pumps
- Low Wash Chemical Supply Sensors
- Three-Way Calibration Valve with Chamber Injection Tubing
- Delivery Station Protective Wire Duct
- Separate Install Kit, including Chemical Feed Lines and Signal Cable

The Selections Checked Below Apply To This Equipment

CONFIGURATIONS

- ☐ AL-2002 - 2 Pump Delivery System
- ☐ AL-2003 - 3 Pump Delivery System

ACCESSORIES

- ☐ Prolystica Ultra Concentrate Enzymatic Cleaner
- ☐ Prolystica Ultra Concentrate Neutral Detergent
- ☐ Prolystica Ultra Concentrate Alkaline Detergent
- ☐ Prolystica Ultra Concentrate Lubricant

Item _____

Location(s)_____

_____

ACCESSORIES

Prolystica® Ultra Concentrate Enzymatic Cleaner: Provides superior cleaning performance against blood, mucous and the most challenging fatty soils, with a dual enzyme system that works exceptionally well within a range of water qualities and types. Use dilutions from 1/40 to 1/10 oz/gal (0.2 to 0.8 mL/L).

Prolystica® Ultra Concentrate Neutral Detergent: Built-in corrosion inhibitors protect instruments and prolong washer life, while chelating and sequestering agents protect instrumentation and enhance cleaning performance within a broad range of water quality and type. Use dilutions from 1/40 to 1/10 oz/gal (0.2 to 0.8 mL/L).

Prolystica® Ultra Concentrate Alkaline Detergent: Exceptional cleaning with built-in corrosion inhibitors and chelating and sequestering agents to protect instruments and cleaning performance, over a broad range of water quality.

Prolystica® Ultra Concentrate Lubricant: This special formula is non-silicone based so steam or EO sterilization steps are not compromised. Use dilutions from 1/40 to 1/10 oz/gal (0.2 to 0.8 mL/L).

UTILITY REQUIREMENTS

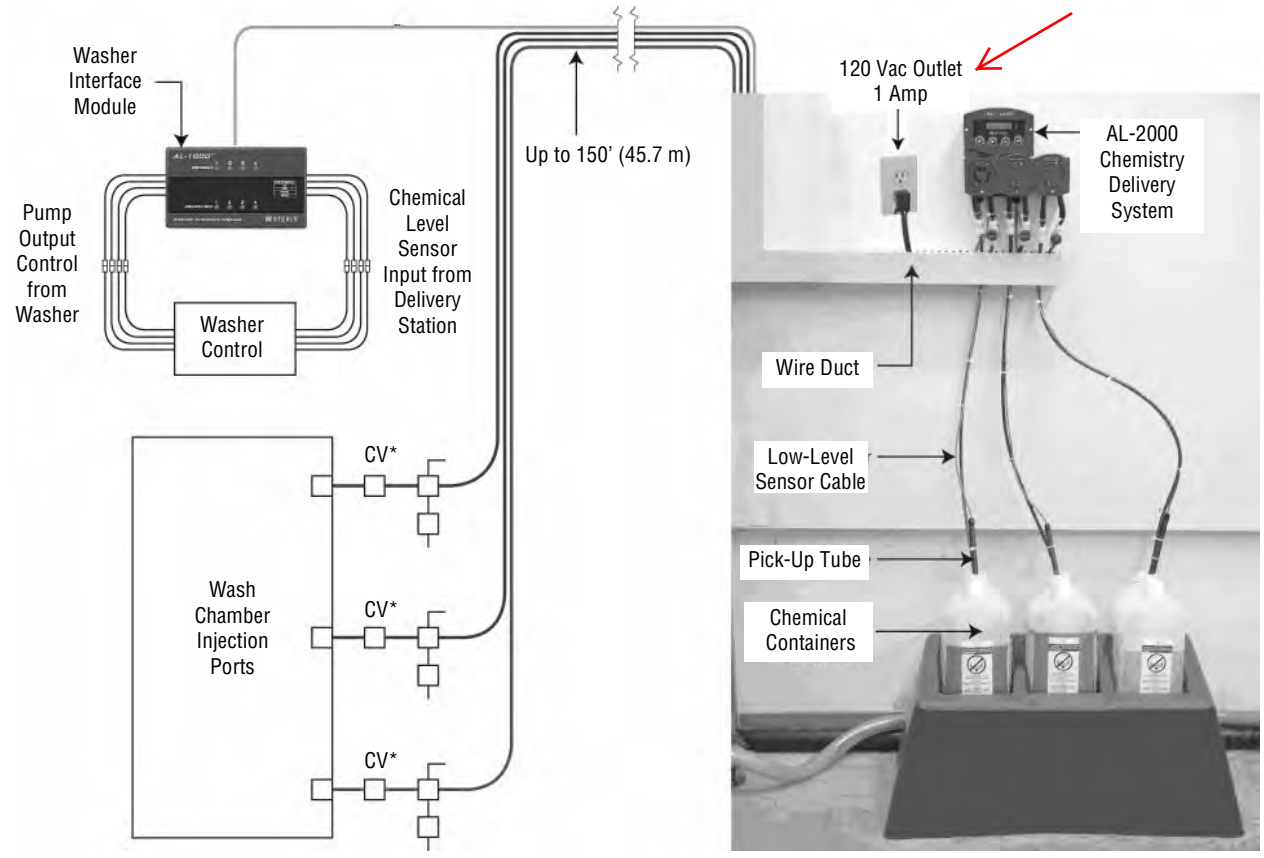
120 Vac 1.0 Amp Receptacle with Ground.

NOTES

1. Delivery system to be within four feet (1.2 m) of power outlet. MUST BE 120 Vac 1.0 AMP CAPACITY GROUNDED.
2. Delivery System should be mounted no more than five feet (1.5 m) off the floor.
3. Delivery System to be mounted above Prolystica containers.
4. Use wire ducting to channel all tubing, power cord and communication cable.
5. Low Level Sensors to be tie wrapped to chemical suction tubing.
6. Cable and tubing between washer and delivery system supplied separately. Customize lengths as required on site.

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL, STATE AND NATIONAL CODES AND REGULATIONS.

The base language of the document is ENGLISH. Any translations must be made from the base language document.

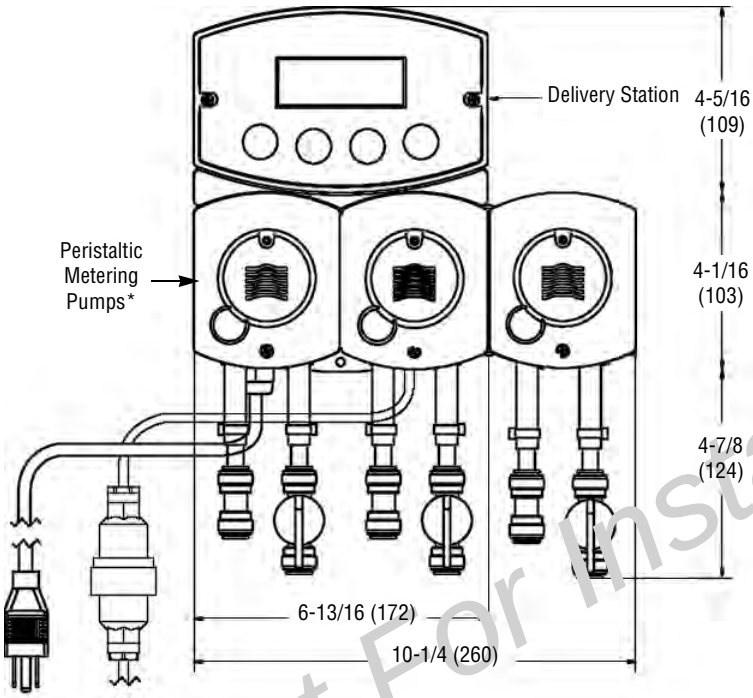


**NOTE: For the Prolystica AL-2000 Chemistry Delivery System, the control valves (CV, 12Vdc) have an extra cable (Control Valve Cable, not shown) that runs alongside the communications cable.*

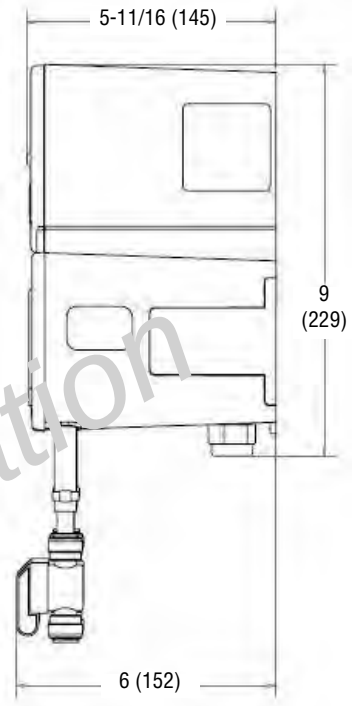
Reference the following equipment drawings for installation details.	
Equipment Drawing Number	**Equipment Drawing Title**
129393-281	AL-2000 Chemistry Delivery System

Dimensions are in inches (mm).

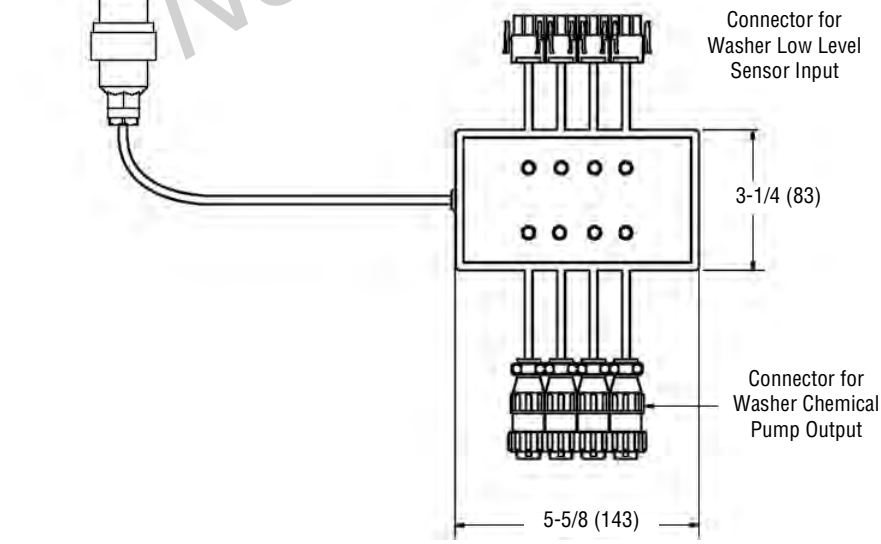
Dimensions are typical.
Drawing is not to scale.



FRONT VIEW



SIDE VIEW



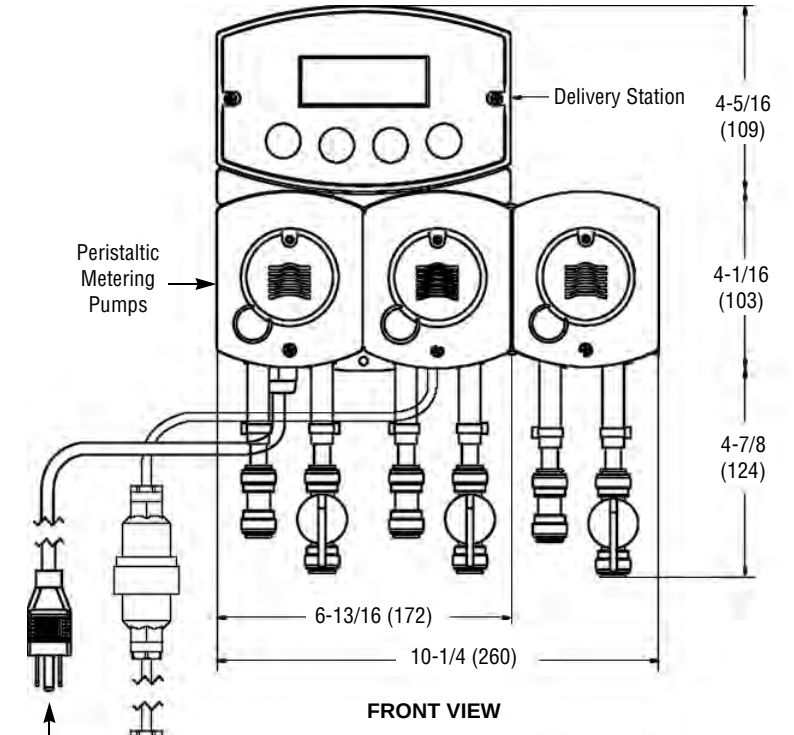
WASHER INTERFACE MODULE

* AL-2003 Chemical Delivery System Shown

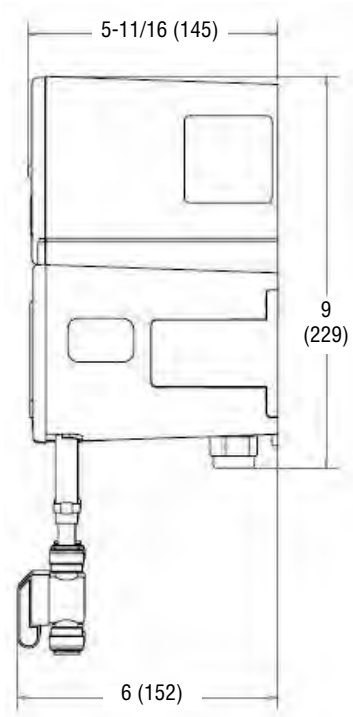
Not For Installation

DATE: 07-13-11 DRAWN BY: TM CHECKED BY: AK & AH

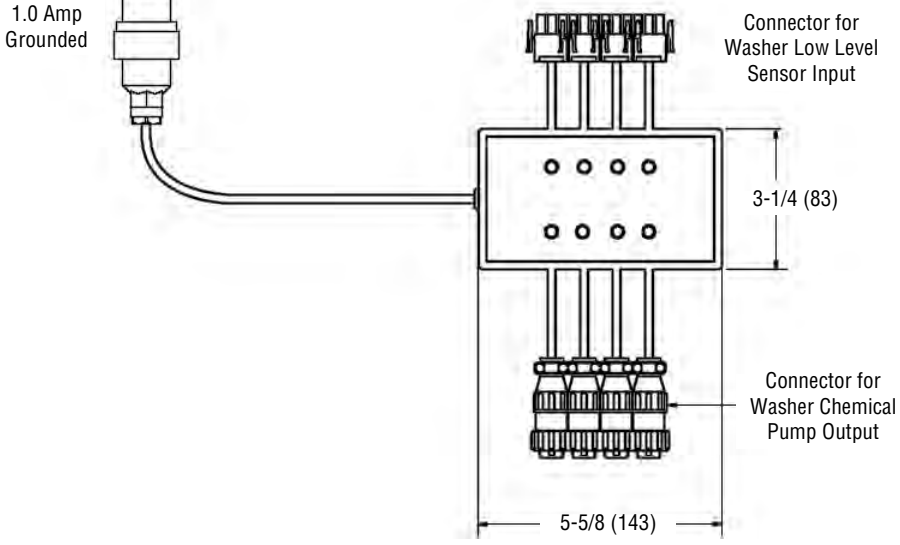
E215 4/8



FRONT VIEW



SIDE VIEW

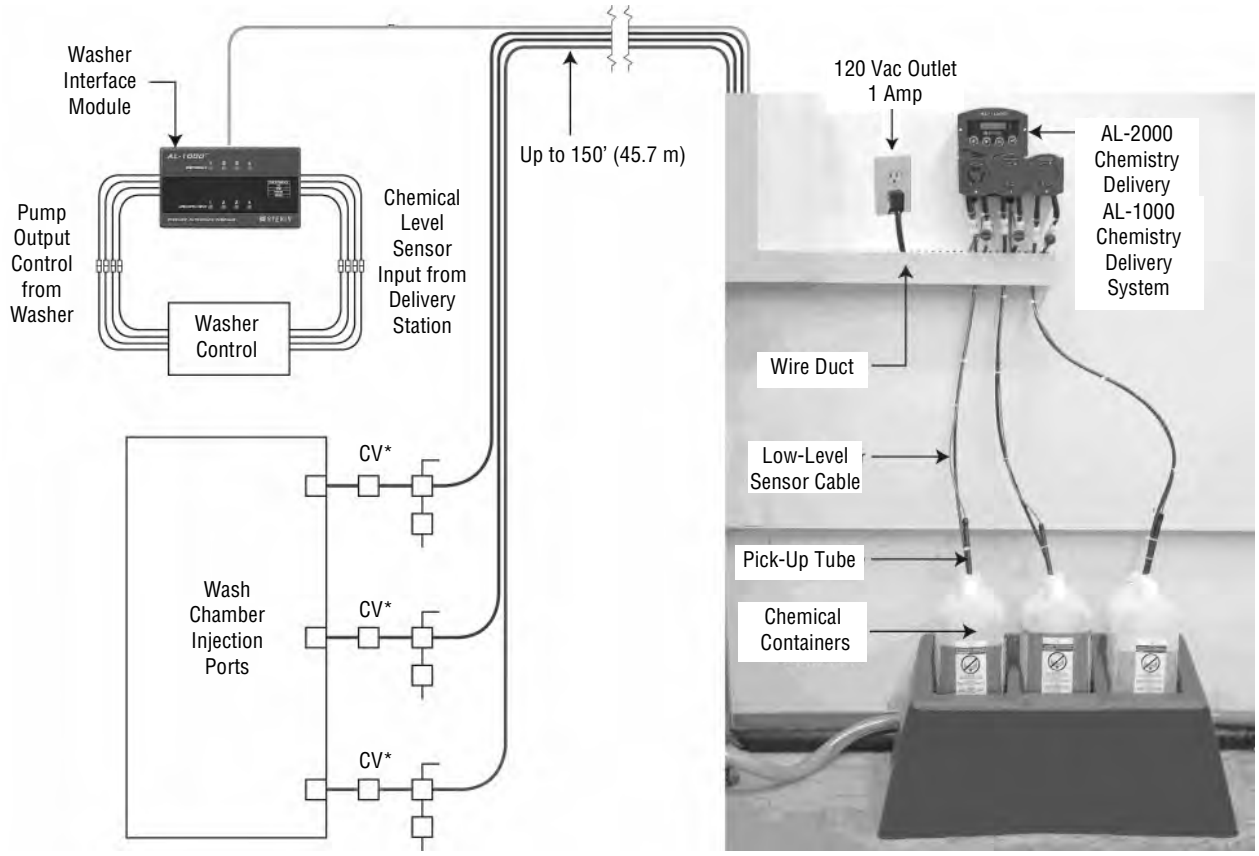


WASHER INTERFACE MODULE

SHT. 1 OF 5

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)		AL-2000 CHEMISTRY DELIVERY SYSTEM	EQUIPMENT DRAWING NO. 129393-281
STERIS®	STERIS Corporation Mentor, OH	GENERAL INSTALLATION LAYOUT DWG.	ITEM _____ LOCATIONS _____

DATE: 07-13-11 DRAWN BY: TM CHECKED BY: ZD & AP



**NOTE: For the Prolystica AL-2000 Chemistry Delivery System, the control valves (CV, 12Vdc) have an extra cable (Control Valve Cable, not shown) that runs alongside the communications cable.*

Notes:

1. Delivery system to be within four feet (1.2 m) of power outlet. MUST BE 120 Vac 1.0 AMP CAPACITY GROUNDED.
2. Delivery System should be mounted no more than five feet (1.5 m) off the floor.
3. Delivery System to be mounted above chemical containers.
4. Use wire ducting to channel all tubing, power cord and communication cable.
5. Low Level Sensors to be tie wrapped to chemical suction tubing.
6. Two Delivery Systems per set of chemical containers.
7. Cable and tubing between washer and delivery system supplied separate. Customize lengths as required on site.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)		AL-2000 CHEMISTRY DELIVERY SYSTEM	EQUIPMENT DRAWING NO. 129393-281
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DATE: 07-13-11 DRAWN BY: TM CHECKED BY: ZD & AP

TOOLS AND MATERIALS NEEDED

- Flat and Phillips screwdrivers. One screwdriver needs to have a long 8" (20 cm) shank to reach the bottom mounting screw on the dispenser
- Drill and drill bits. Use a 3/16" Masonry or standard bit depending on wall surface
- Wire cutters, wire and cable strippers, and channel locks
- Tubing Cutter
- Wire terminal connectors and a crimping tool
- Voltmeter (or multi-meter)
- Dry wall anchors and mounting screws
- Colored 3/8" Poly tubing
- AL-2000 communication cable (no substitutes)
- Chemical container holder
- Plastic 3" wire ducting

PRE-INSTALLATION CHECK

1. Check all applicable plumbing and electrical codes before installation.
2. Obtain wiring schematic of washer/disinfector.
3. Check that washer/disinfector is functioning properly.
4. Suitable 120 Vac electrical outlet with 1.0 amp per three pump dispenser (0.5 amp per pump)

INSTALLATION INSTRUCTIONS

1. Prior to installing delivery system verify chemical tubing from washer and communication cable routes are free of obstructions and less than 150 ft (45.7 m) between washer and delivery system. Verify local facility compliance for routing of chemical lines and cable in concealed ceiling spaces.
2. Measure appropriate lengths of cable and chemical tubing from each delivery system to each washer allowing an extra eight feet (2.4 m) from the top of the washer and two feet (0.61 m) at the delivery systems.
3. Locate 120 Vac power outlet and mount delivery system within four feet (1.2 m) (unless power strip used).
4. Use supplied paper mounting template (part number P755718-166) to position system on the wall, mark mounting hole locations. Use level to ensure unit is correctly positioned.
5. Level Sensors from delivery system must reach bottom of chemical containers from where system is installed.
6. For drywall or porous wall surfaces use #10 x 1" wall anchors and screws supplied with the system. For stainless steel or other hard surfaces use appropriate mounting screws.
7. Use a 3/16" masonry bit for concrete/block walls or standard drill bit for drywall surfaces.
8. Insert wall anchors ensuring they are secure enough to hold the weight of the system.
9. Remove mounting bracket from accessory kit and mount to wall. Align delivery system to bracket and drop into position. Press down firmly to fully "nest" the unit in place.
10. Install bottom mounting screws to prevent unit from coming off the wall.
11. Position/Install plastic wire ducting furnished and cut to the proper length for one or more delivery systems. Wire ducting should be mounted underneath unit approximately 6" (152 mm) from the bottom of the unit.
12. Disassemble communication cable connector housing to expose terminals and cable connections. Unplug internal connectors from each other.

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STERIS®	STERIS Corporation Mentor, OH	GENERAL INSTALLATION LAYOUT DWG.	ITEM _____ LOCATIONS _____ _____

13. Take communication cable coming from washer, remove insulation and strip four wire leads.
14. Connect four wire leads to spare cable connector/housing from service kit. Match wire colors accordingly (red/red, black/black etc.) and connect to mating delivery system connector.
15. Tubing and communication cable runs should be placed in wire ducting and routed above delivery systems up to ceiling (and into ceiling where required). All cable and tubing near the work area should be neatly and safely tucked away in the wire ducting.
16. Position the chemical container holder below the delivery system. Ensure the level sensors can reach the bottom of the chemical containers.
17. Cut 3/8" O.D. chemical tubing for the suction (left) side of each pump to the appropriate length to the reach bottom of chemical container.
18. Insert tubing into "quick connect" fittings pushing inward until tubing "stops". Ensure tube ends are cut square and no jagged ends that could result in leaks. Tubing color codes are:
    - » Red = Enzyme (Pump 1)
    - » Green = Neutral detergent (Pump 2)
    - » Blue = Lubricant (Pump 3)
    - » Violet = Alkaline Detergent (Pump 2)
    - » Natural = Drying Agent (Pump 2 Cart Washer)
19. Insert discharge (right) side 3/8" O.D. tubing into "quick connect" fittings pushing inward until tubing "stops". Ensure tube ends are cut square and no jagged ends that could result in leaks. Be sure ball valve on this side is turned to the vertical position to allow flow to the washer.
20. Remove existing chemical tubing (inlet/outlet) and level sensor cables from the washer and external chemical containers. It is not necessary to remove existing pumps from the washers.
21. Drop chemical tubing and communication cable down from the top of the washer avoiding contact with steam and hot water lines that would cause leaks or electrical shorts. Tie off tubing and cable carefully with cable ties.
22. Route chemical tubing and locate near the existing chemical pumps.
    Note: It is permissible to customize alternate locations for systems with conveyors.
23. Connect the Injector Kit three-way valve inlet quick connect to each of the colored chemical lines coming from the delivery system. Be certain to use the Viton® (Blue label)[1] kit for the Lubricant.
24. Position three-way valves and calibration outlet in a convenient location in the washer for service.
25. Connect clear vinyl tubing end from three-way valve to the washer injection ports. Secure with plastic clamp.
    Note: Replace existing injector fittings if deteriorated or broken as required.
26. Position the Washer Interface Module in the washer in a convenient location for service.
27. Take communication cable coming from delivery system and remove insulation and strip four wire leads.
28. Connect four wire leads to spare cable connector/housing from service kit. Match wire colors accordingly (red/red, black/black etc.) and connect to mating Washer Interface Module connector.
29. Disconnect internal washer pump control output cables from existing pumps and connect corresponding pump signal connector from Washer Interface Module (Pump 1 = Enzyme, Pump 2 = Detergent, Pump 3 = Lubricant).
30. Disconnect internal washer Low Level Sensor control input cables from washer and connect corresponding Level Sensor cable from Washer Interface Module (1 = Enzyme, 2 = Detergent, 3 = Lubricant).
31. Plug in delivery system(s) to 120 Vac power and see delivery system instruction manual for operation and calibration.

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1. Viton is a registered trademark of Dupont Performance Elastomers L.L.C.

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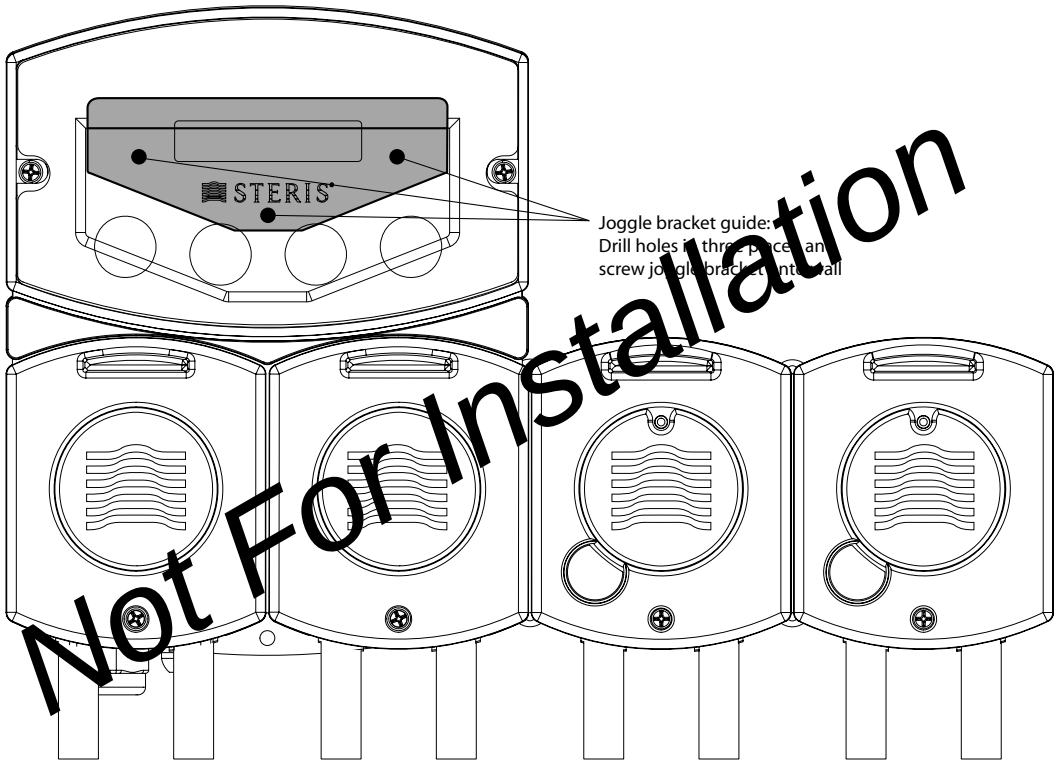
DATE: 07-13-11 DRAWN BY: TM CHECKED BY: ZD & AP



Not For Installation

SAMPLE MOUNTING TEMPLATE
NOT FOR USE IN MOUNTING - NOT TO SCALE
USE SUPPLIED FULL-SIZE TEMPLATE P755718-166

SHT. 5 OF 5

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)		AL-2000 CHEMISTRY DELIVERY SYSTEM	EQUIPMENT DRAWING NO. 129393-281
STERIS	STERIS Corporation Mentor, OH	GENERAL INSTALLATION LAYOUT DWG.	ITEM _____ LOCATIONS _____

AMSCO® 400 Small Steam Sterilizer

Steam Sterilization

Relocated Equipment Item - Cut Sheets Shown as Reference - Verify Exact Model & Coordinate with Owner

E216 1/17

APPLICATION

AMSCO 400® Series Small Steam Sterilizers are designed for sterilization of materials used in healthcare facilities.

The sterilizers are designed for fast, efficient sterilization of heat- and moisture-stable materials in addition to sterilization of items for immediate use. AMSCO 400 Series Small Steam Sterilizers are equipped with prevacuum, gravity, leak test, and daily air removal test cycles. An optional Steam Flush Pressure Pulse (SFPP) configuration sterilizer adds SFPP cycles.

Each sterilizer is equipped with either a single or double door, for open or recessed mounting. (Recess mounting is not available for 16 x 16 x 26" double door sterilizers.)

DESCRIPTION

AMSCO 400 Series Small Steam Sterilizers are the next advancement in the STERIS line of steam-jacketed sterilizers and are equipped with the latest features in both state-of-the-art technology and ease of use.

Primary Product Features

The control system for the AMSCO 400 Series Small Steam Sterilizers features enhanced functionality and user-friendly interface screen.

- Touch-screen with 30–line x 40 character display area
- Ink-On-Paper impact printer
- Help screens for programming and troubleshooting alarm conditions
- Automatic check of control program and cycle data maintains process integrity
- Service reprogrammable flash ROM memory
- Available with optional water-saving electric vacuum pump
- Vertical sliding door with hands– free loading and unloading capability
- Foot pedal activated door opening and closing
- Non-lubricated, steam activated door seal
- Valve manifolds increase dependability and reduce servicing time
- Reduced piping components increase reliability
- Emergency manual exhaust valve
- Electronic water saving control

Interior Chamber Dimensions

- 16 x 16 x 26" (406 x 406 x 660 mm)
- 20 x 20 x 38" (508 x 508 x 965 mm)

STANDARDS

Each sterilizer meets applicable requirements of the following listings and standards, and carries the appropriate symbols:

- ANSI/UL 61010-1 and CAN/CSA-C22.2 No. 61010-1 – Standard for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
- ANSI/UL 61010A-2-041 – Standard for Electrical Equipment for Measurement, Control and Laboratory Use, Part 2: Particular Requirements for Autoclaves using Steam for the Treatment of Medical Materials and Laboratory Processes
- ANSI/AAMI-ST8:2008 “Hospital Steam Sterilizers” American National Standard
- ASME Code, Section VIII, Division 1 for unfired pressure vessels. The pressure vessel is so stamped; ASME Form U-1 is furnished. Shell and door are constructed to withstand working pressure of 50 psig (344.7 kPa).
- ASME Code, Section I, Part PMB for power boilers, if optional steam generator is supplied.
- CAN/CSA-C22.2 No. 61010-1

FEATURES

Rack and shelf design accepts wider loads: 16 x 16" sterilizers – chamber clearance is 12" (304 mm) for top shelf and 14" (357 mm) for bottom shelf. 20 x 20" sterilizers – chamber clearance is 18" (457 mm) for intermediate shelves, and 15" (381 mm) for bottom shelf.

User-programmable cycle names allow for load specific naming of cycles. These cycle names are displayed and printed in addition to the factory-default cycle type and aid in identifying the proper cycle to be used with a specific load.

Hinged front cabinet panel fully opens for convenient access to sterilizer piping and control.

Software calibration is performed in the Service Mode, accessible through the touch-screen displays, and accomplished using external or internal temperature and pressure sources. Control system provides printed record of all calibration data for verification of current readings.

Lighted DIN connectors are installed on all steam, water and exhaust valves for reliability and ease of maintenance.

Steam generator units are equipped with an **automatic flush and drain system**. This system helps the generator to operate at peak performance and extends the life of the heaters.

ProConnect® Technical Support Services – Maximize operational efficiencies with secure, Internet-based, real-time equipment monitoring. Data from your equipment is used by STERIS to provide pro-active Customer alert notifications, technical support, and predictive maintenance. Online parts ordering, equipment performance dashboards, and online service scheduling at steris.com is also available. (ProConnect Technical Support Services is available in U.S. and Canada only.) Refer to Tech Data sheet SD983, PROCONNECT TECHNICAL SUPPORT SERVICES, for details.

UTILITIES CONSERVATION FEATURES

Resistance Temperature Detectors (RTD) are installed for sterilizer temperature control. The chamber drain line RTD senses and controls temperature variations within the sterilizer chamber. A jacket RTD provides temperature control within the jacket space. These RTD signals, converted into electrical impulses, provide accurate control inputs and readouts throughout entire cycle and minimizes utilities usage.

Electronic water saving control includes a condenser RTD to control the amount of water used in condensing the exhausted chamber steam. Control software minimizes amount of water used to cool condensate.

Automatic utilities startup/shutdown may be programmed to activate at the end of any designated cycle or time of day. When activated, control system automatically shuts off all utility valves, conserving steam and water usage. Sterilizer utilities can be restarted either by programmed time or manual operation. A different shutdown and restart time can be programmed for each day.

Insulation, one-inch thick, asbestos-free spin-glass (rated at 500°F [260°C] continuous) encompasses the exterior of the sterilizer vessel and is sealed in an oil and water resistant outer jacket.

Vacuum System Water ejector reduces chamber pressure during prevacuum and post-drying phases. Air is drawn from chamber through the vacuum system. Following dry phase, chamber vacuum is relieved to atmospheric pressure by admitting air through a bacteria-retentive filter.

An **optional vacuum pump** can be ordered in place of the standard water ejector. The vacuum pump provides equivalent performance, but reduces cooling water consumption by up to 60%, helping facilities to conform with Leadership in Energy and Environmental Design (LEED) requirements.

SAFETY FEATURES

Control senses when the door is closed and sealed, preventing cycle start until a limit switch signal is received. If control loses appropriate signal during cycle, alarm activates, cycle aborts and chamber safely vents with a controlled exhaust.

Chamber Float Switch activates alarm, aborts cycle and safely vents chamber with a controlled exhaust if excessive water is detected in the vessel chamber.

Pressure Relief Valve limits amount of pressure buildup so that rated pressure of vessel is not exceeded.

PROCESSING CYCLES

AMSCO 400 Series Small Steam Sterilizers models[1]

- 16 (Prevac), and 16S (Prevac and SFPP)
- 20 (Prevac), and 20S (Prevac and SFPP)

Prevacuum Sterilizer Models feature the following cycles:

- Immediate Use, Prevac Cycle (4-minute exposure):
- Cycle type is for sterilizing porous and non-porous loads. Examples – A single unwrapped instrument tray or up to a full load of unwrapped instrument trays, each with a maximum weight of 25 lb (11.3 kg).
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 4 minutes
  - Dry time:1 minute

NOTE: Items sterilized for immediate use must be used within the shortest possible time after removal from the sterilizer and must be taken to the sterile field using aseptic transfer protocols.

- A sterilized item intended for immediate use must not be stored.
- An item sterilized for immediate use cannot be held for use on a future case.
- The prevac immediate use cycle is the preferred immediate use cycle. The gravity immediate use cycle is only safe for simple instruments that contain no hinges or other features that could trap air.
- Always refer to instrument manufacturer's instructions for use to determine processing requirements.

1. *All cycles validated to AAMI standard ST8:2008.:*

Prevac Cycle (4-minute exposure):

- Cycle type is for sterilizing porous and non-porous loads. Example – Wrapped 25 lb (11.3 kg) instrument tray(s) or fabric packs.
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 4 minutes
  - Dry time: 30 minutes (full load of instruments trays), 20 minutes (full load of fabric packs) or 5 minutes (Customer option, for a single fabric pack)

Prevac Cycle (3-minute exposure):

- This cycle is for sterilizing porous and non-porous loads. Example – Wrapped 25 lb (11.3 kg) instrument trays.
  - Sterilize exposure temperature: 275°F (135°C)
  - Sterilize exposure time: 3 minutes
  - Dry time: 30 minutes

Immediate Use, Gravity Cycle[2] (3-minute or 10-minute exposure):

- Cycle type is for sterilizing non-porous loads. Example – A single unwrapped instrument tray or up to a full load of unwrapped instrument trays, each with a maximum weight of 25 lb (11.3 kg).
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 10 minutes or 3 minutes
  - Dry time:1 minute

SFPP Sterilizer Models also feature the following cycles (in addition to those found on Prevacuum models)

SFPP Cycle (4-minute exposure):

- This cycle is for sterilizing porous and non-porous loads. Example – A wrapped 25 lb (11.3 kg) instrument tray.
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 4 minutes
  - Dry time: 30 minutes (full load of instruments trays), 20 minutes (full load of fabric packs) or 5 minutes (Customer option, for a single fabric pack)

SFPP Cycle (3-minute exposure):

- This cycle is for sterilizing porous and non-porous loads. Example – A wrapped 25 lb (11.3 kg) instrument tray.
  - Sterilize exposure temperature: 275°F (135°C)
  - Sterilize exposure time: 3 minutes
  - Dry time: 30 minutes.

OPTIONAL CYCLES: The following cycles are available on Prevac and SFPP sterilizers, and can be made accessible for use by the departmental supervisor:

- **Gravity Cycles:** Full load, non-porous instrument trays.
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 15 minutes
  - Dry time: 30 minutes
- **Full load, non-porous instrument trays**
  - Sterilize exposure temperature: 250°F (121°C)
  - Sterilize exposure time: 30 minutes
  - Dry time: 30 minutes

  Full load, fabric packs.
  - Sterilize exposure temperature: 270°F (132°C)
  - Sterilize exposure time: 25 minutes
  - Dry time: 15 minutes

  Full load, fabric packs.
  - Sterilize exposure temperature: 250°F (121°C)
  - Sterilize exposure time: 30 minutes
  - Dry time: 15 minutes

Liquid Cycle:

This cycle is used for sterilizing liquids in borosilicate containers with vented closures. The 16" sterilizer can process a maximum load of fifteen 1000 mL containers. The 20" sterilizer can process a maximum load of thirty two 1000 mL containers.

- Sterilize temperature: 250°F (121°C)
- Factory programmed sterilize time: 45 minutes
- Dry time: not applicable

NOTE: Important: The liquid cycle is for non-patient contact use only.

PREVACUUM TESTING CYCLES

- Vacuum Leak Test: This cycle is used for testing the vacuum integrity of sterilizer piping. The sterilizer chamber must be empty while running this test cycle. Temperature: 270°F (132°C); all timing is preprogrammed and cannot be adjusted. This cycle is validated to AAMI standard ST8:2008.
- A preprogrammed Bowie-Dick Test Cycle is used to test for adequate air removal from the sterilizer chamber. Recommended load is a Dart® testing apparatus from STERIS, or a properly prepared Bowie-Dick test pack. Preprogrammed cycle parameters cannot be adjusted by user. Sterilize exposure temperature: 270°F (132°C); sterilize exposure time: 3-1/2 minutes; dry time: 1 minute. This cycle is validated to AAMI standard ST8:2008.

CONTROL SYSTEM

Design Features The control system for the AMSCO 400 Series Small Steam Sterilizer monitors and controls all sterilizer operations and functions. The control system is factory-programmed with standard sterilizing cycles. Each cycle is adjustable, and cycle names are user-programmable, to meet specific processing requirements. Cycle parameters cannot be adjusted to less than preset, validated settings. All control configuring is performed through touch-screen display.

2. *See Note on previous page regarding immediate use.*

NOTE: Important: Always refer to instrument manufacturer's instructions for use to determine processing requirements.

Cycle values and operating features may be adjusted and verified prior to cycle operation. Once cycle is started, cycles and cycle values cannot be changed until cycle is complete. On completion of cycle, timers reset to the previously selected values, eliminating the need to reset values between repeated cycles. If chamber temperature drops below setpoint during the exposure phase the timer stops. It automatically resets once normal operating temperature is reached.

Critical control system components are housed within a compartment to protect the components from moisture and heat generated during sterilization. A cooling fan with filter maintains air flow within the compartment, keeping components cool.

Operator interface control panel, consisting of a touch-screen and impact printer, is located on the operating end (OE – loading end or nonsterile end) of the sterilizer. If sterilizer is equipped with double doors, an additional touch-screen (but no printer) is provided on the sterilizer non-operating end (unloading or sterile).

- Touch-Screen features a 30-line x 40-character graphics display. The control touch-screen, from which all sterilizer functions are controlled, features a wide viewing angle and high-visibility back-lighting. The display indicates any abnormal conditions that may exist, either in or out of cycle. Displayed messages are complete phrases with no codes to be cross-referenced.
- Ink-On-Paper Impact Printer, located near touch-screen, provides an easy-to-read printed record of all pertinent cycle data. Data is automatically printed at the beginning and end of each cycle and at transition points during the cycle. Printer take-up spool stores an entire roll of paper, providing cycle records which can be saved for future reference. Three paper tape rolls are furnished with each unit.

Non-operating end (NOE) control panel, equipped on double-door sterilizers only, includes a touch-screen similar to the operating end screen, but no printer. Preprogrammed cycles can be started from the NOE control panel. Display concurrently shows the same information as the operating end screen display.

Cycle configuration is performed by accessing the Change Values menu through the operating end touch-screen. In addition to adjustment of cycle values, the following operating parameters can also be changed through the Change Values menu:

- Time Display and Printout Units – Standard AM/PM or 24-hour.
- Access Code – accessing Change Values menu causes display to request the entry of an access code. If access code is not properly entered, display returns to menu screen, denying user access to the sterilizer programming. Supervisors can allow operators to change chosen cycle and parameters; or lock them out from making any changes.
- Audible Signals – are adjustable. Sounds made when touching the screen and for end-of-cycle signals can be adjusted to one of four sound levels (off, low, medium or high) as required for the operating environment. The alarm signal can be adjusted to low, medium or high; but cannot be turned off.
- Print Format – allows selection of either a full or condensed printout of the cycle information during processing.
- Temperature Display and Printout Units – Fahrenheit (°F) or Celsius (°C). Temperature is set, displayed, controlled and printed to the nearest 0.1°. Recalibration is not required when changing temperature units from °F to °C and vice versa.
- Pressure/Vacuum Display and Printout Units – psig/In Hg, millibar or psia. Recalibration is not required when changing pressure units.
- Utilities Control – This parameter permits the operator to program the sterilizer to automatically shut off its steam and water at the end of the work day, to conserve utilities. It also allows control for shut down and power-up of an integral steam generator.
- Languages – This parameter can be used to select English, French or Spanish as the default for displays and printouts. The sterilizer can also be set to allow quick changes between available languages.
- Machine Number – This parameter assigns a six-character, alphanumeric code to the sterilizer. This code appears in the heading of all printouts.
- Automatic Duplicate Print – Sterilizer can be set to automatically furnish a duplicate printout of each cycle at the end of the cycle. First line reads "DUPLICATE PRINT."

Technical Data

Control system consists of a microcomputer control board and peripheral function circuit boards, located within the control board housing behind the front cabinet service panel above the chamber.

A memory backup system maintains cycle settings indefinitely and current cycle information for approximately five days. If a power failure occurs during a cycle, the battery backup system ensures that cycle memory is retained and proper cycle completion occurs once power is restored. When power is lost, the cycle is held in phase until power is restored, exceeding the minimum government specification of one minute. Once power returns, the event is recorded on the printout and the cycle automatically resumes or restarts, depending on what phase the cycle was in at the time of power loss. If necessary, the operator can manually abort the cycle.

CONSTRUCTION

Shell Assembly

Two fabricated Type 316L stainless-steel shells, welded one within the other, form the sterilizer vessel. Type 316L stainless-steel end frame(s) is welded to door end. On single door units, back of chamber is fitted with welded, 316L stainless-steel formed head.

Sterilizer vessel is ASME rated at 50 psig and insulated. Vessel (20 x 20" units only) includes one 1.0"-NPT welded chamber bushing for Customer use.

Steam-supply opening inside the chamber is shielded by a Type 316L stainless-steel baffle.

Chamber Door(s)

Door is constructed of a single formed piece of Type 316L stainless steel.

During cycle operation, door is sealed by a steam-activated door seal. Door seal is constructed of a special long-life rubber compound. When sterilizer cycle is complete, the seal retracts under vacuum into a machined groove in the sterilizer end frame. Door seal can be manually retracted to open door and remove critical load in emergency situation if loss of vacuum or loss of power occurs.

Door is suspended by cables attached to a counterweight. Chamber door is opened (lowered) and closed (raised) by pressing a foot pedal located on the same end as the door being operated. In case of a power or mechanical failure, door can be operated manually.

A long-life proximity switch is used by the control to determine if door is closed. An additional seal pressure switch prevents inadvertent cycle initiation if door is not sealed.

The door assembly is equipped with a mechanical locking mechanism that ensures the door cannot be opened as long as the seal is intact and energized and more than 2.0 psi pressure is in the chamber.

The sterilizer door opening is fitted with a textured thermoplastic bezel. This bezel insulates the operator from the chamber end ring, lessening the chance of accidental contact with a hot metal surface.

Chamber Drain System

Drain system is designed to prevent pollutants from entering into the water-supply system and sterilizer. The automatic condensing system converts chamber steam to condensate and disposes condensate to waste. Cooling water flow is regulated by the waste line RTD to minimize water usage. Water supply shutoff valve is located behind the front cabinet service panel under the chamber.

Steam Source

Sterilizers are piped, valved and trapped to receive building-supplied steam delivered at 50 to 80 psig dynamic. If building steam source is not available, an electric carbon-steel steam generator may be provided to supply steam to the sterilizer. Steam piping is constructed of brass and includes a shutoff valve, steam strainer, flush system and a brass pressure regulator.

Piping

All piping connections terminate within the confines of the sterilizer and are accessible from front and side of sterilizer.

- Manual Shutoff Valves are pressure rated at 125 psig for saturated steam. Valve handles are low-heat conducting.
- Solenoid Valves in the manifold with DIN connectors simplify sterilizer piping and can be serviced individually.

MOUNTING ARRANGEMENT

Sterilizers are arranged for either freestanding or recessed installation, as specified. Each sterilizer is equipped with a height-adjustable steel floor stand. Sterilizer subframe is equipped with a synthetic rubber gasket to ensure tight fit between the cabinet panels on freestanding units or between the front cabinet panel and wall partition on recessed units.

On freestanding units, stainless-steel side panels and a louvered top panel enclose the sterilizer body and piping.

ACCESSORY

Seismic Tie-Down Kit – conforms to California Code of Regulations.

PREVENTIVE MAINTENANCE

A global network of skilled service specialists can provide periodic inspections and adjustments to help ensure low-cost peak performance. STERIS representatives can provide information regarding annual maintenance programs.

NOTES

1. The sterilizer is not supplied with a vacuum breaker or backflow preventer and, where required by local codes, installation of such a device in the water line is not provided by STERIS.
2. Pipe sizes shown indicate terminal outlets only. Building service lines (not provided by STERIS), must supply the specified pressures and flow rates.
3. Disconnect switches (with OFF position lockout only; not provided by STERIS) should be installed in electric supply lines near the equipment.
4. Access to the recessing area from the control end of the sterilizer is recommended.
5. Clearances shown are minimal for installing and servicing the equipment.
6. If loading car and carriage are to be used with a 20 x 20 x 38" sterilizer, front clearance should be at least 76" (1930 mm). This permits complete withdrawal of the loading car from the chamber and allows convenient maneuverability of the transfer assembly to and from the sterilizer.
7. Floor drain should be provided within confines of sterilizer framework.

UTILITY REQUIREMENTS

Sterilizer Using Facility Steam

- **Steam**- 1/2" NPT, 50 to 80 psig, dynamic, 97 to 100% vapor quality.
- **Drain**- 1–1/2" ODT drain terminal. (Floor drain capacity must handle peak water consumption; refer to Engineering data.)
- **Electrical - Controls**
  - 120 Volt, 50/60 Hz, 1-phase, 2.0 Amp
- **Electrical – Vacuum Pump Option**
  - 208 Volt, 50/60 Hz, 3-phase, 6 Amps
  - 240 Volt, 50/60 Hz, 3-phase, 6 Amps or
  - 480 Volt, 50/60 Hz, 3-phase, 3.2 Amps

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- **Sterilizer Feed Water**[3]- 1" NPT
  - 30 to 50 psig for water ejector
  - 20 to 50 psig for vacuum pump or
  - 40 to 50 psig for SFPP sterilizers.

NOTE: Backflow prevention (not supplied on unit) is not provided by STERIS.

Sterilizer Equipped with Integral Carbon Steel Steam Generator

Every AMSCO 400 Series Small Steam Sterilizer equipped with an electric steam generator includes an automatic flush and drain package.

- **Drain- Sterilizer-** 1–1/2" ODT drain terminal. (Floor drain capacity must handle peak water consumption; refer to Engineering Data.)
- **Drain**- Steam Generator- 1/2" ODT
- **Electrical - Controls**
  - 120 Volt, 50/60 Hz, 1-phase, 9.5 Amps[4] or
  - 220 Volt, 50/60 Hz, 1-phase, 5.0 Amps[5]
- **Electrical - Steam Generator**
  - 208 Volt, 50/60 Hz, 3-phase, 83 Amps
  - 240 Volt, 50/60 Hz, 3-phase, 72 Amps
  - 380/415 Volt, 50/60 Hz, 3-phase, 38/42 Amps or
  - 480 Volt, 50/60 Hz, 3-phase, 36 Amps
- **Electrical – Vacuum Pump Option**
  - 208 Volt, 50/60 Hz, 3-phase, 6 Amps
  - 240 Volt, 50/60 Hz, 3-phase, 6 Amps or
  - 480 Volt, 50/60 Hz, 3-phase, 3.2 Amps
- **Feed Water – Sterilizer**[6]- 1" NPT
  - 30 to 50 psig for water ejector
  - 20 to 50 psig for vacuum pump
  - 40 to 50 psig for SFPP sterilizers
- **Feed Water – Steam Generator**[7] - 1/2" NPT

3. *Water is used for ejector (creating chamber vacuum), and exhaust cooling. Refer to Table 1 for recommended water quality. Use of feed water within the nominal conditions optimizes equipment performance and helps reduce maintenance.*
4. *The 120V, 50/60 Hz control is always used with the 208V, 240V, and 480V integral steam generator or vacuum pump option.*
5. *The 220V, 50/60 Hz control is always used with the 380/415V integral steam generator.*
6. *Water is used for ejector (creating chamber vacuum), or vacuum pump option, exhaust cooling and cooling the generator drain. Refer to Table 1 for recommended water quality. Use of feed water within the nominal conditions optimizes equipment performance and helps reduce maintenance.*
7. *Water is used for integral steam generator.Refer to Table 2 for recommended water quality. Use of feed water within the nominal conditions optimizes equipment performance and helps reduce maintenance.*

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ENGINEERING DATA										
Size in (mm)	Heating	Maximum Operating Weight* lbs (kg)		HEAT LOSS† BTU/hr at 70°F (21°C)						
				Single Door			Double Door			
		Single Door	Double Door	Cabinet Enclosed	Recessed		Recessed One Wall		Recessed Two Walls	
				To Room	Front of Wall	Back of Wall	Front of Wall	Back of Wall	At Each End	Between Walls
16 x 16 x 26 (406 x 406 x 660)	Steam‡ Electric**	750 (340) 890 (404)	989 (449) N/A	4300 6050	1600 2300	2700 3750	1600 N/A	3700 N/A	N/A N/A	N/A N/A
20 x 20 x 38 (508 x 508 x 965)	Steam‡ Electric**	1230 (558) 1371 (622)	1606 (728) 1726 (782)	7000 8750	2500 3300	4500 5600	2500 3300	5300 6300	2500 3300	4500 6300

* Based on chamber fully loaded with water flasks.

† At 70°F (21°C).

‡ In the Heating column, “Steam” refers to External Supplied Steam (Facility Steam/Stand-Alone Steam Generator).

** In the Heating column, “Electric” refers to Integral Steam Generator.

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Size in (mm)	Heating	Water Ejector (WE) or Optional Vacuum Pump (VP)	UTILITIES CONSUMPTION*								
			Water†						Steam		
			Cold			Hot‡					
			Peak gpm (lpm)	Average Usage gal/cycle (l/Cycle)	Idle gph (lpm)	Peak gpm (lpm)	Per Cycle gal/cycle (l/cycle)	Idle gph (lph)	Peak** lb/hr (kg/hr)	Per Cycle lb/cycle (kg/cycle)	Idle lb/hr (kg/h)
16 x 16 x 26 (406 x 406 x 660)	Steam††	WE VP	15 (57) 10 (38)	135 (511) 50 (186)	12 (45)	N/A	N/A	N/A	158 (72)	30 (14)	7 (3)
	Electric‡‡	WE VP	15 (57) 10 (38)	135 (511) 50 (186)	12 (45)	1 (4)	3 (11)	1 (4)	N/A	N/A	N/A
20 x 20 x 38 (508 x 508 x 965)	Steam††	WE VP	15 (57) 10 (38)	175 (662) 70 (261)	12 (45)	N/A	N/A	N/A	158 (72)	42 (19)	9 (4)
	Electric‡‡	WE VP	15 (57) 10 (38)	175 (662) 70 (261)	12 (45)	1 (4)	5 (19)	1 (4)	N/A	N/A	N/A

* Data is based on 270°F (132°C), 4 minute sterilize, 30 minute dry cycle, processing 25 lb (11kg) instrument trays, maximum load in chamber.

† Backflow preventer device in water line, when required by local codes, is installed by others.

‡ Hot water recommended for units equipped with electric steam heat.

** Peak steam demand (lb/hr) may vary depending on operating conditions.

†† In the Heating column, “Steam” refers to External Supplied Steam (Facility Steam/Stand-Alone Steam Generator).

‡‡ In the Heating column, “Electric” refers to Integral Steam Generator.

Refer to the Following Equipment Drawing for Installation Details	
Equipment Drawing Number	**Equipment Drawing Title**
129394-044	16 x 16 x 26", single door, cabinet enclosed with steam heat
129394-045	16 x 16 x 26", single door, recessed one wall with steam heat
129394-046	16 x 16 x 26", single door, recessed one wall with electric heat
129394-047	16 x 16 x 26", single door, cabinet enclosed with electric heat
129394-048	16 x 16 x 26", double door, recessed one wall with cabinet and steam heat
129394-049	20 x 20 x 38", single door, cabinet enclosed with steam heat
129394-050	20 x 20 x 38", single door, recessed one wall with steam heat
129394-051	20 x 20 x 38", double door, recessed one wall with cabinet and steam heat
129394-052	20 x 20 x 38", double door, recessed two walls, with steam heat
129394-053	20 x 20 x 38", single door, cabinet enclosed with electric heat
129394-054	20 x 20 x 38", single door, recessed one wall with electric heat
129394-055	20 x 20 x 38", double door, recessed one wall with electric heat and cabinet
129394-056	20 x 20 x 38", double door, recessed two walls with electric heat
10066840	16 x 16 x 26", single door, recessed one wall with steam heat and vacuum pump

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Refer to the Following Equipment Drawing for Installation Details	
Equipment Drawing Number	**Equipment Drawing Title**
10066841	16 x 16 x 26", single door, cabinet with steam heat and vacuum pump
10066842	16 x 16 x 26", single door, recessed one wall with electric steam heat and vacuum pump
10066843	16 x 16 x 26", single door, cabinet with electric steam heat and vacuum pump
10066844	20 x 20 x 38", single door, recessed one wall with steam heat and vacuum pump
10066845	20 x 20 x 38", single door, cabinet with steam heat and vacuum pump
10066846	20 x 20 x 38", single door, recessed one wall with electric heat and vacuum pump
10066847	20 x 20 x 38", single door, cabinet with electric heat and vacuum pump

Selections Checked Below Apply To This Equipment

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Size/Type

- ☐ 16 x 16 x 26" Prevacuum with Liquid Cycle
- ☐ 20 x 20 x 38" Prevacuum with Liquid Cycle
- ☐ 16 x 16 x 26" SFPP and Prevacuum with Liquid Cycle
- ☐ 20 x 20 x 38" SFPP and Prevacuum with Liquid Cycle

Steam Source

- ☐ **Facility Steam**[8]
  - ☐ 120 Volt Control

Integral Steam Generator[9]

- ☐ Control Voltage
  - ☐ 120 Volt Control[10]
  - ☐ 220 Volt Control[11]
- ☐ Electrical (for generator power):
  - ☐ 208 Volts
  - ☐ 240 Volts
  - ☐ 480 Volts
  - ☐ 380/415 Volts
- ☐ **Vacuum System**
  - ☐ Water Ejector
  - ☐ Vacuum Pump
    - ☐ 208–240V
    - ☐ 480V

Doors

- ☐ Single
- ☐ Double

Single Door Mounting

- ☐ Cabinet Enclosed/Freestanding
- ☐ Recessed

Double Door Mounting

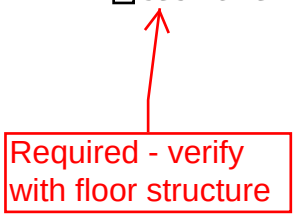
- ☐ Recessed through one wall
- ☐ Recessed through two walls[12]

Remote Monitoring

- ☐ ProConnect Technology Support Services (Remote Monitoring, Priority Technical Support, Customer Care Center Access, Equipment Performance Reports). Available in U. S. and Canada only. (GP09162)

Accessories

- ☐ Loading Rack and Two Shelves standard on 16 x 16 26" sterilizers (optional on 20 x 20 x 38" sterilizer)
  - ☐ Single Door (FV021011)
  - ☐ Double Door (FV022011)
- ☐ One Spare Shelf (20 x 20 x 38" sterilizer only) (FV020012)- Intermediate Shelf
- ☐ Loading Car (20 x 20" uits only) (FV020001)
- ☐ Transfer Carriage (20 x 20" units only) (FV020002)
- ☐ Chamber Track Assembly (20 x 20" units only)
  - ☐ Single Door (FV021003)
  - ☐ Double Door (FV022003)
- ☐ Loading Car, Transfer Carriage, and Track Assembly (20 x 20" units only)
  - ☐ Single Door (FV021004)
  - ☐ Double Door (FV022004)
- ☐ Seismic Tie-Down Kit[13]



Item:	
Locations:	

8. External Supplied Steam (Facility Steam/Stand-Alone Steam Generator)
9. 16 x 16 x 26" double door sterilizers are not available with integral steam generator
10. 120V control is used for 208V, 240V, and 480V powered integral steam generators
11. 220V control is always used with the 380/415V powered integral steam generator
12. Available for 20 x 20 x 38" double door sterilizers only
13. Based on CA requirements

For Further Information, contact:

STERIS Corporation
5960 Heisley Rd.
Mentor, OH 44060–1834 ▪ USA
440–354–2600 ▪ 800–548–4873
www.steris.com

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The base language of this document is ENGLISH. Any translations must be made from the base language document.

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

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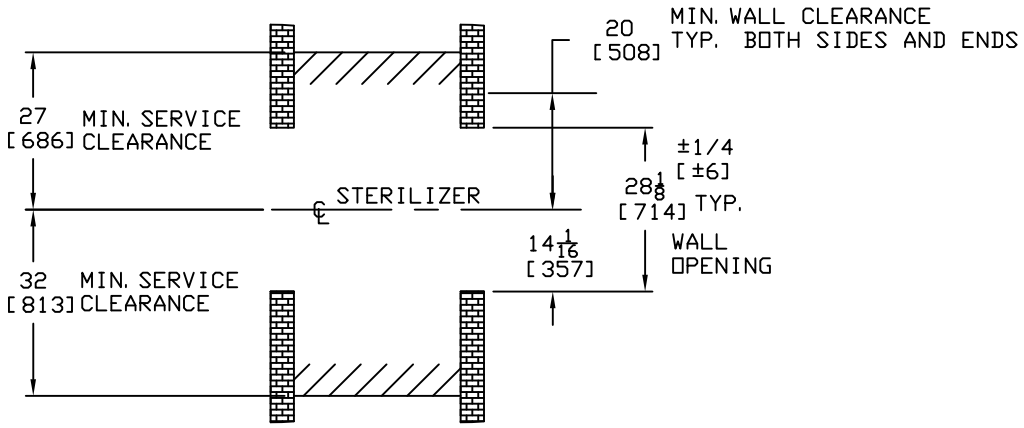
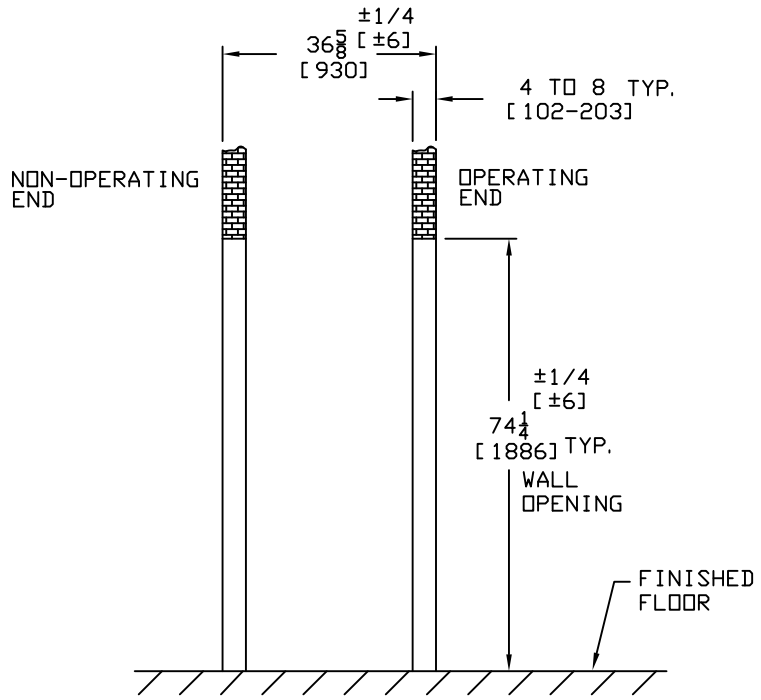
E216 12/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

E. C. A. NO. 120110 DATE 07-30-12 REV. 2 DWG. NO. 129394-056

PLAN VIEW





SIDE VIEW

CHAMBER SIZE IN. (mm)
20 X 20 X 38 (508 X 508 X 965)
MAX. OUTSIDE DIM. OF STERILIZER
43 7/8 X 30 X 74 1/2 (1114 X 762 X 1891)

NOTES:

1. WALL THICKNESS: 4" TO 8" (102-203).
2. ALL DIMENSIONS IN INCHES AND (MM).
3. THESE SERVICE CLEARANCES MUST BE MAINTAINED TO ALLOW ACCESS TO STERILIZER FOR SERVICEABILITY.
4. IF LOADING CAR AND CARRIAGE ARE TO BE USED, FRONT CLEARANCE SHOULD EQUAL TWICE THE LENGTH OF THE STERILIZER.

SERVICE CLEARANCE

SHT. 1 OF 6

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS®	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

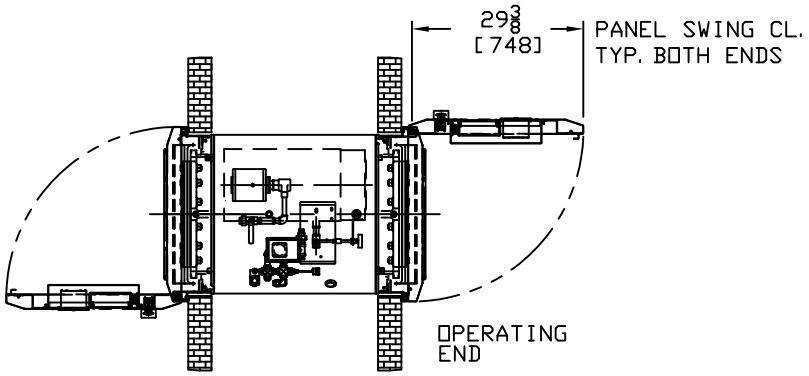
AUTOCAD. DWG.

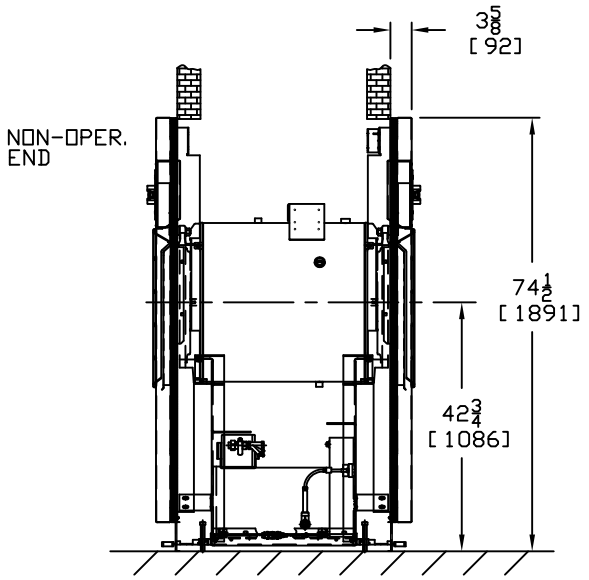
E216 13/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

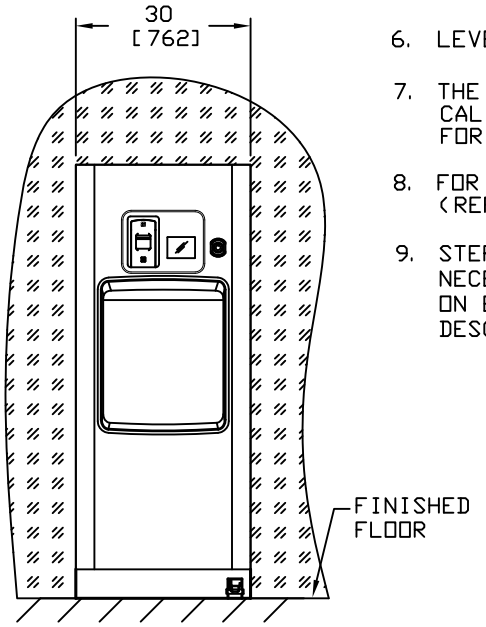
E. C. A. NO. 120110 DATE 07-30-12 REV. 2 DWG. NO. 129394-056

PLAN VIEW





SIDE VIEW



FRONT VIEW

GENERAL NOTES:

1. ALL DIMENSIONS IN INCHES AND (MM).
2. CURB WEIGHT:
   20 x 20 x 38 DD VESSEL = 1600 LBS. (725 KG.)
3. MAXIMUM OPERATING WEIGHT BASED ON CHAMBER FULLY LOADED WITH WATER FLASKS:
   20 x 20 x 38 DD VESSEL = 1726 LBS. (783 KG.)
4. FACILITY MUST PROVIDE REGULATED STEAM PRESSURE IN THE DYNAMIC RANGE SPECIFIED. FAILURE TO DO SO WILL RESULT IN IMPROPER EQUIPMENT OPERATION.
5. HEAT LOSS AT 70°F (21°C):
   20 x 20 x 38 - TO ROOM: 8750 BTU/HR (9,232 KILOJOULE)
6. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION.
7. THE TIE-DOWN OF THIS STERILIZER HAS BEEN PRE-APPROVED IN CALIFORNIA (REF. OPA-0531). SEE STERIS DWG. NO. 83280-194 FOR SEISMIC LOADING AND TIE-DOWN SPECIFICATIONS.
8. FOR SEISMIC INSTALLATIONS: A SEISMIC ADD ON KIT (REF. 146660-184) MUST BE INSTALLED ON THE STERILIZER.
9. STERIS ASSUMES NO RESPONSIBILITY FOR CHANGES MADE NECESSARY THROUGH FAILURE TO OBSERVE THE SPECIFICATIONS ON EQUIPMENT DRAWING AND NOTE PAGES. SPECIFICATIONS AND DESCRIPTIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

STERILIZER INSTALLATION

SHT. 2 OF 6

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

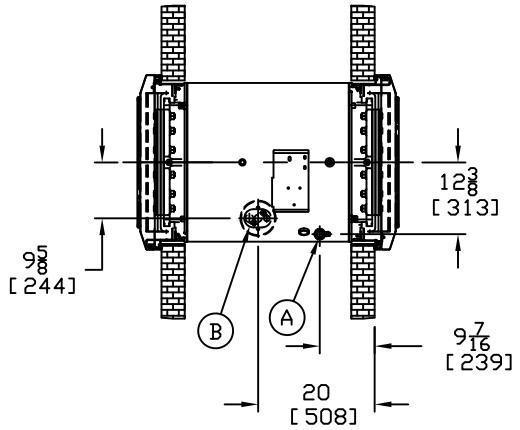
AUTOCAD. DWG.

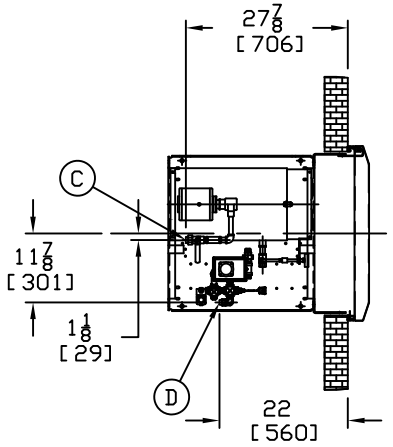
E216 14/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

E. C. A. NO. 120110 DATE 07-30-12 REV. 2 DWG. NO. 129394-056

PLAN VIEW



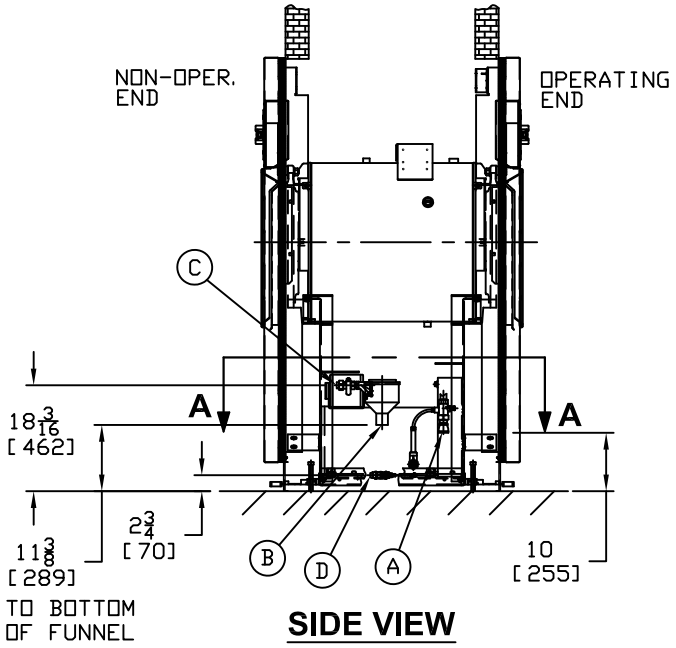


VIEW A-A

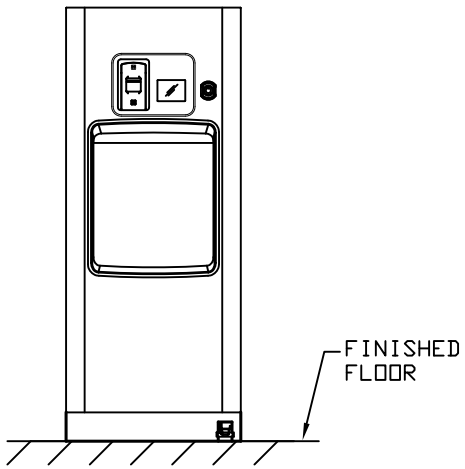
PLUMBING CONNECTIONS

- (A) STERILIZER COLD WATER
- (B) STERILIZER DRAIN
- (C) STERILIZER HOT WATER
- (D) ELECTRIC STEAM GENERATOR FLUSH DRAIN PORT

NOTE: SEE SHEET 4 FOR PLUMBING INSTALLATION SPECS. AND PLUMBING REQUIREMENTS.



SIDE VIEW



FRONT VIEW

SHT. 3 OF 6

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS®	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

AUTOCAD DWG.

E216 15/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

E. C. A. NO. 120110 DATE 07-30-12 REV. 2 DWG. NO. 129394-056

INSTALLATION SPECIFICATIONS:

THE INSTALLATION OF THE CHIMERON STERILIZER MUST MEET ALL APPLICABLE REGULATIONS.

INSTALLATION SPECIFICATION IS LISTED AS ENGINEERING AND INSTALLATION GUIDES. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUIPMENT UNLESS UNDER WRITTEN AGREEMENT WITH STERIS.

1. PIPE SIZES LISTED UNDER **PLUMBING REQUIREMENTS** INDICATE THE EQUIPMENT TERMINATION SIZES ONLY. SIZE PIPING TO EQUIPMENT DEPENDING ON LENGTH OF PIPE RUN FROM PRESSURE REGULATING STATION FOR STEAM LINE, AND MAIN WATER HEADERS. TO SUPPLY THE SPECIFIED SERVICE PRESSURE AND FLOW RATE AT EQUIPMENT TERMINALS, INCLUDE EFFECT OF COINCIDENT DRAW OF MULTIPLE UNIT INSTALLATIONS.

2. PROVIDE PIPING, SHUT-OFF VALVE, PIPE PLUGGED TEE, AND UNION IN STEAM AND WATER SUPPLY CONNECTIONS BETWEEN EQUIPMENT AND STUB OUTS. PLUGGED TEE CAN LATER BE USED FOR TEST PRESSURE GAUGE CONNECTION. ARRANGE CONNECTION PIPING TO ALLOW ACCESS TO MACHINE COMPONENTS AND ELECTRICAL CONTROL PANEL.

3. RECOMMEND PROVISION OF BLOW DOWN VALVE AT EACH STEAM AND WATER STRAINER TO ENABLE STRAINER CLEAN OUT.

4. FOR RECOMMENDED FEED WATER QUALITY FOR STERILIZERS AND CARBON STEEL STEAM GENERATORS, SEE STERIS DWG. NO. 62941-091

5. BLOW DOWN BUILDING STEAM AND WATER SUPPLY LINES BEFORE FINAL CONNECTION TO EQUIPMENT.

6. THE STERILIZER IS NOT SUPPLIED WITH A VACUUM BREAKER OR BACKFLOW PREVENTER AND WHERE REQUIRED BY LOCAL CODES, INSTALLATION OF SUCH A DEVICE IN WATER LINE IS BY OTHERS.

7. FOR GENERAL INSTALLATION INFORMATION SEE STERIS DRAWING NO. 62941-091. (THIS DWG. SHOULD ALWAYS ACCOMPANY THE EQUIPMENT DWGS.) IF DWG. IS NOT ATTACHED, CONTACT STERIS SERVICE ENGINEERING AT 1-800-333-8848 TO OBTAIN A COPY.

8. **PLACEMENT OF PIPING SHUTOFFS**: WHEN INSTALLING; SHUTOFFS MUST BE LOCATED IN A SUITABLE LOCATION WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PUT THE SERVICE PERSON IN **HARMS WAY** IN ORDER TO SHUT IT OFF.

PLUMBING REQUIREMENTS

Ⓐ STERILIZER COLD WATER: (SEE NOTE #4)

SUPPLY TEMPERATURE REQUIREMENTS ARE 50-70°F (10-21°C). VACUUM EFFICIENCY IS REDUCED AT WATER TEMPERATURES ABOVE 70°F (21°C).

1" NPT
30-50 PSIG DYNAMIC (2.1 TO 3.5 bar)

CONSUMPTION IN CYCLE:
PEAK-15 gpm (57 lpm)
AVERAGE-175 gal/cycle (662 l/cycle)

CONSUMPTION OUT OF CYCLE:
AVERAGE-12 gal/hr (.76 lpm)

SFPP CYCLES REQUIRE A MINIMUM OF 40 psig COLD WATER PRESSURE.

Ⓑ STERILIZER DRAIN:

1 1/2" ODT
(FLOOR DRAIN CAPACITY MUST HANDLE PEAK WATER CONSUMPTION).

Ⓒ STERILIZER HOT WATER:

SUPPLY TEMPERATURE REQUIREMENTS ARE =< 140°F.
WATER RESISTIVITY NOT TO EXCEED 26000 OHMS/CM.
TOTAL HARDNESS TO BE 0-3 PPM ($CaCO_3$)
1/2" NPT:
20-50 DYNAMIC PSIG (137.9-344.7 KPA)
CONSUMPTION: PEAK 1 GPM, PER CYCLE 5 GAL, IDLE 1 GPH.

Ⓓ DRAIN FROM ELECTRIC STEAM GENERATOR: 1/2" ODT.

CHECK ALL NATIONAL CODES AND STANDARDS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

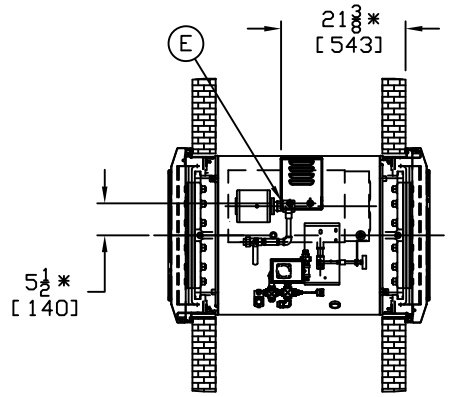
AUTOCAD. DWG.

E216 16/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

E. C. A. NO. 120110 DATE 07-30-11 REV. 2 DWG. NO. 129394-056

PLAN VIEW



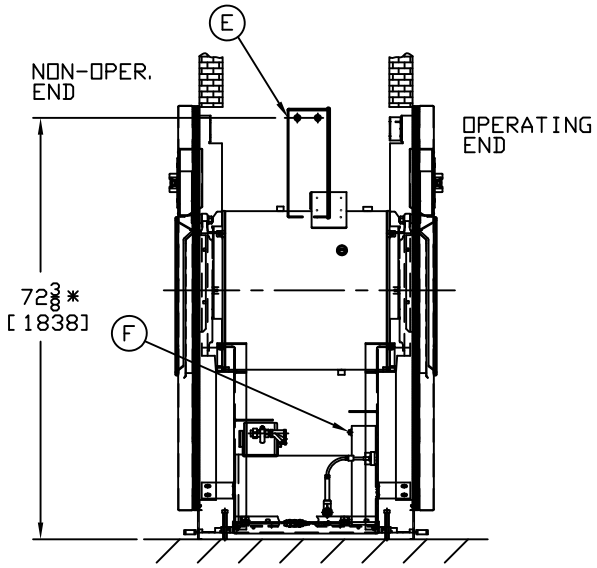
* = TO CONTROL BOX HOLE (E)

ELECTRICAL CONNECTIONS

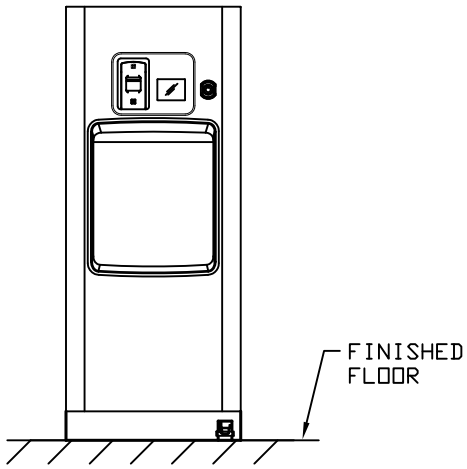
(E) STERILIZER POWER

(F) ELECTRIC STEAM GENERATOR POWER

NOTE: SEE SHEET 6 FOR ELECTRICAL INSTALLATION SPECS. AND ELECTRICAL REQUIREMENTS.



SIDE VIEW



FRONT VIEW

SHT. 5 OF 6

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS®	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

AUTOCAD. DWG.

E216 17/17

DATE: 02-22-11 DRAWN BY: E. S. CHECKED BY: JMS

E. C. A. NO. 120110 DATE 07-30-12 REV. 2 DWG. NO. 129394-056

INSTALLATION SPECIFICATIONS:

THE INSTALLATION OF THE CHIMERON STERILIZER MUST MEET ALL APPLICABLE REGULATIONS.

INSTALLATION SPECIFICATION IS LISTED AS ENGINEERING AND INSTALLATION GUIDES. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUIPMENT UNLESS UNDER WRITTEN AGREEMENT WITH STERIS.

1. PROVIDE GROUPED OR GANGED CIRCUIT PROTECTION AND DISCONNECT FOR STERILIZER POWER AS REQUIRED BY CODES AND STANDARDS. INDIVIDUAL POWER SHUTOFFS REQUIRED NEAR EACH MACHINE FOR SERVICING.

2. PROVIDE GROUNDED METAL CONDUIT AND WIRING BETWEEN EQUIPMENT TERMINALS AND STUB OUTS OR DISCONNECTS. CHECK LOCAL CODES FOR MINIMUM AWG. WIRE SIZE, #16 AWG. MINIMUM RECOMMENDED.

3. **PLACEMENT OF ELECT. DISCONNECTS**: WHEN INSTALLING; DISCONNECTS MUST BE LOCATED IN A SUITABLE LOCATION WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PUT THE SERVICE PERSON IN **HARMS WAY** IN ORDER TO SHUT IT OFF. ALSO, THE LOCATION OF THE DISCONNECTS SHOULD ALLOW THE SERVICE PERSON TO SHUTOFF POWER FROM THE SIDE TO PREVENT POSSIBLE ARC FLASH.

4. **CAUTION**: DO NOT USE GROUND FAULT CURRENT INTERRUPTERS (GFCI).

5. **ATTENTION**: THE ELECTRICAL CLEARANCES REQUIRED BY THE **NEC** ARE THE RESPONSIBILITY OF THE INSTALLER. ALSO, ADHERENCE TO LOCAL CODES AND PROCUREMENT OF PERMITS ARE THE RESPONSIBILITY OF THE CUSTOMER UNLESS AGREED TO IN WRITING WITH **STERIS.**

6. FOR GENERAL INSTALLATION INFORMATION SEE STERIS DRAWING NO. 62941-091. (THIS DWG. SHOULD ALWAYS ACCOMPANY THE EQUIPMENT DWGS.) IF DWG. IS NOT ATTACHED, CONTACT STERIS SERVICE ENGINEERING AT 1-800-333-8848 TO OBTAIN A COPY.

ELECTRICAL REQUIREMENTS

Ⓔ STERILIZER POWER:

CONTROL BOX FOR: 120V, 50/60 HZ, 9.5 AMP SINGLE PHASE SERVICE. MINIMUM RECOMMENDED LINE AND GROUND CONDUCTOR SIZE AWG #12 COPPER (2.05MM).

120VAC REQUIRE A THREE (3) WIRE CONNECTION (L1, NEUT, GND.).

MINIMUM 15A CIRCUIT BREAKER IS RECOMMENDED. INSTALLED NEAR THE EQUIPMENT WITHIN EASY REACH OF THE OPERATOR AND MARKED AS THE DISCONNECTING DEVICE FOR THE EQUIPMENT.

Ⓕ ELECTRIC STEAM GENERATOR POWER:

30 KW HEATERS

208VAC, 50/60HZ, 83A, (3) PHASE. MINIMUM 90A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #1 COPPER (42.4 MM^2) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

240VAC, 50/60HZ, 72A, (3) PHASE. MINIMUM 80A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #4 COPPER (21.5 MM^2) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

480VAC, 50/60HZ, 36A, (3) PHASE. MINIMUM 45A CIRCUIT BREAKER RECOMMENDED. MINIMUM RECOMMENDED LINE CONDUCTOR SIZE AWG #8 COPPER (8.6 MM^2) 75°C (167°F). REQUIRES A FOUR (4) WIRE "DELTA" CONNECTION (L1, L2, L3, GND.).

CHECK ALL NATIONAL CODES AND STANDARDS SHT. 6 OF 6

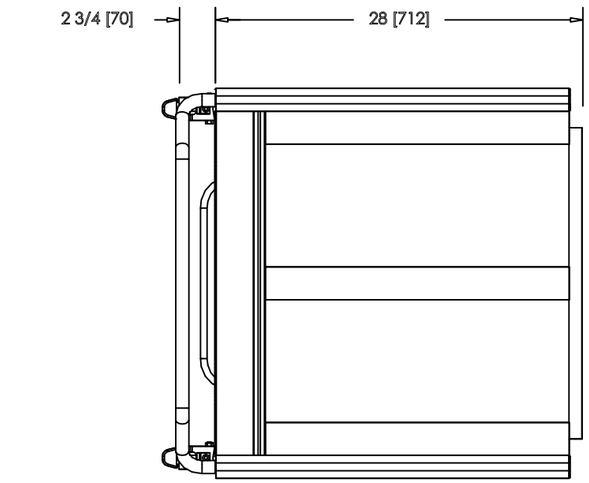
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) ALSO REFER TO GENERAL NOTES APPLICABLE TO EQUIPMENT DRAWINGS DWG. NO. 62941-091		20 x 20 x 38 AMSCO 400 SERIES PREVACUUM STERILIZER DOUBLE SLIDING DOOR RECESSED TWO WALLS ELECTRIC STEAM HEAT	EQUIPMENT DRAWING NO. 129394-056
STERIS®	STERIS Corporation Mentor, OH		ITEM _____ LOCATION(S) _____ _____

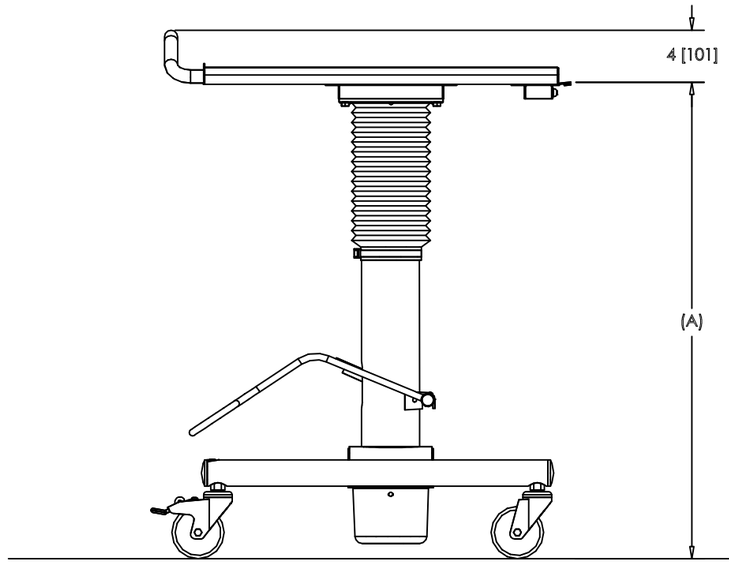
AUTOCAD. DWG.

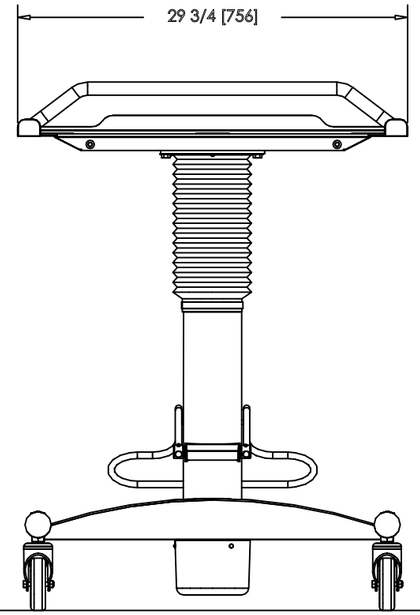
DWG. NO.	SHEET OF
920-002-595EN	1 1

QUANTITY	PART NUMBER	ITEM NO.	MODEL	ENGINEERING CHANGE	REV ID	REVISION DATE
X	920-002-595EN		UTC	TECH. MODIF. #03045	1.0	2003-03-10

E217 1/1







GENERALS NOTES:

1. UNIVERSAL TRANSFER CART IS SHIPPED IN ONE CRATE.
2. SHIPPING WEIGHT OF UNIVERSAL TRANSFER CART: 155 LBS (70.5 KG).

NOTES:

(A) UNIVERSAL TRANSFER CART LOADING HEIGHT: 29 1/4 [743] TO 37 1/2[953].

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STERIS Canada Corporation

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DWN.	CKD.	ENG.
VC		
DATE 1998-03-09	DATE	DATE

TITLE: Universel Transfer Cart

DOMESTIC / INTERNATIONAL

FIRST MADE FOR: Universel Transfer Cart

DWG. NO. 920-002-595EN | SHEET OF 1 1

REF. X

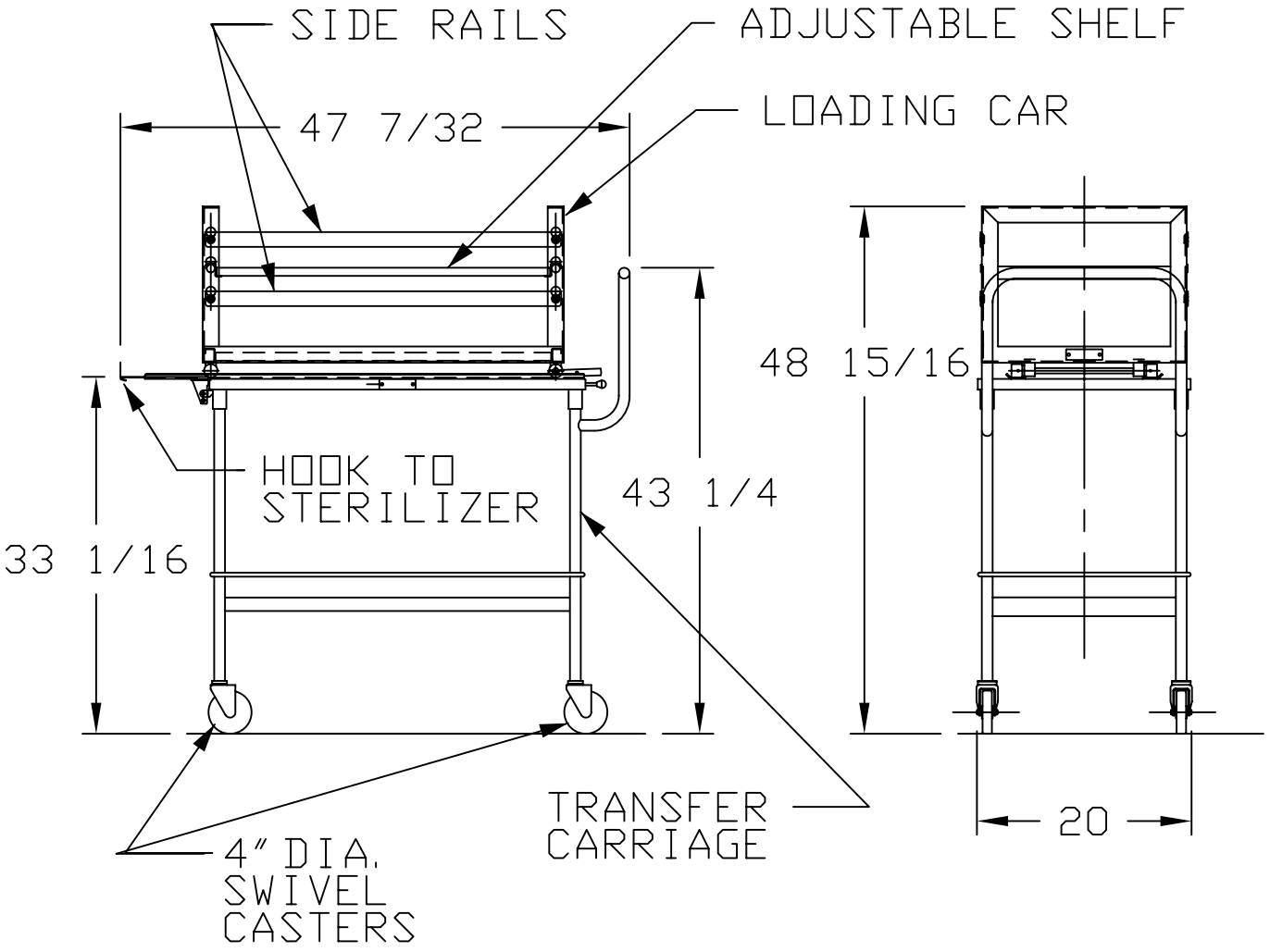
SHEET OF	DRAWING NUMBER	MATERIAL	REV NO	REVISION DATE
1 1	65435-742	SEE NOTES	1	04-12-06

DWG. NO. 65435-742

E218 1/1

NOTES:

1. LOADING CAR CONSTRUCTED OF 316L STNLS. STL.
2. TRANSFER CARRIAGE-STAINLESS STEEL CONSTRUCTION.



FOR USE WITH 20 X 20 X 38 EAGLE CENTURY STERILIZERS

NO.	DATE	E.C.A. NUMBER	NO.	DATE	E. C. A. NUMBER	NO.	DATE	E. C. A. NUMBER
1	04-12-06	060090						
0	03-21-97	970064						

AUTOCAD DWG.

STERIS®

STERIS Corporation
Mentor, OH

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TITLE: LOADING CAR & TRANSFER CARRIAGE

TOLERANCES UNLESS OTHERWISE SPECIFIED:
FRACTIONAL +/- 1/64, DECIMAL +/- .005, ANGULARITY +/- 1° MACHINE SURFACES 125

FIRST MADE FOR:

DWN. DOS	CKD. MEC	ENG.	MFG.	C. D.
DATE 03-21-97	DATE 03-21-97	DATE	DATE	DATE

DWG. NO. 65435-742 | 1 SHEET OF 1

PureSteel™

Ergonomic Workstation and Wrap Inspection Tables

pure PROCESSING

PHONE 877.718.6868 WEB www.pure-processing.com

PureSteel™ Workstation and Wrap Inspection Tables

PureSteel Ergonomic Workstation

Light hood to increase visibility and lighting

Shelf allows for storage of materials and accessories

Magnifying task lights assist with inspection of instruments

Monitor available for tracking systems

Electronic push button for easy height-adjustment

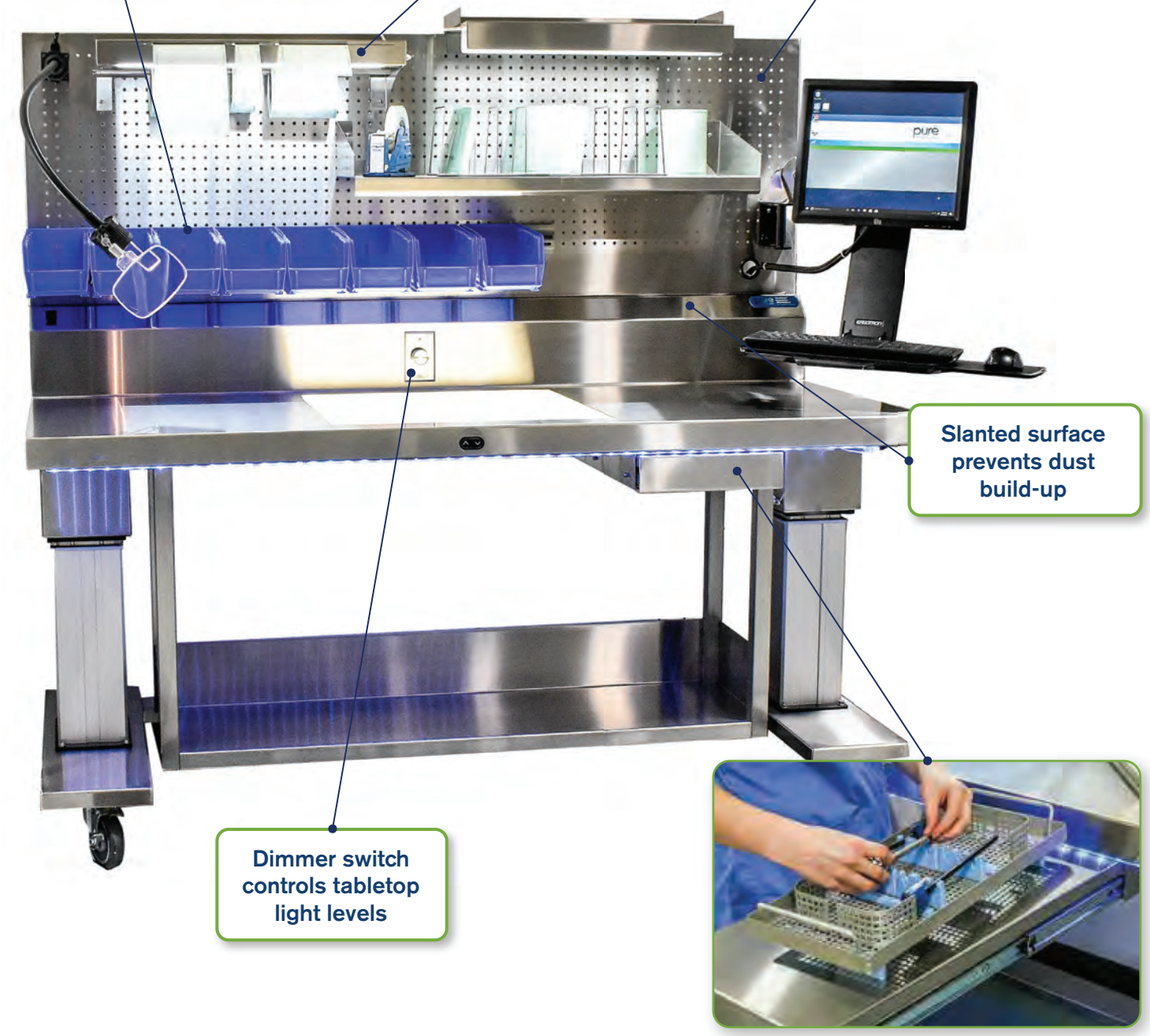
Table top light allows for easy inspection of instruments and wrap materials

Options

- Custom lengths
- Custom designs and layouts for back walls

To see a video demonstration, go to www

Engineered by experts for understand the reprocessing space, PureSteel Ergonomic WorkStation and Wrap Inspection Tables are designed to enhance the inspection and packaging of instruments. By providing illumination for the inspection of instruments and perforations in sterile wrap materials, staff can have more control over quality. Height-adjustability and enhanced lighting help to improve staff safety and increase productivity. An array of accessories are also available to accommodate the specific needs of each department.



v.pure-processing/resources/videos/

PureSteel™ Packaging and Assembly Solutions

PureSteel Wrap Inspection Table and Mini Wrap Inspection Table

The PureSteel Wrap Inspection Table is designed to organize and enhance the packaging and assembly of instruments. Combined with a back wall rack in which to hang wraps, the table top light provides illumination for the inspection of perforations in sterile wrap materials.

The PureSteel Mini Inspection Table is designed to provide sterile wrap inspection abilities in smaller spaces. The mobile table features an illuminated table top and lower shelf for storage of materials.

Anticipated Table Style in approximate size of 30" x 60". Exact model and size to be determined by the Owner

pure PROCESSING

PHONE 877.718.6868 WEB www.pure-processing.com

E220 1/8

S7 / OPMI PROergo

OPMI PROergo from ZEISS

Comfort and precision

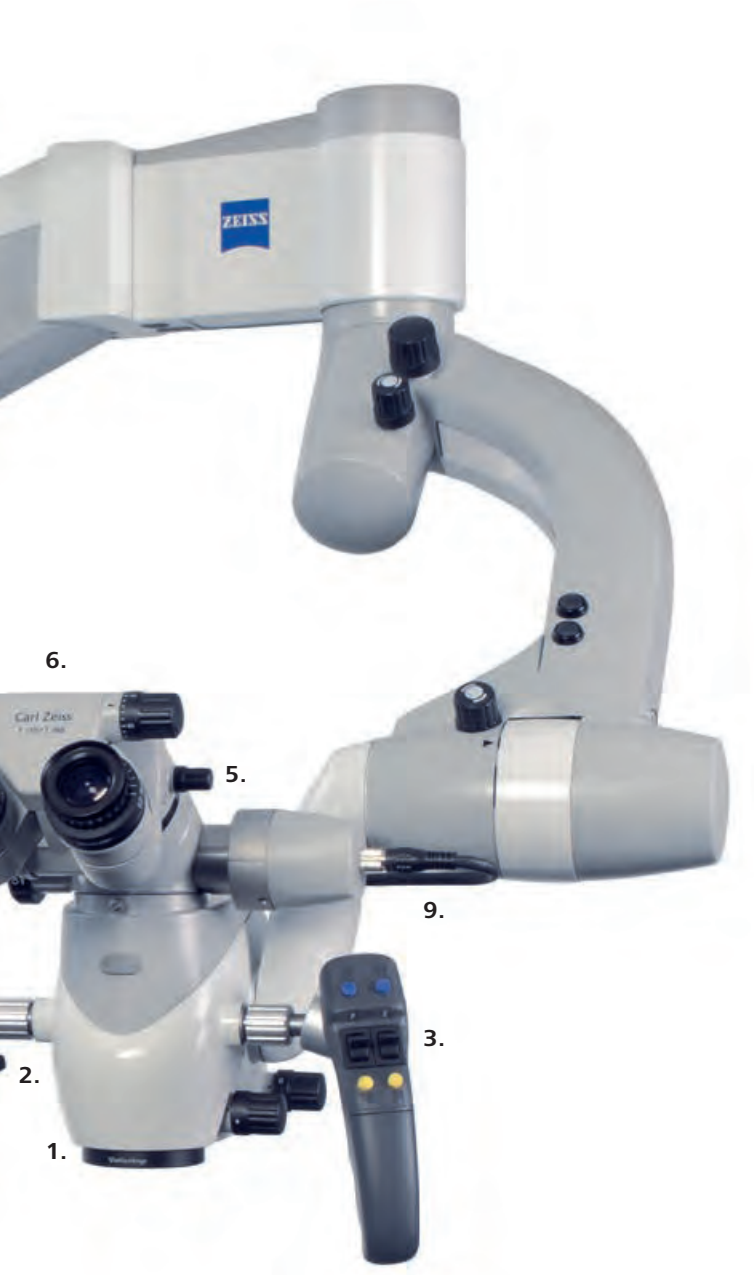
ZEISS

ZEISS OPMI PROergo

Comfort and precision

The legendary optics of ZEISS surgical microscopes allow you to visualize details and fine structures, therefore enhancing the quality of your examination and treatment in all dental disciplines. They provide you with clear visibility of regions that are otherwise difficult to view. The ergonomic design of the OPMI PROergo® facilitates a comfortable working position and helps prevent back and neck pain.

OPMI PROergo from ZEISS is excellence at your fingertips. It offers a variety of convenient, motorized functions that support effortless handling and mechanical stability. The virtually free-floating system allows smooth and precise in an appealing, sleek and compact design.



1. Motorized Varioskop
At the push of a button focus on the treatment field within a working distance of 200 - 415 mm for a better and comprehensive overview – all without having to move the OPMI or change your position.

2. Motorized zoom
Continuous magnification. The brightness setting adjusts automatically as you increase or decrease magnification levels.

3. Magnetic clutches
The Free Float Magnetic System offers smooth movement and precise, stable positioning. The push of a button on the handgrip releases the magnetic brakes.

4. Ergonomically designed handgrips with function keys
Control the focus and zoom and set the other configurable function buttons to operate brightness and SpeedFokus to control video recording.

5. Angled optics and tube dovetail
For work on difficult-to-reach areas.

6. Foldable Tube f170/f260
For an ergonomically correct posture, even with extremely angled positions. Boosts to 150 % detail magnification with the PROMAG function.

7. Stereoscopic image
Large visual field with widefield eyepieces (12.5x or 10x). Special diopter settings also make them suitable for eyeglass wearers.

8. Xenon illumination
This provides homogenous, high-contrast illumination of the treatment field and offers a light temperature characteristic of natural daylight. Two xenon lamps are included in the quick-change module.

9. 1Chip HD Camera
High definition for your patient consultation and documentation.

10. Control console
Default settings such as light, zoom or magnification can be personalized and stored for various users, making clinical transitions quick and easy.

See more – treat more

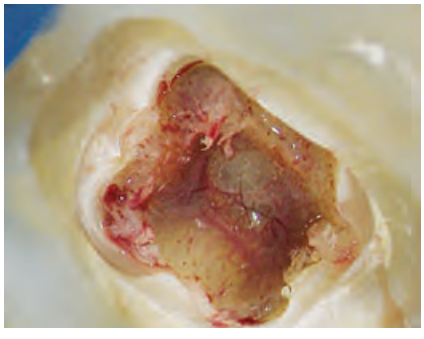
ZEISS OPMI PROergo enables you to view regions that are otherwise difficult to see. The coaxial illumination directs light to where it is needed. Even very narrow root canals are effectively illuminated and visualized.

Automatic brightness control
The brightness settings adjust automatically as you decrease or increase magnification levels to view the entire oral cavity or fine anatomical structures.

Change the focus without moving
The built-in Varioskop® provides a large field of view at each magnification and improves orientation in the horizontal axis.

High-performance xenon illumination
For even the highest demands and professional documentation, the shadow-free illumination directs light to exactly where it is needed. Even root canals are perfectly illuminated and imaged.

Flexible precision optics
The Foldable Tube f170/f260 combines brilliant apochromatic optics and a unique design for high visualization flexibility. It offers dentists a wide range of magnification potential – even at extreme approach angles.



› Image courtesy of Dr. Bijan Vahedi, Augsburg, Germany

E220 5/8

Comfort and easy handling – for your own health

Sit comfortably in an upright, ergonomically correct position during treatment for a more relaxed working day. ZEISS OPMI PROergo helps prevent the early onset of fatigue as well as neck and back problems.

Foldable Tube f170/f260

ZEISS OPMI adapts to you, not vice versa

The motorized Varioskop is already integrated into your ZEISS OPMI PROergo. With its long reach, this highly flexible system easily accommodates your needs and different positions of your patient. Foldable Tube f170/f260 offers a wide range of comfortable working positions by reducing or increasing the distance to the required treatment field.

Functional, motorized and ergonomic design

Control the focus and zoom and set the other configurable function buttons to operate brightness and SpeedFokus. The treatment field is focused at the push of a button without having to move ZEISS OPMI PROergo or change your working position.

Balance and brake – for effortless and precise positioning

By unlocking the magnetic clutches on the handgrip, you can maneuver ZEISS OPMI PROergo easily into the desired working position – even if additional accessories such as the co-observation tube and photo adapter with SLR camera are simultaneously connected.

Free Float Magnetic System

You can unlock the magnetic brakes with the push of a button on the handgrip. The OPMI PROergo can then be maneuvered into the desired working position. The system locks back into place once the button is released. The system can compensate for accessories weighing up to 14 kg such as an optical co-observation tube or a photo adapter with camera. By unlocking the magnetic clutches on the handgrip, you can maneuver ZEISS OPMI PROergo effortlessly and precisely into the desired position and orientation. After the handgrip has been released, the brakes are locked automatically to ensure that the position remains stable and secure.

Photo adapter for SLR cameras (f=340 mm)

Co-observation tube and 1Chip HD Camera (1080p)

Free Float Magnetic System

E220 6/8

Digital visualization – for greater clarity in your daily patient consultations and scientific presentations

A picture is worth a thousand words:
Patients ask for detailed information to help them understand the examination, courses of treatment and the expected outcomes. Clear images and videos are extremely valuable to enhance your patient's understanding and acceptance.

1Chip HD Camera (1080p)

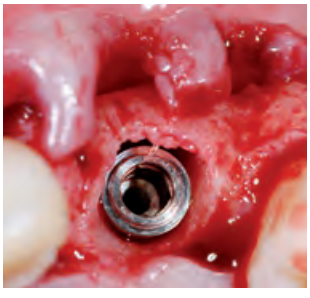
Digital visualization in HD
The video camera for ZEISS OPMI PROergo allows you to visualize your surgical microscope images in state-of-art, full HD picture quality. Beneficial for co-observation or scientific presentations, this enables you to display the teeth and tissue structures with finer detail than with standard definition cameras. High contrast and ideal image definition are ensured through the built-in ZEISS apochromatic video optics. The camera starts with a pre-defined configuration and is therefore instantly ready to use with the surgical microscope.

Seamless workflow integration for video and still images
Combining the video camera with the HD video recorder allows you to digitally save your high-quality images. With the push of a button on the handgrip of the surgical microscope you can save video or still images to a USB storage device or automatically transmit them to a network storage system.

Digital photography
It is also optionally possible to attach digital cameras to the surgical microscope. ZEISS can provide you with a variety of camera adapters including SLR cameras, FlexioStill for digital cameras and FlexioMotion for digital camcorders.

Restorative dentistry
Quickly detect enamel and dentine fractures as well as approximal caries. High-precision views enable accurate assessment of crown edges, preparation levels and veneers.
› *Image courtesy of Dr. Alessandro Conti, Alessandria, Italy*

Endodontics
Visualize fine anatomical structures and details of root canals and isthmuses. The visibility provides a clear view down to the apex.
› *Image courtesy of Oscar Freiherr von Stetten Stuttgart, Germany*



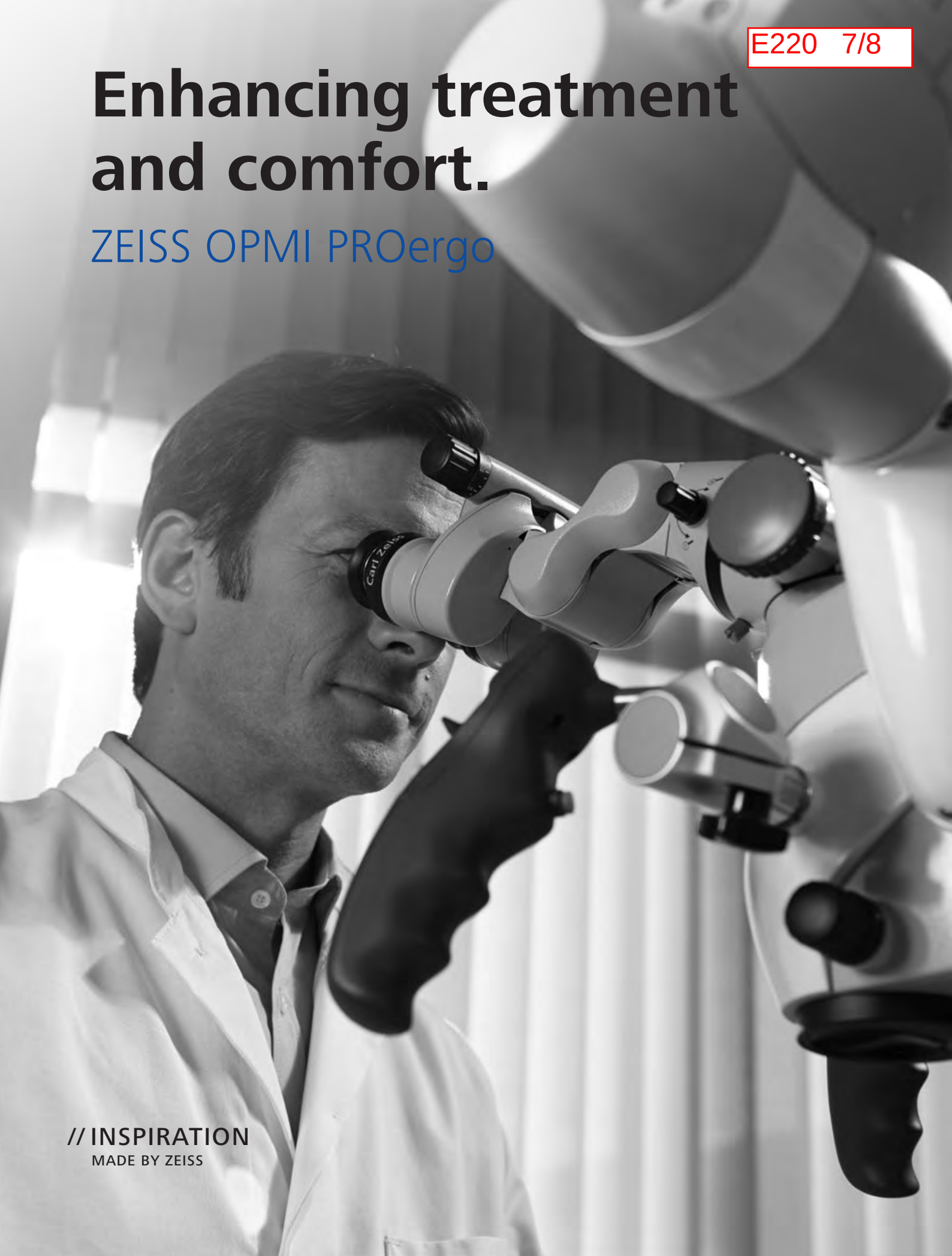
Implantology
Conduct high-precision examinations and implant treatments quickly and confidently. Reliably detect important anatomical structures.
› *Image courtesy of Dr. Rino Burkhardt Zurich, Switzerland*

Periodontics
Benefit from support for soft-tissue evaluation and management to aid healing, low scarring and improved cosmetic outcomes.
› *Image courtesy of Dr. Rino Burkhardt Zurich, Switzerland*

E220 7/8

Enhancing treatment and comfort.

ZEISS OPMI PROergo



// INSPIRATION
MADE BY ZEISS

E220 8/8

Technical data

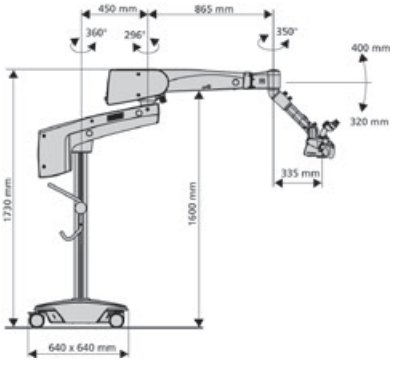
S7 / OPMI PROergo from ZEISS

S7 / OPMI PROergo		
Magnification system	Motorized zoom system; with apochromatic 1:6 ratio; magnification factor Y = 0.4x–2.4x	●
Focus	Continuous motorized focusing via Varioskop	●
	Focusing range of 200-415 mm	●
	SpeedFokus only in combination with the video camera	○
Operating concept	Free Float Magnetic System	●
	Multifunctional, programmable handgrips	●
	LCD display with user guidance	●
	Foot control panel for zoom and focus	○
Tubes	Tiltable tube 0-180°	●
	Foldable tube f170/f260, incl. PROMAG function boost to 150 % magnification and detail magnification	○
Eyepieces	12.5x wide-field eyepieces; also suitable for eyeglass wearers	●
	10x wide-field eyepieces; also suitable for eyeglass wearers	○
	10x or 12x wide-field eyepieces with reticle; also suitable for eyeglass wearers	○
Magnification range	Example with working distance 300 mm and 12.5x eyepieces: Magnification 2.3x up to 14x Field-of-view diameter: 75 to 16 mm	●
Illumination	Halogen illumination with 2 halogen reflector lamps in the quick-change module	●
	Xenon illumination, with daylight characteristic including 2 xenon lamps in the quick-change model	○
	Integrated coaxial cold light illumination	●
	Orange filter for composite materials and swing-in Illumination diaphragms	●
High Definition video	1Chip HD Camera (1080p), 1/3" CMOS Output: DVI, HD-SDI, S-Video	○
	HD video recorder	○
	HD monitors	○
Accessories	Angled optics optional with tube dovetail	○
	Double iris diaphragm to increase the depth of field	○
	Beam splitters: Angled optics documentation port, optional with tube dovetail	○
	Beam splitter with documentation port	○
	Stereo co-observer	○
	Foot control panel for zoom and focus	○
	Photo adapter for SLR cameras (f=340 mm)	○
	FlexioStill adapter for digital cameras	○
	FlexioMotion adapter for digital camcorders	○
	Splash protection for the objective lens	○
	VisionGuard® drapes	○
	Sterilizable asepsis caps and handgrip covers	○
	Instrument tray on floor stand	○

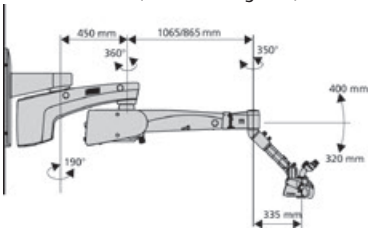
● *Standard* ○ *Option*

Suspension system

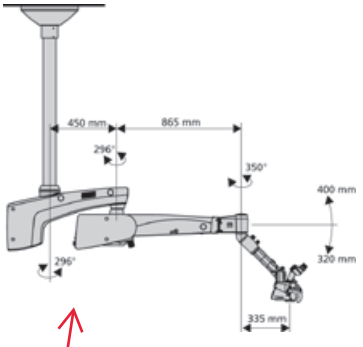
S7 Floor Stand ●



S7 Wall Mount (short or long arm) ○



S7 Ceiling Mount ○



S7 Centro Mount for KaVo CENTRO suspension system ○

Ceiling Mount with Lifting/Telescoping mast

CE

Carl Zeiss Meditec AG
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www.zeiss.com/opmi-proergo
www.zeiss.com/med/contacts

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NEW Imaging Applications: Anterior Segment Glaucoma Retina

CIRRUS HD-OCT 5000/500

Advancing Smart OCT

ZEISS

We make it visible.

International Version

Technical Data

CIRRUS™ HD-OCT 5000/500

New Software Version 8.0* includes:
En Face Analysis
PanoMap

Optional licensed features:

Smart HD Scans	
HD 1 Line 100x	1 Line (100x averaged)
HD 21 Line	21 Lines (4 or 8x averaged)
HD Radial	12 Lines (8x averaged)
HD Cross	10 Lines - 5 horizontal, 5 vertical (8x averaged)

Anterior Segment Premier Module with External Lens Kit		**Measurement Capabilities**
ChamberView™	15.5 mm x 5.8 mm (max.)	Anterior Chamber Depth, Angle to Angle Distance, Lens Vault, Chamber Area, Corneal Thickness, Angle and Caliper Tools
Wide Angle to Angle	15.5 mm x 2.9 mm	Angle Opening Distance (AOD500/750), Trabecular Iris Space Area (TISA 500/750), Scleral Spur Angle, Angle and Caliper Tools
HD Cornea	9 mm x 2 mm	Residual Stromal Thickness, Caliper Tool
HD Angle	6 mm x 2.9 mm	Angle Opening Distance (AOD500/750), Trabecular Iris Space Area (TISA 500/750), Scleral Spur Angle, Angle and Caliper Tools
Pachymetry Map	9 mm diameter	Sector Thickness Values, Minimum Thickness

Two interchangeable lenses expand CIRRUS HD-OCT with corneal, anterior chamber, and wide angle to angle imaging

CIRRUS 5000 Hardware/Computer Updates	
Operating system/processor	Windows® 7, i7 processor (4th generation)
Memory	16 GB
Hard drive/internal storage	2 TB

*Version 8.0 is compatible with CIRRUS Models HD-OCT 5000 and 500 only. Model 500 available with all listed features except Smart HD Scans.
CIRRUS Review Software supported Operating Systems: Windows 8.1, Windows 7, Windows Server 2008 R2

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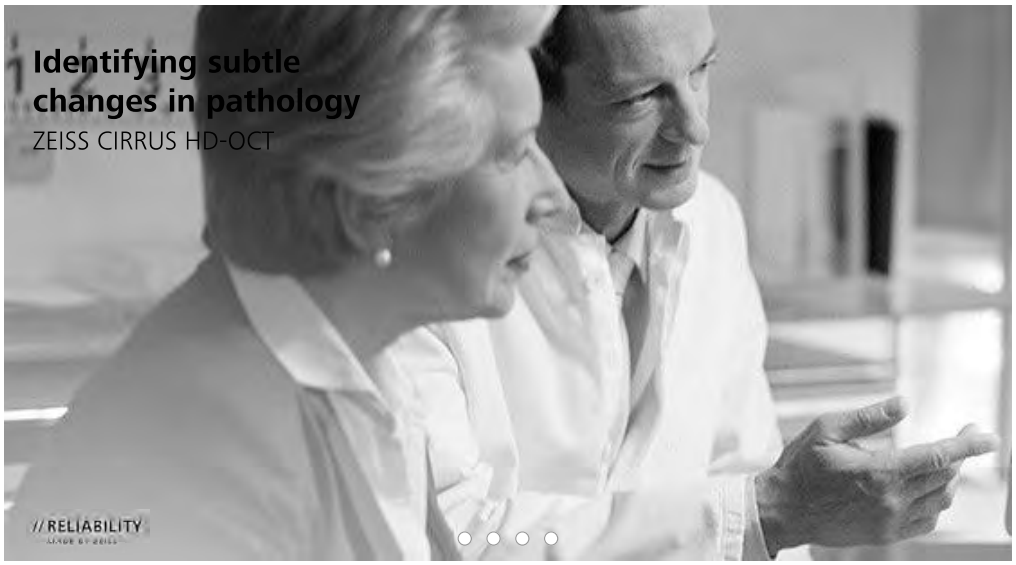


CIRRUS HD-OCT

Advancing SMART OCT

As the world's leading OCT innovator, ZEISS has been at the forefront of industry-defining advancements that have made OCT standard of care. Today, that leadership continues with new clinical assessment tools for CIRRUS 5000 and 500.

compare models

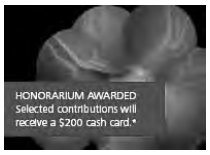
Highlights | **Specifications** | Education | Image Gallery | Videos | More Information

OCT Imaging	Model 5000	Model 500
Methodology	Spectral domain OCT	Spectral domain OCT
Optical source	Superluminescent diode (SLD), 840 nm	Superluminescent diode (SLD), 840 nm
Scan speed	27K- 68K A-scans per second	27K - 68K A-scans per second
A-scan	2.0 mm (in tissue), 1024	2.0 mm (in tissue), 1024
Axial resolution	5 µm (in tissue)	5 µm (in tissue)
Transverse resolution	15 µm (in tissue)	15 µm (in tissue)
Fundus Imaging	**Model 5000**	**Model 500**
Methodology	Line scanning opthalmoscope (LSO)	Live OCT Fundus™
Live fundus image	During alignment and during OCT scan	During alignment
Optical source	Superluminescent diode (SLD), 750 nm	Superluminescent diode (SLD), 840 nm
Field of view	36 degrees W x 30 degrees H	36 degrees W x 22 degrees H
Frame rate	> 20 Hz	> 1.7 Hz

Quick Help for CIRRUS HD-OCT

ZEISS Quick Help. Your online support resource when you need answers, fast.

Get Help



Take your Best Shot!

It's your time to shine.

Upload your prize ophthalmic images taken with a CIRRUS™ HD-OCT, CIRRUS photo, FF450, VISUCAM or other ZEISS retinal imaging device. Submissions considered for use will be eligible for a $200 honorarium.*

› Send us your images today!

DICOM Conformance Statements

A list of DICOM 3.0 Conformance Statements for products from ZEISS.

CIRRUS Smartcube

Puts answers within reach

Transverse resolution	25 µm (in tissue)	45 µm (in tissue)
Iris Imaging	**Model 5000**	**Model 500**
Methodology	CCD camera	CCD camera
Resolution	1280 x 1024	1280 x 1024
Live iris image	During alignment	During alignment
Electrical and Physical	**Model 5000**	**Model 500**
Weight	80 lbs (36 kg)	76 lbs (34 kg)
Dimensions of instrument	26L x 18W x 21H (in) 65L x 46W x 53H (cm)	26L x 18W x 21H (in) 65L x 46W x 53H (cm)
Dimensions of table	39L x 22W (in) 99L x 56W (cm)	39L x 22W (in) 99L x 56W (cm)
Fixation	Internal, external	Internal, external
Internal fixation focus adjustment	-20D to +20D (diopters)	-20D to +20D (diopters)
Electrical rating (115V)	Single Phase, 100–120V~ systems: 50/60Hz, 5A	Single Phase, 100–120V~ systems: 50/60Hz, 5A
Electrical rating (230V)	Single Phase, 220–240V~ systems: 50/60Hz, 2.5A	Single Phase, 220–240V~ systems: 50/60Hz, 2.5A
Internal Computer	**Model 5000**	**Model 500**
Operating system/processor	Windows® 7, 4th generation i7 Intel® processor	Windows® 7, 4th generation i7 Intel® processor
Memory	16 GB	16 GB
Hard drive/internal storage	≥ 2 T > 200,000 scans	≥ 2 T > 200,000 scans
Display	Integrated 19" color flat panel display	Integrated 19" color flat panel display
USB ports	6 ports	6 ports

Includes Table

Third Party Software and Hardware

The following hardware and software is compatible with the **CIRRUS ™ HD-OCT**:

Virus Scanning

The CIRRUS HD-OCT Software has been tested with Microsoft® Security Essentials, but anti-virus software does not come pre-installed. When installing your anti-virus software per the manufacturer's recommendations, configure it so it does not scan automatically, as this may interrupt the operation of the CIRRUS instrument or your review station.

Virus scans and virus definition updates must be launched manually or scheduled to run when patient data acquisitions are not actively being performed on the CIRRUS equipment.

Show more

Related Products

FORUM
› more

Humphrey Field Analyzer 3
› more

Therapeutic Lasers
› more

Not all products, services or offers are approved or offered in every market and approved labeling and instructions may vary from one country

Daytona

Nikon

optos®

INNOVATIVE TECHNOLOGY

***Daytona* produces a 200° single-capture optomap® retinal image of unrivaled clarity in less than ½ second. This fast, easy, patient friendly, ultra-widefield (UWF™) imaging technology was designed for healthy eye screening and has been shown to improve practice flow and patient engagement.**

Enhances Clinical Decision-making

Evaluation of the peripheral retina is critical for optimal patient management.[1] **opto**map imaging is ideal for peripheral examinations. Published studies comparing field of view and clinical utility of various widefield imaging systems confirm **opto**map captures the widest clinically usable field of view and the most retinal pathology.[2, 3, 4]

Improves Practice Efficiency and Economics

Studies show that **opto**map images are faster to capture and easier to review than traditional patient examination techniques.[5, 6] A recent study found a 28 minute (33%) reduction in patient visit duration after implementing centralized **opto**map imaging.[7] **opto**map enables practitioners to differentiate their practice and add an additional revenue stream.

Daytona

FEATURES AND BENEF E302 2/4

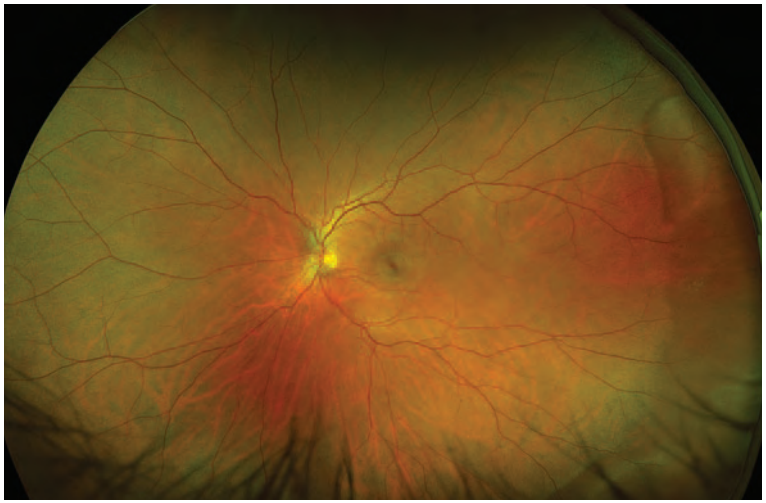
- Non-mydriatic, non-contact imaging through most cataracts and small (2mm) pupils
- High resolution 200° **opto**map images improve pathology detection and management from macula through the far periphery
- **opto**map image clarity yields unrivaled detail across the entire 200° image
- 3-in-1 Color Depth Imaging™ provides important clinical data from the retinal surface through the choroid
- Autofluorescence imaging (green laser) highlights lipofuscin in the RPE
- Stereo disc imaging facilitates ONH review
- 3D Wrap® for patient education
- DICOM compatible software supports compliance with the Code of Federal Regulations [8, 9]
- Images are available immediately and stored electronically for future comparison or for use in telehealth applications

Optos*Advance*™

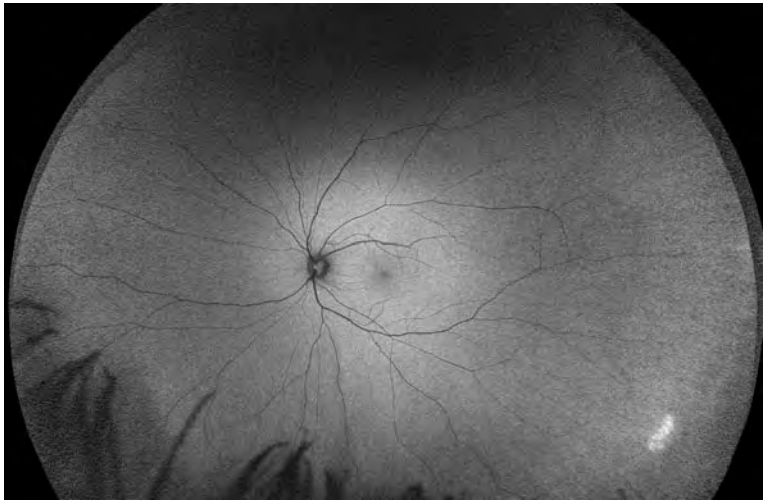
Daytona comes with Optos*Advance* an easy to use, browser-based software for documentation, monitoring, and referral processing to facilitate patient management and improve practice flow. Optos*Advance* offers an auto montage tool to quickly capture and merge a series of images into a single 220° montage showing 97% of the retina. The software also includes tools for accurate distance and area measurements even in the far periphery.

1) ULTRA-WIDEFIELD FUNDUS IMAGING: A Review of Clinical Applications and Future Trends. 2016 2) Quantitative Comparison of Fundus Images by Two Ultra-Wide Field Fundus Cameras; Ophthalmology Retina, 2020. 3) Assessment of Diabetic Retinopathy using Two Ultra-wide-field Fundus Imaging Systems, the Clarus® and Optos™ Systems; BMC Ophthalmology, 2018. 4) Comparison of Widefield Imaging Between Confocal Laser Scanning Ophthalmoscopy and Broad Line Fundus Imaging in Routine Clinical Practice; OSLI, 2020. 5) Nonmydriatic Ultrawide Field Retinal Imaging Compared with Dilated Standard 7-field 35mm Photography and Retinal Specialist Examination for Evaluation of Diabetic Retinopathy; American Journal of Ophthalmology, 2012. 6) Real-Time Ultrawide Field Image Evaluation of Retinopathy in Diabetes Telemedicine program, Diabetes Care, 2015 7) Successful Interventions to Improve Efficiency and Reduce Patient Visit Duration in a Retina Practice. Retina, 2021. 8) All Covered Entities must securely backup 'retrievable exact copies of ePHI' (CFR 164.308 (7)(ii)(A)). 9) All Data must be backed up off site. HiPAA final security (CFR 164.308(a)(7)).

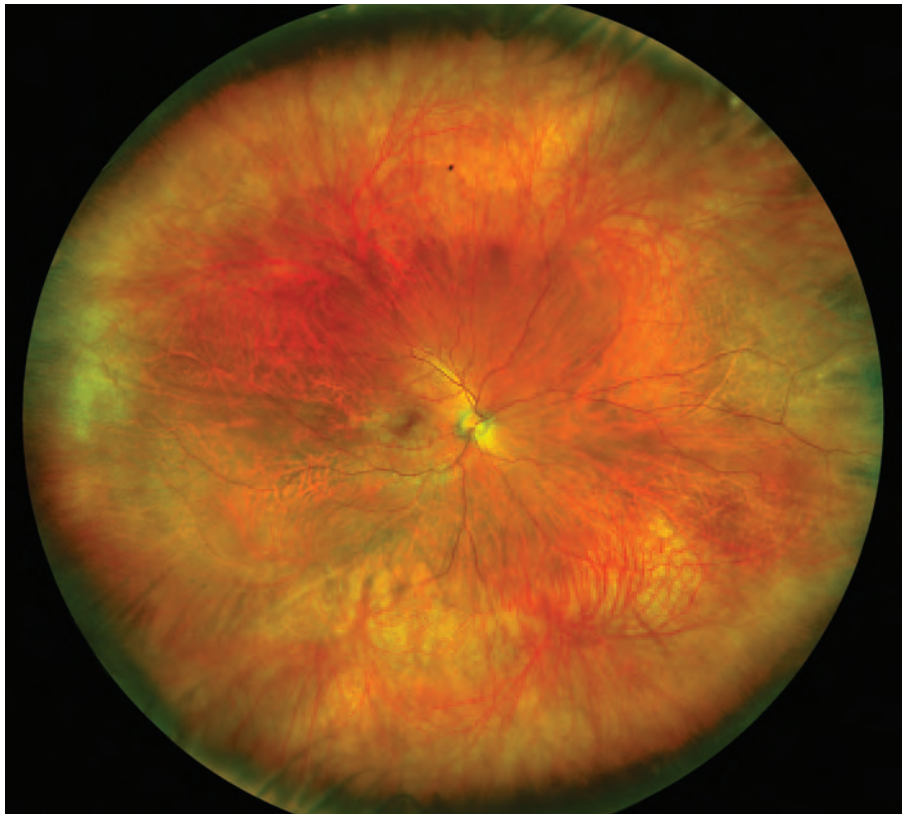
UNRIVALED CLARITY ACROSS THE ENTIRE FIELD OF VIEW



optomap ***color***



optomap ***af***



Auto-montage showing 97% of the retina

*"**opto**map is exceptional for imaging pathology we were unable to document in the past. It facilitates observations of diabetic changes and helps patients see and understand these critical changes. Using **opto**map in discussions with our patients results in better compliance. Optos UWF technology greatly affects quality of care; it makes examining the retina easier, facilitates disease detection, and allows me to maximize quality time with my patients. Routine use of **opto**map has helped improve patient flow allowing me to see 6-7 more patients daily."*

Scott Segal, MD
Pasadena Eye Associates,Texas, USA

TECHNICAL SPECIFICATIONS

TRADE NAME	Daytona
MODEL NAME	P200T
MODEL NUMBER	A10600
IMAGING MODES	Color view Sensory view (red-free) Choroid view Autofluorescence AF
RESOLUTION	optomap: 20 µm optomap *plus*: 14 µm
LASER WAVELENGTHS	Red laser: 635 nm Green laser: 532 nm
EXPOSURE TIME	Less than 0.4 seconds
FOOTPRINT	Width: 425 mm/17 in Depth: 475 mm/19 in Height: 800 mm/32 in
WEIGHT	28 kg/62 lbs
TABLE SPACE REQUIREMENTS (not including wheel position)	Width: 887 mm/35 in Depth: 623 mm/24 in
COLORS	White body with dark blue trim White body with aqua trim White body with gray trim White body with red trim
LASER CLASS	Laser safety class-1 following EN60825-1 and 21 CFR1040.10 and 1040.11.
SYSTEM VOLTAGE	US: 100-120V at 50/60Hz, 3A EU/AU: 200-240V at 50/60Hz, 1.5A
POWER CONSUMPTION	300VA
COMMUNICATION PROTOCOL	DICOM Compatible

Table Included

More than 1,600 published and ongoing clinical trials as well as thousands of case studies and testimonials show the long-term value of **opto**map imaging in diagnosis, treatment planning and patient engagement.

NOTE: Specifications are subject to change without notice.

The Daytona outer case is manufactured from recyclable material.

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CE 0197

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Humphrey Field Analyzer 3 from ZEISS

The best just got faster

ZEISS

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Streamlining clinic flow.

ZEISS Humphrey Field Analyzer 3

// INNOVATION
MADE BY ZEISS

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The ZEISS Humphrey Field Analyzer 3 featuring SITA Faster

The Humphrey® Field Analyzer 3 (HFA3) combines everything you've always valued in a Humphrey with more than you can imagine to streamline your workflow.

The best just got faster

Key benefits

Reduce visual field testing time with NEW SITA™ Faster.

New Mixed Guided Progression Analysis™ (GPA™): Inter-mixing of SITA Standard, SITA Fast and SITA Faster.

Reduce setup time with a single trial lens. Using liquid pressure, the new Liquid Trial Lens™ instantly delivers each patient's refractive correction with the touch of a button.*

Improve confidence in test results with RelEYE™.** Instantly review the patient's eye position, at any stimulus point.

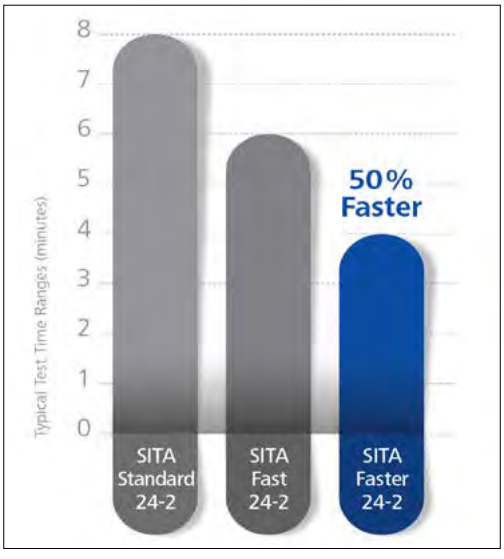
Simplify operation with the intuitive new SmartTouch™ interface that novice users will appreciate.

Gain peace of mind with seamless transferability of legacy data from the HFA II and HFA II-*i* to the HFA3.

* *Available correction range is -8 to +8 diopters sphere. Spherical correction only. Liquid Trial Lens available on the HFA3 model 860.*

** *RelEYE is available on both the instrument and through Glaucoma Workplace.*

Faster, easier, more reliable than ever



SITA Strategies

SITA Faster takes about half the time of SITA Standard and 70% of SITA Fast with the same reproducibility as SITA Fast. This may improve patient satisfaction with perimetric testing and reduce patient fatigue.

Mixed GPA allows free mixing of SITA Faster, SITA Fast and SITA Standard and allows full access to the patient's progression analysis including all SITA tests.

Liquid Lens technology allows you to automatically load each patient's refractive correction from the previous exam.

SmartTouch interface on the HFA3 platform gets you up and running with fewer touches. Simply select the patient's name and press start, all using a color graphic user interface.

Kinetic Perimetry: Significant advancements
Kinetic perimetry advancements provide an easy-to-use graphical user interface with full 180° testing range.

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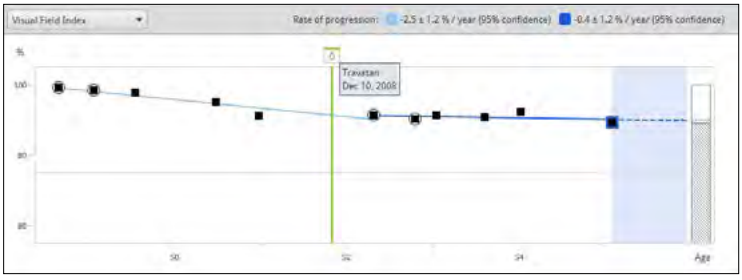
Review the complete HFA exam history with Glaucoma Workplace*

- Advanced, interactive review of all standard HFA analyses and GPA, including:
  - Mixed GPA
  - Trend analysis by superior vs. inferior hemifield
  - 10-2 MD trend analysis
  - Dual baselines
- Dynamic Structure-Function GPA for both HFA and CIRRUS on a single screen
  - Clinical Events indicate timing of intervention and initiation of new trend analysis
  - Color-coded alerts help you quickly identify statistically significant change
  - View HFA and CIRRUS information efficiently displayed in simple side-by-side format

Combined Reports: See the whole picture
ZEISS CIRRUS™ HD-OCT or CIRRUS™ photo to generate combined structure and function reports in a single display.

HFA Dual Baseline Report and Clinical Event



HFA & OCT Structure-Function GPA Report

HFA3 and CIRRUS HD-OCT Combined Report

** ZEISS FORUM and Glaucoma Workplace are required.*

Everything you expect from a Humphrey

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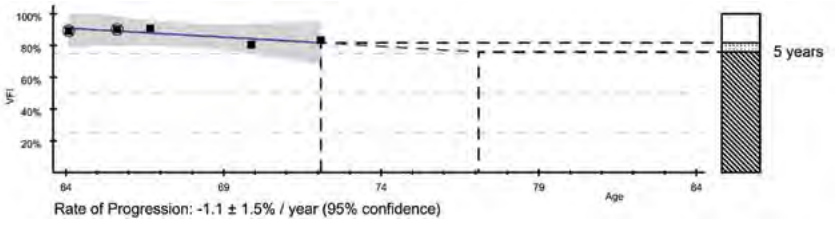
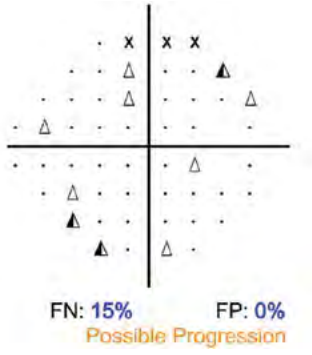
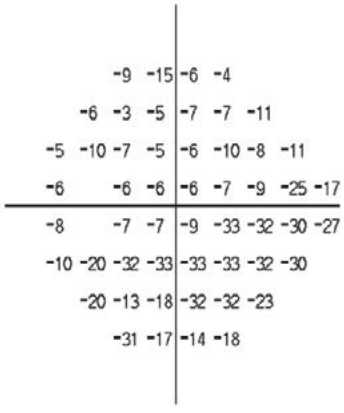
The advances in HFA3 from ZEISS only add to the reliable standard that thousands of practices already depend on for critical diagnoses. The new model continues to deliver the interactive analysis you need, when and where you need it.

Visual Field Index
A simple and intuitive global index. Its most powerful application is GPA, which trends VFI over time.

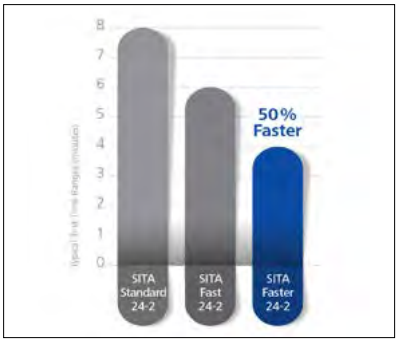




GPA Alert
A message in simple language that indicates whether statistically significant deterioration was identified in consecutive visits.



STATPAC™
The language of perimetry, STATPAC compares results to proprietary age normative and glaucoma databases.



SITA Strategies
Unsurpassed in efficiency, SITA is patient responsive: It learns to perform as fast as the patient wants to go.

Mixed GPA
Gain full access to the patient's progression analysis including all SITA tests with new mixed GPA.

Connectivity
For comprehensive connectivity, HFA3 can be connected to FORUM® with Glaucoma Workplace. HFA3 also supports common file folder sharing used by most Electronic Medical Record Systems (EMRs).

Technical data
Specifications

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The HFA3 that's right for you

- All **HFA3 Models** perform custom static testing with custom static patterns for stimulus sizes I through V, and feature Guided Progression Analysis (GPA) to assist in care management over time.
- The **HFA3 Model 840**, like all models, performs custom static testing with custom static patterns for stimulus sizes I through V, and features Guided Progression Analysis (GPA) to assist in care management over time. In addition, it includes improved gaze tracking and head tracking.
- The **HFA3 Model 850** adds vertex monitoring, blue-on-yellow (SWAP) and the new RelEYE monitor.
- The **HFA3 Model 860** delivers all these features and adds the automated Liquid Trial Lens.

Specifications	Humphrey FDT	Humphrey Matrix 800	HFA3		
			840	850	860
Test specifications					
Maximum temporal range (degrees)	30	30	90	90	90
Stimulus duration	200-400 ms	300 ms	200 ms	200 ms	200 ms
Visual field testing distance	Infinity	Infinity	30 cm	30 cm	30 cm
Background illumination	100 cd/m²	100 cd/m²	31.5 ASB	31.5 ASB	31.5 ASB
Threshold test library					
N-30	•	•			
C-20	•				
24-2, 30-2, 10-2, Macula		•	•	•	•
60-4, Nasal step			•	•	•
Threshold test strategies					
MOBS	•	•			
ZEST		•			
SITA Standard, SITA Fast, SITA Faster, Full Threshold, FastPac			•	•	•
SITA-SWAP				•	•
Suprathreshold test library					
C40, C76, C80			•	•	•
C64, C-Armaly			•	•	•
C-20	•				
N-30	•	•			
24-2		•			
Peripheral test patterns			•	•	•
Suprathreshold test modes					
Age corrected	•	•	•	•	•
Threshold related, Single intensity			•	•	•
Specialty test library					
Social Security Disability, monocular, binocular			•	•	•
Esterman monocular, binocular, superior 36, 64			•	•	•
Custom Static testing			•	•	•

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Features	Humphrey FDT	Humphrey Matrix 800	HFA3		
			840	850	860
Fixation control					
Heijl-Krakau blind spot monitor	●	●	●	●	●
Video eye monitor		●	●	●	●
Gaze tracking			●	●	●
Head tracking			●	●	●
Vertex monitoring				●	●
Operator interface					
Display	LCD	LCD	Touch-screen LCD		
Keyboard		●	●	●	●
Stimulus					
Frequency doubling	●	●			
White-on-white			●	●	●
Red- or blue-on-white			●	●	●
Blue-on-yellow (SWAP)				●	●
General testing features					
Stimulus sizes	10°	2°, 5°, 10°	Goldmann I-V	Goldmann I-V	Goldmann I-V
Foveal threshold testing			●	●	●
Automatic pupil measurement			●	●	●
Liquid Trial Lens (AutoTLC)					●
RelEYE eye review				●	●
Test storage					
User-defined		●	●	●	●
Software features					
Single Field Analysis (SFA)			●	●	●
Glaucoma Hemifield Test (GHT)		●	●	●	●
Visual Field Index (VFI)			●	●	●
Guided Progression Analysis (GPA)			●	●	●
Mixed GPA			●	●	●
Serial field overview		●	●	●	●
Networking		●	●	●	●
FORUM Connectivity		●	●	●	●
DICOM Connectivity		●	●	●	●
Printer					
Thermal printer	●				
Native generic PCL 3, PCL 5 and postscript printer support for local, shared and networked printers		●			
Native postscript printer support for network capable printers			Optional	Optional	Optional
Data storage, retrieval and analysis					
Hard drive		250 GB	500 GB	500 GB	500 GB
USB		●	●	●	●
CD-R/W drive		●			
Dimensions					
Height	17" (43 cm)	17" (43 cm)	23" (58 cm)		
Width	10" (25 cm)	12.2" (31 cm)	20" (51 cm)		
Depth	19" (48 cm)	33.5" (85 cm)	18" (46 cm)		
Weight	19 lbs (8.6 kg)	37.5 lbs (17.4 kg)	63 lbs (28.7 kg)		
Electrical requirements					
	100-120V, 50/60Hz 230V, 50/60Hz	100-240V~, 50/60Hz, 200VA max	100-120V~, 50/60Hz, 4.0A 230V~, 50/60Hz, 1.8A		
Standards					
Meets UL, CSA and CE standards	●	●	●	●	●

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For years, the Humphrey Field Analyzer has brought certainty to glaucoma diagnostics. The HFA3 that made its predecessors the gold standard in perimetry—then takes that standard to new heights with innovations that enhance usability to streamline clinic flow.

Certainty for years with the ZEISS Glaucoma Suite

A broad range of innovative diagnostic and imaging solutions are transforming your point of care. Today, the **ZEISS Glaucoma Suite** delivers a ZEISS solution that can stand alone or seamlessly integrate into a comprehensive all-practice solution through FORUM, putting critical information at your fingertips—in an instant.

Partnering with reliable expertise

ZEISS is dedicated to enhancing the long-term value of your investment through a highly skilled field and technical support organization. ZEISS service agreements encompass the full range of support offerings to ensure optimal system uptime and workflow convenience. You can count on ZEISS to support your needs for high productivity and cost containment while delivering the optimum in customer care.

** FDT does not connect to FORUM*

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HFA.6613 Rev E Printed in the United States. CZ-X/2017 United States Edition: Only for sale in selected countries
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CE 0297

Humphrey Field Analyzer

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Technical data Specifications

Choose the HFA3 that's right for you

Specifications	HFA3				Humphrey Matrix 800	Humphrey FDT
	830	840	850	860		
Test specifications						
Maximum temporal range (degrees)	90				30	30
Stimulus duration	200 ms				300 ms	200-400 ms
Visual field testing distance	30 cm				Infinity	Infinity
Background illumination	31.5 ASB				100 cd/m^2	100 cd/m^2
Threshold test library						
N-30					•	•
C-20						•
24-2, 30-2, 10-2, Macula	•	•	•	•	•	
60-4, Nasal step	•	•	•	•		
Threshold test strategies						
SITA Standard, SITA Fast, SITA Faster, Full Threshold, FastPac	•	•	•	•		
SITA-SWAP			•	•		
MOBS					•	•
ZEST					•	
Suprathreshold test library						
C40, C76, C80	•	•	•	•		
C64, C-Armaly	•	•	•	•		
C-20						•
N-30					•	•
24-2					•	
Peripheral test patterns	•	•	•	•		
Suprathreshold test modes						
Age corrected	•	•	•	•	•	•
Threshold related, Single intensity	•	•	•	•		
Specialty test library						
Social Security Disability, monocular, binocular	•	•	•	•		
Esterman monocular, binocular, superior 36, 64	•	•	•	•		
Kinetic testing		•	•	•		
Custom Kinetic testing		•	•	•		
Custom Static testing	•	•	•	•		

Features	HFA3				Humphrey Matrix 800	Humphrey FDT
	830	840	850	860		
Fixation control						
Heijl-Krakau blind spot monitor	•	•	•	•	•	•
Video eye monitor	•	•	•	•		•
Gaze tracking		•	•	•		
Head tracking		•	•	•		
Vertex monitoring			•	•		
Operator interface						
Display	Touchscreen LCD				LCD	LCD
Keyboard	•	•	•	•		•
Stimulus						
Frequency doubling					•	•
White-on-white	•	•	•	•		
Red- or blue-on-white		•	•	•		
Blue-on-yellow (SWAP)			•	•		
General testing features						
Stimulus sizes	Goldmann I-V				10°	2°, 5°, 10°
Foveal threshold testing		•	•	•		
Automatic pupil measurement		•	•	•		
Liquid Trial Lens (AutoTLC)				•		
RelEYE eye review			•	•		
Test storage						
User-defined	•	•	•	•		•
Software features						
Single Field Analysis (SFA)	•	•	•	•		
Glaucoma Hemifield Test (GHT)	•	•	•	•		•
Visual Field Index (VFI)	•	•	•	•		
Guided Progression Analysis (GPA)	•	•	•	•		
Mixed GPA	•	•	•	•		
Serial field overview	•	•	•	•		•
Networking	•	•	•	•		•
FORUM Connectivity	•	•	•	•		•
DICOM Connectivity	•	•	•	•		•
Printer						
Thermal printer					•	
Native generic PCL 3, PCL 5 and postscript printer support for local, shared and networked printers						•
Native postscript printer support for network capable printers	Optional					
Data storage, retrieval and analysis						
Hard drive	500 GB					250 GB
USB	•	•	•	•		•
CD-R/W drive						•
Dimensions						
Height	23" (58 cm)				17" (43 cm)	17" (43 cm)
Width	20" (51 cm)				10" (25 cm)	12.2" (31 cm)
Depth	18" (46 cm)				19" (48 cm)	33.5" (85 cm)
Weight	63 lbs (28.7 kg)				19 lbs (8.6 kg)	37.5 lbs (17.4 kg)
Electrical requirements						
	100-120V~, 50/60Hz, 4.0A 230V~, 50/60Hz, 1.8A				100-120V, 50/60Hz 230V, 50/60Hz	100-240V~, 50/60Hz, 200VA max
Standards						
Meets UL, CSA and CE standards	•	•	•	•	•	•

ATLAS Corneal Topography System

Simply accurate for maximum productivity

Take your practice to the next level

With more than 15 years experience in corneal topography, Carl Zeiss Meditec now offers the next generation of the ATLAS® Model 9000. The ATLAS System delivers the accuracy essential to today's eye care practice, in a powerful and easy to use platform. With applications including contact lens fitting, abnormal cornea detection and management, and selection of aspheric IOLs, the new ATLAS System is the right choice for reliable real-world results, every time, from virtually any operator.

Superior Performance Designed for How You Practice

- Compact, all-in-one system, now easier to use and more efficient
- Improved repeatability and reliability
- Compatible with your existing ATLAS data
- Compatible with Visante® *omni* to generate posterior topography

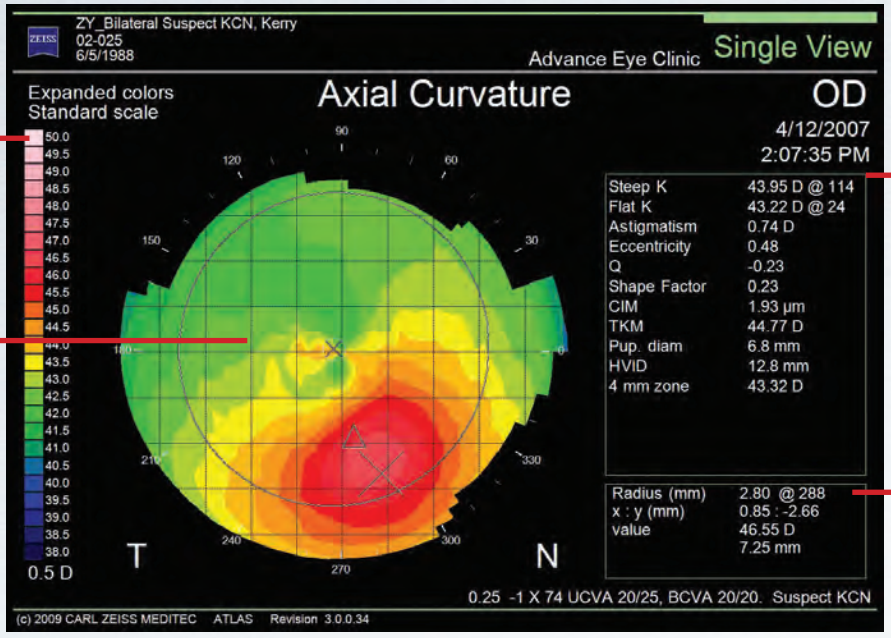
Elevate Your Practice with ATLAS

The next-generation ATLAS System provides new tools and superior data acquisition and analysis to set your practice apart. From increasing patient satisfaction, to gaining greater clinical insight, to improving overall workflow, the ATLAS System can take your practice to new heights.

Intuitive Analysis and Reporting

Color Scale
Customize colors and scales for detailed corneal assessments

Topography Map
Display as curvature, elevation, corneal wavefront, even image simulations. Landmarks such as corneal apex △, pupil contour, and pupil center ⊗ help explain the impact on visual acuity



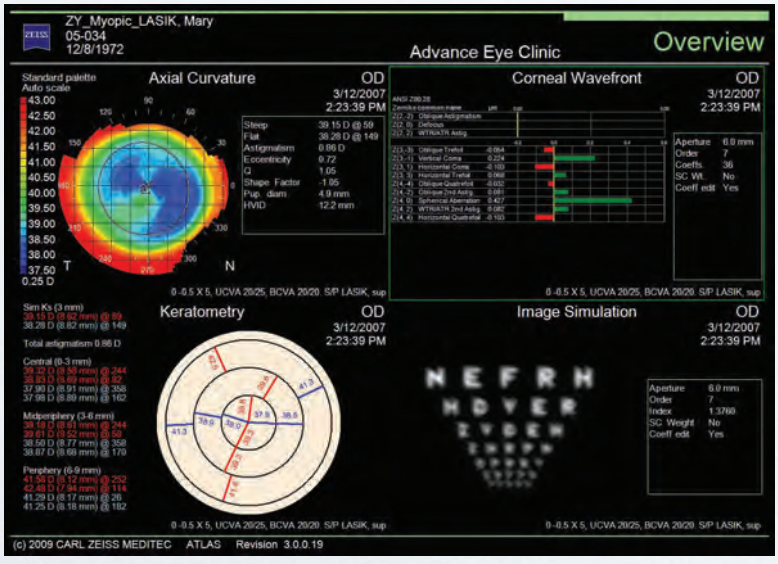
Data
Automatically display preferred parameters such as simulated keratometry, shape factor, eccentricity, and HVID (white to white)

Cursor Value
Obtain the exact value at any point on the map

Axial map reveals a displaced corneal apex and inferior steepening, which standard keratometry at 3mm would have missed.

Novel Applications for Cataract Care

Corneal Wavefront Analysis is a valuable tool guiding you to the suitable technologies which will correct visual distortion. The ATLAS provides all the key topographical information needed to enhance IOL power calculation and IOL selection as well as set appropriate patient expectations.



- Educate patients about higher-order aberrations and simulate visual acuity with various pupil sizes
- Assess corneal refraction with image simulation and point spread function
- Optimize aspheric IOL selection with corneal spherical aberration, Z(4,0), based on Placido disk technology[3,4]
- Established IOL power formulas for myopic and hyperopic LASIK/PRK and RK[5,6]
- Perioperative astigmatism management

3- M. Jeandervin and J. Barr, "Comparison of repeat videokeratography: repeatability and accuracy," Optom. Vis. Sci. 75, 663–669 (1998)
4- Evaluating data acquisition and smoothing functions of currently available videokeratoscopes. J Cataract Refract Surg 22 (1996);22:421-426
5- iol.ascrs.org (accessed 10/01/09)
6- http://doctor-hill.com/iol-main/keratorefractive.htm (accessed 10/01/09)

PathFinder II Corneal Analysis Software

Advancing traditional topography. PathFinder™ II Corneal Analysis Software is a comprehensive, easy to understand, and reliable anterior topographic screening module to assist with refractive surgery screening and to help identify abnormal corneal conditions.

1.
PathFinder II provides probabilities for 5 different corneal conditions by comparing topography exams to an extensive clinical database. Validation of PathFinder II with an independent data set demonstrated greater than 90% sensitivity, specificity, and accuracy in detecting normal versus abnormal corneas [7].

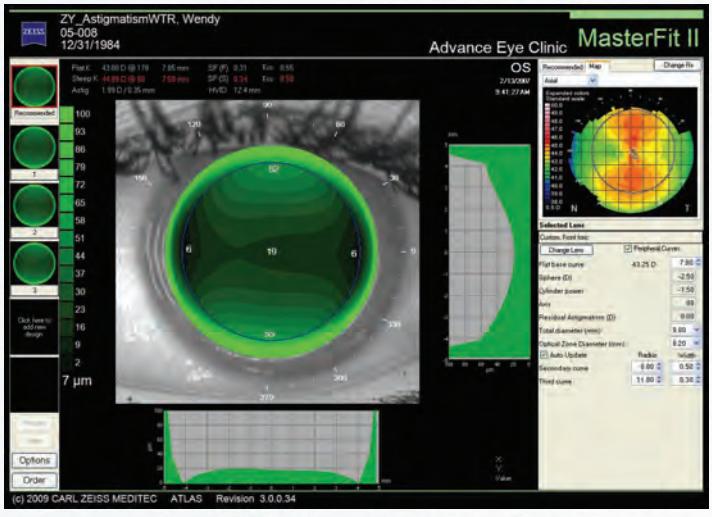
2.
Color-coding of PathFinder II parameters quickly indicates which parameters are beyond normal limits and may contribute to specific classifications.

3.
In this example, traditional axial curvature does not highlight the nature of the cornea as compared to mean curvature.

4.
3-dimensional mean curvature analysis eliminates corneal astigmatism to reveal underlying local curvature irregularities. The size and location of corneal irregularities, especially in the periphery, are better highlighted.

MasterFit II Contact Lens Software

Direct your fitting success. MasterFit™ II Contact Lens Software helps streamline fitting gas permeable (GP) lenses and guides you through challenging-to-fit patients. Simulated fluorescein patterns and tear film thickness profiles promote effective lens design to minimize chair-time and improve patient satisfaction.

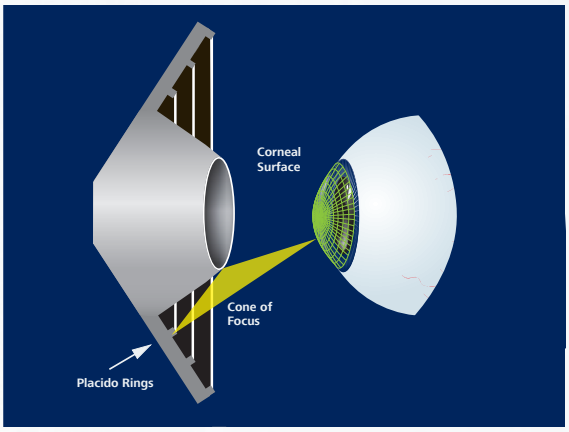


- Simulate fluorescein patterns for custom and stock lenses, including spherical, toric, and aspheric designs
- Automatically design lenses to your preferences by customizing fitting options such as desired tear film clearance
- Improve trial lens fitting efficiency by adjusting lens parameters, such as peripheral curves, and simulating lens movement to compensate for lens-to-cornea relationship
- Email lens design and topography exam to your lab for efficient ordering and fulfillment

7- Data on file

Superior Topography Performance and Efficiency

The ATLAS System has been proven to deliver the accuracy and workflow efficiency that your practice requires. The all-in-one system combines a suite of unique technologies that is simple for virtually any operator to use. The result is a new level of confidence in every exam and for every patient.



Triangulation with the Cone-of-Focus, Placido rings, and corneal surface delivers superior accuracy

Proven Placido Disk Technology

- Patented Cone-of-Focus™ Alignment System and Arc-Step Algorithm deliver sub-micron elevation accuracy[1]
- 22-ring Placido disk optimized to avoid ring crossover, which means reliable results for a wide range of patients
- Long, comfortable 70 mm working distance minimizes focusing error found in "small cone" systems

SmartCapture makes image acquisition easy

SmartCapture™ Image Analysis Helps Your Staff Get it Right the First Time

- SmartCapture analyzes 15 digital images per second during alignment and automatically selects the highest quality image
- Next-generation image processing provides more repeatable, reliable results, even in difficult cases
- Less dependence on operator technique means greater efficiency and fewer repeat exams

Workflow Flexibility with Review Software

- Dynamic remote access to all your corneal topography exam data and patient education tools, such as corneal wavefront simulation
- Equivalent analysis functionality as the ATLAS Model 9000[2]
- Compatible with ATLAS Models 993 and 995[2]

1- Data on file
2- Except for PathFinder II Corneal Analysis Software

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Technical Specifications

ATLAS Model 9000

Working Distance		70 mm
Field of View		17 mm X 14.5 mm
Placido Rings		22 (18 superiorly, 22 inferiorly)
Illumination Source		Non-visible infrared (950 nm) LED
Optics		Digital CMOS camera with 1280x1024 pixel resolution
Curvature	**Measurement Range** **Accuracy** **Reproducibility**	15 to 95 D (3.5 to 22.5 mm) ± 0.05 D (± 0.01 mm)[8] ± 0.10 D (± 0.02 mm)[8]
HVID (white to white)	**Measurement Range** **Resolution**	10.0 to 14.0 mm 0.1 mm
Pupillometry	**Acquired Images** **Measurement Range** **Resolution**	Scotopic and photopic (700 nm) 0.5 to 11.0 mm 0.1 mm
Views		■ Axial Curvature ■ Tangential Curvature ■ Elevation (Best-Fit Sphere) ■ Irregularity (Best-Fit Ellipsoid) ■ Videokeratoscopic (Rings, Scotopic, Photopic) ■ Keratometry ■ Refractive Power ■ Mean Curvature ■ Corneal Wavefront ■ Image Simulation ■ Point Spread Function (PSF) ■ Modulation Transfer Function (MTF)
Presentation Displays		■ Single View ■ Overview ■ OD/OS Comparison ■ Difference ■ Trend with Time, Trend Analysis ■ Custom
Optional Software/Third Party Software		■ PathFinder™ II Corneal Analysis Software ■ MasterFit™ II Contact Lens Software ■ ATLAS™ Review Software ■ DICOM Gateway ■ Wave Contact Lens Software
Computer		■ Microsoft® Windows 7 ■ 4th Generation Intel Processor ■ Internal storage: up to 35,000 exams ■ Gigabit Ethernet & USB 3.0 ■ Integrated 12.1" color flat panel display
Dimensions / Weight (Instrument only)		■ 52 L x 37 W x 50 H (cm) ■ 39 lbs. (17.7 kg)
Electrical		■ 100-240V~: 50/60Hz, 2-1A

NOTE: All technical specifications are subject to change without notice.

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8- To one standard deviation on a properly calibrated 42.51 D (7.94 mm) test object.

120V

CE 0297

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TearScience® LipiFlow® Thermal Pulsation System

TearScience® LipiFlow® Thermal Pulsation System

Instructional Guides

Product Safety Information

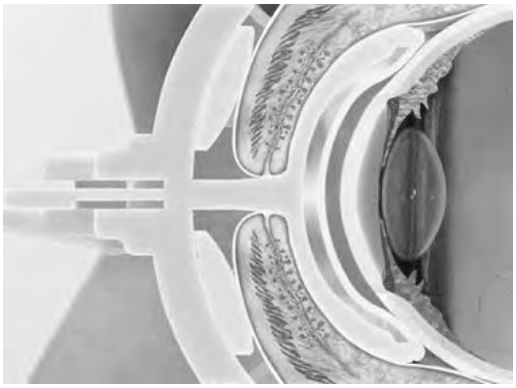
Patent Information

Overview

Order This Product

Designed to Improve Gland Function

The TearScience® LipiFlow® Thermal Pulsation System, **is a medical device used by physicians in addressing Meibomian Gland Dysfunction (MGD).** It consists of a Console and a single-use sterile device, known as the Activator, and has a drug-free mechanism of action. Eye care professionals use the TearScience® LipiFlow® System to **treat MGD patients in-office with confidence and efficiency.**



The TearScience® LipiFlow® System represents more than 10 years of dedicated research and is protected by more than 30 patents. A phased pressure profile with adaptive force equalization and proximal-to-distal peristaltic motion evacuates gland contents as the inner lid is gently heated.

How the TearScience® LipiFlow® System Works

- The procedure centers around the breakthrough **Vector Thermal Pulse Technology** (VTP)
- After an initial anesthetic drop, **no drugs are required** for the procedure
- The TearScience® LipiFlow® system safely delivers heat and pressure to the meibomian glands while **protecting the delicate structures of the patient's eye**
- As a result, the obstructed **meibum is liquefied** and pushed up and out of the gland orifices
- **Contoured design** vaults the cornea and protects the eye
- Heat and pressure are regulated with **redundant sensors**

Key Messages for Patients
Benefits
References

1. Lemp MA, et al. Distribution of Aqueous-Deficient and Evaporative Dry Eye in a Clinic-Based Patient Cohort. Cornea. 2012; 31(5): 472-478. doi:10.1097/co.0b013e318225415a.

2. Blackie CA, Coleman CA, Holland EJ. The sustained effect (12 months) of a single-dose vectored thermal pulsation procedure for meibomian gland dysfunction and evaporative dry eye. Clin Ophthalmol. 2016; 10: 1385-1396.

3. Lane SS et al. A New System, the LipiFlow®, for the Treatment of Meibomian Gland Dysfunction (MGD). Cornea. 2012;31(4):396-404.

4. Blackie C, Carlson AN, Korb DR. Treatment for meibomian gland dysfunction and dry eye symptoms with a single-dose vectored thermal pulsation: a review.

TearScience® LipiView® II Ocular Surface Interferometer

TearScience® LipiView® II Ocular Surface Interferometer

Instructional Guides

Product Safety Information

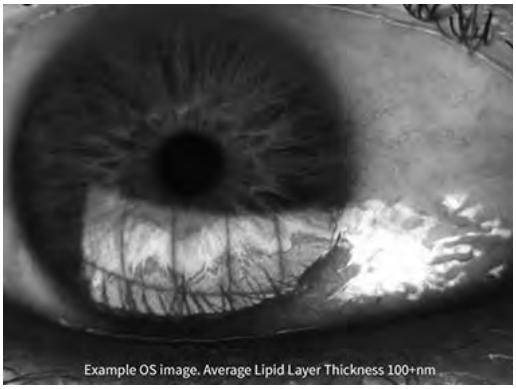
Patent Information

Overview

Order This Product

Leading innovation in lipid layer thickness measurement and meibomian gland imaging.

TearScience® LipiView® II Ocular Surface Interferometer with Dynamic Meibomian Imaging™ (DMI) measures lipid layer thickness (LLT) with nanometer accuracy, captures blink dynamics, and images meibomian gland structure.



The TearScience® LipiView® II Interferometer features patented technology that **provides a sophisticated assessment** of factors that contribute to dry eye. Compelling visuals and video captures provide an opportunity to educate patients about their personal ocular health.

Dynamic Meibomian Imaging

MEIBOMIAN GLANDS IN HIGH DEFINITION

Images for illustrative purposes only. Actual results may vary.

Dynamic Illumination

Surface lighting originates from multiple light sources to minimize reflection.

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Southcentral Foundation

Optometry Clinic

Fireweed Building Renovation

Optometry Equipment Cut Sheet

Existing Printer Relocated / Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

E309 1/1

Southcentral Foundation

Optometry Clinic

Fireweed Building Renovation

Optometry Equipment Cut Sheet

Existing Printer Relocated / Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

E310 1/1

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Optometry Clinic

Fireweed Building Renovation

Optometry Equipment Cut Sheet

Existing Mini Refrigerator Relocated / Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

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Optometry Equipment Cut Sheet

Existing Refrigerator Relocated / Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

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Optometry Equipment Cut Sheet

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Optometry Clinic

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Optometry Equipment Cut Sheet

Existing Ice Maker Relocated / Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

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Optometry Clinic

Fireweed Building Renovation

Optometry Equipment Cut Sheet

Pyxis Medication Dispensing unit Provided by Southcentral Foundation - verify exact manufacturer, model, size & accessories

Item To Be Selected